



BGC ENGINEERING INC.

AN APPLIED EARTH SCIENCES COMPANY

DELOITTE & TOUCHE INC.

2005 ANNUAL GEOTECHNICAL EVALUATION AND INSTRUMENT REVIEW

VARIOUS FACILITIES AT FARO MINE, YUKON

FINAL

PROJECT NO.: 0257-032-05
DATE: FEBRUARY 22, 2006

DISTRIBUTION LIST:	
ANVIL RANGE FARO	2 COPIES
DELOITTE & TOUCHE TORONTO	8 COPIES
DELOITTE & TOUCHE CALGARY	1 COPY
GARTNER LEE – YELLOWKNIFE	1 COPY
GARTNER LEE – WHITEHORSE	6 COPIES
BGC CALGARY	2 COPIES
BGC VANCOUVER	1 COPY

Project No. 0257-032-05

February 22, 2006

Mr. Doug Sedgwick
Deloitte & Touche Inc., as Interim Receiver for Anvil Range Mining Corporation
Suite 1900, TD Centre
79 Wellington Street West
Toronto, ON
M5K 1B9

Re: 2005 Annual Geotechnical Evaluation and Instrument Review
Various Mine Waste Facilities at Faro Mine, Yukon

Dear Mr. Sedgwick:

Please find attached our final report on the Annual Geotechnical Evaluation and Instrument Review of various mine waste facilities at Faro Mine. This report has been sent to the distribution list shown on the front cover.

If there are any questions regarding this report, please contact the undersigned at your convenience.

Yours truly,
BGC Engineering Inc.
per:

Gerry Ferris, M.Sc., P.Eng.
Geotechnical Engineer

encl.: Final Report

GWF/sf

TABLE OF CONTENTS

1.0	Introduction	1
1.1	Scope of Services.....	1
1.2	General Background Relating to Inspection and Instrumentation	2
1.3	Additional Relevant Studies.....	3
2.0	2005 Monitoring Program	4
2.1	Introduction	4
2.2	Elevations within the Down Valley Project Area	5
2.3	2005 Water Management	5
2.4	Precipitation Information	6
3.0	Inspection Conditions and Approach.....	6
4.0	Findings and conclusions	6
5.0	Instrumentation, Monitoring and Annual Review	31
5.1	Instrumentation Readings.....	31
5.2	Routine Inspections by On-Site Personnel.....	31
5.2.1	Rose Creek Diversion Canal.....	31
5.2.2	Intermediate Dam	32
5.2.3	Cross Valley Dam	32
5.2.4	North Fork Rose Creek Flow-Through Causeway.....	32
5.2.5	Faro Creek Diversion Canal.....	33
5.2.6	Faro Waste Rock Dumps.....	33
5.2.7	Secondary Tailings Dam – East Leg.....	33
5.3	Annual Reviews.....	33
6.0	Closure	34
	References.....	35

LIST OF TABLES

Table 1	Summary of Polishing Pond and Intermediate Pond Levels
Table 2	Total Monthly Precipitation at Faro Airport, Yukon
Table 3	Diversion Canal – Canal Dike – Piezometers
Table 4	Diversion Canal – Canal Dike – Thermistors
Table 5	Diversion Canal – Canal Dike – Slope Inclinometers
Table 6	Diversion Canal – Spoil Piles – Thermistors
Table 7	Diversion Canal – Spoil Piles – Slope Inclinometers
Table 8	Intermediate Dam – Piezometers
Table 9	2005 Cross Valley Dam – Weir Flows
Table 10	Cross Valley Dam Seepage Flows – Weir X13 (1982-2005)
Table 11	Cross Valley Dam – Piezometers
Table 12	Cross Valley Dam – Thermistors
Table 13	Secondary Dam - Piezometers

LIST OF DRAWINGS

Drawing 1	Site Plan
Drawing 2	Down Valley Tailings Containment Instrument Locations - 1 of 2
Drawing 3	Down Valley Tailings Containment Instrument Locations - 2 of 2
Drawing 4	Cross Valley Dam Pond Elevations (1999 – 2005)
Drawing 5	Intermediate Dam Pond Elevations (1999 – 2005)
Drawing 6	Diversion Canal Dike Inspection Photos
Drawing 7	Diversion Canal Dike Inspection Photos
Drawing 8	Diversion Canal Dike Inspection Photos
Drawing 9	Diversion Canal Dike Inspection Photos
Drawing 10	Canal Dike - Current Piezometric Conditions
Drawing 11	Canal Dike/ Intermediate Pond – Hydraulic Connectivity
Drawing 12	Spoil Pile Inspection Photos
Drawing 13	North Valley Interceptor Ditch Inspection Photos
Drawing 14	Intermediate Dam Inspection Photos
Drawing 15	Intermediate Dam Inspection Photos
Drawing 16	Intermediate Dam Inspection Photos
Drawing 17	Intermediate Dam Inspection Photos
Drawing 18	Section View of Intermediate Dam
Drawing 19	Cross Valley Dam Inspection Photos
Drawing 20	Cross Valley Dam Inspection Photos
Drawing 21	Cross Valley Dam Inspection Photos
Drawing 22	Cross Valley Dam 2005 Weir Flows
Drawing 23	Cross Valley Dam Measured Flow Rates at X13 (1997-2005)

Drawing 24	Section View of Cross Valley Dam
Drawing 25	Flow Through Rock Drain Inspection Photos
Drawing 26	Flow Through Rock Drain Inspection Photos
Drawing 27	Faro Creek Diversion Channel Inspection Photos
Drawing 28	Waste Rock Dump Inspection Photos
Drawing 29	Secondary Dam Inspection Photos
Drawing 30	Secondary Dam Inspection Photos
Drawing 31	Secondary Dam Inspection Photos
Drawing 32	Secondary Dam – Current Piezometric Conditions
Drawing 33	2006 Monitoring Schedule

LIST OF APPENDICES

Appendix I	Instrumentation Repair and Replacement Report
Appendix II	Site Visit Inspection Memos (May and September)
Appendix III	Instrumentation Data Records and Graphs

LIMITATIONS OF REPORT

This report was prepared by BGC Engineering Inc. (BGC) for the account of Deloitte & Touche Inc., the Interim Receiver for Anvil Range Mining Corporation. The material in it reflects the judgement of BGC staff in light of the information available to BGC at the time of report preparation. Any use which a Third Party makes of this report or any reliance on decisions to be based on it are the responsibility of such Third Parties. BGC Engineering Inc. accepts no responsibility for damages, if any, suffered by any Third Party as a result of decisions made or actions based on this report.

As a mutual protection to our client, the public, and ourselves, all reports and drawings are submitted for the confidential information of our client for a specific project and authorization for use and/or publication of data, statements, conclusions or abstracts from or regarding our reports and drawings is reserved pending written approval by BGC.

1.0 INTRODUCTION

1.1 Scope of Services

BGC Engineering Inc. (BGC) provided a proposal (No. 05-006) for the annual geotechnical evaluation and instrumentation review work at Faro Mine, dated May 17, 2005, to Mr. Doug Sedgwick of Deloitte & Touche Inc. (Deloitte), Interim Receiver for Anvil Range Mining Corporation. The noted scope of work comprised the following:

- a) Field geotechnical inspection, review of relevant instrumentation data and preparation of maintenance recommendations concerning the following structures:
 - Cross Valley Dam and emergency spillway;
 - Intermediate Dam and emergency spillway;
 - Rose Creek Diversion Channel, dike crest, top of backslope and toe of slope;
 - North Valley Wall Interceptor Ditch;
 - North-Fork Rose Creek flow-through rock drain;
 - Selected portions of the Faro Waste Rock dumps;
 - Secondary Tailings Impoundment; and
 - Faro Creek Diversion Channel above the Faro Pit.
- b) Synthesis and interpretation of field instrumentation data (collected by site staff).
- c) May and September site visits to inspect conditions.
- d) Preparation and presentation of site staff geotechnical training seminar.
- e) Preparation of a compilation report that provides interpretation and recommendations resulting from the instrumentation data and field inspections. The report provides a compendium of all relevant instrumentation data and plots.

This annual inspection report does not include the Fresh Water Supply (FWS) Dam as it has in the past. As detailed in Section 1.2, this dam was breached in 2003 and inspection of the breach and channel works constructed during the breach is reported under a separate water licence and relevant report.

Two separate site inspections were performed in 2005; one in May and one in September. The purpose of the May inspection was to examine site conditions of the major structures in the Down Valley immediately following the spring freshet. The September inspection coincided with the timing of the annual inspection visits that have been performed for over 20 years. The structures listed above were assessed.

In addition to the annual inspection and assessment work, BGC was responsible for the preparation of a training seminar for site staff. During the September inspection, a seminar was given to provide site staff with continued training related to water level surveys and flow measurements.

1.2 General Background Relating to Inspection and Instrumentation

Golder Geotechnical Consultants provided design recommendations for the Down Valley Tailings Disposal Project (Golder 1980). Following the subsequent construction of the facilities (Golder 1982), an extensive geotechnical monitoring program was initiated and is continuing to-date. Golder Associates was responsible for the annual inspection and instrumentation review of the Down Valley Tailings project between 1981 and 1999. Beginning in 2000, BGC has conducted the annual geotechnical inspection and instrumentation review duties.

The report provided herein presents an assessment of the monitoring data collected in 2005. Monitoring data from piezometers, slope inclinometers, thermistors and seepage weirs is collected by site staff. The data is forwarded to BGC for review and inclusion in this report. In addition to reviewing the instrumentation data, visual inspections of the various facilities were undertaken by BGC. This report compiles and reviews the instrumentation and inspection components in order to assess the physical performance of the noted structures.

As noted earlier, the FWS Dam was breached in November/December 2003, in accordance with the terms and conditions provide in the Yukon Water Board Licence Number QZ03-058. This licence is in effect until December 31, 2008 and provides details on reporting, effluent quality standards, monitoring and surveillance required for this specific project. The requirements provided in that licence are supplemental to those provided in Water Licence QZ95-003 which are applicable to the Faro Site.

The following components of Faro Mine are included within the present report, and are shown in Drawing 1:

- **The Rose Creek Diversion Canal** – The Canal Dike was built as part of the former Down Valley Tailings Project in 1980-81, it was constructed as an expansion of the existing facility. The Canal Dike separates the diversion canal from the Polishing Pond, the Intermediate Dam pond and tailings deposit. Structures associated with the Rose Creek Diversion Canal include the Canal Dyke, the Spoil Piles and the Back Slope.
- **The Intermediate Dam** – The Intermediate Dam was designed to retain tailings solids, supernatant water and run-off water. It was built as part of the Down Valley Tailings Project in 1980-81, and underwent crest raisings in 1988, 1989 and 1991.
- **The Cross Valley Dam** – The Cross Valley Dam was designed to have capacity for 60-day retention of seepage/discharge water from the intermediate dam. It was originally used as a polishing pond and later for water treatment residue retention. Built as part of the former Down Valley Tailings Project, it was constructed in 1980-81.

- **North-Fork Rose Creek Flow-Through Causeway (“the Rock Drain”)** - The causeway was built of waste rock in 1987. The causeway was advanced by dumping waste from causeway grade to provide a zone of preferentially larger particles in the lower portion of the fill. This zone conveys creek flows through the structure; the driving head being provided by a small pond of water on the upstream side of the causeway. During 2005, a detailed monitoring program was undertaken at this structure, the results will be presented in a separate report by BGC (BGC 2006a).
- **Faro Creek Diversion Canal and East Wall of Faro Pit** – Faro Creek was diverted around the top of the Faro Pit through the construction of a diversion channel. The stability of the east wall of the Faro pit has been a concern throughout the lifetime of the pit operation. A number of structural discontinuities within the east pit wall, coupled with seepage from the Faro Creek diversion channel along the top of this pit wall, contribute to the slope instability that has occurred along this pit wall. A visual inspection along the diversion channel was initiated in 2000 to assess the concern that instability of the East Pit Wall could lead to the potential loss of the diversion channel.
- **Faro Waste Rock Dumps** – The Waste Rock dumps were built throughout the operating life of the Faro Pit. These dumps were generally constructed by end dumping and spreading from the final bench elevation of the dump. Portions of the Faro Waste Rock Dumps are adjacent to the North Fork of Rose Creek. Generally, the physical stability of waste dumps are of concern during construction and the first few years following construction. However, given their location adjacent to a creek, these portions of the waste dumps are reviewed on a two-year cycle.
- **Secondary Tailings Impoundment** – Built in 1974 to accommodate expanding tailings storage requirements. The stability of the eastern portion (east of the Diversion Dam) of the secondary tailings component is a concern since it is retaining tailings from the upper section of the Rose Creek Diversion Canal. Monitoring and inspection of this dam was re-initiated in 2005.

1.3 Additional Relevant Studies

In addition to instrumentation monitoring and visual inspections, Deloitte is undertaking a number of assessment studies relevant to structures and facilities at Faro Mine that are discussed in this annual report. These additional studies are documented in the following reports:

1. BGC (2003) has written an Emergency Preparedness Plan for potential failure of the dams at the Faro Mine.
2. BGC (2004), with input from SRK, has prepared an Operations, Maintenance and Surveillance Manual (OM&S) for the dams at the Faro Mine site (including Little Creek Dam near the Vangorda/Grum mining area).
3. SRK (2004) has undertaken a review of the Intermediate Dam; this review included commentary on the classification of the dam, the hydraulic capacity of the emergency spillway and a preliminary review of the seismic stability.

4. Golder (2004) has prepared a detailed comparison of alternatives for the relocation of the Faro Creek Diversion around the Faro Pit.
5. BGC (2005a) supervised construction to re-establish the hydraulic capacity of the Rose Creek Diversion Canal to the levels indicated in the water licence.
6. BGC (2005b) supervised the installation of a larger culvert in the outfall section of the North Valley Wall Interceptor Ditch.
7. Klohn (2005) prepared a detailed assessment of the seismic stability of the Cross Valley, Intermediate and Secondary Dams under the condition of the Maximum Credible Earthquake.
8. Golder (2006) reported on the performance of the stability of the soil slope between the Faro Pit and the Faro Creek Diversion Canal.
9. BGC (2006) completed a review of instruments within the Faro Tailings area and completed the replacement of some of the instruments and repaired others. A copy of this report is included in Appendix I.

These reports, including the drafts when finalized, should be reviewed in conjunction with the assessment provided herein. Each report provides conclusions and recommendations that are relevant to structures and facilities at Faro Mine and the Down Valley tailings project.

2.0 2005 MONITORING PROGRAM

2.1 Introduction

Historically, the monitoring program has been comprised of a specific schedule for reading the instrumentation, which depended on the type of instrument, its location and the performance trend indicated by the accumulated data. In those areas where good performance of the structures was demonstrated over time, the frequency of readings was reduced for reasons of economy or irrelevance of additional data, or because the installations became non-functional. Conversely, there have been some instances where instrumentation and visual observation justified more frequent readings and installation of additional instrumentation. A recommended instrumentation monitoring schedule for 2005 was provided as Drawing 27 of the 2004 Annual Geotechnical Inspection (BGC 2005c).

Instruments in the Rose Creek Diversion Canal (canal dike and spoil piles) and the Intermediate Dam were monitored in May and September, 2005. Instruments in the Cross Valley Dam were monitored in February, May and September, 2005. Instruments in the Secondary Tailings Impoundment Dam were monitored in June, August and September. All of the instruments monitored as part of this evaluation are shown in Drawings 2 and 3.

As a complement to the instrumentation data obtained, various components of the Faro Mine were visually inspected by BGC personnel during the periods between May 26 to 28 and September 12 to 14, 2005. Details of the visual inspection are discussed in Section 4.0.

2.2 Elevations within the Down Valley Project Area

Elevations within the Down Valley project were originally documented with respect to the Down Valley Project Datum (dvdpd). The dvdpd is 32.3 m above mean sea level (m amsl). The Interim Receiver has initiated a program to present information concerning the facilities in terms of metres above mean sea level (or a geodetic datum) rather than in dvpd or mine datum.

All elevations documented in this report concerning structures and instrumentation are reported with respect to a geodetic datum. An elevation survey of all instruments at the Cross Valley and Intermediate Dams was performed in 2004, allowing the data to be presented in terms of the geodetic datum. Surveys of crest and instrument collar elevations for the Diversion Canal (Canal Dike, Back Slope, and Spoil Piles) and the Secondary Tailings Dam were performed in 2005. A summary report of the instrumentation survey and the 2005 instrumentation installations is provided in Appendix I. This 2005 survey has allowed all the instrumentation data collected at the Faro Mine to be presented in terms of the geodetic datum.

2.3 2005 Water Management

Water pumped from the Faro pit passes through the mill water treatment plant and then flows to a pipe located in the spillway of the Intermediate Dam. After discharge, the water flows down to the polishing pond behind the Cross Valley Dam. Decant siphons are used to convey any retained water from the Intermediate Pond over the Intermediate Dam. Water from the polishing pond is then discharged to the environment over the Cross Valley Dam by siphon pipes.

The Intermediate and Cross Valley Pond water levels are measured with respect to a geodetic datum using either staff gauge readings or direct survey from a local benchmark. Drawings 4 and 5 provide a summary of the Cross Valley Pond and Intermediate Pond water levels throughout the year. Table 1 also contains the 2005 water level data from the Intermediate and Cross Valley Ponds in tabular format. The water level information is used to aid in the interpretation of the instrumentation response in the following sections.

In 2005, similar to the past few years, the pond levels in both the intermediate impoundment and polishing pond were kept low since the water quality was suitable for discharge. The Cross Valley Pond fluctuated from a high of 1030.18 m on February 22 down to a low of 1026.31 m on March 23. The Intermediate Pond level ranged from a high of approximately 1047.28 m on May 4 and 5 to a low of 1045.98 m on June 29.

2.4 Precipitation Information

Yearly climatic conditions significantly affect the performance of water retaining and water conveying earth structures. Table 2 provides a summary, on a month-by-month basis, of the total precipitation at the Faro Airport from 1978 to 2005. At the bottom of the table, the minimum, mean and maximum monthly precipitation values are also provided. The year 2005 was an above average year with respect to precipitation. The total annual precipitation was 374 mm, 65 mm above the mean annual value of 308 mm.

3.0 INSPECTION CONDITIONS AND APPROACH

Messrs. Gerry Ferris, P.Eng. and Jim Cassie, P.Eng., from BGC undertook the first of two site inspections of selected structures from May 26 to 28, 2005. Mr. Jim Cassie undertook a second inspection of selected facilities at Faro Mine on September 12 to 14, 2005.

Each of the selected structures was inspected in a walking tour. Pertinent observations concerning both condition and seepage (or lack thereof) were recorded by camera and Dictaphone.

In general, during the May inspections, the site appeared in good condition, even though various site water flows were higher than values seen between late June and September. No major concerns were noted and these findings were reviewed verbally with Messrs. Haggard and Sedgwick before BGC personnel left site. A summary memo pertaining to the conditions and maintenance items was prepared for Deloitte; a copy is attached in Appendix II.

During the September inspections, the inspected facilities appeared in satisfactory condition and the recommendations made were related to minor maintenance and monitoring. A second summary memo regarding the dam conditions and maintenance items was prepared for Deloitte; this is also attached in Appendix II.

4.0 FINDINGS AND CONCLUSIONS

The results of the inspections of each of the structures are presented on the following pages in standardised format, complemented by a selection of site photographs. Refer to Drawing 1 for the general location of each structure and to Drawings 2 and 3 for the locations of individual instruments. Specific maintenance requirements are documented on the individual sheets and in the summary memos provided in Appendix II. Instrumentation data reviewed on the summary sheets are attached in Appendix III.

In general, the structures appeared in good condition. The instrumentation appeared in good working condition. There are a total of 70 active instruments at the Faro Mine site, which includes 41 piezometers, 15 thermistors, and 14 slope inclinometers.

Visual monitoring and reading of instrumentation (as recommended) should be continued and the instrumentation data immediately conveyed to BGC for review. Should any atypical or deteriorating conditions be observed or recorded, BGC should be contacted immediately for comment. Protocols for anomalous readings were reviewed in the Emergency Action Plan (EAP) presented in BGC (2003).

ROSE CREEK DIVERSION CANAL (RCDC) – CANAL DIKE

LOCATION:	Borders the southern edge of the tailings impoundments (see Drawings 2 and 3). The Canal Dike is considered to start at the Diversion Dam.
FUNCTION:	The Canal Dike separates the diversion canal from the Polishing Pond, the Intermediate Dam pond and tailings deposit. Drawings 6 through 9 provide photographs of the RCDC Canal Dike.
LENGTH:	+/- 3,800 m
MAX HEIGHT:	+/- 4 m above downstream toe/native ground.
CREST ELEVATION:	1063.1 m at the start of the dike, grading downwards at 0.3% to the start of the upper weirs, where the crest elevation is 1052.4 m. The dike then grades at 4.6% through the weir sections to an elevation of 1024.9 m. After the weir section, the dike grades at 2.2% to a final elevation of 1014.8 m.
CREST WIDTH AND CONDITION:	+/- 5 m wide; approximately 1 km of the dike crest was resurfaced in 2004 with sand and gravel from the Haul Road borrow area. No signs of cracking or settlement were noted on the Canal Dike crest.
RIPRAP:	Rip rap repairs undertaken in a portion of the 1 km section of dike crest raised in 2004. The new rip rap matched the gradation of the existing rip rap which consisted of broadly graded rockfill between 90 mm to 500 mm in size. The rip rap is in satisfactory condition.
WEIRS:	Central boulders have been displaced downstream slightly. Overall, the weir sections appeared in satisfactory condition.
SEEPAGE:	Minor seepage at the Canal Dike toe near BGC05-08 was noted to be slightly greater than in 2004, likely due to lowered pond elevations in 2005.
INSTRUMENTATION:	Readings of the Canal Dike instruments for 2005 were obtained in May and September. Tabulated data and plotted records are presented in Appendix III and summarised in Tables 3, 4 and 5. Piezometers. The observed piezometric pressures generally reflect the anticipated conditions (BGC 2005b). Drawing 10 provides a longitudinal section of the piezometric conditions observed within the canal dike observed during 2005. Additional observations with regards to the 2005 Canal Dike piezometric monitoring data include the following:

- Eight pneumatic piezometer installations exist in the Canal Dike, three of which were installed in 2005. The newly installed piezometers: BGC05-02, BGC05-03 and BGC05-06. Installation details for these three piezometers are contained in Appendix I. No readings were available for BGC05-02 and -03, which replaced CD-19, and only one reading was taken at BGC05-06, which replaced piezometer 88-11. Data recorded in BGC05-06 was similar to previously recorded conditions from 88-11.
- The deep piezometer CD-21 continues to indicate piezometric pressures that are 1 to 4 m lower than the average intermediate pond elevation of the adjacent tailings pond, in spite of their locations being between 400 m and 600 m upstream of the Intermediate Dam.
- Data collected from piezometers CD-21, CD-26 and BGC05-06 indicates a downward hydraulic gradient, and low pore pressures at depth indicate that the subsurface is essentially free draining.
- Downstream of the Intermediate Dam, Piezometer CD-26 at Station 2+600 indicates essentially free drainage at depth. The lower piezometer, although some 70 m southwest of the pond shoreline, indicates a water level approximately 12.5 m above the full supply elevation of the polishing pond (1030.33 m). This is thought to be due to the influence of the upstream reservoir, the water level in the diversion canal and hillside seepage.
- Data collected from CD-13 and -15 indicates that a weak upward hydraulic gradient exists at these locations. The upward hydraulic gradient at CD-15 has been consistent since 2002.

Over the period of record, the water level in the tailings pond retained by the Intermediate Dam was lowered during the months of May, June and September with a gradual increase during the rest of the year. The average pond level for 2005 is 1046.7 m. The Canal Dike crest elevation opposite the south abutment of the Intermediate Dam is approximately 1052.9 m. The invert of the 0.6 m deep pilot channel (of the diversion canal) is at approximately 1048.9 m. Fall flows typically just inundate the bench adjacent to the pilot channel, suggesting a diversion canal water surface elevation of about 1049.6 to 1049.7 m, i.e., an elevation approximately two and a half metres above the level of the tailings pond at the Intermediate Dam. The gradient of the Diversion Canal is 0.19%. The tails beach limit, when the pond is at its full supply level, is about 1100 m upstream of the Intermediate Dam. In addition, higher spring and summer flows in the canal will produce a higher driving head for potential seepage.

Based on the above, the difference in elevation between the surface of the water in the Diversion Canal and the base level (water or tailings) upstream of the Intermediate Dam ranges from about 2 m at the Intermediate Dam to approximately 4 m at the beach limit. Upstream of the beach limit, the difference in elevation is about 4 m. Under these conditions, and a uniform head loss between the Diversion Canal and the tailings pond, piezometric levels recorded by piezometers installed in the Canal Dike should range from about 1049.2 m just upstream of the Intermediate Dam, to about 1051.2 m at the limit of the tailings beach. The geometry and piezometric assumptions reviewed here are graphically displayed on Drawing 11.

Thermistors. The data continues to indicate a warming trend at depth at thermistor locations CD-10, CD-21, CD-26 and BGC01-02. No frozen conditions were measured by the thermistors at these locations.

- At thermistor location CD-15, the cooling trend at 10 m depth measured since 1999 reversed and warming was measured. Permafrost still exists at 10 m depth.
- A thermistor string was installed in borehole BGC01-02 to verify the geothermal conditions indicated by installation 88-11. The data collected in 2005 indicates that permafrost no longer exists within 13 m of the ground surface. Unfortunately, a number of the thermistor nodes at this instrument appear to be malfunctioning, limiting the ability to verify the geothermal conditions previously indicated by installations 88-7 and 88-11.
- Two thermistors were installed in 2005; installation details can be found in Appendix I. BGC05-04 was installed to replace the destroyed thermistor CD-19, and BGC05-07 replaced the destroyed thermistor 88-11. No readings have been taken from these instruments since installation.

Slope Inclometers. The slope inclinometer data indicates that minor movements continue to be measured, although these are mostly related to thaw settlement of the dike or surficial creep movement.

- Two slope inclinometers were installed in 2005; installation details can be found in Appendix I. BGC05-05 was installed to replace the destroyed inclinometer CD-19, and BGC05-08 replaced the destroyed inclinometer 88-11. Only the baseline readings were collected from these instruments in 2005.

MAINTENANCE

RECOMMENDATIONS: It is important that the crest of the Canal Dike be graded each September or October after the annual inspection to cover areas where cracks and potholes have developed. The purpose of this treatment is to prevent ingress of surface run-off water that may be concentrated in the settled areas, potentially reducing stability. Blading should be used to accomplish this work. Care must be taken not to disturb the existing instrumentation that has been installed to monitor performance of the dike.

CONCLUSIONS: The majority of the permafrost that was originally in the Canal Dike has degraded beyond the depth of instrumentation. Given the above summary of monitoring results, it is recommended that select instruments be monitored in 2006. The select instruments are located in the area of 2004 dike crest raise and the piezometers throughout the dike crest. Monitoring of all working instruments should be moved to a two year cycle outside of this 1 km zone.

RCDC – SPOIL PILES

LOCATION: Downslope of the diversion canal dike, on the southern edge of the tailings impoundments (see Drawings 2 and 3).

FUNCTION: The construction waste of the diversion canal dike formed the spoil piles. Drawing 12 provides photographs of the RCDC spoil piles.

LENGTH: Discontinuous over the approximate 3,800 m length of the Canal Dike.

MAX HEIGHT: Variable heights, ranging from approximately 1 m to 8 m above downstream toe/native ground.

INSTRUMENTATION: Readings for the spoil pile instruments for 2005 were obtained in May and September. Tabulated data and plotted records are presented in Appendix III and summarised in Tables 6 and 7.

Thermistors. Thermistor SP-3 indicates that there is no longer any permafrost above a depth of 9 m at this location. A slight warming trend is apparent in the data.

Slope Indicators. Inclinator SP-2 showed negligible movement in 2005. The spoil pile has settled in the vicinity of Station 1+530, based on the distinctive shape of the deflection versus depth curves for data obtained from SP-2.

MAINTENANCE

RECOMMENDATIONS: Increased seepage quantity and sloughing occurring at the toe of the spoil piles, located between the Cross Valley and Intermediate Dams. Seepage and related sloughing was likely caused by very low polishing pond levels. Visually monitor sloughing and retrogression for the short term and undertake rehabilitation if the retrogression becomes worse.

CONCLUSIONS: The spoil pile is experiencing on going movements near SP-2 and SP-3, which are located downslope from areas of the canal dike that have moved in the past. There is no measured permafrost remaining in the foundations of the spoil piles, although melting permafrost is suspected near SP-5. Monitoring of the spoil pile instruments currently is on a two year cycle, this schedule should be continued.

Significantly more seepage was noted in 2005 at the toe of the spoil pile within the polishing pond as compared to past observations. This and the associated sloughing failures in the area are likely the result of the lower polishing pond elevation in 2005. This area should be visually monitored for deteriorating conditions and repaired as necessary.

Instruments SP-2, and SP-5 are scheduled for monitoring in 2006.

RCDC – BACKSLOPE

LOCATION:	Upslope of the Canal Dike, on the southern edge of the tailings impoundments (see Drawings 2 and 3).
FUNCTION:	Forms part of the canal excavation above the elevation at which water will flow. The Canal Backslope was constructed when the Canal was excavated. Drawings 6 to 8 provide photographs of the Canal Backslope.
LENGTH:	+/- 3,800 m, the entire length of the Canal Dike
INSTRUMENTATION:	The Canal Backslope instruments were not scheduled for monitoring in 2005.
OBSERVATIONS:	Approx. 2H:1V slope and in good condition with no signs of settlement. Small sloughs (with small headscarps and cracks) were noted at two locations on the backslope; approximately 30 m east of CD-19 and one directly south of the first weir. These sloughs likely resulted from surficial saturation of the backslope materials. The sloughs did not appear active in September.
MAINTENANCE	
RECOMMENDATIONS :	Monitor sloughing on backslope and assess for deteriorating conditions.
CONCLUSIONS:	The Canal Backslope is performing satisfactorily with some minor occurrences of local sloughing within the granular material and erosion. Based on the readings collected in 2004 the instruments in the Canal Backslope were switched to a monitoring frequency of every two years. No readings were acquired in 2005 and consequently, all functioning instrumentation should be monitored in 2006.

NORTH VALLEY WALL INTERCEPTOR DITCH (NVWID)

LOCATION:	North side of the valley containing the tailings impoundments, along the north side of Rose Creek Valley (see Drawing 1).
FUNCTION:	The NVWID diverts the water from the Upper Guardhouse Creek around the tailings and polishing ponds. The NVWID was constructed in 1980/81 as part of the Down Valley Tailings Project. The design flood for the ditch was the 50 year return period flood with one half (0.5) meter freeboard above the design flood level (Golder, 1980). Drawing 13 provides photographs of the NVWID.
LENGTH:	+/- 3,000 m
GRADIENT:	1.25 to 2.5% in the Mine Leg; 1.5% in the Borrow Area "F" Segment; and 4.5 to 5% in the north abutment of the Cross Valley Dam (the Outfall Section).
INSTRUMENTATION:	None.
OBSERVATIONS:	During the winter of 2004/2005, the culvert at the outfall section became plugged with ice, requiring regular "steaming" and ice removal from the upstream side of the culvert to allow water flow. This performance was similar to past performance in this area. In 2005, water diversions above the north area of the Faro Main pit were upgraded, which will improve the diversion of clean water away from the pit and into the catchment area of the North Wall Interceptor Ditch.
MAINTENANCE	
RECOMMENDATIONS:	Continue "steaming" of the culvert within the Outfall section to ensure passage of water throughout the winter. Depending on the performance of the culvert during the winter of 2005, additional work may be warranted.
CONCLUSIONS:	Selected sections were inspected, including the Outfall Section at the access road, and no concerns were noted. Overall, the NVWID appears to be performing acceptably.

During the May inspection, options for reducing the winter ice build up on the upstream side of the culvert were discussed. It was decided to try and increase the velocity of the water prior to flowing into the culvert in order to prevent the development of frazil ice. This was done in September by removing the organics further upstream of the culvert and by narrowing the pilot channel with riprap. The performance of this construction work will be reviewed over the winter of 2005/2006.

INTERMEDIATE DAM

LOCATION:	Located at the west end of the Intermediate Pond, immediately east of the Polishing Pond (see Drawing 2).
FUNCTION:	Retain tailings solids, supernatant water and run-off water. Drawings 14 to 17 provide photographs of the Intermediate Dam.
LENGTH:	650 m.
MAX HEIGHT:	32 m.
CREST ELEVATION:	1049.2 m; spillway elevation: 1047.7 m.
CREST WIDTH AND CONDITION:	6–7 m. The crest was repaired in 2003. The repairs consisted of the recommended crack filling and regrading (placement of about 250 mm of granular material on the crest). Some minor sinkholes and crest cracking occurred in the fill last year and are still apparent this year. The sinkholes were encountered in the crest near the center of the dam, the largest of which was 125 mm deep with a diameter of 400 mm. The cracking is occurring on the upstream side of the crest of the dam near the spillway. This area was subject to cracking prior to the placement of fill on the crest of the dam in 2003. The cracking is likely in response to frost effects and the low pond level.
SPILLWAY:	At the time of the May and September inspections, the pond level in the Intermediate Reservoir was lower than the spillway inlet. The condition of the emergency spillway remained unchanged from previous inspections. There are some areas of the spillway that have been disturbed as part of previous repair work at the spillway that were not returned to their original arrangements. Specifically, this includes crossing ramps and other disturbances to the base of the spillway. The spillway was surveyed in 2003/2004 and its hydraulic capacity assessed in 2004 (SRK 2004). Evaluation of the capacity of the Rose Creek hydraulic system is currently underway (BGC and nhc 2006) which will present recommendations for spillway repairs, if necessary.
RIPRAP:	The upstream riprap was in satisfactory condition. Small scarps were noted on the rip rapped toe of the road surface within the Polishing Pond early in 2005 due to ice plucking as the reservoir was lowered. The area was graded by site staff in the summer of 2005 to close the crack opened up by the ice action.

BACKSLOPE: 2:1 slope angle, 2.1:1 overall, including 20 m berm. The downstream slope of the dam was rehabilitated in 2003. The surface of the downstream face of the dam was generally smooth with no signs of bulges or seepage in 2005. In May, the downstream face was subject to the formation of extensive erosional gullies and the development of colluvial fans on the access road surface. The downstream face was regraded during the summer. However, minor erosional gullies and a small colluvium apron at the dam toe were already apparent during the September inspection. The excess debris and slough material at the toe should be removed (so the internal drain can work properly) and the gullies should be monitored next spring following runoff and thaw.

SEEPAGE: During this year's inspections, no signs of seepage were noted at the south abutment toe. This may be due to the slough material on the drain.

INSTRUMENTATION: Readings of the ID instruments for 2005 were obtained in May and September. Tabulated data and plotted records are presented in Appendix III and summarised in Table 8. The positions of these instruments are shown in section in Drawing 18.

Piezometers. The deep piezometer located in 91-ID3 continues to indicate an overall trend of declining pore pressures with time. It is inferred that the piezometer data reflects abutment conditions dominated by drainage from upslope, not the level of the tailings pond upstream of the dam. That inference is supported by the sudden increase in piezometric level of 2 m recorded by both tips in June 1992, which would be coincident with the spring freshet in the adjacent diversion channel. Therefore, the decline in piezometric pressure recorded by 91-ID3 may be related to better drainage associated with ongoing loss of permafrost in the abutment downstream of the dam.

- Additional general observations about the 2005 Intermediate Dam piezometric monitoring data include the following:
- Similar conditions to historical readings were observed in 94-IDC-1, 96-2 and P01-04.
- Lower than historical readings were observed in 96-1, 96-3, 96-4, 91-ID4, 91-ID6, 91-ID7 and P01-03.
- Pneumatic piezometer 91-ID6 indicates the presence of an upward hydraulic gradient.

- The data from the pneumatic piezometer 91-ID4 indicates the presence of a downward hydraulic gradient.
- Hydrostatic conditions exist within the nested standpipe piezometers located at; P96-3, P96-4 and P01-04.
- Piezometers 94-IDC-1 and the shallow piezometer tip at 91-ID3 are both recording dry conditions.
- Pneumatic piezometer 91-ID5 has not worked since May 1999. Readings were attempted in 2005 and it is recommended that monitoring of this instrument be discontinued.
- The piezometric information from P01-04 indicates pore pressures within the foundation of the dam and not the pore pressures within the dam itself.
- Piezometers BKS04-06 and BKS04-07 are dry.

MAINTENANCE

RECOMMENDATIONS: The following maintenance/monitoring requirements are recommended:

- As recommended in the OM&S manual (BGC 2004), "trigger levels" for instruments at this dam should be established. Deloitte has requested proposals for completion of this work in 2006.
- Monitor the crest cracking of the dam for deteriorating conditions following thaw.
- Monitor the erosional gullies that have formed on the downstream slope.
- All excess slough and debris accumulated at the toe of the downstream face should be excavated/graded off.
- Two small sinkholes, previously noted and painted, may be settling slightly. They should be backfilled and graded over.
- Continue to monitor for seepage discharge at the south abutment.
- The small shrubs that are accumulating at the upstream edge of the crest should be removed.

CONCLUSIONS:

Overall, the Intermediate Dam appears to be performing in an acceptable manner. The piezometers and monitoring wells along the toe of the dam indicate a piezometric surface ranging between 2.2 and 4.3 m below ground surface (bgs). The piezometers and monitoring wells installed at the crest of the dam indicate a piezometric surface ranging from 19.2 to 21.1 m bgs. The piezometer in the south abutment of the dam indicates drained conditions in the upper 7 m. The deep tip (15.2 m bgs) in the south abutment indicates pore pressures at depth are continuing a declining trend. It is recommended that monitoring of all functional piezometers and monitoring wells in the Intermediate Dam continue in 2006.

CROSS VALLEY DAM

LOCATION:	Immediately west of the Polishing Pond, at the downstream (western) limit of the Rose Creek Tailings Area (see Drawing 2).
FUNCTION:	Designed to have capacity for 60-day retention of seepage/discharge water from the intermediate dam. Used as a polishing pond and later for treatment residue retention. Drawings 19 through 21 provide photographs of the Cross Valley Dam (CVD).
LENGTH:	500 m.
MAX HEIGHT:	17 m.
CREST ELEVATION:	1033.1 m
CREST WIDTH AND CONDITION:	6–7 m. Cracking noted in the centre of the crest along a majority of its length. Some minor crest cracking located near upstream side of rip rap.
SPILLWAY:	Elevation: 1031.7 m. At the time of the May inspection, the upstream pond was 2 m lower than the inlet elevation for the spillway. During the inspection, no water was being transferred from the polishing pond. The inlet to both the spillway and pilot channel were in satisfactory condition, based on the visual inspection. The capacity of the spillway was calculated in 2005 (nhc 2005) based on survey information collected in 2004 and 2005.
RIPRAP:	The riprap on the upstream face and in the spillway channel appear to be in satisfactory condition.
BACKSLOPE:	2:1 slope angle. The downstream face appears to be in satisfactory condition, with no seepage, cracking or deformation noted.
SEEPAGE:	The 2005 data and the historic summary of weir flows are presented in Tables 9 and 10. Weir flows for 2005 are summarised on Drawing 22. Drawing 23 presents flow rate data for Weir X13 together with the year-by-year trend in mean annual seepage rate. The Weir X13 quantity is approximately equal to the combined flow volumes of X11, X12 and W3, but a difference exists between the calculated combined flow rates and the flow rate, as presented in Table 9. This difference is due to contributing surface run-off or from additional groundwater flow which comes to surface downstream of the seepage trench.

The north portion of the seepage collection trench, as measured by Weir X-11, produces the most seepage water. Additionally, this area has artesian pressures at depth. This performance is consistent with past performance. It is thought that this area experiences high pressures and seepage due to it being located near the location of the creek prior to the construction of the dam.

In 2005, maintenance activities were conducted on the weir plates below the Cross Valley Dam. All weirs were calibrated and staff gauges were set to report the correct H values. Maintenance was conducted in August and September, and corrections were applied to all of the data from 2005. The corrected data produced lower flow rates than the previous calculations. Therefore, calculated results from the past few years may have been slightly higher than the actual flow rates. Details of the maintenance activities can be found in Appendix I.

The average 2005 flow rate at Weir X13 is 28 l/s, which is lower than the 35 l/s recorded in 2004. The difference between the 2005 flow rates and the 2004 flow rates is the result of the following: the weir maintenance, on going reduction in the seepage and the lower water levels in the polishing pond. As displayed on Drawing 22 the data from 2005 continues the trend of lower seepage rates at this dam. Data collection should continue to monitor this trend. This reduction in seepage may be reflective of changes within the granular toe drain (e.g. clogging) but this is unlikely since the pressures are not increasing in a corresponding manner. The lower seepage amounts are thought to be due in part to the lower pond levels in the polishing pond. It is also possible that a low permeability sludge layer may be developing at the bottom of the pond as a result of the water treatment process, further reducing the seepage rates through the dam.

INSTRUMENTATION: Readings of the CVD instruments for 2005 were obtained in February, May, September and October. Tabulated data and plotted records are presented in Appendix III and summarised in Tables 9 through 12. The positions of these instruments are shown in section in Drawing 24.

Piezometers. Low pore pressures within the foundation and cut-off trench of the dam are indicated by readings taken at instruments CVDC-4, CVDC-7 and CVDP-6. Slightly higher pore pressures are observed at instrument CVDC-9. Higher pore pressures recorded at CVDC-9 are likely related to the fact that the instrument is located in the approximate area of the former Rose Creek channel. Instruments CVDP-1, CVDP-3, CVDP-5, CVDT-1 and P01-11 along the dam toe indicate artesian or near artesian pressures, as observed in previous monitoring.

Additional general observations with regards to the 2005 Cross Valley Dam piezometric monitoring data include the following:

- Instrument 94CVDC-1 indicates the piezometric surface within the core of the dam is approximately 10 m below the surface of the dam.
- Piezometer CVDP-2 malfunctioned twice in 2005. The data from 2005 is suspect and will be reviewed once 2006 data is collected, likely this instrument will be abandoned.
- Upward gradient conditions exist in the crest at the location of the nested standpipe piezometer CVDC-7.

Thermistors. The 2005 readings indicate the ground temperatures at depth appear to be stable in Thermistors CVDC-6 and BH-88-4. The thermistor beads at 21 and 29 m depth in CVDC-6 appear to be malfunctioning and therefore have been ignored.

Data collected in the spring from piezometer BH-88-4 indicates that winter frost penetration extends to a depth of approximately 3.4 m at this location.

MAINTENANCE

RECOMMENDATIONS: No maintenance is required, but some monitoring is noted:

- Monitor the cracking in the crest of the dam following thaw.
- Check the flows measured at the weirs to ensure accuracy following the 2005 repairs.

CONCLUSIONS:

The piezometric pressures recorded from the instrumentation in the Cross Valley Dam indicate that pore pressures remain consistent with previous years' readings. Instrument 94CVDC-1 indicates the piezometric surface within the core of the dam is approximately 10 m below the surface of the dam (approximately 1022.9 to 1023.8 m).

Geothermal instrumentation within the CV Dam indicates that no permafrost is encountered within the foundation of the dam and winter frost penetration is observed to be approximately 3.5 m below the crest.

Overall, the dam is exhibiting acceptable piezometric and geothermal performance which is consistent with the historical monitoring at this dam. Continued monitoring of the seepage weirs and functioning instruments in the CV Dam is recommended for 2006.

NORTH FORK ROCK DRAIN (NFRD)

LOCATION:	West of the waste rock piles, part of the haul road that extends to the Vangorda pit (see Drawing 1).
FUNCTION:	The NFRD was designed to transmit the water flow of the North Fork Rose Creek through the haul road. Drawings 25 and 26 provide photographs of the rock drain.
MAX HEIGHT:	+/- 55 m
CREST ELEVATION:	1143.9 m
CREST WIDTH AND CONDITION:	+/- 25 m
UPSTREAM FACE:	Minor channelized erosion and related sloughing is occurring on the upstream side of the rock drain. Some woody debris and silty materials have collected at the base of the upstream face.
BACKSLOPE:	Channelized erosion and related sloughing is occurring on the upstream side of the rock drain due to runoff from the crest haul road.
SEEPAGE:	Head pond level was relatively high (equal to 2004 highest pond level) during the May inspection but the drain appears to be passing the flows in a satisfactory manner.
INSTRUMENTATION:	A sensor and datalogger are located in the pond to measure pond water elevations. A benchmark was established on the upstream side of the pond to allow regular pond elevation surveys. A benchmark was established at the toe of the drain to measure the water elevation as it exits the downstream toe of the drain. Three staff gauges and a sensor with datalogger is located near the main access road, at environmental station X2, to measure the discharge in the creek. The results of this monitoring is presented in a separate report by BGC (2006a).

MAINTENANCE

RECOMMENDATIONS: None required. Removal of the woody debris on the upstream side of the NFRD is suggested since this material is blocking the inlet of the drain to some degree. Monitoring at a reduced schedule is recommended.

CONCLUSIONS: The flow-through rock drain was observed during the site inspections. The discharge area was observed to be flowing clear water from the downstream side. No evidence of significant instability on the slope above the discharge area, other than some old cracks along the top edge of the crest and a minor slough on the upstream face, was observed. On this basis, it appeared that the downstream portion of the causeway section was functioning as intended, and that its performance was not deteriorating.

In 2005, the performance of the NFRD was evaluated by BGC. A review of the typical year-to-year hydraulic performance of the NFRD was recommended in the 2003 Annual Geotechnical Inspection Report (BGC 2004b). Prior to the 2005 evaluation, the last detailed review of the structure was in 1993. Results of the 2005 evaluation can be found in BGC (2005a). The evaluation determined that the hydraulic performance of the rock drain continues to meet performance requirements and is showing no signs of deteriorating.

FARO CREEK DIVERSION CHANNEL

LOCATION:	Top of the east wall of the Faro Pit (see Drawing 1).
FUNCTION:	The channel transmits creek water, which previously flowed directly through the pit area, over to the North Fork Rose Creek upstream of the rock drain. Drawing 27 provides photographs of the diversion channel.
LENGTH:	+/- 1,500 m with an elevation loss of approximately 21 m.
INSTRUMENTATION:	None.
OBSERVATIONS:	A portion of the road adjacent to the channel near the Faro Valley dump was raised in 2005. This work was undertaken by Mine site staff. A new berm was constructed on the downhill side of the canal dike access road. The purpose of the berm is to prevent overland surface run-off and related ravelling of proximal overburden at the edge of the Faro pit. Monitoring of the regression distance and rate is necessary to determine when the channel was compromised. Retrogression of the soil slope between the access road and the edge of the Faro Pit appears to be less than in past years. A detailed review of the stability of the pit wall was performed in 2005 (Golder 2006).
RIPRAP:	Some slight movement of pilot channel rip rap has occurred.
MAINTENANCE	
RECOMMENDATIONS:	No maintenance is required. Monitoring recommendations contained in Golder 2006 should be initiated in 2006.
CONCLUSIONS:	There were no notable concerns of the condition of the channel in 2005.

SELECTED WASTE ROCK DUMPS

LOCATION: Southeast of the Faro Main Pit (see Drawing 1), overlooking North Fork of Rose Creek. Drawing 28 provides photographs of the waste rock dumps.

MAX HEIGHT: Variable

INSTRUMENTATION: None.

MAINTENANCE

RECOMMENDATIONS: No maintenance is required.

CONCLUSIONS: Selected northeast waste rock dumps overlooking the North Fork of Rose Creek were inspected during the September site visit. Selected portions of the toe area and crest edges were inspected. No signs of new crest cracking, toe bulging or significant slope instability were noted.

Visual inspection of the waste dumps should be performed in 2007.

SECONDARY TAILINGS IMPOUNDMENT (EAST OF DIVERSION DAM)

LOCATION:	Located on the east side of the Down Valley project area. The east leg of the Secondary Tailings Dam is directly adjacent to either the North Fork of Rose Creek or the original portion of the RCDC. See Drawing 3.
FUNCTION:	Retain tailings solids, supernatant water and run-off water from flowing into the Rose Creek Diversion Canal. Drawings 29 to 31 provide photographs of the Secondary Dam and Tailings Impoundment.
LENGTH:	Approximately 1120 m.
MAX HEIGHT:	Approximately 28 m.
CREST ELEVATION:	Varies from 1060.2 m to 1063.3 m.
CREST WIDTH AND CONDITION:	6.1 m, capped with a protective layer of sand and gravel fill.
SPILLWAY:	N/A
BACKSLOPE:	2:1 slope angle.
SEEPAGE:	During this year's inspections, no signs of seepage were noted at the Secondary Dam.
INSTRUMENTATION:	Readings of the Secondary Tailings Impoundment instruments for 2005 were obtained in June, August and September. Tabulated data and plotted records are presented in Appendix III and summarised in Table 13. The piezometric data for the P03 series of instruments was supplied by Gartner Lee and is supplied in Appendix III.

Piezometers. Readings were taken from six piezometers in the Secondary Dam and Impoundment Areas. The readings acquired in 2005 are the only readings on record. Therefore, no long term trends can be identified.

The three piezometers within the Secondary Dam: P81-06, P81-07 and P81-08, recorded dry conditions in 2005.

The three piezometers within the tailings impoundment and near to the eastern portion of the secondary dam, P03-01, P03-02, and P03-03, indicated conditions at or near hydrostatic at an elevation of approximately 1054 m to 1055 m amsl.

MAINTENANCE

RECOMMENDATIONS: The upstream crest berm needs to be re-established at the north abutment to prevent crest overtopping and downstream face erosion. It is understood that this maintenance work has been completed by site personnel following the September site visit by BGC.

CONCLUSIONS: Based on the piezometric information available, the elevation of the water table in the secondary tailings impoundment ranges from approximately 1054.4 m to 1055.3 m, depending on seasonal variability. The elevation of Rose Creek in the Diversion Canal along the east arm of the Secondary Dam is approximately 1054.1 m. Under these conditions, and assuming a uniform head loss between the tailings and the water levels in the Diversion Canal, the piezometric levels in the Secondary Dam should be at an elevation of approximately 1054.3 m, but were dry since the piezometers terminate above this elevation. The geometry and piezometric assumptions mentioned above are conceptually illustrated on Drawing 32.

The low piezometric levels in the secondary tailings impoundment is a result of the long term “drain down” in the tailings area and appears to be reflective of the overall valley piezometric conditions.

Overall, the Secondary Dam and Tailings Impoundments is performing in an acceptable manner. The piezometers and monitoring wells installed at the crest of the dam indicate dry, well drained conditions. It is recommended that monitoring of all functional piezometers and monitoring wells in the Secondary Dam and Tailings Impoundment continue in 2006.

5.0 INSTRUMENTATION, MONITORING AND ANNUAL REVIEW

5.1 Instrumentation Readings

The frequency of readings of the instrumentation has been greatly reduced from the initial practice of quarterly observations because confidence in the performance of the structures has been substantiated by accumulated data. Drawing 33 provides a schedule of readings for 2006 for the major structures, broken down by month. As has been the case over the last several years, all instrumentation data collected by site staff should be immediately forwarded to BGC for review.

If any rapid lowering of either reservoir in the Down Valley is expected, then BGC should be consulted and changes to the monitoring program may be made.

It is recommended that the pond levels on the upstream side of the flow-through causeway be measured and correlated to measured flow in the North Fork of Rose Creek. The two dataloggers, located in the pond and downstream of the flow-through causeway at X2, should be downloaded periodically to ensure they are functioning properly. These electronic readings should be supplemented with manual readings at the pond, downstream toe and at station X2.

5.2 Routine Inspections by On-Site Personnel

Any change in condition that is noted as a consequence of this program of routine inspection must be brought immediately to the attention of the inspector's superiors. BGC must also be notified so that the condition can be evaluated in light of the database and prior performance history of the structures, and to provide any necessary geotechnical advice related to the concern at hand. Photos of the changed condition should be taken and forwarded to BGC.

5.2.1 Rose Creek Diversion Canal

It is important that current site staff continue with their inspection program as described below, and that a log of observations be maintained:

1. To inspect the Rose Creek Diversion Channel before run-off to ensure any snow and/or ice blockages are removed.
2. To inspect, on a monthly basis, the 400 m reach of the Diversion Canal dike crest immediately upstream of the Intermediate Dam for evidence of cracking.
3. To view on a monthly basis, the opposite side of the Diversion Canal from the canal dike looking for change to the top profile of the gravely backslope, possible narrowing of the flow channel, and other changes which might be attributed to sloughing of the backslope.

4. To inspect in June, just after spring runoff is completed, the top of the thermal liner on the backslope of the Diversion Canal at the location situated about 500 m upstream of the Intermediate Dam; such inspection to determine if new (sharp-edged) cracking has developed.

5.2.2 Intermediate Dam

Weekly inspections should continue at the abutments of the Intermediate Dam for evidence of: changing conditions (sloughing of the embankment fill and/or the adjacent slopes); active crest cracking; and for evidence of changing seepage rates (especially the south abutment toe seepage) and locations.

The Intermediate Dam Pond levels should be noted and recorded on a weekly basis. Consideration should be given to automating this task through the installation of pore pressure transducers and dataloggers so that continuous data may be collected. Any pressure transducer must be able to withstand the water environment within the pond.

5.2.3 Cross Valley Dam

Weekly inspections should continue at the Cross Valley Dam's abutments and downstream toe berm culverts. The abutments should be inspected for evidence of: changing conditions (sloughing of the embankment fill and/or the adjacent slopes); active crest cracking; and for evidence of changing seepage rates and locations. The downstream toe berm culverts should be inspected for consistency of flow rate.

The Polishing Pond levels should be noted and recorded on a weekly basis. Consideration should be given to automating this task through the installation of pore pressure transducers and dataloggers so that continuous data may be collected.

5.2.4 North Fork Rose Creek Flow-Through Causeway

Additional data should be collected in 2006 as detailed in Section 5.1. This additional data should include pond levels, water levels at the downstream toe of the drain, and flow downstream of the drain. Headpond water level observations for both the causeway and the road culvert downstream should be downloaded periodically from the dataloggers to ensure they are functioning properly. If there is a problem with the dataloggers or the quality of the data, manual surveys of the water levels will be required. Data during periods of high flow is particularly important and, as a minimum, the headpond should be viewed weekly in the late afternoon for the period from about April 15th until June 30th.

The upstream and downstream faces of the rock drain should also be inspected monthly for any signs of instability or sloughing.

5.2.5 Faro Creek Diversion Canal

Continue with both visual and survey monitoring of the overburden ravelling proximal to the access road and diversion channel. Assess if the average ravelling rate noted by Golder (2005) is appropriate or if conditions have changed following rehabilitation of the channel. The monitoring program recommended by Golder should be implemented.

Visual inspection of the access road and channel sections for cracks and for overburden ravelling overlooking the Faro Pit should be undertaken monthly from May until October. Any signs of deformation should be forwarded to BGC for comment.

5.2.6 Faro Waste Rock Dumps

Continue visual monitoring of dump slope by site staff. It is also recommended that the inspection of the Faro waste dumps be undertaken again in 2007.

5.2.7 Secondary Tailings Dam – East Leg

Continue visual monitoring of the crest and the toe of this dam on a weekly basis by site staff. Monitoring of the instrumentation within this structure should continue.

5.3 Annual Reviews

As has been noted in previous annual reports, the performance monitoring and annual inspections of facilities has served as a basis for:

- a. judging current performance of the facilities;
- b. providing some forewarning of any trends towards potentially troublesome performance;
- c. adjusting the frequency of observation of instrumentation;
- d. recommending the installation of additional instrumentation; and
- e. undertaking maintenance work.

In keeping with the important nature of these facilities, and the inherent value of keeping a comprehensive performance record, it remains prudent to continue with the data acquisition. As such, Drawing 33 provides a proposed schedule of instrumentation monitoring for 2006. The collection of current data is of both immediate and ongoing value, to review such data in relation to the existing database and to visually inspect the works on an annual basis for evidence of deteriorating or deficient performance.

Annual inspections in 2006 should be performed in late June and early September, in keeping with the schedules held for previous inspections, and for the advantage of consistency of conditions.

6.0 CLOSURE

This report summarizes the physical conditions as observed by BGC and the instrumentation results as collected by site staff on various mine waste facilities and structures at Faro Mine. Thank you for the opportunity to be of service to Deloitte & Touche and Faro Mine. Should you have any questions on this report, please contact BGC at your convenience.

Respectfully submitted,
BGC Engineering Inc.
per:

Mike McCrank, E.I.T. (AB)
Geological Engineer-in-Training

Gerry Ferris, M.Sc., P.Eng. (AB)
Geotechnical Engineer

James W. Cassie, M.Sc., P.Eng.
Specialist Geotechnical Engineer

REFERENCES

- BGC Engineering Inc. 2003. Emergency Preparedness Plan for Selected Dams and Water Diversion Structures. Submitted to Deloitte and Touche Inc., October 20, 2003.
- BGC Engineering Inc. 2004. Operations Maintenance & Surveillance Manual for Selected Dams. Interim Final Draft Manual submitted to Deloitte and Touche Inc., February 1, 2005.
- BGC Engineering Inc. 2005a. Rose Creek Diversion Canal, Dike Upgrade, As-built report. Submitted to Deloitte and Touch Inc., June 29, 2005
- BGC Engineering Inc. 2005b. NVWID Outfall section culvert, As-built report. Submitted to Deloitte and Touche Inc., June 28, 2005
- BGC Engineering Inc. 2005c. 2004 Annual Geotechnical Evaluation & Instrumentation Review. Various Facilities at Faro Mine, Yukon. Report submitted to Deloitte and Touche Inc., Project No 0257-022-06, February, 2005.
- BGC Engineering Inc. 2006 Task 8 – Instrument repair and replacement. Report submitted to Deloitte and Touche Inc. February 16, 2006
- BGC Engineering Inc. and Northwest Hydraulic Consultants Inc. 2006 Review of the hydraulic capacity of the structures within the Rose Creek tailings area. Report under preparation for Deloitte and Touche Inc.
- Golder Geotechnical Consultants Ltd. 1980. Final Design Recommendations for the Down Valley Tailings Disposal Project, Faro, Yukon Territory. Report No. 792-2025 submitted to Cyprus Anvil Mining, three volumes, June, 1980.
- Golder Associates 1982. Down Valley Tailings Containment Project, 1980-81 Construction, Faro, Yukon. Report 802-2038 submitted to Cyprus Anvil Mining Corporation, February 1982, three volumes.
- Golder Associates Ltd. 2004. Detailed Comparison of Alternatives for the Relocation of the Faro Creek Diversion, Faro, YT. Report submitted to Deloitte and Touche Inc., Project No. 022-1497/4000, February 5, 2004.
- Golder Associates Ltd. 2006 Faro Pit slope movement monitoring. Letter report submitted to Deloitte and Touche Inc.
- Klohn Crippen Consultants Ltd. 2005. Anvil Range Mining Complex, Yukon, Rose Creek Tailings Impoundment, Seismic Stability Assessment. A report in preparation for Deloitte & Touche Inc.

Northwest Hydraulic Consultants Inc. 2005 Revised 500 year Initial Hydraulic Assessment, Intermediate and Cross Valley Dams. Draft report submitted to Deloitte and Touche Inc.

SRK Consulting Inc. 2004. Dam Safety Studies for the Intermediate Dam, Anvil Range Mining Complex. Report submitted to Deloitte and Touche Inc.

TABLES

Table 1
Summary of Polishing Pond and Intermediate Pond Levels

DATE	Cross Valley Pond Elevation (m amsl)	Intermediate Dam Pond Elevation (m amsl)
January 4, 2005	1029.750	1047.153
January 17, 2005	1029.879	1047.180
January 25, 2005	1029.940	1047.185
February 3, 2005	1030.030	1047.210
February 10, 2005	1030.080	1047.220
February 17, 2005	1030.134	1047.232
February 22, 2005	1030.176	
February 23, 2005	1030.045	
February 24, 2005	1029.854	1047.250
February 25, 2005	1029.683	
February 26, 2005	1029.525	
February 27, 2005	1029.355	
February 28, 2005	1029.185	
March 2, 2005	1029.030	
March 3, 2005	1028.940	1047.250
March 6, 2005	1028.580	
March 7, 2005	1028.443	
March 8, 2005	1028.340	
March 9, 2005	1028.195	
March 10, 2005	1028.180	1047.258
March 11, 2005	1028.050	
March 12, 2005	1027.885	
March 13, 2005	1027.745	
March 14, 2005	1027.605	
March 15, 2005	1027.457	
March 16, 2005	1027.280	
March 18, 2005	1027.018	
March 21, 2005	1026.580	
March 22, 2005	1026.453	
March 23, 2005	1026.307	
April 4, 2005	1026.630	
April 7, 2005	1026.702	1047.270
April 22, 2005		1047.271
April 25, 2005		1047.195
April 26, 2005		1047.230
May 2, 2005	1027.923	
May 3, 2005	1027.847	
May 4, 2005	1027.742	1047.280
May 5, 2005	1027.625	1047.280
May 9, 2005	1027.382	
May 10, 2005		1047.208
May 16, 2005	1027.250	
May 24, 2005	1028.265	1047.012
May 25, 2005	1028.313	
May 26, 2005	1028.310	
May 30, 2005	1028.213	
June 1, 2005	1028.213	1046.810
June 6, 2005	1028.145	1046.690
June 8, 2005	1028.128	1046.852
June 13, 2005	1028.134	1046.490
June 20, 2005	1028.183	1046.321
June 27, 2005	1028.343	1046.042
June 29, 2005	1028.290	1045.975
June 30, 2005	1028.245	1045.995
July 5, 2005	1028.070	1046.060
July 8, 2005	1028.015	
July 11, 2005	1028.021	1046.212
July 18, 2005	1027.840	1046.385
July 26, 2005	1027.885	1046.500
August 1, 2005	1027.568	1046.565
August 8, 2005	1027.470	1046.634
August 15, 2005	1027.335	1046.670
August 22, 2005	1027.202	1046.717
August 29, 2005		1046.780
August 30, 2005	1027.270	
August 30, 2005	1027.140	
September 7, 2005	1027.395	1046.516
September 12, 2005	1027.540	1046.370
September 19, 2005	1027.670	1046.170
September 22, 2005	1027.525	1046.090
September 26, 2005	1027.254	1046.001
September 27, 2005	1027.174	
September 29, 2005	1026.949	
October 3, 2005	1026.540	1046.113
October 5, 2005	1026.325	
October 12, 2005	1026.564	1046.180
October 17, 2005	1026.714	1046.230
October 24, 2005	1026.920	1046.270
October 31, 2005	1027.115	1046.320
November 16, 2005	1027.515	1046.438
December 15, 2005	1028.032	1046.54

TABLE 2
TOTAL MONTHLY PRECIPITATION (mm) AT FARO AIRPORT, YUKON

Year	Jan	Feb.	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total (mm)
1978	0.4	miss.	trace	4.1	11.6	27.0	38.1	41.6	7.8	32.4	20.2	19.0	
1979	8.9	18.3	20.2	6.7	10.5	68.2	55.4	13.8	13.4	11.6	12.4	34.4	273.8
1980	19.7	2.4	11.7	12.5	10.5	11.1	95.4	33.2	46.7	miss.	21.3	13.3	
1981	6.5	23.1	4.0	4.5	7.8	42.8	41.3	22.5	41.9	21.5	17.0	5.4	238.3
1982	10.2	18.0	9.5	4.1	18.2	14.3	58.3	47.3	47.2	42.3	11.8	13.6	294.8
1983	35.7	6.6	9.8	2.2	20.6	55.6	49.1	65.8	21.2	16.3	11.4	3.9	298.2
1984	27.6	24.1	5.9	2.4	38.8	49.0	16.6	64.9	5.5	10.8	10.7	22.5	278.8
1985	22.5	24.8	2.2	13.8	17.2	28.1	62.6	80.8	46.3	20.0	22.2	26.1	366.6
1986	8.4	4.7	34.6	12.9	35.1	12.8	81.8	77.4	44.4	22.7	15.9	5.6	356.3
1987	3.1	14.0	2.8	10	40.1	50.8	92.4	63.5	30.2	26.6	17.8	6.2	357.5
1988	7.0	10.4	17.2	8.2	38.0	37.3	97.2	25.5	43.8	29.0	17.9	16.5	348.0
1989	19.8	3.6	19.8	2.0	17.9	41.0	51.7	16.9	30.8	46.3	39.8	13.8	303.4
1990	14.4	25.8	5.0	7.0	23.4	45.4	30.0	64.4	66.2	22.7	25.4	24.8	354.5
1991	17.2	22.6	16.6	2.8	22.4	30.2	115.4	33.0	48.2	49.6	43.4	40.0	441.4
1992	22.8	24.6	7.6	15.8	14.4	11.4	66.1	34.4	47.8	13.8	18.8	13.0	290.5
1993	22.2	15.0	1.6	6.0	76.7	48.6	50.2	56.0	50.8	35.7	miss.	miss.	
1994	20.2	8.4	11.4	5.0	39.8	24.2	19.6	25.2	45.6	41.6	24.4	8.0	273.4
1995	8.4	7.8	18.4	5.2	10.9	33.9	73.4	63.4	28.8	12.2	22.3	15.4	300.1
1996	10.2	9.1	27.1	7.2	13.4	20.0	64.4	70.8	52.7	34.8	3.5	5.9	319.1
1997	6.6	8.7	1.4	14	16.5	39.3	86.4	33.2	trace	25.2	6.4	12.4	250.1
1998	7.0	2.8	4.8	4.2	14.4	29.6	19.2	24.2	23.4	24.0	4.6	8.2	166.4
1999	24.4	10.0	15.4	1.8	44.4	64.8	42.0	33.8	27.0	22.4	12.8	21.6	320.4
2000	12.2	2.0	trace	6.0	9.6	39.6	48.1	116.2	102.2	8.6	19.4	5.8	369.7
2001	7.4	3.0	4.0	14.6	30.8	35	58.4	14.2	44.6	28.6	12.2	15.4	268.2
2002	9.2	5.8	9.0	7.0	19.6	19.4	34.9	64.1	38.4	18.2	9.6	9.4	244.6
2003	22.4	8.0	16.0	0.4	7.6	45.2	63.2	30.4	30.8	12.8	32.8	19.9	289.5
2004	31.1	11.4	45.0	4.0	15.6	34.0	13.5	38.0	48.5	33.6	9.8	45.0	329.5
2005	26.7	12.4	2.6	19.5	58.6	41.0	83.8	38.6	36.6	13.0	30.0	10.8	373.6
Max	35.7	25.8	45	19.5	76.7	68.2	115.4	116.2	102.2	49.6	43.4	45	
Year	1983	1990	2004	2005	1993	1979	1991	2000	2000	1991	1991	2004	
Mean	15.4	11.7	11.6	7.3	24.4	35.7	57.4	46.2	38.2	24.2	17.6	15.6	308.3
Min	0.4	2	trace	0.4	7.6	11.1	13.5	13.8	trace	8.6	3.5	3.9	
Year	1978	2000	1978	2003	2003	1980	2004	1979	1997	2000	1996	1983	
St.Dev	9.2	7.9	10.7	5.0	16.6	15.2	26.6	24.2	19.0	11.5	9.9	10.6	

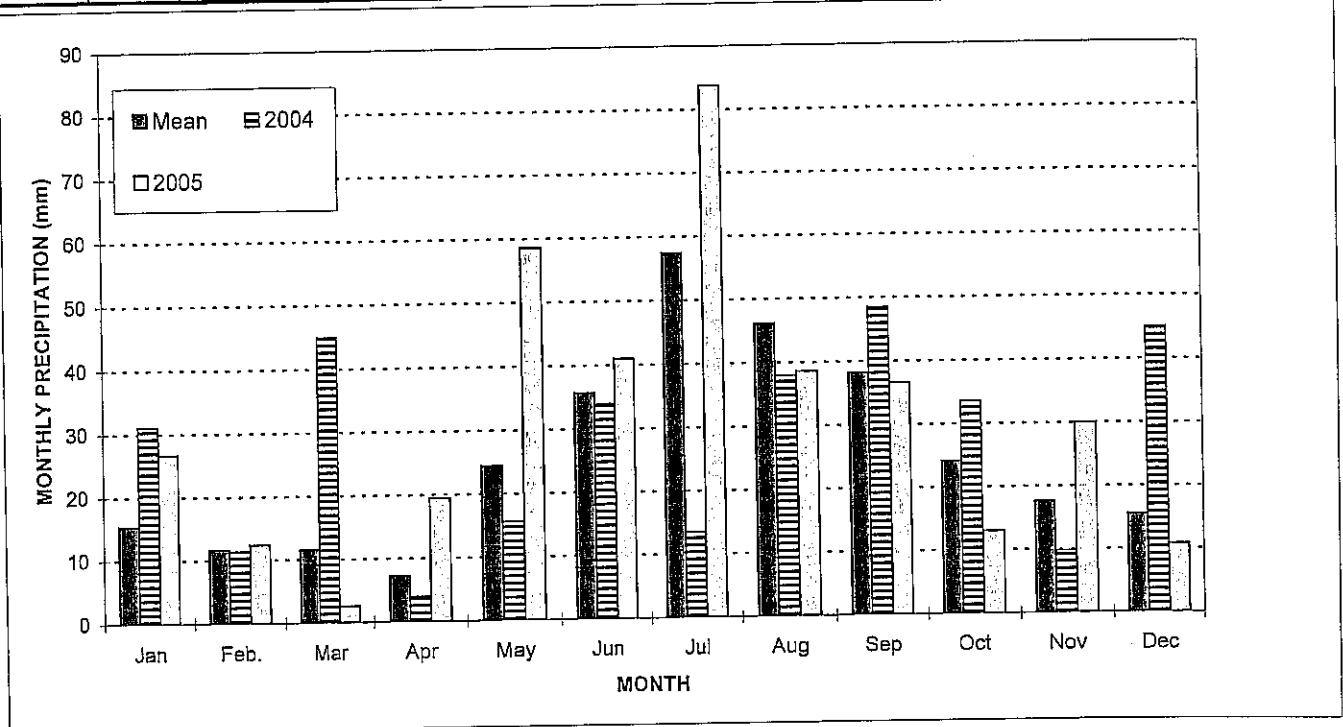


Table 3
Diversion Canal - Canal Dike - Piezometers

Installation	Date Installed	Standpipe (S) or Pneumatic (P)	# of Readings in 2005	Ground Elevation (m amsl)	Tip Elev. (m amsl)	Historic Low Reading/ Date	Historic High Reading/ Date	2005 Low Reading/ Date (Compared to 2004 Low)	2005 High Reading/ Date (Compared to 2004 High)	Comments
CD-10	1981	P	2	1056.4	1045.3	1045.97/ Mar 1982	1050.48/ Sep 1992	1048.22/ Sep 14 (+0.21)	1049.98/ May 31 (+0.7)	Readings consistent with previous data.
CD-13	1981	P	2	1055.2	1048.7/ 1044.7	1049.05/ Sep 1995 1047.57/ May 1982	1051.84/ Jun 2000, Jun 2001 1051.07/ Jun 2000, May 2005	1049.68/ Sep 14 (+0.07) 1050.30/ Sep 14 (+0.21)	1050.45/ May 31 (+0.49) 1051.07/ May 31 (+0.77)	Shallow piezometer no longer functioning properly. Historically the gradient was downward.
CD-15	1981	P	2	1054.9	1048.10/ 1043.30	1048.1 (dry)/ Nov 1981, Dec 1981, Sep 2001, Jun 2003 1043.31/ Dec, 1981	1051.25/ Oct 1985 1050.96/ Sep 2000	1048.52/ Sep 14 (+0.40) 1048.30/ Sep 14 (+0.14)	1048.94/ May 31 (+0.49) 1050.30/ May 31 (+0.98)	Normally an upward hydraulic gradient. Sub-zero temperatures at depth (thermistor CD-15) correlate with variable pressures at depth.
CD-21	1981	P	2	1053.45	1047.50/ 1042.00	1047.92/ Apr 1991 1042.28/ Nov 1988, May 1982 to Sep 1983	1052.26/ Jun 1992 1047.51/ Jun 1982	1048.13/ May 31 (-0.07) 1042.70/ May 31 (+0.07)	1048.41/ Sep 14 (+0.21) 1042.70/ Sep 14 (0.0)	Downward gradient, likely free drainage at depth. Pressures dropped in shallow piezometer from 1999 to 2003, stable from 2003 to 2005. Deep tip piezometer destroyed in 2005.
CD-26	1981	P	2	1053.1	1048.2/ 1042.0	1048.2/ Sep 1995 1042.5/ Sep 1995	1049.81/ Jul 1988 1043.61/ Jul 1988	1048.55/ May 31, Sep 14 (0.0) 1042.49/ May 31 (-0.14)	1048.55/ May 31, Sep 14 (-0.07) 1042.63/ Sep 14 (-0.07)	Downward gradient, likely free drainage at depth. Readings are very consistent since 2001.
BGC05-03 BGC05-02	2005	P	0	1054.68 1054.1	1050.64 1044.65	N/A	N/A	N/A	N/A	No readings available in 2005. Replaced former piezometer CD-19.
BGC05-06	2005	P	1	1050.31	1046.78 1041.50	1046.92/ Sep 2005 1041.71/ Sep 2005	1046.92/ Sep 2005 1041.71/ Sep 2005	1046.92/ Sep 14 (N/A) 1041.71/ Sep 14 (N/A)	1046.92/ Sep 14 (N/A) 1041.71/ Sep 14 (N/A)	Only one reading from 2005. Downward gradient, likely free drainage at depth. Replaced former piezometers 88-11. Conditions were similar to the former piezometer 88-11.

Note: Bold values correspond to deep tip readings.

Table 4
Diversion Canal - Canal Dike - Thermistors

Installation	Date Installed	Length of String (m)	# of Readings in 2005	Depth to Permafrost 2004 (depth below ground surface (m))	Depth to Permafrost 2005 (depth below ground surface (m))	Comments
CD-10	1981	10	2	Not observed within 9.9 m of ground surface.	Not observed within 9.9 m of ground surface.	A completely thawed profile was present in October 2005.
CD-15	1981	10	2	9.5	9.5	The data indicating subzero ground temperatures recorded at 3 m depth may be spurious.
CD-21	1981	13	2	Not observed within 13.0 m of ground surface.	Not observed within 13.0 m of ground surface.	Warming trend indicated at depth.
CD-26	1981	10	2	Not observed within upper 9.6 m of ground surface.	Not observed within upper 9.6 m of ground surface.	Warming trend indicated at depth.
BGC01-02	2001	13.9	1	Not observed within upper 13 m of ground surface.	Not observed within upper 13 m of ground surface.	Upper nodes malfunctioning. A completely thawed profile was present in May 2005.
BGC05-04	2005	11.9	0	N/A	No readings available.	No readings taken in 2005. Replaced thermistor CD-19.
BGC05-07	2005	11.4	0	N/A	No readings available.	No readings taken in 2005. Replaced thermistor 88-11.

Table 5
Diversion Canal - Canal Dike - Slope Indicators

Installation	Date Installed	Length of Casing (m)	# of Readings in 2005	Comments
CD-10	1981	10	0	Negligible movement since 1996. Not read in 2005.
CD-15	1981	10	2	Negligible subsurface movement since 1996. Minor surficial movement in upper 2 m.
91CD-1	1991	11	2	Negligible movement since 1996.
CD-19	1981	10	2	Some movement was detected in readings prior to 1998. This movement has previously been attributed to settlement of the dike and settlement of the SI casing in the borehole. Negligible movement since 1998.
CD-21	1981	10	2	Some movement was detected in readings prior to 1998. This movement has been attributed to settlement of the dike and settlement of the SI casing in the borehole. Indications of settlement have been observed at surface during the annual inspection since 1991.
BGC01-01 (88-10 replacement)	2001	12	2	Original depth of casing was 11.5 m bgs, but freezing activities often result in a maximum bottom depth of 10 m. Minor movement noted in the upper 10 m.
94CD-1	1994	14	1	Negligible subsurface movement since 1996. Surficial movements in upper 2 m.
BGC05-05	2005	11.5	1	Installed in 2005. Baseline reading was the only reading taken in 2005.
BGC05-08	2005	12.5	1	Installed in 2005 to confirm visual observations of settlement at the surface. Baseline reading was the only reading taken in 2005.

Table 6 Diversion Canal - Spoil Piles - Thermistors

Installation	Date Installed	Length of String (m)	# of Readings in 2005	Depth to Permafrost 2004 (m below surface)	Depth to Permafrost 2005 (m below surface)	Comments
SP-3	1981	10	1	Not observed with 10 m of ground surface	Not observed with 10 m of ground surface	Apparent warming trend at depth. Most thermistor tips malfunctioning.
SP-5	1981	10	0	-9.1	-	Not read in 2005.

Table 7 Diversion Canal - Spoil Piles - Slope Inclimeters

Installation	Date Installed	Length of Casing (m)	# of Readings in 2005	Comments
SP-2	1981	7.5	2	The DCSP has settled in the vicinity of SP-2, based on the distinctive shape of the deflection versus depth curves.
SP-5	1981	10	0	No movement at depth has been recorded since 1994. Minor surface displacements have been occurring in the upper 2 m since September 2000. No readings in 2005.

Table 8
Intermediate Dam - Piezometers

Installation	Date Installed	Standpipe (S) or Pneumatic (P)	# of Readings In 2005	Ground Elevation (in ans)	Tip Elev. (in ans)	Historic Low Reading/ Date	Historic High Reading/ Date	2005 Low Reading/ Date (Compared to 2004)	2005 High Reading/ Date (Compared to 2004)	Comments
91-ID3	1991	P	2	1043.82	1038.82/ 1028.82	1035.82/ Sep 95, Dec 98, Sep 00, Sep 02, Sep 03, May and Sep 05 1032.05/ Sep 2005	1039.23/ Jun 1992 1038.04/ Jun 1992	Dry/ May 26, Sep 14 (0.0) 1032.06/ Sep 14 (-0.19)	Dry/ May 26, Sep 14 (-0.07) 1034.50/ May 26 (-1.54)	Shallow tip dry both readings in 2005. Deep tip indicates declining pore pressures with high seasonal fluctuation. Downward gradient.
91-ID4	1991	P	2	1031.8*	1024.22/ 1017.08	1028.63/ May 1997 1027.66/ Sep 2005	1034.58/ Jun 1992 1031.85/ Sep 1992	1028.77/ Sep 14 (-1.47) 1027.66/ Sep 14 (-1.47)	1029.47/ May 26 (-1.19) 1028.28/ May 26 (-1.47)	Downward gradient, declining pore pressures since 2002.
91-ID5	1991	P	1	1031.94	1024.31 1017.08					Both tips are leaking, making the instrument inoperable. Tips should be replaced.
91-ID6	1991	P	2	1031.36	1024.8/ 1016.9	1026.83/ May 1997 1028.48/ Sep 2005	1031.74/ Jun 1992 1034.96/ Jun 1992	1027.32/ Sep 14 (-1.61) 1028.48/ Sep 14 (-1.44)	1027.95/ May 26 (-1.40) 1028.08/ May 26 (-1.18)	Upward gradient. Pore pressures declining since 1999.
91-ID7	1991	P	2	1032.42	1025.95	1029.52/ May 97, Sep 05	1032.20/ Feb 1992	1028.52/ Sep 14 (-1.36)	1030.22/ May 26 (-0.91)	Pore pressures appear to be declining since 1999.
94-IDC-1	1994	S	2	1049.21	1035.1 (approx)					Has recorded dry conditions since initial monitoring in 1994.
P96-1	1996	S	4	1049.15	1027.35	1028.01/ Sep 2005	1031.65/ Jun 1999	1028.01/ Sep 14 (-1.50)	1028.66/ May 26 (-1.48)	Piezometric Elev. Approx. 20 - 22 m bgs.
P96-2	1996	S	2	1049.22	1029.18	1028.27/ May 10, 2004	1031.94/ Jun 1999	1028.90/ Sep 14 (-0.03)	1029.99/ May 26 (-0.34)	Piezometric Elev. Approx. 18 - 20 m bgs.
P96-3	1996	S	2	1031.48	1022.43/ 1012.23	1027.58/ May 1997 1027.71/ May 1997	1031.38/ Jun 1999 1031.45/ Jun 1999	1027.77/ Sep 14 (-1.59) 1027.88/ Sep 14 (-1.54)	1028.47/ May 26 (-1.51) 1028.58/ May 26 (-1.48)	Piezometric Elev. Approx. 3.0 - 4.0 m bgs.
P96-4	1996	S	2	1032.16	1025.68 1020.86 1015.69 1003.82	1027.89/ May 1997 1029.23/ Sep 2003 1027.82/ Sep 2005 1028.15/ Sep 2005	1032.04/ Jun 2002 1032.08/ Jun 2002 1031.54/ Jun 1999 1031.75/ Jun 1999	1028.01/ Sep 14 (-1.54) 1029.28/ May 26 (-0.65) 1027.82/ Sep 14 (-1.78) 1028.15/ Sep 14 (-1.52)	1028.70/ May 26 (-1.25) 1029.28/ May 26 (-0.65) 1027.82/ Sep 14 (-2.14) 1028.83/ May 26 (-1.23)	Piezometric Elev. Approx. 2.5 - 4.5 m bgs.
P01-03	2001	S	2	1031.52	1022.35	1028.17/ Sep 2005	1030.63/ Sep 2001	1028.17/ Sep 14 (-1.51)	1028.85/ May 26 (-1.58)	Piezometric Elev. Approx. 2.5 - 3.5 m bgs. Historic lows recorded in 2005.
P01-04	2001	S	2	1032.32	998.17/ 978.89	1029.55/ Sep 2003 1029.56/ Sep 2005	1032.24/ May 2005 1032.17/ May 2005	1030.08/ Sep 14 (-0.87) 1029.56/ Sep 9 (-1.81)	1032.24/ May 26 (-0.65) 1032.17/ May 26 (-0.15)	Piezometric Elev. Approx. 0 - 3.0 m bgs; roughly equivalent to discharge at polishing pond level.
BKS04-05	2004	S	2	1049.1	1035	1036.46/ Sep 2005	1037.60/ May 2005	1036.46/ Sep 14 (N/A)	1037.60/ May 26 (N/A)	First full season of monitoring.
BKS04-07	2004	S	1	1049.2	1037.3	1037.72/ Sep 2005	1037.72/ Sep 2005	1037.72/ Sep 14 (N/A)	1037.72/ Sep 14 (N/A)	First full season of monitoring.

Note: Bold values correspond to deep piezometer tips

Table 9
2005 Cross Valley Dam Weir Flows

DATE	X13 (comb.) FLOW* (Lps)	X11 (North) FLOW* (Lps)	X12 (South) FLOW* (Lps)	W3 (Central) FLOW* (Lps)	X13-(X11+X12+W3) FLOW (Lps)
January 5, 2005	31.12	12.08	0.11	3.99	15
January 17, 2005	31.12	12.08	0.11	4.53	14
January 21, 2005	31.12				
January 24, 2005	31.12	12.08	0.52	4.53	14
January 31, 2005	31.12	13.10	0.52	5.10	12
February 3, 2005	31.12	13.10	0.52	5.10	12
February 8, 2005	31.12				
February 10, 2005	31.12	14.18	0.52	5.10	11
February 15, 2005	31.12	14.18	0.27	5.72	11
February 24, 2005	31.12		0.27	5.72	
March 3, 2005	27.84	11.10	0.11	4.53	12
March 10, 2005	24.69	9.30	0.03	3.99	11
March 14, 2005	21.67	7.68	0.00		14
March 17, 2005	21.67	5.59	0.00	3.50	13
March 24, 2005	18.79	4.42		3.50	11
March 29, 2005				3.50	
March 31, 2005	16.04	3.89	0.00	3.50	9
April 7, 2005	16.04	3.89	0.00	3.50	9
April 11, 2005	16.04				
April 14, 2005	16.04	4.42	0.00	2.62	9
April 21, 2005	21.67	6.94	0.03	2.62	12
April 28, 2005	34.51	20.34	0.27	3.50	10
May 5, 2005	41.64	26.25	0.27	3.50	12
May 9, 2005	34.51				
May 12, 2005	31.12	15.30	0.11	3.04	13
May 26, 2005	49.20	29.55	0.27	3.50	16
June 2, 2005	41.64	23.18	0.52	3.50	14
June 9, 2005	34.51	17.71	0.52	3.99	12
June 16, 2005	34.51	15.30	0.52	4.53	14
June 21, 2005	38.02				
June 23, 2005	41.64	13.10	0.52	4.53	23
June 30, 2005	34.51	14.18	0.52	4.53	15
July 7, 2005	31.12	11.10	0.52	3.99	16
July 14, 2005	31.12	11.10	0.52	3.99	16
July 21, 2005	31.12				
July 25, 2005	31.12	11.10	0.52	3.99	16
July 28, 2005	31.12	11.10	0.52	3.99	16
August 4, 2005	27.84	10.17	0.52	3.50	14
August 12, 2005	27.84	9.30	0.52	3.50	15
August 17, 2005		9.30	0.52	3.04	
August 23, 2005	21.67				
August 25, 2005	21.67	8.47	0.18	2.62	10
September 1, 2005	24.69	7.68	0.27	3.50	13
September 6, 2005	24.69				
September 15, 2005	21.67	6.11	0.21	3.31	12
September 22, 2005	24.69	9.13	0.21	3.79	12
September 29, 2005	24.69	6.80	0.21	3.31	14
October 6, 2005	18.79	5.47	0.21	3.31	10
October 11, 2005	18.79				
October 13, 2005	18.79	4.31	0.21	2.87	11
October 20, 2005	18.79	4.87	0.21	3.31	10
October 27, 2005	18.79	4.87	0.21	3.31	10
November 2, 2005	18.79				
November 3, 2005	18.79	5.47	0.21	3.31	10
November 10, 2005	18.80	6.83	0.31	3.33	8
November 17, 2005	21.67	8.34	0.31	3.81	9
November 25, 2005	24.69	10.96	0.44	3.81	9
December 1, 2005	27.84	12.95	0.59	3.81	10
December 15, 2005	27.84	11.93	0.77	4.89	10
December 22, 2005	27.84	12.95	0.77	4.33	10
December 28, 2005	31.12	14.02	0.77	4.89	11

*Flows calculated from standard weir formulas and applied to staff gauge levels.
Staff levels prior to September 2, 2005 corrected according to Laberge
Environmental Services (2005).

The difference of flow at X13 less (X11+X12+W3) is unaccounted for or due to
errors in measurement.

Table 10
CROSS VALLEY DAM SEEPAGE FLOWS - WEIR X13 (1982 - 2005)

YEAR	MEAN POND ELEVATION (m amsl)	MINIMUM FLOW RATE (month recorded) (L/s)	MAXIMUM FLOW RATE (month recorded) (L/s)	AVERAGE YEARLY FLOW RATE (L/s)
1982	1026.25	75.9 (Sept)	277.6 (June)	115.3
1984	1027.55	67.8 (Oct)	84.9 (Dec)	76.3
1985	1029.69	83.9 (Sept - Dec)	113.6 (Jul)	93.2
1986	1030.9	79.8 (May)	113.2 (Sept)	93.8
1987	~1030.9	77.0 (May)	106.1 (Aug - Sept)	94.4
1988	~1030.9	78.9 (Jun)	110.4 (Aug)	95.5
1989	~1030.9	72.3 (Mar)	97.9 (Aug)	85.7
1990	~1030.9	64.9 (Mar)	102.9 (Sept)	82.8
1991	~1030.9	66.6 (Oct)	91.0 (Jun)	81.6
1992	N/A	53.8 (Nov)	90.8	68.4
1995	1031.2	29.1 (Dec)	52.8 (Jun)	50.2
1996	1029.9 (Sep)	15.8 (Apr)	58.3 (Sep)	34.8
1997	N/A	30.0 (Apr)	109.9 (Sep)	28.6
1998	1030.5	49.0 (Dec)	119.0 (Sep)	52.7
1999	1030.7	44.0 (Feb - Sep)	82.0 (July)	53.6
2000	1031.5	35.0 (Nov)	78.0 (June 26)	48.7
2001	N/A	35.0 (Jan - Feb)	49 (Jun to Sep)	48.0
2002	N/A	38 (Oct - Nov)	49 (May to Sep)	46.4
2003	1029.7	28 (Sept - Oct)	46 (Jan to Mar)	38.1
2004	1029.8	31.6 (Apr, Sep to Dec)	49.5 (Jun)	35.3
2005	1028.0	16.0 (Mar - Apr)	49.2 (May)	27.3

- Notes:
1. For locations of weirs see Figure 1.
 2. Flows for 1983, 1984 and 1985 based on records for period June to December and flow for 1991 based on records for period January to November.
 3. High flow through Weir 3 in June, 1982 due to siphon discharge above weir.
 4. Weir 3 was replaced by X13 as a consequence of the seepage filter construction conducted in the summer of 1991.
 5. Drainage from west of south abutment road crossed to berm drainage collector during 1995 and perhaps in 1996; therefore some readings may higher than expected.
 6. Insufficient data for average pond level in 2001 - 2003 as water level was below staff gauge.
 7. Weir plates at X-11 and X-13 were replaced in August 2003.
 8. Weir maintenance and calibrations conducted in 2005.
 9. Mean pond elevation data from 1982-2003 converted from m advd to m amsl.

Table 11
Cross Valley Dam - Piezometers

Installation	Date Installed	Standpipe (S) or Pneumatic (P)	# of Readings in 2005	Ground Elevation (m amsl)	Tip Elev. (m amsl)	Historic Low Reading/ Date	Historic High Reading/ Date	2005 Low Reading/ Date (Compared to 2004 Low)	2005 High Reading/ Date (Compared to 2004 High)	Comments
CVDC-4	1981	S	5	1033.30	1007.9/ 999.7	1016.68/ Apr 1984 1016.72/ Apr 1984	1018.44/ Oct 1986 1019.05/ Jun 1992	N/A 1018.48/ Sep 14 (-0.23)	N/A 1018.81/ May 28 (-0.02)	Shallow piezometer blocked 7.6 m below top of pipe since 1987. Deep piezometer has been very consistent since 1992.
CVDC-7	1981	S	5	1033.24	1007.80/ 1002.90	1015.21/ Apr 1984 1017.17/ Apr 1984	1016.30/ Sep 1992 1019.21/ Jun 1992	1015.30/ Sep 14 (-0.25) 1017.43/ Sep 14 (-0.54)	1015.56/ May 26 (-0.08) 1018.04/ Feb 22 (-0.10)	Vary consistent readings in both piezometers. Upward gradient.
CVDC-9	1981	S	5	1033.28	1007.70/ 1000.70	1019.91/ Aug 1983 1021.18/ Jun 1984	1024.74/ Aug 1982 1025.61/ Jun 1992	1020.72/ Sep 14 (-0.38) 1023.08/ Sep 14 (-0.74)	1021.53/ Feb 22 (-0.15) 1024.03/ Feb 22 (-0.16)	Moderately higher pore pressures than in other places of the dam. Slight upward gradient.
CVDP-1	1982	P	4	1016.86	1014.51	1017.38/ Aug 1983	1019.55/ Sep 1992	1018.15/ Sep 14 (-0.49)	1018.78/ Feb 22 (-0.08)	Minor seasonal fluctuations, low readings in September, artesian conditions
CVDP-2	1982	P	4	1016.86	1014.51	1016.40/ Aug 2004	1019.44/ Oct 1986			Readings do not seem reliable, piezometer may still be broken
CVDP-3	1982	P	4	1016.86	1014.71	1014.98/ Sep 1992	1018.07/ May 1991	1016.32/ Sep 14 (-0.49)	1016.6/ May 26 (-0.28)	Minor seasonal fluctuations, pore pressures at grade. Instrument malfunction in February, may have been frozen.
CVDP-5	1982	P	4	1019.18	1014.28	1018.13/ Aug 1993	1021.21/ Sep 1992	1020.02/ Sep 14 (-0.49)	1021.07/ May 26 (+0.35)	Artesian conditions
CVDP-6	1982	P	5	1019.18	1014.37	1016.99/ May 1998	1018.99/ Sep 1992	1017.52/ Sep 14 (-0.21)	1017.73/ Feb, May (+0.14)	Stable seasonally, Low pore pressures in the shallow foundation.
CVDT-1	1984	S	4	1018.31	1007.9	1017.13/ May 1994	1018.32/ Aug 2004	1017.89/ Sep 14 (-0.22)	1018.28/ May 26 (-0.03)	Minor seasonal fluctuation.
CVDT-2	1984	S	4	1019.5*	1006.2	1015.89/ Sep 2005	1016.49/ Oct 2000	1015.89/ Sep 14 (-0.09)	1016.17/ May 26 (-0.05)	Minor seasonal fluctuation, 3.5 m below grade. Historic Low in 2005.
BH94CVDC-1	1994	S	5	1033.38	1020.4	1022.91/ May 1997	1024.58/ Sep 1995	1022.93/ Sep 14 (-0.58)	1023.87/ Feb 22 (+0.09)	Minor seasonal fluctuation.
P01-11	2001	S	3	1017.21	1006.61	1016.81/ Sep 2005	1017.53/ Jul 2003	1016.81/ Sep 14 (-0.37)	1017.37/ May 26 (0)	Piezometric elevation located just below ground surface. Minor seasonal fluctuation. Historic low in 2005.

Note: Bold values correspond to deep tip readings

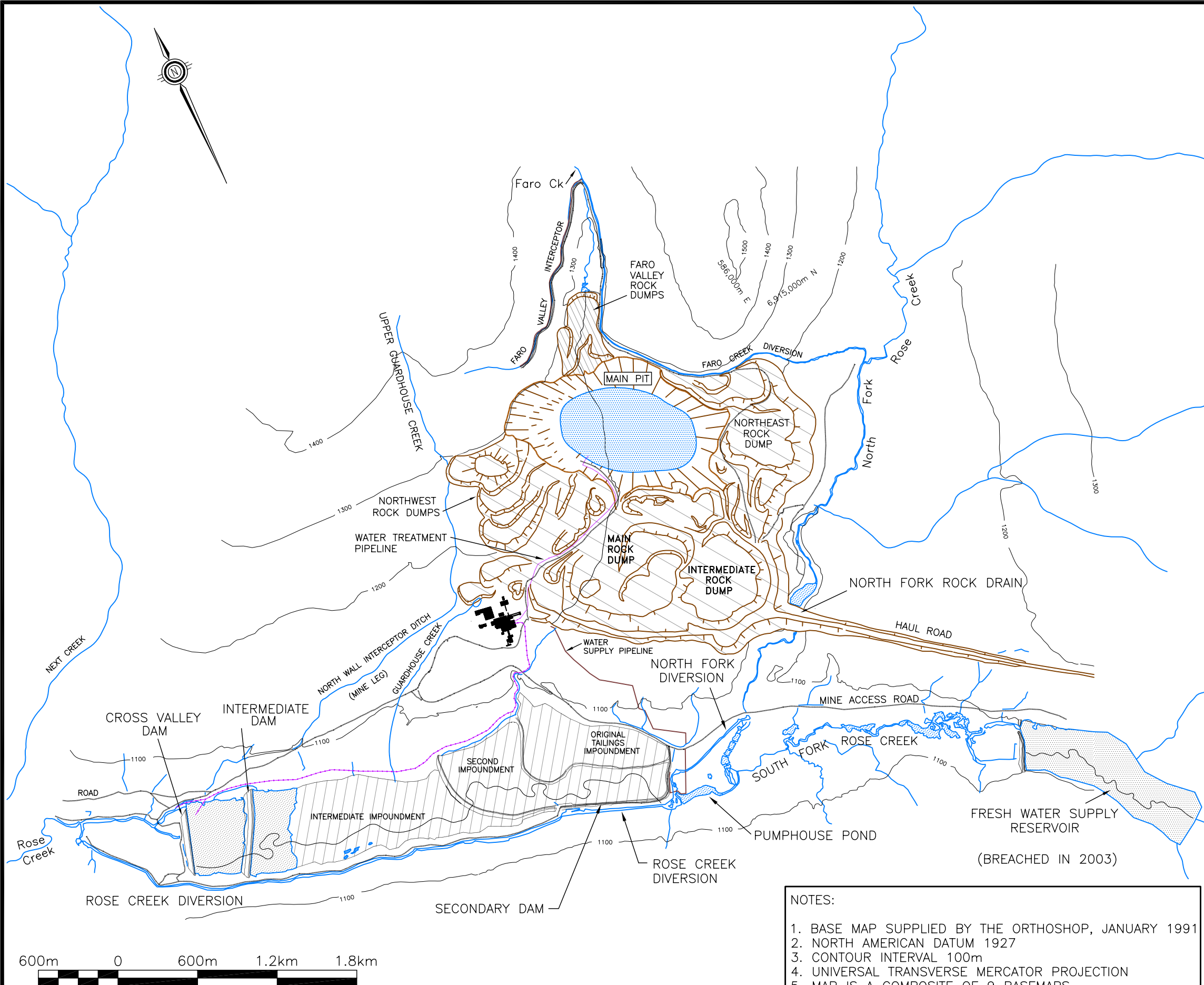
Table 12
Cross Valley Dam - Thermistors

Installation	Date Installed	Length of String (m)	# of Readings in 2004	Depth to Permafrost 2004 (m below ground surface)	Depth to Permafrost 2005 (m below ground surface)	Comments
CVDC-6	1981	29	2	N/A	N/A	Readings at 21 m are unavailable. Minimal temperature fluctuation between May and October.
88-4-4T	1988	4.2	2	N/A	N/A	Depth of winter frost extends to approximately 3.5 m.

Table 13
Secondary Dam - Piezometers

Installation	Date Installed	Standpipe (S) or Pneumatic (P)	# of Readings In 2005	Ground Elevation (m amsl)	Tip Elev. (m amsl)	Historic Low Reading/ Date	Historic High Reading/ Date	2005 Low Reading/ Date (Compared to 2004)	2005 High Reading/ Date (Compared to 2004)	Comments
P03-01	2003	S	2	1060.58	9 Tips, Variable Depths	2005 Data Available Only	2005 Data Available Only	1054.72/ May 3 (N/A) (Tip #P03-01-09)	1055.34/ Sep 8 (N/A) (Tip #P03-01-08)	Gartner Lee monitoring well, 9 tips at varying elevations. Hydrostatic conditions.
P03-02	2003	S	2	1059.91	9 Tips, Variable Depths	2005 Data Available Only	2005 Data Available Only	1054.41/ Sep 8 (N/A) (Tip #P03-02-05)	1055.33/ Sep 8 (N/A) (Tip #P03-02-09)	Gartner Lee monitoring well, 9 tips at varying elevations. Hydrostatic conditions.
P03-03	2003	S	2	1060.67	9 Tips, Variable Depths	2005 Data Available Only	2005 Data Available Only	1053.85/ May 4 (N/A) (Tip #P03-03-02)	1054.52/ Jul 22 (N/A) (Tip #P03-03-01)	Gartner Lee monitoring well, 9 tips at varying elevations. Hydrostatic conditions.
P81-06	1981	S	3	1060.74	1054.71	1054.71/ Aug 2005	1054.72/ Jun, Sep 2005	1054.71/ Aug 1 (N/A)	1054.72/ Jun 20, Sep 14 (N/A)	Piezometric levels near bottom of standpipe or dry.
P81-07	1981	S	3	1063.31	1057.17	1057.17/ 2005	1057.17/ 2005	1057.17/ 2005 (N/A)	1057.17/ 2005 (N/A)	Piezometer dry in 2005.
P81-08	1981	S	3	1063.29	1055.8	1055.80/ Aug 2005	1055.81/ Jun, Sep 2005	1055.80/ Aug 1 (N/A)	1055.81/ Jun 20, Sep 14 (N/A)	Piezometric levels near bottom of standpipe or dry.

FIGURES



CLIENT:

**Deloitte
& Touche**

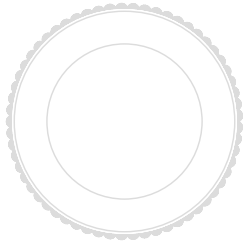
LEGEND:

- ROADS
- EXISTING DRAINAGE
- ORIGINAL DRAINAGE
- EFFLUENT PIPELINE
- PIPELINE

AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA, STATEMENTS, CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

REV.	DATE	REVISION NOTES	DRAWN	CHECKED	APPROVED

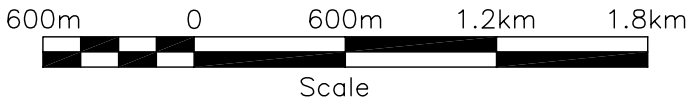
SCALE:	AS SHOWN
DATE:	FEB 2006
DRAWN:	REM
DESIGNED:	GWF
CHECKED:	GWF
APPROVED:	JWC



PROJECT	2005 ANNUAL GEOTECHNICAL EVALUATION AND INSTRUMENTATION REVIEW		
TITLE	SITE PLAN		
PROJECT No.	DWG No.	REV.	
0257-032-05	1	0	

NOTES:

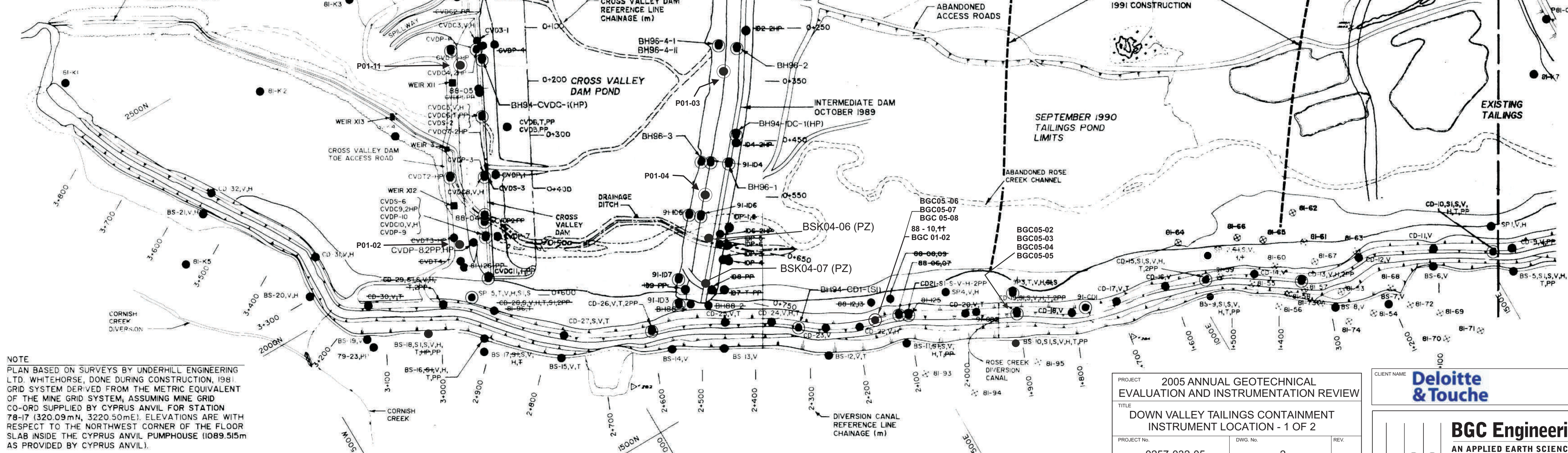
1. BASE MAP SUPPLIED BY THE ORTHOSHOP, JANUARY 1991
2. NORTH AMERICAN DATUM 1927
3. CONTOUR INTERVAL 100m
4. UNIVERSAL TRANSVERSE MERCATOR PROJECTION
5. MAP IS A COMPOSITE OF 9 BASEMAPS



LEGEND

- ⊕ SITE INVESTIGATION BOREHOLES
- INSTRUMENTATION BOREHOLES
- △ SURVEY CONTROL STATION (UNDERHILL ENGINEERING LTD)
- CD CANAL DYKE
- BS BACK SLOPE
- SP SPOIL PIPE
- CVDC CROSS VALLEY DAM CREST
- CVDB CROSS VALLEY DAM U/S BLANKET
- CVDT CROSS VALLEY DAM TOE
- CVDP CROSS VALLEY DAM CONSTRUCTION PIEZOMETER
- CVDS CROSS VALLEY DAM CONSTRUCTION SETTLEMENT PLATE
- NOTE APPROXIMATE LOCATION OF BH96-1 BH96-2 BH96-3 BH96-4-I BH96-4-II IN ACCORDANCE INFORMATION SUPPLIED BY ROBERTSON GEOCONSULTANTS INC
- ID INTERMEDIATE DAM
- IDP INTERMEDIATE DAM CONSTRUCTION PIEZOMETER
- INSTRUMENTATION MONITORED IN 2003
- PBI TAILINGS DAM
- BIK KLOHN LEONOFF PIEZOMETER
- SI SLOPE INDICATOR
- S INCREMENTAL SETTLEMENT
- V VERTICAL SETTLEMENT
- H HORIZONTAL SETTLEMENT
- T THERMISTOR STRING
- PP PNEUMATIC PIEZOMETER
- HP HYDRAULIC PIEZOMETER
- P01 MONITORING WELL INSTALLED IN 2001 BY GARTNER LEE LTD. (LOCATION APPROXIMATE)

SEDIMENTATION POND



NOTE
PLAN BASED ON SURVEYS BY UNDERHILL ENGINEERING LTD. WHITEHORSE, DONE DURING CONSTRUCTION, 1981. GRID SYSTEM DERIVED FROM THE METRIC EQUIVALENT OF THE MINE GRID SYSTEM, ASSUMING MINE GRID CO-ORD SUPPLIED BY CYPRUS ANVIL FOR STATION 78-17 (320.09mN, 3220.50mE). ELEVATIONS ARE WITH RESPECT TO THE NORTHWEST CORNER OF THE FLOOR SLAB INSIDE THE CYPRUS ANVIL PUMPHOUSE (1089.515m AS PROVIDED BY CYPRUS ANVIL).

