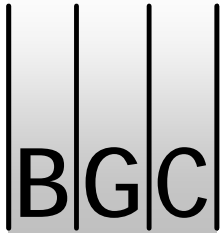


**APPENDIX I  
SITE VISIT INSPECTION MEMO  
(JULY)**

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	2.8	7.5	1050.63	1049.95	
Mar-82	0.9	5.0	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	7.0	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	8.0	1050.94	1050.30	
Sep-89	2.0	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	3.5		1051.12		
May-94	2.8	7.7	1050.66	1050.09	
Sep-94	2.0	7.5	1050.10	1049.95	
Sep-95	0.5	7.5	1049.05	1049.95	
Sep-96	3.4	8.3	1051.08	1050.48	
8-May-97	2.0	7.9	1050.10	1050.23	
7-Nov-97	2.5	7.5	1050.45	1049.95	
26-May-98	3.4	8.3	1051.06	1050.51	
15-Nov-98	2.7	7.7	1050.59	1050.09	
28-May-99	3.3	8.1	1051.01	1050.37	
11-Sep-99	3.1	8.0	1050.87	1050.30	
14-Jun-00	4.2	9.1	1051.64	1051.07	
9-Sep-00	3.8	8.7	1051.36	1050.79	
6-Jun-01	4.2	8.8	1051.64	1050.86	
19-Sep-01	3.0	7.9	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)
6-Jul-04	1.3	8.0	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	8.0	1049.68	1050.30	#350 Bubbles stop then numbers start rising
14-Jun-06	2.3	8.7	1050.31	1050.79	#350 Keeps Climbing
2-Oct-06	0.9	7.7	1049.33	1050.09	Ice in casing and on cable
6-Jun-07	3.9	9.5	1051.43	1051.35	read three times, was very noisy
24-Sep-07	1.9	8.3	1050.03	1050.51	#350 stopped then keeps rising
24-Jun-08	3.2	8.7	1050.94	1050.79	#350 stopped then keeps rising
24-Sep-08	3.6	8.6	1051.22	1050.72	
30-Jun-09	3.4	8.4	1051.08	1050.58	
29-Sep-09	4.0	8.4	1051.50	1050.58	

Questionable values



**BGC ENGINEERING INC.**  
**AN APPLIED EARTH SCIENCES COMPANY**

200, 1121 Centre Street NW, Calgary, Alberta, Canada. T2E 7K6  
Phone (403) 250-5185 Fax (403) 250-5330

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**MEMORANDUM**

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<b>To:</b>	<b>Denson Environmental Services</b>	<b>Fax No.:</b>	<b>Via e-mail</b>
<b>Attention:</b>	<b>Roy Morrell</b>	<b>CC:</b>	<b>Jon Bronson</b> <b>John Brodie</b>
<b>From:</b>	<b>Gerry Ferris</b>	<b>Date:</b>	<b>July 30, 2009</b>
<b>Subject:</b>	<b>Summer Inspection of Faro Mine</b>		
<b>No. of Pages (including this page):</b>	<b>6</b>	<b>Project No:</b>	<b>0762-002-02</b>

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Mr. Gerry Ferris, P.Eng., of BGC Engineering Inc. (BGC), undertook a visual inspection of selected facilities at Faro Mine between June 30 and July 3, 2009. At the end of this inspection much of the items contained in this memo were discussed with Mr. Roy Morrell and Mr. Jon Bronson. This memo summarizes the conditions observed, along with recommendations for maintenance or monitoring:

**FWSD Breach Area**

- Minor cracking continues in the backslope behind the rip rap on both sides of the floodplain.
- The slough near the south abutment of the former dam shows signs of seepage discharge and minor ravelling. This area should be visually monitored, but no further work is recommended.
- Erosion and bank undercutting continues downstream of the breach works, within the Fresh Water Channel. This behaviour was expected and does not require further intervention at this time.
- Appears in satisfactory condition.

**K8 Creek Rehab.**

- The delta continues to develop in the former borrow pit as K8 Creek flows into the former reservoir area, this development has slowed and a channel is developing across this area.
- Appears in satisfactory condition.

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### Upstream Section of Former Reservoir

- Very minor erosion is evident as South Fork of Rose Creek enters the former reservoir area.
- Appears in satisfactory condition.

### Cross Valley Dam

- Minor cracks were apparent on the crest of the dam, this is due to frost action and typically occurs at this site. The crest of the dam should be graded and compacted so that water does not begin to concentrate in the small depression
- During the spring of 2009, in order to create storage space for the expected spring inflow, the pond elevation was lowered when the ice was on the polishing pond. During this drawdown ice plucking of the rip rap occurred. This has lead to the movement of rip rap down the face of the dam, exposing in some cases the underlying sand and gravel and creating a scarp on the upstream face. This has lead to movement of the rip rap above the ice plucking zone and minor sliding. Repairs to the rip rap should be completed within 2 years.
- The majority of the vegetation was removed from this dam last year. It appears that on some parts of the dam this work was not completed. The remaining vegetation should be removed, from the upstream portion of the spillway, the south abutment and the surface of the seepage blanket (toe of the dam).
- During the removal of the woody vegetation from the crest of the dam, it appears that in some locations the amount of soil removed with the roots was quite significant. In a few areas the crest width of the dam has been reduced by this activity, mostly on the downstream side of the crest. The normal crest width should be re-established by placing addition material within the areas that show loss of crest width. It appears that the material removed was shell, which consists of sand and gravel, and should be replaced (and compacted) in kind. If during this repair work, it is discovered that some of the core material was disturbed, different repairs will be required and geotechnical advice should be sought.
- Appears in satisfactory condition.

### Intermediate Dam

- No crest cracking or toe seepage noted.
- Downstream face experienced fairly significant rilling erosion and some slumping. This type of behaviour has occurred on the face of the dam a number of times over the last four or five years, ever since some sand and gravel was applied to the face of the dam. The rill erosion and slumping is occurring within this surfacing material. In previous years this material has been used to re-surface the downstream face. This should not be undertaken. The rilling and minor surface slumping does not need to be repaired, if desired the erosion rills can be filled with a coarse angular gravel, but this is not strictly

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needed. The downstream face appears in rough shape and more and more of the surface fill that is not part of the shell will be removed each year, this should not be cause for concern, but the size and severity of the rills should be monitored and any changes noted.

- The granular material collected on the road surface (eroded down the face of the dam in previous years) should be removed in order to expose the gravel drain. If the borrow material can be created, it would be advisable to extend the gravel drain onto the prepared surface of the road, extending about 0.3 m from the face of the dam. This will ensure that the gravel drain is not completely covered by future erosion on the face of the dam. The gravel used to complete this extension will need to match the specifications of the existing gravel drain.
- On the polishing pond side of the road there is evidence of wave erosion occurring where the rip rap has been disturbed and ice plucking occurred due to the winter lowering of the polishing pond. This area should be visually inspected on a regular basis, if the erosion starts to become excessive rip rap protection of this area will be needed.
- The rip rap repairs on the upstream side of the dam appear to be performing adequately.
- The emergency spillway was reconfigured about two years ago and at the outlet was shaped. Due to the presence of a water discharge line in the centre of the spillway, the rip rap surface is not 'level' and under flow it appears that water would concentrate on the left side of the spillway. The surface of the rip rap should be levelled to ensure that flow concentration would not occur if the emergency spillway is needed.
- Other than the notes above, the dam is in satisfactory condition.

#### Spoil Pile Toe at Polishing Pond

- Over the past few years, when the water level in the polishing pond was maintained at low levels, significant seepage was noted in this area. In conjunction with the seepage sloughing of the edge of the pond has been noted. This appears to have been an area with on-going movements, as evidenced by the bowed appearance of trees in the area.
- This year the water level in the polishing pond is higher than the last few, which should provide some extra stability at the toe. However, the slumping is now extending further up the slope. A number of headscarps were noted in the area.
- This area should be regularly inspected and a study of this area should be undertaken to determine the best method to repair the slumping. Access to this area is difficult and the risk of slumping needs to be considered prior to proceeding with repairs because this will likely require a significant and/or complicated construction program.

#### Secondary Impoundment Dam

- Surface water appears to have been directed along the east toe of the dam this spring. The surface water traveled along the toe of the dam until near the pumping wells, where it travelled across the road causing erosion of the road surface. A small swale was

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created in the road surface to direct the water into the North Fork Rose Creek Diversion channel. The erosion location should be filled with sand and gravel fill, and the swale should be formalized, if the surface water will continue to be directed to this area.

- The structure appears to be performing adequately.

#### Rose Creek Diversion Channel

- Remove the trees in the channel. This activity does not need to be completed in the upper and lower weir section, but should be completed for the remainder of the channel. Where practicable the removal of the trees and shrubs should include removal of the roots. This activity may cause some damage to the clay layer which is within the canal dyke (road) fill. Careful monitoring for this possibility will need to be undertaken and depending on the severity of the leakage remedial measures may be needed. Prior to initiating this activity, additional staff gauges or potentially water level monitoring stations should be installed (see next bullet).
- At least three new staff gauges or flow measurement locations should be established within the diversion; one located near the access road to the settlement test pads, one about 50 m upstream of the upper weir section and one located between the upper and lower weir sections. These locations should be established prior to the initiation of any vegetation removal from the diversion. Once the staff gauges are installed a rating curve should be developed at each location, this will allow assessment of the amount of leakage occurring in various reaches of the diversion and assessment of changes due to the vegetation removal. A survey program will also be needed to check that the position of the staff gauge is not changing with time, this should be completed as part of each measurement for the development of the rating curve.
- No signs of cracking or settlement were noted on the canal dike crest.
- Minor movements are evident within the sand and gravel of the backscarp, these should be visually monitored.
- Appears in satisfactory condition.

#### North Fork Rose Creek Rock Drain

- Rock drain appears to be discharging water with no signs of significant instability.
- The water level in the pond appears to have been increasing over the last few years for the same discharge and same water exit elevation. Upon detailed examination during this inspection this appears to be related to beaver activity on the face of the rock drain. The beavers are building a facing on the rockfill material which is raising the pond elevation, although this is not thought to cause a significant reduction in the maximum capacity of the drain, or reduce stability of the downstream toe, the beavers should be removed.

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**BGC Project Memorandum**

To: Denson Environmental  
Subject: Faro Mine – Summer Inspection

From: BGC Engineering Inc.

Date: July 30, 2009  
Proj. No: 0762-002-02

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- The following monitoring program should be followed throughout the summer period:
  - Once every two weeks measure the water elevation in the pond.
  - Once every two weeks measure the water elevation exit at the downstream toe of the drain.
  - Once per week record the water levels at staff gauges NFRC 23 and X2. Daily measurements are preferred. Once per month measure the top of the staff gauge (elevation survey).
  - Once per month download the data from the pond and creek dataloggers and send to BGC.
- The pressure gauge installed in the upstream pond has failed, this should be replaced to re-institute monitoring of the pond elevation.

#### K8 Rock Drain

- Water appears to be flowing freely through, appears in satisfactory condition.

#### North Valley Wall Interceptor Ditch

- Selected sections of the channel were inspected and found to be flowing properly.
- A new crossing of the ditch was made, uphill from the guardhouse for the installation of a new water well. Two culverts were installed to transfer water under the new access road. The capacity of the culverts should be checked.
- Appears in satisfactory condition.

#### Faro Creek Diversion Channel

- Some minor rip rap movement has occurred in select locations, exposing the underlying geotextile. This was likely caused by ice action during this past winter. The rip rap cover should be reinstated, in some locations the damage has been extensive and a new section of geotextile should be placed in the area.
- Monitoring of the retrogression of the Faro Pit Wall had not been completed until during my inspection, recommendations have been provided by Golder for monitoring this section of the pit wall. It appears that the erosion of this area has progressed significantly (this progress is less evident by failure of the flat ground surface but by steepening of the underlying support soil). Monitoring of the progress of the erosion should be documented by photographs and the regular monitoring of the crest retrogression.
- Last year a number of slumps occurred in the slope above the diversion and also on the downstream side of the road. Repair of the major slump in the hill side at the corner appears to have been repaired adequately. As part of this repair, rip rap has been placed on the hill side edge of the channel. This rip rap placement has restricted the flow in the channel, and should be re-adjusted so as to remove the flow restriction.

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**BGC Project Memorandum**

To: Denson Environmental

From: BGC Engineering Inc.

Date: July 30, 2009

Subject: Faro Mine – Summer Inspection

Proj. No: 0762-002-02

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- The section of the channel repaired last year through the addition of bituminous liner and rip rap appears to be performing adequately. In this area there is no need to cover the bituminous liner.
- Channel appears to be performing in a satisfactory manner.

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:

Original Signed by:

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

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## **APPENDIX II INSTRUMENTATION DATA RECORDS AND GRAPHS**

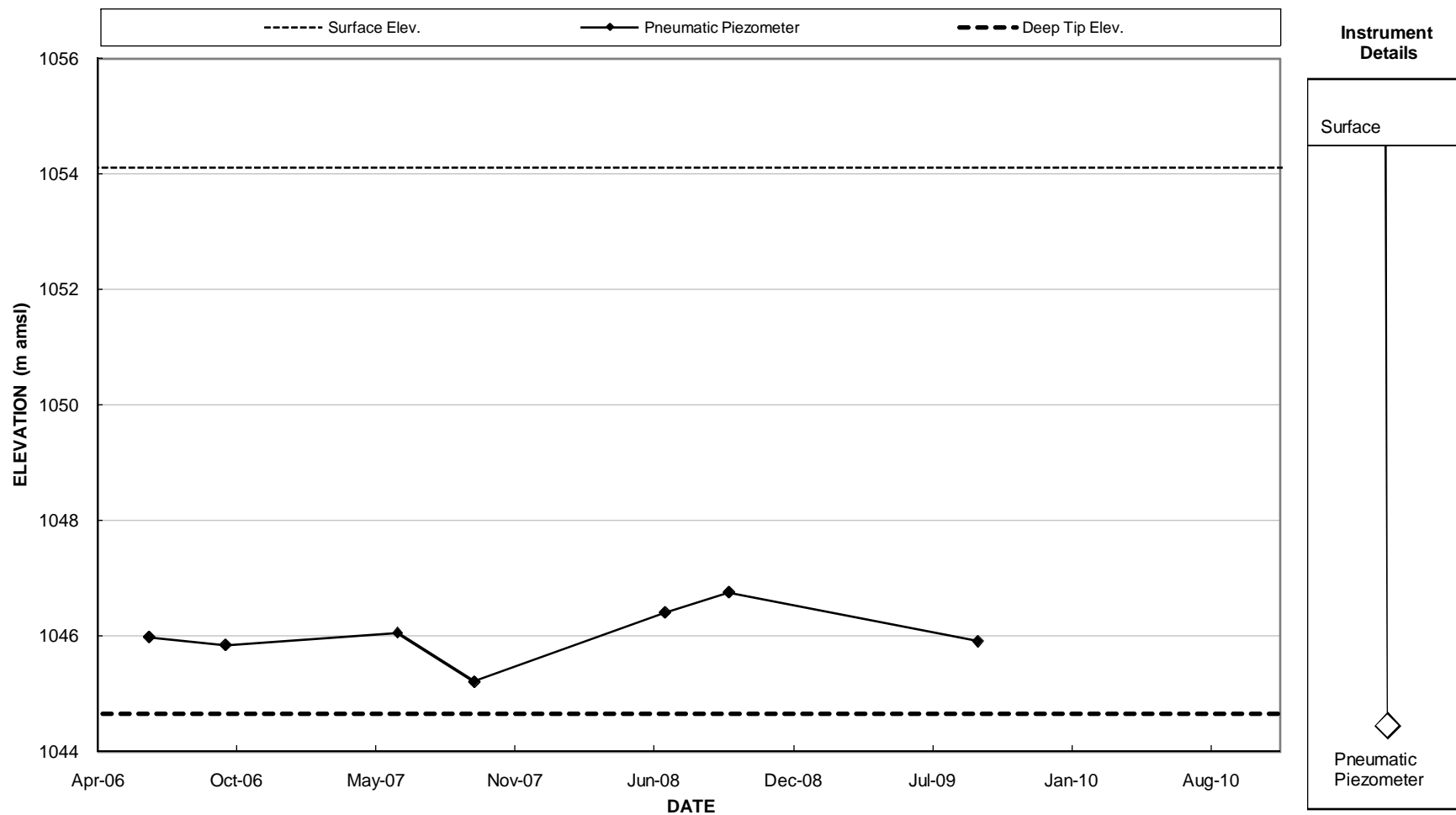
## **DIVERSION CANAL CANAL DIKE**

## **PIEZOMETERS**

Faro Mine Instrumentation  
 Canal Dike

<b>BGC05-02</b>		<b>Location:</b>	Canal Dike St.1+900		
		<b>Coordinates:</b>	8V580881 6913412	<b>Ground Elevation (m amsl):</b>	1054.10
<b>Surface Protector:</b>	Yes	<b>Date Installed:</b>	2005	<b>Tip Elevation (m amsl):</b>	1044.65
<b>Date</b>		<b>Reading (psi) (#030137)</b>		<b>Piezometric Elevation (m amsl)</b>	<b>Comments</b>
14-Jun-06		1.9		1045.98	
2-Oct-06		1.7		1045.84	
06-Jun-07		2		1046.05	good flow
24-Sep-07		0.8		1045.21	
24-Jun-08		2.5		1046.40	
24-Sep-08		3		1046.75	
30-Jun-09		n/r			
17-Sep-09		1.8		1045.91	

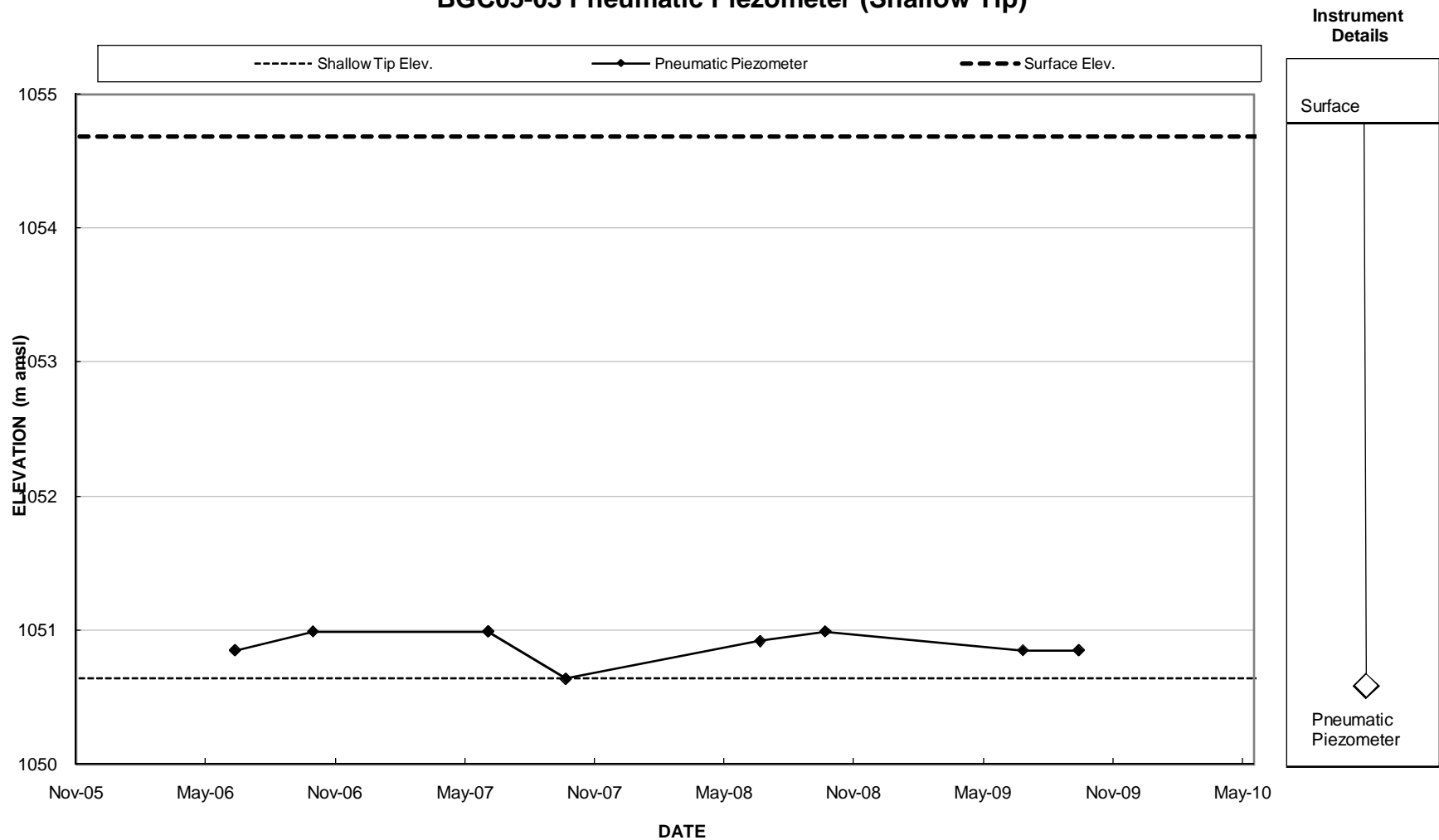
### DIVERSION CANAL DIKE Piezometric Monitoring BGC05-02 Pneumatic Piezometer (Deep Tip)



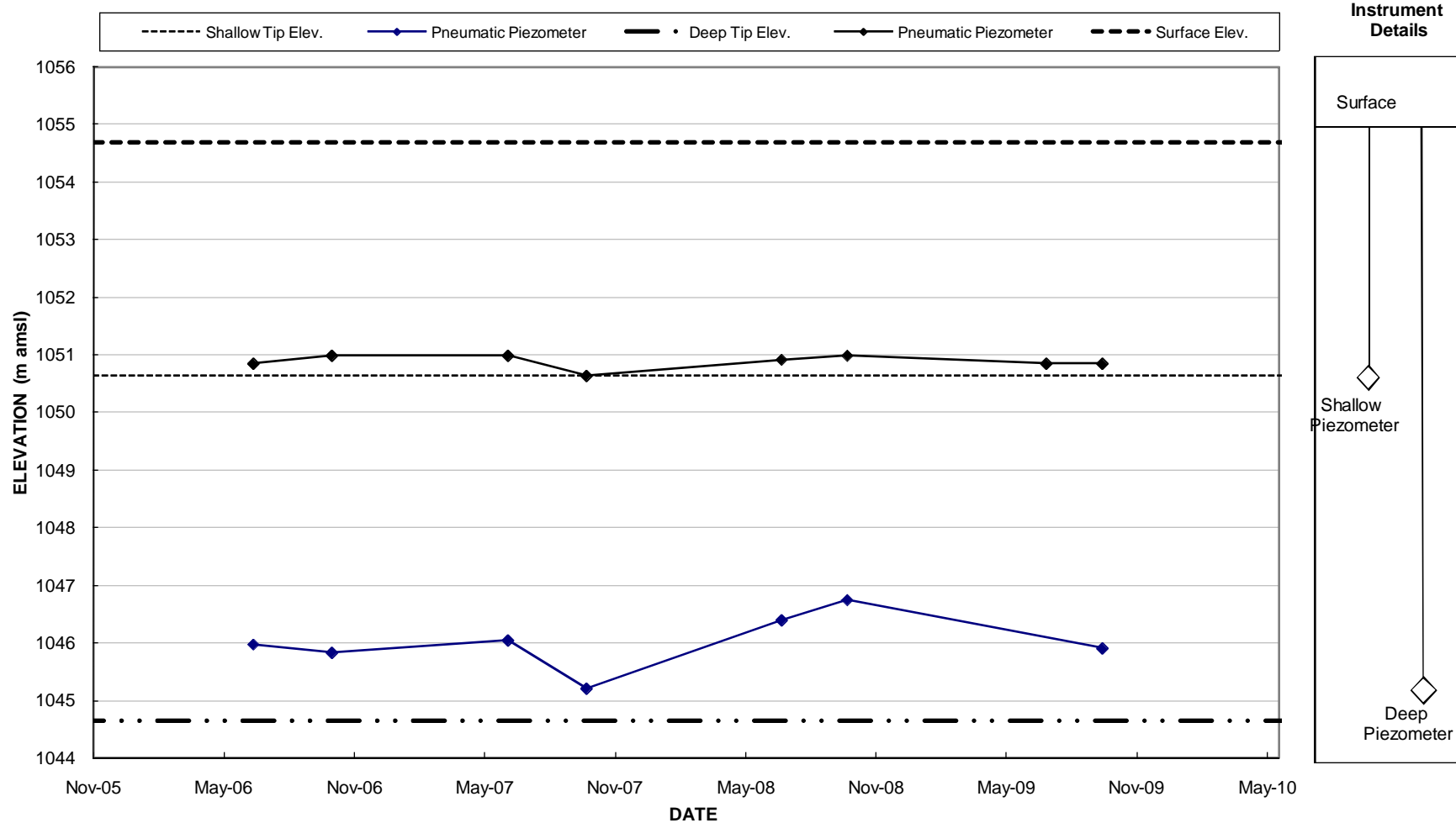
**Faro Mine Instrumentation  
 Canal Dike**

<b>BGC05-03</b>		<b>Location:</b>	Canal Dike St.1+900		
		<b>Coordinates:</b>	8V580868 6913418	<b>Ground Elevation (m amsl):</b>	1054.68
<b>Surface Protector:</b>	Yes	<b>Date Installed:</b>	2005	<b>Tip Elevation (m amsl):</b>	1050.64
<b>Date</b>		<b>Reading (psi) (#030139)</b>		<b>Piezometric Elevation (m amsl)</b>	<b>Comments</b>
14-Jun-06		0.3		1050.85	
2-Oct-06		0.5		1050.99	
6-Jun-07		0.5		1050.99	good flow
24-Sep-07		0		1050.64	
24-Jun-08		0.4		1050.92	
24-Sep-08		0.5		1050.99	
30-Jun-09		0.3		1050.85	
17-Sep-09		0.3		1050.85	

### DIVERSION CANAL DIKE Piezometric Monitoring BGC05-03 Pneumatic Piezometer (Shallow Tip)



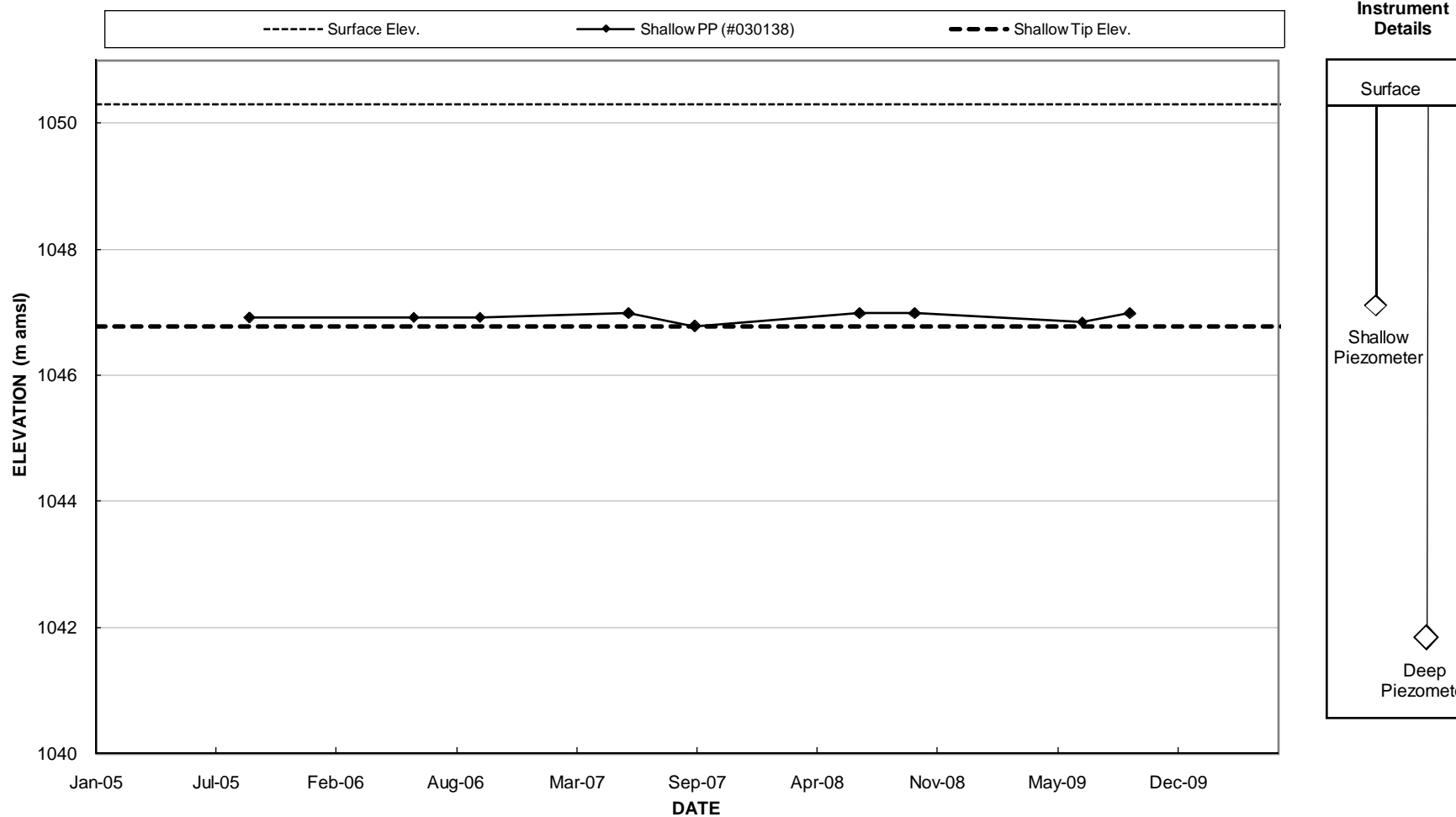
### DIVERSION CANAL DIKE Piezometric Monitoring BGC05-02/-03 Pneumatic Piezometer



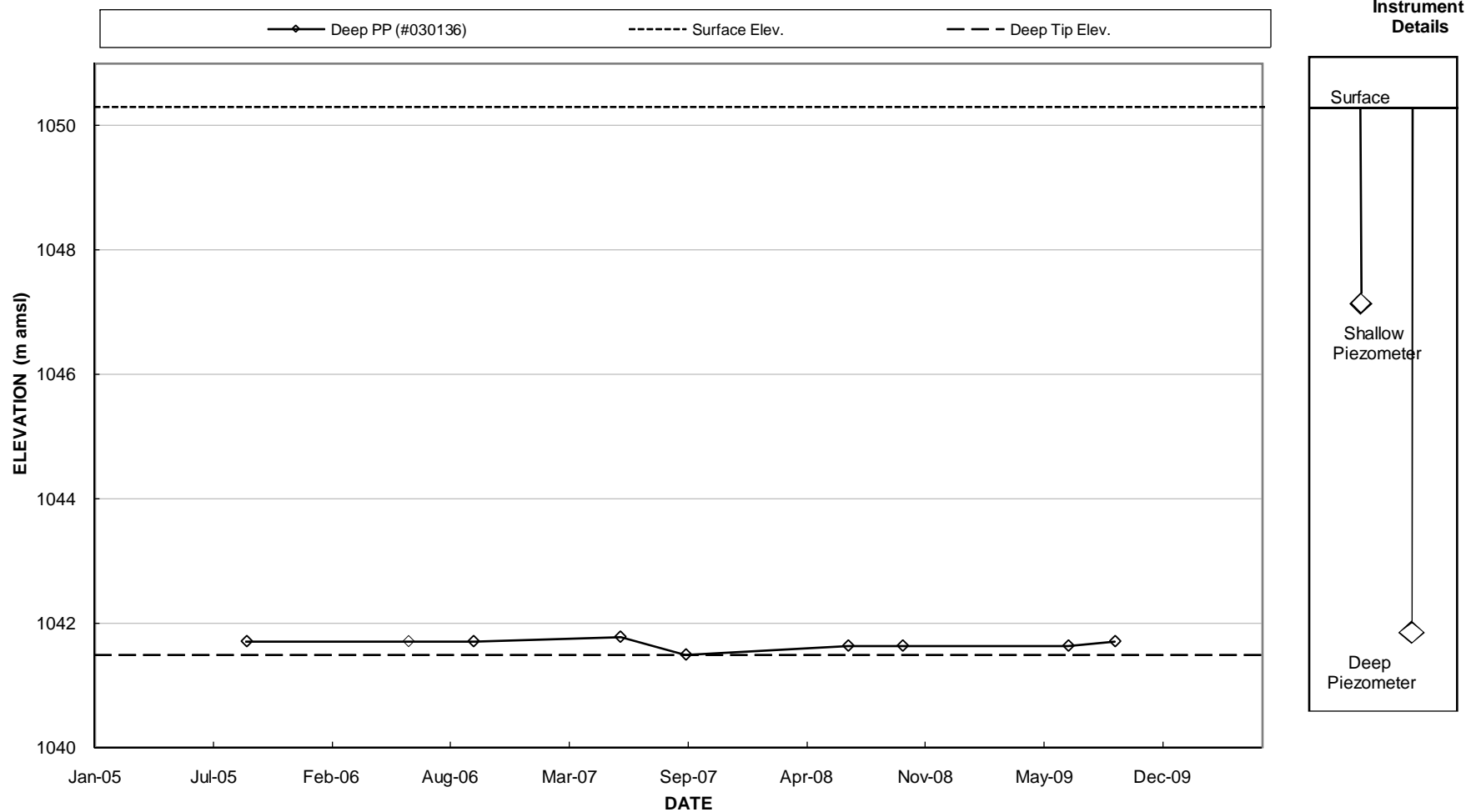


<b>BGC05-06</b>		<b>Location:</b>	Canal Dike St. 2+160 (approx)	<b>Ground Elevation (m amsl):</b>	1050.31
		<b>Coordinates:</b>	8V580715 6913517	<b>Shallow Tip Elevation (m amsl):</b>	1046.78
<b>Surface Protector:</b>	Yes	<b>Date Installed:</b>	2005	<b>Deep Tip Elevation (m amsl):</b>	1041.50
<b>Date</b>	<b>Reading (psi)</b>		<b>Piezometric Elevation (m amsl)</b>		<b>Comments</b>
	<b>Shallow PP (#030138)</b>	<b>Deep PP (#030136)</b>	<b>Shallow (#030138)</b>	<b>Deep (#030136)</b>	
14-Sep-05	0.2	0.3	1046.92	1041.71	
14-Jun-06	0.2	0.3	1046.92	1041.71	
2-Oct-06	0.2	0.3	1046.92	1041.71	
6-Jun-07	0.3	0.4	1046.99	1041.78	good flow
24-Sep-07	0	0	1046.777	1041.50	
24-Jun-08	0.3	0.2	1046.987	1041.64	
24-Sep-08	0.3	0.2	1046.99	1041.64	
30-Jun-09	0.1	0.2	1046.85	1041.64	
17-Sep-09	0.3	0.3	1046.99	1041.71	

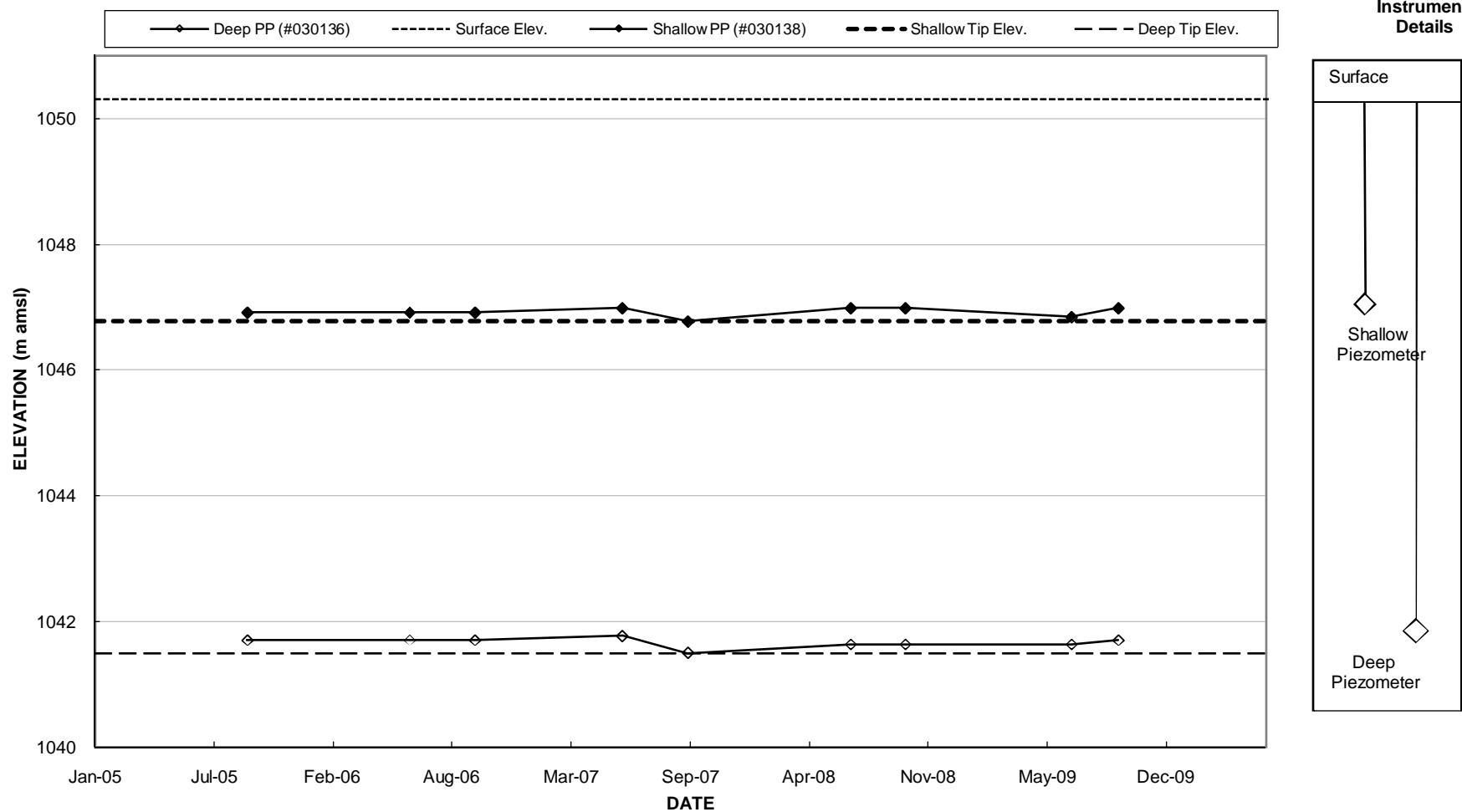
### DIVERSION CANAL DIKE Piezometric Monitoring BGC05-06 Pneumatic Piezometer (Shallow Tip)



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



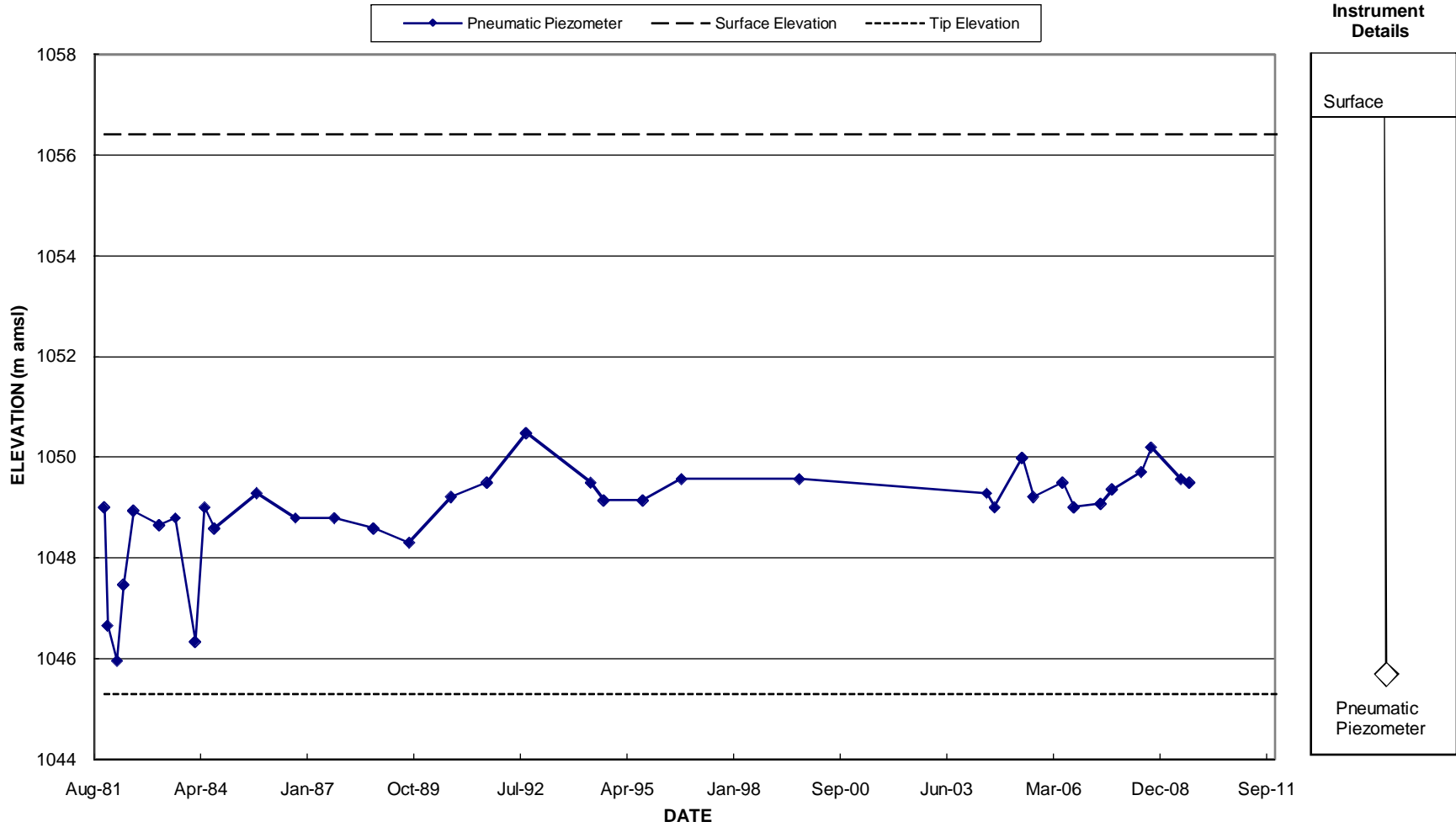
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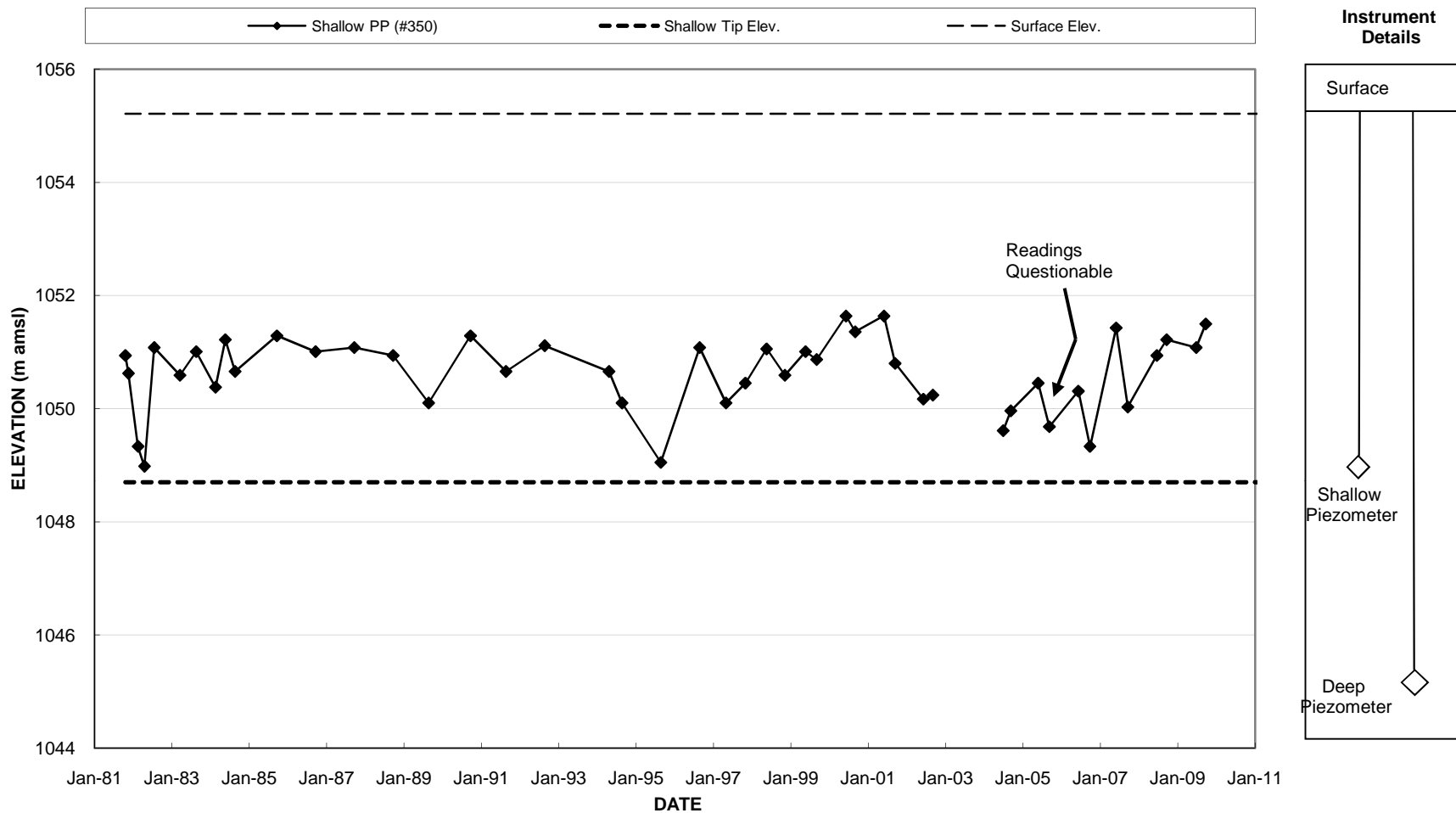
**Faro Mine Instrumentation  
 Diversion Canal Dike**

<b>CD-10</b>		<b>Location:</b>	Canal Dike St.0+990	<b>Date Installed:</b>	1981
		<b>Coordinates:</b>	1008.7N, 1519.7E	<b>Ground Elevation (m amsl):</b>	1056.41
<b>Surface Protector:</b>	Yes		8V581739 6913053	<b>Tip Elevation (m amsl):</b>	1045.30
<b>Date</b>		<b>Reading (psi)</b>		<b>Piezometric Elevation (m amsl)</b>	<b>Comments</b>
Nov-81		5.3		1049.01	
Dec-81		2.0		1046.67	
Mar-82		1.0		1045.97	
May-82		3.1		1047.47	
Aug-82		5.2		1048.94	
Apr-83		4.8		1048.66	
Sep-83		5.0		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		5.0		1048.80	
Oct-87		5.0		1048.80	
Oct-88		4.7		1048.59	
Sep-89		4.3		1048.31	
Oct-90		5.6		1049.22	
Sep-91		6.0		1049.50	
Sep-92		7.4		1050.48	
May-94		6.0		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	
14-Jun-06		6.0		1049.50	
2-Oct-06		5.3		1049.01	
6-Jun-07		5.4		1049.08	
24-Sep-07		5.8		1049.36	
24-Jun-08		6.3		1049.71	
24-Sep-08		7.0		1050.2	
30-Jun-09		6.1		1049.57	
17-Sep-09		6.0		1049.5	

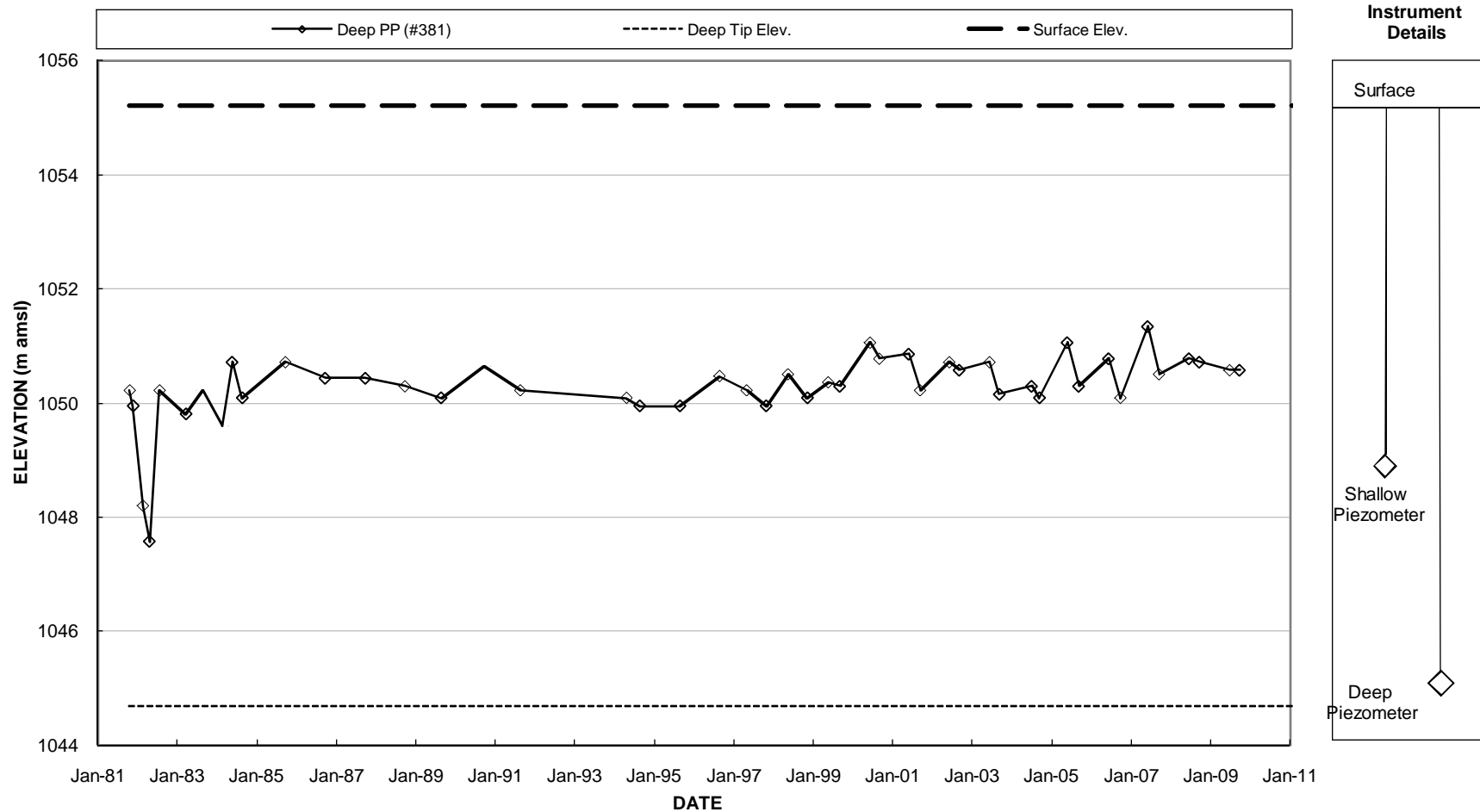
**DIVERSIONAL CANAL DIKE  
 Piezometric Monitoring  
 CD-10 Pneumatic Piezometer**



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

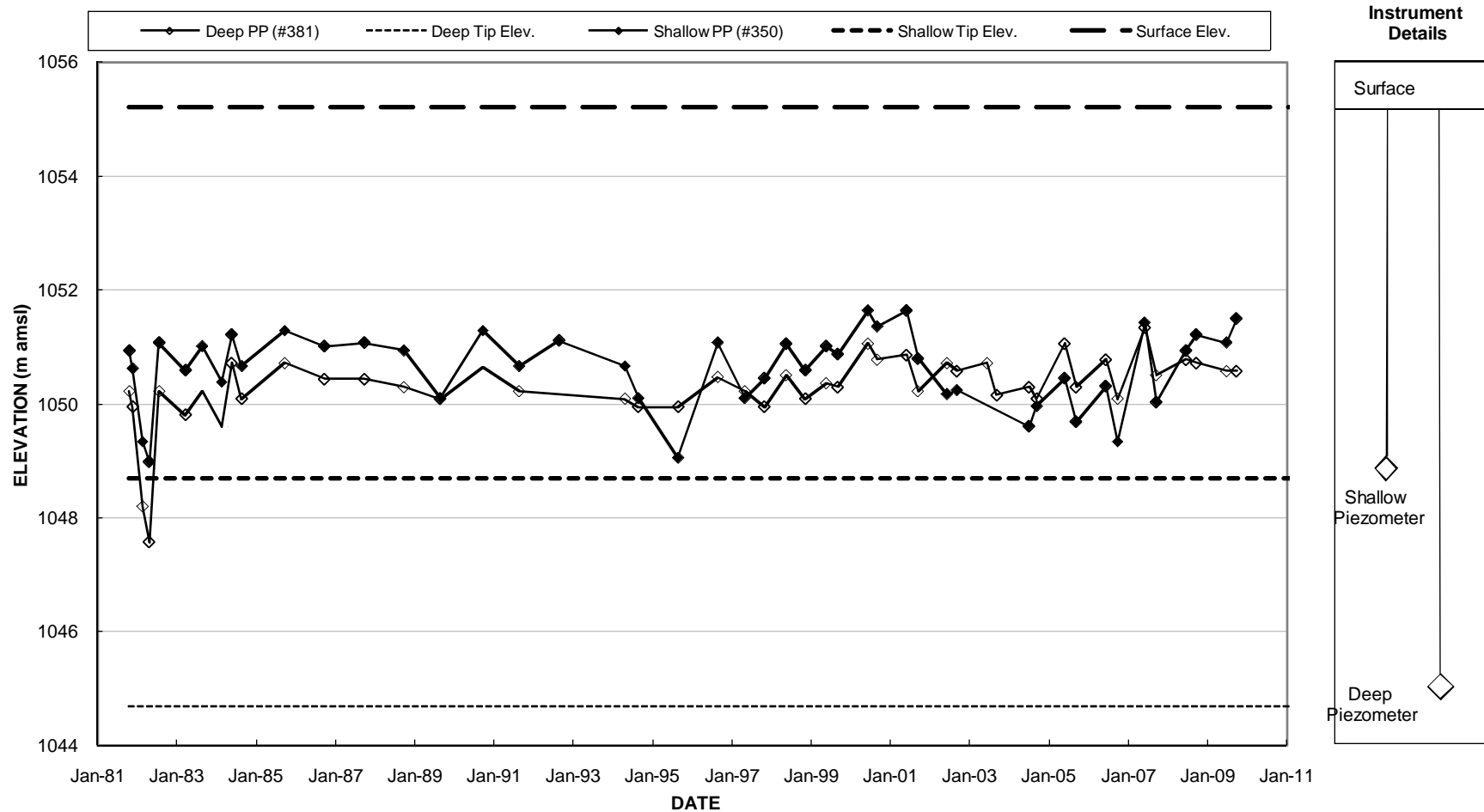


### DIVERSION CANAL DIKE Piezometric Monitoring CD-13 Pneumatic Piezometer (Deep Tip)



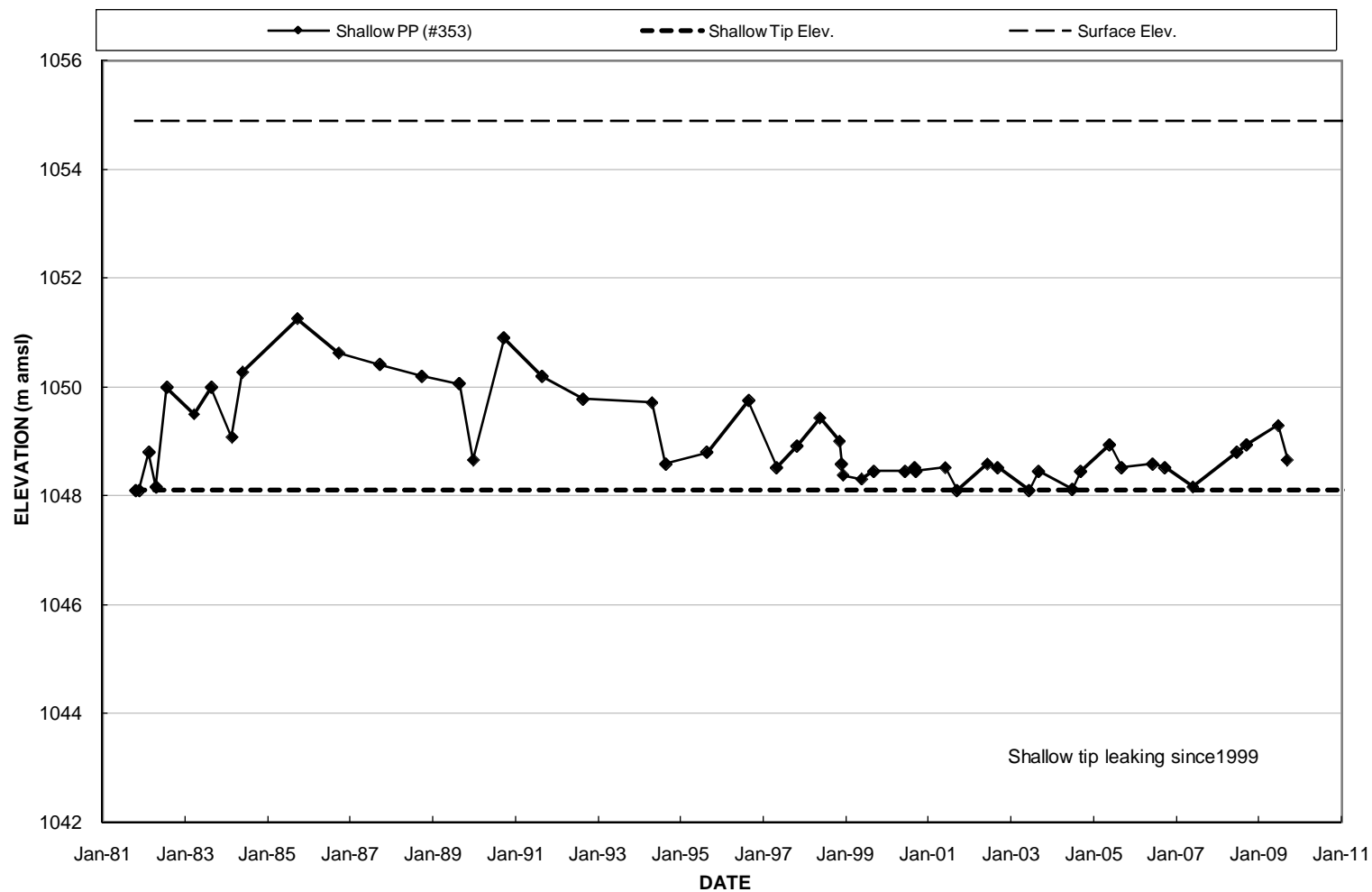


### DIVERSION CANAL DIKE Piezometric Monitoring CD-13 Pneumatic Piezometer (Both Tips)

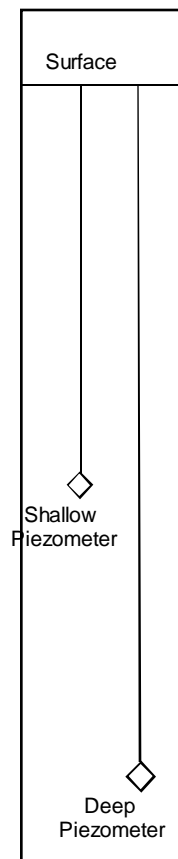


CD-15		Location:	Canal Dike St.1+530	Ground Elevation (m amsl):	1054.882
		Coordinates:	1233.7N, 1028.7E 8V581245 6913275	Shallow Tip Elevation (m amsl):	1048.10
Surface Protector:	yes	Date Installed:	1981	Deep Tip Elevation (m amsl):	1043.30
Date	Reading (psi)		Piezometric Elevation (m amsl)		Comments
	Shallow PP (#353)	Deep PP (#362)	Shallow (#353)	Deep (#362)	
Nov-81	0.0	0.1	1048.1	1043.37	
Dec-81	0.0	0.0	1048.1	1043.314	
Mar-82	1.0	0.1	1048.8	1043.37	
May-82	0.1		1048.17		
Aug-82	2.7		1049.99		
Apr-83	2.0		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	3.0		1050.2		
Sep-89	2.8		1050.06		
Jan-90	0.8		1048.66		
Oct-90	4.0		1050.9		
Sep-91	3.0		1050.2		
Sep-92	2.4		1049.78		
May-94	2.3	10.4	1049.71	1050.58	
Sep-94	0.7	8.0	1048.59	1048.9	
Sep-95	1.0	9.0	1048.8	1049.6	
Sep-96	2.4	9.1	1049.745	1049.67	
08-May-97	0.6	7.0	1048.52	1048.2	
06-Nov-97	1.2	3.4	1048.919	1045.645	
26-May-98	1.9	9.2	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	0.3	7.4	1048.31	1048.494	
11-Sep-99	0.5	8.5	1048.45	1049.25	
14-Jun-00	0.5	9.9	1048.45	1050.23	
09-Sep-00	0.6		1048.52		No return in deep piezo
19-Sep-00	0.5	11.0	1048.45	1050.965	
06-Jun-01	0.6	5.9	1048.52	1047.43	
19-Sep-01	0.0	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	0.0	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	0.0	8.6	1048.128	1049.32	
16-Sep-04	0.5	7.8	1048.45	1048.76	
31-May-05	1.2	10.0	1048.94	1050.3	
14-Sep-05	0.6	8.0	1048.52	1048.9	
14-Jun-06	0.7	9.0	1048.59	1049.6	
2-Oct-06	0.6	7.7	1048.52	1048.69	
06-Jun-07	0.1	7.2	1048.17	1048.34	good flow
24-Sep-07	dry	3.9		1046.03	#353 Dropping - #362 No Bubbles
24-Jun-08	1.0	0.2	1048.8	1043.44	
24-Sep-08	1.2	9.8	1048.94	1050.16	
30-Jun-09	1.7	9.1	1049.29	1049.67	
17-Sep-09	0.8	8.0	1048.66	1048.9	

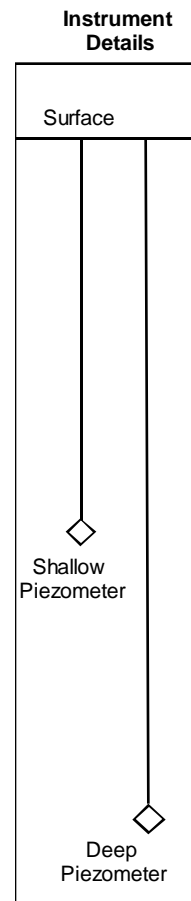
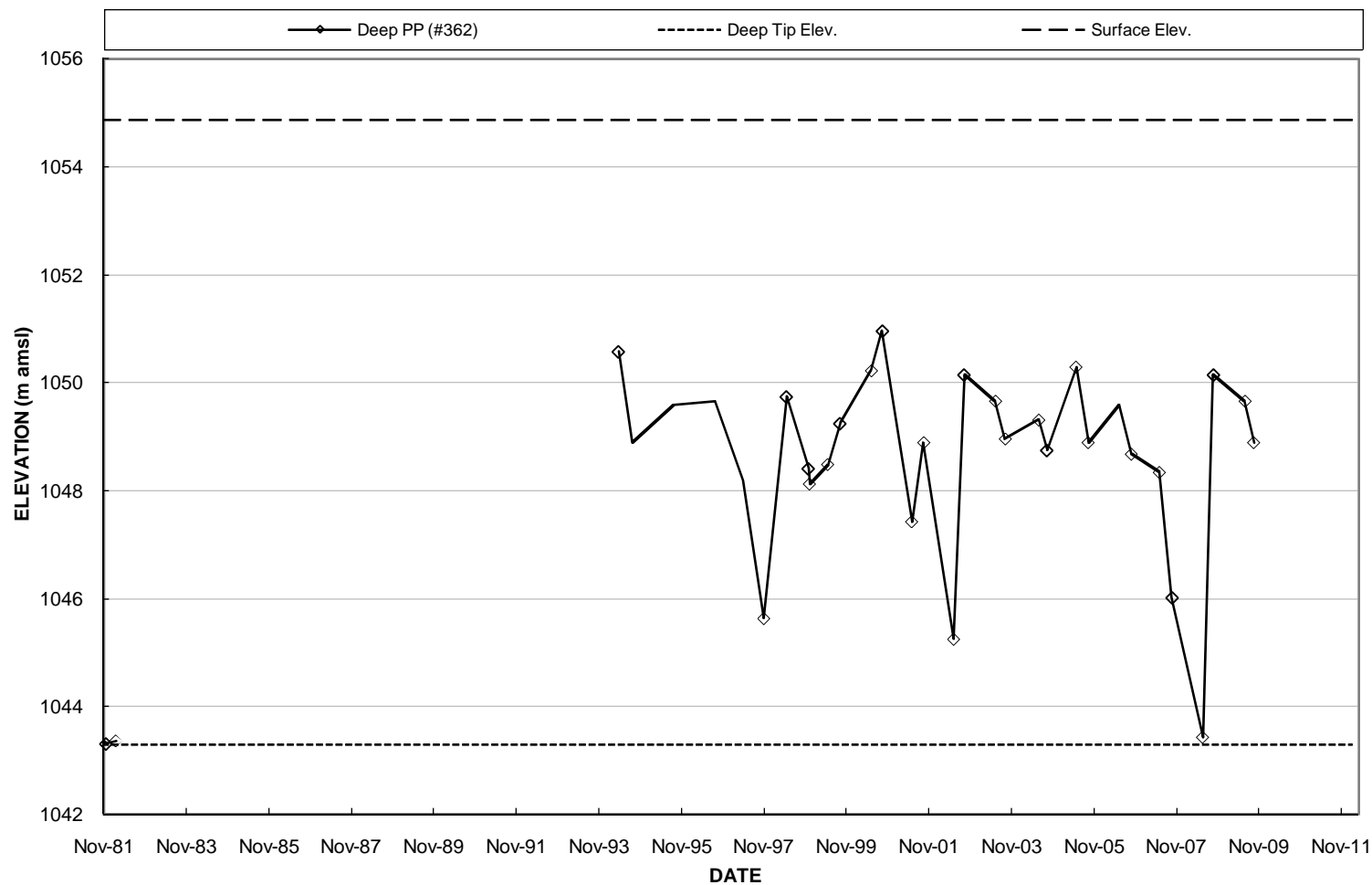
### DIVERSION CANAL DIKE Piezometric Monitoring CD-15 Pneumatic Piezometer (Shallow Tip)



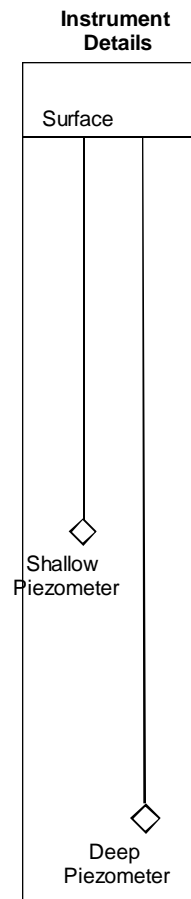
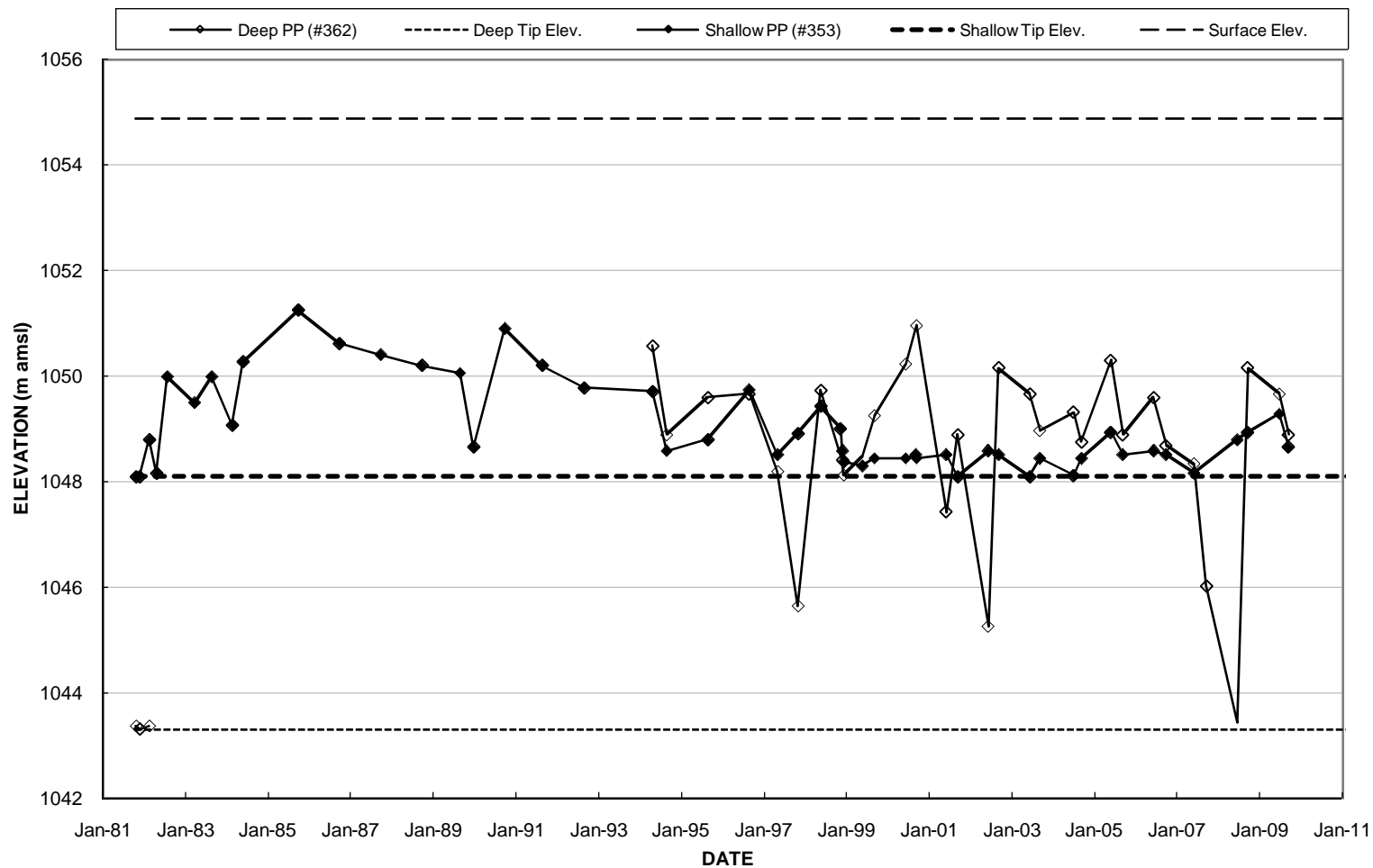
#### Instrument Details



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

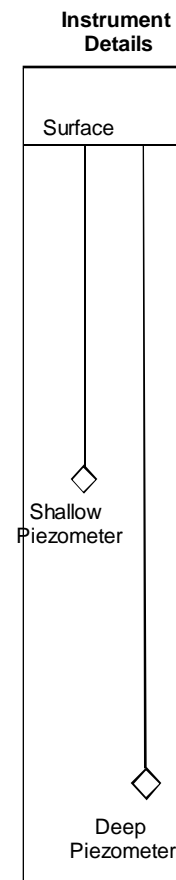
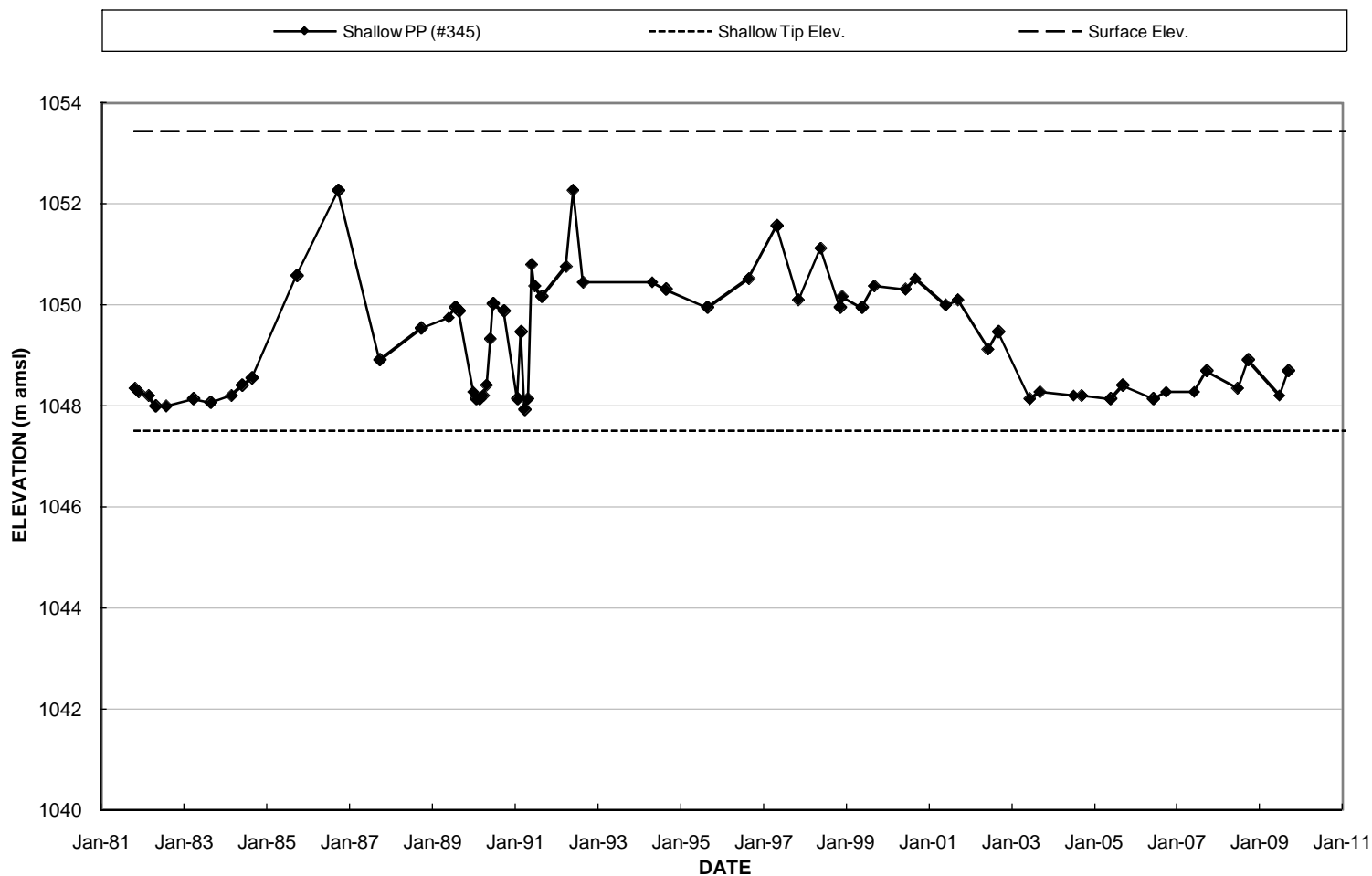


### DIVERSION CANAL DIKE Piezometric Monitoring CD-15 Pneumatic Piezometer (Both Tips)

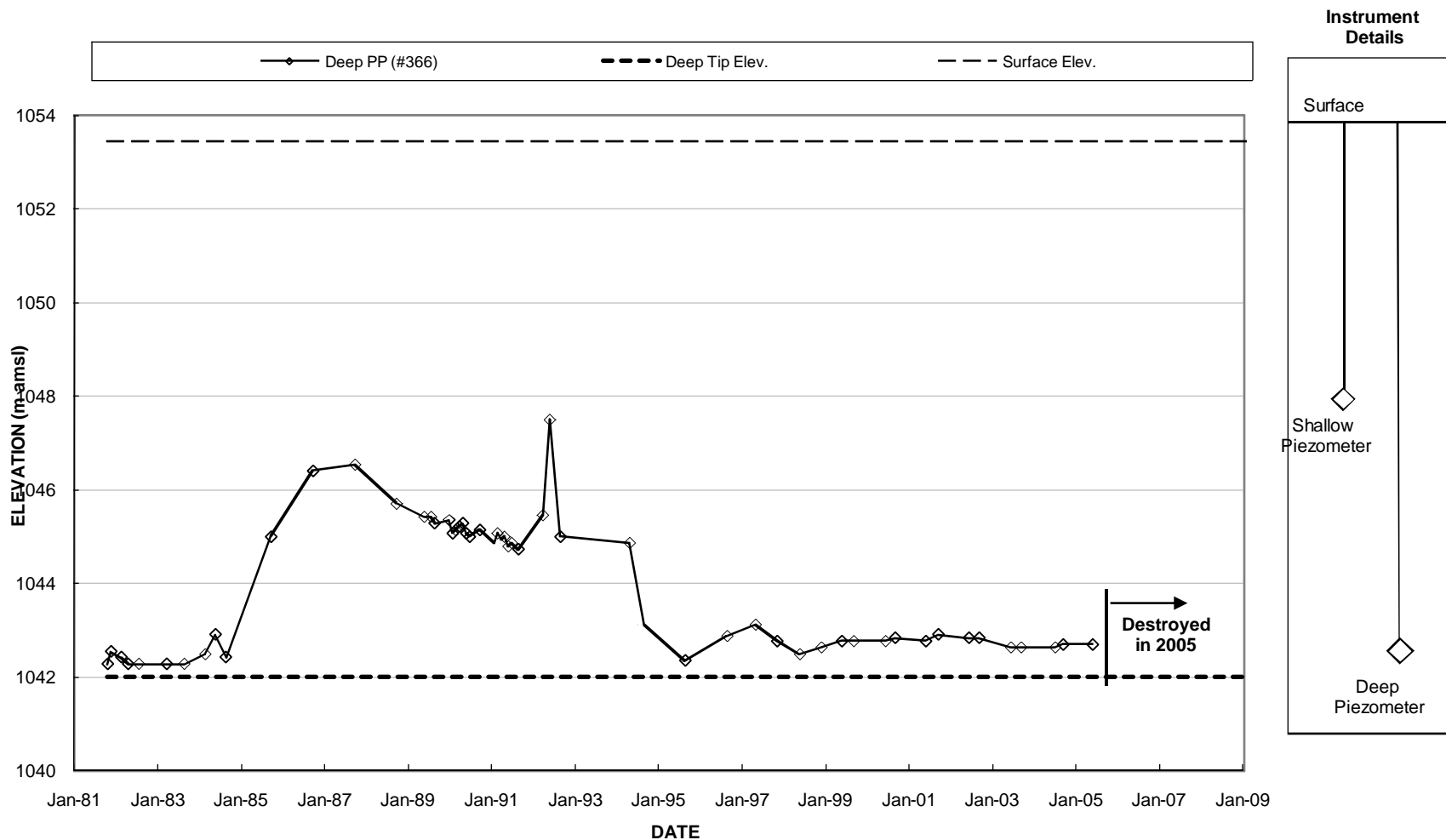


CD-21		Location:	Canal Dike St.2+100	Ground Elevation (m amsl):	1053.447
		Coordinates:	1455.9N, 509.5E 8V580724 6913495	Shallow Tip Elevation (m amsl):	1047.50
Surface Protector:	yes	Date Installed:	1981	Deep Tip Elevation (m amsl):	1042.00
Date	Reading (psi)		Piezometric Elevation (m amsl)		Comments
	Shallow PP (#345)	Deep PP (#366)	Shallow (#345)	Deep (#366)	
Nov-81	1.2	0.4	1048.34	1042.28	
Dec-81	1.1	0.8	1048.27	1042.55	
Mar-82	1.0	0.6	1048.20	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	0.7	1048.20	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	2.0	6.5	1048.90	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	1.0	4.6	1048.20	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	4.0	1050.79	1044.80	
Jul-91	4.1	4.1	1050.37	1044.87	
Sep-91	3.8	3.9	1050.16	1044.73	
Apr-92	4.7	5.0	1050.76	1045.47	
Jun-92	6.8	7.9	1052.26	1047.51	
Sep-92	4.2	4.3	1050.44	1045.01	
May-94	4.2	4.1	1050.44	1044.87	
Sep-94	4.0	1.6	1050.30	1043.12	
Sep-95	3.5	0.5	1049.95	1042.35	
Sep-96	4.3	1.3	1050.51	1042.88	
8-May-97	5.8	1.6	1051.56	1043.12	
10-Nov-97	3.7	1.1	1050.09	1042.77	
26-May-98	5.2	0.7	1051.11	1042.49	
15-Nov-98	3.5	n.r.	1049.95		
4-Dec-98	3.8	0.9	1050.16	1042.63	
28-May-99	3.5	1.1	1049.94	1042.77	
11-Sep-99	4.1	1.1	1050.37	1042.77	
14-Jun-00	4.0	1.1	1050.30	1042.77	
9-Sep-00	4.3	1.2	1050.51	1042.84	
6-Jun-01	3.6	1.1	1049.99	1042.77	
19-Sep-01	3.7	1.3	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	
6-Jul-04	1.0	0.9	1048.20	1042.63	#366 Bubbles stopped at 1.7Psi
16-Sep-04	1.0	1.0	1048.20	1042.70	
31-May-05	0.9	1.0	1048.13	1042.70	casing full of water, lots of air over 35 psi
14-Sep-05	1.3		1048.41		#366 - gone
14-Jun-06	0.9		1048.13		#366 - gone
2-Oct-06	1.1		1048.27		#366 - gone
6-Jun-07	1.1	n.r.	1048.27		#366 - gone
24-Sep-07	1.7	n.r.	1048.69		#366 - gone (No Cable)
24-Jun-08	1.2		1048.34		#366 - gone
24-Sep-08	2.0		1048.90		#366 - gone
30-Jun-09	1.0	n.r.	1048.20		#366 - gone
17-Sep-09	1.7	n.r.	1048.69		#366 - gone

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

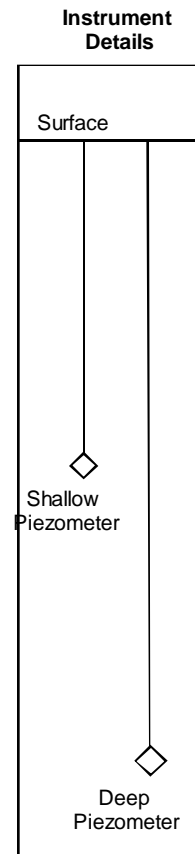
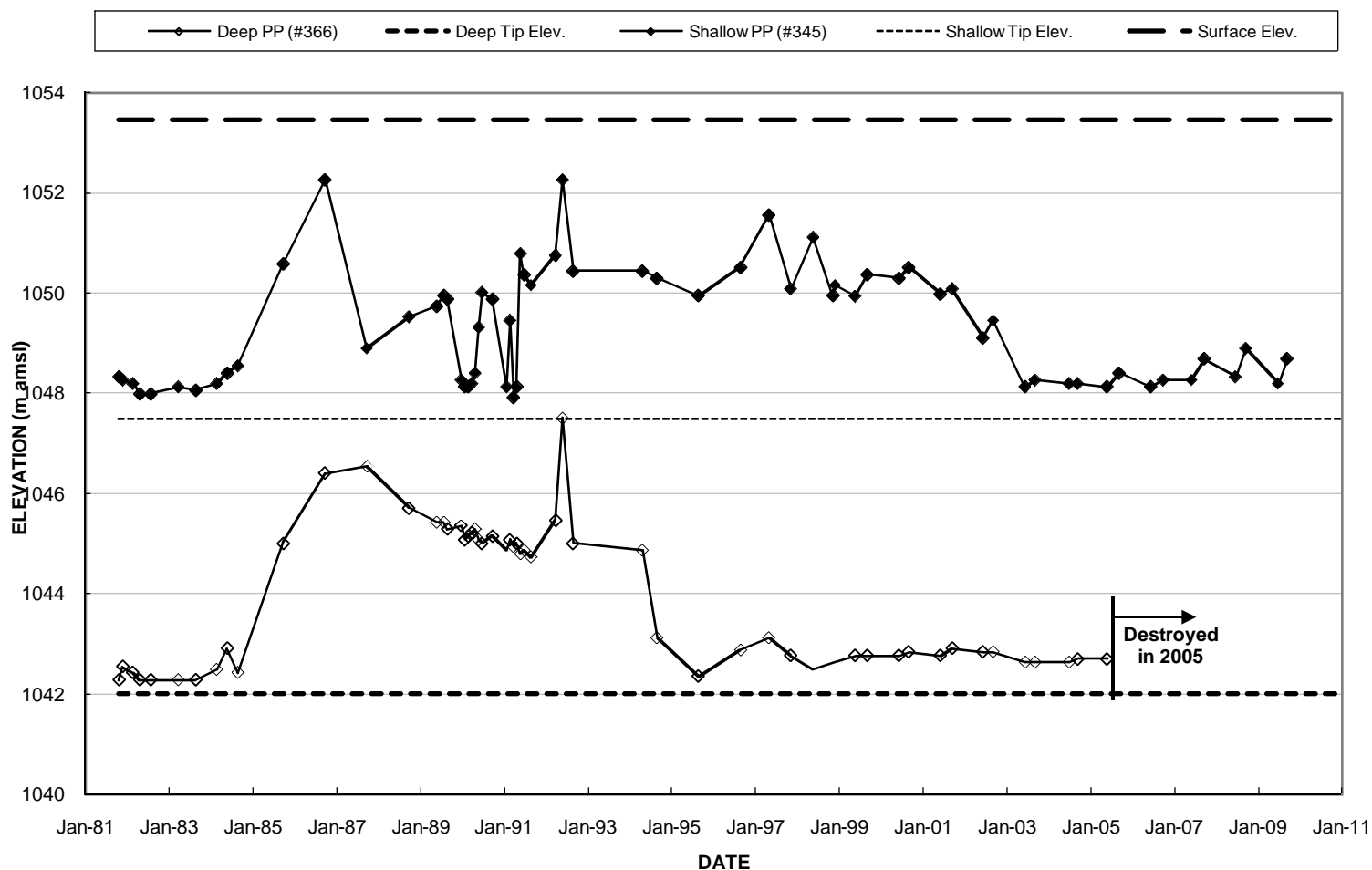