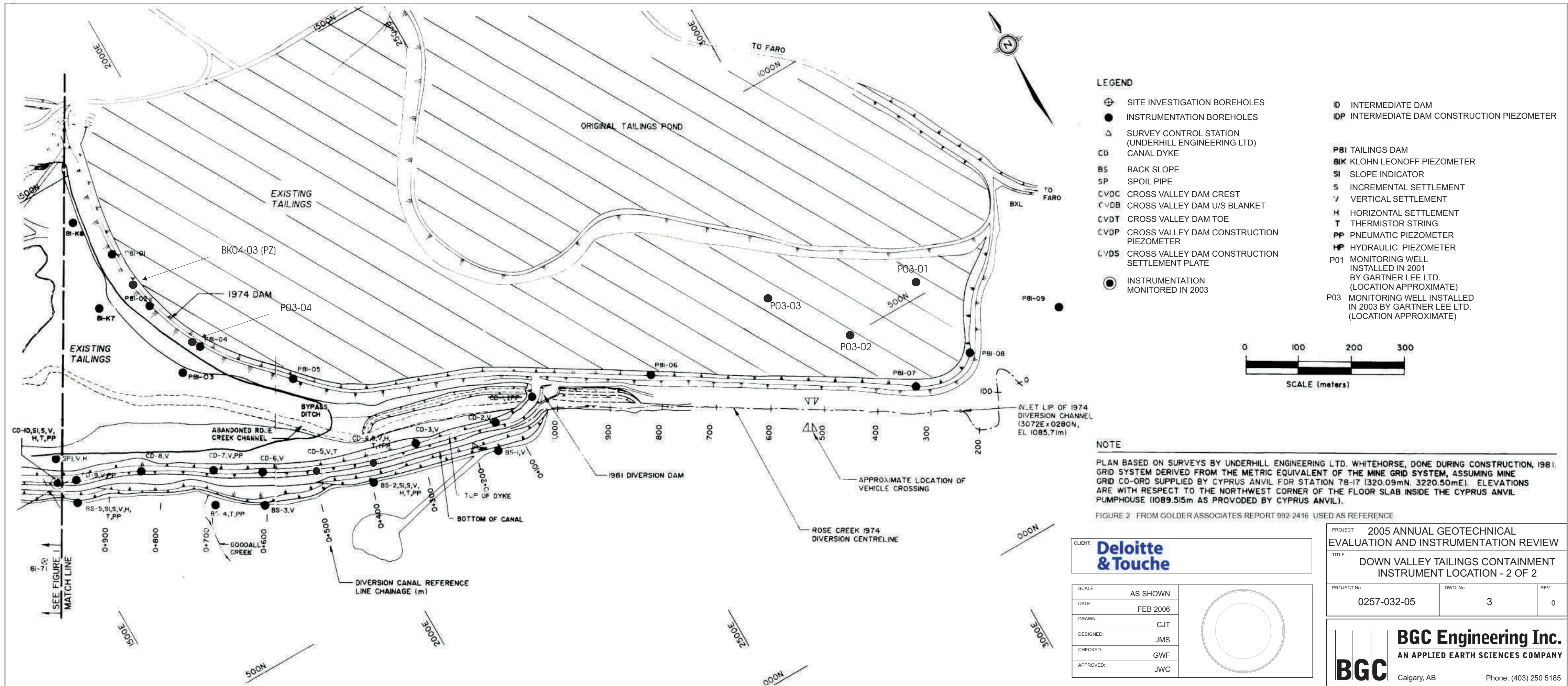
NOTE:

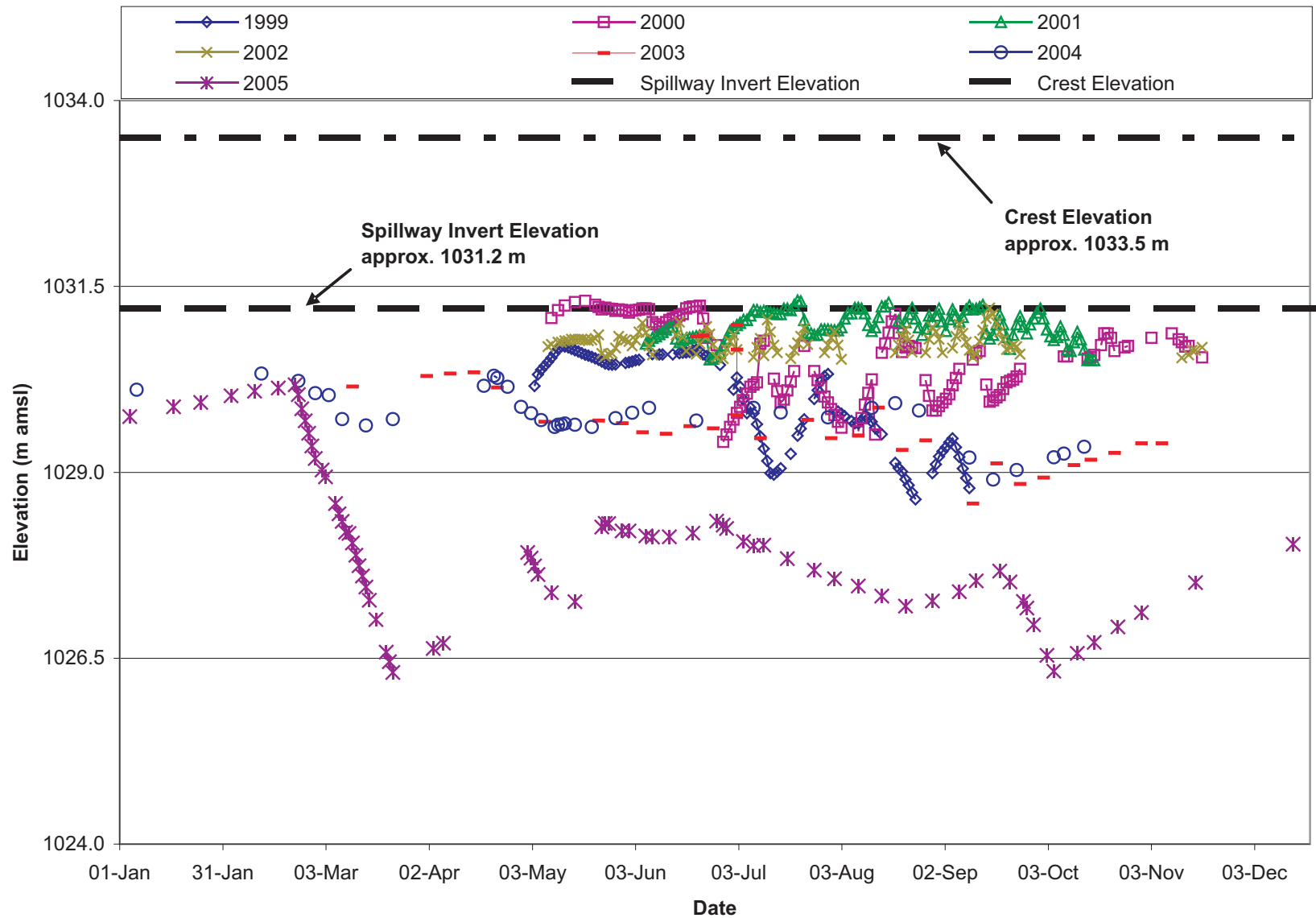
FIGURE 1 FROM GOLDER ASSOCIATES REPORT 992-2416 USED AS REFERENCE

PROJECT 2005 ANNUAL GEOTECHNICAL EVALUATION AND INSTRUMENTATION REVIEW		
TITLE DOWN VALLEY TAILINGS CONTAINMENT INSTRUMENT LOCATION - 1 OF 2		
PROJECT No. 0257-032-05	DWG. No. 2	REV. 0

CLIENT NAME **Deloitte & Touche** JAN 2006

BGC Engineering Inc.
AN APPLIED EARTH SCIENCES COMPANY
Calgary, AB Phone: (403) 250 5185





DATE:
FEB 2006

DRAWN
SLF

REFERENCED DRAWING DESCRIPTION

AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA, STATEMENTS, CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.



BGC ENGINEERING INC.

AN APPLIED EARTH SCIENCES COMPANY

Calgary, Alberta

Phone: (403) 250-5185

CLIENT



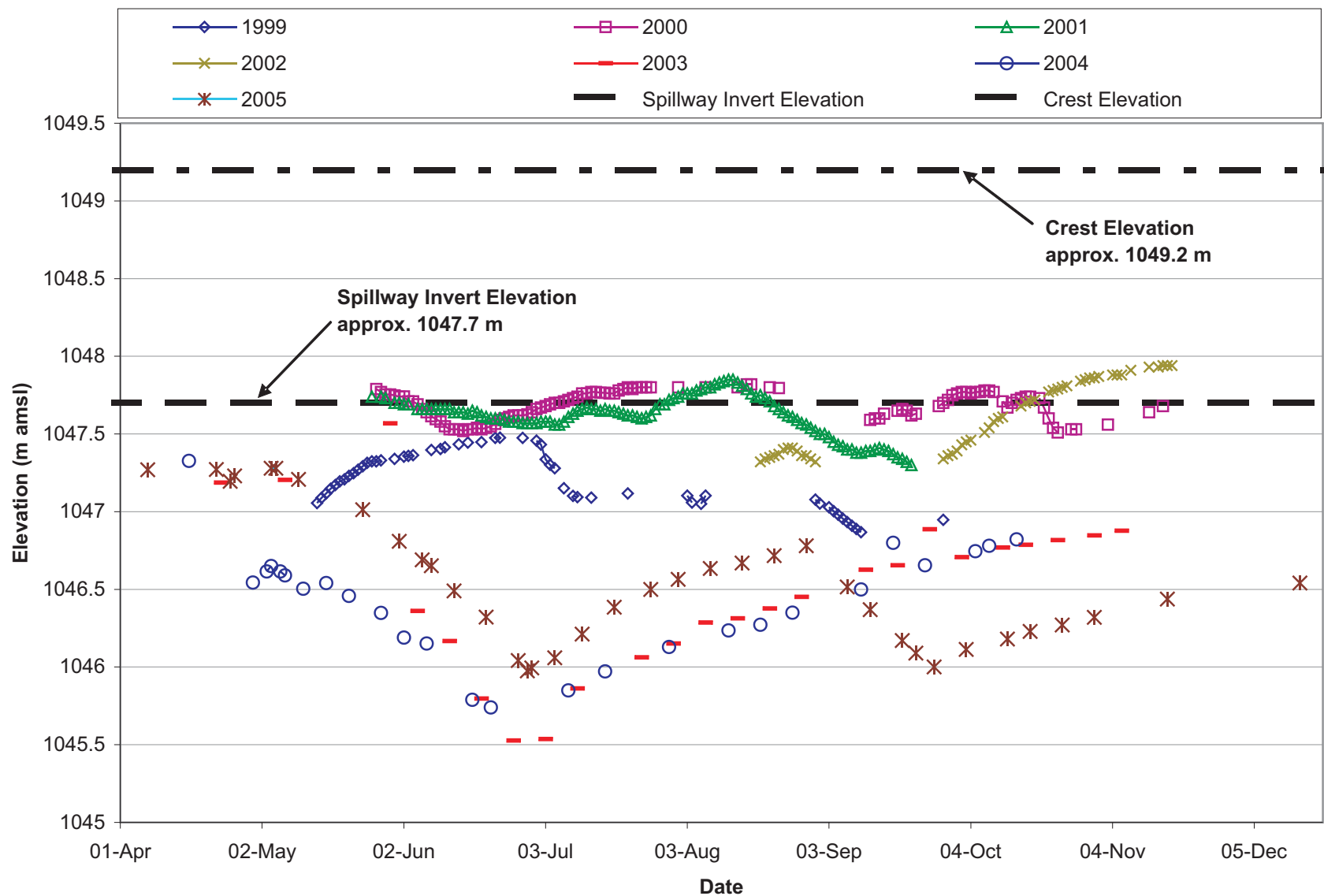
PROJECT 2005 ANNUAL GEOTECHNICAL
EVALUATION & INSTRUMENTATION REVIEW

TITLE CROSS VALLEY DAM
POND ELEVATIONS (1999-2005)

PROJECT No.
0257-032-05

DWG. No.
4

REV.
0



DATE:
FEB 2006

DRAWN
SLF

REFERENCED DRAWING DESCRIPTION

AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA, STATEMENTS, CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.



BGC ENGINEERING INC.

AN APPLIED EARTH SCIENCES COMPANY

Calgary, Alberta

Phone: (403) 250-5185

CLIENT



PROJECT 2005 ANNUAL GEOTECHNICAL
EVALUATION & INSTRUMENTATION REVIEW

TITLE
INTERMEDIATE DAM POND
ELEVATIONS (1999-2005)

PROJECT No.
0257-032-05

DWG. No.
5

REV.
0



CLIENT:

**Deloitte
& Touche**

AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA STATEMENTS CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
REV.	DATE	REVISION NOTES	DRAWN	CHECKED	APPROVED

SCALE:	N/A	
DATE:	FEBRUARY 2006	
DRAWN:	SLF	
DESIGNED:	GWF	
CHECKED:	GWF	
APPROVED:	JWC	

PROJECT			2005 ANNUAL GEOTECHNICAL EVALUATION AND INSTRUMENT REVIEW		
TITLE					
DIVERSION CANAL DIKE INSPECTION PHOTOS					
PROJECT No.		DWG. No.		REV.	
0257-032-05		7		0	



Photo shows a view of the regraded crest located at approximately CD-21. On the left can be seen 3 new instrumentation casings.



Photo shows some minor sloughing and a small scarp which is located on the backslope.



Photo shows a view of the water flowing over top of the first weir. The central boulders have been pushed out of the way but the weir is still effective in discharging energy.



Photo shows the lower most portion of the upper weir section. No concerns were noted with the first upper weir section.

CLIENT:

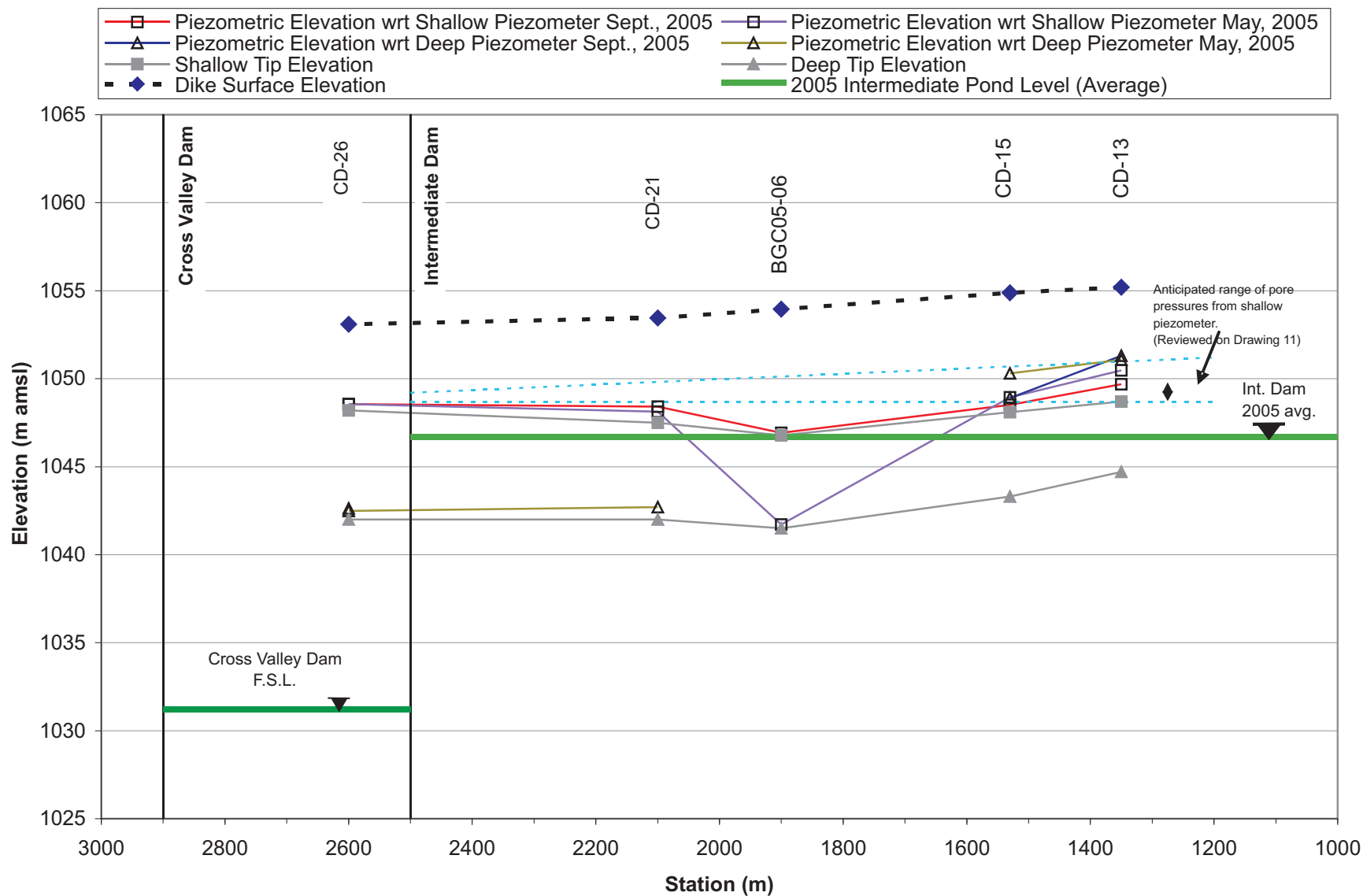
Deloitte
& Touche

AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA STATEMENTS CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
REV.	DATE	REVISION NOTES	DRAWN	CHECKED	APPROVED

SCALE:	N/A	
DATE:	FEBRUARY 2006	
DRAWN:	SLF	
DESIGNED:	GWF	
CHECKED:	GWF	
APPROVED:	JWC	

PROJECT2005 ANNUAL GEOTECHNICAL EVALUATION AND INSTRUMENT REVIEW		
TITLEDIVERSION CANAL DIKE INSPECTION PHOTOS		
PROJECT No. 0257-032-05	DWG. No. 8	REV. 0



DATE:
JAN 2006

DRAWN
SLF

REFERENCED DRAWING DESCRIPTION

AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA, STATEMENTS, CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.



BGC ENGINEERING INC.

AN APPLIED EARTH SCIENCES COMPANY

Calgary, Alberta

Phone: (403) 250-5185

CLIENT



PROJECT 2005 ANNUAL GEOTECHNICAL
EVALUATION & INSTRUMENTATION REVIEW

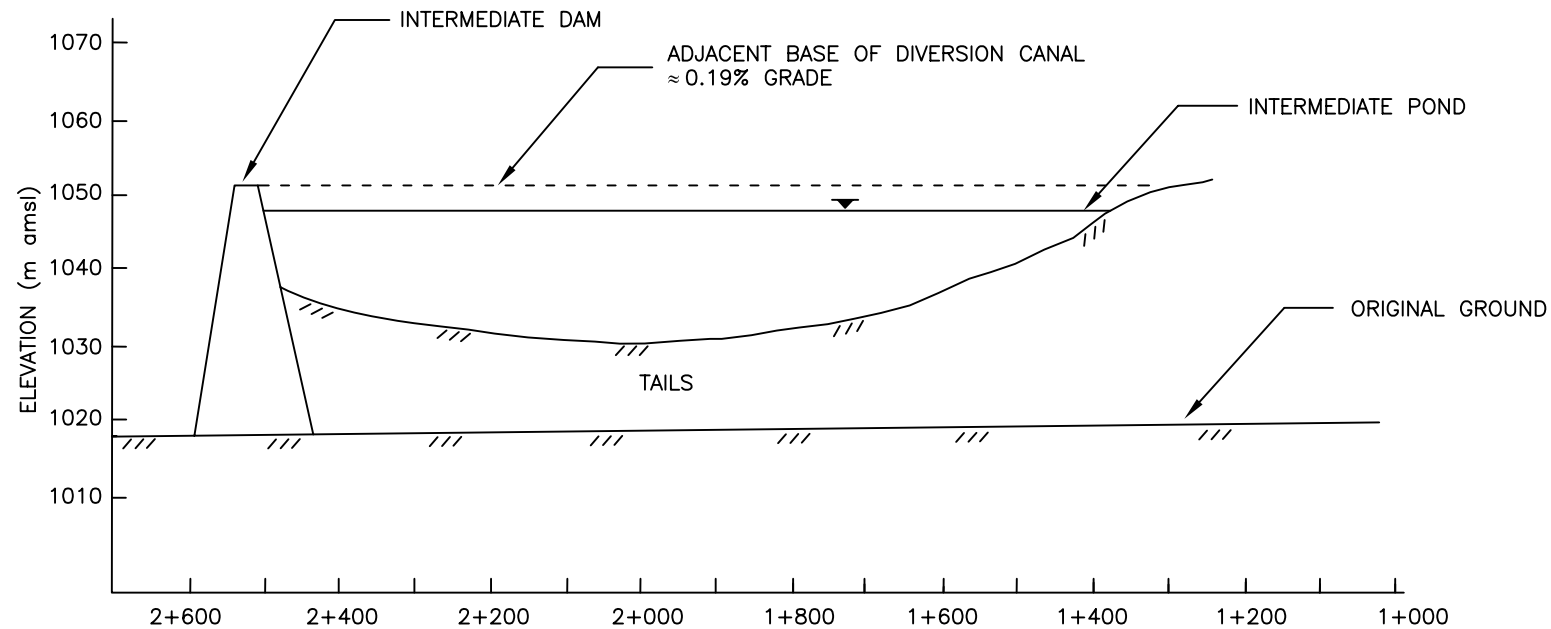
TITLE
CANAL DIKE, CURRENT
PIEZOMETRIC CONDITIONS

PROJECT No.
0257-032-05

DWG. No.
10

REV.
0

K:\Graphics\Projects\0257\032\05\Drawings\0257-032-05 Fig 11.dwg



NOTE: 10X VERTICAL EXAGGERATION

- NOTES: 1) DRAWING IS A SCHEMATIC, CONSTRUCTED FOR ILLUSTRATIVE PURPOSES ONLY.
- 2) ALL ELEVATIONS ARE APPROXIMATE AND ARE BASED ON AVAILABLE INFORMATION.
- 3) LOCATION OF TAILINGS IN THE INTERMEDIATE POND IS APPROXIMATE. NO BATHYMETRIC INFORMATION IS AVAILABLE.

CLIENT:

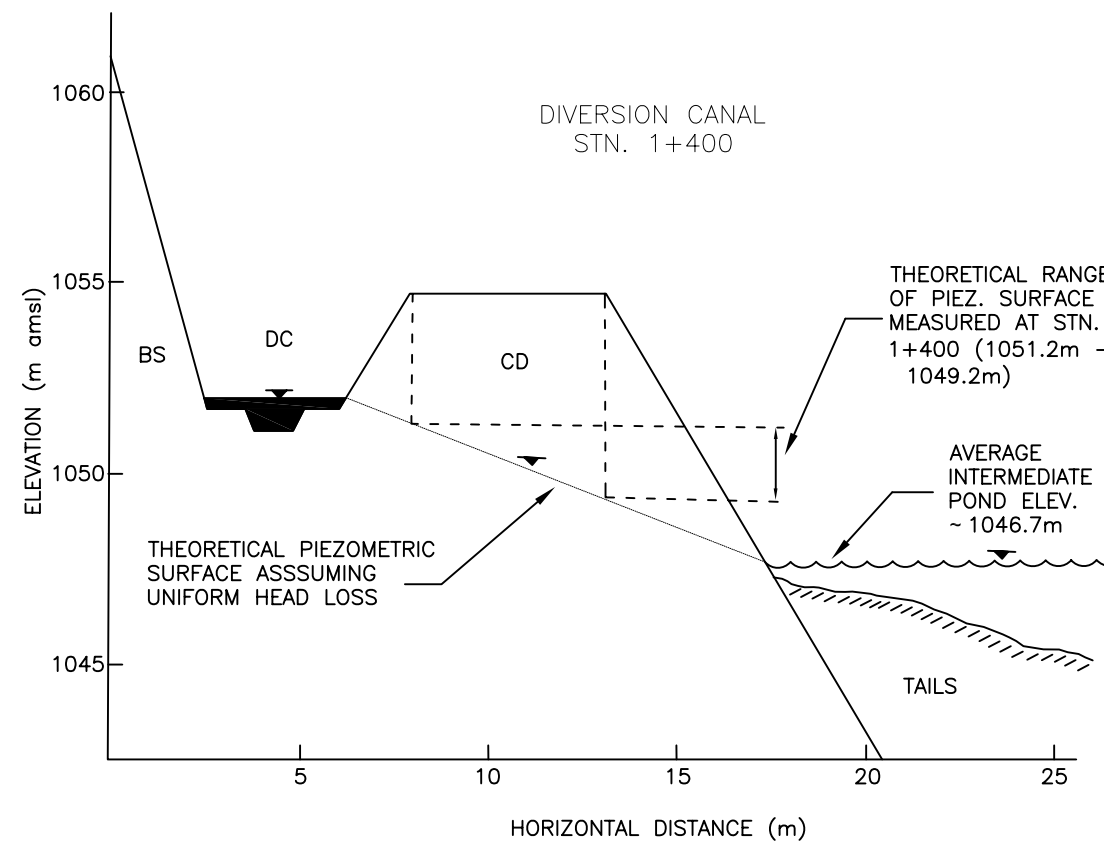
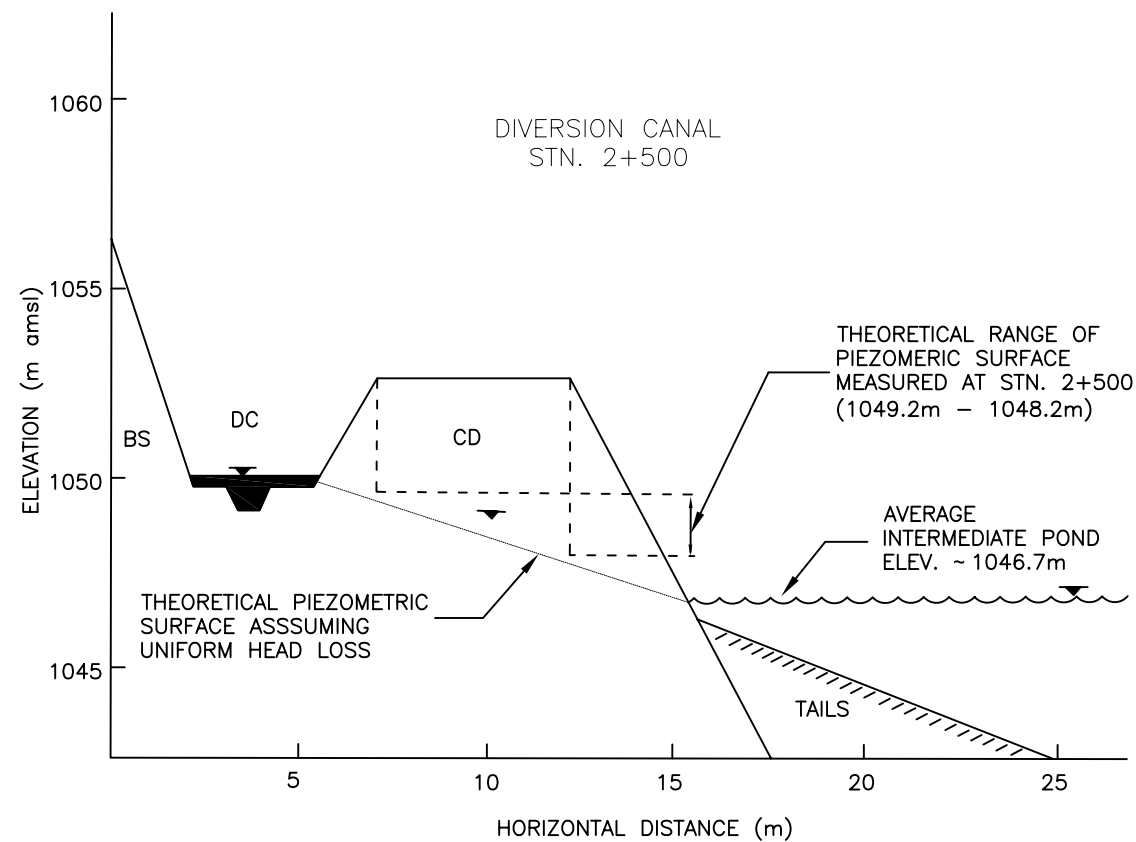
**Deloitte
& Touche**

LEGEND

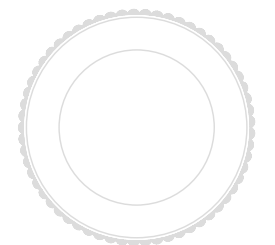
BS BACK SLOPE
DC DIVERSION CANAL
CD CANAL DIKE

AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA, STATEMENTS, CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

REV.	DATE	REVISION NOTES	DRAWN	CHECKED	APPROVED



SCALE:	AS SHOWN
DATE:	FEB 2006
DRAWN:	REM
DESIGNED:	JMS
CHECKED:	GWJ
APPROVED:	JWC



PROJECT	2005 ANNUAL GEOTECHNICAL EVALUATION AND INSTRUMENTATION REVIEW	
TITLE	CANAL DIKE / INTERMEDIATE POND HYDRAULIC CONNECTIVITY	
PROJECT No.	DWG. No.	REV.
0257-032-05	11	0

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

BGC Calgary, AB Phone: (403) 250 5185



May: Photo shows the outfall section of the NVWID.



September: Photo shows the channel upstream of the culvert after the construction were undertaken in September.



August: Photo shows a view of the outlet end of the culvert as the water cascades on top of the first rock. The large boulders which formed a break to water flow should be placed back into position.



September: Photo shows the continuation of the berm and the ditch which runs along the hillside uphill from the Intermediate Dam. The ditch appears to be working satisfactorily with no noted blockages or problems from this perspective.

CLIENT:

Deloitte
& Touche

AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA STATEMENTS CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
REV.	DATE	REVISION NOTES	DRAWN	CHECKED	APPROVED

SCALE:	N/A	
DATE:	FEBRUARY 2006	
DRAWN:	SLF	
DESIGNED:	GWF	
CHECKED:	GWF	
APPROVED:	JWC	

PROJECT	2005 ANNUAL GEOTECHNICAL EVALUATION AND INSTRUMENT REVIEW		
TITLE	NORTH VALLEY INTERCEPTOR DITCH INSPECTION PHOTOS		
PROJECT No.	DWG. No.	REV.	
0257-032-05	13	0	

BGC

BGC Engineering Inc.

AN APPLIED EARTH SCIENCES COMPANY

Calgary Alberta

Phone: (403) 250-5185



September: Photo shows the current condition of the inlet to the spillway. No water is currently flowing in the spillway.



May: Photo shows the pond level at the inlet area to the spillway. and the water level is currently below the staff gauge.



May: Photo shows some longitudinal cracks on the crest. These cracks progress further into the background of the photo as well along the crest. This is in the area where historically cracking has always been seen.



May: Photo shows the riprap on the upstream side.

CLIENT:

**Deloitte
& Touche**

AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA STATEMENTS CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
REV.	DATE	REVISION NOTES	DRAWN	CHECKED	APPROVED

SCALE:	N/A	
DATE:	FEBRUARY 2006	
DRAWN:	SLF	
DESIGNED:	GWF	
CHECKED:	GWF	
APPROVED:	JWC	

PROJECT 2005 ANNUAL GEOTECHNICAL EVALUATION AND INSTRUMENT REVIEW		
TITLE INTERMEDIATE DAM INSPECTION PHOTOS		
PROJECT No. 0257-032-05	DWG. No. 14	REV. 0

BGC

BGC Engineering Inc.
AN APPLIED EARTH SCIENCES COMPANY

Calgary Alberta

Phone: (403) 250-5185



May: Photo shows some thin cracking located in the centre of the crest just immediately to the left of the hard hat.



May: Photo shows one small sinkhole approximately 40 cm in diameter located on the crest. This sinkhole was marked last year. It does not appear to be getting much larger.



May: Photo shows some minor crest edge cracking on the upstream side, proximal to the riprap.



May: Photo shows the toe at the south abutment. As can be seen, there are no signs of seepage discharging in this area, where seepage has been noted in previous years.

CLIENT:



AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA STATEMENTS CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
REV.	DATE	REVISION NOTES	DRAWN	CHECKED	APPROVED

SCALE:	N/A	
DATE:	FEBRUARY 2006	
DRAWN:	SLF	
DESIGNED:	GWF	
CHECKED:	GWF	
APPROVED:	JWC	

PROJECT2005 ANNUAL GEOTECHNICAL EVALUATION AND INSTRUMENT REVIEW		
TITLEINTERMEDIATE DAM INSPECTION PHOTOS		
PROJECT No.	DWG. No.	REV.
0257-032-05	15	0



May: Photo shows a number of different sized erosional gullies on the downstream face.



May: Photo shows another view of the downstream side of this dam. No signs of seepage, discharge or standing water were noted on the toe.



September: Photo shows a view of the crest looking towards the south. The crest appears to be properly graded with no signs of settlement or standing water.



August: Photo shows a view looking along the edge of the Polishing Pond.

CLIENT:

Deloitte
& Touche

AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA STATEMENTS CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
REV.	DATE	REVISION NOTES	DRAWN	CHECKED	APPROVED

SCALE:	N/A	
DATE:	JANUARY 2006	
DRAWN:	SLF	
DESIGNED:	GWF	
CHECKED:	GWF	
APPROVED:	JWC	

PROJECT2005 ANNUAL GEOTECHNICAL EVALUATION AND INSTRUMENT REVIEW		
TITLEINTERMEDIATE DAM INSPECTION PHOTOS		
PROJECT No. 0257-032-05	DWG. No. 16	REV. 0

BGC

BGC Engineering Inc.
AN APPLIED EARTH SCIENCES COMPANY

Calgary Alberta

Phone: (403) 250-5185



CLIENT:



AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA STATEMENTS CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
REV.	DATE	REVISION NOTES	DRAWN	CHECKED	APPROVED

SCALE:	N/A
DATE:	JANUARY 2006
DRAWN:	SLF
DESIGNED:	GWF
CHECKED:	GWF
APPROVED:	JWC

PROJECT 2005 ANNUAL GEOTECHNICAL EVALUATION AND INSTRUMENT REVIEW		
TITLE INTERMEDIATE DAM INSPECTION PHOTOS		
PROJECT No. 0325-032-05	DWG. No. 17	REV. 0

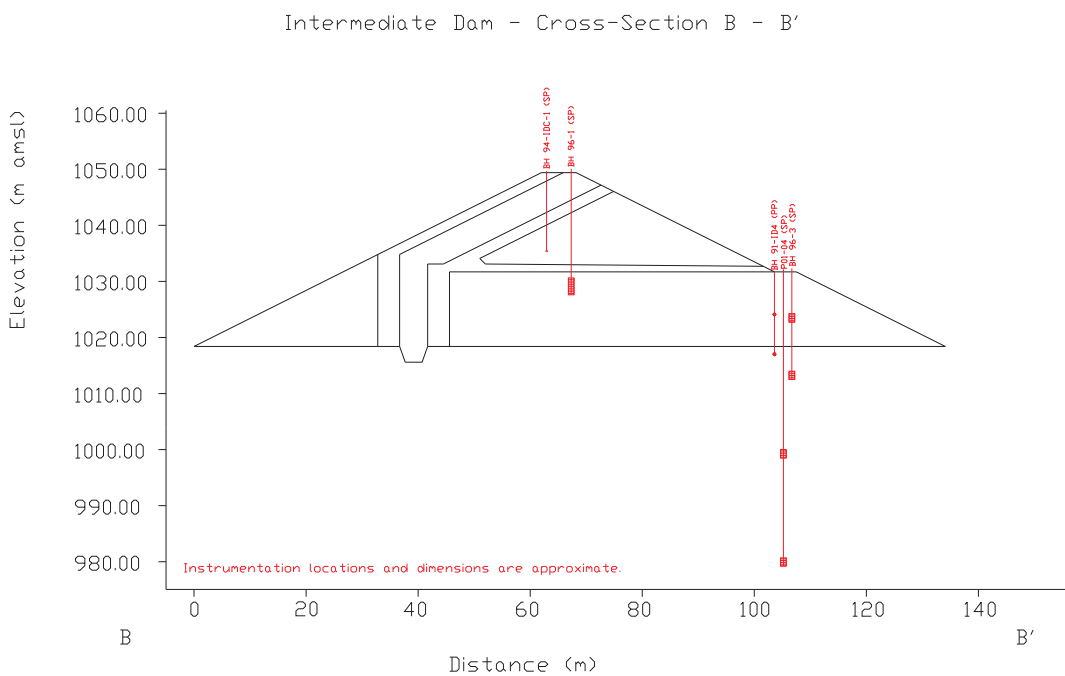
BGC

BGC Engineering Inc.

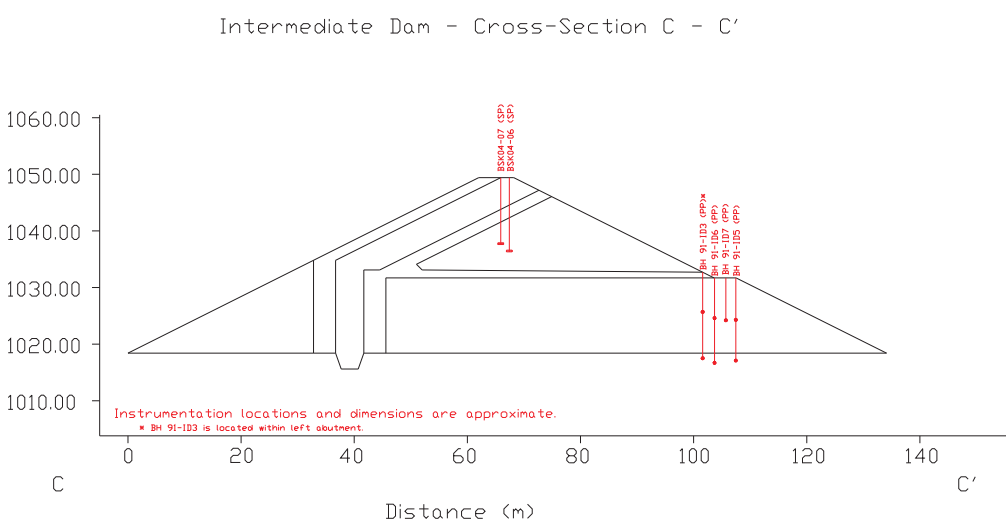
AN APPLIED EARTH SCIENCES COMPANY

Calgary Alberta

Phone: (403) 250-5185



Intermediate Dam - Cross-Section B - B'



Intermediate Dam - Cross-Section C - C'

BGC Engineering Inc.
AN APPLIED EARTH SCIENCES COMPANY

Calgary Alberta Phone: (403) 250-5185



May: Photo shows the inlet into the spillway on the Cross Valley Dam and also the two siphon pipes.



May: Photo shows the crest looking towards the south abutment. Within this area there is some minor cracking near the upstream side.



May: Photo shows a crack located on the upstream side.



May: Photo shows an orange painted crack which progresses all the way to the south abutment of this dam. Water infiltration is leading to subsidence directly proximal to the crack.

CLIENT:

Deloitte
& Touche

AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA STATEMENTS CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
REV.	DATE	REVISION NOTES	DRAWN	CHECKED	APPROVED

SCALE:	N/A	
DATE:	JANUARY 2006	
DRAWN:	SLF	
DESIGNED:	GWF	
CHECKED:	GWF	
APPROVED:	JWC	

PROJECT	2005 ANNUAL GEOTECHNICAL EVALUATION AND INSTRUMENT REVIEW	
TITLE	CROSS VALLEY DAM INSPECTION PHOTOS	
PROJECT No.	DWG. No.	REV.
0257-032-05	19	0

BGC

BGC Engineering Inc.
AN APPLIED EARTH SCIENCES COMPANY

Calgary Alberta

Phone: (403) 250-5185



August: Photo shows a view of the Emergency Spillway on the Cross Valley Dam.



August: Photo shows a view of the crest of the dam.



September: Photo shows the bottom of the seepage collection trench looking north towards the middle V-Notch Weir. As can be seen the bottom of the trench is relatively dry, possibly a result of the ongoing pump test.



September: Photo shows a view of the downstream face and toe area where the pump test is ongoing. The seepage collection trench appears to be slightly drier than typical, likely in relation to the ongoing large scale pump test.

CLIENT:

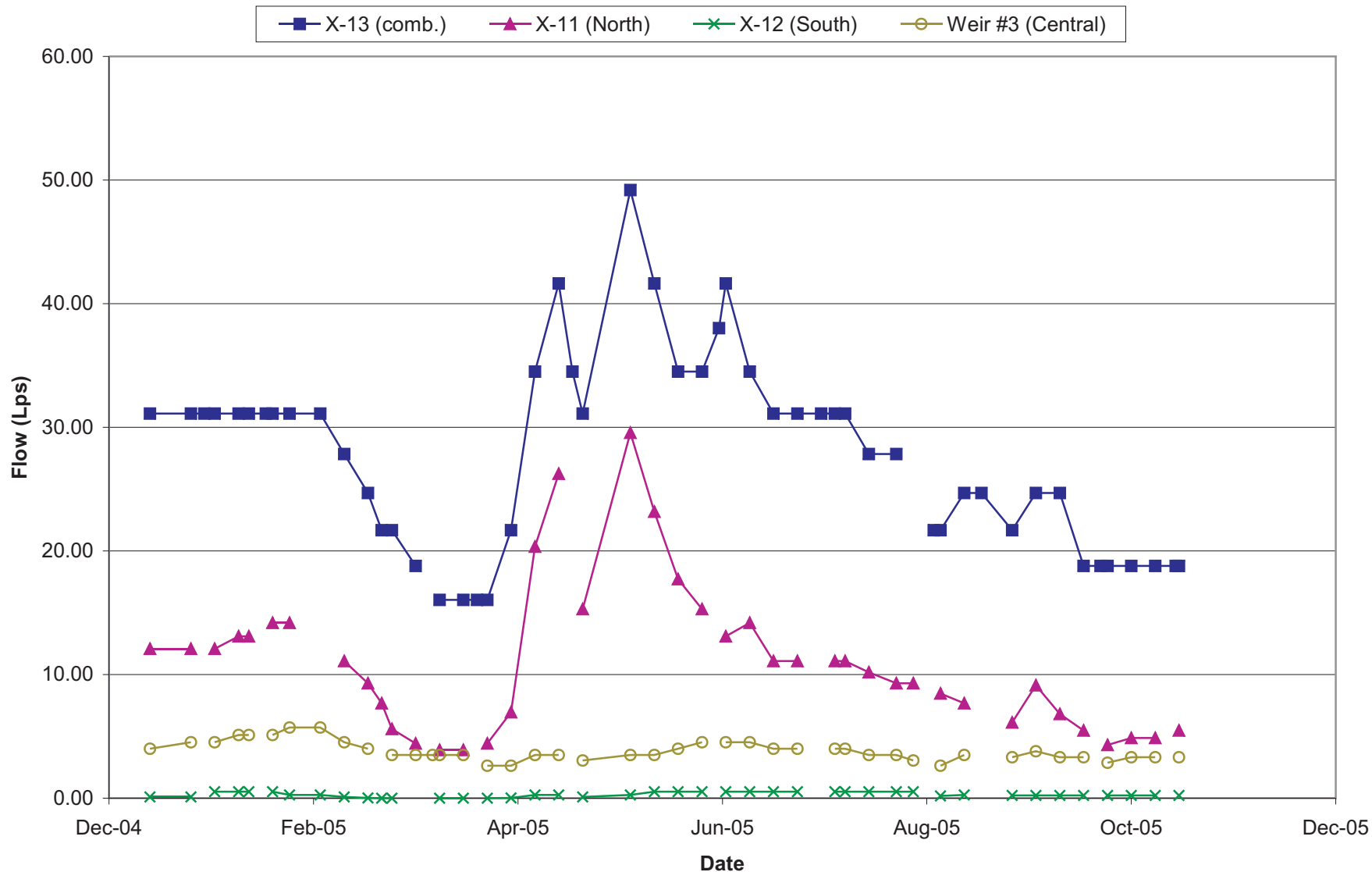
**Deloitte
& Touche**

AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA STATEMENTS CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
REV.	DATE	REVISION NOTES	DRAWN	CHECKED	APPROVED

SCALE:	N/A	
DATE:	JANUARY 2006	
DRAWN:	SLF	
DESIGNED:	GWF	
CHECKED:	GWF	
APPROVED:	JWC	

PROJECT 2005 ANNUAL GEOTECHNICAL EVALUATION AND INSTRUMENT REVIEW		
TITLE CROSS VALLEY DAM INSPECTION PHOTOS		
PROJECT No. 0257-032-05	DWG. No. 21	REV. 0



DATE:
JAN 2006

DRAWN
SLF

REFERENCED DRAWING DESCRIPTION

AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA, STATEMENTS, CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.



BGC ENGINEERING INC.

AN APPLIED EARTH SCIENCES COMPANY

Calgary, Alberta

Phone: (403) 250-5185

CLIENT

**Deloitte
& Touche**

PROJECT 2005 ANNUAL GEOTECHNICAL
EVALUATION & INSTRUMENTATION REVIEW

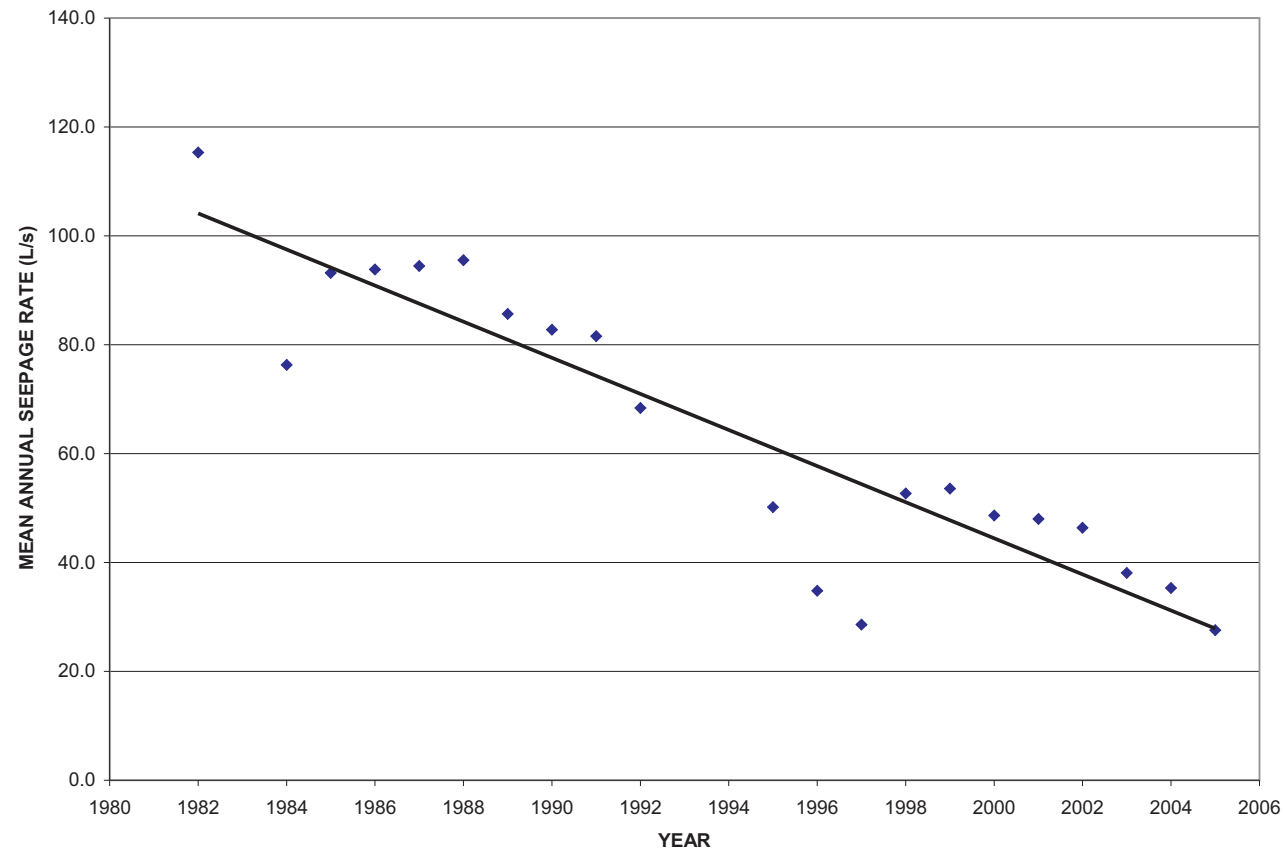
TITLE

CROSS VALLEY DAM 2005 WEIR FLOWS

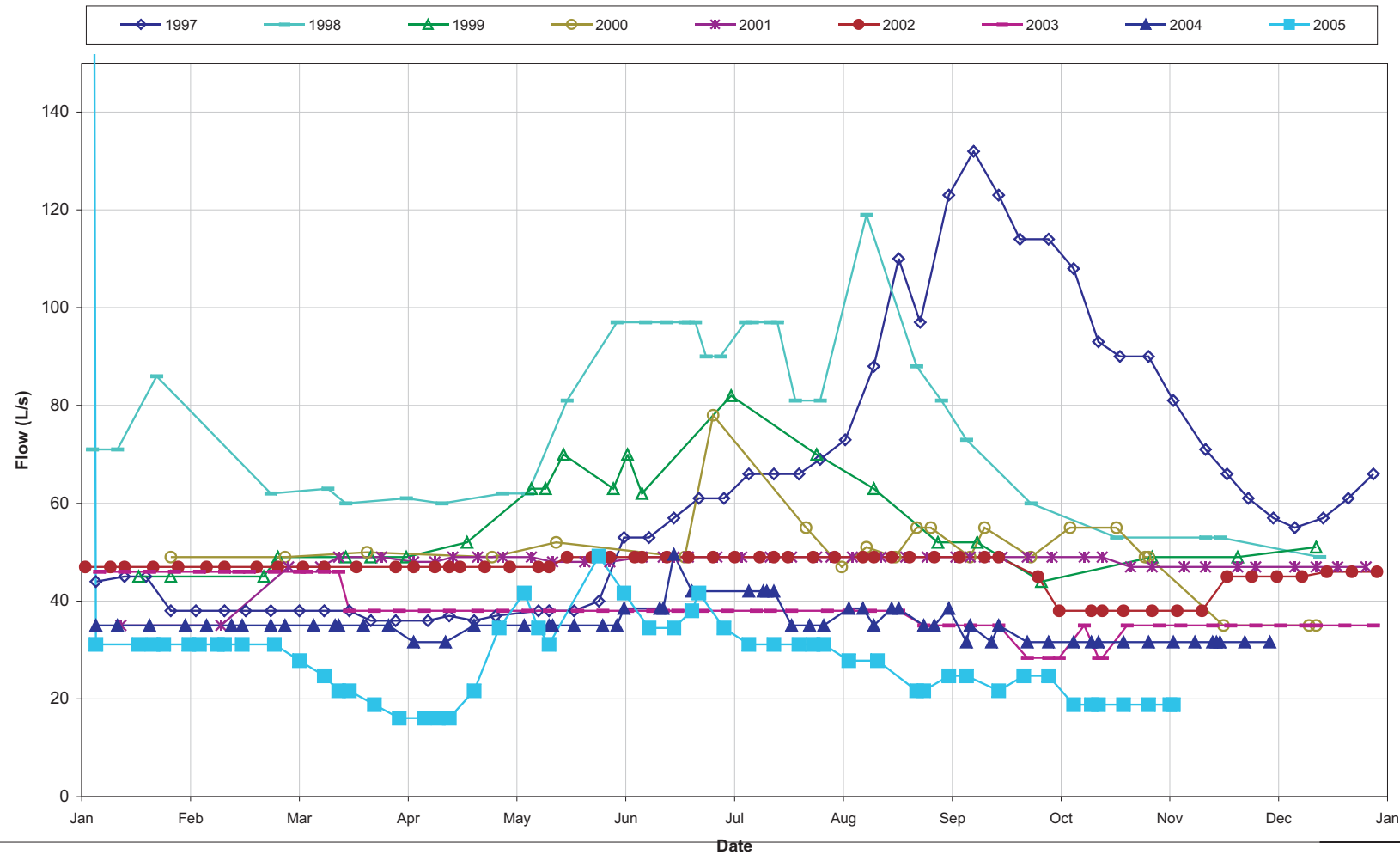
PROJECT No.
0257-032-05

DWG. No.
22

REV.
0



MEASURED FLOW RATES AT X13 (L/s)



CLIENT:



AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA STATEMENTS CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

	-	- -	-	-	-
-	-	- -	-	-	-
-	-	- -	-	-	-
REV.	DATE	REVISION NOTES	DRAWN	CHECKED	APPROVED

SCALE:	N/A	
DATE:	JANUARY 2006	
DRAWN:	SLF	
DESIGNED:	JMS	
CHECKED:	GWF	
APPROVED:	JWC	

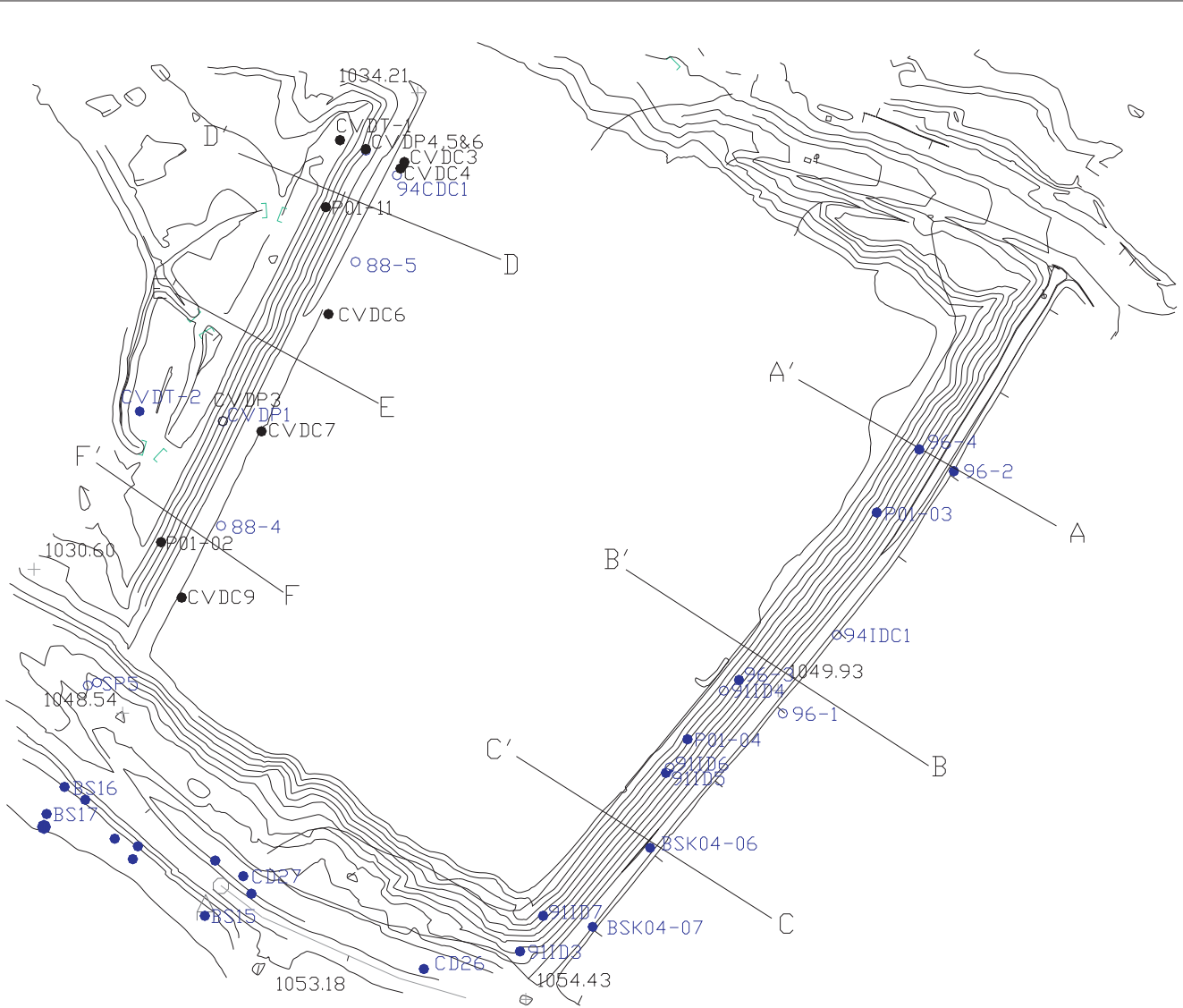
PROJECT	2005 ANNUAL GEOTECHNICAL EVALUATION AND INSTRUMENTATION REVIEW		
TITLE	CROSS VALLEY DAM MEASURED FLOW RATES AT X13 (1997 - 2005)		
PROJECT No.	0257-032-05	DWG. No.	23
		REV.	0



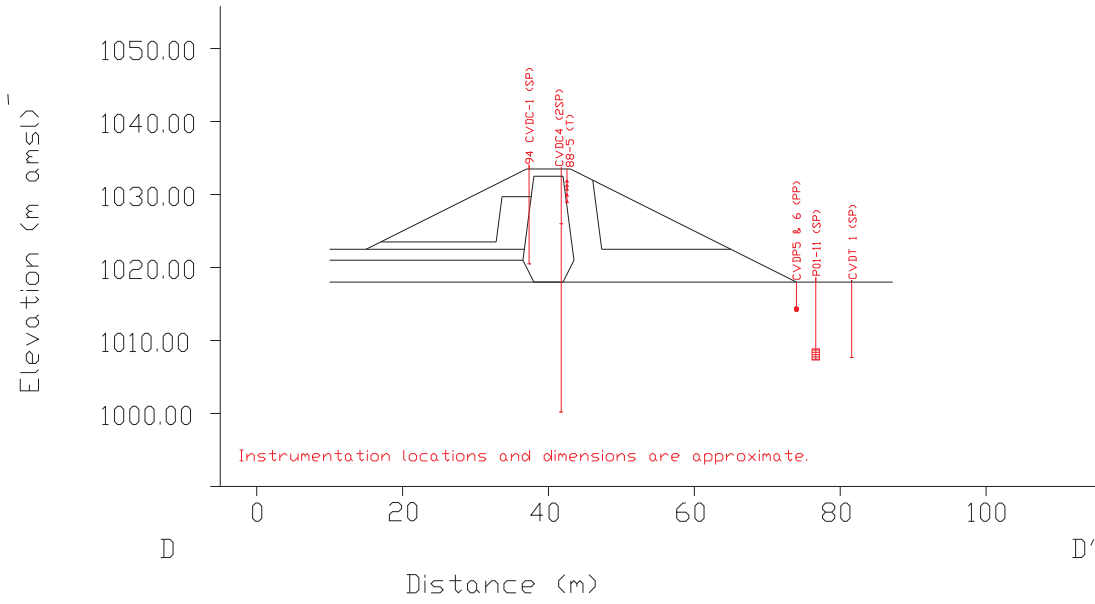
BGC Engineering Inc.
AN APPLIED EARTH SCIENCES COMPANY

Calgary Alberta

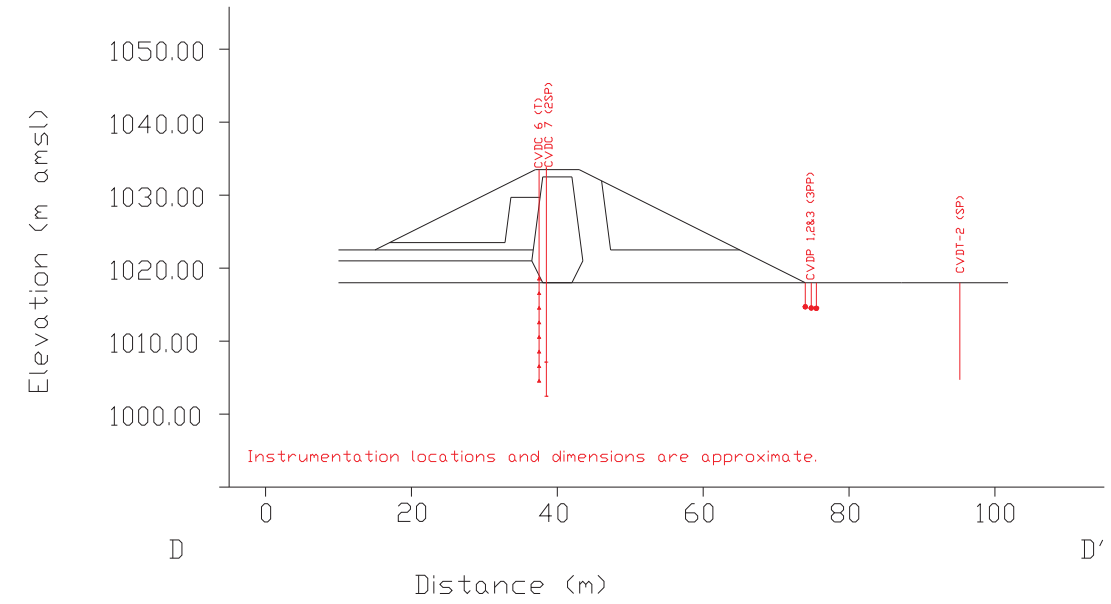
Phone: (403) 250-5185



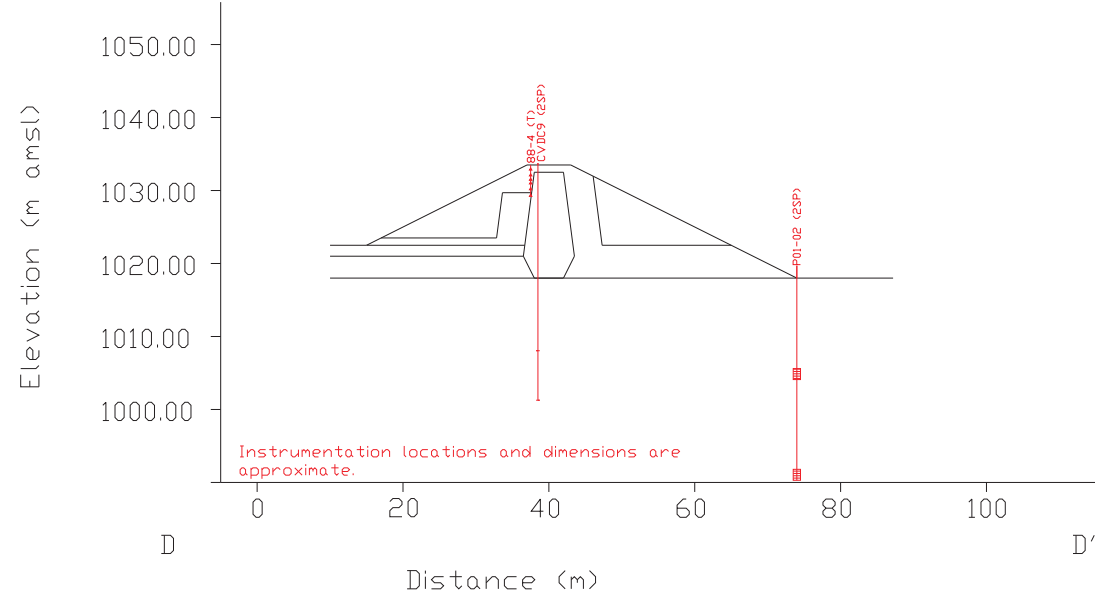
Cross Valley Dam - Cross-Section D - D'



Cross Valley Dam - Cross-Section E - E'



Cross Valley Dam - Cross-Section F - F'



CLIENT:



- [SP] Standpipe Piezometers
- [PP] Pneumatic Piezometers
- [T] Thermistor Cables
- [] Screened Intervals of Standpipe Piezometers
- [] Bottom of Standpipe Piezometers
- [] Pneumatic Piezometer Tips
- [] Thermistor Nodes

AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA STATEMENTS CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
REV.	DATE	REVISION NOTES	DRAWN	CHECKED	APPROVED

SCALE:	N/A	
DATE:	JANUARY 2006	
DRAWN:	SLF	
DESIGNED:	MJM	
CHECKED:	GWJ	
APPROVED:	JWC	

PROJECT 2005 ANNUAL GEOTECHNICAL EVALUATION AND INSTRUMENTATION REVIEW		
TITLE SECTION VIEW OF CROSS VALLEY DAM		
PROJECT No. 0257-032-05	DWG. No. 24	REV. 0

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



August: Photo shows a three shot panoramic of the upstream face of the Rock Drain.



September: A view of the pond at typical levels.



August: Photo looking along the upstream toe of the Rock Drain. Note the woody debris and grass growing on the face of the drain.

CLIENT:

Deloitte
& Touche

AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA STATEMENTS CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
REV.	DATE	REVISION NOTES	DRAWN	CHECKED	APPROVED

SCALE:	N/A	
DATE:	JANUARY 2006	
DRAWN:	SLF	
DESIGNED:	GWF	
CHECKED:	GWF	
APPROVED:	JWC	

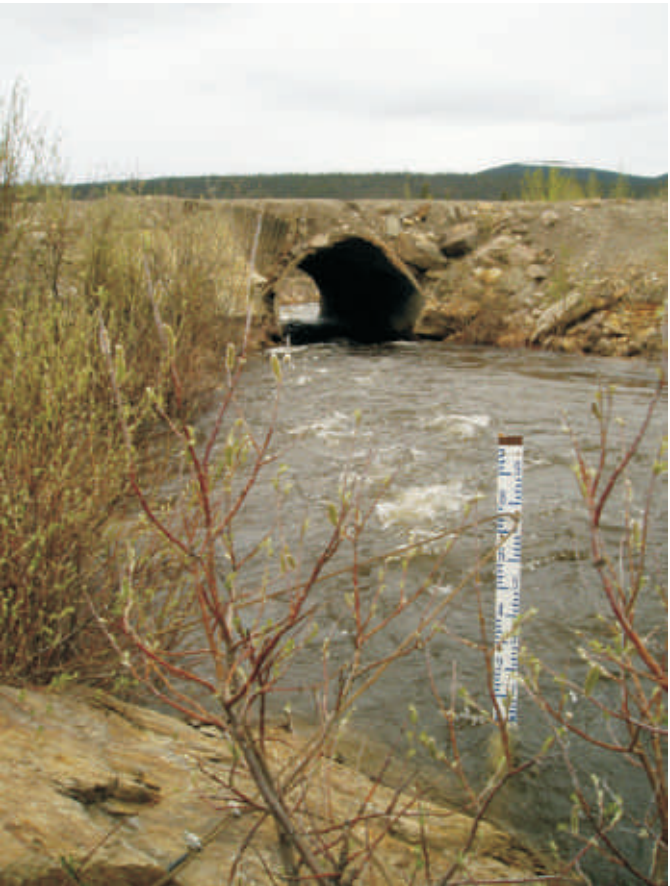
PROJECT	2005 ANNUAL GEOTECHNICAL EVALUATION AND INSTRUMENT REVIEW		
TITLE	FLOW THROUGH ROCK DRAIN INSPECTION PHOTOS		
PROJECT No.	DWG. No.	REV.	
0257-032-05	25	0	



August: Photo is a two shot panorama showing the North Fork Rose Creek as it exits the Rock Drain.



May: Photo shows the main discharge area from the rock drain.



May: Photo is a view of the staff gauge NFRC 23 within the North Fork Rose Creek on the upstream side of the culvert.

CLIENT:

Deloitte
& Touche

AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA STATEMENTS CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
REV.	DATE	REVISION NOTES	DRAWN	CHECKED	APPROVED

SCALE:	N/A	
DATE:	JANUARY 2006	
DRAWN:	SLF	
DESIGNED:	GWF	
CHECKED:	GWF	
APPROVED:	JWC	

PROJECT	2005 ANNUAL GEOTECHNICAL EVALUATION AND INSTRUMENT REVIEW	
TITLE	FLOW THROUGH ROCK DRAIN INSPECTION PHOTOS	
PROJECT No.	0257-032-05	REV. 0
DWG. No.	26	

BGC

BGC Engineering Inc.
AN APPLIED EARTH SCIENCES COMPANY

Calgary Alberta

Phone: (403) 250-5185



May: Photo shows a view of the Diversion Creek looking in the downstream direction right from the high starting area.



May: Photo shows a view of the Diversion Canal. There is a higher water mark located maybe 0.3 m higher up from the current water level.



May: Photo shows the beginning of the next section of the pilot channel. This is located some approximately 100 metres downstream from the corner.



September: Photo shows an exposure of geotextile located under the riprap. This exposure is located several hundred metres before the bend in the Diversion Channel before it heads towards the east.

CLIENT:

Deloitte
& Touche

AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA STATEMENTS CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
REV.	DATE	REVISION NOTES	DRAWN	CHECKED	APPROVED

SCALE:	N/A	
DATE:	JANUARY 2006	
DRAWN:	SLF	
DESIGNED:	GWF	
CHECKED:	GWF	
APPROVED:	JWC	

PROJECT	2005 ANNUAL GEOTECHNICAL EVALUATION AND INSTRUMENT REVIEW	
TITLE	FARO CREEK DIVERSION CHANNEL INSPECTION PHOTOS	
PROJECT No.	0257-032-05	REV. 0
DWG. No.	27	

BGC

BGC Engineering Inc.
AN APPLIED EARTH SCIENCES COMPANY

Calgary Alberta

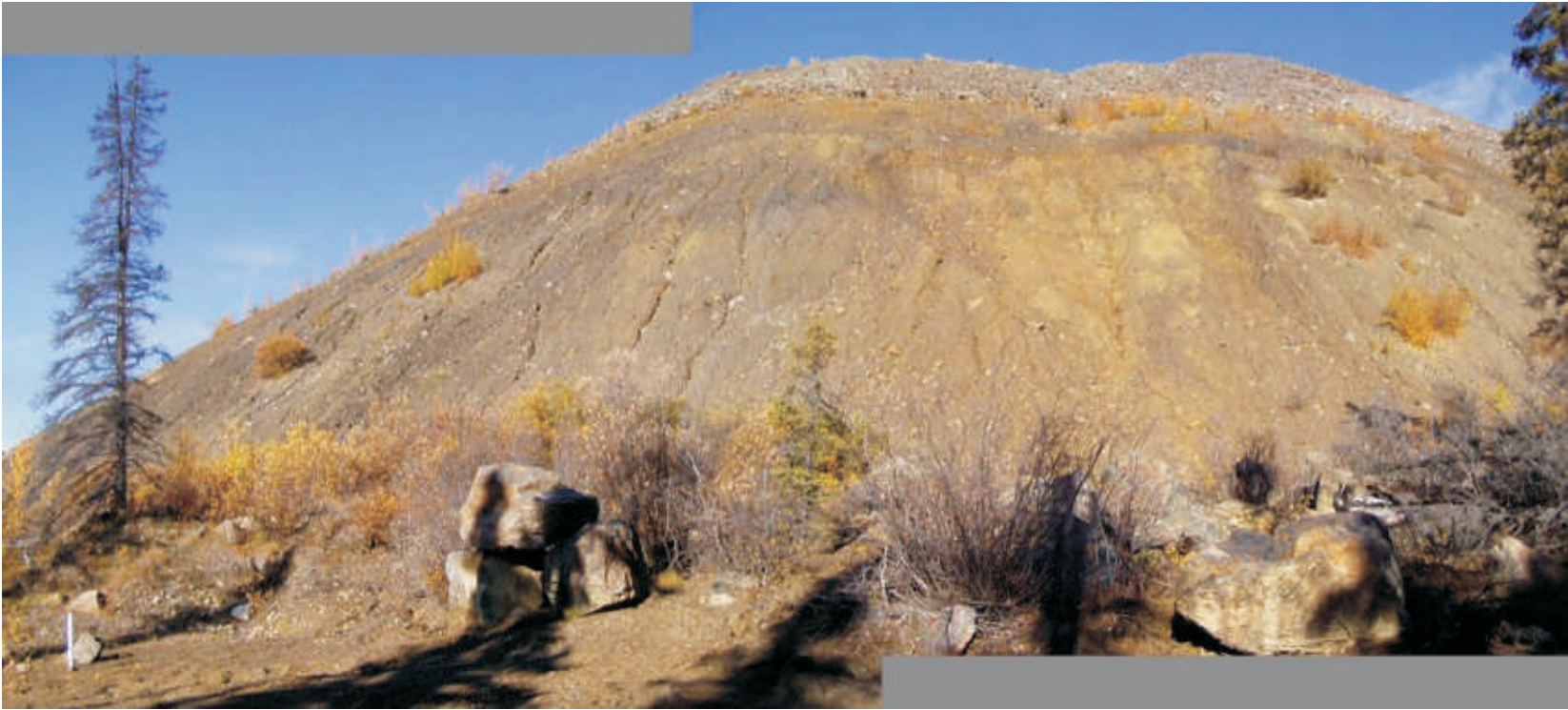
Phone: (403) 250-5185



September: view of the face of the waste dumps. No signs of bulging or cracking were noted.



September: view of the face of the waste dumps. No signs of bulging or cracking were noted.



September: View of location, where till soils are exposed and eroding along the side of the waste dump.

CLIENT:

Deloitte
& Touche

AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA STATEMENTS CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
REV.	DATE	REVISION NOTES	DRAWN	CHECKED	APPROVED

SCALE:	N/A	
DATE:	JANUARY 2006	
DRAWN:	SLF	
DESIGNED:	GWF	
CHECKED:	GWF	
APPROVED:	JWC	

PROJECT2005 ANNUAL GEOTECHNICAL EVALUATION AND INSTRUMENT REVIEW		
TITLE WASTE ROCK DUMP INSPECTION PHOTOS		
PROJECT No. 0257-032-05	DWG. No. 28	REV. 0



September: Photo shows the crest looking west towards the Intermediate Dam. This dam is constructed out of sand and gravel with armour on the downstream side consisting of large rounded cobbles and boulders. On the upstream side, tailings come close to the upstream crest of the dam.



September: Photo shows a view of the downstream face of this dam. There is the occasional erosional gully but the coarse material appears to prevent any erosion of the face.



September: Photo shows a ditch on the upstream side of the Secondary Dam. There is approximately 1.2 to 1.5 m of freeboard from the ditch water level to the crest of the dike.



September: Photo shows another view of the downstream side of the face. The face is well armoured with granular gravel, cobbles and boulders. Some vegetation is catching on but in a very sporadic matter. No direct indications of seepage which discharges directly from the face were observed.

CLIENT:

**Deloitte
& Touche**

AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA STATEMENTS CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
REV.	DATE	REVISION NOTES	DRAWN	CHECKED	APPROVED

SCALE:	N/A	
DATE:	JANUARY 2006	
DRAWN:	SLF	
DESIGNED:	GWF	
CHECKED:	GWF	
APPROVED:	JWC	

PROJECT	2005 ANNUAL GEOTECHNICAL EVALUATION AND INSTRUMENT REVIEW	
TITLE	SECONDARY DAM INSPECTION PHOTOS	
PROJECT No.	DWG. No.	REV.
0257-032-05	29	0

BGC

BGC Engineering Inc.
AN APPLIED EARTH SCIENCES COMPANY

Calgary Alberta

Phone: (403) 250-5185



CLIENT:



AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA STATEMENTS CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
REV.	DATE	REVISION NOTES	DRAWN	CHECKED	APPROVED

SCALE:	N/A	
DATE:	JANUARY 2006	
DRAWN:	SLF	
DESIGNED:	GWF	
CHECKED:	GWF	
APPROVED:	JWC	

PROJECT			2005 ANNUAL GEOTECHNICAL EVALUATION AND INSTRUMENT REVIEW		
TITLE					
SECONDARY DAM INSPECTION PHOTOS					
PROJECT No.		DWG. No.		REV.	
0257-032-05		30		0	



September: Photo shows the upstream side of this crest. Approximately 0.8 m to 1 m of freeboard exists from the tailings surface to the crest of the dam.



September: Photo shows the downstream face which is heavily armoured with gravel, cobbles and boulders.



September: Photo shows the downstream face of the far eastern arm overlooking North Fork Rose Creek Diversion. There are cobbles and boulders up to approximately 3 feet in diameter.



September: Photo shows another view of the downstream face of this dike looking towards the west. Large armouring from the cobbles and boulders is located on the face.

CLIENT:

Deloitte
& Touche

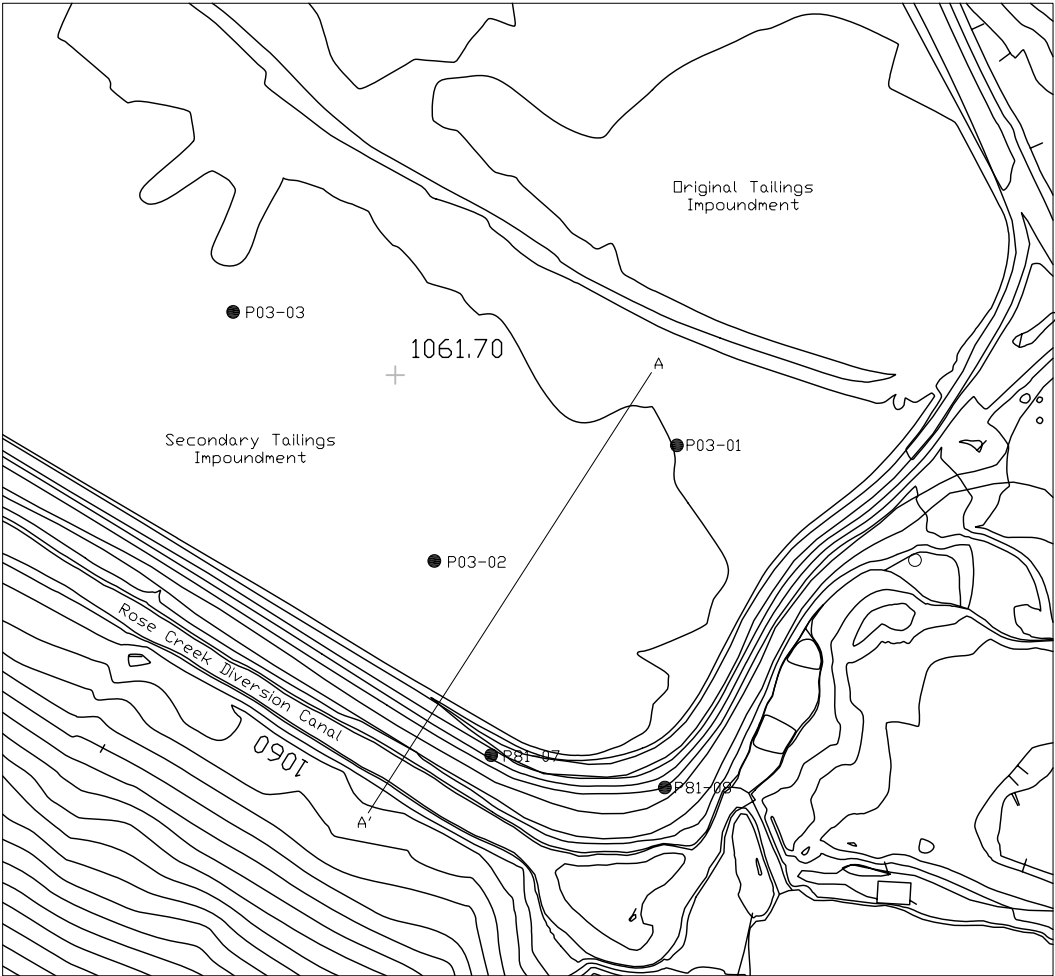
AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA STATEMENTS CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
REV.	DATE	REVISION NOTES	DRAWN	CHECKED	APPROVED

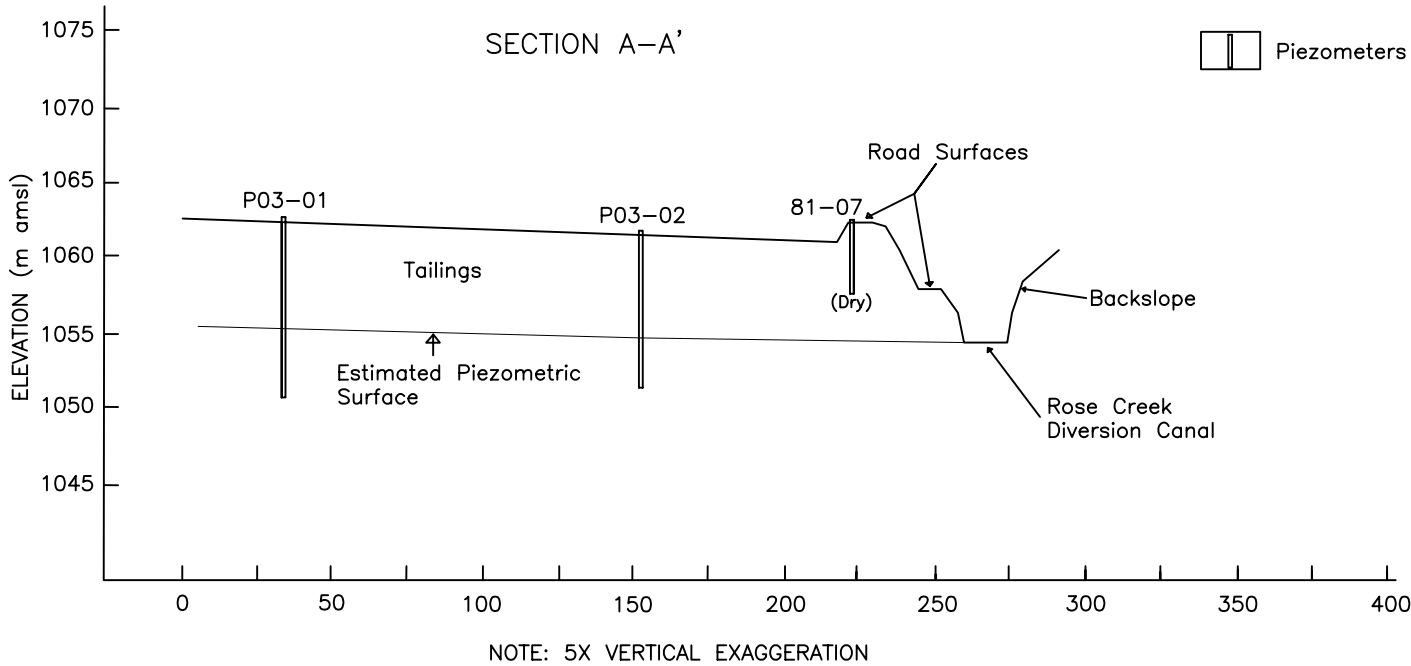
SCALE:	N/A	
DATE:	JANUARY 2006	
DRAWN:	SLF	
DESIGNED:	GWF	
CHECKED:	GWF	
APPROVED:	JWC	

PROJECT2005 ANNUAL GEOTECHNICAL EVALUATION AND INSTRUMENT REVIEW		
TITLESECONDARY DAM INSPECTION PHOTOS		
PROJECT No.	DWG. No.	REV.
0257-032-05	31	0

K:\Graphics\Projects\0257\032\05 Drawings\0257-032-05 001 Fig 32.dwg



- NOTES: 1) DRAWING IS A SCHEMATIC, CONSTRUCTED FOR ILLUSTRATIVE PURPOSES ONLY.
- 2) ALL ELEVATIONS ARE APPROXIMATE.



CLIENT:

**Deloitte
& Touche**

AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA, STATEMENTS, CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

REV.	DATE	REVISION NOTES	DRAWN	CHECKED	APPROVED

SCALE:	AS SHOWN	
DATE:	FEB 2006	
DRAWN:	REM	
DESIGNED:	MJM	
CHECKED:	GWF	
APPROVED:	JWC	

PROJECT	2005 ANNUAL GEOTECHNICAL EVALUATION AND INSTRUMENTATION REVIEW		
TITLE	SECONDARY DAM CURRENT PIEZOMETRIC CONDITIONS		
PROJECT No.	DWG. No.	REV.	
0257-032-05	32	0	

BGC

BGC ENGINEERING INC.

AN APPLIED EARTH SCIENCES COMPANY

Calgary, AB Phone: (403) 250 5185

2006 INSTRUMENTATION READINGS SCHEDULE	JAN 06	FEB 06	MAR 06	APR 06	MAY 06	JUN 06	JUL 06	AUG 06	SEP 06	OCT 06	NOV 06	DEC 06
1. Diversion Canal												
THERMISTORS												
- Canal Dyke: CD-15, CD-21, BGC01-02, BGC05-04, BGC05-07					***	***			***			
- Spoil Pile: SP-3						***						
- Back Slope: BS-5, BS-9, BS-10, BS-12						***			***			
SLOPE INDICATORS					If blocked in May, attempt to read in June.							
- Canal Dike: BGC01-01, CD-15, CD-19, CD-21, BH94CD-1, BH91-CD1, BGC05-05, BGC05-08					***				***			
- Spoil Pile: SP-2						***						
- Back Slope: BS-5, BS-9, BS-10						***			***			
PIEZOMETERS												
- Canal Dyke: CD-10, CD-13, CD-15, CD-21, CD-26, BGC05-02, BGC05-03, BGC05-06					***	***			***			
- Back Slope: BS-5, BS-9					***	***			***			
STAFF GAUGE: RCDC-4				daily	daily	daily	daily	daily	daily			
2. Cross Valley Dam												
THERMISTORS - CVDC-6, BH88-4					***	***			***			
PIEZOMETERS: CVDC-4, CVDC-7, CVDC-9, CVDT-1, CVDT-2, CVDP-1, CVDP-2, CVDP-3, CVDP-5, CVDP-6, 94 CVDC-1, P01-11 ²					***	***			***			
WEIR FLOWS ¹ : X-11, X-12, W3 ³	***	***	***	***	***	***	***	***	***	***	***	***
WEIR FLOWS ¹ : X-13	weekly	weekly	weekly	weekly	weekly	weekly	weekly	weekly	weekly	weekly	weekly	weekly
POLISHING POND WATER LEVEL ¹ (or automate with datalogger)	weekly	weekly	weekly	weekly	weekly	weekly	weekly	weekly	weekly	weekly	weekly	weekly
3. Intermediate Dam												
PIEZOMETERS: 91ID-4, 91-ID-5, 91-ID-6, 91-ID-7, 94-IDC-1, 96-1, 96-2, 96-3, 96-4, P01-03 ² , P01-04 ² , BKS04-06, BKS04-07					***	***			***			
91-ID3 (with seepage observations near south abutment)					***	***		***	***			
RETAINED POND WATER LEVEL ¹ (or automate with datalogger)	weekly	weekly	weekly	weekly	weekly	weekly	weekly	weekly	weekly	weekly	weekly	weekly
4. Secondary Tailings Dam												
PIEZOMETERS: P81-6, P81-7, P81-8, P81-9; P03-01 ⁴ , P03-02 ⁴ , P03-03 ⁴					***	***			***			
5. North Fork Rock Drain												
DATALOGGERS (automatic): Pond, X-2												
STAFF GAUGES ¹ : NFRD22, NFRD23 and X2				daily	daily	daily	weekly	weekly	weekly	weekly		
Survey or Staff Gauge ¹ : NFRD20, NFRD21, Pond, Toe of drain				weekly	weekly	weekly	weekly	weekly	weekly	weekly		
NOTES:												
1 Confirm accuracy of monitoring techniques.												
2 Before monitoring P01 series monitoring wells, confirm with GLL staff in Whitehorse that it is alright to do so.												
3 Monitor Instrumentation twice per month												
4 Monitored as part of Environmental Monitoring Program, provide elevation data to BGC												

CLIENT:



AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA STATEMENTS CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
REV.	DATE	REVISION NOTES	DRAWN	CHECKED	APPROVED

SCALE:	N/A	
DATE:	JANUARY 2006	
DRAWN:	SLF	
DESIGNED:	GWF	
CHECKED:	GWF	
APPROVED:	JWC	

PROJECT	2005 ANNUAL GEOTECHNICAL EVALUATION AND INSTRUMENT REVIEW	
TITLE	2006 MONITORING SCHEDULE	
PROJECT No.	DWG. No.	REV.
0257-032-05	33	0



BGC Engineering Inc.
AN APPLIED EARTH SCIENCES COMPANY

Calgary Alberta

Phone: (403) 250-5185

APPENDIX I

INSTRUMENTATION REPLACEMENT AND REPAIR



BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

DELOITTE AND TOUCHE INC.

TASK 8 INSTRUMENT REPAIR AND REPLACEMENT

FARO MINE, YT.

FINAL

PROJECT NO.: 0257-035-01
DATE: FEBRUARY 16, 2006

DISTRIBUTION LIST:	
ANVIL RANGE FARO	2 COPIES
DELOITTE & TOUCHE TORONTO	8 COPIES
DELOITTE & TOUCHE CALGARY	1 COPY
GARTNER LEE – YELLOWKNIFE	1 COPY
GARTNER LEE – WHITEHORSE	6 COPIES
BGC CALGARY	2 COPIES
BGC VANCOUVER	1 COPY

Project No. 0257-035-01

Date: February 16, 2006

Mr. Douglas Sedgwick
Deloitte & Touche Inc.
Suite 1900, TD Centre
79 Wellington Street West
Toronto, Ontario
M5K 1B9

RE: TASK 8 – INSTRUMENT REPAIR & REPLACEMENT

Dear Mr. Sedgwick:

Please find attached our report on the Instrumentation Repair and Replacement completed in 2005 at the Faro Mine. This report was included as appendix within the Faro Mine Annual submitted to the Yukon Water Board.

We trust that this information meets with your requirements at this time. Should you have any questions or comments, please do not hesitate to contact me at the number listed above.

Yours truly,

BGC Engineering Inc. per:

Gerry Ferris, M.Sc., P.Eng.
Geotechnical Engineer

GWF/sf

Attached: Final Report

TABLE OF CONTENTS

1.0	Introduction	1
1.1	Scope of Work.....	1
1.2	Work Location	2
2.0	Instrument Replacement	2
2.1	General.....	2
2.2	Subsurface Conditions	4
2.3	Installations	4
3.0	Weir Maintenance.....	6
4.0	Instrument Repair and Survey	7
5.0	Closure.....	8
	References.....	9

LIST OF TABLES

Table 1: Summary of Boreholes	3
Table 2: Summary of Instrument Details.....	5

LIST OF FIGURES

Figure 1. Site Location
Figure 2. Site Plan
Figure 3. Location of Boreholes
Figure 4. Summary of Moisture Content Testing
Figure 5 Weirs Downstream of Cross Valley Dam

APPENDICES

APPENDIX A – Borehole Logs
APPENDIX B – Site Photographs
APPENDIX C – Instrument Calibration Sheets
APPENDIX D – Laberge Weir Reports

LIMITATIONS OF REPORT

This report was prepared by BGC Engineering Inc. (BGC) for the account of Deloitte and Touche Inc., Interim Receiver for Anvil Range Mining Corporation. The material in it reflects the judgement of BGC staff in light of the information available to BGC at the time of report preparation. Any use which a Third Party makes of this report, or any reliance on decisions to be based on it are the responsibility of such Third Parties. BGC Engineering Inc. accepts no responsibility for damages, if any, suffered by any Third Party as a result of decisions made or actions based on this report.

As a mutual protection to our client, the public, and ourselves, all reports and drawings are submitted for the confidential information of our client for a specific project and authorization for use and / or publication of data, statements, conclusions or abstracts from or regarding our reports and drawings is reserved pending our written approval.

1.0 INTRODUCTION

The Rose Creek Diversion Canal (RCDC), Secondary Tailings Dam, Intermediate Dam and Cross Valley Dam are the main structures in the tailings area at Faro Mine, Yukon. Instruments have been installed within these structures to monitor their performance. The monitoring of these instruments is required as part of the annual geotechnical inspection performed for the Faro Mine. The annual geotechnical inspection is required by Yukon Water Licence QZ03-059.

BGC Engineering Inc. (BGC) recommended in an annual report (BGC 2004) that a detailed evaluation of the instruments used to monitor these main structures be undertaken. It was also recommended that the inoperable instruments be replaced or minor repairs be made, depending on the condition of the instrument. Additionally, the information concerning the structures and studies being performed as part of closure are all working with the geodetic datum rather than the local datum (Mine or Down Valley). Therefore, it was recommended that as part of the review of the instruments they be surveyed to establish geodetic elevations.

In 2004 (BGC 2004) a portion of the instruments were reviewed and the elevation of the instrument and ground determined (measured to geodetic datum). This report describes the work undertaken in 2005 to review, repair and replace the instruments not reviewed in 2004.

1.1 Scope of Work

In 2004, a review of the instruments on the Cross Valley and Intermediate Dams was performed. The 2004 work included establishing the elevation (geodetic) of the ground and the top of the instrument, and a review of the performance of the instrument. This review assessed if the instrument worked reliably or if some minor maintenance was required. The results of this survey were presented in the 2004 annual inspection.

As recommended in the 2004 annual report (BGC 2005), the program in 2005 consisted of the following:

- Complete the minor repairs recommended in 2004 for instruments at the Cross Valley and Intermediate Dams.
- Review and complete repairs on the instruments associated with the RCDC (backslope, dike crest, and spoil piles) and the Secondary Tailings Dam.
- Replacing instruments CD-19 and 88-07 (located on the RCDC) as recommended in the 2004 annual report.
- Complete a geodetic survey for all the instruments associated with the RCDC and the Secondary Tailings Dam.
- Review the weirs (X11, Weir #3, X12, X13) which are used to measure seepage flow downstream of the Cross Valley Dam. Complete any repairs recommended.

BGC provided a proposal (No. 05-006) for the review and replacement of instruments at Faro Mine, dated July 7, 2005, to Mr. Doug Sedgwick of Deloitte & Touche Inc. (Deloitte), Interim Receiver for Anvil Range Mining Corporation. The work was approved via letter dated July 13, 2005.

1.2 Work Location

The Faro Mine site is located in the central Yukon, approximately 200 km north-northeast of Whitehorse. The Faro Mine is situated approximately 22 km north of the Town of Faro, as shown in Figure 1. A mine site plan indicating the locations of major structures is shown in Figure 2.

2.0 INSTRUMENT REPLACEMENT

2.1 General

The instrument replacement program was undertaken to replace existing instruments CD-19 and 88-07. These existing instruments were destroyed during the 2004 canal dike crest raise. Additional instruments were added in this area as it corresponds to the location of the on-going dike crest settlement.

The instrument replacement program was completed between August 1 and 8, 2005. The drilling contractor was Midnight Sun Drilling Ltd. of Whitehorse, Yukon. A buggy-mounted CME 75 drill rig, equipped with hollow stem augers, was used to drill the eight boreholes required for this program. The drilling and installation program was supervised by BGC's field representative, Mr. Jordan Severin, G.I.T. A summary of the eight boreholes drilled in this program is provided in Table 1:

Table 1: Summary of Boreholes

Borehole No.	Borehole Location	Ground Surface Elevation (m amsl)	UTM Coordinates (NAD 27)	Borehole Depth (m)	Instrumentation/Depth (m)
BGC05-01	Canal Dike Crest	1054.1	580,889E / 6,913,409N	2.4	Drill Refusal at 2.4 m
BGC05-02	Canal Dike Crest	1054.1	580,881E / 6,913,413N	9.8	Piezometer/9.4
BGC05-03	Canal Dike Crest	1054.1	580,869E / 6,913,418N	4.7	Piezometer/4.0
BGC05-04	Canal Dike Crest	1054.1	580,865E / 6,913,420N	12.1	Thermistor/12.1
BGC05-05	Canal Dike Crest	1054.2	580,862E / 6,913,422N	10.7	SI Casing/10.7
BGC05-06	Canal Dike Toe	1050.3	580,715E / 6,913,518N	9.8	Piezometers/3.5, 8.8
BGC05-07	Canal Dike Toe	1050.3	580,714E / 6,913,518N	11.1	Thermistor/11.1
BGC05-08	Canal Dike Toe	1050.4	580,712E / 6,913,519N	12.2	SI Casing/12.2

The borehole locations are shown on Figure 3. Borehole logs documenting the field findings and the installation of the instruments are provided in Appendix A. Photographs of general site conditions are provided in Appendix B. The coordinates and elevations of the boreholes were surveyed by Yukon Engineering Services (YES) of Whitehorse.

Boreholes were drilled using hollow stem augers. Samples were collected using the Standard Penetrometer Test (SPT) sampling device every 0.75 m until a depth of 3 m. Below 3 m depth SPT samples were collected at 1.5 m intervals until the ultimate depth of the borehole was reached. Samples were collected from only one of the boreholes within a grouping of several proximal boreholes (Figure 3). It was assumed that similar soil conditions would be encountered in the other boreholes given the proximity of the holes. Samples collected were identified as JMS 1 through JMS 23 and were named in the order they were collected. Moisture contents of the samples were determined using the on site facilities, a summary of the moisture content determined is shown on Figure 4.

2.2 Subsurface Conditions

The general subsurface stratigraphy was encountered in this investigation:

- Fill, overlying,
- Till, overlying,
- Bedrock.

The thickness of the fill material was observed to range from 3.4 m (BGC05-02) to 5.0 m (BGC05-06). Based on information collected during drilling, the sand and silt unit is compact, exhibiting variable plasticity (low plastic to non-cohesive), slightly oxidized and having angular rock fragments. The fill was distinguished from the underlying till by the presence of organic-rich layers found throughout the unit.

The thickness of the till was observed to range between 4.7 m (BGC05-06) and 6.4 m (BGC05-02). The till was not observed deeper than 12.2 m below ground surface (BGC05-08); however, BGC05-08 was completed at a depth of 12.2 m before the bottom of the unit could be determined. The till was observed to be compact, exhibit low plasticity, sub-rounded clasts, and partial oxidization of the fine-grained materials.

Bedrock was encountered below the till at a depth ranging from 9.7 m (BGC05-06) and 11.4 m (BGC05-07) below ground surface. The bedrock observed was a weathered, green-grey, fine grained phyllite or schist. The bedrock did not appear to have any discontinuities or observable foliation, however, the recovered samples were disturbed due to the drilling and sampling method.

2.3 Installations

Two slope indicator casings, two thermistor strings, and four pneumatic piezometers were installed at the site.

The slope indicator casing used was 2.75 inch (70 mm) outer diameter Slope Indicator Shear-Wire inclinometer casing. A bentonite-cement grout was poured into the annular gap between the outside of the slope inclinometer casing and the borehole wall in order to secure the instruments in the ground. At each of the installations, a protective steel surface casing was installed at the surface to minimize the potential for damage to the instrumentation.

The thermistor strings were installed within a 25 mm diameter PVC protective casing. The thermistor type was YSI44007 (0.2 °C accuracy) with termination type 97-3106A-2-27P. The temperature beads on both thermistor strings were located at 0.5, 0.75, 1.0, 1.5, 2.0, 3.0, 4.0, 6.0, 10.0, and 12.0 m below the “zero” marker. A bentonite-cement grout was poured into the annular gap between the outside of the PVC and the borehole wall in order to secure the instruments in the ground. At each of the installations, a protective steel surface casing was installed at the surface to minimize the potential for damage to the instrumentation. Calibration sheets for the thermistor beads are included in Appendix C.

The pneumatic piezometers used have a maximum capacity of 50 psi (334.7 kPa) and were manufactured by RST Instruments Ltd. of Coquitlam, B.C. A copy of the calibration sheet for the piezometers is included in Appendix C. The piezometers were installed within an open-ended 25 mm diameter PVC protective casing (protective casing only around the plastic lead of the piezometer) and a sand pack was placed around the tip. The sand used for the sand pack was a 10-20 ‘frac’ sand. Bentonite pellets were placed as a seal zone both above and below the sand pack. The remaining portion of the hole was backfilled with cuttings. At each of the installations, a protective steel surface casing was installed at the surface to minimize the potential for damage to the instrumentation.

A summary of the installations is provided in Table 2 and details are shown in the borehole logs in Appendix A. Orientation bearings presented in Table 2 are with respect to true north. The correction for magnetic inclination at the site was 25° 45' E at the time of installation (GSC, www.geolab.nrcan.gc.ca).

Table 2: Summary of Instrument Details

Borehole No.	Instrument Type	Instrument Id	Instrument Depth Below Ground Surface(M)	Stick-Up From Ground Surface (M)	A°/Fall Line Bearing
BGC05-02	Piezometer	RST P100 - 030137	9.4	0.55	N/A
BGC05-03	Piezometer	RST P100 - 030139	4.0	0.5	N/A
BGC05-04	Thermistor	BGC05-02	12.1	0.23	N/A
BGC05-05	SI Casing	N/A	10.7	0.73	026° / 026°
BGC05-06	Piezometer	RST P100 - 030138	3.5	0.50	N/A
BGC05-06	Piezometer	RST P100 - 030139	8.8	0.50	N/A
BGC05-07	Thermistor	BGC05-01	11.1	0.38	N/A
BGC05-08	SI Casing	N/A	12.2	0.52	Not measured/

					Not measured

3.0 WEIR MAINTENANCE

Four weirs are located at the toe of the Cross Valley Dam to measure the seepage as shown on Figure 5. The V-notch weirs (X11, X12, Weir #3) measure the respective flow from the south third, middle third, and north third of the dam seepage in the collection trench. The fourth weir (X13), a rectangular weir, measures the combined seepage from the three areas.

As part of the on-going annual inspection it was recommended (BGC 2005) that the performance of these weirs be made. The program undertaken consisted of:

- A review of the physical condition of the weir plates;
- A review the stream and pond behind the weir plates in order to confirm that all flow is being measured and that the staff gauge is correctly positioned;
- Perform an elevation survey to confirm the relationship between the staff gauge reading and flow; and
- Perform independent checks on the flow amount as calculated from the staff gauge, such as filling known volumes of containers or in-stream measurements.

Laberge Environmental Ltd. (Laberge) of Whitehorse, Yukon were contracted to perform the above noted program. A preliminary review of the existing weir performance was undertaken in August 2005 (Appendix D) and a series of minor repairs were recommended. The recommended repairs were performed in September 2005 by Laberge (Appendix D) so that the standard V-notch or rectangular weir formula could be applied and discharge could be evaluated directly from the staff gauge readings.

A summary of the work completed at each weir follows:

- Weir X11 - The weir and staff gauge were surveyed and rocks were removed to allow for a volumetric measurement check. A new staff gauge was installed so that the readings directly correspond to the height above the notch.
- Weir # 3 - The sediment in the headpond was removed and a new staff gauge was attached to the angle iron to allow the reading to correspond to the height above the notch. A volumetric measurement check was completed upon completion of repairs.
- Weir X12 - The headpond was cleared and the staff gauge was adjusted to allow the reading to correspond to the height above the notch. A volumetric measurement check was completed.
- Weir X13 – It was observed that the rectangular weir was not level. The lower edge of the left hand side and the right hand side were measured and the staff gauge was adjusted to allow the reading to correspond to the height above the center of the notch.

A copy of the standard V-notch and rectangular weir formulas are included as part of the second Laberge report. These relationships should be used in future monitoring.

4.0 INSTRUMENT REPAIR AND SURVEY

In 2004, a review of the instruments located on the Cross Valley Dam and Intermediate Dam was conducted (BGC 2004). This review resulted in a series of recommendations for minor repairs and maintenance.

As part of the 2005 study, Mr. Gerry Ferris of BGC reviewed the existing instruments located on the backslope, spoil pile, and crest of the RCDC dike as well as the instruments associated with the Secondary Tailings Dam. This review included determining if the instrument functioned properly and reliably and other pertinent facts. Some recommendations for minor repairs were developed for these instruments.

Mr. Ferris of BGC, with support of site staff, completed the repairs and minor maintenance recommended for all the reviewed instruments in the tailings area. Yukon Engineering Services (YES) of Whitehorse, Yukon, was contracted to perform a detailed position and elevation survey of all the instruments associated with the RCDC and Secondary Tailings Dam. The results of this review and the elevation survey of instruments were used to update the instrumentation files for the 2005 annual geotechnical report.

The results of monitoring are included in the 2005 Annual geotechnical report. Recommendations for monitoring of the existing and recently installed instruments are also made in the 2005 Annual geotechnical report.

5.0 CLOSURE

We trust that this information will meet with your requirements at this time. Should you have any questions or require any additional information, please do not hesitate to contact the undersigned.

Yours truly,

BGC Engineering Inc.
Per

Jordan Severin, M.Sc., G.I.T.
Geologist-in-Training

James W. Cassie, M.Sc., P.Eng.
Specialist Geotechnical Engineer

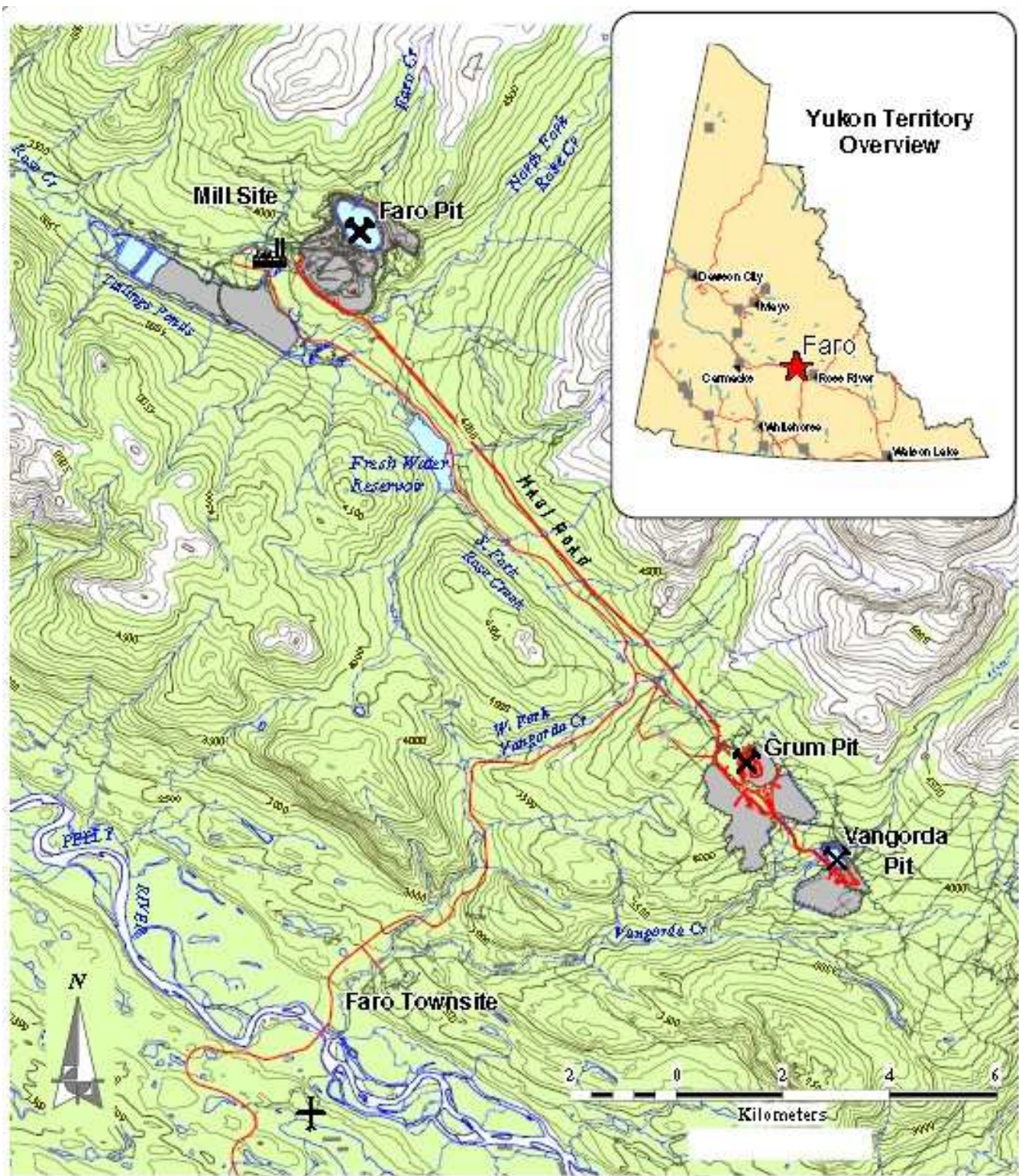
Gerry Ferris, M.Sc., P.Eng.
Geotechnical Engineer

REFERENCES

BGC Engineering Inc. 2004. 2003 Annual Geotechnical Evaluation and Instrument Review, Various Facilities at Faro Mine, Yukon. Two volume report submitted to Deloitte and Touche Inc., Project No 0257-015-06, February 2004.

BGC Engineering Inc. 2005. 2004 Annual Geotechnical Evaluation and Instrument Review, Various Facilities at Faro Mine, Yukon. Submitted to Deloitte and Touche Inc., Project No 0257-022-06, February 2005.

FIGURES



Note: Base map figure provided by Gartner Lee Limited.

AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA STATEMENTS CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

SCALE:	As Shown	DESIGNED:	JMS
DATE:	JANUARY 2006	CHECKED:	GWF
DRAWN:	SLF	APPROVED:	JWC

CLIENT:

**Deloitte
& Touche**

BGC

BGC Engineering Inc.
AN APPLIED EARTH SCIENCES COMPANY

Calgary, Alberta.

Phone: (403) 250-5185

PROJECT **TASK 8**
INSTRUMENT REPAIR AND REPLACEMENT

TITLE

SITE LOCATION PLAN

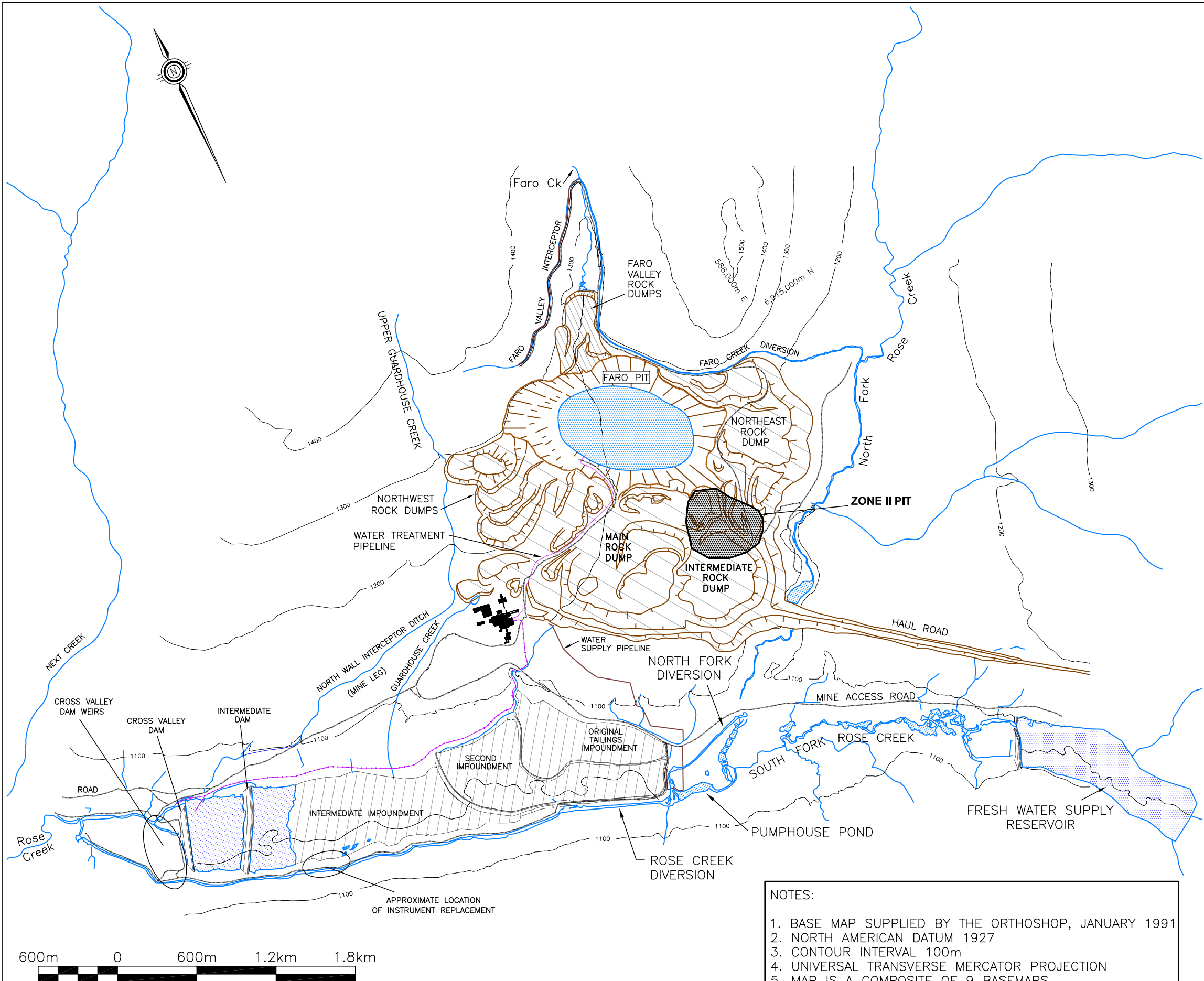
PROJECT No.
0257-035-01

FIGURE No.

1

REV.

0



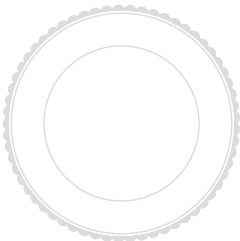
CLIENT:

**Deloitte
& Touche**

AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA, STATEMENTS, CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

REV.	DATE	REVISION NOTES	DRAWN	CHECKED	APPROVED

SCALE:	SHOWN
DATE:	JANUARY 2006
DRAWN:	REM
DESIGNED:	JMS
CHECKED:	GW
APPROVED:	



PROJECT			TASK 8		
			INSTRUMENT REPAIR AND REPLACEMENT		
TITLE			SITE PLAN		
PROJECT No.	DWG	REV.			
0257-035-01	2	A			

- NOTES:
1. BASE MAP SUPPLIED BY THE ORTHOSHOP, JANUARY 1991
 2. NORTH AMERICAN DATUM 1927
 3. CONTOUR INTERVAL 100m
 4. UNIVERSAL TRANSVERSE MERCATOR PROJECTION
 5. MAP IS A COMPOSITE OF 9 BASEMAPS

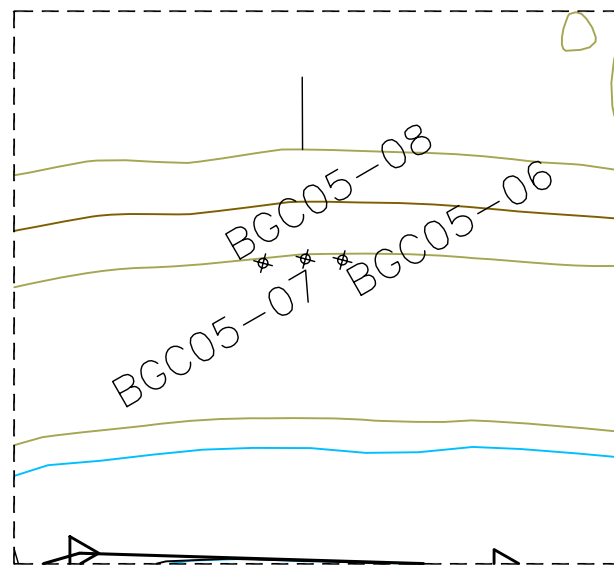
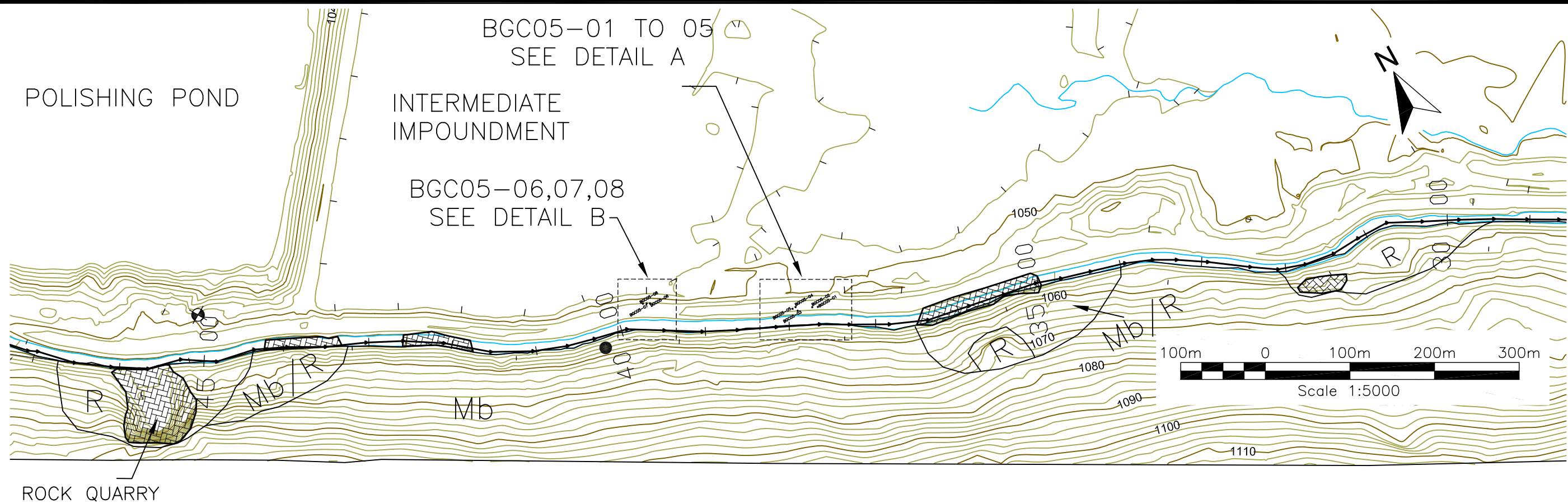


BGC ENGINEERING INC.

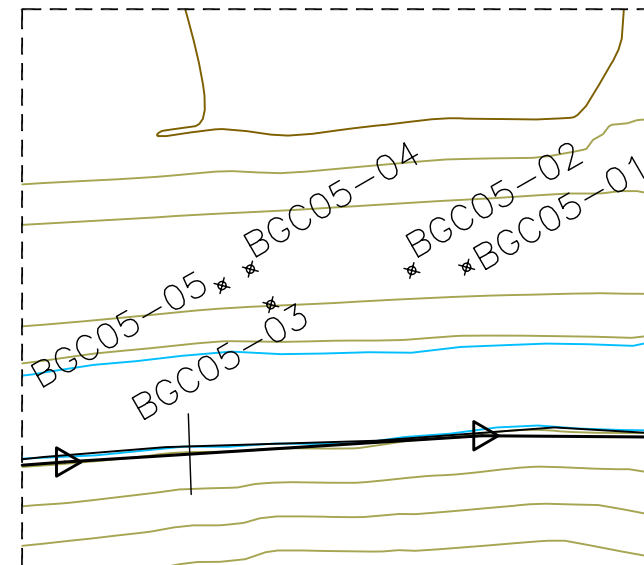
AN APPLIED EARTH SCIENCES COMPANY

Calgary, AB

Phone: (403) 250 5185



DETAIL B



DETAIL A

Legend:	
R	Bedrock
Mb/R	Morainal Blanket over Bedrock
Mb	Morainal Blanket
Cv	Colluvium
Ff	Fluvial Fan
•	Boreholes

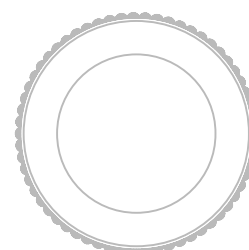
PROJECTION: UTM NAD27 ZONE 8

- NOTES:
1. TOPOGRAPHIC BASE INFORMATION FROM RECTIFIED AIRPHOTOS, THE ORTHOSHOP 2003.
 2. ELEVATIONS OF BOREHOLES FROM DIRECT SURVEY, YUKON ENGINEERING SERVICES 2005.

AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA, STATEMENTS, CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

REV.	DATE	REVISION NOTES	DRAWN	CHECK	APPR.

SCALE	1:10,000
DATE	JAN 2006
DRAWN	REM
DESIGNED	JMS
CHECKED	GWF
APPROVED	



BGC

BGC ENGINEERING INC.

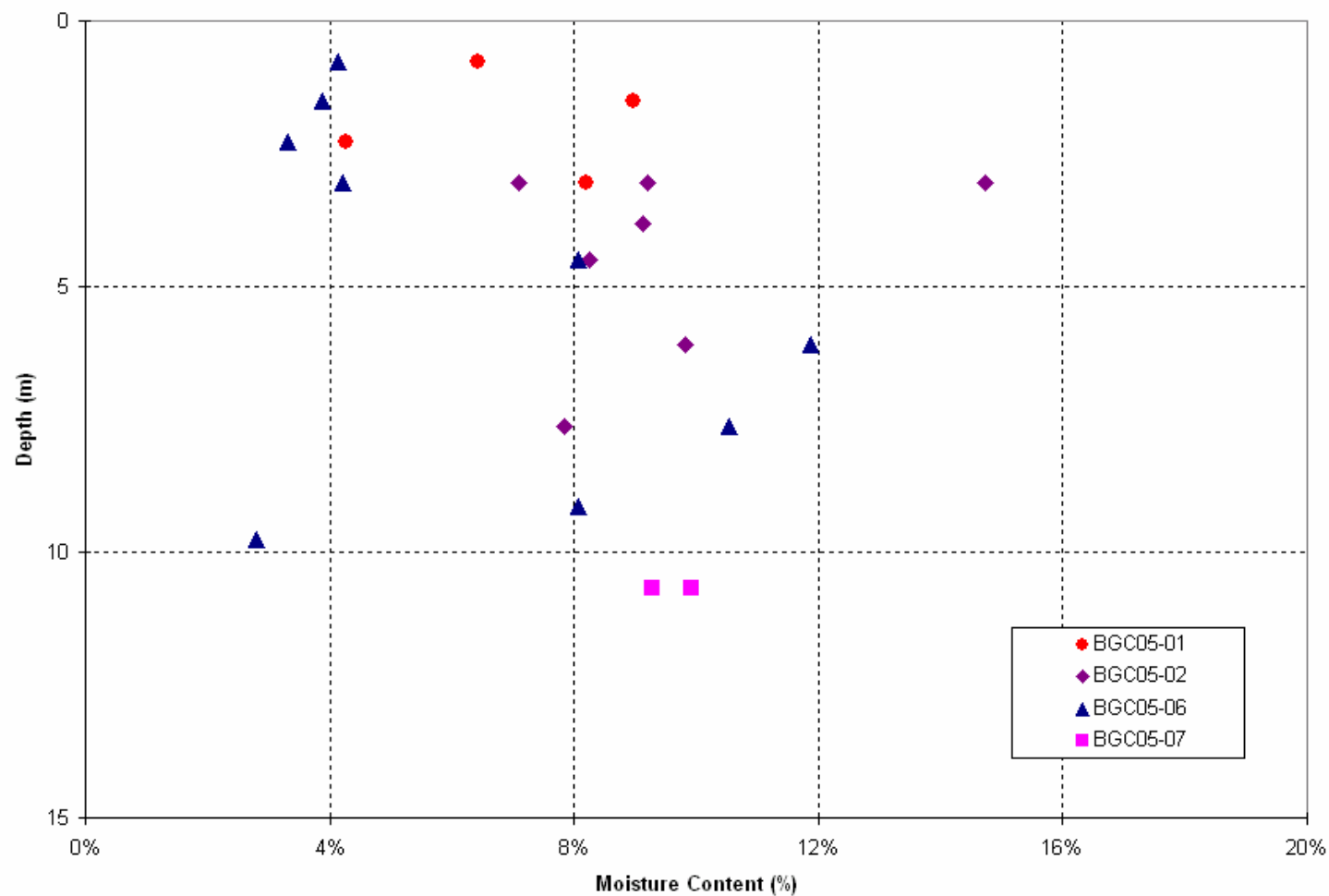
AN APPLIED EARTH SCIENCES COMPANY

Calgary, AB Phone: (403) 250 5185

CLIENT

Deloitte & Touche

PROJECT		
TASK 8		
INSTRUMENT REPAIR AND REPLACEMENT		
TITLE		
BOREHOLE LOCATIONS		
PROJECT No.	FIGURE	REV.
0257-035-01	3	



AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA, STATEMENTS, CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY
Calgary, Alberta Phone: (403) 250-5185

Client: **Deloitte & Touche**

Project: **TASK 8**
INSTRUMENT REPAIR AND REPLACEMENT

Title: **SUMMARY OF MOISTURE CONTENT TESTING**

Project #: **0257-035-01**

Date: **JAN 2006**

Scale: **NA**

Drawn: **JMS**

Approved: **GWF**

Figure: **4**



AS A MUTUAL PROTECTION TO OUR CLIENT, THE PUBLIC AND OURSELVES, ALL REPORTS AND DRAWINGS ARE SUBMITTED FOR THE CONFIDENTIAL INFORMATION OF OUR CLIENT FOR A SPECIFIC PROJECT AND AUTHORIZATION FOR USE AND/OR PUBLICATION OF DATA STATEMENTS CONCLUSIONS OR ABSTRACTS FROM OR REGARDING OUR REPORTS AND DRAWINGS IS RESERVED PENDING OUR WRITTEN APPROVAL.

SCALE:	1:5,000	DESIGNED:	GWF
DATE:	JANUARY 2006	CHECKED:	GWF
DRAWN:	SLF	APPROVED:	

CLIENT:

**Deloitte
& Touche**

BGC

BGC Engineering Inc.
AN APPLIED EARTH SCIENCES COMPANY

Calgary, Alberta.

Phone: (403) 250-5185

PROJECT
TASK 8
INSTRUMENT REPAIR AND REPLACEMENT

TITLE
LOCATION OF WEIRS AT CROSS VALLEY DAM

PROJECT No.	DWG. No.	REV.
0257-035-01	5	A

APPENDIX A – BOREHOLE LOGS

BOREHOLE # BGC05-01

Page 1 of 1

Project : Instrument Replacement

Project No. : 0257-035-01

Location : Faro Mine, YT
Co-ordinates (m) : 580888.5E, 6913408.7N
Co-ordinates in : NAD 27
Ground Elevation (m) : 1054.1 amsl

Drill Designation : CME 75
Drilling Contractor : Midnight Sun Ltd
Drill Method : Hollow Stem Auger
Sampling Method : Standard Penetration Test
Boring Diameter : 20 cm

Start Date : 02 Aug 05
Finish Date : 02 Aug 05
Final Depth of Hole (m) : 2.4
Logged by : J. Severin
Reviewed by : G. Ferris

Depth (m)	Sample Type	Sample No.	Recovery	Lithologic Description	Backfill	Instrument Details	SPT Blows per 300mm	Su - kPa				
								40	80	120	160	
								VANE	FIELD	LAB	UC/2	
								PEAK	◆	■	▲	
								REMOLD	◇	□	△	Pocket Pen /2
								★ % Fines			●	SPT (blows/300mm)
								Moisture Content & SPT N				
								W _p %			W _p %	W _p %
								X	20	40	60	80
0				SAND (FILL) Some Gravel, trace Silt. Dense, non-plastic, moist, reddish brown.								
1		JMS 01		SILT (FILL) Some Gravel, some Sand. Dense, non-plastic to low plasticity, grey. at 1.3 m, some oxidation, white powdery crystals.	Cuttings		33	○				
2		JMS 02					30	○				
3		JMS 03		E.O.H.: 2.4 m, auger refusal on cobble/boulder.. At 2.3 m, SPT gives 50 blows for 2 inches. Abandoned hole. No water observed. No sloughing observed.			100	○				
4												
5												

BGC ENGINEERING INC.

AN APPLIED EARTH SCIENCES COMPANY

BGC

Calgary, AB

Phone (403) 250 5185

Client:

Deloitte
& Touche

BOREHOLE # BGC05-02

Page 1 of 3

Project : Instrument Replacement

Project No. : 0257-035-01

Location : Faro Mine, YT
Co-ordinates (m) : 580881.1E, 6913412.6N
Co-ordinates in : NAD 27
Ground Elevation (m) : 1054.1 amsl

Drill Designation : CME 75
Drilling Contractor : Midnight Sun Ltd
Drill Method : Hollow Stem Auger
Sampling Method : Standard Penetration Test
Boring Diameter : 20 cm

Start Date : 02 Aug 05
Finish Date : 02 Aug 05
Final Depth of Hole (m) : 9.8
Logged by : J. Severin
Reviewed by : G. Ferris

Depth (m)	Sample Type	Sample No.	Recovery	Lithologic Description	Backfill	Instrument Details	SPT Blows per 300mm	Su - kPa			
								40	80	120	160
								VANE	FIELD	LAB	UC/2
								PEAK	◆	■	▲
								REMOLD	◇	□	△
★ % Fines			● SPT (blows/300mm)								
Moisture Content & SPT N											
W _p %	X		W%	O		W _p %	X				
20		40		60		80					

0				See BGC05-01 Borehole Log for nearby upper information.	Concrete								
1					Cuttings								
2													
3		JMS 05		SILT (FILL) Some Sand, some Gravel. Compact, non-plastic, moist, grey.			27	O					
4		JMS 07 JMS 06		SAND (TILL) Some Gravel, some Silt. Compact, non-cohesive, moist, reddish brown. Gravel contains quartz and biotite rock fragments.	Bentonite		20	O O					
5		JMS 08		At 4.0 m, SILT, some Sand.			23	O					
6		JMS 09		at 4.7 m, some iron staining of fine-grained materials.	Sand		19	O					

(Continued on next page)



BGC ENGINEERING INC.

AN APPLIED EARTH SCIENCES COMPANY

Calgary, AB

Phone (403) 250 5165

Client:

**Deloitte
& Touche**

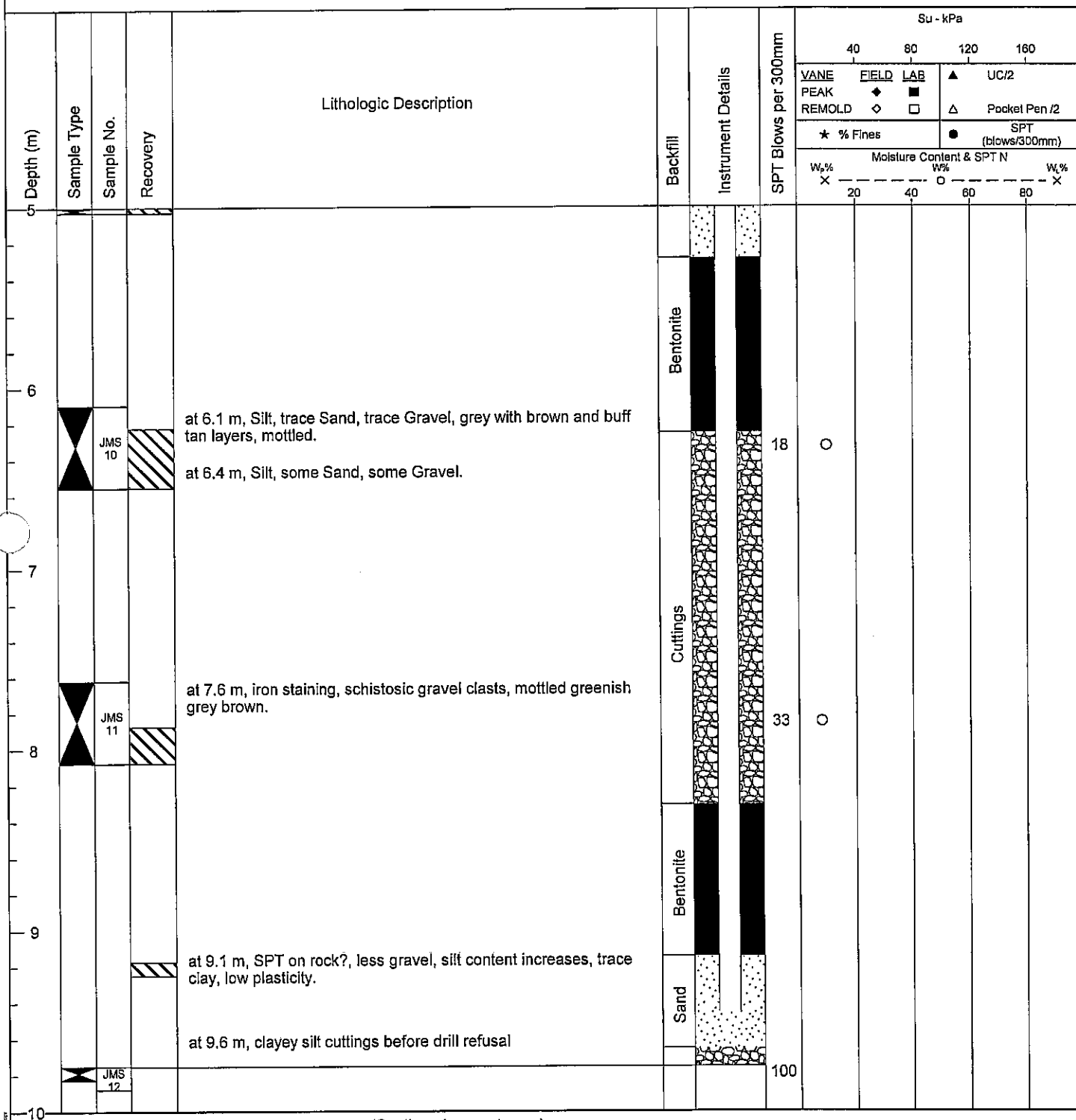
Project : Instrument Replacement

Project No. : 0257-035-01

Location : Faro Mine, YT
 Co-ordinates (m) : 580881.1E, 6913412.6N
 Co-ordinates in : NAD 27
 Ground Elevation (m) : 1054.1 amsl

Drill Designation : CME 75
 Drilling Contractor : Midnight Sun Ltd
 Drill Method : Hollow Stem Auger
 Sampling Method : Standard Penetration Test
 Boring Diameter : 20 cm

Start Date : 02 Aug 05
 Finish Date : 02 Aug 05
 Final Depth of Hole (m) : 9.8
 Logged by : J. Severin
 Reviewed by : G. Ferris



(Continued on next page)

BGC ENGINEERING INC.

AN APPLIED EARTH SCIENCES COMPANY

Client:

Deloitte
& Touche

BGC

Calgary, AB

Phone (403) 250 5185

Project : Instrument Replacement

Project No. : 0257-035-01

Location : Faro Mine, YT
 Co-ordinates (m) : 580881.1E, 6913412.6N
 Co-ordinates in : NAD 27
 Ground Elevation (m) : 1054.1 amsl

Drill Designation : CME 75
 Drilling Contractor : Midnight Sun Ltd
 Drill Method : Hollow Stem Auger
 Sampling Method : Standard Penetration Test
 Boring Diameter : 20 cm

Start Date : 02 Aug 05
 Finish Date : 02 Aug 05
 Final Depth of Hole (m) : 9.8
 Logged by : J. Severin
 Reviewed by : G. Ferris

Depth (m)	Sample Type	Sample No.	Recovery	Lithologic Description	Backfill	Instrument Details	SPT Blows per 300mm	Su - kPa				
								40	80	120	160	
								VANE	FIELD	LAB	UC/2	
								PEAK	◆	■	▲	
								REMOLD	◇	□	△	
★ % Fines				● SPT (blows/300mm)								
Moisture Content & SPT N												
W _p %	X		20	40	60	80	W _p %					
10				E.O.H.: 9.75 m, drill refusal, likely on cobbles/boulders. SPT at 9.75 m: 10 blows for 0 inches. Hole sloughed 10 cm at bottom of hole upon completion of drilling No water observed upon completion of drilling. at 9.4 m: Pneumatic Piezometer (RST P100 - 030137) installed. Piezometer installed in 25 mm diameter protective PVC. Stick up of PVC is 0.55 m. Protective casing installed at surface. 10-20 Frac Sand.	Slough							
11												
12												
13												
14												
15												

BGC ENGINEERING INC.

AN APPLIED EARTH SCIENCES COMPANY

Client:

Deloitte
& Touche

BGC

Calgary, AB

Phone (403) 260 5185

BOREHOLE # BGC05-03

Page 1 of 1

Project : Instrument Replacement

Project No. : 0257-035-01

Location : Faro Mine, YT
 Co-ordinates (m) : 580868.5E, 6913418.4N
 Co-ordinates in : NAD 27
 Ground Elevation (m) : 1054.1 amsl

Drill Designation : CME 75
 Drilling Contractor : Midnight Sun Ltd
 Drill Method : Hollow Stem Auger
 Sampling Method : Standard Penetration Test
 Boring Diameter : 20 cm

Start Date : 03 Aug 05
 Finish Date : 03 Aug 05
 Final Depth of Hole (m) : 4.7
 Logged by : J. Severin
 Reviewed by : G. Ferris

Depth (m)	Sample Type	Sample No.	Recovery	Lithologic Description	Backfill	Instrument Details	SPT Blows per 300mm	Su - kPa			
								40	80	120	160
								VANE	FIELD	LAB	UC/2
								PEAK	◆	■	▲
								REMOLD	◇	□	△
								★ % Fines			● SPT (blows/300mm)
								Moisture Content & SPT N			
								W _p %	X	W _p %	O
								20	40	60	80
0				Hole drilled for the installation of Piezometer (RST P100 - 030139) at depth 4.0 m. Hole drilled with Hollow Stem Auger to 4.7 m. No logging or sampling undertaken.	Concrete						
1					Cuttings						
2											
3				E.O.H.: 4.7 m at target depth. No sloughing observed upon completion of drilling. No water observed upon completion of drilling.	Bentonite						
4				at 4.0 m: Pneumatic Piezometer (RST P100 - 030139) installed. Piezometer installed in 25 mm diameter protective PVC. Stick up of PVC is 0.5 m. Protective casing installed at surface. 10-20 Frac Sand.	Sand						
5											

BGC ENGINEERING INC.

AN APPLIED EARTH SCIENCES COMPANY

Client:

Deloitte
& Touche

BGC

Calgary, AB

Phone (403) 250 5185

BOREHOLE # BGC05-04

Page 1 of 3

Project : Instrument Replacement

Project No. : 0257-035-01

Location : Faro Mine, YT
Co-ordinates (m) : 580864.7E, 6913420.2N
Co-ordinates in : NAD 27
Ground Elevation (m) : 1054.1 amsl

Drill Designation : CME 75
Drilling Contractor : Midnight Sun Ltd
Drill Method : Hollow Stem Auger
Sampling Method : Standard Penetration Test
Boring Diameter : 20 cm

Start Date : 03 Aug 05
Finish Date : 04 Aug 05
Final Depth of Hole (m) : 12.1
Logged by : J. Severin
Reviewed by : G. Ferris

Depth (m)	Sample Type	Sample No.	Recovery	Lithologic Description	Backfill	Instrument Details	SPT Blows per 300mm	Su - kPa			
								40	80	120	160
								VANE	FIELD	LAB	UC/2
								PEAK	◆	■	▲
								REMOLD	◇	□	△
★ % Fines			● SPT (blows/300mm)								
Moisture Content & SPT N											
W _p %	X	20	40	60	80	W _p %	X				
0				Hole drilled for the installation of Thermistor# BGC05-02. Hole drilled with Hollow Stem Auger to 12.1m. No logging or sampling undertaken.	Concrete						
1											
2											
3											
4											
5											

(Continued on next page)



BGC ENGINEERING INC.

AN APPLIED EARTH SCIENCES COMPANY

Calgary, AB

Phone (403) 250 5185

Client:

**Deloitte
& Touche**

BOREHOLE # BGC05-04

Page 2 of 3

Project : Instrument Replacement

Project No. : 0257-035-01

Location : Faro Mine, YT
 Co-ordinates (m) : 580864.7E, 6913420.2N
 Co-ordinates in : NAD 27
 Ground Elevation (m) : 1054.1 amsl

Drill Designation : CME 75
 Drilling Contractor : Midnight Sun Ltd
 Drill Method : Hollow Stem Auger
 Sampling Method : Standard Penetration Test
 Boring Diameter : 20 cm

Start Date : 03 Aug 05
 Finish Date : 04 Aug 05
 Final Depth of Hole (m) : 12.1
 Logged by : J. Severin
 Reviewed by : G. Ferris

Depth (m)	Sample Type	Sample No.	Recovery	Lithologic Description	Backfill	Instrument Details	SPT Blows per 300mm	Su - kPa			
								40	80	120	160
								VANE	FIELD	LAB	UC/2
								PEAK	◆	■	▲
								REMOLD	◇	□	△
★ % Fines			● SPT (blows/300mm)								
Moisture Content & SPT N											
W _p %	X		W _p %	O		W _p %	X				
20 40 60 80											

5				No logging or sampling was undertaken.															
6																			
7																			
8																			
9																			
10																			

(Continued on next page)

BGC ENGINEERING INC.

AN APPLIED EARTH SCIENCES COMPANY

Client:

Deloitte
& Touche

BGC

Calgary, AB

Phone (403) 250 5165

BOREHOLE # BGC05-04

Page 3 of 3

Project : Instrument Replacement

Project No. : 0257-035-01

Location : Faro Mine, YT
Co-ordinates (m) : 580864.7E, 6913420.2N
Co-ordinates in : NAD 27
Ground Elevation (m) : 1054.1 amsl

Drill Designation : CME 75
Drilling Contractor : Midnight Sun Ltd
Drill Method : Hollow Stem Auger
Sampling Method : Standard Penetration Test
Boring Diameter : 20 cm

Start Date : 03 Aug 05
Finish Date : 04 Aug 05
Final Depth of Hole (m) : 12.1
Logged by : J. Severin
Reviewed by : G. Ferris

Depth (m)	Sample Type	Sample No.	Recovery	Lithologic Description	Backfill	Instrument Details	SPT Blows per 300mm	Su - kPa			
								40	80	120	160
								VANE	FIELD	LAB	UC/2
								PEAK	◆	■	▲
								REMOLD	◇	□	△
★ % Fines			● SPT (blows/300mm)								
Moisture Content & SPT N								W _p %	W _w %	W _w %	
X	20	40	60	80	X						

10																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				</

E.O.H.: 12.1 m at target depth.

No sloughing observed upon completion of drilling.
Protective casing installed at surface.

Thermistor installed at 11.9 m in a 1 inch protective PVC casing.
Zero marker on thermistor located 0.09 m above ground surface.
Thermistor beads located at 0.41 m, 0.66 m, 0.91 m, 1.91 m, 2.91 m, 3.91 m, 5.91 m, 9.91 m, and 11.91 m below ground surface.
Stick-up of PVC protective casing 0.23 m.

BGC ENGINEERING INC.

AN APPLIED EARTH SCIENCES COMPANY

Client:

**Deloitte
& Touche**

BGC

Calgary, AB

Phone (403) 250 5185

BOREHOLE # BGC05-05

Page 1 of 3

Project : Instrument Replacement

Project No. : 0257-035-01

Location : Faro Mine, YT
 Co-ordinates (m) : 580862.3E, 6913421.7N
 Co-ordinates in : NAD 27
 Ground Elevation (m) : 1054.2 amsl

Drill Designation : CME 75
 Drilling Contractor : Midnight Sun Ltd
 Drill Method : Hollow Stem Auger
 Sampling Method : Standard Penetration Test
 Boring Diameter : 20 cm

Start Date : 04 Aug 05
 Finish Date : 04 Aug 05
 Final Depth of Hole (m) : 10.7
 Logged by : J. Severin
 Reviewed by : G. Ferris

Depth (m)	Sample Type	Sample No.	Recovery	Lithologic Description	Backfill	Instrument Details	SPT Blows per 300mm	Su - kPa																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
								40	80	120	160																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
								VANE	FIELD	LAB	UC/2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
								PEAK	◆	■	▲																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
								REMOLD	◇	□	△																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
★ % Fines			● SPT (blows/300mm)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
Moisture Content & SPT N																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
W _p %	W _p %						W _p %																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
X	20	40	60	80	X																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					

(Continued on next page)

Client:

**Deloitte
& Touche**

BOREHOLE # BGC05-05

Page 2 of 3

Project : Instrument Replacement

Project No. : 0257-035-01

Location : Faro Mine, YT
Co-ordinates (m) : 580862.3E, 6913421.7N
Co-ordinates in : NAD 27
Ground Elevation (m) : 1054.2 amsl

Drill Designation : CME 75
Drilling Contractor : Midnight Sun Ltd
Drill Method : Hollow Stem Auger
Sampling Method : Standard Penetration Test
Boring Diameter : 20 cm

Start Date : 04 Aug 05
Finish Date : 04 Aug 05
Final Depth of Hole (m) : 10.7
Logged by : J. Severin
Reviewed by : G. Ferris

Depth (m)	Sample Type	Sample No.	Recovery	Lithologic Description	Backfill	Instrument Details	SPT Blows per 300mm	Su - kPa					
								40	80	120	160		
								VANE	FIELD	LAB	▲ UC/2		
								PEAK	◆	■	▲ Pocket Pen /2		
								REMOLD	◇	□	● SPT (blows/300mm)		
★ % Fines		Moisture Content & SPT N		W _p %		W _p %							
X	20	40	60	80	X								
5				No logging or sampling undertaken.									
6													
7													
8													
9													

(Continued on next page)



BGC ENGINEERING INC.

AN APPLIED EARTH SCIENCES COMPANY

Calgary, AB

Phone (403) 250 5185

Client:

**Deloitte
& Touche**

BOREHOLE # BGC05-05

Page 3 of 3

Project : Instrument Replacement

Project No. : 0257-035-01

Location : Faro Mine, YT
Co-ordinates (m) : 580862.3E, 6913421.7N
Co-ordinates in : NAD 27
Ground Elevation (m) : 1054.2 amsl

Drill Designation : CME 75
Drilling Contractor : Midnight Sun Ltd
Drill Method : Hollow Stem Auger
Sampling Method : Standard Penetration Test
Boring Diameter : 20 cm

Start Date : 04 Aug 05
Finish Date : 04 Aug 05
Final Depth of Hole (m) : 10.7
Logged by : J. Severin
Reviewed by : G. Ferris

Depth (m)	Sample Type	Sample No.	Recovery	Lithologic Description	Backfill	Instrument Details	SPT Blows per 300mm	Su - kPa									
								40	80	120	160						
								VANE	FIELD	LAB	▲ UC/2						
								PEAK	◆	■							
								REMOLD	◇	□	△ Pocket Pen /2						
★ % Fines			● SPT (blows/300mm)														
Moisture Content & SPT N																	
W _p %	W _p %		W _p %		W _p %												
×	20	40	60	80	×												
10																	
11																	
12																	
13																	
14																	
15																	

BGC ENGINEERING INC.

AN APPLIED EARTH SCIENCES COMPANY

Client:

Deloitte
& Touche

BGC

Calgary, AB

Phone (403) 250 5185

BOREHOLE # BGC05-06

Page 1 of 3

Project : Instrument Replacement

Project No. : 0257-035-01

Location : Faro Mine, YT
Co-ordinates (m) : 580715.3E, 6913517.5N
Co-ordinates in : NAD 27
Ground Elevation (m) : 1050.3 amsl

Drill Designation : CME 75
Drilling Contractor : Midnight Sun Ltd
Drill Method : Hollow Stem Auger
Sampling Method : Standard Penetration Test
Boring Diameter : 20 cm

Start Date : 05 Aug 05
Finish Date : 05 Aug 05
Final Depth of Hole (m) : 9.8
Logged by : J. Severin
Reviewed by : G. Ferris

Depth (m)	Sample Type	Sample No.	Recovery	Lithologic Description	Backfill	Instrument Details	SPT Blows per 300mm	Su - kPa			
								40	80	120	160
								VANE	FIELD	LAB	▲ UC/2
								PEAK	◆	■	▲ Pocket Pen /2
								REMO	◇	□	● SPT (blows/300mm)
★ % Fines				Moisture Content & SPT N							
W _p %	X			20	40	60	80	W _p %	X		

0				SAND (FILL) Some Gravel, trace Silt. Medium grained sand, loose, non-plastic, moist, light brown.	Concrete														
1		JMS 13					8												
2		JMS 14					9												
		JMS 15		at 2.3 m, gravel up to 15 mm, compact.	Bentonite		14												
3		JMS 16					15												
4					Sand														
		JMS 17			Bentonite		22												
5																			

(Continued on next page)

BGC ENGINEERING INC.

AN APPLIED EARTH SCIENCES COMPANY

Client:

Deloitte
& Touche

BGC

Calgary, AB

Phone (403) 250 5185

BOREHOLE # BGC05-06

Page 2 of 3

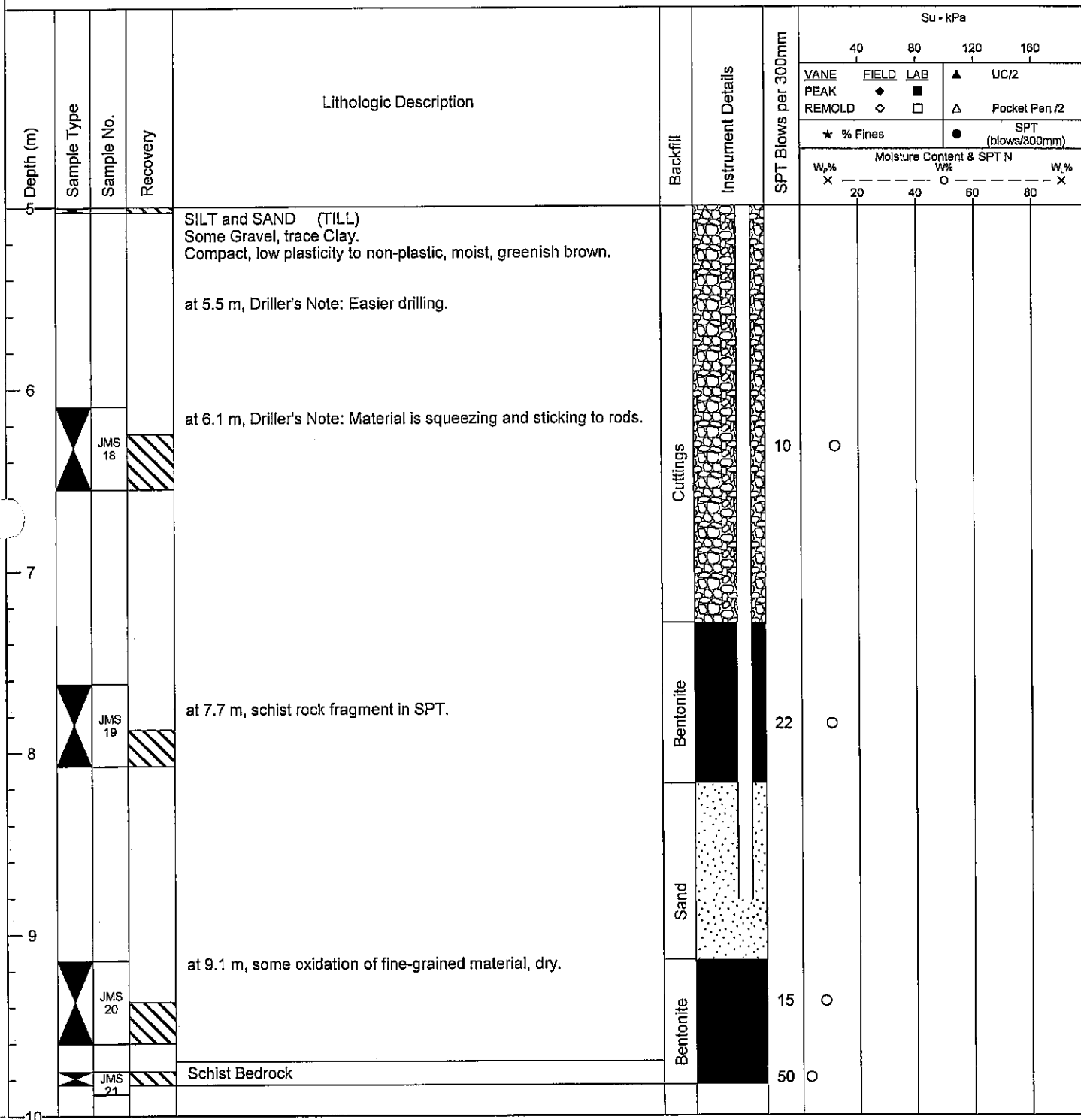
Project : Instrument Replacement

Project No. : 0257-035-01

Location : Faro Mine, YT
 Co-ordinates (m) : 580715.3E, 6913517.5N
 Co-ordinates in : NAD 27
 Ground Elevation (m) : 1050.3 amsl

Drill Designation : CME 75
 Drilling Contractor : Midnight Sun Ltd
 Drill Method : Hollow Stem Auger
 Sampling Method : Standard Penetration Test
 Boring Diameter : 20 cm

Start Date : 05 Aug 05
 Finish Date : 05 Aug 05
 Final Depth of Hole (m) : 9.8
 Logged by : J. Severin
 Reviewed by : G. Ferris



(Continued on next page)

BGC ENGINEERING INC.

AN APPLIED EARTH SCIENCES COMPANY

Client:

Deloitte
& Touche

BGC

Calgary, AB

Phone (403) 250 5185

BOREHOLE # BGC05-06

Page 3 of 3

Project : Instrument Replacement

Project No. : 0257-035-01

Location : Faro Mine, YT
 Co-ordinates (m) : 580715.3E, 6913517.5N
 Co-ordinates in : NAD 27
 Ground Elevation (m) : 1050.3 amsl

Drill Designation : CME 75
 Drilling Contractor : Midnight Sun Ltd
 Drill Method : Hollow Stem Auger
 Sampling Method : Standard Penetration Test
 Boring Diameter : 20 cm

Start Date : 05 Aug 05
 Finish Date : 05 Aug 05
 Final Depth of Hole (m) : 9.8
 Logged by : J. Severin
 Reviewed by : G. Ferris

Depth (m)	Sample Type	Sample No.	Recovery	Lithologic Description	Backfill	Instrument Details	SPT Blows per 300mm	Su - kPa			
								40	80	120	160
								VANE	FIELD	LAB	▲ UC/2
								PEAK	◆	■	▲ Pocket Pen /2
								REMOLD	◇	□	△ SPT (blows/300mm)
★ % Fines		● SPT (blows/300mm)									
Moisture Content & SPT N											
W _p %	X	20	40	60	80	X	W _p %				
10											
11				E.O.H.: 9.8 m, drill refusal in bedrock. No sloughing observed upon completion of drilling. No water observed upon completion of drilling. Protective casing installed at surface. at 3.5 m: Pneumatic Piezometer (RST P100 - 030138) installed. Pneumatic Piezometer installed in 25 mm diameter protective PVC. Stick up of PVC is 0.5 m. at 8.8 m: Piezometer (RST P100 - 030136) installed. Piezometer installed in 25 mm diameter protective PVC. Stick up of PVC is 0.5 m.							
12											
13											
14											
15											

BGC ENGINEERING INC.

AN APPLIED EARTH SCIENCES COMPANY

Client:

Deloitte
& Touche

BGC

Calgary, AB

Phone (403) 250 5185

BOREHOLE # BGC05-07

Page 1 of 3

Project : Instrument Replacement

Project No. : 0257-035-01

Location : Faro Mine, YT
Co-ordinates (m) : 580714E, 6913518.1N
Co-ordinates in : NAD 27
Ground Elevation (m) : 1050.3 amsl

Drill Designation : CME 75
Drilling Contractor : Midnight Sun Ltd
Drill Method : Hollow Stem Auger
Sampling Method : Standard Penetration Test
Boring Diameter : 20 cm

Start Date : 06 Aug 05
Finish Date : 06 Aug 05
Final Depth of Hole (m) : 11.1
Logged by : J. Severin
Reviewed by : G. Ferris

Depth (m)	Sample Type	Sample No.	Recovery	Lithologic Description	Backfill	Instrument Details	SPT Blows per 300mm	Su - kPa						
								40	80	120	160			
								VANE	FIELD	LAB	▲ UC/2			
								PEAK	◆	■				
								REMOLD	◇	□	△ Pocket Pen /2			
★ % Fines			● SPT (blows/300mm)		Moisture Content & SPT N									
W _p %	X		20	40	60	80	W _p %	X						
0				Hole drilled for the installation of Thermistor #BGC05-01. Hole drilled with Hollow Stem Auger to 11.4 m. No logging or sampling undertaken.	Concrete									
1														
2														
3					Bentonite and Cement									
4														

(Continued on next page)

BGC

BGC ENGINEERING INC.

AN APPLIED EARTH SCIENCES COMPANY

Calgary, AB

Phone (403) 250 5185

Client:

Deloitte
& Touche

Project : Instrument Replacement

Project No. : 0257-035-01

Location : Faro Mine, YT
 Co-ordinates (m) : 580714E, 6913518.1N
 Co-ordinates in : NAD 27
 Ground Elevation (m) : 1050.3 amsl

Drill Designation : CME 75
 Drilling Contractor : Midnight Sun Ltd
 Drill Method : Hollow Stem Auger
 Sampling Method : Standard Penetration Test
 Boring Diameter : 20 cm

Start Date : 06 Aug 05
 Finish Date : 06 Aug 05
 Final Depth of Hole (m) : 11.1
 Logged by : J. Severin
 Reviewed by : G. Ferris

Depth (m)	Sample Type	Sample No.	Recovery	Lithologic Description	Backfill	Instrument Details	SPT Blows per 300mm	Su - kPa			
								40	80	120	160
5				No logging or sampling undertaken.				VANE FIELD LAB			
								PEAK	◆	■	▲ UC/2
6								REMOLO	◇	□	△ Pocket Pen /2
								★ % Fines		●	SPT (blows/300mm)
7								Moisture Content & SPT N			
								W _p %	X	W _p %	W _p %
8								20	40	60	80
9											
10											

(Continued on next page)

BGC

BGC ENGINEERING INC.

AN APPLIED EARTH SCIENCES COMPANY

Calgary, AB

Phone (403) 250 5165

Client:

Deloitte
& Touche

BOREHOLE # BGC05-07

Page 3 of 3

Project : Instrument Replacement

Project No. : 0257-035-01

Location : Faro Mine, YT
Co-ordinates (m) : 580714E, 6913518.1N
Co-ordinates in : NAD 27
Ground Elevation (m) : 1050.3 amsl

Drill Designation : CME 75
Drilling Contractor : Midnight Sun Ltd
Drill Method : Hollow Stem Auger
Sampling Method : Standard Penetration Test
Boring Diameter : 20 cm

Start Date : 06 Aug 05
Finish Date : 06 Aug 05
Final Depth of Hole (m) : 11.1
Logged by : J. Severin
Reviewed by : G. Ferris

Depth (m)	Sample Type	Sample No.	Recovery	Lithologic Description	Backfill	Instrument Details	SPT Blows per 300mm	Su - kPa			
								40	80	120	160
								VANE	FIELD	LAB	▲ UC/2
								PEAK	◆	■	
								REMOLD	◇	□	△ Pocket Pen /2
								★ % Fines			● SPT (blows/300mm)
								Moisture Content & SPT N			
								W _p %	W _w %	W _w %	W _w %
								×	○	○	×
								20	40	60	80
10											
11		JMS 22 A & B		Phyllite / Schist Bedrock Moist, highly weathered.	Bentonite and Cement		21	○			
12				E.O.H.: 11.4 m due to auger refusal in bedrock. No sloughing observed upon completion of drilling. No water observed upon completion of drilling. Thermistor installed in 1 inch protective PVC casing. Zero marker on thermistor located 0.66m above ground surface. Thermistor beads located at 0.09 m, 0.34 m, 0.84 m, 1.34 m, 2.34 m, 3.34 m, 5.34 m, 9.34 m, and 11.34 m below ground surface. Stick-up of PVC 0.38 m.							
13											
14											
15											

BGC ENGINEERING INC.

AN APPLIED EARTH SCIENCES COMPANY

Client:

Deloitte
& Touche

BGC

Calgary, AB

Phone (403) 250 5185

BOREHOLE # BGC05-08

Page 1 of 3

Project : Instrument Replacement

Project No. : 0257-035-01

Location : Faro Mine, YT
 Co-ordinates (m) : 580712.1E, 6913518.6N
 Co-ordinates in : NAD 27
 Ground Elevation (m) : 1050.4 amsl

Drill Designation : CME 75
 Drilling Contractor : Midnight Sun Ltd
 Drill Method : Hollow Stem Auger
 Sampling Method : Standard Penetration Test
 Boring Diameter : 20 cm

Start Date : 07 Aug 05
 Finish Date : 07 Aug 05
 Final Depth of Hole (m) : 12.2
 Logged by : J. Severin
 Reviewed by : G. Ferris

Depth (m)	Sample Type	Sample No.	Recovery	Lithologic Description	Backfill	Instrument Details	SPT Blows per 300mm	Su - kPa				
								40	80	120	160	
								VANE	FIELD	LAB	▲ UC/2	
								PEAK	◆	■	▲ Pocket Pen /2	
								REMOLD	◇	□	△ Pocket Pen /2	
★ % Fines			● SPT (blows/300mm)									
Moisture Content & SPT N												
W _p %	X		W _p %	O	W _p %		X					
20		40		60		80						
0				Hole drilled for the installation of 2.75 inch diameter PVC Slope Indicator Casing. Hole drilled with Hollow Stem Auger to a depth of 12.2 m. No logging or sampling undertaken.	Concrete							
1												
2												
3												
4												
5												

(Continued on next page)



BGC ENGINEERING INC.

AN APPLIED EARTH SCIENCES COMPANY

Calgary, AB

Phone (403) 250 5185

Client:

**Deloitte
& Touche**

BOREHOLE # BGC05-08

Page 2 of 3

Project : Instrument Replacement

Project No. : 0257-035-01

Location : Faro Mine, YT
Co-ordinates (m) : 580712.1E, 6913518.6N
Co-ordinates in : NAD 27
Ground Elevation (m) : 1050.4 amsl

Drill Designation : CME 75
Drilling Contractor : Midnight Sun Ltd
Drill Method : Hollow Stem Auger
Sampling Method : Standard Penetration Test
Boring Diameter : 20 cm

Start Date : 07 Aug 05
Finish Date : 07 Aug 05
Final Depth of Hole (m) : 12.2
Logged by : J. Severin
Reviewed by : G. Ferris

Depth (m)	Sample Type	Sample No.	Recovery	Lithologic Description	Backfill	Instrument Details	SPT Blows per 300mm	Su - kPa			
								40	80	120	160
								VANE	FIELD	LAB	▲ UC/2
								PEAK	◆	■	△ Pocket Pen /2
								REMOLD	◇	□	● SPT (blows/300mm)
★ % Fines											
Moisture Content & SPT N											
W _p %			W _p %			W _p %					
X	20	40	60	80	X						

5				No logging or sampling undertaken.		Bentonite and Cement											
6																	
7																	
8																	
9																	
10																	

(Continued on next page)

Client:

**Deloitte
& Touche**

BOREHOLE # BGC05-08

Page 3 of 3

Project : Instrument Replacement

Project No. : 0257-035-01

Location : Faro Mine, YT
 Co-ordinates (m) : 580712.1E, 6913518.6N
 Co-ordinates in : NAD 27
 Ground Elevation (m) : 1050.4 amsl

Drill Designation : CME 75
 Drilling Contractor : Midnight Sun Ltd
 Drill Method : Hollow Stem Auger
 Sampling Method : Standard Penetration Test
 Boring Diameter : 20 cm

Start Date : 07 Aug 05
 Finish Date : 07 Aug 05
 Final Depth of Hole (m) : 12.2
 Logged by : J. Severin
 Reviewed by : G. Ferris

Depth (m)	Sample Type	Sample No.	Recovery	Lithologic Description	Backfill	Instrument Details	SPT Blows per 300mm	Su - kPa			
								40	80	120	160
								VANE	FIELD	LAB	▲ UC/2
								PEAK	◆	■	
								REMOLD	◇	□	△ Pocket Pen /2
★ % Fines			● SPT (blows/300mm)								
Moisture Content & SPT N								W _p %	W _p %	W _p %	W _p %
X	20	40	60	80	X						
10				No logging or sampling undertaken.	Bentonite and Cement						
11											
12					Slough						
13				E.O.H.: 12.2 m at target depth. Hole sloughed at 10.5 m upon completion of drilling. Depth to water 9.1 m upon completion of drilling. 2.75 inch PVC Slope Indicator Casing installed at a depth of 12.2 m as casing sunk into slough with applied weight. A ⁰ was not measured but is approximately coincident with the fall line of the slope. PVC Stick up 1.52 m above ground surface.							
14											
15											



BGC ENGINEERING INC.

AN APPLIED EARTH SCIENCES COMPANY

Calgary, AB

Phone (403) 250 5185

Client:

Deloitte
& Touche

APPENDIX B – SITE PHOTOGRAPHS



Photo 1 View of Rose Creek Diversion Canal Dike looking west along the crest. Note the barrels on left side of photo indicating location of replacement instruments.



Photo 2 View of Secondary Impoundment Structure, tailings pond and rock dump (in background) from replacement instrument site at BGC05-02.



Photo 3 View of grout plant (on sled) used to mix grout for backfilling boreholes around instruments.



Photo 4 View of drill and crew at instrument replacement location at BGC05-02.



Photo 5 View of drill crew placing 6 inch Standard Penetrometer Test (SPT) marks on drill rod at BGC05-02. Note white SPT hammer to the right of test rod.



Photo 6 View of Rose Creek Diversion Canal and backslope, near instrument replacement site at BGC05-02, looking in the upstream direction.



Photo 7 View of drill crew mixing grout for BGC05-03. Note the protective casing around BGC 05-02 in foreground and 1 inch PVC pipe in front of the drill at BGC05-03.



Photo 8 View of drill and crew at instrument replacement location at BGC05-06 with Intermediate Dam and pond in background.

Photo 9 View of a nested pneumatic piezometer installation in BGC05-06.



Photo 10 Close up view of sample JMS 21 retrieved from SPT spoon in BGC05-06 (9.75 m).

APPENDIX C – INSTRUMENT CALIBRATION SHEETS

ORDER NO: 022655

[illegible]

CALIBRATED BY

[illegible]

M-Squared Instruments

APPENDIX D –LABERGE WEIR REPORTS

To: Gerry Ferris BCG
Copies: Deloitte, GLL, RGC, Type II
From: Ken Nordin LES

August 22, 2005

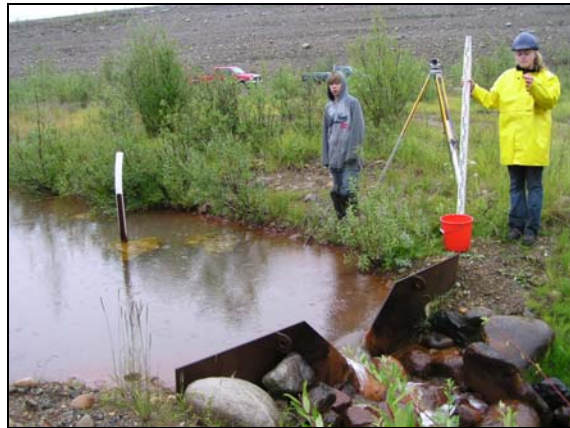
Re: Maintenance of Weirs Below the Cross Valley Dam

The following are observations and prescriptions for some minor upgrading work on the four weirs downstream of the Cross Valley Dam that capture seepage flows.

X_11 or CVS_5 - 90° V-notch weir at seepage channel

Observations

This weir was installed by Curragh and LES in 1996. It consists of a lined head pond and steel bulkhead with a 90 degree V-notch. It was leveled on July 13 2005. The top of the steel bulkhead on the left hand side looking downstream was 0.309m above the water surface. The staff gauge was reading 0.289m and the height of water over the V-notch was 0.224m. Applying the weir formula $Q = 1.3629 \cdot H^{2.5}$, the discharge was $1.3629 \cdot 0.224^{2.5} = 32.4$ L/sec



Prescription

The structure itself is performing well and does not need any physical work. Adjust the staff plate so that it reads the value H, or depth over the crest. The standard weir formula for 90° V-notch weirs has reported the same discharge compared with the salt slug injection in the past. (see memo to RGC May 29, 2005).

Weir #3 or CVS_6 - 90° V-notch weir upstream end culvert

Observations

This weir is a steel bulkhead attached to the upstream end of a culvert. The head pond is still functioning but has in-filled over the years with sediment and stones from the road shoulder. This should not affect the performance of the weir as a measurement structure but it may be wise to bale out the head pond to ensure that the approach velocity is near zero. The discharge on July 13, 2005 was measured with a stopwatch and bucket, 4.35 L/sec. Applying the weir formula, the discharge was $Q = 1.3629 (0.10^{2.5}) = 4.31$ L/sec.



Prescription

Bale out the headpond. Attach a new staff plate to the angle iron so that the staff reads the same as the H value above the notch. Run an axe file over the sharp edge.

X_12 or CVS_6 - 90° V-notch weir upstream end culvert

Observations

X_12 is a small steel bulkhead with a 90° V-notch bolted onto the upstream end of a culvert. The headpond is filling up and needs to be baled out. On July 13 the top of the steel bulkhead was 0.161m above the square shaped bench mark at the side of the weir, and 0.237m above the water surface. The measured H was 0.064m and the staff was reading 0.113m. Discharge was measured volumetrically at 1.25 L/sec (see calcs. below). Using the weir formula; $Q = 1.3629 (.0064^{2.5}) = 1.41$ L/sec. The higher result for the formula indicates that the approach velocity is too high.



X12 Flow Determination

Time (s)	Bucket depth (cm)	Volume (L)	Flow Rate (L/s)
1.53	6.1	1.96	1.28
1.78	6.7	2.16	1.21
1.73	6.8	2.18	1.26
1.78	6.6	2.11	1.19
1.54	6.2	2.00	1.30
Average:			1.25 L/s

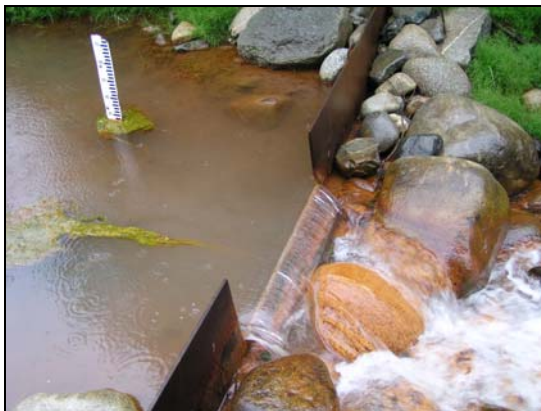
Prescription

Bale out the head pond, check discharge vs. weir formula, affix staff gauge so that H value is the same as the staff reading. Sharpen V-notch.

X_13 or CVS_4 Rectangular weir

Observations

X_13 is the combined seepage of X_11 and X_12. This weir is a rectangular sharp crested weir with a width of 0.915m. The weir is slightly slanted so that the H value varies from one side to the other. On July 13 the H on the RHS looking downstream was 60mm and 86mm on the LHS. The staff gauge was reading 0.260m. Using the formula in metric units for a sharp crested rectangular weir; $Q = 1.8363 LH^{3/2}$, the discharge was $1.8363 \times 0.915 \times 0.074^{3/2} = 33.8 \text{ L/sec}$. (This compares with the sum of X_11 and X_12; $32.4 + 1.25 = 33.65 \text{ L/sec}$).



Prescription

Try to level the weir, so that it has the same H across the crest. Adjust the staff so that it reads the same as the crest H. (Note that at this site it is preferable to measure the H using a steel tape because of precision).

Summary

The weirs below the Cross Valley Dam are performing well as water measurement structures. Some time ago Gartner Lee presented rating curves to the site managers at Faro which report discharge relative to the staff gauge readings. The staff gauges currently do not read the actual height of water flowing above the notch or the crest. The standard weir formulas still work fairly well with these structures, except for X_12 as noted above. If the conditions for weirs are followed (free falling nappe, close to zero approach velocity, ample head pond, precise sharp crest), then rating curves are not necessary because the weir formulae would take their place. Modest improvements to the weirs as discussed above would require the use of a backhoe and two person crew for about ½ a day.

If it is decided to adjust the staff gauges as described above, then it is important that all Deloitte staff and everyone else who uses these data to be informed of the difference between the adjusted staff gauge and the existing rating curves.

To: Gerry Ferris BGC, Dan Mackie SRK
Copies: Christoph Wels RGC, Deloitte, GLL, Faro Project Office
From: Ken Nordin LES

September 5, 2005

Re: Maintenance of Weirs Below the Cross Valley Dam

The following are observations from the recent work done at the four weirs downstream of the Cross Valley Dam. This is a follow-up to a memo of August 22 on the same subject. Note that the previous memo on this subject contained an error regarding the flow at X_11. We found that there was significant seepage entering the system between X_11, X_12, and Weir #3 prior to reporting at X_13. All weirs were calibrated and the staff gauges were set to report the H value.

X_11 or CVS_5 - 90° V-notch weir at seepage channel



For July 13 2005, the H value was incorrectly reported for as 0.224 m. This was an error. The actual H over the notch was not .224, rather 0.154 measured at the crest. (The value 0.224 had been derived from the staff gauge height). Applying the weir formula $Q \text{ L/sec} = 1362.9 \cdot H^{2.5}$, the discharge was $1362.9 \cdot 0.154^{2.5} = 12.7 \text{ L/sec}$, *not 32.4 L/sec as reported*. On September 2, 2005 rocks were removed to allow a volumetric measurement at X_11. The discharge was 7.6 L/sec. Applying the formula, the discharge was $1362.9 \cdot 0.126^{2.5} = 7.7 \text{ L/sec}$. The staff gauge reading was initially 0.260 m. A new staff gauge was installed and set to read H, or 0.126 m.

Weir #3 or CVS_6 - 90° V-notch weir upstream end culvert



This weir is a steel bulkhead welded to the upstream end of a culvert. The head pond is still functioning but has in-filled over the years with sediment and stones from the road shoulder. The discharge on July 13, 2005 was measured with a stopwatch and bucket, 4.35 L/sec. Applying the weir formula, the discharge was $Q \text{ L/sec} = 1362.9 (0.10^{2.5}) = 4.31 \text{ L/sec}$. On September 2nd, the existing staff gauge read 0.13 m and H was measured at 0.092 m. The volumetric discharge was 3.8 L/sec and the formula discharge was $Q \text{ L/sec} = 1362.9 (0.092^{2.5}) = 3.52 \text{ L/sec}$. The staff gauge was set to read H or 0.092 m.

X_12 or CVS_6 - 90° V-notch weir upstream end culvert



X_12 is a small steel bulkhead with a 90° V-notch welded onto the upstream end of a culvert. The headpond was cleaned out and the edge sharpened on September 1, 2005. On September 2 the measured H was 0.033 m and the staff was reading 0.09 m. Discharge was measured volumetrically at 0.26 L/sec. Using the weir formula; $Q \text{ L/sec} = 1362.9 (.033^{2.5}) = 0.27 \text{ L/sec}$. The staff gauge was adjusted to read H, or 0.033 m.

X_13 or CVS_4 Rectangular weir

X_13 is the combined seepage of X_11, X_12 and Weir #3. This weir is a standard rectangular sharp crested weir with a width of 0.915m. The weir is slightly slanted so that the H value varies from one side to the other. The formula for a weir of this type is $Q \text{ (m}^3\text{/sec)} = 1.8363 LH^{3/2}$. In L/sec for X_13, the formula is $Q \text{ L/sec} = 1680.2 H^{3/2}$, where H is the average depth over the crest – LHS + RHS /2. On September 1 and 2, a series of measurements were taken at this weir as well as upstream and downstream channels with the following results:

X_13 weir September 1 at 6 PM (H=0.066)	28.5 L/sec
X_13 weir September 2 at 12 PM (H=0.060)	24.7 L/sec
X_13 channel 5 m D/S of weir 11 AM	26.3 L/sec
X_13 channel 75 m D/S of weir 10 AM	31.0 L/sec
X_12 channel 20 m U/S weir 1 PM	6.5 L/sec



X_13 Sept. 2 2005



X_13 showing staff gauge set at average H

The staff gauge was adjusted to reflect the average H over the crest, or 0.060 m on September 2, 2005. When reading this weir, it is prudent to measure the depth over the crest on the LHS and RHS using a set square or ruler for better precision.



X_13 channel 5 m D/S weir



X_13 channel 75 m D/S weir



Seepage channel between X_12 and X_13

Summary

The weirs below the cross valley dam were maintained and adjusted on September 1 and 2, 2005. The standard weir formulas now apply to all. Significant seepage is entering the system between the weirs and below X_13 as reflected by the higher discharge at X_13 than the sum of the upstream weirs, and the increasing flow noticed in the channel just below X_13. The discharge at X_12 on September 2 was only 0.27 L/sec but increased to 6.5 L/sec in the channel below.

New rating tables and charts for the weirs are attached.

The following are comparisons between the old rating curves vs. the new rating curves:

Weir	Staff (old)	Q (old)	Staff (new)	Q (new)	old-new
X_11	0.26	47 L/sec	0.126	7.71 L/sec	.134
X_12	0.09	0.75 L/sec	0.033	0.27 L/sec	.057
Weir 3	0.13	8.25 L/sec	0.092	3.52 L/sec	.038
X13	0.245	72 L/sec	0.060	24.7 L/sec	.185

Past data from these weirs can be adjusted by converting the old staff gauge readings to their equivalent "new" values by subtracting the difference and applying the result to the new rating table.

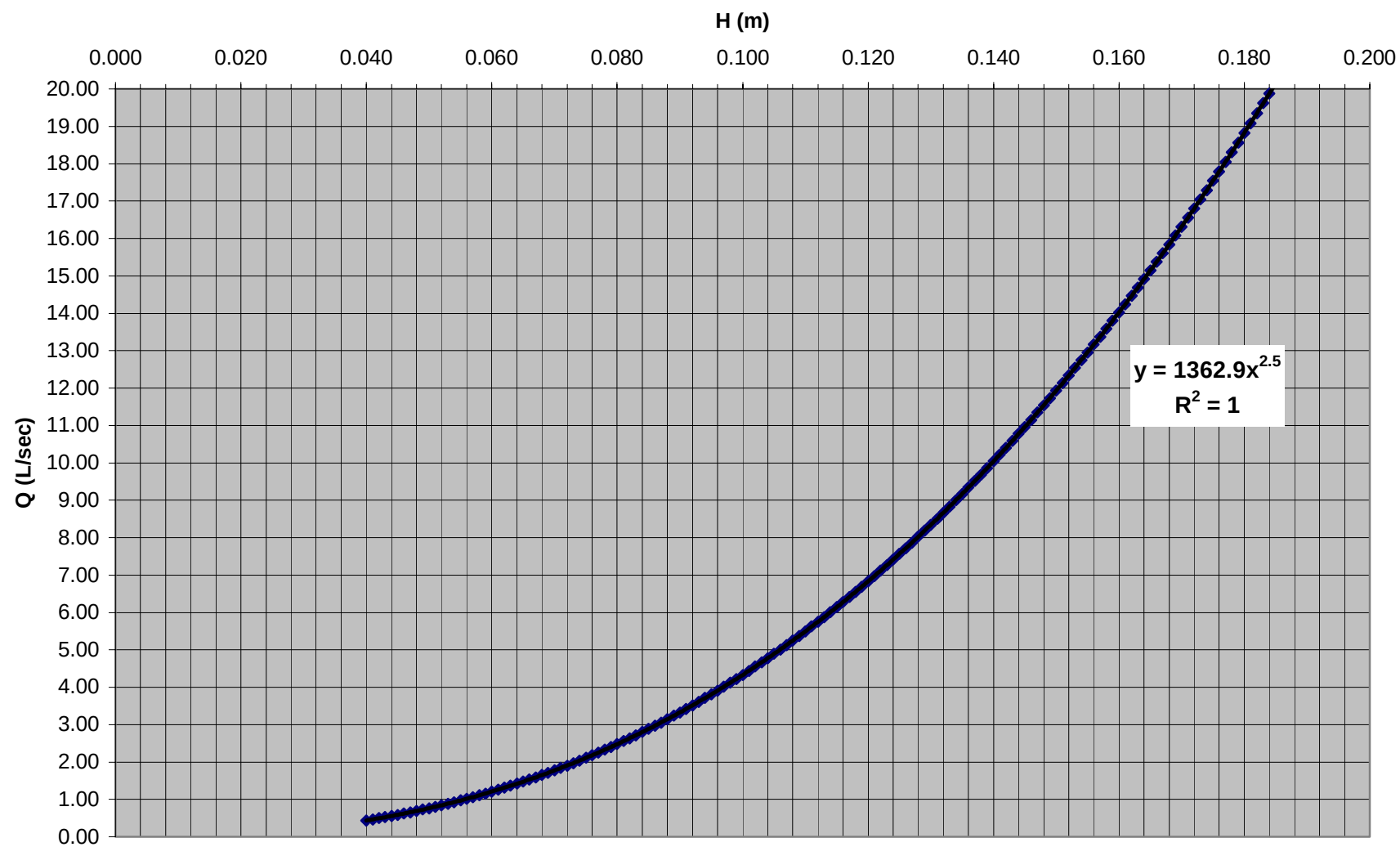
Rating Table for X_11, Weir #3 and X_12 - Standard 90° V-notch Weirs where $Q \text{ (L/sec)} = 1362.9H^{2.5}$

H (m)	L/sec	H (m)	L/sec	H (m)	L/sec	H (m)	L/sec	H (m)	L/sec	H (m)	L/sec	H (m)	L/sec
0.030	0.21	0.073	1.97	0.108	5.25	0.143	10.59	0.178	18.30	0.223	32.15	0.258	46.29
0.035	0.31	0.074	2.04	0.109	5.37	0.144	10.77	0.179	18.56	0.224	32.52	0.259	46.74
0.040	0.44	0.075	2.11	0.110	5.49	0.145	10.96	0.180	18.82	0.225	32.88	0.260	47.20
0.041	0.47	0.076	2.18	0.111	5.62	0.146	11.15	0.181	19.08	0.226	33.25	0.270	51.87
0.042	0.49	0.077	2.25	0.112	5.75	0.147	11.34	0.182	19.35	0.227	33.61	0.280	56.80
0.043	0.52	0.078	2.33	0.113	5.88	0.148	11.54	0.183	19.62	0.228	33.99	0.290	62.01
0.044	0.56	0.079	2.40	0.114	6.01	0.149	11.73	0.184	19.88	0.229	34.36	0.300	67.49
0.045	0.59	0.080	2.48	0.115	6.14	0.150	11.93	0.185	20.16	0.230	34.74	0.310	73.26
0.046	0.62	0.081	2.56	0.116	6.27	0.151	12.13	0.186	20.43	0.231	35.12	0.320	79.31
0.047	0.66	0.082	2.64	0.117	6.41	0.152	12.33	0.187	20.70	0.232	35.50	0.330	85.65
0.048	0.69	0.083	2.72	0.118	6.55	0.153	12.54	0.188	20.98	0.233	35.88	0.340	92.29
0.049	0.73	0.084	2.80	0.119	6.69	0.154	12.74	0.189	21.26	0.234	36.27	0.350	99.23
0.050	0.77	0.085	2.88	0.120	6.83	0.155	12.95	0.190	21.55	0.235	36.66	0.360	106.47
0.051	0.80	0.086	2.97	0.121	6.97	0.156	13.16	0.191	21.83	0.236	37.05	0.370	114.02
0.052	0.84	0.087	3.06	0.122	7.12	0.157	13.37	0.192	22.12	0.237	37.44	0.380	121.88
0.053	0.89	0.088	3.15	0.123	7.26	0.158	13.59	0.193	22.41	0.238	37.84	0.390	130.06
0.054	0.93	0.089	3.24	0.124	7.41	0.159	13.80	0.194	22.70	0.239	38.24	0.400	138.55
0.055	0.97	0.090	3.33	0.125	7.56	0.160	14.02	0.195	22.99	0.240	38.64	0.410	147.38
0.056	1.02	0.091	3.42	0.126	7.72	0.161	14.24	0.196	23.29	0.241	39.04	0.420	156.53
0.057	1.06	0.092	3.52	0.127	7.87	0.162	14.46	0.197	23.58	0.242	39.45	0.430	166.01
0.058	1.11	0.093	3.61	0.128	8.03	0.163	14.69	0.198	23.89	0.243	39.85	0.440	175.83
0.059	1.16	0.094	3.71	0.129	8.18	0.164	14.91	0.199	24.19	0.244	40.27	0.450	185.99
0.060	1.21	0.095	3.81	0.130	8.34	0.165	15.14	0.200	24.49	0.245	40.68	0.500	242.04
0.061	1.26	0.096	3.91	0.131	8.50	0.166	15.37	0.201	24.80	0.246	41.10		
0.062	1.31	0.097	4.01	0.132	8.67	0.167	15.60	0.202	25.11	0.247	41.52		
0.063	1.36	0.098	4.12	0.133	8.83	0.168	15.84	0.203	25.42	0.248	41.94		
0.064	1.42	0.099	4.22	0.134	9.00	0.169	16.08	0.204	25.77	0.249	42.36		
0.065	1.47	0.100	4.33	0.135	9.17	0.170	16.32	0.205	26.05	0.250	42.79		
0.066	1.53	0.101	4.44	0.136	9.34	0.171	16.56	0.206	26.37	0.251	43.22		
0.067	1.59	0.102	4.55	0.137	9.51	0.172	16.80	0.207	26.69	0.252	43.65		
0.068	1.65	0.103	4.66	0.138	9.69	0.173	17.04	0.208	27.02	0.253	44.08		
0.069	1.71	0.104	4.78	0.139	9.86	0.174	17.29	0.209	27.34	0.254	44.52		
0.070	1.78	0.105	4.89	0.140	10.04	0.175	17.54	0.210	27.67	0.255	44.96		
0.071	1.84	0.106	5.01	0.141	10.22	0.176	17.79	0.211	28.00	0.256	45.40		
0.072	1.90	0.107	5.13	0.142	10.40	0.177	18.05	0.222	31.79	0.257	45.85		

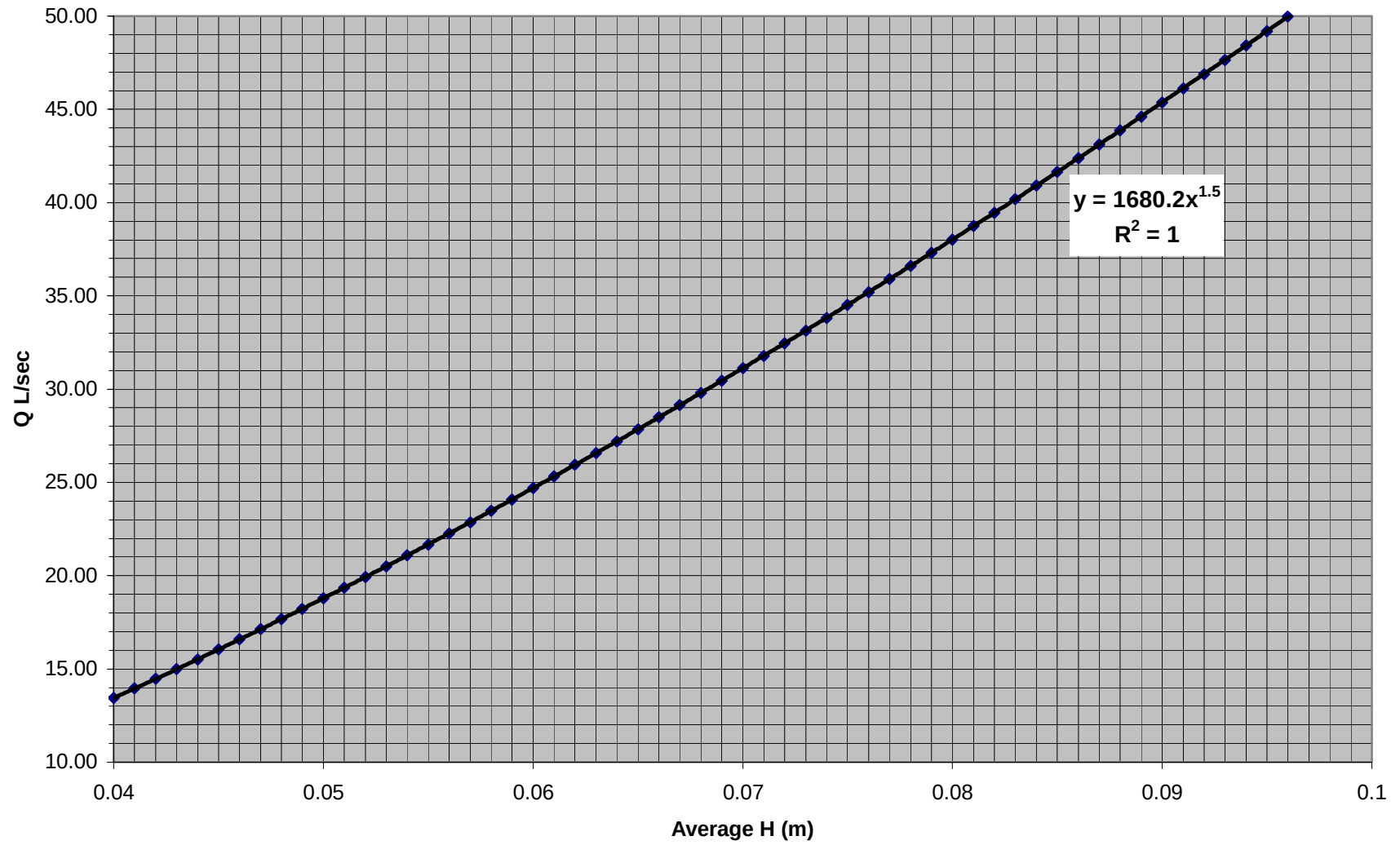
Rating Table for X_13 Standard Rectangular Weir where $Q = (1.8363)(.915)H^{1.5}$ or in L/sec; $1680.2 H^{1.5}$

H (m)	L/sec	H (m)	L/sec	H (m)	L/sec	H (m)	L/sec	H (m)	L/sec
0.030	8.73	0.073	33.14	0.108	59.63	0.143	90.86	0.178	126.18
0.035	11.00	0.074	33.82	0.109	60.47	0.144	91.81	0.179	127.25
0.040	13.44	0.075	34.51	0.110	61.30	0.145	92.77	0.180	128.31
0.041	13.95	0.076	35.20	0.111	62.14	0.146	93.73	0.181	129.38
0.042	14.46	0.077	35.90	0.112	62.98	0.147	94.70	0.182	130.46
0.043	14.98	0.078	36.60	0.113	63.82	0.148	95.67	0.183	131.54
0.044	15.51	0.079	37.31	0.114	64.67	0.149	96.64	0.184	132.61
0.045	16.04	0.080	38.02	0.115	65.53	0.150	97.61	0.185	133.70
0.046	16.58	0.081	38.73	0.116	66.38	0.151	98.59	0.186	134.78
0.047	17.12	0.082	39.45	0.117	67.24	0.152	99.57	0.187	135.87
0.048	17.67	0.083	40.18	0.118	68.11	0.153	100.55	0.188	136.96
0.049	18.22	0.084	40.91	0.119	68.97	0.154	101.54	0.189	138.06
0.050	18.79	0.085	41.64	0.120	69.85	0.155	102.53	0.190	139.15
0.051	19.35	0.086	42.38	0.121	70.72	0.156	103.53	0.191	140.25
0.052	19.92	0.087	43.12	0.122	71.60	0.157	104.52	0.192	141.36
0.053	20.50	0.088	43.86	0.123	72.48	0.158	105.52	0.193	142.46
0.054	21.08	0.089	44.61	0.124	73.37	0.159	106.53	0.194	143.57
0.055	21.67	0.090	45.37	0.125	74.26	0.160	107.53	0.195	144.68
0.056	22.27	0.091	46.12	0.126	75.15	0.161	108.54	0.196	145.80
0.057	22.87	0.092	46.89	0.127	76.04	0.162	109.56	0.197	146.91
0.058	23.47	0.093	47.65	0.128	76.94	0.163	110.57	0.198	148.03
0.059	24.08	0.094	48.42	0.129	77.85	0.164	111.59	0.199	149.16
0.060	24.69	0.095	49.20	0.130	78.76	0.165	112.61	0.200	150.28
0.061	25.31	0.096	49.98	0.131	79.67	0.166	113.64	0.201	
0.062	25.94	0.097	50.76	0.132	80.58	0.167	114.67	0.202	
0.063	26.57	0.098	51.55	0.133	81.50	0.168	115.70	0.203	
0.064	27.20	0.099	52.34	0.134	82.42	0.169	116.73	0.204	
0.065	27.84	0.100	53.13	0.135	83.34	0.170	117.77	0.205	
0.066	28.49	0.101	53.93	0.136	84.27	0.171	118.81	0.206	
0.067	29.14	0.102	54.73	0.137	85.20	0.172	119.86	0.207	
0.068	29.79	0.103	55.54	0.138	86.14	0.173	120.90	0.208	
0.069	30.45	0.104	56.35	0.139	87.07	0.174	121.95	0.209	
0.070	31.12	0.105	57.17	0.140	88.02	0.175	123.00	0.210	
0.071	31.79	0.106	57.99	0.141	88.96	0.176	124.06	0.211	
0.072	32.46	0.107	58.81	0.142	89.91	0.177	125.12	0.222	

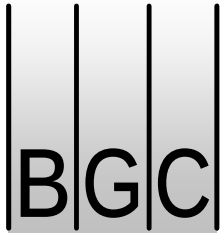
Rating Curve for Standard 90 Degree V-notch Weirs X_11, X_12 and Weir #3 0 - 20 L/sec



X_13 Rating Curve 10 to 50 L/sec



APPENDIX II
SITE VISIT INSPECTION MEMOS
(MAY AND SEPTEMBER)



BGC ENGINEERING INC.

AN APPLIED EARTH SCIENCES COMPANY

1605, 840 – 7 Avenue S.W., Calgary, Alberta, Canada. T2P 3G2

Phone (403) 250-5185 Fax (403) 250-5330

PROJECT MEMORANDUM

To:	Anvil Range Mining Corp.	Fax No.:	by email
Attention:	Dana Haggar	CC:	Doug Sedgwick
From:	Jim Cassie /Gerry Ferris	Date:	June 9, 2005
Subject:	Summary of Site Observations and Maintenance Needs Selected Facilities, Faro Mine, YT		
No. of Pages (including this page): 3		Project No: 0257-032-03	

Messrs. Gerry Ferris, P.Eng. and Jim Cassie, P.Eng., from BGC Engineering Inc. (BGC) undertook a site visit of selected Faro structures from May 26 to 28, 2005. The following memorandum outlines some of the conditions noted and any recommended follow-up work:

FWS Dam Breach

- Breach channel appears to be performing in a satisfactory manner.
- Some minor water flow (est. 1 to 5% of total) was occurring where the riffles met the erosion protection, with the majority of flow concentrated in the center of the channel. No concerns expressed.
- Erosion and downcutting of the channel base was occurring downstream of the breach construction. Some tension cracks have developed in this area. No concerns.
- Portions of the floodplain and upstream of the inlet structure have eroded, but no concerns.
- Slough continues to occur at the south abutment. The soil within the slough will need to be excavated and replaced with rockfill to both buttress the slope and allow water drainage.
- K8 Creek appears fine but one minor area of rip rap should be repaired by the placement of additional material.
- A distinct incised channel has not yet formed in the K8 Creek discharge downstream from the old borrow area.
- Main channel in the reservoir area appears to be performing fine.
- The vegetation in the Phase I and Phase II re-vegetation area appears to be growing well. The lower elevations of the former reservoir have not yet "greened up", likely due to the flooding of the area that occurred this spring.

This communication is intended for the use of the above named recipient. Any unauthorized use, copying, review or disclosure of the contents by other than the recipient is prohibited.

Intermediate Dam

- Pond water is located approximately 4 m below the physical crest.
- Minor crest cracking was noted near the north abutment. Minor crest cracking near upstream crest rip rap in the center of the dam. These cracks should be monitored for deteriorating conditions.
- Two small sinkholes, previously noted and painted, may be settling slightly. They should be backfilled and graded over.
- No toe seepage noted at the south abutment.
- Erosion on the downstream face is slightly more extensive as compared to the last inspection. The eroded material is located on the road surface at the interface with the downstream shell. This material which is likely covering the gravel drain should be removed.
- Some small scarps were noted on the rip rapped toe of the road surface within the polishing pond. This is the location where ice plucking was noted by BGC in early May. These scarps should be graded. It is understood that in the future the water level in the pond will be maintained at about the current water elevation, which is about 2 m below the area affected by the ice action.

Cross Valley Dam

- Water level is located approximately 2 m below the emergency spillway inlet elevation.
- Cracking noted in the centre of the crest along a majority of its length. Some minor crest cracking located near upstream side rip rap. These cracks should be monitored for deteriorating conditions.
- No maintenance items noted.

Rose Creek Diversion Canal

- Three minor slough areas with cracking were noted on the backslope. These should be monitored and assessed for deteriorating conditions.

Faro Creek Diversion Canal

- Channel appears to be working well under current flows. Slightly higher water mark was noted, approximately 0.3 to 0.4 m above the current water level. Some slight movement of pilot channel rip rap has occurred.

North Fork Rose Creek Rock Drain

- Head pond level was relatively high (equal to 2004 highest pond level) but the drain appears to be passing the flows in a satisfactory manner.
- Minor channelized erosion and related sloughing noted on the upstream side of the rock drain. The placement of some coarse armour rock may retain some of the fine material which is sloughing/eroding.
- New datalogger installed in the creek flow at Station X2.
- Recommendations for monitoring at the rock drain were provided to site environmental staff.

BGC Project Memorandum

To: Dana Haggar

From: Jim Cassie/Gerry Ferris

Date: June 9, 2005

Subject: Summary of Faro Site Observations, May, 2005

Proj. No: 0257-032-03

In general, the site appears in good condition, even though various site water flows are higher than values seen between late June and September. No major concerns were noted and these findings were reviewed verbally with Messrs. Haggar and Sedgwick before BGC personnel left site.

Please contact either of the undersigned should you have any questions.

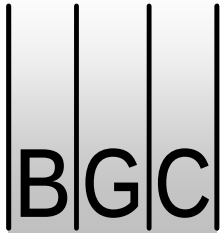
Respectfully submitted,

BGC Engineering Inc.

per:

Gerry Ferris, P.Eng.
Geotechnical Engineer

James W. Cassie, P.Eng.
Specialist Geotechnical Engineer



BGC ENGINEERING INC.

AN APPLIED EARTH SCIENCES COMPANY

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

PROJECT MEMORANDUM

To:	Anvil Range Mining / Deloitte & Touche	Fax No.:	(867) 994-3459
Attention:	Dana Haggart / Doug Sedgwick	CC:	(416) 601-5902
From:	Jim Cassie, P.Eng.	Date:	Sept. 21, 2005
Subject:	September Site Inspection Conditions Selected Facilities, Faro Mine, YT		
No. of Pages (including this page): 3 Pages		Project No: 0257-032-03	

Mr. Jim Cassie, P.Eng., from BGC Engineering Inc.(BGC), undertook an inspection of selected facilities at Faro Mine on September 12 to 14, 2005 and the following memo summarizes the conditions observed, along with any required maintenance or monitoring:

FWSD Breach

- No additional cracking occurring in the backslope behind the rip rap on both sides.
- Slough at the south abutment appears to be flattening itself and partially stabilizing the associated scarp. Continue to monitor any retrogression as seepage occurs.
- Otherwise appears in satisfactory condition.

K8 Creek Rehab.

- Appears in satisfactory condition.

Cross Valley Dam

- Large quantity pump test at toe appears to have reduced surface quantity in the seepage collection trench.
- Appears in satisfactory condition.

This communication is intended for the use of the above named recipient. Any unauthorized use, copying, review or disclosure of the contents by other than the recipient is prohibited.

K:\Projects\0257 D&T\032 2005 Annual Inspection\05 Annual Geotech Inspection Rpt\Appendix III\Site Inspection Memo_Final.doc

BGC Project Memorandum

To: Dana Haggard / Doug Sedgwick

From: Jim Cassie

Date: Sept. 21, 2005

Subject: Site Inspection Summary, Selected Facilities at Faro Mine

Proj. No: 0257-032-03

Intermediate Dam

- No crest cracking or toe seepage noted.
- Downstream face has been recently graded and minor erosional gullies have formed.
- Appears in satisfactory condition.

Secondary Impoundment Dam

- Upstream crest berm needs to be re-established at the north abutment to prevent crest overtopping and downstream face erosion (Dana and Jim specifically visited this site to discuss problem and repair method).
- No other visual concerns were noted.

Rose Creek Diversion Channel

- Previously noted sloughs in the backslope do not appear currently active.
- No signs of cracking or settlement noted on the canal dike crest.
- Increased seepage quantity and sloughing occurring at the toe of the spoil piles, located between the Cross Valley and Intermediate Dams. Seepage and related sloughing caused by very low polishing pond level. Monitor sloughing and retrogression for the short term and undertake rehabilitation if the retrogression becomes worse.

North Fork Rose Creek Rock Drain

- Rock drain appears to be discharging water with no signs of significant instability.

North Valley Wall Interceptor Ditch

- Selected sections of the channel were inspected and found to be flowing properly.
- Some minor work on the inlet side of the Outfall Section culvert was undertaken in an attempt to prevent icing problems.
- Ditch appears in satisfactory condition.

Faro Creek Diversion Channel

- New berm constructed on the downhill side of the canal dike access road. Purpose of berm is to prevent overland surface run-off and related ravelling of proximal overburden at Faro pit edge.
- Channel appears to be performing in a satisfactory manner.

Selected Northeast Rock Dumps (overlooking North Fork Rose Creek)

- Selected portions of the toe area and crest edges were inspected. No signs of new crest cracking, toe bulging or significant slope instability were noted.

BGC Project Memorandum

To: Dana Hagggar / Doug Sedgwick

From: Jim Cassie

Date: Sept. 21, 2005

Subject: Site Inspection Summary, Selected Facilities at Faro Mine

Proj. No: 0257-032-03

In general, the inspected facilities appear in satisfactory condition and only some minor maintenance and monitoring is required. Please contact the undersigned should you have any questions or comments.

Respectfully submitted,

BGC Engineering Inc.

per:

James W. Cassie, P.Eng.