### DIVERSION CANAL DIKE Piezometric Monitoring CD-21 Pneumatic Piezometer (Deep Tip)



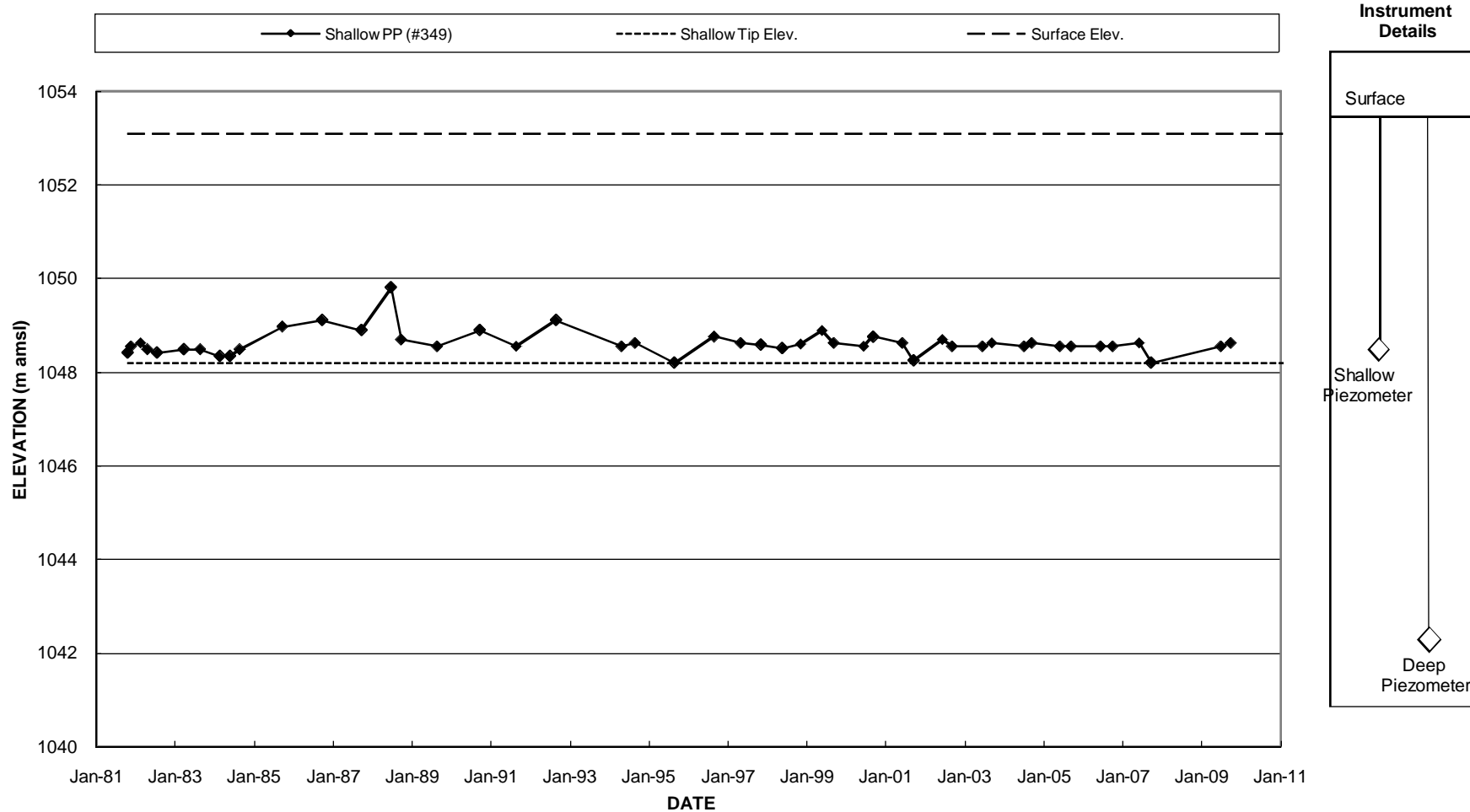


### DIVERSION CANAL DIKE Piezometric Monitoring CD-21 Pneumatic Piezometer (Both Tips)

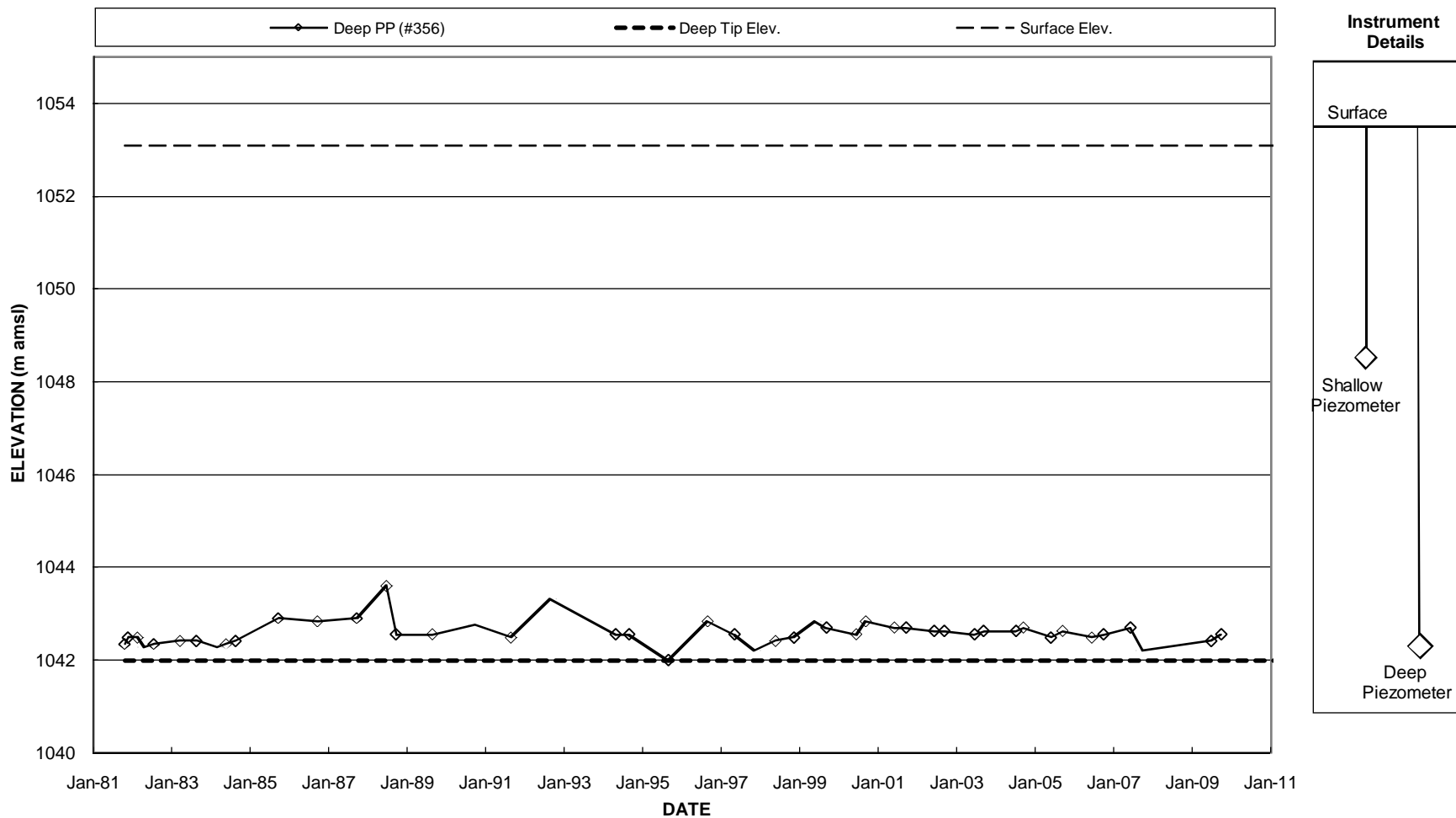


CD-26		Location:	Canal Dike St.2+600	Ground Elevation (m amsl):	1053.10
		Coordinates:	1674.7N, 71.7E 8V580284 6913710	Shallow Tip Elevation (m amsl):	1048.20
Surface Protector:	yes	Date Installed:	1981	Deep Tip Elevation (m amsl):	1042.00
Date	Reading (psi)		Piezometric Elevation (m amsl)		Comments
	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	1.0	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	1.0	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	0.0	1048.20	1042.00	
Sep-96	0.8	1.2	1048.76	1042.84	
8-May-97	0.6	0.8	1048.62	1042.56	
10-Nov-97	0.6	0.3	1048.59	1042.21	
26-May-98	0.4	0.6	1048.51	1042.42	
12-Nov-98	0.6	0.7	1048.60	1042.49	
28-May-99	1.0	1.2	1048.89	1042.84	
11-Sep-99	0.6	1.0	1048.62	1042.70	
14-Jun-00	0.5	0.8	1048.55	1042.56	
9-Sep-00	0.8	1.2	1048.76	1042.84	
6-Jun-01	0.6	1.0	1048.62	1042.70	
19-Sep-01	0.1	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 piezometer
12-Sep-03	0.6	0.9	1048.62	1042.63	
6-Jul-04	0.5	0.9	1048.55	1042.63	
16-Sep-04	0.6	1.0	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	
14-Jun-06	0.5	0.7	1048.55	1042.49	
2-Oct-06	0.5	0.8	1048.55	1042.56	wet in casing
6-Jun-07	0.6	1.0	1048.62	1042.70	good flow
24-Sep-07	0.0	0.3	1048.20	1042.21	
30-Jun-09	0.5	0.6	1048.55	1042.42	
29-Sep-09	0.6	0.8	1048.62	1042.56	

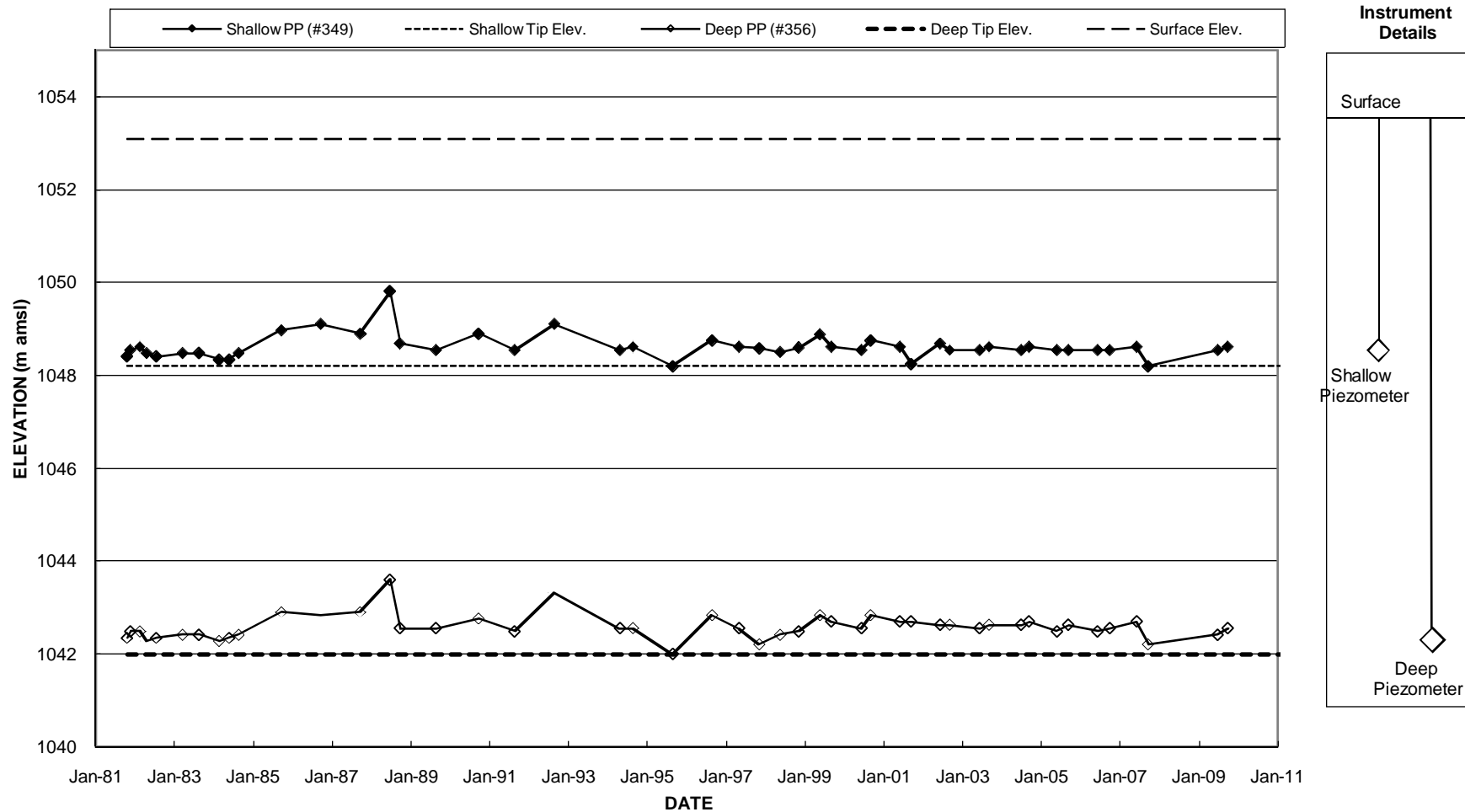
### DIVERSION CANAL DIKE Piezometric Monitoring CD-26 Pneumatic Piezometer (Shallow Tip)



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



### DIVERSION CANAL DIKE Piezometric Monitoring CD-26 Pneumatic Piezometers (Both Tips)

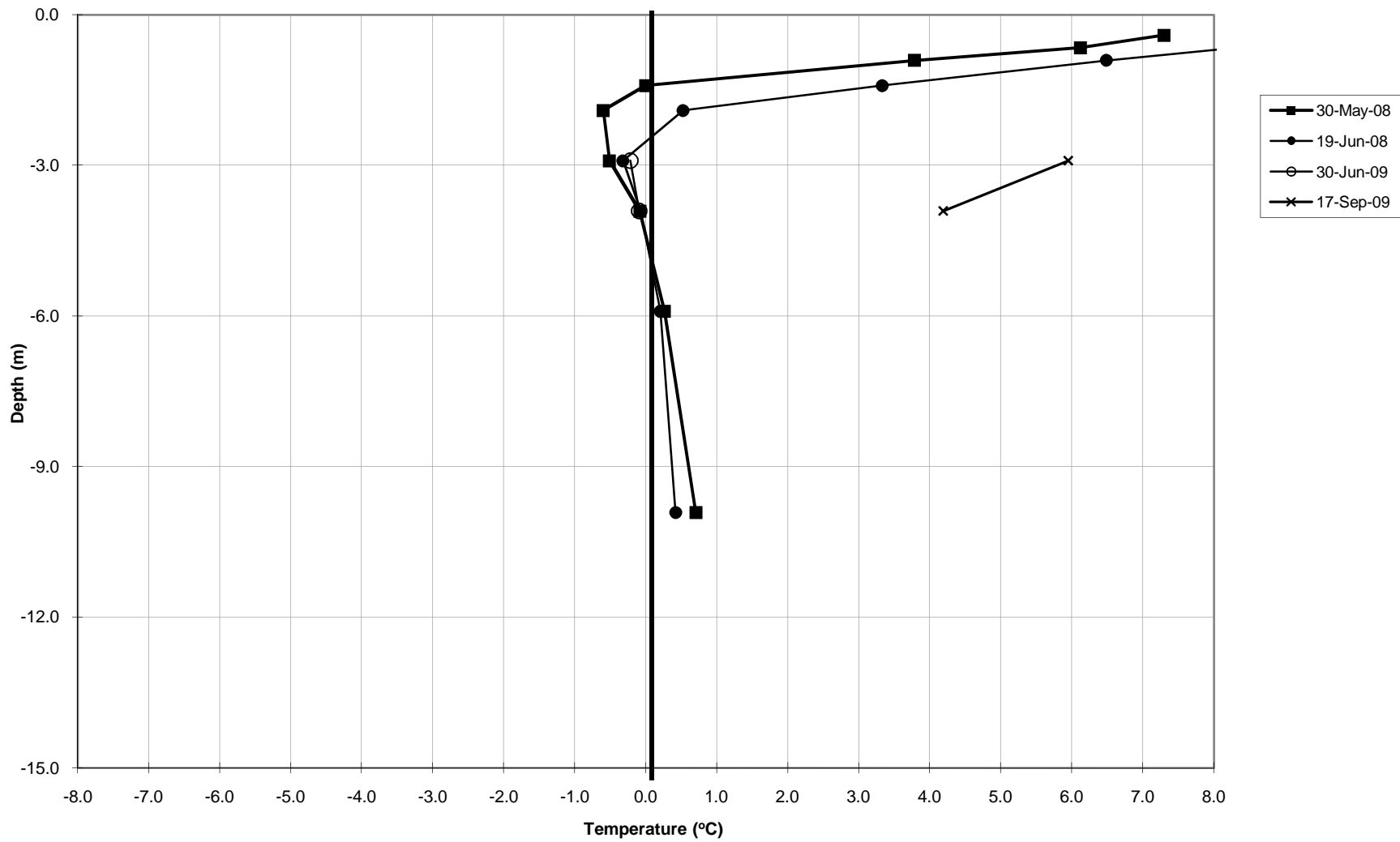


## THERMISTORS

BGC05-04		Location:		Elevation (m amsl):		Coordinates:		1054.1 amsl		580864.7E		6913420.2N	
Thermistor String #		Date Installed:		Thermistor Type:		YSI 44007		Ice-Bath Calibration:		Yes		Surface Protector:	
Depth Correction:		0.09											
Depth on String (m)	Actual Depth (m)	Resistivity (kOhms) 30-May-08	Resistivity (kOhms) 19-Jun-08	Resistivity (kOhms) 30-Jun-09	Resistivity (kOhms) 17-Sep-09								
0.5	-0.4	11.31	9.92										
0.8	-0.7	11.98	10.75										
1.0	-0.9	13.48	11.79										
1.5	-1.4	16.32	13.79										
2.0	-1.9	16.83	15.89										
3.0	-2.9	16.77	16.61	16.52	12.12								
4.0	-3.9	16.40	16.39	16.41	13.22								
6.0	-5.9	16.07	16.12										
10.0	-9.9	15.72	15.95										
12.0	-11.9	15.51	15.79										
Depth on String (m)	Actual Depth (m)	Temperature (C) 30-May-08	Temperature (C) 19-Jun-08	Temperature (C) 30-Jun-09	Temperature (C) 17-Sep-09								
0.5	-0.4	7.30	10.00										
0.8	-0.7	6.13	8.34										
1.0	-0.9	3.79	6.49										
1.5	-1.4	0.00	3.33										
2.0	-1.9	-0.60	0.53										
3.0	-2.9	-0.51	-0.32	-0.21	5.95								
4.0	-3.9	-0.08	-0.07	-0.09	4.19								
6.0	-5.9	0.27	0.20										
10.0	-9.9	0.71	0.42										

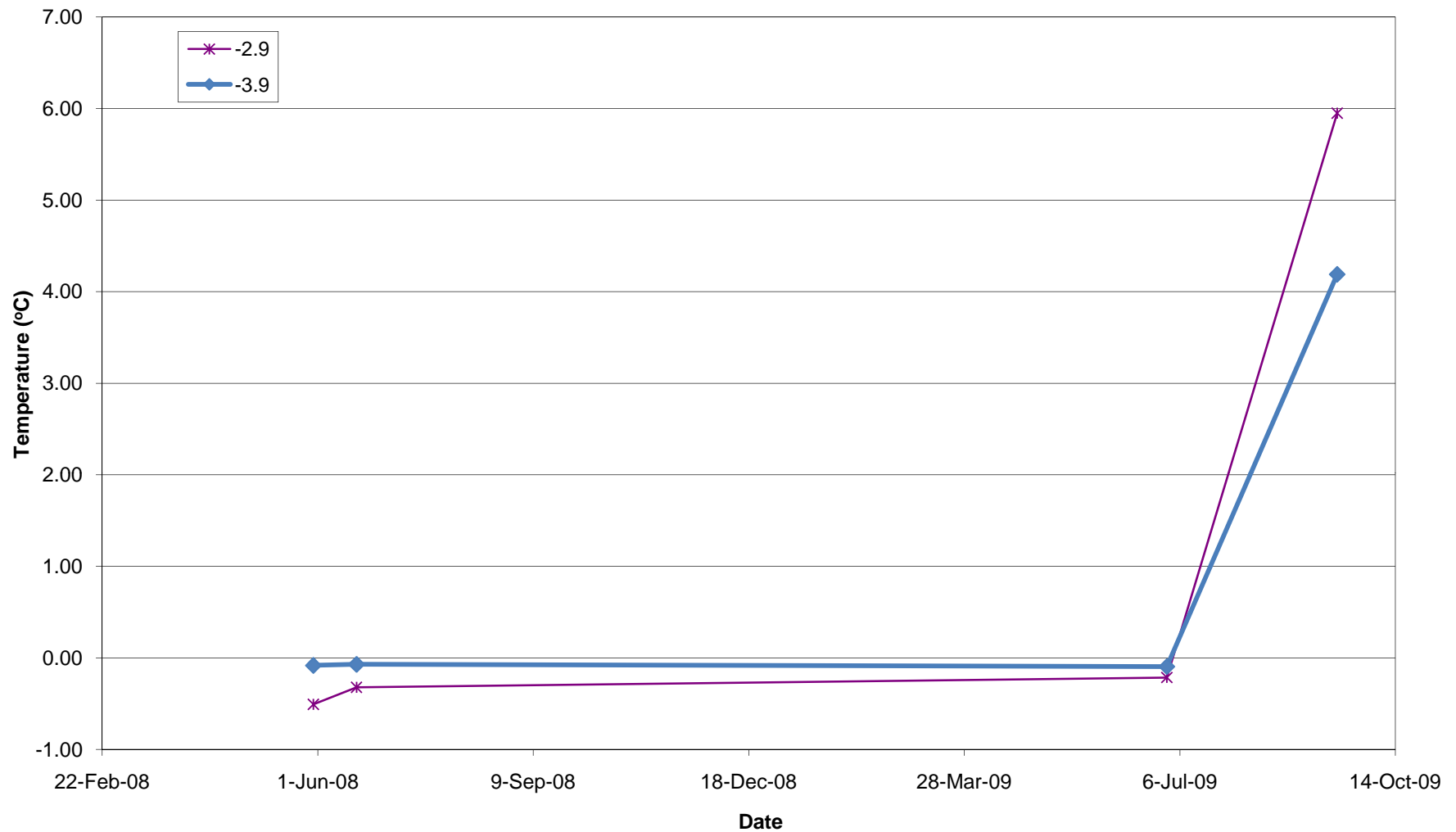
The node is malfunctioning. Numbers are not included in the graphs.

**DIVERSION CANAL DIKE**  
**Geothermal Monitoring**  
**BGC05-04**





### Diversion Canal Dike Geothermal Monitoring Long Term Monitoring for Nodes in BGC05-04



Faro Mine Instrumentation  
Diversion Canal Dike

CD-10	Location:	Canal Dyke St. 0+990			Elevation (m amsl):	1056.09	Coordinates:	1008.7 mN 1519.7 mE	8V581754 6913048				
	Thermistor String #23	Date Installed:	1981	Thermistor Type:	Cantec Controls YSI 44007	Ice-Bath Calibration:	applied	Surface Protector:	yes				
Depth Correction:	-0.1												
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)
		9-Dec-81	31-May-94	13-Sep-94	20-Sep-95	11-Sep-96	13-Sep-99	7-Jun-00	5-Sep-00	13-Jun-02	12-Sep-02	17-Jun-03	12-Sep-03
1.0	-0.9	23.70	13.83	12.20	11.98	12.25	11.65	10.54	12.94	12.13	11.85	11.16	11.43
2.0	-1.9	16.68	16.31	10.90	11.74	12.47	11.78	16.06	12.77	16.01	11.93	15.03	11.63
3.0	-2.9	16.50	17.55	11.39	12.54	13.65	12.93	17.21	13.74	18.77	13.10	17.52	12.58
4.0	-3.9	16.13	16.67	12.03	12.94	15.07	14.28	16.84	15.68		13.97	16.79	13.42
5.0	-4.9	16.24	16.50	13.24	13.77	16.83	16.48	16.75					14.61
6.0	-5.9	16.31	16.43	14.03	14.40	16.34	15.85	16.64	15.88		15.16	16.48	15.18
7.0	-6.9	16.19	16.15	14.19	14.92	15.56	14.96	17.24	15.88	16.63	14.82	16.04	15.03
8.0	-7.9	16.19	16.00	13.93	15.26	15.08	14.34	16.20	15.81	16.39	14.75	15.60	14.55
9.0	-8.9	16.36	16.31	16.68	15.52	15.38	15.09		16.08	16.72	14.91	16.15	15.08
10.0	-9.9	16.21	16.17	14.87	15.31	15.60	15.26		15.77	16.48	14.70	16.06	15.12

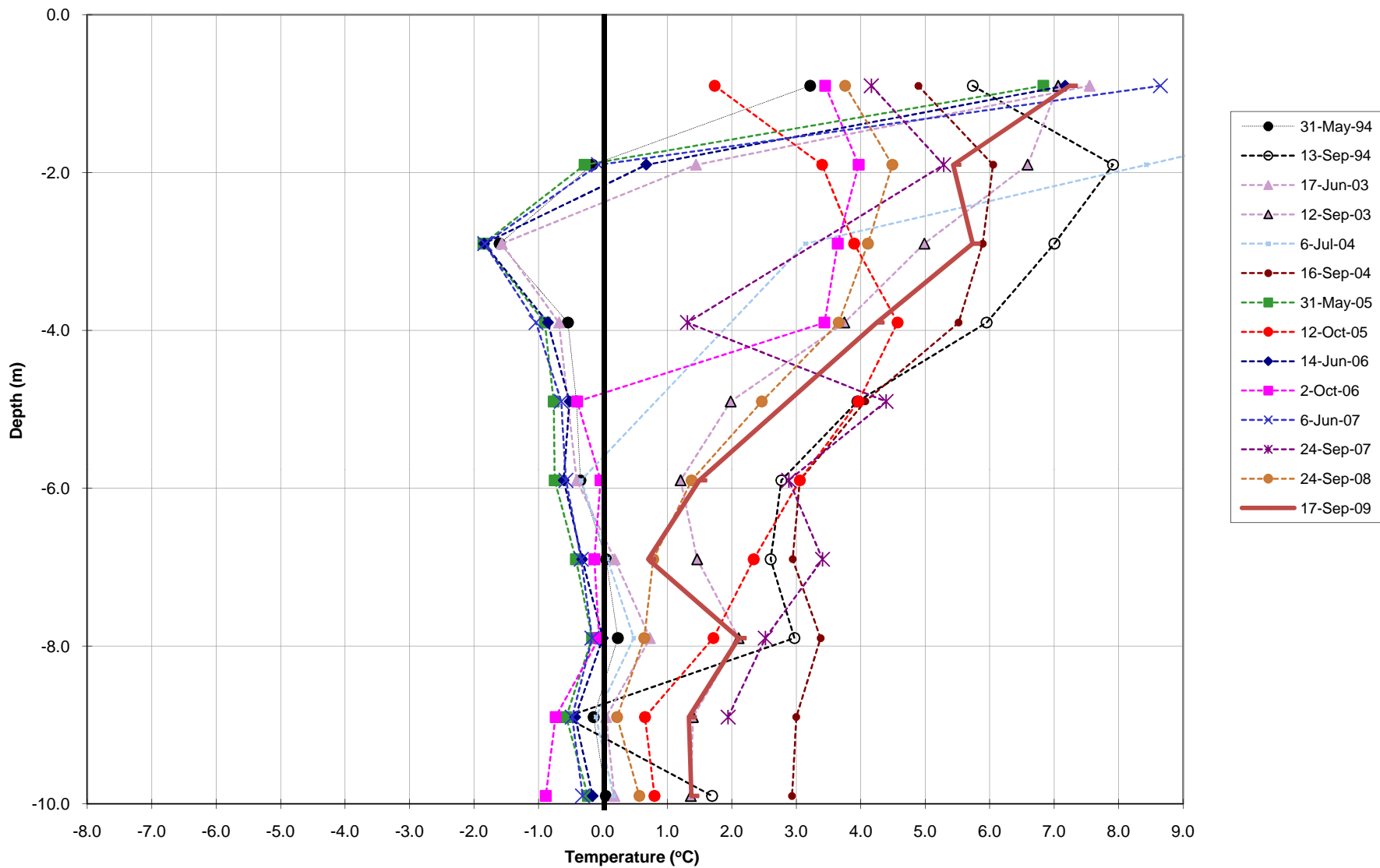
\*The initial reading (Nov 15/81) is excluded from the data set because post-installation equilibrium may not have been complete.

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)	Temperature (C)
		9-Dec-81	31-May-94	13-Sep-94	20-Sep-95	11-Sep-96	13-Sep-99	7-Jun-00	5-Sep-00	13-Jun-02	12-Sep-02	17-Jun-03	12-Sep-03
1.0	-0.9	-7.20	3.22	5.74	6.11	5.65	6.67	8.72	4.55	5.85	6.33	7.55	7.06
2.0	-1.9	-0.60	-0.16	7.91	6.40	5.17	6.33	0.14	4.69	0.20	6.07	1.44	6.59
3.0	-2.9	-0.40	-1.60	7.00	5.05	3.35	4.43	-1.22	3.22	-2.90	4.17	-1.57	4.99
4.0	-3.9	0.10	-0.54	5.95	4.48	1.44	2.51	-0.74	0.66		2.94	-0.68	3.75
5.0	-4.9	-0.10	-0.41	3.95	3.16	-0.80	-0.39	-0.70					1.98
6.0	-5.9	-0.20	-0.35	2.77	2.25	-0.24	0.36	-0.60	0.32		1.23	-0.41	1.21
7.0	-6.9	0.00	0.05	2.60	1.61	0.78	1.56	-1.23	0.38	-0.52	1.74	0.18	1.46
8.0	-7.9	0.00	0.23	2.97	1.16	1.40	2.39	-0.01	0.47	-0.24	1.83	0.73	2.11
9.0	-8.9	-0.20	-0.14	-0.58	0.83	1.01	1.38		0.13	-0.63	1.62	0.05	1.40
10.0	-9.9	0.00	0.04	1.69	1.12	0.75	1.18		0.54	-0.33	1.92	0.18	1.36

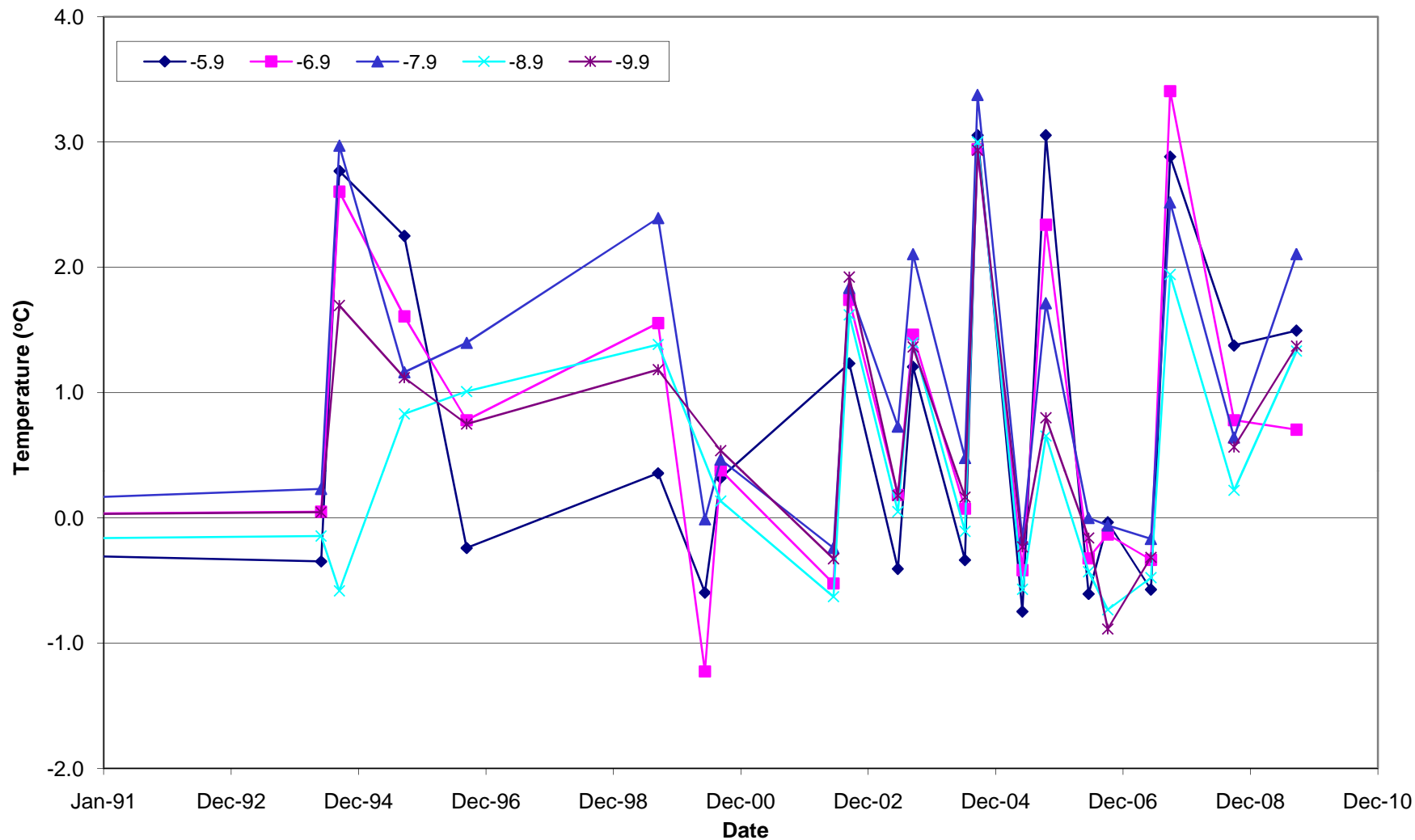
Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)
12-Sep-02	17-Jun-03	12-Sep-03	6-Jul-04	16-Sep-04	31-May-05	12-Oct-05	14-Jun-06	2-Oct-06	6-Jun-07	24-Sep-07	30-May-08	24-Sep-08	17-Sep-09
11.85	11.16	11.43	8.32	12.72	11.56	14.90	11.37	13.67	10.58	13.19	12.44	13.46	11.33
11.93	15.03	11.63	10.63	11.94	16.41	13.62	15.63	13.24	16.23	12.4	17.31	12.9	12.31
13.10	17.52	12.58	13.79	12.03	17.78	13.28	17.77	13.45	17.76	18.47	17.61	13.14	12.13
13.97	16.79	13.42		12.29	16.98	12.88	16.94	13.63	17.1	15.17	16.87	13.48	13.09
		14.61		13.16	16.80	13.23	16.59	16.49	16.7	12.95	16.56	14.26	
15.16	16.48	15.18	16.42	13.83	16.77	13.83	16.65	16.17	16.62	13.95	16.6	15.05	14.96
14.82	16.04	15.03	16.13	13.95	16.54	14.38	16.46	16.3	16.47	13.63	16.41	15.56	15.62
14.75	15.60	14.55	15.80	13.65	16.33	14.84	16.19	16.24	16.33	14.25	16.18	15.67	14.55
14.91	16.15	15.08	16.28	13.91	16.67	15.66	16.55	16.81	16.59	14.67	16.52	16.01	15.13
14.70	16.06	15.12	16.07	13.97	16.40	15.56	16.34	16.96	16.47	34.4	16.15	15.73	15.1

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)
12-Sep-02	17-Jun-03	12-Sep-03	6-Jul-04	16-Sep-04	31-May-05	12-Oct-05	14-Jun-06	2-Oct-06	6-Jun-07	24-Sep-07	30-May-08	24-Sep-08	17-Sep-09
6.33	7.55	7.06	13.67	4.89	6.83	1.73	7.17	3.45	8.65	4.16	5.34	3.76	7.24
6.07	1.44	6.59	8.43	6.05	-0.28	3.40	0.67	3.97	-0.07	5.29	-1.33	4.49	5.44
4.17	-1.57	4.99	3.14	5.89	-1.85	3.90	-1.84	3.64	-1.83		-1.67	4.12	5.73
2.94	-0.68	3.75		5.52	-0.90	4.57	-0.85	3.44	-1.04	1.31	-0.77	3.66	4.25
		1.98		4.07	-0.76	3.96	-0.52	-0.40	-0.65	4.39	-0.48	2.47	
1.23	-0.41	1.21	-0.34	3.06	-0.75	3.06	-0.61	-0.04	-0.57	2.88	-0.55	1.38	1.50
1.74	0.18	1.46	0.07	2.94	-0.42	2.34	-0.32	-0.13	-0.34	3.41	-0.26	0.78	0.70
1.83	0.73	2.11	0.48	3.08	-0.17	1.71	0.00	-0.06	-0.17	2.52	0.01	0.64	2.11
1.62	0.05	1.40	-0.11	3.30	-0.57	0.65	-0.43	-0.73	-0.48	1.94	-0.39	0.22	1.33
1.92	0.18	1.36	0.17	2.93	-0.23	0.80	-0.16	-0.89	-0.32		0.07	0.57	1.37

### 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

<b>CD-15</b>		<b>Location:</b> Canal Dyke St. 1+530			<b>Elevation (m amsl):</b> 1054.73		<b>Coordinates:</b> 1233.7 mN 1028.7 mE		8V581228 6913287	
<b>Thermistor String #26</b>		<b>Date Installed:</b> 1981		<b>Thermistor Type:</b> Cantec Controls YSI 44007		<b>Ice-Bath Calibration:</b> applied		<b>Surface Protector:</b> yes		
<b>Depth Correction:</b>	0.1									
<b>Depth on String</b>	<b>Actual Depth</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>
(m)	(m)	09-Dec-81	31-May-94	13-Sep-94	20-Sep-95	11-Sep-96	13-Sep-99	07-Jun-00	05-Sep-00	25-May-01
1.0	-1.1	20.00	13.84	11.56	11.52	11.93	11.36	13.04	12.03	16.84
2.0	-2.1	16.29	16.58	10.64	11.36	12.23	11.48	16.96	11.74	17.14
3.0	-3.1	15.99	23.62	15.29	16.47	18.13	17.46	24.88	17.37	24.84
4.0	-4.1	15.65		11.34	11.61	13.10	12.17	16.64	12.08	17.01
5.0	-5.1	15.71	16.11	11.81	11.65	13.06	12.38	16.12	11.88	16.21
6.0	-6.1	15.75	15.80	12.17	11.72	13.07	12.50	15.77	12.10	15.90
7.0	-7.1	15.53	15.49	12.61	12.28	13.67	13.09	15.39	12.60	15.52
8.0	-8.1	15.47	15.33	13.42	13.09	14.28	13.78	15.24	13.55	15.40
9.0	-9.1	15.41	15.19	14.09	13.78	14.68	14.38	15.23	14.39	15.40
10.0	-10.1	15.45	15.96	15.21	14.97	15.78	16.64	17.33	16.94	17.64

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

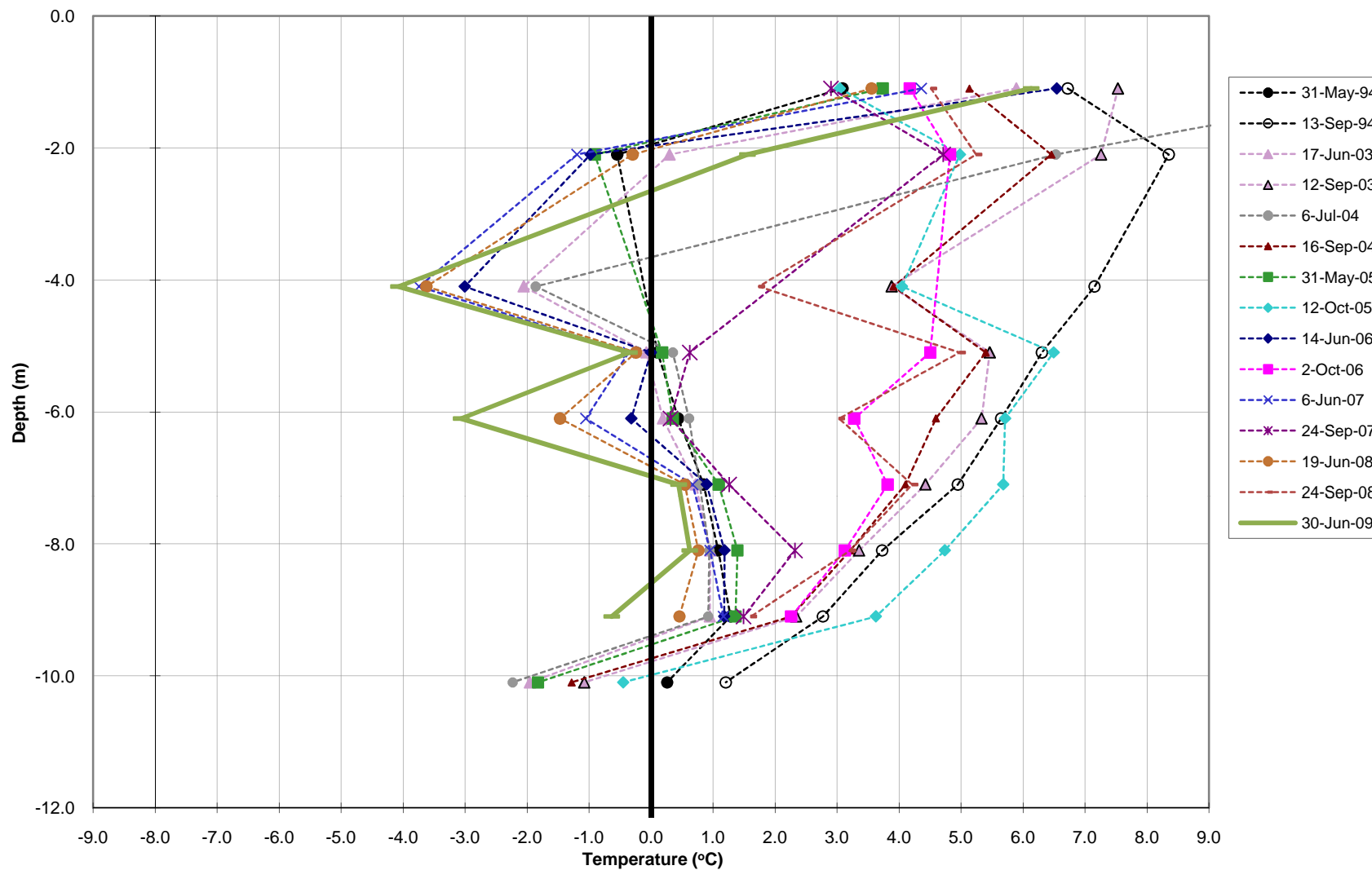
<b>Depth on String</b>	<b>Actual Depth</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>
(m)	(m)	09-Dec-81	31-May-94	13-Sep-94	20-Sep-95	11-Sep-96	13-Sep-99	07-Jun-00	05-Sep-00	25-May-01
1.0	-1.1	-4.10	3.09	6.72	6.79	6.08	7.08	4.28	5.91	-0.78
2.0	-2.1	-0.20	-0.55	8.35	7.01	5.51	6.79	-0.99	6.34	-1.19
3.0	-3.1	0.20								
4.0	-4.1	0.70		7.15	6.67	4.23	5.72	-0.51	5.87	-0.93
5.0	-5.1	0.60	0.11	6.31	6.58	4.27	5.35	0.09	6.19	-0.01
6.0	-6.1	0.50	0.44	5.65	6.41	4.21	5.11	0.48	5.76	0.31
7.0	-7.1	0.80	0.85	4.95	5.48	3.33	4.20	0.98	4.96	0.81
8.0	-8.1	0.90	1.08	3.73	4.23	2.49	3.20	1.20	3.53	0.99
9.0	-9.1	1.00	1.28	2.77	3.22	1.96	2.37	1.23	2.35	1.01
10.0	-10.1	0.90	0.26	1.21	1.52	0.48	-0.56	-1.35	-0.90	-1.69

\* The 3 metre depth tip is suspect

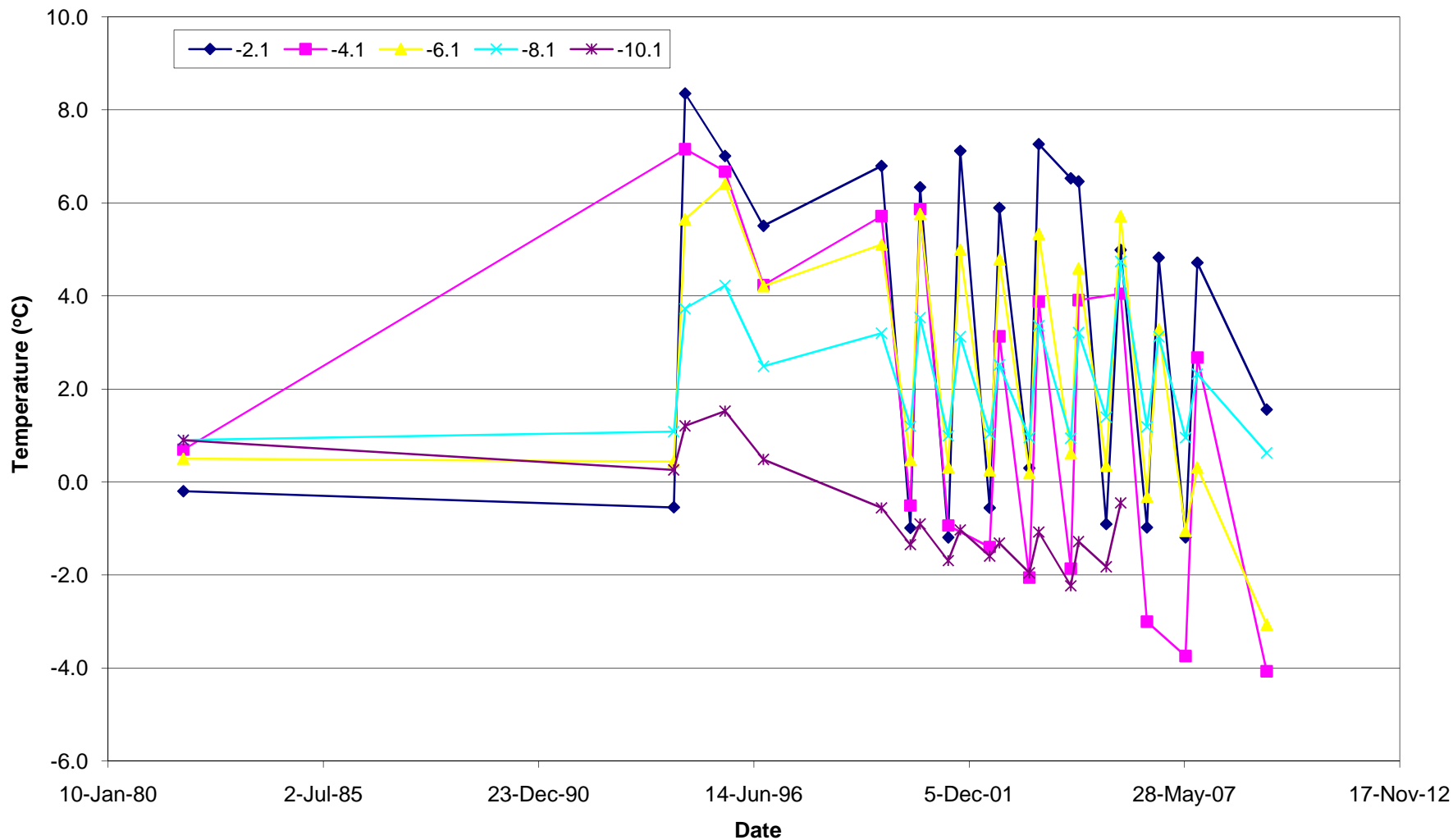
<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>
13-Sep-01	13-Jun-02	12-Sep-02	17-Jun-03	12-Sep-03	06-Jul-04	16-Sep-04	31-May-05	12-Oct-05	14-Jun-06	02-Oct-06	06-Jun-07	24-Sep-07	19-Jun-08	24-Sep-08	30-Jun-09
11.56	12.16	11.57	12.04	11.11	8.87	12.50	13.40	13.87	11.66	13.11	12.99	13.97	13.52	12.89	11.9
11.30	16.59	12.00	15.88	11.22	11.63	11.67	16.89	12.55	16.95	12.65	17.14	12.72	16.37	12.39	14.9
17.05	24.82	18.61	24.71	17.12	21.04	16.94	24.35	17.39	24.52	18.43		13.08			
	17.42	13.84	18.02	13.33	17.84	13.31		13.22	18.93	O/L	19.56	14.08	19.44	14.76	19.9
	16.24	12.68	16.26	12.31	15.91	12.35	16.05	11.70	16.20	12.91	16.5	15.69	16.4	12.61	16.49
	12.57	15.95	12.70	16.00	12.36	15.66	12.82	15.87	12.13	16.42	13.69	17.05	15.9	17.42	13.86
	13.10	15.53	13.43	15.59	12.94	15.54	13.15	15.30	12.16	15.45	13.34	15.63	15.17	15.73	13.08
	13.83	15.37	14.26	15.43	13.67	15.44	13.77	15.09	12.76	15.25	13.83	15.43	14.4	15.58	13.77
	14.52	15.37	14.88	15.45	14.40	15.47	14.46	15.13	13.50	15.27	14.46	15.28	15.03	15.84	14.94
	17.05	17.55	17.30	17.88	17.09	18.14	17.27	17.76	16.55	5.17	5.14	28.1			

<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>
13-Sep-01	13-Jun-02	12-Sep-02	17-Jun-03	12-Sep-03	06-Jul-04	16-Sep-04	31-May-05	12-Oct-05	14-Jun-06	02-Oct-06	06-Jun-07	24-Sep-07	19-Jun-08	24-Sep-08	30-Jun-09
6.72	5.69	6.70	5.89	7.53	12.20	5.14	3.74	3.05	6.55	4.18	4.36	2.90	3.56	4.52	6.13
	7.12	-0.56	5.89	0.30	7.26	6.53	6.46	-0.91	4.98	-0.98	4.82	-1.19	4.71	-0.30	1.55
												4.15			
		-1.40	3.13	-2.05	3.88	-1.86	3.91		4.05	-3.00		-3.74	2.68	-3.62	1.74
	5.35	-0.05	4.87	-0.07	5.47	0.35	5.40	0.18	6.50	0.00	4.50	-0.36	0.63	-0.24	4.98
	4.99	0.25	4.79	0.19	5.33	0.61	4.60	0.35	5.71	-0.32	3.28	-1.05	0.31	-1.47	3.03
	4.18	0.80	3.68	0.72	4.43	0.78	4.10	1.09	5.68	0.90	3.82	0.67	1.26	0.55	4.21
	3.13	1.03	2.52	0.95	3.36	0.94	3.21	1.39	4.74	1.19	3.13	0.95	2.32	0.76	3.21
	2.18	1.05	1.69	0.95	2.34	0.92	2.26	1.36	3.63	1.18	2.26	1.17	1.49	0.46	1.61
	-1.03	-1.59	-1.31	-1.95	-1.08	-2.23	-1.28	-1.82	-0.45						

### DIVERSION CANAL DIKE Geothermal Monitoring CD-15



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



CD-21		Location:	Canal Dyke St.2+100			Elevation (m amsl):	1053.34	Coordinates:	1455.9 mN 509.5 mE	8V580708 6913505
Depth Correction:		Thermistor String #12	Date Installed:	1981	Thermistor Type:	Cantec Controls YSI 44007	Ice-Bath Calibration:	NO	Surface Protector:	yes
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)
0	0									
3.0	-3.0	16.58	16.80	11.91	13.12	14.12	14.18	14.78	13.47	16.92
5.0	-5.0	16.56	16.45	14.61	15.04	16.56	15.29	14.65	15.78	16.42
8.0	-8.0	16.89	16.51	16.72	16.68	16.63	16.48	15.79	16.43	16.26
11.0	-11.0	16.87	16.31	16.27	16.31	16.40	16.48	nr	16.13	15.67
13.0	-13.0	16.84	16.69	16.84	16.84	16.83	16.81	16.77	16.59	16.25
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)
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

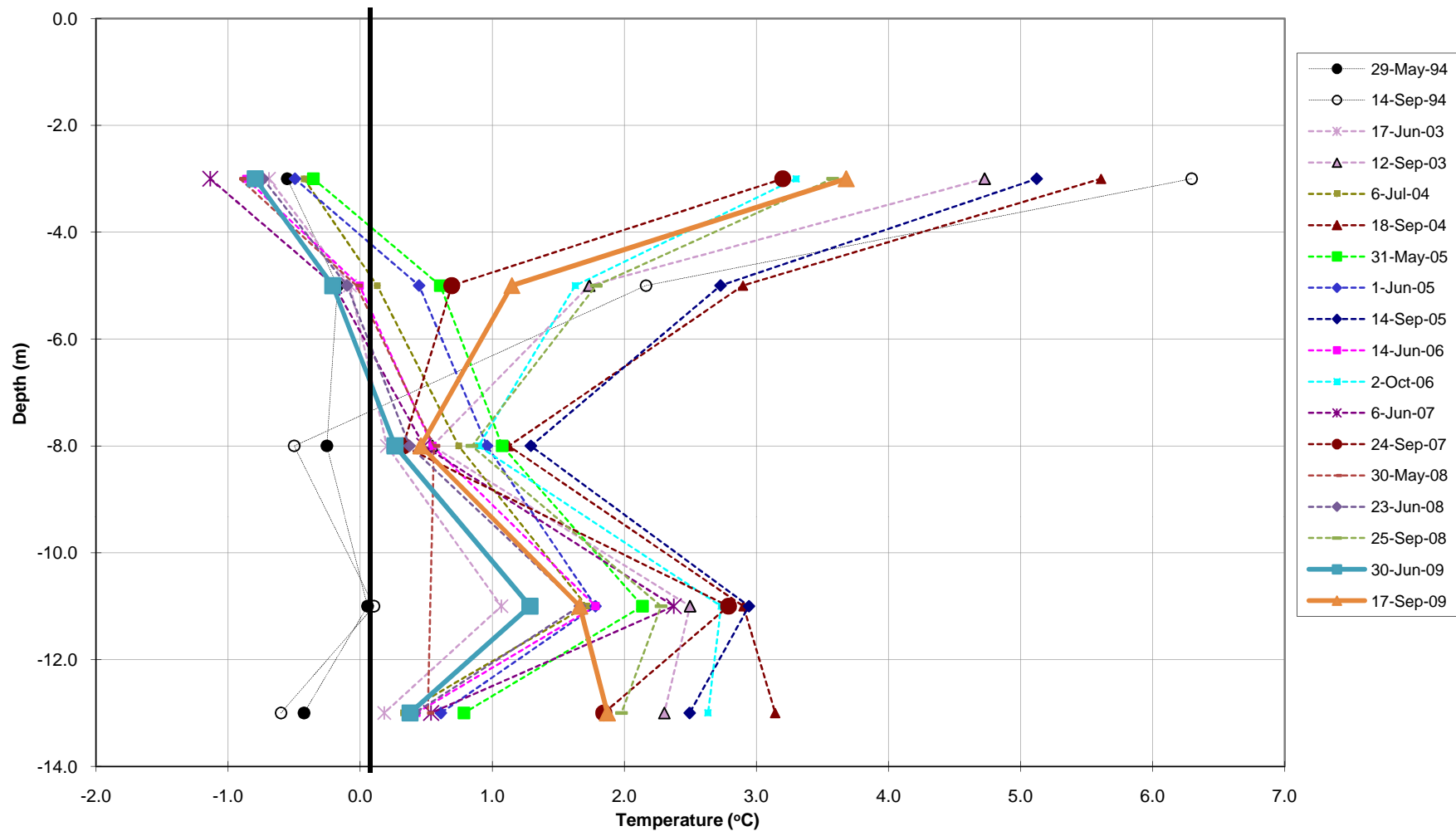
\*tip #4 suspect

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)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)
5-Sep-00	25-May-01	26-Jun-01	13-Sep-01	13-Jun-02	13-Sep-02	17-Jun-03	12-Sep-03	6-Jul-04	18-Sep-04	31-May-05	1-Jun-05	14-Sep-05	14-Jun-06	2-Oct-06	6-Jun-07	24-Sep-07	30-May-08	23-Jun-08	25-Sep-08	30-Jun-09	17-Sep-09
13.27	16.96	16.84	12.55	17.13	13.29	16.92	12.87	16.69	12.32	16.63	16.75	12.62	17.07	13.82	17.31	13.89	17.11	16.96	13.63	17.01	13.56
15.15	16.34	16.40	14.56	16.42	15.13	16.37	14.93	16.20	14.08	15.81	15.94	14.20	16.31	15.01	16.47	15.74	16.33	16.39	14.89	16.48	15.38
16.23	16.11	16.22	15.99	16.07	15.97	16.13	15.85	15.69	15.39	15.43	15.52	15.26	15.85	15.57	15.9	16.03	15.84	15.99	15.61	16.08	15.92
15.79	15.53	15.43	15.54	15.38	14.97	15.49	14.41	14.99	14.12	14.67	14.94	14.09	14.94	14.24	14.5	14.2		15.03	14.57	15.32	15.03
16.37	16.00	16.12	16.17	15.93	15.60	16.18	14.53	16.06	13.93	15.69	15.83	14.39	15.98	14.29	15.89	14.87	15.91	15.99	14.77	16.02	14.85

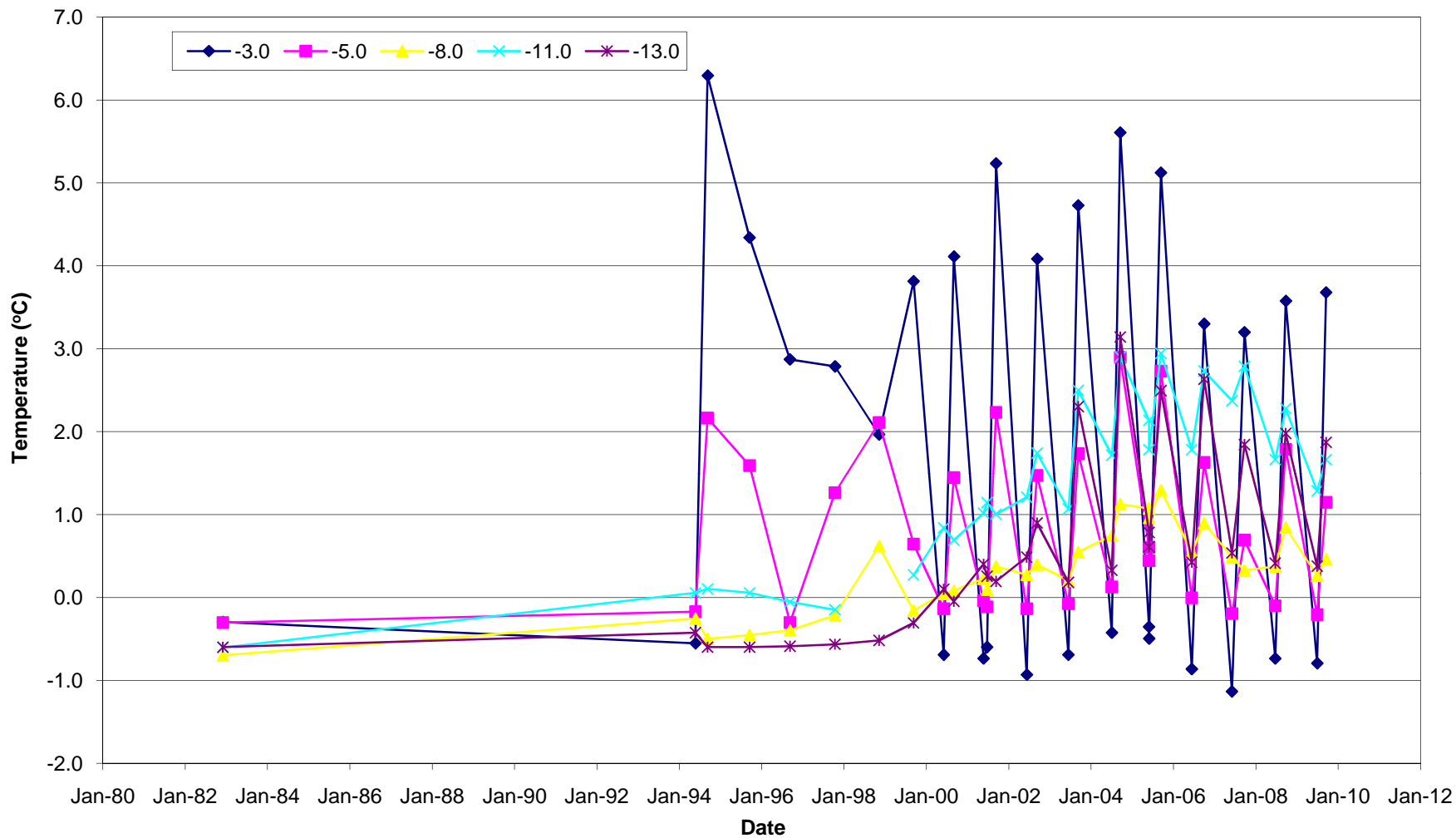
Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)
5-Sep-00	25-May-01	26-Jun-01	13-Sep-01	13-Jun-02	13-Sep-02	17-Jun-03	12-Sep-03	6-Jul-04	18-Sep-04	31-May-05	1-Jun-05	14-Sep-05	14-Jun-06	2-Oct-06	6-Jun-07	24-Sep-07	30-May-08	23-Jun-08	25-Sep-08	30-Jun-09	17-Sep-09
4.11	-0.74	-0.60	5.23	-0.93	4.08	-0.69	4.73	-0.42	5.61	-0.35	-0.49	5.12	-0.86	3.30	-1.14	3.20	-0.91	-0.74	3.58	-0.79	3.68
1.45	-0.04	-0.11	2.23	-0.14	1.47	-0.08	1.73	0.13	2.90	0.61	0.45	2.73	0.00	1.63	-0.20	0.69	-0.03	-0.10	1.79	-0.21	1.15
0.08	0.23	0.09	0.37	0.28	0.40	0.20	0.55	0.75	1.13	1.07	0.96	1.29	0.55	0.90	0.48	0.32	0.56	0.37	0.85	0.26	0.46
0.69	1.02	1.14	1.00	1.21	1.74	1.07	2.50	1.72	2.90	2.14	1.78	2.94	1.78	2.73	2.37	2.79		1.66	2.28	1.29	1.66
-0.05	0.40	0.25	0.19	0.49	0.90	0.18	2.30	0.33	3.14	0.79	0.61	2.49	0.43	2.63	0.54	1.84	0.51	0.41	1.98	0.38	1.87



### DIVERSION CANAL DIKE Geothermal Monitoring CD-21



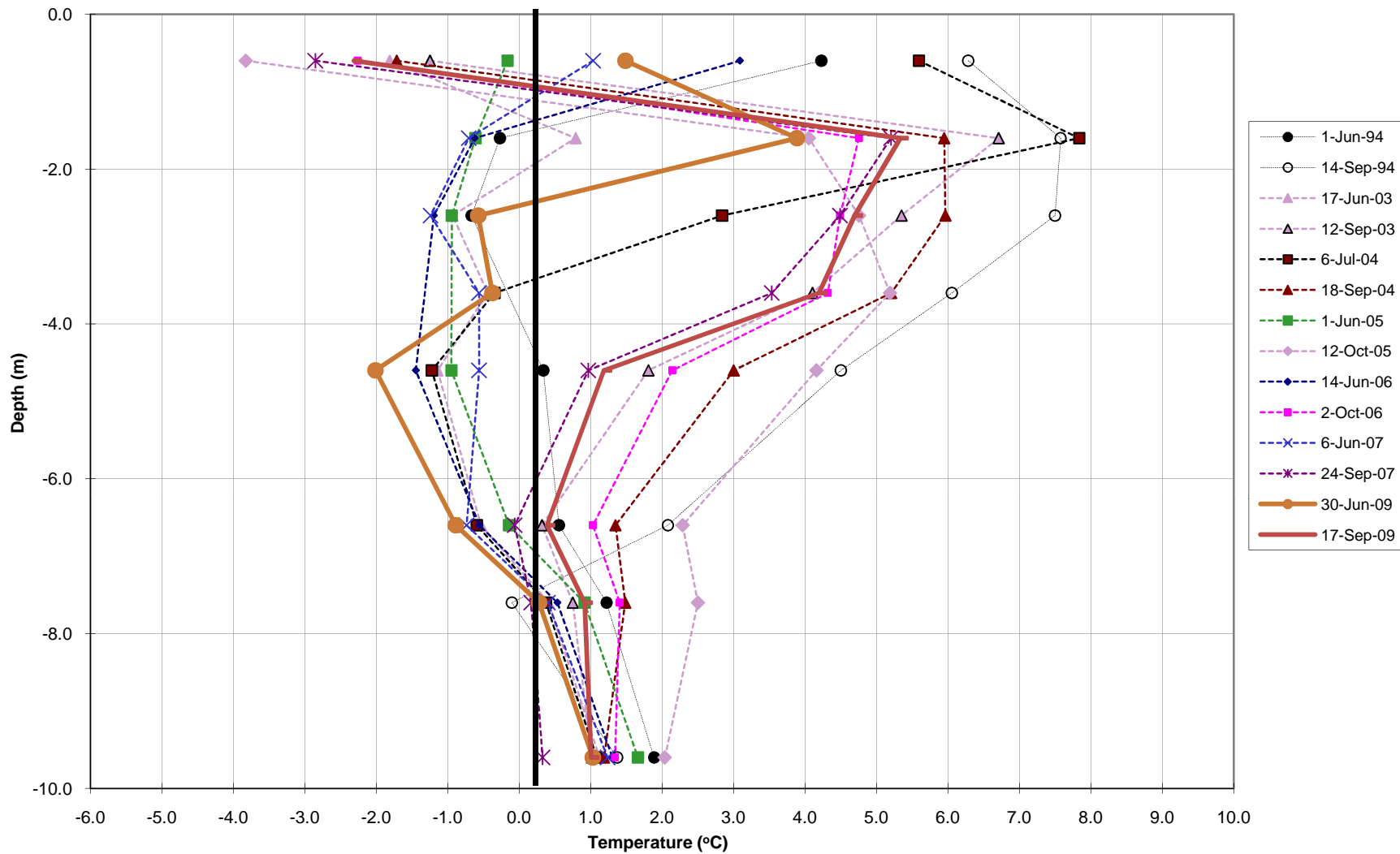
### Diversion Canal Dike Geothermal Monitoring Long Term Monitoring for Nodes in CD-21



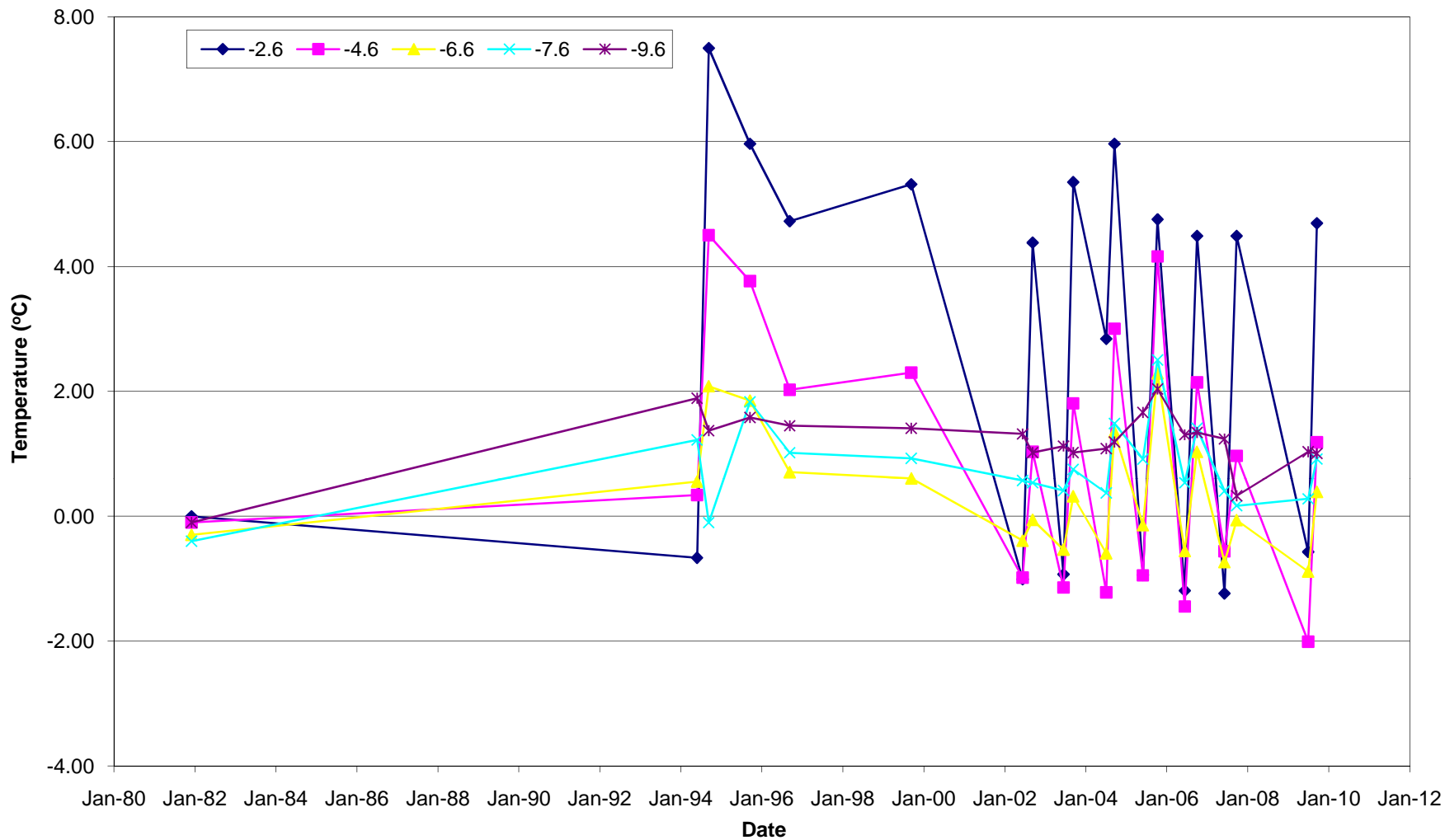
CD-26		Location:	Canal Dyke St.2+600	Elevation (m amsl):	1053.1			Coordinates:	1674.7 mN, 71.7 mE	8V580269 6913720											
		Thermistor String #17	Date Installed:	1981	Thermistor Type:	Cantec Controls YSI 44007	Ice-Bath Calibration:	applied	Surface Protector:	yes											
Depth Correction:	-0.4																				
Depth on String (m)	Actual Depth (m)	Resistivity (kOhms) 9-Dec-81	Resistivity (kOhms) 1-Jun-94	Resistivity (kOhms) 14-Sep-94	Resistivity (kOhms) 21-Sep-95	Resistivity (kOhms) 13-Sep-96	Resistivity (kOhms) 14-Sep-99	Resistivity (kOhms) 13-Jun-02	Resistivity (kOhms) 12-Sep-02	Resistivity (kOhms) 17-Jun-03	Resistivity (kOhms) 12-Sep-03	Resistivity (kOhms) 6-Jul-04	Resistivity (kOhms) 18-Sep-04	Resistivity (kOhms) 1-Jun-05	Resistivity (kOhms) 12-Oct-05	Resistivity (kOhms) 14-Jun-06	Resistivity (kOhms) 2-Oct-06	Resistivity (kOhms) 6-Jun-07	Resistivity (kOhms) 24-Sep-07	Resistivity (kOhms) 30-Jun-09	Resistivity (kOhms) 17-Sep-09
1.0	-0.6	22.70	13.14	11.87	11.54	11.98	11.51	14.85	15.64	17.85	17.34	12.28	17.76	16.40	19.82	13.91	18.27	15.43	18.84	15.08	18.32
2.0	-1.6	16.32	16.38	11.07	11.52	11.97	11.63	16.08	11.97	15.52	11.55	10.93	11.99	16.67	13.17	16.68	12.72	16.75	12.44	13.28	12.36
3.0	-2.6	16.20	16.76	11.14	12.01	12.77	12.40	17.06	12.99	16.99	12.38	14.03	12.01	17.00	12.75	17.22	12.92	17.26	12.92	16.68	12.79
4.0	-3.6	16.17		11.94	12.60	13.59	13.26	16.60	13.83	16.54	13.15	16.46	12.45		12.46		13.03	16.67	13.55	16.51	13.11
5.0	-4.6	16.24	15.88	12.88	13.36	14.58	14.38	16.99	15.33	17.13	14.74	17.20	13.88	16.96	13.10	17.40	14.53	16.67	15.42	17.96	15.25
6.0	-5.6	16.28	17.71	15.80	18.08	22.69	27.08	35.50	34.25	37.50	35.00	40.20	34.00	44.20	38.00		42.3	48.3	44.06	54.4	50.6
7.0	-6.6	16.43	15.73	14.56	14.73	15.61	15.69	16.51	16.23	16.63	15.92	16.68	15.11	16.30	14.41	16.65	15.37	16.82	16.25	16.95	15.88
8.0	-7.6	16.50	15.19	16.25	14.73	15.35	15.42	15.70	15.73	15.83	15.56	15.86	14.99	15.43	14.24	15.73	15.08	15.87	16.06	15.97	15.46
9.0	-8.6	16.46	15.33	15.60	15.38	15.80	16.10	16.90	17.17	17.38	17.43	17.99	17.62	18.31	18.06	19.84	19.38	19.85	20.78	22.42	22.53
10.0	-9.6	16.24	14.68	15.07	14.91	15.01	15.04	15.11	15.34	15.26	15.34	15.29	15.21	14.85	14.57	15.12	15.13	15.21	15.93	15.37	15.39
Depth on String (m)	Actual Depth (m)	Temperature (C) 9-Dec-81	Temperature (C) 1-Jun-94	Temperature (C) 14-Sep-94	Temperature (C) 21-Sep-95	Temperature (C) 13-Sep-96	Temperature (C) 14-Sep-99	Temperature (C) 13-Jun-02	Temperature (C) 12-Sep-02	Temperature (C) 17-Jun-03	Temperature (C) 12-Sep-03	Temperature (C) 6-Jul-04	Temperature (C) 18-Sep-04	Temperature (C) 1-Jun-05	Temperature (C) 12-Oct-05	Temperature (C) 14-Jun-06	Temperature (C) 2-Oct-06	Temperature (C) 6-Jun-07	Temperature (C) 24-Sep-07	Temperature (C) 30-Jun-09	Temperature (C) 17-Sep-09
1.0	-0.6	-6.40	4.23	6.28	6.86	6.10	6.91	1.79	0.77	-1.81	-1.25	5.59	-1.71	-0.16	-3.82	3.09	-2.26	1.03	-2.85	1.49	-2.31
2.0	-1.6	-0.20	-0.27	7.58	6.76	5.98	6.57	0.09	5.98	0.79	6.71	7.84	5.95	-0.61	4.05	-0.62	4.75	-0.70	5.20	3.89	5.33
3.0	-2.6	0.00	-0.67	7.50	5.97	4.72	5.32	-1.01	4.38	-0.93	5.35	2.84	5.97	-0.94	4.76	-1.19	4.49	-1.24	4.49	-0.57	4.69
4.0	-3.6	0.00		6.05	4.96	3.45	3.94	-0.51	3.10	-0.44	4.10	-0.34	5.21		5.19		4.32	-0.56	3.53	-0.37	4.20
5.0	-4.6	-0.10	0.34	4.50	3.77	2.02	2.30	-0.98	1.03	-1.14	1.81	-1.22	3.00	-0.95	4.16	-1.45	2.14	-0.56	0.97	-2.01	1.19
6.0	-5.6	-0.10																			
7.0	-6.6	-0.30	0.56	2.08	1.85	0.71	0.61	-0.39	-0.06	-0.53	0.32	-0.59	1.35	-0.14	2.29	-0.56	1.03	-0.74	-0.06	-0.89	0.39
8.0	-7.6	-0.40	1.22	-0.10	1.83	1.02	0.93	0.57	0.54	0.41	0.75	0.37	1.49	0.91	2.50	0.54	1.41	0.40	0.17	0.28	0.92
9.0	-8.6	-0.35																			
10.0	-9.6	-0.10	1.89	1.37	1.58	1.45	1.41	1.32	1.02	1.12	1.02	1.08	1.19	1.66	2.04	1.30	1.34	1.24	0.33	1.03	1.01