Specialist Geotechnical Engineer

APPENDIX III

INSTRUMENTATION DATA RECORDS AND GRAPHS

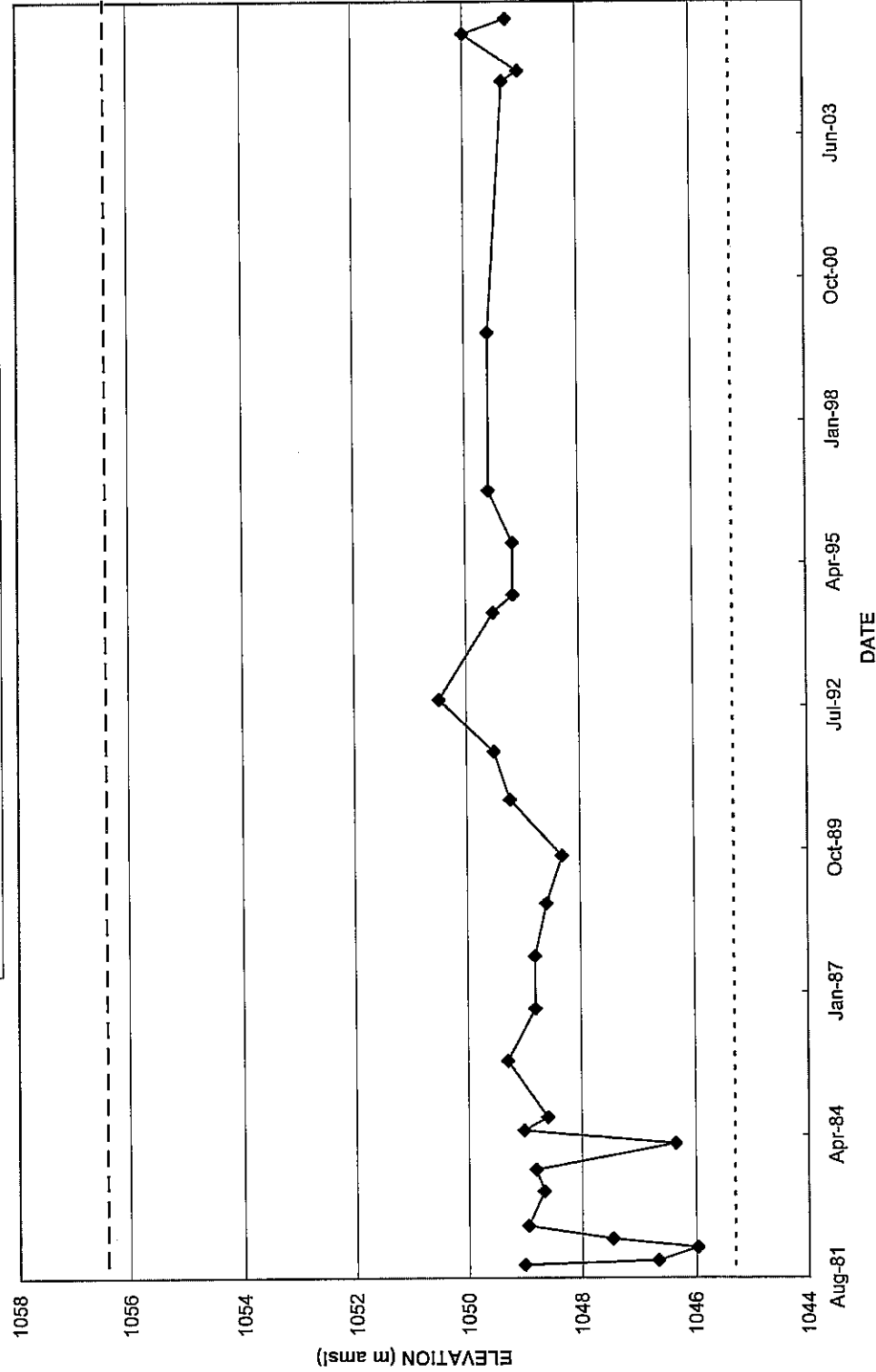
DIVERSION CANAL CANAL DIKE

PIEZOMETERS

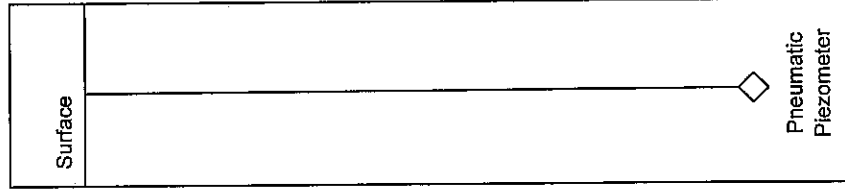
CD-10		Location:	Canal Dike St.0+990	Date Installed:	1981
		Coordinates:	1008.7N, 1519.7E	Ground Elevation (m amsl):	1056.41
Surface Protector:	Yes		8V581739 6913053	Tip Elevation (m amsl):	1045.30
Date		Reading (psi)		Piezometric Elevation (m amsl)	Comments
Nov-81		5.3		1049.01	
Dec-81		1.95		1046.67	
Mar-82		0.95		1045.97	
May-82		3.1		1047.47	
Aug-82		5.2		1048.94	
Apr-83		4.8		1048.66	
Sep-83		5		1048.80	
Mar-84		1.5		1046.35	
Jun-84		5.3		1049.01	
Sep-84		4.7		1048.59	
Oct-85		5.7		1049.29	
Oct-86		5		1048.80	
Oct-87		5		1048.80	
Oct-88		4.7		1048.59	
Sep-89		4.3		1048.31	
Oct-90		5.6		1049.22	
Sep-91		6		1049.50	
Sep-92		7.4		1050.48	
May-94		6		1049.50	
Sep-94		5.5		1049.15	
Sep-95		5.5		1049.15	
Sep-96		6.1		1049.57	
11-Sep-99		6.1		1049.57	
6-Jul-04		5.7		1049.29	
16-Sep-04		5.3		1049.01	
31-May-05		6.7		1049.99	
14-Sep-05		5.6		1049.22	

DIVERSIONAL CANAL DIKE Piezometric Monitoring CD-10 Pneumatic Piezometer

—◆— Pneumatic Piezometer — — — Surface Elevation ······ Tip Elevation

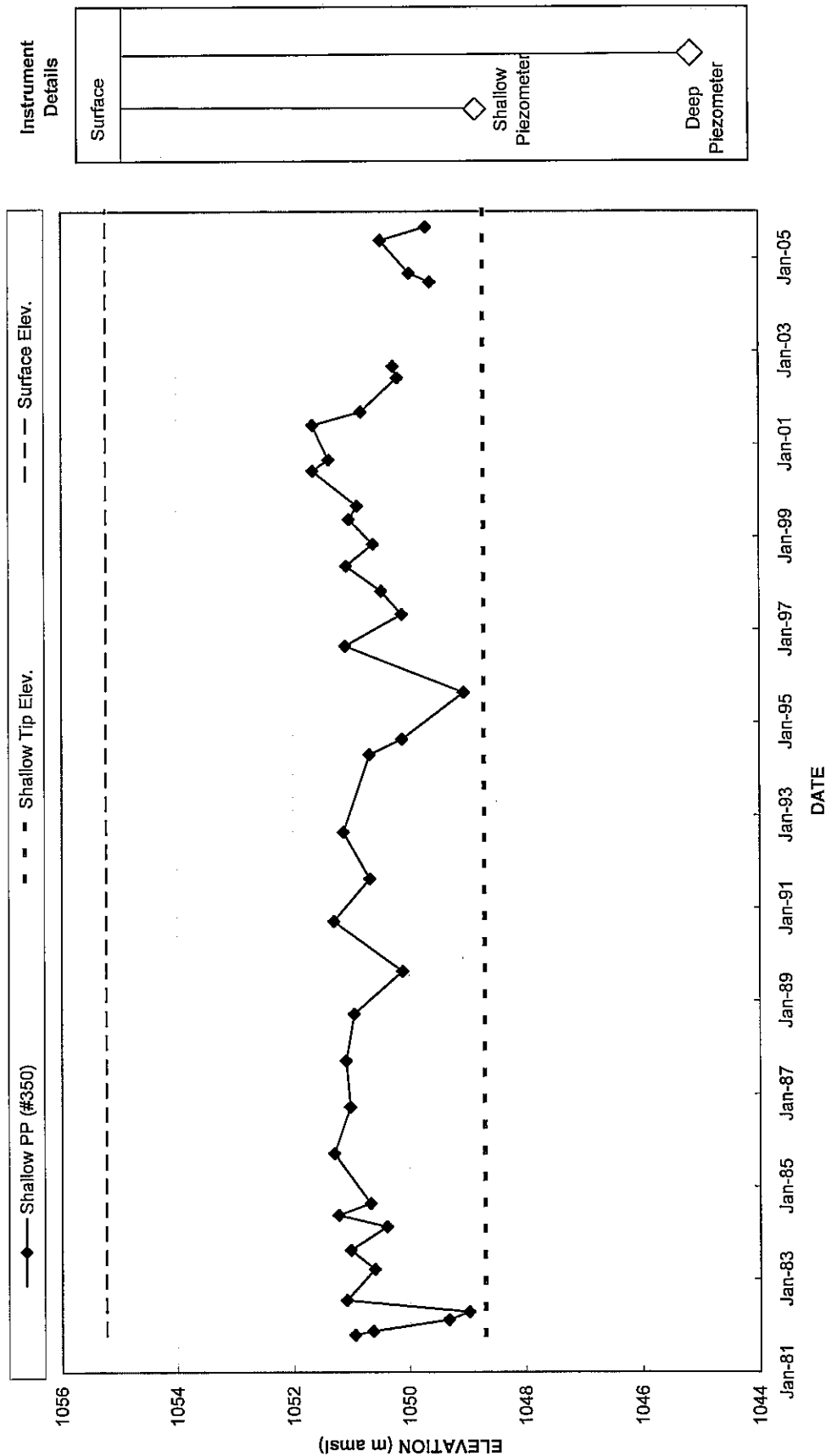


Instrument
Details

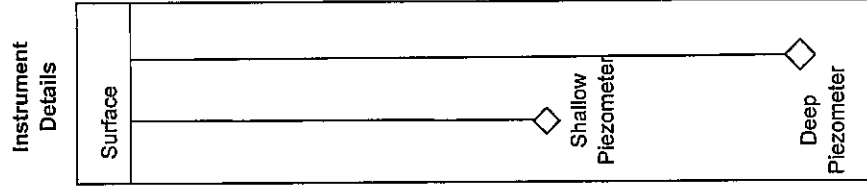
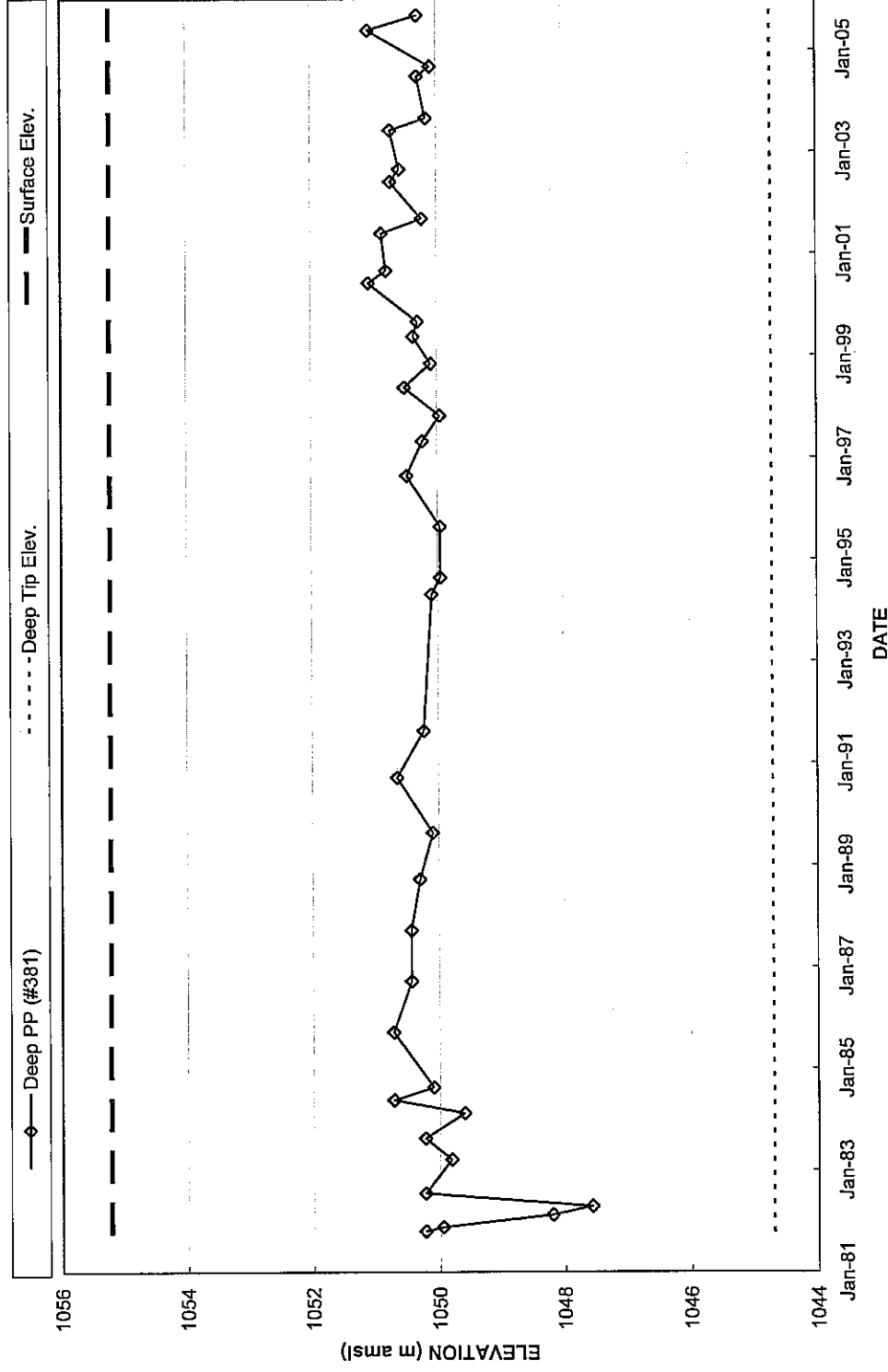


CD-13		Location:	Canal Dike St.1+350	Ground Elevation (m amsl):	1055.214
		Coordinates:	8V581400 6913185	Shallow Tip Elevation (m amsl):	1048.70
Surface Protector:	yes	Date Installed:	1981	Deep Tip Elevation (m amsl):	1044.70
Date	Reading (psi)		Piezometric Elevation (m amsl)		Comments
	Shallow PP (#350)	Deep PP (#381)	Shallow (#350)	Deep (#381)	
Nov-81	3.2	7.9	1050.94	1050.23	
Dec-81	2.75	7.5	1050.63	1049.95	
Mar-82	0.9	5	1049.33	1048.20	
May-82	0.4	4.1	1048.98	1047.57	
Aug-82	3.4	7.9	1051.08	1050.23	
Apr-83	2.7	7.3	1050.59	1049.81	
Sep-83	3.3	7.9	1051.01	1050.23	
Mar-84	2.4	7	1050.38	1049.60	
Jun-84	3.6	8.6	1051.22	1050.72	
Sep-84	2.8	7.7	1050.66	1050.09	
Oct-85	3.7	8.6	1051.29	1050.72	
Oct-86	3.3	8.2	1051.01	1050.44	
Oct-87	3.4	8.2	1051.08	1050.44	
Oct-88	3.2	8	1050.94	1050.30	
Sep-89	2	7.7	1050.10	1050.09	
Oct-90	3.7	8.5	1051.29	1050.65	
Sep-91	2.8	7.9	1050.66	1050.23	
Sep-92	3.45		1051.12		
May-94	2.8	7.7	1050.66	1050.09	
Sep-94	2	7.5	1050.10	1049.95	
Sep-95	0.5	7.5	1049.05	1049.95	
Sep-96	3.4	8.25	1051.08	1050.48	
08-May-97	2.0	7.9	1050.10	1050.23	
07-Nov-97	2.5	7.5	1050.45	1049.95	
26-May-98	3.37	8.30	1051.06	1050.51	
15-Nov-98	2.70	7.70	1050.59	1050.09	
28-May-99	3.30	8.10	1051.01	1050.37	
11-Sep-99	3.10	8.00	1050.87	1050.30	
14-Jun-00	4.20	9.10	1051.64	1051.07	
09-Sep-00	3.80	8.70	1051.36	1050.79	
06-Jun-01	4.20	8.80	1051.64	1050.86	
19-Sep-01	3.00	7.90	1050.80	1050.23	
13-Jun-02	2.1	8.6	1050.17	1050.72	
12-Sep-02	2.2	8.4	1050.24	1050.58	
17-Jun-03	0.1	8.6		1050.72	(#350 very wet)
12-Sep-03	0.1	7.8		1050.16	(#350 very wet)
06-Jul-04	1.3	8	1049.61	1050.30	(#350 kept rising)
16-Sep-04	1.8	7.7	1049.96	1050.09	(#350 kept rising)
31-May-05	2.5	9.1	1050.45	1051.07	(#350 kept rising)
14-Sep-05	1.4	8	1049.68	1050.30	#350 Bubbles stop then numbers start rising

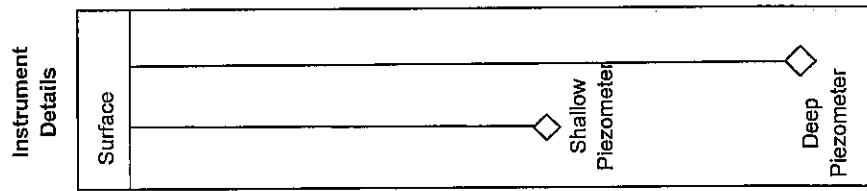
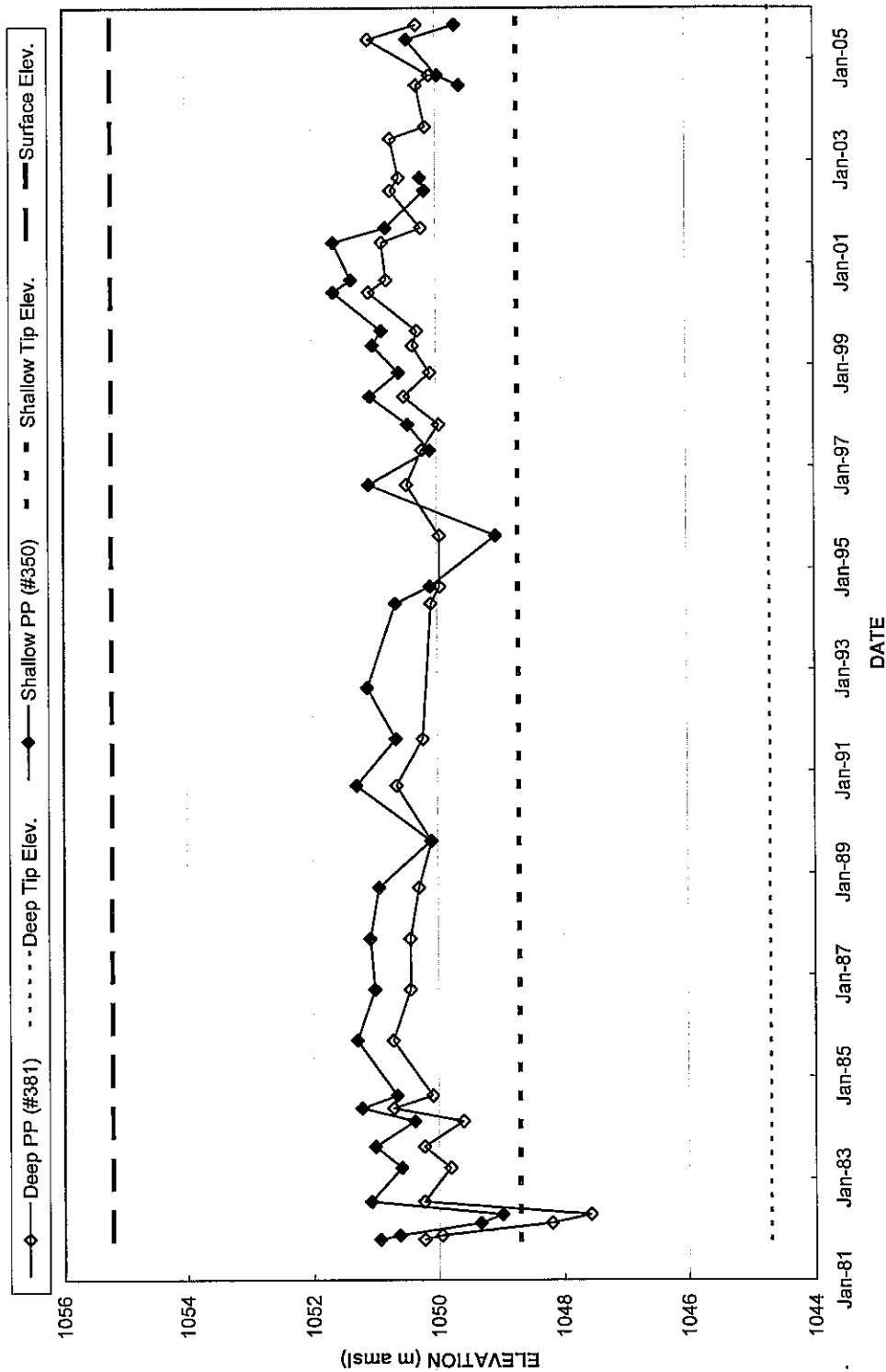
DIVERSION CANAL DIKE
Piezometric Monitoring
CD-13 Pneumatic Piezometer (Shallow Tip)



DIVERSION CANAL DIKE
Piezometric Monitoring
CD-13 Pneumatic Piezometer (Deep Tip)

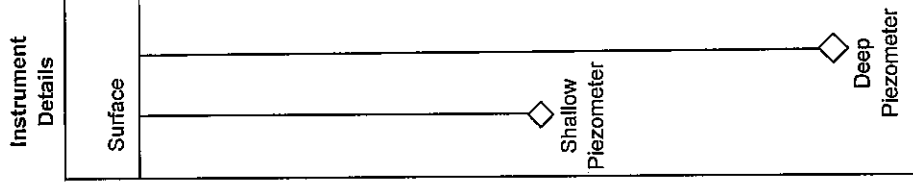
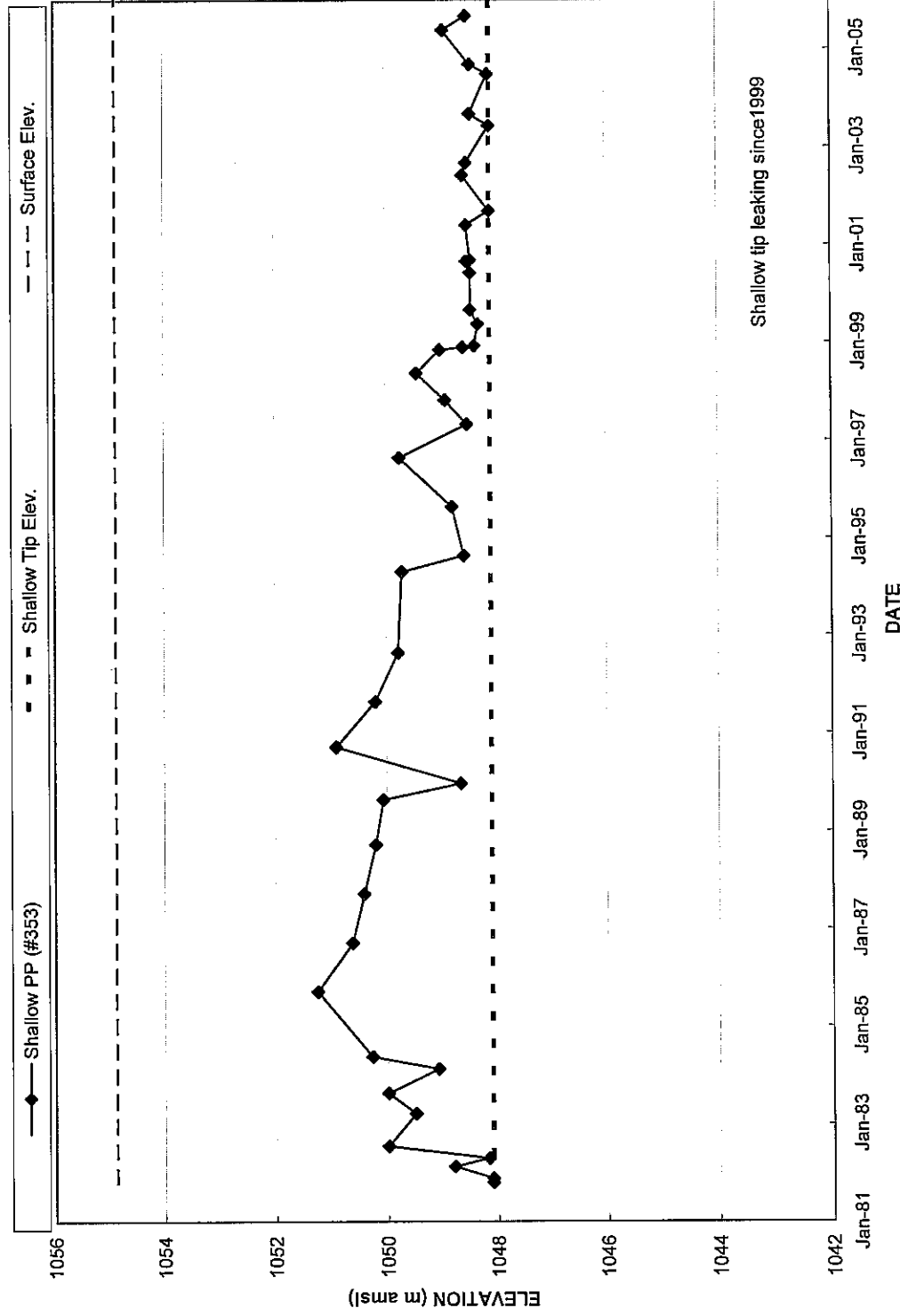


DIVERSION CANAL DIKE Piezometric Monitoring CD-13 Pneumatic Piezometer (Both Tips)

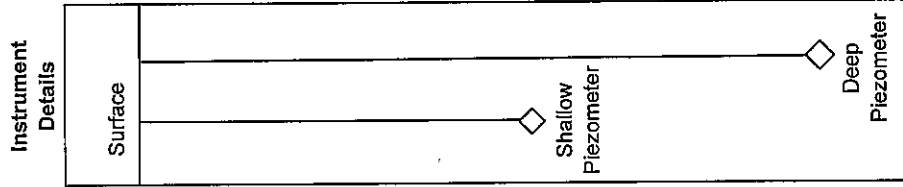
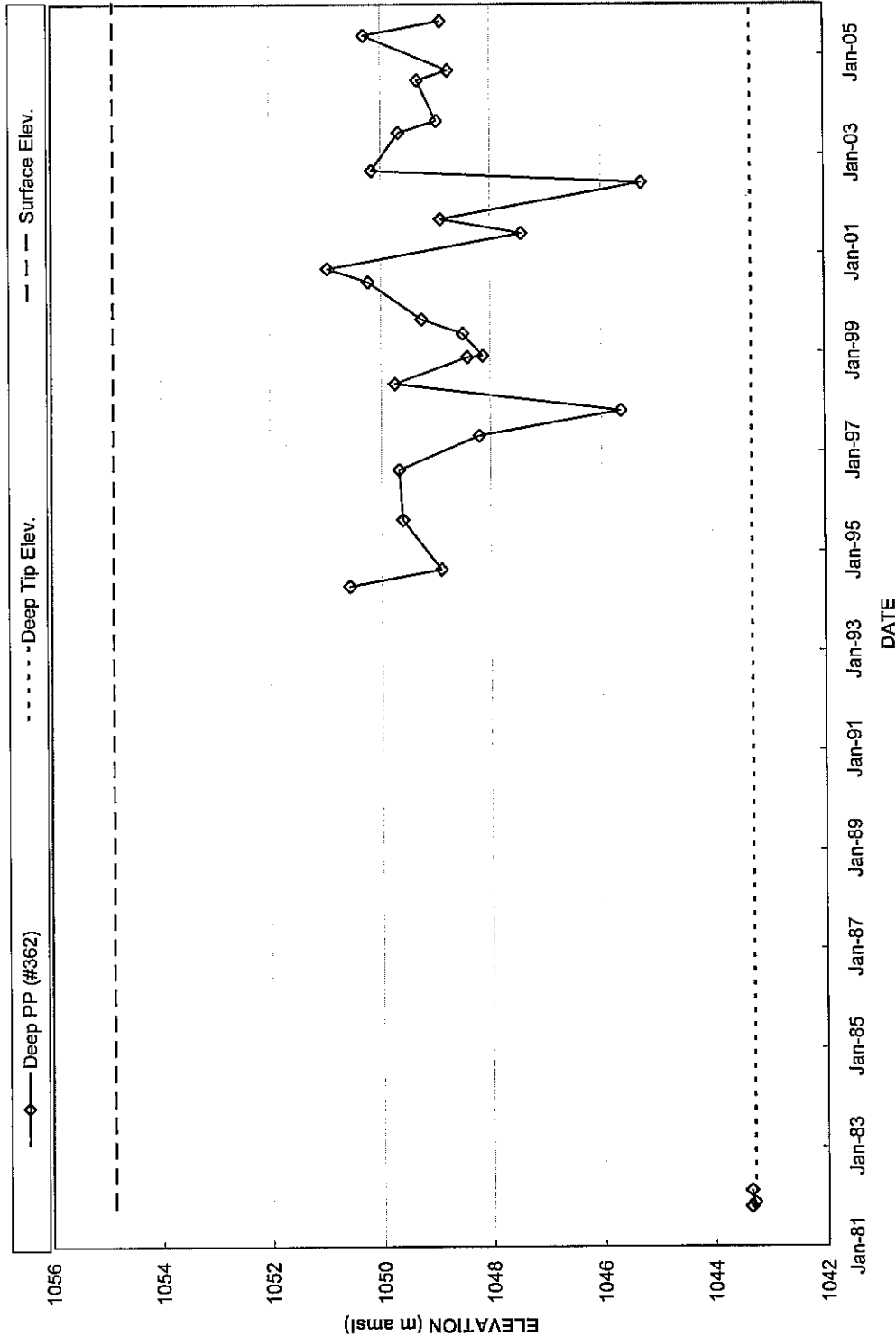


CD-15		Location:	Canal Dike St.1+530 1233.7N, 1028.7E 8V581245 6913275	Ground Elevation (m amsl):	1054.882
		Coordinates:		Shallow Tip Elevation (m amsl):	1048.10
Surface Protector:	yes	Date Installed:	1981	Deep Tip Elevation (m amsl):	1043.30
Date	Reading (psi)		Piezometric Elevation (m amsl)		Comments
	Shallow PP (#353)	Deep PP (#362)	Shallow (#353)	Deep (#362)	
Nov-81	0	0.1	1048.1	1043.37	
Dec-81	0	0.02	1048.1	1043.314	
Mar-82	1	0.1	1048.8	1043.37	
May-82	0.1		1048.17		
Aug-82	2.7		1049.99		
Apr-83	2		1049.5		
Sep-83	2.7		1049.99		
Mar-84	1.4		1049.08		
Jun-84	3.1		1050.27		
Oct-85	4.5		1051.25		
Oct-86	3.6		1050.62		
Oct-87	3.3		1050.41		
Oct-88	3		1050.2		
Sep-89	2.8		1050.06		
Jan-90	0.8		1048.66		
Oct-90	4		1050.9		
Sep-91	3		1050.2		
Sep-92	2.4		1049.78		
May-94	2.3	10.4	1049.71	1050.58	
Sep-94	0.7	8	1048.59	1048.9	
Sep-95	1	9	1048.8	1049.6	
Sep-96	2.35	9.1	1049.745	1049.67	
08-May-97	0.6	7.0	1048.52	1048.2	
06-Nov-97	1.17	3.35	1048.919	1045.645	
26-May-98	1.90	9.20	1049.43	1049.74	
15-Nov-98	1.3		1049.01		No return in deep piezo
04-Dec-98	0.7	7.3	1048.59	1048.41	
16-Dec-98	0.4	6.9	1048.38	1048.13	
28-May-99	0.30	7.42	1048.31	1048.494	
11-Sep-99	0.50	8.5	1048.45	1049.25	
14-Jun-00	0.50	9.9	1048.45	1050.23	
09-Sep-00	0.60		1048.52		No return in deep piezo
19-Sep-00	0.50	10.95	1048.45	1050.965	
06-Jun-01	0.60	5.9	1048.52	1047.43	
19-Sep-01	0.00	8.0	1048.1	1048.9	Shallow tip is "dry"
13-Jun-02	0.7	2.8	1048.59	1045.26	
12-Sep-02	0.6	9.8	1048.52	1050.16	
17-Jun-03	0	9.1	1048.1	1049.67	*readings recorded with new piezometer
12-Sep-03	0.5	8.1	1048.45	1048.97	
06-Jul-04	0.04	8.6	1048.128	1049.32	
16-Sep-04	0.5	7.8	1048.45	1048.76	
31-May-05	1.2	10	1048.94	1050.3	
14-Sep-05	0.6	8	1048.52	1048.9	

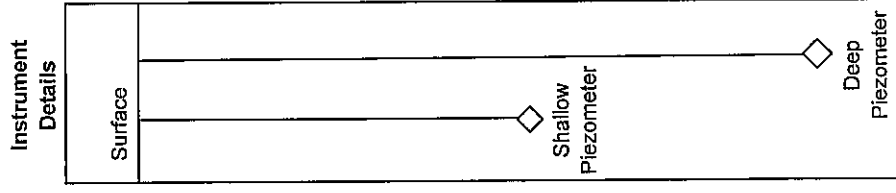
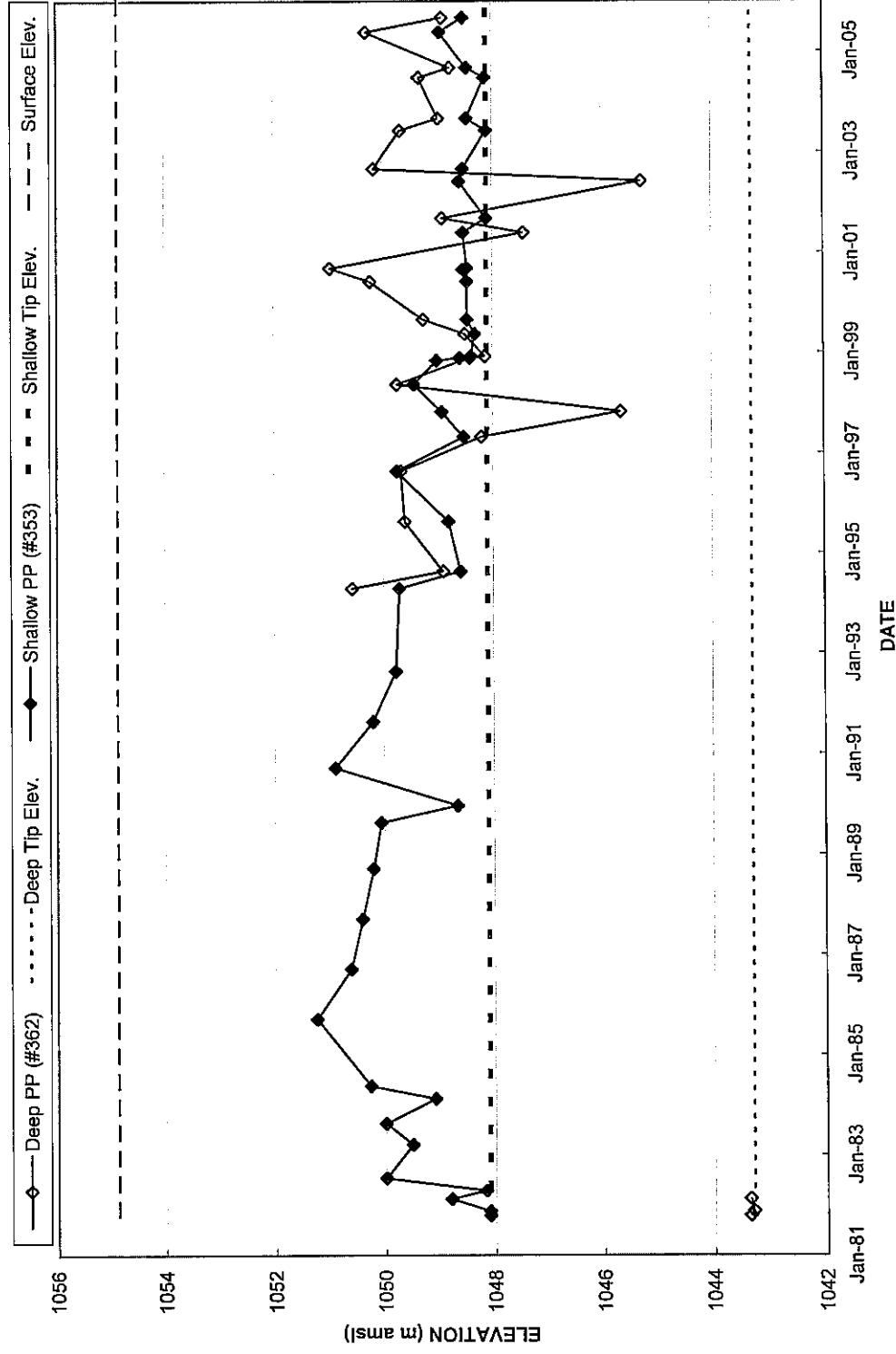
DIVERSION CANAL DIKE Piezometric Monitoring CD-15 Pneumatic Piezometer (Shallow Tip)



DIVERSION CANAL DIKE Piezometric Monitoring CD-15 Pneumatic Piezometer (Deep Tip)



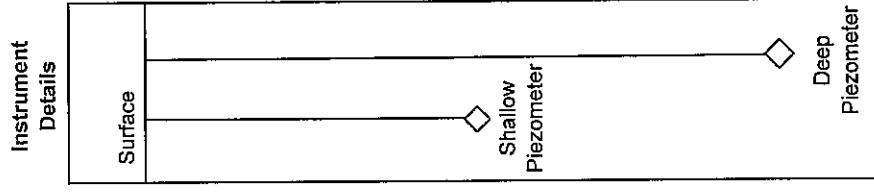
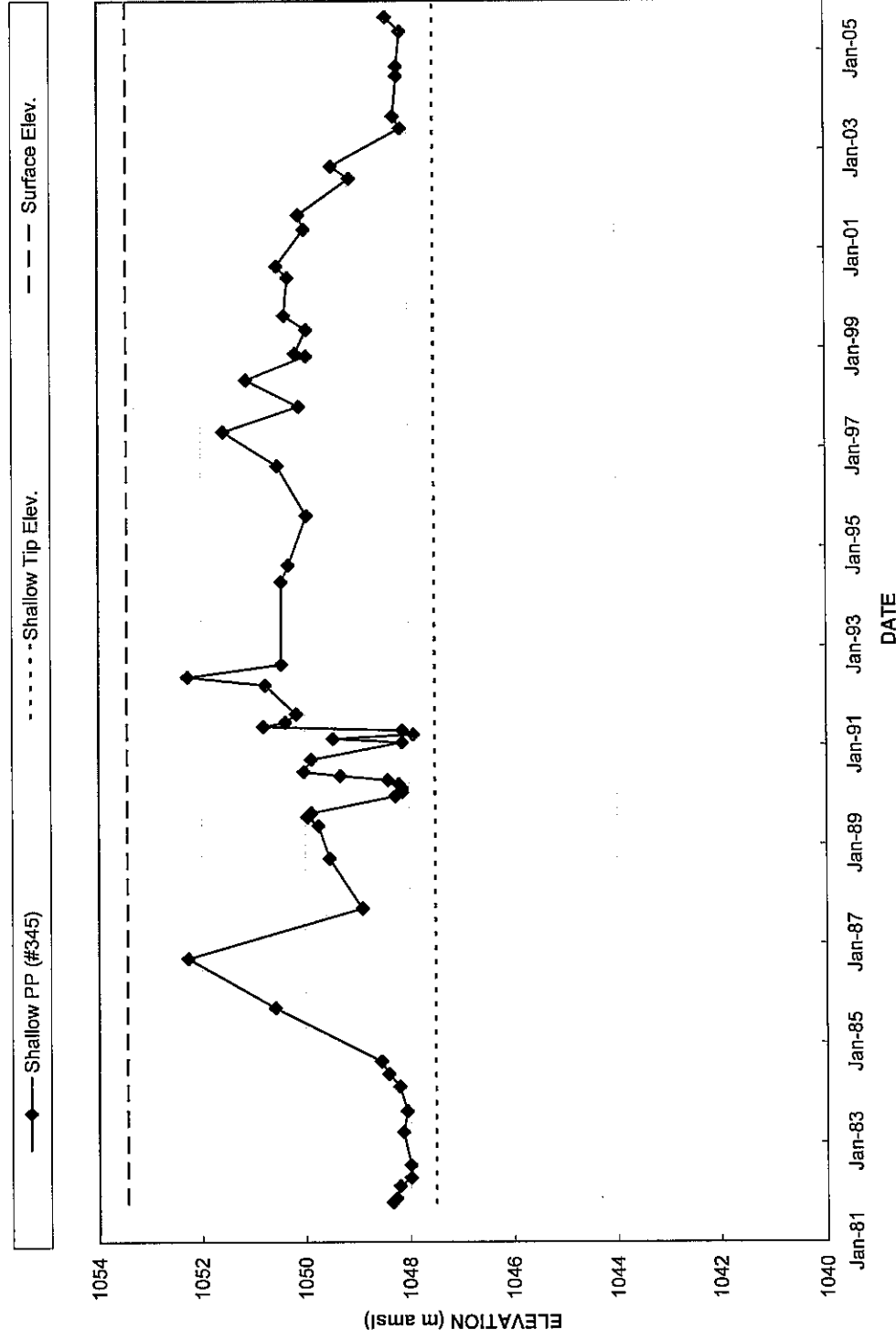
DIVERSION CANAL DIKE Piezometric Monitoring CD-15 Pneumatic Piezometer (Both Tips)



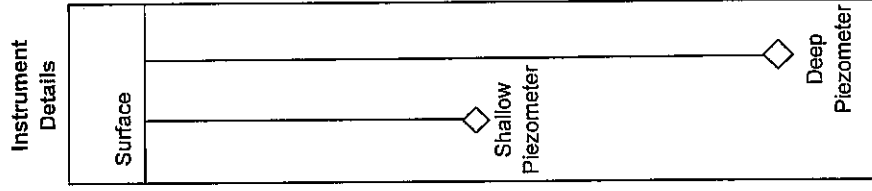
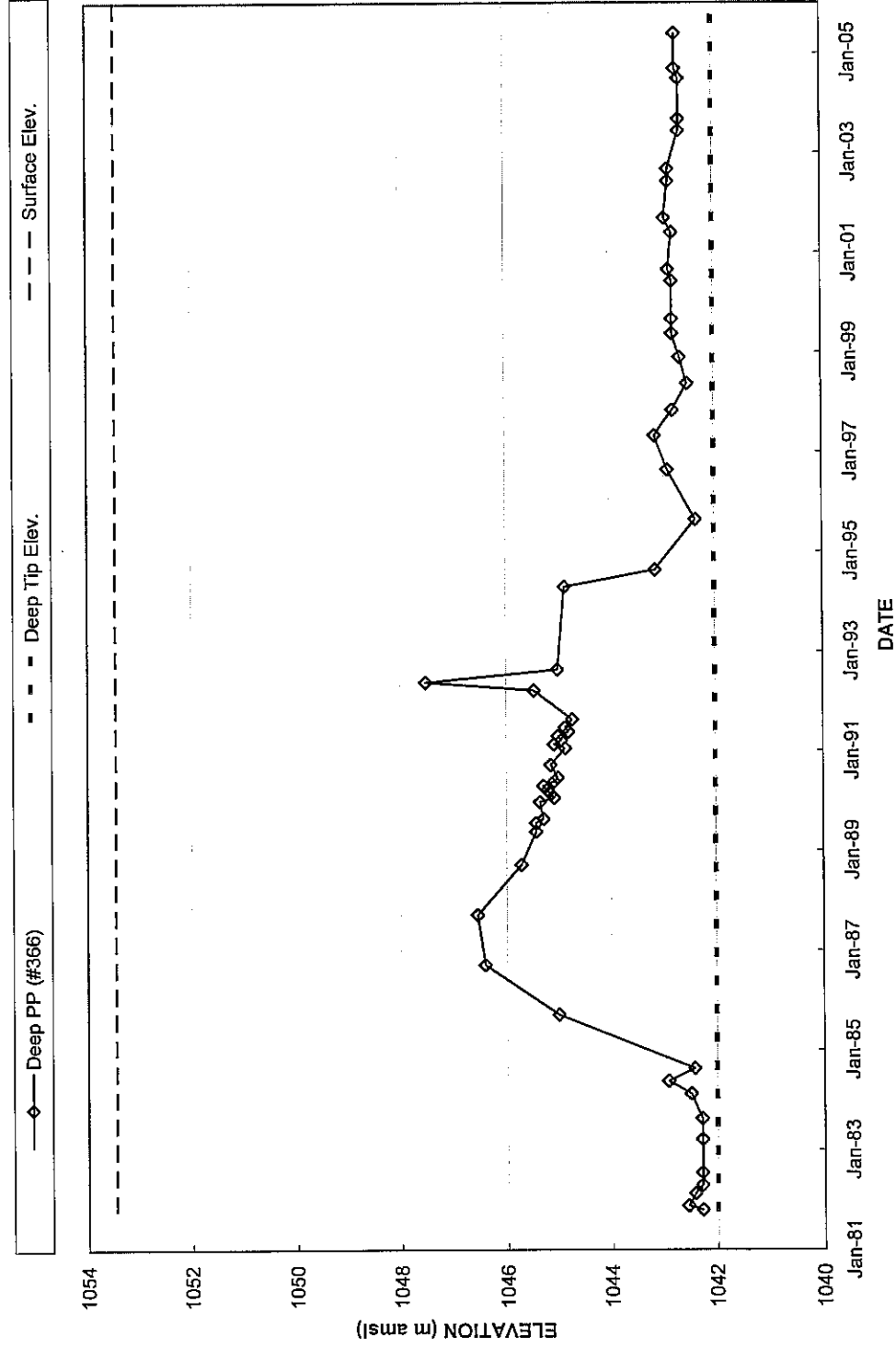
Faro Mine Instrumentation - Diversion Canal Dike

CD-21		Location:	Canal Dike St.2+100	Ground Elevation (m amsl):	1053.447
		Coordinates:	1455.9N, 509.5E 8V580724 6913495	Shallow Tip Elevation (m amsl):	1047.50
Surface Protector:	yes	Date Installed:	1981	Deep Tip Elevation (m amsl):	1042.00
Date	Reading (psi)		Piezometric Elevation (m amsl)		Comments
	Shallow PP (#345)	Deep PP (#366)	Shallow (#345)	Deep (#366)	
Nov-81	1.2	0.4	1048.34	1042.28	
Dec-81	1.1	0.78	1048.27	1042.546	
Mar-82	1	0.6	1048.2	1042.42	
May-82	0.7	0.4	1047.99	1042.28	
Aug-82	0.7	0.4	1047.99	1042.28	
Apr-83	0.9	0.4	1048.13	1042.28	
Sep-83	0.8	0.4	1048.06	1042.28	
Mar-84	1	0.7	1048.2	1042.49	
Jun-84	1.3	1.3	1048.41	1042.91	
Sep-84	1.5	0.6	1048.55	1042.42	
Oct-85	4.4	4.3	1050.58	1045.01	
Oct-86	6.8	6.3	1052.26	1046.41	
Oct-87	2	6.5	1048.9	1046.55	
Oct-88	2.9	5.3	1049.53	1045.71	
Jun-89	3.2	4.9	1049.74	1045.43	
Aug-89	3.5	4.9	1049.95	1045.43	
Sep-89	3.4	4.7	1049.88	1045.29	
Jan-90	1.1	4.8	1048.27	1045.36	
Feb-90	0.9	4.4	1048.13	1045.08	
Mar-90	0.9	4.5	1048.13	1045.15	
Apr-90	1	4.6	1048.2	1045.22	
May-90	1.3	4.7	1048.41	1045.29	
Jun-90	2.6	4.4	1049.32	1045.08	
Jul-90	3.6	4.3	1050.02	1045.01	
Oct-90	3.4	4.5	1049.88	1045.15	
Feb-91	0.9	4.1	1048.13	1044.87	
Mar-91	2.8	4.4	1049.46	1045.08	
Apr-91	0.6	4.2	1047.92	1044.94	
May-91	0.9	4.3	1048.13	1045.01	
Jun-91	4.7	4	1050.79	1044.8	
Jul-91	4.1	4.1	1050.37	1044.87	
Sep-91	3.8	3.9	1050.16	1044.73	
Apr-92	4.65	4.95	1050.755	1045.465	
Jun-92	6.8	7.87	1052.26	1047.509	
Sep-92	4.2	4.3	1050.44	1045.01	
May-94	4.2	4.1	1050.44	1044.87	
Sep-94	4	1.6	1050.3	1043.12	
Sep-95	3.5	0.5	1049.95	1042.35	
Sep-96	4.3	1.25	1050.51	1042.875	
08-May-97	5.8	1.6	1051.56	1043.12	
10-Nov-97	3.7	1.1	1050.09	1042.77	
26-May-98	5.16	0.70	1051.112	1042.49	
15-Nov-98	3.50	n.r.	1049.95		
04-Dec-98	3.80	0.90	1050.16	1042.63	
28-May-99	3.49	1.10	1049.943	1042.77	
11-Sep-99	4.10	1.10	1050.37	1042.77	
14-Jun-00	4.00	1.10	1050.3	1042.77	
09-Sep-00	4.30	1.20	1050.51	1042.84	
06-Jun-01	3.55	1.10	1049.985	1042.77	
19-Sep-01	3.70	1.30	1050.09	1042.91	
13-Jun-02	2.3	1.2	1049.11	1042.84	
12-Sep-02	2.8	1.2	1049.46	1042.84	
17-Jun-03	0.9	0.9	1048.13	1042.63	*readings recorded with new piezometer
12-Sep-03	1.1	0.9	1048.27	1042.63	
06-Jul-04	1	0.9	1048.2	1042.63	#366 Bubbles stopped at 1.7Psi
16-Sep-04	1	1	1048.2	1042.7	
31-May-05	0.9	1	1048.13	1042.7	casing full of water, lots of air over 35 psi
14-Sep-05	1.3		1048.41		#366 - gone

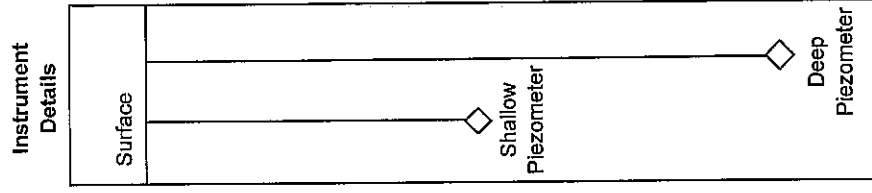
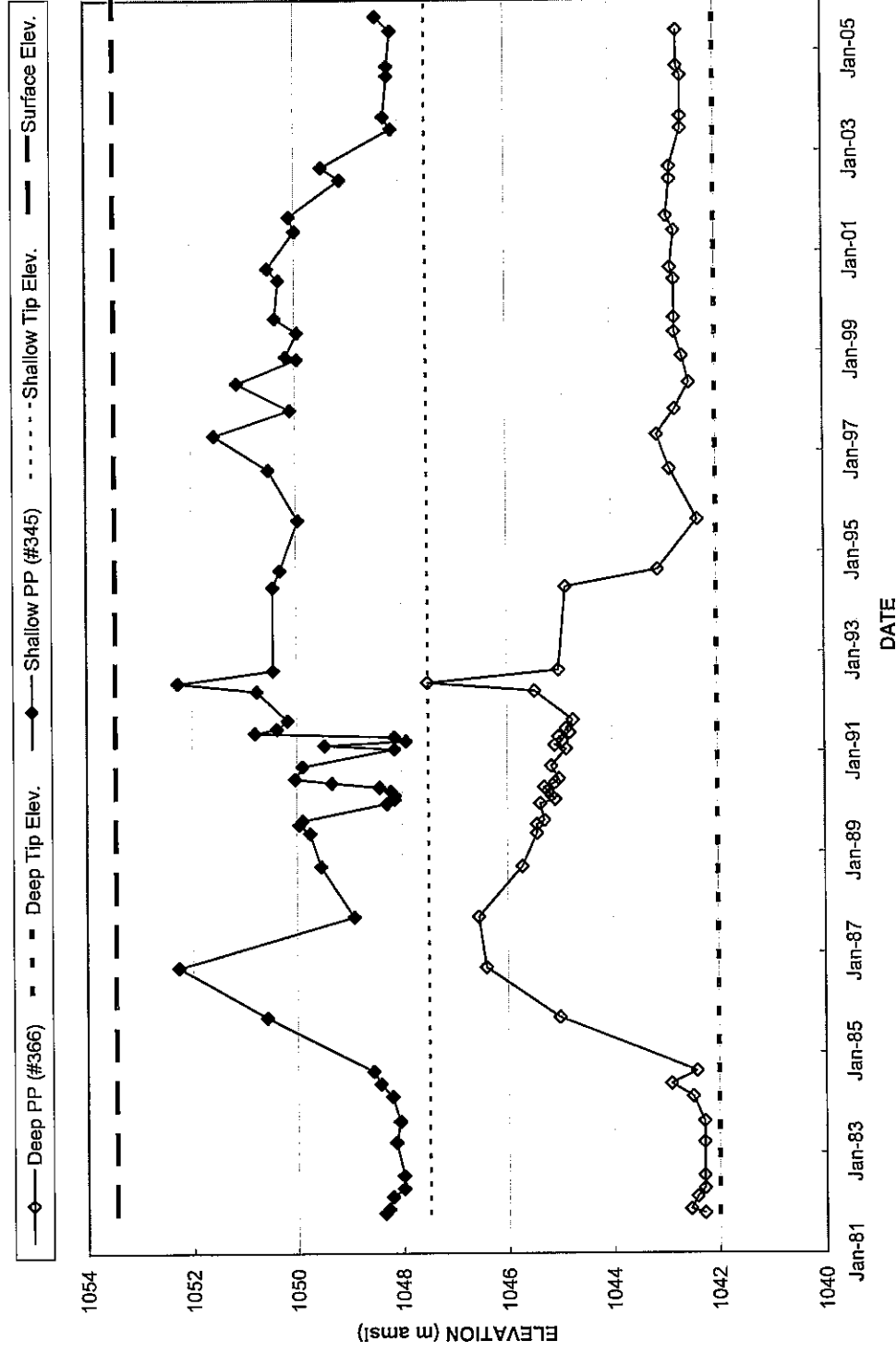
DIVERSION CANAL DIKE
Piezometric Monitoring
CD-21 Pneumatic Piezometer (Shallow Tip)



DIVERSION CANAL DIKE
Piezometric Monitoring
CD-21 Pneumatic Piezometer (Deep Tip)



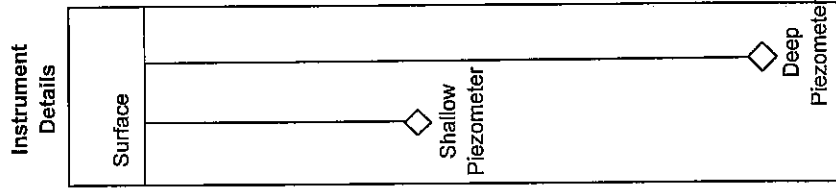
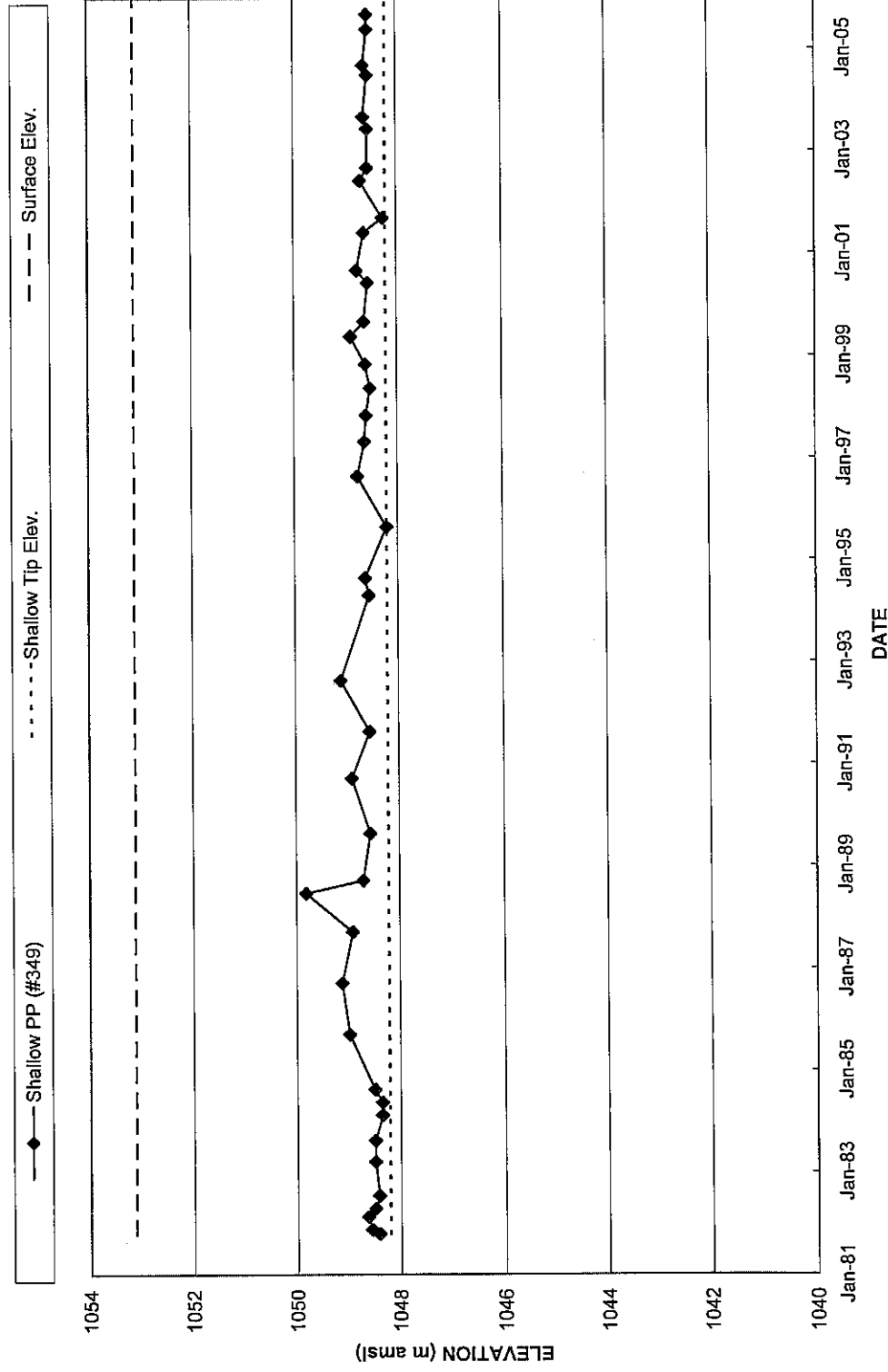
DIVERSION CANAL DIKE Piezometric Monitoring CD-21 Pneumatic Piezometer (Both Tips)



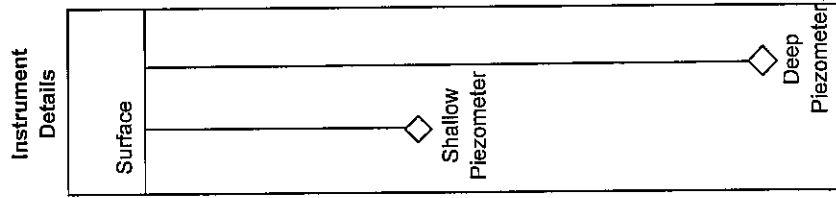
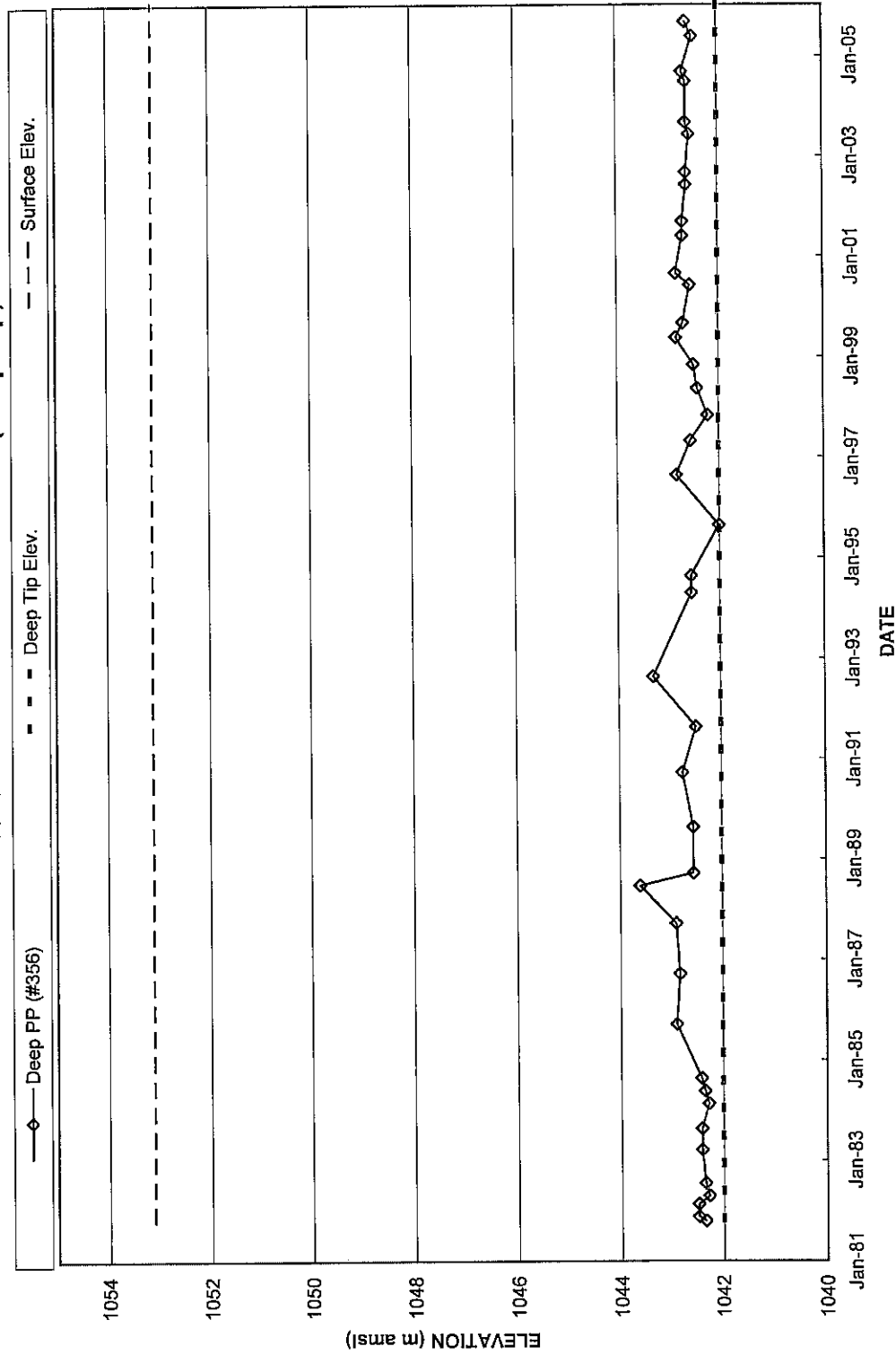
Faro Mine Instrumentation - Diversion Canal Dike

CD-26		Location:	Canal Dike St.2+600	Ground Elevation (m amsl):	1053.10
		Coordinates:	1674.7N, 71.7E 8V580284 6913710	Shallow Tip Elevation (m amsl):	1048.20
Surface Protector:	yes	Date Installed:	1981	Deep Tip Elevation (m amsl):	1042.00
Date	Reading (psi)		Piezometric Elevation (m amsl)		Comments
	Shallow PP (#349)	Deep PP (#356)	Shallow (#349)	Deep (#356)	
Nov-81	0.3	0.5	1048.41	1042.35	
Dec-81	0.5	0.7	1048.55	1042.49	
Mar-82	0.6	0.7	1048.62	1042.49	
May-82	0.4	0.4	1048.48	1042.28	
Aug-82	0.3	0.5	1048.41	1042.35	
Apr-83	0.4	0.6	1048.48	1042.42	
Sep-83	0.4	0.6	1048.48	1042.42	
Mar-84	0.2	0.4	1048.34	1042.28	
Jun-84	0.2	0.5	1048.34	1042.35	
Sep-84	0.4	0.6	1048.48	1042.42	
Oct-85	1.1	1.3	1048.97	1042.91	
Oct-86	1.3	1.2	1049.11	1042.84	
Oct-87	1	1.3	1048.90	1042.91	
Jul-88	2.3	2.3	1049.81	1043.61	
Oct-88	0.7	0.8	1048.69	1042.56	
Sep-89	0.5	0.8	1048.55	1042.56	
Oct-90	1	1.1	1048.90	1042.77	
Sep-91	0.5	0.7	1048.55	1042.49	
Sep-92	1.3	1.9	1049.11	1043.33	
May-94	0.5	0.8	1048.55	1042.56	
Sep-94	0.6	0.8	1048.62	1042.56	
Sep-95	0	0	1048.20	1042.00	
Sep-96	0.8	1.2	1048.76	1042.84	
08-May-97	0.6	0.8	1048.62	1042.56	
10-Nov-97	0.55	0.30	1048.59	1042.21	
26-May-98	0.44	0.60	1048.51	1042.42	
12-Nov-98	0.57	0.70	1048.60	1042.49	
28-May-99	0.98	1.20	1048.89	1042.84	
11-Sep-99	0.60	1.0	1048.62	1042.70	
14-Jun-00	0.50	0.8	1048.55	1042.56	
09-Sep-00	0.80	1.2	1048.76	1042.84	
06-Jun-01	0.60	1.0	1048.62	1042.70	
19-Sep-01	0.07	1.0	1048.25	1042.70	
13-Jun-02	0.7	0.9	1048.69	1042.63	
12-Sep-02	0.5	0.9	1048.55	1042.63	
17-Jun-03	0.5	0.8	1048.55	1042.56	*readings recorded with new piezomete
12-Sep-03	0.6	0.9	1048.62	1042.63	
06-Jul-04	0.5	0.9	1048.55	1042.63	
16-Sep-04	0.6	1	1048.62	1042.70	
31-May-05	0.5	0.7	1048.55	1042.49	good flow
14-Sep-05	0.5	0.9	1048.55	1042.63	

DIVERSION CANAL DIKE Piezometric Monitoring CD-26 Pneumatic Piezometer (Shallow Tip)



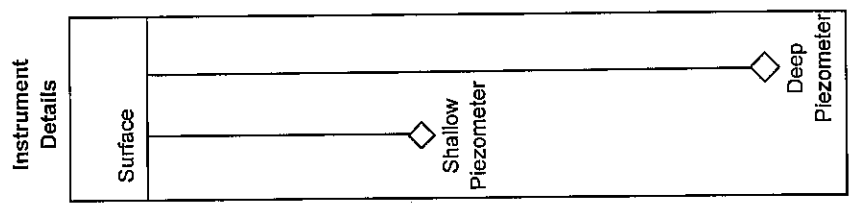
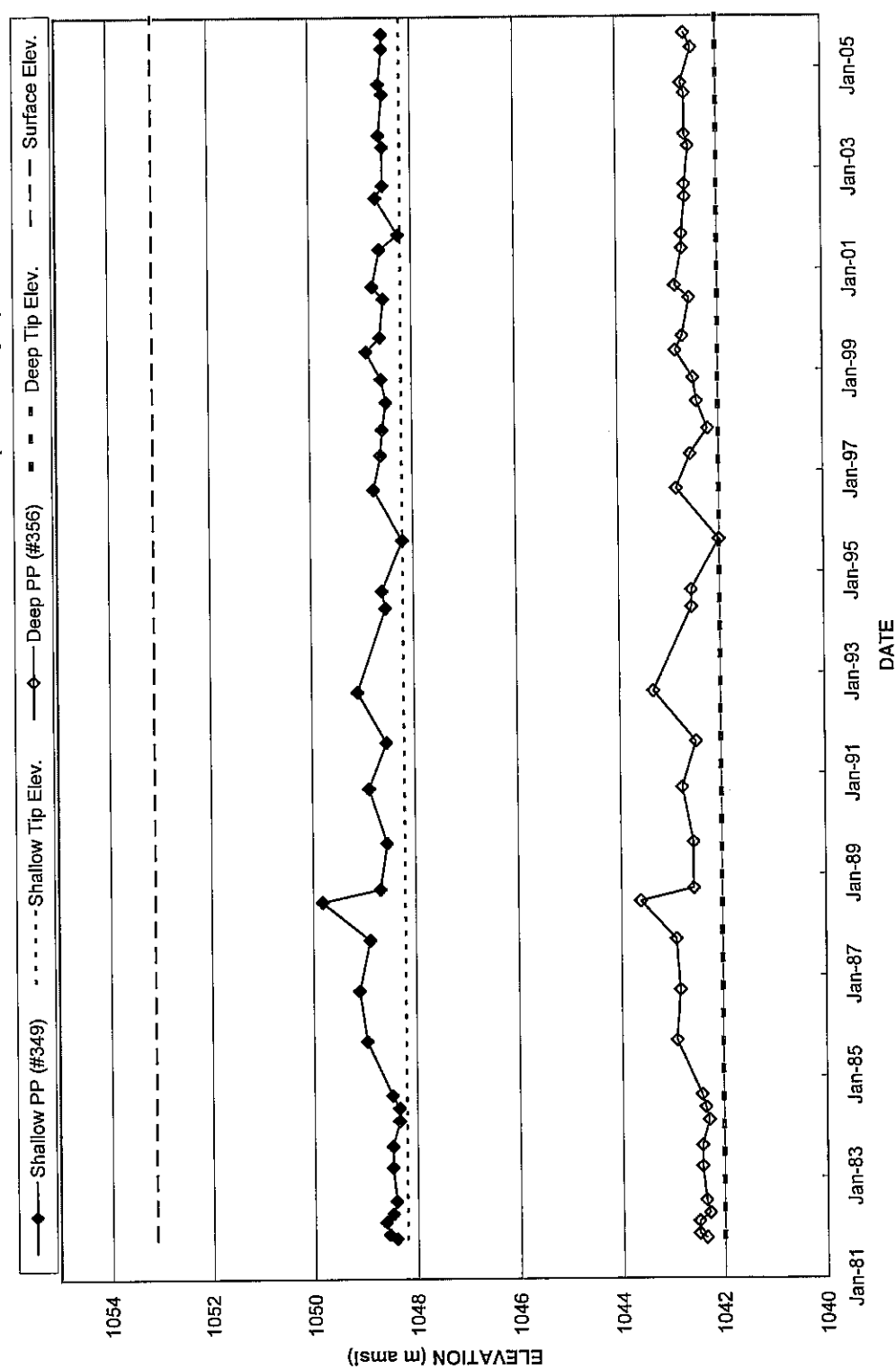
DIVERSION CANAL DIKE
Piezometric Monitoring
CD-26 Pneumatic Piezometer (Deep Tip)



DIVERSION CANAL DIKE

Piezometric Monitoring

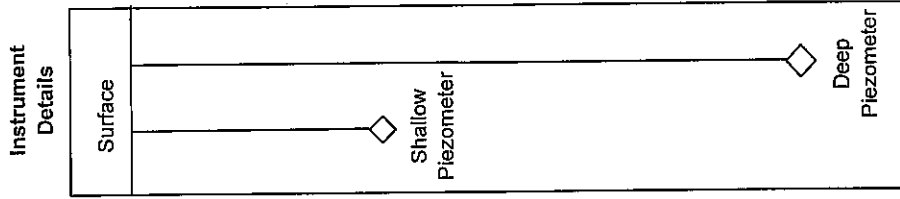
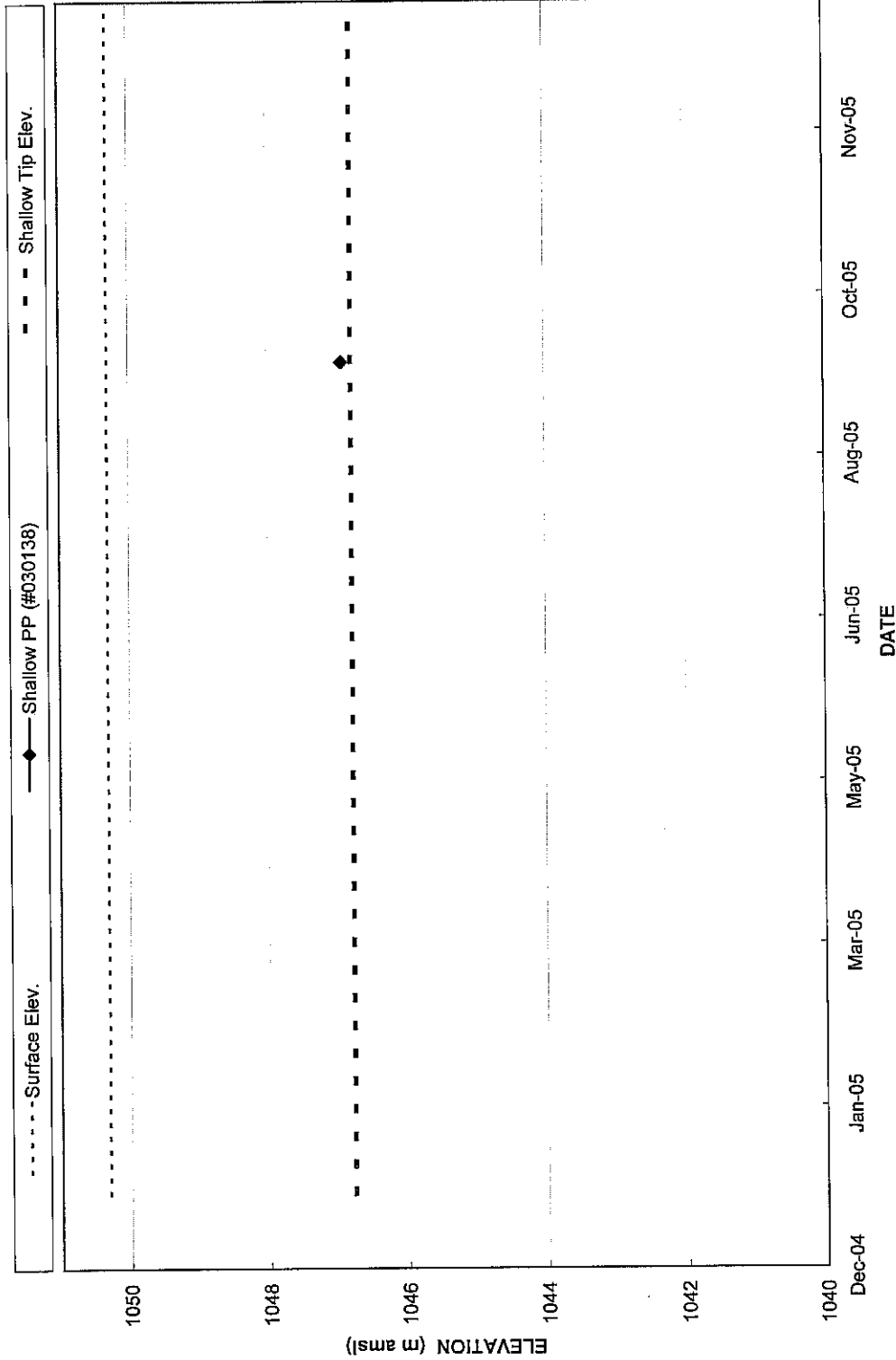
CD-26 Pneumatic Piezometers (Both Tips)



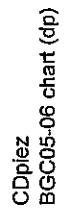
Faro Mine Instrumentation - Diversion Canal Dike

BGC05-06		Location:	Canal Dike St. 2+160 (approx)	Ground Elevation (m amsl):	1050.31
		Coordinates:	8V580715 6913517	Shallow Tip Elevation (m amsl):	1046.78
Surface Protector:	Yes	Date Installed:	2005	Deep Tip Elevation (m amsl):	1041.50
Date	Reading (psi)		Piezometric Elevation (m amsl)		Comments
	Shallow PP (#030138)	Deep PP (#030136)	Shallow (#030138)	Deep (#030136)	
14-Sep-05	0.2	0.3	1046.92	1041.71	

DIVERSION CANAL DIKE
Piezometric Monitoring
BGC05-06 Pneumatic Piezometer (Shallow Tip)

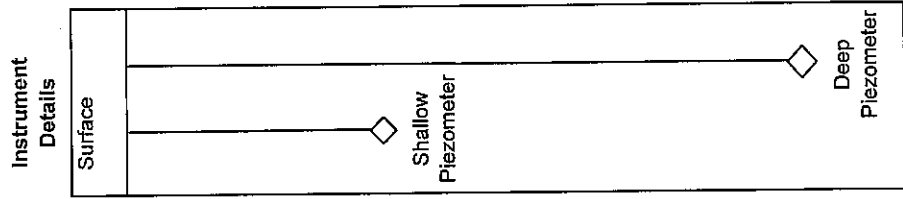
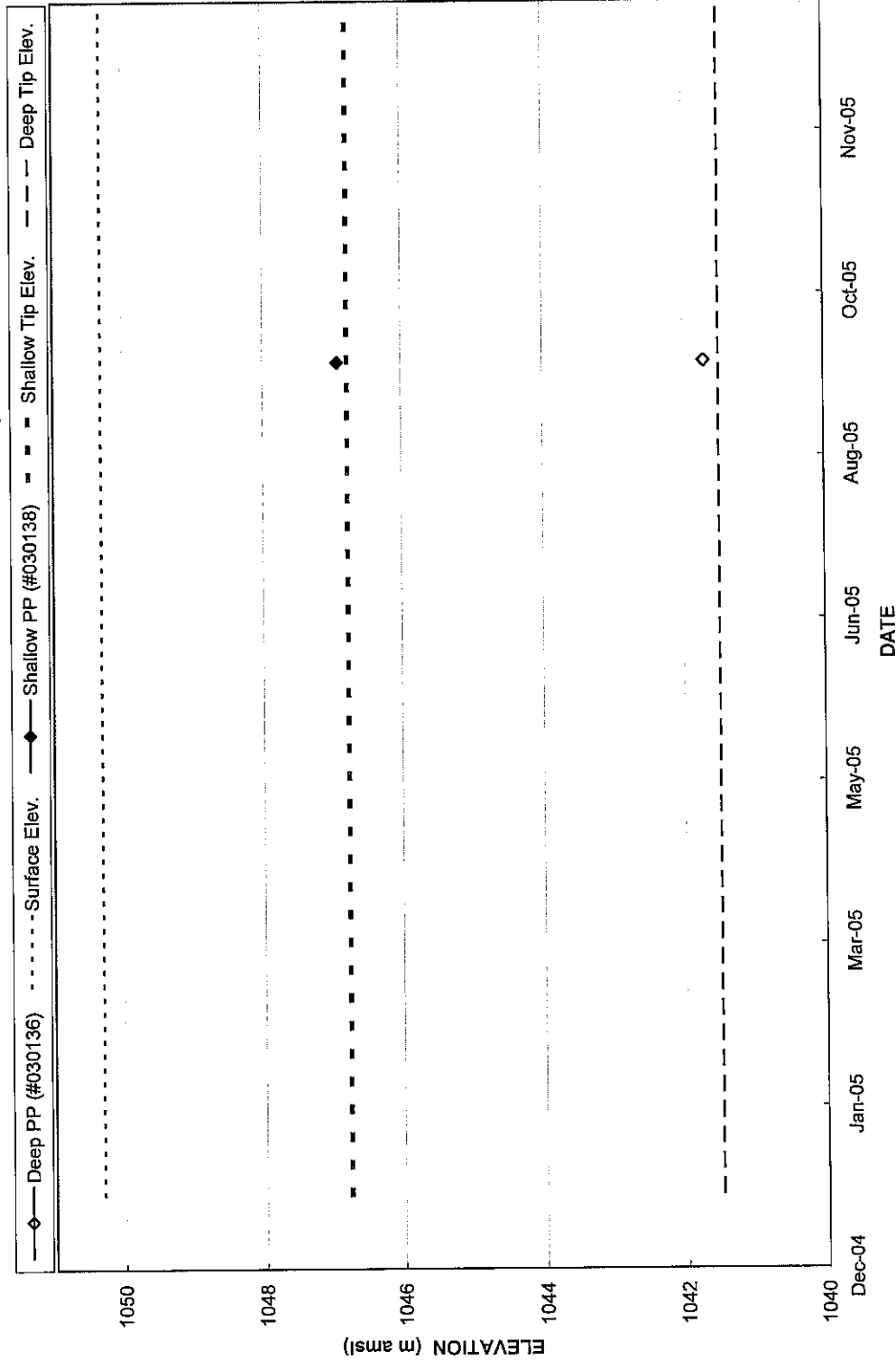


The diagram illustrates the vertical arrangement of instruments. A vertical line represents the profile, with 'Surface' at the top, 'Shallow Piezometer' in the middle, and 'Deep Piezometer' at the bottom. The labels are positioned to the right of the line, and the instruments are represented by diamond shapes.



BGC Engineering Inc.

DIVERSION CANAL DIKE **Piezometric Monitoring** **BGC05-06 Pneumatic Piezometer (Both Tips)**

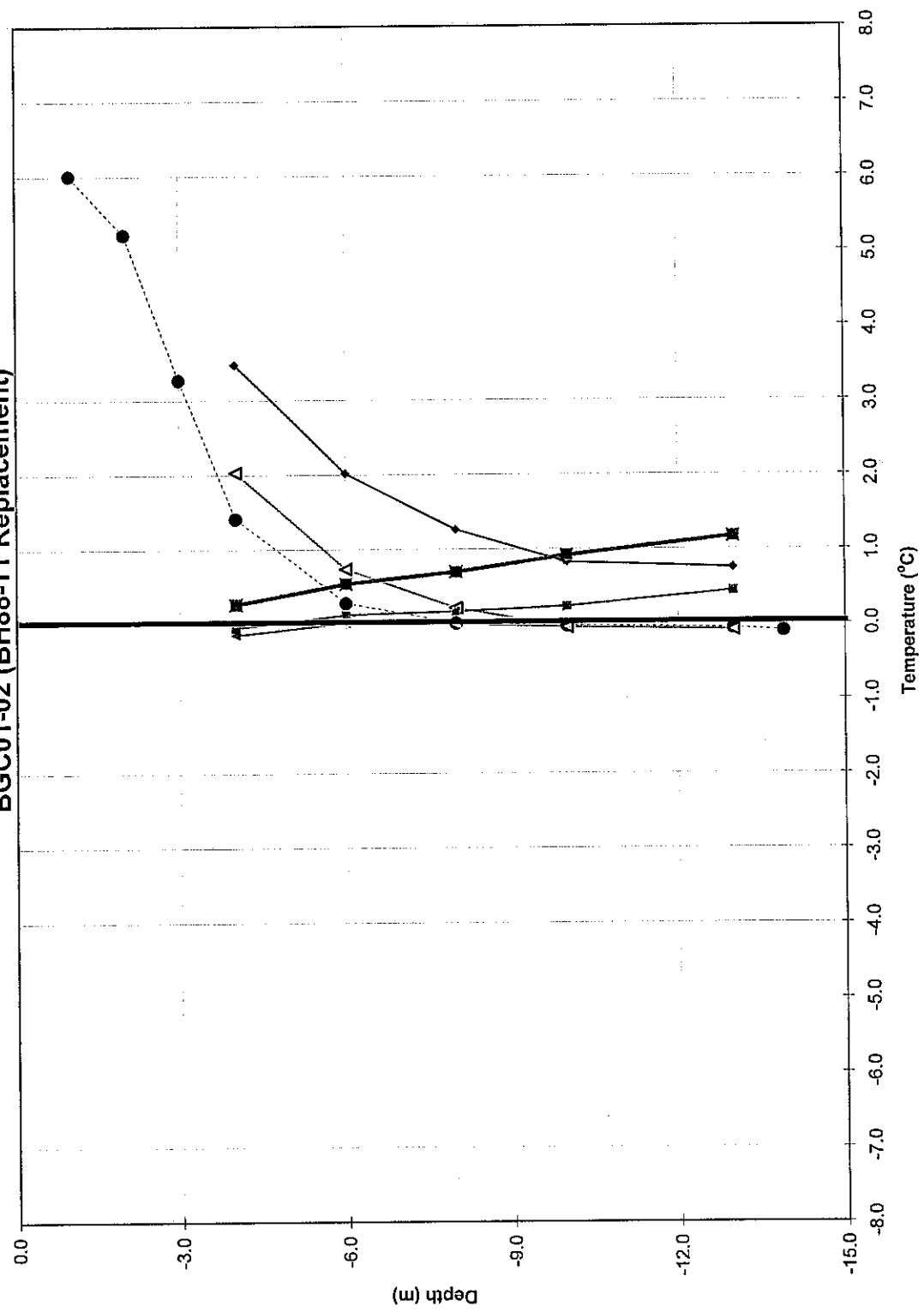


THERMISTORS

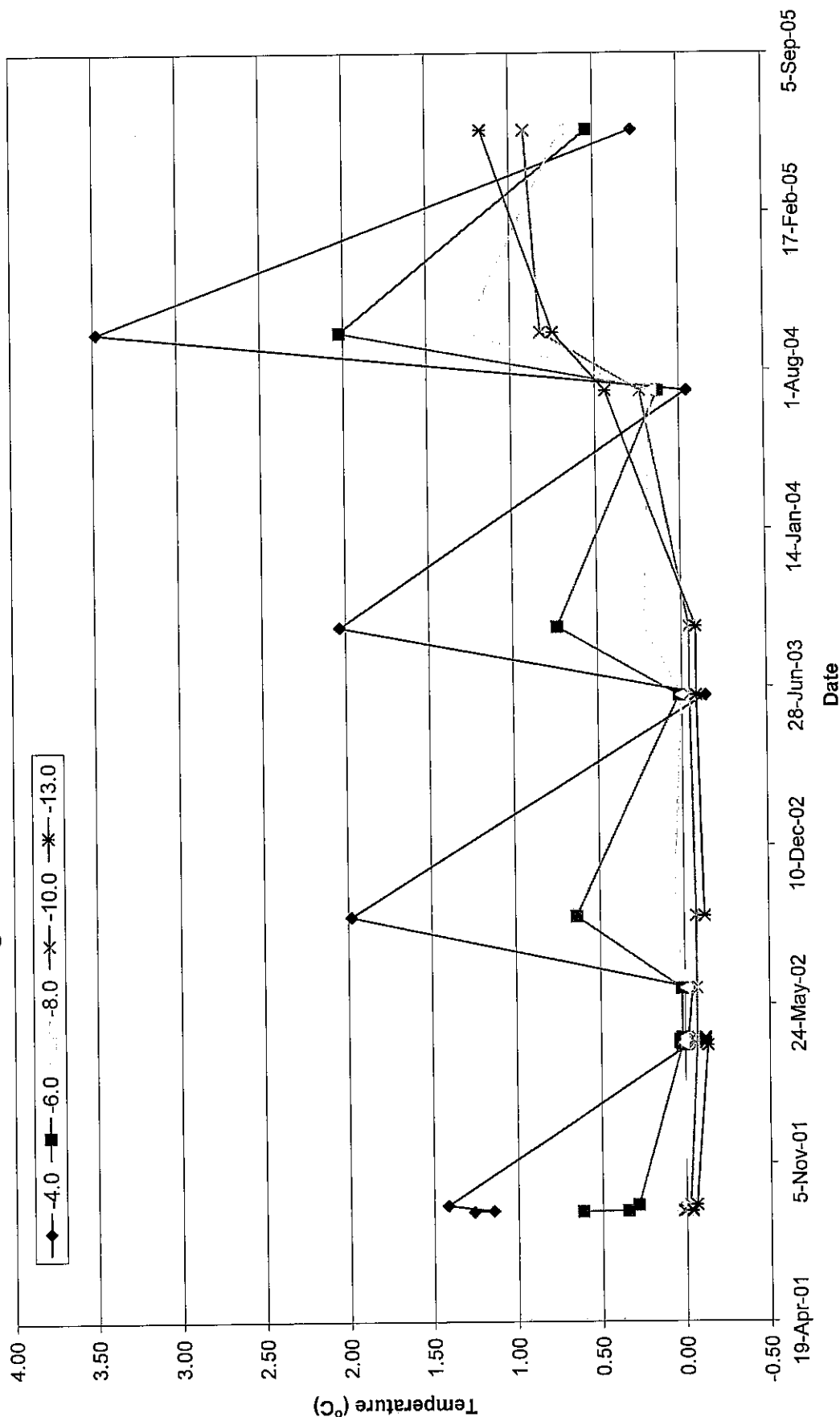
BGC01-02		Location:	Canal Dyke	Thermistor String #	Date Installed:	2001	Thermistor Type:	Elevation (m amsl):	1052.76	Ice-Bath Calibration:	Coordinates:	1478.8mN 456.6mE	8V580652 6913530
Depth Correction:		0											
Depth on String (m)	Actual Depth (m)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)
1.0	-1.0	10.86	11.05	12.05	12.05	12.05	20.50	16.33	16.33	16.33	16.33	14.76	16.10
2.0	-2.0	11.82	11.97	12.53	12.53	12.53		16.33	16.33	16.33	16.33	15.80	15.88
3.0	-3.0	13.25	13.53	13.83	13.83	13.83		16.33	16.33	16.33	16.33	15.29	15.77
4.0	-4.0	15.31	15.40	15.19	15.19	15.19	16.34	16.33	16.33	16.33	16.33	16.39	15.59
6.0	-6.0	15.82	16.04	16.09	16.09	16.09	16.31	16.30	16.30	16.30	16.30	16.39	15.35
8.0	-8.0	16.32	16.32	16.33	16.33	16.33	16.35	16.34	16.34	16.34	16.34	16.39	15.35
10.0	-10.0	16.32	16.33	16.35	16.35	16.35	16.39	16.38	16.38	16.38	16.38	16.39	15.35
13.0	-13.0	16.32	16.32	16.34	16.34	16.34	16.40	16.39	16.39	16.39	16.39	16.39	15.35
13.9	-13.9	16.35	16.35	16.38	16.38	16.38		20.90	20.90	20.90			
		15.37	15.42	15.43	15.43	15.43							

Depth on String (m)	Actual Depth (m)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)
1.0	-1.0	8.13	7.77	6.01	-4.44								
2.0	-2.0	6.40	6.14	5.22									
3.0	-3.0	4.13	3.71	3.28									
4.0	-4.0	1.26	1.14	1.41	-0.02	-0.01							
6.0	-6.0	0.61	0.34	0.28	0.02	0.03	0.03	-0.01	-0.01	-0.01	-0.02	1.98	0.27
8.0	-8.0	0.02	0.02	0.01	-0.01	-0.01	0.00	-0.01	-0.01	-0.01	0.02	0.64	0.54
10.0	-10.0	0.01	0.00	-0.02	-0.07	-0.06	-0.06	-0.07	-0.07	-0.07	0.06	-0.07	0.70
13.0	-13.0	-0.04	-0.04	-0.06	-0.13	-0.12	-0.12	-0.12	-0.12	-0.12	-0.07	-0.12	0.91
13.9	-13.9	-0.06	-0.06	-0.10									1.17

DIVERSION CANAL DIKE **Geothermal Monitoring** **BGC01-02 (BH88-11 Replacement)**



Diversion Canal Dike Geothermal Monitoring Long Term Monitoring for Nodes in BGC01-02



Faro Mine Instrumentation
Diversion Canal Dike

CD-10		Location: Canal Dyke St. 0-990	Date Installed:	1981	Thermistor Type:	Elevation (m amsl):	1056.09	Coordinates:	1008.7 mN 1519.7 mE	8V581754 5913048
Depth Correction:	-0.1									
Actual Depth on String (m)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)
1.0	-0.9	23.70	13.63	12.20	11.98	12.25	11.65	10.54	12.84	12.13
2.0	-1.9	16.68	16.31	10.90	11.74	12.47	11.78	16.06	12.77	16.01
3.0	-2.9	16.50	17.55	11.39	12.54	13.65	12.93	17.21	13.74	18.77
4.0	-3.9	16.13	16.87	12.03	12.94	15.07	14.28	16.84	15.68	
5.0	-4.9	16.24	16.50	13.24	13.77	16.83	16.48	16.75	15.88	
6.0	-5.9	16.31	16.43	14.03	14.40	16.34	15.85	16.84	15.88	16.63
7.0	-6.9	16.19	16.15	14.19	14.92	15.56	14.96	17.24	15.88	16.39
8.0	-7.9	16.19	16.00	13.93	15.26	15.08	14.34	16.20	15.81	16.72
9.0	-8.9	16.36	16.31	16.88	15.52	15.38	15.09	16.08	16.08	16.72
10.0	-9.9	16.21	16.17	14.87	15.31	15.60	15.26	16.77	16.77	16.48

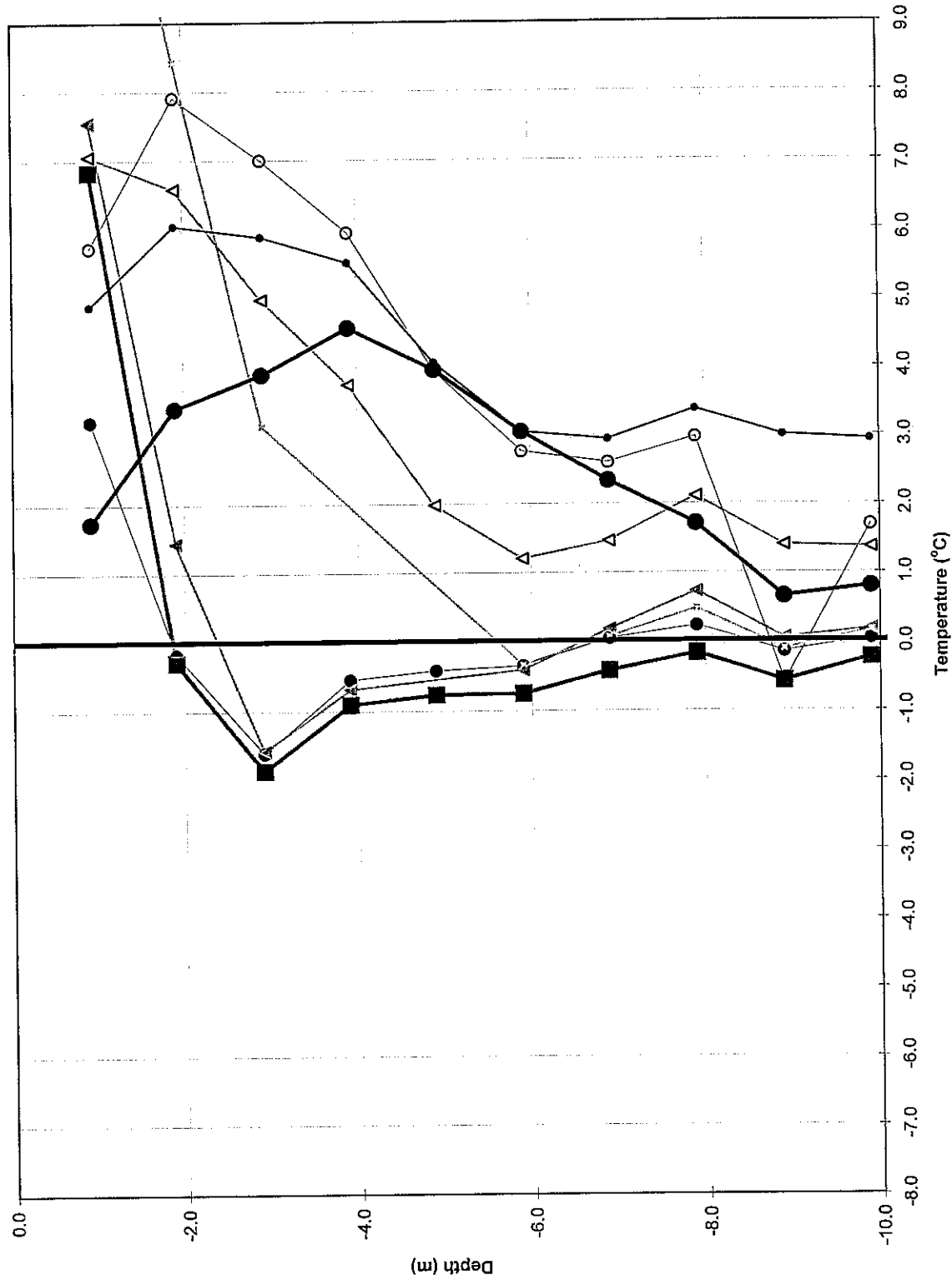
*The initial reading (Nov 15/81) is excluded from the data set because post installation equilibrium may not have been complete.

Depth on String (m)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)
1.0	-0.9	7.20	3.22	6.74	6.11	5.65	6.67	8.72	4.55	5.85
2.0	-1.9	-0.60	-0.16	7.91	6.40	5.17	6.33	0.14	4.69	0.20
3.0	-2.9	-0.40	-1.60	7.00	5.05	3.35	4.43	-1.22	3.22	-2.90
4.0	-3.9	0.10	-0.54	5.95	4.48	1.44	2.51	-0.74	0.66	
5.0	-4.9	-0.10	-0.41	3.85	3.16	-0.80	-0.39	-0.70		
6.0	-5.9	-0.20	-0.35	2.77	2.25	-0.24	0.36	-0.60	0.32	
7.0	-6.9	0.00	0.05	2.60	1.61	0.78	1.56	-1.23	0.38	-0.52
8.0	-7.9	0.00	0.23	2.97	1.16	1.40	2.39	-0.01	0.47	-0.24
9.0	-8.9	-0.20	-0.14	-0.58	0.83	1.01	1.38		0.13	-0.63
10.0	-9.9	0.00	0.04	1.89	1.12	0.75	1.18		0.54	-0.33

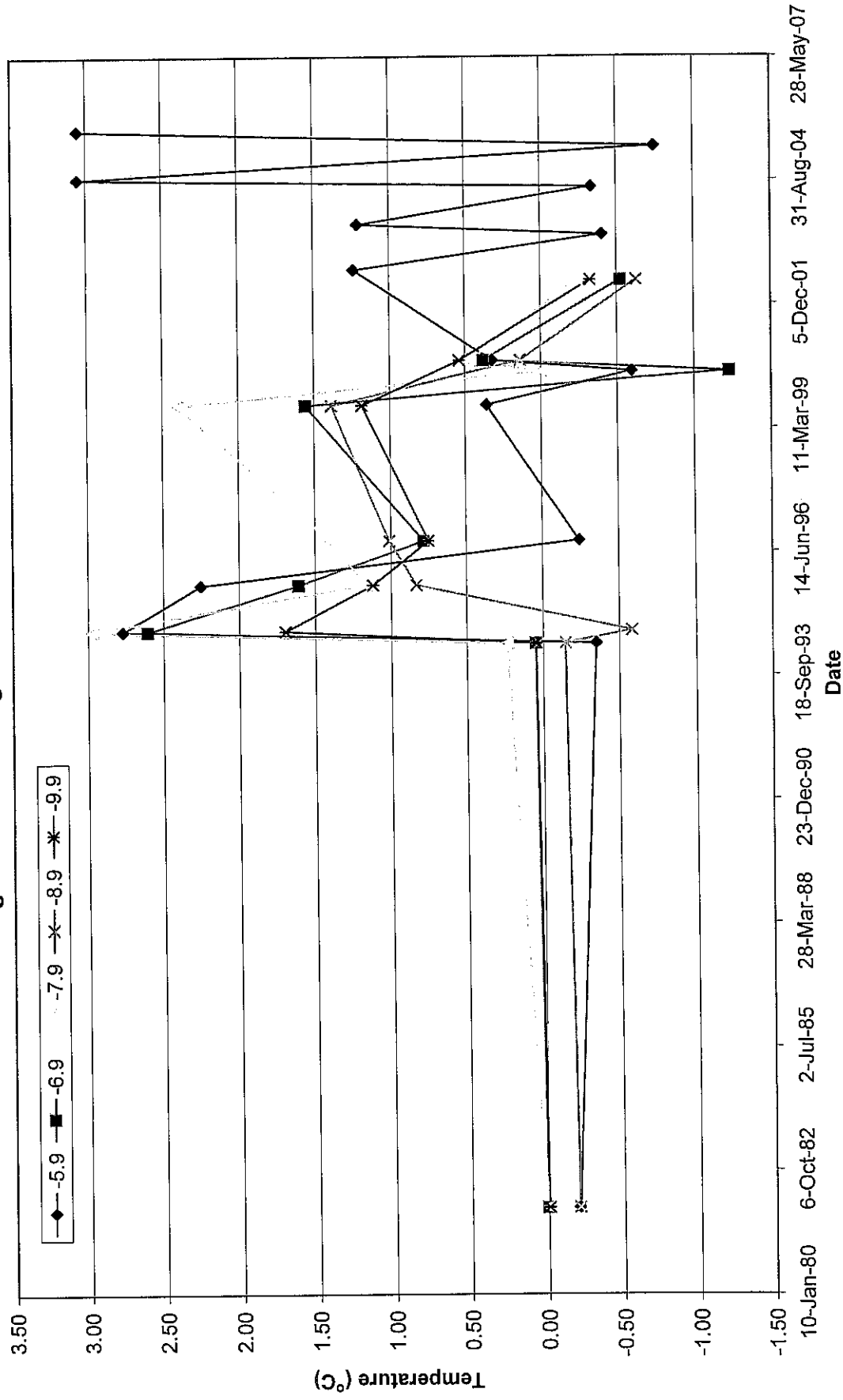
Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)
11.85	11.16	11.43	8.32	12.72	11.56	14.90	13.62	16.41	13.28	12.88
11.83	15.03	11.63	10.63	11.94	16.41	13.62	16.41	13.28	12.88	13.23
13.10	17.52	12.58	13.78	12.03	17.78	13.28	16.98	15.98	12.88	13.23
13.97	16.79	13.42		12.28	16.98	12.88	13.23	13.83	13.83	13.83
15.16	16.48	15.18	16.42	13.83	16.77	13.83	16.77	13.83	13.83	13.83
14.82	16.04	15.03	16.13	13.95	16.54	14.38	16.54	14.38	14.38	14.38
14.75	15.60	14.55	15.80	13.65	16.33	14.84	16.33	14.84	14.84	14.84
14.91	16.15	15.08	16.28	13.91	16.67	15.66	16.67	15.66	15.66	15.66
14.70	16.06	15.12	16.07	13.87	16.40	15.56	16.40	15.56	15.56	15.56

Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)
12-Sep-02	17-Jun-03	12-Sep-03	06-Jul-04	16-Sep-04	31-May-05	12-Oct-05	12-Oct-05	12-Oct-05	12-Oct-05	12-Oct-05
6.33	7.55	7.06	13.67	4.89	6.83	1.73	1.73	1.73	1.73	1.73
6.07	1.44	6.59	8.43	6.05	-0.28	3.40	3.40	3.40	3.40	3.40
4.17	-1.67	4.99	3.14	5.89	-1.85	3.90	3.90	3.90	3.90	3.90
2.94	-0.68	3.75		5.52	-0.90	4.57	4.57	4.57	4.57	4.57
1.23	-0.41	1.21	-0.34	4.07	-0.76	3.66	3.66	3.66	3.66	3.66
1.74	0.18	1.46	0.07	3.06	-0.75	3.06	3.06	3.06	3.06	3.06
1.83	0.73	2.11	0.48	2.94	-0.42	2.34	2.34	2.34	2.34	2.34
1.82	0.05	1.40	-0.11	3.00	-0.57	0.65	0.65	0.65	0.65	0.65
1.92	0.16	1.36	0.17	2.83	-0.23	0.80	0.80	0.80	0.80	0.80

DIVERSION CANAL DIKE Geothermal Monitoring CD-10



Diversion Canal Dike
Geothermal Monitoring
Long Term Monitoring for Nodes in CD-10



Faro Mine Instrumentation
Diversion Canal Dike

Anvil Range Mining Corp.
Faro Mine, Faro, YT

CD-15		Location:	Canal Dyke St. 1+530	Thermistor String #26	Date Installed:	1981	Thermistor Type:	Centec Controls YSI 44007	Ice-Bath Calibration:	Coordinates:	1233.7 mN 1028.7 mE	8V581228 5813287
Depth Correction:	0.1											
Actual Depth on String (m)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)
1.0	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56
2.0	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56
3.0	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56
4.0	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56
5.0	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56
6.0	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56
7.0	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56
8.0	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56
9.0	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56
10.0	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56

*The initial reading (Nov 15/81) is excluded from the data set because post-installation equilibrium may not have been complete.

Depth on String (m)	Actual Depth (m)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)
1.0	1.0	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56
2.0	2.0	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56
3.0	3.0	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56
4.0	4.0	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56
5.0	5.0	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56
6.0	6.0	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56
7.0	7.0	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56
8.0	8.0	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56
9.0	9.0	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56
10.0	10.0	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56

* The 3 metre depth tip is suspect

Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)
13-Sep-01	13-Jun-02	12-Sep-02	17-Jun-03	12-Sep-03	08-Jul-04	16-Sep-04	31-May-05	12-Oct-05				
11.56	12.16	11.57	12.04	11.11	8.87	12.50	13.40	13.87				
11.30	16.59	12.00	15.88	11.22	11.63	11.67	16.83	12.55				
17.05	24.82	18.61	24.71	17.12	21.04	15.94	24.35	17.39				
17.42	13.84	13.84	16.02	13.33	17.84	13.31	16.05	13.22				
12.38	16.24	12.68	16.26	12.31	15.91	12.35	16.05	11.70				
12.57	15.95	12.70	16.00	12.36	15.96	12.82	15.87	12.13				
13.10	15.53	13.43	15.59	12.84	15.64	13.15	15.30	12.16				
13.83	15.37	14.26	13.43	13.67	15.44	13.77	15.09	12.76				
14.52	15.37	14.88	15.45	14.40	15.47	14.46	15.13	13.50				
17.05	17.55	17.30	17.88	17.09	18.14	17.27	17.76	16.95				

Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)
13-Sep-01	13-Jun-02	12-Sep-02	17-Jun-03	12-Sep-03	08-Jul-04	16-Sep-04	31-May-05	12-Oct-05				
6.72	5.89	5.70	5.89	7.53	12.20	5.14	3.74	3.05				
7.12	-0.56	5.89	0.30	7.26	6.53	6.46	-0.81	4.98				
-1.05	-8.20	-2.75	-8.11	-1.13	-5.09	-0.92	-7.84	-1.43				
5.35	-0.05	4.87	-2.05	3.86	-1.86	3.91	0.18	6.50				
4.99	0.25	4.79	0.19	5.33	0.61	4.60	0.35	5.71				
4.18	0.80	3.68	0.72	4.43	0.78	4.10	1.09	5.68				
3.13	1.03	2.52	0.95	3.36	0.94	3.21	1.39	4.74				
2.18	1.05	1.69	0.95	2.34	0.92	2.26	1.36	3.63				
-1.03	-1.59	-1.31	-1.95	-1.08	-2.23	-1.28	-1.82	-0.45				

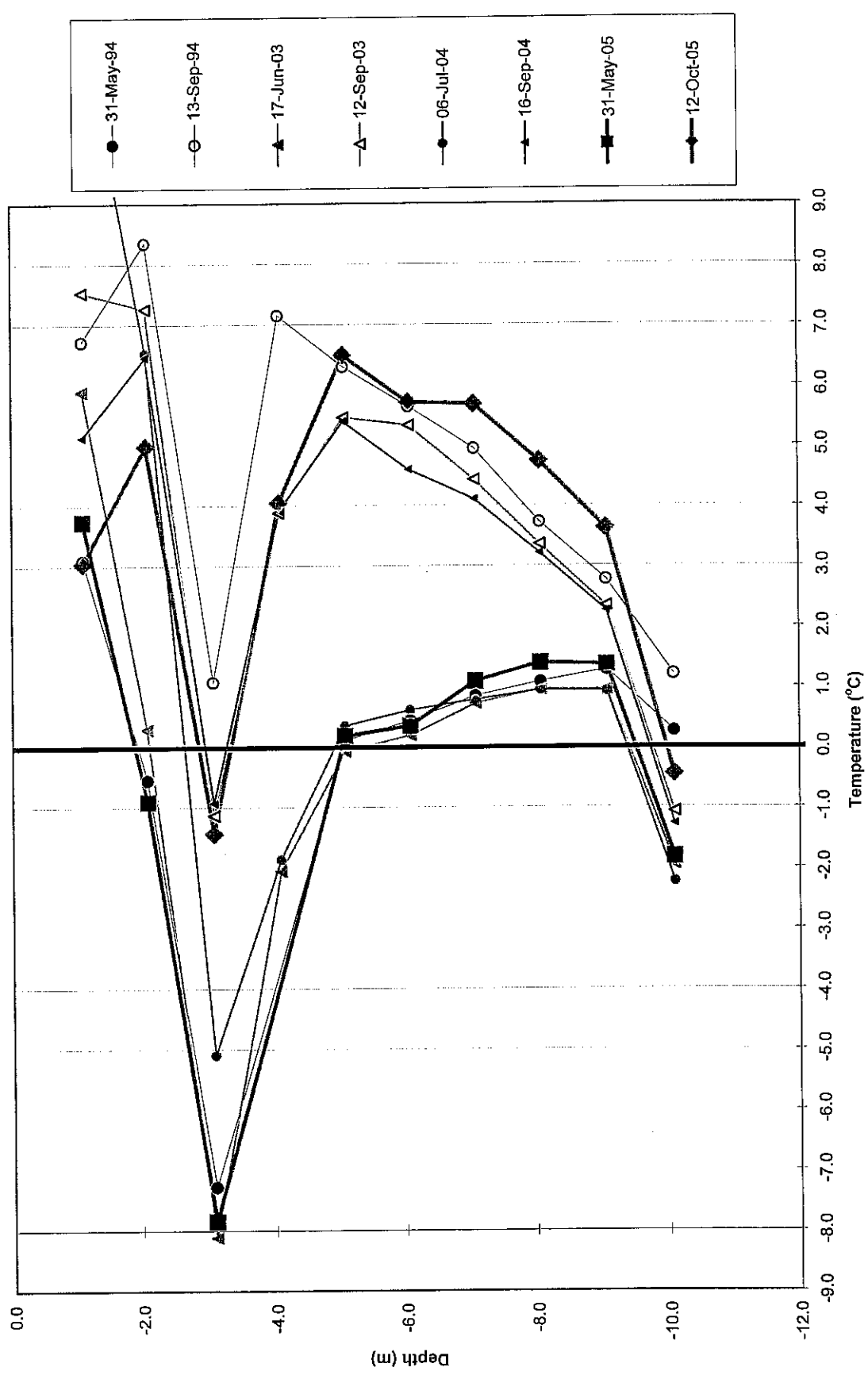
CDIthem
CD-15

BGC Engineering Inc.

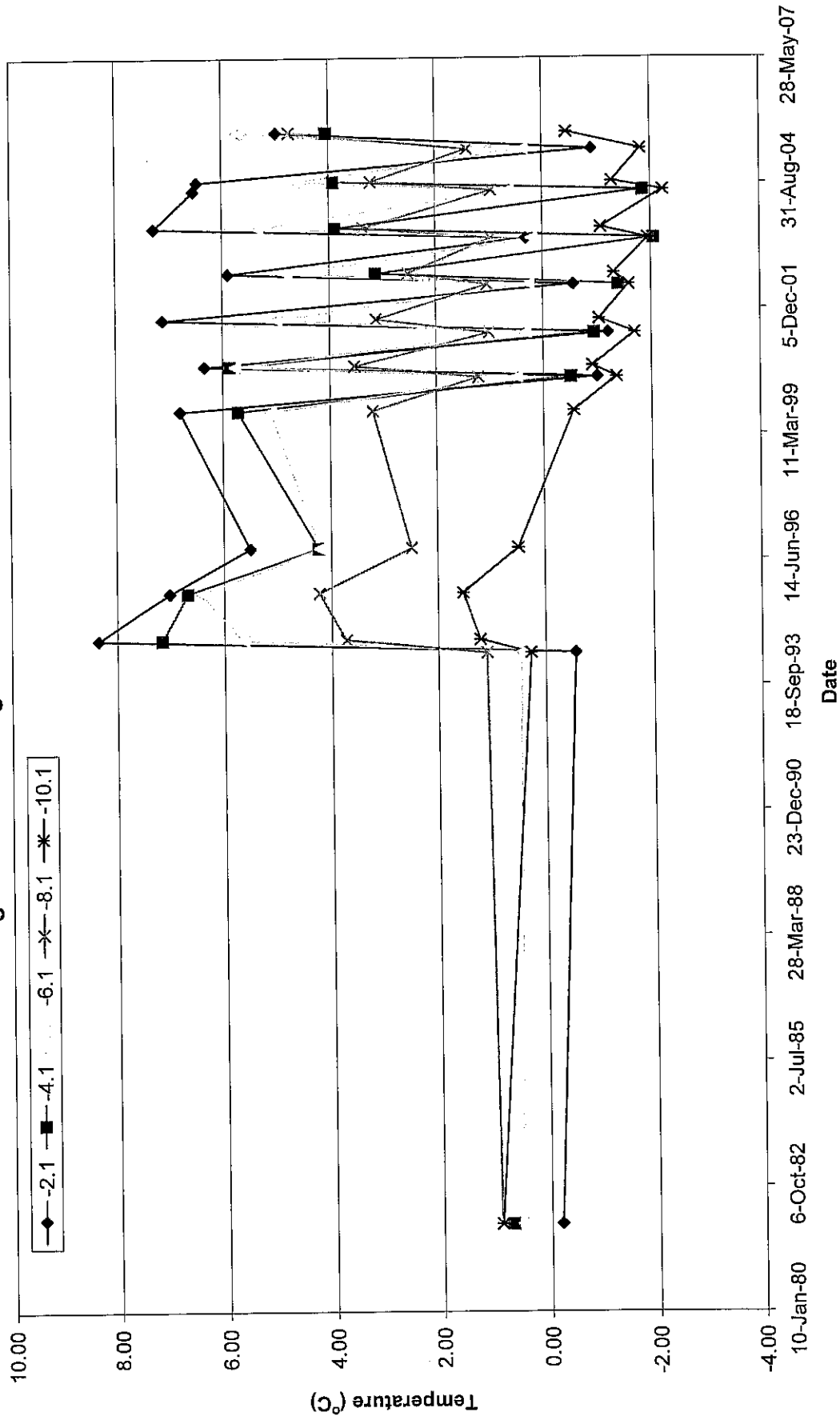
DIVERSION CANAL DIKE

Geothermal Monitoring

CD-15



Diversion Canal Dike Geothermal Monitoring Long Term Monitoring for Nodes in CD-15



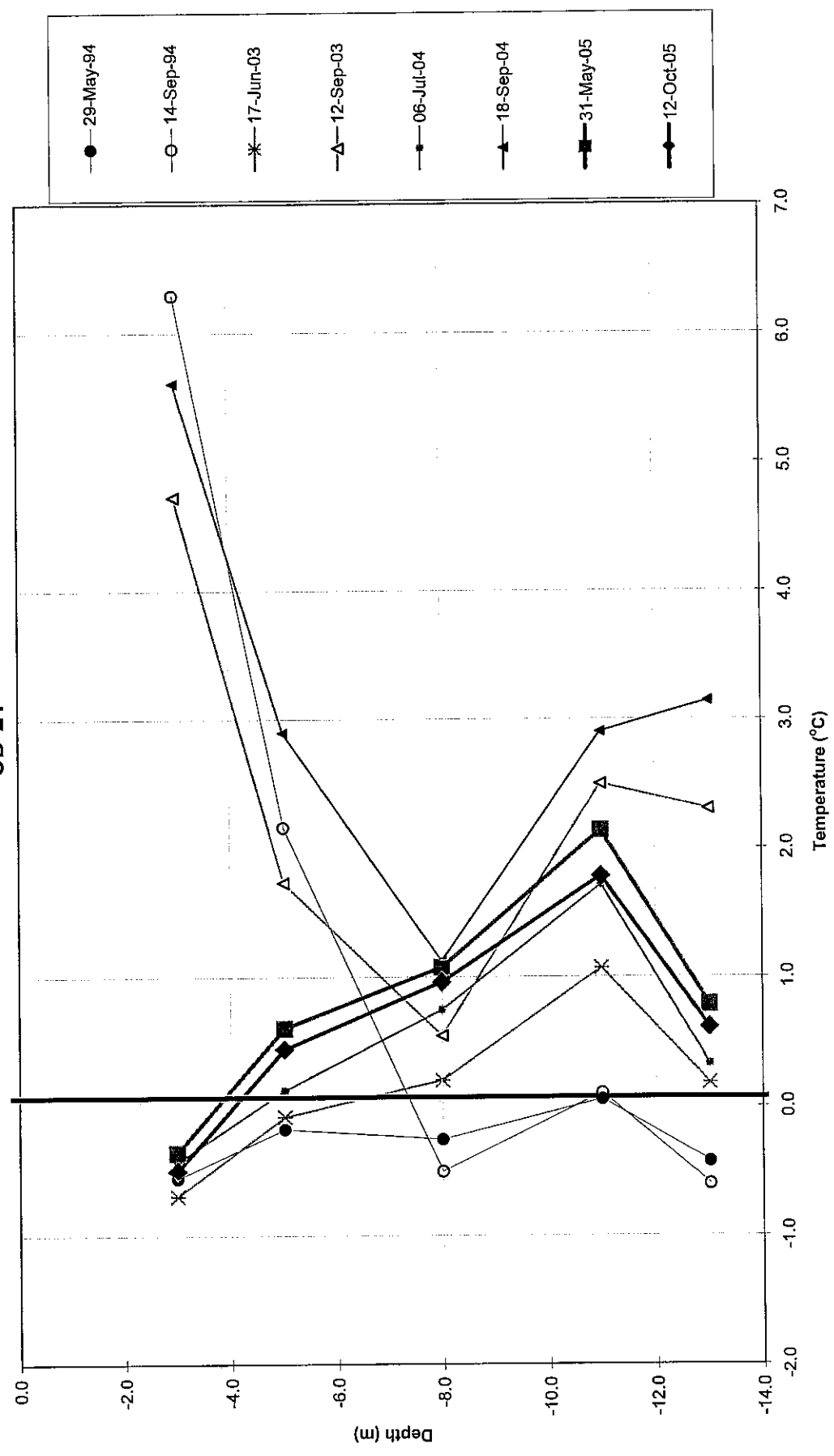
Depth on String	Actual Depth	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)
(m)	(m)	09-Dec-82	29-May-94	14-Sep-94	20-Sep-95	13-Sep-96	17-Oct-97	12-Nov-98	13-Sep-99	07-Jun-00						
3.0	-3.0	-0.30	-0.55	6.29	4.34	2.87	2.79	1.96	3.81	-0.69						
5.0	-5.0	-0.30	-0.17	2.16	1.59	-0.30	1.26	2.11	0.64	-0.14						
8.0	-8.0	-0.70	-0.25	-0.50	-0.45	-0.39	-0.22	0.62	-0.16	0.05						
11.0	-11.0	-0.60	0.06	0.10	0.06	-0.05	-0.15		0.27	0.84						
13.0	-13.0	-0.60	-0.42	-0.60	-0.60	-0.59	-0.56	-0.52	-0.31	0.10						

[illegible][illegible]

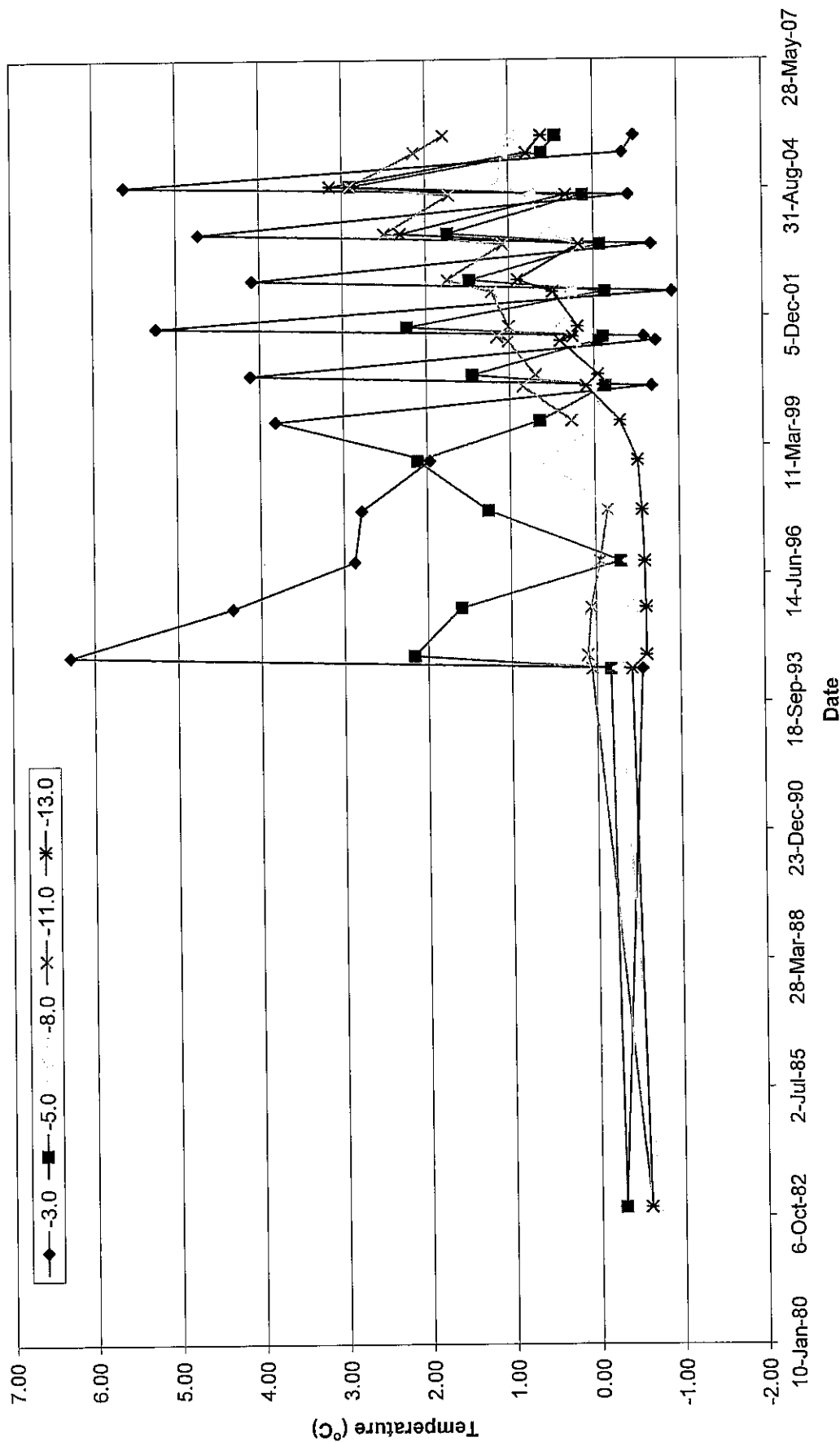
DIVERSION CANAL DIKE

Geothermal Monitoring

CD-21

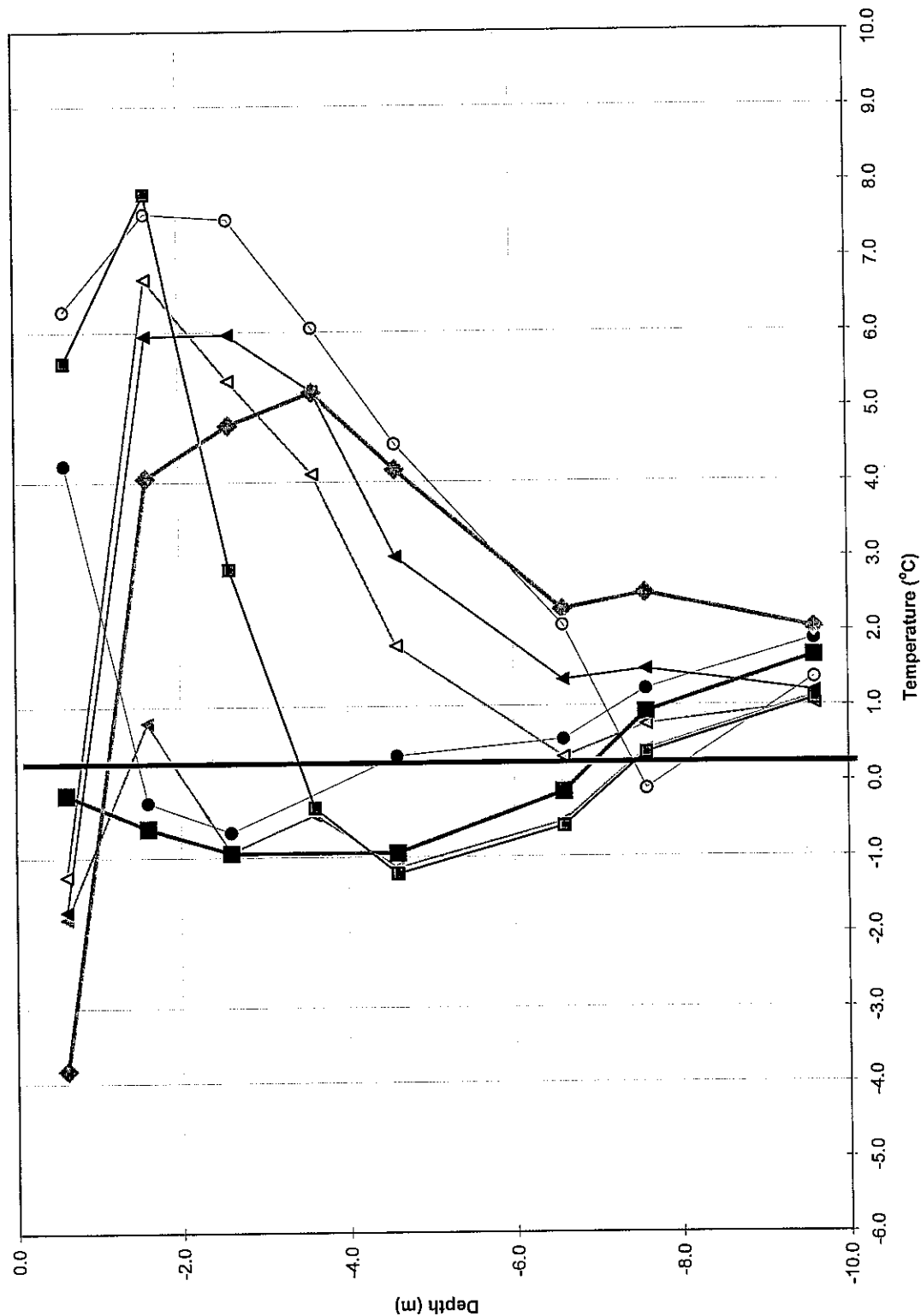


Diversion Canal Dike Geothermal Monitoring Long Term Monitoring for Nodes in CD-21

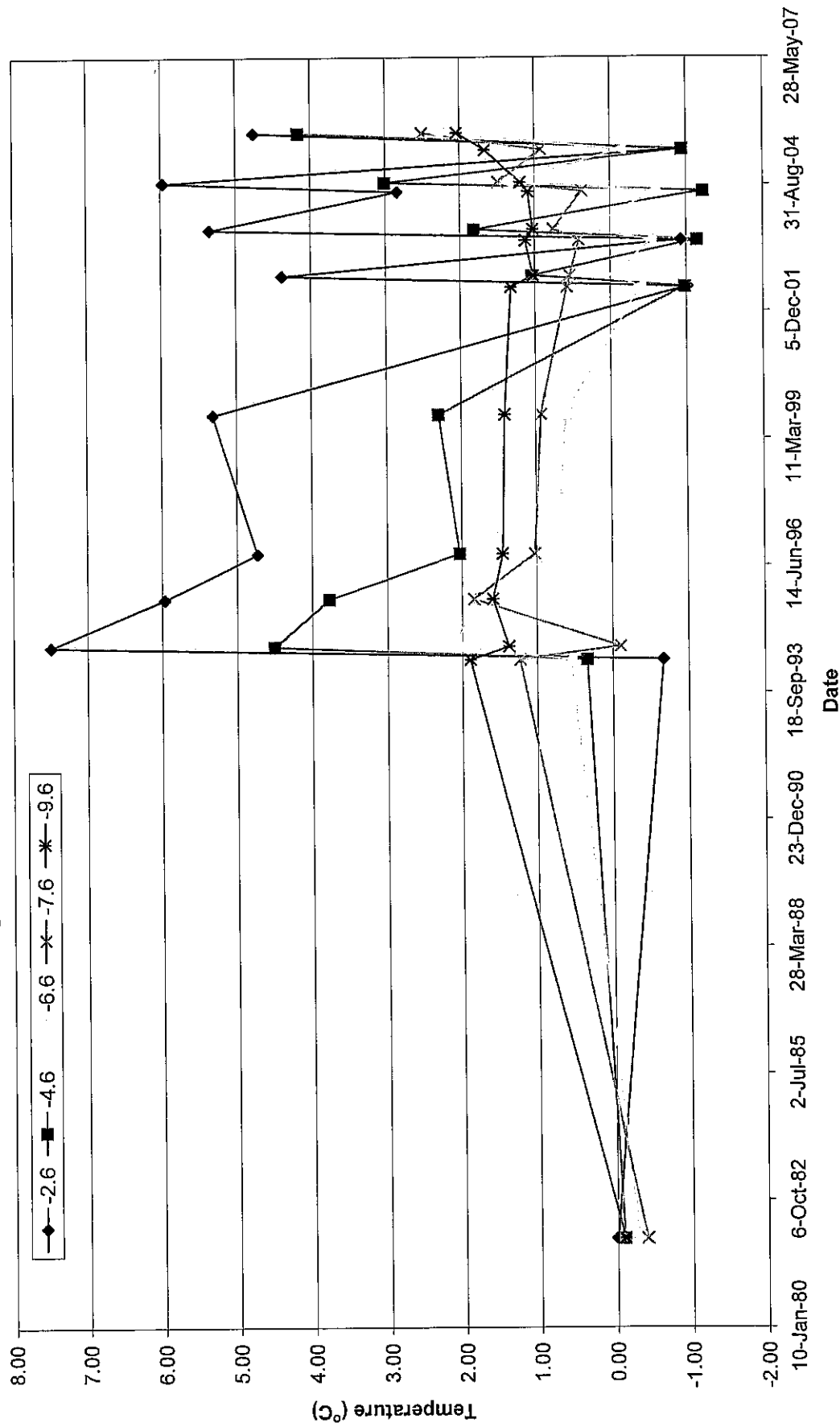


*Ties at 5.6 m and 8.6 depth are suspect

DIVERSION CANAL DIKE Geothermal Monitoring CD-26

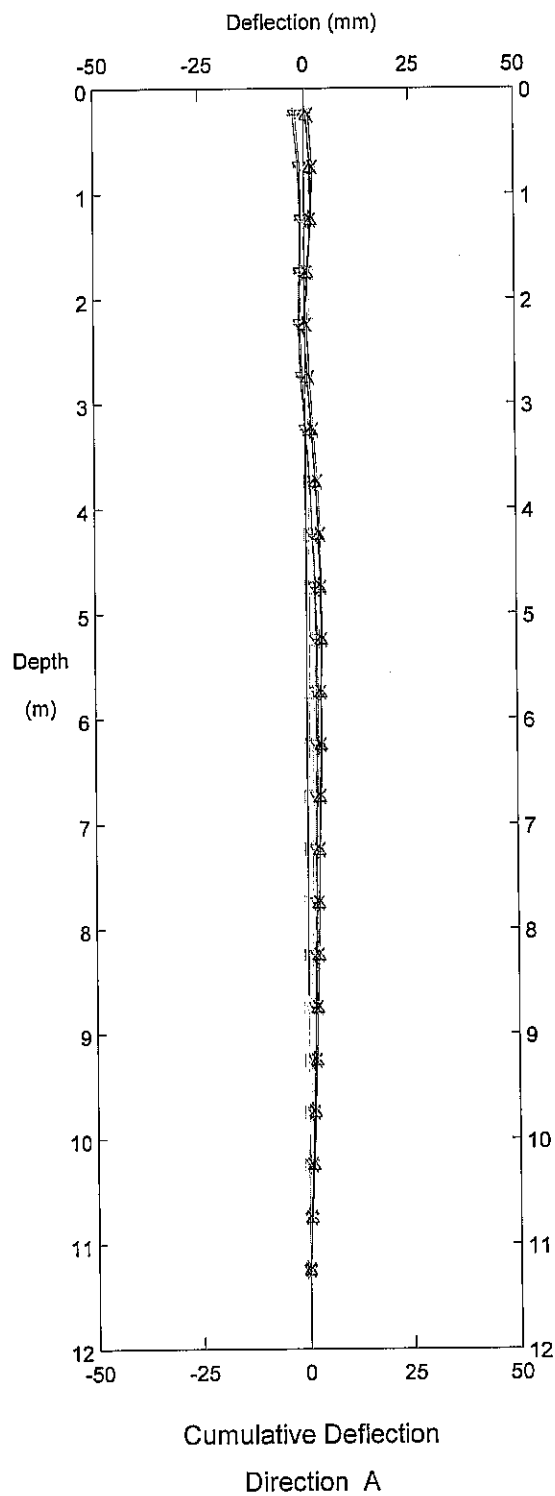


Diversion Canal Dike Geothermal Monitoring Long Term Monitoring for Nodes in CD-26



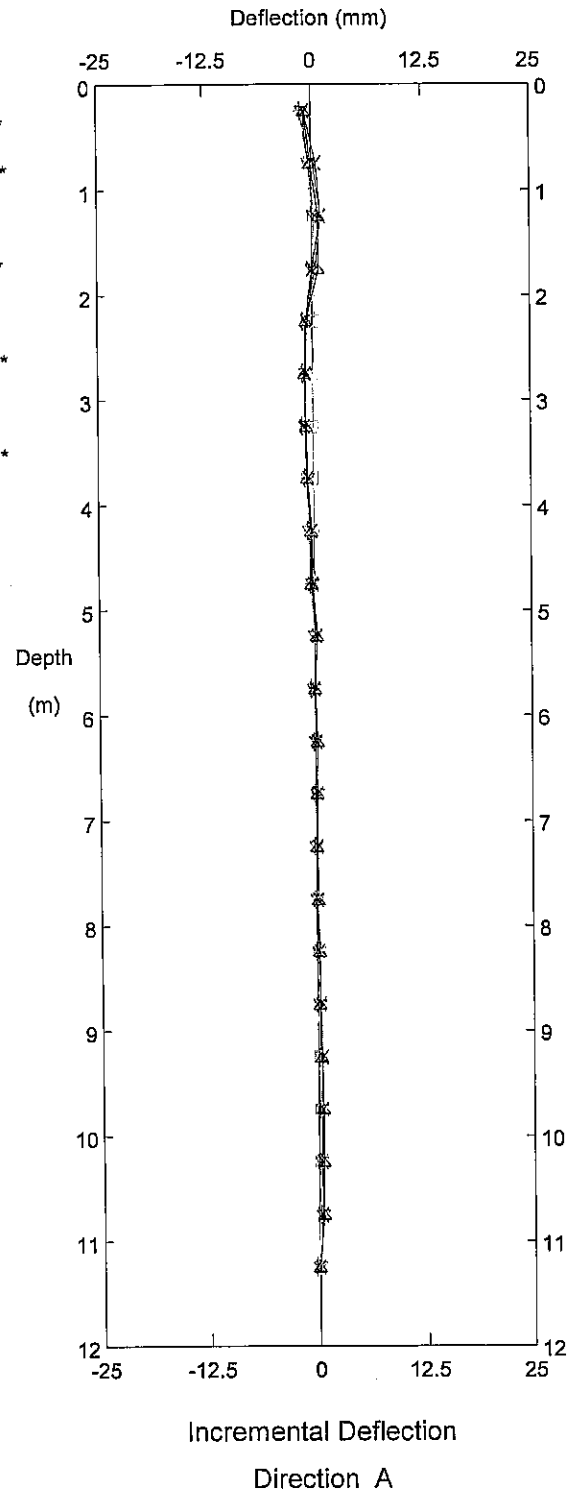
SLOPE INDICATORS

BGC Engineering Inc. - Calgary, AB



LEGEND

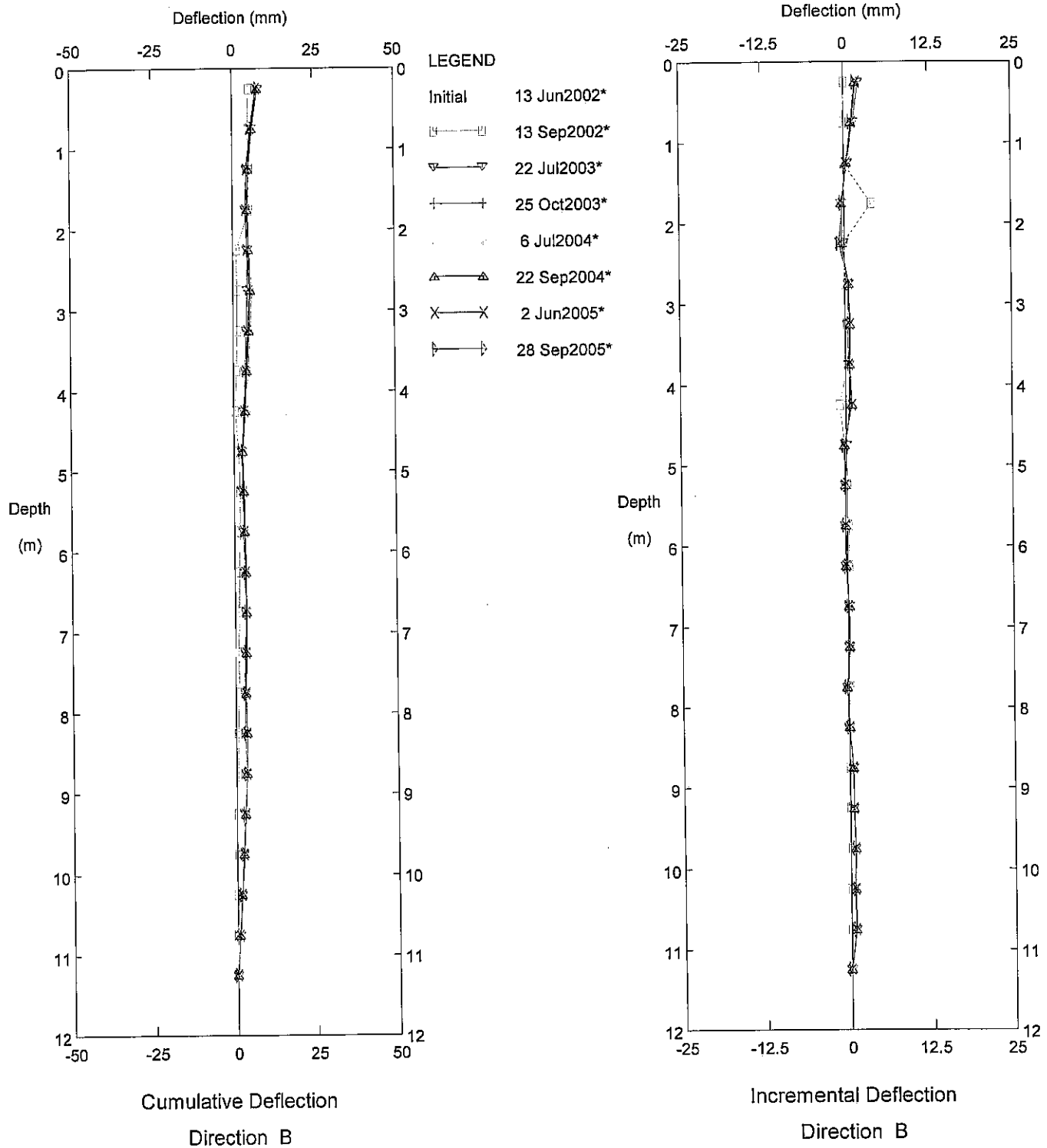
- Initial 13 Jun2002*
- 13 Sep2002*
- 22 Jul2003*
- 25 Oct2003*
- 6 Jul2004*
- 22 Sep2004*
- 2 Jun2005*
- 28 Sep2005*



91CD-1, Inclinator 1+767

Sets marked * include zero shift and/or rotation corrections.

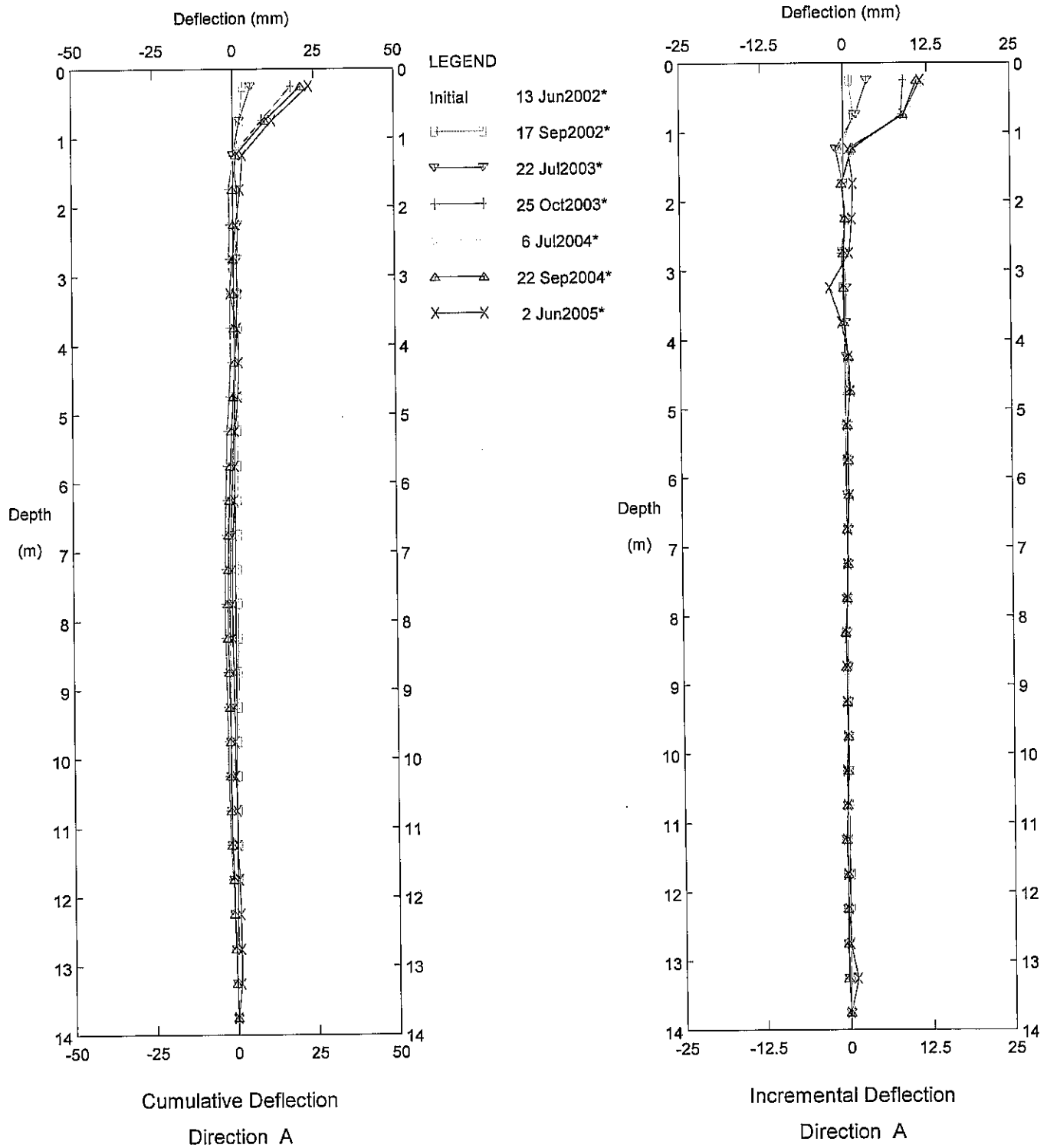
BGC Engineering Inc. - Calgary, AB



91CD-1, Inclinator 1+767

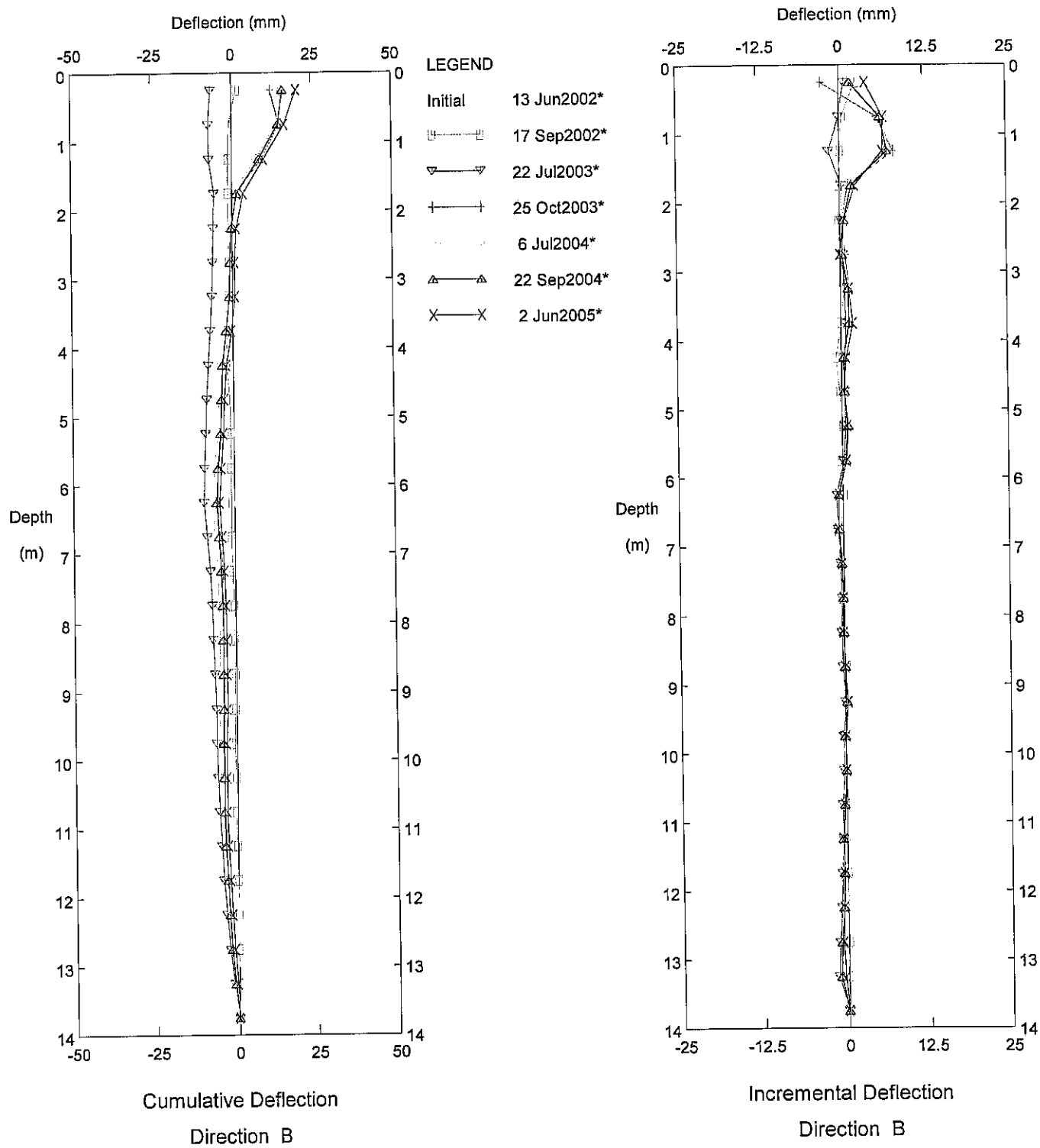
Sets marked * include zero shift and/or rotation corrections.

BGC Engineering Inc. - Calgary, AB



94CD-1, Inclinometer BH-94CD-1

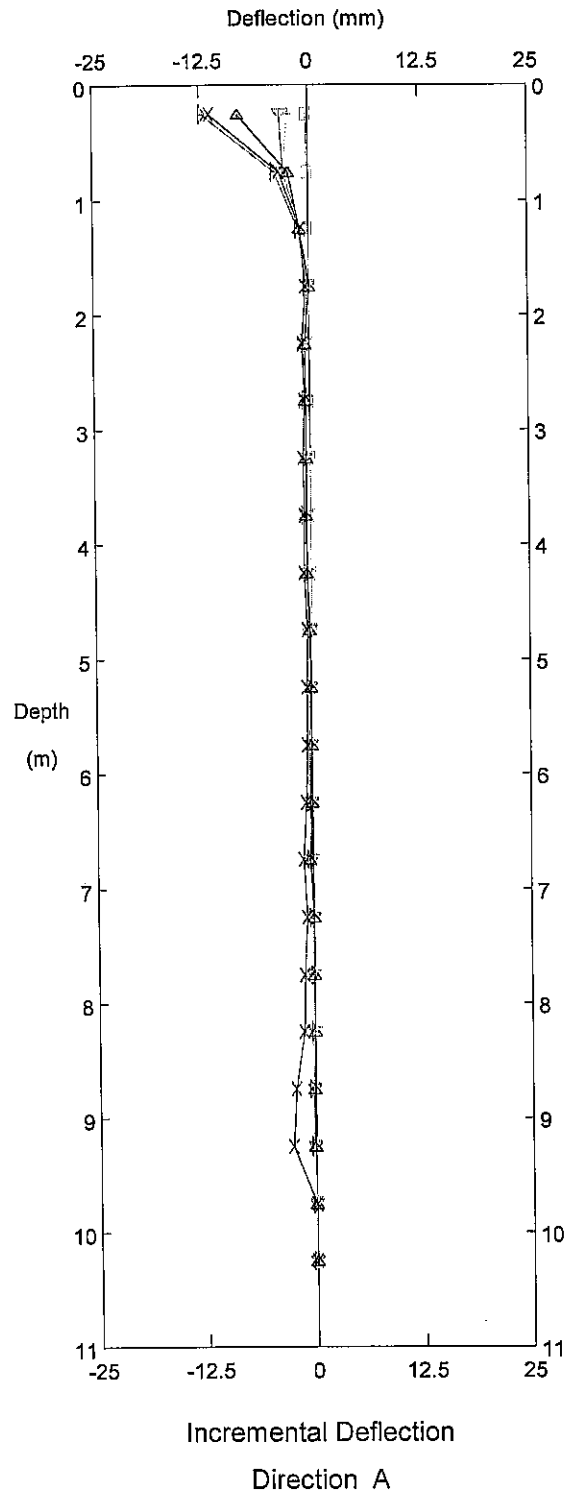
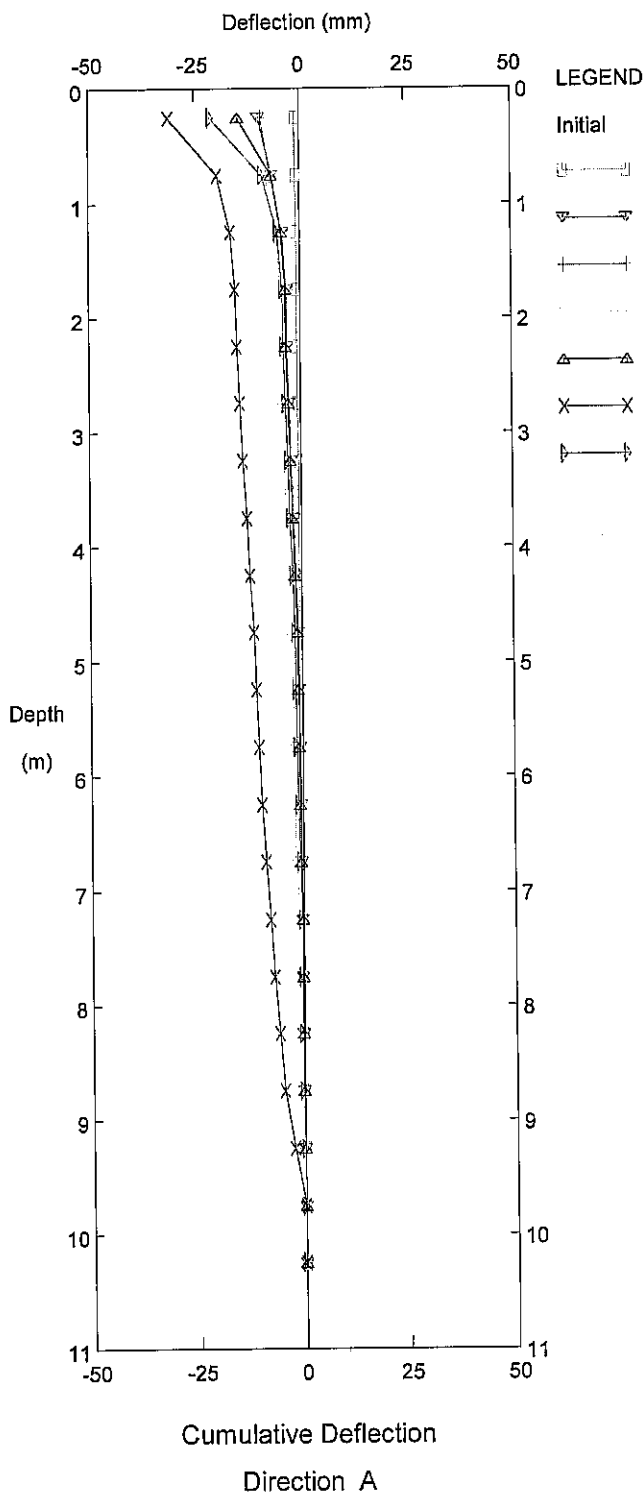
Sets marked * include zero shift and/or rotation corrections.



94CD-1, Inclinator BH-94CD-1

Sets marked * include zero shift and/or rotation corrections.

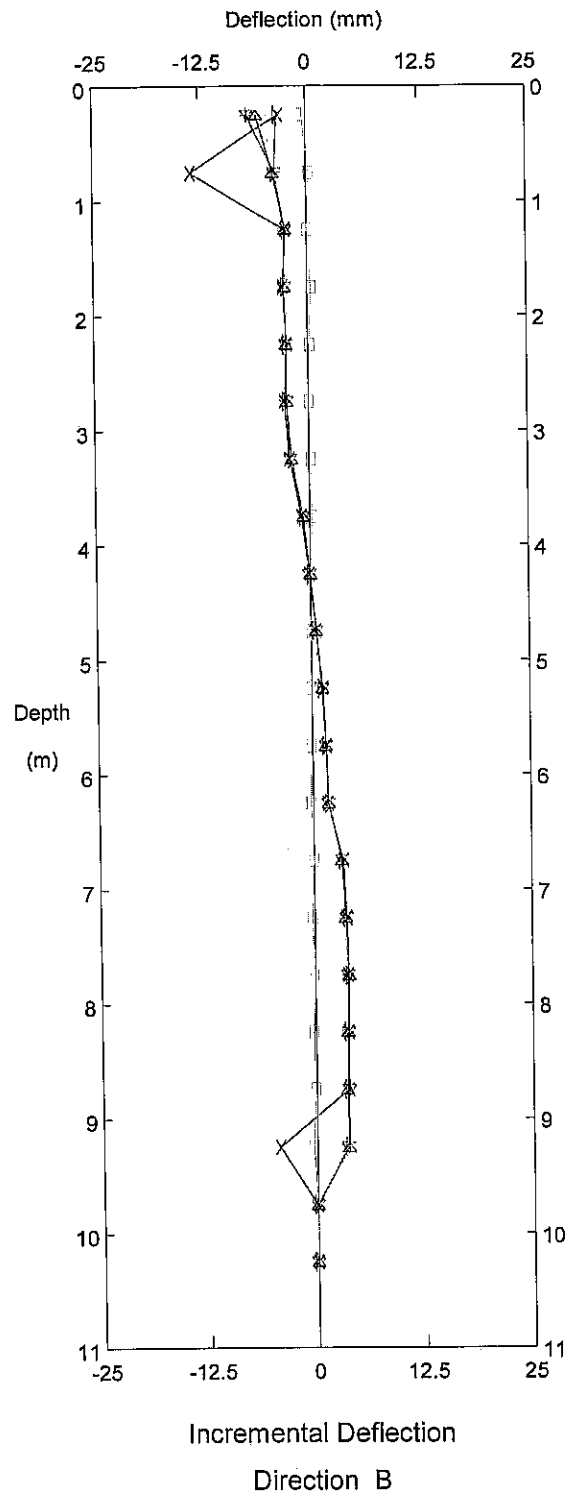
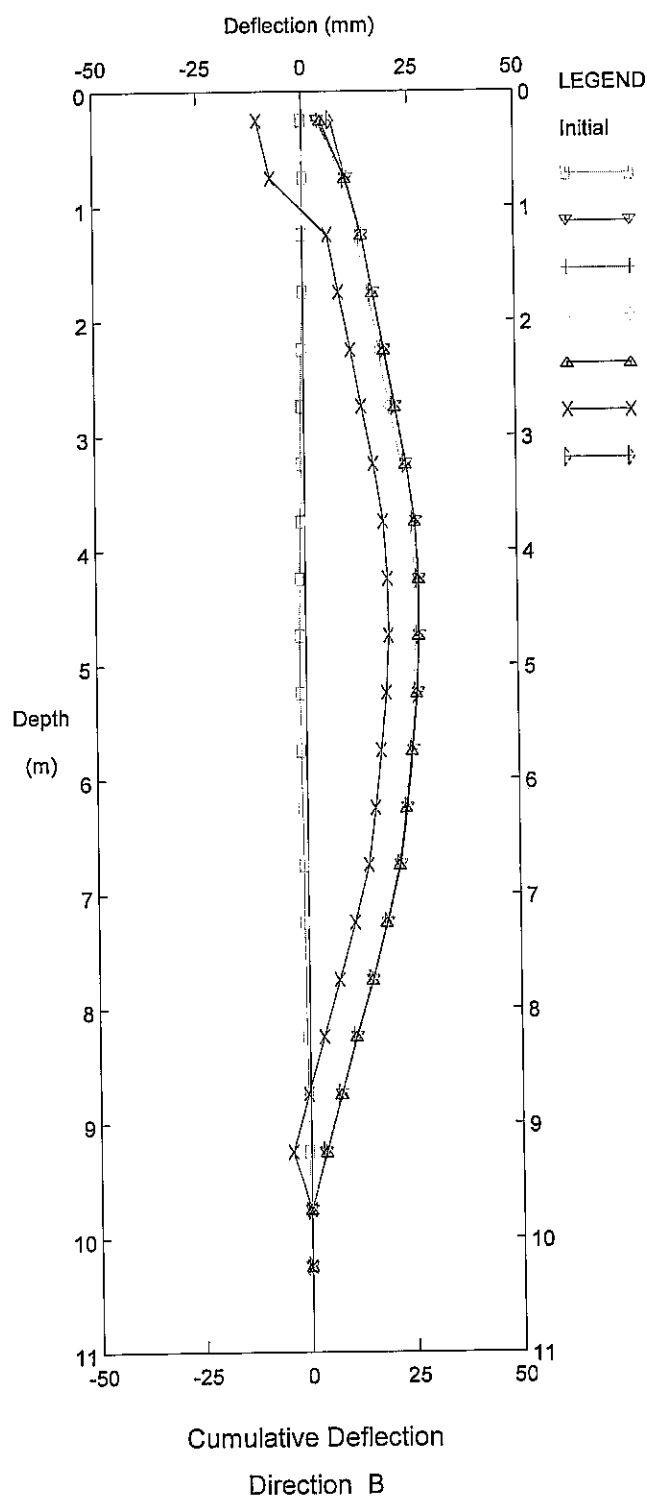
BGC Engineering Inc. - Calgary, AB



CD-15, Inclinometer 1+530

Sets marked * include zero shift and/or rotation corrections.

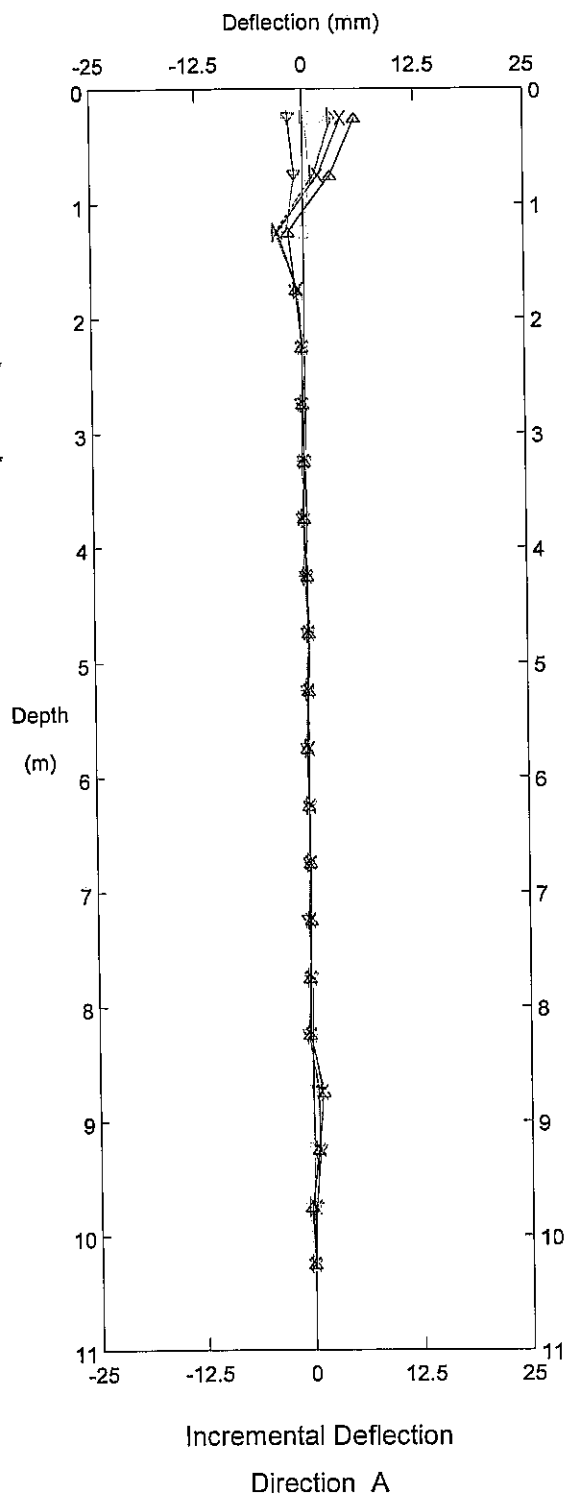
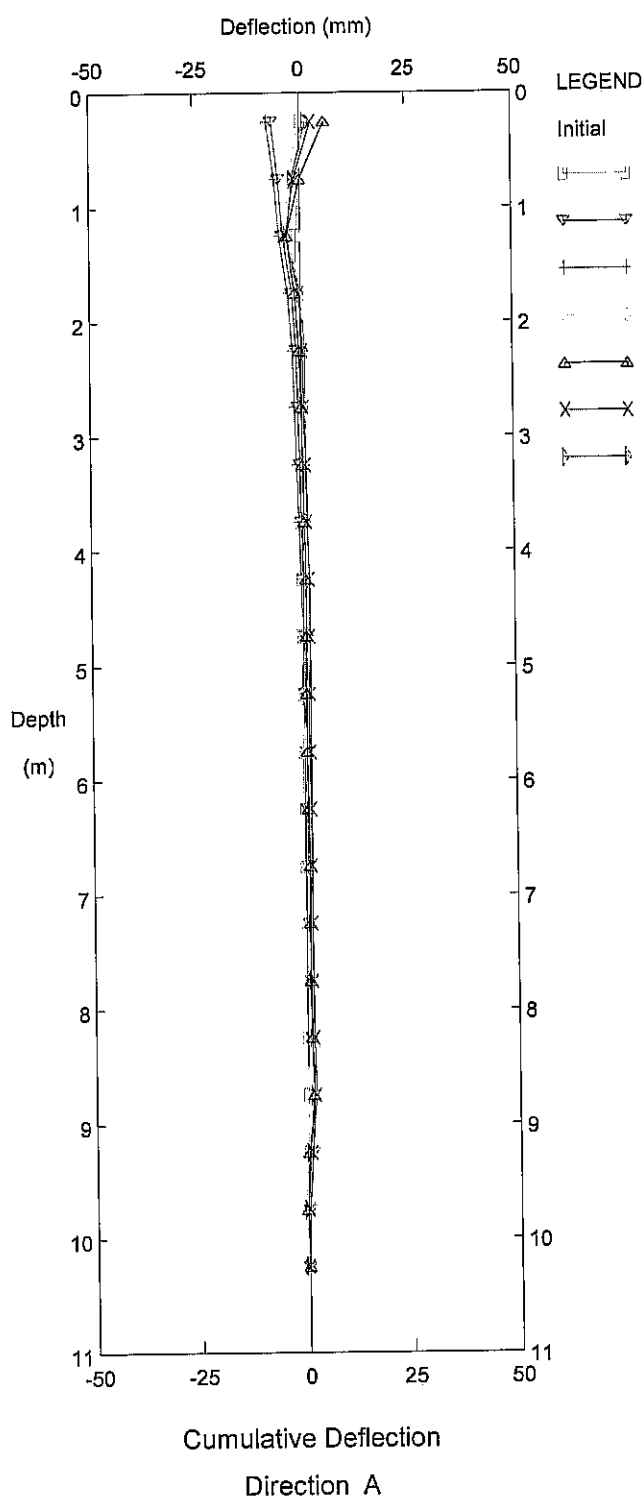
BGC Engineering Inc. - Calgary, AB



CD-15, Inclinator 1+530

Sets marked * include zero shift and/or rotation corrections.

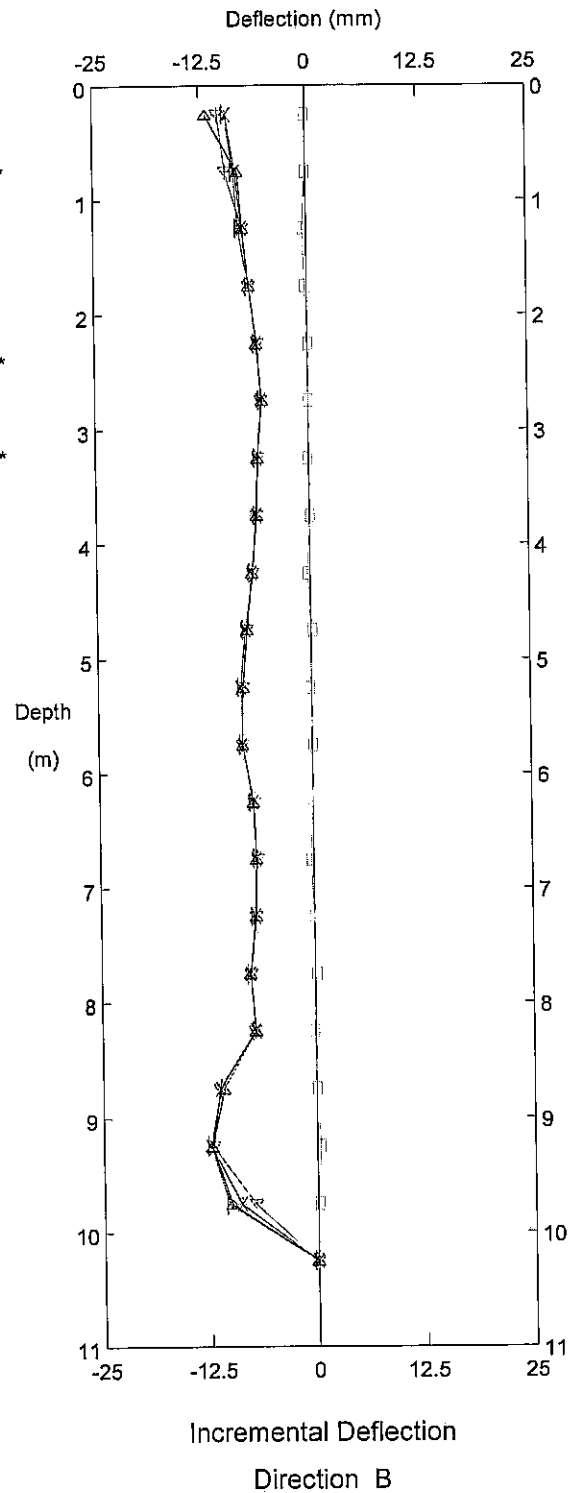
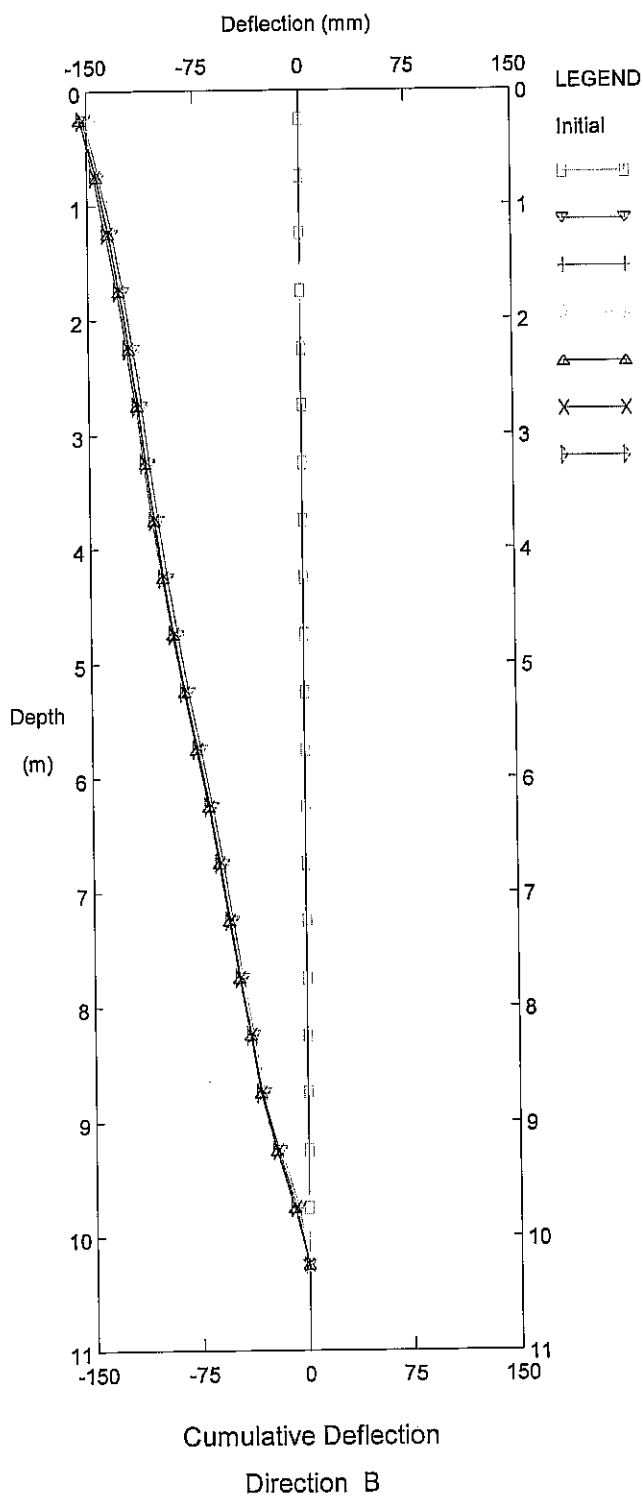
BGC Engineering Inc. - Calgary, AB



CD-19, Inclinator 1+900

Sets marked * include zero shift and/or rotation corrections.

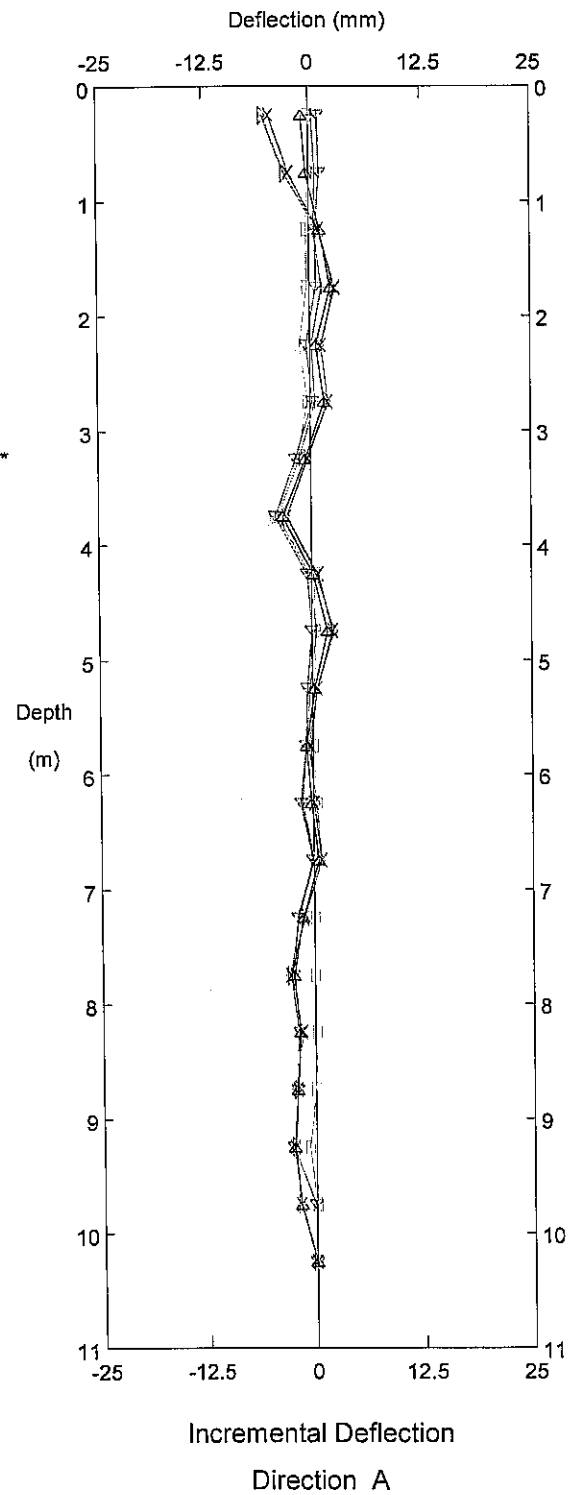
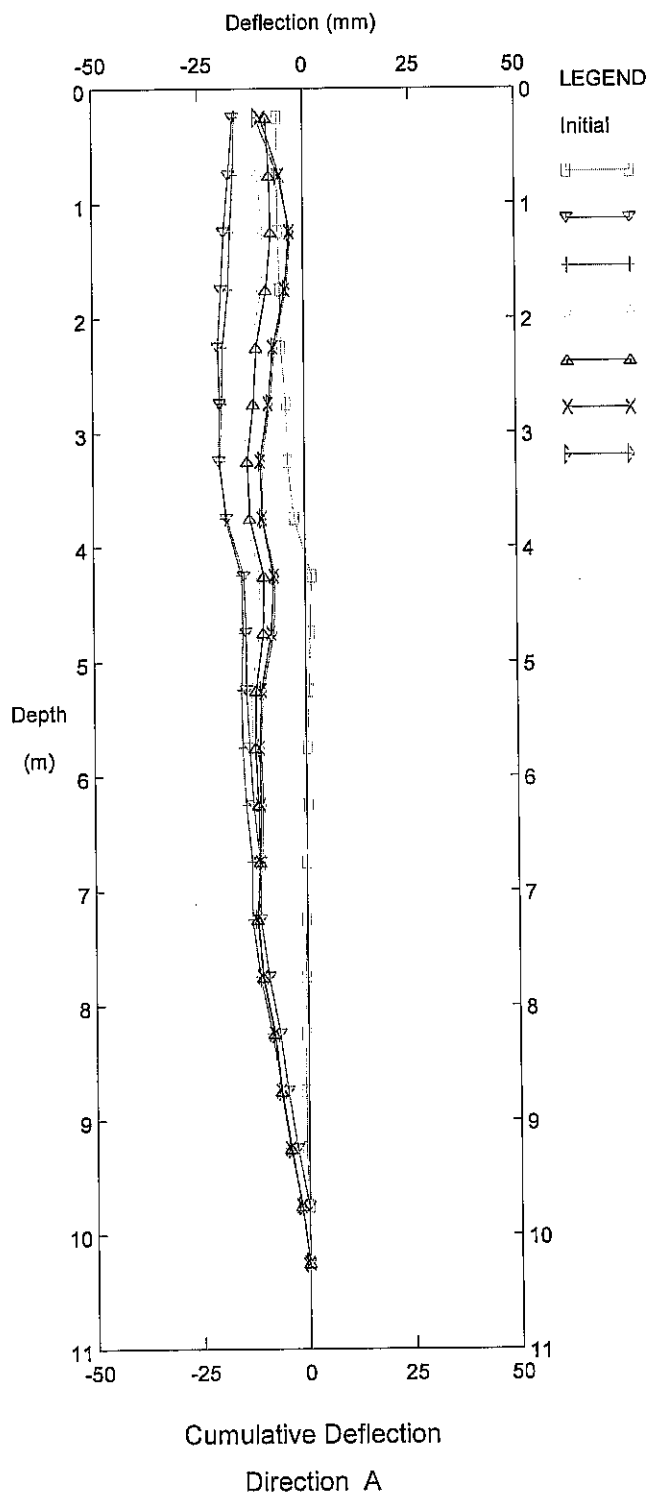
BGC Engineering Inc. - Calgary, AB



CD-19, Inclinator 1+900

Sets marked * include zero shift and/or rotation corrections.

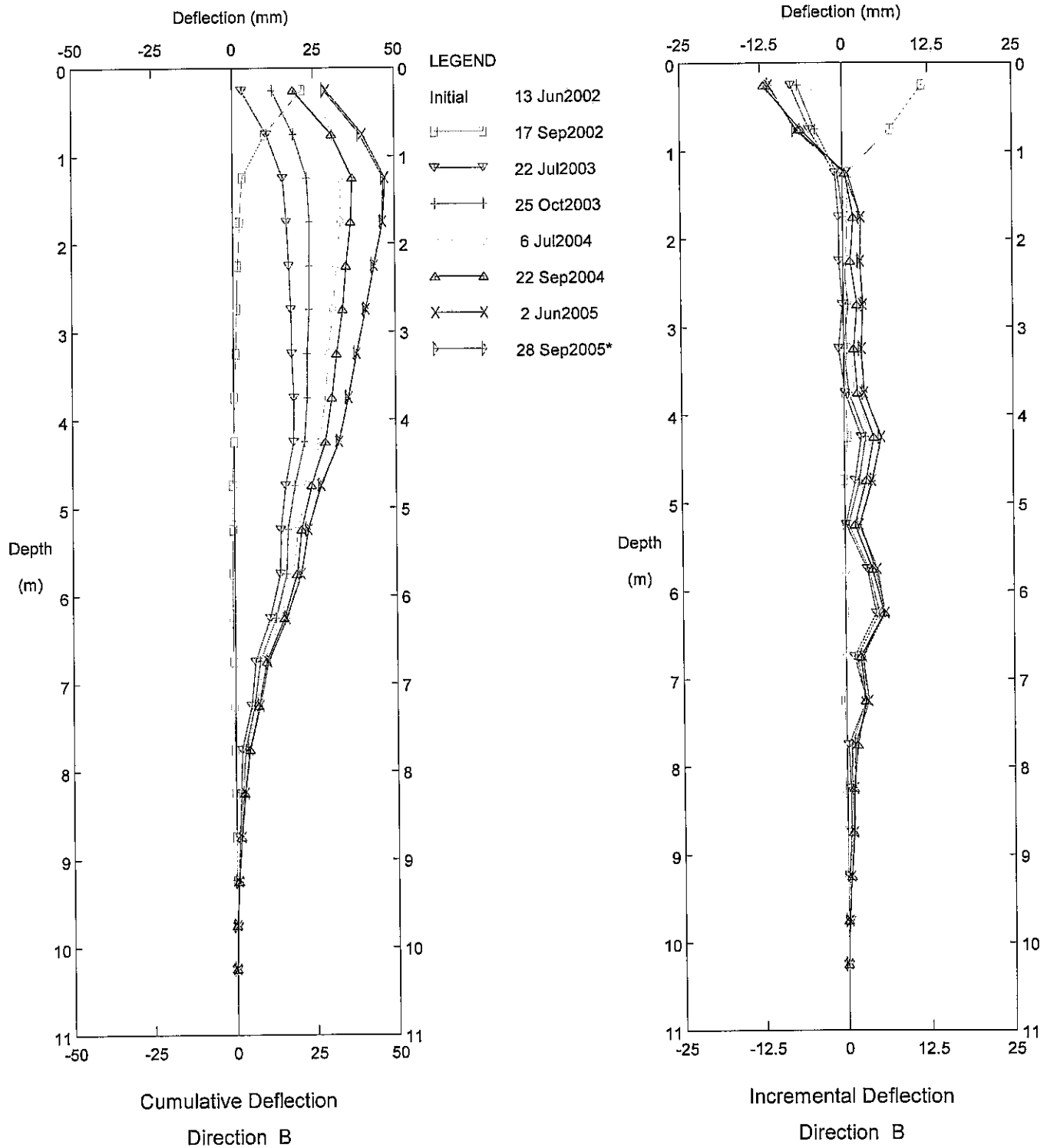
BGC Engineering Inc. - Calgary, AB



CD-21, Inclinator 2+100

Sets marked * include zero shift and/or rotation corrections.

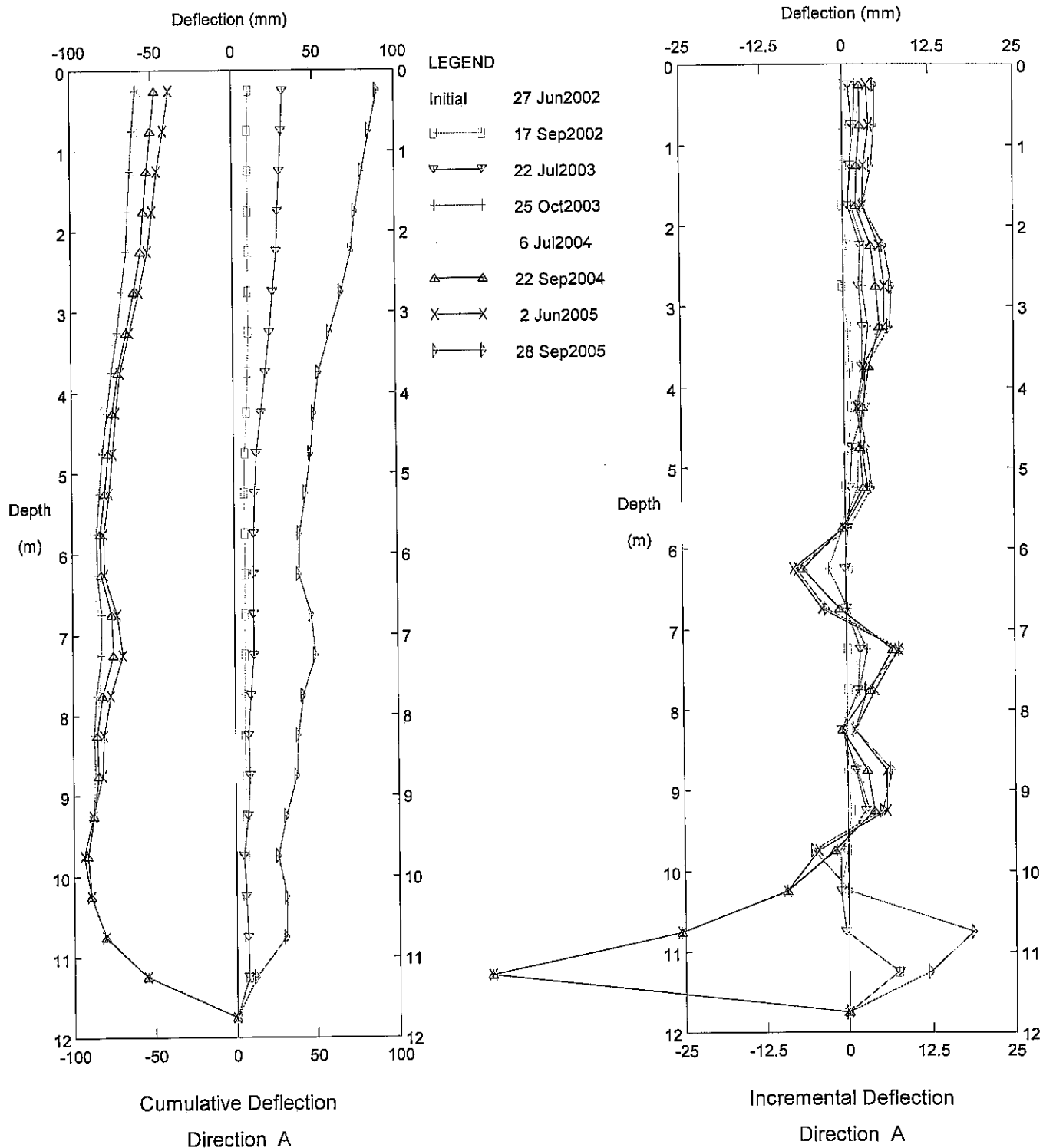
BGC Engineering Inc. - Calgary, AB



CD-21, Inclinometer 2+100

Sets marked * include zero shift and/or rotation corrections.

BGC Engineering Inc. - Calgary, AB

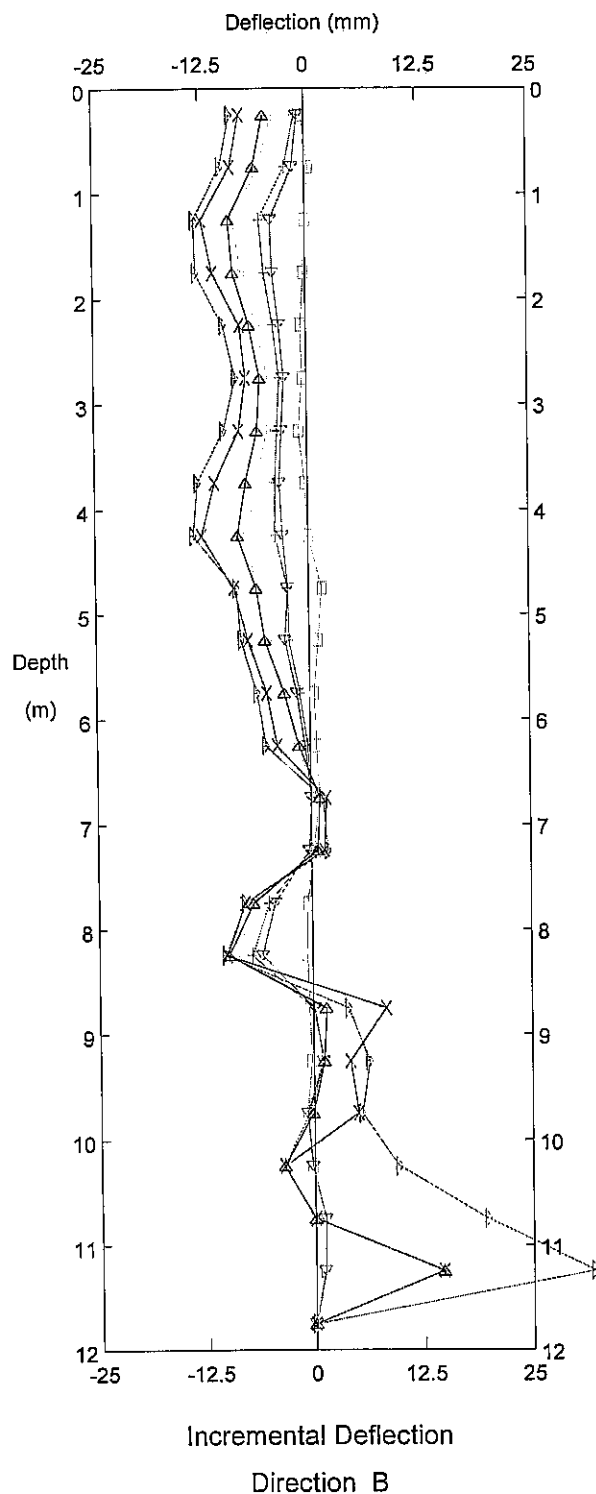
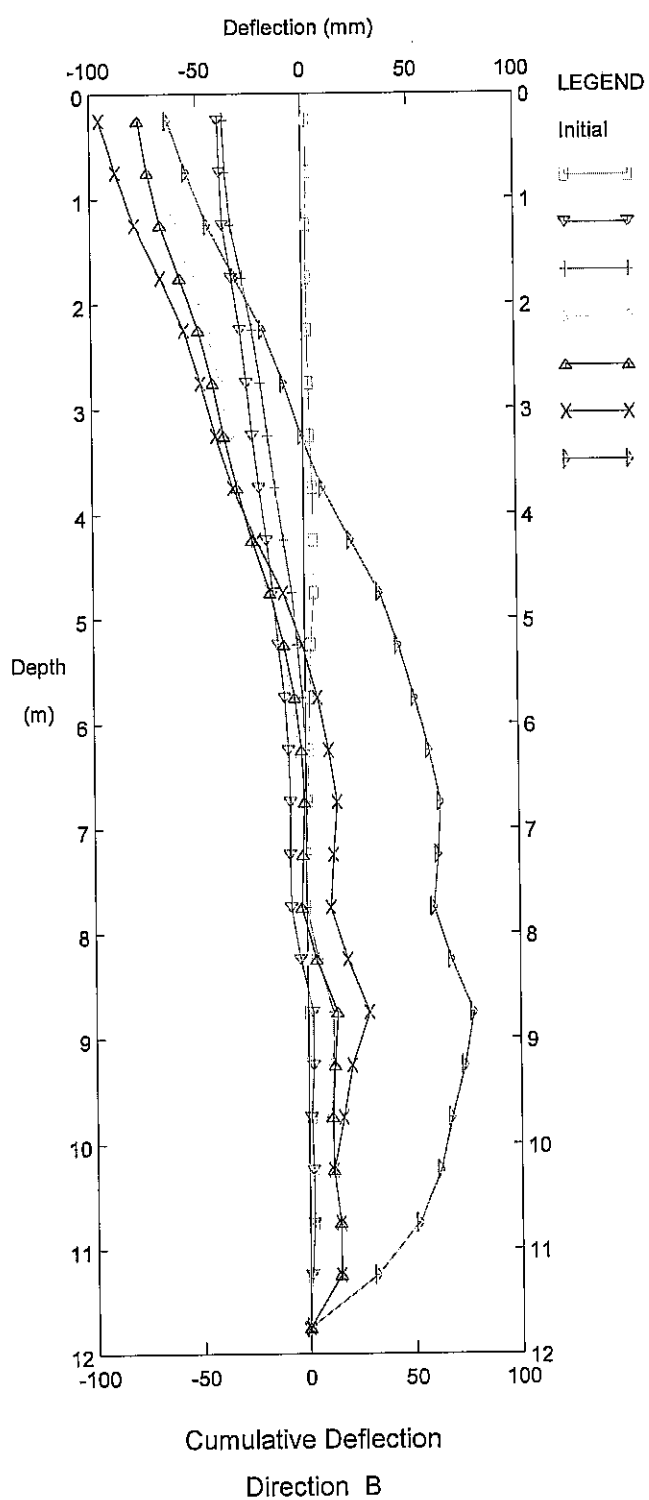


BGC01-01, Inclinometer

Deloitte and Touche

Sets marked * include zero shift and/or rotation corrections.

BGC Engineering Inc. - Calgary, AB



BGC01-01, Inclinator

Deloitte and Touche

Sets marked * include zero shift and/or rotation corrections.

DIVERSION CANAL SPOIL PILES

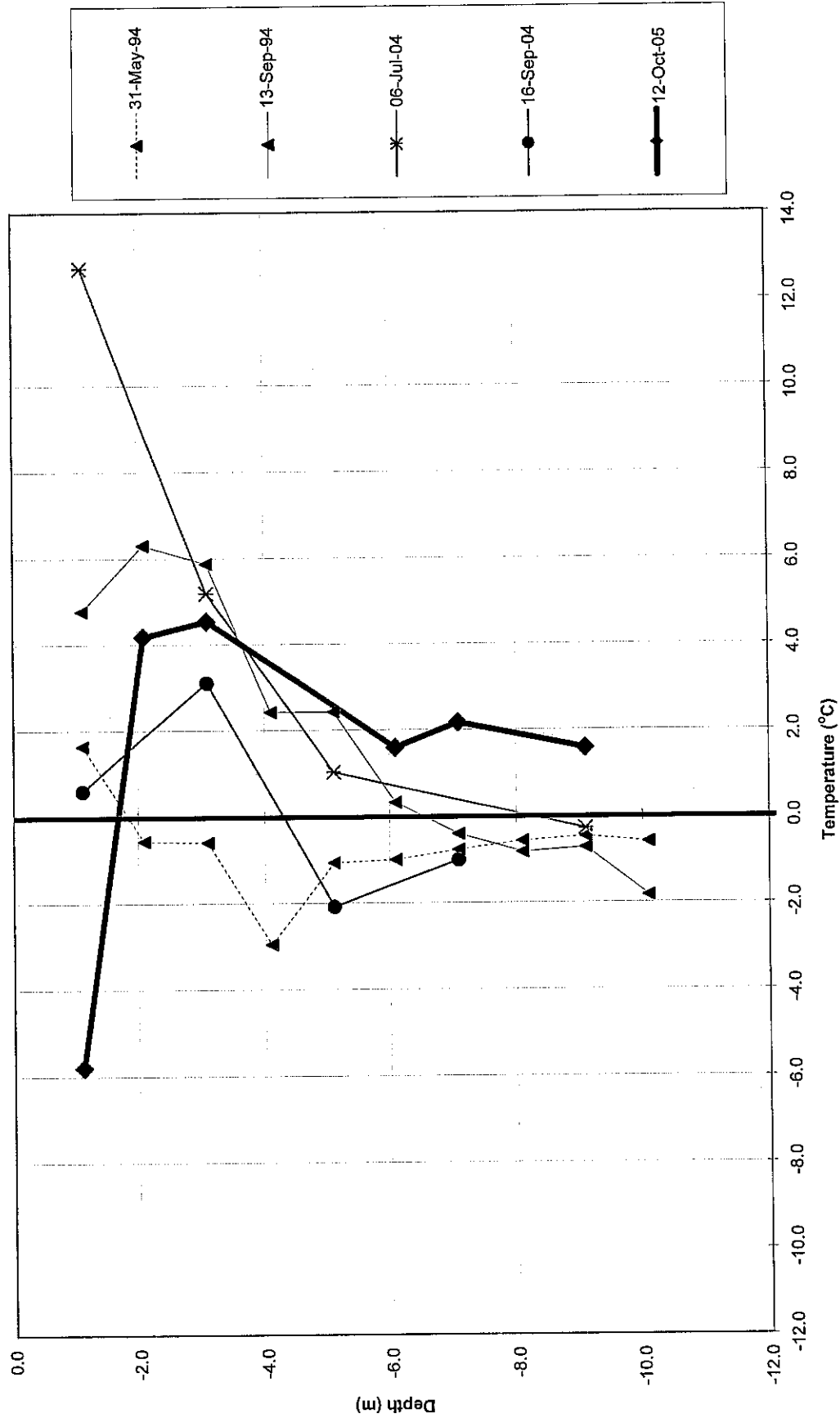
THERMISTORS

Faro Mine Instrumentation Diversion Canal Spoil Pile

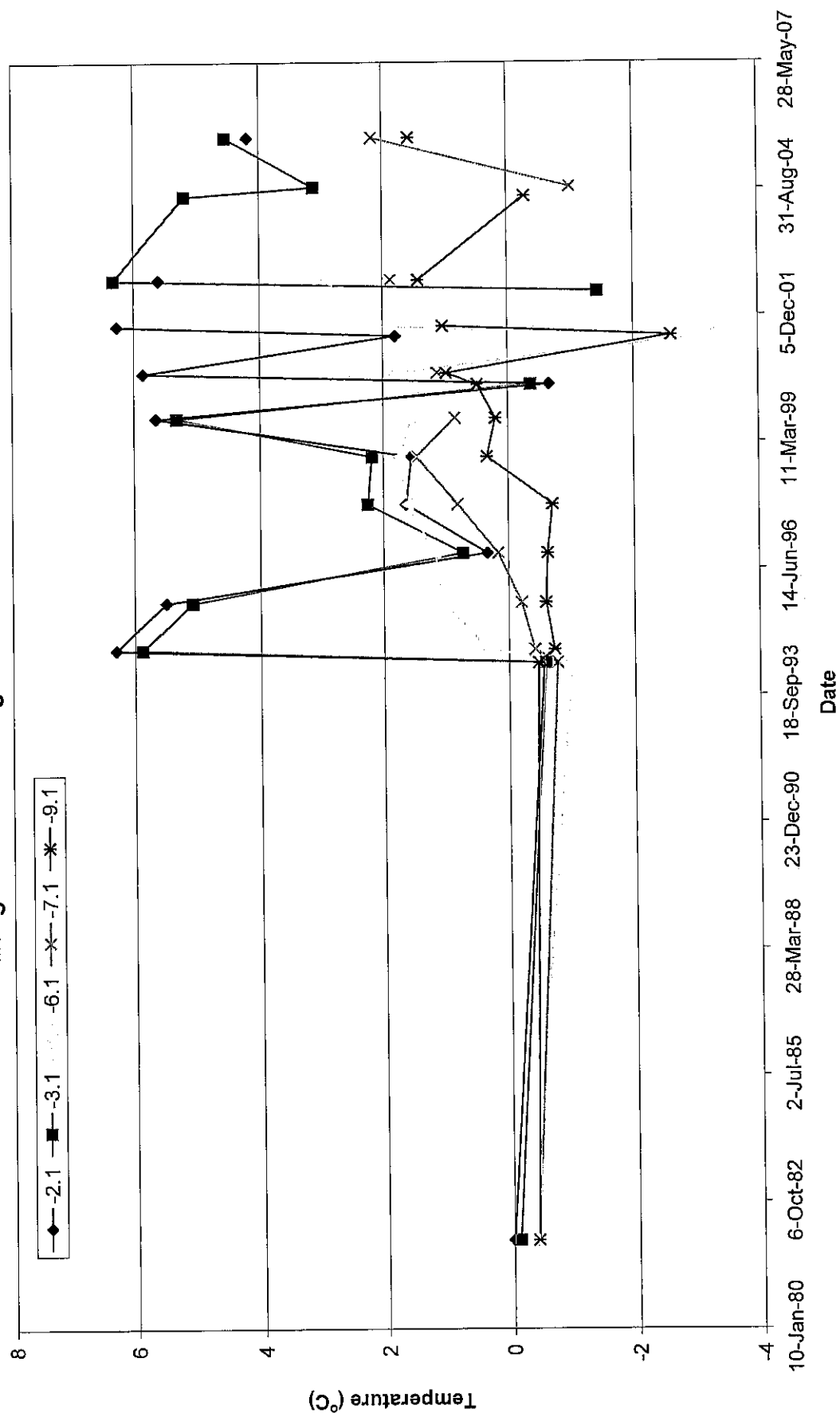
[illegible]

* The initial reading (Nov 15/81) is excluded from the data set because post-installation equilibrium may not have been complete

DIVERSION CANAL SPOIL PILE
Geothermal Monitoring
SP-3

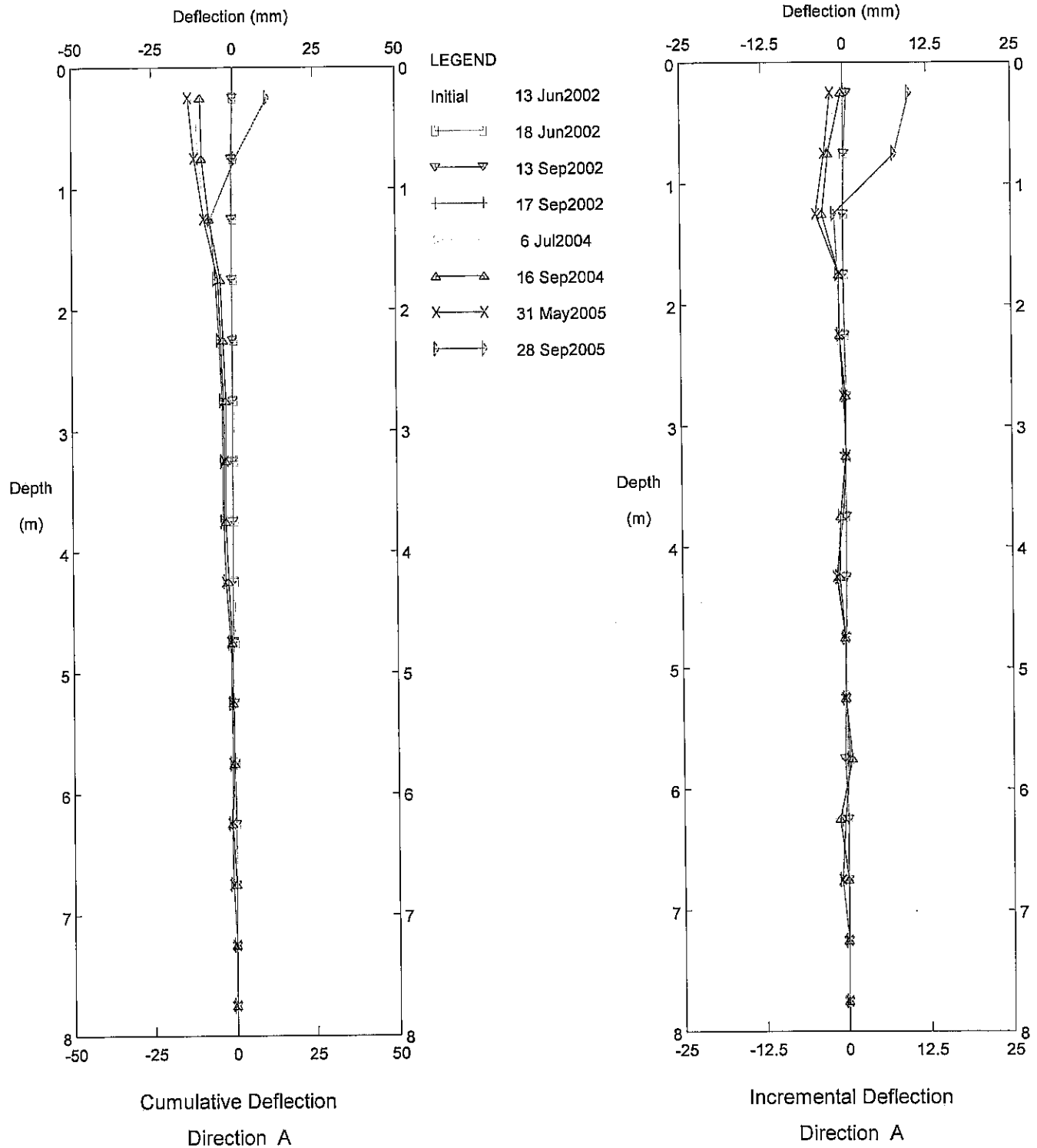


Diversion Canal Spoil Pile Geothermal Monitoring Long Term Monitoring for Nodes in SP-3



SLOPE INDICATORS

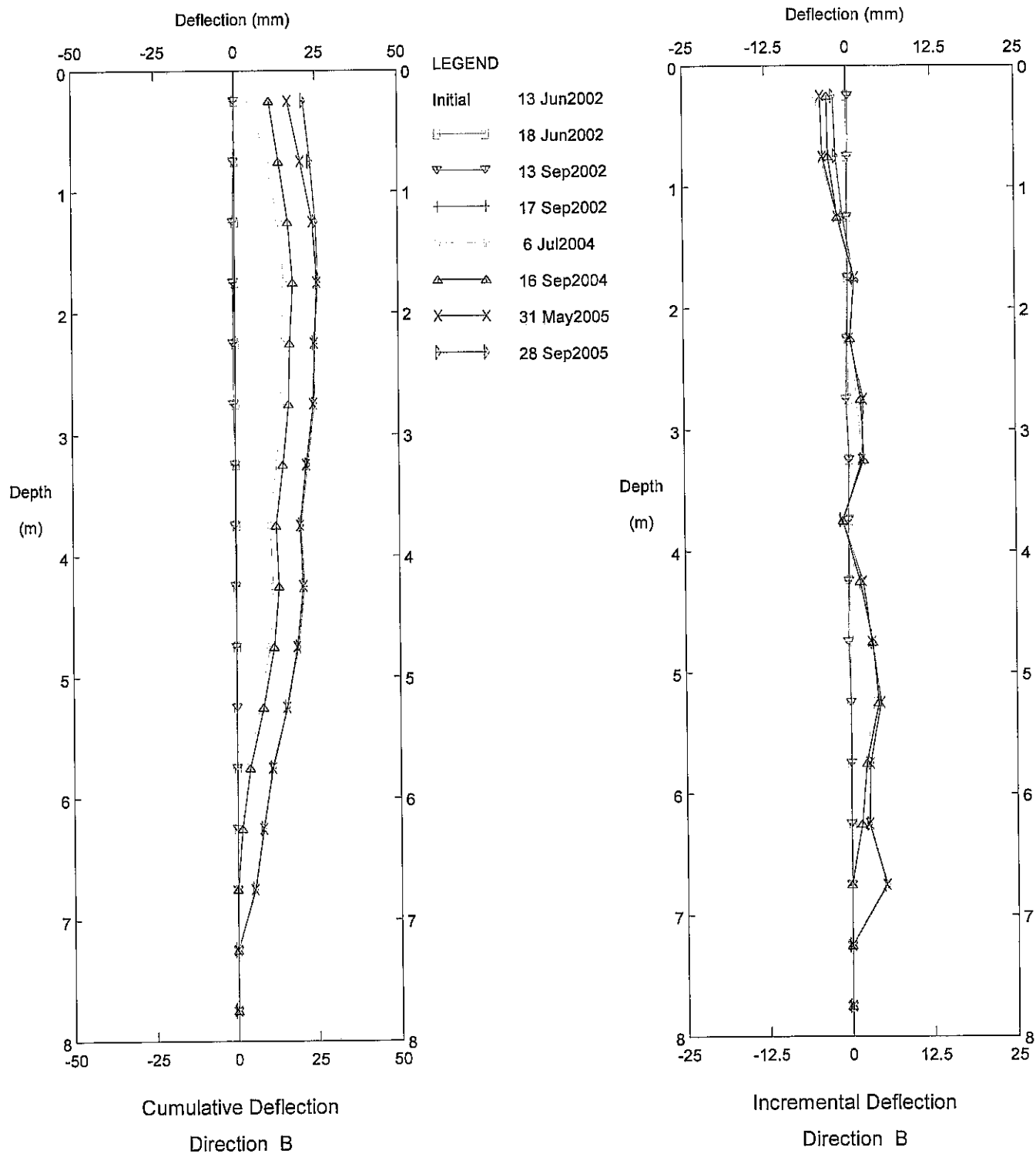
BGC Engineering Inc. - Calgary, AB



SP-2, Inclinator 1+530

Sets marked * include zero shift and/or rotation corrections.

BGC Engineering Inc. - Calgary, AB



SP-2, Inclinometer 1+530

Sets marked * include zero shift and/or rotation corrections.