\*Tips at 5.6 m and 8.6 depth are suspect

### DIVERSION CANAL DIKE Geothermal Monitoring CD-26

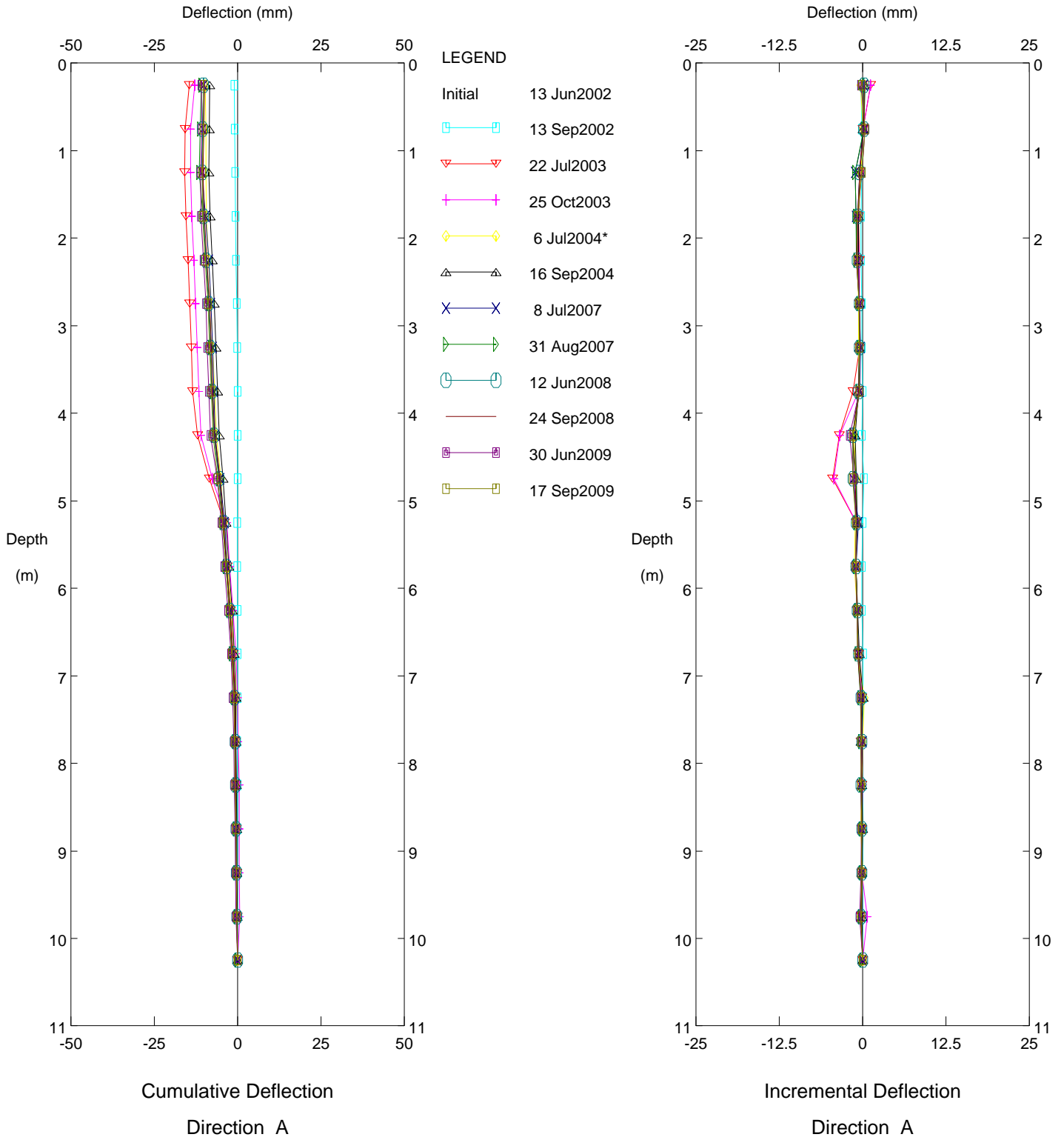


### Diversion Canal Dike Geothermal Monitoring Long Term Monitoring for Nodes in CD-26



## SLOPE INDICATORS

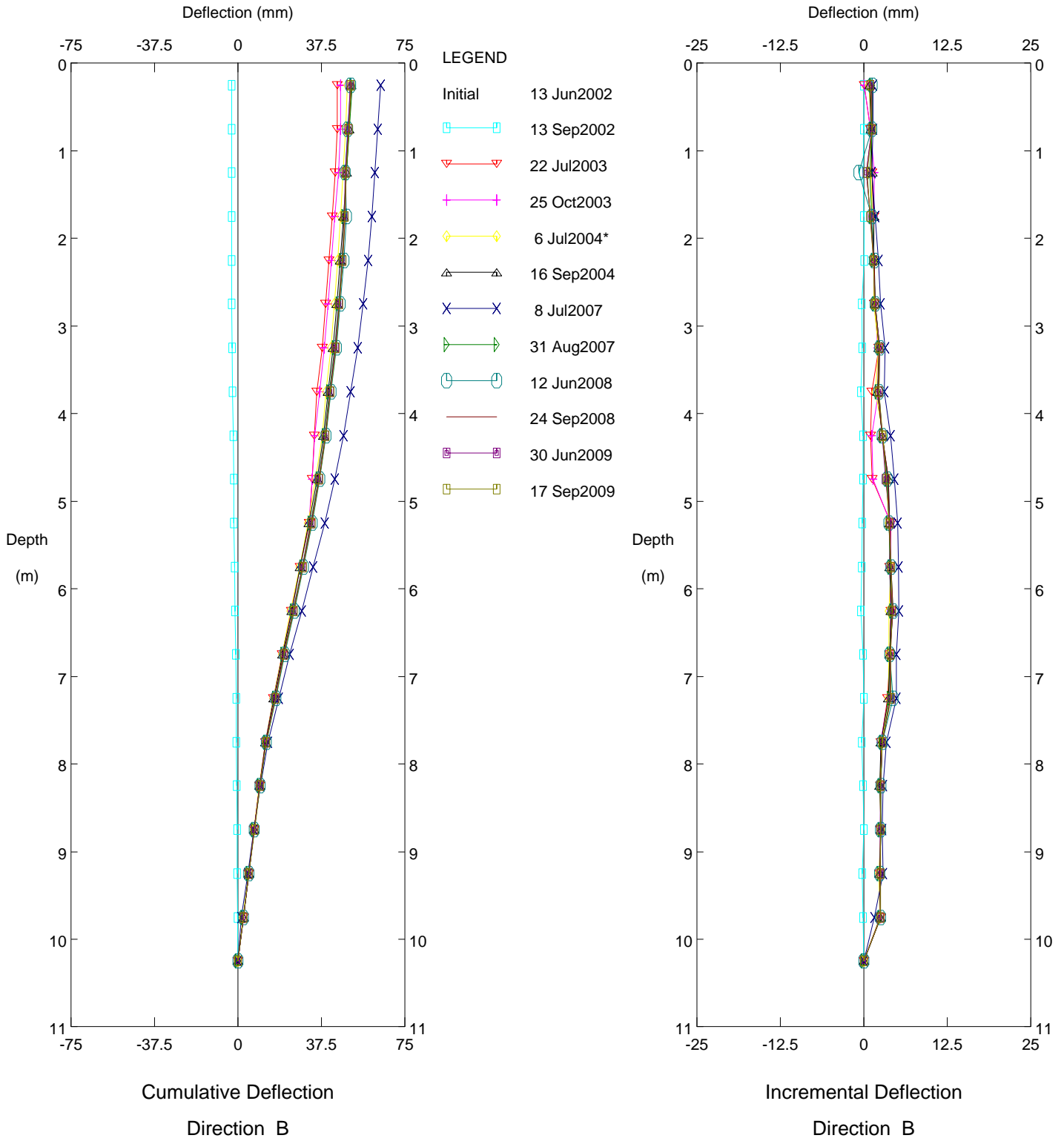
BGC Engineering Inc. - Calgary, AB



CD-10, Inclinometer 0+990

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

BGC Engineering Inc. - Calgary, AB

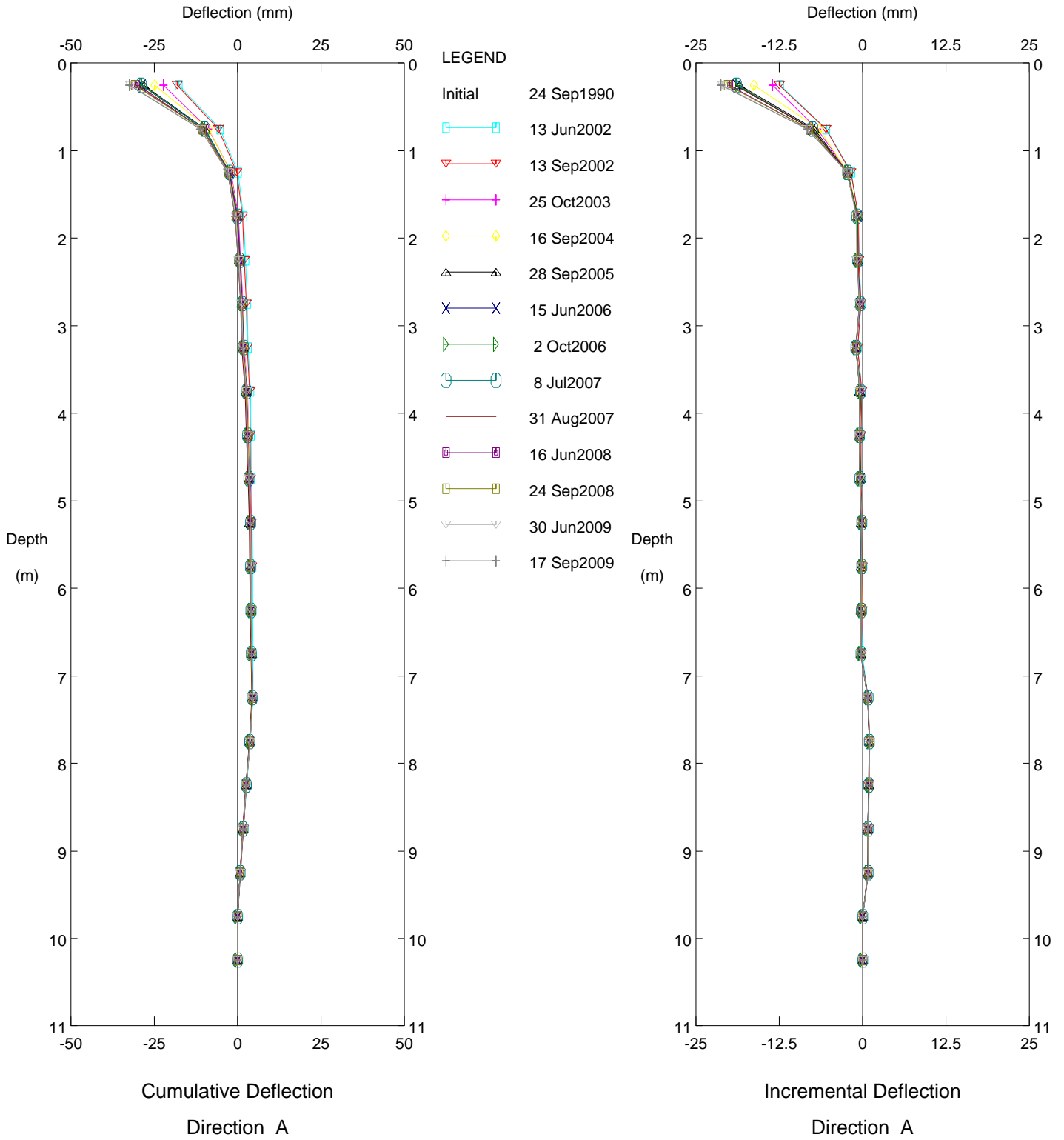


CD-10, Inclinometer 0+990

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



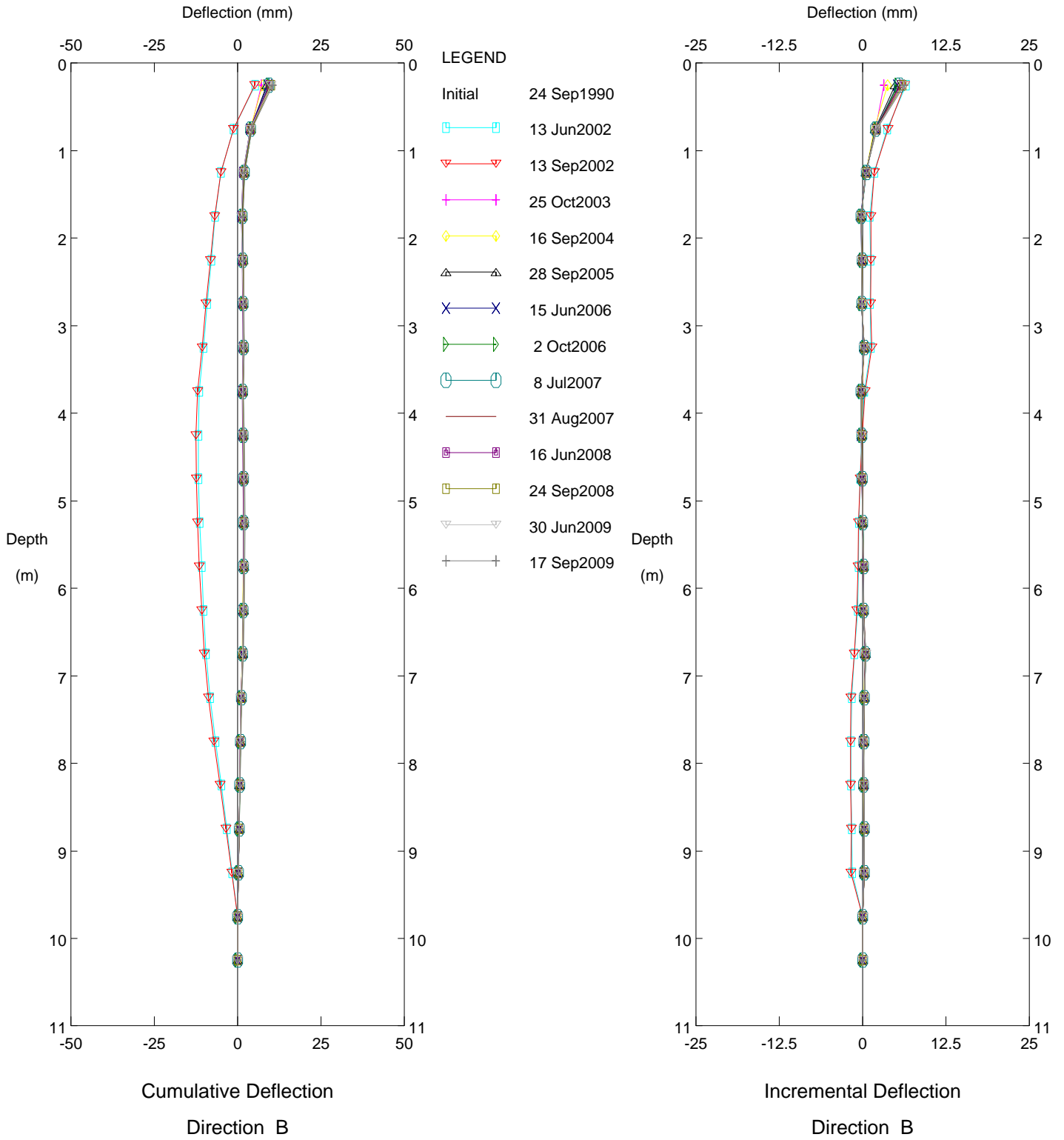
BGC Engineering Inc. - Calgary, AB



CD-15, Inclinometer 1+530

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

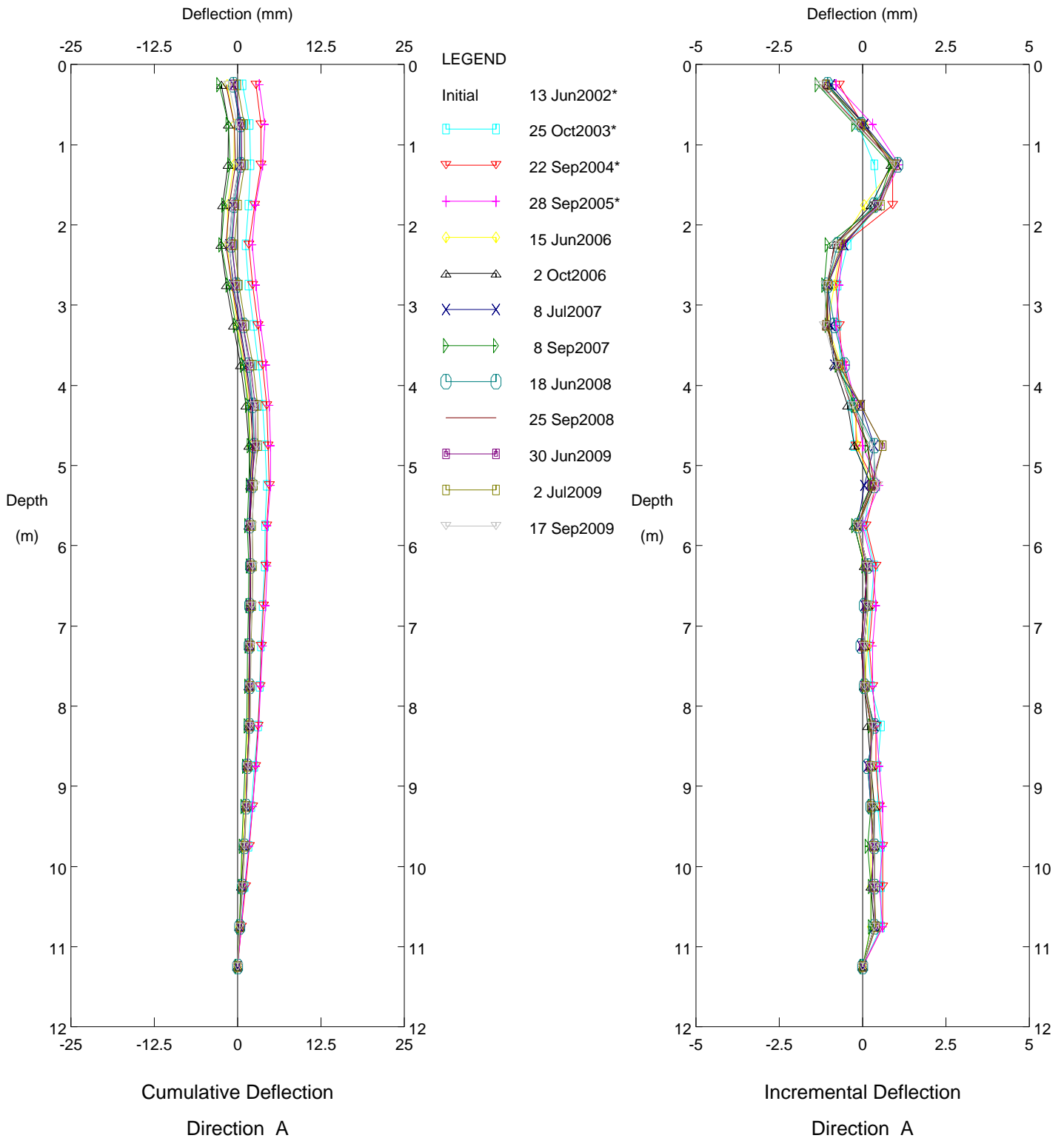
BGC Engineering Inc. - Calgary, AB



CD-15, Inclinometer 1+530

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

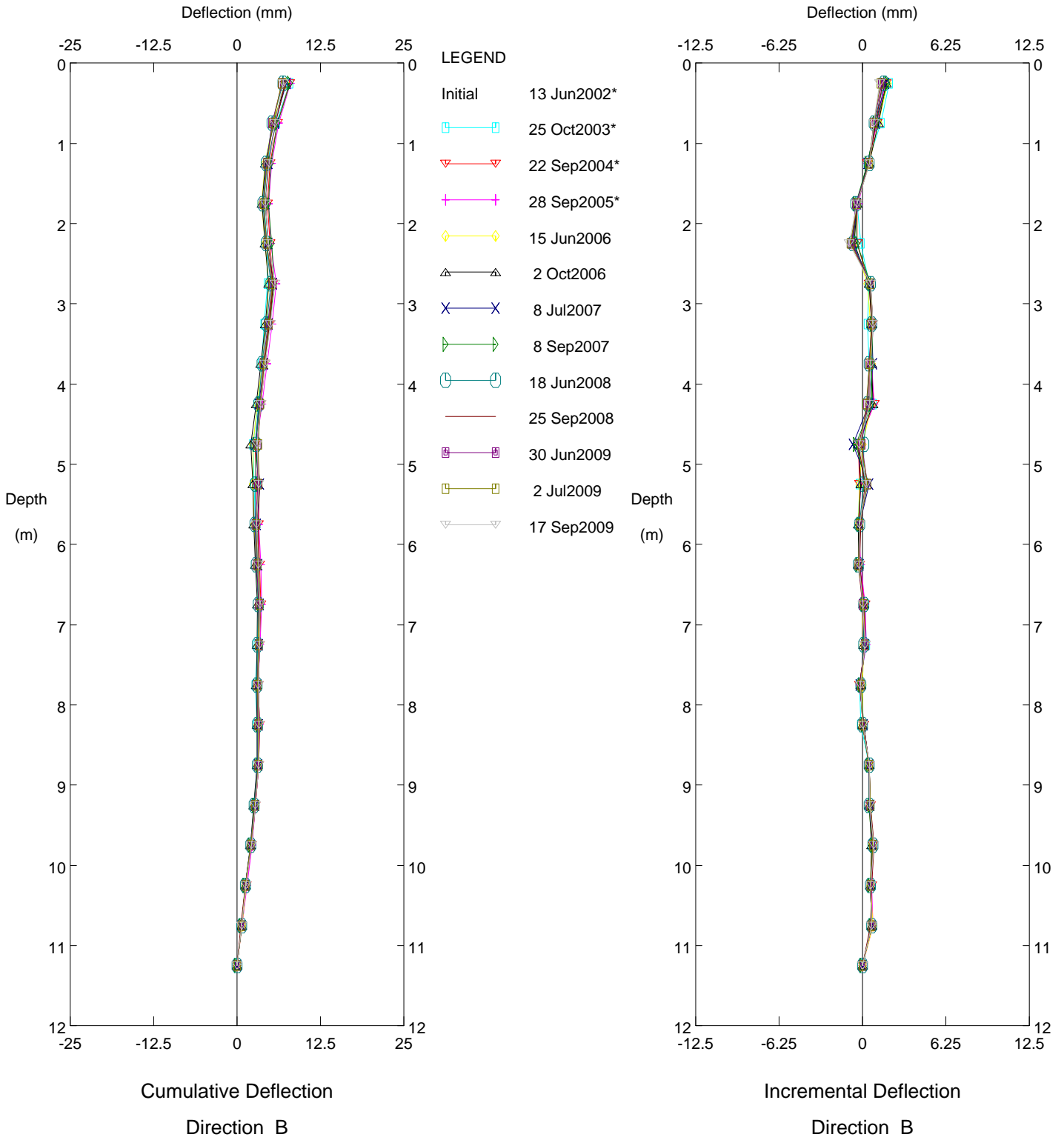
BGC Engineering Inc. - Calgary, AB



91CD-1, Inclinometer 1+767

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

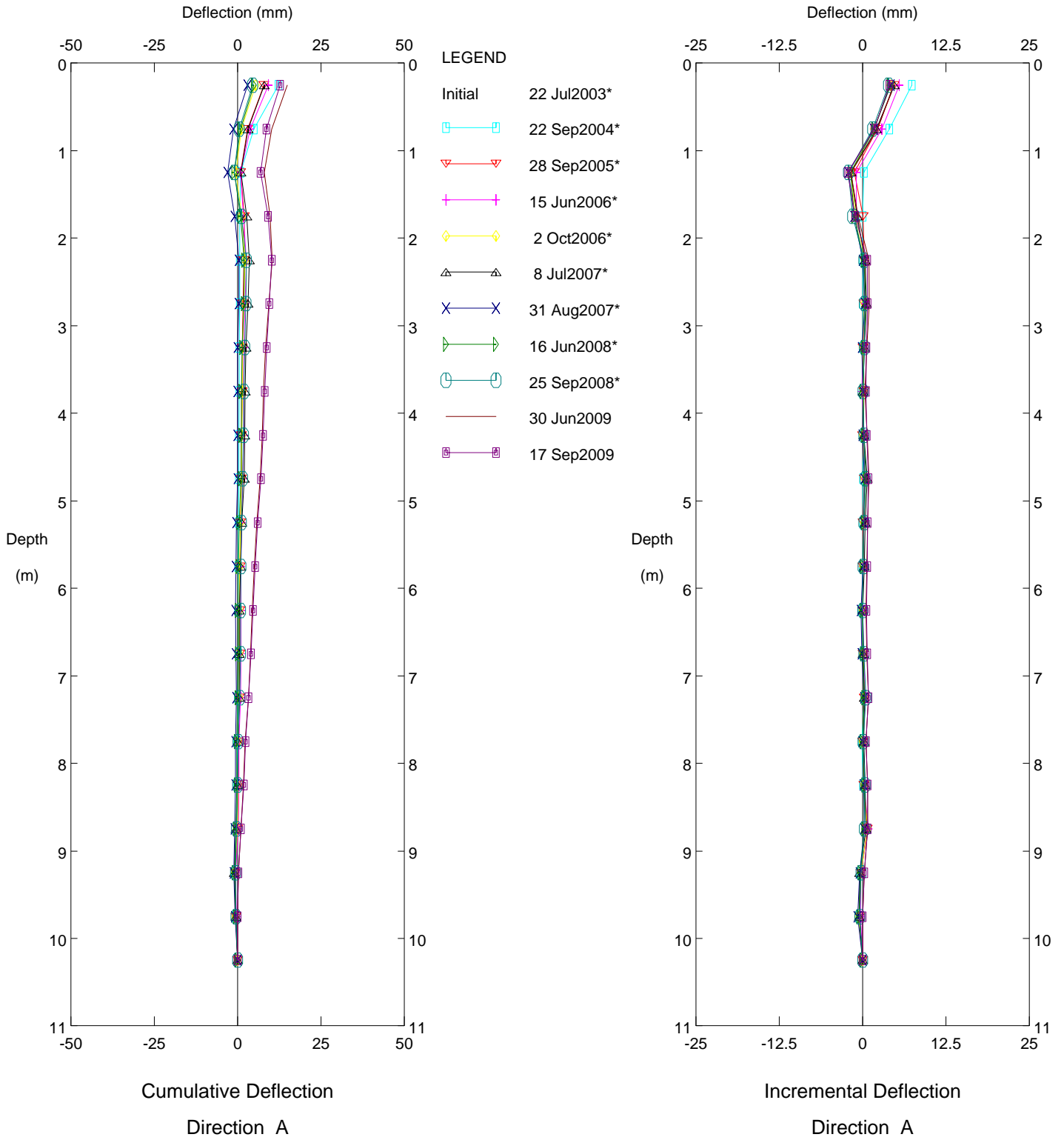
BGC Engineering Inc. - Calgary, AB



91CD-1, Inclinometer 1+767

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

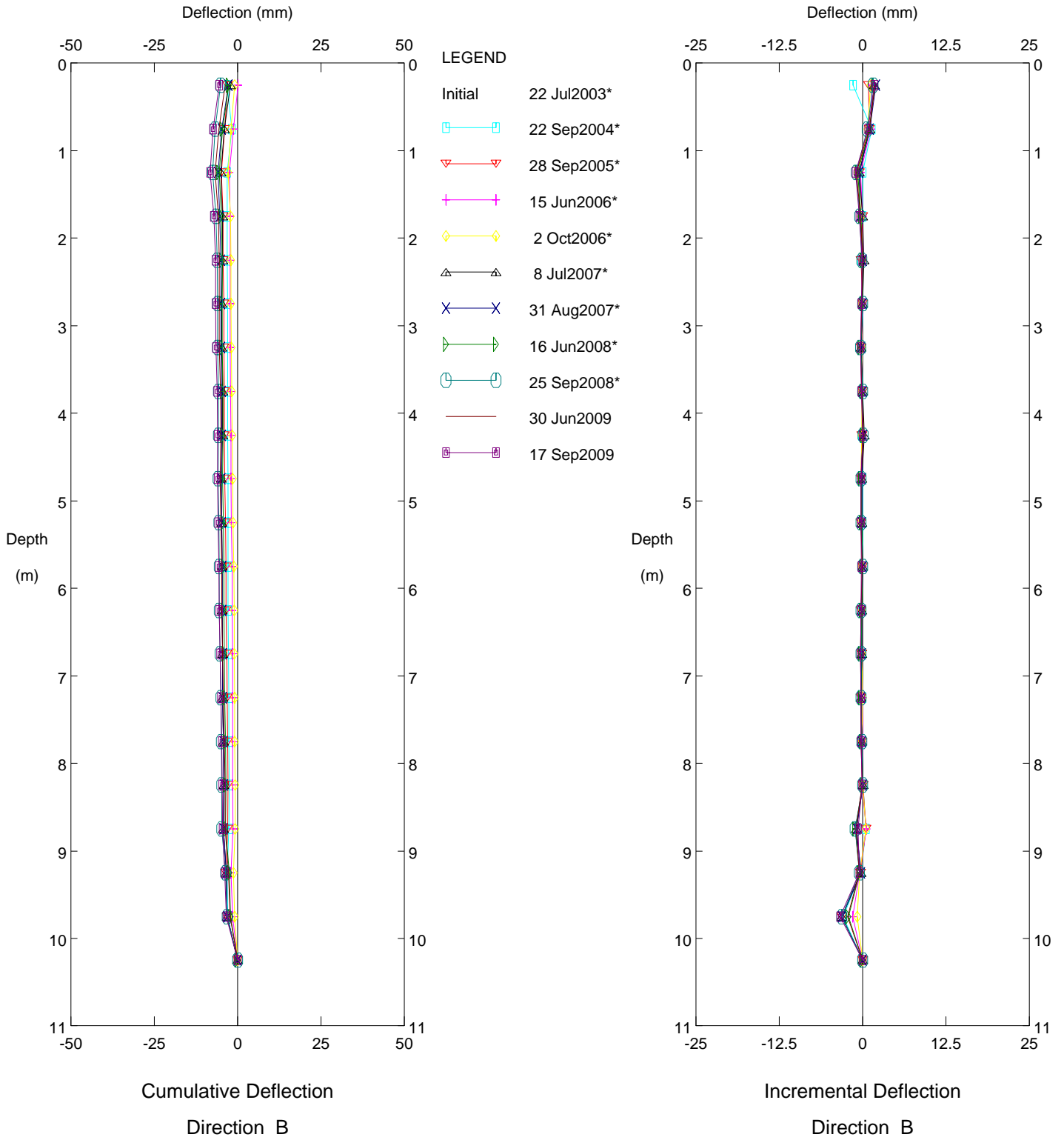
BGC Engineering Inc. - Calgary, AB



CD-19, Inclinometer 1+900

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

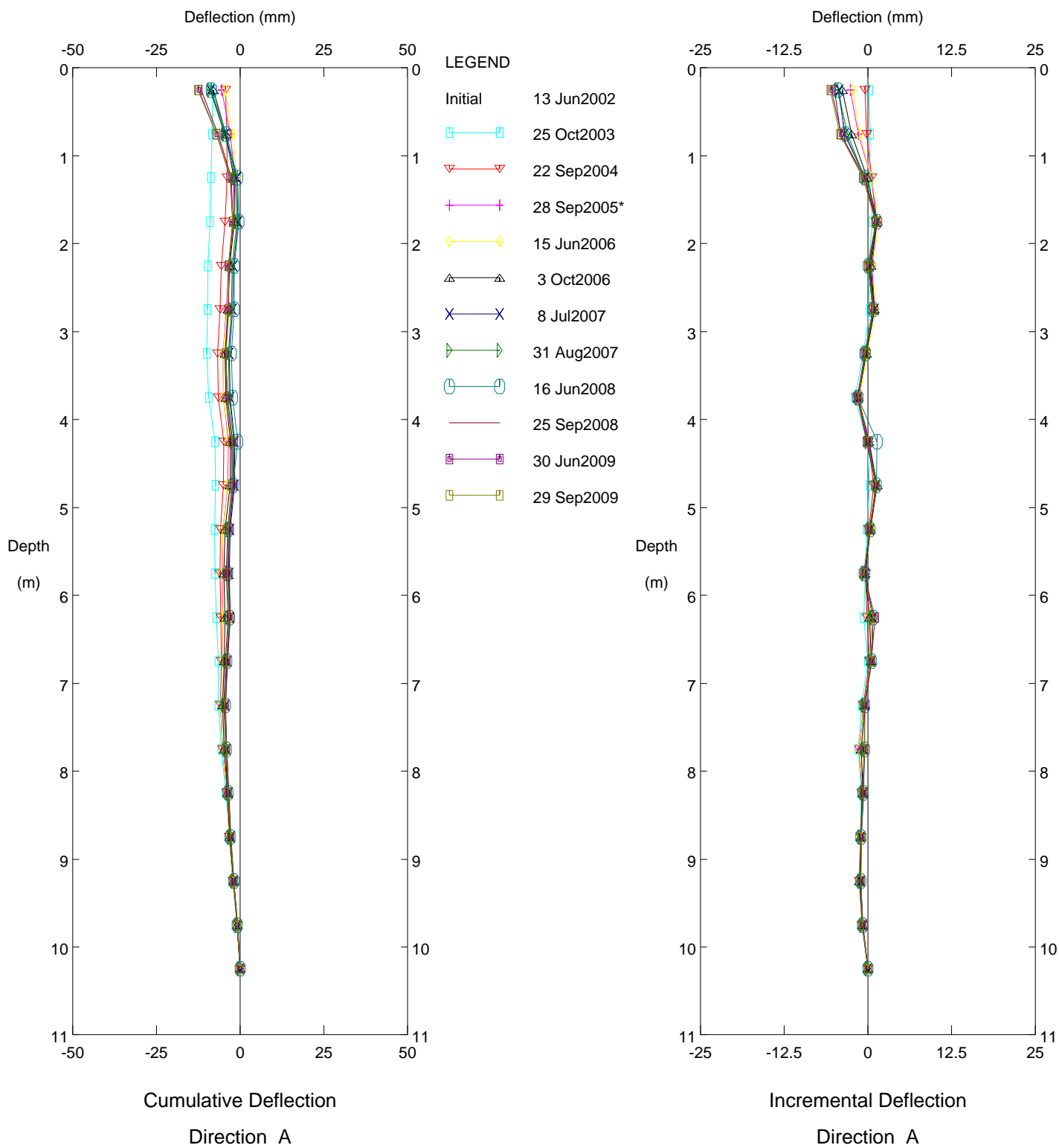
BGC Engineering Inc. - Calgary, AB



CD-19, Inclinometer 1+900

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

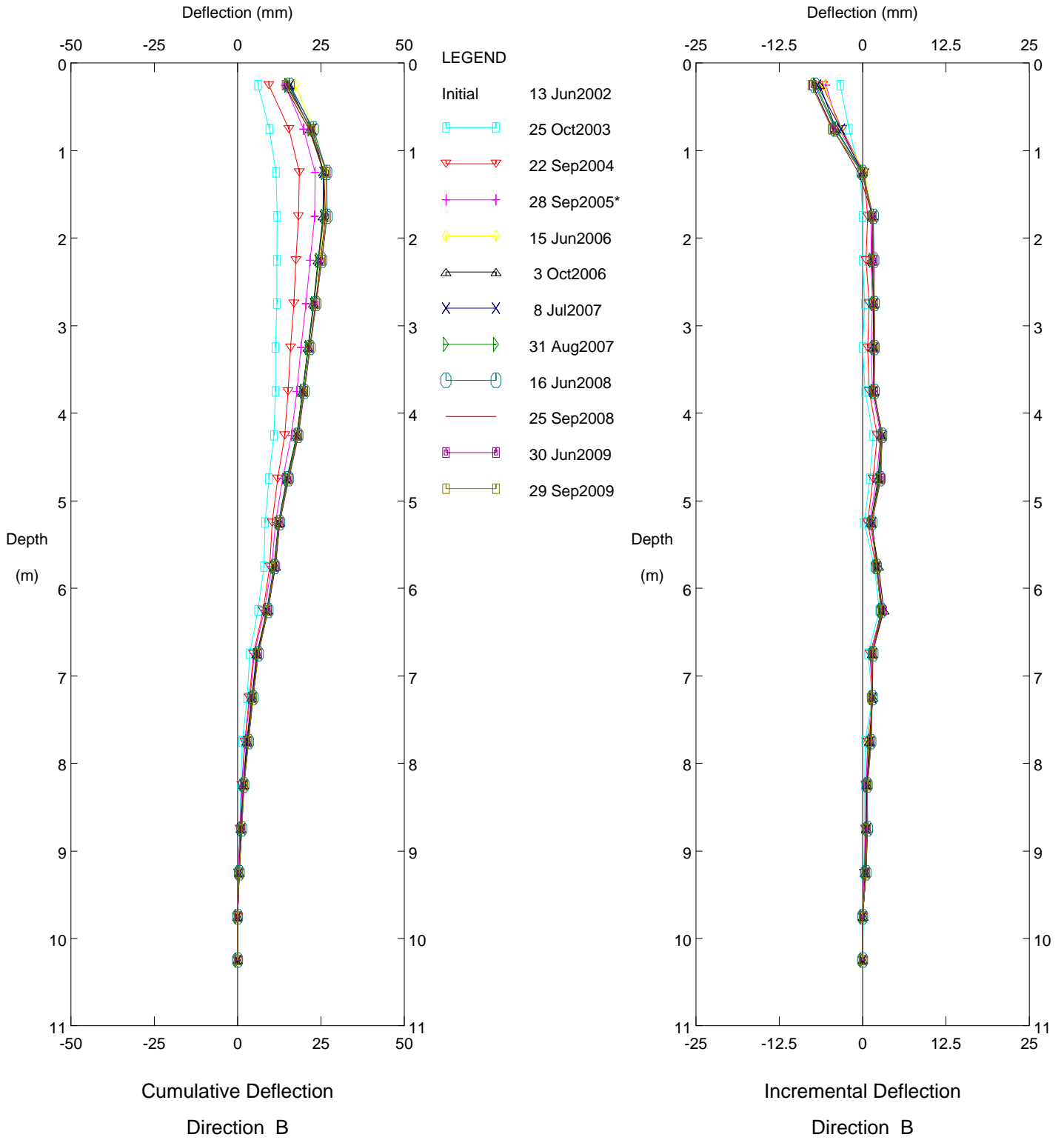
BGC Engineering Inc. - Calgary, AB



CD-21, Inclinometer 2+100

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

BGC Engineering Inc. - Calgary, AB

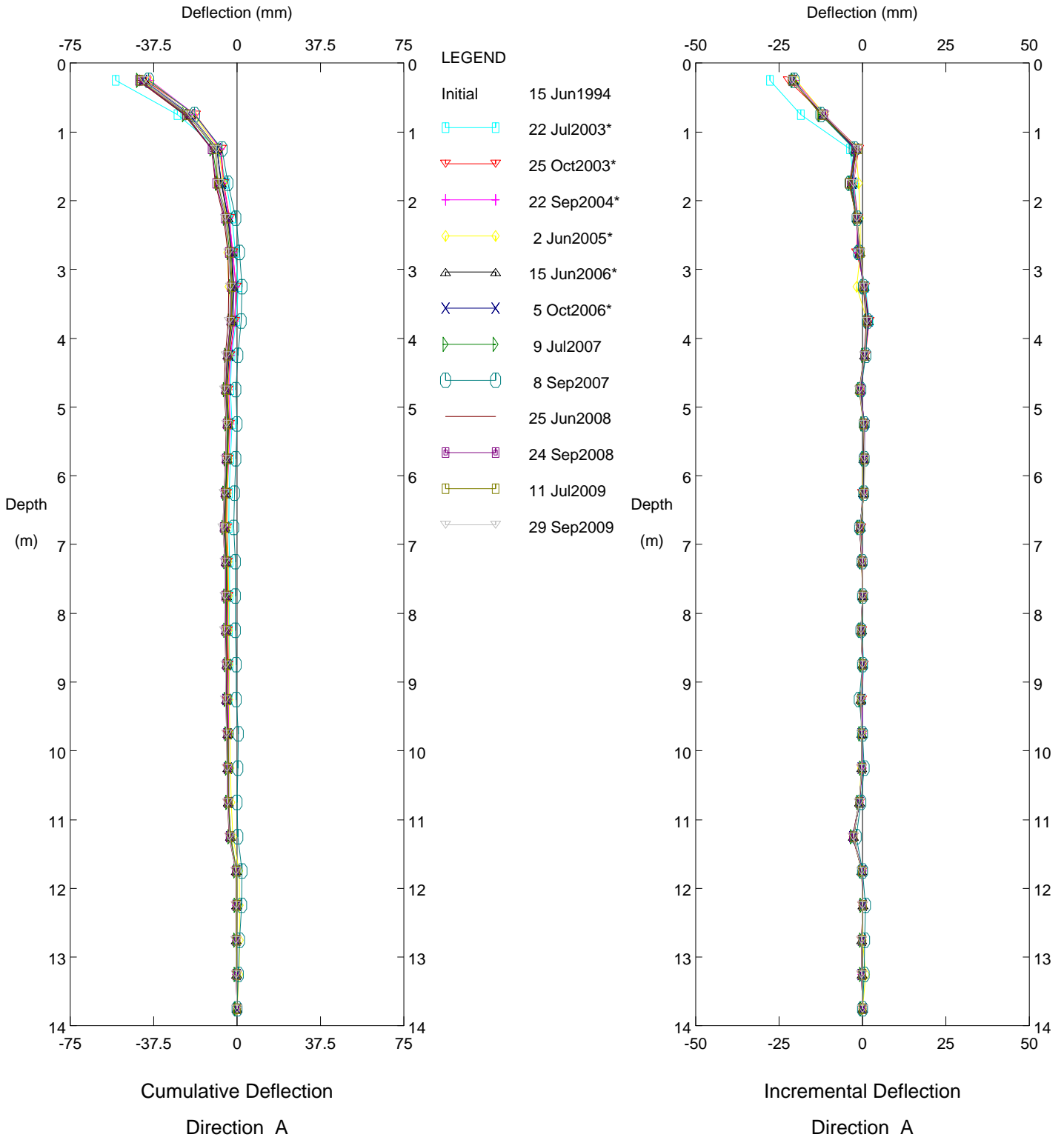


CD-21, Inclinometer 2+100

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



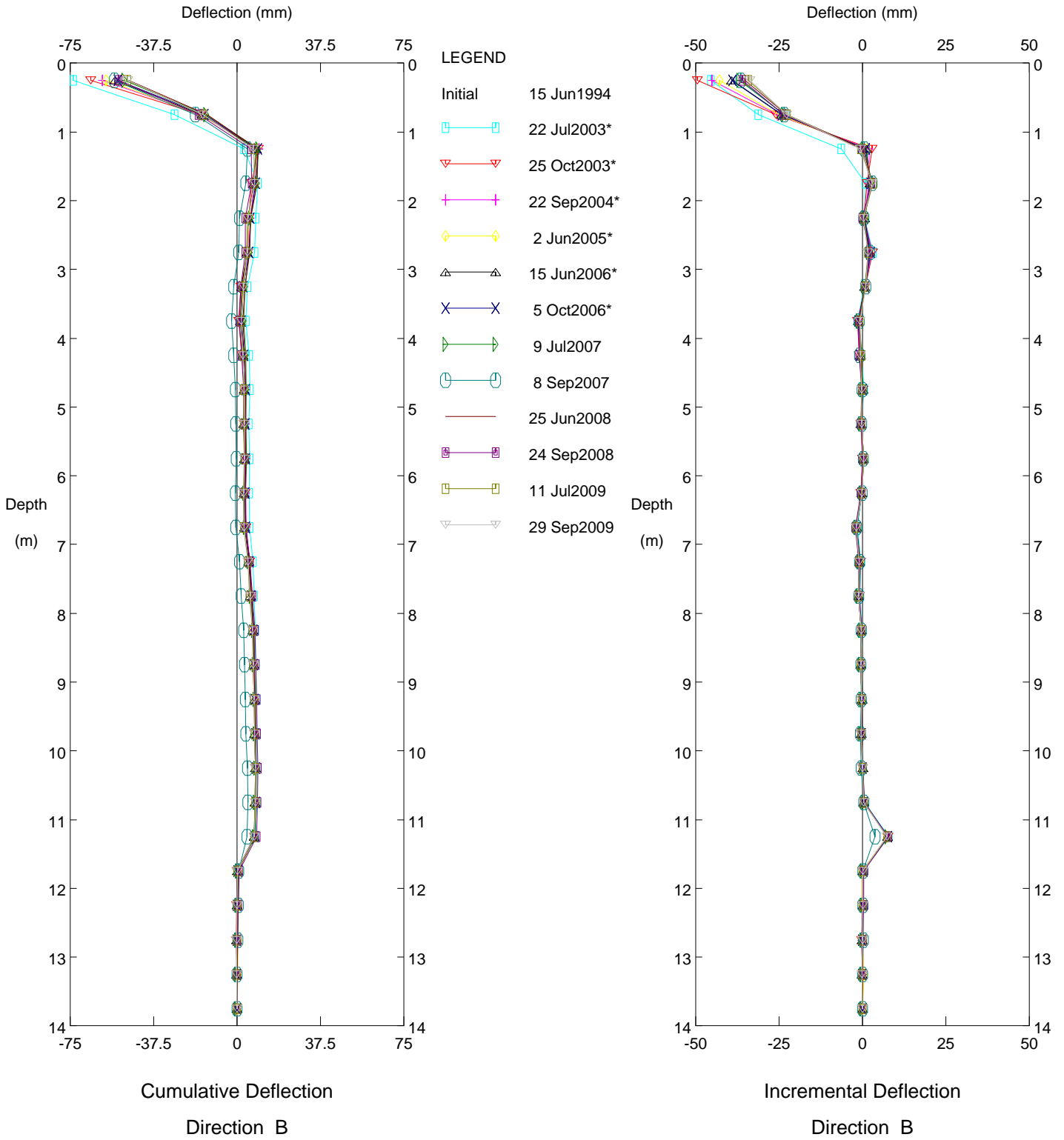
BGC Engineering Inc. - Calgary, AB



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

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

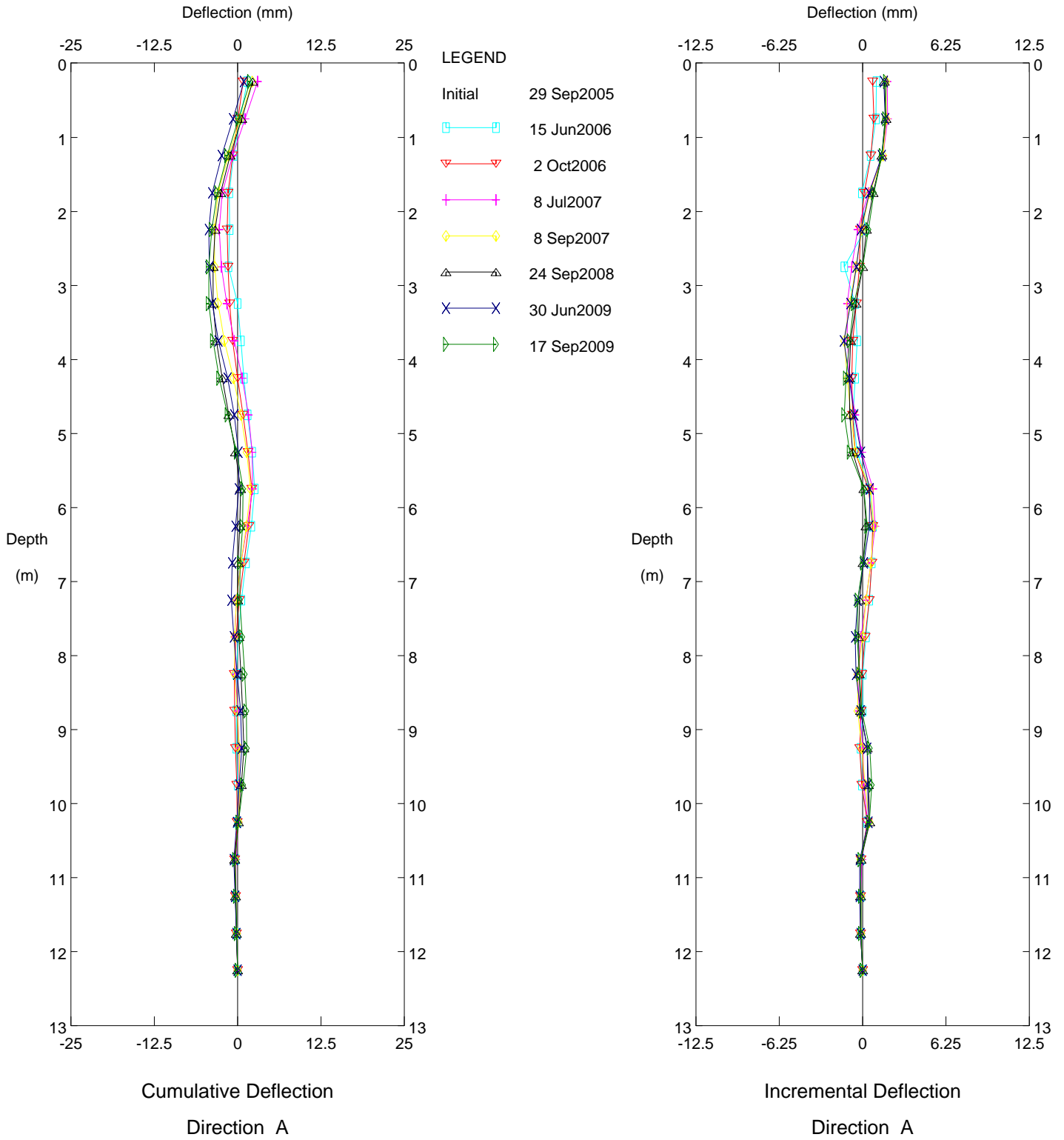
BGC Engineering Inc. - Calgary, AB



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

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

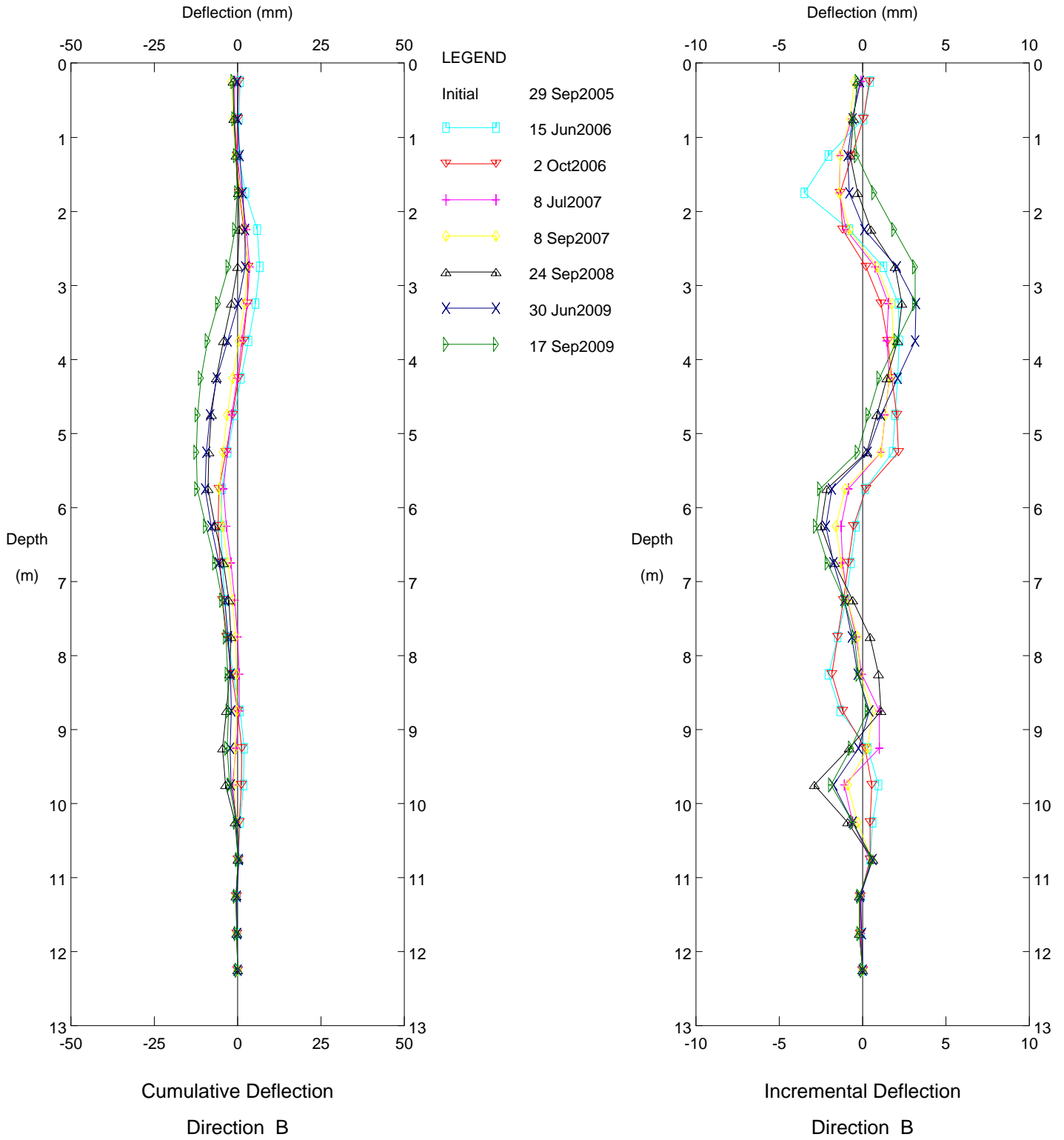
BGC Engineering Inc. - Calgary, AB



Canal Dike, Inclinometer BGC05-05

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

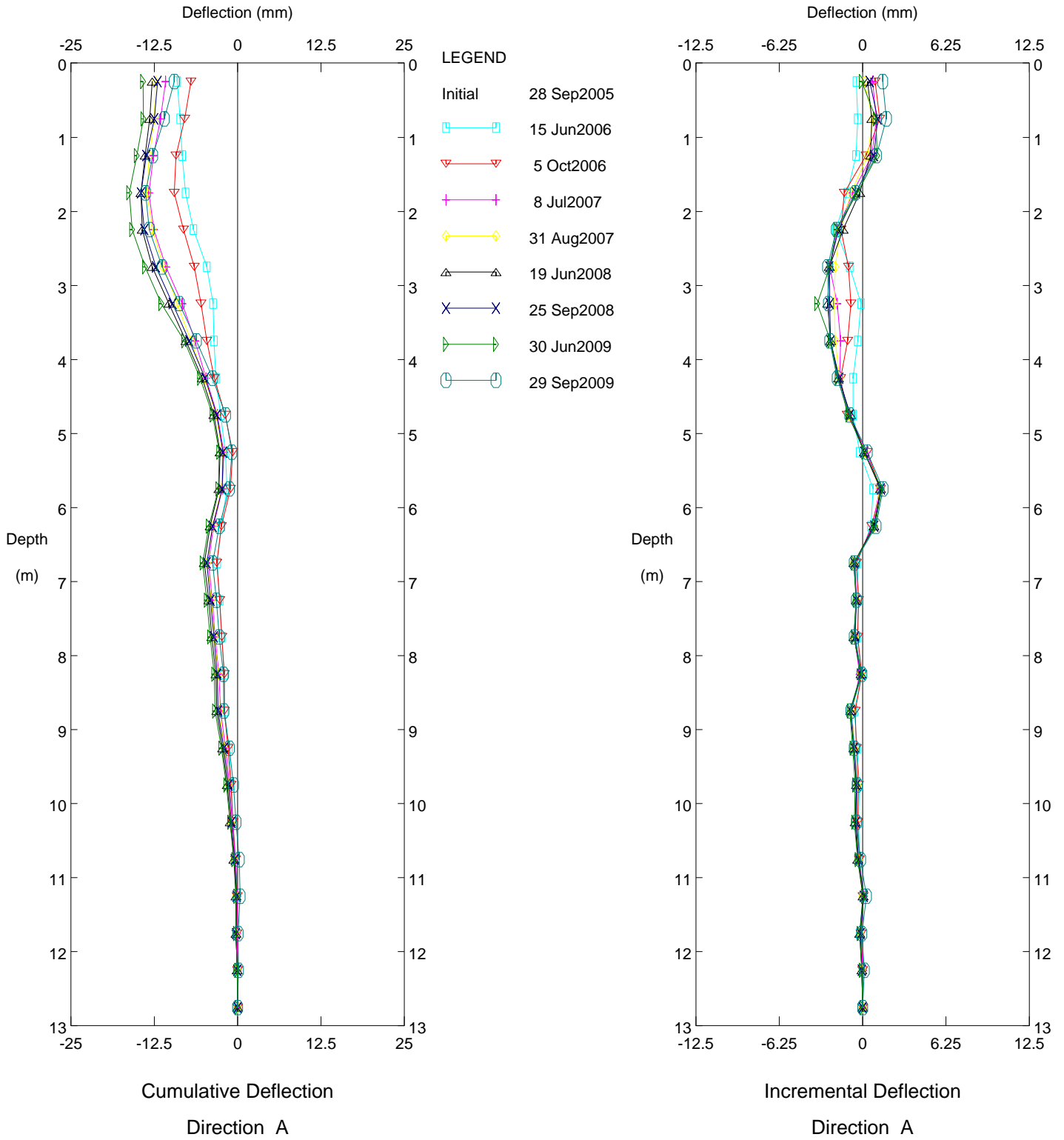
BGC Engineering Inc. - Calgary, AB



Canal Dike, Inclinometer BGC05-05

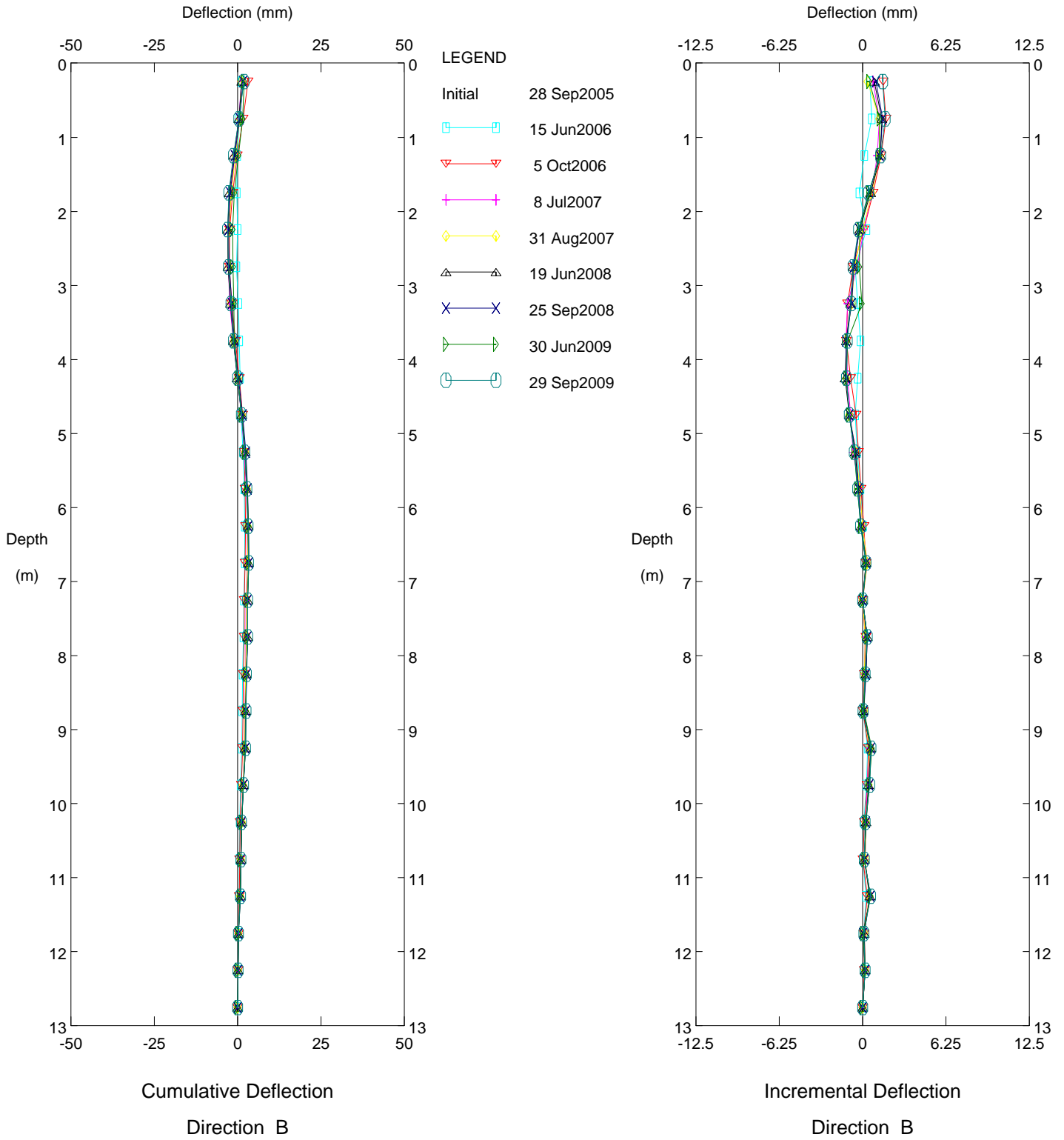
Sets marked \* include zero shift and/or rotation corrections.

BGC Engineering Inc. - Calgary, AB



Canal Dike, Inclinometer BGC05-08

BGC Engineering Inc. - Calgary, AB



Canal Dike, Inclinator BGC05-08

## **DIVERSION CANAL SPOIL PILES**

## THERMISTORS



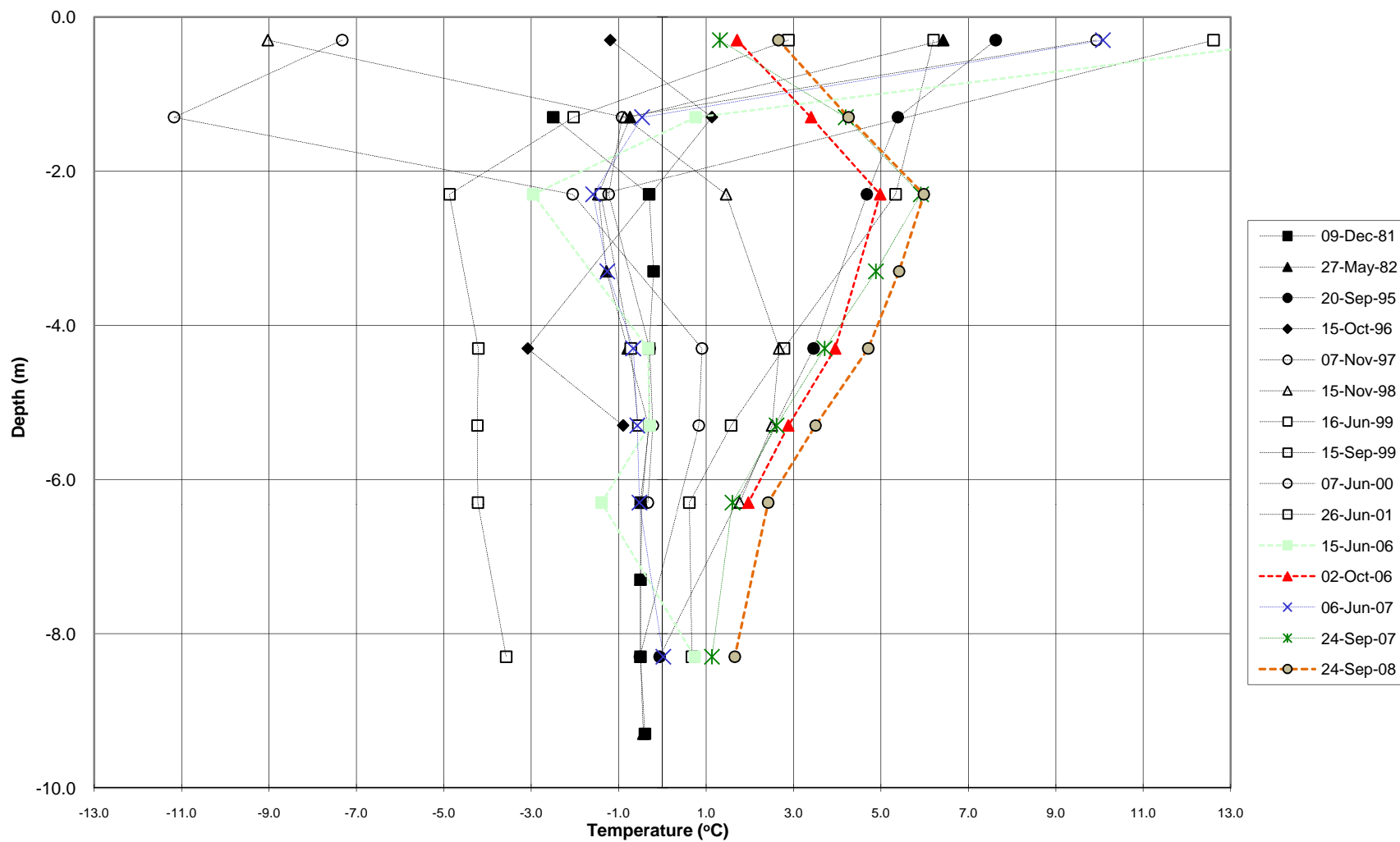
Faro Mine Instrumentation  
Diversion Canal Spoil Pile

SP-2		Location:			Surface Elevation: (m advpd)		Coordinates:										
		N. of canal dyke St.1+530			1093.1		1274.1 mN & 1055.7 mE										
Thermistor String #21	Date Installed:				Thermistor Type:	Cantec Controls YSI 44007	Ice-Bath Calibration:	applied	Surface Protector:	yes							
Depth Correction	0.3																
Depth on String (m)	Actual Depth (m)	Resistivity (kOhms) 9-Dec-81	Resistivity (kOhms) 27-May-82	Resistivity (kOhms) 20-Sep-95	Resistivity (kOhms) 15-Oct-96	Resistivity (kOhms) 7-Nov-97	Resistivity (kOhms) 15-Nov-98	Resistivity (kOhms) 16-Jun-99	Resistivity (kOhms) 15-Sep-99	Resistivity (kOhms) 7-Jun-00	Resistivity (kOhms) 5-Sep-00	Resistivity (kOhms) 26-Jun-01	Resistivity (kOhms) 15-Jun-06	Resistivity (kOhms) 2-Oct-06	Resistivity (kOhms) 6-Jun-07	Resistivity (kOhms) 24-Sep-07	Resistivity (kOhms) 24-Sep-08
0.0	-0.3		11.74	11.07	17.22	23.75	26.03	8.71	11.87	9.90	13.19	14.00	7.89	14.85	9.83	15.15	14.16
1.0	-1.3	18.44	16.84	12.37	15.29	29.29	16.95			17.00	13.09	18.00	15.60	13.64	16.59	13.11	13.07
2.0	-2.3	16.45	17.46	12.80		18.00	15.04	17.41	12.39	17.25	13.08	20.85	18.86	12.61	17.57	12.04	12
3.0	-3.3	16.34	17.27						13.3				17.21	O/L	17.28	12.67	12.34
4.0	-4.3	16.45	16.87	13.60	18.99	15.47	14.15	16.81	14.07	16.44	14.79	20.14	16.47	13.27	16.76	13.43	12.78
5.0	-5.3	16.40	16.41		16.96	15.48	14.22	16.61	14.91	16.33	18.16	20.1	16.39	14	16.68	14.19	13.57
6.0	-6.3	16.60	16.57				14.79		15.68	16.46	16.36	20.13	17.38	14.66	16.64	14.93	14.33
7.0	-7.3	16.62	16.62										19.90	O/L	too niosy	too niosy	
8.0	-8.3	16.62	16.62	16.25		16.63	14.85		15.65		16.07	19.48	15.60	to niosy	16.18	15.29	14.89
9.0	-9.3	16.50	16.53											85.1	86.4	85.7	

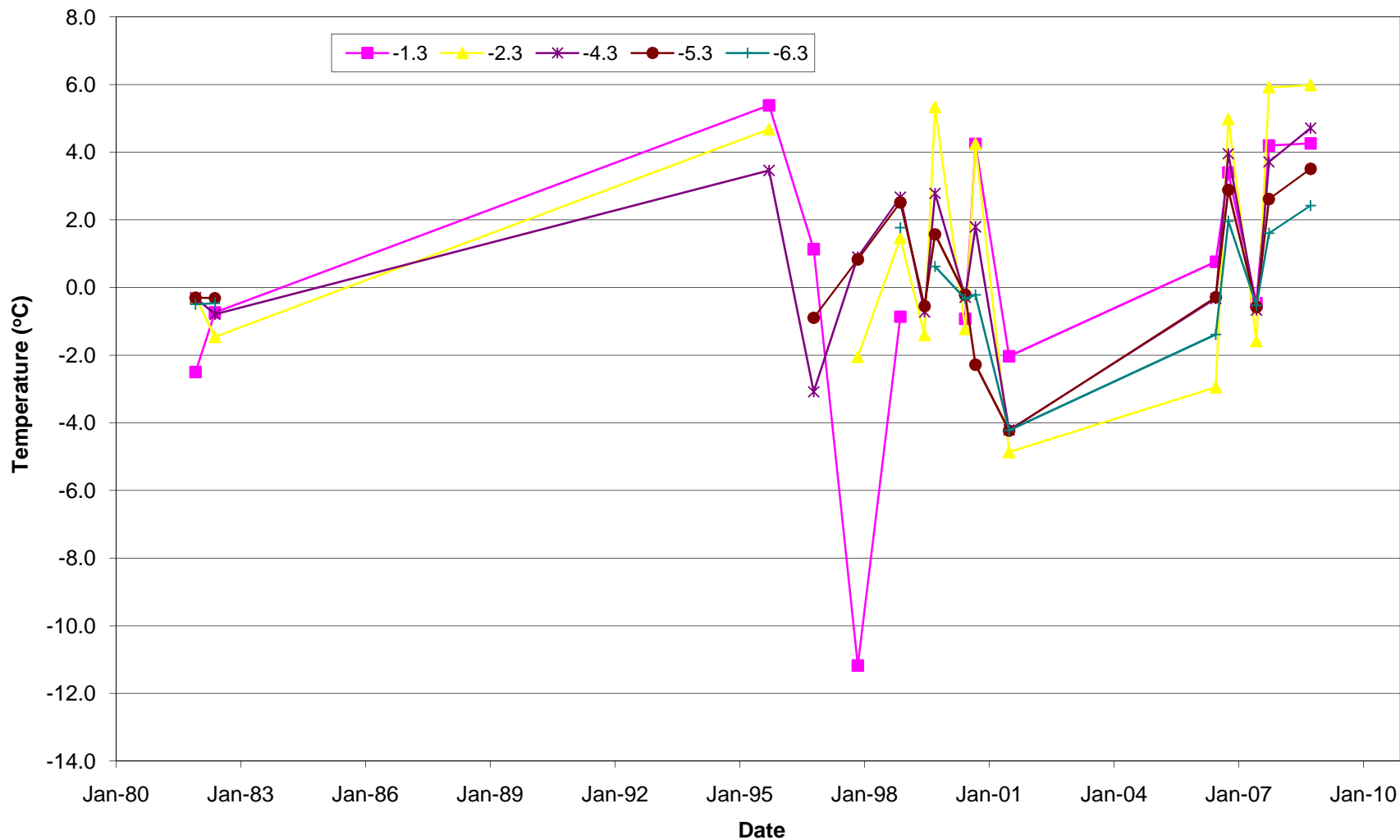
  

Depth on String (m)	Actual Depth (m)	Temperature (C) 9-Dec-81	Temperature (C) 27-May-82	Temperature (C) 20-Sep-95	Temperature (C) 15-Oct-96	Temperature (C) 7-Nov-97	Temperature (C) 15-Nov-98	Temperature (C) 16-Jun-99	Temperature (C) 15-Sep-99	Temperature (C) 7-Jun-00	Temperature (C) 5-Sep-00	Temperature (C) 26-Jun-01	Temperature (C) 15-Jun-06	Temperature (C) 2-Oct-06	Temperature (C) 6-Jun-07	Temperature (C) 24-Sep-07	Temperature (C) 24-Sep-08
0.0	-0.3		6.43	7.63	-1.19	-7.32	-9.03	12.61	6.20	9.93	4.07	2.88	14.70	1.71	10.08	1.32	2.66
1.0	-1.3	-2.50	-0.74	5.39	1.13	-11.17	-0.87			-0.92	4.25	-2.03	0.76	3.40	-0.47	4.20	4.26
2.0	-2.3	-0.30	-1.46	4.68		-2.05	1.46	-1.41	5.33	-1.23	4.24	-4.87	-2.95	4.98	-1.58	5.91	5.98
3.0	-3.3	-0.20	-1.28												-1.26	4.88	5.42
4.0	-4.3	-0.30	-0.79	3.46	-3.08	0.90	2.67	-0.72	2.78	-0.29	1.79	-4.21	-0.33	3.95	-0.67	3.71	4.71
5.0	-5.3	-0.30	-0.31		-0.90	0.83	2.51	-0.55	1.57	-0.22	-2.28	-4.23	-0.29	2.88	-0.57	2.61	3.50
6.0	-6.3	-0.50	-0.46				1.77		0.62	-0.33	-0.21	-4.22	-1.39	1.97	-0.53	1.60	2.42
7.0	-7.3	-0.50	-0.50														
8.0	-8.3	-0.50	-0.50	-0.06		-0.51			0.68		0.14	-3.57	0.74		0.02	1.13	1.66
9.0	-9.3	-0.40	-0.44														

### THERMISTOR SP-2 (installed 1981)



### Diversion Canal Spoil Pile Geothermal Monitoring Long Term Monitoring for Nodes in SP-2

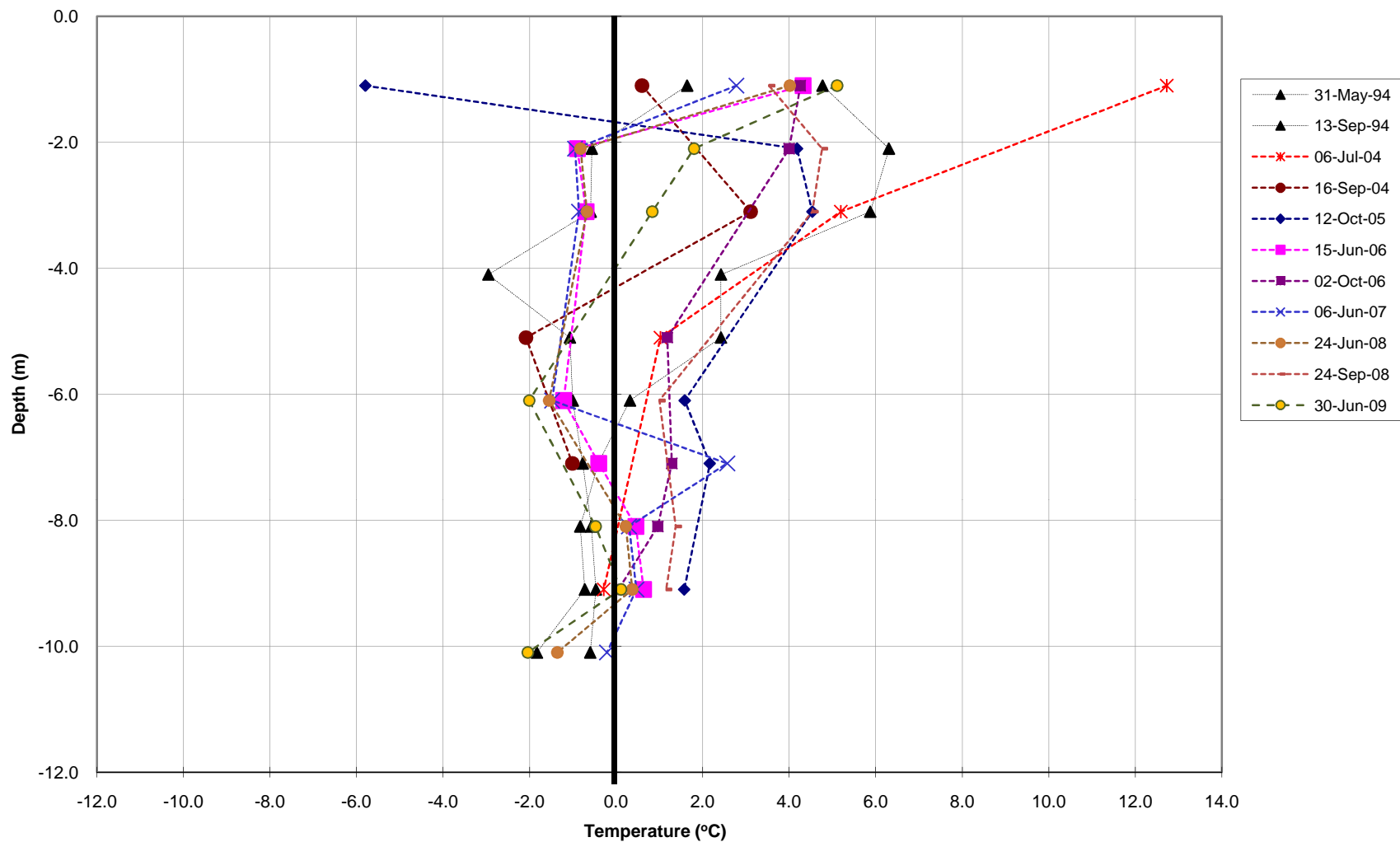


<b>SP-3</b>		<b>Location:</b> N. of canal dyke St.1+900		<b>Surface Elevation (m amsl):</b> 1051.2		<b>Coordinates:</b> 1394.4 m N & 704.5 m E																							
		<b>Date Installed:</b> 1981		<b>Thermistor Type:</b>		Cantec Controls YSI 44007		<b>Ice-Bath Calibration:</b> applied						<b>Surface Protector:</b> yes															
<b>Thermistor String#25</b>		<b>Depth Correction</b>		0.1																									
<b>Depth on String (m)</b>	<b>Actual Depth (m)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	<b>Resistivity (kOhms)</b>	
		9-Dec-81	31-May-94	13-Sep-94	20-Sep-95	15-Oct-96	6-Nov-97	15-Nov-98	15-Sep-99	7-Jun-00	5-Sep-00	26-Jun-01	13-Sep-01	13-Jun-02	13-Sep-02	6-Jul-04	16-Sep-04	12-Oct-05	15-Jun-06	2-Oct-06	6-Jun-07	24-Sep-07	24-Jun-08	24-Sep-08	30-Jun-09				
1.0	-1.1	16.85	14.88	12.72	12.60	17.37	16.59	17.30	12.15		12.38	13.69	12.31	10.81	12.41	8.65	15.69	21.86	13.01	13.05	14.05	13.73	13.21	13.53	12.51				
2.0	-2.1	16.20	16.67	11.81	12.29	15.90	14.88	14.95	12.18	16.73	12.06	14.76	11.81		12.21			13.10	16.93	13.22	16.98								
3.0	-3.1	16.25	16.66	12.04	12.52	15.59	14.43	14.48	12.38	16.48																			
4.0	-4.1	16.27	18.85	14.32	15.13	16.19	18.09	29.54	nr	nr																			
5.0	-5.1	16.27	17.10	14.32	14.82	15.10	15.06	15.20	15.11	18.93	16.23	23.65	18.05		13.12	15.35	18.00	144.00	300.40	15.23	1.90								
6.0	-6.1	16.39	16.99	15.88	15.31	15.23	14.90	14.80	14.96		14.73	19.10	14.50		13.97	25.52	25.10	14.92	17.21	10.12	17.45								
7.0	-7.1	16.49	16.81	16.50	16.33	16.04	15.52	15.01	15.49		15.27				14.71		17.03	14.49	16.51	15.15	14.20								
8.0	-8.1	16.54	16.69	16.91	16.80	16.73	16.27	15.39	15.78			18.79	18.79						15.80	15.4	15.93								
9.0	-9.1	16.54	16.60	16.82	16.71	16.70	16.77	15.90	16.01	15.78	15.38	18.50	15.34		15.04	16.41		14.93	15.66	16.13	15.79								
10.0	-10.1	16.48	16.65	17.74	16.77	16.77	16.75	16.68	16.38		15.64										16.35								

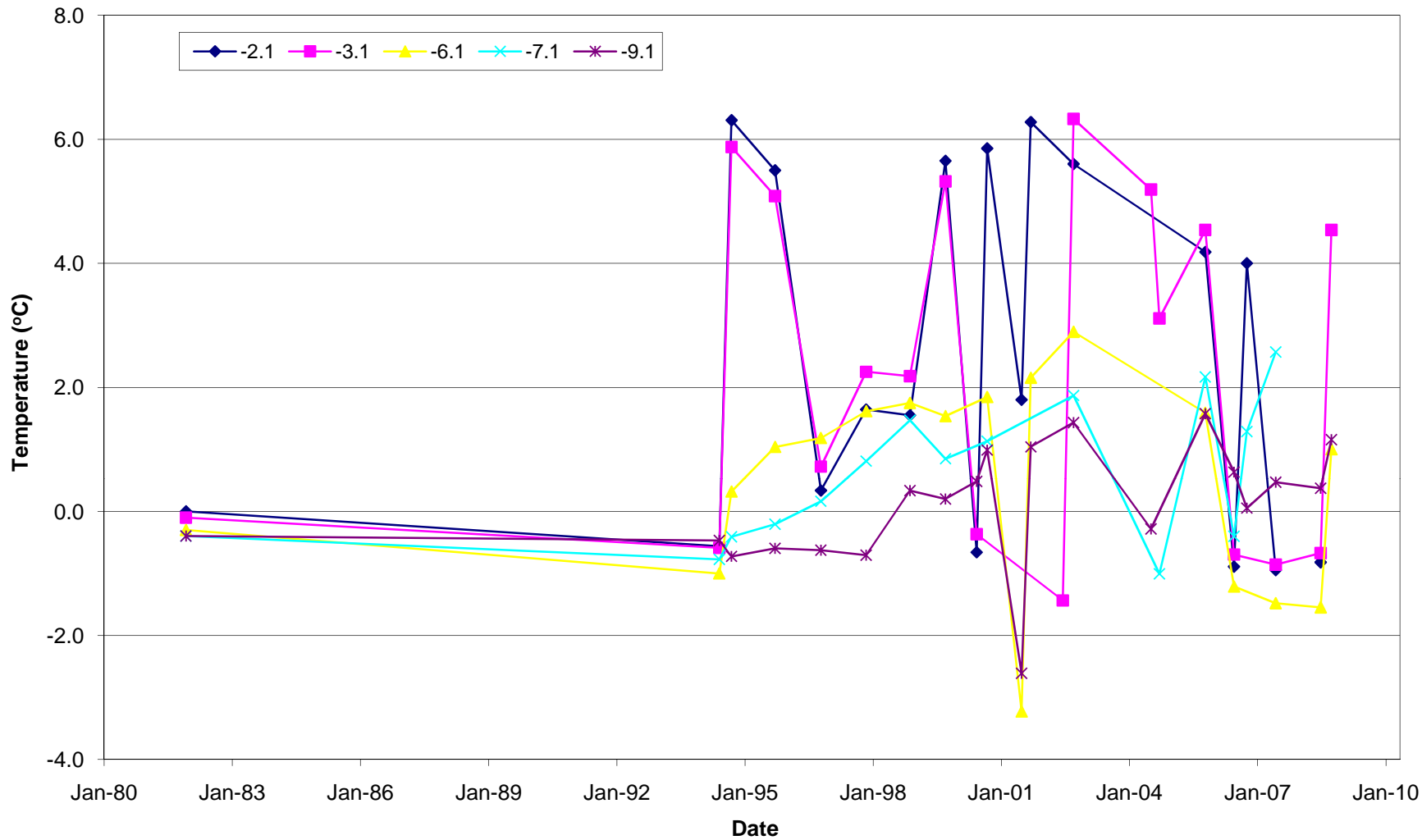
\* The initial reading (Nov 15/81) is excluded from the data set because post-installation equilibrium may not have been complete.