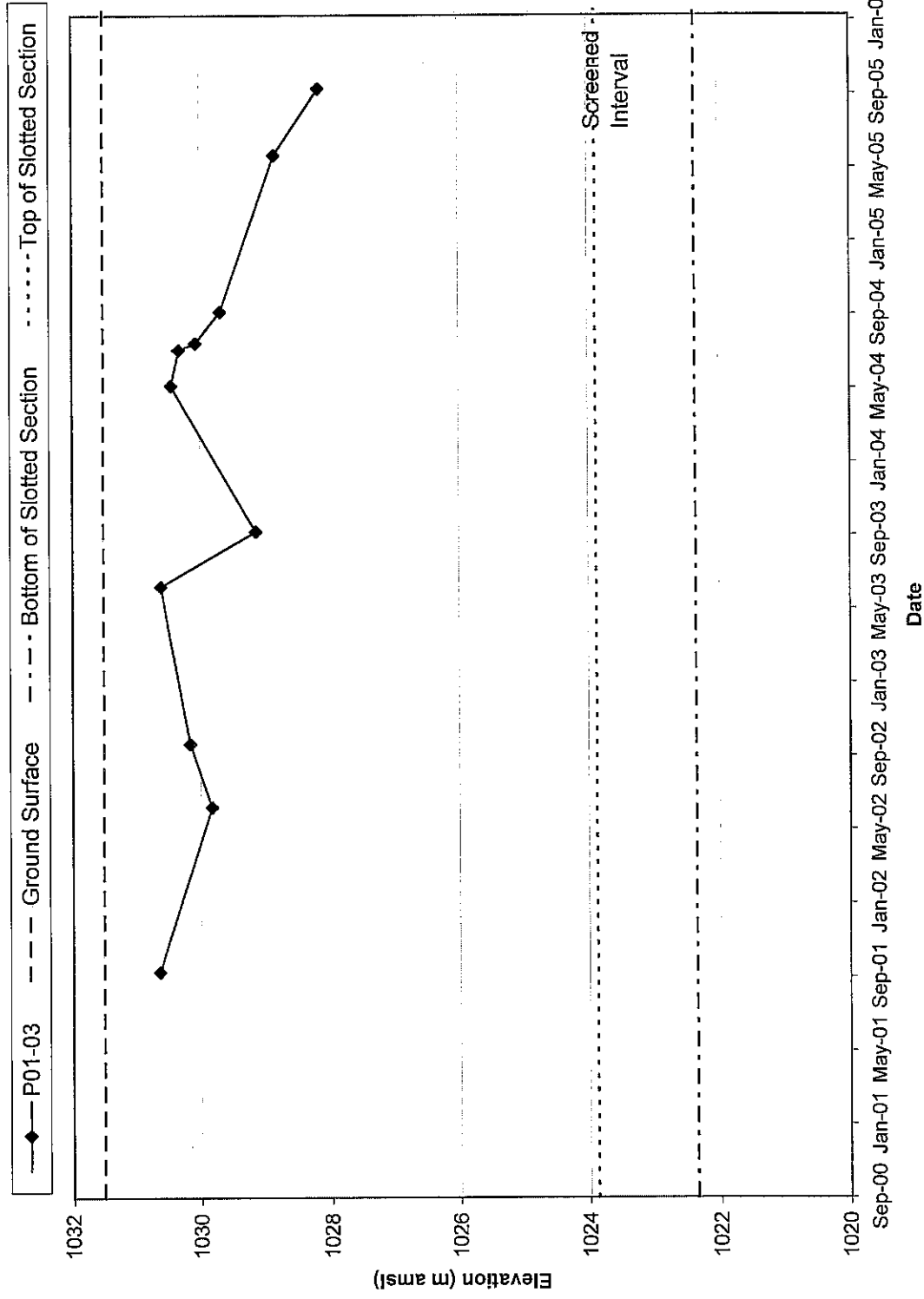
INTERMEDIATE DAM

PIEZOMETERS

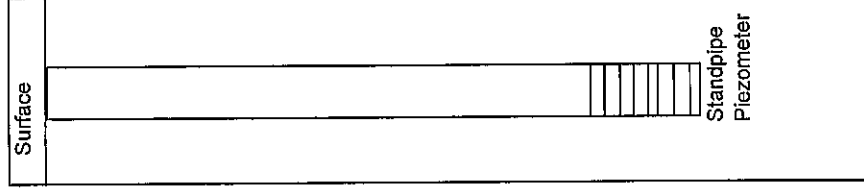
Faro Mine Instrumentation Intermediate Dam

P01-03		Location:	Intermediate Dam Toe	2004 Stick-Up (m):	0.61
		Coordinates:	8V580636 6914064	2004 Surface Elevation (m amsl):	1031.52
Surface Protector:	yes	Date Installed:	1996	Tip Elevation (m amsl):	1022.35
				Screened Interval (m bgs):	7.78 - 9.30
Date		Water level from top of pipe (m)	Piezometric Elevation (m amsl)	Pond El. (m amsl)	Comments
11-Sep-01		1.58	1030.63		
10-Jun-02		2.39	1029.82		
23-Sep-02		2.06	1030.15	1047.2	
11-Jun-03		1.61	1030.60		
10-Sep-03		3.075	1029.14		
10-May-04		1.7	1030.43		2004 survey info used from here on
08-Jul-04		1.82	1030.31		
19-Jul-04		2.07	1030.06		
09-Sep-04		2.455	1029.68		Dirty, strong sulphur smell
26-May-05		3.285	1028.85		ph=6.7, temp=9.0C
14-Sep-05		3.96	1028.17		ph=6.8, temp=6.4C

INTERMEDIATE DAM Piezometric Monitoring P01-03 (2001 GLL Monitoring Well)

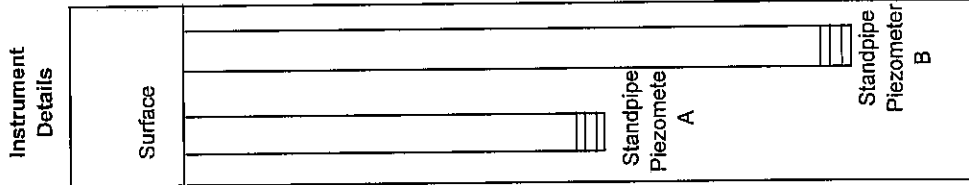
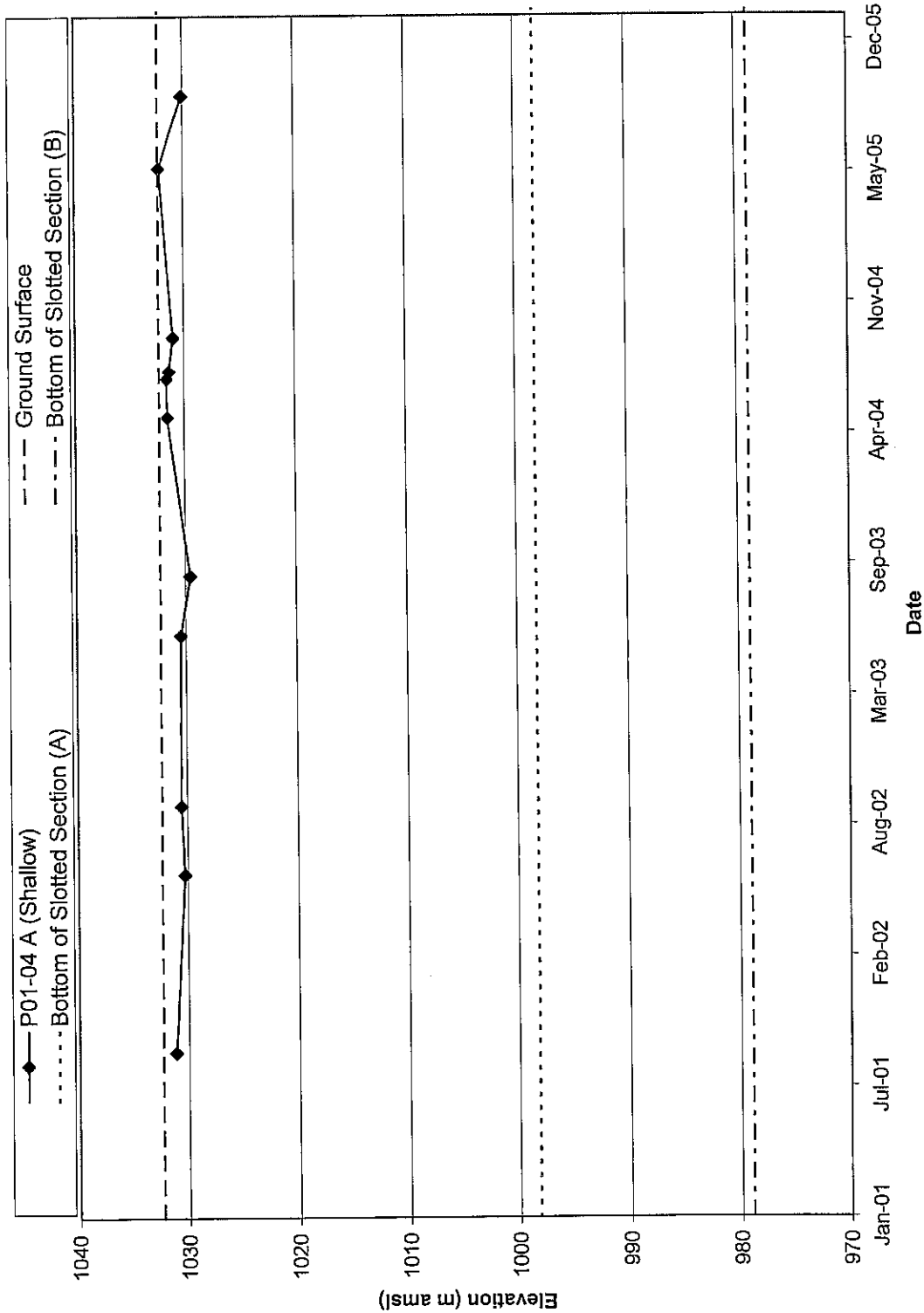


Instrument
Details

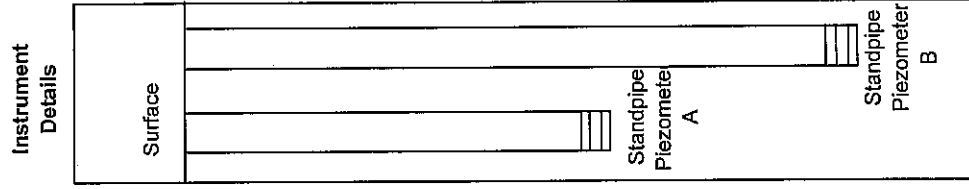
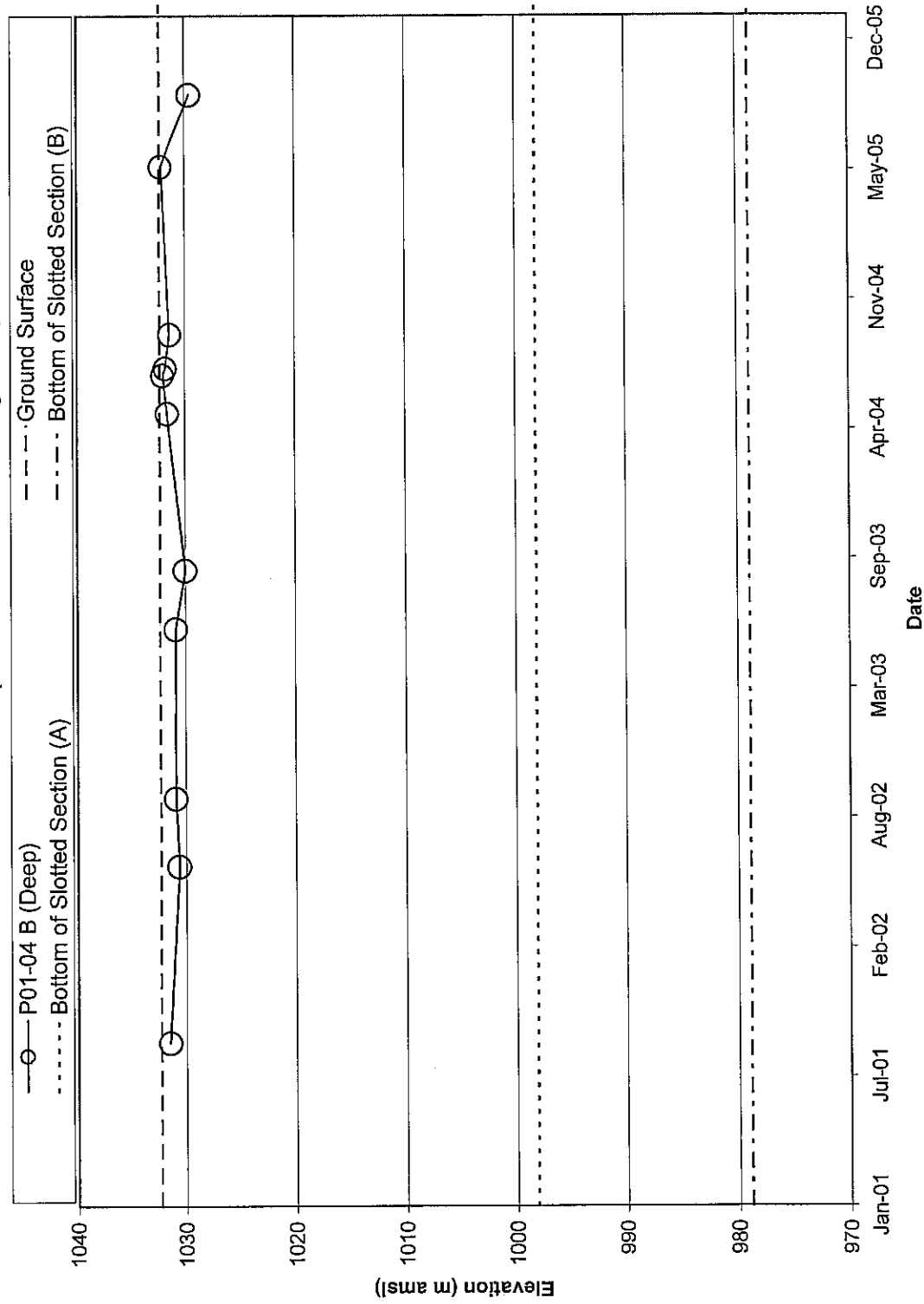


P01-04		Location:	Intermediate Dam Toe	2004 Stick Up - A (m):	0.45
		Coordinates:	8V580489 6913888	2004 Stick Up -B (m):	0.45
Surface Protector:	yes	Date Installed:	1996	2004 Surface Elevation (m amsl):	1032.32
		Screened Interval -A (m bgs):	31.7 - 33.22	Tip Elevation - A (m amsl):	998.17
		Screened Interval - B (m bgs):	51.0 - 52.5	Tip Elevation - B (m amsl):	978.89
Date	Water level from top of pipe (m)		Piezometric Elevation (m amsl)		Comments
	A	B	A	B	
11-Sep-01	0.78	0.43	1031.12	1031.46	
10-Jun-02	1.67	1.29	1030.23	1030.60	
23-Sep-02	1.39	1.00	1030.51	1030.89	
11-Jun-03	1.45	1.03	1030.45	1030.86	
10-Sep-03	2.35	1.90	1029.55	1029.99	
10-May-04	1.25	1.17	1031.52	1031.60	2004 survey info used from this point on
08-Jul-04	1.18	0.755	1031.59	1032.02	
19-Jul-04	1.42	0.99	1031.35	1031.78	
09-Sep-04	1.825	1.4	1030.95	1031.37	
26-May-05	0.53	0.6	1032.24	1032.17	bottom, no beep
14-Sep-05	2.69	3.215	1030.08	1029.56	

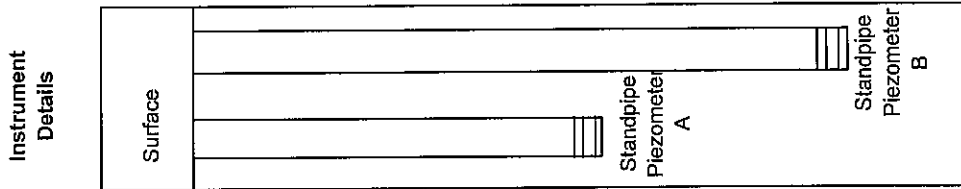
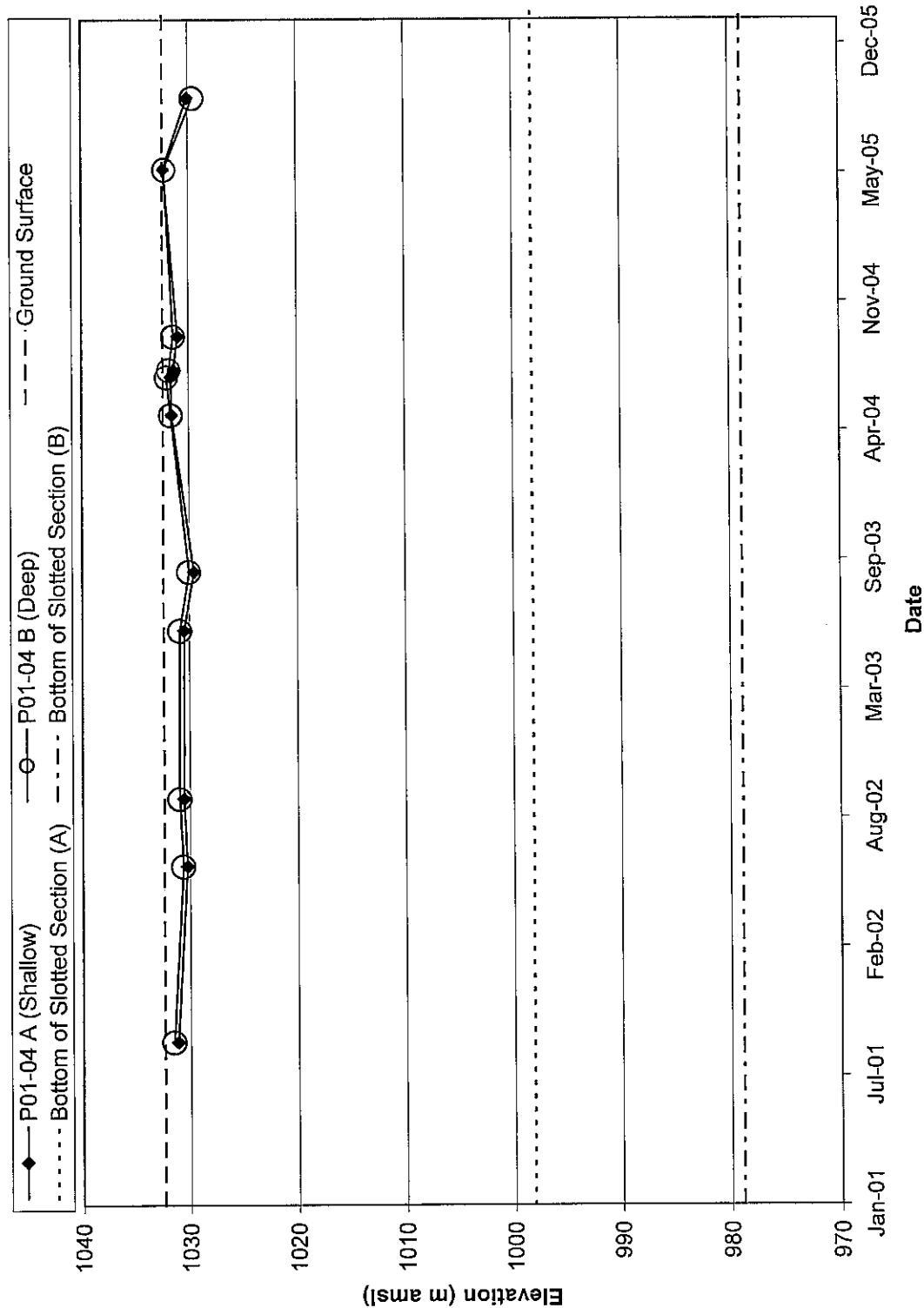
INTERMEDIATE DAM Piezometric Monitoring P01-04A (2001 - GLL Monitoring Well)



INTERMEDIATE DAM
Piezometric Monitoring
P01-04B (2001 - GLL Monitoring Well)



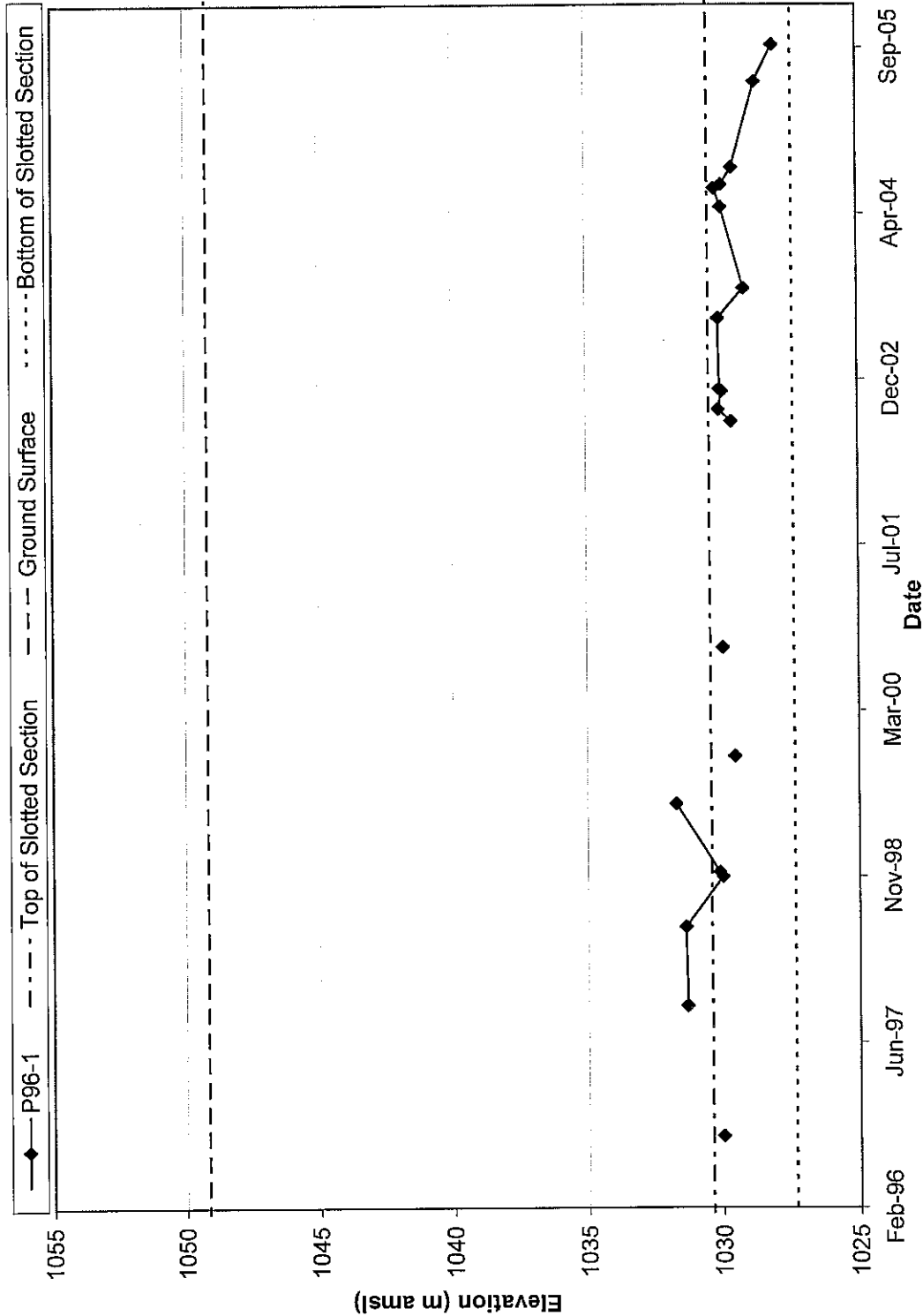
INTERMEDIATE DAM
Piezometric Monitoring
P01-04 (2001 - GLL Monitoring Well)



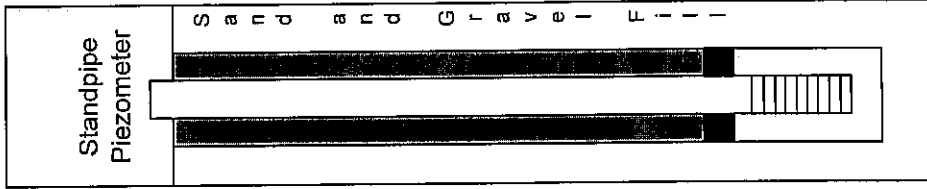
Faro Mine Instrumentation - Intermediate Dam

BH96-1		Location: Intermediate Dam Crest			
		Coordinates:	8V580563 6913908	2004 Stick Up:	0.68
Surface Protector:	yes	Date Installed:	1996	2004 Surface Elevation (m amsl):	1049.15
		Screened Interval (m bgs):	18.77 - 21.80	Tip Elevation (m amsl):	1027.35
Date		Water level from top of pipe (m)		Piezometric Elevation (m amsl)	Comments
8-Sep-96		20.06		1029.99	
26-Sep-96					
27-Sep-96					
13-May-97					
6-Jun-97					
11-Jul-97					
7-Oct-97		18.77		1031.28	
1-Jun-98		18.73		1031.32	
31-Oct-98		20.08		1029.97	
13-Nov-98		19.97		1030.08	
8-Jun-99		18.4		1031.65	
19-Jun-99					
3-Jul-99					
29-Oct-99		20.55		1029.50	
31-Oct-99					
31-May-00					
27-Jun-00					
25-Jul-00					
21-Sep-00		20.13		1029.92	
10-Oct-00					
6-Jun-01					
15-Jul-01					
5-Sep-01					
18-Jun-02					
5-Aug-02		20.48		1029.57	
10-Sep-02		20.02		1030.03	
4-Nov-02		20.14		1029.91	
10-Nov-02		20.06		1029.99	
11-Jun-03		20.025		1030.03	
10-Sep-03		20.96		1029.09	
12-May-04		19.925		1029.91	2004 survey data used from here on
8-Jul-04		19.695		1030.14	
19-Jul-04		19.945		1029.89	
9-Sep-04		20.325		1029.51	clear
26-May-05		21.17		1028.66	ICE
14-Sep-05		21.82		1028.01	

INTERMEDIATE DAM
Piezometric Monitoring
P96-1 Monitoring Well (Robertson, 1996)
(Dam Crest)



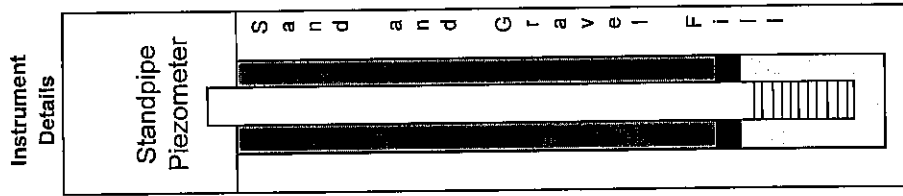
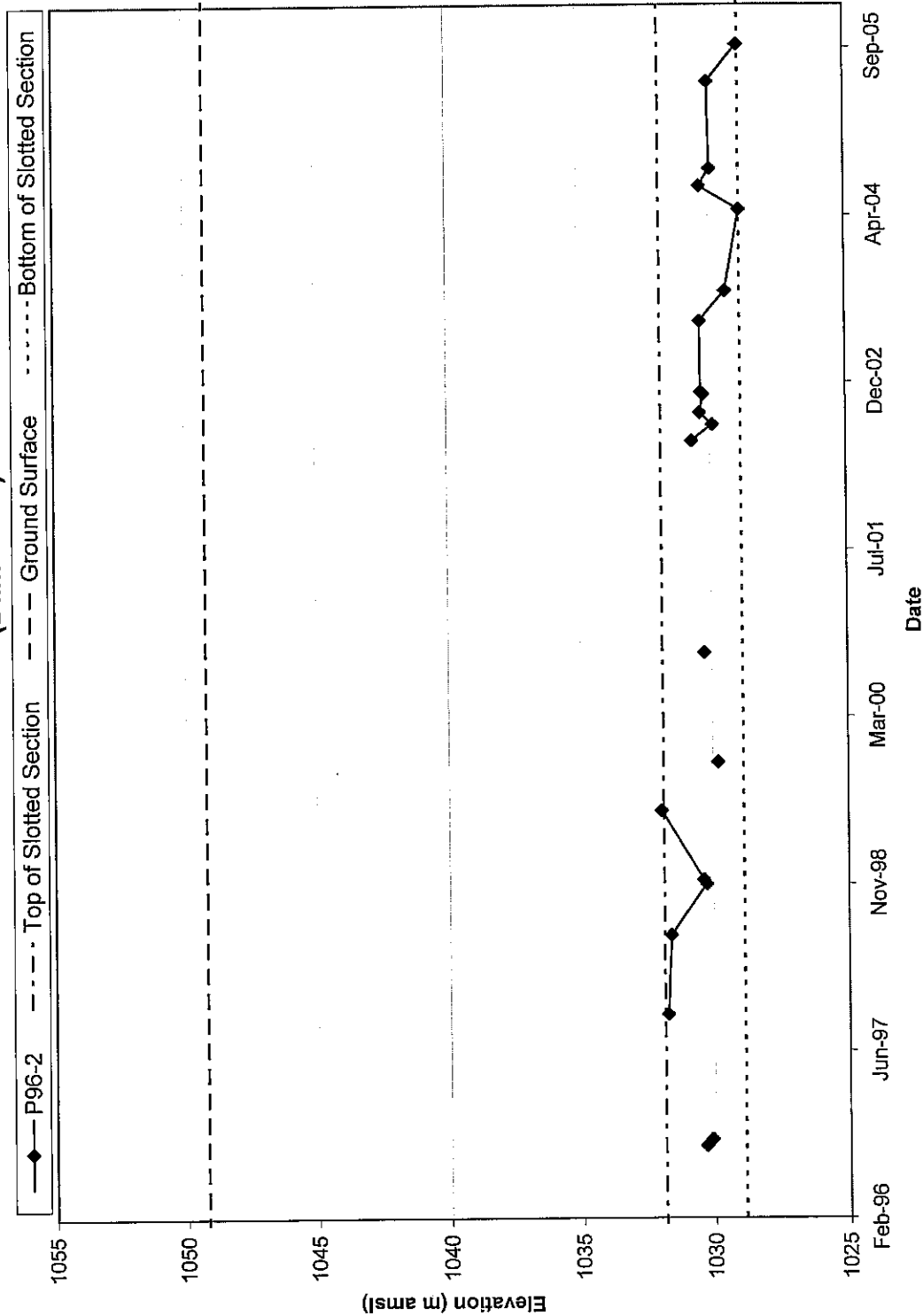
Instrument
Details



Faro Mine Instrumentation - Intermediate Dam

BH96-2		Location: Intermediate Dam Crest			
		Coordinates:	8V580696 6914096	Tip Elevation (m amsl):	
Surface Protector:	yes	Date Installed:	1996	2004 Surface Elevation: (m amsl)	1028.87
		Screened Interval (m bgs):	17.13 - 20.12	2004 Stick Up (m):	0.72
Date		Water level from top of pipe (m)		Piezometric Elevation (m amsl)	Comments
8-Sep-96		19.74		1030.31	
26-Sep-96					
27-Sep-96		19.94		1030.11	
13-May-97					
6-Jun-97					
11-Jul-97					
7-Oct-97		18.3		1031.75	
1-Jun-98		18.44		1031.61	
31-Oct-98		19.8		1030.25	
13-Nov-98		19.69		1030.36	
8-Jun-99		18.11		1031.94	
19-Jun-99					
3-Jul-99					
29-Oct-99		20.25		1029.80	
31-Oct-99					
31-May-00					
27-Jun-00					
25-Jul-00					
21-Sep-00		19.78		1030.27	
10-Oct-00					
6-Jun-01					
15-Jul-01					
5-Sep-01					
18-Jun-02		19.375		1030.68	
5-Aug-02		20.15		1029.90	
10-Sep-02		19.68		1030.37	
4-Nov-02		19.815		1030.24	
10-Nov-02		19.73		1030.32	
11-Jun-03		19.71		1030.34	
10-Sep-03		20.65		1029.40	
10-May-04		21.07		1028.87	Dry reading, 2004 survey data used from here on
19-Jul-04		19.615		1030.33	
9-Sep-04		20.02		1029.92	
26-May-05		19.95		1029.99	
14-Sep-05		21.04		1028.90	bottom iron mud on probe

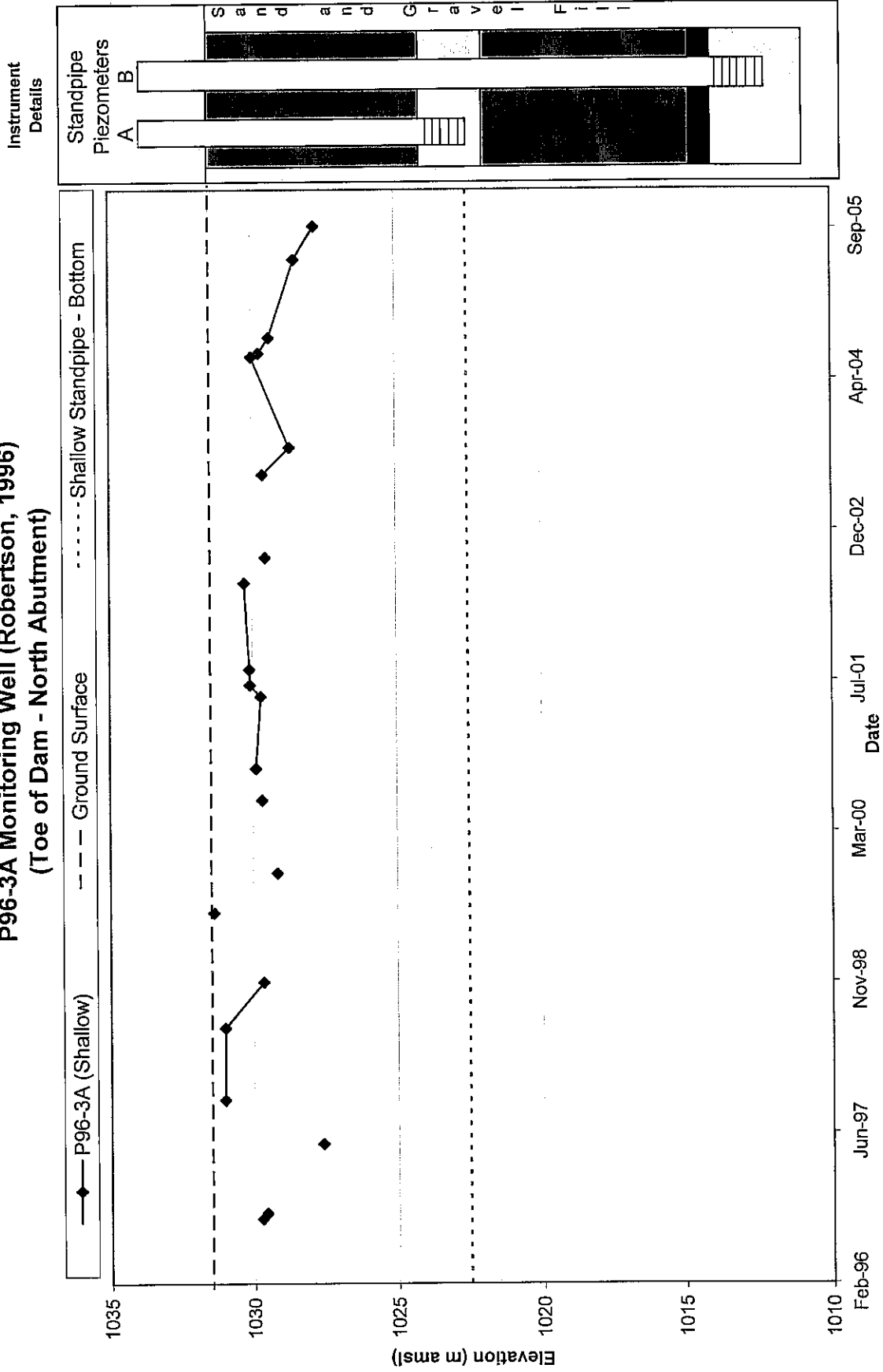
**Intermediate Dam
Piezometric Monitoring
P96-2 Monitoring Well (Robertson, 1996)
(Dam Crest)**



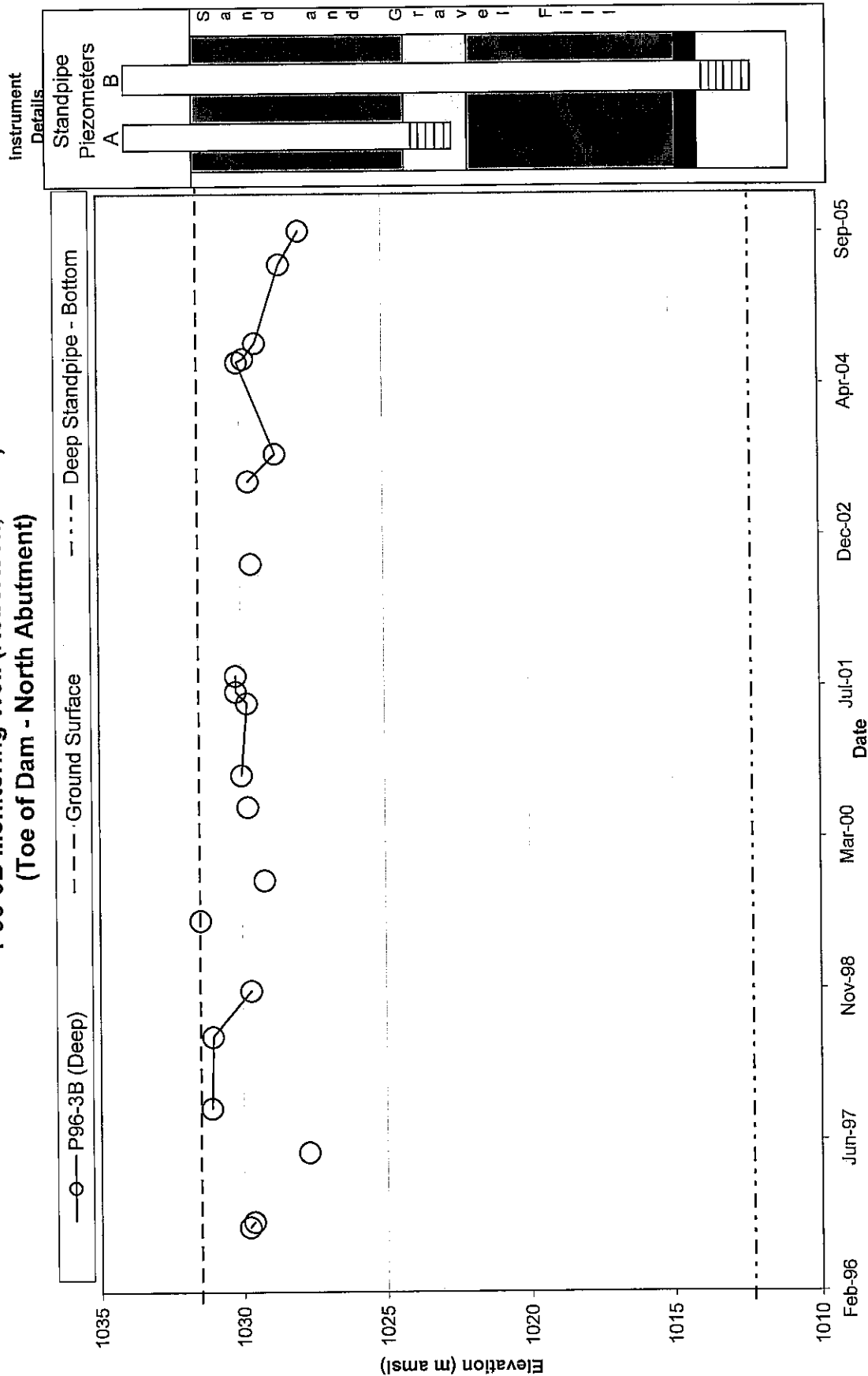
Faro Mine Instrumentation - Intermediate Dam

BH96-3		Location:	Intermediate Dam Toe, near the North Abutment	2004 Stick Up - A (m):	0.65
		Coordinates:	8V580529 6913934	2004 Stick Up - B (m):	0.59
Surface Protector:	yes	Date Installed:	1996	2004 Surface Elevation (m amsl):	1031.48
		Tip Elevation - A (m amsl):	1022.43	Screened Interval - A (m bgs):	7.44 - 8.97
		Tip Elevation - B (m amsl):	1012.23	Screened Interval - B (m bgs):	17.7 - 19.17
Date	Water level from top of pipe (m)		Piezometric Elevation (m amsl)		Comments
	A	B	96-3A (Shallow)	96-3B (Deep)	
08-Sep-96	2.37	2.25	1029.71	1029.78	
26-Sep-96	2.53	2.4	1029.55	1029.63	
27-Sep-96					
13-May-97	4.5	4.32	1027.58	1027.71	
06-Jun-97					
11-Jul-97					
07-Oct-97	1.06	0.95	1031.02	1031.08	
01-Jun-98	1.07	0.99	1031.01	1031.04	
31-Oct-98	2.44	2.34	1029.64	1029.69	
13-Nov-98					
08-Jun-99					
19-Jun-99	0.7	0.58	1031.38	1031.45	
03-Jul-99					
29-Oct-99	2.94	2.82	1029.14	1029.21	
31-Oct-99					
31-May-00					
27-Jun-00	2.41	2.26	1029.67	1029.77	
25-Jul-00					
21-Sep-00					
10-Oct-00	2.2	2.05	1029.88	1029.98	
06-Jun-01	2.38	2.24	1029.70	1029.79	
15-Jul-01	2.00	1.86	1030.08	1030.17	
05-Sep-01	1.98	1.86	1030.10	1030.17	
18-Jun-02	1.81		1030.27		
05-Aug-02					
10-Sep-02	2.565	2.42	1029.52	1029.61	
04-Nov-02					
10-Nov-02					
11-Jun-03	2.47	2.34	1029.61	1029.69	
10-Sep-03	3.43	3.28	1028.65	1028.75	
08-Jul-04	2.15	2.01	1029.98	1030.06	2004 survey data used from here on
19-Jul-04	2.4	2.225	1029.73	1029.85	
09-Sep-04	2.77	2.645	1029.36	1029.43	clear, sulphur smell
26-May-05	3.66	3.49	1028.47	1028.58	
14-Sep-05	4.365	4.18	1027.77	1027.89	

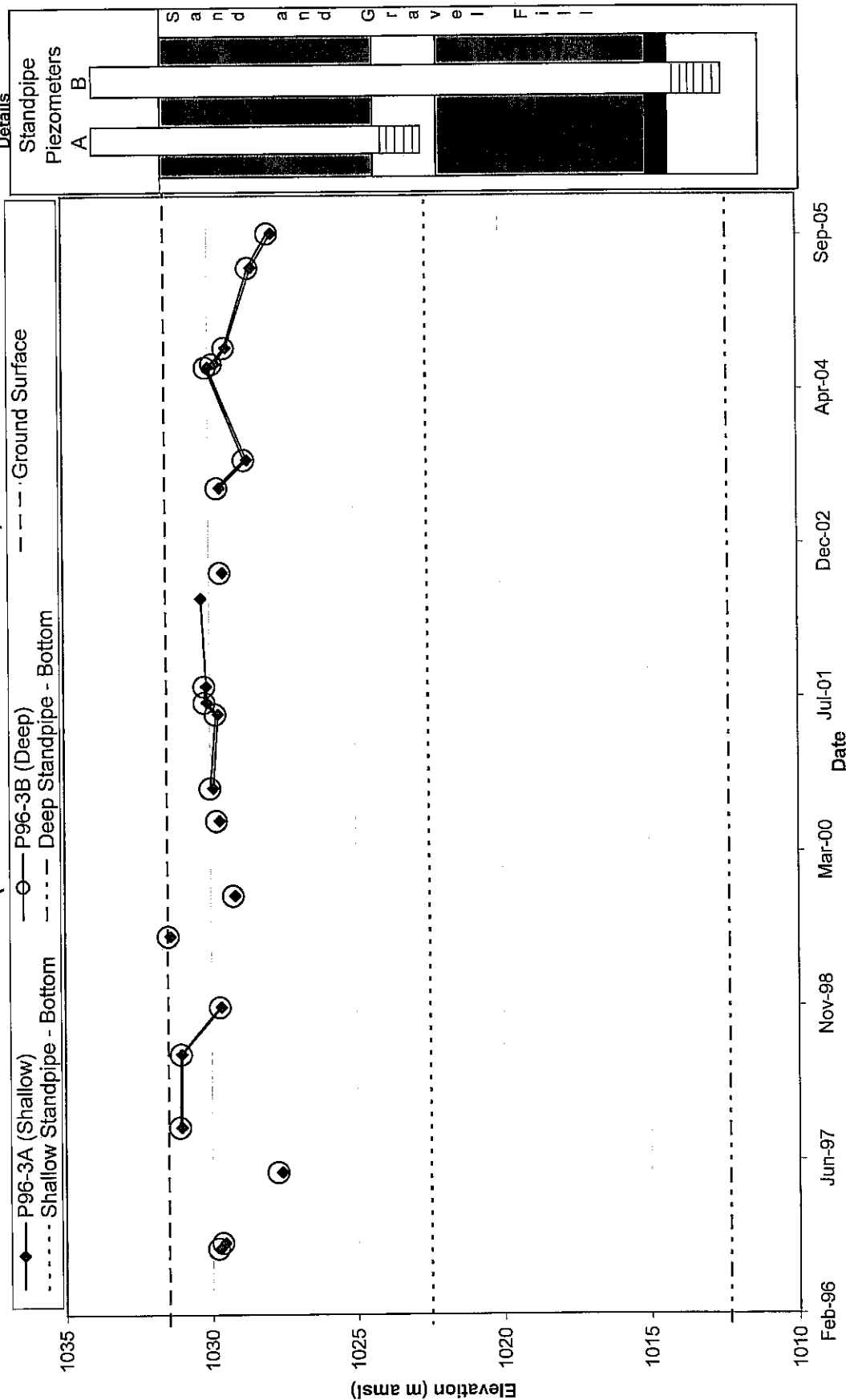
INTERMEDIATE DAM
Piezometric Monitoring
P96-3A Monitoring Well (Robertson, 1996)
(Toe of Dam - North Abutment)



INTERMEDIATE DAM
Piezometric Monitoring
P96-3B Monitoring Well (Robertson, 1996)
(Toe of Dam - North Abutment)

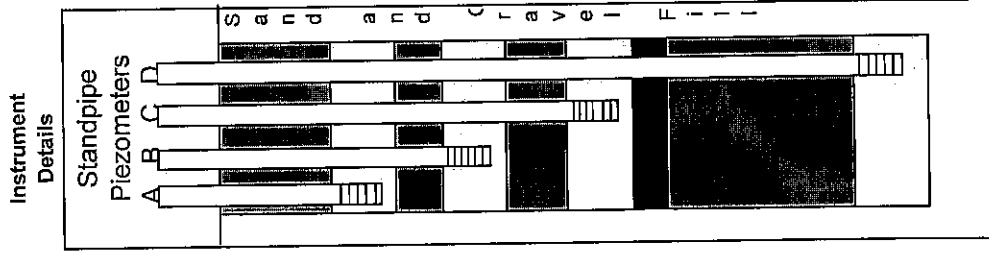
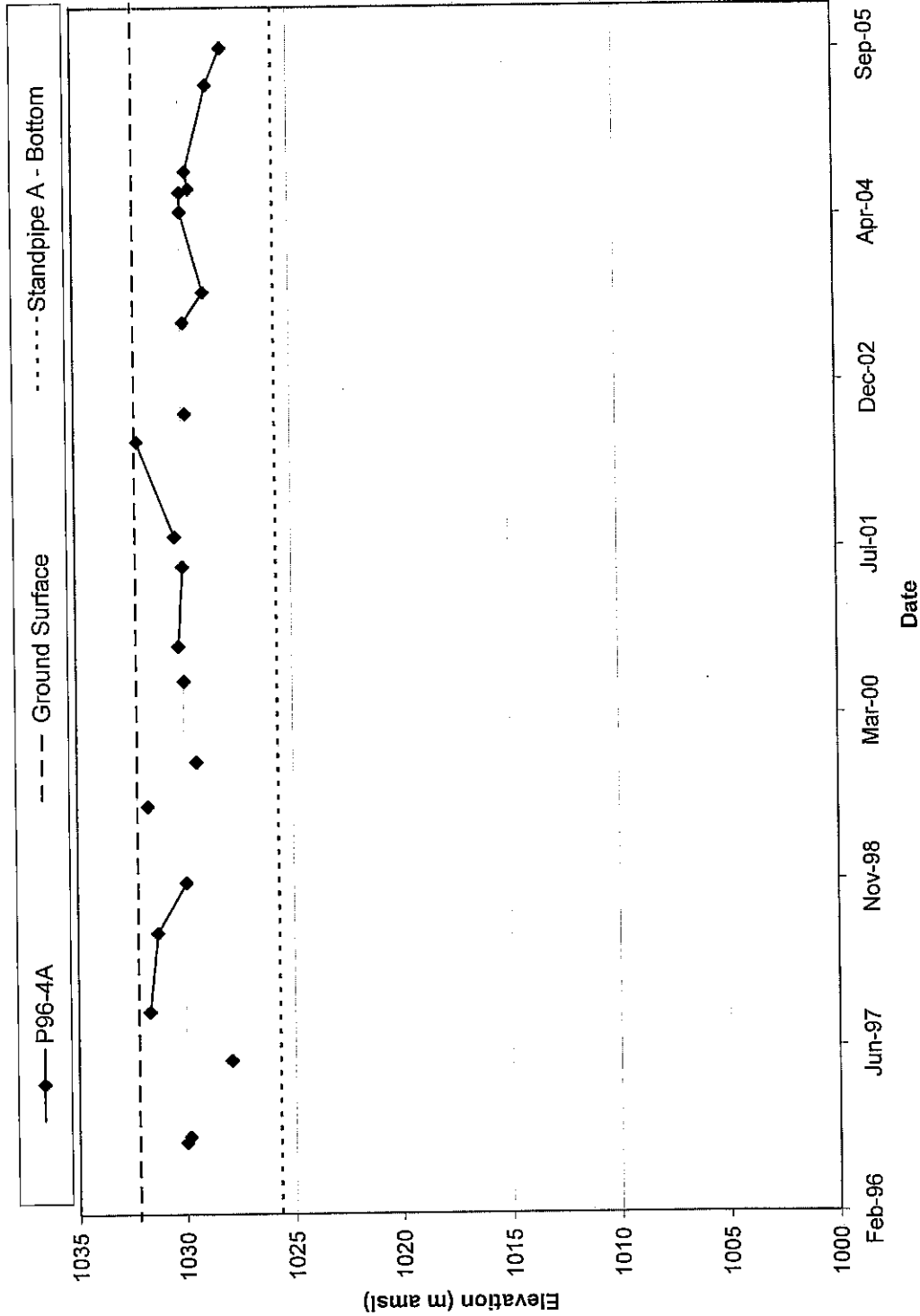


INTERMEDIATE DAM Piezometric Monitoring P96-3 Monitoring Well (Robertson, 1996) (Toe of Dam - North Abutment)

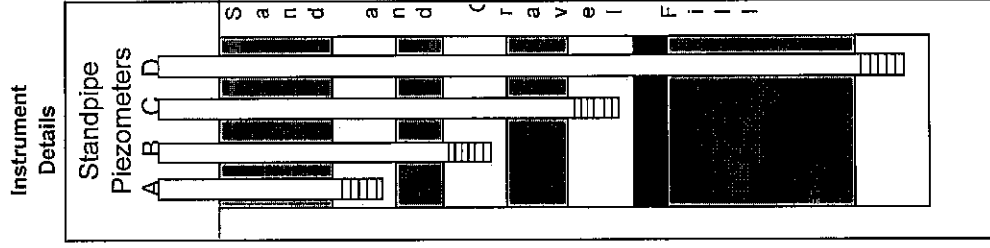
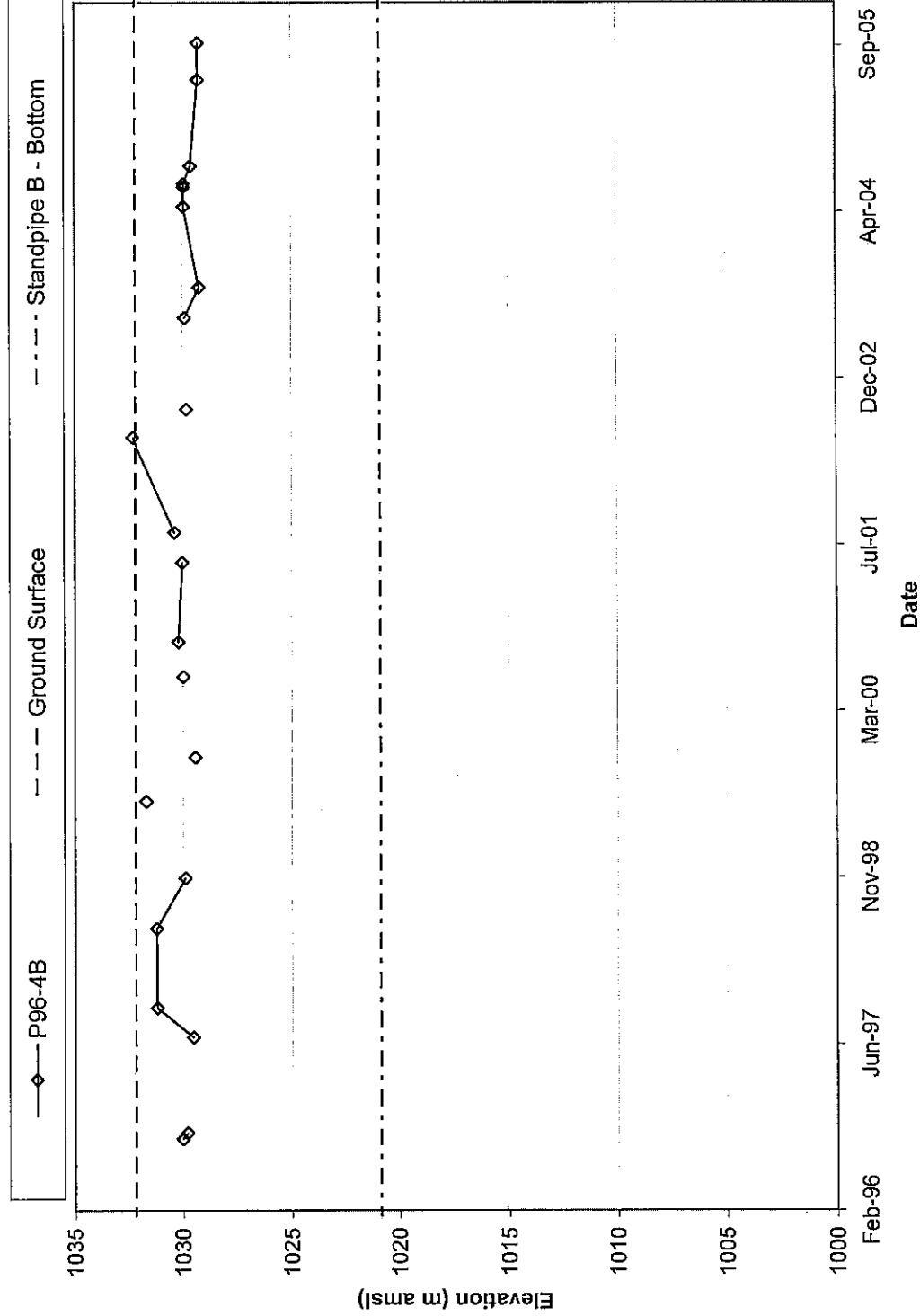


BH96-4		Location:		Intermediate Dam Toe, near South Abutment	2004 Stick Up - A (m):		0.95		
		Coordinates:		8V580669 6914113	2004 Stick Up - B (m):		0.87		
Surface Protactor:	N/A	Date Installed:		1996	2004 Stick Up - C (m):		0.91		
Screened Interval - A (m bgs):	5.7-6.48	Screened Interval - C (m bgs):		14.97-16.47	2004 Stick Up - D (m):		0.88		
Screened Interval - B (m bgs):	9.8-11.3	Screened Interval - D (m bgs):		26.84-28.34	2004 Surface Elevation (m amsl):		1032.16		
Date	Water level from top of pipe (m)				Piezometric Elevation (m amsl)				Comments
	A	B	C	D	A	B	C	D	
08-Sep-96	3.11	3.04	2.98	2.88	1029.99	1030.01	1030.02	1030.12	
26-Sep-96	3.27	3.25	3.12	3.05	1029.83	1029.80	1029.88	1029.95	
27-Sep-96									
13-May-97	5.21		4.85		1027.89		1028.15		
06-Jun-97									
11-Jul-97		3.51				1029.54			
07-Oct-97	1.45	1.87	1.82		1031.65	1031.18	1031.18		
01-Jun-98	1.84	1.84	1.83	1.62	1031.26	1031.21	1031.17	1031.38	
31-Oct-98	3.18	3.15	3.09	3.01	1029.92	1029.90	1029.91	1029.99	
13-Nov-98									
08-Jun-99									
19-Jun-99	1.43	1.38	1.36	1.25	1031.67	1031.67	1031.64	1031.75	
03-Jul-99									
29-Oct-99	3.68	3.62	3.60	3.48	1029.42	1029.43	1029.40	1029.52	
31-Oct-99									
31-May-00									
27-Jun-00	3.14	3.08	3.07	2.93	1029.96	1029.97	1029.93	1030.07	
25-Jul-00			2.84				1030.16		
21-Sep-00									
10-Oct-00	2.92	2.85	2.83	2.71	1030.18	1030.20	1030.17	1030.29	
06-Jun-01	3.13	3.04	3.06	2.94	1029.97	1030.01	1029.94	1030.06	
15-Jul-01									
05-Sep-01	2.77	2.68	2.71	2.57	1030.33	1030.37	1030.29	1030.43	
18-Jun-02	1.06	0.77			1032.04	1032.28			
05-Aug-02									
10-Sep-02	3.31	3.24	3.25	3.11	1029.80	1029.82	1029.75	1029.90	
04-Nov-02									
10-Nov-02									
11-Jun-03	3.24	3.15	3.21	3.06	1029.86	1029.90	1029.79	1029.94	
10-Sep-03	4.19	3.82	4.15	3.99	1028.91	1029.23	1028.85	1029.01	
10-May-04	3.18	3.10	3.14	3.01	1029.93	1029.94	1029.93	1030.03	2004 survey info used from here on
08-Jul-04	3.16	3.09	3.12	2.99	1029.95	1029.94	1029.96	1030.06	
19-Jul-04	3.56	3.09	3.12	2.99	1029.55	1029.94	1029.96	1030.06	
09-Sep-04	3.41	3.41	3.50	3.38	1029.70	1029.62	1029.57	1029.67	a, b and c - dirty; d - clear; a and d - sulphur smell
26-May-05	4.415	3.74		4.22	1028.70	1029.29		1028.83	coarse sand frozen
14-Sep-05	5.1	3.75	5.25	4.89	1028.01	1029.28	1027.82	1028.15	b- bottom blocked

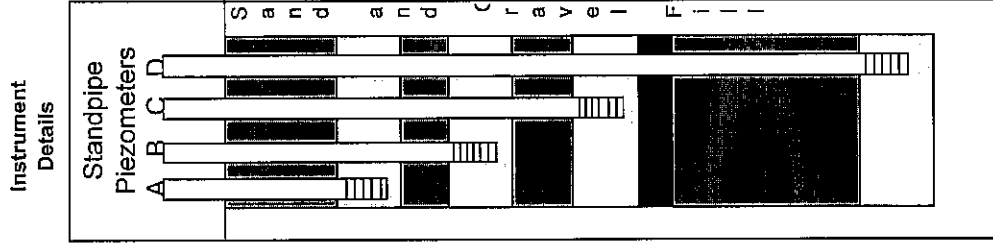
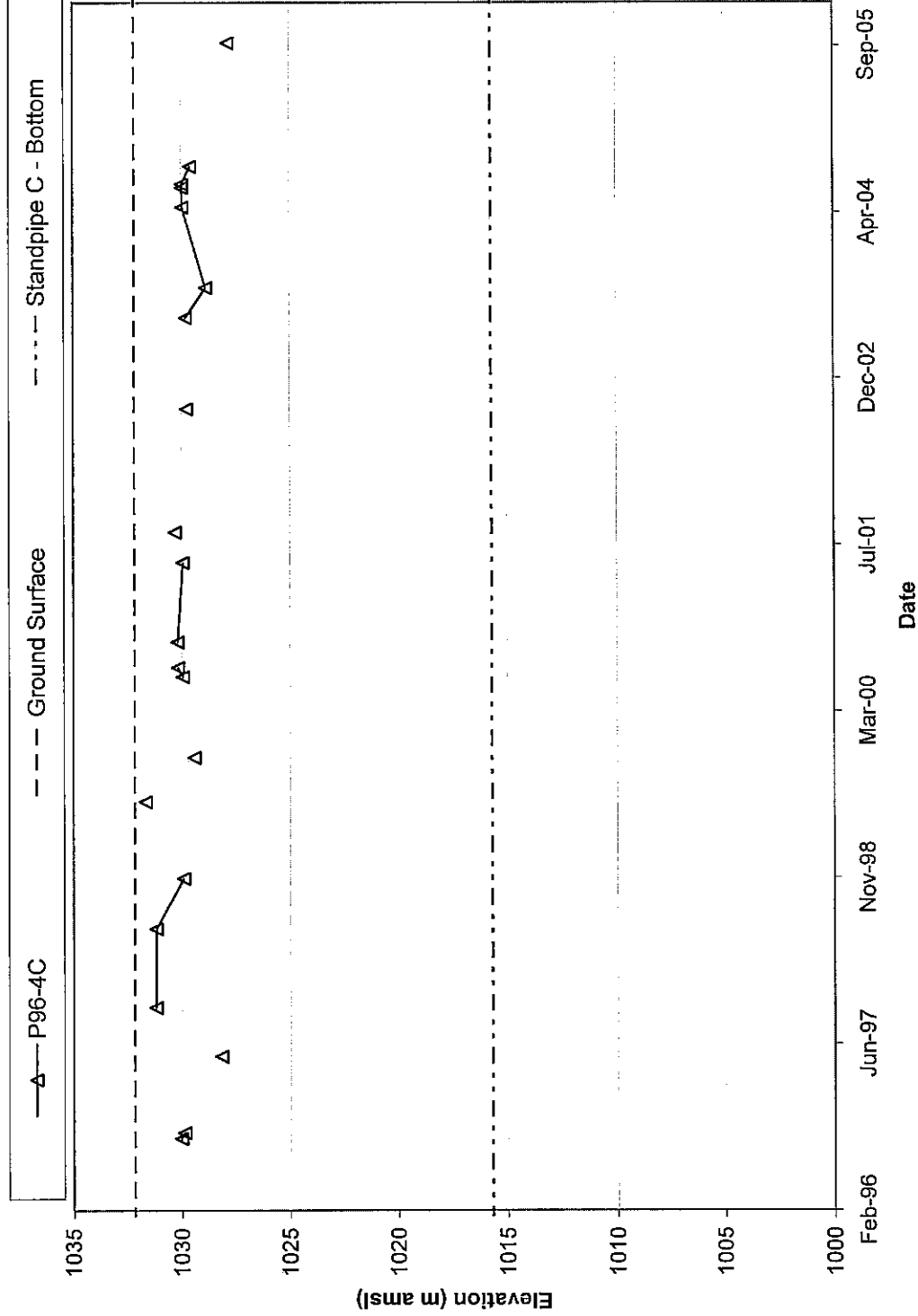
INTERMEDIATE DAM
Piezometric Monitoring
P96-4A Monitoring Well (Robertson, 1996)
(Toe of Dam - South Abutment)



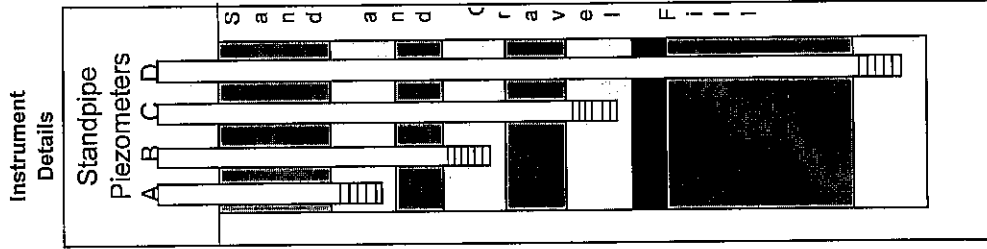
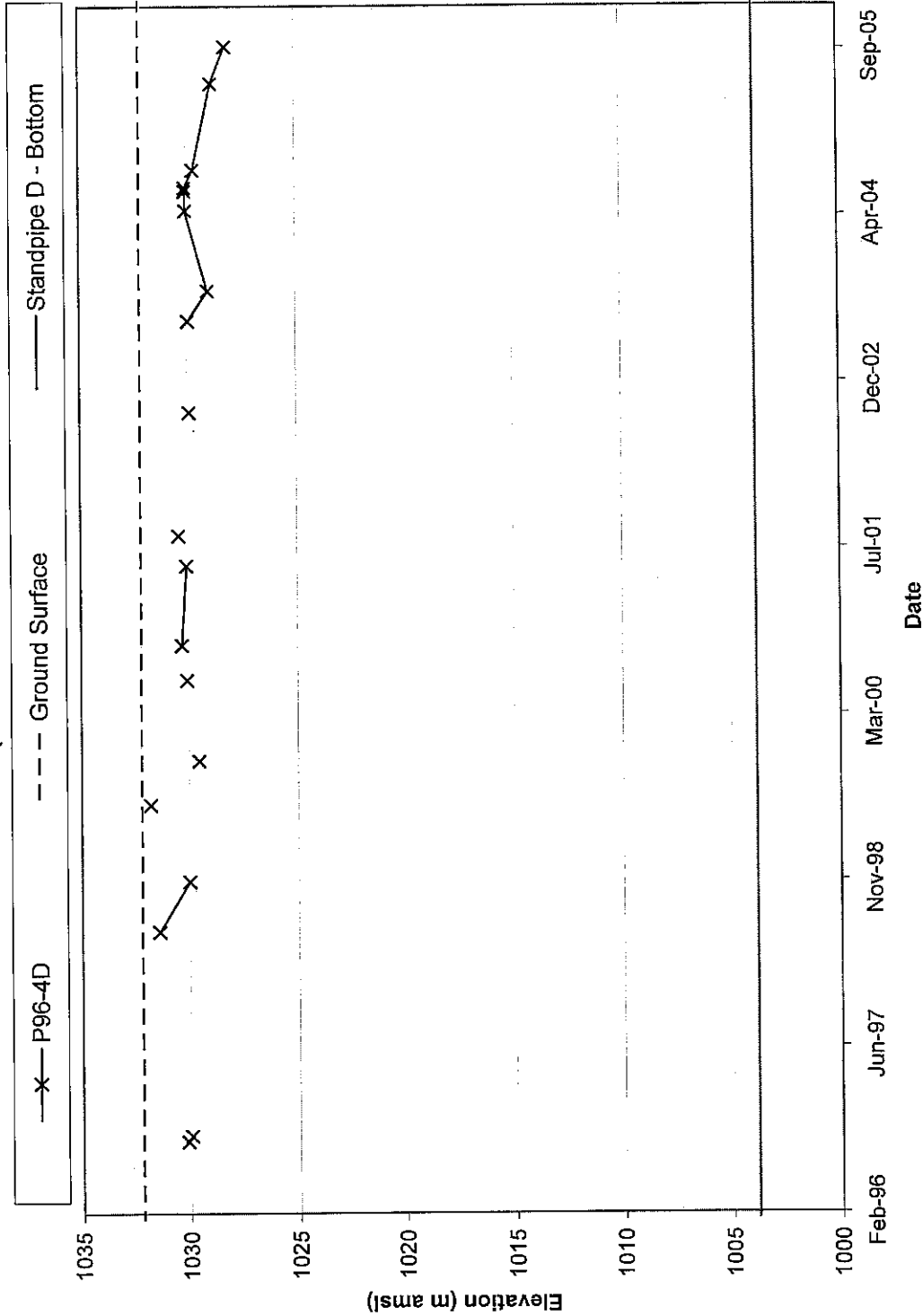
INTERMEDIATE DAM
Piezometric Monitoring
P96-4B Monitoring Well (Robertson, 1996)
(Toe of Dam - South Abutment)



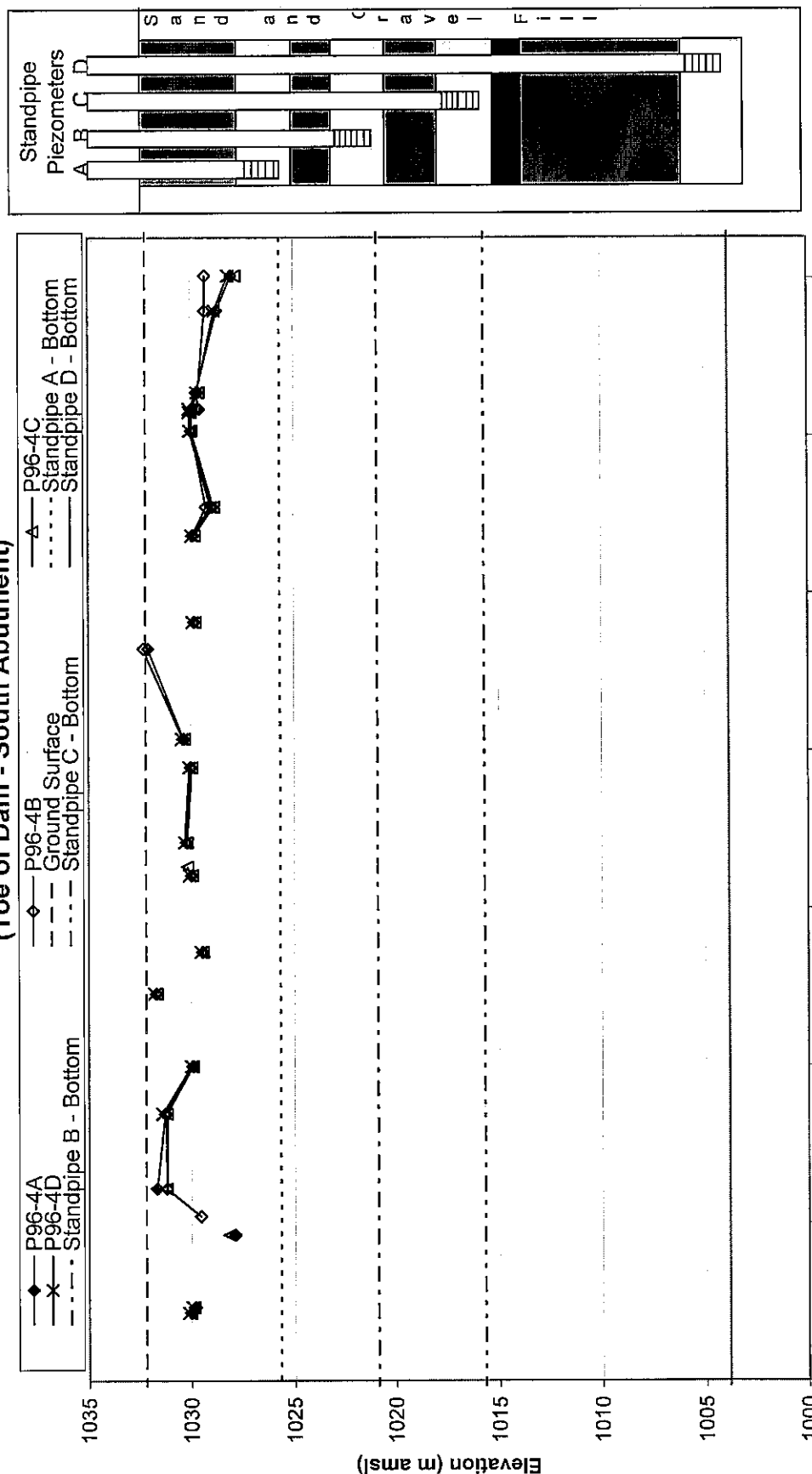
INTERMEDIATE DAM
Piezometric Monitoring
P96-4C Monitoring Well (Robertson, 1996)
(Toe of Dam - South Abutment)



INTERMEDIATE DAM Piezometric Monitoring P96-4D Monitoring Well (Robertson, 1996) (Toe of Dam - South Abutment)

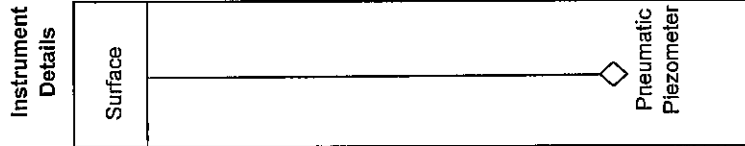
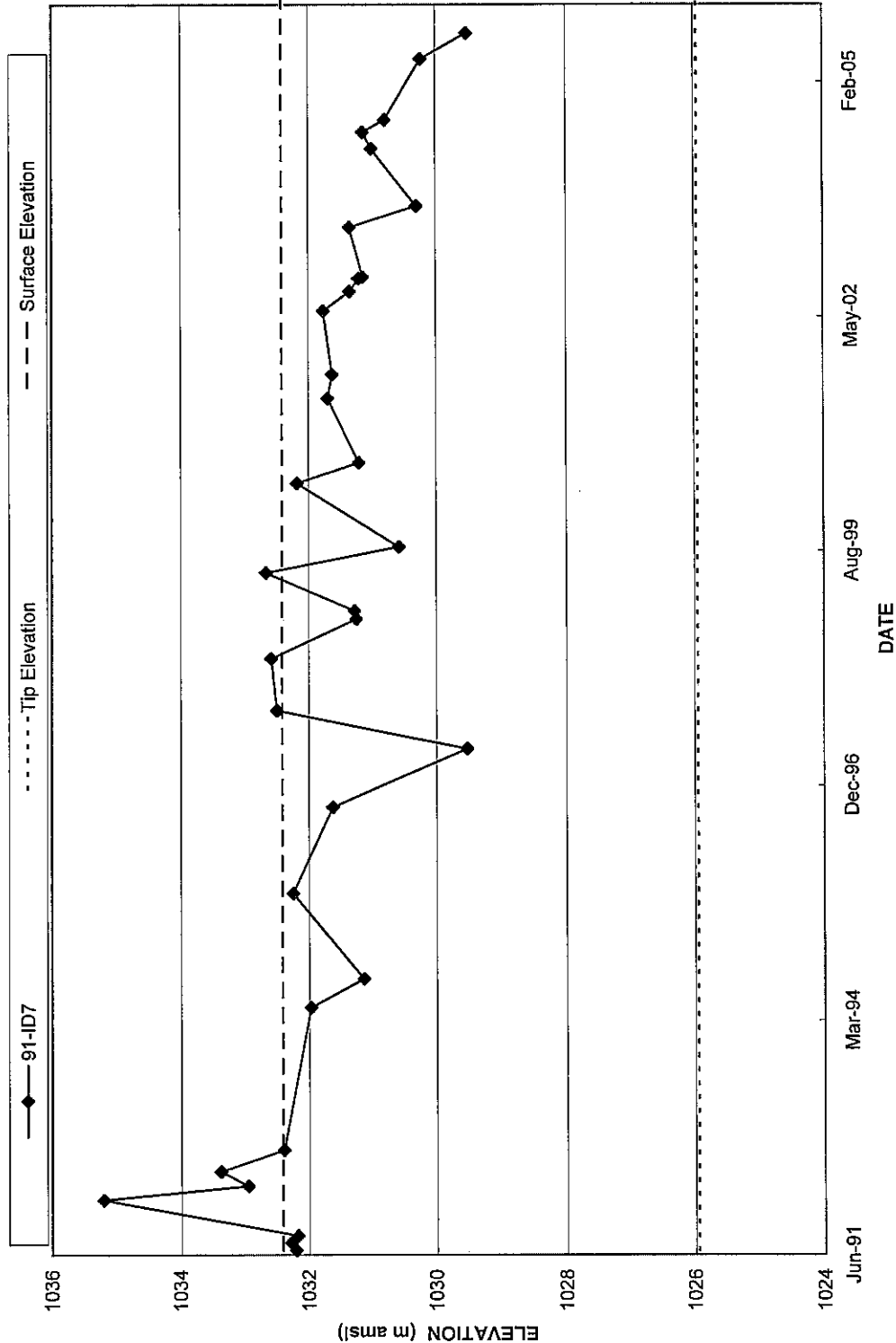


INTERMEDIATE DAM Piezometric Monitoring P96-4 Monitoring Well (Robertson, 1996) (Toe of Dam - South Abutment)



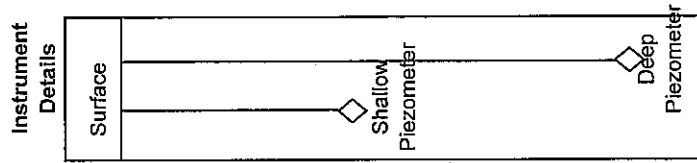
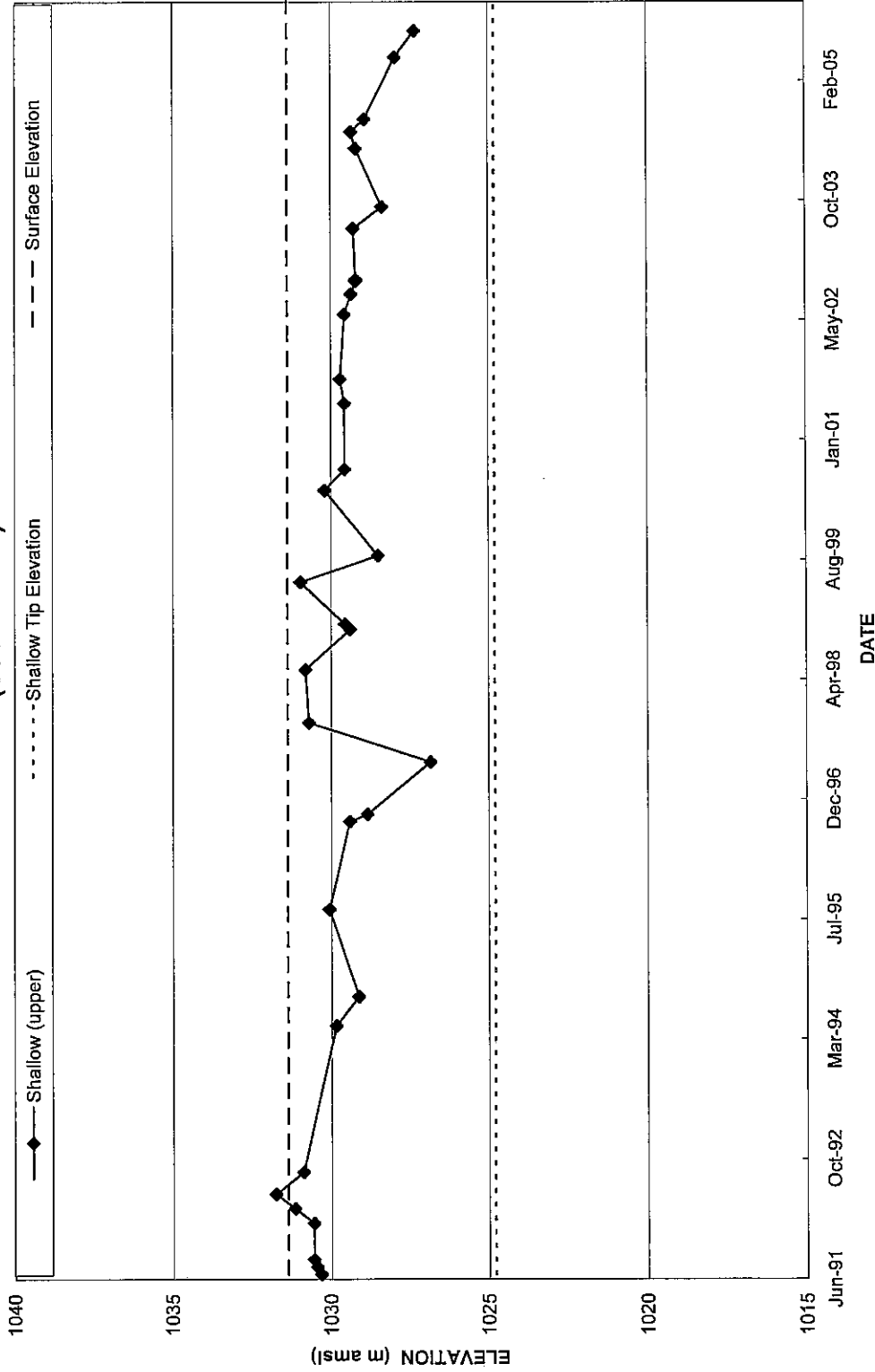
BH91-ID7		Location:	Intermediate Dam Toe @St.0+759		
		Coordinates:	8V580377 6913751	Tip Elevation (m amsl):	1025.95
Surface Protector:	yes	Date Installed:	1991	2004 Ground Elevation (amsl):	1032.42
Date		Reading (psi)	Piezometric Elevation (m amsl)	Pond El. (m amsl)	Comments
Jul-91		8.94	1032.21	1042.2	
Aug-91		9.06	1032.29	1042.2	
Sep-91		8.90	1032.18	1042.2	
Feb-92		13.21	1035.2	1047.7	
Apr-92		10.01	1032.96	1047.7	
Jun-92		10.61	1033.38	1047.7	
Sep-92		9.21	1032.4	1047.7	
May-94		8.60	1031.97	1047.7	
Sep-94		7.40	1031.13	1047.7	
Sep-95		9.00	1032.25	1047.7	
Sep-96		8.1	1031.62	1048.1	
7-May-97		5.1	1029.52		
17-Oct-97		9.36	1032.502		
27-May-98		9.49	1032.593	1048.1	
12-Nov-98		7.56	1031.242	1047.8	
16-Dec-98		7.6	1031.27	1047.8	
29-May-99		9.60	1032.67	1048	
16-Sep-99		6.6	1030.57	1047.7	
14-Jun-00		8.9	1032.18	1047.6	
9-Sep-00		7.5	1031.2		
10-Jun-01		8.20	1031.69		
20-Sep-01		8.10	1031.62		
18-Jun-02		8.30	1031.76		
10-Sep-02		7.70	1031.34		
4-Nov-02		7.50	1031.2		
10-Nov-02		7.40	1031.13		
11-Jun-03		7.70	1031.34		*New piezometer started use here
10-Sep-03		6.20	1030.29		
10-May-04		7.20	1030.99		2004 survey data used from here on
19-Jul-04		7.40	1031.13		
9-Sep-04		6.90	1030.78		
26-May-05		6.1	1030.22		
14-Sep-05		5.1	1029.52		

INTERMEDIATE DAM Piezometric Monitoring BH91-ID7 Pneumatic Piezometer (Toe of Dam)

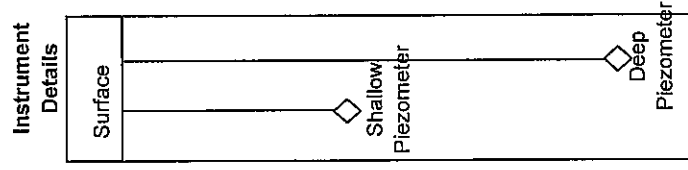
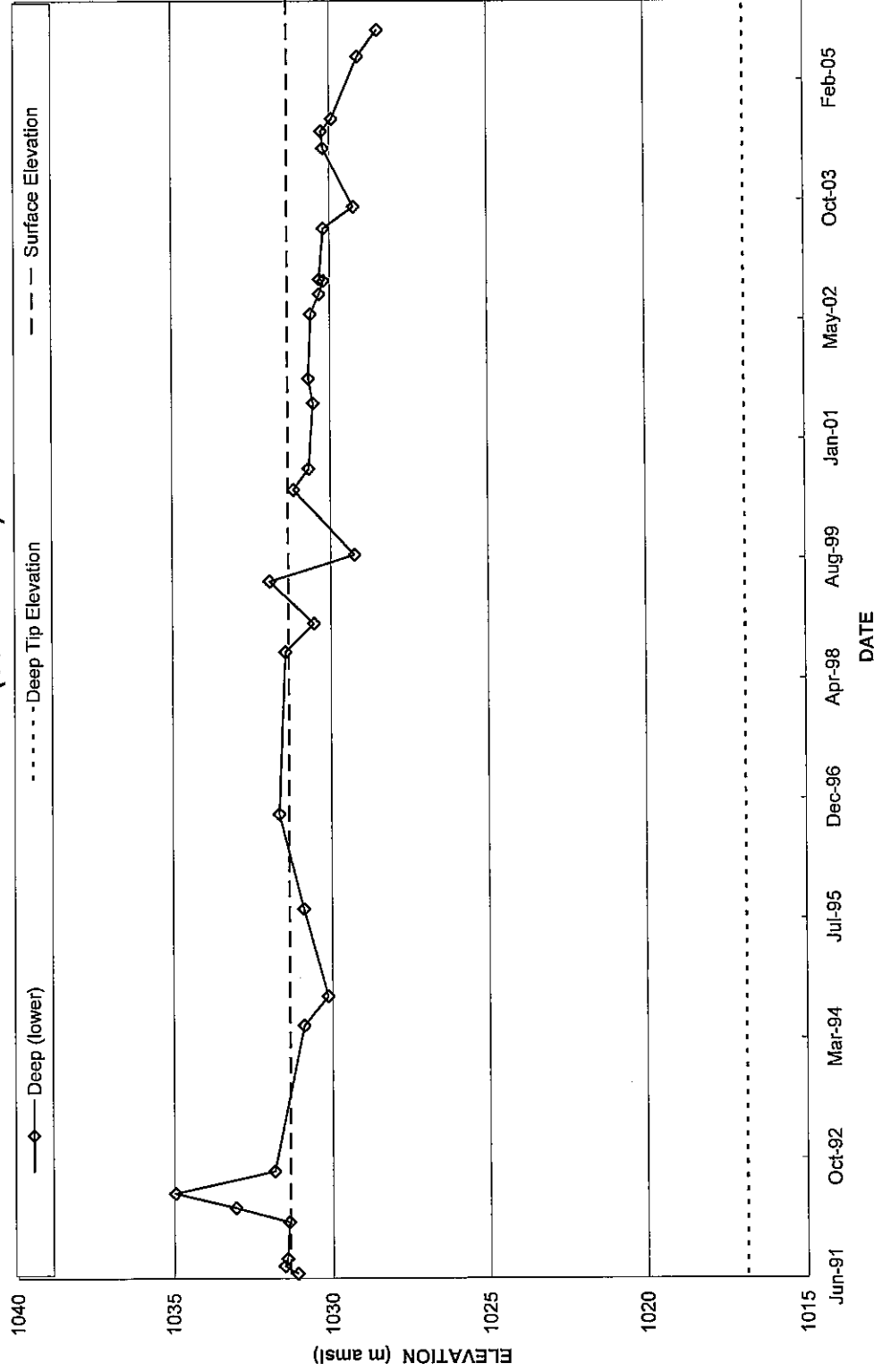


BH91-ID6		Location:	Intermediate Dam Toe @St.0+630		Shallow Tip Elevation (m amsl):		1024.80
		Coordinates:	8V580475 6913866		Deep Tip Elevation (m amsl):		1016.90
Surface Protector:	yes	Date Installed:	1991		2004 Surface Elevation (m amsl):		1031.36
Date		Reading (psi)		Piezometric Elevation (m amsl)		Pond El. (m amsl)	Comments
		Shallow (upper)	Deep (lower)	Shallow (upper)	Deep (lower)		
Jul-91		7.89	20.33	1030.32	1031.13	1042.2	
Aug-91		8.06	20.91	1030.44	1031.54	1042.2	
Sep-91		8.20	20.80	1030.54	1031.46	1042.2	
Feb-92		8.20	20.70	1030.54	1031.39	1047.7	
Apr-92		9.06	23.10	1031.14	1033.07	1047.7	
Jun-92		9.91	25.80	1031.74	1034.96	1047.7	
Sep-92		8.67	21.36	1030.87	1031.85	1047.7	
May-94		7.20	20.00	1029.84	1030.9	1047.7	
Sep-94		6.20	18.90	1029.14	1030.13	1047.7	
Sep-95		7.50	20.00	1030.05	1030.9	1047.7	
Sep-96		6.6		1029.42		1048.1	
Oct-96		5.8	21.1	1028.86	1031.67		
7-May-97		2.9		1026.83			
17-Oct-97		8.41		1030.687			
27-May-98		8.56		1030.792		1048.1	
7-Aug-98			20.8		1031.46	1048.1	
12-Nov-98		6.57		1029.389		1047.8	
4-Dec-98		6.8	19.5	1029.56	1030.55	1047.8	
29-May-99		8.78	21.50	1030.946	1031.95	1048	
16-Sep-99		5.3	17.60	1028.51	1029.22	1047.7	
14-Jun-00		7.7	20.41	1030.19	1031.187	1047.6	
9-Sep-00		6.8	19.70	1029.56	1030.69		
10-Jun-01		6.80	19.50	1029.56	1030.55		
20-Sep-01		7.00	19.70	1029.7	1030.69		
18-Jun-02		6.80	19.60	1029.56	1030.62		
10-Sep-02		6.50	19.20	1029.35	1030.34		
4-Nov-02		6.30	19.00	1029.21	1030.2		
10-Nov-02		6.30	19.2	1029.21	1030.34		
11-Jun-03		6.40	19	1029.28	1030.2		*New piezometer started use here
10-Sep-03		5.10	17.6	1028.37	1029.22		
10-May-04		6.3	19	1029.21	1030.2		2004 survey data used from this point on
19-Jul-04		6.5	19.1	1029.35	1030.27		
9-Sep-04		5.9	18.6	1028.93	1029.92		
26-May-05		4.5	17.4	1027.95	1029.08		
14-Sep-05		3.6	16.5	1027.32	1028.45		

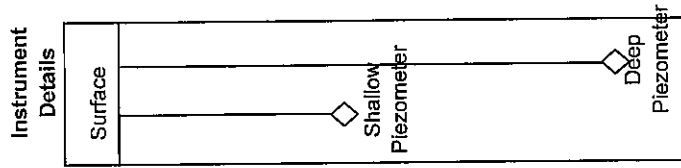
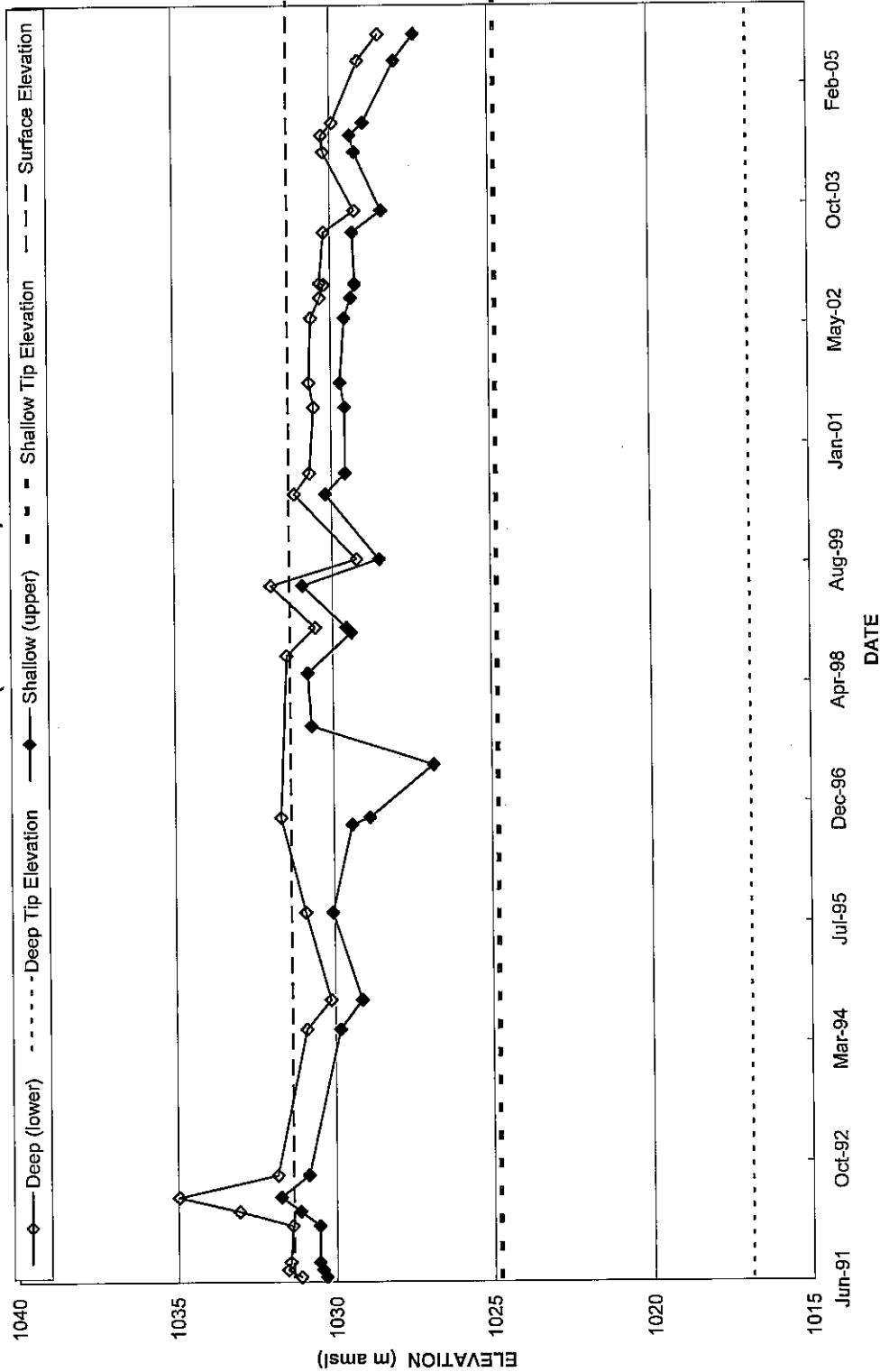
INTERMEDIATE DAM
Piezometric Monitoring
BH91-ID6 Pneumatic Piezometer (Shallow Tip)
(Toe of Dam)



INTERMEDIATE DAM
Piezometric Monitoring
BH91-ID6 Pneumatic Piezometer (Deep Tip)
(Toe of Dam)



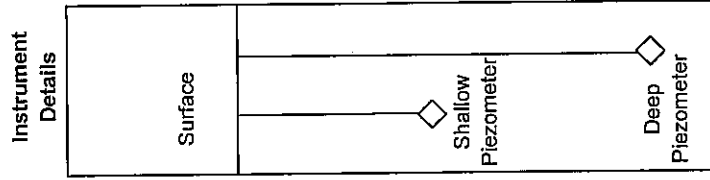
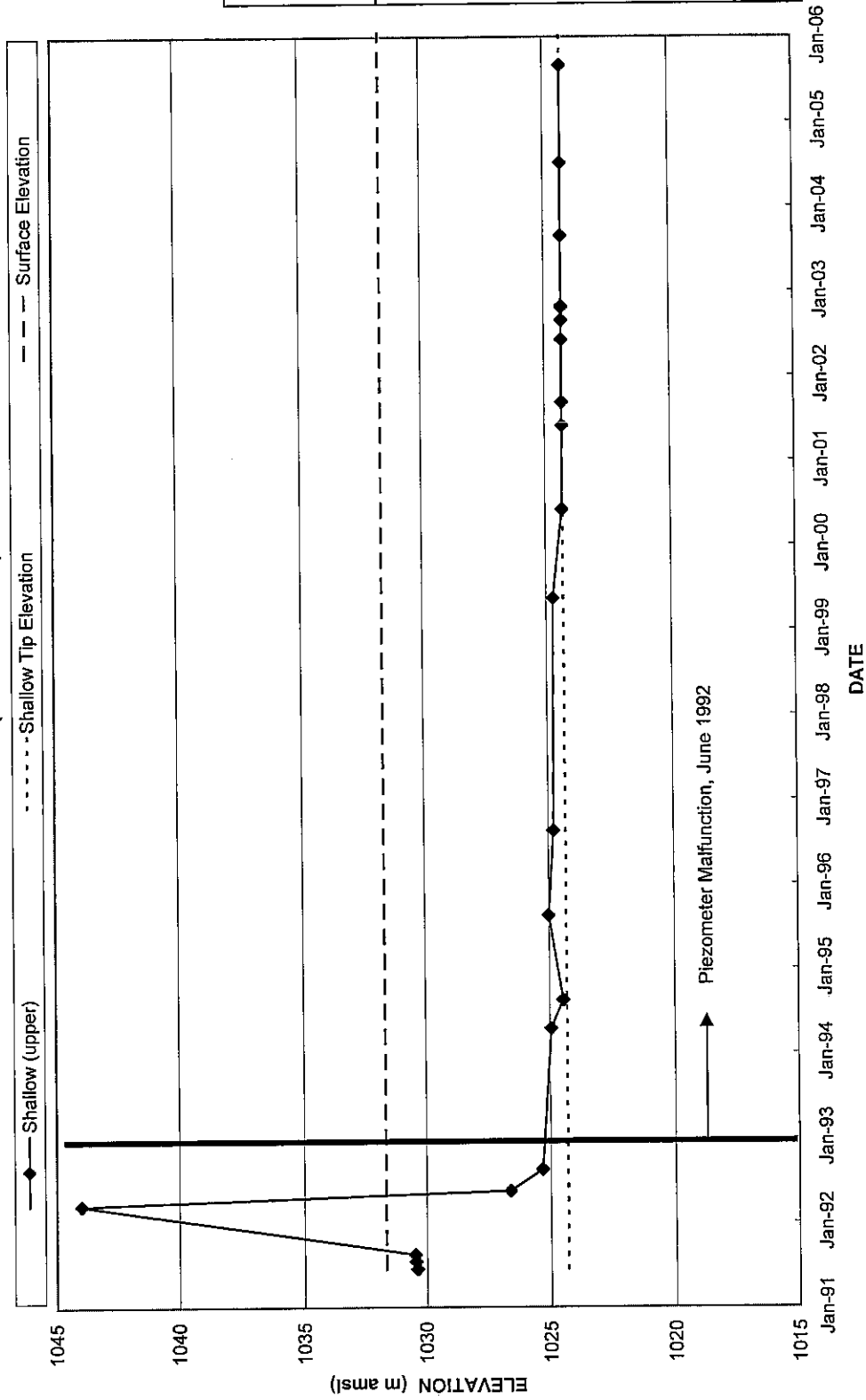
INTERMEDIATE DAM Piezometric Monitoring BH91-ID6 Pneumatic Piezometer (Both Tips) (Toe of Dam)



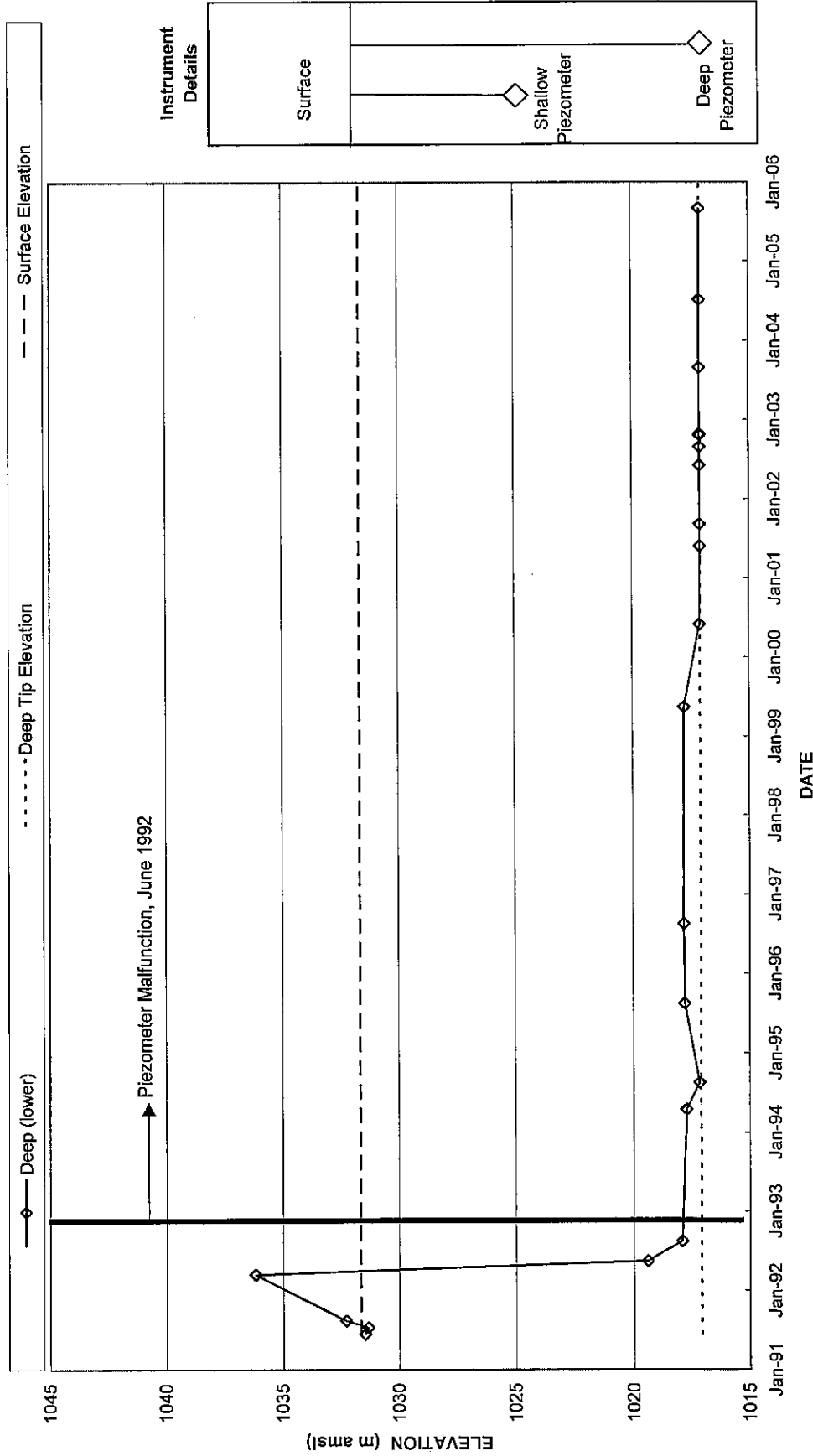
BH91-ID5		Location:		Intermediate Dam Toe @ St.0+625		Shallow Tip Elevation (m amsl):		1024.30	
		Coordinates:		8V580472 6913852		Deep Tip Elevation (m amsl):		1017.08	
Surface Protector:	yes	Date Installed:		1991		2004 Surface Elevation (m amsl):		1031.64	
Date		Reading (psi)		Piezometric Elevation (m amsl)		Pond El. (m amsl)		Comments	
		Shallow (upper)	Deep (lower)	Shallow (upper)	Deep (lower)				
Jul-91		8.67	20.54	1030.37	1031.46	1042.2			
Aug-91		8.76	20.36	1030.43	1031.33	1042.2			
Sep-91		8.80	21.70	1030.46	1032.27	1042.2			
Feb-92									
Apr-92		28.10	27.30	1043.97	1036.19	1047.7			
Jun-92		3.30	3.30	1026.61	1019.39	1047.7			
Sep-92		1.46	1.20	1025.32	1017.92	1047.7			
May-94		0.90	0.90	1024.93	1017.71	1047.7			
Sep-94		0.20	0.10	1024.44	1017.15	1047.7			
Sep-95		1.00	1.00	1025	1017.78	1047.7			
Sep-96		0.7	1.05	1024.79	1017.815	1048.1			
07-May-97		no reading							
17-Oct-97		no reading							
27-May-98		no reading							
29-May-99		0.60	1.00	1024.72	1017.78	1048			
16-Sep-99		no reading; no bubbles							
14-Jun-00		0.03	0.03	1024.321	1017.101	1047.6			
10-Jun-01		0.00	0	1024.3	1017.08				
20-Sep-01		0.00	0.00	1024.3	1017.08				
18-Jun-02		0.00	0	1024.3	1017.08				
10-Sep-02		0.00	0	1024.3	1017.08				
04-Nov-02		0.00	0	1024.3	1017.08				
10-Nov-02		0.00	0	1024.3	1017.08				
10-Sep-03		0.00	0	1024.3	1017.08				
19-Jul-04		0.00	0	1024.30	1017.08				2004 survey data used from here on
Sep-05		0.00	0	1024.3	1017.08				

Note: Both tips have leaking leads as of June, 1992.