<b>Depth on String (m)</b>	<b>Actual Depth (m)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>	<b>Temperature (C)</b>		
		9-Dec-81	31-May-94	13-Sep-94	20-Sep-95	15-Oct-96	6-Nov-97	15-Nov-98	15-Sep-99	7-Jun-00	5-Sep-00	26-Jun-01	13-Sep-01	13-Jun-02	13-Sep-02	6-Jul-04	16-Sep-04	12-Oct-05	15-Jun-06	2-Oct-06	6-Jun-07	24-Sep-07	24-Jun-08	24-Sep-08	30-Jun-09					
1.0	-1.1	-0.80	1.64	4.77	4.96	-1.39	-0.50	-1.31	5.70		5.32	3.30	5.44	8.08	5.27	12.72	0.60	-5.80	4.32	4.26	2.78	3.24	4.01	3.53	5.11					
2.0	-2.1	0.00	-0.56	6.31	5.50	0.33	1.64	1.55	5.65	-0.66	5.85	1.80	6.28		5.60			4.18	-0.89	4.00	-0.95									
3.0	-3.1	-0.10	-0.59	5.87	5.08	0.72	2.25	2.18	5.32	-0.37								4.54	-0.70		-0.86									
4.0	-4.1	-0.10	-2.95	2.42	1.33	-0.02	-2.18																							
5.0	-5.1	-0.10	-1.07	2.42	1.74	1.35	1.40	1.22	1.34	-3.05	-0.07	-7.28	-2.14		4.15	1.03	-2.08													
6.0	-6.1	-0.30	-1.00	0.32	1.04	1.18	1.61	1.75	1.54		1.84	-3.23	2.15		2.89			1.59	-1.21		-1.48									
7.0	-7.1	-0.40	-0.77	-0.41	-0.21	0.16	0.81	1.47	0.85		1.13				1.87			-1.01	2.17	-0.40	1.29	2.57								
8.0	-8.1	-0.40	-0.57	-0.83	-0.70	-0.66	-0.12	0.98	0.48										0.46	0.96	0.30									
9.0	-9.1	-0.40	-0.47	-0.73	-0.60	-0.63	-0.71	0.33	0.20	0.48	0.99	-2.61	1.04						1.57	0.63	0.05	0.47								
10.0	-10.1	-0.40	-0.60	-1.83	-0.74	-0.71	-0.68	-0.60	-0.25		0.66										-0.21									

### DIVERSION CANAL SPOIL PILE Geothermal Monitoring SP-3



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

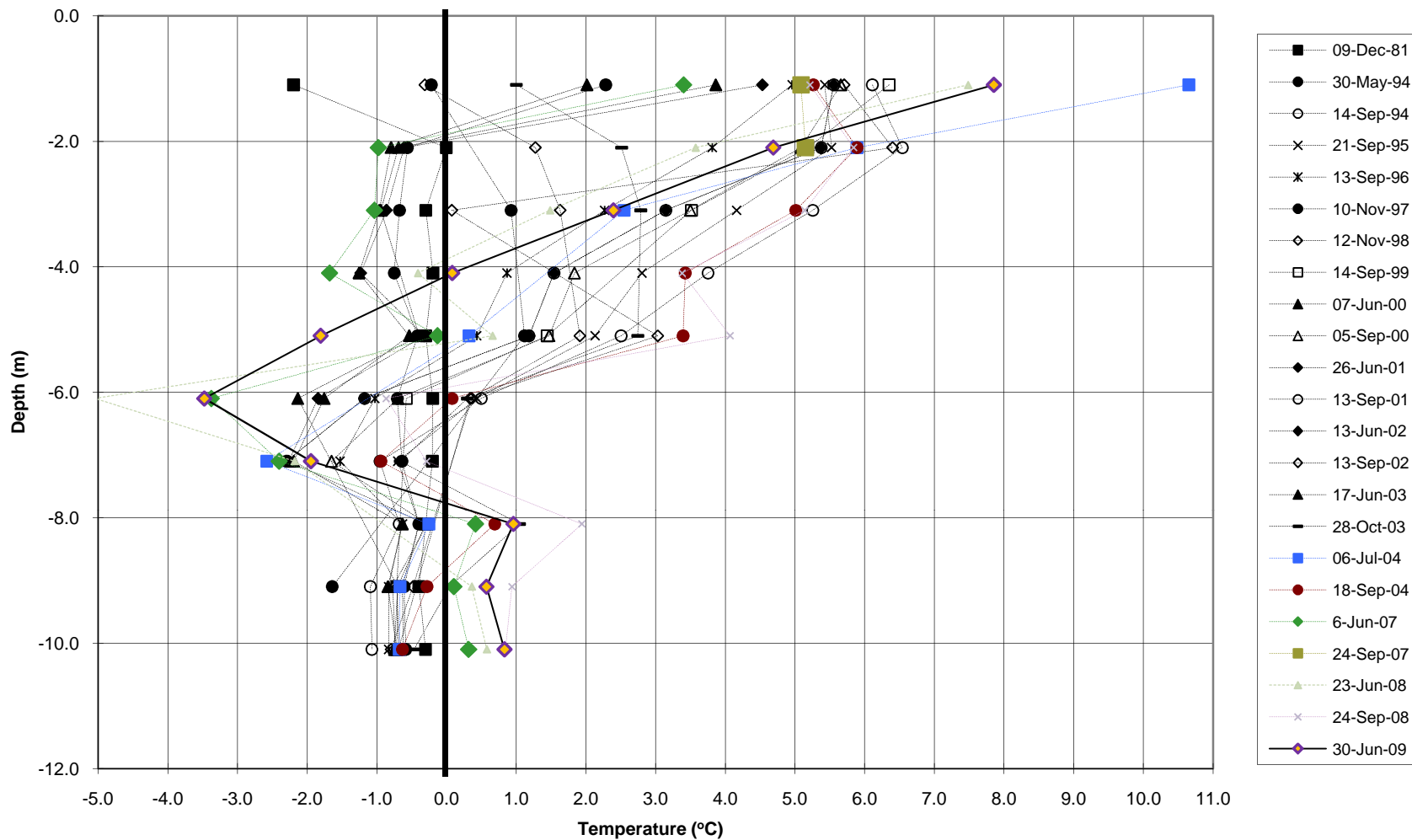


SP-5		Location:	Surface Elevation (m amsl):		Coordinates:	1898.2 m N & 183.1 m W		8V580012 6913942		Surface Protector:																			
		Date Installed:	Thermistor Type:		Cantec Controls YSI 44007	Ice-Bath Calibration:		applied		yes																			
		Depth Correction:																											
Thermistor String #24	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)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)					
		9-Dec-81	30-May-94	14-Sep-94	21-Sep-95	13-Sep-96	10-Nov-97	12-Nov-98	14-Sep-99	7-Jun-00	5-Sep-00	26-Jun-01	13-Sep-01	13-Jun-02	13-Sep-02	17-Jun-03	28-Oct-03	6-Jul-04	18-Sep-04	6-Jun-07	24-Sep-07	23-Jun-08	24-Sep-08	30-Jun-09					
1.0	-1.1	18.19	14.47	11.96	12.37	12.66	16.43	16.51	11.82	14.67	12.23	12.84	12.29	12.93	12.20	13.37	15.44	9.59	12.47	13.68	12.58	11.18	12.50	10.98					
2.0	-2.1	16.21	16.68	11.68	12.28	13.37	12.49	15.19	12.49	16.88	12.55	17.03	12.37	16.72	11.76	16.79	14.27	12.06	12.06	17.04	12.51	13.53	12.09	12.80					
3.0	-3.1	16.38	16.70	12.39	13.08	14.38	15.39	14.85	13.51	16.95	13.52	16.87	13.76	16.86	16.07	16.93	14.01	14.18	12.54	17.01		14.96	12.46	14.29					
4.0	-4.1	16.32	16.79	13.37	14.02	15.46				17.23	14.72	17.23	14.94	17.21		17.35			13.59	17.61		16.5	13.62	16.09					
5.0	-5.1	16.38	16.48	14.21	14.48	15.78	15.24	14.64	14.99	16.58	14.97	16.51	15.19	16.4	13.84	16.46	14.04	15.87	13.59	16.24		15.6	13.14	17.7					
6.0	-6.1	16.33	16.76	15.76	15.81	17.04				15.89	16.65	17.69	16.75	17.76	17.77	15.87	18.04	15.92		16.1	19.24		21	16.9	19.34				
7.0	-7.1	16.36	16.73	17.00	16.78	17.51						18.12	17.62	18.16	18.22	18.19			16.47	16.75	18.49	16.99	18.32		18.11	16.43	17.89		
8.0	-8.1	16.40	16.48	16.72	16.48	16.68						16.68	16.38	16.50					16.40	15.31	16.36	15.59	15.81			14.67	15.38		
9.0	-9.1	16.54	16.72	17.14	16.74	16.91	17.63					16.81	16.92	16.86	16.85				16.80	16.61	16.80	16.17	16.77	16.44	16.12		15.91	15.45	15.74
10.0	-10.1	16.40	16.64	17.06	16.67	16.85						16.73	16.72	16.75	16.77	16.77			16.75	16.82	16.78	16.54	16.72	16.68	15.89		15.68	15.47	15.48

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

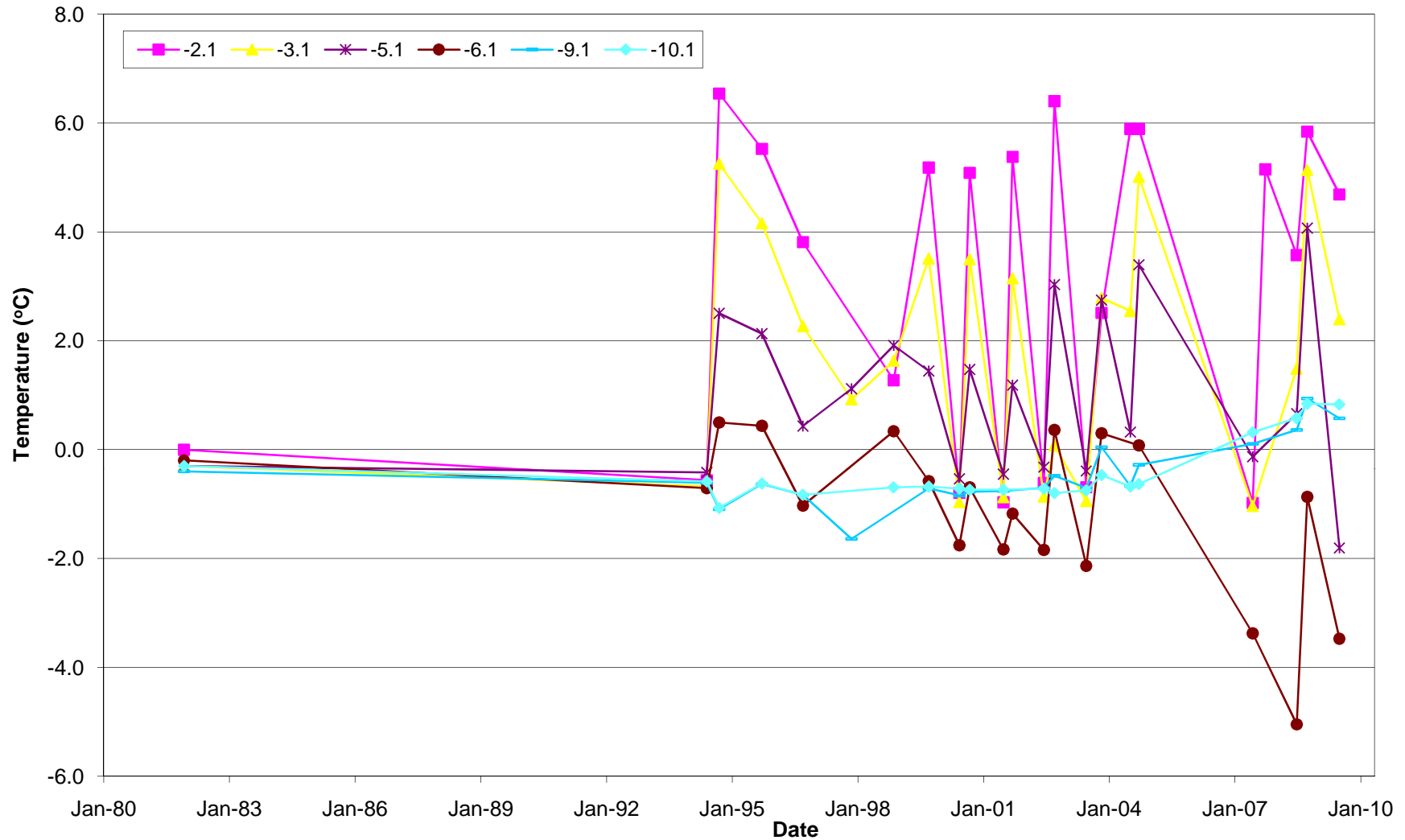
Depth on String (m)	Actual Depth (m)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)				
		9-Dec-81	30-May-94	14-Sep-94	21-Sep-95	13-Sep-96	10-Nov-97	12-Nov-98	14-Sep-99	7-Jun-00	5-Sep-00	26-Jun-01	13-Sep-01	13-Jun-02	13-Sep-02	17-Jun-03	28-Oct-03	6-Jul-04	18-Sep-04	6-Jun-07	24-Sep-07	23-Jun-08	24-Sep-08	30-Jun-09				
1.0	-1.1	-2.20	2.28	6.11	5.43	4.96	-0.22	-0.31	6.35	2.01	5.66	4.67	5.56	4.53	5.71	3.86	1.00	10.65	5.26	3.40	5.09	7.48	5.22	7.85				
2.0	-2.1	0.00	-0.56	6.54	5.52	3.81		1.27	5.18	-0.80	5.08	-0.97	5.38	-0.61	6.40	-0.69	2.51	5.89	5.89	-0.98	5.15	3.57	5.84	4.69				
3.0	-3.1	-0.30	-0.68	5.25	4.16	2.27	0.93	1.63	3.51	-0.97	3.50	-0.87	3.15	-0.86	0.08	-0.94	2.79	2.55	5.01	-1.03		1.49	5.14	2.39				
4.0	-4.1	-0.20	-0.75	3.75	2.80	0.87				-1.25	1.84	-1.25	1.54	-1.23					3.43	-1.68		-0.41	3.38	0.08				
5.0	-5.1	-0.30	-0.42	2.51	2.13	0.43	1.12	1.91	1.45	-0.54	1.47	-0.45	1.18	-0.32	3.03	-0.39	2.74		3.40	-0.13		0.66	4.07	-1.81				
6.0	-6.1	-0.20	-0.71	0.50	0.44	-1.03		0.34	-0.58	-1.76	-0.69	-1.83	-1.18	-1.84	0.36	-2.14	0.30		0.08	-3.38		-5.05	-0.87	-3.48				
7.0	-7.1	-0.20	-0.64	-0.95	-0.70	-1.53				-2.19	-1.65	-2.23	-2.30						-0.66	-2.58	-0.94	-2.40	-0.29	-1.94				
8.0	-8.1	-0.30	-0.40	-0.68	-0.40	-0.63					-0.63	-0.28	-0.42						1.05	-0.25	0.69	0.42			1.94	1.01		
9.0	-9.1	-0.40	-0.61	-1.09	-0.63	-0.83	-1.64			-0.71	-0.84	-0.77	-0.76						-0.70	-0.48	-0.70	0.04	-0.67	-0.28	0.10	0.36	0.94	0.57
10.0	-10.1	-0.30	-0.59	-1.07	-0.62	-0.83				-0.69	-0.68	-0.71	-0.74	-0.74					-0.71	-0.80	-0.75	-0.47	-0.68	-0.63	0.32	0.58	0.84	0.83

### DIVERSION CANAL SPOIL PILE Geothermal Monitoring SP-5



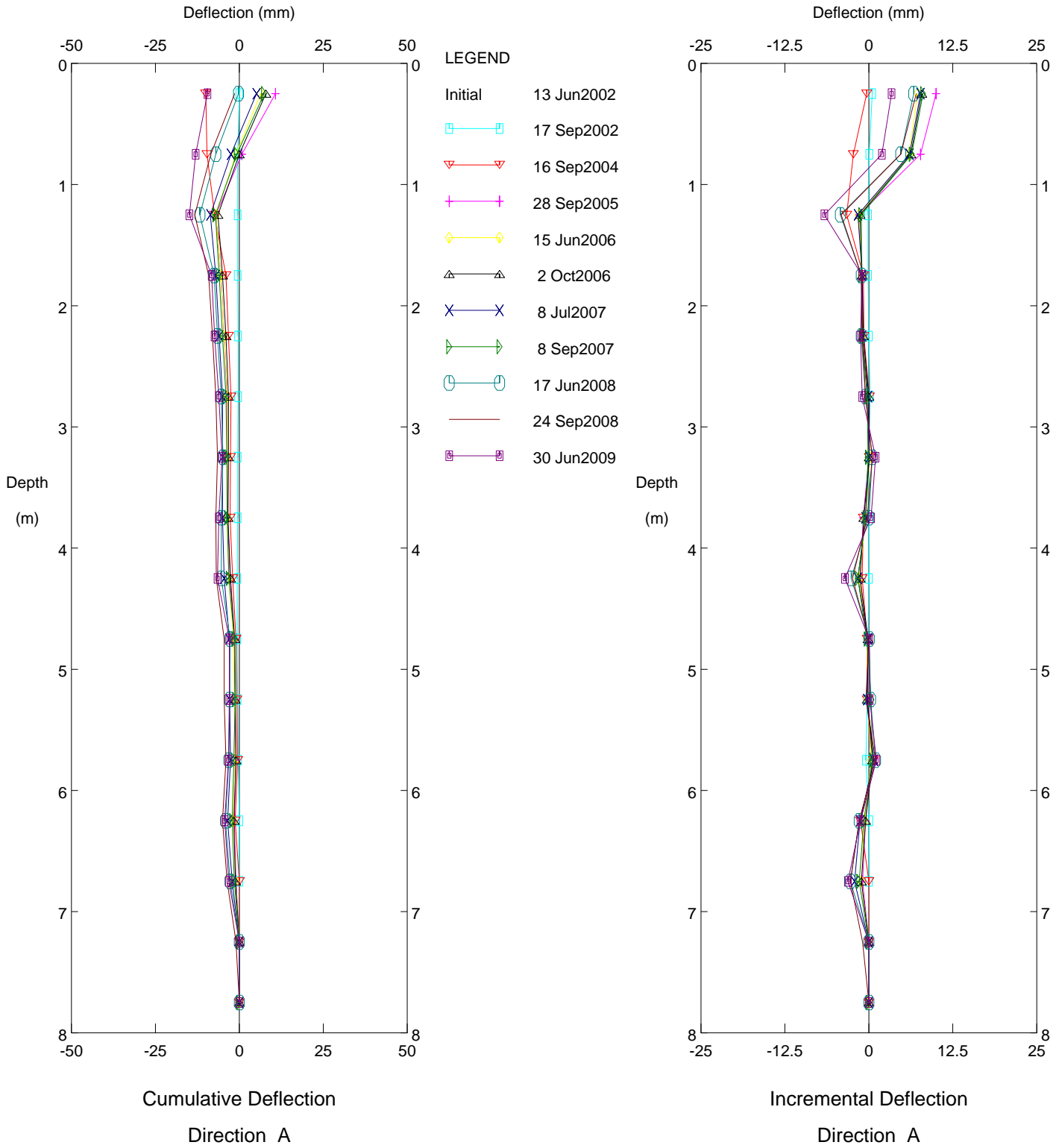


### Diversion Canal Spoil Pile Geothermal Monitoring Long Term Monitoring for Nodes in SP-5



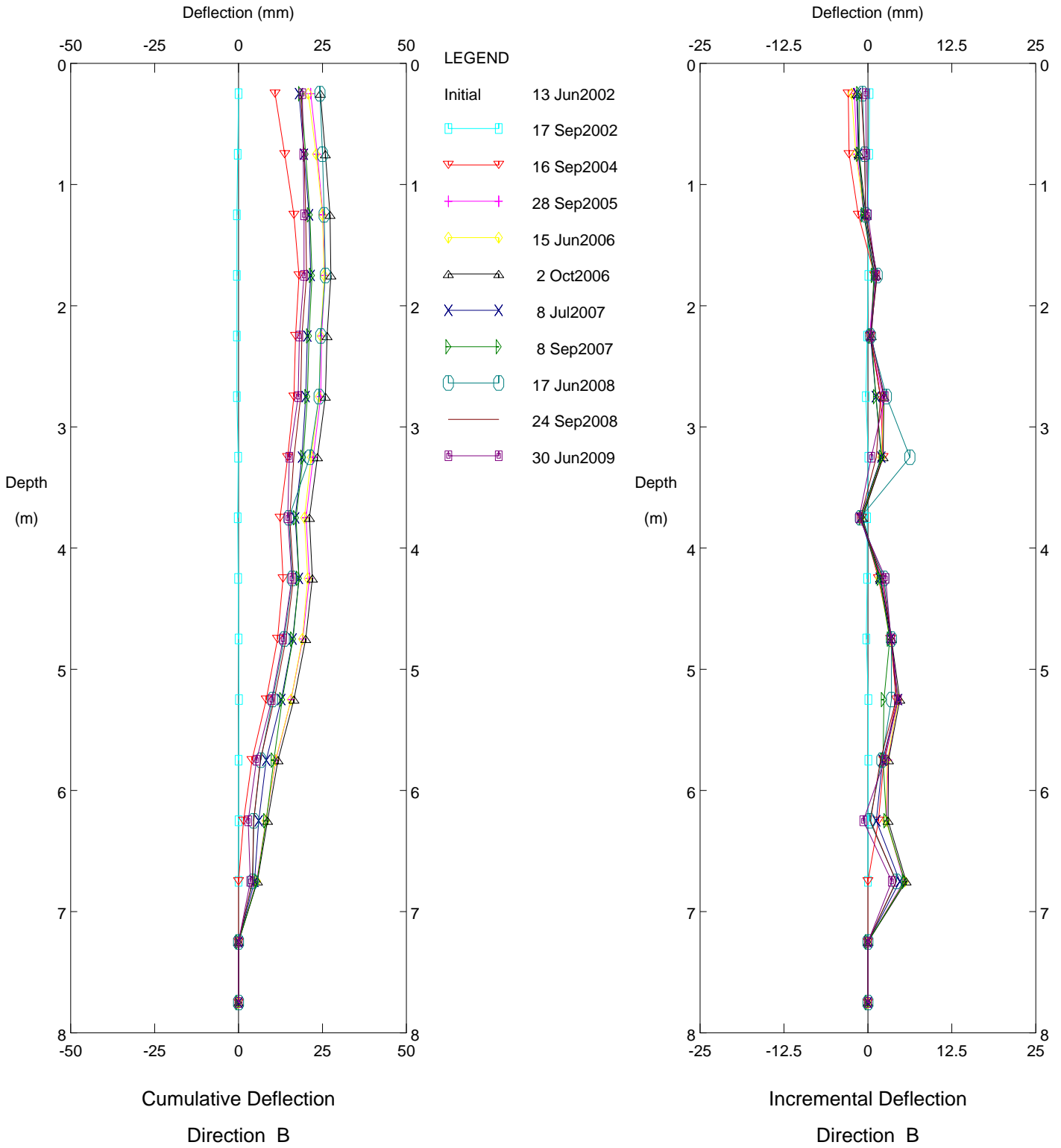
## SLOPE INDICATORS

BGC Engineering Inc. - Calgary, AB



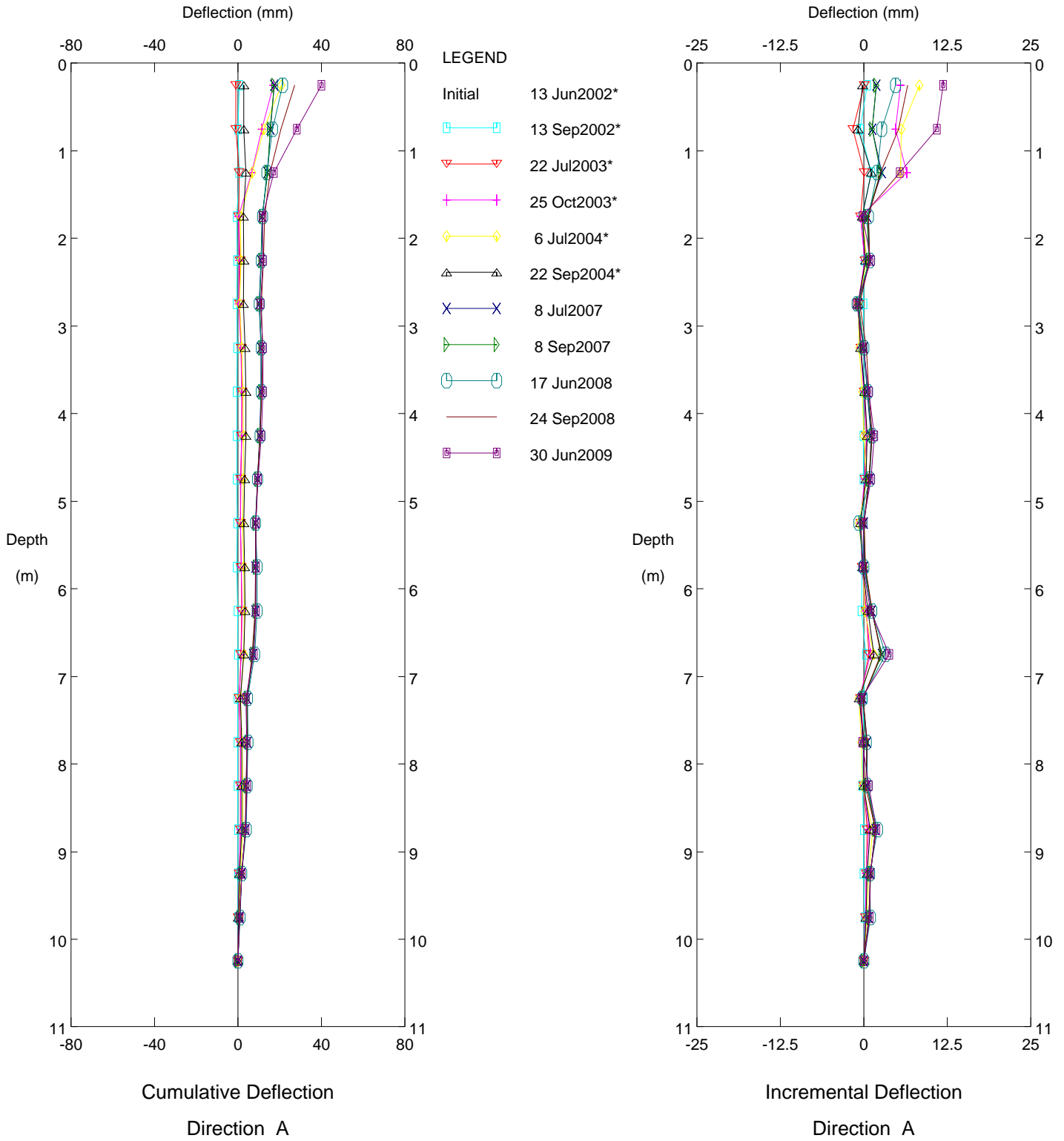
SP-2, Inclinometer 1+530

BGC Engineering Inc. - Calgary, AB



SP-2, Inclinometer 1+530

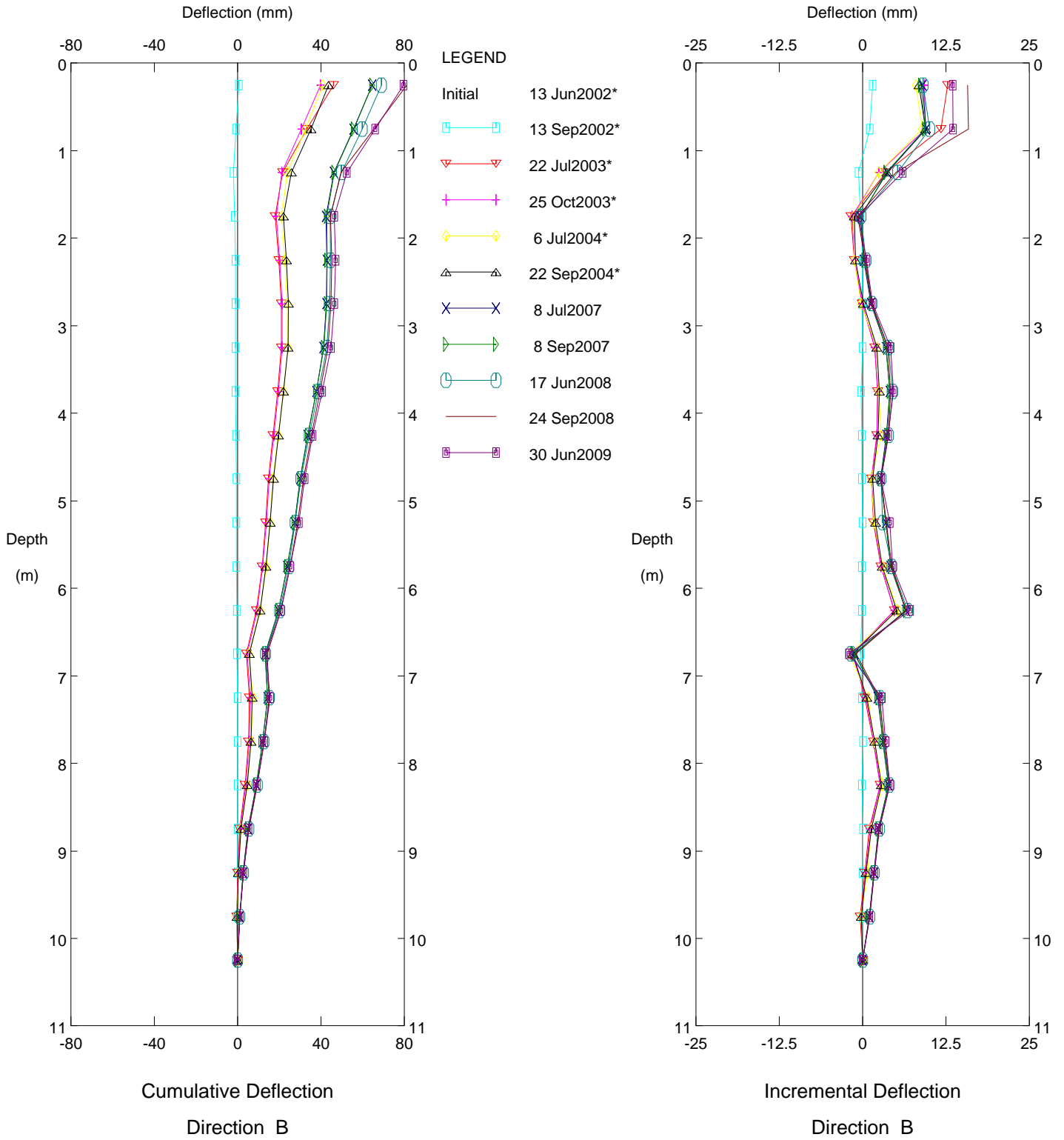
BGC Engineering Inc. - Calgary, AB



SP-5, Inclinometer 2+950

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

BGC Engineering Inc. - Calgary, AB



SP-5, Inclinometer 2+950

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

## **BACKSLOPE**

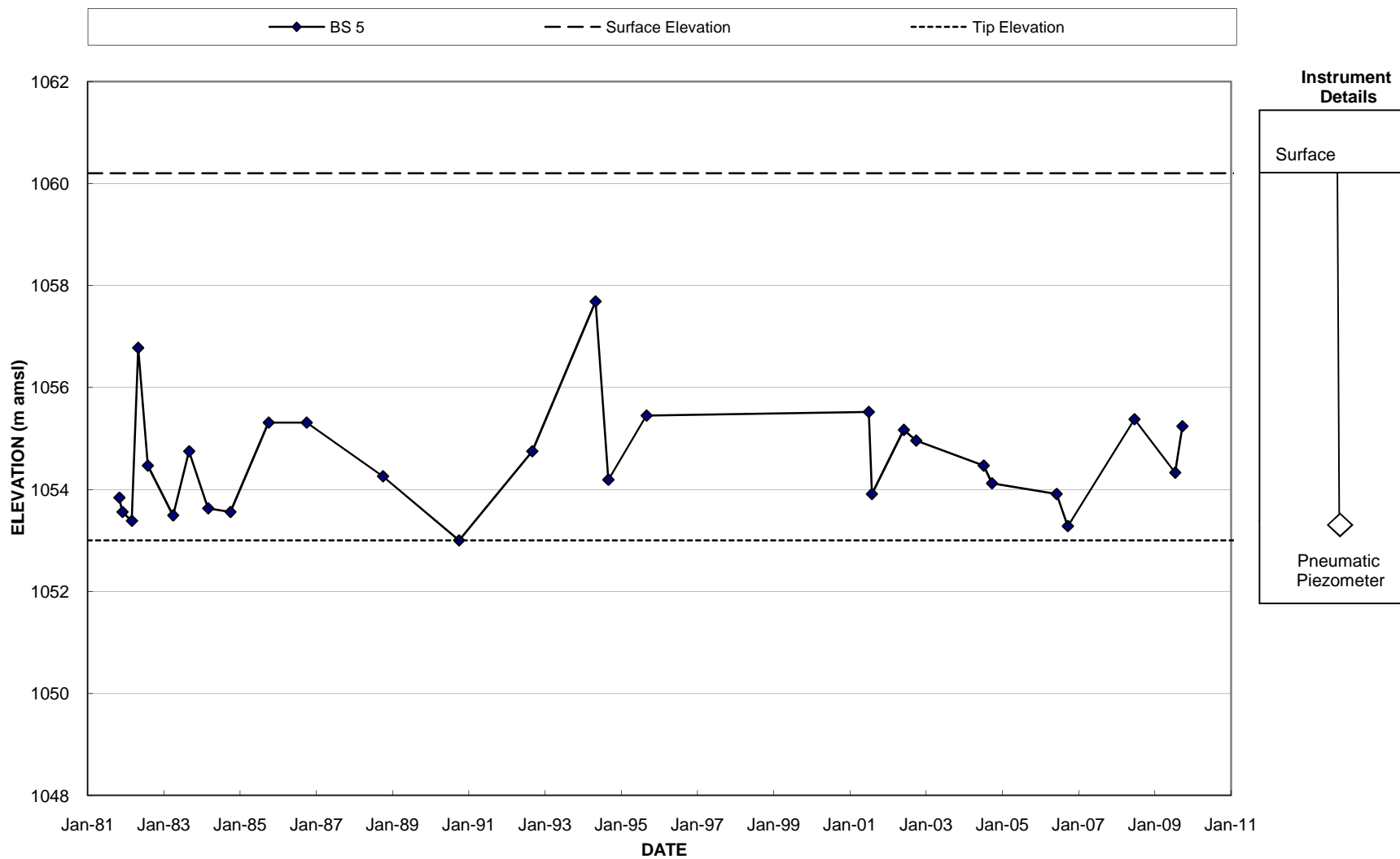
## **PIEZOMETERS**



**Faro Mine Instrumentation  
 Diversion Canal Backslope**

<b>BS-5</b>		<b>Location:</b>	Canal Dyke Backslope	<b>Date Installed:</b>	1981
			St.0+960	<b>Ground Elevation (m amsl):</b>	1060.20
<b>Surface Protector:</b>	yes	<b>Coordinates:</b>	953.2N, 1534.6E	<b>Tip Elevation (m amsl):</b>	1053.00
<b>Date</b>		<b>Reading (psi)</b>		<b>Piezometric Elevation (m amsl)</b>	<b>Comments</b>
Nov-81		1.20		1053.84	
Dec-81		0.80		1053.56	
Mar-82		0.55		1053.385	
May-82		5.40		1056.78	
Aug-82		2.10		1054.47	
Apr-83		0.70		1053.49	
Sep-83		2.50		1054.75	
Mar-84		0.90		1053.63	
Oct-84		0.80		1053.56	
Oct-85		3.30		1055.31	
Oct-86		3.30		1055.31	
Oct-88		1.80		1054.26	
Oct-90				1053.00	
Sep-92		2.50		1054.75	
May-94		6.70		1057.69	
Sep-94		1.70		1054.19	
Sep-95		3.50		1055.45	
Jul-01		3.60		1055.52	
Aug-01		1.30		1053.91	
Jun-02		3.10		1055.17	
Sep-02		2.80		1054.96	
Jul-04		2.10		1054.47	
Sep-04		1.60		1054.12	
Jun-06		1.30		1053.91	
Sep-06		0.40		1053.28	
Jun-08		3.40		1055.38	
Jul-09		1.90		1054.33	
Sep-09		3.20		1055.24	

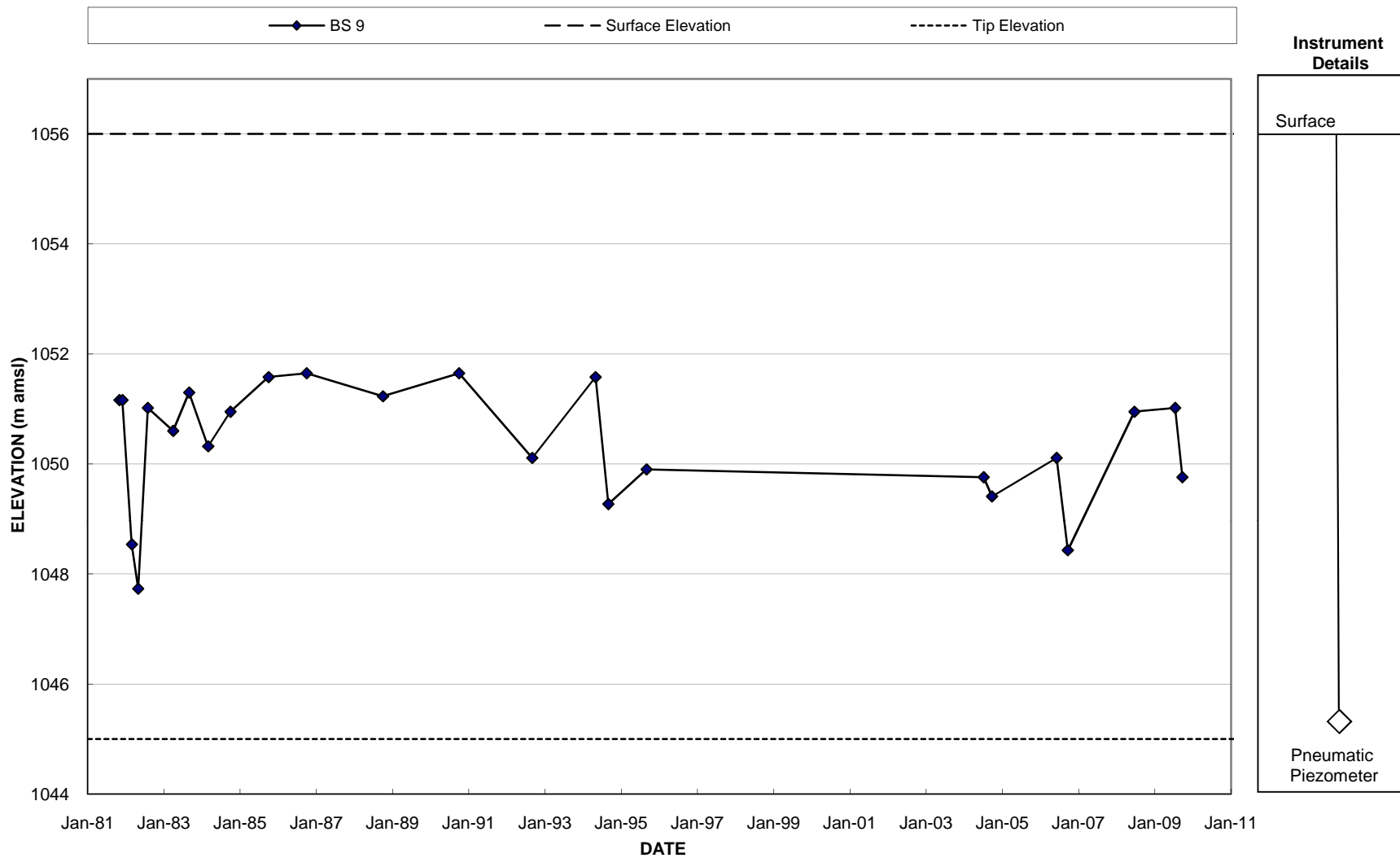
### DIVERSION CANAL BACKSLOPE Piezometric Monitoring BS5



**Faro Mine Instrumentation  
 Canal Dyke Backslope**

<b>BS-9</b>		<b>Location:</b>	Canal Dyke Backslope	<b>Date Installed:</b>	1981
			St.1+530	<b>Ground Elevation (m amsl):</b>	1056.00
<b>Surface Protector:</b>	yes	<b>Coordinates:</b>	1200N, 1018.4E	<b>Tip Elevation (m amsl):</b>	1045.00
<b>Date</b>		<b>Reading (psi)</b>		<b>Piezometric Elevation (m amsl)</b>	<b>Comments</b>
Nov-81		8.80		1051.16	
Dec-81		8.80		1051.16	
Mar-82		5.05		1048.535	
May-82		3.90		1047.73	
Aug-82		8.60		1051.02	
Apr-83		8.00		1050.6	
Sep-83		9.00		1051.3	
Mar-84		7.60		1050.32	
Oct-84		8.50		1050.95	
Oct-85		9.40		1051.58	
Oct-86		9.50		1051.65	
Oct-88		8.90		1051.23	
Oct-90		9.50		1051.65	
Sep-92		7.30		1050.11	
May-94		9.40		1051.58	
Sep-94		6.10		1049.27	
Sep-95		7.00		1049.9	
7-Jul-04		6.80		1049.76	
23-Sep-04		6.30		1049.41	
6-Jun-06		7.30		1050.11	
20-Sep-06		4.90		1048.43	
20-Jun-08		8.50		1050.95	
16-Jul-09		8.60		1051.02	
23-Sep-09		6.80		1049.76	

**DIVERSION CANAL BACKSLOPE  
 Piezometric Monitoring  
 BS9**



## THERMISTORS

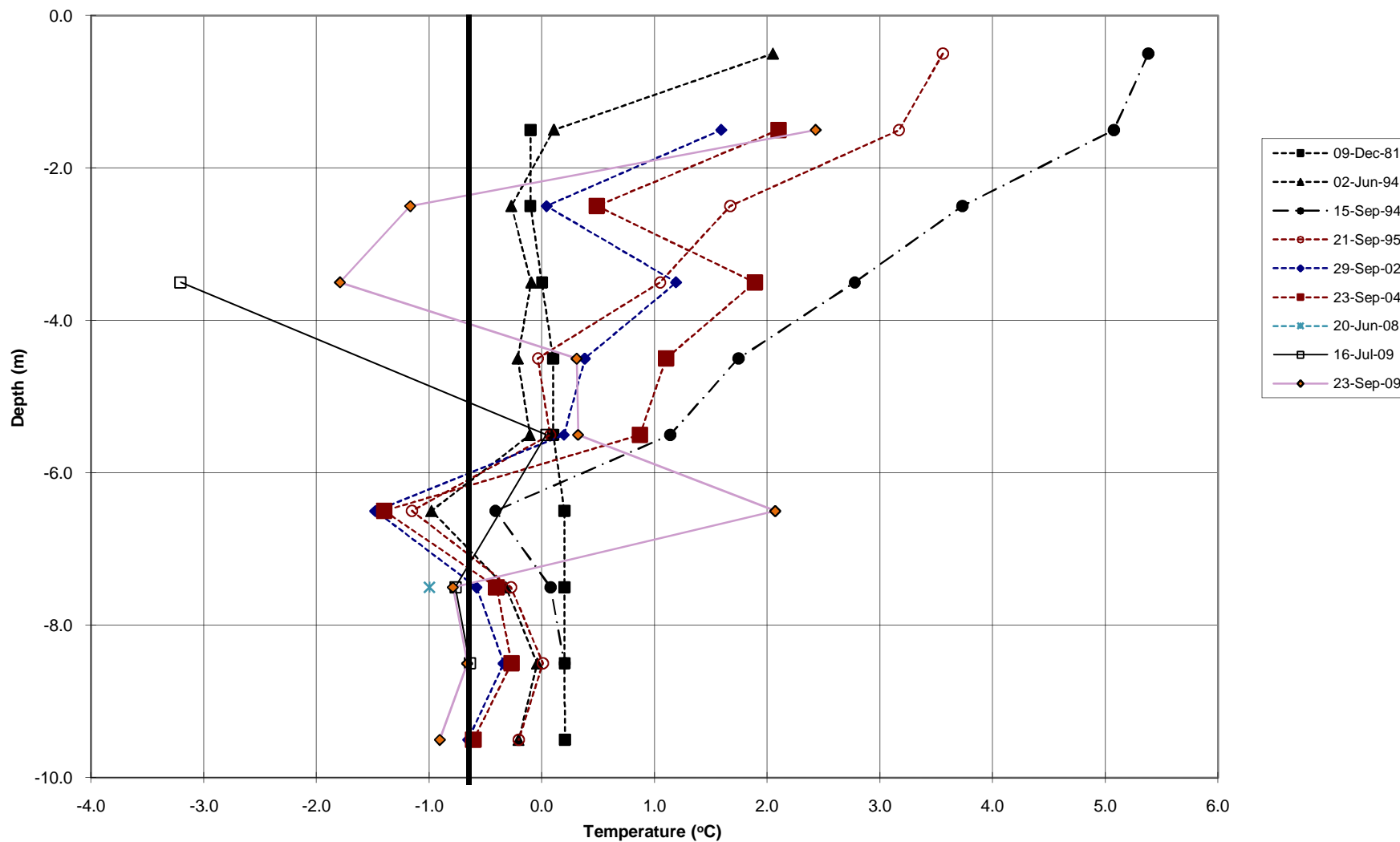
Faro Mine Instrumentation  
Diversion Canal Backslope

<b>BS-5</b>		<b>Location:</b>	Diversion Canal - Back Slope St.0+960			<b>Surface Elevation (m advd):</b>	1092.5 m	<b>Coordinates:</b>				
		<b>Date Installed:</b>	1981			<b>Thermistor Type:</b>	Cantec Controls YSI 44007	<b>Ice-Bath Calibration:</b>		applied		
Thermistor String #3		Depth Correction	-0.5									
Depth on String (m)	Actual Depth (m)	Resistivity (kOhms) 09-Dec-81	Resistivity (kOhms) 02-Jun-94	Resistivity (kOhms) 15-Sep-94	Resistivity (kOhms) 21-Sep-95	Resistivity (kOhms) 29-Sep-02	Resistivity (kOhms) 07-Jul-04	Resistivity (kOhms) 23-Sep-04	Resistivity (kOhms) 20-Jun-08	Resistivity (kOhms) 16-Jul-09	Resistivity (kOhms) 23-Sep-09	
1.0	-0.5		14.56	12.33	13.50		data too noisy					
2.0	-1.5	16.28	16.11	12.55	13.80	14.94		14.56			14.30	
3.0	-2.5	16.25	16.39	13.39	14.85	16.13		15.77			17.17	
4.0	-3.5	16.18	16.26	14.06	15.34	15.23		14.70		19.08	17.73	
5.0	-4.5	16.10	16.36	14.81	16.21	15.87		15.30			15.92	
6.0	-5.5	16.10	16.27	15.27	16.12	16.02		15.48		16.14	15.91	
7.0	-6.5	16.05	17.05	16.56	17.20	17.49		17.42			14.56	
8.0	-7.5	16.01	16.44	16.11	16.40	16.66		16.51	17.02	16.82	16.84	
9.0	-8.5	16.04	16.24	16.04	16.20	16.49		16.43		16.71	16.73	
10.0	-9.5	16.03	16.37	16.23	16.37	16.75		16.71			16.94	
Depth on String (m)	Actual Depth (m)	Temperature (C) 09-Dec-81	Temperature (C) 02-Jun-94	Temperature (C) 15-Sep-94	Temperature (C) 21-Sep-95	Temperature (C) 29-Sep-02	Temperature (C) 07-Jul-04	Temperature (C) 23-Sep-04	Temperature (C) 20-Jun-08	Temperature (C) 16-Jul-09	Temperature (C) 23-Sep-09	
1.0	-0.5		2.05	5.38	3.56							
2.0	-1.5	-0.10	0.11	5.07	3.17	1.59		2.10			2.43	
3.0	-2.5	-0.10	-0.27	3.73	1.67	0.04		0.49			-1.17	
4.0	-3.5	0.00	-0.09	2.78	1.05	1.19		1.89		-3.21	-1.79	
5.0	-4.5	0.10	-0.21	1.74	-0.03	0.38		1.10			0.31	
6.0	-5.5	0.10	-0.11	1.14	0.07	0.20		0.87		0.04	0.32	
7.0	-6.5	0.20	-0.98	-0.41	-1.15	-1.48		-1.40			2.07	
8.0	-7.5	0.20	-0.32	0.08	-0.27	-0.58		-0.40	-1.00	-0.77	-0.79	
9.0	-8.5	0.20	-0.04	0.20	0.01	-0.34		-0.27		-0.64	-0.66	
10.0	-9.5	0.20	-0.21	-0.04	-0.21	-0.65		-0.61			-0.90	

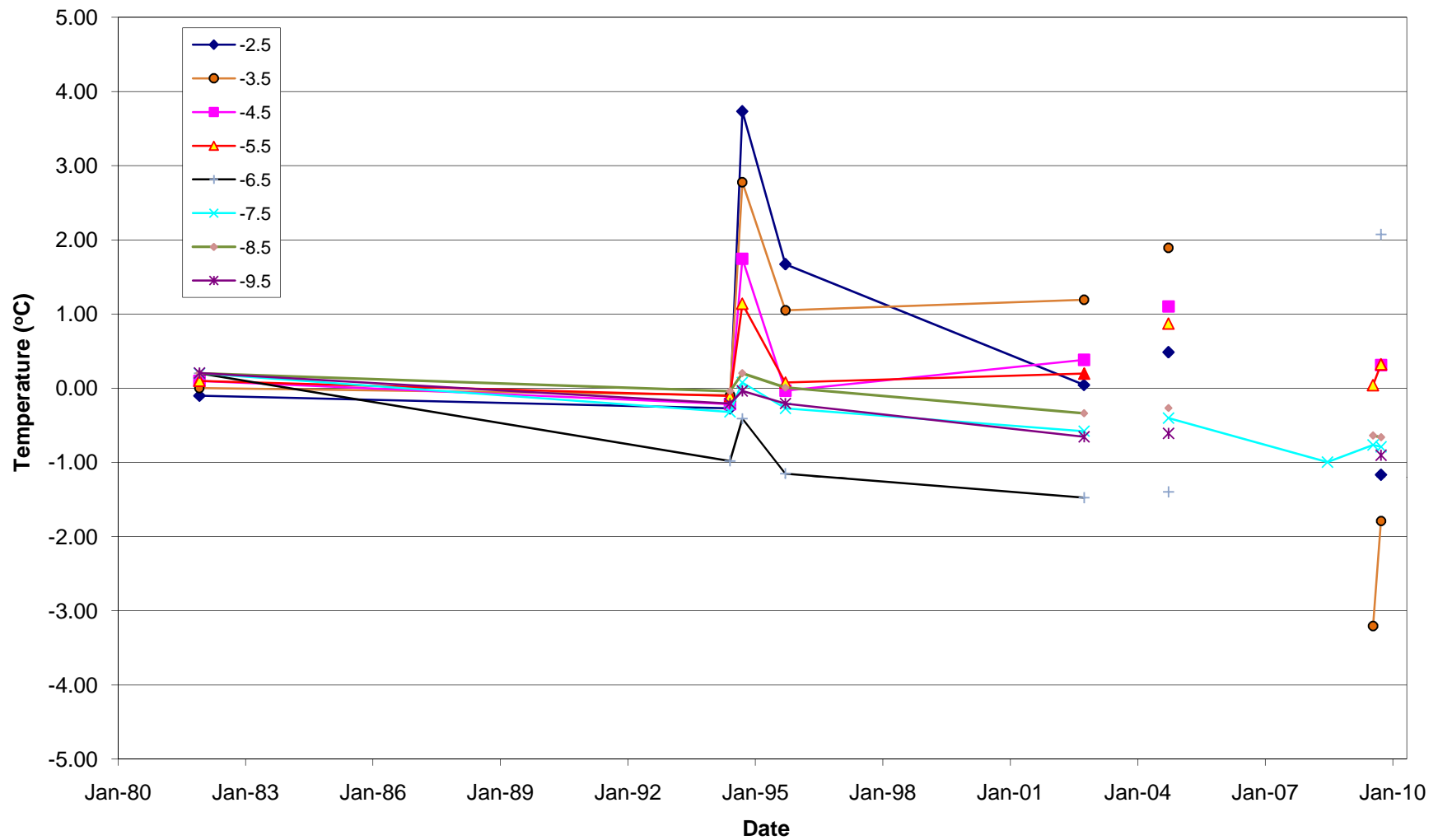
\* The 6.5 metre depth tip is suspect

\*Data is too noisy

### DIVERSION CANAL BACKSLOPE Geothermal Monitoring BS-5



### Diversion Canal Backslope Geothermal Monitoring Long Term Monitoring for Nodes in BS-5

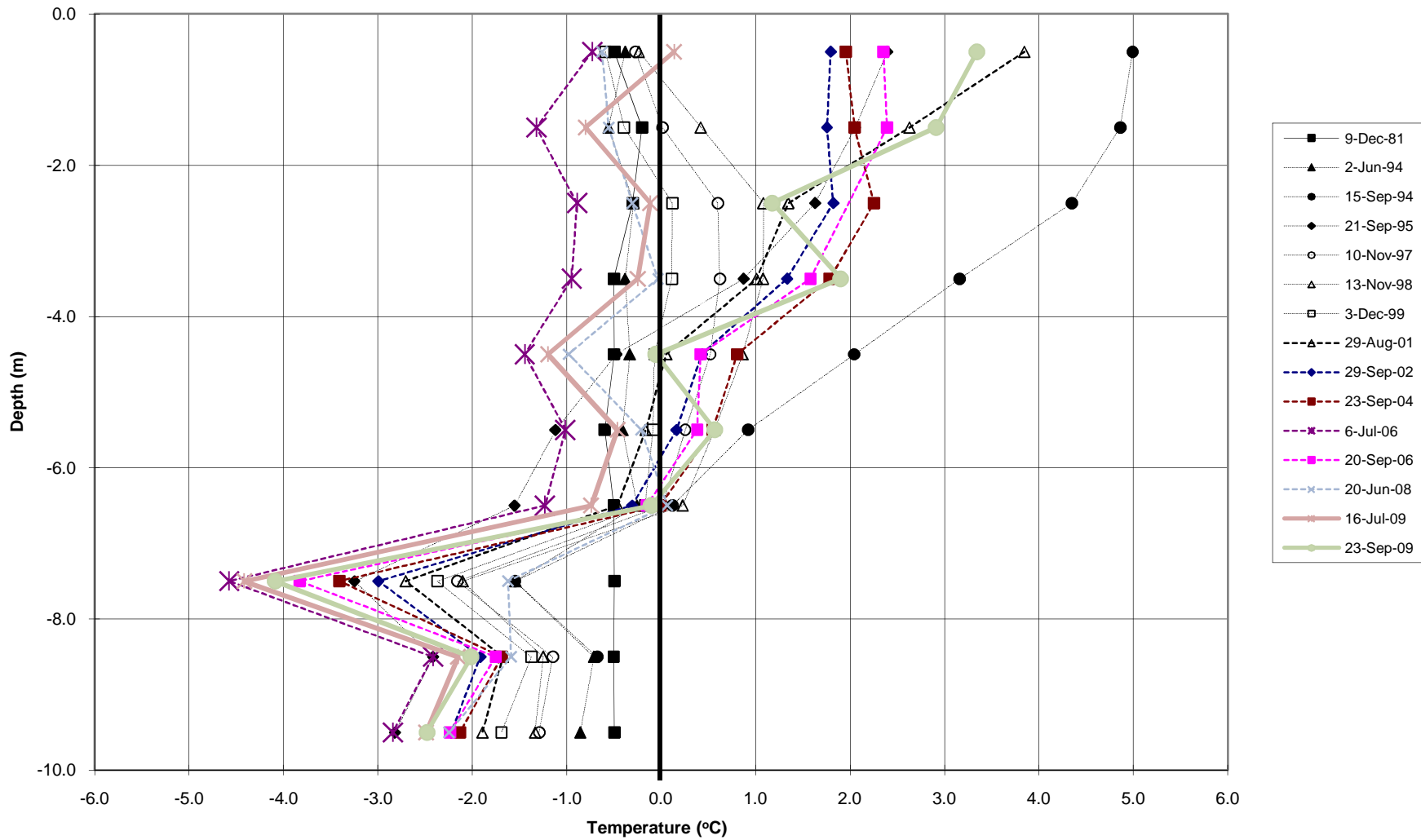




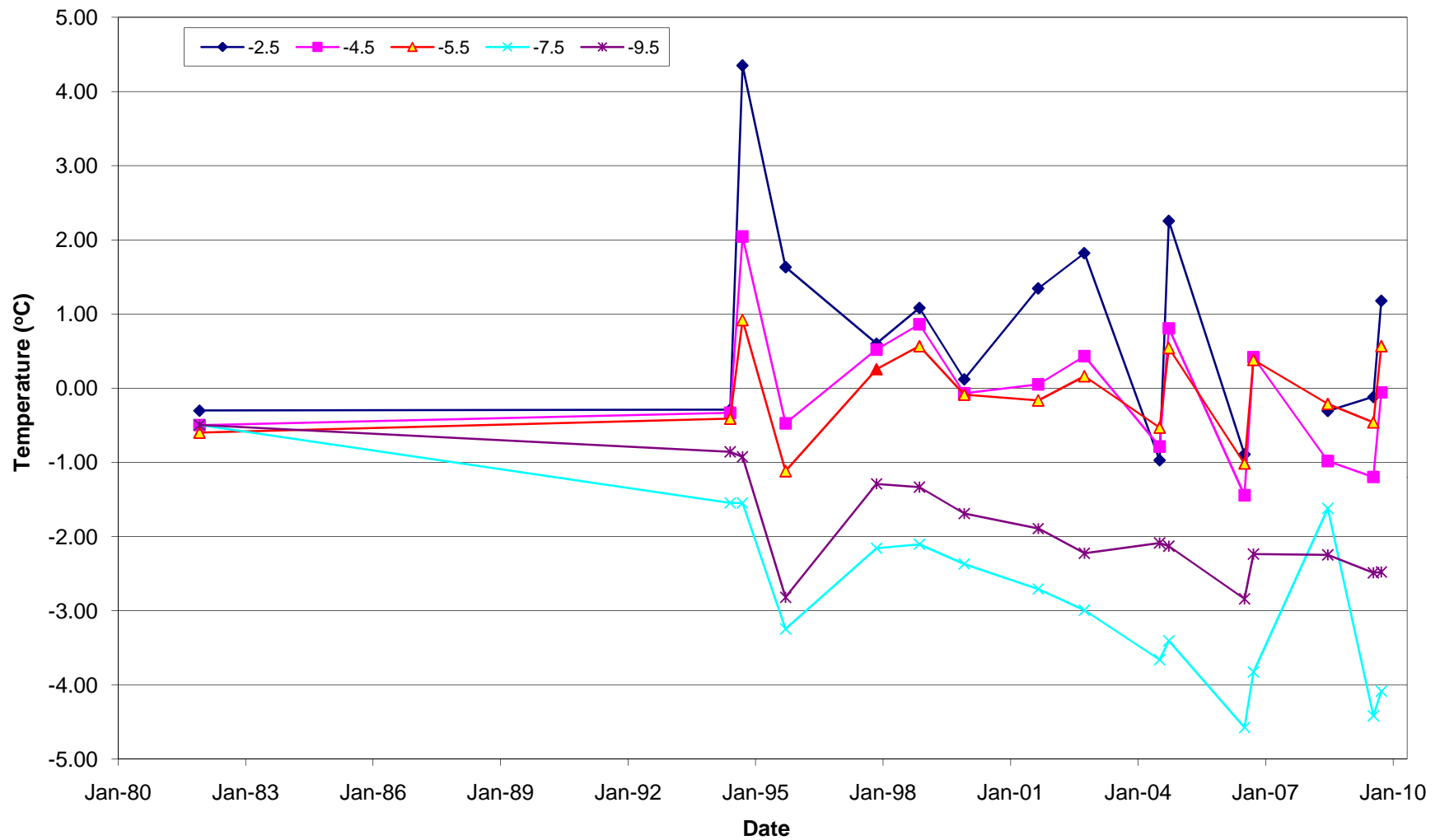
BS-10		Location:	Diversion Canal - Back Slope St.1+900		Surface Elevation (m advd):	1098.2	Coordinates:	1310.5 m N 657.3 m E											
Thermistor String #5		Date Installed:	1981	Thermistor Type:	Cantec Controls YSI 44007	Ice-Bath Calibration:	applied	Surface Protector:	yes										
Depth on String	Actual Depth	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)	Resistivity (kOhms)	
(m)	(m)	9-Dec-81	2-Jun-94	15-Sep-94	21-Sep-95	10-Nov-97	13-Nov-98	3-Dec-99	29-Aug-01	29-Sep-02	7-Jul-04	23-Sep-04	6-Jul-06	20-Sep-06	20-Jun-08	16-Jul-09	23-Sep-09		
1.0	-0.5	16.64	16.54	12.62	14.37	16.45	16.42	16.72	13.36	14.81	16.11	14.69	16.84	14.40	16.75	16.11	13.70		
2.0	-1.5	16.35	16.65	12.67	14.58	16.17	15.84	16.51	14.20	14.84	16.90	14.62	17.36	14.37	16.69	16.90	14.00		
3.0	-2.5	16.45	16.44	13.01	14.91	15.71	15.33	16.10	15.15	14.79	17.05	14.47	16.98	23.24	16.48	16.32	15.28		
4.0	-3.5	16.55	16.45	13.75	15.43	15.63	15.27	16.04	15.41	15.16	16.57	14.82	17.03	14.97	16.25	16.43	14.73		
5.0	-4.5	16.59	16.45	14.58	16.57	15.75	15.48	16.23	16.18	15.87	16.89	15.57	17.47	15.88	17.06	17.25	16.27		
6.0	-5.5	16.65	16.49	15.41	17.10	15.94	15.69	16.22	16.36	16.09	16.67	15.78	17.09	15.91	16.40	16.61	15.76		
7.0	-6.5	16.62	16.41	16.10	17.54	16.19	16.01	16.34	16.61	16.48	16.79	16.23	17.28	16.35	16.17	16.85	16.31		
8.0	-7.5	16.58	17.50	17.50	19.11	18.06	18.01	18.26	18.65	18.93	19.60	19.34	20.56	19.77	17.63	20.39	20.04		
9.0	-8.5	16.62	16.80	16.77	18.34	17.18	17.27	17.38	17.68	17.90	17.82	17.69	18.37	17.75	17.60	18.12	17.99		
10.0	-9.5	16.58	16.89	16.95	18.69	17.27	17.31	17.63	17.88	18.19	18.06	18.10	18.78	18.20	18.21	18.44	18.43		
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)	Temperature (C)	Temperature (C)	
(m)	(m)	9-Dec-81	2-Jun-94	15-Sep-94	21-Sep-95	10-Nov-97	13-Nov-98	3-Dec-99	29-Aug-01	29-Sep-02	7-Jul-04	23-Sep-04	6-Jul-06	20-Sep-06	20-Jun-08	16-Jul-09	23-Sep-09		
1.0	-0.5	-0.50	-0.38	4.99	2.39	-0.27	-0.24	-0.59	3.85	1.79	0.14	1.96	-0.73	2.35	-0.62	0.14	3.34		
2.0	-1.5	-0.20	-0.56	4.86	2.05	0.01	0.42	-0.39	2.63	1.75	-0.80	2.05	-1.32	2.39	-0.55	-0.80	2.91		
3.0	-2.5	-0.30	-0.29	4.35	1.63	0.60	1.08	0.12	1.35	1.82	-0.97	2.25	-0.89		-0.31	-0.12	1.18		
4.0	-3.5	-0.50	-0.38	3.16	0.87	0.62	1.08	0.11	1.01	1.33	-0.41	1.78	-0.95	1.58	-0.03	-0.25	1.90		
5.0	-4.5	-0.50	-0.33	2.04	-0.47	0.52	0.86	-0.07	0.05	0.43	-0.79	0.81	-1.44	0.42	-0.98	-1.20	-0.06		
6.0	-5.5	-0.60	-0.41	0.92	-1.12	0.26	0.57	-0.09	-0.16	0.16	-0.53	0.54	-1.02	0.38	-0.21	-0.46	0.57		
7.0	-6.5	-0.50	-0.25	0.12	-1.55	0.01	0.23	-0.17	-0.46	-0.31	-0.67	-0.01	-1.23	-0.15	0.06	-0.74	-0.10		
8.0	-7.5	-0.50	-1.55	-1.55	-3.25	-2.16	-2.10	-2.37	-2.71	-2.99	-3.66	-3.41	-4.57	-3.83	-1.62	-4.42	-4.09		
9.0	-8.5	-0.50	-0.71	-0.68	-2.41	-1.15	-1.25	-1.37	-1.68	-1.91	-1.83	-1.69	-2.42	-1.75	-1.59	-2.15	-2.01		
10.0	-9.5	-0.50	-0.86	-0.93	-2.82	-1.29	-1.34	-1.69	-1.89	-2.23	-2.09	-2.13	-2.84	-2.24	-2.25	-2.49	-2.48		

The 8 metre depth tip is suspect

### DIVERSION CANAL BACKSLOPE Geothermal Monitoring BS-10



### Diversion Canal Backslope Geothermal Monitoring Long Term Monitoring for Nodes in BS-10

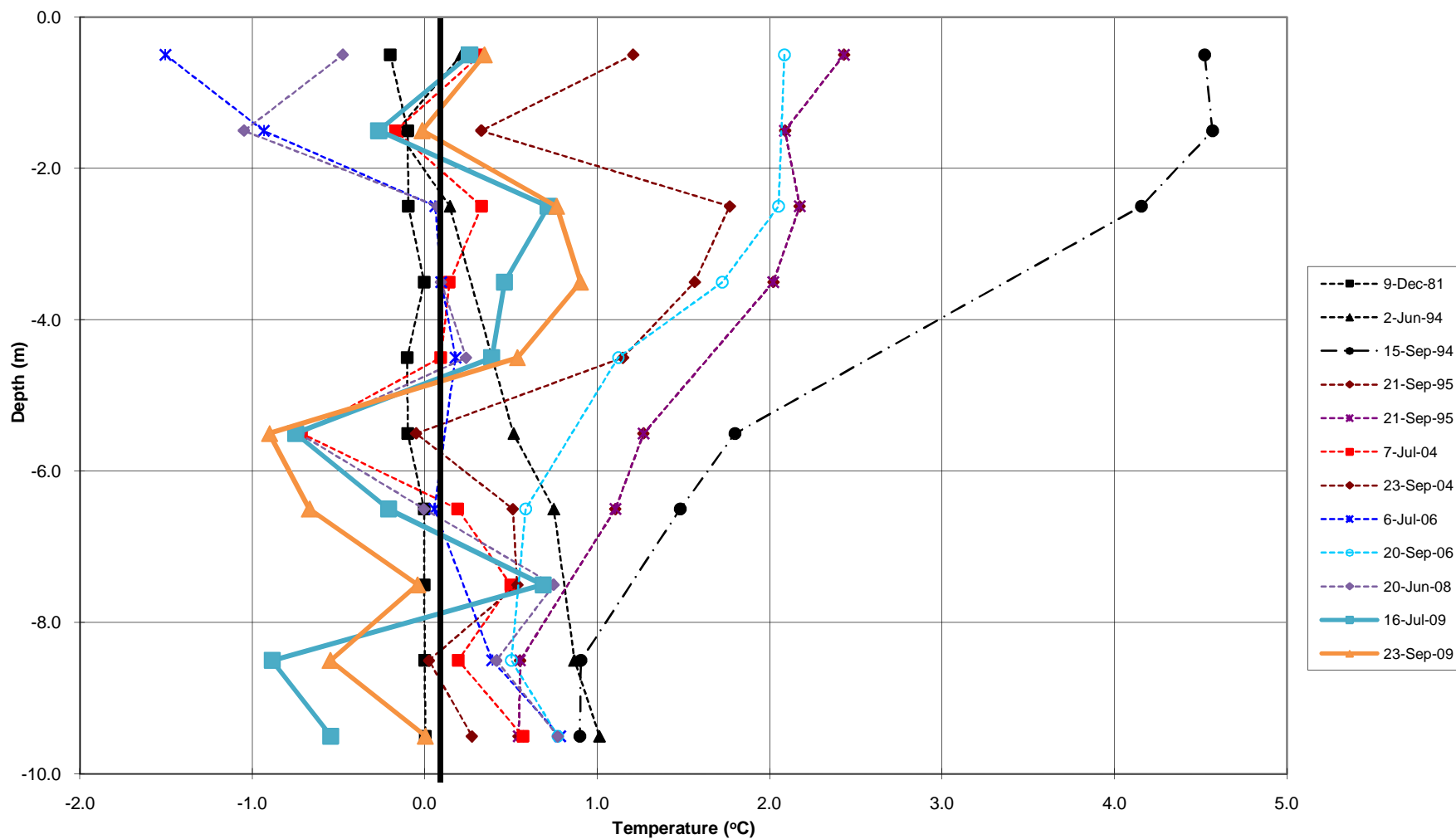


<b>BS-12</b>		<b>Location:</b>	Diversion Canal - Back Slope St.2+260		<b>Elevation (m advd):</b>	1094.6 m	<b>Coordinates:</b>	1463.6 m N 343.1 m E				
		<b>Date Installed:</b>	1981		<b>Thermistor Type:</b>	Cantec Controls YSI 44007	<b>Ice-Bath Calibration:</b>	applied		<b>Surface Protector:</b>	yes	
<b>String #10</b>		<b>Depth Correction:</b>	-0.5									
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)
		9-Dec-81	2-Jun-94	15-Sep-94	21-Sep-95	7-Jul-04	23-Sep-04	6-Jul-06	20-Sep-06	20-Jun-08	16-Jul-09	23-Sep-09
1.0	-0.5	16.34	16.00	12.88	14.30	15.91	15.21	17.47	14.55	16.57	15.96	15.89
2.0	-1.5	16.28	16.33	12.87	14.57	16.34	15.93	16.99	16.06	17.09	16.42	16.21
3.0	-2.5	16.27	16.07	13.13	14.50	15.92	14.80	16.14	14.59	16.13	15.61	15.57
4.0	-3.5	16.20			14.62	16.08	14.96	16.12	14.84	16.12	15.82	15.47
5.0	-4.5	16.24				16.08	15.24	16.01	15.26	15.96	15.84	15.72
6.0	-5.5	16.23	15.73	14.74	15.14	16.75	16.19	16.68	15.99	16.76	16.78	16.91
7.0	-6.5	16.21	15.60	15.03	15.32	16.05	15.79	16.16	15.73	16.21	16.38	16.77
8.0	-7.5	16.21				15.80	15.77	Noisy	15.39	15.60	15.65	16.24
9.0	-8.5	16.19	15.49	15.46	15.74	16.03	16.17	15.87	15.78	15.85	16.94	16.65
10.0	-9.5	16.17	15.36	15.45	15.73	15.71	15.95	15.54	15.55	15.55	16.63	16.17

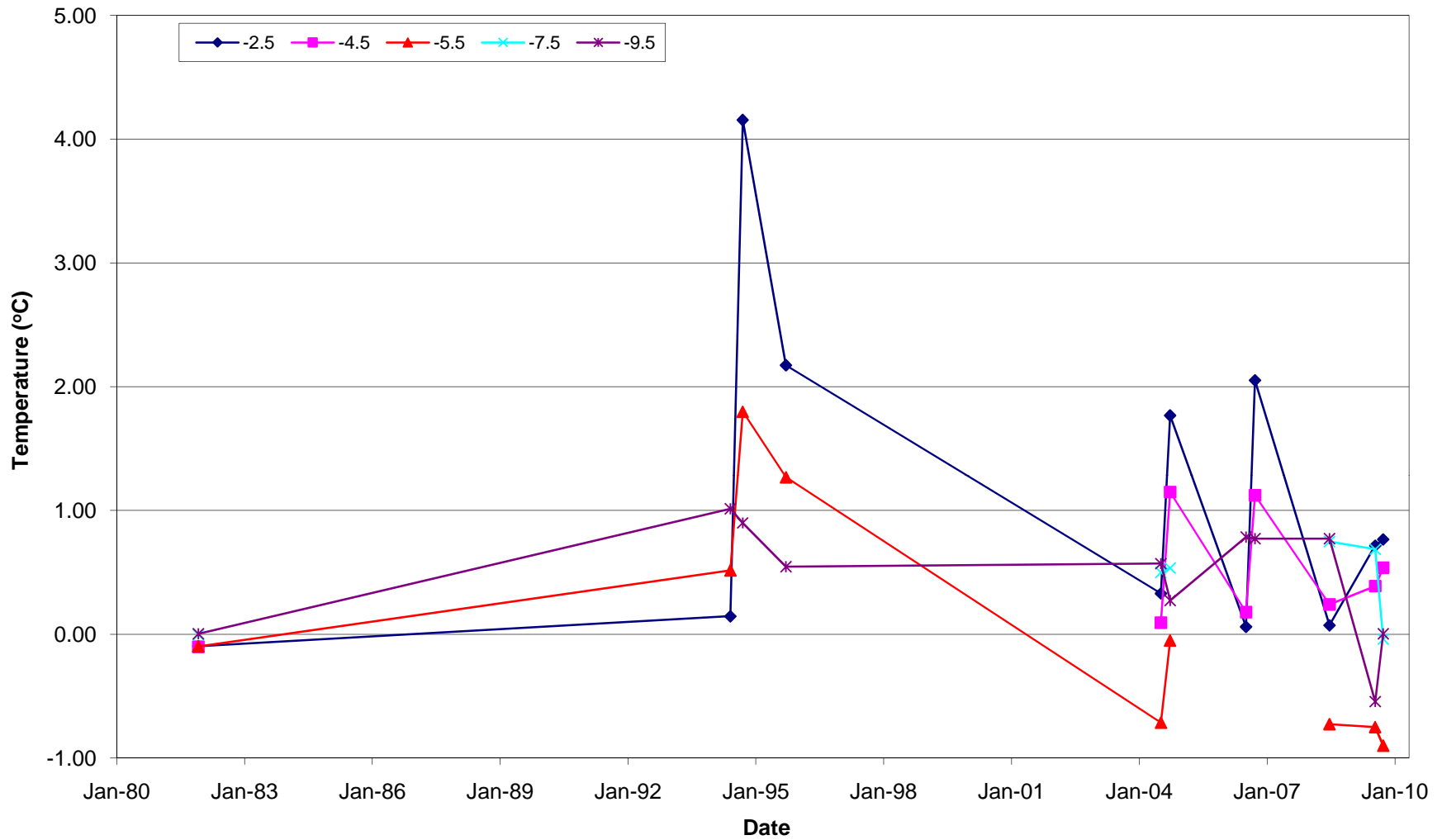
Depth on String (m)	Actual Depth (m)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)
		9-Dec-81	2-Jun-94	15-Sep-94	21-Sep-95	7-Jul-04	23-Sep-04	6-Jul-06	20-Sep-06	20-Jun-08	16-Jul-09	23-Sep-09
1.0	-0.5	-0.20	0.21	4.52	2.43	0.32	1.21	-1.50	2.09	-0.47	0.26	0.35
2.0	-1.5	-0.10	-0.16	4.57	2.09	-0.17	0.33	-0.93		-1.05	-0.27	-0.01
3.0	-2.5	-0.10	0.15	4.16	2.17	0.33	1.77	0.06	2.05	0.07	0.72	0.77
4.0	-3.5	0.00			2.02	0.14	1.57	0.09	1.72	0.09	0.46	0.90
5.0	-4.5	-0.10				0.09	1.15	0.18	1.12	0.24	0.39	0.54
6.0	-5.5	-0.10	0.52	1.80	1.27	-0.71	-0.05			-0.73	-0.75	-0.90
7.0	-6.5	0.00	0.75	1.48	1.11	0.19	0.51	0.06	0.59	0.00	-0.21	-0.67
8.0	-7.5	0.00				0.50	0.54			0.75	0.69	-0.04
9.0	-8.5	0.00	0.87	0.91	0.55	0.19	0.02	0.39	0.50	0.42	-0.88	-0.55
10.0	-9.5	0.00	1.01	0.90	0.55	0.57	0.27	0.78	0.77	0.77	-0.54	0.00

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

### DIVERSION CANAL BACKSLOPE Geothermal Monitoring BS-12

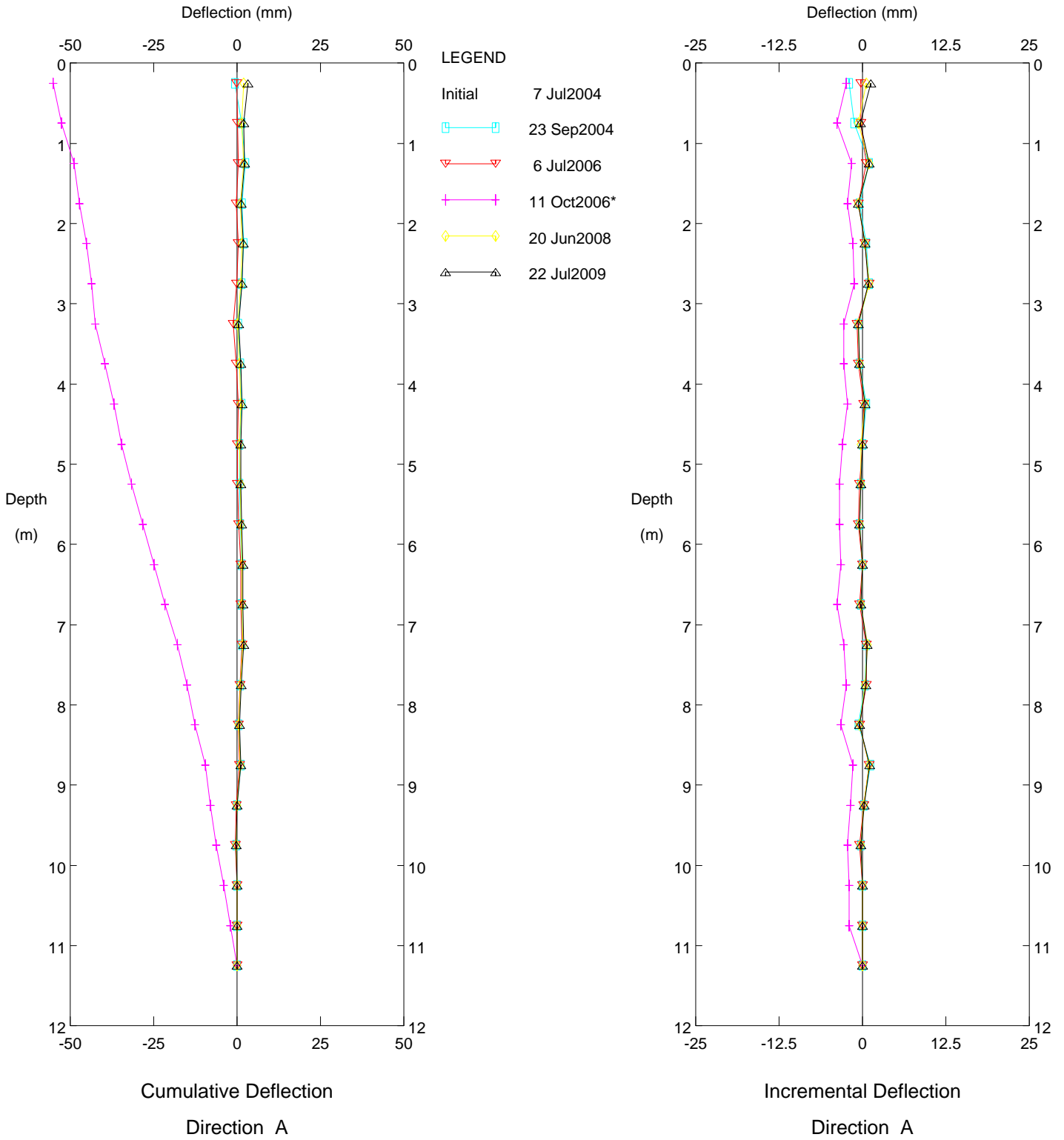


### Diversion Canal Backslope Geothermal Monitoring Long Term Monitoring for Nodes in BS-12



## SLOPE INDICATORS

BGC Engineering Inc. - Calgary, AB



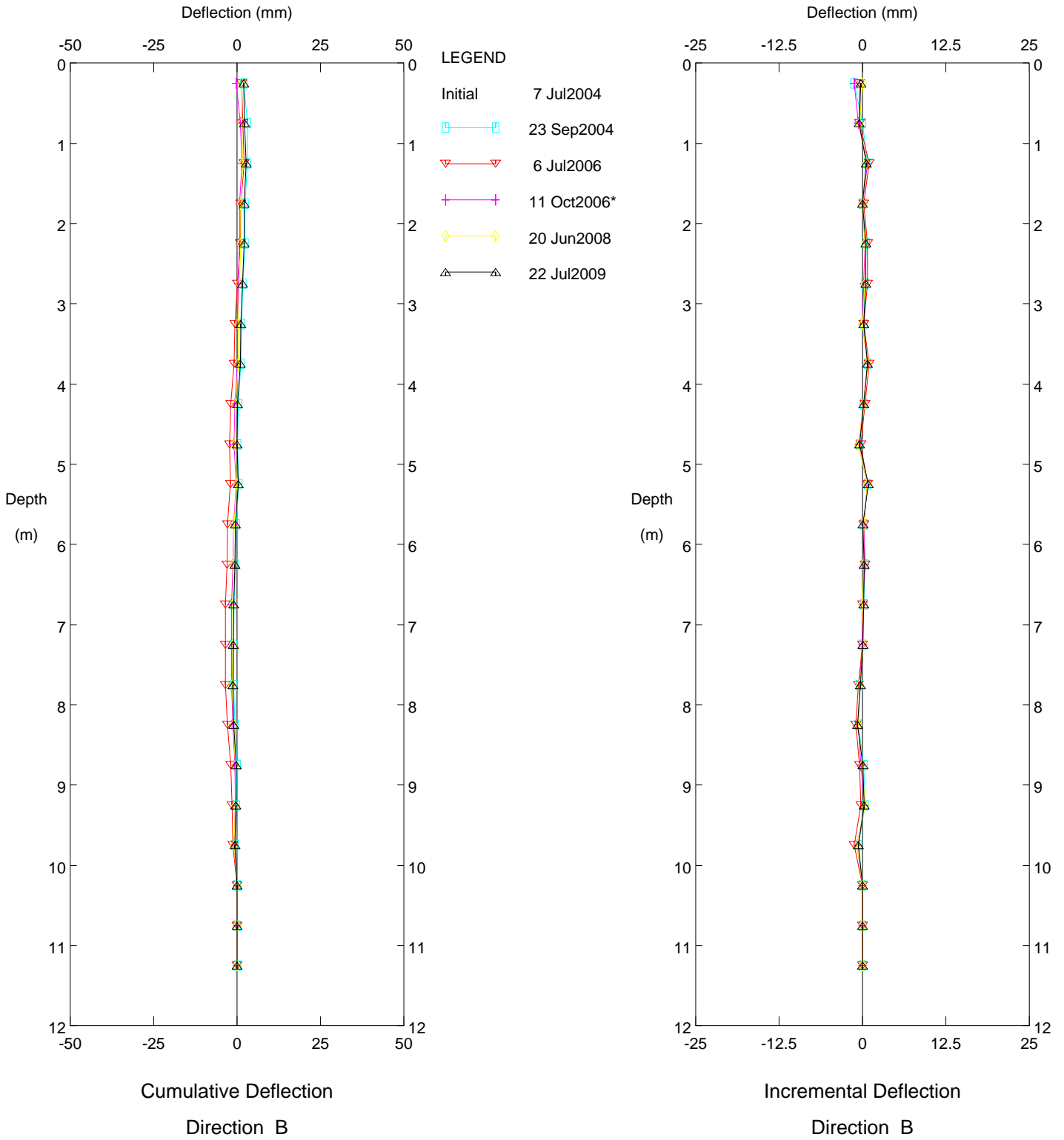
Faro, Inclinator BS-5

Denison Environmental Service

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



BGC Engineering Inc. - Calgary, AB

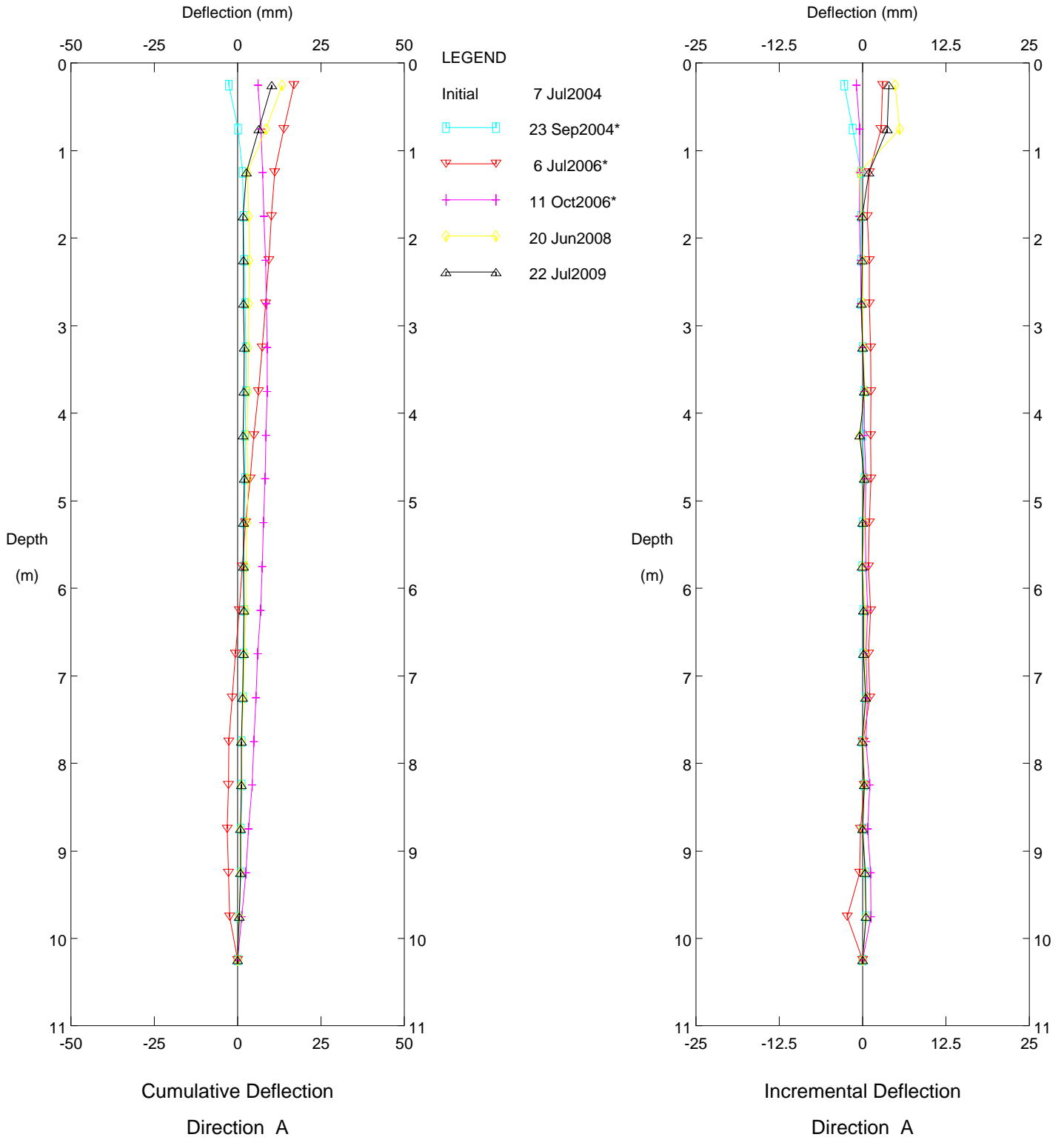


Faro, Inclinator BS-5

Denison Environmental Service

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

BGC Engineering Inc. - Calgary, AB

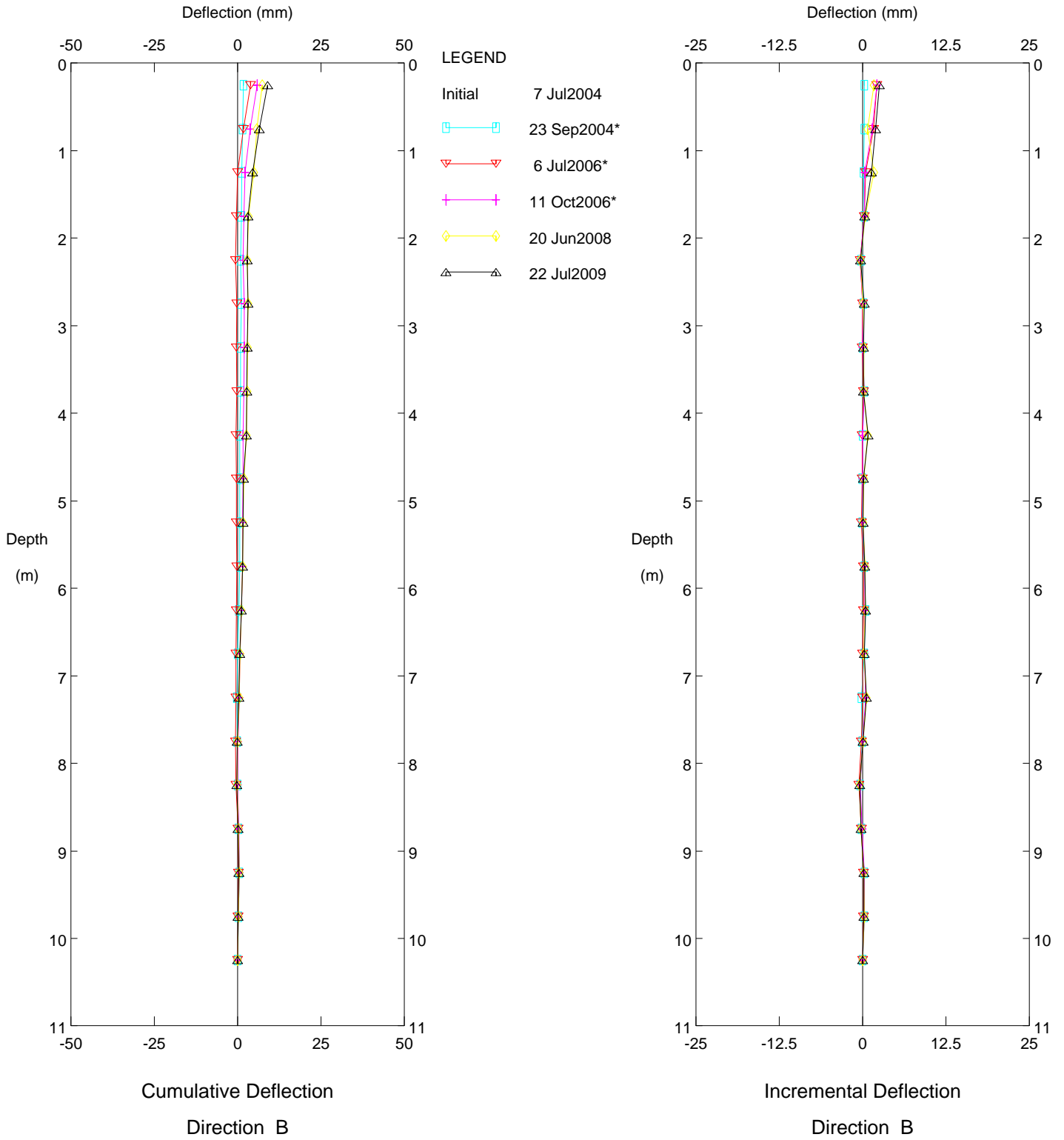


BS-9, Inclinometer 1+530

Denison Environmental Service

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

BGC Engineering Inc. - Calgary, AB

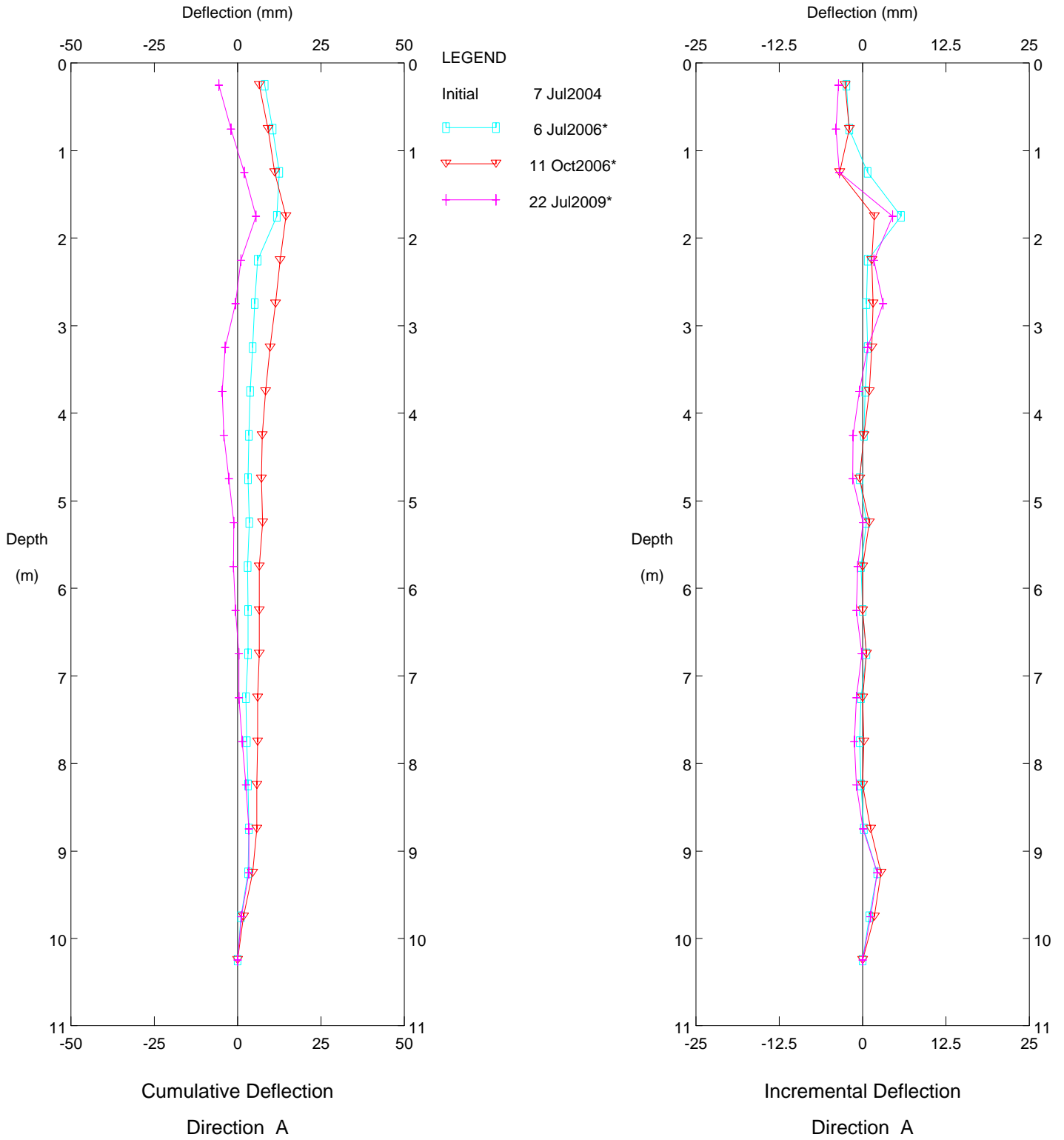


BS-9, Inclinator 1+530

Denison Environmental Service

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

BGC Engineering Inc. - Calgary, AB

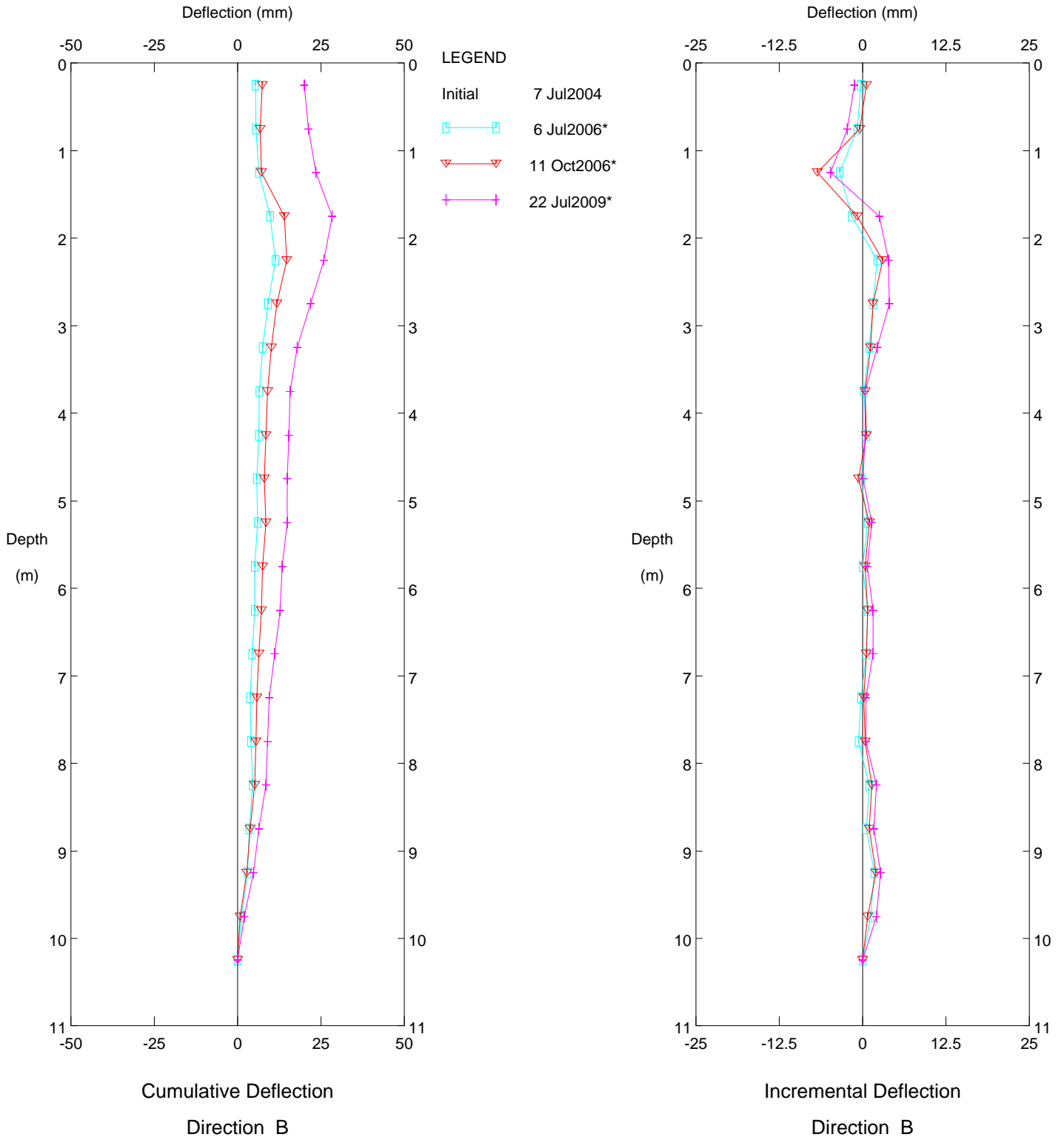


BS-10, Inclinometer 1+900

Denison Environmental Service

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

BGC Engineering Inc. - Calgary, AB



BS-10, Inclinometer 1+900

Denison Environmental Service

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

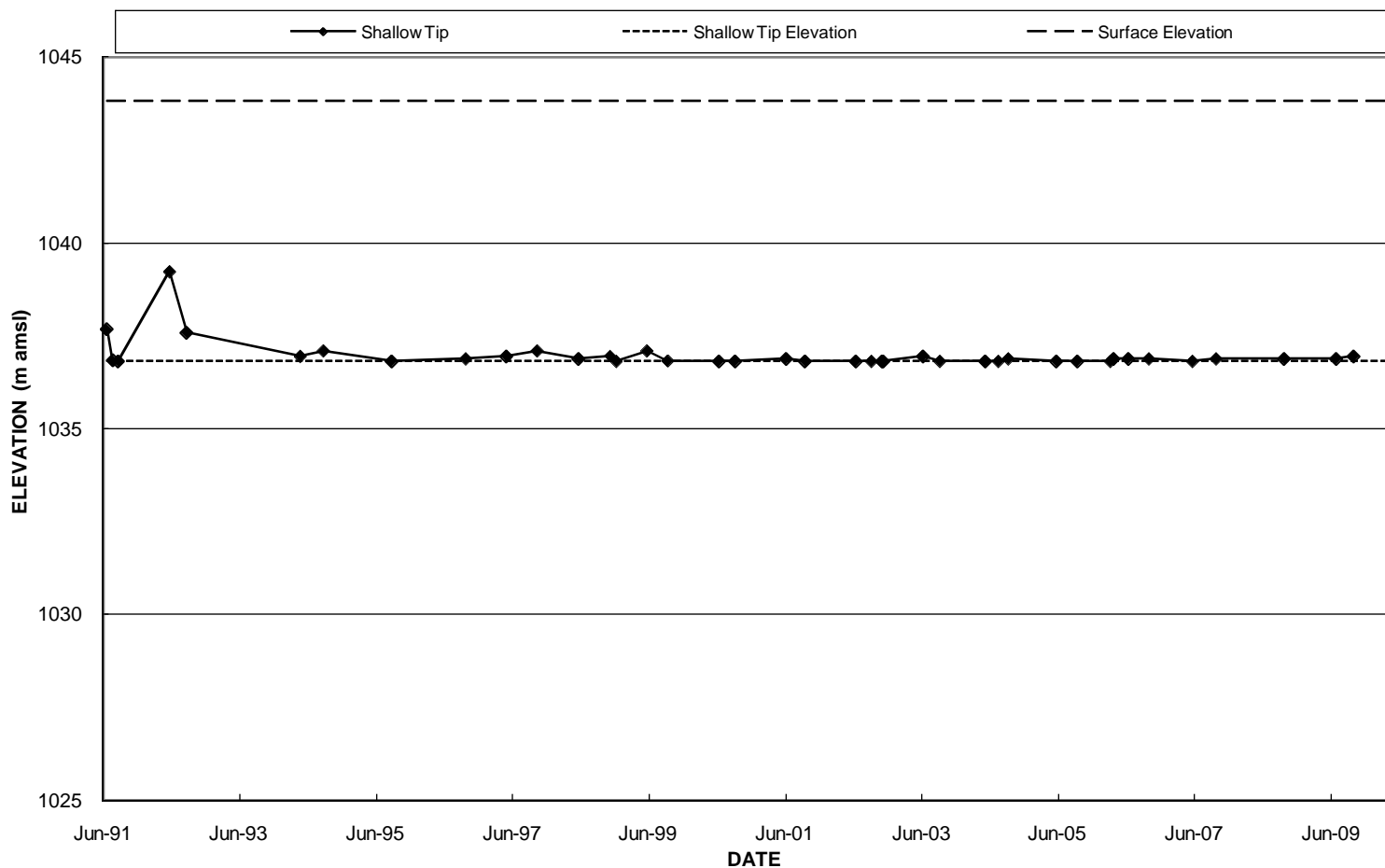
## INTERMEDIATE DAM

## **PIEZOMETERS**

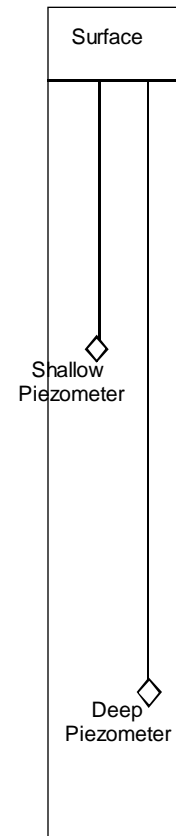
BH91-ID3		Location:	Intermediate Dam South Abutment @ Stn. 0+810		Shallow Tip Elevation (m amsl):	1036.82
		Coordinates:	8V580359 6913723		Deep Tip Elevation (m amsl):	1028.62
Surface Protector:	yes	Date Installed:	1991		2004 Surface Elevation (m amsl):	1043.82
Date	Reading (psi)		Piezometric Elevation (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	1035.20	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	1037.10	1034.99	1047.7	
Sep-95	0.00	9.50	1036.82	1035.27	1047.7	
Oct-96	0.10	7.50	1036.89	1033.87	1048.1	
7-May-97	0.20	6.40	1036.96	1033.10		
17-Oct-97	0.40	8.31	1037.10	1034.44		
27-May-98	0.10	11.70	1036.89	1036.81	1048.1	
12-Nov-98	0.22	7.10	1036.97	1033.59	1047.8	
16-Dec-98	0.00	6.30	1036.82	1033.03	1047.8	
29-May-99	0.40	11.05	1037.10	1036.36	1048	
16-Sep-99	0.02	8.40	1036.83	1034.50	1047.7	
14-Jun-00	0.01	10.41	1036.83	1035.91	1047.6	
9-Sep-00	0.00	9.50	1036.82	1035.27		
10-Jun-01	0.10	10.30	1036.89	1035.83		
20-Sep-01	0.01	8.20	1036.83	1034.36		
18-Jun-02	0.00	9.10	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	0.00	5.20	1036.82	1032.26		2004 survey data used from this point on
19-Jul-04	0.00	6.20	1036.82	1032.96		
9-Sep-04	0.10	5.70	1036.89	1032.61		
26-May-05	0.00	8.40	1036.82	1034.50		
14-Sep-05	0.00	4.90	1036.82	1032.05		
9-Mar-06	0.00	3.30	1036.82	1030.93		
27-Mar-06	0.10	3.40	1036.89	1031.00		
14-Jun-06	0.10	7.10	1036.89	1033.59		
2-Oct-06	0.10	4.10	1036.89	1031.49		
22-May-07	0.00	4.60	1036.82	1031.84	1046.781	Good Flow
26-Sep-07	0.10	5.70	1036.89	1032.61		
24-Sep-08	0.10	6.10	1036.89	1032.89	1046.197	
29-Jun-09	0.10	5.70	1036.89	1032.61		
30-Sep-09	0.20	5.30	1036.96	1032.33	1046.048	



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

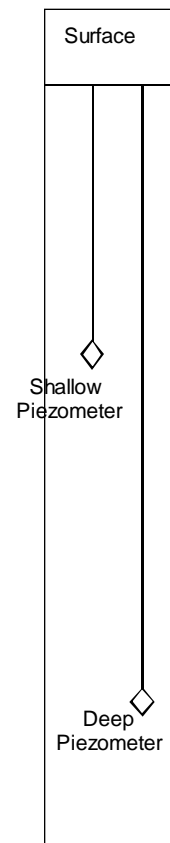
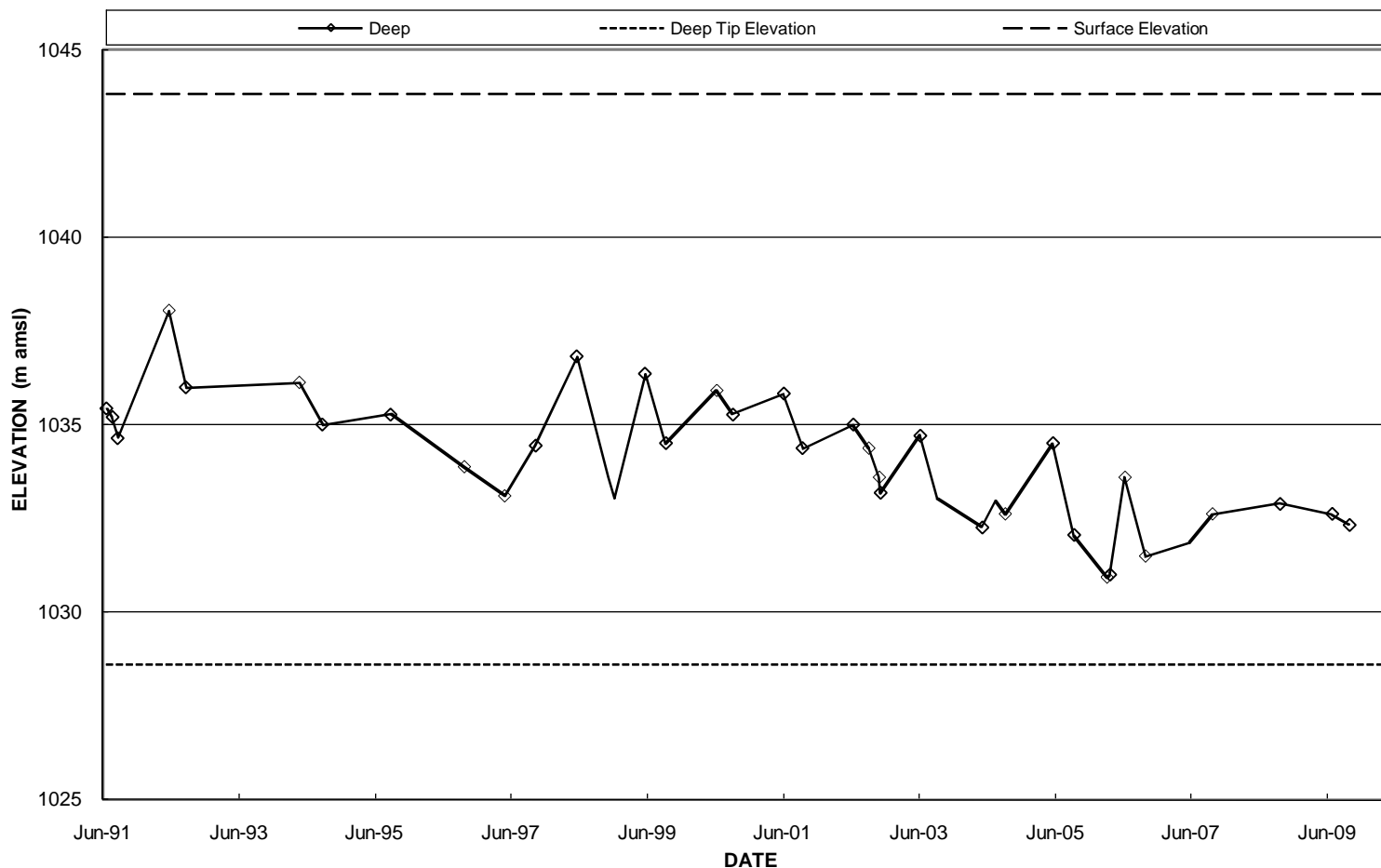


**Instrument Details**



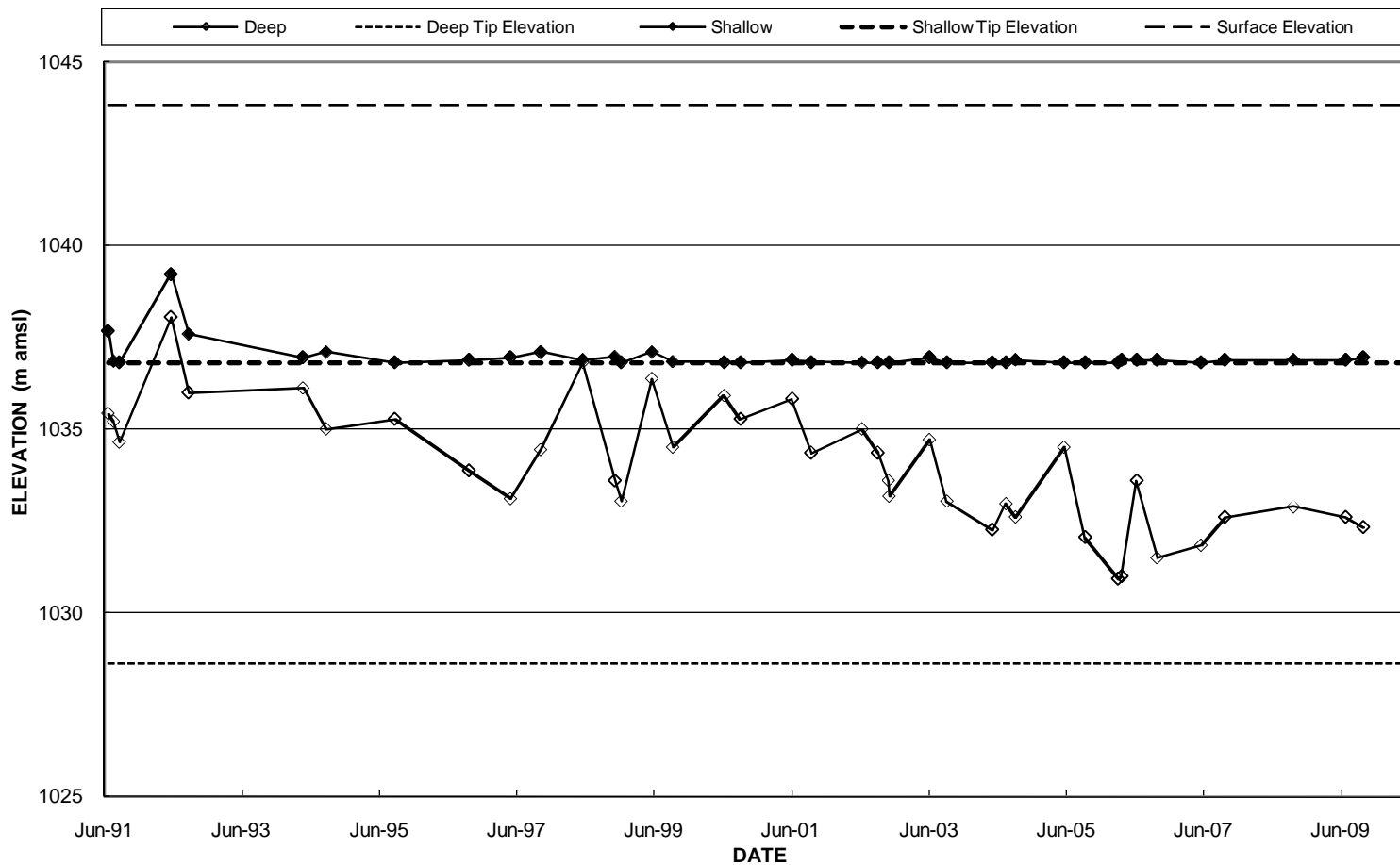
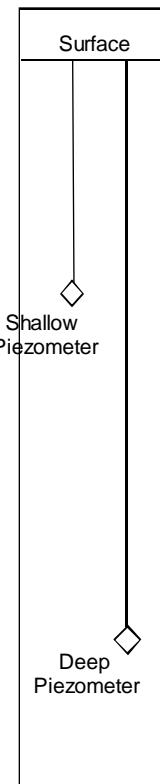
**INTERMEDIATE DAM  
 Piezometric Monitoring  
 BH91-ID3 Pneumatic Piezometer (Deep Tip)  
 (South Abutment of Dam)**

**Instrument  
 Details**



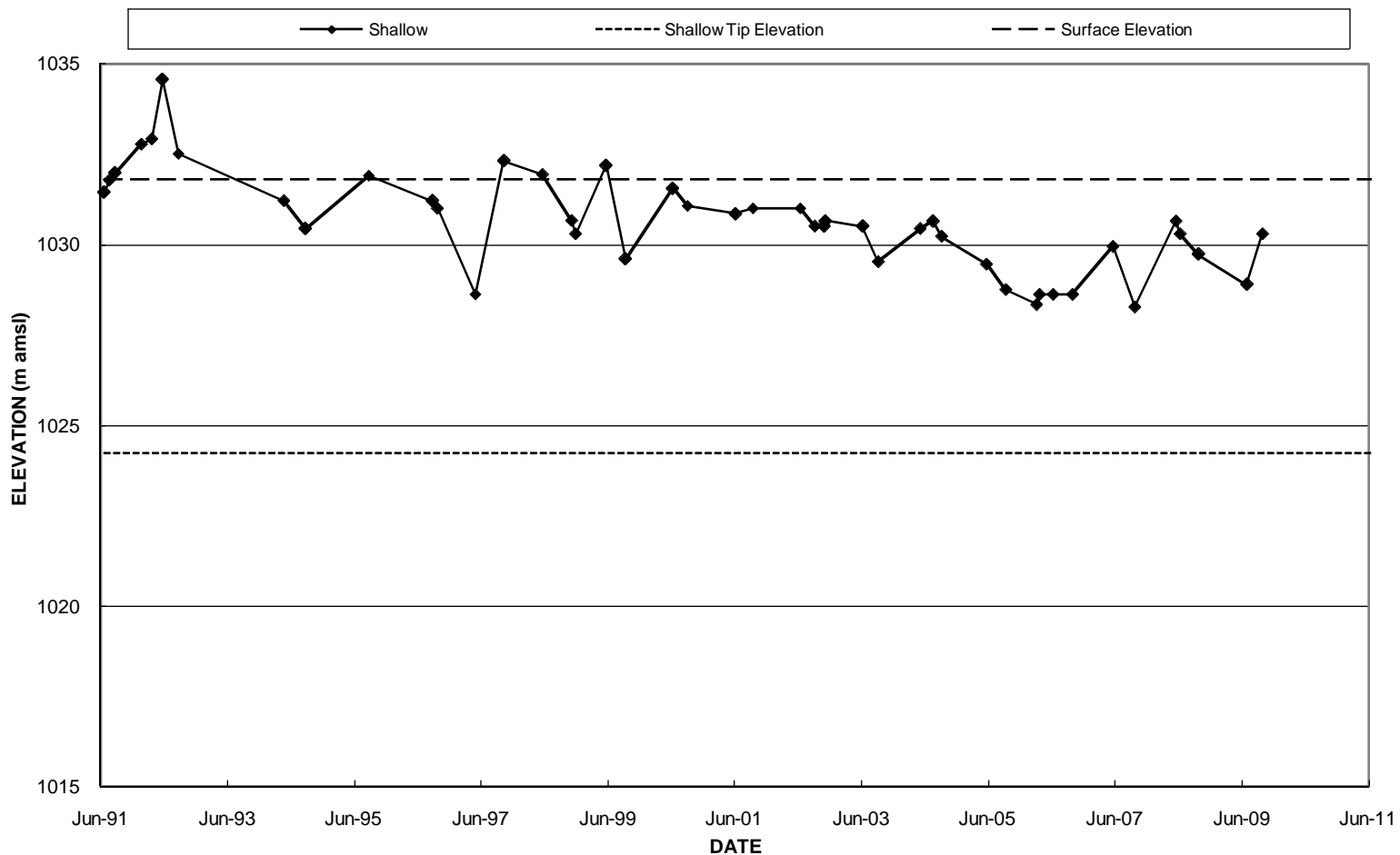
### INTERMEDIATE DAM Piezometric Monitoring BH91-ID3 Pneumatic Piezometer (Both Tips) (South Abutment of Dam)

#### Instrument Details

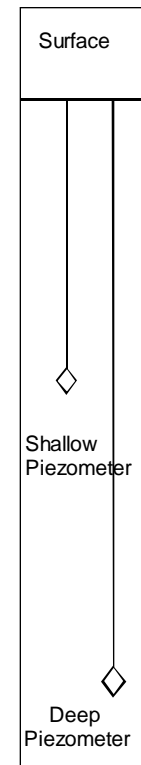


BH91-ID4		Location:	Intermediate Dam Toe @St.0+567	Shallow Tip Elevation (m amsl):	1024.22	
		Coordinates:	8V580517 6913926	Deep Tip Elevation (m amsl):	1017.08	
Surface Protector:	yes	Date Installed:	1991	*Surface Elevation (m amsl):	1031.80	
Date	Reading (psi)		Piezometric Elevation (m amsl)		Pond 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		
9-Mar-06	5.9	14.5	1028.35	1027.23		
27-Mar-06	6.3	14.9	1028.63	1027.51		
14-Jun-06	6.3	14.9	1028.63	1027.51		
2-Oct-06	6.3	14.9	1028.63	1027.51		
22-May-07	8.2	16.8	1029.96	1028.84	1046.781	Good Flow
26-Sep-07	5.8	15	1028.28	1027.58		
20-May-08	9.2	17.5	1030.66	1029.33		
11-Jun-08	8.7	16.9	1030.31	1028.91		
24-Sep-08	7.9	16.4	1029.75	1028.56	1046.197	
29-Jun-09	6.7	15.2	1028.91	1027.72		
30-Sep-09	8.7	16.9	1030.31	1028.91	1046.048	

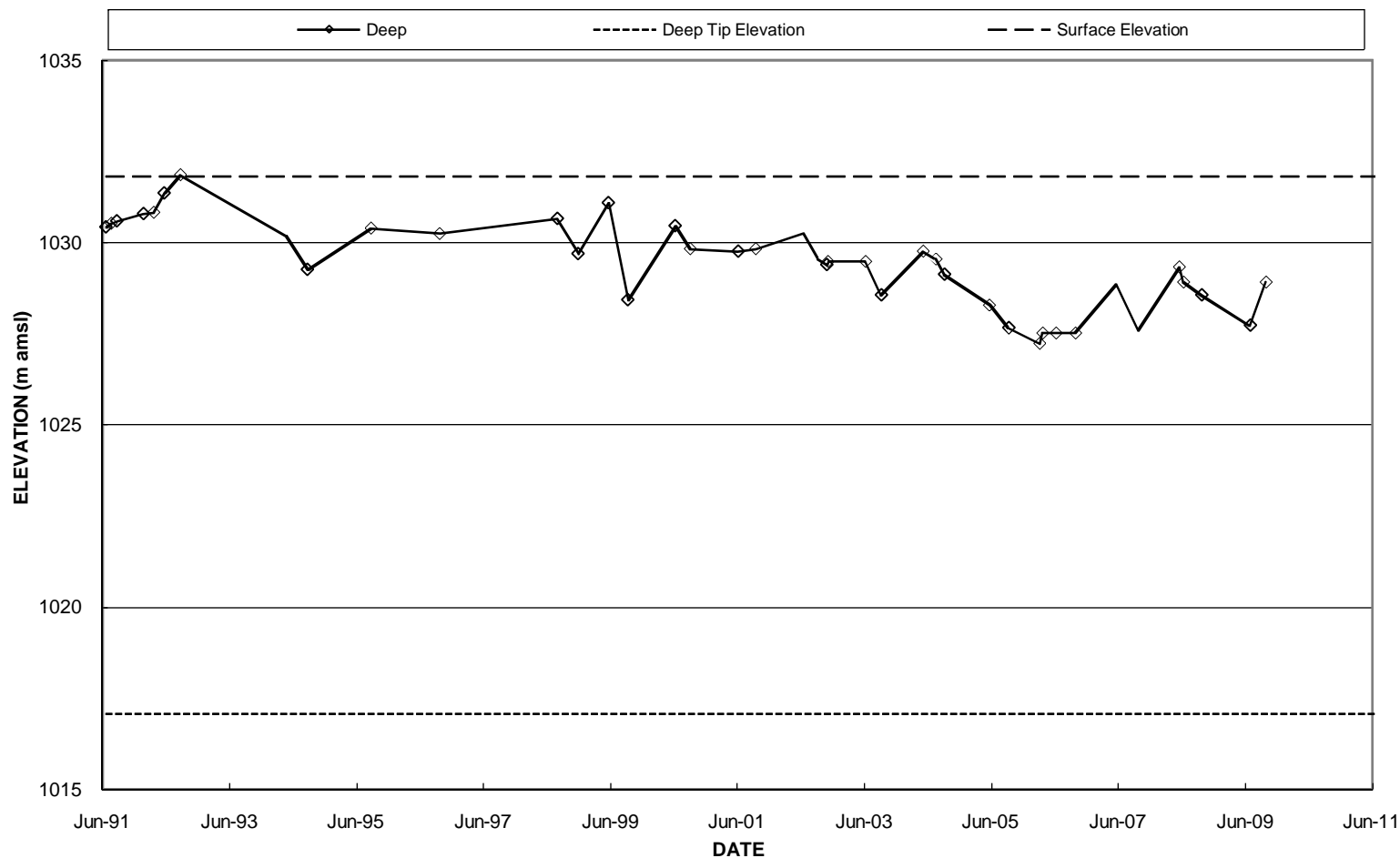
### INTERMEDIATE DAM Piezometric Monitoring BH91-ID4 Pneumatic Piezometer (Shallow Tip) (Toe of Dam)



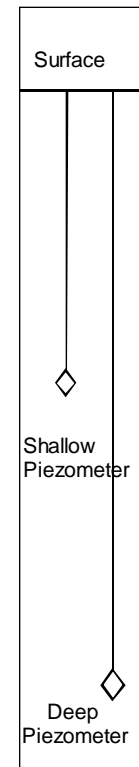
**Instrument Details**



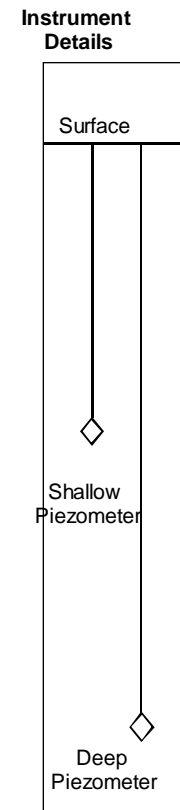
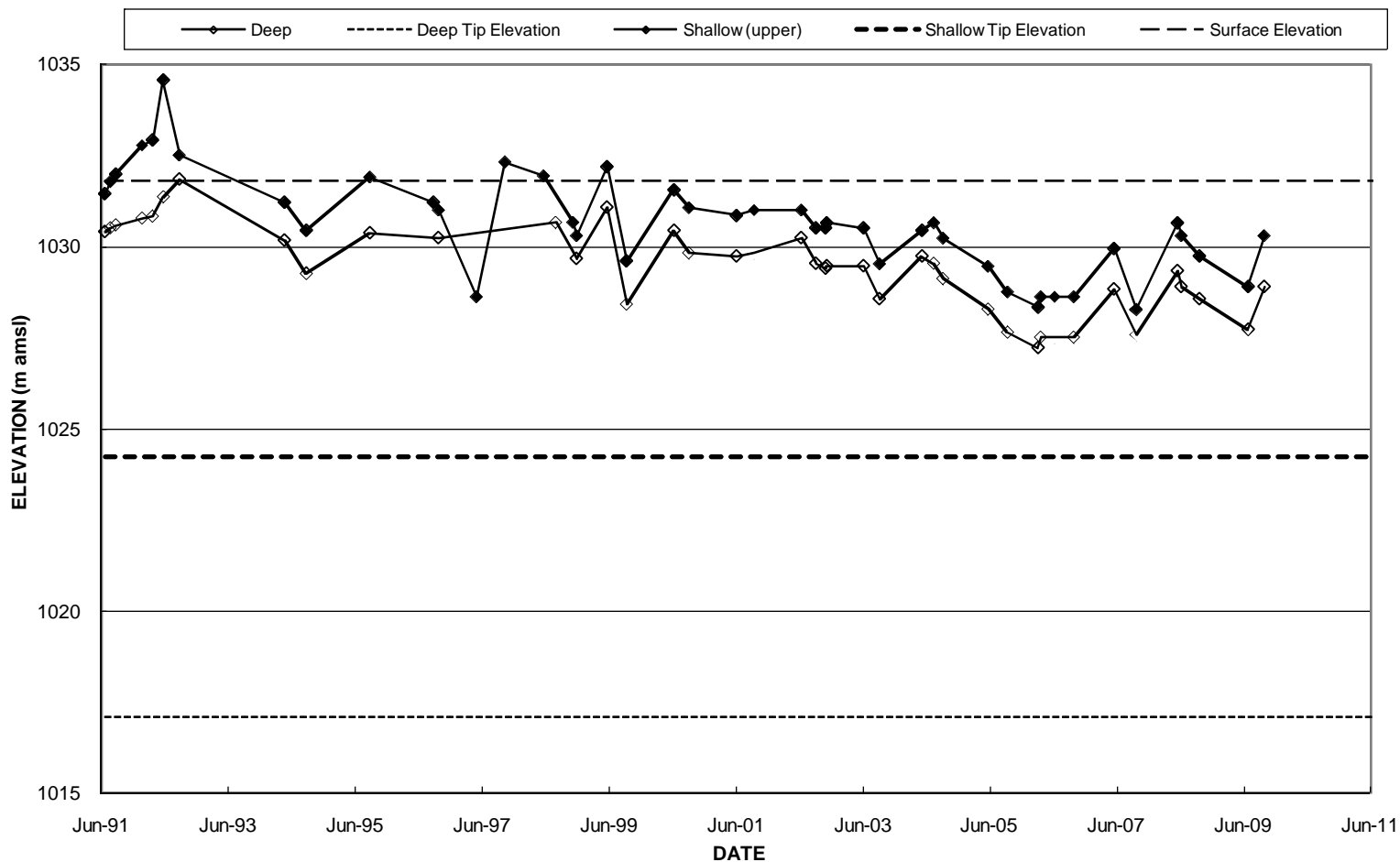
### INTERMEDIATE DAM Piezometric Monitoring BH91-ID4 Pneumatic Piezometer (Deep Tip) (Toe of Dam)



#### Instrument Details



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

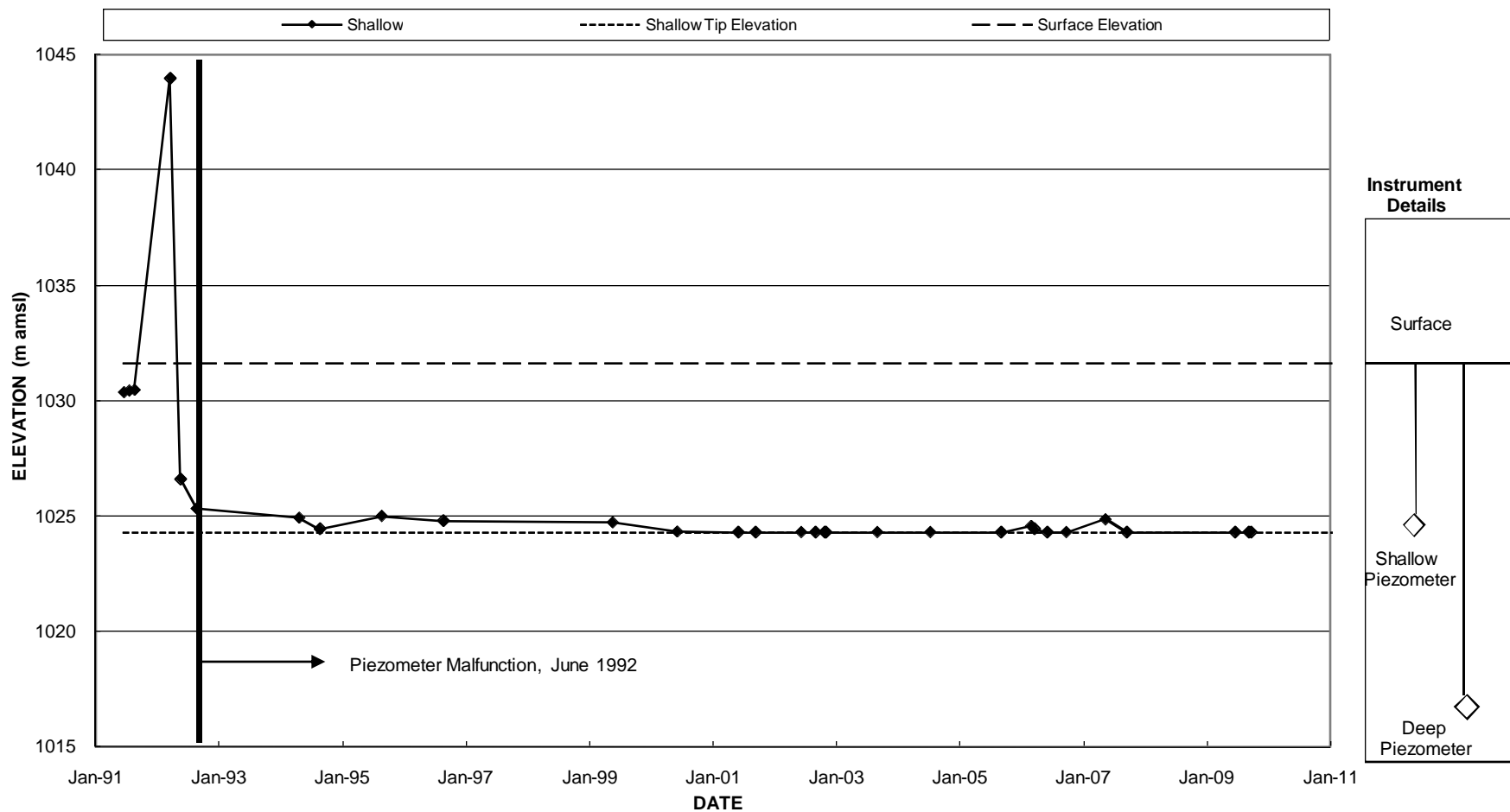


BH91-ID5		Location:		Intermediate Dam	Shallow Tip		1024.30
		Coordinates:		Toe @ St.0+625	Elevation (m amsl):		
Surface Protector:		Date Installed:		2004 Surface		Elevation (m amsl):	
yes		1991		2004 Surface		1031.64	
Date	Reading (psi)		Piezometric Elevation (m amsl)		Pond El. (m amsl)	Comments	
	Shallow (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		
7-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			
4-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			
9-Mar-06	0.4	0.6	1024.58	1017.5			
27-Mar-06	0.2	0.4	1024.44	1017.36		no bubbles	
14-Jun-06	0	0	1024.3	1017.08			
2-Oct-06	0	0	1024.3	1017.08			
22-May-07	0.8	0.5	1024.86	1017.43	1046.781	lower won't stabilize	
26-Sep-07	0	0	1024.3	1017.08		No bubbles	
29-Jun-09	0	0	1024.3	1017.08			
15-Sep-09	0	0.1	1024.3	1017.15			
30-Sep-09	0	0	1024.3	1017.08	1046.048	no bubbles	

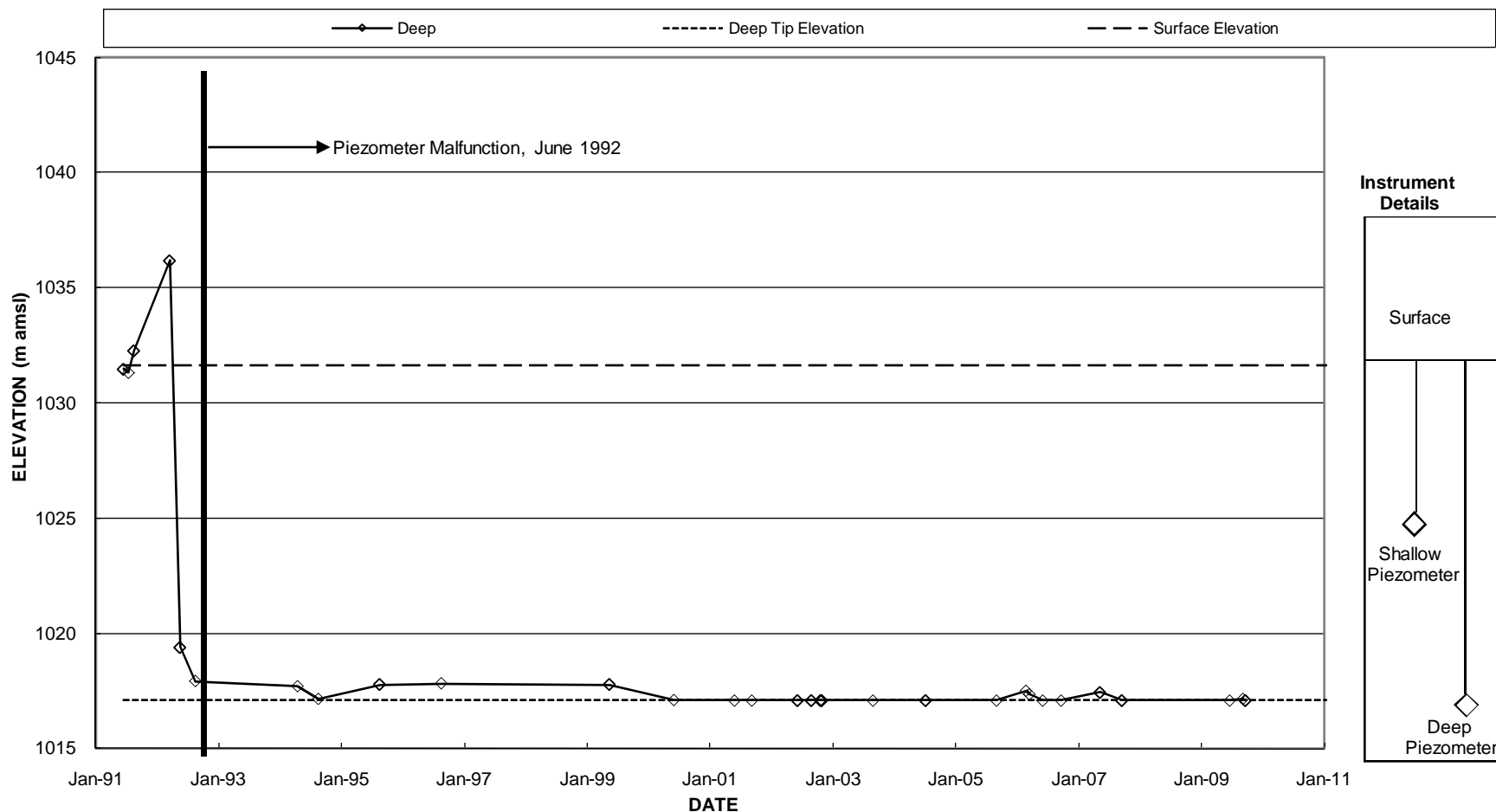
Both tips have leaking leads as of June, 1992



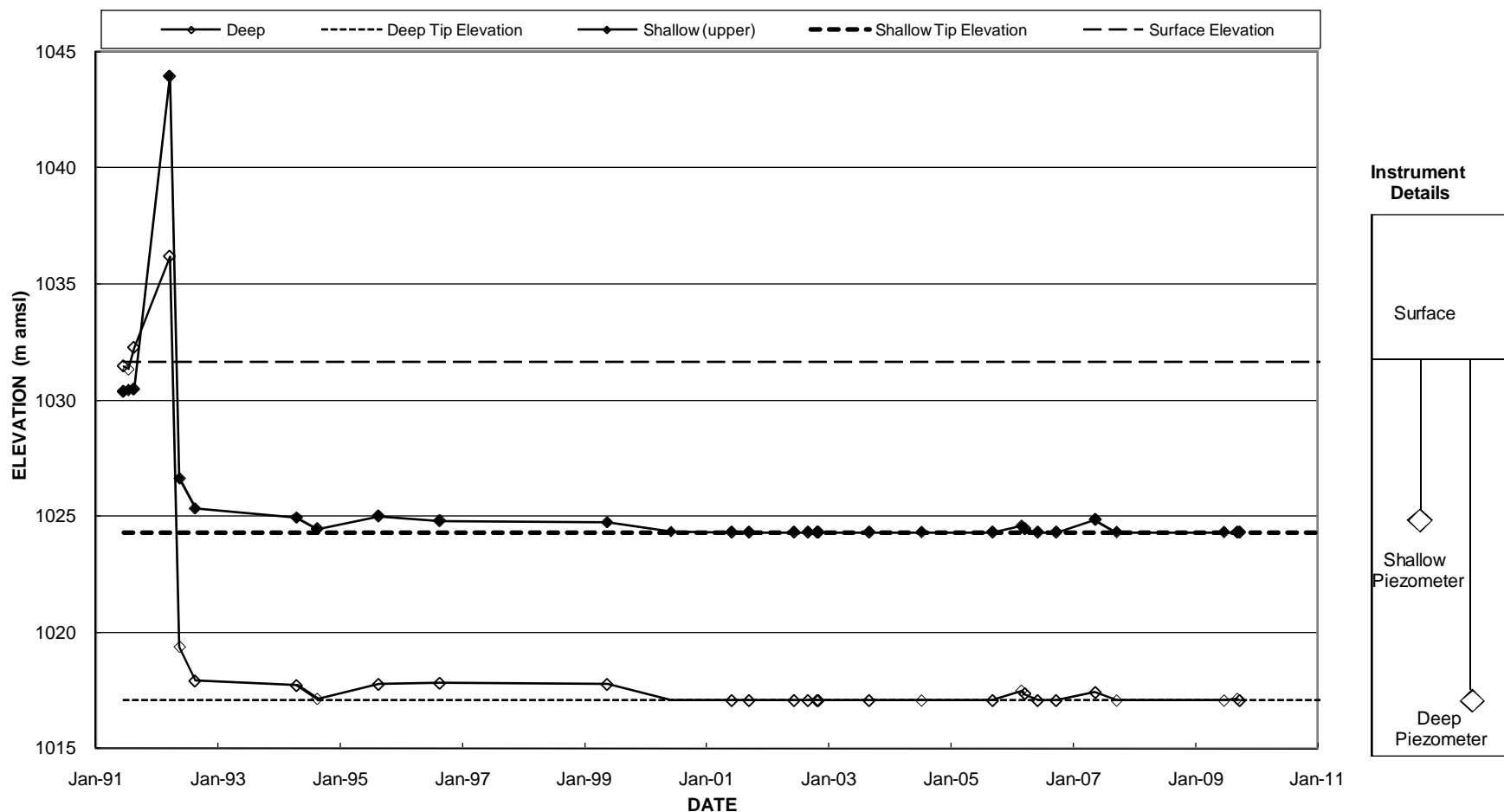
### INTERMEDIATE DAM Piezometric Monitoring BH91-ID5 Pneumatic Piezometer (Shallow Tip) (Toe of Dam)



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

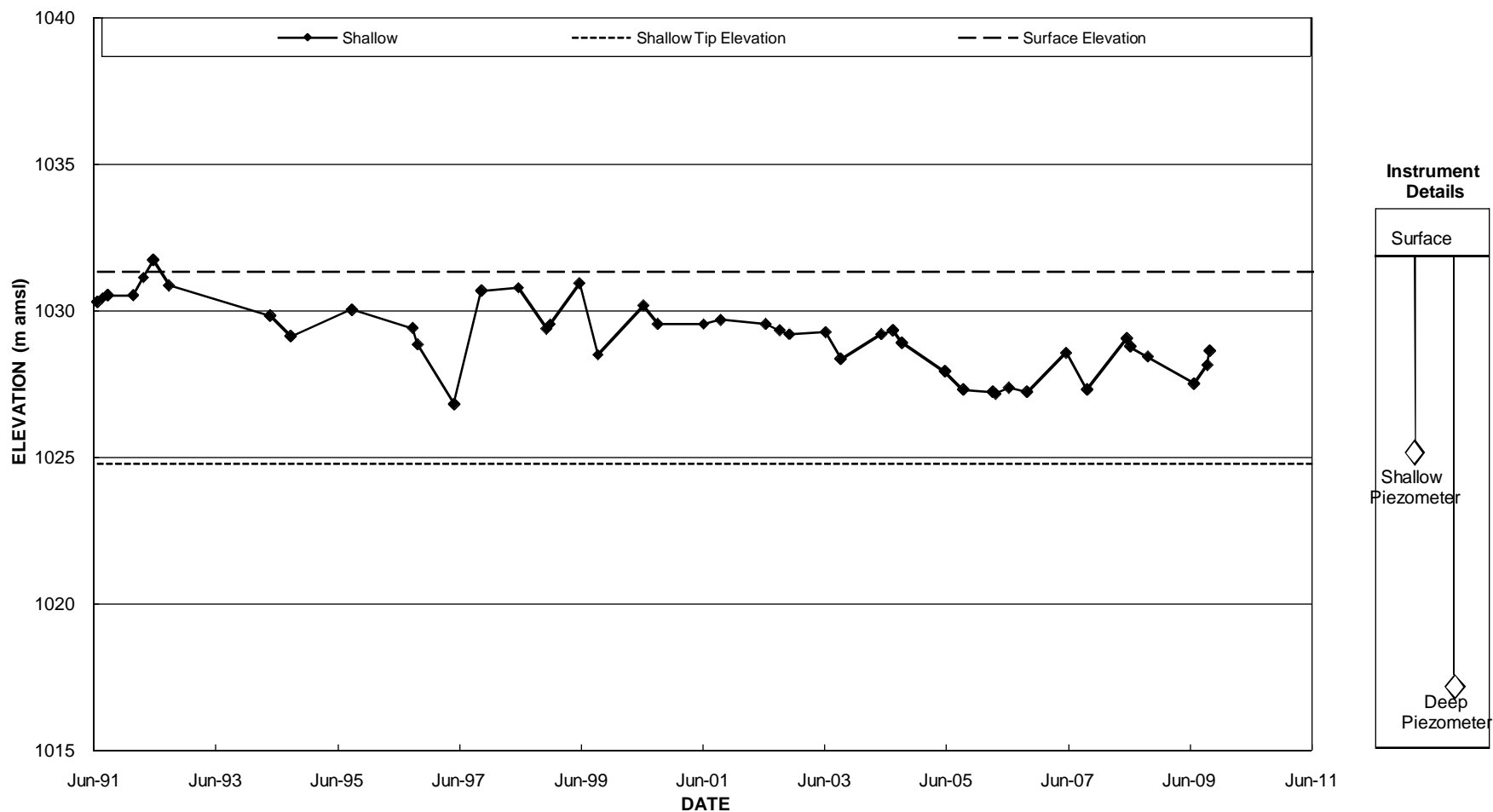


### INTERMEDIATE DAM Piezometric Monitoring BH91-ID5 Pneumatic Piezometer (Both Tips) (Toe of Dam)

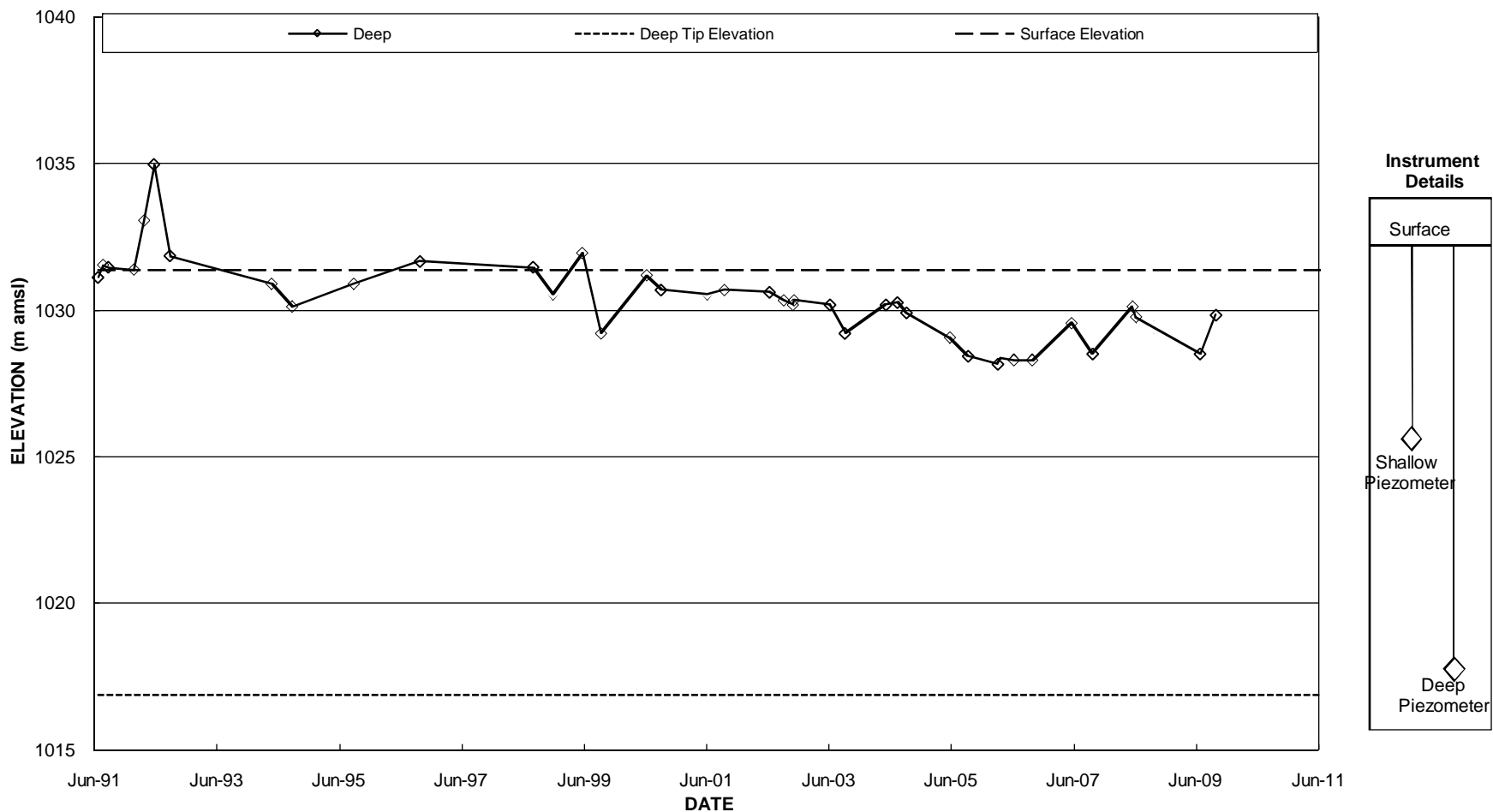


BH91-ID6		Location:	Intermediate Dam Toe @St.0+630		Shallow Tip Elevation (m amsl):	1024.80	
		Coordinates:	8V580475 6913866		Deep Tip Elevation (m amsl):	1016.90	
Surface Protector:	yes	Date Installed:	1991		2004 Surface Elevation (m amsl):	1031.36	
Date		Reading (psi)		Piezometric Elevation (m amsl)		Pond El. (m amsl)	Comments
		Shallow (upper)	Deep (lower)	Shallow (upper)	Deep (lower)		
Jul-91		7.89	20.33	1030.32	1031.13	1042.20	
Aug-91		8.06	20.91	1030.44	1031.54	1042.20	
Sep-91		8.20	20.80	1030.54	1031.46	1042.20	
Feb-92		8.20	20.70	1030.54	1031.39	1047.70	
Apr-92		9.06	23.10	1031.14	1033.07	1047.70	
Jun-92		9.91	25.80	1031.74	1034.96	1047.70	
Sep-92		8.67	21.36	1030.87	1031.85	1047.70	
May-94		7.20	20.00	1029.84	1030.90	1047.70	
Sep-94		6.20	18.90	1029.14	1030.13	1047.70	
Sep-95		7.50	20.00	1030.05	1030.90	1047.70	
Sep-96		6.60		1029.42		1048.10	
Oct-96		5.80	21.10	1028.86	1031.67		
7-May-97		2.90		1026.83			
17-Oct-97		8.41		1030.69			
27-May-98		8.56		1030.79		1048.10	
7-Aug-98			20.80		1031.46	1048.10	
12-Nov-98		6.57		1029.40		1047.80	
4-Dec-98		6.80	19.50	1029.56	1030.55	1047.80	
29-May-99		8.78	21.50	1030.95	1031.95	1048.00	
16-Sep-99		5.30	17.60	1028.51	1029.22	1047.70	
14-Jun-00		7.70	20.41	1030.19	1031.19	1047.60	
9-Sep-00		6.80	19.70	1029.56	1030.69		
10-Jun-01		6.80	19.50	1029.56	1030.55		
20-Sep-01		7.00	19.70	1029.70	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	1030.20		
10-Nov-02		6.30	19.20	1029.21	1030.34		
11-Jun-03		6.40	19.00	1029.28	1030.20		*New piezometer started use here
10-Sep-03		5.10	17.60	1028.37	1029.22		
10-May-04		6.30	19.00	1029.21	1030.20		2004 survey data used from this point on
19-Jul-04		6.50	19.10	1029.35	1030.27		
9-Sep-04		5.90	18.60	1028.93	1029.92		
26-May-05		4.50	17.40	1027.95	1029.08		
14-Sep-05		3.60	16.50	1027.32	1028.45		
9-Mar-06		3.50	16.10	1027.25	1028.17		
27-Mar-06		3.40	16.40	1027.18	1028.38		3.4/3.5 won't stabilize
14-Jun-06		3.70	16.30	1027.39	1028.31		
2-Oct-06		3.50	16.30	1027.25	1028.31		
22-May-07		5.40	18.10	1028.58	1029.57	1046.78	Good flow
26-Sep-07		3.60	16.60	1027.32	1028.52		
20-May-08		6.10	18.90	1029.07	1030.13		
11-Jun-08		5.70	18.40	1028.79	1029.78		
24-Sep-08		5.20	17.90	1028.44	1029.43	1046.20	
29-Jun-09		3.90	16.60	1027.53	1028.52		
15-Sep-09		4.80	n/r	1028.16			
30-Sep-09		5.50	18.50	1028.65	1029.85	1046.05	

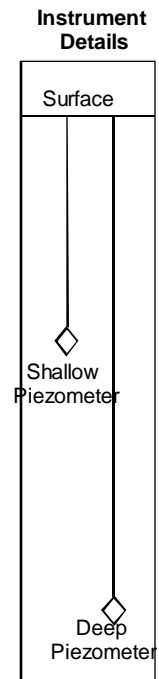
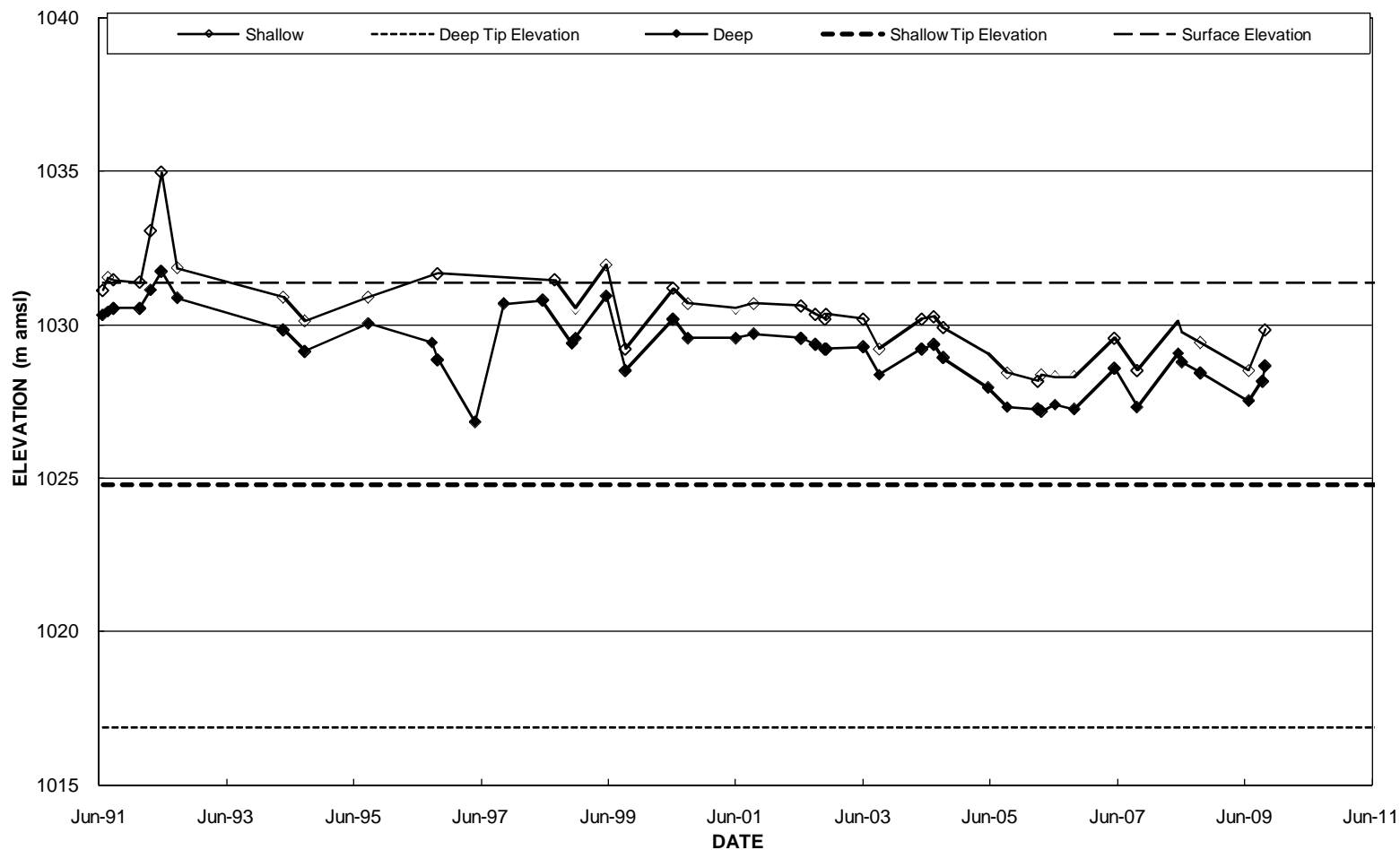
### INTERMEDIATE DAM Piezometric Monitoring BH91-ID6 Pneumatic Piezometer (Shallow Tip) (Toe of Dam)



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



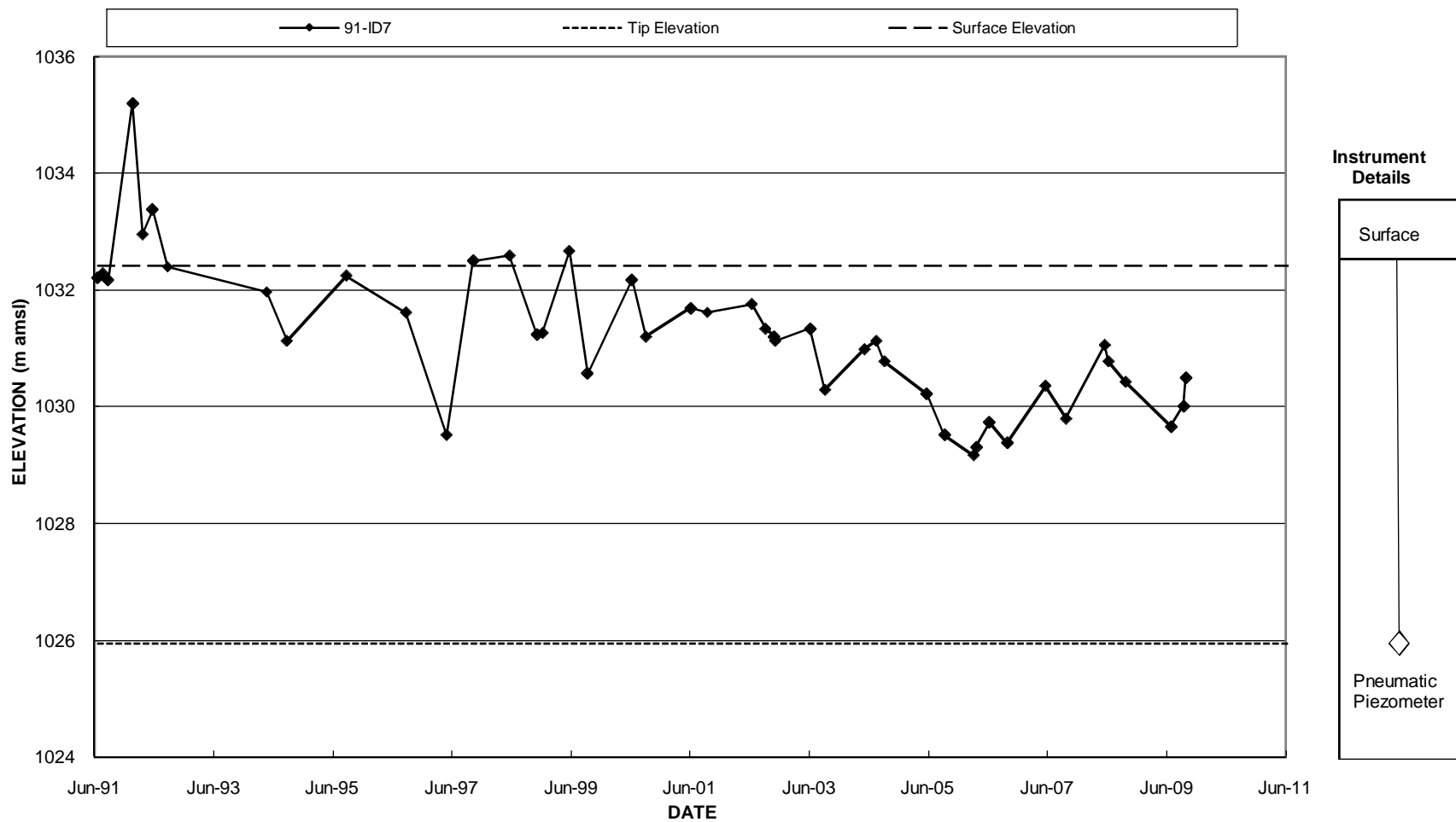
### INTERMEDIATE DAM Piezometric Monitoring BH91-ID6 Pneumatic Piezometer (Both Tips) (Toe of Dam)



BH91-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	1042.20	
Aug-91		9.06	1032.29	1042.20	
Sep-91		8.90	1032.18	1042.20	
Feb-92		13.21	1035.20	1047.70	
Apr-92		10.01	1032.96	1047.70	
Jun-92		10.61	1033.38	1047.70	
Sep-92		9.21	1032.40	1047.70	
May-94		8.60	1031.97	1047.70	
Sep-94		7.40	1031.13	1047.70	
Sep-95		9.00	1032.25	1047.70	
Sep-96		8.10	1031.62	1048.10	
7-May-97		5.10	1029.52		
17-Oct-97		9.36	1032.50		
27-May-98		9.49	1032.59	1048.10	
12-Nov-98		7.56	1031.24	1047.80	
16-Dec-98		7.60	1031.27	1047.80	
29-May-99		9.60	1032.67	1048.00	
16-Sep-99		6.60	1030.57	1047.70	
14-Jun-00		8.90	1032.18	1047.60	
9-Sep-00		7.50	1031.20		
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	1031.20		
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		6.10	1030.22		
14-Sep-05		5.10	1029.52		
9-Mar-06		4.60	1029.17		
27-Mar-06		4.80	1029.31		
14-Jun-06		5.40	1029.73		
2-Oct-06		4.90	1029.38		
22-May-07		6.30	1030.36	1046.78	Good Flow
26-Sep-07		5.50	1029.80		
20-May-08		7.30	1031.06		
11-Jun-08		6.90	1030.78		
24-Sep-08		6.40	1030.43	1046.20	
29-Jun-09		5.30	1029.66		
15-Sep-09		5.80	1030.01		
30-Sep-09		6.50	1030.50	1046.05	



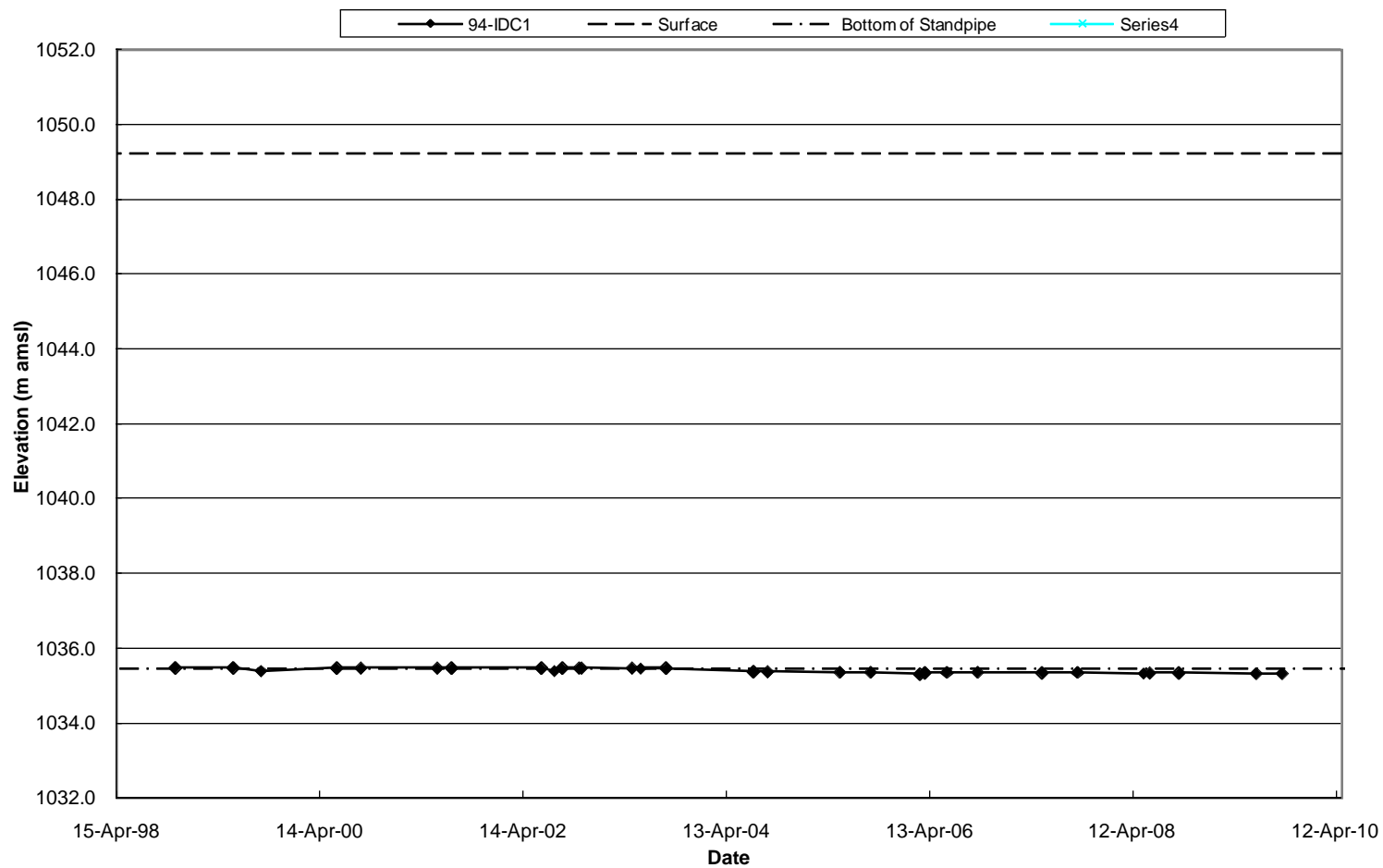
### INTERMEDIATE DAM Piezometric Monitoring BH91-ID7 Pneumatic Piezometer (Toe of Dam)



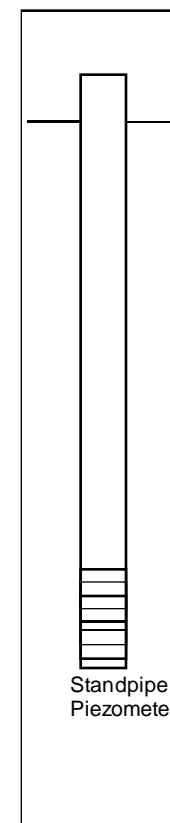
Faro Mine Instrumentation  
Intermediate Dam

<b>BH94-IDC-1</b>		<b>Location:</b>	Intermediate Dam Crest	<b>2004 Stick Up (m):</b>	0.27
		<b>Coordinates:</b>	8V580605 6913969	<b>2004 Surface Elevation (m amsl):</b>	1049.21
<b>Surface Protector:</b>	Yes	<b>Date Installed:</b>	1994	<b>Tip Elevation:</b>	N/A
<b>Date</b>		<b>Water level from top of pipe (m)</b>	<b>Piezometric Elevation (m amsl)</b>	<b>Pond El. (m amsl)</b>	<b>Comments</b>
2-Jun-94				1047.70	dry
16-Sep-94				1047.70	dry
22-Sep-95				1047.70	dry
25-Sep-96				1048.10	dry
28-May-98				1048.10	dry
13-Nov-98		14.10	1035.48	1047.80	dry
8-Jun-99		14.10	1035.48	1047.80	dry
16-Sep-99		14.18	1035.40	1047.70	dry
14-Jun-00		14.11	1035.47	1047.60	dry
9-Sep-00		14.11	1035.47	1047.60	H2O
10-Jun-01		14.11	1035.47	1047.60	
1-Aug-01		14.11	1035.47	1047.60	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
09-Mar-06		14.17	1035.31		
27-Mar-06		14.13	1035.35		no beep, ice crystals
14-Jun-06		14.13	1035.36		bottom
02-Oct-06		14.12	1035.36		
22-May-07		14.14	1035.35	1046.78	bottom and beep
26-Sep-07		14.13	1035.36		no beep
20-May-08		14.15	1035.33		no beep
11-Jun-08		14.14	1035.34		no beep
24-Sep-08		14.14	1035.34	1046.20	no beep
29-Jun-09		14.15	1035.33		no beep
30-Sep-09		14.16	1035.33	1046.05	no beep

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



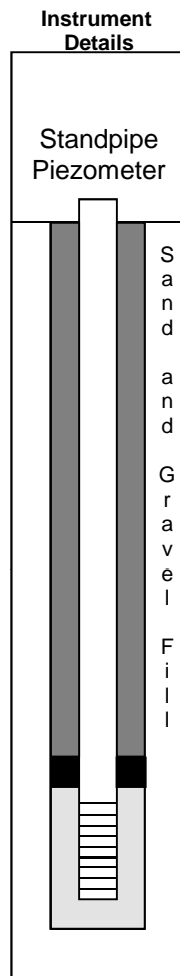
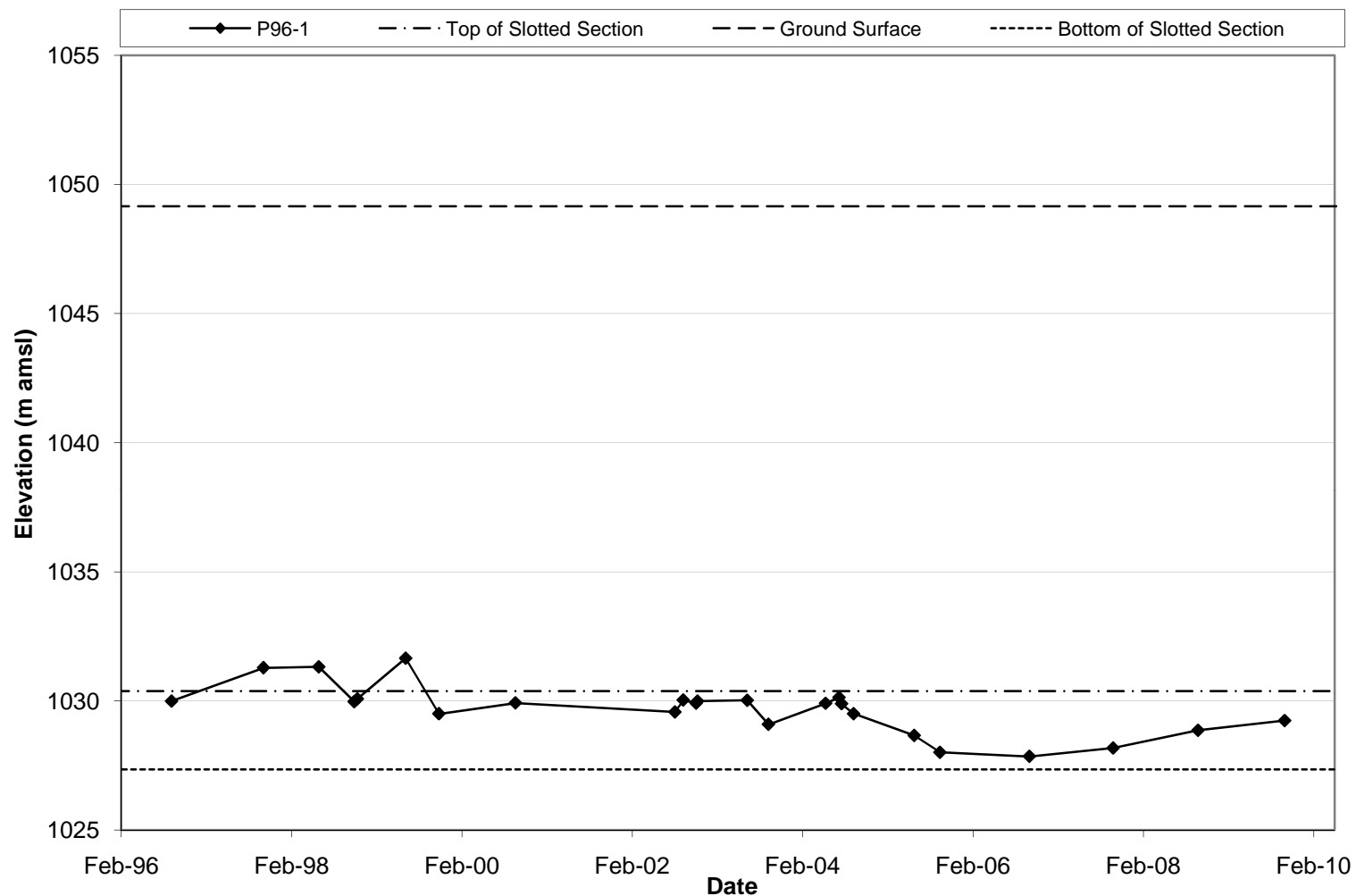
Instrument  
Details



**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		18.40		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		20.03		1030.03	
10-Sep-03		20.96		1029.09	
12-May-04		19.93		1029.91	2004 survey data used from here on
8-Jul-04		19.70		1030.14	
19-Jul-04		19.95		1029.89	
9-Sep-04		20.33		1029.51	clear
26-May-05		21.17		1028.66	ice
14-Sep-05		21.82		1028.01	
9-Mar-06					
27-Mar-06					no read, frozen
14-Jun-06		2.27			likely a mistake
2-Oct-06		21.98		1027.85	
22-May-07					no read, frozen
26-Sep-07		21.66		1028.18	
20-May-08		1.22			no beep, frozen
11-Jun-08		1.20			no beep, frozen
24-Sep-08		20.97		1028.86	
29-Jun-09		3.08			frozen
30-Sep-09		20.59		1029.24	

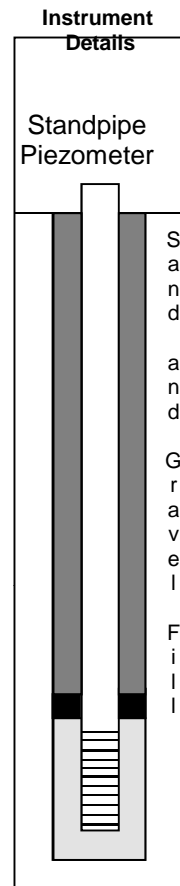
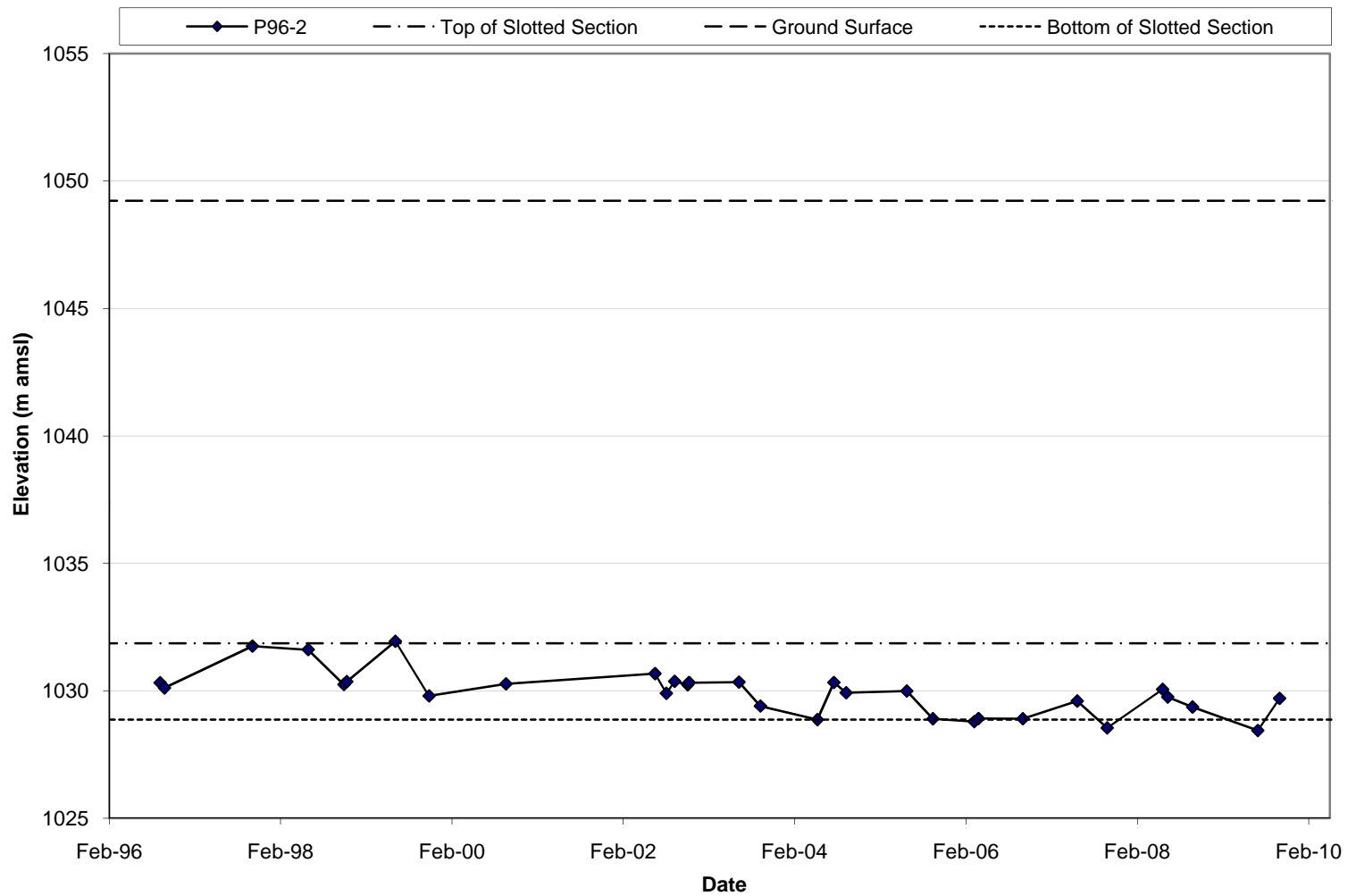
### INTERMEDIATE DAM Piezometric Monitoring P96-1 Monitoring Well (Robertson, 1996) (Dam Crest)



**Faro Mine Instrumentation  
Intermediate Dam**

BH96-2		Location: Intermediate Dam Crest			
		Coordinates:	8V580696 6914096	Tip Elevation (m amsl):	1028.87
Surface Protector:	yes	Date Installed:	1996	2004 Surface Elevation: (m amsl)	1049.22
		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		18.30		1031.75	
1-Jun-98		18.44		1031.61	
31-Oct-98		19.80		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		19.38		1030.68	
5-Aug-02		20.15		1029.90	
10-Sep-02		19.68		1030.37	
4-Nov-02		19.82		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		19.62		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
9-Mar-06		21.15		1028.79	
27-Mar-06		21.03		1028.91	no beep, mud on probe
14-Jun-06		13.05			
2-Oct-06		21.04		1028.90	
22-May-07		20.34		1029.60	no beep, dry
26-Sep-07		21.40		1028.54	
20-May-08		19.89		1030.06	
11-Jun-08		20.19		1029.75	
24-Sep-08		20.58		1029.36	
29-Jun-09		21.50		1028.44	no beep
30-Sep-09		20.24		1029.70	