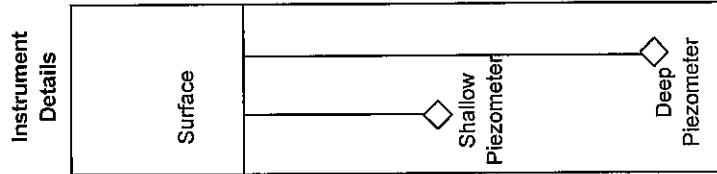
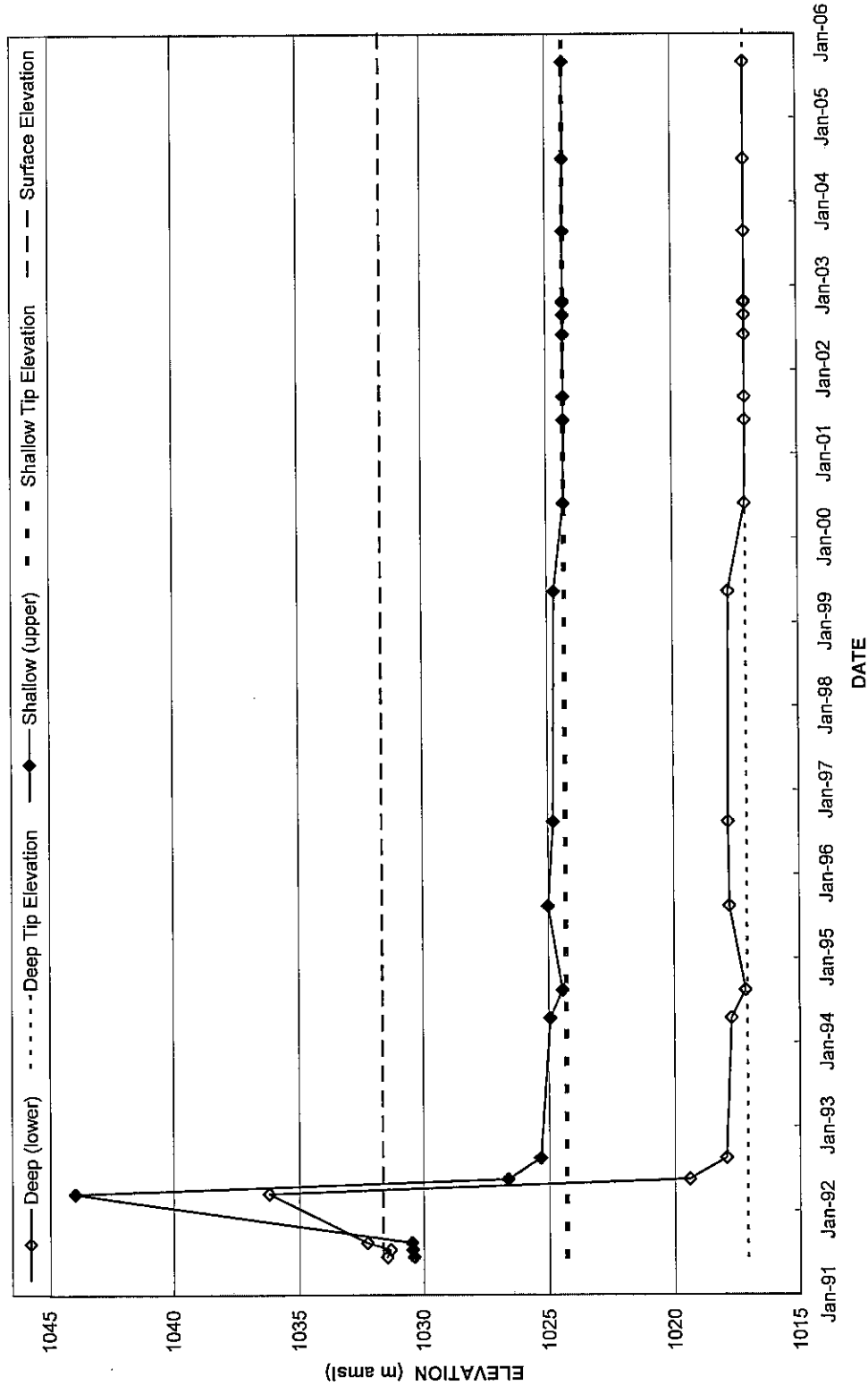
INTERMEDIATE DAM
Piezometric Monitoring
BH91-ID5 Pneumatic Piezometer (Shallow Tip)
(Toe of Dam)



INTERMEDIATE DAM Piezometric Monitoring BH91-ID5 Pneumatic Piezometer (Deep Tip) (Toe of Dam)

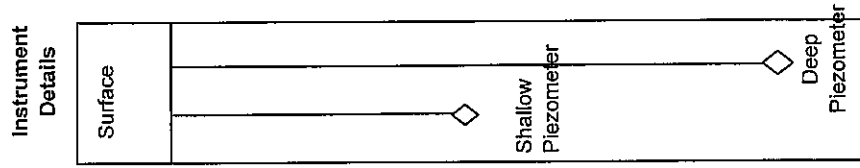
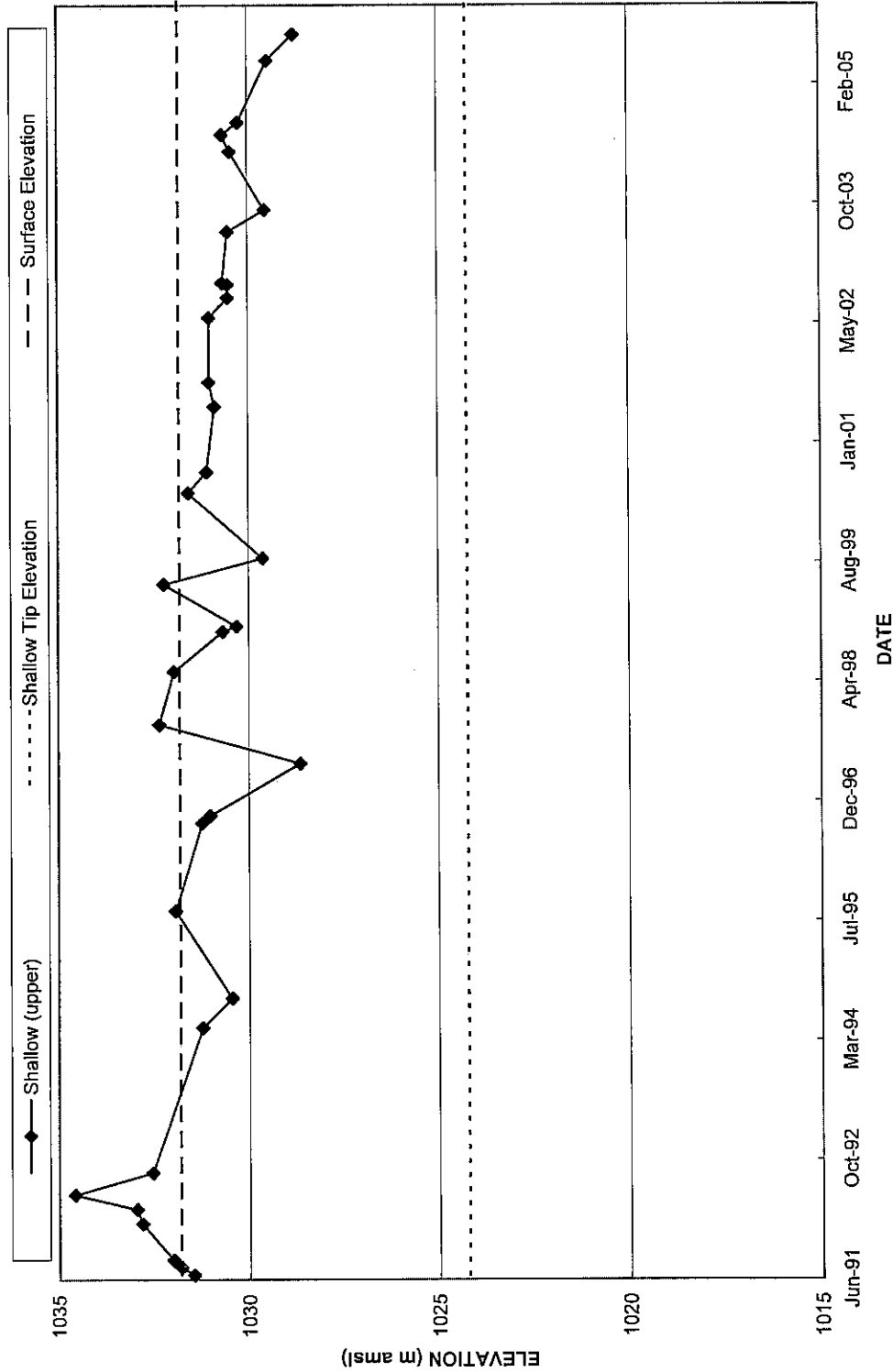


INTERMEDIATE DAM
Piezometric Monitoring
BH91-ID5 Pneumatic Piezometer (Both Tips)
(Toe of Dam)

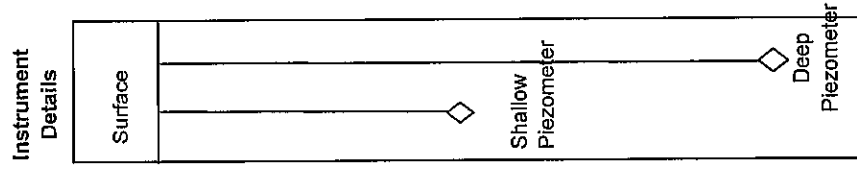
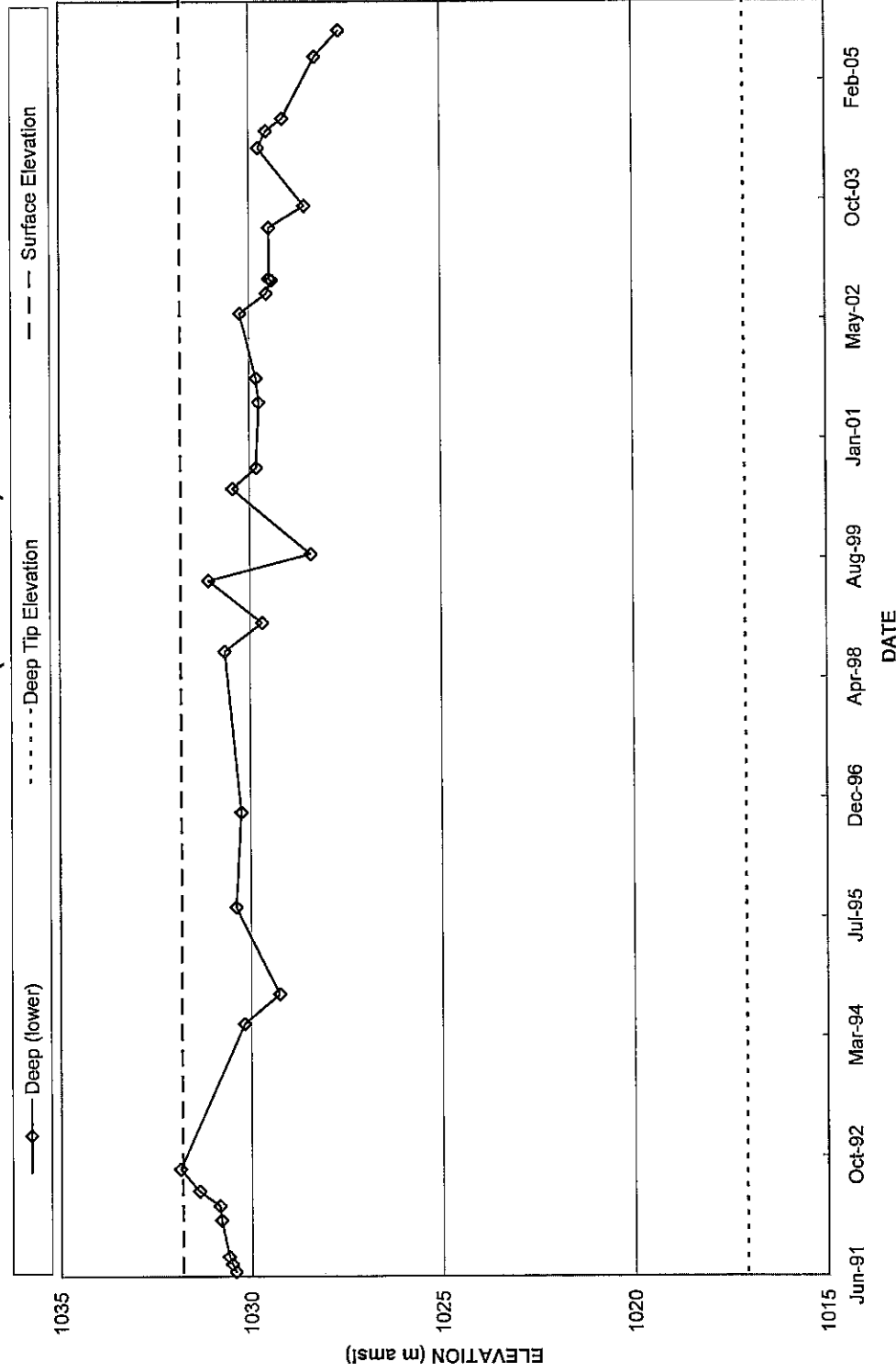


BH91-ID4		Location:	Intermediate Dam Toe @St.0+567		Shallow Tip Elevation (m amsl):	1024.22
		Coordinates:	8V580517 6913926		Deep Tip Elevation (m amsl):	1017.08
Surface Protector:	yes	Date Installed:	1991		*Surface Elevation (m amsl):	1031.80
Date	Reading (psi)		Piezometric Elevation (m amsl)		Pond El. (m amsl)	Comments
	Shallow (upper)	Deep (lower)	Shallow (upper)	Deep (lower)		
Jul-91	10.34	19.06	1031.46	1030.42	1042.2	
Aug-91	10.81	19.20	1031.79	1030.52	1042.2	
Sep-91	11.10	19.30	1031.99	1030.59	1042.2	
Feb-92	12.24	19.59	1032.79	1030.79	1047.7	
Apr-92	12.44	19.64	1032.93	1030.83	1047.7	
Jun-92	14.80	20.40	1034.58	1031.36	1047.7	
Sep-92	11.86	21.10	1032.52	1031.85	1047.7	
May-94	10.00	18.70	1031.22	1030.17	1047.7	
Sep-94	8.90	17.40	1030.45	1029.26	1047.7	
Sep-95	11.00	19.00	1031.92	1030.38	1047.7	
Sep-96	10.00		1031.22		1048.1	
Oct-96	9.7	18.8	1031.01	1030.24		
7-May-97	6.3		1028.63			
17-Oct-97	11.58		1032.33			
27-May-98	11.04		1031.95		1048.1	
7-Aug-98		19.4		1030.66	1048.1	
12-Nov-98	9.22		1030.67		1047.8	
4-Dec-98	8.7	18.0	1030.31	1029.68	1047.8	
29-May-99	11.40	20.00	1032.20	1031.08	1048	
16-Sep-99	7.7	16.2	1029.61	1028.42	1047.7	
14-Jun-00	10.5	19.1	1031.57	1030.45	1047.6	
9-Sep-00	9.8	18.2	1031.08	1029.82		
10-Jun-01	9.50	18.1	1030.87	1029.75		
20-Sep-01	9.70	18.2	1031.01	1029.82		
18-Jun-02	9.70	18.80	1031.01	1030.24		
10-Sep-02	9.00	17.80	1030.52	1029.54		
4-Nov-02	9.00	17.60	1030.52	1029.40		
10-Nov-02	9.20	17.7	1030.66	1029.47		
11-Jun-03	9.00	17.7	1030.52	1029.47		*New piezometer readout used
10-Sep-03	7.60	16.4	1029.54	1028.56		
10-May-04	8.9	18.1	1030.45	1029.75		No 2004 elevation data
19-Jul-04	9.2	17.8	1030.66	1029.54		
9-Sep-04	8.6	17.2	1030.24	1029.12		
26-May-05	7.5	16	1029.47	1028.28		
14-Sep-05	6.5	15.1	1028.77	1027.65		

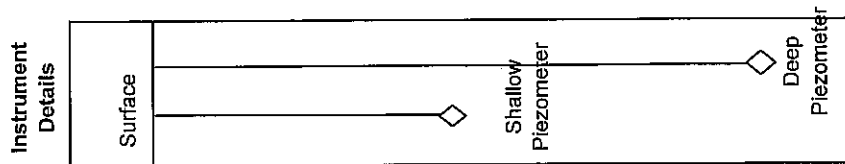
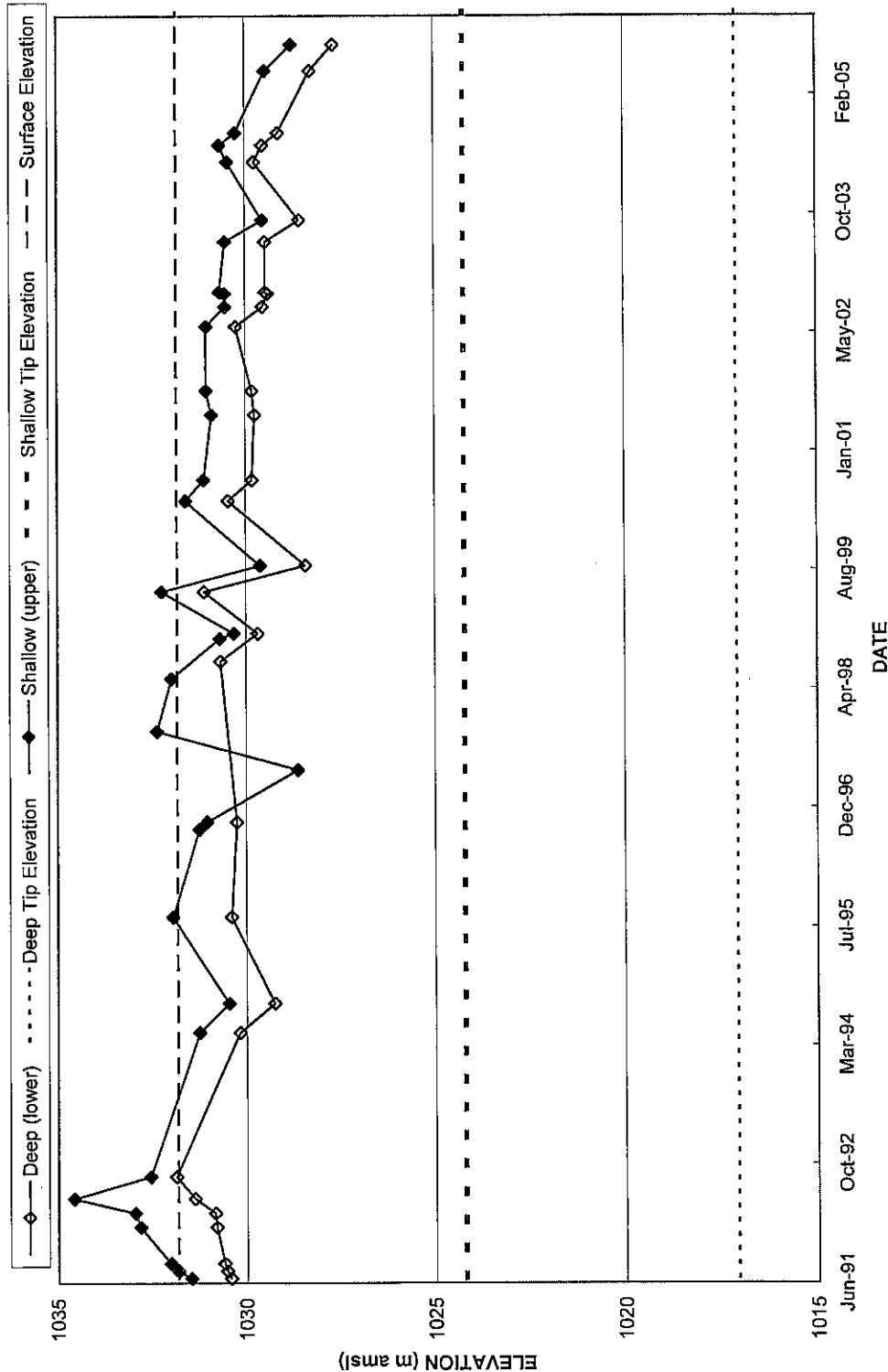
INTERMEDIATE DAM Piezometric Monitoring BH91-ID4 Pneumatic Piezometer (Shallow Tip) (Toe of Dam)



INTERMEDIATE DAM
Piezometric Monitoring
BH91-ID4 Pneumatic Piezometer (Deep Tip)
(Toe of Dam)

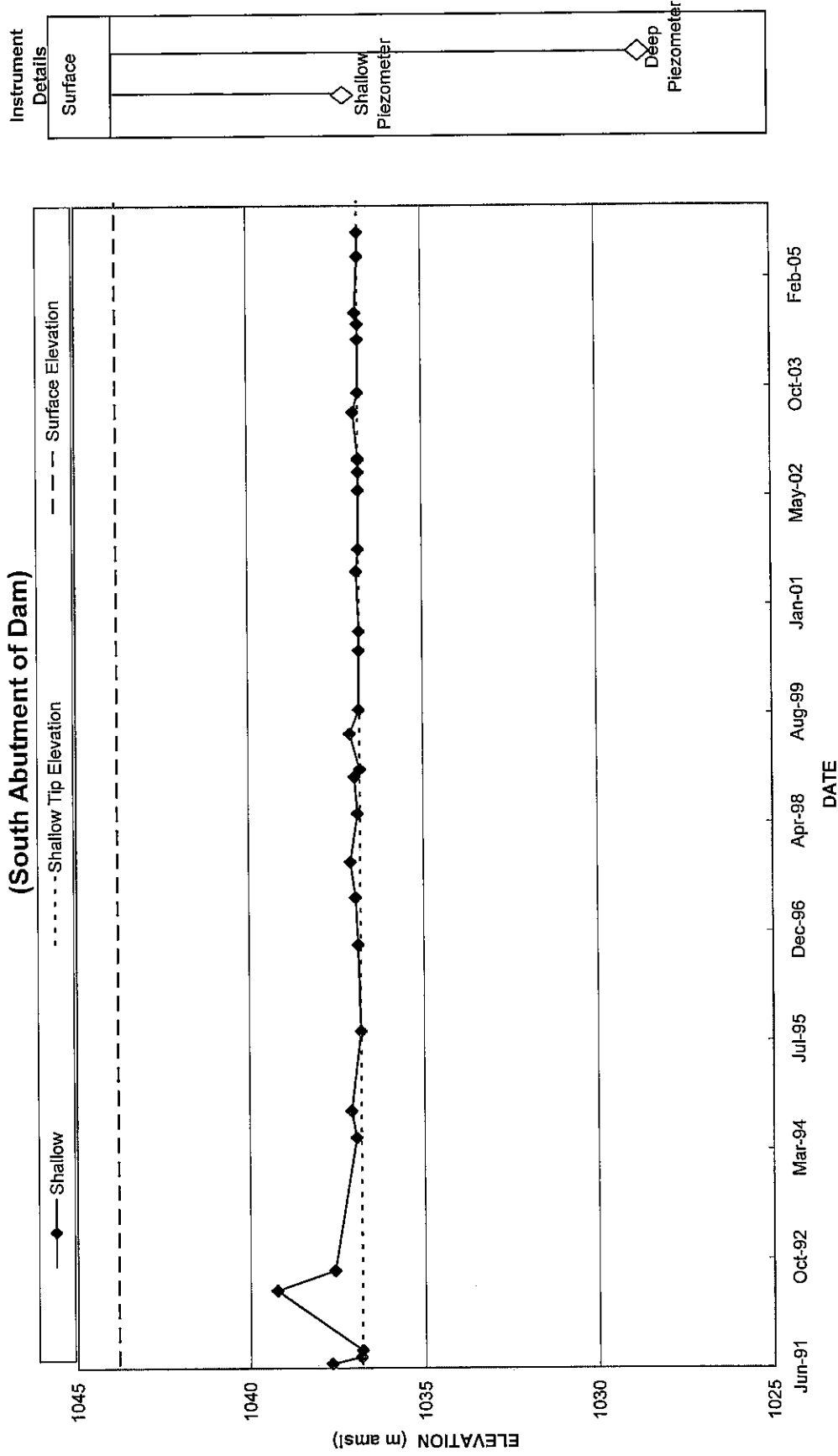


INTERMEDIATE DAM
Piezometric Monitoring
BH91-ID4 Pneumatic Piezometer (Both Tips)
(Toe of Dam)

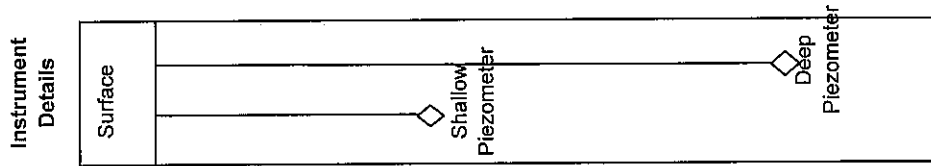
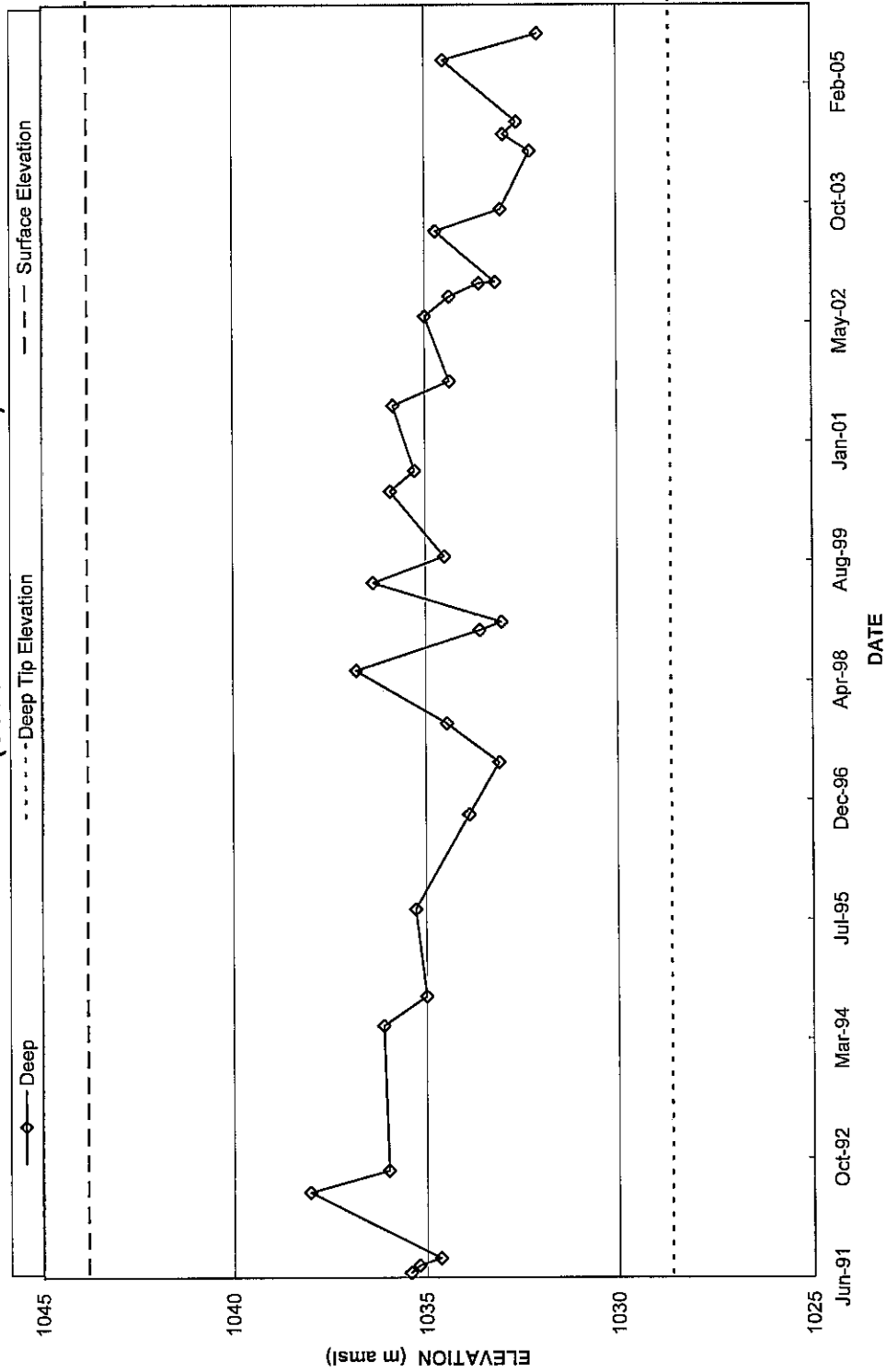


BH91-ID3		Location:	Intermediate Dam South Abutment @ Stn. 0+810		Shallow Tip Elevation (m amsl):	1036.82
		Coordinates:	8V580359 6913723		Deep Tip Elevation (m amsl):	1028.62
Surface Protector:	yes	Date Installed:	1991		2004 Surface Elevation (m amsl):	1043.82
Date	Reading (psi)		Piezometric Elevation (m amsl)		Pond El. (m amsl)	Comments
	Shallow	Deep	Shallow	Deep		
Jul-91	1.23	9.71	1037.68	1035.42	1042.2	
Aug-91	0.04	9.40	1036.85	1035.2	1042.2	
Sep-91		8.60	1036.82	1034.64	1042.2	
Feb-92						
Apr-92						
Jun-92	3.44	13.46	1039.23	1038.04	1047.7	
Sep-92	1.10	10.51	1037.59	1035.98	1047.7	
May-94	0.20	10.70	1036.96	1036.11	1047.7	
Sep-94	0.40	9.10	1037.1	1034.99	1047.7	
Sep-95	0.00	9.50	1036.82	1035.27	1047.7	
Oct-96	0.1	7.5	1036.89	1033.87	1048.1	
7-May-97	0.2	6.4	1036.96	1033.1		
17-Oct-97	0.40	8.31	1037.1	1034.437		
27-May-98	0.10	11.70	1036.89	1036.81	1048.1	
12-Nov-98	0.22	7.10	1036.974	1033.59	1047.8	
16-Dec-98	0.0	6.3	1036.82	1033.03	1047.8	
29-May-99	0.40	11.05	1037.1	1036.355	1048	
16-Sep-99	0.02	8.4	1036.834	1034.5	1047.7	
14-Jun-00	0.01	10.4	1036.827	1035.907	1047.6	
9-Sep-00	0.00	9.5	1036.82	1035.27		
10-Jun-01	0.10	10.3	1036.89	1035.83		
20-Sep-01	0.01	8.2	1036.827	1034.36		
18-Jun-02	0.00	9.1	1036.82	1034.99		
10-Sep-02	0.00	8.20	1036.82	1034.36		
4-Nov-02	0.00	7.10	1036.82	1033.59		
10-Nov-02	0.00	6.50	1036.82	1033.17		
11-Jun-03	0.20	8.70	1036.96	1034.71		*have to continue using old piezometer, tips are too big
10-Sep-03	0.00	6.30	1036.82	1033.03		* Installed new tips, now using new box
10-May-04	0	5.2	1036.82	1032.26		2004 survey data used from this point on
19-Jul-04	0	6.2	1036.82	1032.96		
9-Sep-04	0.1	5.7	1036.89	1032.61		
26-May-05	0	8.4	1036.82	1034.5		
14-Sep-05	0	4.9	1036.82	1032.05		

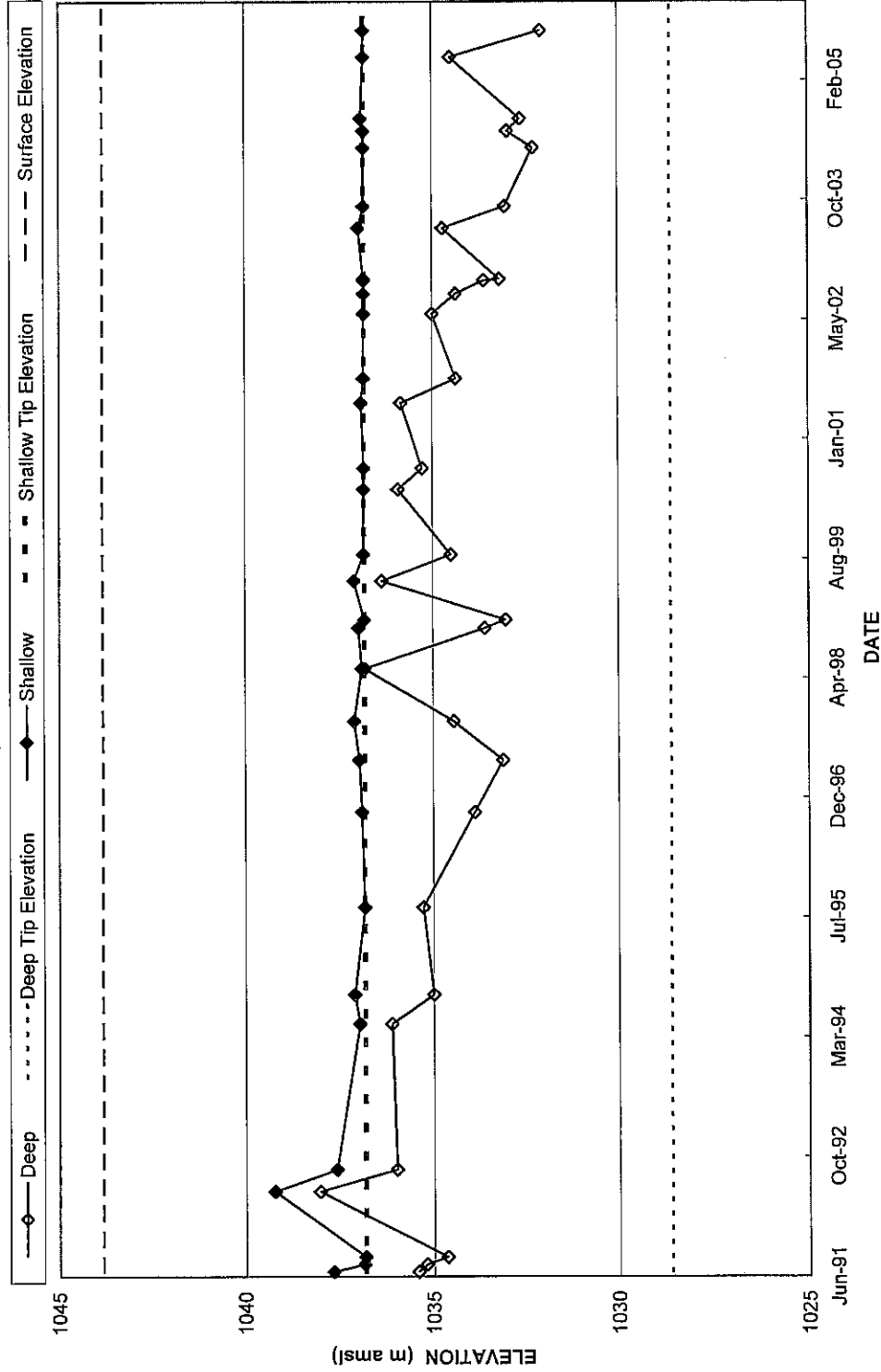
INTERMEDIATE DAM
Piezometric Monitoring
BH91-ID3 Pneumatic Piezometer (Shallow Tip)
(South Abutment of Dam)



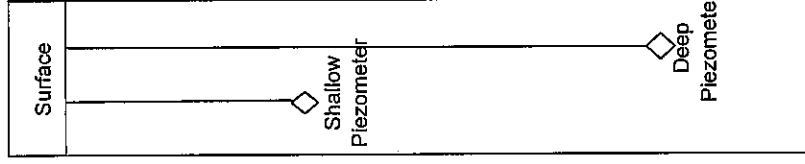
INTERMEDIATE DAM Piezometric Monitoring BH91-ID3 Pneumatic Piezometer (Deep Tip) (South Abutment of Dam)



INTERMEDIATE DAM
Piezometric Monitoring
BH91-ID3 Pneumatic Piezometer (Both Tips)
(South Abutment of Dam)

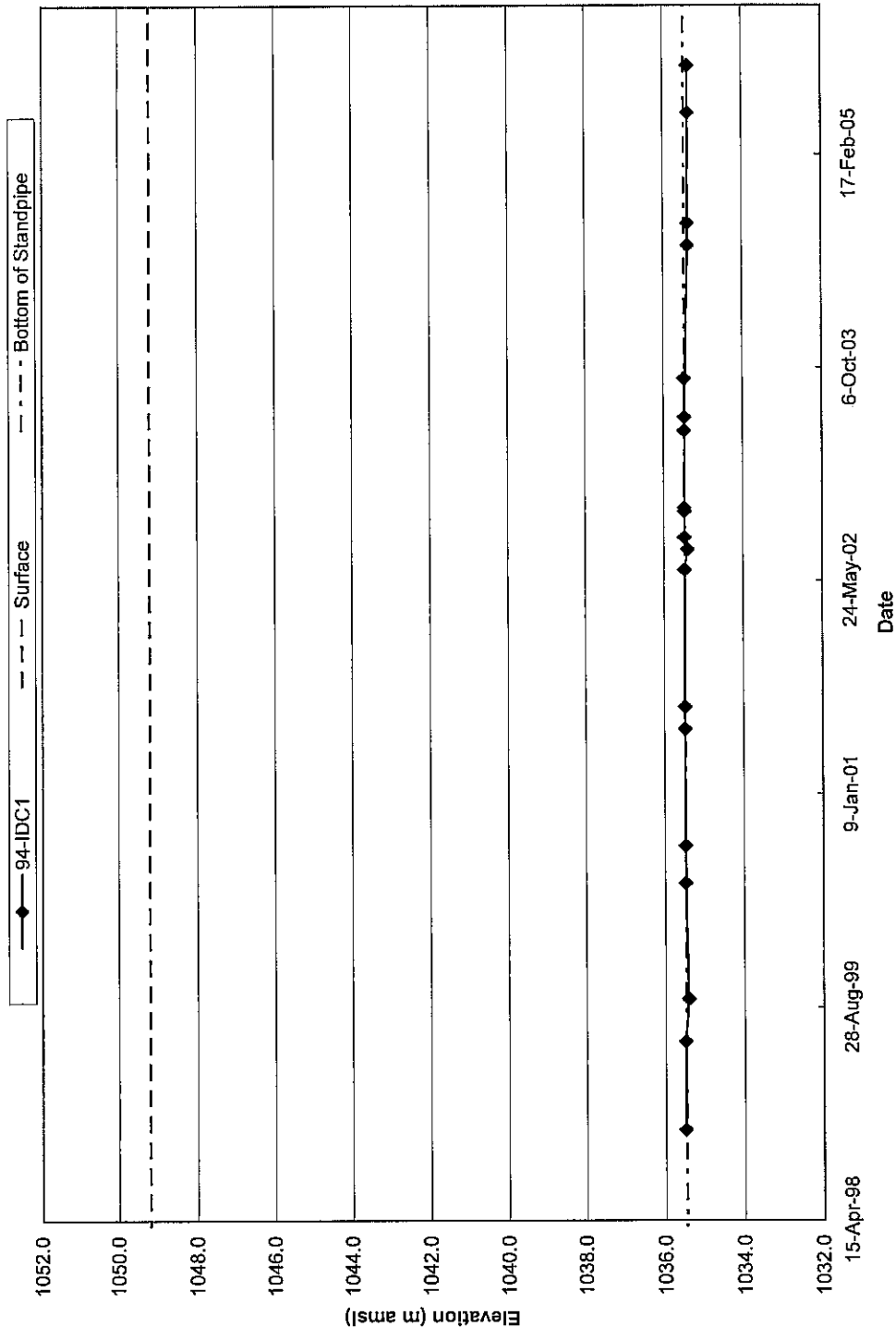


Instrument
Details

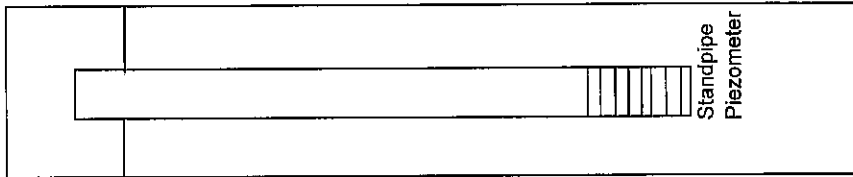


BH94-IDC-1		Location:	Intermediate Dam Crest	2004 Stick Up (m):	0.27
		Coordinates:	8V580605 6913969	2004 Surface Elevation (m amsl):	1049.21
Surface Protector:	Yes	Date Installed:	1994	Tip Elevation:	N/A
Date		Water level from top of pipe (m)	Piezometric Elevation (m amsl)	Pond El. (m amsl)	Comments
2-Jun-94				1047.7	dry
16-Sep-94				1047.7	dry
22-Sep-95				1047.7	dry
25-Sep-96				1048.1	dry
28-May-98				1048.1	dry
13-Nov-98		14.10	1035.48	1047.8	dry
8-Jun-99		14.10	1035.48	1047.8	dry
16-Sep-99		14.18	1035.40	1047.7	dry
14-Jun-00		14.11	1035.47	1047.6	dry
9-Sep-00		14.11	1035.47	1047.6	H2O
10-Jun-01		14.11	1035.47	1047.6	
1-Aug-01		14.11	1035.47	1047.6	dry
18-Jun-02		14.11	1035.47		dry
5-Aug-02		14.19	1035.40		dry
2-Sep-02		14.11	1035.47		dry
2-Nov-02		14.11	1035.47		dry
10-Nov-02		14.11	1035.47		dry
11-Jun-03		14.12	1035.46		dry
10-Sep-03		14.11	1035.47		dry
10-May-03		14.11	1035.47		dry
19-Jul-04		14.11	1035.37		dry
9-Sep-04		14.11	1035.37		dry
26-May-05		14.12	1035.36		bottom
14-Sep-05		14.12	1035.36		bottom

INTERMEDIATE DAM
Piezometric Monitoring
BH94-IDC-1 Standpipe Piezometer
Crest of Dam

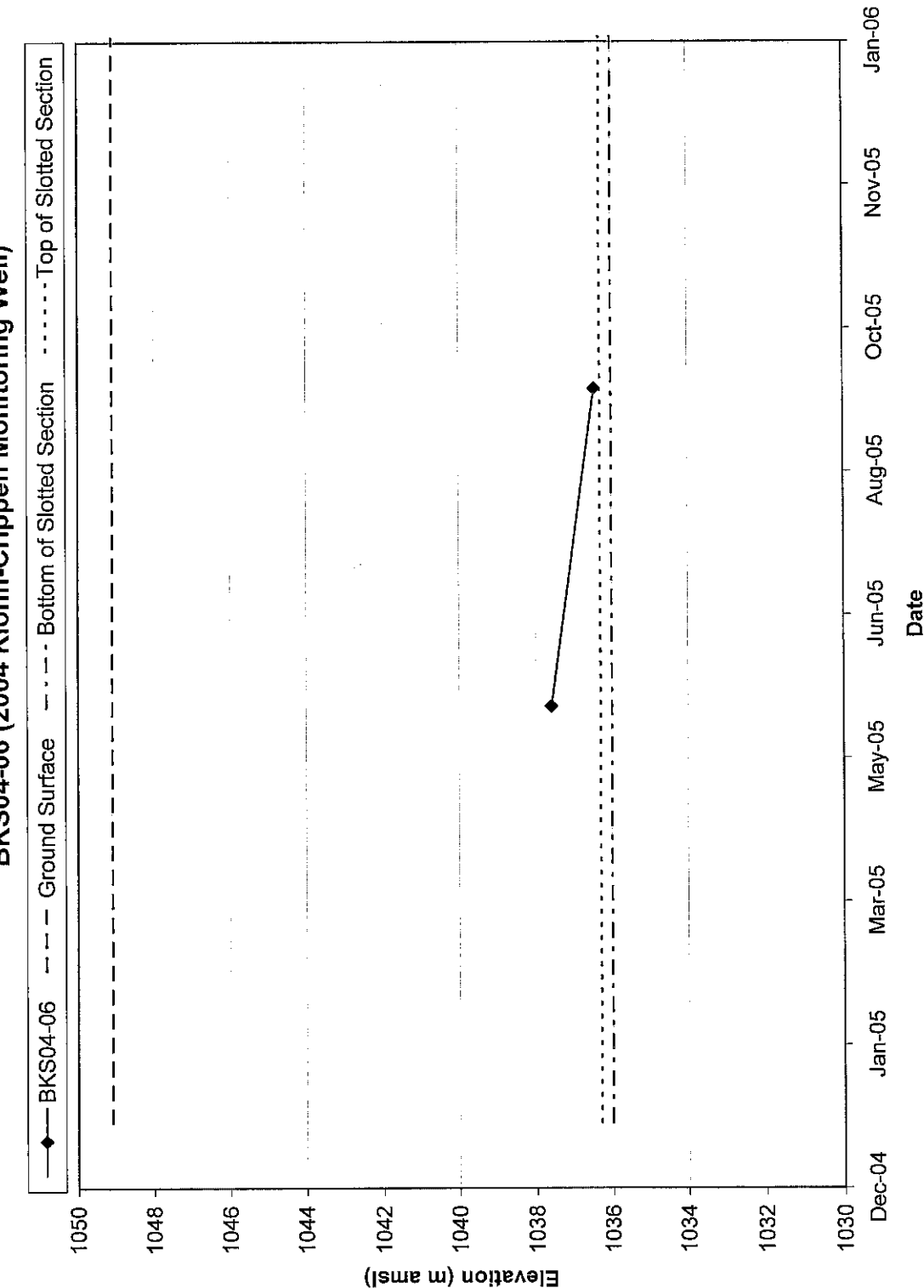


Instrument
Details

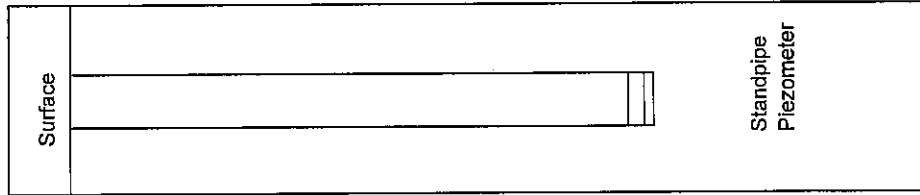


[illegible]

INTERMEDIATE DAM Piezometric Monitoring BKS04-06 (2004 Klohn-Crippen Monitoring Well)

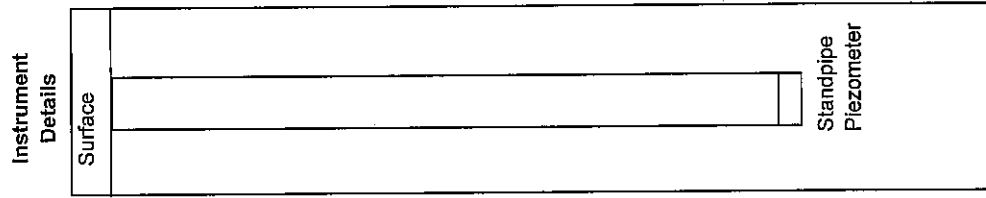
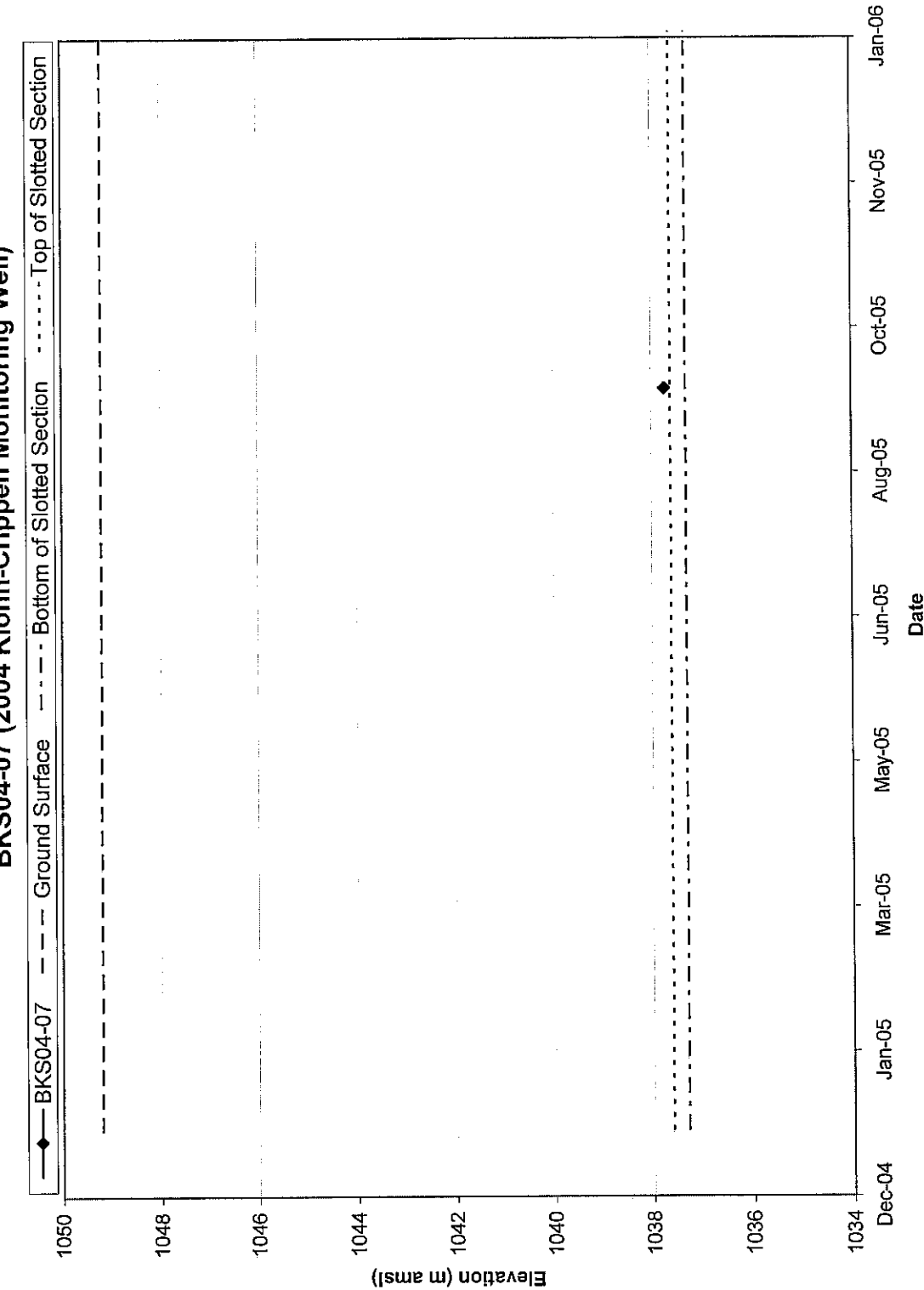


Instrument
Details



BKS04-07		Location:	Intermediate Dam South Abutment	2004 Stick-Up (m):	1.51
		Coordinates:	N 6913747 E 580407.6	Tip Elevation (m amsl):	1037.29
Surface Protector:	yes	Date Installed:	1996	2004 Surface Elevation (m amsl):	1049.2
				Screened Interval (m bgs):	11.5 - 11.81
Date		Water level from top of pipe (m)	Piezometric Elevation (m amsl)	Pond El. (m amsl)	Comments
26-May-05		14.155			Impossible reading
14-Sep-05		12.99	1037.72		

INTERMEDIATE DAM Piezometric Monitoring BKS04-07 (2004 Klohn-Crippen Monitoring Well)



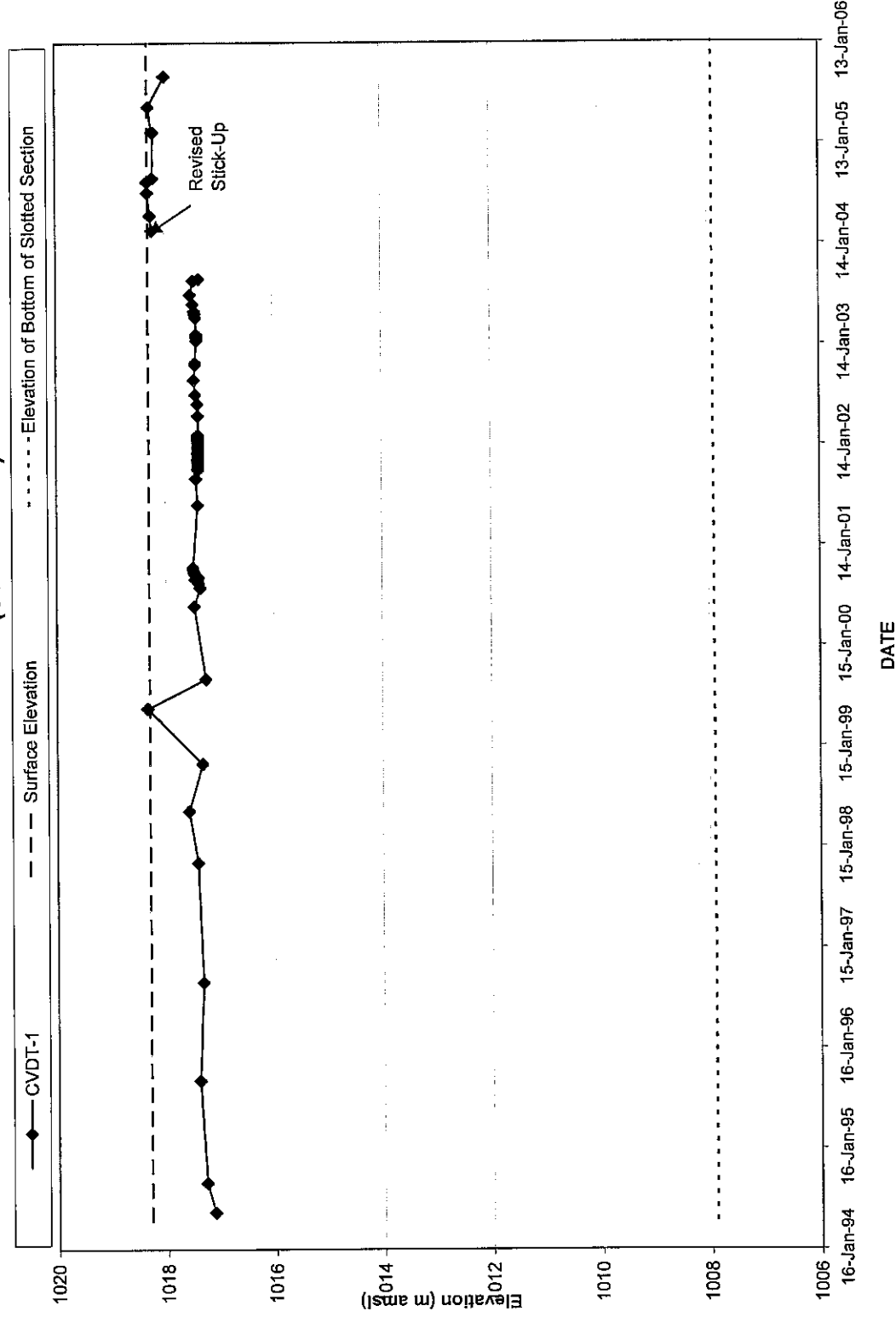
CROSS VALLEY DAM

PIEZOMETERS

CVDT-1		Location:	Cross Valley Dam Toe, black PVC adj. to X11 channel	2004 Stick-up (m):	0.27
		Coordinates:	8V580219 6914353	2004 Ground Elevation (m amsl):	1018.30
Surface Protector:	N/A	Date Installed:	1994	2004 Tip Elevation (m amsl):	1007.90
Date		Water Level from top of pipe (m)	Piezometric Elevation (m amsl)	Pond Elevation (m amsl)	Comments
31-May-94		-2.07	1017.13		
15-Sep-94		-1.92	1017.28		
22-Sep-95		-1.80	1017.40		
13-Sep-96		-1.87	1017.33	1029.915	
20-Nov-97		-1.78	1017.42		
26-May-98		-1.62	1017.58	1031.20	
13-Nov-98		-1.87	1017.33	1029.80	
3-Jun-99		-0.868	1018.33	1031.40	
18-Sep-99		-1.940	1017.26	~1029.2	
8-Jun-00		-1.73	1017.47	~1030.2	
14-Aug-00		-1.84	1017.36		
31-Aug-00		-1.81	1017.39		
7-Sep-00		-1.80	1017.40		
14-Sep-00		-1.75	1017.45		
21-Sep-00		-1.81	1017.39		
28-Sep-00		-1.76	1017.44		
6-Oct-00		-1.73	1017.47		
12-Oct-00		-1.73	1017.47		
20-Oct-00		-1.71	1017.49		
27-Oct-00		-1.71	1017.49		
10-Jun-01		-1.80	1017.40		
14-Sep-01		-1.77	1017.43		
16-Oct-01		-1.81	1017.39		
18-Oct-01		-1.81	1017.39		
19-Oct-01		-1.81	1017.39		
20-Oct-01		-1.81	1017.39		
21-Oct-01		-1.81	1017.39		
22-Oct-01		-1.81	1017.39		
25-Oct-01		-1.81	1017.39		
29-Oct-01		-1.81	1017.39		
1-Nov-01		-1.81	1017.39		
5-Nov-01		-1.81	1017.39		
6-Nov-01		-0.44	1017.39		Stick up changed
8-Nov-01		-0.44	1017.39		
12-Nov-01		-0.44	1017.39		
15-Nov-01		-0.44	1017.39		
19-Nov-01		-0.44	1017.39		
21-Nov-01		-0.44	1017.39		
23-Nov-01		-0.44	1017.39		pond elev approx - 8 ft.
26-Nov-01		-0.44	1017.39		daytime temp -34 C
28-Nov-01		-0.44	1017.39		
30-Nov-01		-0.44	1017.39		
3-Dec-01		-0.44	1017.39		
5-Dec-01		-0.44	1017.39		
12-Dec-01		-0.44	1017.39		
14-Dec-01		-0.44	1017.39		
15-Dec-01		-0.44	1017.39		
16-Dec-01		-0.44	1017.39		
17-Dec-01		-0.44	1017.39		
18-Dec-01		-0.44	1017.39		
19-Dec-01		-0.44	1017.39		
26-Dec-01		-0.44	1017.39		
2-Jan-02		-0.44	1017.39		
9-Jan-02		-0.44	1017.39		

CVDT-1		Location:	Cross Valley Dam Toe, black PVC adj. to X11 channel	2004 Stick-up (m):	0.27
		Coordinates:	8V580219 6914353	2004 Ground Elevation (m amsl):	1018.30
Surface Protector:	N/A	Date Installed:	1994	2004 Tip Elevation (m amsl):	1007.90
Date		Water Level from top of pipe (m)	Piezometric Elevation (m amsl)	Pond Elevation (m amsl)	Comments
16-Jan-02		-0.44	1017.39		
23-Jan-02		-0.44	1017.39		
30-Jan-02		-0.44	1017.39		
6-Feb-02		-0.44	1017.39		
13-Feb-02		-0.44	1017.39		
20-Feb-02		-0.44	1017.39		
1-May-02		-0.44	1017.39		
12-Jun-02		-0.435	1017.40		
17-Jul-02		-0.395	1017.44		
7-Aug-02					not read
9-Sep-02		-0.37	1017.46		
4-Nov-02		-0.395	1017.44		
10-Nov-02		-0.395	1017.44		
30-Jan-03		-0.42	1017.41		
9-Feb-03		-0.42	1017.41	1058.60	start siphon
11-Feb-03		-0.42	1017.41	1058.50	
13-Feb-03		-0.42	1017.41	1058.50	
18-Feb-03		-0.42	1017.41		
21-Feb-03		-0.42	1017.41	1058.48	
23-Apr-03		-0.405	1017.43	1030.14	
7-May-03		-0.39	1017.44		
16-May-03		-0.385	1017.45		
11-Jun-03		-0.355	1017.48		
15-Jul-03		-0.305	1017.53		
4-Sep-03		-0.36	1017.47		
10-Sep-03		-0.465	1017.37	996.28	
4-Mar-04		-0.345	1018.23		2004 survey data use from here on
8-Mar-04					Pulled ice and snow
26-Apr-04		-0.315	1018.26	997.85	
19-Jul-04		-0.27	1018.30		
26-Aug-04		-0.26	1018.31		
9-Sep-04		-0.36	1018.21		
22-Feb-05		-0.37	1018.20		Frozen
24-Feb-05		-0.35	1018.22		Frozen
26-May-05		-0.29	1018.28		
14-Sep-05		-0.585	1017.99		

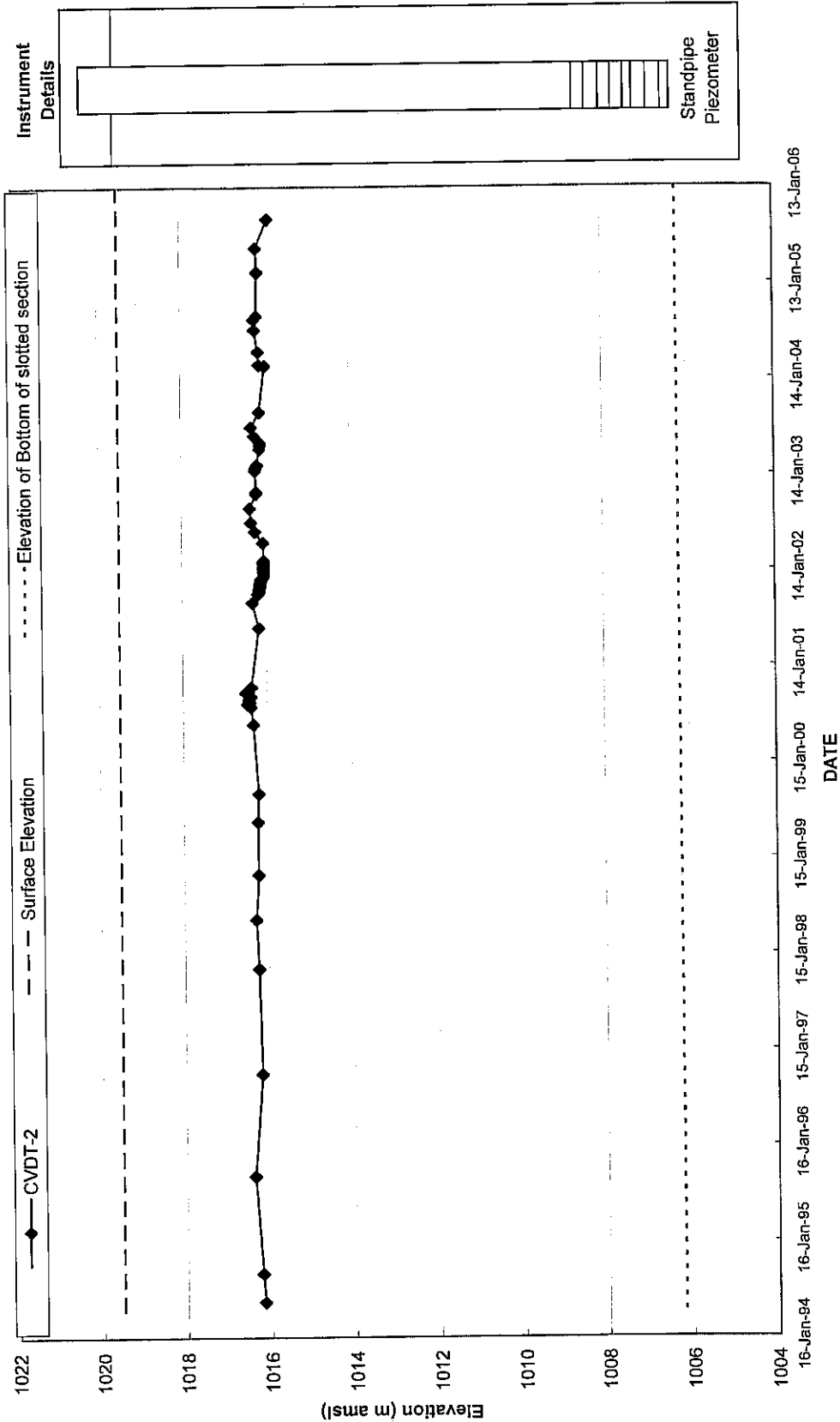
CROSS VALLEY DAM
Piezometric Monitoring
CVDT-1 Standpipe Piezometer
(Toe of Dam)



CVDT-2		Location:	Cross Valley Dam Toe black PVC adj. to W3 channel	Stick up:	1.52m/ 0.38m
		Coordinates:	N/A	Ground Elevation (m amsl):	1019.50
Surface Protector:	N/A	Date Installed:	1994	Tip Elevation (m amsl):	1006.20
Date		Water level from top of pipe (m)	Piezometric Elevation (m amsl)	Pond Elevation (m amsl)	Comments
31-May-94		-4.86	1016.16		
15-Sep-94		-4.81	1016.21		
21-Sep-95		-4.65	1016.37		
15-Oct-96		-4.84	1016.18	1029.915	
20-Nov-97		-4.78	1016.24		
26-May-98		-4.73	1016.29	1031.20	
13-Nov-98		-4.79	1016.23	1029.80	
3-Jun-99		-4.784	1016.24	1031.40	
18-Sep-99		-4.81	1016.21	~1029.2	
8-Jun-00		-4.70	1016.32	~1030.2	
14-Aug-00		-4.65	1016.37		
24-Aug-00		-4.57	1016.45		
31-Aug-00		-4.62	1016.40		
7-Sep-00		-4.60	1016.42		
14-Sep-00		-4.61	1016.41		
21-Sep-00		-4.65	1016.37		
28-Sep-00		-4.60	1016.42		
6-Oct-00		-4.53	1016.49		
12-Oct-00		-4.59	1016.43		
20-Oct-00		-4.61	1016.41		
27-Oct-00		-4.66	1016.36		
10-Jun-01		-4.85	1016.17		
14-Sep-01		-4.71	1016.31		
16-Oct-01		-4.83	1016.19		
18-Oct-01		-4.85	1016.17		
19-Oct-01		-4.86	1016.16		
20-Oct-01		-4.86	1016.16		
21-Oct-01		-4.86	1016.16		
22-Oct-01		-4.86	1016.16		
25-Oct-01		-4.87	1016.15		
29-Oct-01		-4.87	1016.15		
1-Nov-01		-4.875	1016.15		
5-Nov-01		-4.88	1016.14		
6-Nov-01		-3.74	1016.14		New stick-up of 0.38 m
8-Nov-01		-3.74	1016.14		
12-Nov-01		-3.76	1016.12		
15-Nov-01		-3.76	1016.12		
19-Nov-01		-3.755	1016.13		
21-Nov-01		-3.75	1016.13		
23-Nov-01		-3.75	1016.13		pond elev approx - 8 ft.
26-Nov-01		-3.75	1016.13		daytime temp -34 C
28-Nov-01		-3.76	1016.12		
30-Nov-01		-3.76	1016.12		
3-Dec-01		-3.76	1016.12		
5-Dec-01		-3.775	1016.11		
12-Dec-01		-3.775	1016.11		
14-Dec-01		-3.775	1016.11		
15-Dec-01		-3.8	1016.08		
16-Dec-01		-3.79	1016.09		
17-Dec-01		-3.81	1016.07		
18-Dec-01		-3.815	1016.07		
19-Dec-01		-3.82	1016.06		
26-Dec-01		-3.84	1016.04		
2-Jan-02		-3.84	1016.04		
9-Jan-02		-3.835	1016.05		

CVDT-2		Location:	Cross Valley Dam Toe black PVC adj. to W3 channel	Stick up:	1.52m/ 0.38m
		Coordinates:	N/A	Ground Elevation (m amsl):	1019.50
Surface Protector:	N/A	Date Installed:	1994	Tip Elevation (m amsl):	1006.20
Date		Water level from top of pipe (m)	Piezometric Elevation (m amsl)	Pond Elevation (m amsl)	Comments
16-Jan-02		-3.84	1016.04		
23-Jan-02		-3.83	1016.05		
30-Jan-02		-3.84	1016.04		
6-Feb-02		-3.84	1016.04		
13-Feb-02		-3.83	1016.05		
20-Feb-02		-3.84	1016.04		
1-May-02		-3.83	1016.05		
12-Jun-02		-3.64	1016.24		
17-Jul-02		-3.545	1016.34		
7-Aug-02					not read
9-Sep-02		-3.52	1016.36		
4-Nov-02		-3.67	1016.21		
10-Nov-02		-3.68	1016.20		
30-Jan-03		-3.655	1016.23		
9-Feb-03		-3.66	1016.22	1058.60	start siphon
11-Feb-03		-3.665	1016.22	1058.50	
13-Feb-03		-3.675	1016.21	1058.50	
18-Feb-03		-3.69	1016.19		
21-Feb-03		-3.695	1016.19	1026.18	
23-Apr-03		-3.76	1016.12	997.84	
7-May-03		-3.775	1016.11		
16-May-03		-3.775	1016.11		
11-Jun-03		-3.64	1016.24		
15-Jul-03		-3.57	1016.31		
10-Sep-03		-3.76	1016.12		
4-Mar-04		-3.9	1015.98		No 2004 survey data available
8-Mar-04		-3.77	1016.11		
26-Apr-04		-3.75	1016.13		
19-Jul-04		-3.665	1016.215		
26-Aug-04		-3.655	1016.225		
9-Sep-04		-3.72	1016.16		
22-Feb-05		-3.735	1016.145		
24-Feb-05		-3.745	1016.135		
26-May-05		-3.71	1016.17		
14-Sep-05		-3.99	1015.89		

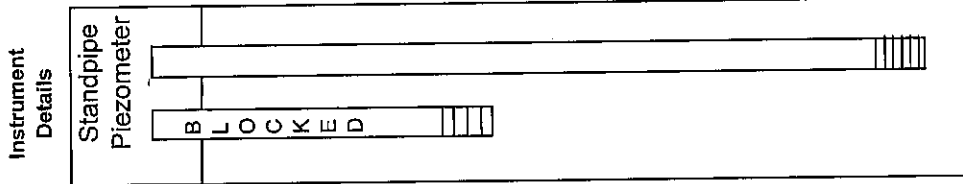
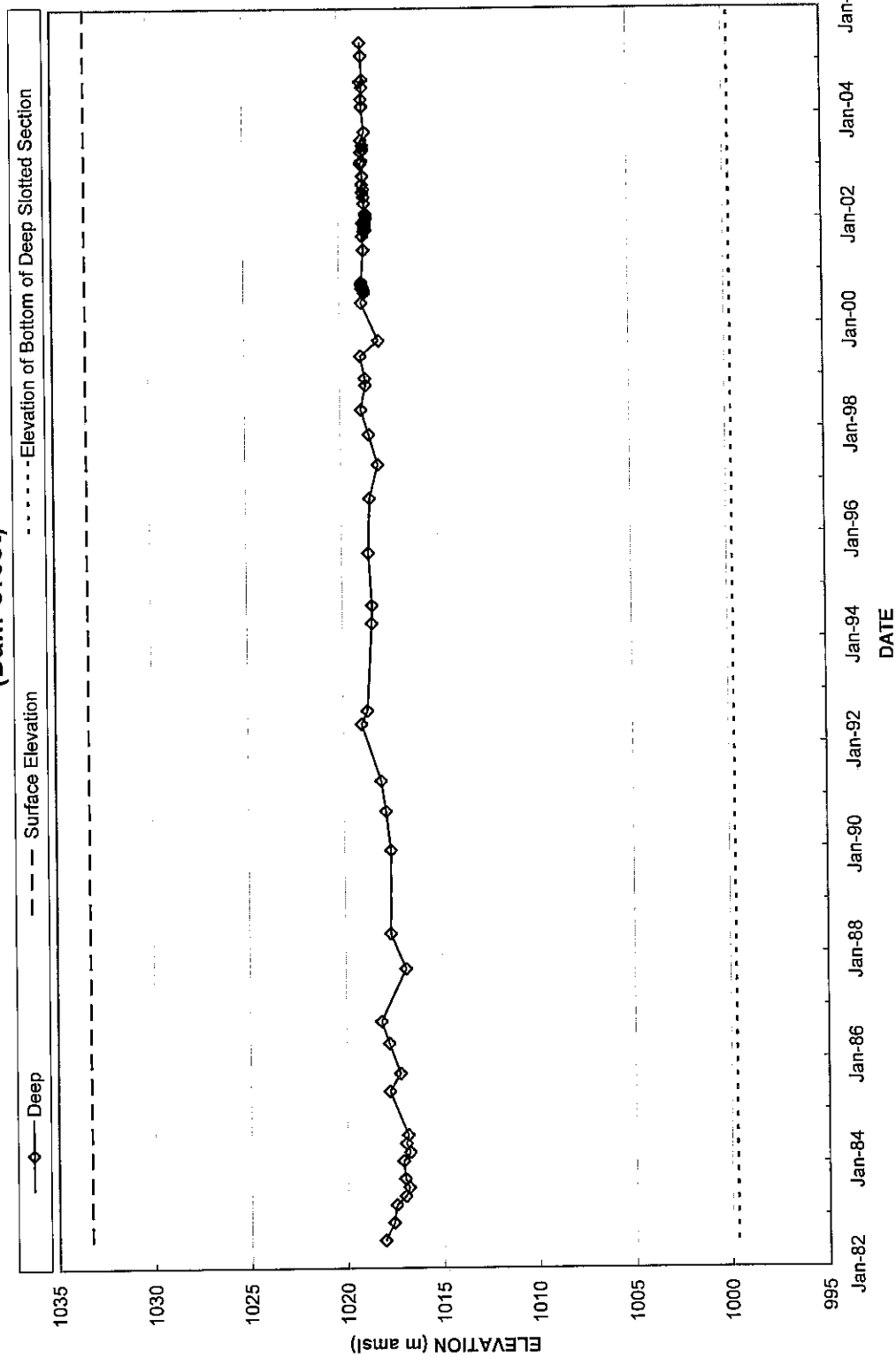
CROSS VALLEY DAM
Piezometric Monitoring
CVDT-2 Standpipe Piezometer
(Toe of Dam)



CVDC-4		Location:	Cross Valley Dam Crest Stn. 0+215	2004 Ground Elevation (m amsl):	1033.3		
		Coordinates:	8V580266 6914331	Shallow Tip Elevation (m amsl):	1007.9	2004 Shallow stick-up 2004 (m):	0.11
Surface Protector:	yes	Date Installed:	1981	Deep Tip Elevation (m amsl):	999.7	2004 Deep stick-up (m):	0.3
Date		Water Level from top of pipe (m)		Piezometric Elevation (m amsl)		Pond Elevation (m amsl)	Comments
		Shallow	Deep	Shallow	Deep		
Aug-82		15.10	15.26	1018.33	1018.04		
Dec-82		15.82	15.71	1017.61	1017.59		
Apr-83		15.71	15.84	1017.72	1017.46	1029.33	
Jun-83		16.54	16.33	1016.89	1016.97	1025.88	
Aug-83		16.57	16.52	1016.86	1016.78		
Oct-83		16.34	16.30	1017.09	1017.00		
Feb-84		16.21	16.22	1017.22	1017.08		
Mar-84						1030.60	
Apr-84		16.75	16.58	1016.68	1016.72		
Jun-84		16.40	16.37	1017.03	1016.93	1026.80	
Aug-84		16.50	16.48	1016.93	1016.82		
Jun-85		15.50	15.55	1017.93	1017.75	1031.20	
Oct-85		16.00	16.10	1017.43	1017.20		
May-86		15.58	15.54	1017.85	1017.76	1030.70	
Oct-86		14.99	15.14	1018.44	1018.16	1030.90	
Oct-87		15.42	16.45	1018.01	1016.85		
Jun-88			15.67		1017.63		
Jan-90			15.78		1017.59		
Oct-90			15.54		1017.83		
May-91			15.31		1018.06		
Jun-92			14.32		1019.05		
Sep-92			14.63		1018.74		
May-94			14.93		1018.47		
Sep-94			14.95		1018.45		
Sep-95			14.80		1018.60		
13-Sep-96			14.89		1018.51	1029.915	
7-May-97			15.34		1018.06		
2-Dec-97			14.89		1018.51		shallow standpipe - dry
26-May-98			14.66		1018.92	1031.2	
13-Nov-98			14.91		1018.67	1029.8	
29-Dec-98			14.89		1018.69	1029.8	
3-Jun-99			14.671		1018.91	1031.4	
18-Sep-99			15.60		1017.98	~1029.2	
8-Jun-00			14.73		1018.85	~1030.2	
14-Aug-00			14.88		1018.70		
31-Aug-00			14.86		1018.72		
7-Sep-00			14.83		1018.75		
14-Sep-00			14.76		1018.82		
21-Sep-00			14.84		1018.74		shallow standpipe - plugged
28-Sep-00			14.79		1018.79		shallow standpipe - plugged
6-Oct-00			14.75		1018.83		shallow standpipe - n.r.
12-Oct-00			14.76		1018.82		shallow standpipe - n.r.
20-Oct-00			14.74		1018.84		blocked @ 1.25m
27-Oct-00			14.76		1018.82		shallow standpipe - blocked @ 7.60m
10-Jun-01		7.67	14.87		1018.71		shallow standpipe - blocked @ 7.61m
14-Sep-01		7.61	14.82		1018.76		shallow standpipe - blocked @ 7.61m
16-Oct-01		7.61	14.90		1018.68		shallow standpipe - blocked @ 7.62m
18-Oct-01		7.61	14.93		1018.65		shallow standpipe - blocked @ 7.61m
19-Oct-01		7.61	14.95		1018.63		shallow standpipe - blocked @ 7.61m
20-Oct-01		7.61	14.96		1018.62		shallow standpipe - blocked @ 7.61m
21-Oct-01		7.61	14.97		1018.61		shallow standpipe - blocked @ 7.61m
22-Oct-01		7.61	14.98		1018.60		shallow standpipe - blocked @ 7.61m
25-Oct-01		7.61	14.98		1018.60		shallow standpipe - blocked @ 7.61m
29-Oct-01		7.61	14.98		1018.60		shallow standpipe - blocked @ 7.61m
1-Nov-01		7.61	14.975		1018.61		shallow standpipe - blocked @ 7.61m
5-Nov-01		7.61	14.97		1018.61		
6-Nov-01		7.61	14.97		1018.61		
8-Nov-01		7.61	14.965		1018.62		
12-Nov-01		7.61	14.96		1018.62		
15-Nov-01		7.61	14.95		1018.63		
19-Nov-01		7.61	14.95		1018.63		
21-Nov-01		7.61	14.95		1018.63		
23-Nov-01		7.61	14.94		1018.64		pond elev approx - 8 ft.
26-Nov-01		7.61	14.95		1018.63		daytime temp -34 C
28-Nov-01		7.61	14.94		1018.64		
30-Nov-01		7.61	14.94		1018.64		
3-Dec-01		7.61	14.96		1018.62		
5-Dec-01		7.61	14.97		1018.61		

CVDC-4		Location:	Cross Valley Dam Crest Stn. 0+215	2004 Ground Elevation (m amsl):	1033.3		
		Coordinates:	8V580266 6914331	Shallow Tip Elevation (m amsl):	1007.9	2004 Shallow stick-up 2004 (m):	0.11
Surface Protector:	yes	Date Installed:	1981	Deep Tip Elevation (m amsl):	999.7	2004 Deep stick-up (m):	0.3
Date		Water Level from top of pipe (m)		Piezometric Elevation (m amsl)		Pond Elevation (m amsl)	Comments
		Shallow	Deep	Shallow	Deep		
12-Dec-01		7.61	14.94		1018.64		
14-Dec-01		7.61	14.82		1018.76		
15-Dec-01		7.61	14.84		1018.74		
16-Dec-01		7.61	14.87		1018.71		
17-Dec-01		7.61	14.9		1018.68		
18-Dec-01		7.61	14.92		1018.66		
19-Dec-01		7.61	14.94		1018.64		
26-Dec-01		7.61	14.96		1018.62		
2-Jan-02		7.61	14.94		1018.64		
9-Jan-02		7.61	14.99		1018.59		
16-Jan-02		7.61	15.04		1018.54		
23-Jan-02		7.61	15.02		1018.56		
30-Jan-02		7.61	15.02		1018.56		
6-Feb-02		7.61	15.00		1018.58		
13-Feb-02		7.61	15		1018.58		
20-Feb-02		7.61	14.99		1018.59		
1-May-02		7.61	14.915		1018.67		
12-Jun-02		7.61	14.895		1018.69		
17-Jul-02		7.61	14.845		1018.74		
7-Aug-02		7.61	14.895		1018.69		
9-Sep-02		7.61	14.82		1018.76		
4-Nov-02		7.61	14.86		1018.72		
10-Nov-02		7.61	14.85		1018.73		
30-Jan-03		7.61	14.75		1018.83		
9-Feb-03		7.61	14.755		1018.83	1058.6	start siphon
11-Feb-03		7.61	14.765		1018.82	1058.5	
13-Feb-03		7.61	14.78		1018.80	1058.5	
18-Feb-03		7.61	14.8		1018.78		
21-Feb-03		7.61	14.83		1018.75	1026.18	
23-Apr-03		7.61	14.78		1018.80	997.84	
7-May-03		7.61	14.875		1018.71		
16-May-03		7.61	14.87		1018.71		
11-Jun-03		7.61	14.85		1018.73		
15-Jul-03		7.61	14.78		1018.80		
10-Sep-03		7.61	14.965		1018.62		
4-Mar-04		7.61	14.84		1018.76		2004 Survey data used from here on
8-Mar-04		7.61	14.86		1018.74		
26-Apr-04		7.61	14.83		1018.77		
19-Jul-04		7.61	14.875		1018.725		
26-Aug-04		7.61	14.775		1018.825		
9-Sep-04		7.61	14.89		1018.71		
22-Feb-05		7.61	14.84		1018.76		
23-Feb-05		7.61	14.84		1018.76		
24-Feb-05		7.61	14.845		1018.76		
26-May-05		7.61	14.79		1018.81		
14-Sep-05		7.61	15.12		1018.48		

CROSS VALLEY DAM Piezometric Monitoring CVDC-4 Deep Standpipe (Dam Crest)



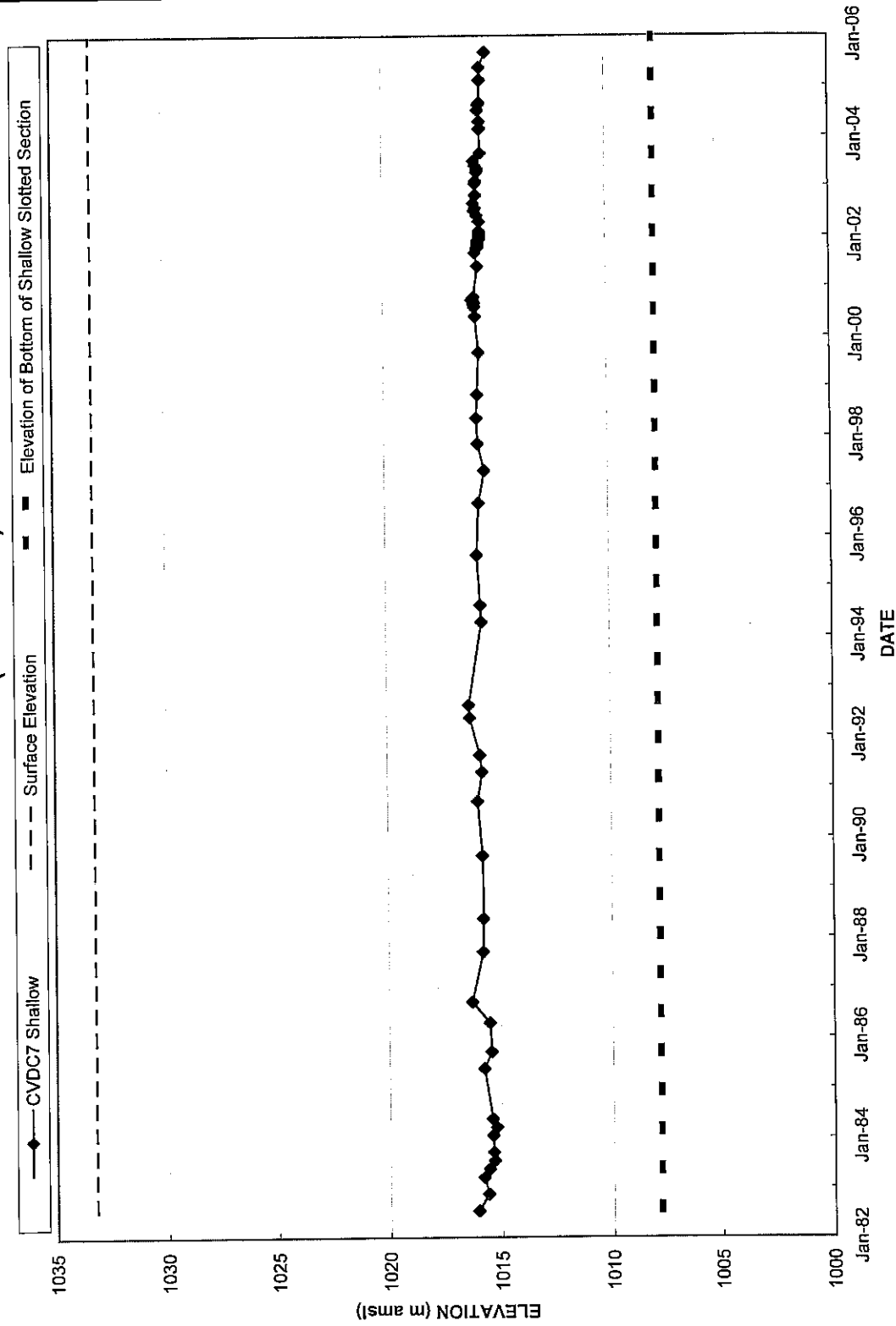
Faro Mine Instrumentation - Cross Valley Dam

CVDC-7		Location:	Cross Valley Dam Crest St.0+450	2004 Ground Elevation (m amsl):	1033.24		
		Coordinates:	8V580158 6914127	2004 Shallow Tip Elevation (m amsl):	1007.80	2004 Shallow stick-up (m):	0.31
Surface Protector:	yes	Date Installed:	1981	Deep Tip Elevation (m amsl):	1002.90	2004 Deep stick-up (m):	0.23
Date		Water Level from top of pipe (m)		Piezometric Elevation (m amsl)		Pond Elevation (m amsl)	Comments
		Shallow	Deep	Shallow	Deep		
Aug-82		17.58	14.44	1016.04	1019.09		
Dec-82		18.02	15.10	1015.60	1018.43		
Apr-83		17.83	15.24	1015.79	1018.29	1029.33	
Jun-83		18.06	14.88	1015.56	1018.65	1025.88	
Aug-83		18.30	16.24	1015.32	1017.29		
Oct-83		18.26	16.01	1015.36	1017.52		
Feb-84		18.24	15.92	1015.38	1017.61		
Mar-84						1030.60	
Apr-84		18.41	16.36	1015.21	1017.17		
Jun-84		18.22	16.06	1015.40	1017.47	1026.80	
Jun-85		17.87	16.06	1015.75	1017.47	1031.20	
Oct-85		18.20	15.55	1015.42	1017.98		
May-86		18.14	15.14	1015.48	1018.39	1030.70	
Oct-86		17.35	14.40	1016.27	1019.13	1030.90	
Oct-87		17.85	14.85	1015.77	1018.68		
Jun-88		17.90	15.10	1015.73	1018.59		
Sep-89		17.88	15.03	1015.75	1018.66		
Oct-90		17.68	15.03	1015.95	1018.66		
May-91		17.89	15.36	1015.74	1018.33		
Sep-91		17.81		1015.82			
Jun-92		17.37	14.48	1016.26	1019.21		
Sep-92		17.33	14.66	1016.30	1019.03		
May-94		17.99	15.50	1015.70	1018.16		
Sep-94		17.95	15.47	1015.74	1018.19		
Sep-95		17.81	15.08	1015.88	1018.58		
13-Sep-96		17.93	15.34	1015.76	1018.32	1029.915	
7-May-97		18.19	16.07	1015.50	1017.59		
20-Nov-97		17.91	15.29	1015.78	1018.37		
26-May-98		17.87	15.12	1015.82	1018.54	1031.2	
15-Nov-98		17.91	15.38	1015.78	1018.28	1029.8	
3-Jun-99		n.r.	15.10		1018.56	1031.4	
18-Sep-99		18.00	15.59	1015.69	1018.07	~1029.2	
8-Jun-00		17.85	15.08	1015.84	1018.58	~1030.2	
14-Aug-00		17.82	15.10	1015.87	1018.56		
31-Aug-00		17.80	15.16	1015.89	1018.50		
7-Sep-00		17.78	15.09	1015.91	1018.57		
14-Sep-00		17.78	15.80	1015.91	1017.86		
19-Sep-00		17.82	15.19	1015.87	1018.47		
21-Sep-00		17.82	15.16	1015.87	1018.50		
28-Sep-00		17.77	15.60	1015.92	1018.06		
6-Oct-00		17.71	14.96	1015.98	1018.70		
12-Oct-00		17.75	15.03	1015.94	1018.63		
20-Oct-00		17.76	15.00	1015.93	1018.66		
27-Oct-00		17.80	15.08	1015.89	1018.58		
10-Jun-01		17.97	15.39	1015.72	1018.27		
14-Sep-01		17.86	15.16	1015.83	1018.50		
16-Oct-01		17.95	15.43	1015.74	1018.23		
18-Oct-01		17.97	15.48	1015.72	1018.18		
19-Oct-01		17.98	15.49	1015.71	1018.17		
20-Oct-01		17.98	15.49	1015.71	1018.17		
21-Oct-01		17.98	15.49	1015.71	1018.17		
22-Oct-01		17.98	15.5	1015.71	1018.16		
25-Oct-01		17.99	15.51	1015.70	1018.15		
29-Oct-01		17.99	15.51	1015.70	1018.15		
1-Nov-01		17.985	15.495	1015.71	1018.17		
5-Nov-01		17.99	15.505	1015.70	1018.16		
6-Nov-01		17.99	15.505	1015.70	1018.16		
8-Nov-01		17.99	15.51	1015.70	1018.15		
12-Nov-01		18	15.51	1015.69	1018.15		
15-Nov-01		18	15.51	1015.69	1018.15		
19-Nov-01		18	15.51	1015.69	1018.15		

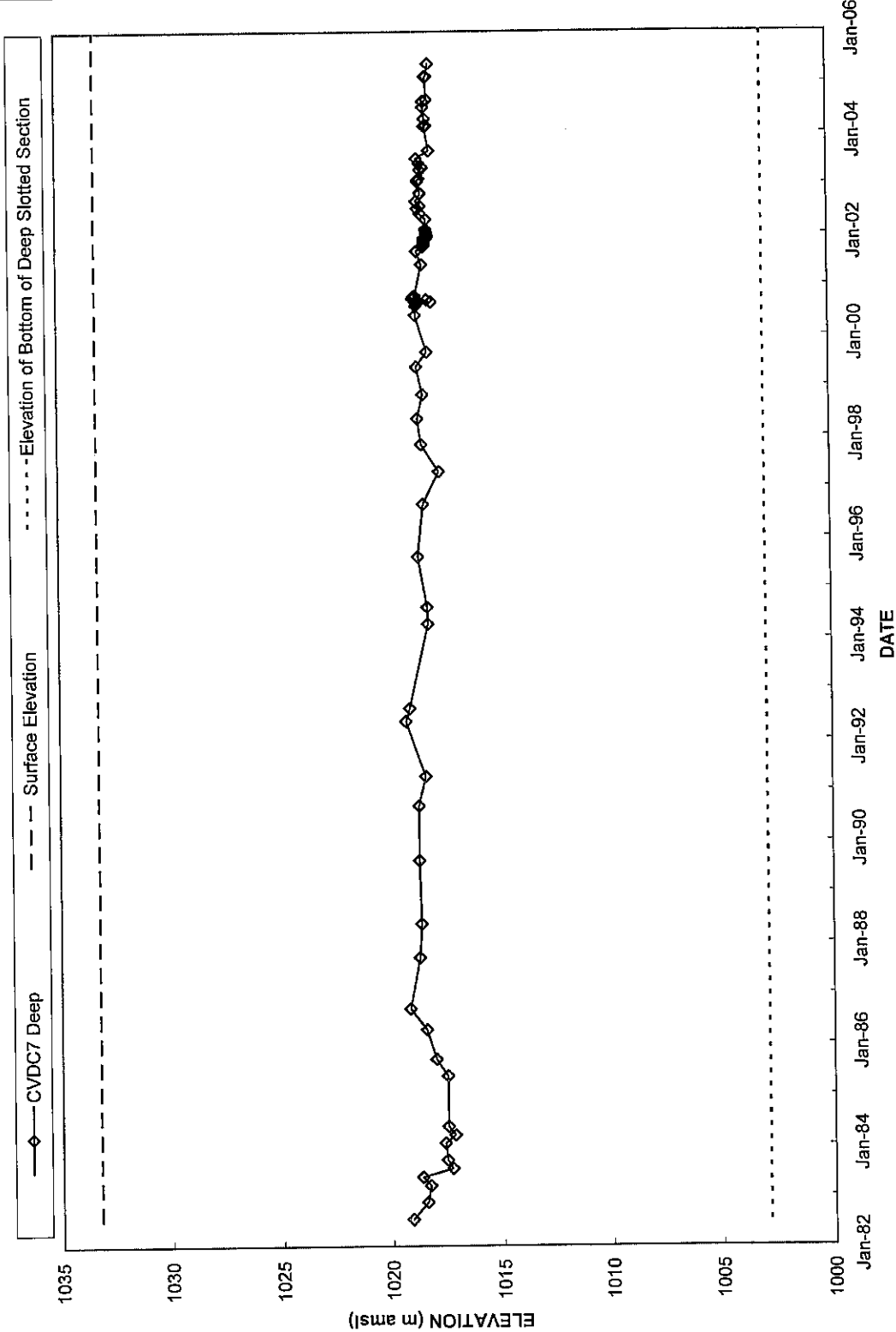
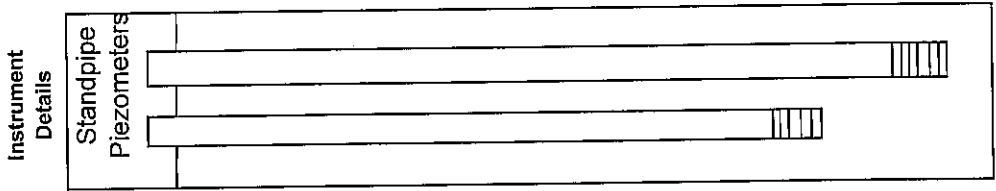
Faro Mine Instrumentation - Cross Valley Dam

CVDC-7		Location:	Cross Valley Dam Crest St.0+450	2004 Ground Elevation (m amsl):	1033.24		
		Coordinates:	8V560158 6914127	2004 Shallow Tip Elevation (m amsl):	1007.80	2004 Shallow stick-up (m):	0.31
Surface Protector:	yes	Date Installed:	1981	Deep Tip Elevation (m amsl):	1002.90	2004 Deep stick-up (m):	0.23
Date		Water Level from top of pipe (m)		Piezometric Elevation (m amsl)		Pond Elevation (m amsl)	Comments
		Shallow	Deep	Shallow	Deep		
21-Nov-01		17.99	15.495	1015.70	1018.17		
23-Nov-01		17.99	15.495	1015.70	1018.17		pond elev approx - 8 ft.
26-Nov-01		18	15.495	1015.69	1018.17		daytime temp -34 C
28-Nov-01		18	15.5	1015.69	1018.16		
30-Nov-01		18.01	15.5	1015.68	1018.16		
3-Dec-01		18.01	15.51	1015.68	1018.15		
5-Dec-01		18.01	15.52	1015.68	1018.14		
12-Dec-01		18.01	15.52	1015.68	1018.14		
14-Dec-01		18.01	15.5	1015.68	1018.16		
15-Dec-01		18.02	15.54	1015.67	1018.12		
16-Dec-01		18.03	15.58	1015.66	1018.08		
17-Dec-01		18.04	15.61	1015.65	1018.05		
18-Dec-01		18.05	15.63	1015.64	1018.03		
19-Dec-01		18.06	15.65	1015.63	1018.01		
26-Dec-01		18.07	15.66	1015.62	1018.00		
2-Jan-02		18.07	15.65	1015.62	1018.01		
9-Jan-02		18.08	15.66	1015.61	1018.00		
16-Jan-02		18.08	15.65	1015.61	1018.01		
23-Jan-02		18.07	15.63	1015.62	1018.03		
30-Jan-02		18.08	15.63	1015.61	1018.03		
6-Feb-02		18.075	15.62	1015.62	1018.04		
13-Feb-02		18.07	15.6	1015.62	1018.06		
20-Feb-02		18.075	15.6	1015.62	1018.06		
1-May-02		18.07	15.6	1015.62	1018.06		Water being discharged from the polishing pond
12-Jun-02		17.975	15.35	1015.72	1018.31		
17-Jul-02		17.85	15.225	1015.84	1018.44		
7-Aug-02		17.9	15.35	1015.79	1018.31		
9-Sep-02		17.815	15.17	1015.88	1018.49		
4-Nov-02		17.91	15.36	1015.78	1018.30		
10-Nov-02		17.91	15.355	1015.78	1018.31		
30-Jan-03		17.895	15.235	1015.80	1018.43		
9-Feb-03		17.9	15.245	1015.79	1018.42	1058.6	start siphon
11-Feb-03		17.905	15.256	1015.79	1018.40	1058.5	
13-Feb-03		17.91	15.28	1015.78	1018.38	1058.5	
18-Feb-03		17.925	15.31	1015.77	1018.35		
21-Feb-03		17.93	15.32	1015.76	1018.34	1026.18	
23-Apr-03		17.98	15.37	1015.71	1018.29	997.84	
7-May-03		18.01	15.47	1015.68	1018.19		
16-May-03		18.01	15.455	1015.68	1018.21		
11-Jun-03		17.91	15.33	1015.78	1018.33		
15-Jul-03		17.84	15.205	1015.85	1018.46		
10-Sep-03		18	15.585	1015.55	1017.88		
4-Mar-04		17.97	15.39	1015.58	1018.08		2004 Survey data used from here on
8-Mar-04		18	15.46	1015.55	1018.01		
26-Apr-04		17.98	15.4	1015.57	1018.07		
19-Jul-04		17.91	15.33	1015.64	1018.14		
26-Aug-04		17.93	15.34	1015.619	1018.129		
9-Sep-04		17.985	15.5	1015.564	1017.97		

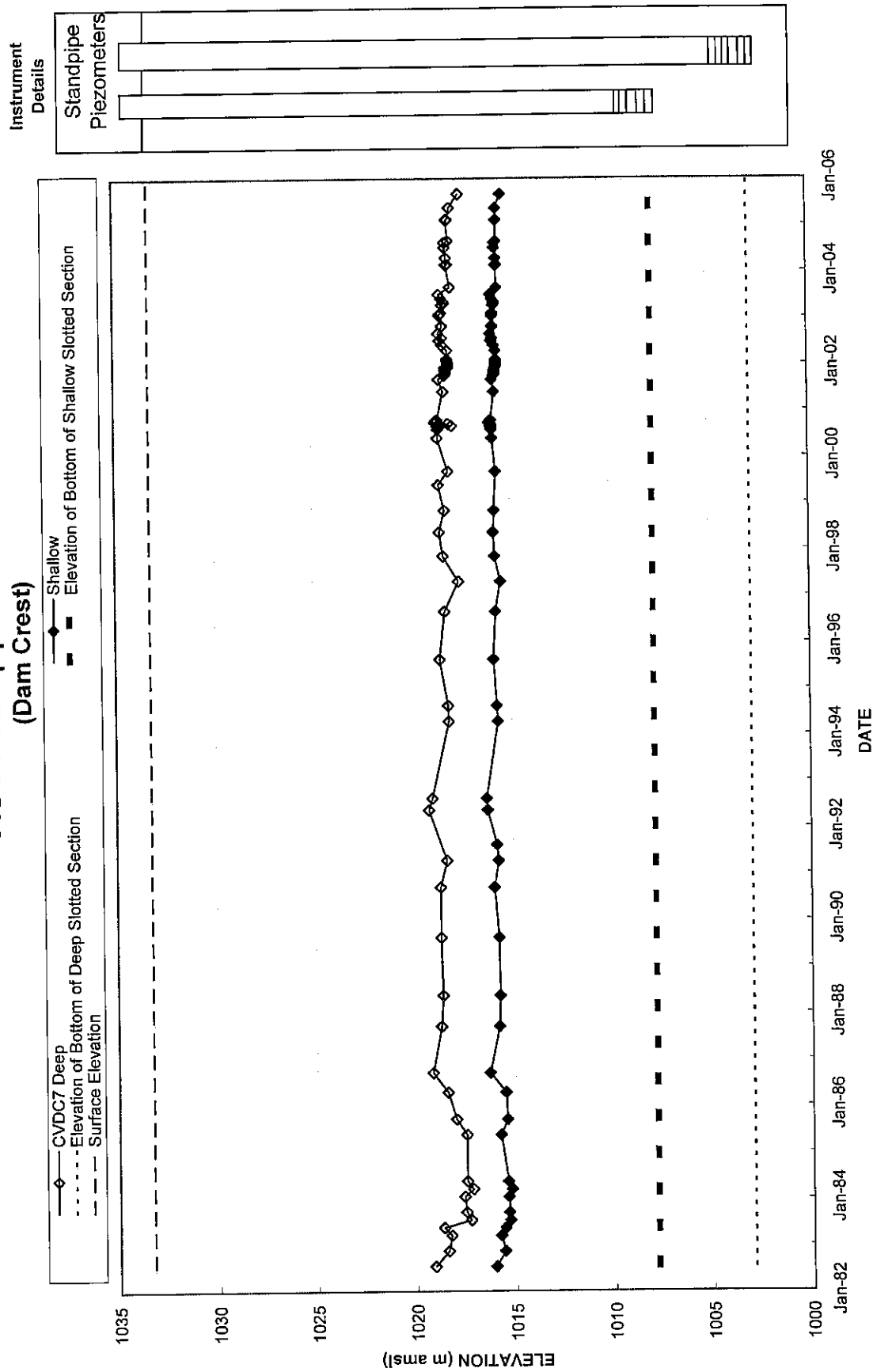
CROSS VALLEY DAM
Piezometric Monitoring
CVDC-7 Shallow Standpipe Piezometer
(Dam Crest)



CROSS VALLEY DAM
Piezometric Monitoring
CVDC-7 Deep Standpipe Piezometer
(Dam Crest)



CROSS VALLEY DAM
Piezometric Monitoring
CVDC-7 Standpipe Piezometers
(Dam Crest)



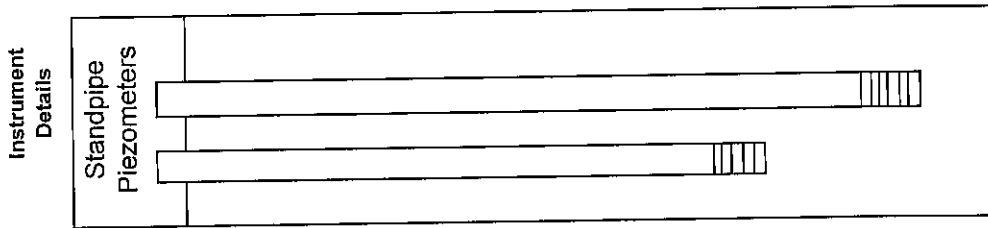
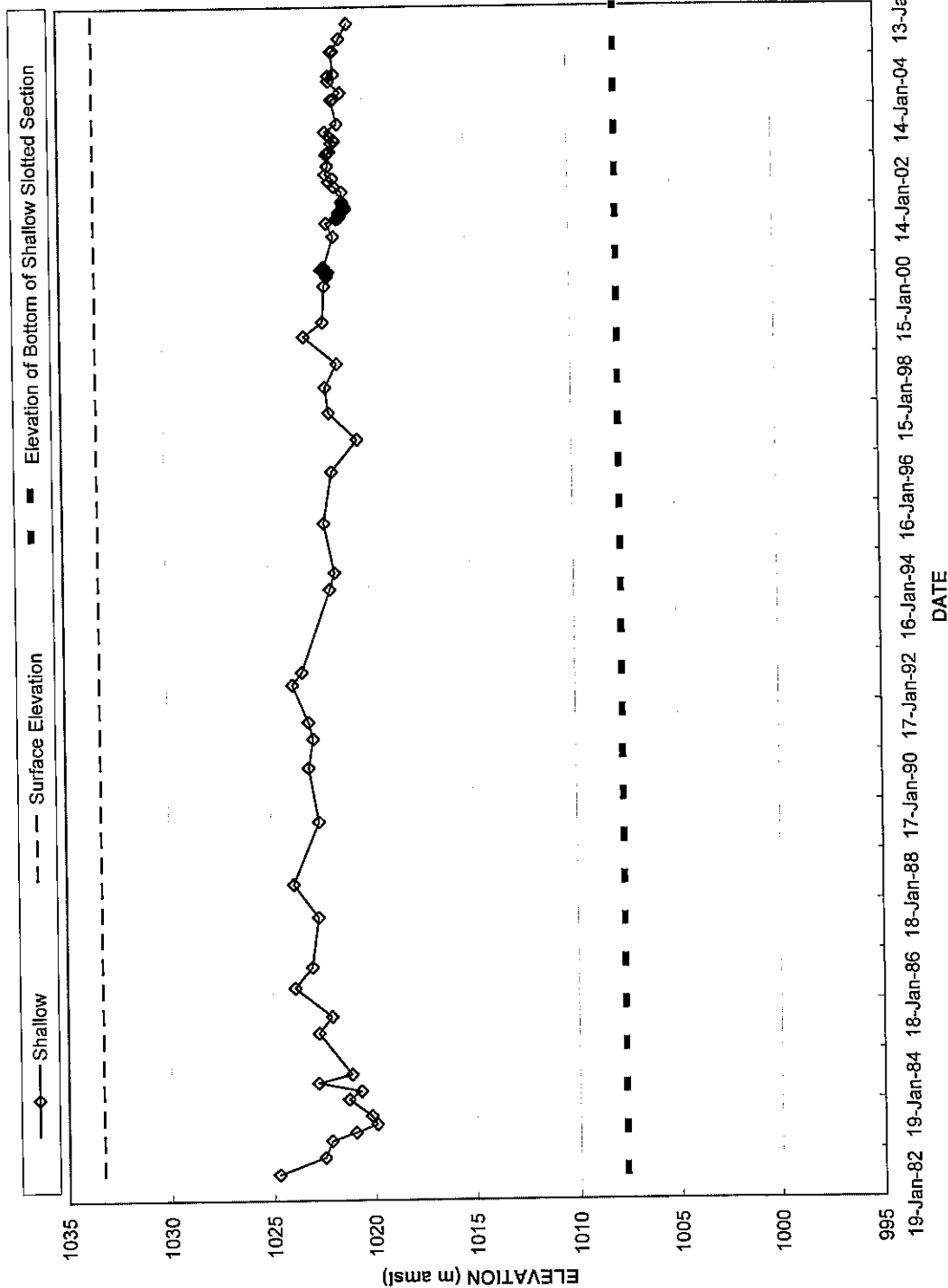
Faro Mine Instrumentation - Cross Valley Dam

CVDC-9		Location:	Cross Valley Dam Crest St.0+565	2004 Ground Elevation (m amsl):	1033.28		
		Coordinates:	8V580096 6913998	2004 Shallow Tip Elevation (m amsl)	1007.70	2004 Shallow stick-up (m):	0.27
Surface Protector:	yes	Date Installed:	1981	2004 Deep Tip Elevation (m amsl):	1000.70	2004 Deep stick-up (m):	0.19
Date		Water Level below top of pipe (m)	Water Level below top of pipe (m)	Piezometric Elevation (m amsl)		Pond Elevation (m amsl)	Comments
		Shallow	Deep	Shallow	Deep		
1-Aug-82		8.80	8.85	1024.74	1024.61		
1-Dec-82		11.04	9.00	1022.50	1024.46		
1-Apr-83		11.38	9.81	1022.16	1023.65	1029.33	
1-Jun-83		12.58	10.74	1020.96	1022.72	1025.88	
1-Aug-83		13.63	11.90	1019.91	1021.56		
1-Oct-83		13.36	11.13	1020.18	1022.33		
1-Feb-84		12.24	10.67	1021.30	1022.79		
1-Mar-84						1030.60	
1-Apr-84		12.87	11.65	1020.67	1021.81		
1-Jun-84		10.75	12.28	1022.79	1021.18	1026.80	
1-Aug-84		12.41	11.05	1021.13	1022.41		
1-Jun-85		10.80	8.98	1022.74	1024.48	1031.20	
1-Oct-85		11.45	8.25	1022.09	1025.21		
1-May-86		9.65	11.18	1023.89	1022.28	1030.70	
1-Oct-86		10.51	8.79	1023.03	1024.67	1030.90	
1-Oct-87		10.85	9.10	1022.68	1024.36		
1-Jun-88		9.74	9.42	1023.90	1024.11		
1-Sep-89		11.01	9.07	1022.63	1024.46		
1-Oct-90		10.54	8.83	1023.10	1024.70		
1-May-91		10.79	9.14	1022.85	1024.39		
1-Sep-91		10.56		1023.08			
1-Jun-92		9.79	7.92	1023.85	1025.61		
1-Sep-92		10.27	8.29	1023.37	1025.24		
1-May-94		11.68	9.49	1021.94	1024.06		
1-Sep-94		11.93	9.82	1021.69	1023.73		
1-Sep-95		11.42	8.86	1022.20	1024.69		
13-Sep-96		11.84	9.52	1021.78	1024.03	1029.915	
7-May-97		13.15	11.57	1020.48	1021.99		
20-Nov-97		11.74	9.58	1021.88	1023.97		
26-May-98		11.57	9.11	1022.05	1024.44	1031.2	
13-Nov-98		12.19	9.90	1021.43	1023.65	1029.8	
3-Jun-99		10.560	8.868	1023.06	1024.68	1031.4	
18-Sep-99		11.50	10.25	1022.12	1023.30	~1029.2	
8-Jun-00		11.60	8.90	1022.02	1024.65	~1030.2	
14-Aug-00		11.73	9.19	1021.89	1024.36		
31-Aug-00		11.77	9.30	1021.85	1024.25		
7-Sep-00		11.66	9.12	1021.96	1024.43		
14-Sep-00		11.65	9.30	1021.97	1024.25		
19-Sep-00		11.83	9.34	1021.79	1024.21		
21-Sep-00		11.78	9.28	1021.84	1024.27		
28-Sep-00		11.61	9.40	1022.01	1024.15		
6-Oct-00		11.46	8.89	1022.16	1024.66		
12-Oct-00		11.57	9.00	1022.05	1024.55		
20-Oct-00		11.53	8.91	1022.09	1024.64		
27-Oct-00		11.62	9.03	1022.00	1024.52		
10-Jun-01		12.09	9.63	1021.53	1023.92		
14-Sep-01		11.75	9.67	1021.87	1023.88		
16-Oct-01		12.24	10.2	1021.38	1023.35		
18-Oct-01		12.35	10.33	1021.27	1023.22		
19-Oct-01		12.37	10.36	1021.25	1023.19		
20-Oct-01		12.38	10.37	1021.24	1023.18		
21-Oct-01		12.39	10.38	1021.23	1023.17		
22-Oct-01		12.40	10.39	1021.22	1023.16		
25-Oct-01		12.42	10.39	1021.20	1023.16		
29-Oct-01		12.405	10.34	1021.22	1023.21		
1-Nov-01		12.395	10.315	1021.23	1023.24		
5-Nov-01		12.41	10.31	1021.21	1023.24		
6-Nov-01		12.41	10.31	1021.21	1023.24		
8-Nov-01		12.41	10.3	1021.21	1023.25		
12-Nov-01		12.42	10.295	1021.20	1023.26		
15-Nov-01		12.42	10.285	1021.20	1023.27		
19-Nov-01		12.39	10.22	1021.23	1023.33		

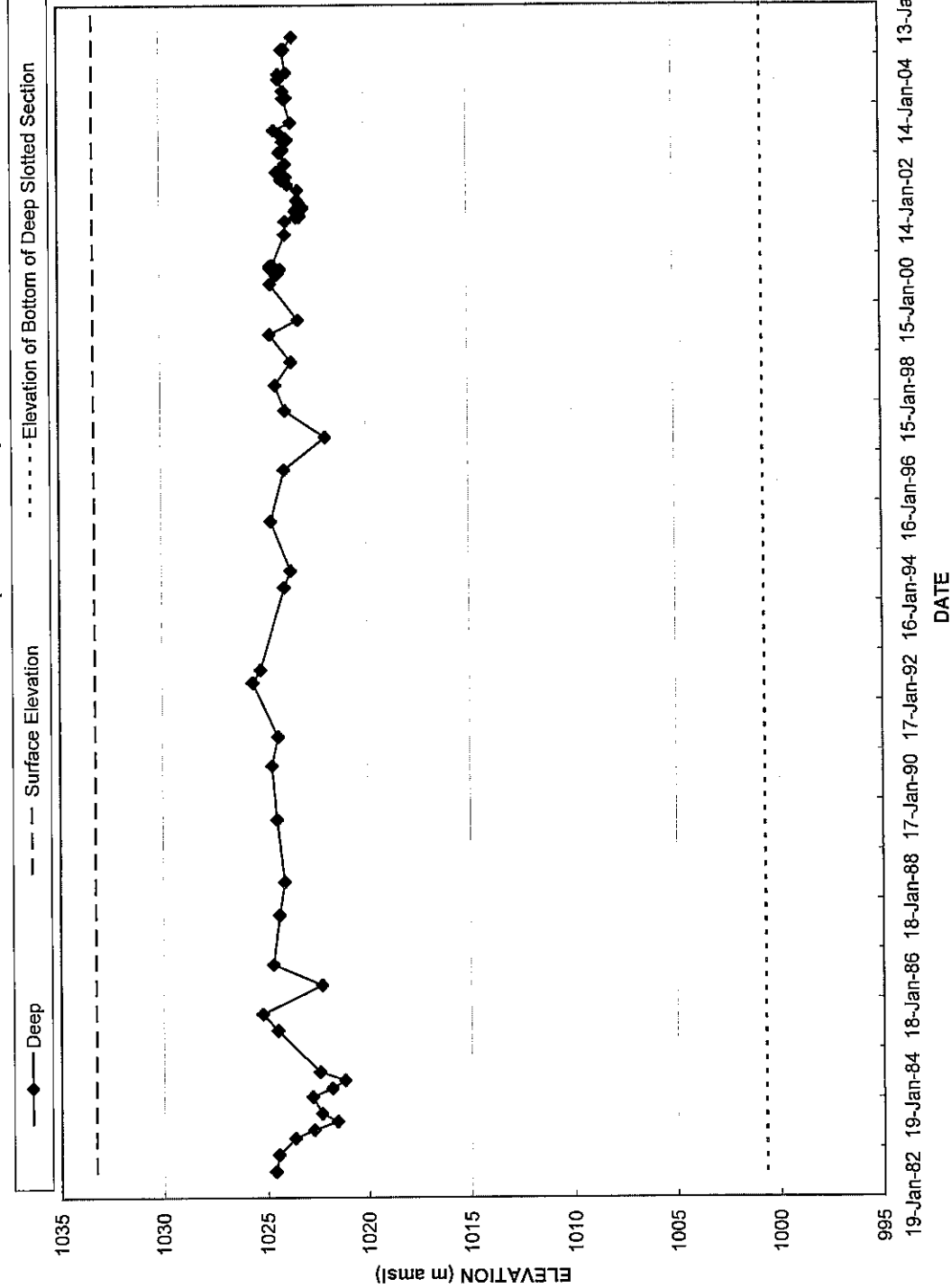
Faro Mine Instrumentation - Cross Valley Dam