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

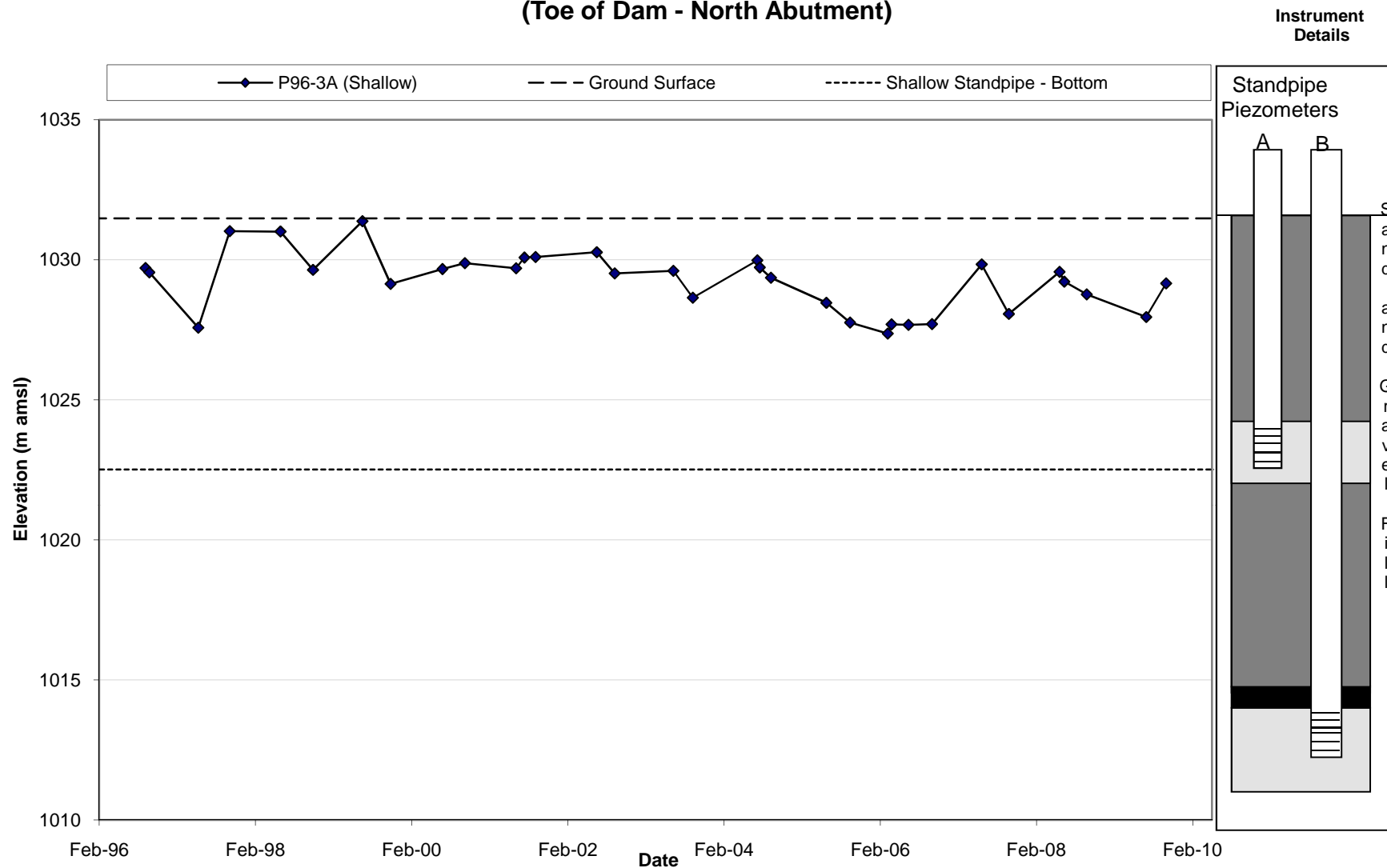


**Faro Mine Instrumentation  
Intermediate Dam**

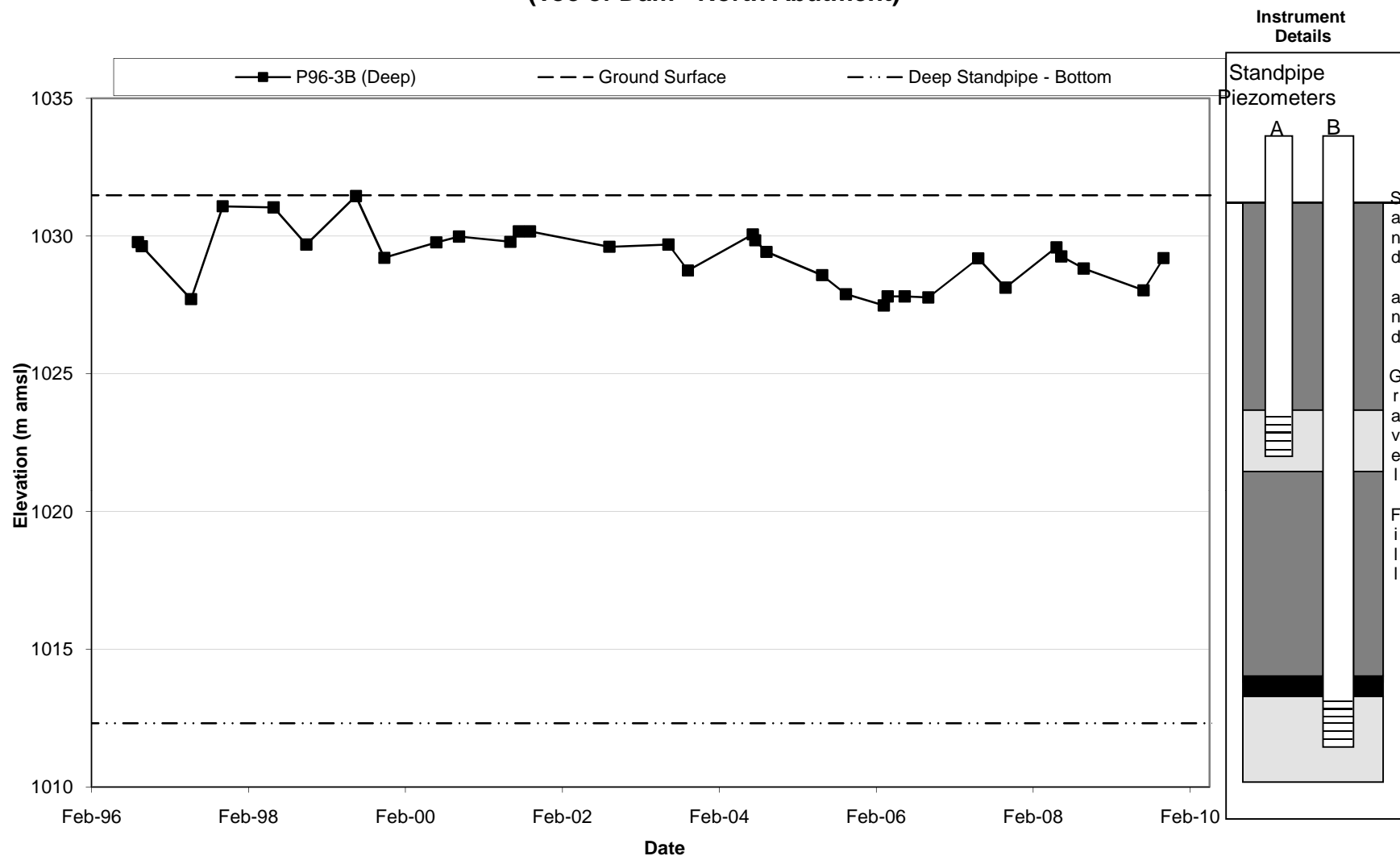
BH96-3		Location:	Intermediate Dam Toe, near the North Abutment	2004 Stick Up - A (m):	0.65
		Coordinates:	8V580529 6913934	2004 Stick Up - B (m):	0.59
Surface Protector:	yes	Date Installed:	1996	2004 Surface Elevation (m amsl):	1031.48
		Tip Elevation - A (m amsl):	1022.43	Screened Interval - A (m bgs):	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)	
8-Sep-96	2.37	2.25	1029.71	1029.78	
26-Sep-96	2.53	2.40	1029.55	1029.63	
27-Sep-96					
13-May-97	4.50	4.32	1027.58	1027.71	
6-Jun-97					
11-Jul-97					
7-Oct-97	1.06	0.95	1031.02	1031.08	
1-Jun-98	1.07	0.99	1031.01	1031.04	
31-Oct-98	2.44	2.34	1029.64	1029.69	
13-Nov-98					
8-Jun-99					
19-Jun-99	0.70	0.58	1031.38	1031.45	
3-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	2.20	2.05	1029.88	1029.98	
6-Jun-01	2.38	2.24	1029.70	1029.79	
15-Jul-01	2.00	1.86	1030.08	1030.17	
5-Sep-01	1.98	1.86	1030.10	1030.17	
18-Jun-02	1.81		1030.27		
5-Aug-02					
10-Sep-02	2.57	2.42	1029.52	1029.61	
4-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	
8-Jul-04	2.15	2.01	1029.98	1030.06	2004 survey data used from here on
19-Jul-04	2.40	2.23	1029.73	1029.85	
9-Sep-04	2.77	2.65	1029.36	1029.43	clear, sulphur smell
26-May-05	3.66	3.49	1028.47	1028.58	
14-Sep-05	4.37	4.18	1027.77	1027.89	
9-Mar-06	4.76	4.59	1027.37	1027.48	
27-Mar-06	4.43	4.26	1027.70	1027.81	
14-Jun-06	4.45	4.26	1027.68	1027.81	
2-Oct-06	4.42	4.30	1027.71	1027.77	
22-May-07	2.29	2.88	1029.84	1029.19	a- frozen no beep
26-Sep-07	4.06	3.94	1028.07	1028.13	
20-May-08	2.56	2.48	1029.57	1029.59	
11-Jun-08	2.91	2.81	1029.22	1029.26	
24-Sep-08	3.36	3.25	1028.77	1028.82	
29-Jun-09	4.17	4.04	1027.96	1028.03	
30-Sep-09	2.97	2.87	1029.16	1029.20	



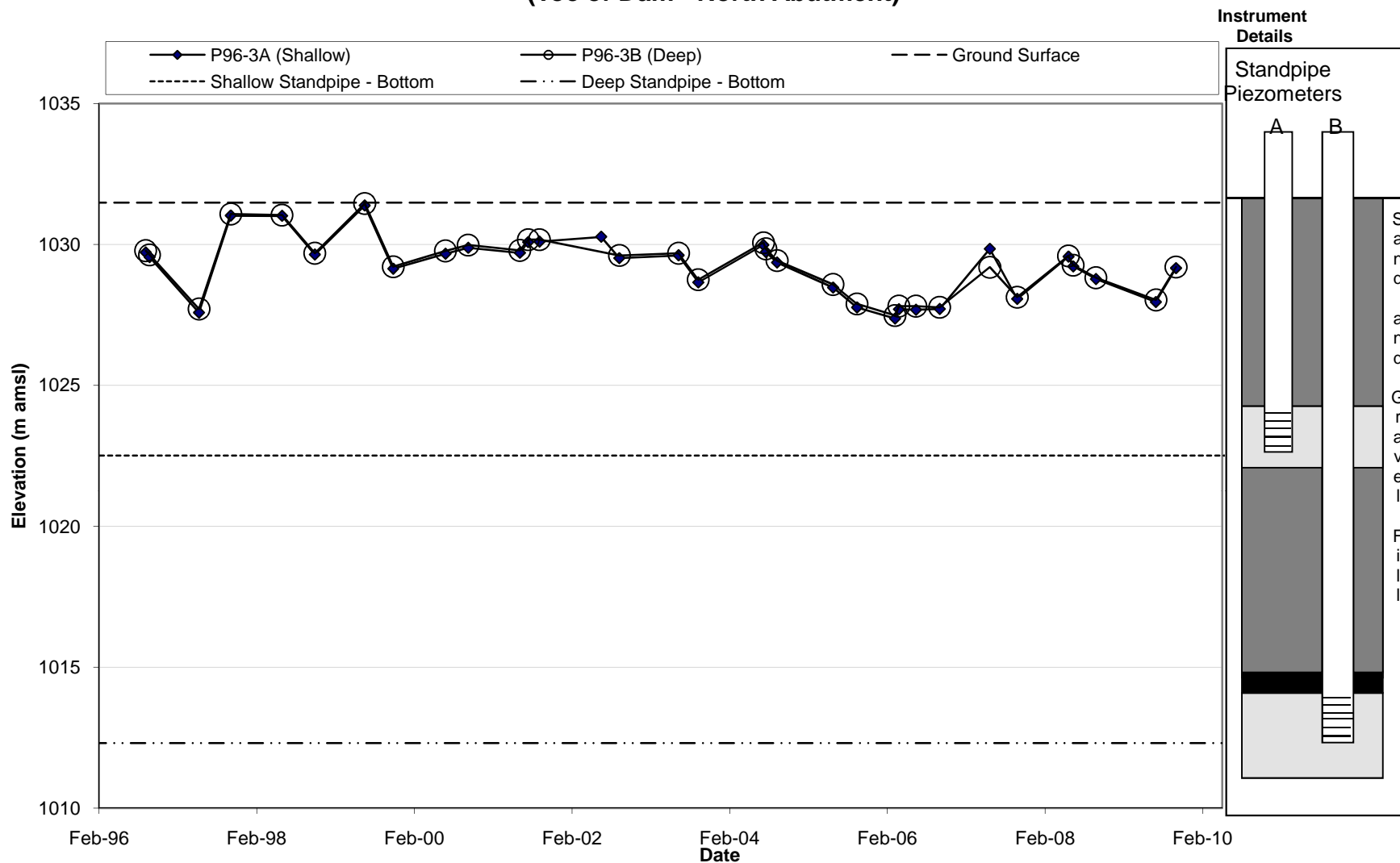
**INTERMEDIATE DAM  
 Piezometric Monitoring  
 P96-3A Monitoring Well (Robertson, 1996)  
 (Toe of Dam - North Abutment)**



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



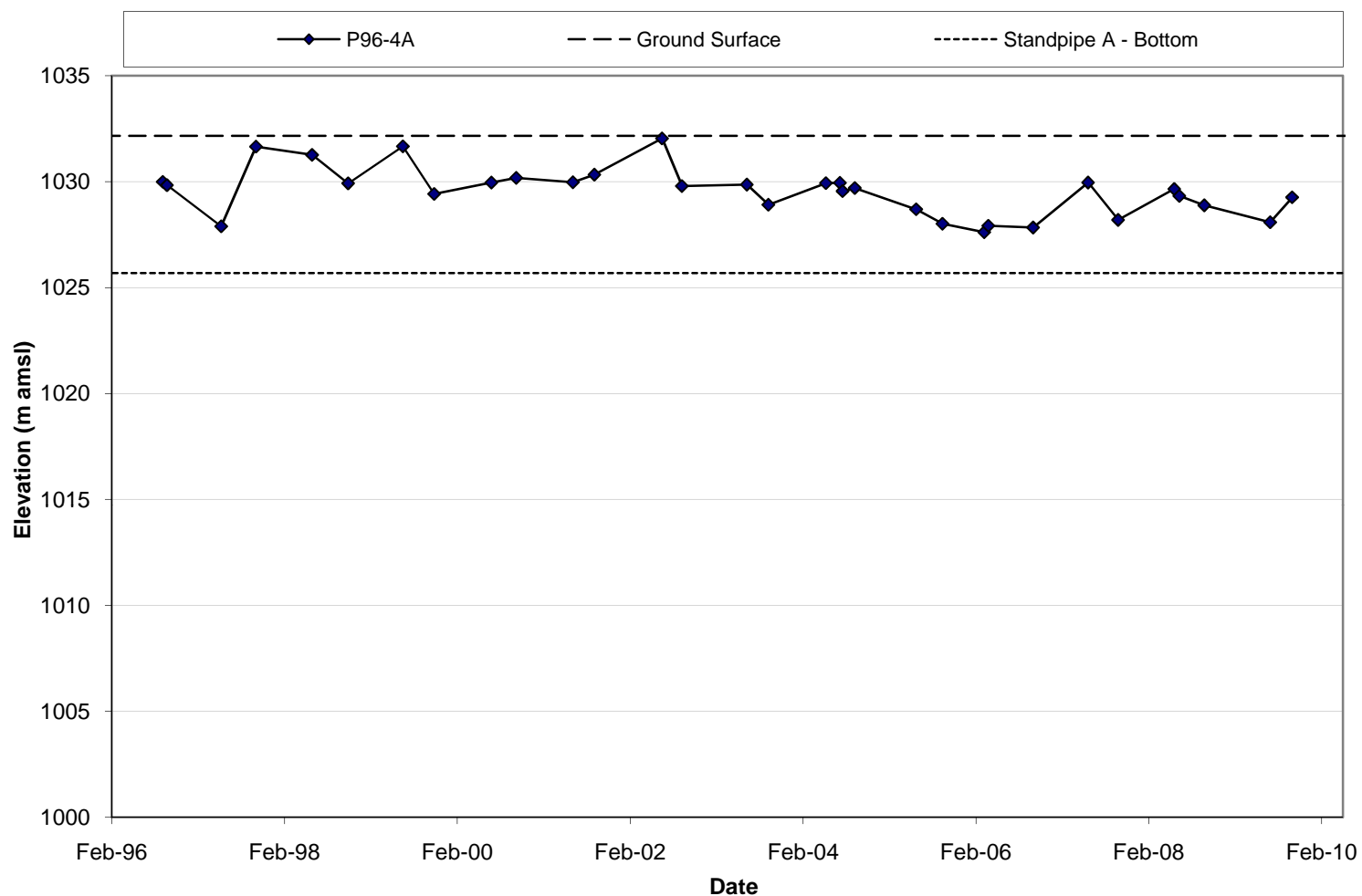
### INTERMEDIATE DAM Piezometric Monitoring P96-3 Monitoring Well (Robertson, 1996) (Toe of Dam - North Abutment)



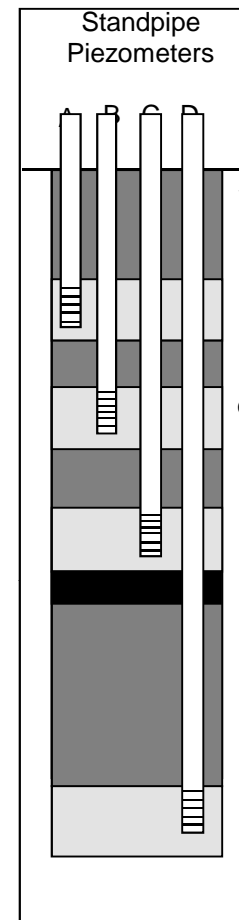
**Faro Mine Instrumentation  
Intermediate Dam**

<b>BH96-4</b>		<b>Location:</b>	Intermediate Dam Toe, near South Abutment		<b>2004 Stick Up - A (m):</b>	0.95			
		<b>Coordinates:</b>	8V580669 6914113		<b>2004 Stick Up - B (m):</b>	0.87			
<b>Surface Protector:</b>	N/A	<b>Date Installed:</b>	1996		<b>2004 Stick Up - C (m):</b>	0.91			
<b>Screened Interval A (m bgs):</b>	5.7-6.48	<b>Screened Interval - C (m bgs):</b>	14.97-16.47		<b>2004 Stick Up - D (m):</b>	0.88			
<b>Screened Interval B (m bgs):</b>	9.8-11.3	<b>Screened Interval - D (m bgs):</b>	26.84-28.34		<b>2004 Surface Elevation (m amsl):</b>	1032.16			
Date	Water level from top of pipe (m)				Piezometric Elevation (m amsl)				Comments
	A	B	C	D	A	B	C	D	
8-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		
6-Jun-97									
11-Jul-97		3.51				1029.54			
7-Oct-97	1.45	1.87	1.82		1031.65	1031.18	1031.18		
1-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									
8-Jun-99									
19-Jun-99	1.43	1.38	1.36	1.25	1031.67	1031.67	1031.64	1031.75	
3-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	
6-Jun-01	3.13	3.04	3.06	2.94	1029.97	1030.01	1029.94	1030.06	
15-Jul-01									
5-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			
5-Aug-02									
10-Sep-02	3.31	3.24	3.25	3.11	1029.80	1029.82	1029.75	1029.90	
4-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
8-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	
9-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
9-Mar-06	5.50	blocked	5.33	5.31	1027.61		1027.74	1027.73	b- bottom blocked
27-Mar-06	5.19	blocked	5.12	4.99	1027.92		1027.96	1028.05	b- bottom blocked, ice crystals on probe
14-Jun-06	2.66	3.75	0.40	4.98		1028.41		1028.06	b-bottom, C-bottom fine sand
2-Oct-06	5.28	3.75	5.20	5.07	1027.83	1028.41	1027.87	1027.97	
22-May-07	3.15	3.75	1.52	3.11	1029.96	1028.41	1031.55	1029.93	a, b and d- frozen no beep
26-Sep-07	4.92	3.74	4.84	4.71	1028.20	1028.42	1028.23	1028.34	b: dry
20-May-08	3.46	3.37	3.39	2.60	1029.65	1028.79	1029.68	1030.44	
11-Jun-08	3.79	3.70	3.72	3.60	1029.32	1028.46	1029.35	1029.44	
24-Sep-08	4.23	3.75	4.15	4.01	1028.88	1028.41	1028.92	1029.03	b: dry
29-Jun-09	5.03	3.77	4.93	4.80	1028.08	1028.39	1028.14	1028.24	b: no beep
30-Sep-09	3.85	3.77	3.77	2.65	1029.26	1028.39	1029.30	1030.39	

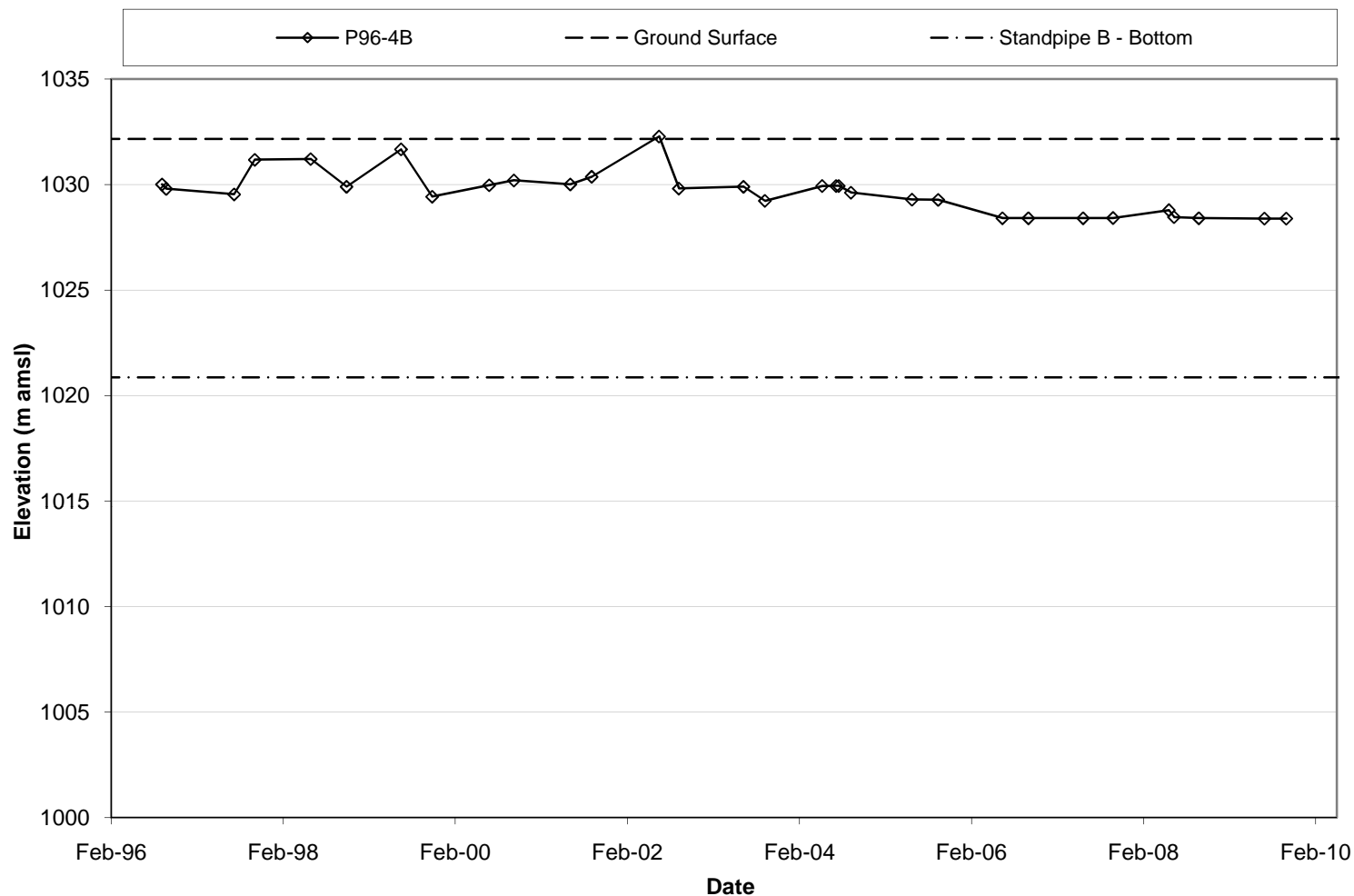
**INTERMEDIATE DAM  
 Piezometric Monitoring  
 P96-4A Monitoring Well (Robertson, 1996)  
 (Toe of Dam - South Abutment)**



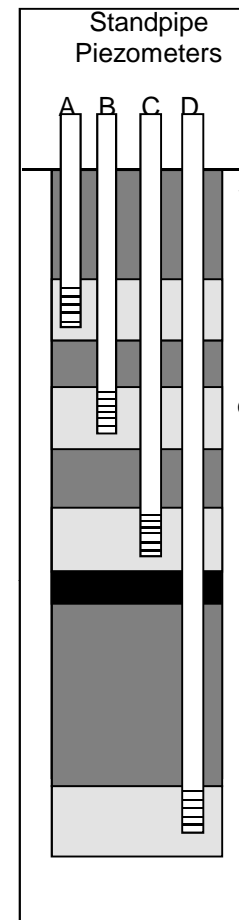
Instrument Details



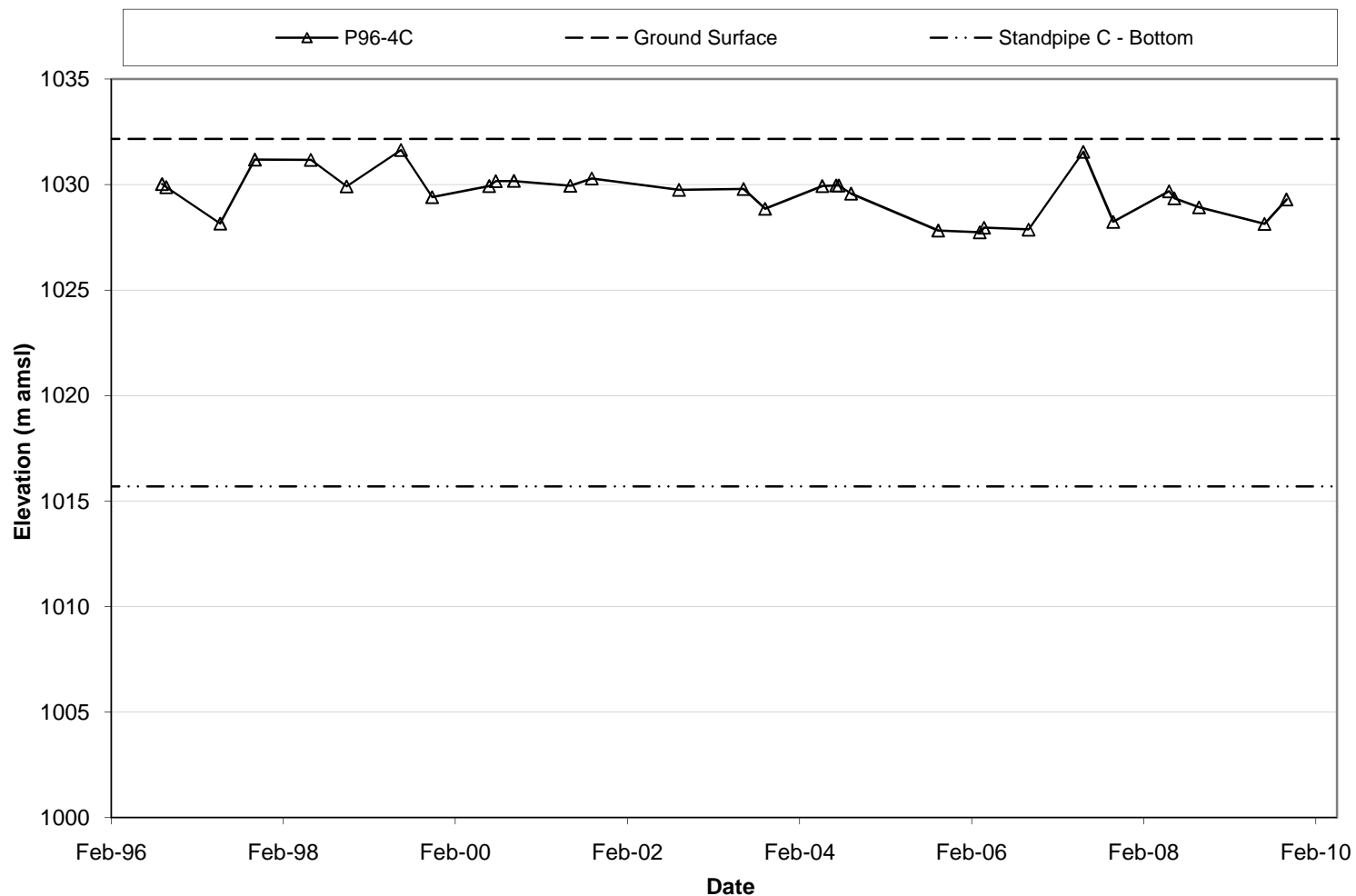
**INTERMEDIATE DAM  
 Piezometric Monitoring  
 P96-4B Monitoring Well (Robertson, 1996)  
 (Toe of Dam - South Abutment)**



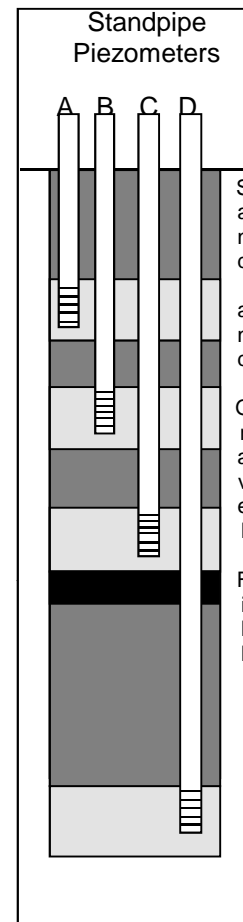
Instrument Details



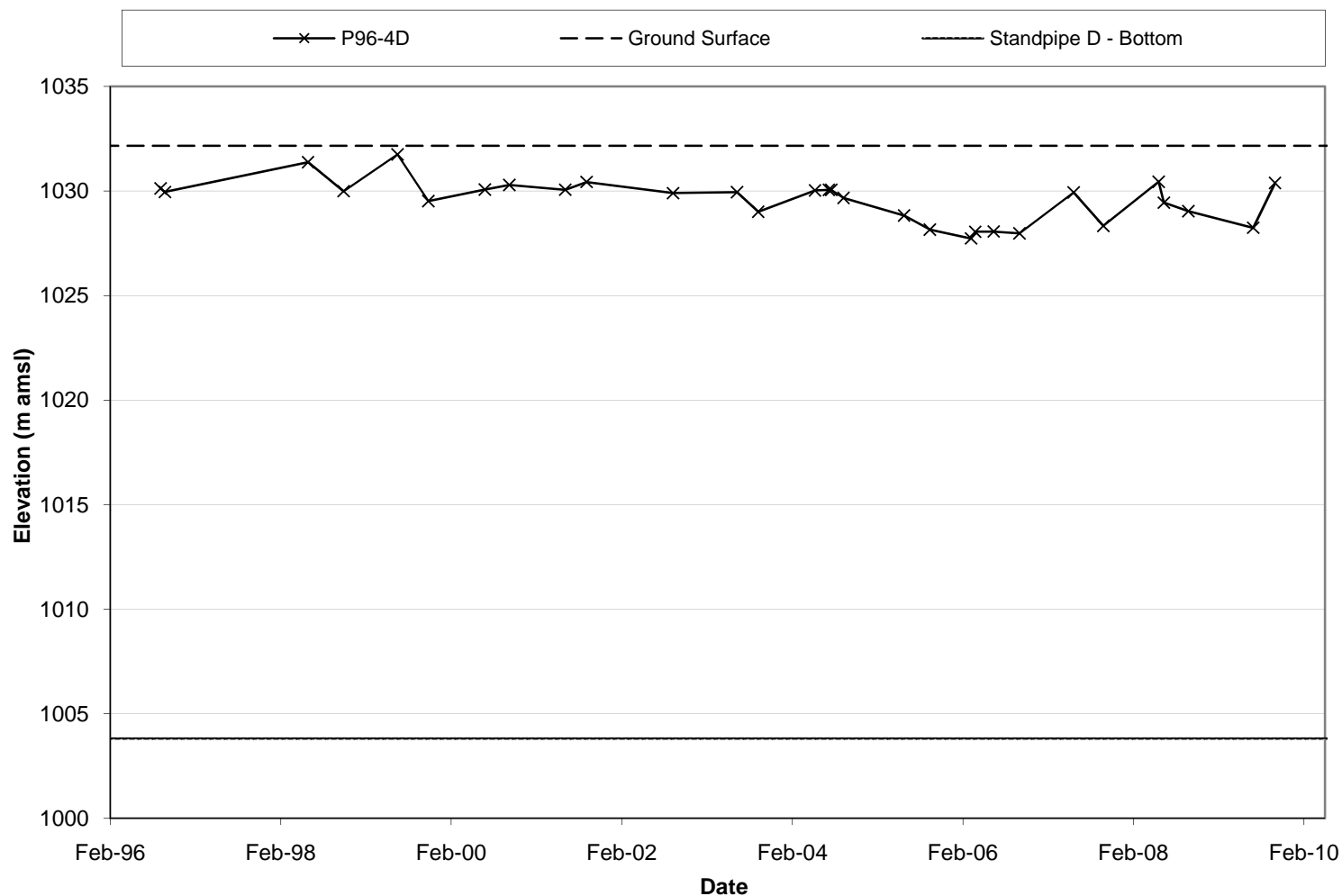
**INTERMEDIATE DAM  
 Piezometric Monitoring  
 P96-4C Monitoring Well (Robertson, 1996)  
 (Toe of Dam - South Abutment)**



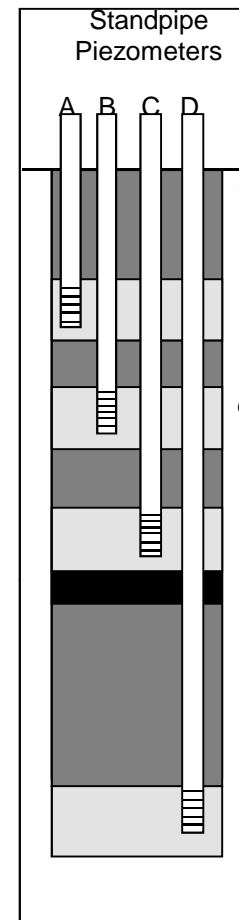
Instrument Details



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



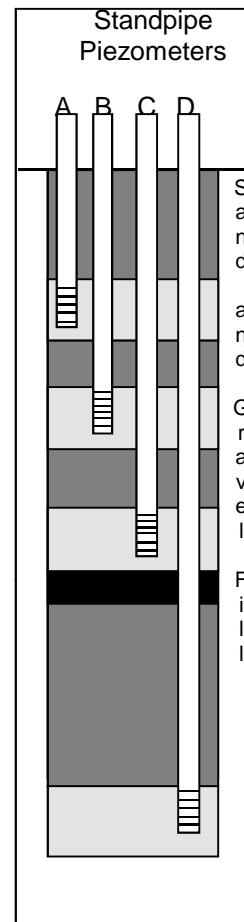
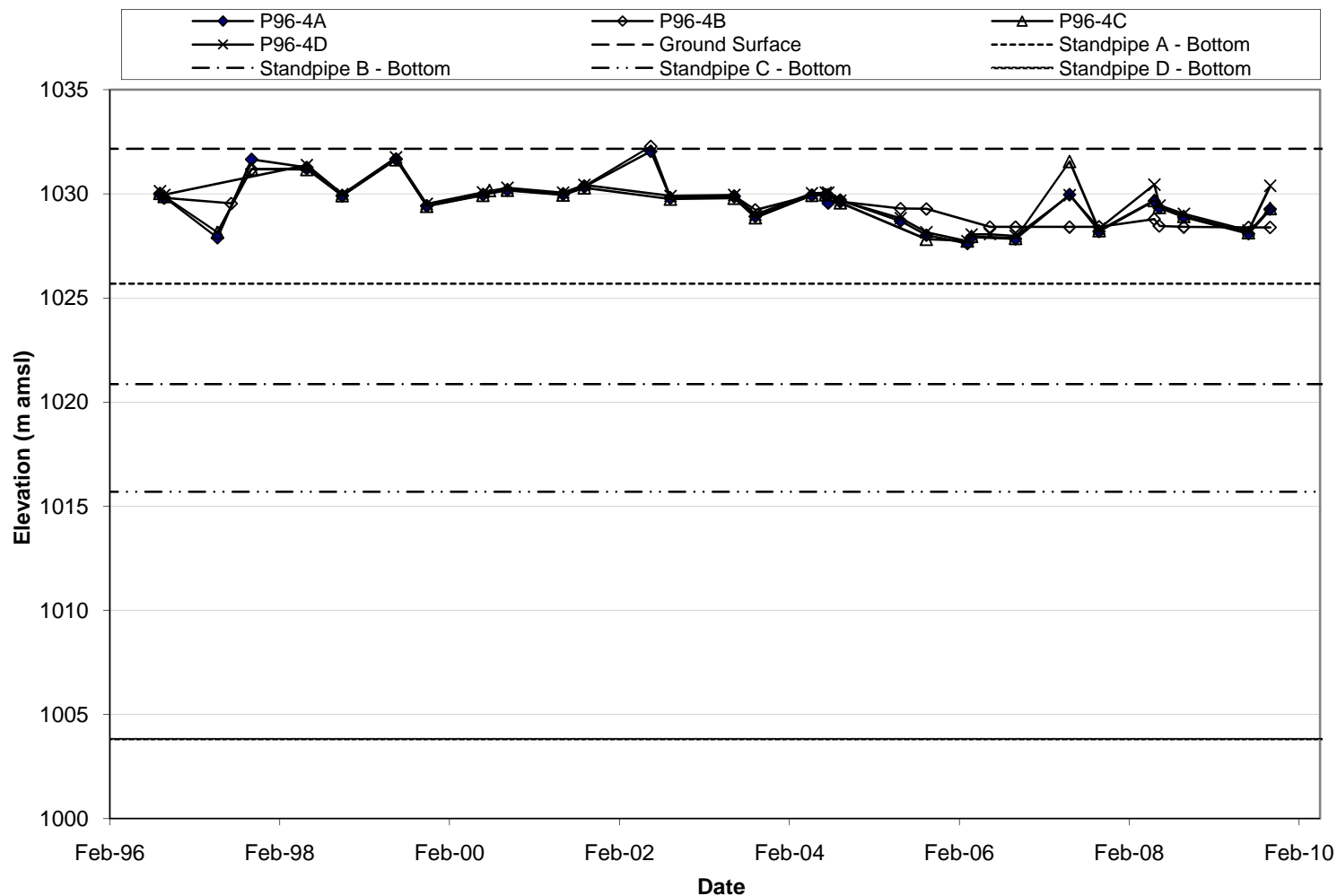
Instrument Details





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

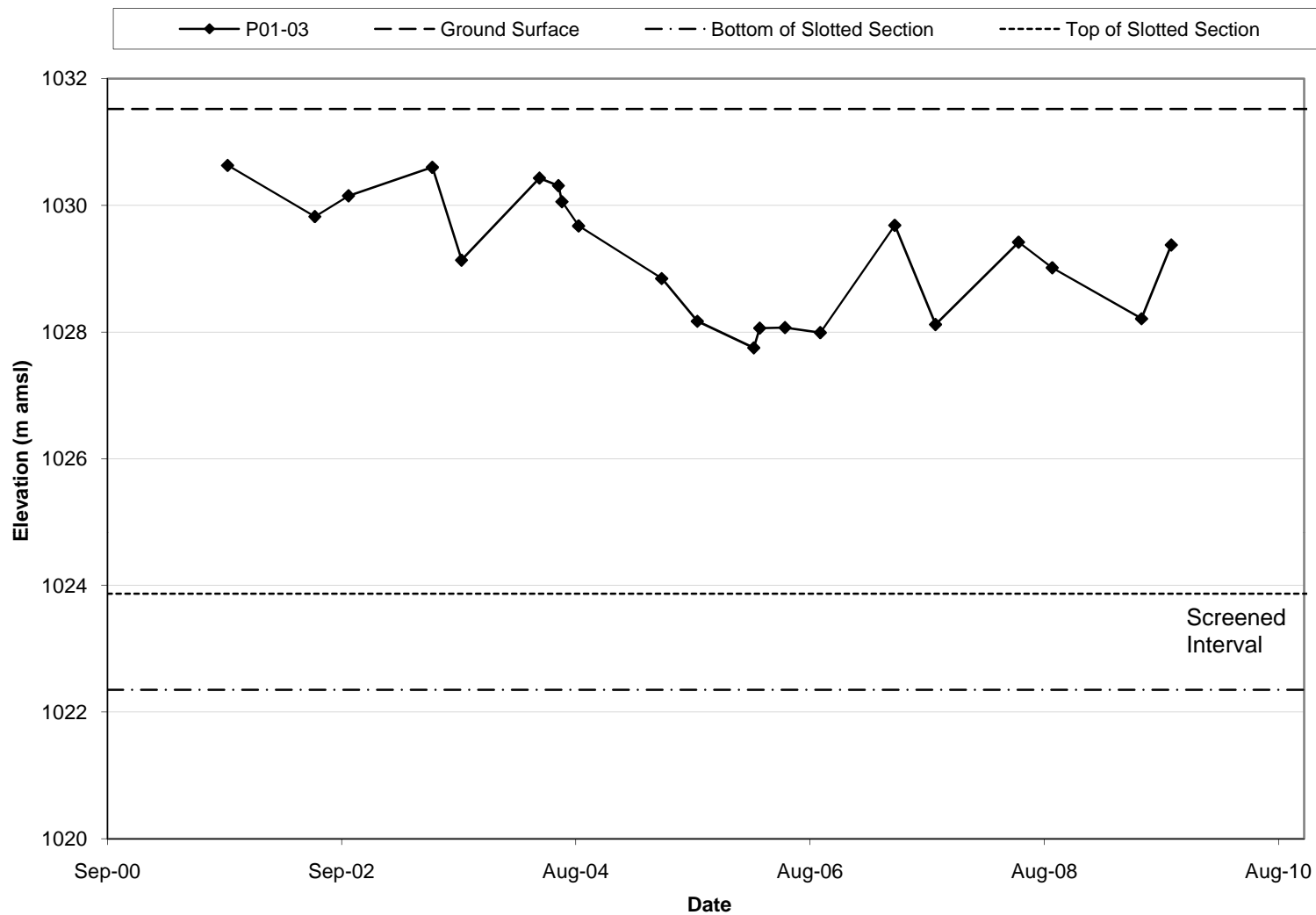
Instrument  
 Details



**Faro Mine Instrumentation  
Intermediate Dam**

<b>P01-03</b>		<b>Location:</b>	Intermediate Dam Toe	<b>2004 Stick-Up (m):</b>	0.61
		<b>Coordinates:</b>	8V580636 6914064	<b>2004 Surface Elevation ( m amsl):</b>	1031.52
<b>Surface Protector:</b>	yes	<b>Date Installed:</b>	1996	<b>Tip Elevation (m amsl):</b>	1022.35
				<b>Screened Interval (m bgs):</b>	7.78 - 9.30
<b>Date</b>		<b>Water level from top of pipe (m)</b>	<b>Piezometric Elevation (m amsl)</b>	<b>Pond El. (m amsl)</b>	<b>Comments</b>
11-Sep-01		1.58	1030.63		
10-Jun-02		2.39	1029.82		
23-Sep-02		2.06	1030.15	1047.19	
11-Jun-03		1.61	1030.60		
10-Sep-03		3.08	1029.14		
10-May-04		1.70	1030.43		2004 survey info used from here on
8-Jul-04		1.82	1030.31		
19-Jul-04		2.07	1030.06		
9-Sep-04		2.46	1029.68		Dirty, strong sulphur smell
26-May-05		3.29	1028.85		ph=6.7, temp=9.0C
14-Sep-05		3.96	1028.17		ph=6.8, temp=6.4C
9-Mar-06		4.38	1027.75		
27-Mar-06		4.07	1028.06		
14-Jun-06		4.06	1028.07		
2-Oct-06		4.14	1027.99		
22-May-07		2.45	1029.69	1046.78	No Beep, frozen
26-Sep-07		4.01	1028.12	1047.78	
20-May-08		1.85	1030.28		No Beep, frozen
11-Jun-08		2.71	1029.42		
24-Sep-08		3.12	1029.02		
29-Jun-09		3.92	1028.21	1046.48	
30-Sep-09		2.76	1029.37	1046.05	

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



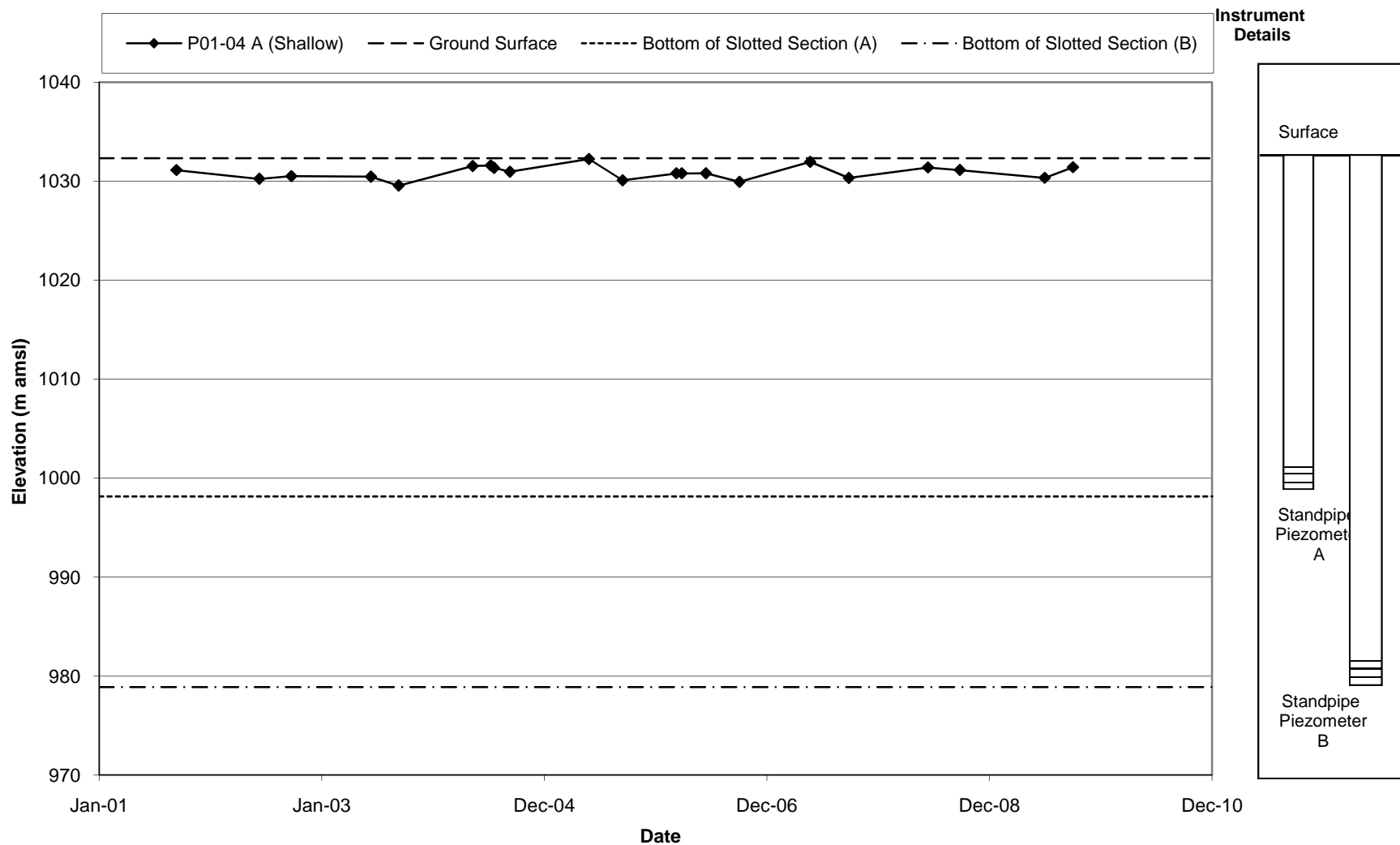
#### Instrument Details



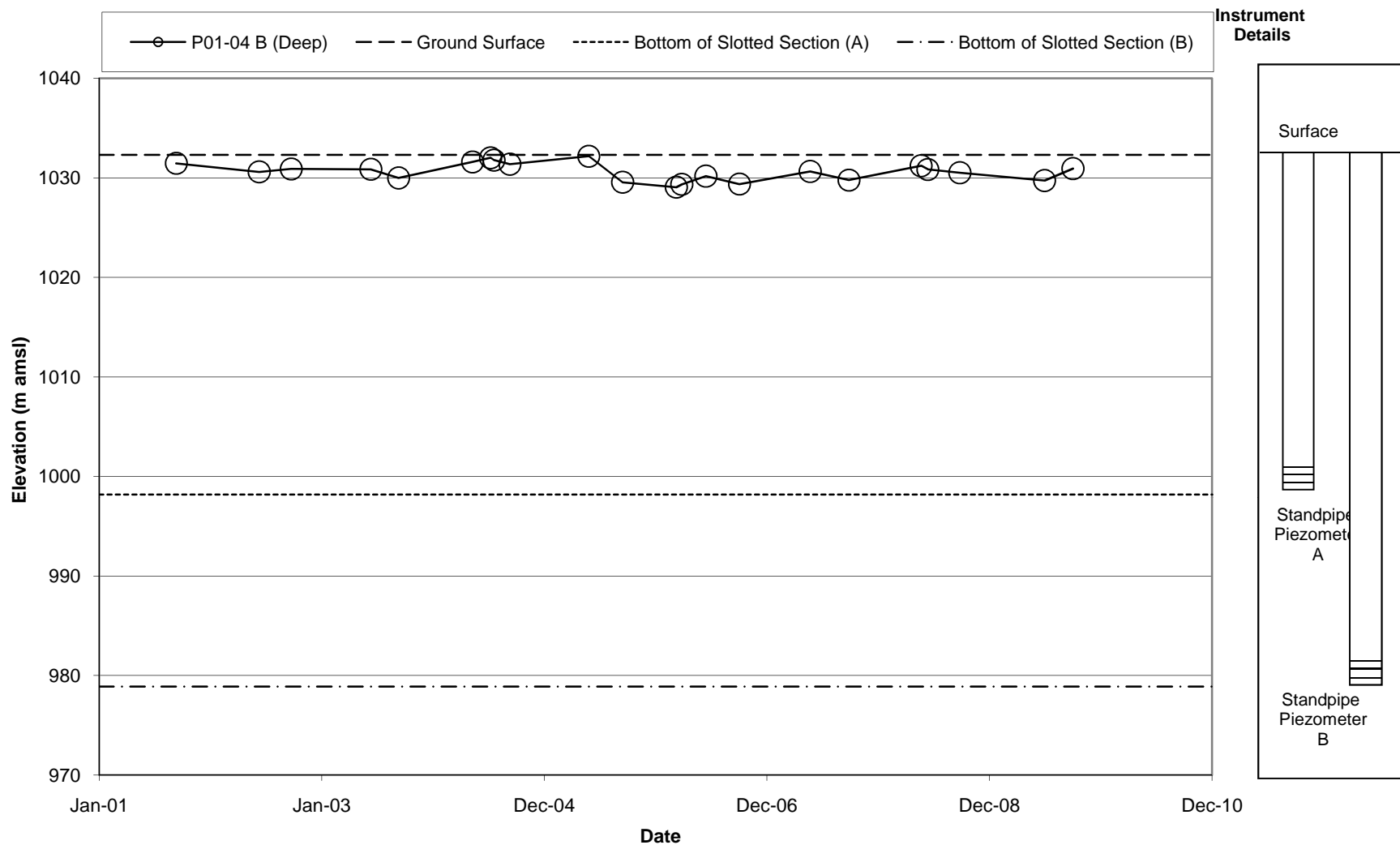
**Faro Mine Instrumentation  
Intermediate Dam**

<b>P01-04</b>		<b>Location:</b>	Intermediate Dam Toe	<b>2004 Stick Up - A (m):</b>	0.45
		<b>Coordinates:</b>	8V580489 6913888	<b>2004 Stick Up -B (m):</b>	0.45
<b>Surface Protector:</b>	yes	<b>Date Installed:</b>	1996	<b>2004 Surface Elevation ( m amsl):</b>	1032.32
		<b>Screened Interval -A (m bgs):</b>	31.7 - 33.22	<b>Tip Elevation - A (m amsl):</b>	998.17
		<b>Screened Interval - B (m bgs):</b>	51.0 - 52.5	<b>Tip Elevation - B (m amsl):</b>	978.89
<b>Date</b>	<b>Water level from top of pipe (m)</b>		<b>Piezometric Elevation (m amsl)</b>		<b>Comments</b>
	<b>A</b>	<b>B</b>	<b>A</b>	<b>B</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
8-Jul-04	1.18	0.76	1031.59	1032.02	
19-Jul-04	1.42	0.99	1031.35	1031.78	
9-Sep-04	1.83	1.40	1030.95	1031.37	
26-May-05	0.53	0.60	1032.24	1032.17	bottom, no beep
14-Sep-05	2.69	3.22	1030.08	1029.56	
9-Mar-06	1.99	3.71	1030.78	1029.06	
27-Mar-06	1.99	3.42	1030.78	1029.35	bottom
14-Jun-06	1.99	2.60	1030.79	1030.18	bottom
2-Oct-06	2.85	3.40	1029.92	1029.37	
22-May-07	0.82	2.13	1031.95	1030.64	a-beep, b-frozen no beep
26-Sep-07	2.45	3.00	1030.33	1029.77	
20-May-08	0.69	1.56	1032.09	1031.21	b-no beep, frozen
11-Jun-08	1.39	1.93	1031.38	1030.84	
24-Sep-08	1.65	2.26	1031.13	1030.51	
29-Jun-09	2.44	3.04	1030.33	1029.73	
30-Sep-09	1.37	1.85	1031.41	1030.93	

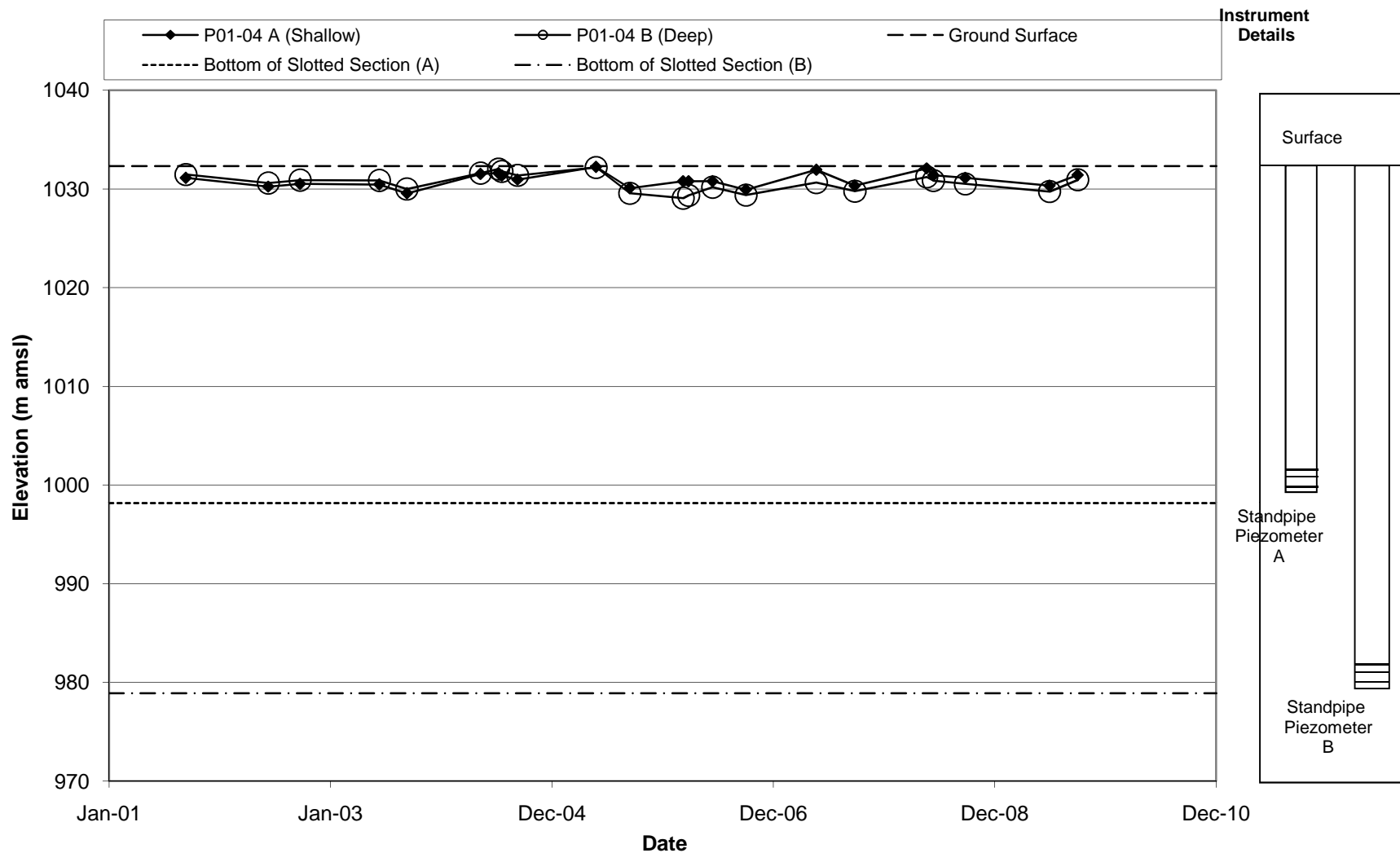
### INTERMEDIATE DAM Piezometric Monitoring P01-04A (2001 - GLL Monitoring Well)



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



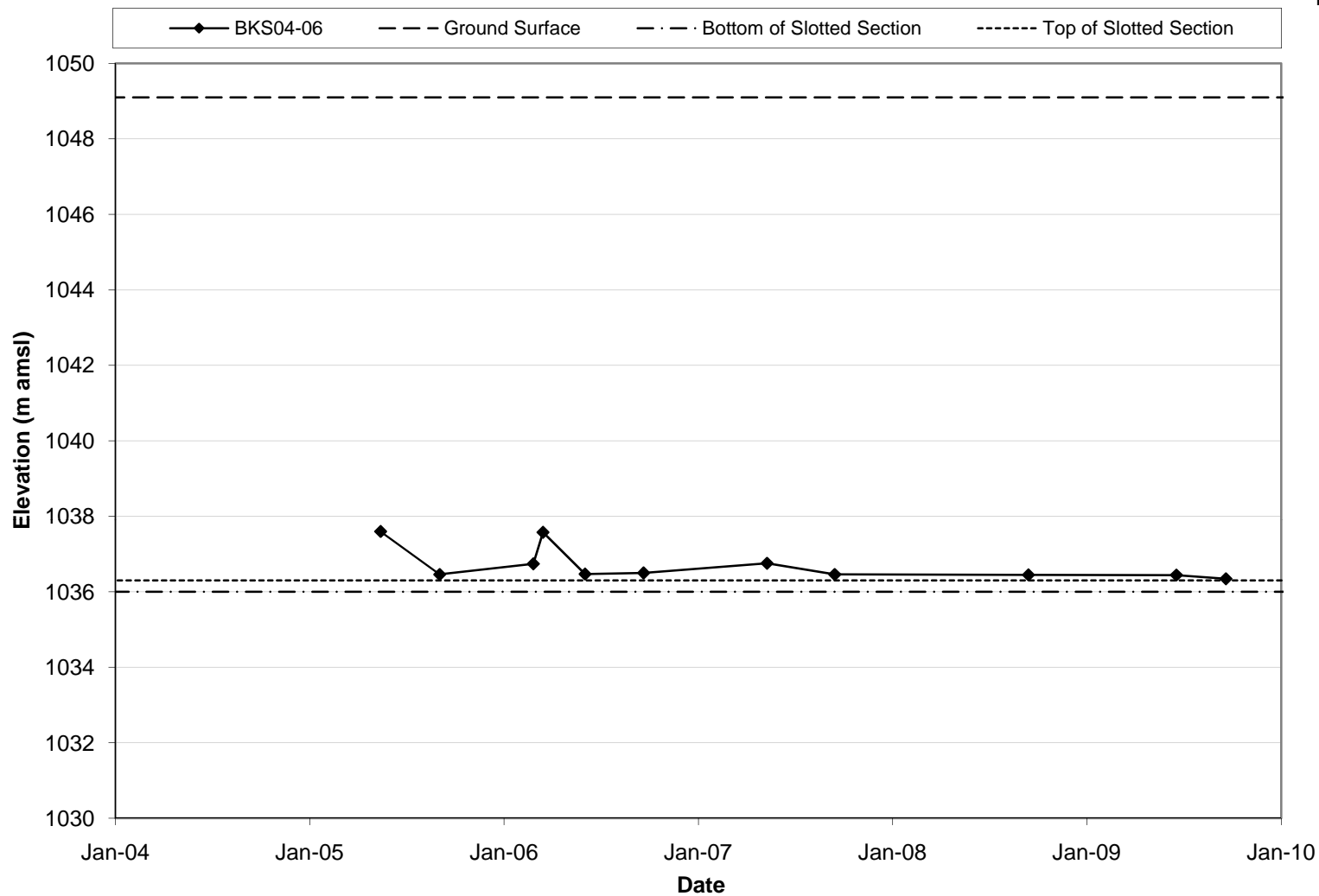
### INTERMEDIATE DAM Piezometric Monitoring P01-04 (2001 - GLL Monitoring Well)



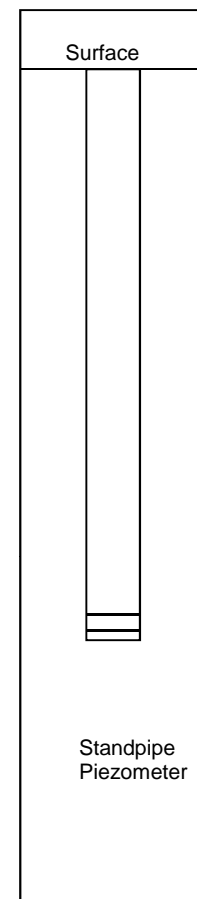
<b>BKS04-06</b>		<b>Location:</b>	Intermediate Dam South Abutment	<b>2004 Stick-Up (m):</b>	1.51
		<b>Coordinates:</b>	N 6913803 E 580454.9	<b>Tip Elevation (m amsl):</b>	1036.00
<b>Surface Protector:</b>	yes	<b>Date Installed:</b>	1996	<b>2004 Surface Elevation ( m amsl):</b>	1049.1
				<b>Screened Interval (m bgs):</b>	12.8 - 13.1
<b>Date</b>	<b>Water level from top of pipe (m)</b>		<b>Piezometric Elevation (m amsl)</b>	<b>Pond El. (m amsl)</b>	<b>Comments</b>
26-May-05	13.01		1037.60		
14-Sep-05	14.15		1036.46		bottom - no beep
9-Mar-06	13.87		1036.74		
27-Mar-06	13.04		1037.57		no beep
14-Jun-06	14.14		1036.47		sticky at 11.0m
2-Oct-06	14.11		1036.50		
22-May-07	13.86		1036.75	1046.78	Bottom no beep
26-Sep-07	14.15		1036.46		no beep
20-May-08	1.82				no beep
11-Jun-08	1.79				no beep
24-Sep-08	14.16		1036.45		no beep
29-Jun-09	14.17		1036.44		beeped
30-Sep-09	14.27		1036.34		no beep



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

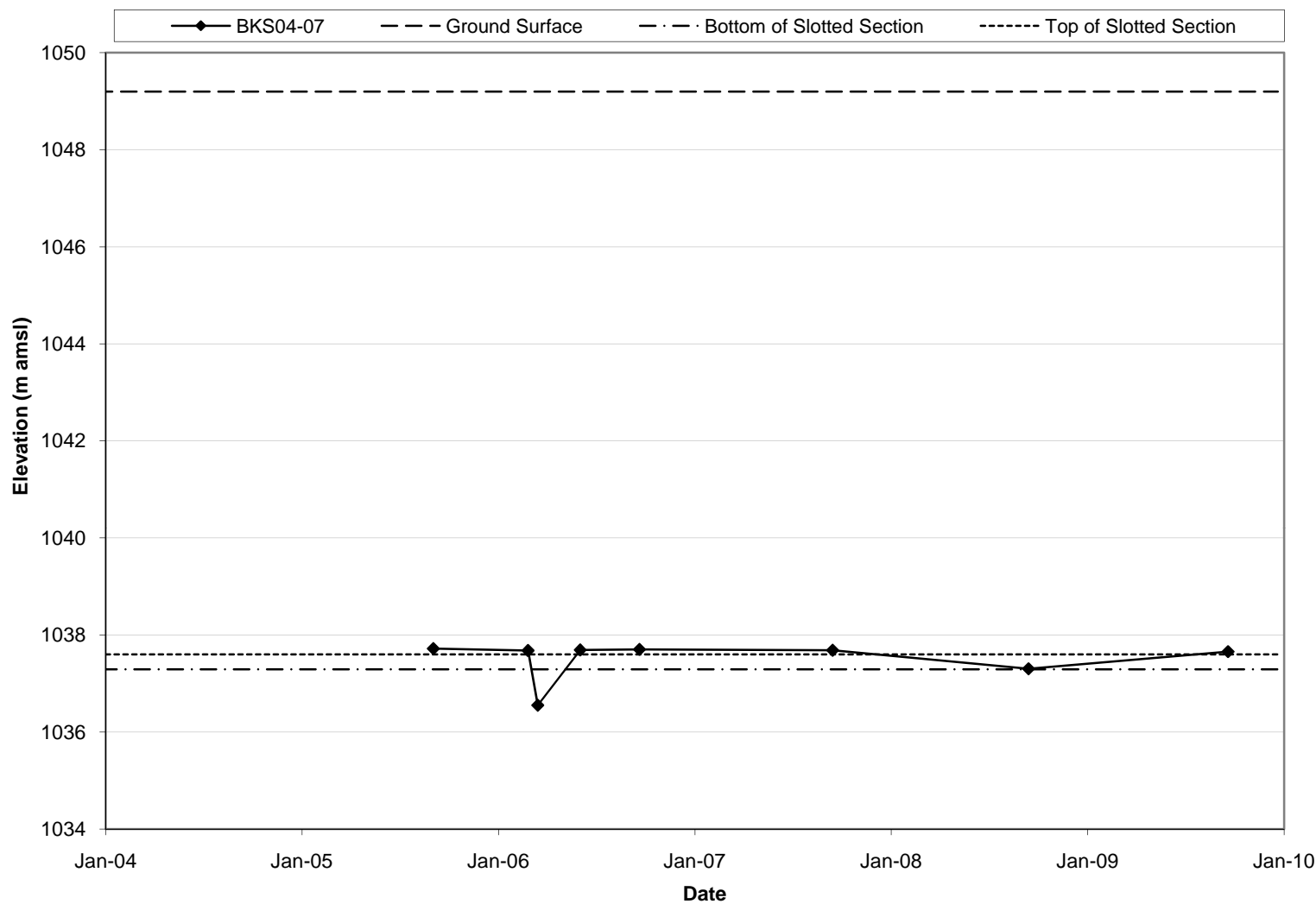


#### Instrument Details

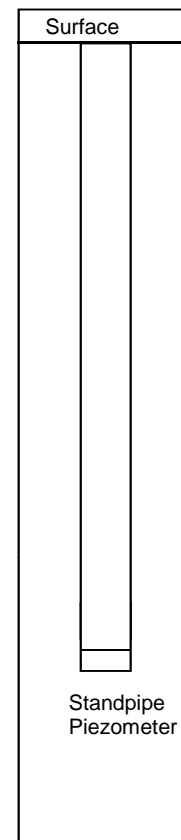


<b>BKS04-07</b>		<b>Location:</b>	Intermediate Dam South Abutment	<b>2004 Stick-Up (m):</b>	1.51
		<b>Coordinates:</b>	N 6913747 E 580407.6	<b>Tip Elevation (m amsl):</b>	1037.29
<b>Surface Protector:</b>	yes	<b>Date Installed:</b>	1996	<b>2004 Surface Elevation ( m amsl):</b>	1049.2
				<b>Screened Interval (m bgs):</b>	11.5 - 11.81
<b>Date</b>		<b>Water level from top of pipe (m)</b>	<b>Piezometric Elevation (m amsl)</b>	<b>Pond El. (m amsl)</b>	<b>Comments</b>
26-May-05		14.155			Impossible reading
14-Sep-05		12.99	1037.72		
9-Mar-06		13.03	1037.68		
27-Mar-06		14.16	1036.55		no beep
14-Jun-06		13.02	1037.69		sticky at 12.7 m
2-Oct-06		13.01	1037.70		
22-May-07		2.03		1046.78	no beep, frozen
26-Sep-07		13.025	1037.69	1047.78	
20-May-08		1.99			no beep
11-Jun-08		2.89			no beep
24-Sep-08		13.405	1037.31		
29-Jun-09		3.58			blocked
30-Sep-09		13.053	1037.66	1046.05	

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



#### Instrument Details



## CROSS VALLEY DAM

## **PIEZOMETERS**

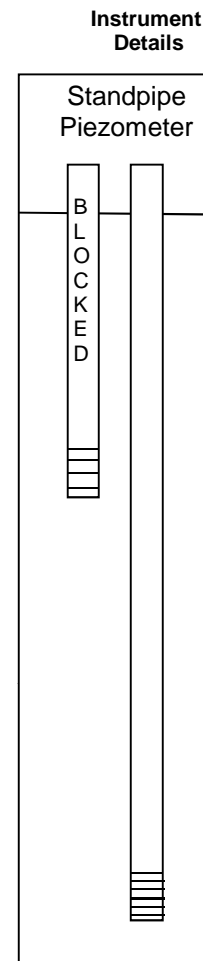
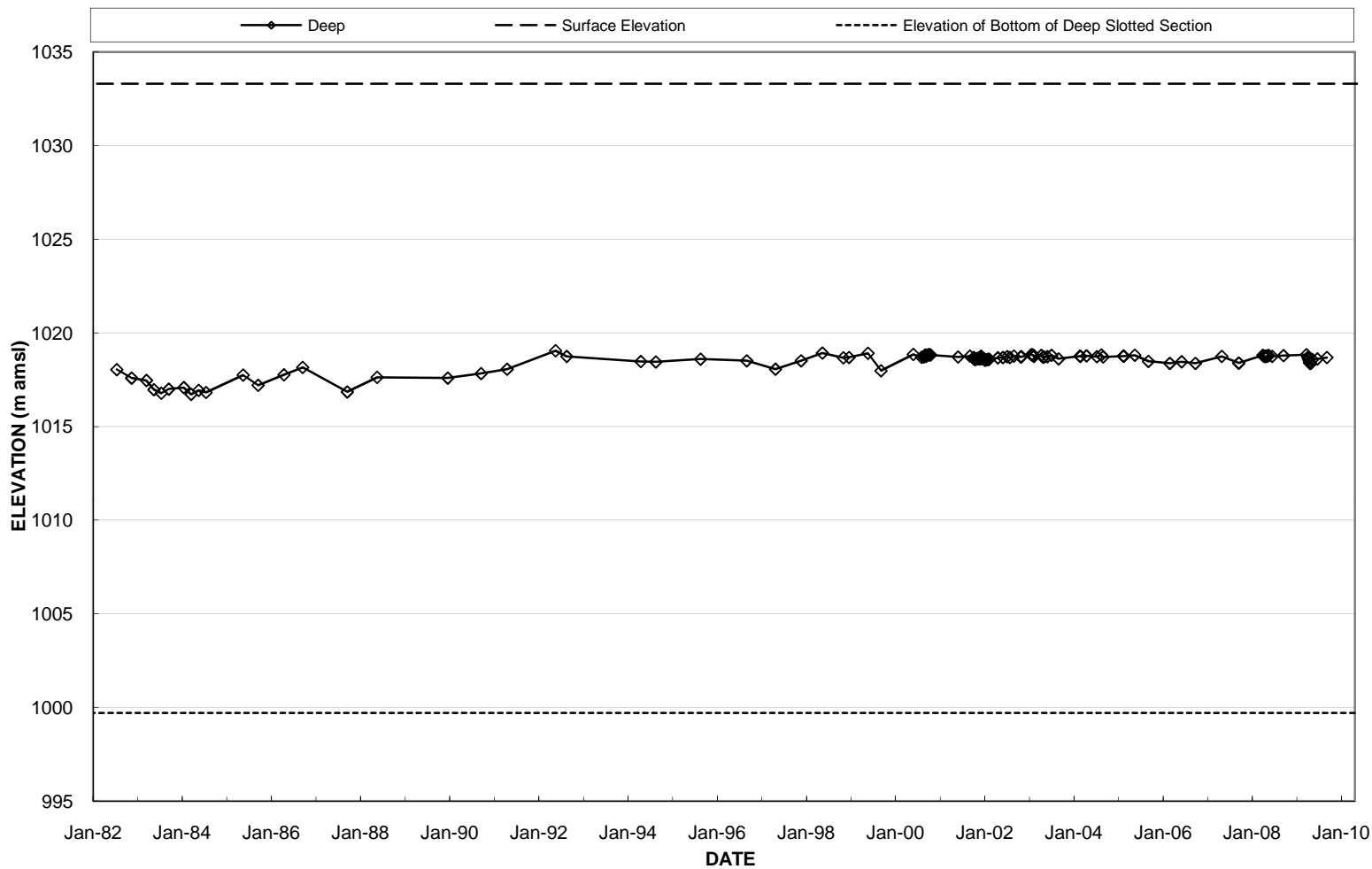
Faro Mine Instrumentation  
Cross Valley Dam

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
		Water Level from top of pipe (m)		Piezometric Elevation (m amsl)		Pond Elevation (m amsl)	Comments
Date		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	1029.92	
7-May-97			15.34		1018.06		
2-Dec-97			14.89		1018.51		shallow standpipe - dry
26-May-98			14.66		1018.92	1031.20	
13-Nov-98			14.91		1018.67	1029.80	
29-Dec-98			14.89		1018.69	1029.80	
3-Jun-99			14.67		1018.91	1031.40	
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	14.98		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	14.97		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		
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	14.90		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		

Faro Mine Instrumentation  
Cross Valley 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
		Water Level from top of pipe (m)		Piezometric Elevation (m amsl)		Pond Elevation (m amsl)	Comments
Date		Shallow	Deep	Shallow	Deep		
30-Jan-02		7.61	15.02			1018.56	
6-Feb-02		7.61	15.00			1018.58	
13-Feb-02		7.61	15.00			1018.58	
20-Feb-02		7.61	14.99			1018.59	
1-May-02		7.61	14.92			1018.67	
12-Jun-02		7.61	14.90			1018.69	
17-Jul-02		7.61	14.85			1018.74	
7-Aug-02		7.61	14.90			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	14.76			1018.83	
11-Feb-03		7.61	14.77			1018.82	start siphon
13-Feb-03		7.61	14.78			1018.80	
18-Feb-03		7.61	14.80			1018.78	
21-Feb-03		7.61	14.83			1018.75	1026.18
23-Apr-03		7.61	14.78			1018.80	
7-May-03		7.61	14.88			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	14.97			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	14.88			1018.73	
26-Aug-04		7.61	14.78			1018.83	
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	14.85			1018.76	
26-May-05		7.61	14.79			1018.81	
14-Sep-05		7.61	15.12			1018.48	
9-Mar-06		7.61	15.23			1018.38	
14-Jun-06		7.61	15.14			1018.46	
4-Oct-06		7.61	15.23			1018.38	1027.47
9-May-07		7.61	14.86			1018.75	1029.30
24-Sep-07		7.61	15.21			1018.39	1030.30
25-Sep-07		7.61	15.21			1018.39	1031.30
9-Apr-08		7.61	14.79			1018.81	1030.30
14-Apr-08		7.61	14.82			1018.78	1029.93
21-Apr-08		7.61	14.85			1018.75	1029.63
28-Apr-08		7.61	14.86			1018.74	1029.25
5-May-08		7.61	14.86			1018.74	1029.43
12-May-08		7.61	14.83			1018.77	1029.36
20-May-08		7.61	14.83			1018.78	1029.34
26-May-08		7.61	14.81			1018.79	1029.28
24-Jun-08		7.61	14.85			1018.75	1028.64
24-Sep-08		7.61	14.82			1018.79	1028.50
31-Mar-09		7.61	14.76			1018.84	1029.60
13-Apr-09		7.61	14.91			1018.70	1028.16
16-Apr-09		7.61	14.95			1018.65	1027.74
20-Apr-09		7.61	15.04			1018.57	1027.72
23-Apr-09		7.61	15.15			1018.45	1027.49
27-Apr-09		7.61	15.20			1018.40	1027.27
30-Apr-09		7.61	15.23			1018.38	1027.16
5-May-09		7.61	15.23			1018.38	1027.23
19-May-09		7.61	15.03			1018.58	1027.83
29-Jun-09		7.61	14.99			1018.61	1027.67
15-Sep-09		7.61	14.92			1018.68	1028.36

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





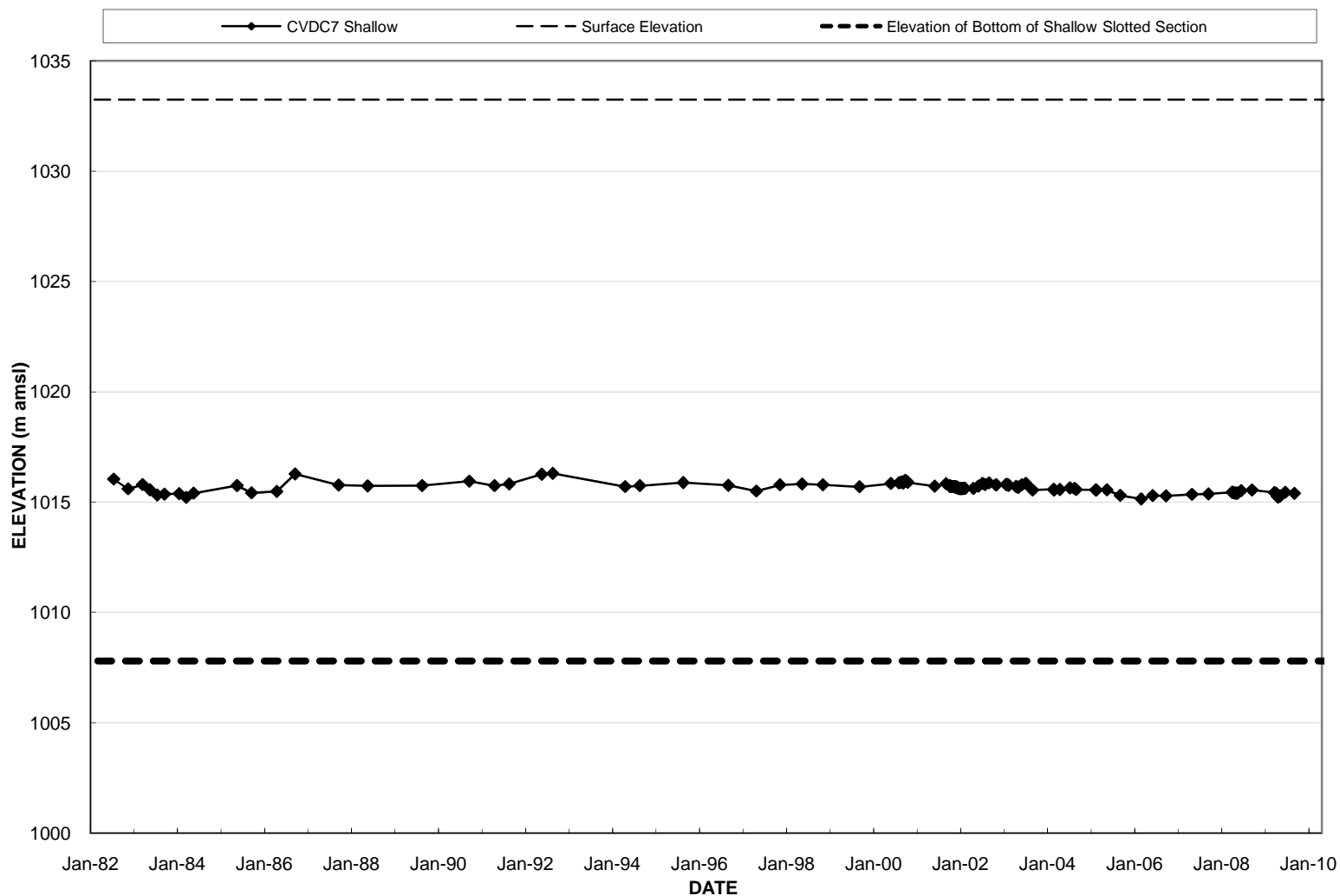
Faro Mine Instrumentation  
Cross Valley Dam

CVDC-7		Location:		2004 Ground		2004 Shallow	2004 Deep
		Cross Valley Dam Crest St.0+450		Elevation (m amsl): 1033.24			
Surface Protector:		Coordinates:		2004 Shallow Tip		2004 Shallow	2004 Deep
yes		8V580158 6914127		Elevation (m amsl): 1007.80			
Date Installed:		Date		Deep Tip		2004 Deep	
1981		1981		Elevation (m amsl): 1002.90		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	15.50	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		17.99	15.50	1015.71	1018.17		
5-Nov-01		17.99	15.51	1015.70	1018.16		
6-Nov-01		17.99	15.51	1015.70	1018.16		
8-Nov-01		17.99	15.51	1015.70	1018.15		
12-Nov-01		18.00	15.51	1015.69	1018.15		
15-Nov-01		18.00	15.51	1015.69	1018.15		
19-Nov-01		18.00	15.51	1015.69	1018.15		
21-Nov-01		17.99	15.50	1015.70	1018.17		
23-Nov-01		17.99	15.50	1015.70	1018.17		pond elev approx - 8 ft.
26-Nov-01		18.00	15.50	1015.69	1018.17		daytime temp -34 C
28-Nov-01		18.00	15.50	1015.69	1018.16		
30-Nov-01		18.01	15.50	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	15.50	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		

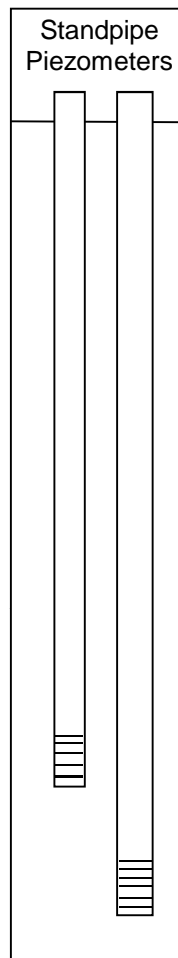
Faro Mine Instrumentation  
Cross Valley Dam

CVDC-7		Location:		2004 Ground Elevation (m amsl):		2004 Shallow stick-up (m):		2004 Deep stick-up (m):		
		Coordinates:		2004 Shallow Tip Elevation (m amsl):		2004 Deep Tip Elevation (m amsl):				
Surface Protector:	yes	Date Installed:	1981							
		Water Level from top of pipe (m)		Piezometric Elevation (m amsl)		Pond Elevation (m amsl)		Comments		
Date		Shallow	Deep	Shallow	Deep					
6-Feb-02		18.08	15.62	1015.62	1018.04					
13-Feb-02		18.07	15.60	1015.62	1018.06					
20-Feb-02		18.08	15.60	1015.62	1018.06					
1-May-02		18.07	15.60	1015.62	1018.06			Water being discharged from the polishing pond		
12-Jun-02		17.98	15.35	1015.72	1018.31					
17-Jul-02		17.85	15.23	1015.84	1018.44					
7-Aug-02		17.90	15.35	1015.79	1018.31					
9-Sep-02		17.82	15.17	1015.88	1018.49					
4-Nov-02		17.91	15.36	1015.78	1018.30					
10-Nov-02		17.91	15.36	1015.78	1018.31					
30-Jan-03		17.90	15.24	1015.80	1018.43					
9-Feb-03		17.90	15.25	1015.79	1018.42			start siphon		
11-Feb-03		17.91	15.26	1015.79	1018.40					
13-Feb-03		17.91	15.28	1015.78	1018.38					
18-Feb-03		17.93	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					
7-May-03		18.01	15.47	1015.68	1018.19					
16-May-03		18.01	15.46	1015.68	1018.21					
11-Jun-03		17.91	15.33	1015.78	1018.33					
15-Jul-03		17.84	15.21	1015.85	1018.46					
10-Sep-03		18.00	15.59	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		18.00	15.46	1015.55	1018.01					
26-Apr-04		17.98	15.40	1015.57	1018.07					
19-Jul-04		17.91	15.33	1015.64	1018.14					
26-Aug-04		17.93	15.34	1015.62	1018.13					
9-Sep-04		17.99	15.50	1015.56	1017.97					
22-Feb-05		18.00	15.43	1015.55	1018.04					
23-Feb-05		18.00	15.45	1015.55	1018.02			smells like old oil		
24-Feb-05		18.00	15.48	1015.55	1017.99					
26-May-05		17.99	15.58	1015.56	1017.89			milky on probe		
14-Sep-05		18.25	16.04	1015.30	1017.43					
9-Mar-06		18.41	16.30	1015.14	1017.17					
14-Jun-06		18.26	16.03	1015.29	1017.44					
4-Oct-06		18.27	16.10	1015.28	1017.37	1027.47				
9-May-07		18.20	15.80	1015.35	1017.67	1029.295				
24-Sep-07		18.19	15.97	1015.36	1017.50	1030.295				
9-Apr-08		18.11	15.55	1015.44	1017.92	1030.300				
14-Apr-08		18.11	15.61	1015.44	1017.86	1029.930				
21-Apr-08		18.12	15.70	1015.43	1017.77	1029.625				
28-Apr-08		18.13	15.76	1015.42	1017.71	1029.250				
5-May-08		18.14	15.72	1015.41	1017.75	1029.433				
12-May-08		18.14	15.71	1015.41	1017.76	1029.362				
20-May-08		18.14	15.75	1015.41	1017.72	1029.340				
26-May-08		18.15	15.76	1015.40	1017.71	1029.276				
24-Jun-08		18.03	15.60	1015.52	1017.87	1028.638				
24-Sep-08		18.00	15.65	1015.55	1017.82	1028.504				
31-Mar-09		18.12	15.70	1015.43	1017.77	1029.596				
13-Apr-09		18.16	16.00	1015.39	1017.47	1028.164				
16-Apr-09		18.19	16.06	1015.36	1017.41	1027.744				
20-Apr-09		18.22	16.14	1015.33	1017.33	1027.716				
23-Apr-09		18.28	16.19	1015.27	1017.28	1027.487				
27-Apr-09		18.31	16.26	1015.24	1017.21	1027.273				
30-Apr-09		18.32	16.28	1015.23	1017.19	1027.159				
5-May-09		18.31	16.25	1015.24	1017.22	1027.229				
19-May-09		18.27	16.15	1015.28	1017.32	1027.831				
29-Jun-09		18.11	15.91	1015.44	1017.56	1027.668				
15-Sep-09		18.16	15.92	1015.39	1017.55	1028.360				

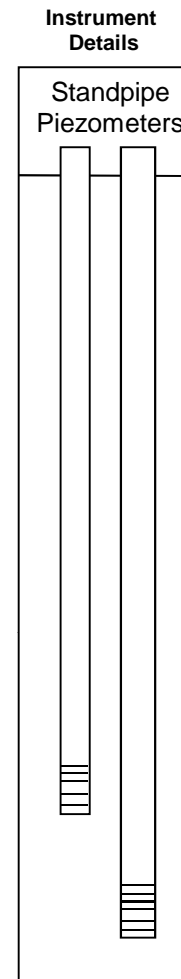
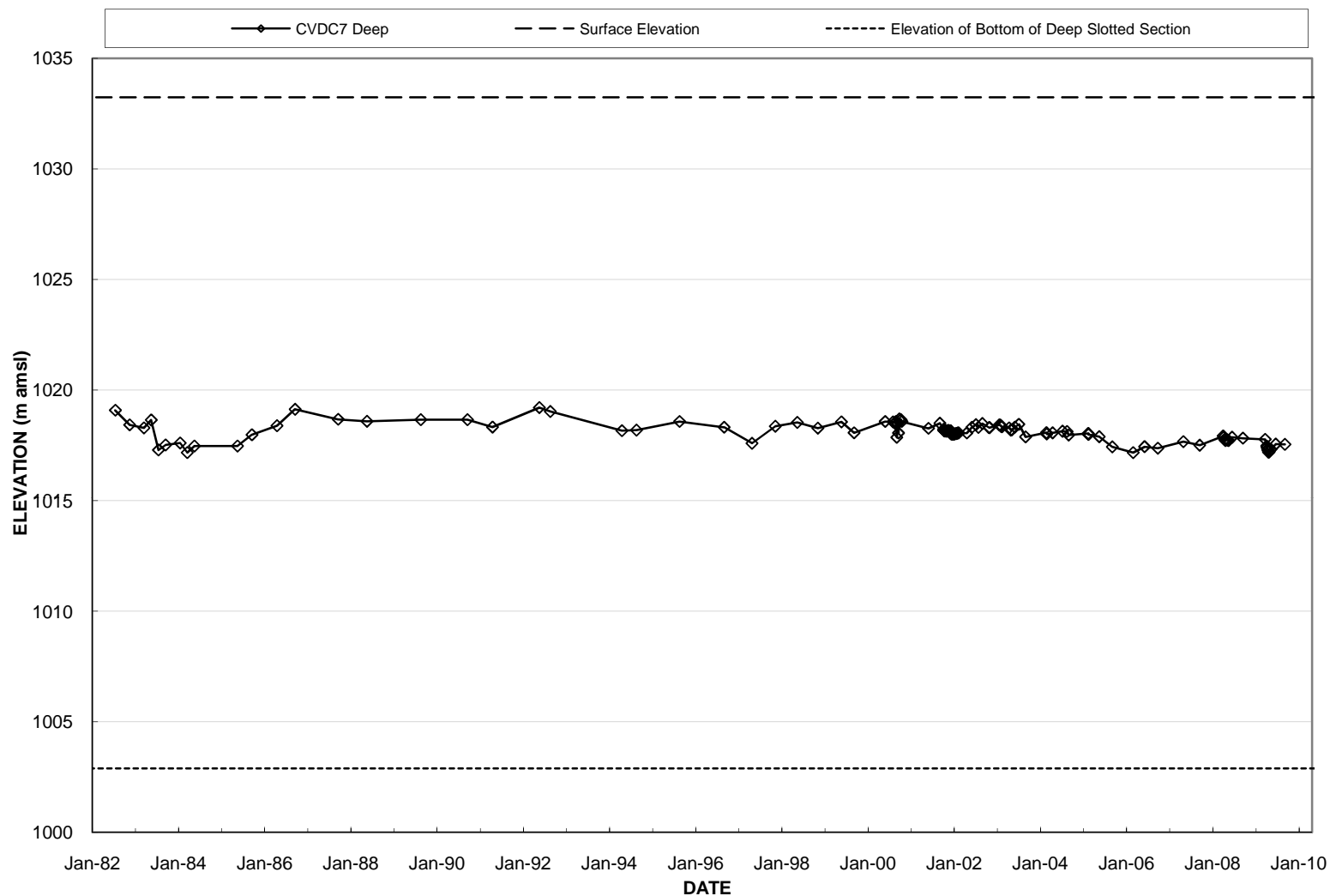
### CROSS VALLEY DAM Piezometric Monitoring CVDC-7 Shallow Standpipe Piezometer (Dam Crest)



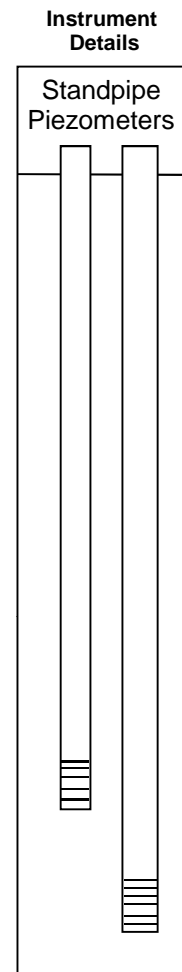
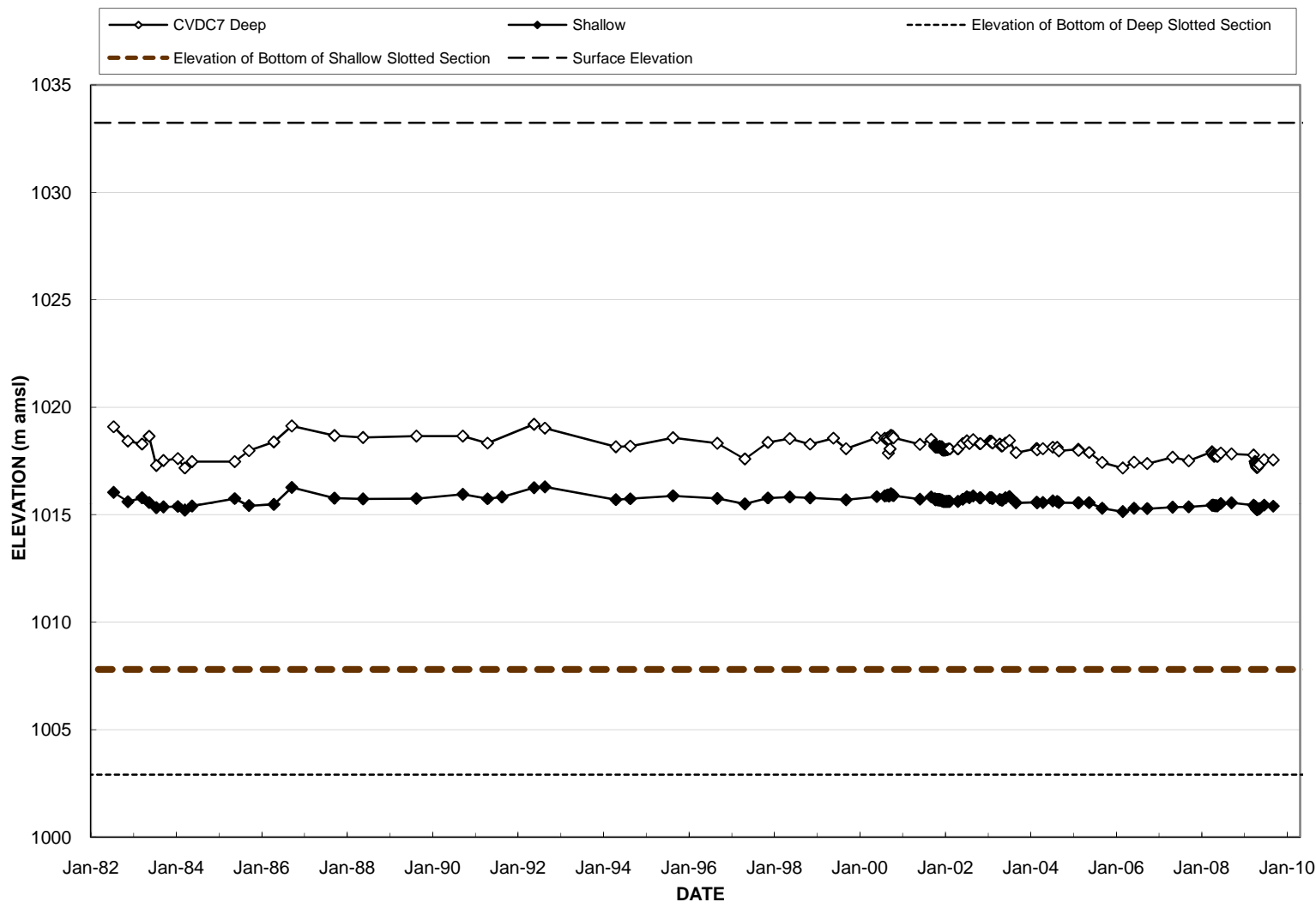
#### Instrument Details



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



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



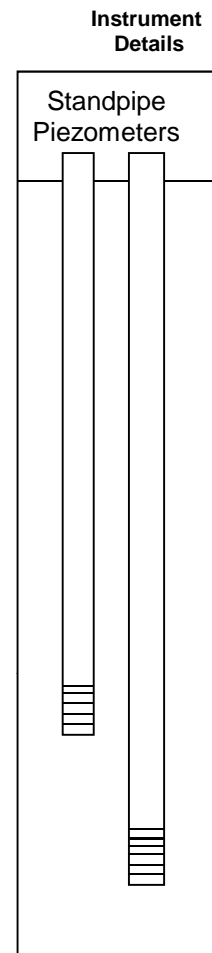
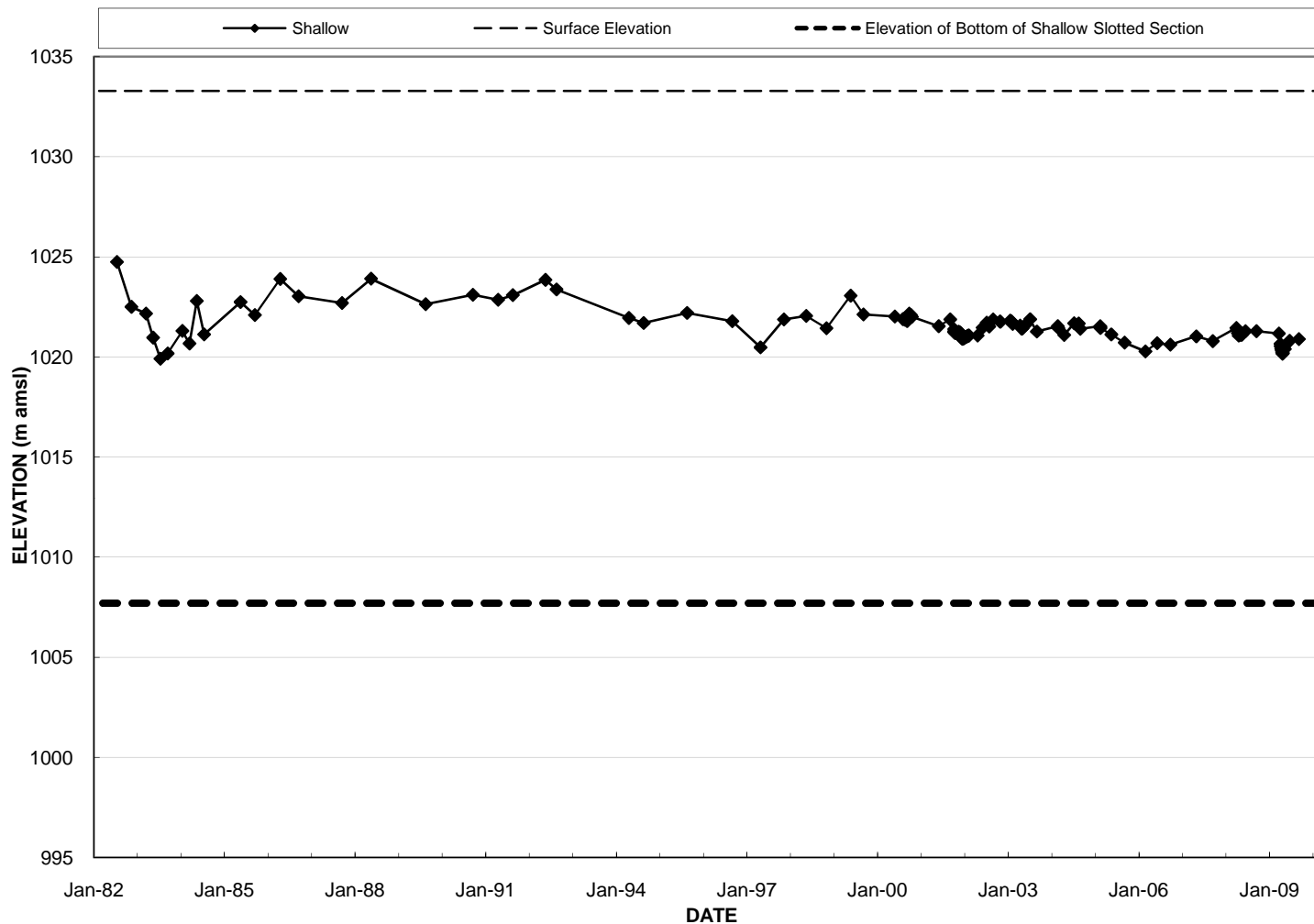
**Faro Mine Instrumentation  
Cross Valley Dam**

CVDC-9		Location:		2004 Ground Elevation (m amsl):			
		Cross Valley Dam Crest St.0+565		1033.28			
		Coordinates:		2004 Shallow Tip Elevation (m amsl):		2004 Shallow stick-up (m):	
		8V580096 6913998		1007.70		0.27	
Surface Protector:		Date Installed:		2004 Deep Tip Elevation (m amsl):		2004 Deep stick-up (m):	
yes		1981		1000.70		0.19	
Date		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	1022.69	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		10.56	8.87	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	10.20	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		12.41	10.34	1021.22	1023.21		
1-Nov-01		12.40	10.32	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	10.30	1021.21	1023.25		
12-Nov-01		12.42	10.30	1021.20	1023.26		
15-Nov-01		12.42	10.29	1021.20	1023.27		
19-Nov-01		12.39	10.22	1021.23	1023.33		
21-Nov-01		12.37	10.19	1021.25	1023.36		
23-Nov-01		12.37	10.17	1021.25	1023.38		
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		12.39	10.17	1021.24	1023.38		
3-Dec-01		12.40	10.19	1021.22	1023.36		
5-Dec-01		12.42	10.20	1021.20	1023.35		
12-Dec-01		12.44	10.20	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		12.70	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		

Faro Mine Instrumentation  
Cross Valley Dam

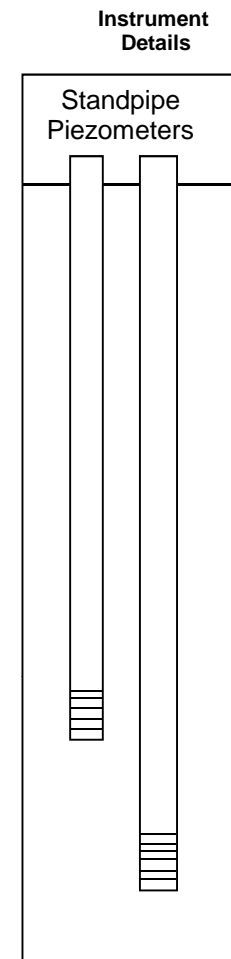
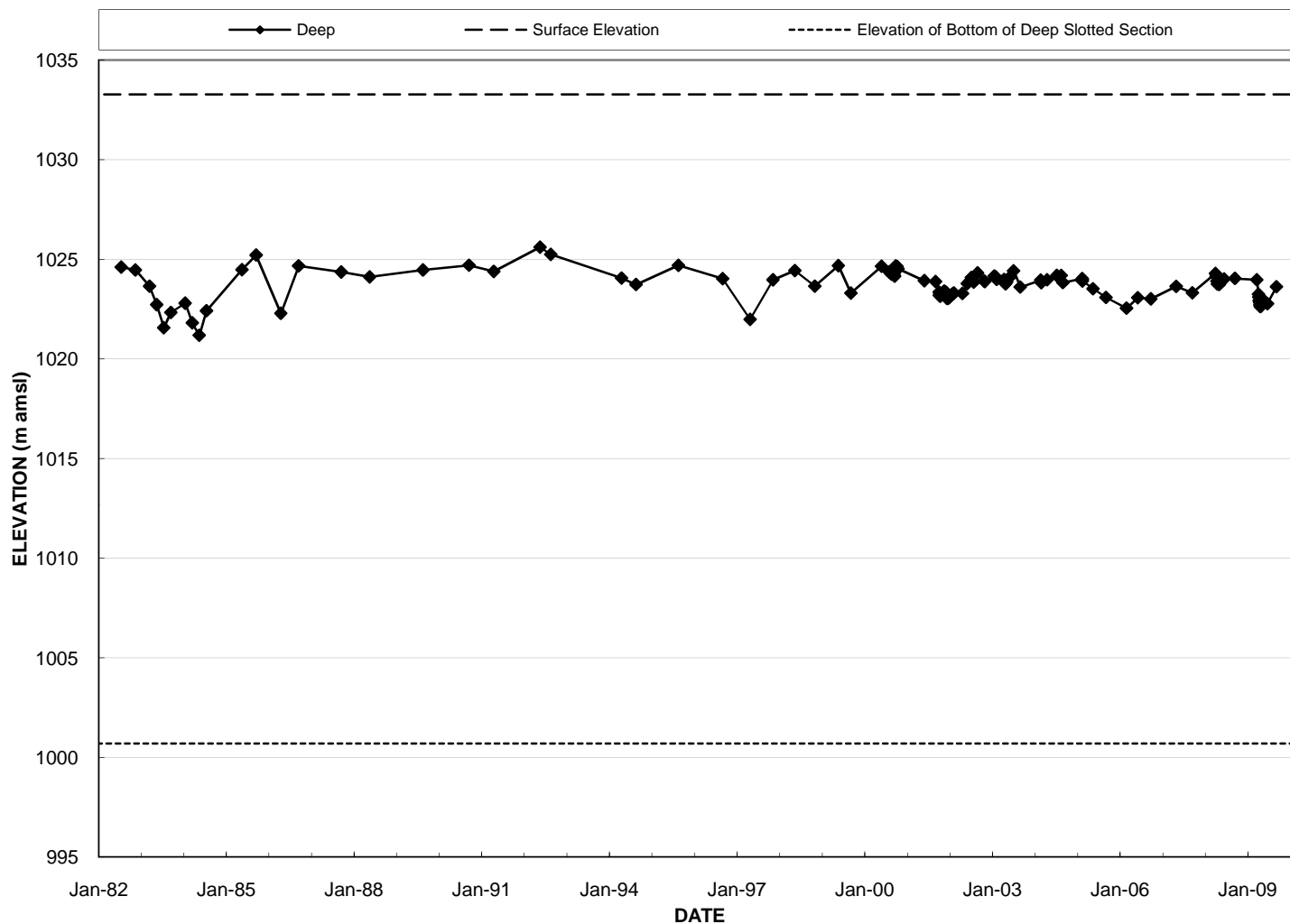
CVDC-9		Location:		2004 Ground Elevation (m amsl):			
		Cross Valley Dam Crest St.0+565		1033.28			
		Coordinates:		2004 Shallow Tip Elevation (m amsl):		2004 Shallow stick-up (m):	
		8V580096 6913998		1007.70		0.27	
Surface Protector:	yes	Date Installed:	1981	2004 Deep Tip Elevation (m amsl):		2004 Deep stick-up (m):	
				1000.70		0.19	
Date		Water Level below top of pipe (m)		Piezometric Elevation (m amsl)		Pond Elevation (m amsl)	Comments
		Shallow	Deep	Shallow	Deep		
23-Jan-02		12.62	10.36	1021.00	1023.19		
30-Jan-02		12.60	10.33	1021.02	1023.22		
6-Feb-02		12.59	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		12.16	9.77	1021.47	1023.78		
17-Jul-02		11.91	9.47	1021.71	1024.09		
7-Aug-02		12.10	9.71	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	9.67	1021.76	1023.89		
30-Jan-03		11.81	9.40	1021.82	1024.16		
9-Feb-03		11.84	9.42	1021.78	1024.13		start siphon
11-Feb-03		11.87	9.46	1021.75	1024.10		
13-Feb-03		11.91	9.50	1021.71	1024.05		
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		12.06	9.57	1021.57	1023.99		
7-May-03		12.21	9.78	1021.41	1023.77		
16-May-03		12.18	9.70	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		12.36	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	9.50	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		
22-Feb-05		12.02	9.44	1021.53	1024.03		
23-Feb-05		12.06	9.49	1021.49	1023.99		
24-Feb-05		12.11	9.56	1021.44	1023.92		
26-May-05		12.43	9.95	1021.12	1023.52		
14-Sep-05		12.83	10.39	1020.72	1023.09		
9-Mar-06		13.27	10.93	1020.28	1022.54		
14-Jun-06		12.86	10.40	1020.69	1023.07		
4-Oct-06		12.94	10.46	1020.62	1023.02	1027.468	
9-May-07		12.52	9.83	1021.03	1023.64	1029.295	
24-Sep-07		12.76	10.15	1020.79	1023.32	1030.295	
9-Apr-08		12.10	9.18	1021.45	1024.29	1030.300	
14-Apr-08		12.19	9.33	1021.36	1024.15	1029.930	
21-Apr-08		12.37	9.57	1021.18	1023.90	1029.625	
28-Apr-08		12.49	9.73	1021.06	1023.75	1029.250	
5-May-08		12.44	9.66	1021.11	1023.81	1029.433	
12-May-08		12.44	9.74	1021.12	1023.73	1029.362	
20-May-08		12.45	9.64	1021.11	1023.84	1029.340	
26-May-08		12.44	9.59	1021.11	1023.89	1029.276	
24-Jun-08		12.26	9.46	1021.29	1024.02	1028.638	
24-Sep-08		12.26	9.44	1021.29	1024.04	1028.504	
31-Mar-09		12.39	9.50	1021.17	1023.97	1029.596	
13-Apr-09		12.90	10.23	1020.65	1023.25	1028.164	
16-Apr-09		13.02	10.38	1020.54	1023.10	1027.744	
20-Apr-09		13.14	10.55	1020.42	1022.92	1027.716	
23-Apr-09		13.22	10.64	1020.33	1022.83	1027.487	
27-Apr-09		13.34	10.77	1020.22	1022.70	1027.273	
30-Apr-09		13.39	10.85	1020.16	1022.63	1027.159	
5-May-09		13.36	10.82	1020.19	1022.66	1027.229	
19-May-09		13.16	10.48	1020.39	1022.99	1027.831	
29-Jun-09		12.75	10.70	1020.81	1022.77	1027.668	
15-Sep-09		12.66	9.85	1020.89	1023.62	1028.360	

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



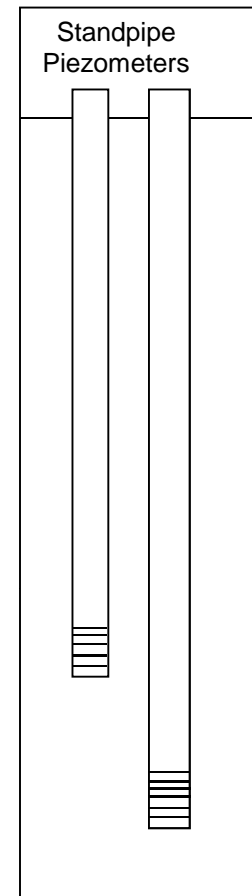
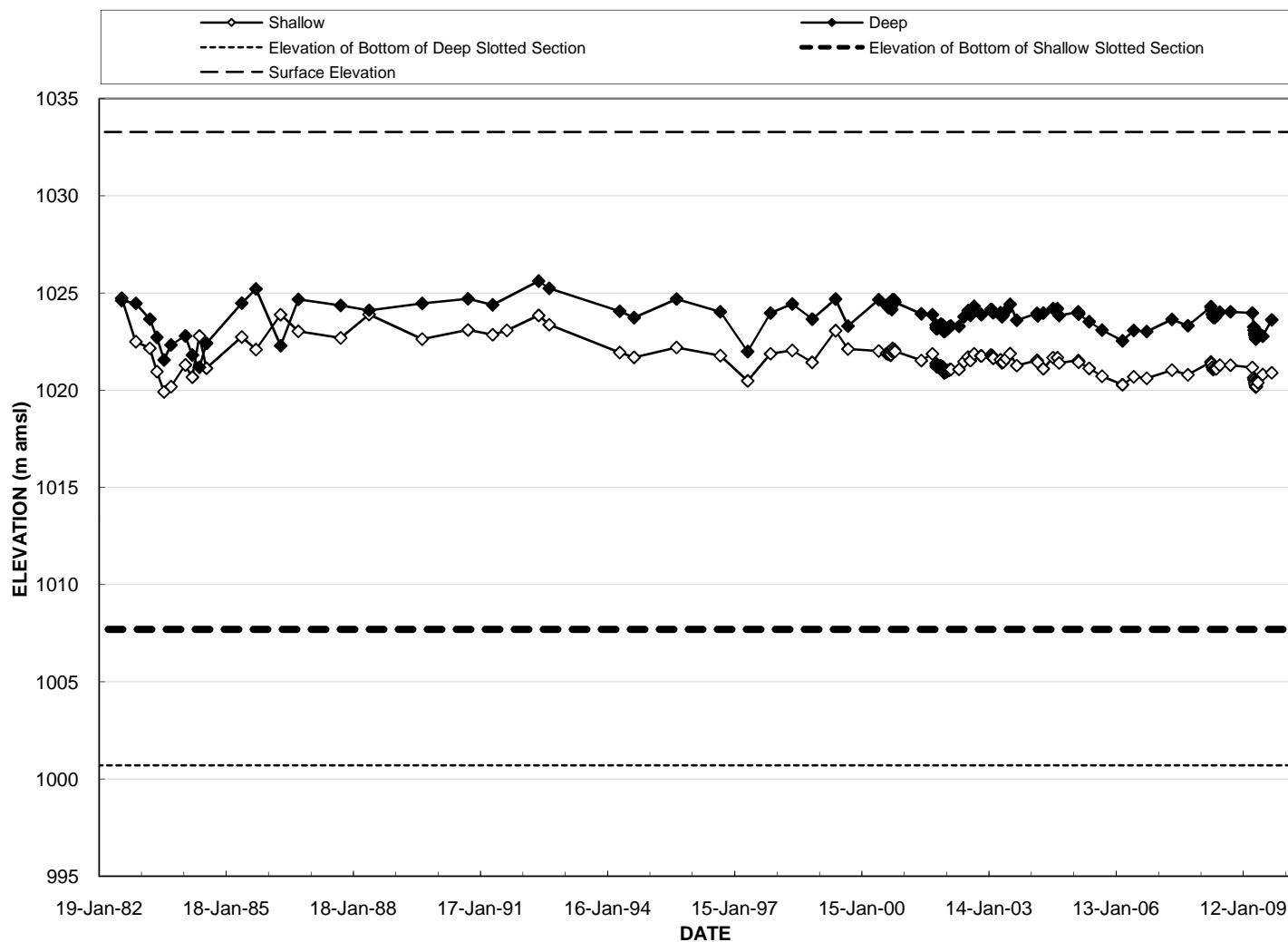


### CROSS VALLEY DAM Piezometric Monitoring CVDC-9 Deep Standpipe Piezometer (Dam Crest)



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

Instrument  
 Details



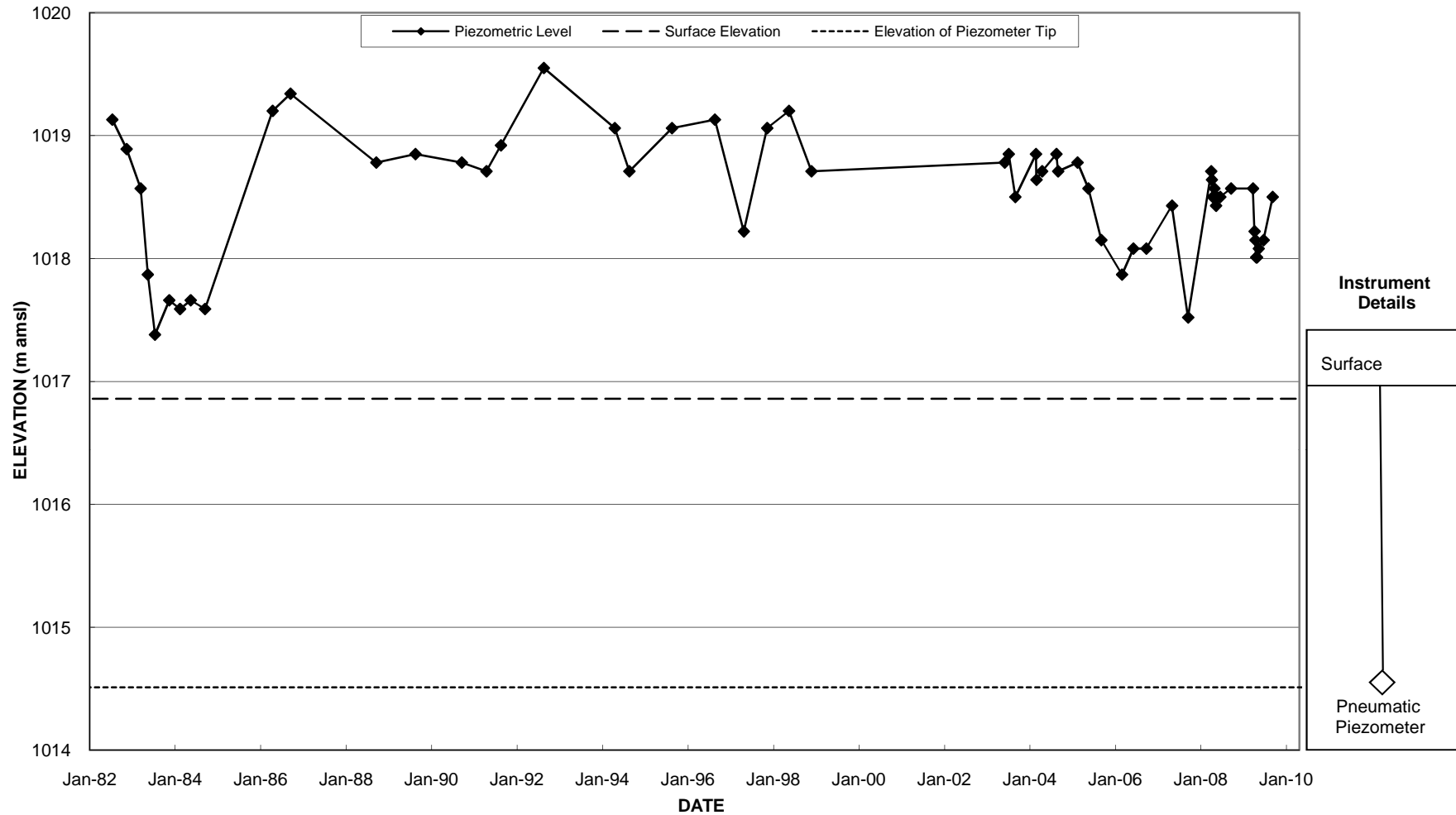
**Faro Mine Instrumentation  
Cross Valley Dam**

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	1029.92	
6-May-97		5.30	1018.22		
21-Nov-97		6.50	1019.06		
27-May-98		6.70	1019.20	1031.20	
12-Nov-98					no air bubbles returned
4-Dec-98		6.00	1018.71	1029.80	
16-Dec-98				1029.80	black tube broken at connector
11-Jun-03		6.10	1018.78		new piezometer
15-Jul-03		6.20	1018.85		
10-Sep-03		5.70	1018.50		
4-Mar-04		6.20	1018.85		2004 Survey data used from here on
8-Mar-04		5.90	1018.64		
26-Apr-04		6.00	1018.71		
26-Aug-04		6.20	1018.85		
9-Sep-04		6.00	1018.71		
22-Feb-05		6.10	1018.78		
24-Feb-05		3.50			
26-May-05		5.80	1018.57		
14-Sep-05		5.20	1018.15		
9-Mar-06		4.80	1017.87		
14-Jun-06		5.10	1018.08		
2-Oct-06		5.10	1018.08	1027.47	
9-May-07		5.60	1018.43	1029.30	Good return
24-Sep-07		4.30	1017.52	1030.30	
9-Apr-08		6.00	1018.71	1030.30	
14-Apr-08		5.90	1018.64	1029.93	
21-Apr-08		5.70	1018.50	1029.63	
28-Apr-08		5.70	1018.50	1029.25	
5-May-08		5.80	1018.57	1029.43	
12-May-08		5.70	1018.50	1029.36	
20-May-08		5.60	1018.43	1029.34	
26-May-08		5.70	1018.50	1029.28	
24-Jun-08		5.70	1018.50	1028.64	
24-Sep-08		5.80	1018.57	1028.50	

**Faro Mine Instrumentation  
Cross Valley Dam**

31-Mar-09		5.80	1018.57	1029.60	
13-Apr-09		5.30	1018.22	1028.16	
16-Apr-09				1027.74	
20-Apr-09		5.20	1018.15	1027.72	
23-Apr-09				1027.49	
27-Apr-09		5.00	1018.01	1027.27	
30-Apr-09				1027.16	
5-May-09		5.00	1018.01	1027.23	
19-May-09		5.10	1018.08	1027.83	
29-Jun-09		5.20	1018.15	1027.67	
15-Sep-09		5.70	1018.50	1028.36	

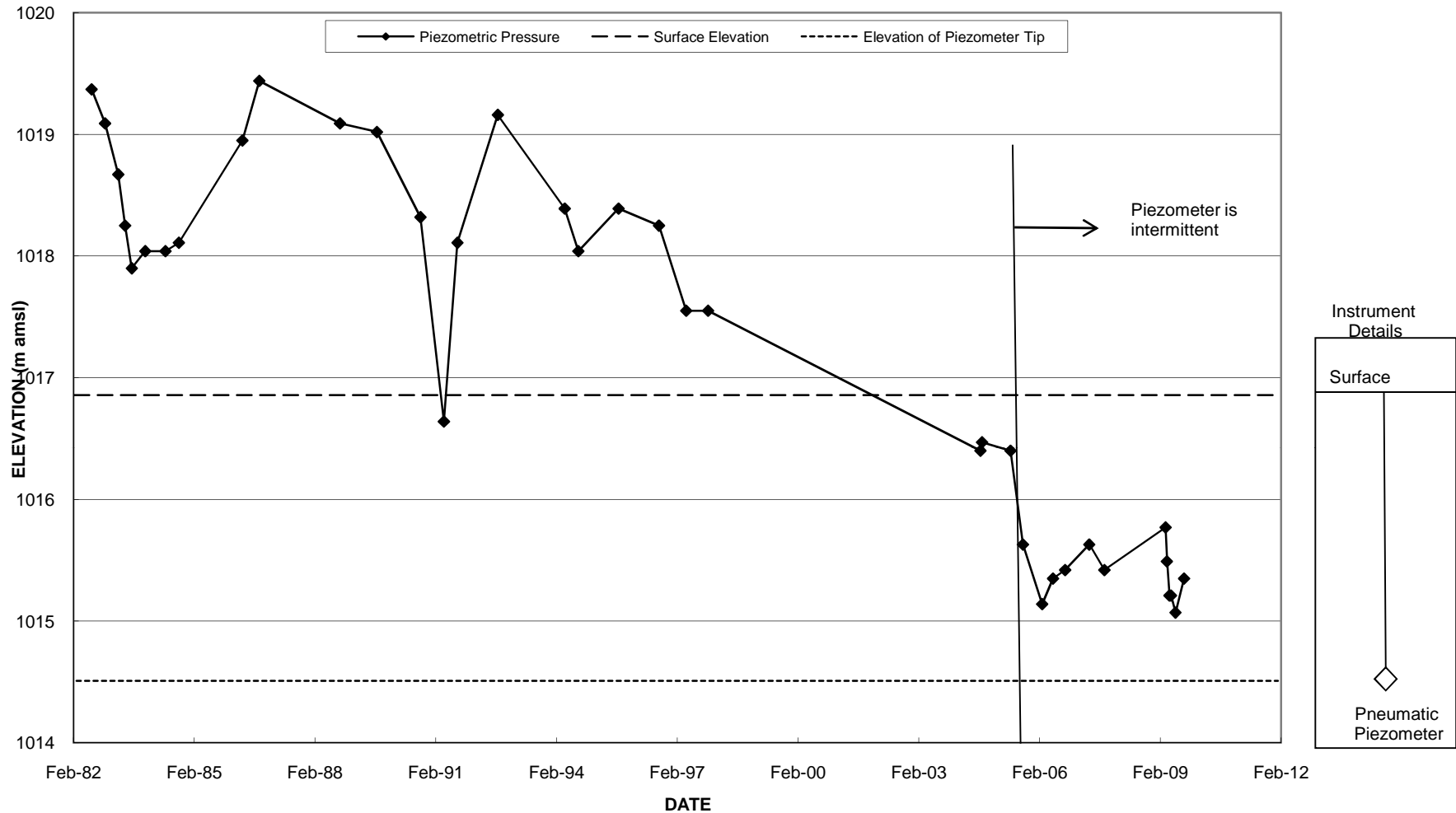
### CROSS VALLEY DAM Pieometric Monitoring CVDP-1 Pneumatic Piezometer (Toe of Dam)



**Faro Mine Instrumentation  
Cross Valley 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	1029.92	
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		11.50			no bubbles, keeps rising
24-Feb-05		16.00			no bubbles, keeps rising
26-May-05		2.70	1016.40		
14-Sep-05		1.60	1015.63		
9-Mar-06		0.90	1015.14		
14-Jun-06		1.20	1015.35		
2-Oct-06		1.30	1015.42	1027.47	
9-May-07		1.60	1015.63	1029.30	Good Return
24-Sep-07		1.30	1015.42	1030.30	
9-Apr-08					stopped at 13.1 psi, no bubbles
14-Apr-08					not working
31-Mar-09		1.80	1015.77	1029.60	
13-Apr-09		1.40	1015.49	1028.16	
16-Apr-09				1027.74	
20-Apr-09		20.30		1027.72	likely erroneous reading (LNW)
23-Apr-09				1027.49	
27-Apr-09		n/r		1027.27	
30-Apr-09				1027.16	
5-May-09		1.00	1015.21	1027.23	
19-May-09		1.00	1015.21	1027.83	
29-Jun-09		0.80	1015.07	1027.67	
15-Sep-09		1.20	1015.35	1028.36	

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



Faro Mine Instrumentation  
Cross Valley Dam

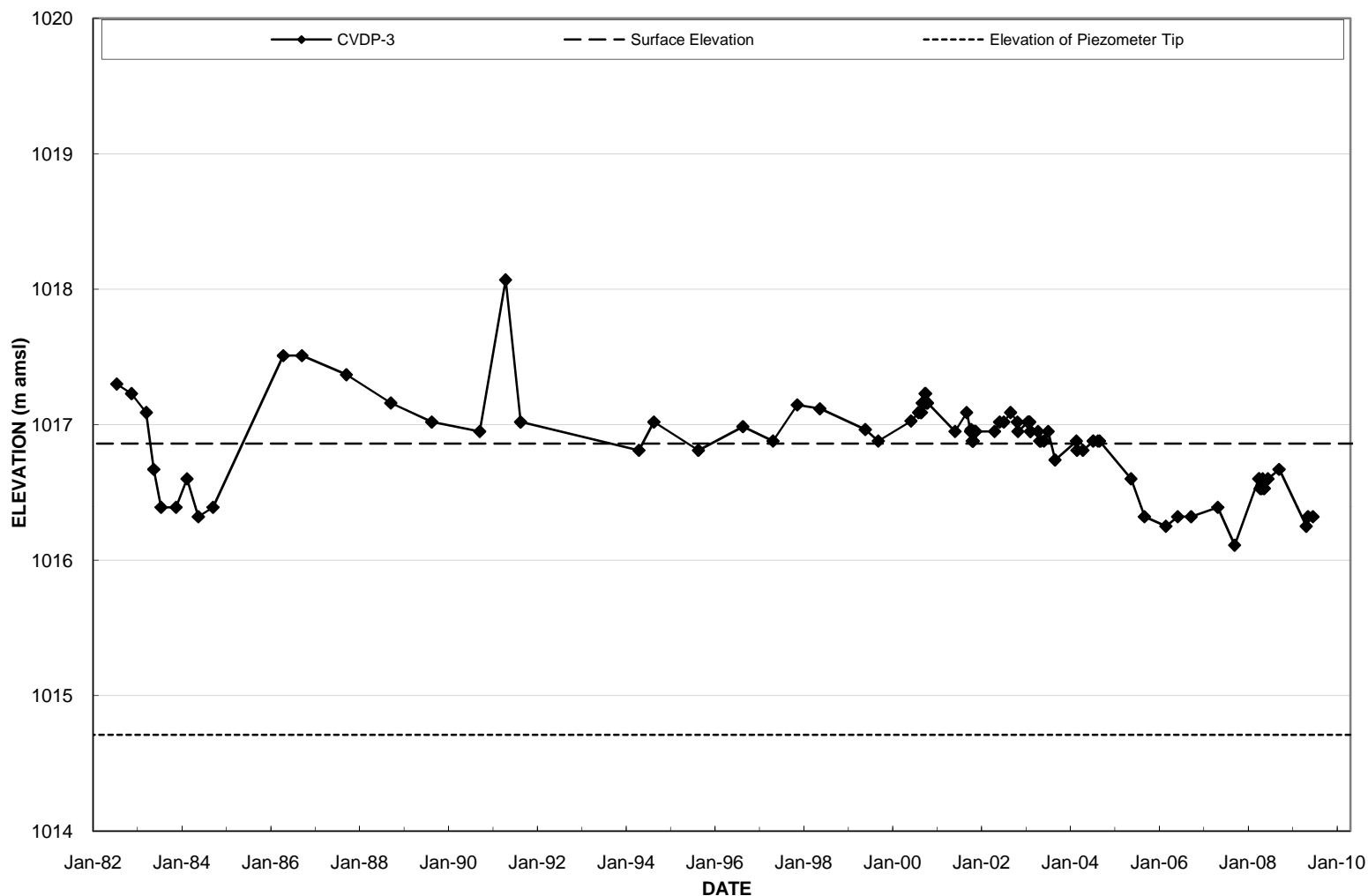
CVDP-3		Location:	St.0+450 7m d/s of CL.		
		Coordinates:	8V580128 6914135	2004 Ground Elevation (m amsl):	1016.86
Surface Protector:	yes	Date Installed:	1982	Tip Elevation (m amsl):	1014.71
Date	Reading (psi)	Piezometric Elevation 2004 (m amsl)	Pond Elevation (m amsl)	Comments	
Aug-82	3.70	1017.30			
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	1029.92		
6-May-97	3.10	1016.88			
21-Nov-97	3.48	1017.15			
27-May-98	3.44	1017.12	1031.20		
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	1029.20		very slow
14-Jun-00	3.31	1017.03	1030.20		
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	3.20	1016.95			
18-Oct-01	3.20	1016.95			
19-Oct-01	3.20	1016.95			
20-Oct-01	3.22	1016.96			
21-Oct-01	3.21	1016.96			
22-Oct-01	3.20	1016.95			
25-Oct-01	3.20	1016.95			
29-Oct-01	3.10	1016.88			
1-Nov-01	3.20	1016.95			
5-Nov-01	3.10	1016.88			
6-Nov-01	3.10	1016.88			
8-Nov-01	3.20	1016.95			
12-Nov-01	3.20	1016.95			
15-Nov-01	3.20	1016.95			
19-Nov-01	3.20	1016.95			
21-Nov-01	3.20	1016.95			
23-Nov-01	3.20	1016.95			pond elev approx - 8 ft.
26-Nov-01	3.20	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	3.20	1016.95			instrument fixed
12-Jun-02	3.30	1017.02			
17-Jul-02	3.30	1017.02			
7-Aug-02					not read
9-Sep-02	3.40	1017.09			



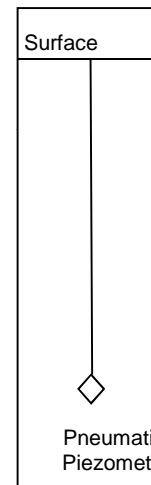
**Faro Mine Instrumentation  
Cross Valley Dam**

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	
4-Nov-02	3.30	1017.02			
10-Nov-02	3.20	1016.95			
30-Jan-03	3.30	1017.02			
9-Feb-03	3.30	1017.02			start siphon
11-Feb-03	3.30	1017.02			
13-Feb-03	3.30	1017.02			
18-Feb-03	3.20	1016.95			
21-Feb-03	3.20	1016.95	1026.18		
23-Apr-03	3.20	1016.95			
7-May-03	3.10	1016.88			
16-May-03	3.10	1016.88			
11-Jun-03	3.10	1016.88			*new piezometer readout
15-Jul-03	3.20	1016.95			
10-Sep-03	2.90	1016.74			
4-Mar-04	3.10	1016.88			2004 Survey data used from here on
8-Mar-04	3.00	1016.81			
26-Apr-04	3.00	1016.81			
19-Jul-04	3.10	1016.88			
26-Aug-04	3.10	1016.88			
9-Sep-04	3.10	1016.88			
22-Feb-05	14.00				no bubbles, keeps rising
24-Feb-05	16.00				no bubbles, keeps rising
26-May-05	2.70	1016.60			
14-Sep-05	2.30	1016.32			
9-Mar-06	2.20	1016.25			
14-Jun-06	2.30	1016.32			
2-Oct-06	2.30	1016.32	1027.47		
9-May-07	2.40	1016.39	1029.30		Good Return
24-Sep-07	2.00	1016.11	1030.30		
9-Apr-08	2.70	1016.60	1030.30		
14-Apr-08	2.70	1016.60	1029.93		
21-Apr-08	2.60	1016.53	1029.63		
28-Apr-08	2.60	1016.53	1029.25		
5-May-08	2.60	1016.53	1029.43		
12-May-08	2.70	1016.60	1029.36		
20-May-08	2.60	1016.53	1029.34		
26-May-08	2.60	1016.53	1029.28		
24-Jun-08	2.70	1016.60	1028.64		
24-Sep-08	2.80	1016.67	1028.50		
31-Mar-09	20.20		1029.60		likely erroneous reading (LNW)
13-Apr-09	20.60		1028.16		likely erroneous reading (LNW)
16-Apr-09			1027.74		
20-Apr-09	20.20		1027.72		likely erroneous reading (LNW)
23-Apr-09			1027.49		
27-Apr-09	n/r		1027.27		
30-Apr-09			1027.16		
5-May-09	2.20	1016.25	1027.23		
19-May-09	2.30	1016.32	1027.83		
29-Jun-09	2.30	1016.32	1027.67		
15-Sep-09	n/r		1028.36		no bubbles

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



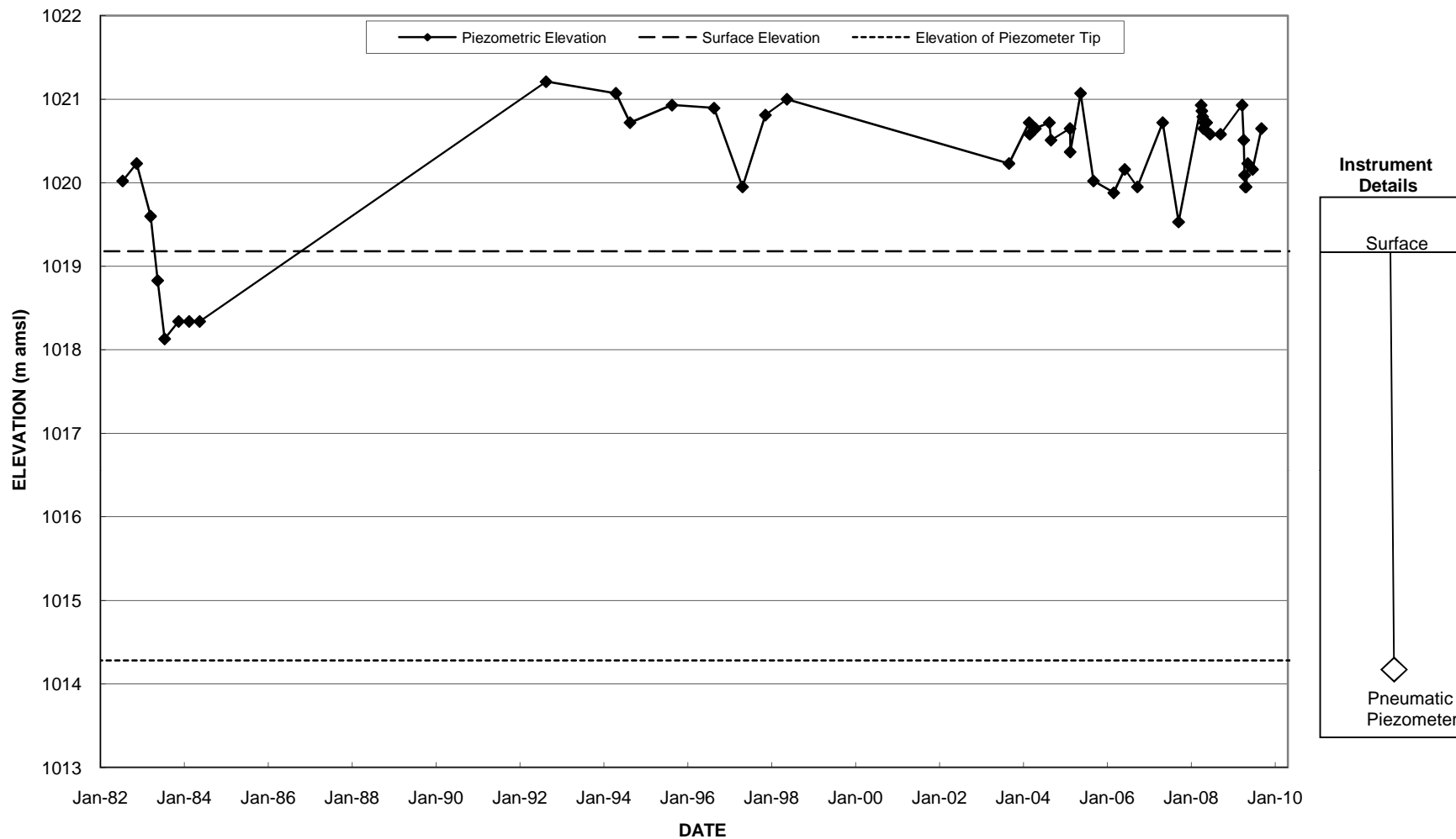
#### Instrument Details



**Faro Mine Instrumentation  
Cross Valley 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	1029.92		
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	9.10	1020.65			
24-Feb-05	8.70	1020.37			
26-May-05	9.70	1021.07			
14-Sep-05	8.20	1020.02			
9-Mar-06	8.00	1019.88			
14-Jun-06	8.40	1020.16			
2-Oct-06	8.10	1019.95	1027.47		
9-May-07	9.20	1020.72	1029.30		Good Return
24-Sep-07	7.50	1019.53	1030.30		
9-Apr-08	9.50	1020.93	1030.30		
14-Apr-08	9.40	1020.86	1029.93		
21-Apr-08	9.30	1020.79	1029.63		
28-Apr-08	9.10	1020.65	1029.25		
5-May-08	9.20	1020.72	1029.43		
12-May-08	9.20	1020.72	1029.36		
20-May-08	9.20	1020.72	1029.34		
26-May-08	9.20	1020.72	1029.28		
24-Jun-08	9.00	1020.58	1028.64		
24-Sep-08	9.00	1020.58	1028.50		
31-Mar-09	9.50	1020.93	1029.60		
13-Apr-09	8.90	1020.51	1028.16		
16-Apr-09			1027.74		
20-Apr-09	8.30	1020.09	1027.72		
23-Apr-09			1027.49		
27-Apr-09	8.10	1019.95	1027.27		
30-Apr-09			1027.16		
5-May-09	8.10	1019.95	1027.23		
19-May-09	8.50	1020.23	1027.83		
29-Jun-09	8.40	1020.16	1027.67		
15-Sep-09	9.10	1020.65	1028.36		

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



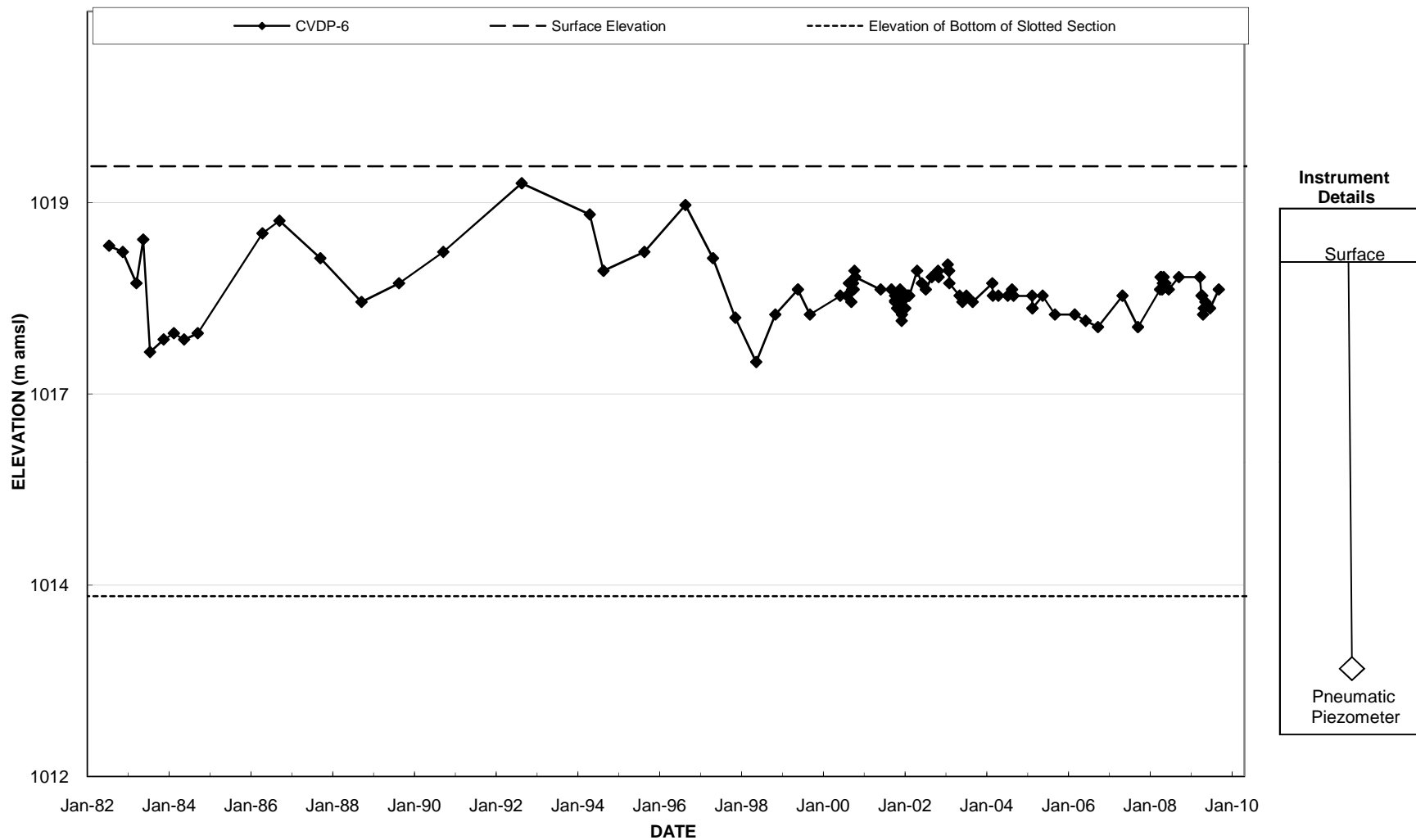
**Faro Mine Instrumentation  
Cross Valley Dam**

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	1017.10			
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	1018.75	1029.92		
6-May-97	5.40	1018.15			
21-Nov-97	4.45	1017.49			
27-May-98	3.74	1016.99	1031.20		
12-Nov-98	4.50	1017.52	1029.80		
3-Jun-99	4.90	1017.80	1031.40		
18-Sep-99	4.50	1017.52			
14-Jun-00	4.80	1017.73	1030.20		
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	1017.80			
6-Oct-00	5.00	1017.87			
12-Oct-00	4.90	1017.80			
20-Oct-00	5.20	1018.01			
27-Oct-00	5.10	1017.94			
10-Jun-01	4.90	1017.80			
14-Sep-01	4.90	1017.80			
16-Oct-01	4.80	1017.73			
18-Oct-01	4.72	1017.67			
19-Oct-01	4.70	1017.66			
20-Oct-01	4.70	1017.66			
21-Oct-01	4.70	1017.66			
22-Oct-01	4.70	1017.66			
25-Oct-01	4.70	1017.66			
29-Oct-01	4.70	1017.66			
1-Nov-01	4.70	1017.66			
5-Nov-01	4.60	1017.59			
6-Nov-01	4.60	1017.59			
8-Nov-01	4.70	1017.66			
12-Nov-01	4.70	1017.66			
15-Nov-01	4.70	1017.66			
19-Nov-01	4.80	1017.73			
21-Nov-01	4.70	1017.66			
23-Nov-01	4.70	1017.66			pond elev approx - 8 ft.
26-Nov-01	-				not read
28-Nov-01	-				not read, low pressure in box
30-Nov-01	4.90	1017.80			
3-Dec-01	4.70	1017.66			
5-Dec-01	4.70	1017.66			
12-Dec-01	4.70	1017.66			
14-Dec-01	4.80	1017.73			
15-Dec-01	4.40	1017.45			
16-Dec-01	4.80	1017.73			
17-Dec-01	4.80	1017.73			
18-Dec-01	4.50	1017.52			
19-Dec-01	4.80	1017.73			
26-Dec-01	4.60	1017.59			
2-Jan-02	4.80	1017.73			
9-Jan-02	4.60	1017.59			
16-Jan-02	4.60	1017.59			
23-Jan-02	4.80	1017.73			

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	
30-Jan-02	4.80	1017.73			
6-Feb-02	4.80	1017.73			
13-Feb-02	4.80	1017.73			
20-Feb-02	4.80	1017.73			
1-May-02	5.20	1018.01			
12-Jun-02	5.00	1017.87			
17-Jul-02	4.90	1017.80			
7-Aug-02					not read
9-Sep-02	5.10	1017.94			
4-Nov-02	5.20	1018.01			
10-Nov-02	5.10	1017.94			
30-Jan-03	5.30	1018.08			
9-Feb-03	5.20	1018.01			start siphon
11-Feb-03	5.20	1018.01			
13-Feb-03	5.00	1017.87			
18-Feb-03					*Piezometer tip broken (-35 oC)
21-Feb-03			1026.18		
23-Apr-03					
7-May-03					
16-May-03	4.80	1017.73			*piezometer tip repaired
11-Jun-03	4.70	1017.66			*new piezometer readout
15-Jul-03	4.80	1017.73			
10-Sep-03	4.70	1017.66			
4-Mar-04	5.00	1017.87			2004 Survey data used from here on
8-Mar-04	4.80	1017.73			
26-Apr-04	4.80	1017.73			
19-Jul-04	4.80	1017.73			
26-Aug-04	4.90	1017.80			
9-Sep-04	4.80	1017.73			
22-Feb-05	4.80	1017.73			
24-Feb-05	4.60	1017.59			
24-Feb-05	4.60	1017.59			
26-May-05	4.80	1017.73			
14-Sep-05	4.50	1017.52			
9-Mar-06	4.50	1017.52			
14-Jun-06	4.40	1017.45			
2-Oct-06	4.30	1017.38	1027.47		
9-May-07	4.80	1017.73	1029.30		Good Return
24-Sep-07	4.30	1017.38	1030.30		
9-Apr-08	4.90	1017.80	1030.30		
14-Apr-08	5.10	1017.94	1029.93		
21-Apr-08	5.10	1017.94	1029.63		
28-Apr-08	4.90	1017.80	1029.25		
5-May-08	5.00	1017.87	1029.43		
12-May-08	5.10	1017.94	1029.36		
20-May-08	5.00	1017.87	1029.34		
26-May-08	5.00	1017.87	1029.28		
24-Jun-08	4.90	1017.80	1028.64		
24-Sep-08	5.10	1017.94	1028.50		
31-Mar-09	5.10	1017.94	1029.60		
13-Apr-09	4.80	1017.73	1028.16		
16-Apr-09			1027.74		
20-Apr-09	4.80	1017.73	1027.72		
23-Apr-09			1027.49		
27-Apr-09	4.50	1017.52	1027.27		
30-Apr-09			1027.16		
5-May-09	4.60	1017.59	1027.23		
19-May-09	4.70	1017.66	1027.83		
29-Jun-09	4.60	1017.59	1027.67		
15-Sep-09	4.90	1017.80	1028.36		

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



**Faro Mine Instrumentation  
Cross Valley Dam**

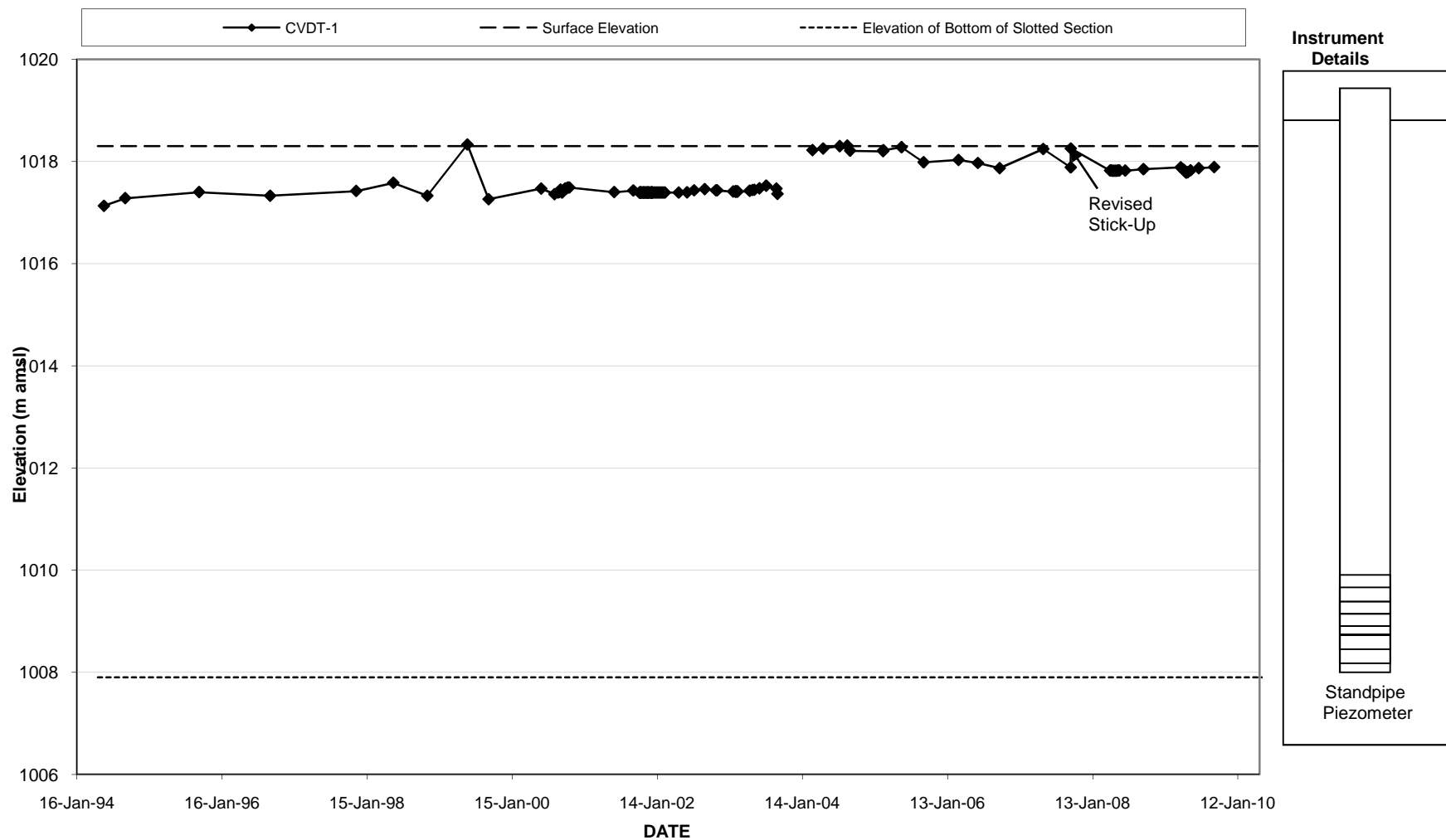
CVDT-1		Location:	Cross Valley Dam Toe, black PVC adj. to X11 channel	2004 Stick-up (m):	0.27
		Coordinates:	8V580219 6914353	2004 Ground Elevation (m amsl):	1018.30
Surface Protector:	N/A	Date Installed:	1994	2004 Tip Elevation (m amsl):	1007.90
Date		Water Level from top of pipe (m)	Piezometric Elevation (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	1029.92	
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		-0.87	1018.33	1031.40	
18-Sep-99		-1.94	1017.26	-1029.20	
8-Jun-00		-1.73	1017.47	-1030.20	
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		
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		-0.44	1017.40		
17-Jul-02		-0.40	1017.44		
7-Aug-02					not read
9-Sep-02		-0.37	1017.46		
4-Nov-02		-0.40	1017.44		
10-Nov-02		-0.40	1017.44		
30-Jan-03		-0.42	1017.41		



**Faro Mine Instrumentation  
Cross Valley Dam**

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
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		-0.41	1017.43	1030.14	
7-May-03		-0.39	1017.44		
16-May-03		-0.39	1017.45		
11-Jun-03		-0.36	1017.48		
15-Jul-03		-0.31	1017.53		
4-Sep-03		-0.36	1017.47		
10-Sep-03		-0.47	1017.37	996.28	
4-Mar-04		-0.35	1018.23		2004 survey data use from here on
8-Mar-04					Pulled ice and snow
26-Apr-04		-0.32	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		-0.59	1017.99		
9-Mar-06		-0.54	1018.03		no beep
14-Jun-06		-0.60	1017.97		
2-Oct-06		-0.70	1017.87	1027.47	
9-May-07		-0.33	1018.25	1029.30	
24-Sep-07		-0.69	1017.89	1030.30	
25-Sep-07		-0.32	1018.26	1031.30	
9-Apr-08		-0.75	1017.82	1030.30	
14-Apr-08		-0.75	1017.82	1029.93	
21-Apr-08		-0.76	1017.82	1029.63	
28-Apr-08		-0.76	1017.82	1029.25	
5-May-08		-0.76	1017.82	1029.43	
12-May-08		-0.76	1017.82	1029.36	
20-May-08		-0.75	1017.82	1029.34	
26-May-08		-0.75	1017.82	1029.28	
24-Jun-08		-0.75	1017.82	1028.64	
24-Sep-08		-0.72	1017.85	1028.50	
31-Mar-09		-0.69	1017.89	1029.60	
13-Apr-09		-0.73	1017.85	1028.16	
16-Apr-09				1027.74	
20-Apr-09		-0.76	1017.81	1027.72	
23-Apr-09				1027.49	
27-Apr-09		-0.79	1017.78	1027.27	
30-Apr-09				1027.16	
5-May-09		-0.78	1017.79	1027.23	
19-May-09		-0.75	1017.83	1027.83	
29-Jun-09		-0.70	1017.87	1027.67	
15-Sep-09		-0.68	1017.89	1028.32	

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



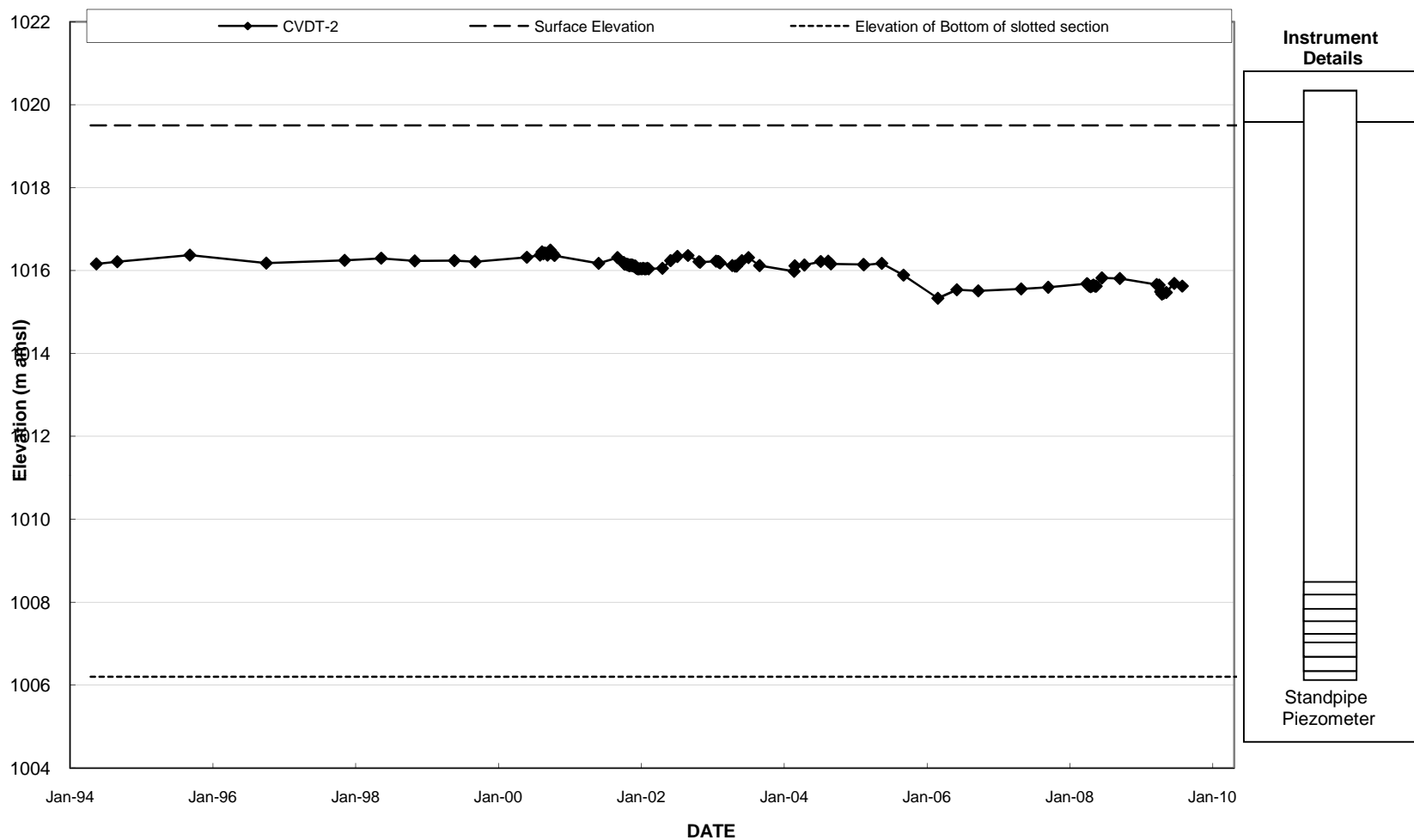
**Faro Mine Instrumentation  
Cross Valley Dam**

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	1029.92	
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		-4.78	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		-4.88	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		-3.76	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		-3.78	1016.11		
12-Dec-01		-3.78	1016.11		
14-Dec-01		-3.78	1016.11		
15-Dec-01		-3.80	1016.08		
16-Dec-01		-3.79	1016.09		
17-Dec-01		-3.81	1016.07		
18-Dec-01		-3.82	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		-3.84	1016.05		
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		-3.55	1016.34		
7-Aug-02					not read
9-Sep-02		-3.52	1016.36		
4-Nov-02		-3.67	1016.21		

**Faro Mine Instrumentation  
Cross Valley 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	
10-Nov-02	-3.68	1016.20			
30-Jan-03	-3.66	1016.23			
9-Feb-03	-3.66	1016.22	1058.60		start siphon
11-Feb-03	-3.67	1016.22	1058.50		
13-Feb-03	-3.68	1016.21	1058.50		
18-Feb-03	-3.69	1016.19			
21-Feb-03	-3.70	1016.19	1026.18		
23-Apr-03	-3.76	1016.12	997.84		
7-May-03	-3.78	1016.11			
16-May-03	-3.78	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	-3.90	1015.98			No 2004 survey data available
8-Mar-04	-3.77	1016.11			
26-Apr-04	-3.75	1016.13			
19-Jul-04	-3.67	1016.22			
26-Aug-04	-3.66	1016.23			
9-Sep-04	-3.72	1016.16			
22-Feb-05	-3.74	1016.15			
24-Feb-05	-3.75	1016.14			
26-May-05	-3.71	1016.17			
14-Sep-05	-3.99	1015.89			
9-Mar-06	-4.17	1015.33			
14-Jun-06	-3.97	1015.54			
2-Oct-06	-3.99	1015.51	1027.47		
9-May-07	-3.95	1015.56	1029.30		
24-Sep-07	-3.91	1015.60	1030.30		
9-Apr-08	-3.82	1015.68	1030.30		
14-Apr-08	-3.84	1015.66	1029.93		
21-Apr-08	-3.88	1015.63	1029.63		
28-Apr-08	-3.89	1015.61	1029.25		
5-May-08	-3.87	1015.63	1029.43		
12-May-08	-3.85	1015.65	1029.36		
20-May-08	-3.88	1015.62	1029.34		
26-May-08	-3.88	1015.62	1029.28		
24-Jun-08	-3.68	1015.82	1028.64		
24-Sep-08	-3.70	1015.81	1028.50		
31-Mar-09	-3.84	1015.66	1029.60		
13-Apr-09	-3.85	1015.65	1028.16		
16-Apr-09			1027.74		
20-Apr-09	-4.01	1015.49	1027.72		
23-Apr-09			1027.49		
27-Apr-09	-4.07	1015.43	1027.27		
30-Apr-09			1027.16		
5-May-09	-4.05	1015.45	1027.23		
19-May-09	-4.03	1015.47	1027.83		
29-Jun-09	-3.81	1015.69	1027.67		
9-Aug-09	-3.88	1015.63	1028.36		

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



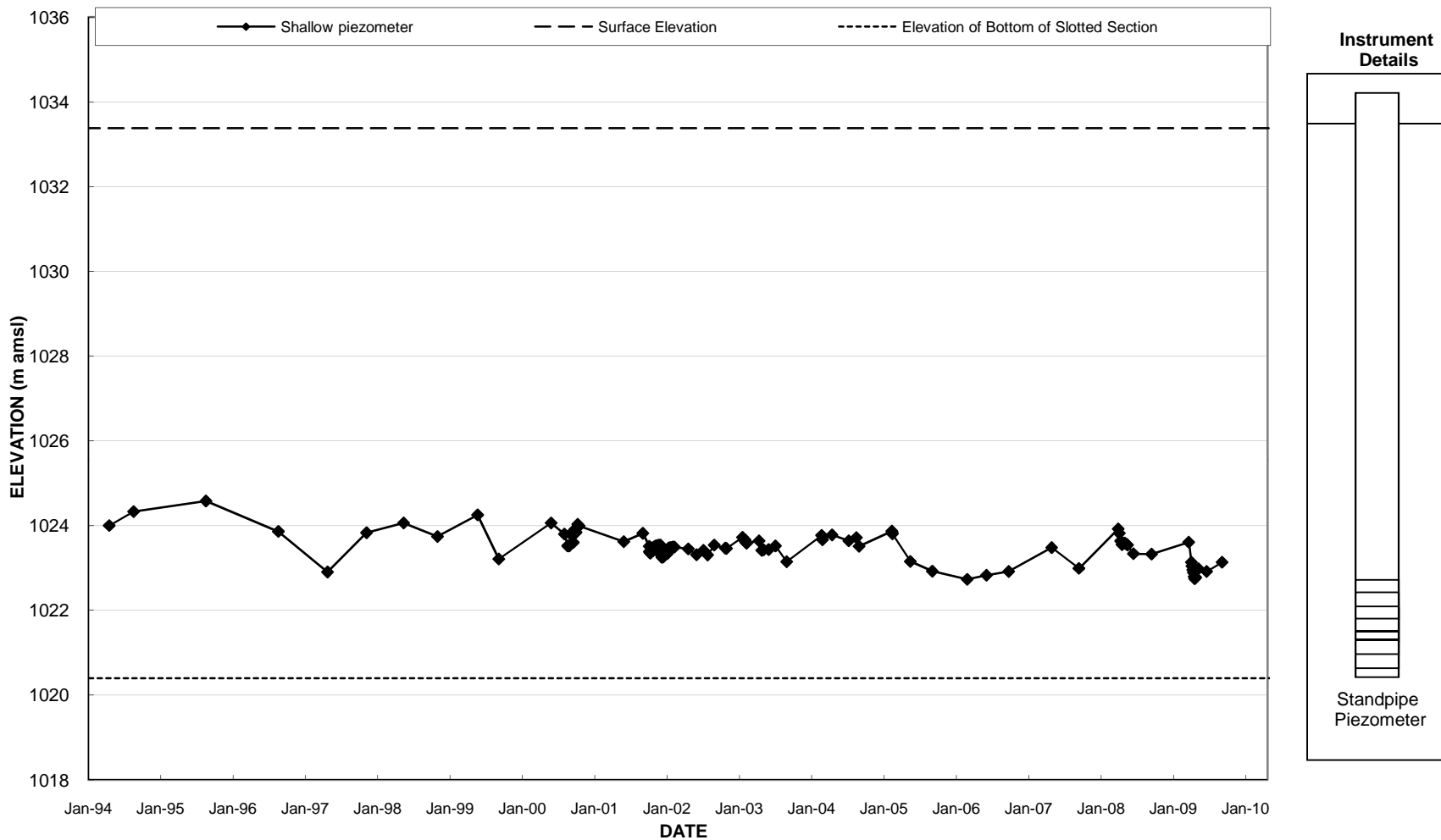
**Faro Mine Instrumentation  
Cross Valley Dam**

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	1029.92	
7-May-97		11.00	1022.91		
20-Nov-97		10.07	1023.83		
26-May-98		9.84	1024.06	1031.20	
13-Nov-98		10.16	1023.74	1029.80	
3-Jun-99		9.65	1024.25	1031.40	
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		10.43	1023.48		
5-Nov-01		10.49	1023.42		
6-Nov-01		10.49	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		10.38	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		10.37	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		
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		10.49	1023.42		

**Faro Mine Instrumentation  
Cross Valley Dam**

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	
7-Aug-02	10.60	1023.31			
9-Sep-02	10.36	1023.54			
4-Nov-02	10.44	1023.47			
10-Nov-02	10.44	1023.46			
30-Jan-03	10.18	1023.72			
9-Feb-03	10.24	1023.67			start siphon
11-Feb-03	10.24	1023.67			
13-Feb-03	10.28	1023.63			
18-Feb-03	10.31	1023.59			
21-Feb-03	10.31	1023.59	1026.18		
23-Apr-03	10.26	1023.64			
7-May-03	10.49	1023.42			
16-May-03	10.47	1023.43			
11-Jun-03	10.47	1023.44			
15-Jul-03	10.38	1023.52			
10-Sep-03	10.76	1023.15			
4-Mar-04	10.25	1023.77			2004 Survey data used from here on.
8-Mar-04	10.36	1023.67			
26-Apr-04	10.24	1023.78			
19-Jul-04	10.38	1023.64			
26-Aug-04	10.31	1023.72			
9-Sep-04	10.51	1023.51			
22-Feb-05	10.15	1023.87			
23-Feb-05	10.18	1023.85			
24-Feb-05	10.22	1023.81			
26-May-05	10.87	1023.16			dirty
14-Sep-05	11.10	1022.93			
9-Mar-06	11.29	1022.73			
14-Jun-06	11.20	1022.83			
4-Oct-06	11.11	1022.92	1027.47		
9-May-07	10.54	1023.48	1029.30		
24-Sep-07	11.03	1022.99	1030.30		
9-Apr-08	10.10	1023.92	1030.30		
14-Apr-08	10.20	1023.82	1029.93		
21-Apr-08	10.39	1023.64	1029.63		
28-Apr-08	10.47	1023.55	1029.25		
5-May-08	10.44	1023.58	1029.43		
12-May-08	10.43	1023.59	1029.36		
20-May-08	10.46	1023.56	1029.34		
26-May-08	10.48	1023.54	1029.28		
24-Jun-08	10.69	1023.34	1028.64		
24-Sep-08	10.70	1023.33	1028.50		
31-Mar-09	10.42	1023.61	1029.60		
13-Apr-09	10.89	1023.14	1028.16		
16-Apr-09	10.98	1023.05	1027.74		
20-Apr-09	11.07	1022.96	1027.72		
23-Apr-09	11.13	1022.89	1027.49		
27-Apr-09	11.23	1022.80	1027.27		
30-Apr-09	11.28	1022.75	1027.16		
5-May-09	11.25	1022.78	1027.23		
19-May-09	11.04	1022.98	1027.83		
29-Jun-09	11.11	1022.92	1027.67		
15-Sep-09	10.89	1023.14	1028.36		

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

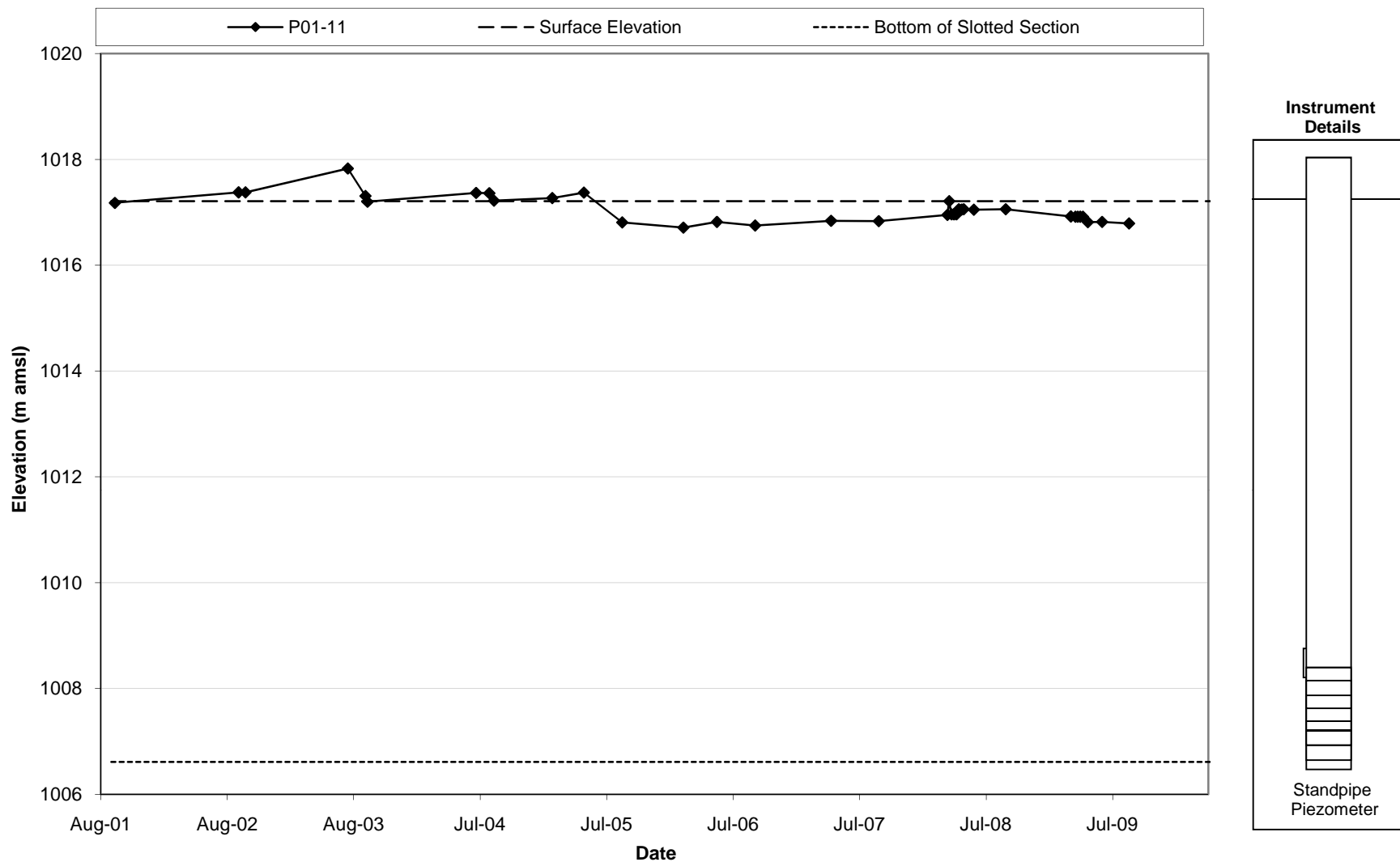




**Faro Mine Instrumentation  
Cross Valley Dam**

<b>P01-11</b>		<b>Location:</b>	Cross Valley Dam Toe	<b>2004 Stick-Up (m):</b>	0.66
		<b>Coordinates:</b>	8V580208 6914301	<b>2004 Surface Elevation (m amsl):</b>	1017.21
<b>Surface Protector:</b>	yes	<b>Date Installed:</b>	2001	<b>Tip Elevation (m amsl):</b>	1006.61
				<b>Screened Interval (m bgs):</b>	9.15 - 10.67
<b>Date</b>		<b>Water level from top of pipe (m)</b>	<b>Piezometric Elevation (m amsl)</b>		<b>Comments</b>
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		
9-Mar-06		1.16	1016.71		
14-Jun-06		1.05	1016.82		Water in casing
2-Oct-06		1.12	1016.75		
9-May-07		1.03	1016.84		Good Return
24-Sep-07		1.035	1016.84		
9-Apr-08		0.92	1016.95		frozen
14-Apr-08		0.66	1017.21		frozen
21-Apr-08		0.91	1016.96		frozen
28-Apr-08		0.91	1016.96		frozen
5-May-08		0.91	1016.96		frozen
12-May-08		0.81	1017.06		
20-May-08		0.815	1017.06		
26-May-08		0.81	1017.06		
24-Jun-08		0.82	1017.05		
24-Sep-08		0.81	1017.06		
31-Mar-09		0.95	1016.92	1029.596	Frozen
13-Apr-09		0.955	1016.92	1028.164	Frozen
16-Apr-09				1027.744	
20-Apr-09		0.955	1016.92	1027.716	Frozen
23-Apr-09				1027.487	
27-Apr-09		0.955	1016.92	1027.273	Frozen
30-Apr-09				1027.159	
5-May-09		0.955	1016.92	1027.229	Frozen
19-May-09		1.055	1016.82	1027.831	
29-Jun-09		1.05	1016.82	1027.668	
15-Sep-09		1.081	1016.79	1028.360	