CVDC-9		Location:	Cross Valley Dam Crest St.0+565	2004 Ground Elevation (m amsl):	1033.28		
		Coordinates:	8V580096 6913998	2004 Shallow Tip Elevation (m amsl)	1007.70	2004 Shallow stick-up (m):	0.27
Surface Protector:	yes	Date Installed:	1981	2004 Deep Tip Elevation (m amsl):	1000.70	2004 Deep stick-up (m):	0.19
Date		Water Level below top of pipe (m)	Water Level below top of pipe (m)	Piezometric Elevation (m amsl)		Pond Elevation (m amsl)	Comments
		Shallow	Deep	Shallow	Deep		
21-Nov-01		12.37	10.19	1021.25	1023.36		pond elev approx - 8 ft.
23-Nov-01		12.37	10.17	1021.25	1023.38		daytime temp -34 C
26-Nov-01		12.37	10.17	1021.25	1023.38		
28-Nov-01		12.38	10.16	1021.24	1023.39		
30-Nov-01		12.385	10.17	1021.24	1023.38		
3-Dec-01		12.4	10.19	1021.22	1023.36		
5-Dec-01		12.42	10.2	1021.20	1023.35		
12-Dec-01		12.435	10.2	1021.19	1023.35		
14-Dec-01		12.47	10.25	1021.15	1023.30		
15-Dec-01		12.52	10.31	1021.10	1023.24		
16-Dec-01		12.57	10.38	1021.05	1023.17		
17-Dec-01		12.62	10.43	1021.00	1023.12		
18-Dec-01		12.66	10.48	1020.96	1023.07		
19-Dec-01		12.68	10.51	1020.94	1023.04		
26-Dec-01		12.72	10.53	1020.90	1023.02		
2-Jan-02		12.7	10.49	1020.92	1023.06		
9-Jan-02		12.68	10.45	1020.94	1023.10		
16-Jan-02		12.65	10.41	1020.97	1023.14		
23-Jan-02		12.62	10.36	1021.00	1023.19		
30-Jan-02		12.6	10.33	1021.02	1023.22		
6-Feb-02		12.585	10.31	1021.04	1023.24		
13-Feb-02		12.55	10.26	1021.07	1023.29		
20-Feb-02		12.55	10.25	1021.07	1023.30		
1-May-02		12.55	10.27	1021.07	1023.28		
12-Jun-02		12.155	9.77	1021.47	1023.78		
17-Jul-02		11.91	9.465	1021.71	1024.09		
7-Aug-02		12.1	9.705	1021.52	1023.85		
9-Sep-02		11.75	9.24	1021.87	1024.31		
4-Nov-02		11.85	9.64	1021.77	1023.91		
10-Nov-02		11.86	9.665	1021.76	1023.89		
30-Jan-03		11.805	9.395	1021.82	1024.16		
9-Feb-03		11.84	9.42	1021.78	1024.13	1058.6	start siphon
11-Feb-03		11.87	9.455	1021.75	1024.10	1058.5	
13-Feb-03		11.91	9.5	1021.71	1024.05	1058.5	
18-Feb-03		11.96	9.55	1021.66	1024.00		
21-Feb-03		11.97	9.56	1021.65	1023.99	1026.18	
23-Apr-03		12.055	9.565	1021.57	1023.99	997.84	
7-May-03		12.21	9.78	1021.41	1023.77		
16-May-03		12.175	9.7	1021.45	1023.85		
11-Jun-03		11.99	9.46	1021.63	1024.09		
15-Jul-03		11.74	9.13	1021.88	1024.42		
10-Sep-03		12.355	9.95	1021.27	1023.60		
4-Mar-04		12.01	9.52	1021.54	1023.95		2004 Survey data used from here on
8-Mar-04		12.11	9.65	1021.44	1023.82		
26-Apr-04		12.45	9.5	1021.10	1023.97		
19-Jul-04		11.87	9.28	1021.68	1024.19		
26-Aug-04		11.88	9.28	1021.67	1024.19		
9-Sep-04		12.15	9.64	1021.40	1023.83		

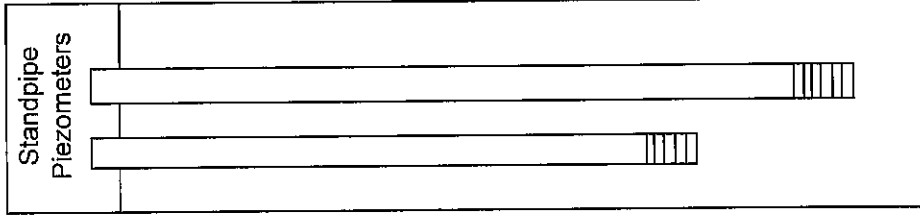
CROSS VALLEY DAM Piezometric Monitoring CVDC-9 Shallow Standpipe Piezometer (Dam Crest)



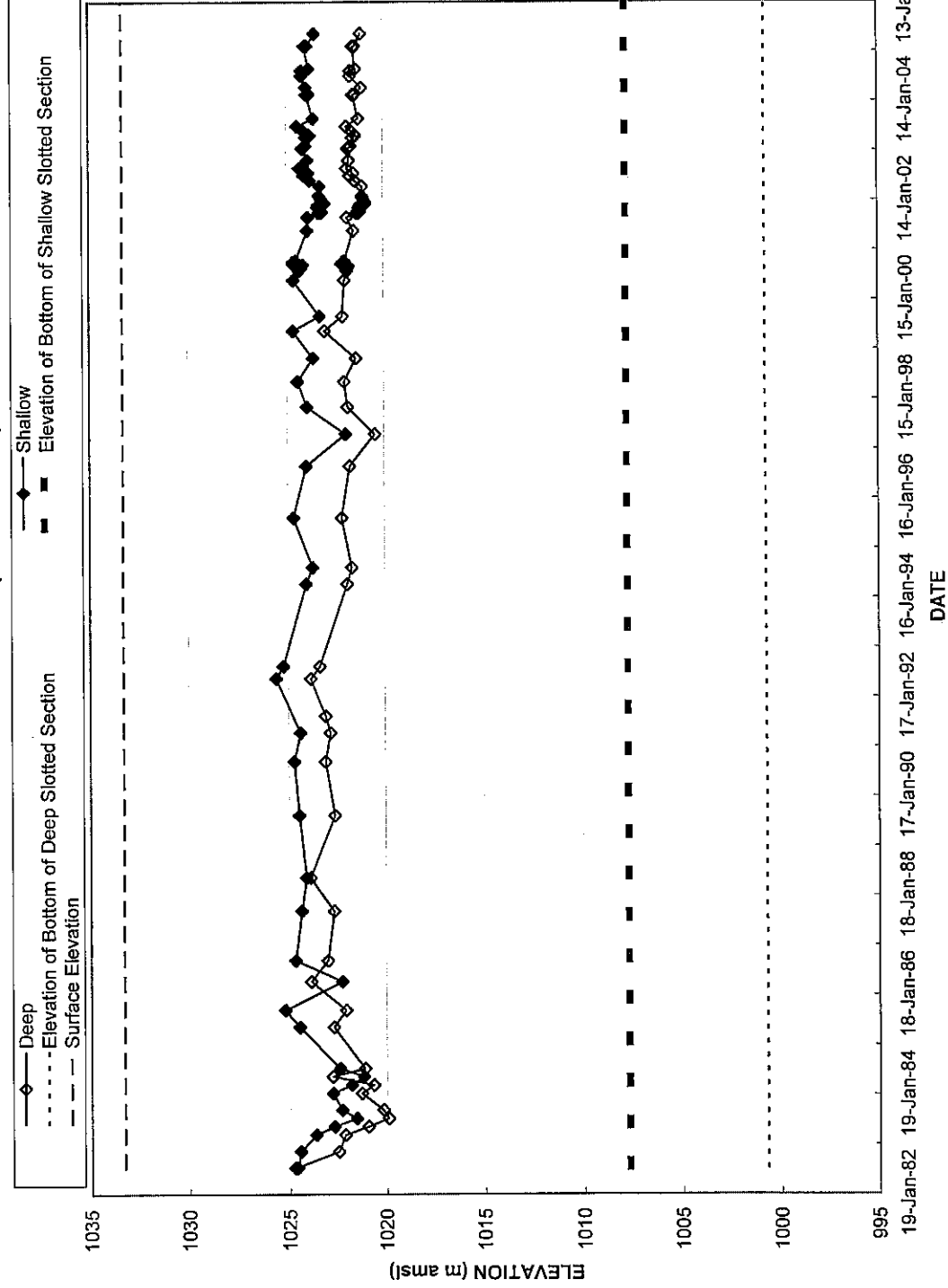
CROSS VALLEY DAM Piezometric Monitoring CVDC-9 Deep Standpipe Piezometer (Dam Crest)



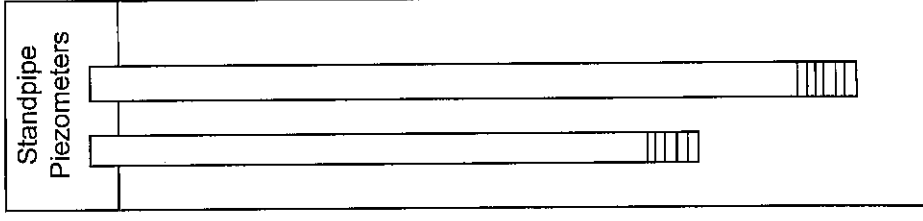
Instrument
Details



CROSS VALLEY DAM Piezometric Monitoring CVDC-9 Standpipe Piezometers (Dam Crest)



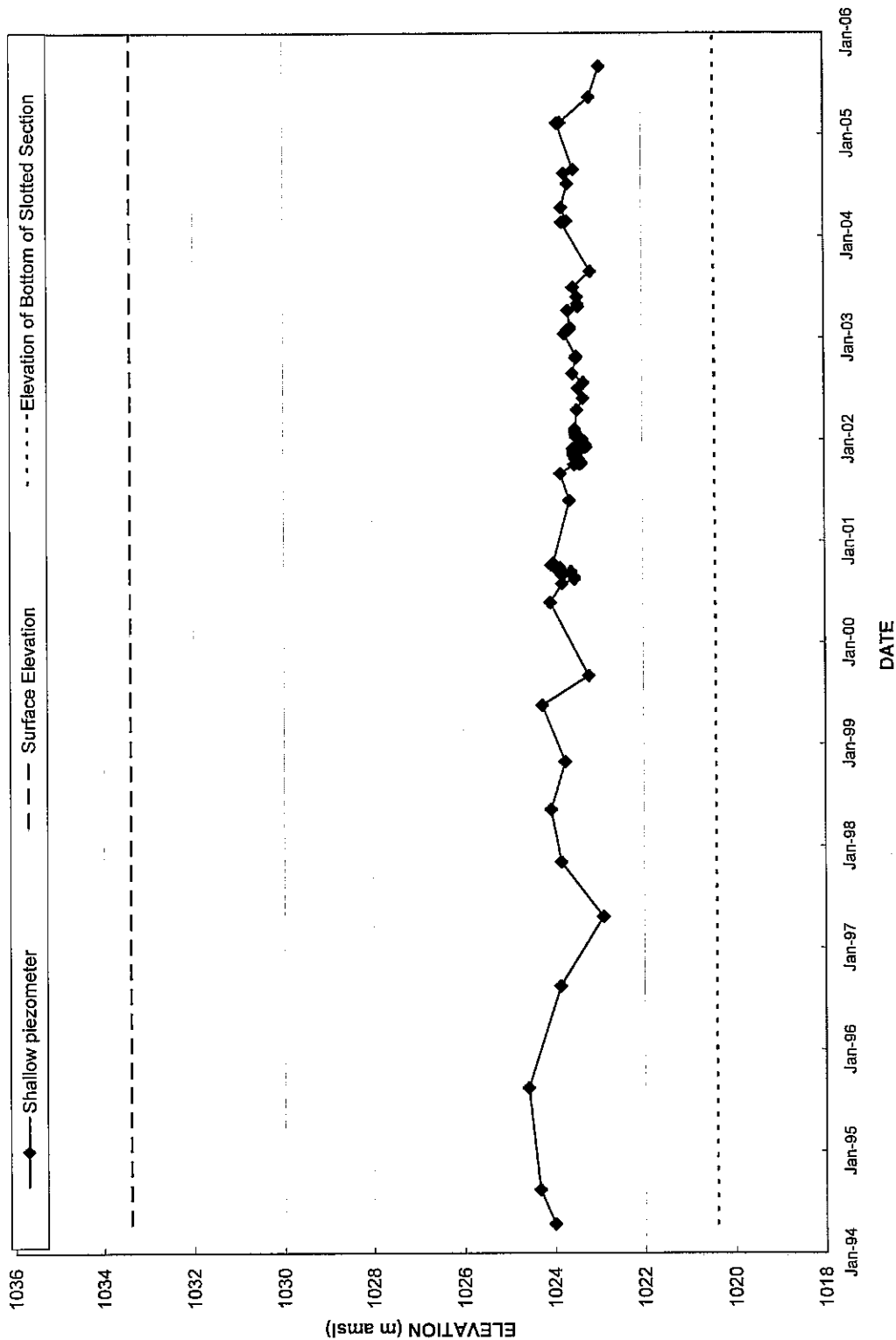
Instrument
Details



94CVDC-1		Location:	Cross Valley Dam Crest Stn. 0+215	2004 Stick-up (m):	0.64
		Coordinates:	8V580263 6914326	2004 Ground Elevation (m amsl):	1033.38
Surface Protector:	yes	Date Installed:	1994	2004 Tip Elevation (m amsl):	1020.4
Date		Water Level from top of pipe (m)	Piezometric Elevation (m amsl)	Pond Elevation (m amsl)	Comments
May-94		9.90	1024.00		
Sep-94		9.57	1024.33		
Sep-95		9.32	1024.58		
Sep-96		10.04	1023.86	1029.915	
7-May-97		11.00	1022.91		
20-Nov-97		10.07	1023.83		
26-May-98		9.84	1024.06	1031.2	
13-Nov-98		10.16	1023.74	1029.8	
3-Jun-99		9.650	1024.25	1031.4	
18-Sep-99		10.69	1023.21	~1029.2	
8-Jun-00		9.84	1024.06	~1030.2	
14-Aug-00		10.10	1023.80		
31-Aug-00		10.38	1023.52		
7-Sep-00		10.38	1023.52		
14-Sep-00		10.10	1023.80		
21-Sep-00		13.61			frozen?
28-Sep-00		10.30	1023.60		
6-Oct-00		9.99	1023.91		
12-Oct-00		10.06	1023.84		
20-Oct-00		9.87	1024.03		
27-Oct-00		9.91	1023.99		
10-Jun-01		10.28	1023.62		
14-Sep-01		10.08	1023.82		
16-Oct-01		10.39	1023.51		
18-Oct-01		10.51	1023.39		
19-Oct-01		10.53	1023.37		
20-Oct-01		10.54	1023.36		
21-Oct-01		10.55	1023.35		
22-Oct-01		10.53	1023.37		
25-Oct-01		10.53	1023.37		
29-Oct-01		10.44	1023.46		
1-Nov-01		10.425	1023.48		
5-Nov-01		10.485	1023.42		
6-Nov-01		10.485	1023.42		
8-Nov-01		10.41	1023.49		
12-Nov-01		10.41	1023.49		
15-Nov-01		10.39	1023.51		
19-Nov-01		10.38	1023.52		
21-Nov-01		10.375	1023.53		
23-Nov-01		10.42	1023.48		pond elev approx - 8 ft.
26-Nov-01		10.42	1023.48		daytime temp -34 C
28-Nov-01		10.39	1023.51		
30-Nov-01		10.37	1023.53		
3-Dec-01		10.37	1023.53		
5-Dec-01		10.365	1023.54		
12-Dec-01		10.36	1023.54		
14-Dec-01		10.42	1023.48		
15-Dec-01		10.48	1023.42		
16-Dec-01		10.53	1023.37		
17-Dec-01		10.59	1023.31		
18-Dec-01		10.62	1023.28		
19-Dec-01		10.65	1023.25		
26-Dec-01		10.64	1023.26		
2-Jan-02		10.56	1023.34		
9-Jan-02		10.57	1023.33		
16-Jan-02		10.56	1023.34		
23-Jan-02		10.43	1023.47		
30-Jan-02		10.42	1023.48		

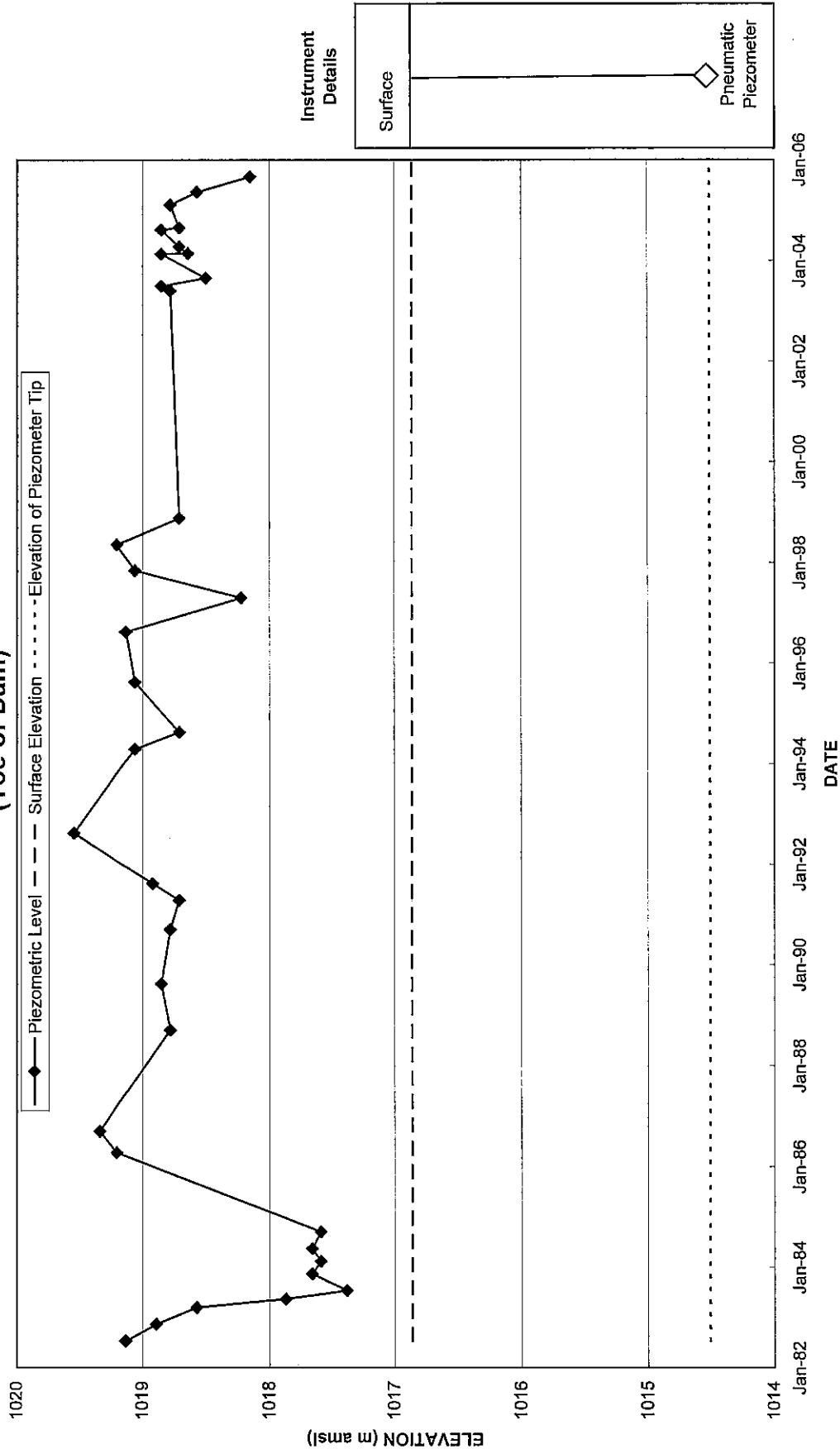
94CVDC-1		Location:	Cross Valley Dam Crest Stn. 0+215	2004 Stick-up (m):	0.64
		Coordinates:	8V580263 6914326	2004 Ground Elevation (m amsl):	1033.38
Surface Protector:	yes	Date Installed:	1994	2004 Tip Elevation (m amsl):	1020.4
Date		Water Level from top of pipe (m)	Piezometric Elevation (m amsl)	Pond Elevation (m amsl)	Comments
6-Feb-02		10.42	1023.48		
13-Feb-02		10.41	1023.49		
20-Feb-02		10.41	1023.49		
1-May-02		10.45	1023.45		
12-Jun-02		10.59	1023.31		
17-Jul-02		10.485	1023.42		
7-Aug-02		10.595	1023.31		
9-Sep-02		10.36	1023.54		
4-Nov-02		10.435	1023.47		
10-Nov-02		10.44	1023.46		
30-Jan-03		10.18	1023.72		
9-Feb-03		10.235	1023.67	1058.6	start siphon
11-Feb-03		10.235	1023.67	1058.5	
13-Feb-03		10.275	1023.63	1058.5	
18-Feb-03		10.31	1023.59		
21-Feb-03		10.31	1023.59	1026.18	
23-Apr-03		10.26	1023.64	997.84	
7-May-03		10.485	1023.42		
16-May-03		10.47	1023.43		
11-Jun-03		10.465	1023.44		
15-Jul-03		10.38	1023.52		
10-Sep-03		10.755	1023.15		
4-Mar-04		10.25	1023.77		2004 Survey data used from here on.
8-Mar-04		10.355	1023.67		
26-Apr-04		10.24	1023.78		
19-Jul-04		10.38	1023.64		
26-Aug-04		10.305	1023.72		
9-Sep-04		10.51	1023.51		
22-Feb-05		10.15	1023.87		
23-Feb-05		10.175	1023.85		
24-Feb-05		10.215	1023.81		
26-May-05		10.865	1023.16		dirty
14-Sep-05		11.095	1022.93		

CROSS VALLEY DAM Piezometric Monitoring BH94 CVDC-1 Standpipe Piezometer (Dam Crest)



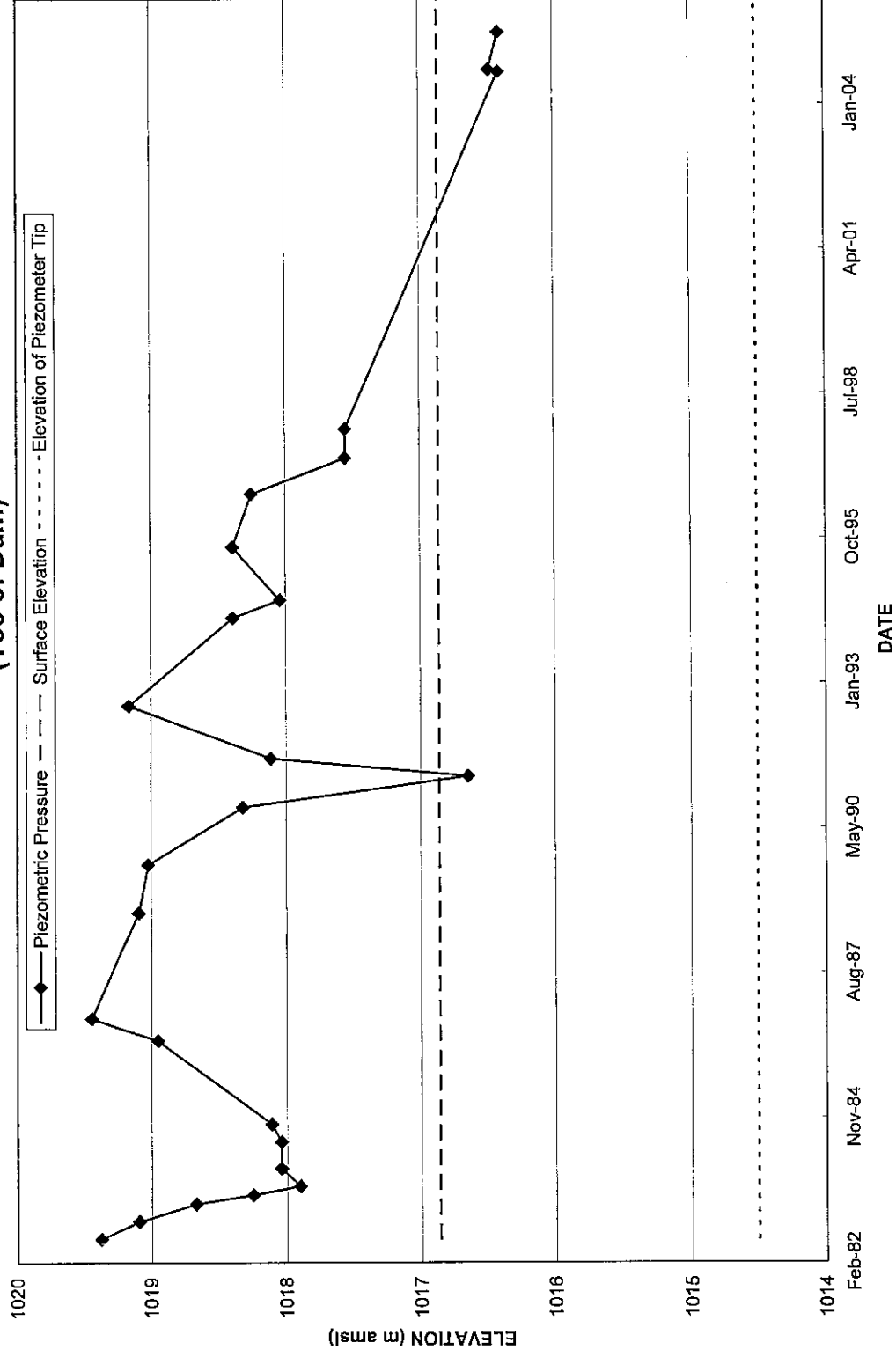
CVDP-1		Location:	20m u/s of CL, Stn.0+450		
		Coordinates:	8V580128 6914135	2004 Ground Elevation (m amsl):	1016.86
Surface Protector:	yes	Date Installed:	1982	Tip Elevation (m amsl):	1014.51
Date		Reading (psi)	Piezometric Elevation (m amsl)	Pond Elevation (m amsl)	Comments
Aug-82		6.60	1019.13		
Dec-82		6.26	1018.89		
Apr-83		5.80	1018.57	1029.33	
Jun-83		4.80	1017.87	1025.88	
Aug-83		4.10	1017.38		
Dec-83		4.50	1017.66		
Mar-84		4.40	1017.59	1029.71	
Jun-84		4.50	1017.66	1026.80	
Oct-84		4.40	1017.59		
May-86		6.70	1019.20	1030.70	
Oct-86		6.90	1019.34	1030.90	
Oct-88		6.10	1018.78		
Sep-89		6.20	1018.85		
Oct-90		6.10	1018.78		
May-91		6.00	1018.71		
Sep-91		6.30	1018.92		
Sep-92		7.20	1019.55		
May-94		6.50	1019.06		
Sep-94		6.00	1018.71		
Sep-95		6.50	1019.06		
Sep-96		6.60	1019.13	1029.915	
6-May-97		5.30	1018.22		
21-Nov-97		6.50	1019.06		
27-May-98		6.70	1019.20	1031.2	
12-Nov-98					no air bubbles returned
4-Dec-98		6.0	1018.71	1029.8	
16-Dec-98				1029.8	black tube broken at connector
11-Jun-03		6.1	1018.78		new piezometer
15-Jul-03		6.2	1018.85		
10-Sep-03		5.7	1018.50		
4-Mar-04		6.2	1018.85		2004 Survey data used from here on
8-Mar-04		5.9	1018.64		
26-Apr-04		6	1018.71		
26-Aug-04		6.2	1018.85		
9-Sep-04		6	1018.71		

CROSS VALLEY DAM
Pieometric Monitoring
CVDP-1 Pneumatic Piezometer
(Toe of Dam)

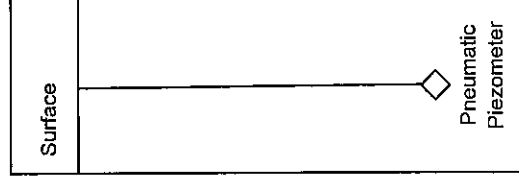


CVDP-2		Location:	Cross Valley Dam St.0+450 5m u/s of CL.		
		Coordinates:	8V580128 6914135	Ground Elevation (m amsl):	1016.86
Surface Protector:	yes	Date Installed:	1982	Tip Elevation (m amsl):	1014.51
Date		Reading (psi)	Piezometric Elevation (m amsl)	Pond Elevation (m amsl)	Comments
Aug-82		6.90	1019.37		
Dec-82		6.50	1019.09		
Apr-83		5.90	1018.67	1029.33	
Jun-83		5.30	1018.25	1025.88	
Aug-83		4.80	1017.90		
Dec-83		5.00	1018.04		
Mar-84				1029.71	
Jun-84		5.00	1018.04	1026.80	
Oct-84		5.10	1018.11		
May-86		6.30	1018.95	1030.70	
Oct-86		7.00	1019.44	1030.90	
Oct-88		6.50	1019.09		
Sep-89		6.40	1019.02		
Oct-90		5.40	1018.32		
May-91		3.00	1016.64		
Sep-91		5.10	1018.11		
Sep-92		6.60	1019.16		
May-94		5.50	1018.39		
Sep-94		5.00	1018.04		
Sep-95		5.50	1018.39		
Sep-96		5.30	1018.25	1029.915	
6-May-97		4.30	1017.55		
21-Nov-97			1017.55		Broken
10-Sep-03		16.90			Broken
4-Mar-04					Frozen
8-Mar-04		19.20			Broken
26-Aug-04		2.70	1016.40		Broken
9-Sep-04		2.80	1016.47		Broken
22-Feb-05		11.5			no bubbles, keeps rising
24-Feb-05		16			no bubbles, keeps rising
26-May-05		2.7	1016.40		
14-Sep-05		1.6	1015.63		

CROSS VALLEY DAM Piezometric Monitoring CVDP-2 Pneumatic Piezometer (Toe of Dam)



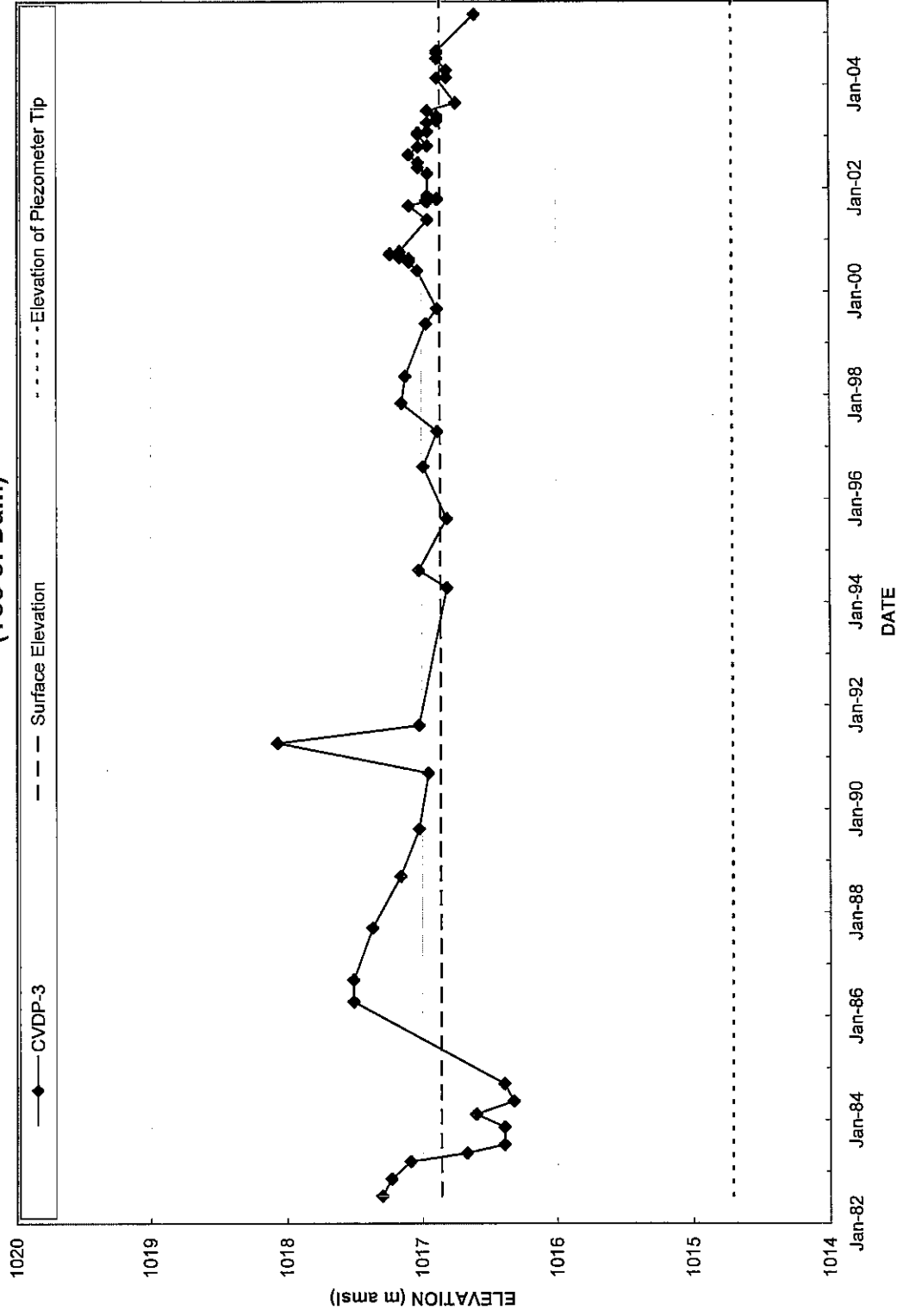
Instrument
Details



CVDP-3		Location:	St.0+450 7m d/s of CL.		
		Coordinates:	8V580128 6914135	2004 Ground Elevation (m amsl):	1016.86
Surface Protector:	yes	Date Installed:	1982	Tip Elevation (m amsl):	1014.71
Date		Reading (psi)	Piezometric Elevation 2004 (m amsl)	Pond Elevation (m amsl)	Comments
Aug-82		3.70	1017.30		
Dec-82		3.60	1017.23		
Apr-83		3.40	1017.09	1029.33	
Jun-83		2.80	1016.67	1025.88	
Aug-83		2.40	1016.39		
Dec-83		2.40	1016.39		
Mar-84		2.70	1016.60	1029.71	
Jun-84		2.30	1016.32	1026.80	
Oct-84		2.40	1016.39		
May-86		4.00	1017.51	1030.70	
Oct-86		4.00	1017.51	1030.90	
Oct-87		3.80	1017.37		
Oct-88		3.50	1017.16		
Sep-89		3.30	1017.02		
Oct-90		3.20	1016.95		
May-91		4.80	1018.07		
Sep-91		3.30	1017.02		
Sep-92		0.40			likely erroneous reading
May-94		3.00	1016.81		
Sep-94		3.30	1017.02		
Sep-95		3.00	1016.81		
Sep-96		3.25	1016.99	1029.915	
6-May-97		3.10	1016.88		
21-Nov-97		3.48	1017.15		
27-May-98		3.44	1017.12	1031.2	
12-Nov-98		n.r.			no air bubbles returned
4-Dec-98		n.r.			no air bubbles returned
3-Jun-99		3.22	1016.96		
18-Sep-99		3.10	1016.88	1029.2	very slow
14-Jun-00		3.31	1017.03	1030.2	
14-Aug-00		3.40	1017.09		
31-Aug-00		3.40	1017.09		
7-Sep-00		3.40	1017.09		
14-Sep-00		3.50	1017.16		
21-Sep-00		3.50	1017.16		
28-Sep-00		3.50	1017.16		
6-Oct-00		3.60	1017.23		
12-Oct-00		3.60	1017.23		
20-Oct-00		3.50	1017.16		
27-Oct-00		3.50	1017.16		
10-Jun-01		3.20	1016.95		
14-Sep-01		3.40	1017.09		
16-Oct-01		3.2	1016.95		
18-Oct-01		3.2	1016.95		
19-Oct-01		3.2	1016.95		
20-Oct-01		3.22	1016.96		
21-Oct-01		3.21	1016.96		
22-Oct-01		3.2	1016.95		
25-Oct-01		3.2	1016.95		
29-Oct-01		3.1	1016.88		
1-Nov-01		3.2	1016.95		
5-Nov-01		3.1	1016.88		

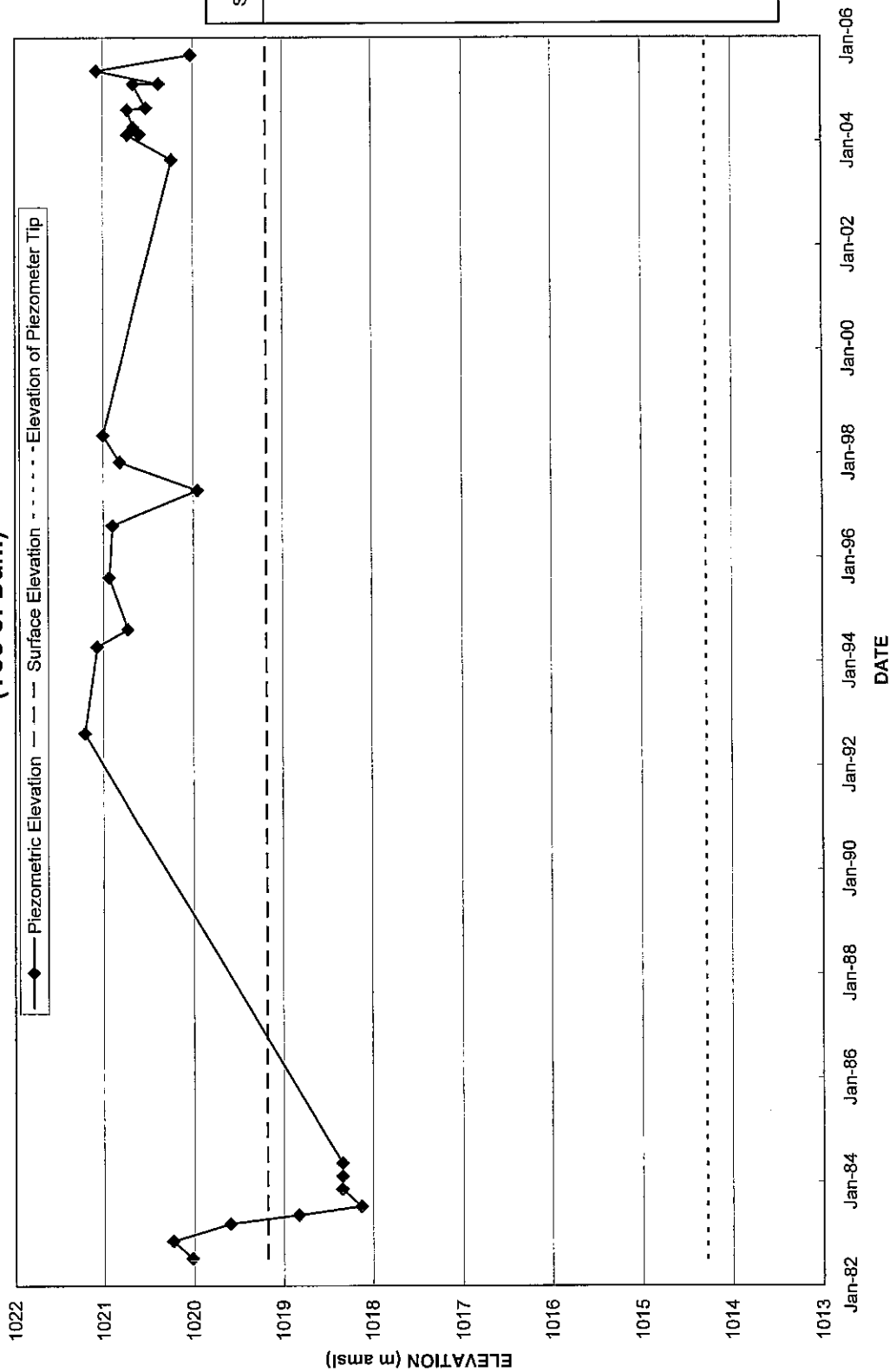
CVD-3		Location:	St.0+450 7m d/s of CL.		
		Coordinates:	8V580128 6914135	2004 Ground Elevation (m amsl):	1016.86
Surface Protector:	yes	Date Installed:	1982	Tip Elevation (m amsl):	1014.71
Date		Reading (psi)	Piezometric Elevation 2004 (m amsl)	Pond Elevation (m amsl)	Comments
6-Nov-01		3.1	1016.88		
8-Nov-01		3.2	1016.95		
12-Nov-01		3.2	1016.95		
15-Nov-01		3.2	1016.95		
19-Nov-01		3.2	1016.95		
21-Nov-01		3.2	1016.95		
23-Nov-01		3.2	1016.95		pond elev approx - 8 ft.
26-Nov-01		3.2	1016.95		daytime temp -34 C
28-Nov-01					not read, low pressure in box
30-Nov-01					instrument broken from Nov 01 to Feb 02
1-May-02		3.2	1016.95		instrument fixed
12-Jun-02		3.3	1017.02		
17-Jul-02		3.3	1017.02		
7-Aug-02					not read
9-Sep-02		3.4	1017.09		
4-Nov-02		3.3	1017.02		
10-Nov-02		3.2	1016.95		
30-Jan-03		3.3	1017.02		
9-Feb-03		3.3	1017.02	1058.6	start siphon
11-Feb-03		3.3	1017.02	1058.5	
13-Feb-03		3.3	1017.02	1058.5	
18-Feb-03		3.2	1016.95		
21-Feb-03		3.2	1016.95	1026.18	
23-Apr-03		3.2	1016.95	997.84	
7-May-03		3.1	1016.88		
16-May-03		3.1	1016.88		
11-Jun-03		3.1	1016.88		*new piezometer readout
15-Jul-03		3.2	1016.95		
10-Sep-03		2.9	1016.74		
4-Mar-04		3.1	1016.88		2004 Survey data used from here on
8-Mar-04		3	1016.81		
26-Apr-04		3	1016.81		
19-Jul-04		3.1	1016.88		
26-Aug-04		3.1	1016.88		
9-Sep-04		3.1	1016.88		
22-Feb-05		14			no bubbles, keeps rising
24-Feb-05		16			no bubbles, keeps rising
26-May-05		2.7	1016.60		
14-Sep-05		2.3	1016.32		

CROSS VALLEY DAM
Piezometric Monitoring
CVDP-3 Pneumatic Piezometer
(Toe of Dam)



CVDP-5		Location:	Cross Valley Dam St.0+210 9m u/s of CL.		
		Coordinates:	8V580239 6914346	2004 Ground Elevation (m amsl):	1019.18
Surface Protector:	yes	Date Installed:	1982	Tip Elevation (m amsl):	1014.28
Date		Reading (psi)	Piezometric Elevation (m amsl)	Pond Elevation (m amsl)	Comments
Aug-82		8.20	1020.02		
Dec-82		8.50	1020.23		
Apr-83		7.60	1019.60	1029.33	
Jun-83		6.50	1018.83	1025.88	
Aug-83		5.50	1018.13		
Dec-83		5.80	1018.34		
Mar-84		5.80	1018.34	1029.71	
Jun-84		5.80	1018.34	1026.80	
May-86				1030.70	
Oct-86				1030.90	
Sep-92		9.90	1021.21		
May-94		9.70	1021.07		
Sep-94		9.20	1020.72		
Sep-95		9.50	1020.93		
Sep-96		9.45	1020.90	1029.915	
6-May-97		8.10	1019.95		
21-Nov-97		9.33	1020.81		
27-May-98		9.60	1021.00		
12-Nov-98					black air tube broken at connector
10-Sep-03		8.50	1020.23		
4-Mar-04		9.20	1020.72		2004 Survey data used from here on
8-Mar-04		9.00	1020.58		
26-Apr-04		9.10	1020.65		
26-Aug-04		9.20	1020.72		
9-Sep-04		8.90	1020.51		
22-Feb-05		9.1	1020.65		
24-Feb-05		8.7	1020.37		
26-May-05		9.7	1021.07		
14-Sep-05		8.2	1020.02		

CROSS VALLEY DAM Piezometric Monitoring CVDP-5 Pneumatic Piezometer (Toe of Dam)



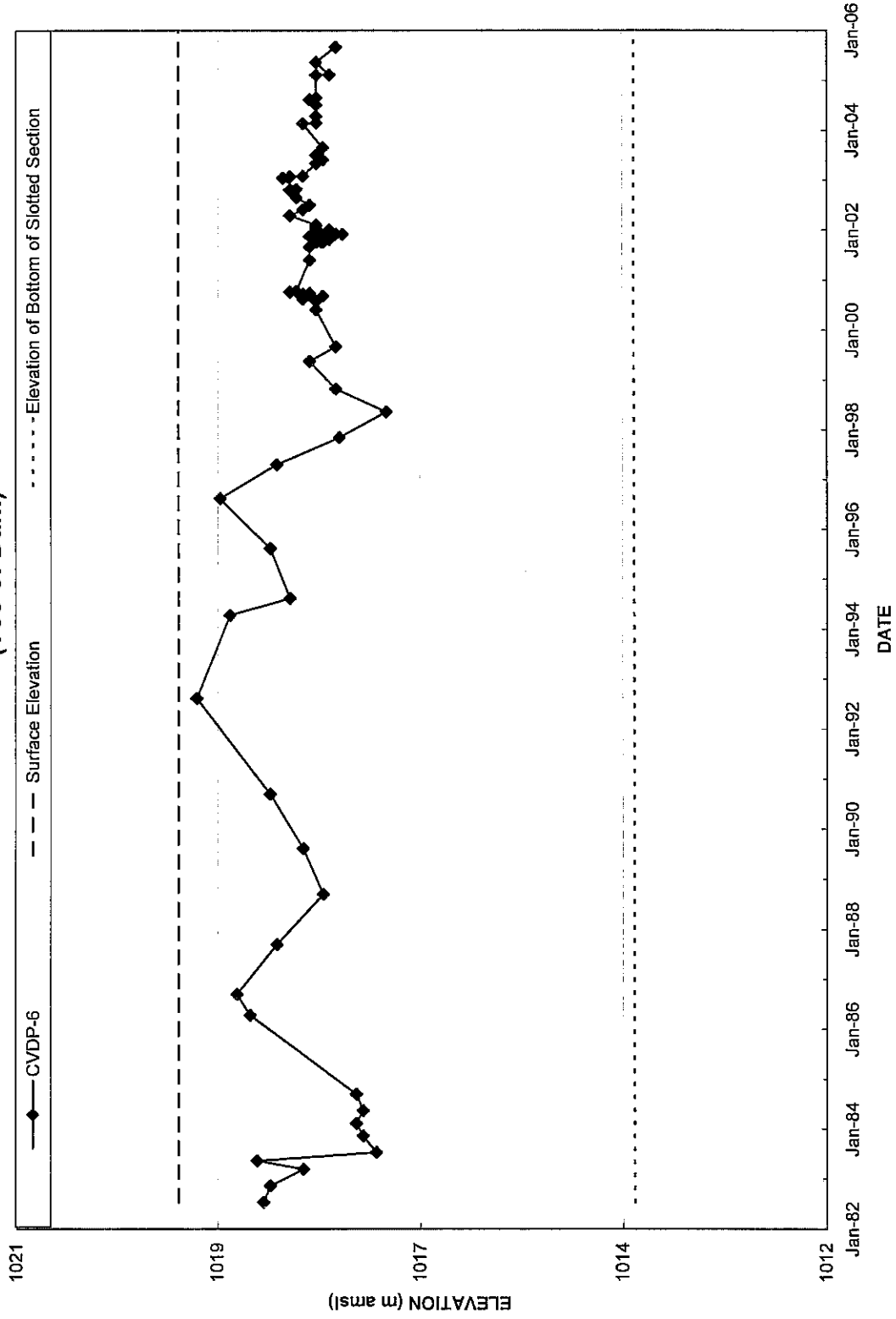
Faro Mine Instrumentation - Cross Valley Dam

CVDP-6		Location:	St.0+210 5m d/s of CL.		
		Coordinates:	8V580239 6914346	2004 Ground Elevation (m amsl):	1019.18
Surface Protector:	yes	Date Installed:	1982	Tip Elevation (m amsl):	1014.37
Date		Reading (psi)	Piezometric Elevation 2004 (m amsl)	Pond Elevation (m amsl)	Comments
Aug-82		5.60	1018.29		
Dec-82		5.50	1018.22		
Apr-83		5.00	1017.87	1029.33	
Jun-83		5.70	1018.36	1025.88	
Aug-83		3.90	1017.1		
Dec-83		4.10	1017.24		
Mar-84		4.20	1017.31	1029.71	
Jun-84		4.10	1017.24	1026.80	
Oct-84		4.20	1017.31		
May-86		5.80	1018.43	1030.70	
Oct-86		6.00	1018.57	1030.90	
Oct-87		5.40	1018.15		
Oct-88		4.70	1017.66		
Sep-89		5.00	1017.87		
Oct-90		5.50	1018.22		
Sep-92		6.60	1018.99		
May-94		6.10	1018.64		
Sep-94		5.20	1018.01		
Sep-95		5.50	1018.22		
Sep-96		6.25	1018.745	1029.915	
6-May-97		5.40	1018.15		
21-Nov-97		4.45	1017.485		
27-May-98		3.74	1016.988	1031.2	
12-Nov-98		4.50	1017.52	1029.8	
3-Jun-99		4.90	1017.8	1031.4	
18-Sep-99		4.50	1017.52		
14-Jun-00		4.80	1017.73	1030.2	
14-Aug-00		4.80	1017.73		
31-Aug-00		5.00	1017.87		return bubbles "sputtering"
7-Sep-00		5.00	1017.87		
14-Sep-00		5.00	1017.87		
21-Sep-00		4.70	1017.66		
28-Sep-00		4.90	1017.8		
6-Oct-00		5.00	1017.87		
12-Oct-00		4.90	1017.8		
20-Oct-00		5.20	1018.01		
27-Oct-00		5.10	1017.94		
10-Jun-01		4.90	1017.8		
14-Sep-01		4.9	1017.8		
16-Oct-01		4.8	1017.73		
18-Oct-01		4.72	1017.674		
19-Oct-01		4.7	1017.66		
20-Oct-01		4.7	1017.66		
21-Oct-01		4.7	1017.66		
22-Oct-01		4.7	1017.66		
25-Oct-01		4.70	1017.66		
29-Oct-01		4.7	1017.66		
1-Nov-01		4.7	1017.66		
5-Nov-01		4.6	1017.59		
6-Nov-01		4.6	1017.59		
8-Nov-01		4.7	1017.66		
12-Nov-01		4.7	1017.66		
15-Nov-01		4.7	1017.66		
19-Nov-01		4.8	1017.73		
21-Nov-01		4.7	1017.66		
23-Nov-01		4.7	1017.66		pond elev approx - 8 ft.
26-Nov-01		-			not read
28-Nov-01		-			not read, low pressure in box
30-Nov-01		4.9	1017.8		

Faro Mine Instrumentation - Cross Valley Dam

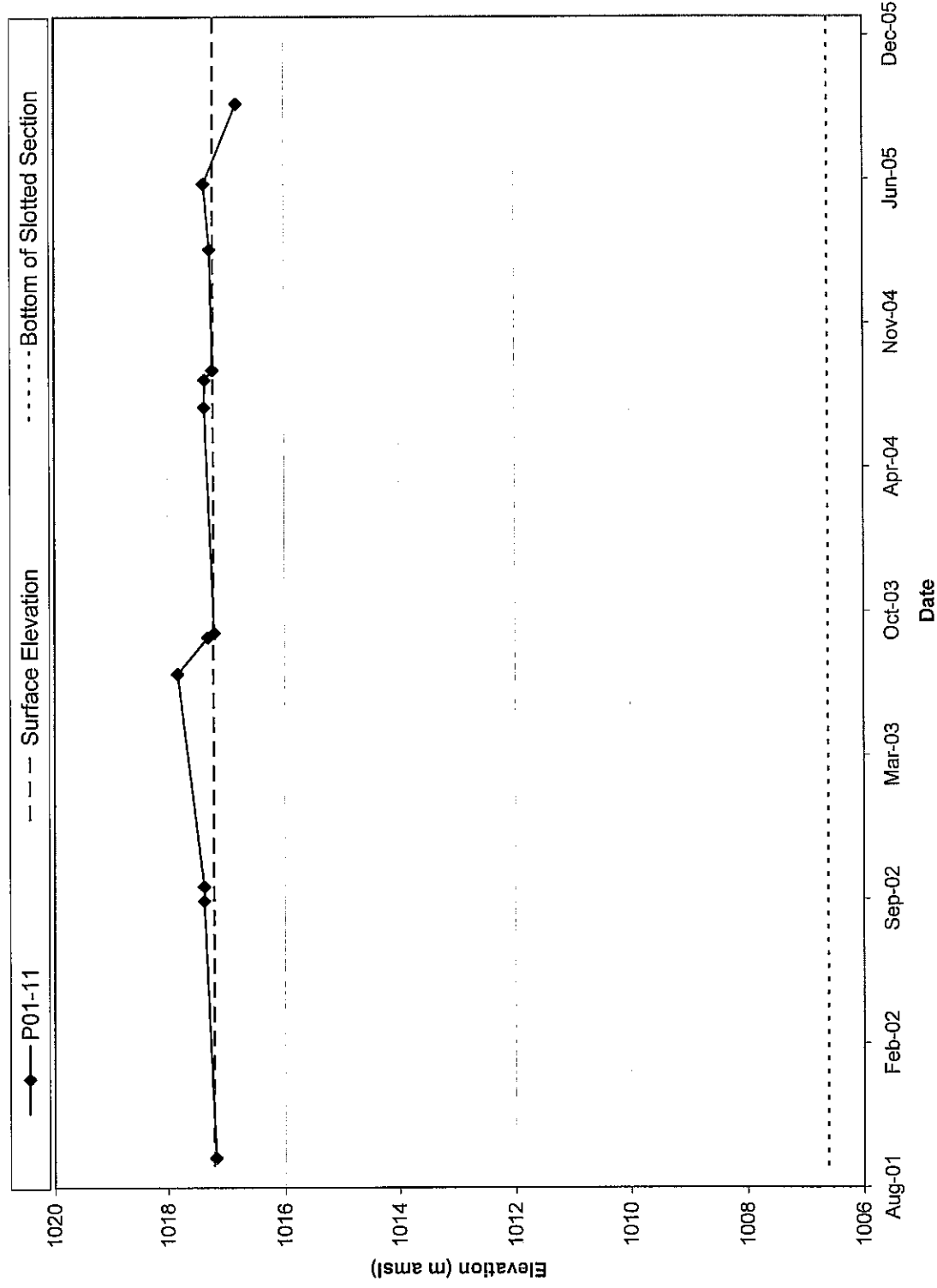
CVDP-6		Location:	St.0+210 5m d/s of CL.		
		Coordinates:	8V580239 6914346	2004 Ground Elevation (m amsl):	1019.18
Surface Protector:	yes	Date Installed:	1982	Tip Elevation (m amsl):	1014.37
Date		Reading (psi)	Piezometric Elevation 2004 (m amsl)	Pond Elevation (m amsl)	Comments
3-Dec-01		4.7	1017.66		
5-Dec-01		4.7	1017.66		
12-Dec-01		4.7	1017.66		
14-Dec-01		4.8	1017.73		
15-Dec-01		4.4	1017.45		
16-Dec-01		4.8	1017.73		
17-Dec-01		4.8	1017.73		
18-Dec-01		4.5	1017.52		
19-Dec-01		4.8	1017.73		
26-Dec-01		4.6	1017.59		
2-Jan-02		4.8	1017.73		
9-Jan-02		4.6	1017.59		
16-Jan-02		4.6	1017.59		
23-Jan-02		4.8	1017.73		
30-Jan-02		4.8	1017.73		
6-Feb-02		4.8	1017.73		
13-Feb-02		4.8	1017.73		
20-Feb-02		4.8	1017.73		
1-May-02		5.2	1018.01		
12-Jun-02		5.0	1017.87		
17-Jul-02		4.9	1017.8		
7-Aug-02					not read
9-Sep-02		5.1	1017.94		
4-Nov-02		5.2	1018.01		
10-Nov-02		5.1	1017.94		
30-Jan-03		5.3	1018.08		
9-Feb-03		5.2	1018.01	1058.6	start siphon
11-Feb-03		5.2	1018.01	1058.5	
13-Feb-03		5	1017.87	1058.5	
18-Feb-03					*Piezometer tip broken (-35 oC)
21-Feb-03				1026.18	
23-Apr-03				997.84	
7-May-03					
16-May-03		4.8	1017.73		*piezometer tip repaired
11-Jun-03		4.7	1017.66		*new piezometer readout
15-Jul-03		4.8	1017.73		
10-Sep-03		4.7	1017.66		
4-Mar-04		5	1017.87		2004 Survey data used from here o
8-Mar-04		4.8	1017.73		
26-Apr-04		4.8	1017.73		
19-Jul-04		4.8	1017.73		
26-Aug-04		4.9	1017.80		
9-Sep-04		4.8	1017.73		
22-Feb-05		4.8	1017.73		
24-Feb-05		4.6	1017.59		
24-Feb-05		4.6	1017.59		
26-May-05		4.8	1017.73		
14-Sep-05		4.5	1017.52		

CROSS VALLEY DAM Piezometric Monitoring CVDP-6 Pneumatic Piezometer (Toe of Dam)



P01-11		Location:	Cross Valley Dam Toe	2004 Stick-Up (m):	0.66
		Coordinates:	8V580208 6914301	2004 Surface Elevation (m amsl):	1017.21
Surface Protector:	yes	Date Installed:	2001	Tip Elevation (m amsl):	1006.61
				Screened Interval (m bgs):	9.15 - 10.67
Date		Water level from top of pipe (m)	Piezometric Elevation (m amsl)		Comments
11-Sep-01		0.65	1017.18		
3-Sep-02		0.45	1017.38		
23-Sep-02		0.45	1017.38		
15-Jul-03		0.00	1017.83		*whole casing filled with water
4-Sep-03		0.52	1017.31		* Rhonda noted: 'water in casing'
10-Sep-03		0.63	1017.20		
19-Jul-04		0.505	1017.37		2004 survey data used from here on
26-Aug-04		0.51	1017.36		
9-Sep-04		0.65	1017.22		Ice in tubing, sulphur smell
24-Feb-05		0.6	1017.27		Frozen
26-May-05		0.5	1017.37		
14-Sep-05		1.06	1016.81		

CROSS VALLEY DAM Piezometric Monitoring P01-11 (2001 - GLL Monitoring Well)



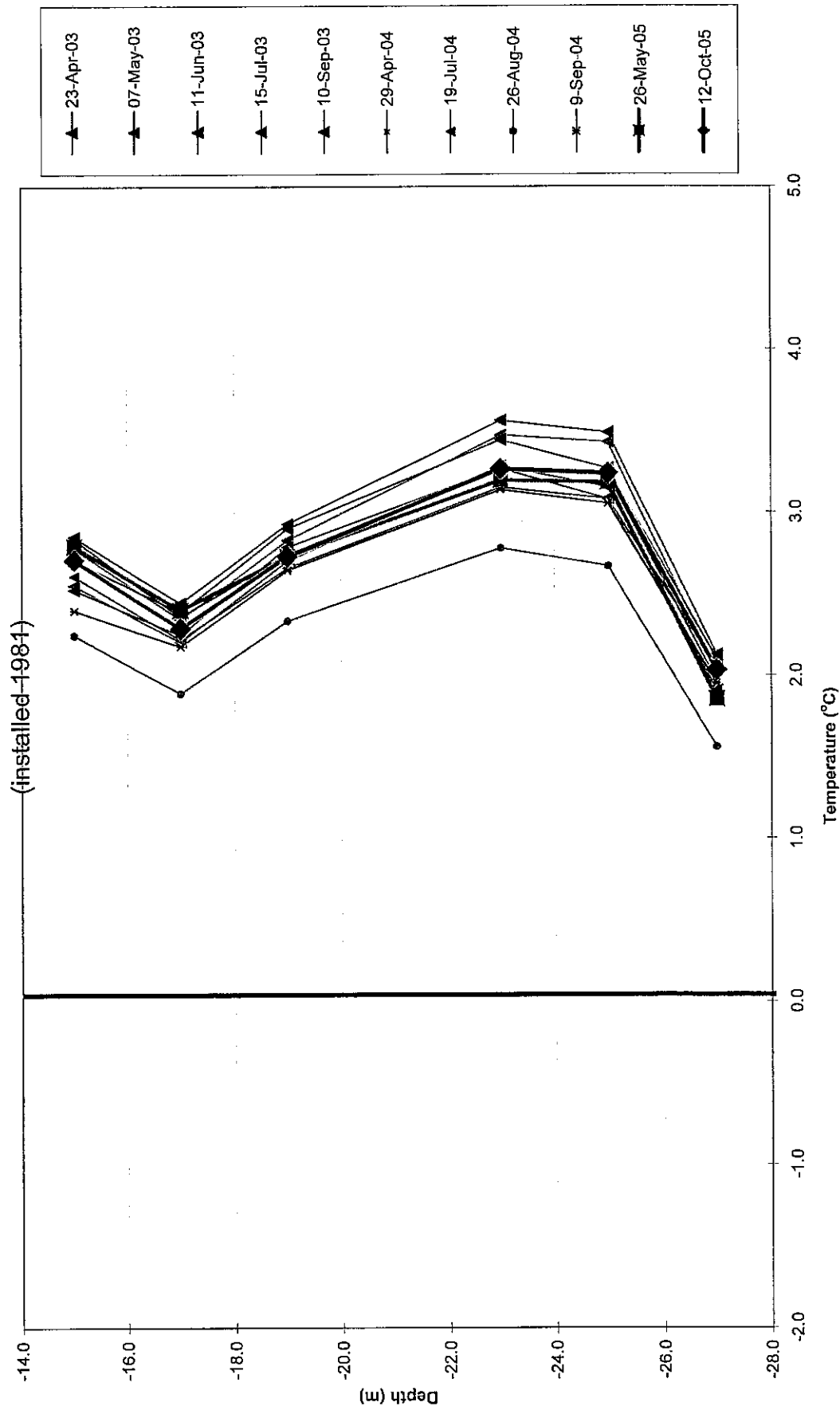
THERMISTORS

- The initial reading (Nov 15/81) is excluded from data set because post-installation equilibrium may not have been complete.

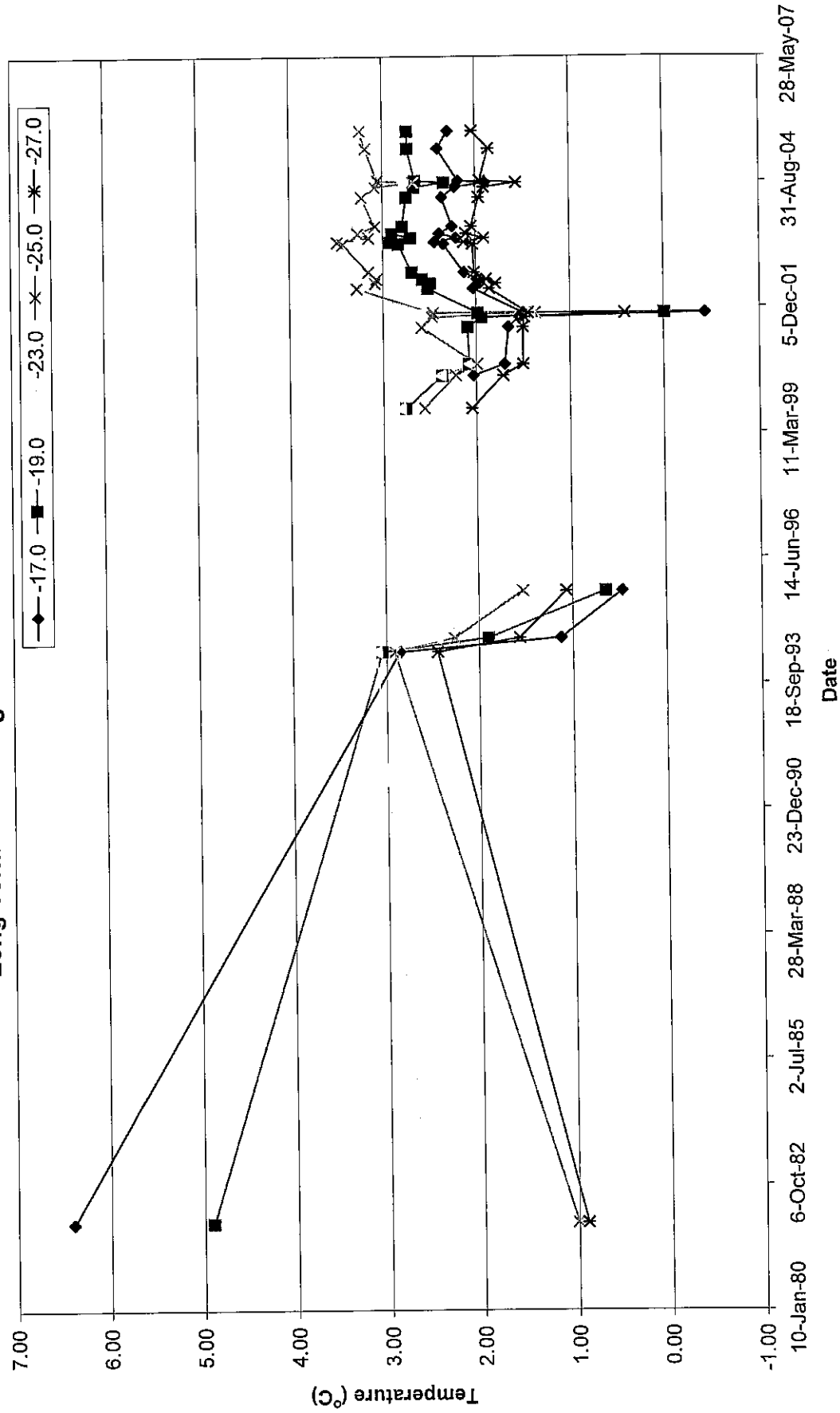
The -21 and -29 metre depth tips are suspect

[illegible]

CROSS VALLEY DAM
Geothermal Monitoring
CVDC-6



Cross Valley Dam
Geothermal Monitoring
Long Term Monitoring for Nodes in CVDC-6



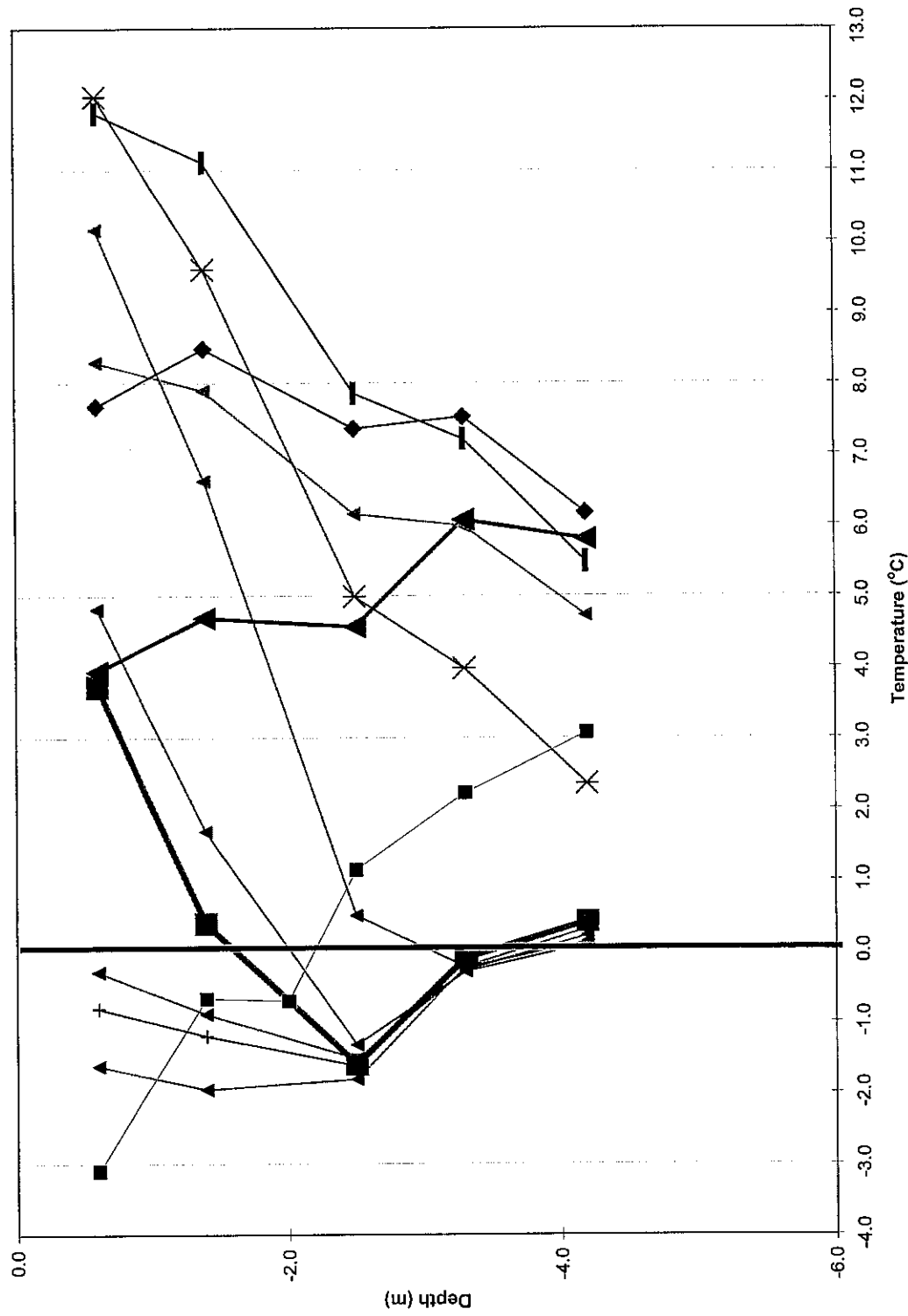
BH 88-4	Location:		0+450, Cross Valley Dam Crest		Elevation (m amsl):		Coordinates:		2018.3 m N, 76.6 m W BV580127 5914054		Surface Protector:		Yes	
	Depth on Sling (m)	Actual Depth (m)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)
	0.6	-0.6	19.03	13.67	11.01	11.17	11.28	16.59	16.59	16.59	16.59	16.59	16.59	16.59
	1.4	-1.4	16.72	15.54	10.82	11.32	11.43	17.14	15.68	16.51	15.71	16.52	11.25	15.73
	2.0	-2.0	16.81	17.93	11.27	12.45	13.01	19.84	17.50	18.19	17.30	19.76	13.61	19.90
	2.5	-2.5	15.25	16.14	10.37	11.54	11.91	17.47	14.86	16.70	14.19	16.76	11.64	16.73
	3.3	-3.3	14.45	16.31	10.79	11.91	12.48	17.17	14.25	16.40	13.47	16.53	12.09	16.51
	4.2	-4.2	13.82	14.68	11.52	12.41	13.19	16.52	13.82	15.98	13.03	16.11	12.72	16.14

Depth on Sling	Actual Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)
	Depth															
0.6	(m)	24-Jan-92	30-May-94	15-Sep-94	22-Sep-95	13-Sep-96	05-May-97	20-Nov-97	26-May-98	12-Nov-98	28-May-99	20-Sep-99	07-Jun-00	05-Sep-00		
0.6	-0.6	-4.61	3.10	7.77	7.47	7.27	-0.44	-0.50	2.64	-2.22	1.83	7.66	4.47	6.46		
1.4	-1.4	-2.67	0.76	8.62	7.12	6.92	-1.15	0.34	-0.42	0.55	-0.43	7.25	0.53	6.38		
2.0	-2.0	-0.70	-2.08	7.28	5.26	4.37	-3.97	-1.56	-3.34	-1.33	-3.92	3.40	-4.03	2.65		
2.5	-2.5	1.15	-0.52	8.93	6.74	6.09	-1.52	1.65	-0.65	2.66	-0.72	5.78	-0.68	5.85		
3.3	-3.3	2.22	1.01	8.12	6.10	5.16	-1.19	2.48	-0.29	3.60	-0.45	5.78	-0.42	4.96		
4.2	-4.2	3.07	1.86	6.74	5.23	4.00	-0.43	3.08	0.22	4.27	0.06	4.75	0.02	3.86		

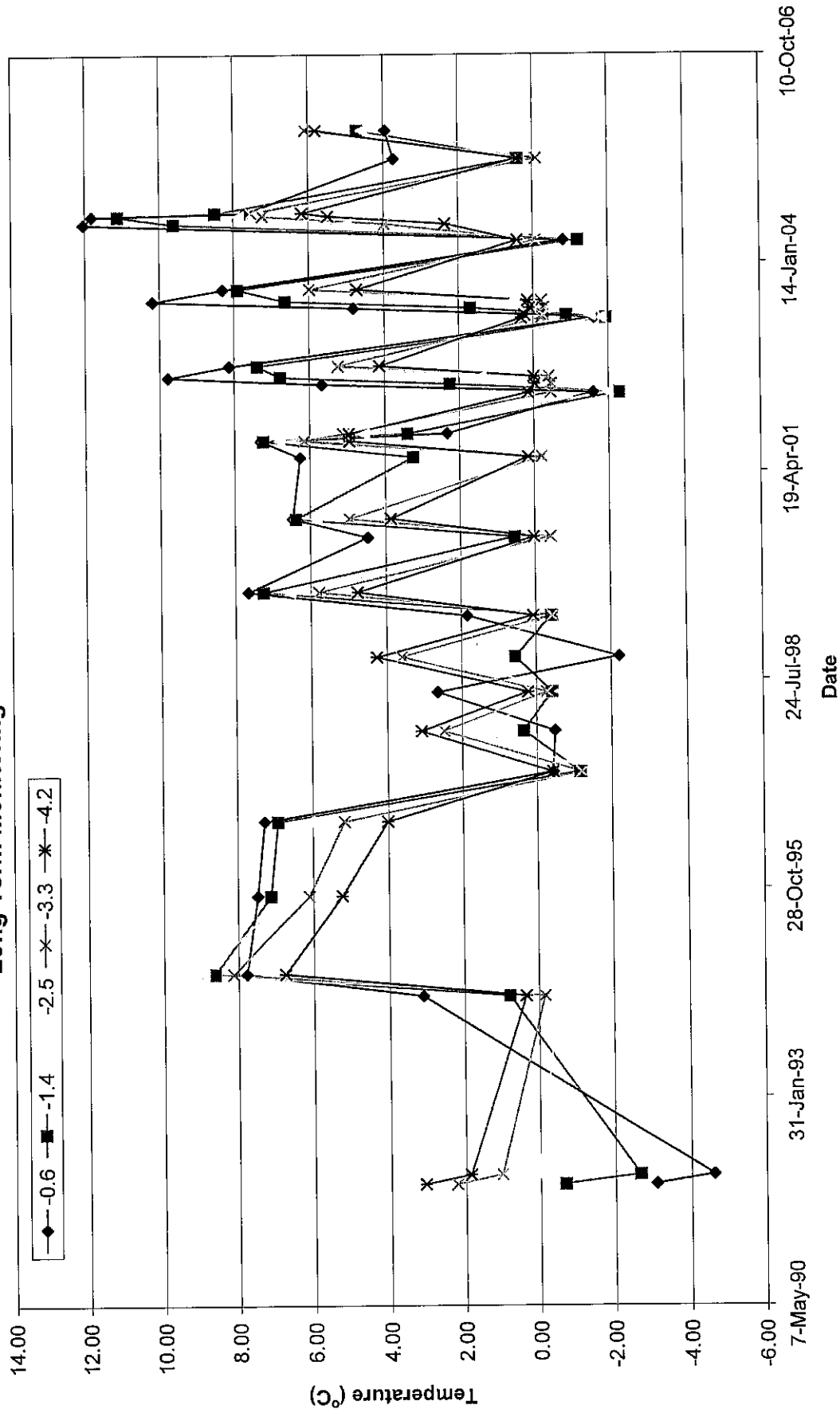
Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)
11.86	11.27	14.42	17.61	18.17	17.61	17.61	17.61	17.61	17.61	17.61	17.61	17.61	17.61	17.61	17.61
13.71	11.26	13.61	14.42	14.42	14.42	14.42	14.42	14.42	14.42	14.42	14.42	14.42	14.42	14.42	14.42
19.22	13.49	15.59	19.88	21.52	20.35	20.35	20.35	20.35	20.35	20.35	20.35	20.35	20.35	20.35	20.35
16.67	11.50	12.85	17.08	17.89	17.89	17.89	17.89	17.89	17.89	17.89	17.89	17.89	17.89	17.89	17.89
16.33	11.87	12.50	16.55	16.54	16.54	16.54	16.54	16.54	16.54	16.54	16.54	16.54	16.54	16.54	16.54
16.03	12.60	12.59	16.19	16.17	16.17	16.17	16.17	16.17	16.17	16.17	16.17	16.17	16.17	16.17	16.17

Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)
26-Jun-01	18-Oct-01	23-Apr-02	09-Sep-02	23-Jul-02	17-Jul-02	12-Jun-02	01-May-02	18-Jun-02	12-Jun-02	12-Jun-02	12-Jun-02	12-Jun-02	12-Jun-02	12-Jun-02	12-Jun-02
6.25	7.29	2.32	2.24	5.68	9.77	5.68	-1.60	2.24	5.68	5.68	5.68	5.68	5.68	5.68	5.68
3.25	7.23	3.40	-5.52	-4.02	6.76	6.76	-1.85	-4.02	6.76	6.76	6.76	6.76	6.76	6.76	6.76
-3.37	3.57	0.70	-1.98	-1.08	1.41	1.41	-1.81	-1.08	1.41	1.41	1.41	1.41	1.41	1.41	1.41
-0.21	6.80	4.55	-0.46	-0.47	-0.42	-0.42	-0.46	-0.42	-0.42	-0.42	-0.42	-0.42	-0.42	-0.42	-0.42
0.15	4.94	4.96	0.14	-0.04	-0.02	-0.02	0.14	-0.04	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02

CROSS VALLEY DAM Geothermal Monitoring 88-4



Cross Valley Dam Geothermal Monitoring Long Term Monitoring for Nodes in 88-4-4T



SECONDARY DAM

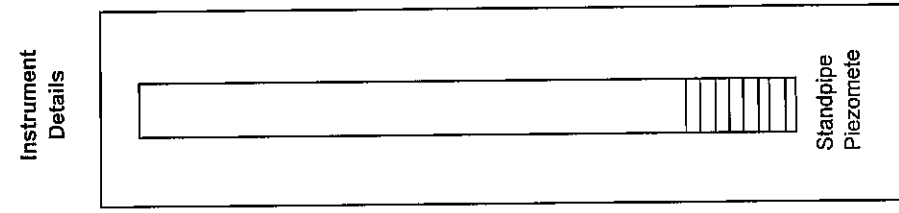
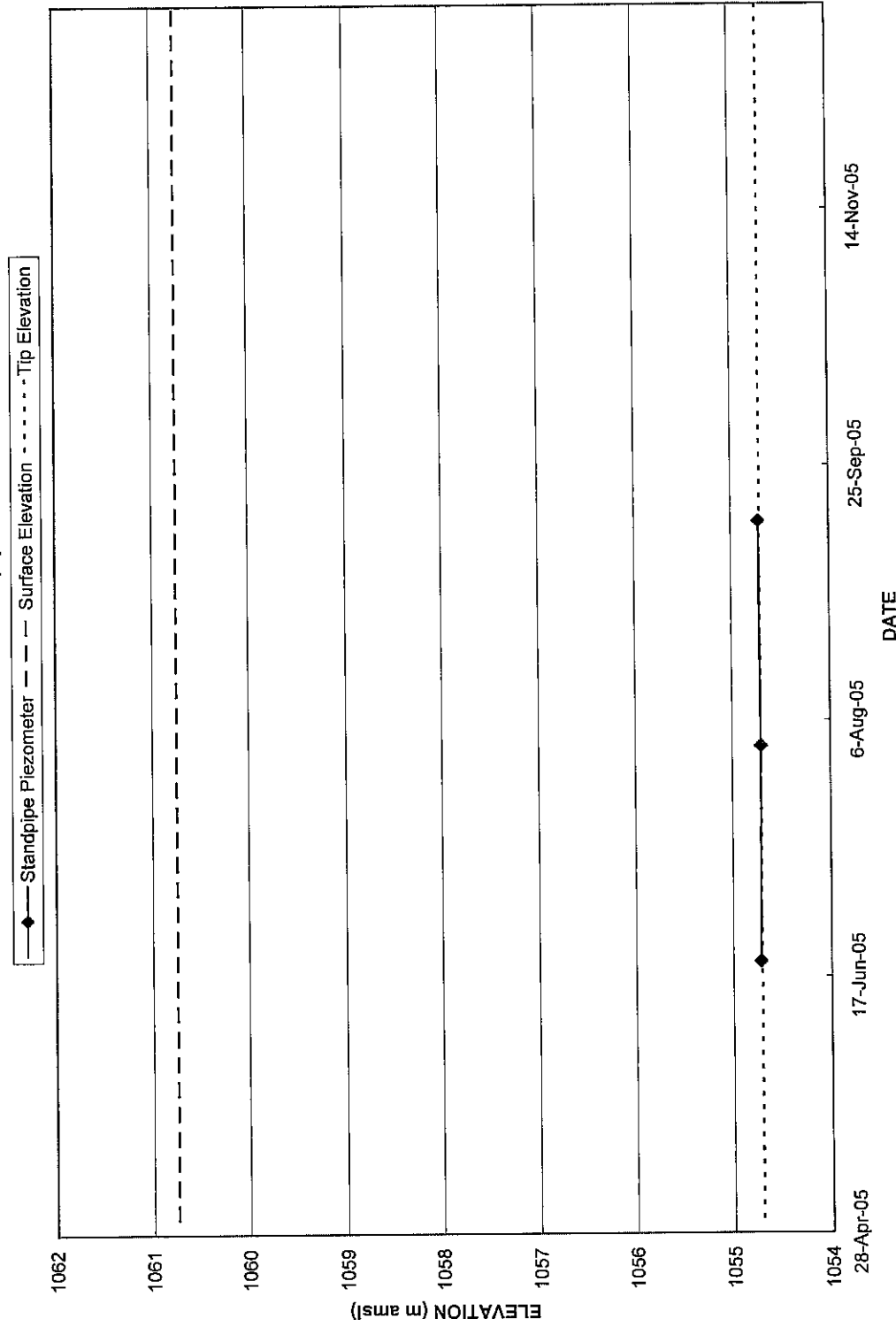
PIEZOMETERS

Note: Water levels should be read from top of lower section of pipe (5" stick-up), not from the 26" broken piece on

SECONDARY DAM

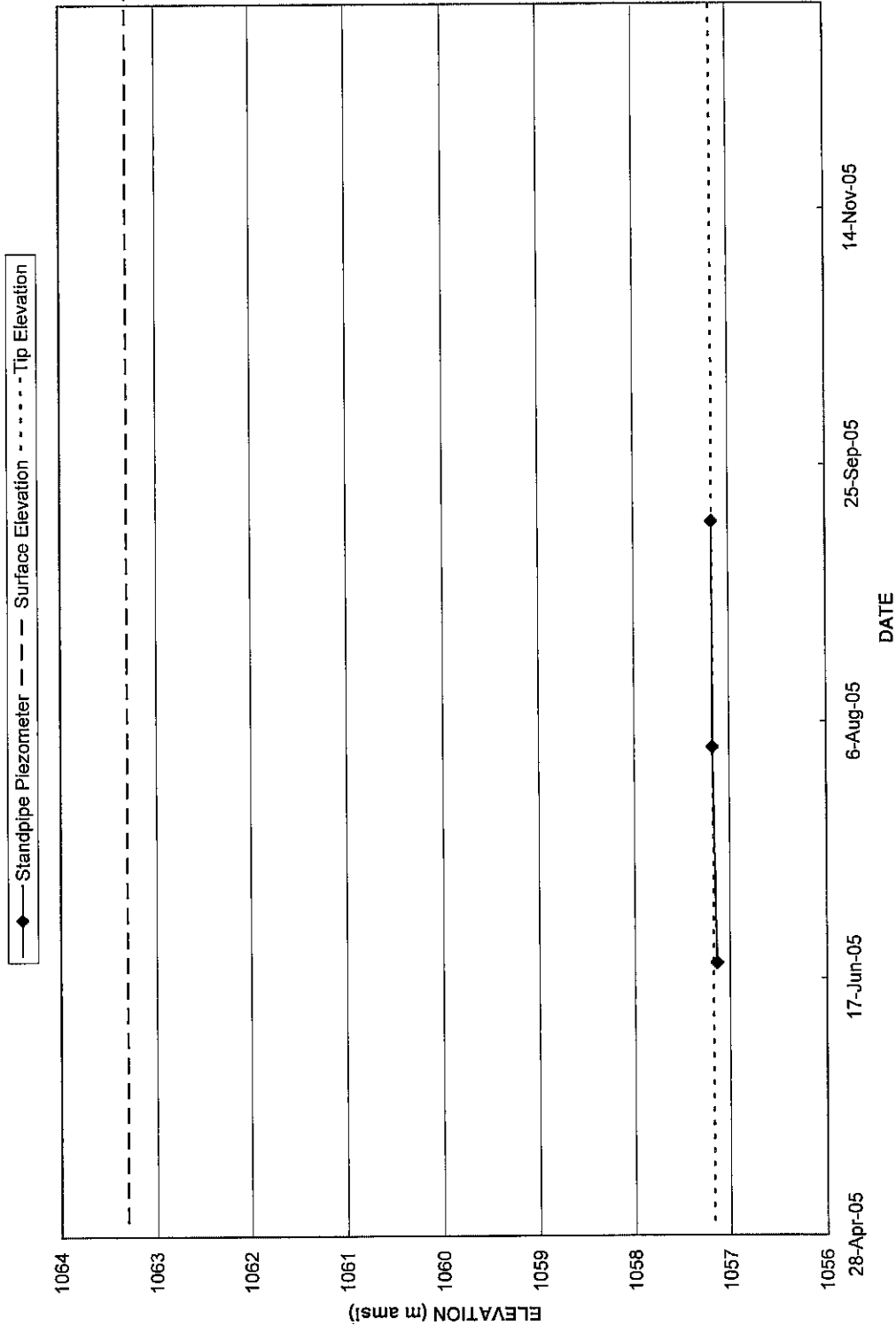
Piezometric Monitoring

P81-06 Standpipe Piezometer

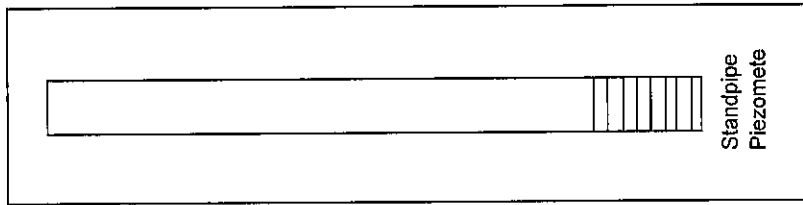


[illegible]

SECONDARY DAM
Piezometric Monitoring
P81-07 Standpipe Piezometer



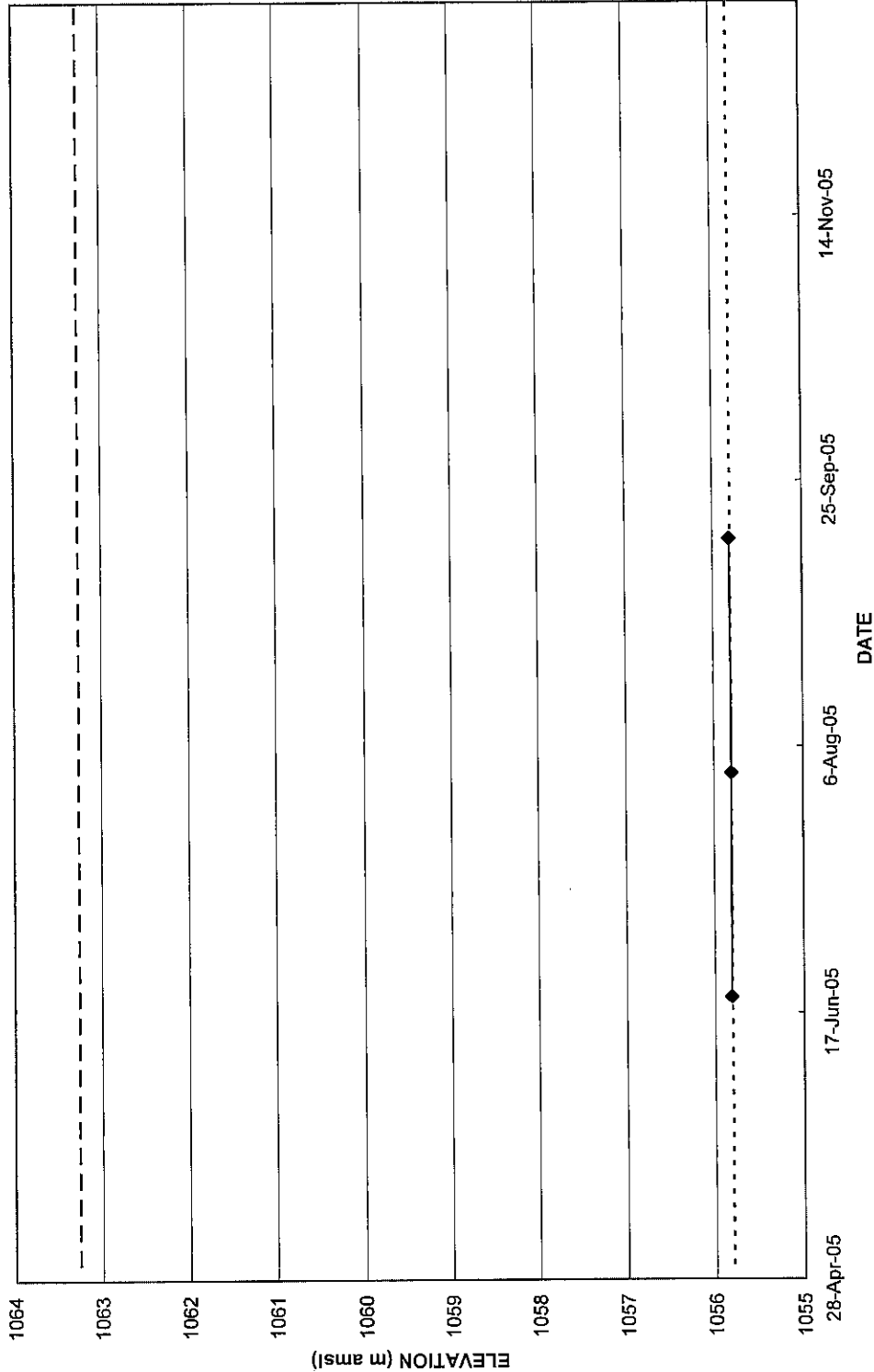
Instrument
Details



[illegible]

SECONDARY DAM
Piezometric Monitoring
P81-08 Standpipe Piezometer

—◆— Standpipe Piezometer — — — Surface Elevation - - - - - Tip Elevation



Instrument
Details

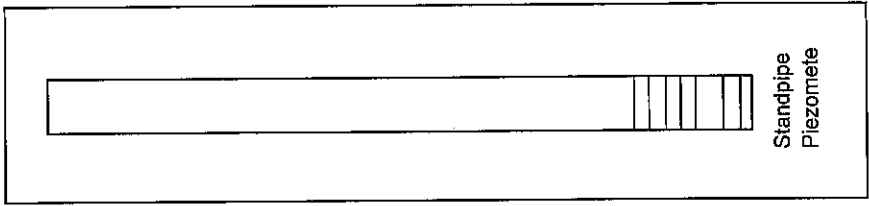


Table 7. 2005 Water Level Elevation for Multi-Level Wells, Faro Mine, Yukon

Well ID	Stickup (m)	Ground Elevation (m asl)	Date	Time	Water Level Below top of Casing (m)	Water Level Elevation (m asl)
P03-01-01	0.53	1060.581	3-May-05	10:01	6.36	1054.75
P03-01-01	0.53	1060.581	8-Sep-05	9:55	6.03	1055.08
P03-01-02	0.53	1060.5872	3-May-05	10:03	6.35	1054.76
P03-01-02	0.53	1060.5872	8-Sep-05	9:57	6.10	1055.02
P03-01-03	0.53	1060.581	3-May-05	10:04	6.34	1054.77
P03-01-03	0.53	1060.581	8-Sep-05	9:59	6.08	1055.03
P03-01-04	0.53	1060.581	3-May-05	10:05	6.36	1054.75
P03-01-04	0.53	1060.581	8-Sep-05	9:59	6.10	1055.01
P03-01-05	0.53	1060.581	3-May-05	10:05	6.37	1054.74
P03-01-05	0.53	1060.581	8-Sep-05	10:00	6.10	1055.00
P03-01-06	0.53	1060.581	3-May-05	10:06	6.36	1054.75
P03-01-06	0.53	1060.581	8-Sep-05	10:01	6.08	1055.02
P03-01-07	0.53	1060.581	3-May-05	10:07	6.34	1054.77
P03-01-07	0.53	1060.581	8-Sep-05	10:02	6.02	1055.09
P03-01-08	0.53	1060.581	3-May-05	10:08	n/a	-
P03-01-08	0.53	1060.581	8-Sep-05	10:02	5.77	1055.34
P03-01-09	0.53	1060.581	3-May-05	10:10	6.39	1054.72
P03-01-09	0.53	1060.581	8-Sep-05	10:03	5.84	1055.27
P03-02-01	0.69	1059.905	11-May-05	10:09	5.86	1054.74
P03-02-01	0.69	1059.905	8-Sep-05	13:09	6.18	1054.42
P03-02-02	0.69	1059.905	11-May-05	10:11	5.86	1054.74
P03-02-02	0.69	1059.905	8-Sep-05	13:10	6.17	1054.42
P03-02-03	0.69	1059.905	11-May-05	10:12	5.84	1054.75
P03-02-03	0.69	1059.905	8-Sep-05	13:11	6.18	1054.42
P03-02-04	0.69	1059.905	11-May-05	10:13	5.84	1054.75
P03-02-04	0.69	1059.905	8-Sep-05	13:11	6.17	1054.42
P03-02-05	0.69	1059.905	11-May-05	10:14	5.86	1054.74
P03-02-05	0.69	1059.905	8-Sep-05	13:12	6.18	1054.41
P03-02-06	0.69	1059.905	11-May-05	10:14	5.89	1054.70
P03-02-06	0.69	1059.905	8-Sep-05	13:12	6.10	1054.49
P03-02-07	0.69	1059.905	11-May-05	10:16	5.74	1054.86
P03-02-07	0.69	1059.905	8-Sep-05	13:13	5.52	1055.07
P03-02-08	0.69	1059.905	11-May-05	10:17	5.69	1054.91
P03-02-08	0.69	1059.905	8-Sep-05	13:14	5.35	1055.25
P03-02-09	0.69	1059.905	11-May-05	10:18	5.61	1054.98
P03-02-09	0.69	1059.905	8-Sep-05	13:15	5.27	1055.33
P03-03-01	0.82	1060.672	4-May-04	16:11	7.53	1053.96
P03-03-01	0.82	1060.672	22-Jul-05	17:36	6.97	1054.52
P03-03-01	0.82	1060.672	8-Sep-05	15:20	7.29	1054.20
P03-03-02	0.82	1060.672	4-May-04	16:12	7.63	1053.86
P03-03-02	0.82	1060.672	22-Jul-05	17:38	7.05	1054.44
P03-03-02	0.82	1060.672	8-Sep-05	15:23	7.38	1054.11
P03-03-03	0.82	1060.672	4-May-04	16:14	7.62	1053.87
P03-03-03	0.82	1060.672	22-Jul-05	17:39	7.05	1054.44
P03-03-03	0.82	1060.672	8-Sep-05	15:23	7.34	1054.15
P03-03-04	0.82	1060.672	4-May-04	16:15	7.57	1053.92

Table 7. 2005 Water Level Elevation for Multi-Level Wells, Faro Mine, Yukon

Well ID	Stickup (m)	Ground Elevation (m asl)	Date	Time	Water Level Below top of Casing (m)	Water Level Elevation (m asl)
P03-03-04	0.82	1060.672	22-Jul-05	17:40	7.08	1054.41
P03-03-04	0.82	1060.672	8-Sep-05	15:24	7.35	1054.14
P03-03-05	0.82	1060.672	4-May-05	16:15	7.58	1053.91
P03-03-05	0.82	1060.672	22-Jul-05	17:42	7.09	1054.40
P03-03-05	0.82	1060.672	8-Sep-05	15:25	7.34	1054.15
P03-03-06	0.82	1060.672	4-May-05	16:16	7.57	1053.92
P03-03-06	0.82	1060.672	22-Jul-05	17:43	7.11	1054.38
P03-03-06	0.82	1060.672	8-Sep-05	15:26	7.32	1054.17
P03-03-07	0.82	1060.672	4-May-04	16:16	7.58	1053.91
P03-03-07	0.82	1060.672	8-Sep-05	15:27	7.33	1054.16
P03-03-08	0.82	1060.672	4-May-04	16:17	7.52	1053.97
P03-03-08	0.82	1060.672	8-Sep-05	15:28	7.14	1054.35
P03-03-09	0.82	1060.672	4-May-04	16:18	7.48	1054.01
P03-03-09	0.82	1060.672	8-Sep-05	15:29	7.04	1054.45
P03-04-01	0.78	1060.429	3-May-05	13:35	12.64	1048.57
P03-04-01	0.78	1060.429	10-Sep-05	9:13	12.36	1048.85
P03-04-02	0.78	1060.429	3-May-05	13:37	12.61	1048.60
P03-04-02	0.78	1060.429	22-Jul-05	15:10	12.09	1049.12
P03-04-02	0.78	1060.429	10-Sep-05	9:14	12.32	1048.89
P03-04-03	0.78	1060.429	3-May-05	13:41	12.53	1048.68
P03-04-03	0.78	1060.429	10-Sep-05	9:15	12.26	1048.94
P03-04-04	0.78	1060.429	3-May-05	13:42	12.96	1048.25
P03-04-04	0.78	1060.429	22-Jul-05	15:11	12.38	1048.83
P03-04-04	0.78	1060.429	10-Sep-05	9:17	12.62	1048.58
P03-04-05	0.78	1060.429	3-May-05	13:44	12.97	1048.24
P03-04-05	0.78	1060.429	10-Sep-05	9:18	12.62	1048.58
P03-04-06	0.78	1060.429	3-May-05	13:48	12.92	1048.29
P03-04-06	0.78	1060.429	22-Jul-05	15:13	12.44	1048.77
P03-04-06	0.78	1060.429	10-Sep-05	9:21	12.50	1048.71
P03-04-07	0.78	1060.429	3-May-05	13:46	12.95	1048.26
P03-04-07	0.78	1060.429	10-Sep-05	9:19	12.50	1048.71
P03-04-08	0.78	1060.429	3-May-05	13:49	12.95	1048.26
P03-04-08	0.78	1060.429	22-Jul-05	15:13	12.52	1048.69
P03-04-08	0.78	1060.429	10-Sep-05	9:22	12.47	1048.73
P03-04-09	0.78	1060.429	3-May-05	13:51	12.95	1048.26
P03-04-09	0.78	1060.429	10-Sep-05	9:24	12.47	1048.73
P03-05-01	0.84	1059.588	4-May-05	10:10	8.91	1051.52
P03-05-01	0.84	1059.588	10-Sep-05	14:08	8.68	1051.75
P03-05-02	0.84	1059.588	4-May-05	10:12	8.91	1051.52
P03-05-02	0.84	1059.588	10-Sep-05	14:09	8.67	1051.76
P03-05-03	0.84	1059.588	4-May-05	10:13	8.94	1051.49
P03-05-03	0.84	1059.588	10-Sep-05	14:11	8.70	1051.73
P03-05-04	0.84	1059.588	4-May-05	10:15	9.08	1051.36
P03-05-04	0.84	1059.588	10-Sep-05	14:12	8.81	1051.62
P03-05-05	0.84	1059.588	4-May-05	10:16	9.09	1051.35
P03-05-05	0.84	1059.588	10-Sep-05	14:13	8.80	1051.63

Table 7. 2005 Water Level Elevation for Multi-Level Wells, Faro Mine, Yukon

Well ID	Stickup (m)	Ground Elevation (m asl)	Date	Time	Water Level Below top of Casing (m)	Water Level Elevation (m asl)
P03-05-06	0.84	1059.588	4-May-05	10:17	8.94	1051.49
P03-05-06	0.84	1059.588	10-Sep-05	14:14	8.62	1051.81
P03-05-07	0.84	1059.588	4-May-05	10:18	8.96	1051.47
P03-05-07	0.84	1059.588	10-Sep-05	14:15	8.66	1051.78
P03-05-08	0.84	1059.588	4-May-05	10:20	8.81	1051.63
P03-05-08	0.84	1059.588	10-Sep-05	14:17	8.50	1051.93
P03-06-01	0.87	1061.925	3-May-05	17:07	12.72	1050.07
P03-06-01	0.87	1061.925	10-Sep-05	16:49	12.32	1050.47
P03-06-02	0.87	1061.925	3-May-05	17:09	12.70	1050.09
P03-06-02	0.87	1061.925	10-Sep-05	16:43	12.32	1050.47
P03-06-03	0.87	1061.925	3-May-05	17:10	12.72	1050.07
P03-06-03	0.87	1061.925	10-Sep-05	16:44	12.32	1050.47
P03-06-04	0.87	1061.925	3-May-05	17:12	12.73	1050.07
P03-06-04	0.87	1061.925	10-Sep-05	16:45	12.34	1050.45
P03-06-05	0.87	1061.925	3-May-05	17:13	12.71	1050.08
P03-06-05	0.87	1061.925	10-Sep-05	16:46	12.29	1050.50
P03-06-06	0.87	1061.925	3-May-05	17:14	12.68	1050.11
P03-06-06	0.87	1061.925	10-Sep-05	16:47	12.26	1050.53
P03-06-07	0.87	1061.925	3-May-05	n/a	dry	-
P03-06-07	0.87	1061.925	10-Sep-05	16:48	dry	-
P03-08-01	0.88	1047.474	5-May-05	13:26	8.85	1039.50
P03-08-01	0.88	1047.474	9-Sep-05	14:19	8.46	1039.89
P03-08-02	0.88	1047.474	5-May-05	13:28	8.86	1039.49
P03-08-02	0.88	1047.474	23-Jul-05	11:07	7.56	1040.79
P03-08-02	0.88	1047.474	9-Sep-05	14:21	8.15	1040.20
P03-08-03	0.88	1047.474	5-May-05	13:30	8.65	1039.70
P03-08-03	0.88	1047.474	23-Jul-05	11:10	7.38	1040.97
P03-08-03	0.88	1047.474	9-Sep-05	14:23	7.95	1040.40
P03-08-04	0.88	1047.474	5-May-05	13:31	8.66	1039.69
P03-08-04	0.88	1047.474	23-Jul-05	11:11	7.39	1040.96
P03-08-04	0.88	1047.474	9-Sep-05	14:23	7.92	1040.43
P03-08-05	0.88	1047.474	5-May-05	13:35	8.49	1039.86
P03-08-05	0.88	1047.474	23-Jul-05	11:13	7.19	1041.16
P03-08-05	0.88	1047.474	9-Sep-05	14:24	7.72	1040.64
P03-08-06	0.88	1047.474	5-May-05	13:13	8.06	1040.29
P03-08-06	0.88	1047.474	9-Sep-05	14:26	7.33	1041.02
P03-08-07	0.88	1047.474	5-May-05	13:38	5.85	1042.50
P03-08-07	0.88	1047.474	9-Sep-05	14:27	5.39	1042.96
P03-08-08	0.88	1047.474	5-May-05	13:40	5.72	1042.63
P03-08-08	0.88	1047.474	9-Sep-05	14:29	5.26	1043.09
P03-09-01	0.69	1017.822	4-May-05	13:34	2.64	1015.87
P03-09-01	0.69	1017.822	9-Sep-05	11:35	2.87	1015.64
P03-09-02	0.69	1017.822	4-May-05	13:35	2.89	1015.62
P03-09-02	0.69	1017.822	22-Jul-05	11:44	2.60	1015.91
P03-09-02	0.69	1017.822	9-Sep-05	11:36	3.11	1015.40
P03-09-03	0.69	1017.822	4-May-05	13:36	3.01	1015.50

Table 7. 2005 Water Level Elevation for Multi-Level Wells, Faro Mine, Yukon

Well ID	Stickup (m)	Ground Elevation (m asl)	Date	Time	Water Level Below top of Casing (m)	Water Level Elevation (m asl)
P03-09-03	0.69	1017.822	9-Sep-05	11:37	3.33	1015.18
P03-09-04	0.69	1017.822	4-May-05	13:36	3.33	1015.18
P03-09-04	0.69	1017.822	22-Jul-05	11:46	3.10	1015.42
P03-09-04	0.69	1017.822	9-Sep-05	11:38	3.48	1015.03
P03-09-05	0.69	1017.822	4-May-05	13:37	3.38	1015.14
P03-09-05	0.69	1017.822	9-Sep-05	11:39	3.53	1014.99
P03-09-06	0.69	1017.822	4-May-05	13:38	3.40	1015.11
P03-09-06	0.69	1017.822	22-Jul-05	11:47	3.18	1015.33
P03-09-06	0.69	1017.822	9-Sep-05	11:39	3.53	1014.98
P03-09-07	0.69	1017.822	4-May-05	13:38	3.54	1014.98
P03-09-07	0.69	1017.822	22-Jul-05	11:48	3.35	1015.16
P03-09-07	0.69	1017.822	9-Sep-05	11:40	3.66	1014.85
P03-09-08	0.69	1017.822	4-May-05	13:39	3.58	1014.94
P03-09-08	0.69	1017.822	9-Sep-05	11:40	3.71	1014.80
P03-09-09	0.69	1017.822	4-May-05	13:40	3.75	1014.76
P03-09-09	0.69	1017.822	22-Jul-05	11:48	3.60	1014.91
P03-09-09	0.69	1017.822	9-Sep-05	11:41	4.08	1014.43
P05-01-01	0.68	1017.32	9-Sep-05	9:47	1.69	1016.31
P05-01-02	0.68	1017.32	9-Sep-05	9:48	1.84	1016.16
P05-01-03	0.68	1017.32	9-Sep-05	9:48	1.86	1016.14
P05-01-04	0.68	1017.32	9-Sep-05	9:49	1.91	1016.09
P05-01-05	0.68	1017.32	9-Sep-05	9:49	2.25	1015.75
P05-01-06	0.68	1017.32	9-Sep-05	9:50	2.37	1015.63