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



## THERMISTORS

CVDC-6		Location: Stn O-340, Cross Valley Dam Crest		Elevation (m amsl): 1033.3	Coordinates: 2182.1 m N 4.7 m E	8V580210 6914218														
		Date Installed: 1981	Thermistor Type: Cantec Controls YSI 44007	Ice-Bath Calibration:	applied	Surface Protector: yes														
Thermistor String #32	Depth Correction: 0																			
Depth on String (m)	Actual Depth (m)	Resistivity (kOhms) 9-Dec-81	Resistivity (kOhms) 30-May-94	Resistivity (kOhms) 15-Sep-94	Resistivity (kOhms) 22-Sep-95	Resistivity (kOhms) 13-Sep-96	Resistivity (kOhms) 20-Sep-99	Resistivity (kOhms) 7-Jun-00	Resistivity (kOhms) 5-Sep-00	Resistivity (kOhms) 26-Jun-01	Resistivity (kOhms) 14-Sep-01	Resistivity (kOhms) 16-Oct-01	Resistivity (kOhms) 18-Oct-01	Resistivity (kOhms) 1-May-02						
15.0	-15.0	11.05	13.87	14.23	15.64	All readings	14.22	14.27	14.55	14.61	14.63	16.26	14.11	14.26						
17.0	-17.0	11.70	13.95	15.22	15.74	fluctuating		14.54	14.79	14.82	14.91	16.48	14.94	14.54						
19.0	-19.0	12.59	13.81	14.63	15.59		14.01	14.29	14.50	14.49	14.60	16.12	14.57	14.18						
21.0	-21.0	13.48	18.73	19.53	20.59		21.25	22.11	22.55	22.63	22.75	24.31	22.82	22.39						
23.0	-23.0	14.16	13.80	14.26	14.97		14.00	14.31	14.54	14.16	14.18	15.02	14.17	13.69						
25.0	-25.0	15.37	13.96	14.42	14.97		14.21	14.45	14.62	14.19	14.27	15.09	14.29	13.70						
27.0	-27.0	15.42	14.26	14.81	15.29		14.55	14.80	14.96	14.96	14.97	15.81	15.00	14.69						
29.0	-29.0	15.35	14.46	14.14	15.44		14.86	15.12	15.22	16.01	16.15	17.05	16.25	16.33						

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

Depth on String (m)	Actual Depth (m)	Temperature (C) 9-Dec-81	Temperature (C) 30-May-94	Temperature (C) 15-Sep-94	Temperature (C) 22-Sep-95	Temperature (C) 13-Sep-96	Temperature (C) 20-Sep-99	Temperature (C) 7-Jun-00	Temperature (C) 5-Sep-00	Temperature (C) 26-Jun-01	Temperature (C) 14-Sep-01	Temperature (C) 16-Oct-01	Temperature (C) 18-Oct-01	Temperature (C) 1-May-02
15.0	-15.0	7.60	3.01	2.50	0.63		2.44	2.06	1.97	1.95	-0.13	2.67	2.46	
17.0	-17.0	6.40	2.85	1.12	0.46		2.03	1.69	1.65	1.53	-0.44	1.49	2.03	
19.0	-19.0	4.90	3.04	1.90	0.64		2.76	2.07	2.09	1.94	-0.02	1.98	2.52	
21.0	-21.0													
23.0	-23.0	2.60	3.11	2.46	1.49		2.82	2.39	2.07	2.60	2.57	1.43	2.58	3.27
25.0	-25.0	1.00	2.91	2.26	1.52		2.56	2.22	1.99	2.58	2.47	1.36	2.46	3.28
27.0	-27.0	0.90	2.45	1.56	1.06		2.05	1.71	1.50	1.50	1.48	0.41	1.44	1.86
29.0	-29.0													

The -21 and -29 metre depth tips are suspect

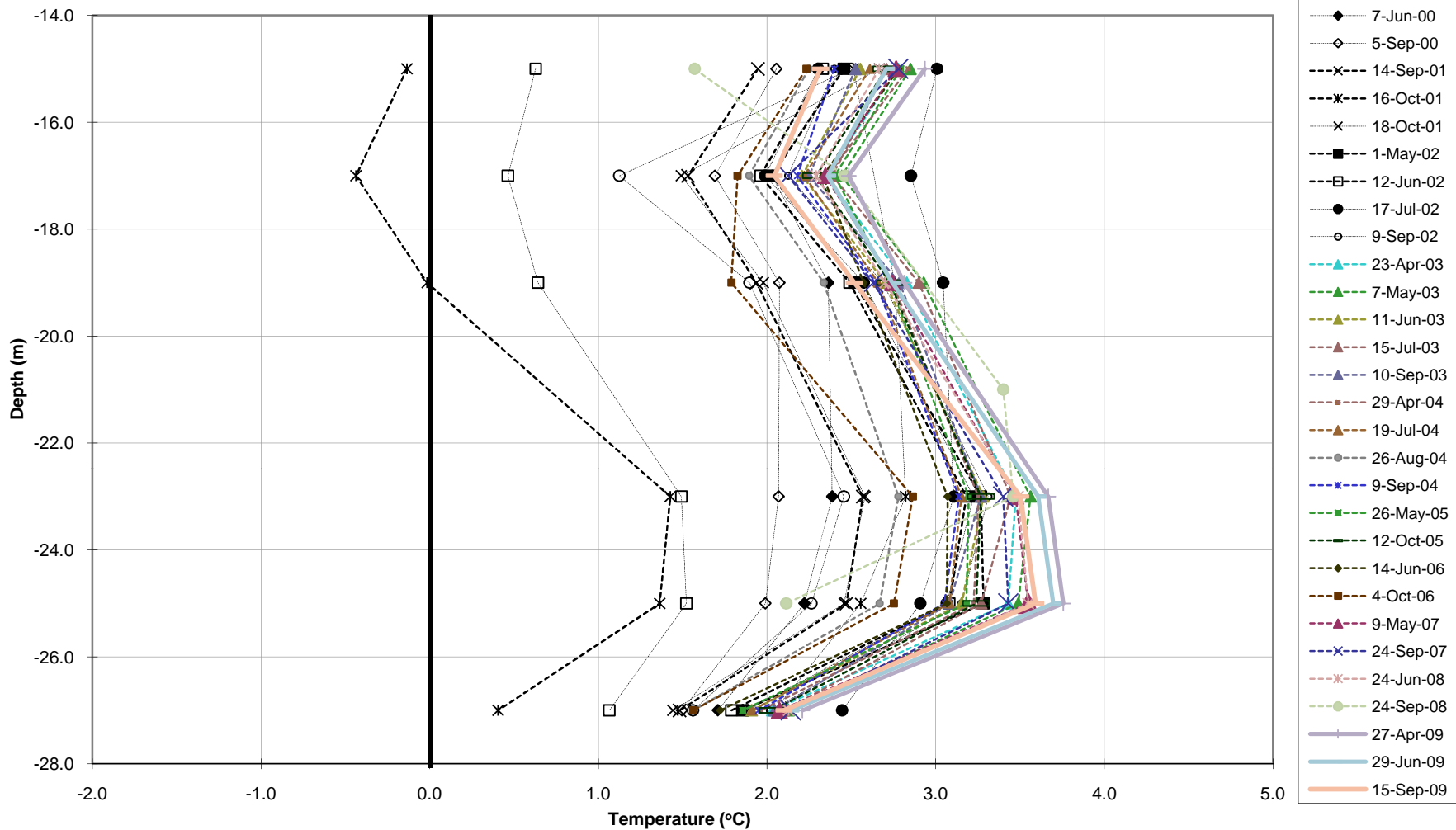
Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)
12-Jun-02	17-Jul-02	9-Sep-02	23-Apr-03	7-May-03	11-Jun-03	15-Jul-03	10-Sep-03	29-Apr-04	19-Jul-04	26-Aug-04	9-Sep-04	26-May-05	12-Oct-05	14-Jun-06	4-Oct-06	9-May-07	24-Sep-07	24-Jun-08	24-Sep-08	
14.35	14.37	14.30	14.03	13.98	14.19	14.08	14.21	13.99	14.15	14.41	14.30	14.02	14.08	14.03	14.42	14.04	14.03	14.11	14.29	
14.59	14.57	14.47	14.31	14.24	14.41	14.28	14.38	14.30	14.40	14.64	14.43	14.27	14.35	14.32	14.69	14.31	14.47	14.35	14.88	
14.20	14.14	14.06	13.96	13.89	14.05	13.91	13.99	14.02	14.08	14.31	14.09	14.03	14.03	14.14	14.71	14.02	14.1	14.05	14.22	
22.43	22.43	22.44	22.74	22.70	22.29	22.98	23.29	24.02	24.55	24.98	24.81	26.06	26.70	28.20	30.07	33.33	36.1	41.1	42.5	
13.75	13.72	13.66	13.55	13.49	13.68	13.57	13.69	13.70	13.77	14.03	13.78	13.74	13.69	13.83	13.97	13.55	13.6	13.54	13.6	
13.84	13.85	13.79	13.69	13.56	13.79	13.71	13.84	13.74	13.84	14.13	13.86	13.77	13.73	13.85	14.07	13.52	13.6	13.52	13.58	
14.74	14.67	14.57	14.56	14.49	14.65	14.51	14.55	14.61	14.65	14.91	14.62	14.69	14.56	14.79	14.91	14.53	14.48	14.49	14.5	
16.37	16.28	16.16	17.97	18.01	18.44	18.53	19.06	20.24	20.55	20.93	20.69	21.77	21.15	23.59	24.08	25.11	25.75	27.17	27.57	

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)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)
12-Jun-02	17-Jul-02	9-Sep-02	23-Apr-03	7-May-03	11-Jun-03	15-Jul-03	10-Sep-03	29-Apr-04	19-Jul-04	26-Aug-04	9-Sep-04	26-May-05	12-Oct-05	14-Jun-06	4-Oct-06	9-May-07	24-Sep-07	24-Jun-08	24-Sep-08	
2.33	2.30	2.40	2.78	2.85	2.55	2.71	2.53	2.84	2.61	2.25	2.40	2.79	2.71	2.78	2.23	2.76	2.78	2.67	2.41	
1.96	1.99	2.12	2.35	2.44	2.21	2.39	2.25	2.36	2.22	1.89	2.18	2.40	2.29	2.33	1.83	2.35	2.12	2.29	1.57	
2.49	2.57	2.69	2.83	2.93	2.70	2.90	2.79	2.74	2.66	2.94	2.64	2.73	2.73	2.57	1.79	2.74	2.63	2.70	2.46	
3.18	3.22	3.31	3.47	3.56	3.28	3.44	3.27	3.25	3.15	2.78	3.14	3.20	3.27	3.07	2.86	3.47	3.40	3.49	3.40	
3.08	3.07	3.15	3.43	3.49	3.15	3.27	3.08	3.23	3.08	2.67	3.05	3.18	3.24	3.07	2.75	3.55	3.43	3.55	3.46	
1.79	1.88	2.02	2.03	2.13	1.91	2.10	2.05	1.96	1.91	1.56	1.95	1.86	2.03	1.72	1.56	2.07	2.14	2.13	2.11	

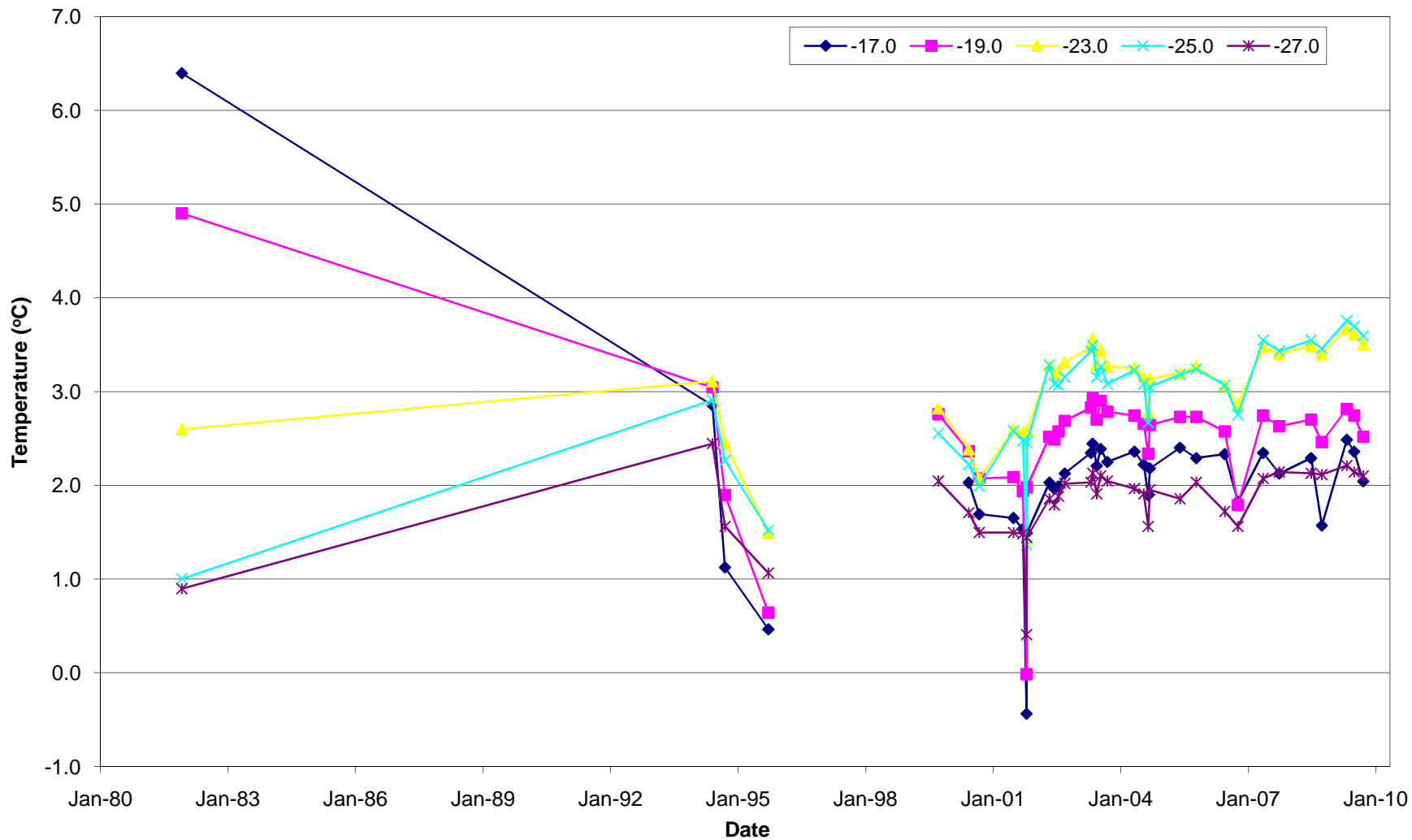
Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)	Resistivity (kOhms)
21-Mar-09	13-Apr-09	20-Apr-09	27-Apr-09	5-May-09	19-May-09	29-Jun-09	15-Sep-09
13.97	13.96	13.93	13.92	2.19	13.93	14.08	14.36
14.61	14.24	14.23	14.21	2.20	14.20	14.30	14.53
14.09	14.01	13.99	13.97	2.19	13.95	14.02	14.18
52.70	43.60	43.50	43.50		43.60	43.90	44.80
22.63	13.45	13.44	13.42	2.18	13.40	13.46	13.53
22.97	13.41	13.40	13.38	2.18	13.36	13.42	13.49
37.09	14.46	14.45	14.43	2.21	14.41	14.48	14.51
	28.52	28.54	28.55	2.39	28.55	28.79	29.42

Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)	Temperature (C)
21-Mar-09	13-Apr-09	20-Apr-09	27-Apr-09	5-May-09	19-May-09	29-Jun-09	15-Sep-09
2.86	2.88	2.92	2.94	43.96	2.92	2.71	2.32
1.93	2.44	2.46	2.49	43.83	2.50	2.36	2.04
2.64	2.76	2.79	2.81	43.90	2.84	2.74	2.52
-6.48	3.62	3.64	3.67	44.14	3.70	3.61	3.50
-6.73	3.71	3.73	3.76	44.17	3.79	3.70	3.59
-15.50	2.17	2.18	2.21	43.79	2.24	2.14	2.10

**CROSS VALLEY DAM**  
**Geothermal Monitoring**  
**CVDC-6**  
(installed 1981)



### 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):	1033.4		Coordinates:	2018.3 m N, 76.6 m W 8V580127 6914054	
	Date Installed:	1988		Thermistor Type:	Cantec Controls YSI 44007		Ice-Bath Calibration:	no	
	Depth Correction:	0					Surface Protector:	Yes	

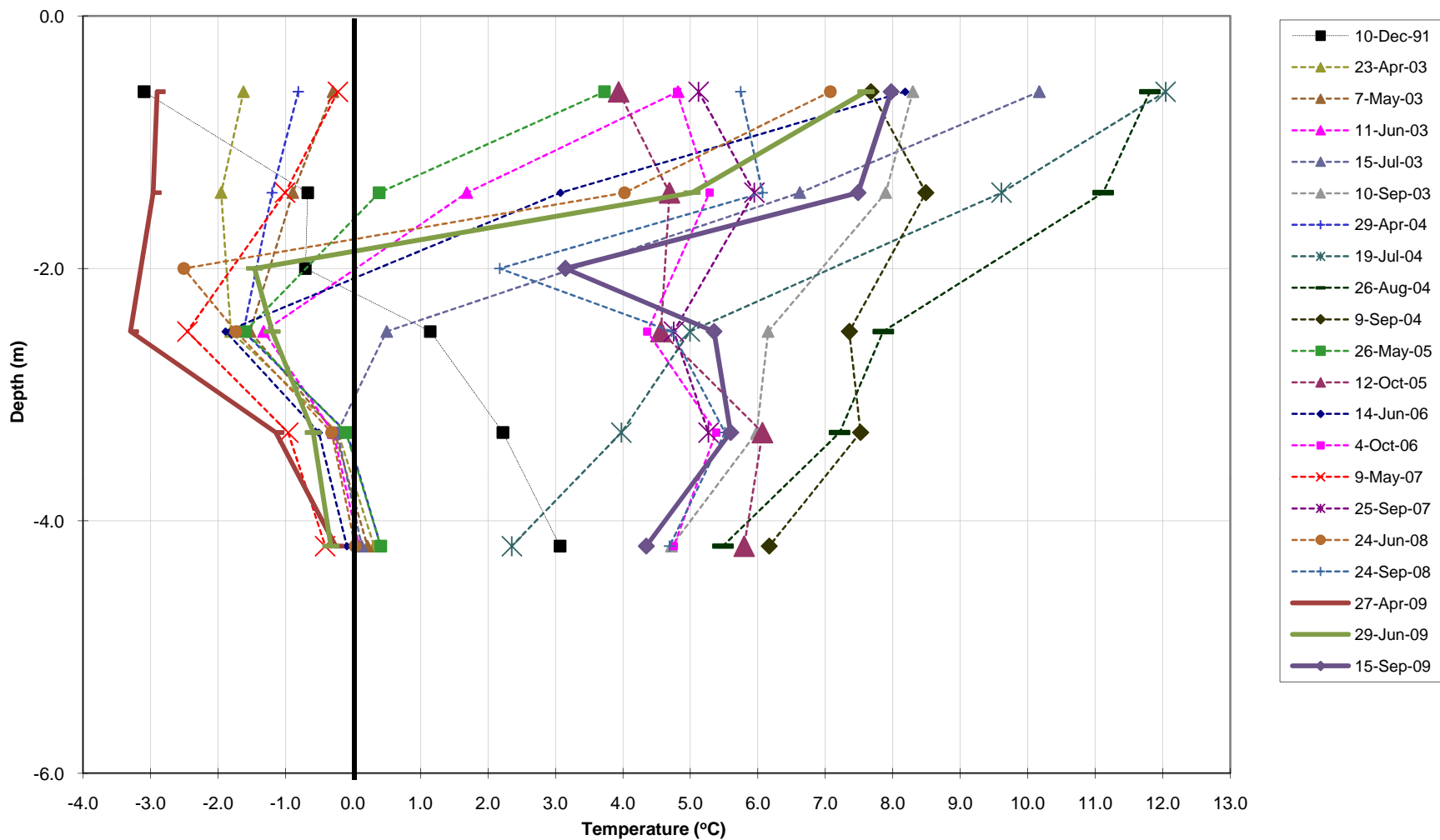
Depth on String (m)	Actual Depth (m)	Resistivity (kOhms) 10-Dec-91	Resistivity (kOhms) 24-Jan-92	Resistivity (kOhms) 30-May-94	Resistivity (kOhms) 15-Sep-94	Resistivity (kOhms) 22-Sep-95	Resistivity (kOhms) 13-Sep-96	Resistivity (kOhms) 5-May-97	Resistivity (kOhms) 20-Nov-97	Resistivity (kOhms) 28-May-98	Resistivity (kOhms) 12-Nov-98	Resistivity (kOhms) 28-May-99	Resistivity (kOhms) 20-Sep-99	Resistivity (kOhms) 7-Jun-00	Resistivity (kOhms) 5-Sep-00	Resistivity (kOhms) 26-Jun-01	Resistivity (kOhms) 14-Sep-01	Resistivity (kOhms) 18-Oct-01	Resistivity (kOhms) 1-May-02	Resistivity (kOhms) 12-Jun-02	Resistivity (kOhms) 17-Jul-02
0.6	-0.6	13.03	20.60	13.87	11.01	11.17	11.28	16.59	16.64	14.19	18.18	14.78	11.07	12.95	11.74	11.86	11.27	14.42	17.61	12.21	9.99
1.4	-1.4	16.72	18.54	15.54	10.52	11.32	11.43	17.14	15.88	16.51	15.71	16.52	11.25	15.73	11.74	13.71	11.26	13.61	18.17	14.42	11.52
2.0	-2.0	16.81	17.93	18.04	11.27	12.45	13.01	19.84	17.50	19.19	17.30	19.78	13.61	19.90	14.13	19.22	13.49	15.59	21.52	19.89	15.78
2.5	-2.5	15.25	16.14	16.60	10.37	11.54	11.91	17.47	14.86	16.70	14.19	16.76	11.64	16.73	12.05	16.67	11.50	12.85	17.89	17.08	15.04
3.3	-3.3	14.45	15.36	16.31	10.79	11.91	12.48	17.17	14.25	16.40	13.47	16.53	12.09	16.51	12.59	16.33	11.87	12.50	16.54	16.55	16.51
4.2	-4.2	13.82	14.69	15.87	11.52	12.41	13.19	16.52	13.82	15.98	13.03	16.11	12.72	16.14	13.30	16.03	12.60	12.59	16.04	16.19	16.17

Depth on String (m)	Actual Depth (m)	Temperature (C) 10-Dec-91	Temperature (C) 24-Jan-92	Temperature (C) 30-May-94	Temperature (C) 15-Sep-94	Temperature (C) 22-Sep-95	Temperature (C) 13-Sep-96	Temperature (C) 5-May-97	Temperature (C) 20-Nov-97	Temperature (C) 28-May-98	Temperature (C) 12-Nov-98	Temperature (C) 28-May-99	Temperature (C) 20-Sep-99	Temperature (C) 7-Jun-00	Temperature (C) 5-Sep-00	Temperature (C) 26-Jun-01	Temperature (C) 14-Sep-01	Temperature (C) 18-Oct-01	Temperature (C) 1-May-02	Temperature (C) 12-Jun-02	Temperature (C) 17-Jul-02
0.6	-0.6	-3.10	-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	6.25	7.29	2.32	-1.60	5.66	9.77
1.4	-1.4	-0.67	-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	3.25	7.23	3.40	-2.28	2.24	6.76
2.0	-2.0	-0.70	-1.96	-2.08	7.28	5.26	4.37	-3.97	-1.56	-3.34	-1.33	-3.92	3.40	-4.03	2.65	-3.37	3.57	0.70	-5.52	-4.02	0.46
2.5	-2.5	1.15	0.03	-0.52	8.93	6.74	6.09	-1.52	1.65	-0.65	2.56	-0.72	6.55	-0.68	5.85	-0.61	6.80	4.55	-1.98	-1.08	1.41
3.3	-3.3	2.22	1.01	-0.16	8.12	6.10	5.16	-1.19	2.48	-0.29	3.60	-0.45	5.78	-0.42	4.96	-0.21	6.15	5.11	-0.46	-0.47	-0.42
4.2	-4.2	3.07	1.86	0.33	6.74	5.23	4.00	-0.43	3.09	0.22	4.27	0.06	4.75	0.02	3.86	0.15	4.94	4.96	0.14	-0.04	-0.02

Resistivity (kOhms) 9-Sep-02	Resistivity (kOhms) 23-Apr-03	Resistivity (kOhms) 7-May-03	Resistivity (kOhms) 11-Jun-03	Resistivity (kOhms) 15-Jul-03	Resistivity (kOhms) 10-Sep-03	Resistivity (kOhms) 29-Apr-04	Resistivity (kOhms) 19-Jul-04	Resistivity (kOhms) 26-Aug-04	Resistivity (kOhms) 9-Sep-04	Resistivity (kOhms) 26-May-05	Resistivity (kOhms) 12-Oct-05	Resistivity (kOhms) 14-Jun-06	Resistivity (kOhms) 4-Oct-06	Resistivity (kOhms) 9-May-07	Resistivity (kOhms) 24-Sep-07	Resistivity (kOhms) 24-Jun-08	Resistivity (kOhms) 24-Sep-08	Resistivity (kOhms) 13-Apr-09	Resistivity (kOhms) 20-Apr-09	Resistivity (kOhms) 27-Apr-09	Resistivity (kOhms) 5-May-09	Resistivity (kOhms) 19-May-09	Resistivity (kOhms) 29-Jun-09	Resistivity (kOhms) 15-Sep-09
10.82	17.63	16.47	12.73	9.80	10.73	16.91	8.96	9.06	11.06	13.44	13.30	10.79	12.74	16.41	12.54	11.39	12.16	20.13	19.33	18.84	2.26	15.81	11.10	10.90
11.18	17.86	16.91	14.83	11.60	10.90	17.18	10.03	9.33	10.59	15.84	12.76	13.83	12.39	17.01	11.99	13.19	11.92	19.79	19.27	18.82	2.27	16.84	12.55	11.12
13.85	21.06	20.35	19.94	16.22	13.38	20.44	13.37	11.88	12.67	20.04	14.92	20.09	14.82	20.83	14.37	18.38	14.47	23.14	22.79	22.35	2.32	20.67	17.41	13.78
12.16	17.73	17.47	17.29	15.75	11.87	17.56	12.57	10.92	11.19	17.54	12.84	17.80	12.97	18.33	12.72	17.66	12.74	19.57	19.39	19.15	2.29	18.21	17.18	12.35
12.42	16.34	16.38	16.40	16.35	11.97	16.23	13.22	11.27	11.10	16.24	11.92	16.58	12.33	16.97	12.40	16.42	12.25	17.16	17.18	17.13	2.26	16.67	16.65	12.20
13.12	15.90	15.98	16.08	16.05	12.74	15.82	14.54	12.27	11.85	15.82	12.08	16.23	12.72	16.50		16.13	12.76	16.29	16.36	16.37	2.25	16.44	16.43	12.98

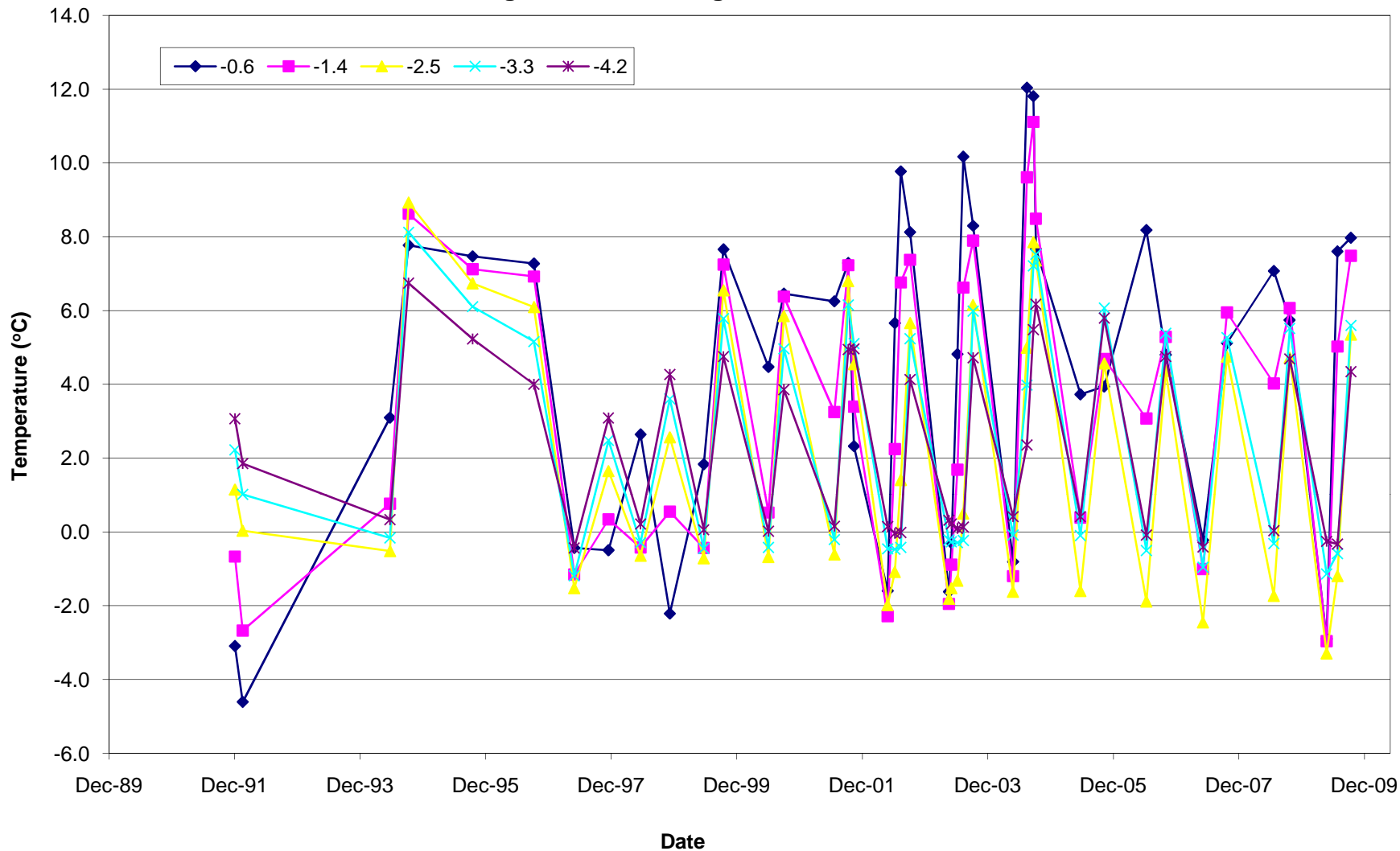
Temperature (C) 9-Sep-02	Temperature (C) 23-Apr-03	Temperature (C) 7-May-03	Temperature (C) 11-Jun-03	Temperature (C) 15-Jul-03	Temperature (C) 10-Sep-03	Temperature (C) 29-Apr-04	Temperature (C) 19-Jul-04	Temperature (C) 26-Aug-04	Temperature (C) 9-Sep-04	Temperature (C) 26-May-05	Temperature (C) 12-Oct-05	Temperature (C) 14-Jun-06	Temperature (C) 4-Oct-06	Temperature (C) 9-May-07	Temperature (C) 24-Sep-07	Temperature (C) 24-Jun-08	Temperature (C) 24-Sep-08	Temperature (C) 13-Apr-09	Temperature (C) 20-Apr-09	Temperature (C) 27-Apr-09	Temperature (C) 5-May-09	Temperature (C) 19-May-09	Temperature (C) 29-Jun-09	Temperature (C) 15-Sep-09
8.13	-1.62	-0.30	4.82	10.17	8.30	-0.81	12.04	11.81	7.68	3.73	3.94	8.18	4.80	-0.22	5.12	7.07	5.74	-4.17	-3.40	-2.90	43.31	0.51	7.60	7.97
7.37	-1.95	-0.89	1.69	6.62	7.89	-1.20	9.61	-11.72	8.49	0.39	4.69	3.08	5.28	-1.00	5.95	4.02	6.07	-3.93	-3.42	-2.96	43.07	-0.81	5.02	7.48
3.05	-5.11	-4.46	-4.07	-0.08	3.74	-4.54	3.75	6.14	4.83	-4.17	1.57	-4.21	1.70	-4.90	2.31	-2.51	2.17	-6.99	-6.60	-6.23	42.55	-4.76	-1.46	3.15
5.66	-1.81	-1.52	-1.32	0.50	6.15	-1.62	4.99	7.86	7.36	-1.60	4.56	-1.89	4.36	-2.45	4.75	-1.73	4.72	-3.71	-3.53	-3.30	42.85	-2.33	-1.20	5.35
5.24	-0.22	-0.27	-0.29	-0.23	5.98	-0.09	3.98	7.21	7.52	-0.10	6.07	-0.51	5.38	-0.96	5.27	-0.32	5.51	-1.18	-1.20	-1.14	43.20	-0.84	-0.59	5.60
4.13	0.31	0.22	0.09	0.13	4.72	0.41	2.35	5.48	6.17	0.41	5.80	-0.09	4.75	-0.41		0.03	4.69	-0.16	-0.24	-0.26	43.35	-0.34	-0.33	4.35

### CROSS VALLEY DAM Geothermal Monitoring 88-4





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



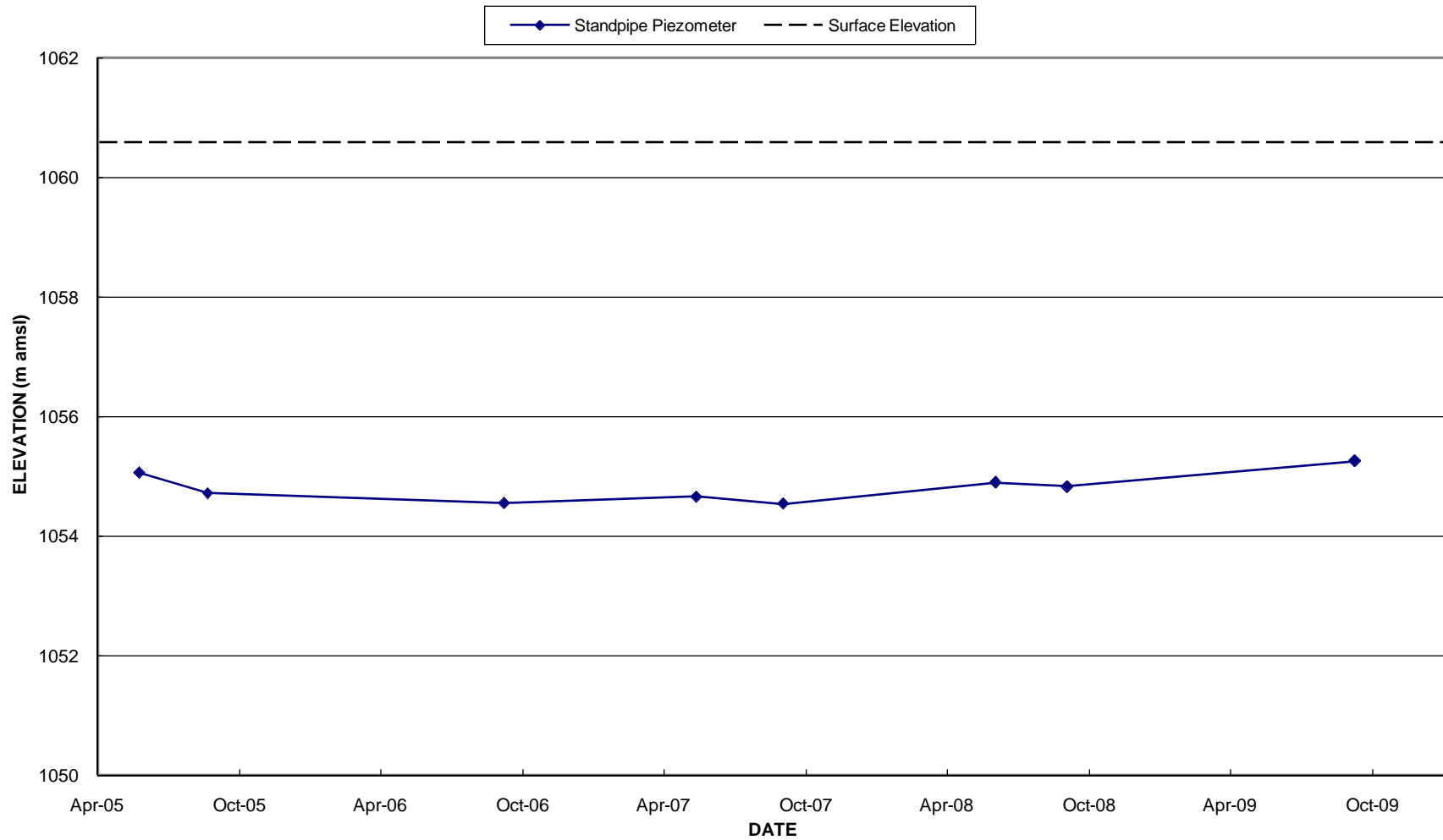
## **SECONDARY DAM**

## **PIEZOMETERS**

**Faro Mine Instrumentation  
 Secondary Dam**

<b>P03-01</b>		<b>Location:</b>	Secondary Impoundment Tailings	<b>2004 Stick-Up (m):</b>	0.53
		<b>Coordinates:</b>		<b>2004 Surface Elevation (m amsl):</b>	1060.581
<b>Surface Protector:</b>	?	<b>Date Installed:</b>	2003	<b>Tip Elevation (m amsl):</b>	?
				<b>Screened Interval (m bgs):</b>	?
<b>Date</b>		<b>Water level from top of pipe (m)</b>	<b>Piezometric Elevation (m amsl)</b>	<b>Pond El. (m amsl)</b>	<b>Comments</b>
20-Jun-05		6.055	1055.06		
16-Sep-05		6.395	1054.72		
2-Oct-06		6.56	1054.55		
6-Jun-07		6.455	1054.66		Gartner Lee did the wells already
26-Sep-07		6.57	1054.54		Beep
25-Jun-08		6.215	1054.90		
25-Sep-08		6.285	1054.83		
30-Sep-09		5.858	1055.25		

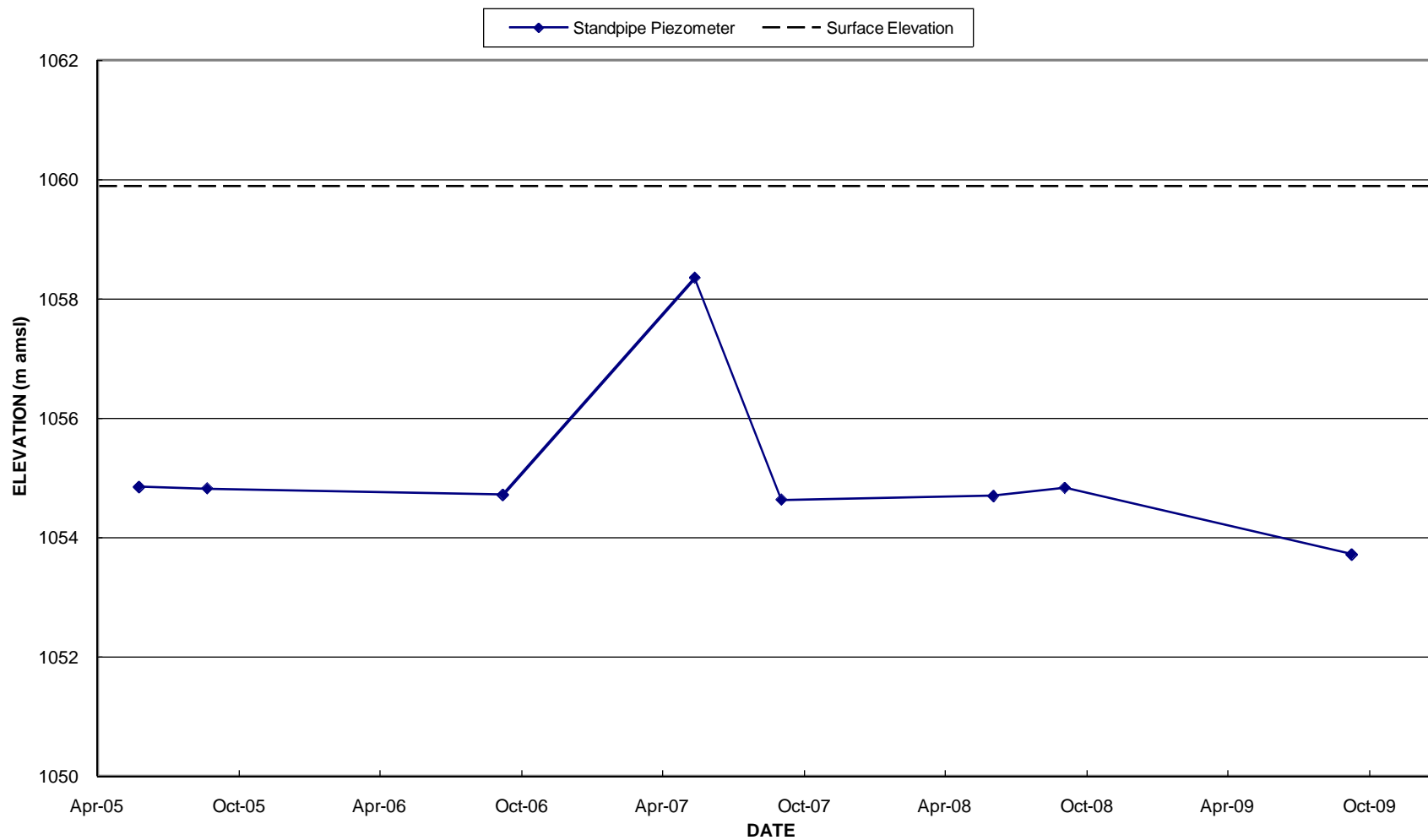
**SECONDARY DAM  
Piezometric Monitoring  
P03-01 Standpipe Piezometer**



**Faro Mine Instrumentation  
 Secondary Dam**

<b>P03-02</b>		<b>Location:</b>	Secondary Impoundment Tailings	<b>2004 Stick-Up (m):</b>	0.69
		<b>Coordinates:</b>		<b>2004 Surface Elevation ( m amsl):</b>	1059.9
<b>Surface Protector:</b>	?	<b>Date Installed:</b>	2003	<b>Tip Elevation (m amsl):</b>	?
				<b>Screened Interval (m bgs):</b>	?
<b>Date</b>		<b>Water level from top of pipe (m)</b>	<b>Piezometric Elevation (m amsl)</b>	<b>Pond El. (m amsl)</b>	<b>Comments</b>
20-Jun-05		5.745	1054.85		
16-Sep-05		5.77	1054.82		
2-Oct-06		5.87	1054.72		
6-Jun-07		2.24	1058.35		No beep, bottom
26-Sep-07		5.955	1054.64		Beep
25-Jun-08		5.89	1054.70		
25-Sep-08		5.755	1054.84		
30-Sep-09		6.875	1053.72		

### SECONDARY DAM Piezometric Monitoring P03-02 Standpipe Piezometer



**Faro Mine Instrumentation  
 Secondary Dam**

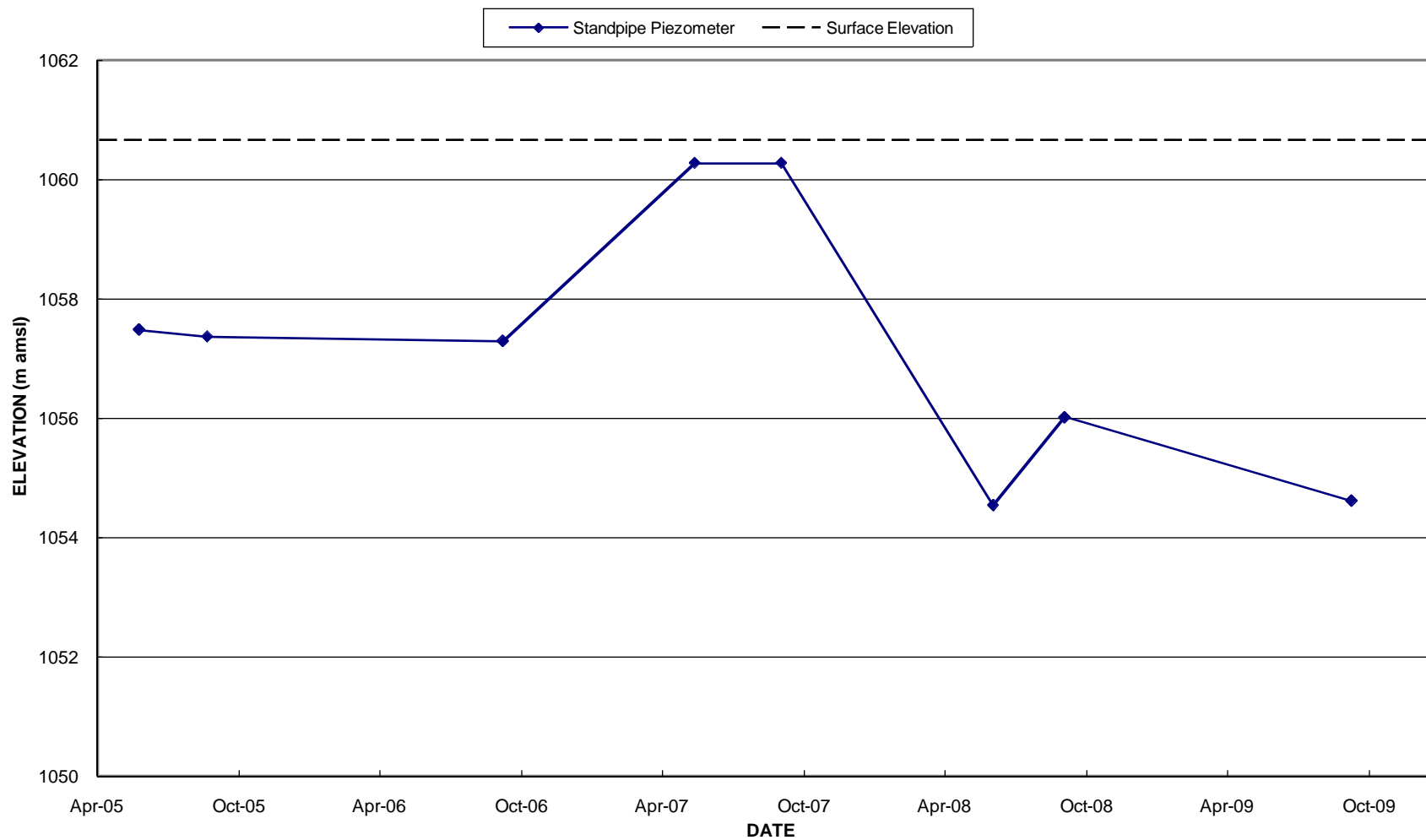
<b>P03-03</b>		<b>Location:</b>	Secondary Impoundment Tailings	<b>2004 Stick-Up (m):</b>	0.82
		<b>Coordinates:</b>		<b>2004 Surface Elevation (m amsl):</b>	1060.67
<b>Surface Protector:</b>	?	<b>Date Installed:</b>	2003	<b>Tip Elevation (m amsl):</b>	?
				<b>Screened Interval (m bgs):</b>	?
<b>Date</b>		<b>Water level from top of pipe (m)</b>	<b>Piezometric Elevation (m amsl)</b>	<b>Pond El. (m amsl)</b>	<b>Comments</b>
20-Jun-05		4.01	1057.48		
16-Sep-05		4.125	1057.37		
2-Oct-06		4.2	1057.29		
6-Jun-07		1.22	1060.27		
26-Sep-07		1.22	1060.27		No Beep - Bottom
25-Jun-08		6.95	1054.54		
25-Sep-08		5.475	1056.02		
30-Sep-09		6.875	1054.62		No Beep - Bottom



**Faro Mine Instrumentation  
 Secondary Dam**

<b>P03-04</b>		<b>Location:</b>	Secondary Impoundment Tailings	<b>2004 Stick-Up (m):</b>	0.74
		<b>Coordinates:</b>		<b>2004 Surface Elevation ( m amsl):</b>	1060.43
<b>Surface Protector:</b>	Yes	<b>Date Installed:</b>	2003	<b>Tip Elevation (m amsl):</b>	?
				<b>Screened Interval (m bgs):</b>	?
<b>Date</b>		<b>Water level from top of pipe (m)</b>	<b>Piezometric Elevation (m amsl)</b>	<b>Pond El. (m amsl)</b>	<b>Comments</b>
20-Jun-05		1.62	1059.55		
29-Sep-05		2.21	1058.96		
2-Oct-06		3.305	1057.87		
6-Jun-07		3.7	1057.47		no beep, bottom
26-Sep-07		3.7	1057.47		no beep, bottom
25-Jun-08		5.21	1055.96		
25-Sep-08		5.475	1055.70		

### SECONDARY DAM Piezometric Monitoring P03-03 Standpipe Piezometer

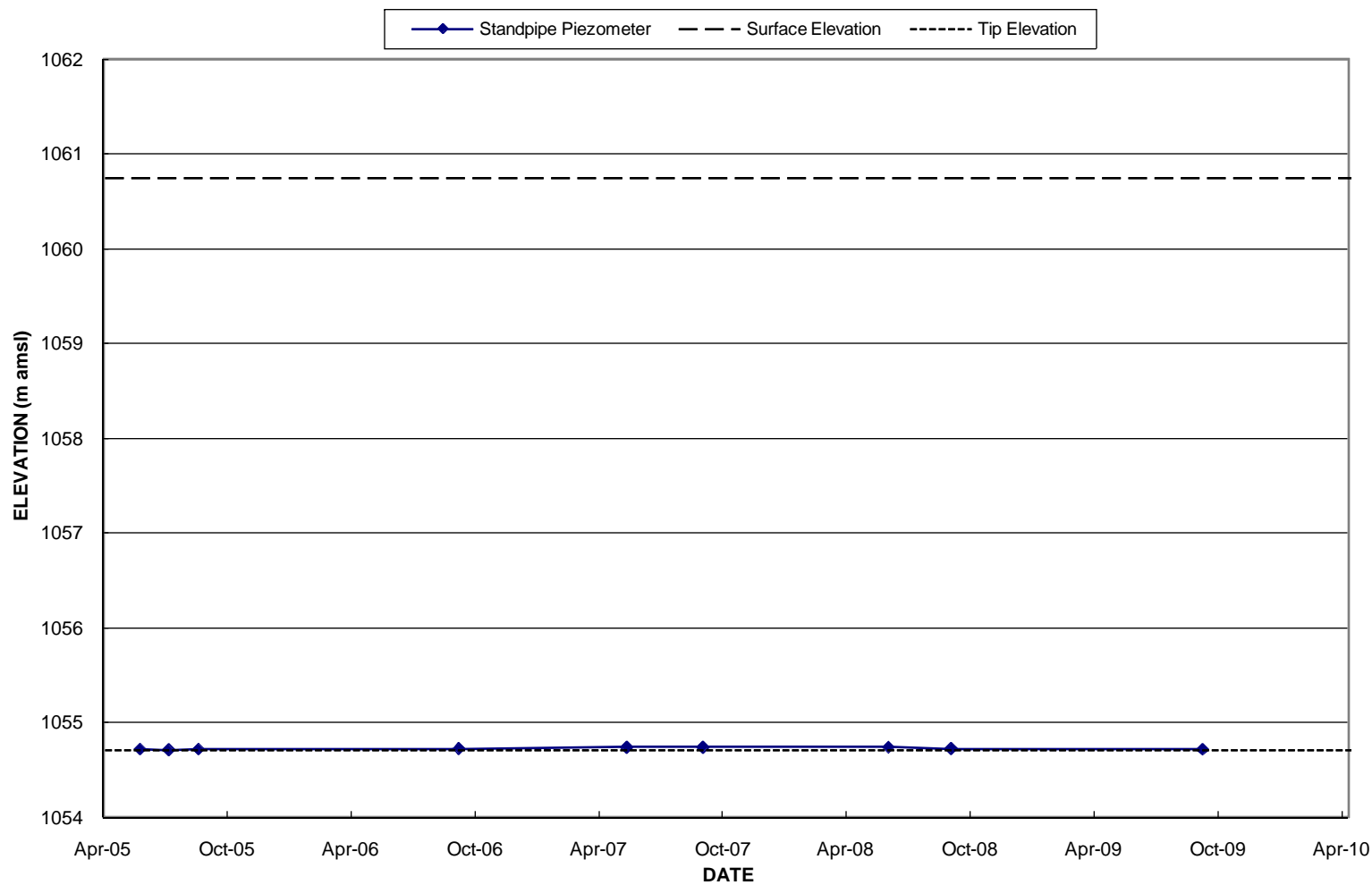


**Faro Mine Instrumentation  
 Secondary Dam**

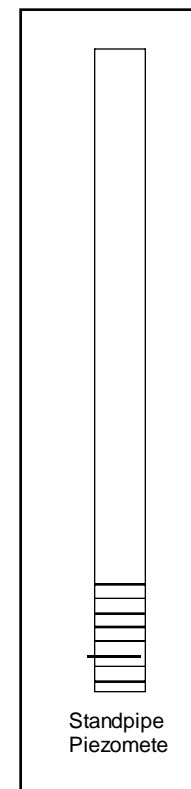
<b>P81-06</b>		<b>Location:</b>	Secondary Dam	<b>2004 Stick-Up (m):</b>	0.13
		<b>Coordinates:</b>	8V582791 6912684	<b>2004 Surface Elevation ( m amsl):</b>	1060.74
<b>Surface Protector:</b>	N/A	<b>Date Installed:</b>	1981	<b>Tip Elevation (m amsl):</b>	1054.71
				<b>Screened Interval (m bgs):</b>	Unknown
<b>Date</b>		<b>Water level from top of pipe (m)</b>	<b>Piezometric Elevation (m amsl)</b>	<b>Pond El. (m amsl)</b>	<b>Comments</b>
20-Jun-05		6.81	1054.72		
1-Aug-05		6.16	1054.71		
14-Sep-05		6.81	1054.72		
2-Oct-06		6.805	1054.73		
6-Jun-07		6.79	1054.74		no beep, bottom
26-Sep-07		6.79	1054.74		no beep, bottom
25-Jun-08		6.79	1054.74		no beep, bottom
25-Sep-08		6.805	1054.73		
30-Sep-09		6.815	1054.72		

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

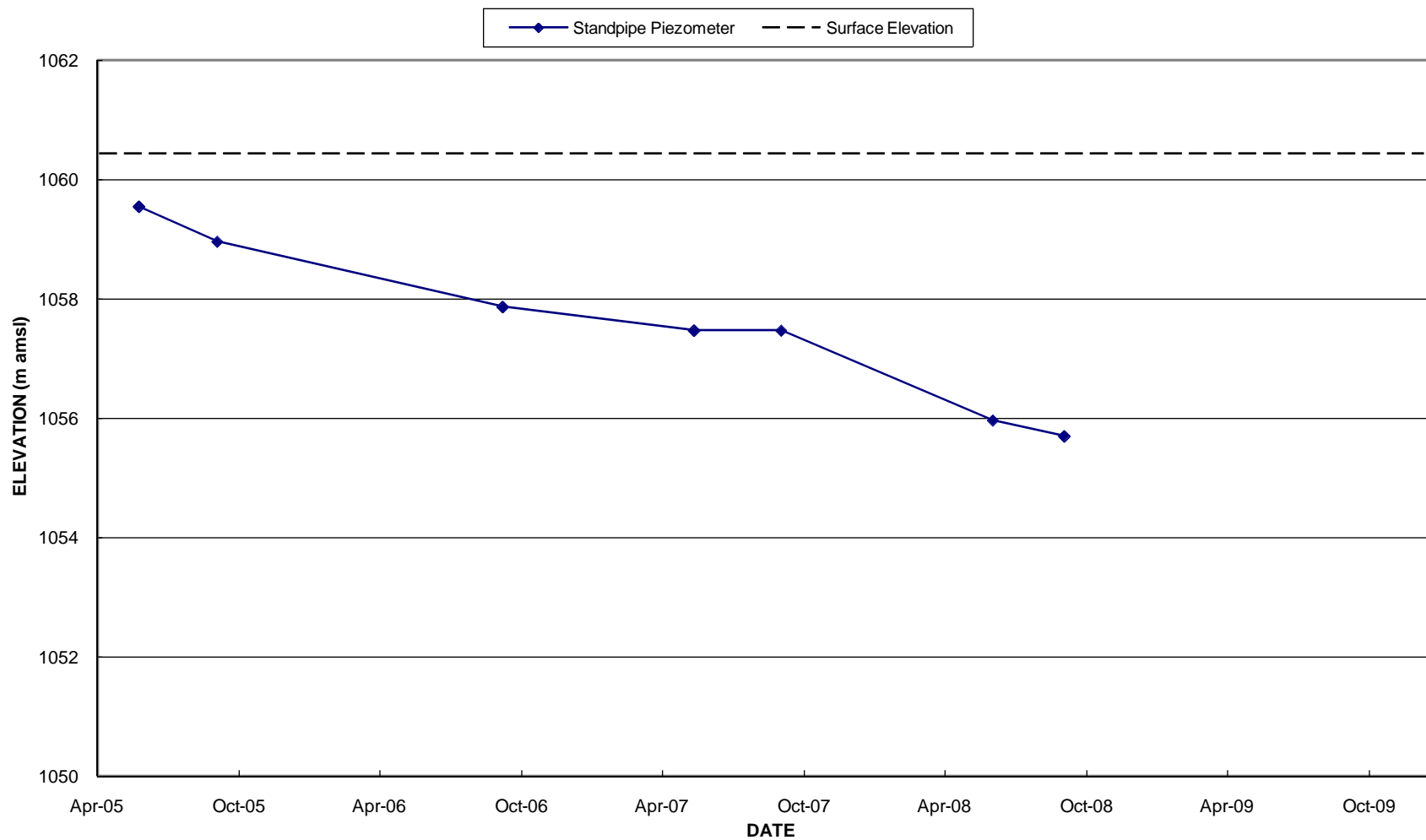
### SECONDARY DAM Piezometric Monitoring P81-06 Standpipe Piezometer



#### Instrument Details



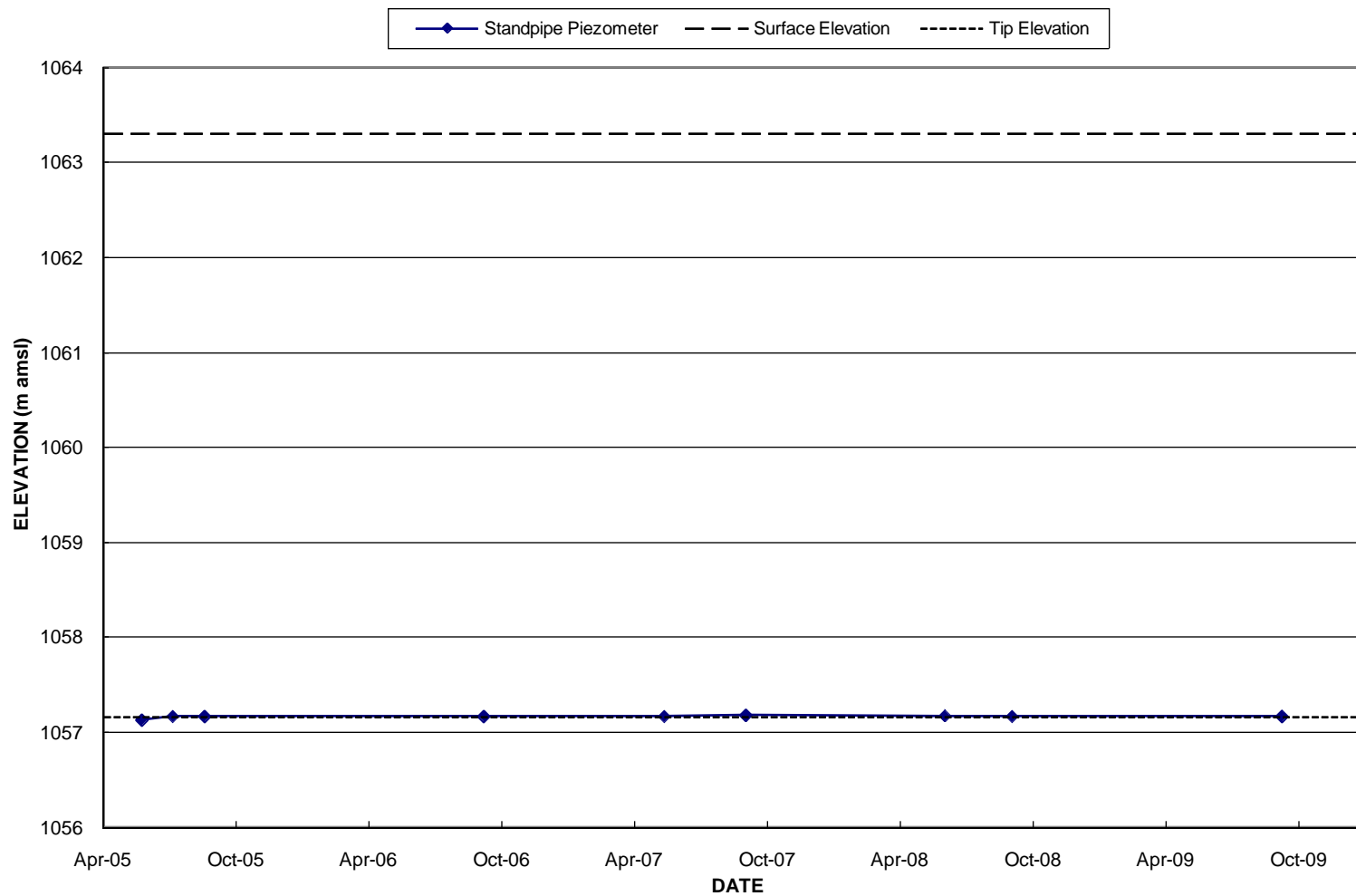
### SECONDARY DAM Piezometric Monitoring P03-04 Standpipe Piezometer



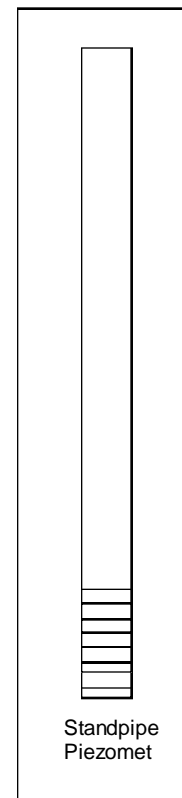
**Faro Mine Instrumentation  
 Secondary Dam**

<b>P81-07</b>		<b>Location:</b>	Secondary Dam	<b>2004 Stick-Up (m):</b>	0.77
		<b>Coordinates:</b>	8V583222 6912420	<b>2004 Surface Elevation ( m amsl):</b>	1063.31
<b>Surface Protector:</b>	N/A	<b>Date Installed:</b>	1981	<b>Tip Elevation (m amsl):</b>	1057.17
				<b>Screened Interval (m bgs):</b>	Unknown
<b>Date</b>		<b>Water level from top of pipe (m)</b>	<b>Piezometric Elevation (m amsl)</b>	<b>Pond El. (m amsl)</b>	<b>Comments</b>
20-Jun-05		6.95	1057.13		
1-Aug-05		6.91	1057.17		
14-Sep-05		6.91	1057.17		
2-Oct-06		6.91	1057.17		
6-Jun-07		6.91	1057.17		
26-Sep-07		6.9	1057.18		Beep
25-Jun-08		6.905	1057.18		
25-Sep-08		6.91	1057.17		
30-Sep-09		6.908	1057.17		

### SECONDARY DAM Piezometric Monitoring P81-07 Standpipe Piezometer



#### Instrument Details

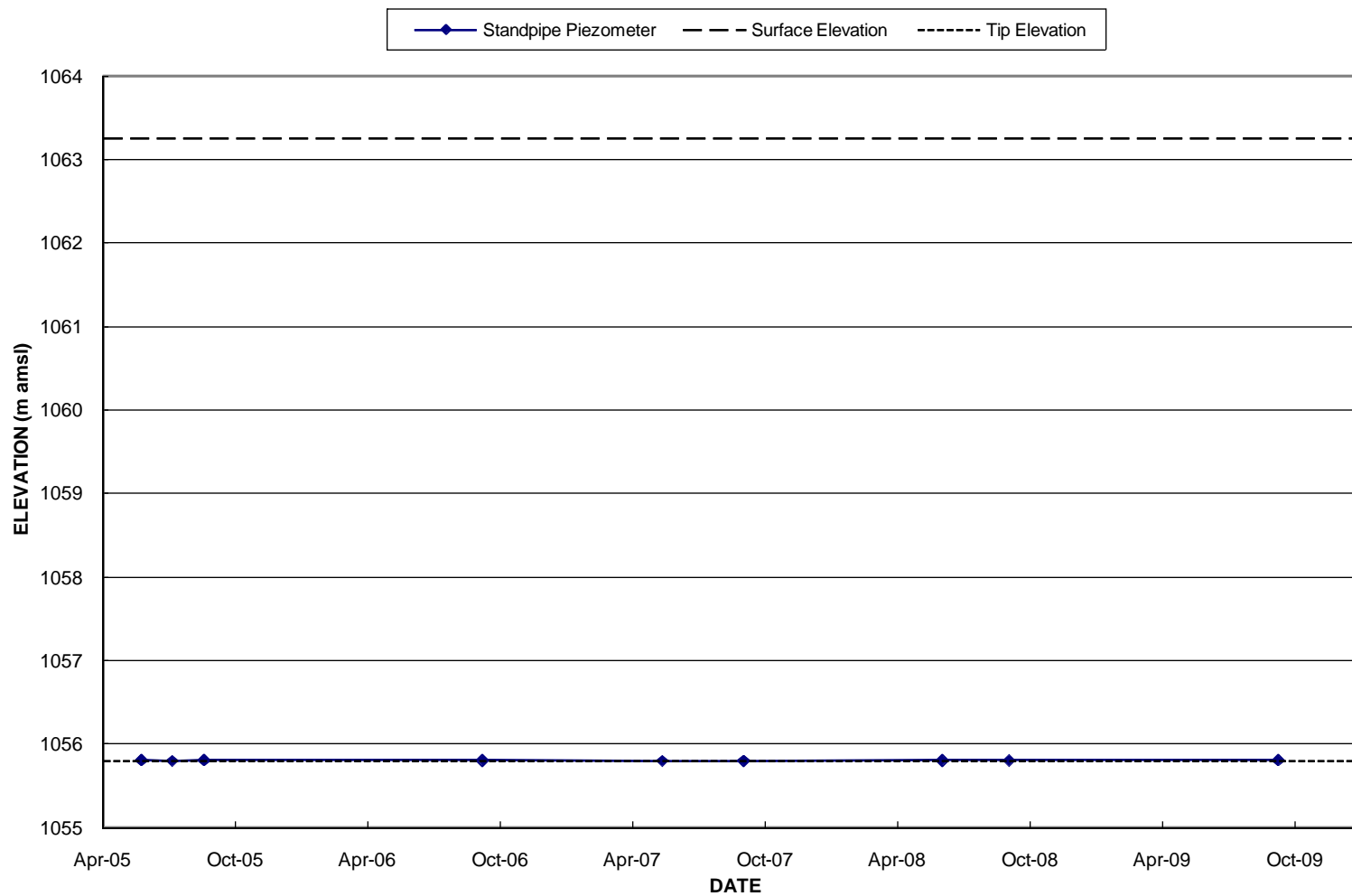


**Faro Mine Instrumentation  
 Secondary Dam**

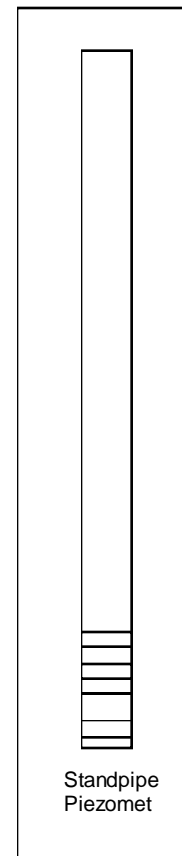
<b>P81-08</b>		<b>Location:</b>	Secondary Dam	<b>2004 Stick-Up (m):</b>	0.74
		<b>Coordinates:</b>	8V583322 6912403	<b>2004 Surface Elevation ( m amsl):</b>	1063.26
<b>Surface Protector:</b>	N/A	<b>Date Installed:</b>	1981	<b>Tip Elevation (m amsl):</b>	1055.80
				<b>Screened Interval (m bgs):</b>	Unknown
<b>Date</b>		<b>Water level from top of pipe (m)</b>	<b>Piezometric Elevation (m amsl)</b>	<b>Pond El. (m amsl)</b>	<b>Comments</b>
20-Jun-05		8.19	1055.81		
1-Aug-05		8.2	1055.80		Dry
14-Sep-05		8.19	1055.81		
2-Oct-06		8.195	1055.81		Dry
6-Jun-07		8.2	1055.80		no beep, bottom
26-Sep-07		8.2	1055.80		no beep, bottom
25-Jun-08		8.195	1055.81		no beep, bottom
25-Sep-08		8.195	1055.81		no beep, bottom
30-Sep-09		8.192	1055.81		no beep, bottom



**SECONDARY DAM  
Piezometric Monitoring  
P81-08 Standpipe Piezometer**



**Instrument  
Details**



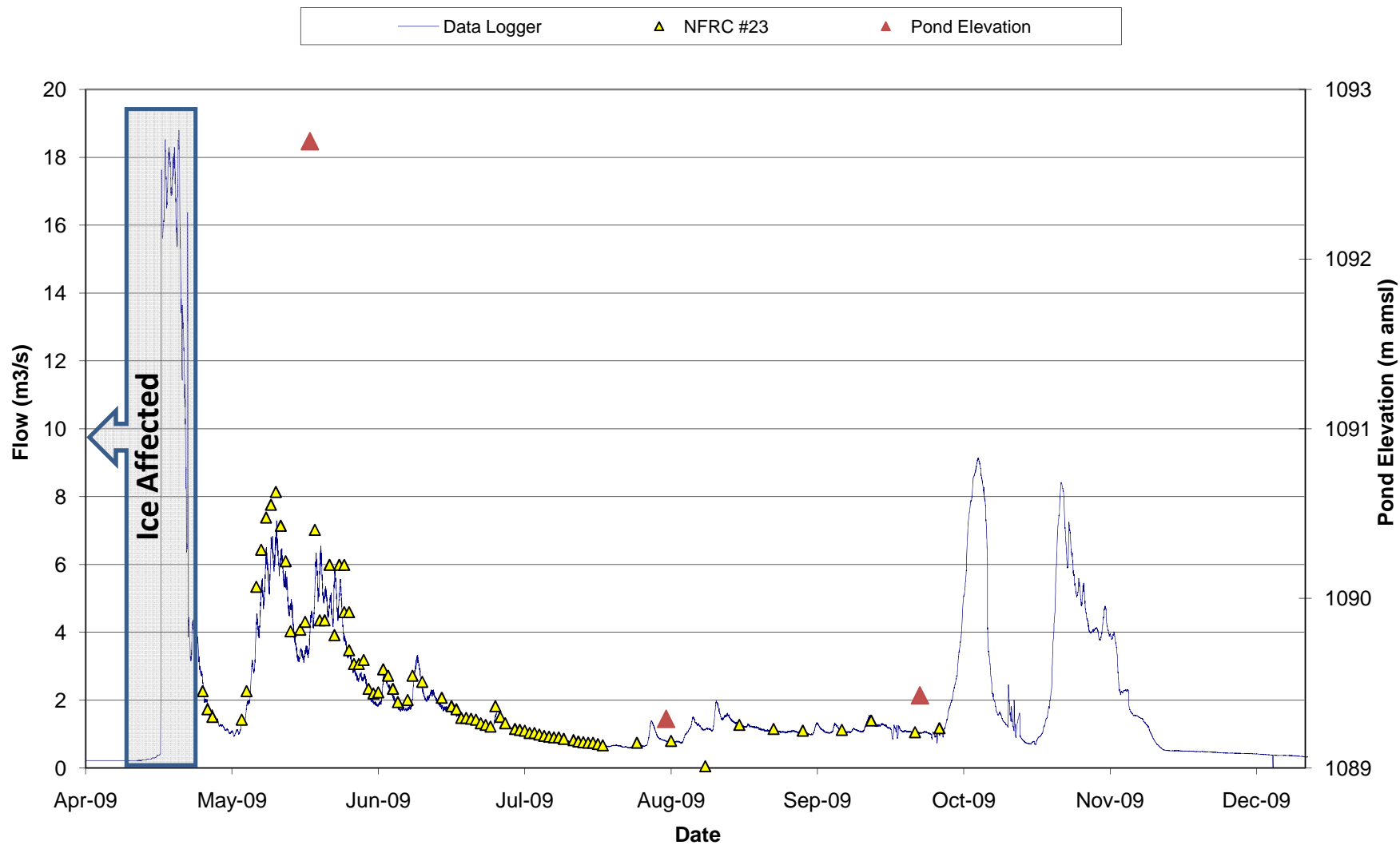
## **NORTH FORK ROCK DRAIN (NFRD)**

## **POND ELEVATION AND CREEK FLOWS**

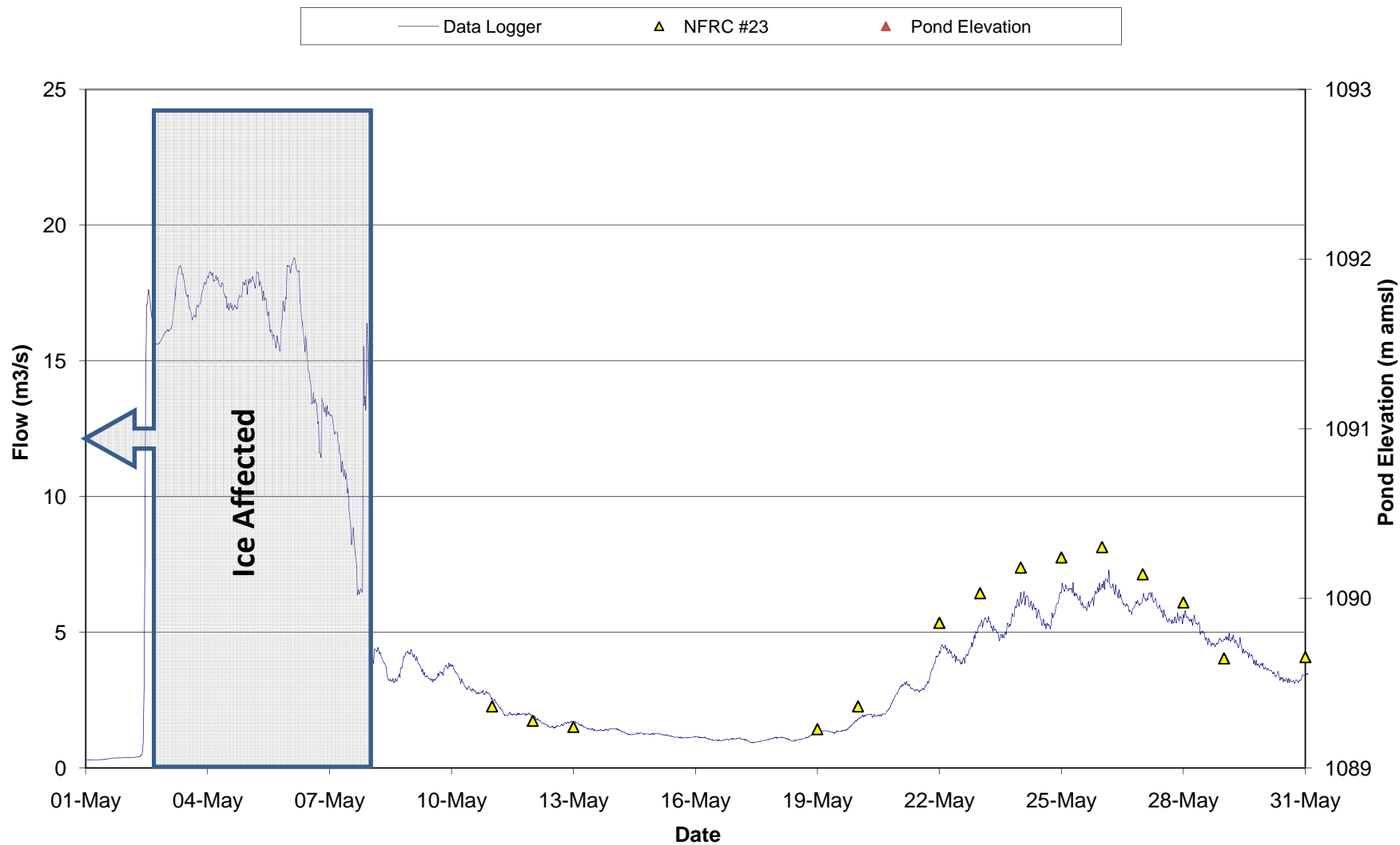
### Calculations of the hydraulic gradient through the rock drain

Date	Toe Elevation (m amsl)	Pond Elevation (m amsl)	Head Difference (m)	Gradient
26-May-05	1086.84	1092.43	5.59	0.0278
28-May-05	1086.94	1092.88	5.94	0.0295
30-May-05	1086.69	1092.24	5.55	0.0276
2-Jun-05	1086.67	1091.82	5.15	0.0256
6-Jun-05	1086.46	1091.23	4.77	0.0237
9-Jun-05	1086.46	1091.09	4.62	0.0230
15-Jun-05	1086.57	1091.15	4.57	0.0227
20-Jun-05	1086.43	1090.39	3.96	0.0197
23-Jun-05	1086.30	1090.17	3.88	0.0193
21-Jul-05	1086.43	1090.38	3.95	0.0196
16-Aug-05	1086.22	1089.51	3.28	0.0163
19-Jul-06	1086.51	1090.19	3.68	0.0183
20-Jul-06	1086.43	1089.57	3.14	0.0156
7-Jun-06	1086.54	1090.58	4.04	0.0201
3-Aug-06	1086.38	1089.72	3.34	0.0166
22-Aug-05	1086.39	1089.54	3.15	0.0156
26-Aug-06	1086.36	1089.75	3.39	0.0168
28-Sep-06	1086.23	1089.31	3.08	0.0153
28-May-07	1086.88	1092.58	5.70	0.0283
13-Jun-07	1086.79	1092.04	5.25	0.0261
27-Jun-07	1086.46	1090.14	3.68	0.0183
11-Jul-07	1086.32	1089.59	3.26	0.0162
18-Jul-07	1086.44	1089.94	3.50	0.0174
1-Aug-07	1086.32	1089.49	3.17	0.0157
26-Jun-08	1086.73	1091.63	4.90	0.0243
14-Jul-08	1086.75	1092.39	5.64	0.0280
29-Jul-08	1086.45	1090.39	3.95	0.0196
6-Aug-08	1086.41	1089.90	3.49	0.0173
12-Aug-08	1086.40	1089.98	3.58	0.0178
2-Jun-09	1086.88	1092.70	5.81	0.0289
14-Aug-09	1086.01	1089.29	3.28	0.0149
5-Oct-09	1086.26	1089.43	3.16	0.0157

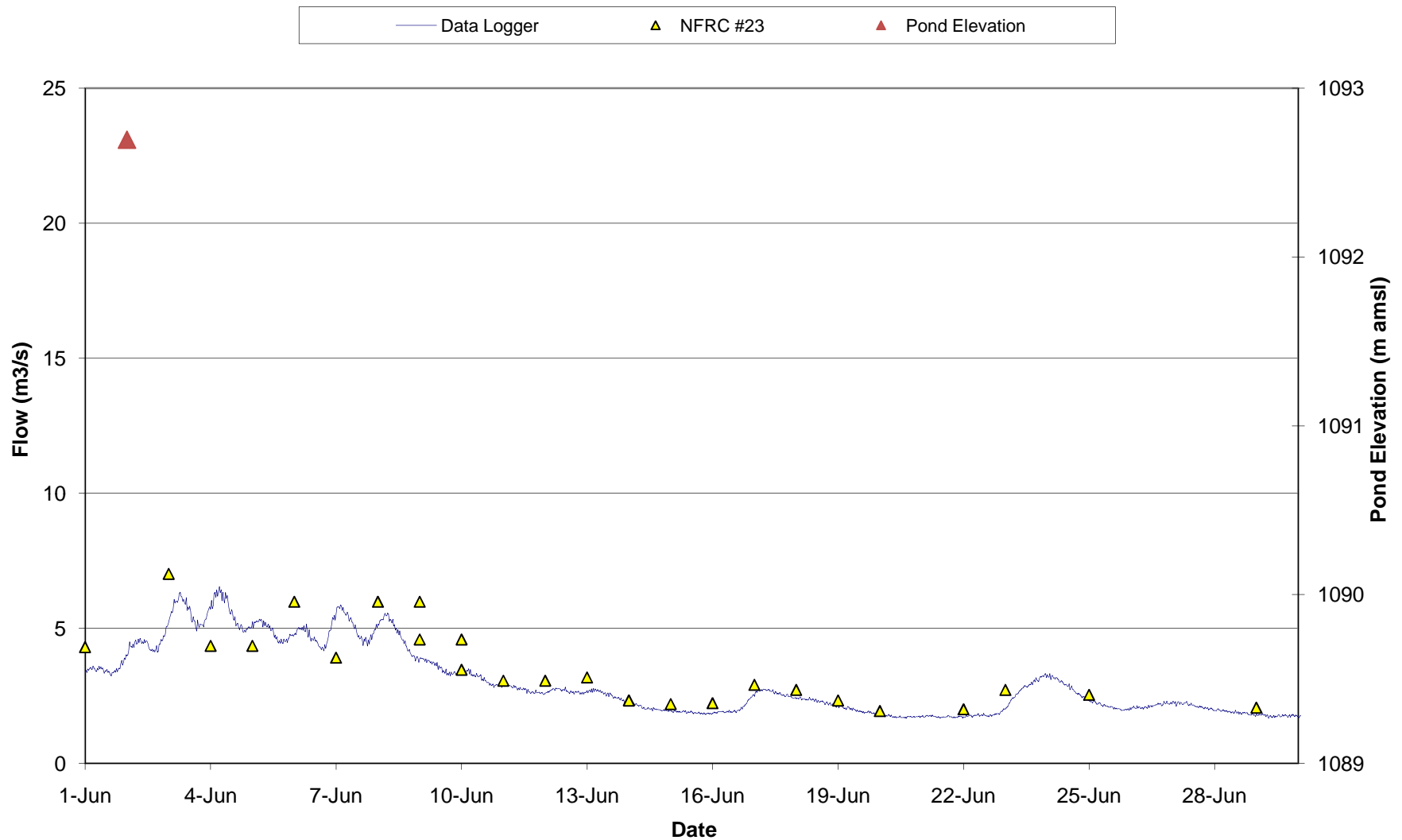
## Pond Elevation and Flow downstream of NFRD - Apr to Dec 2009



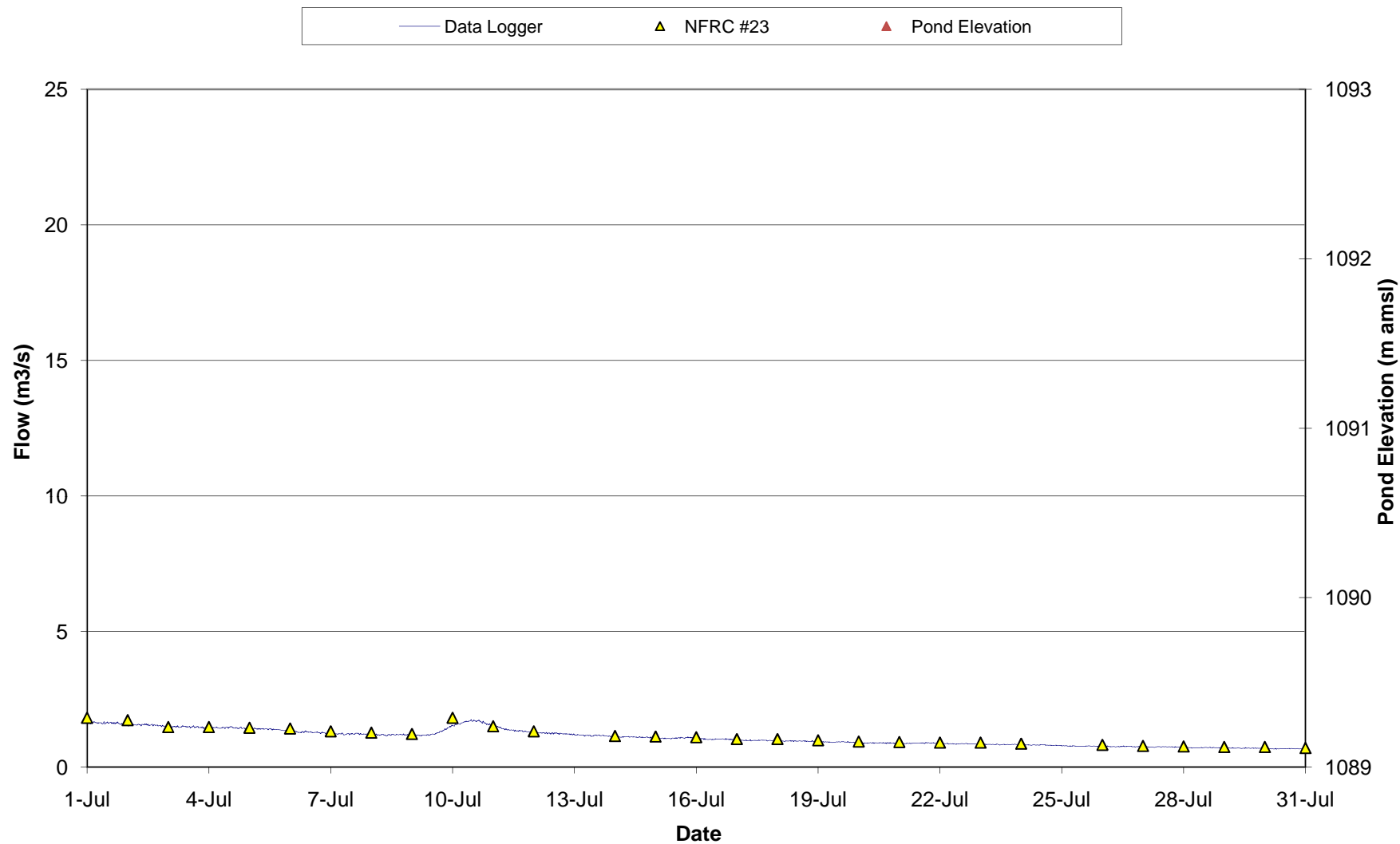
## Pond Elevation and Flow downstream of NFRD - May 2009



## Pond Elevation and Flow downstream of NFRD - June 2009

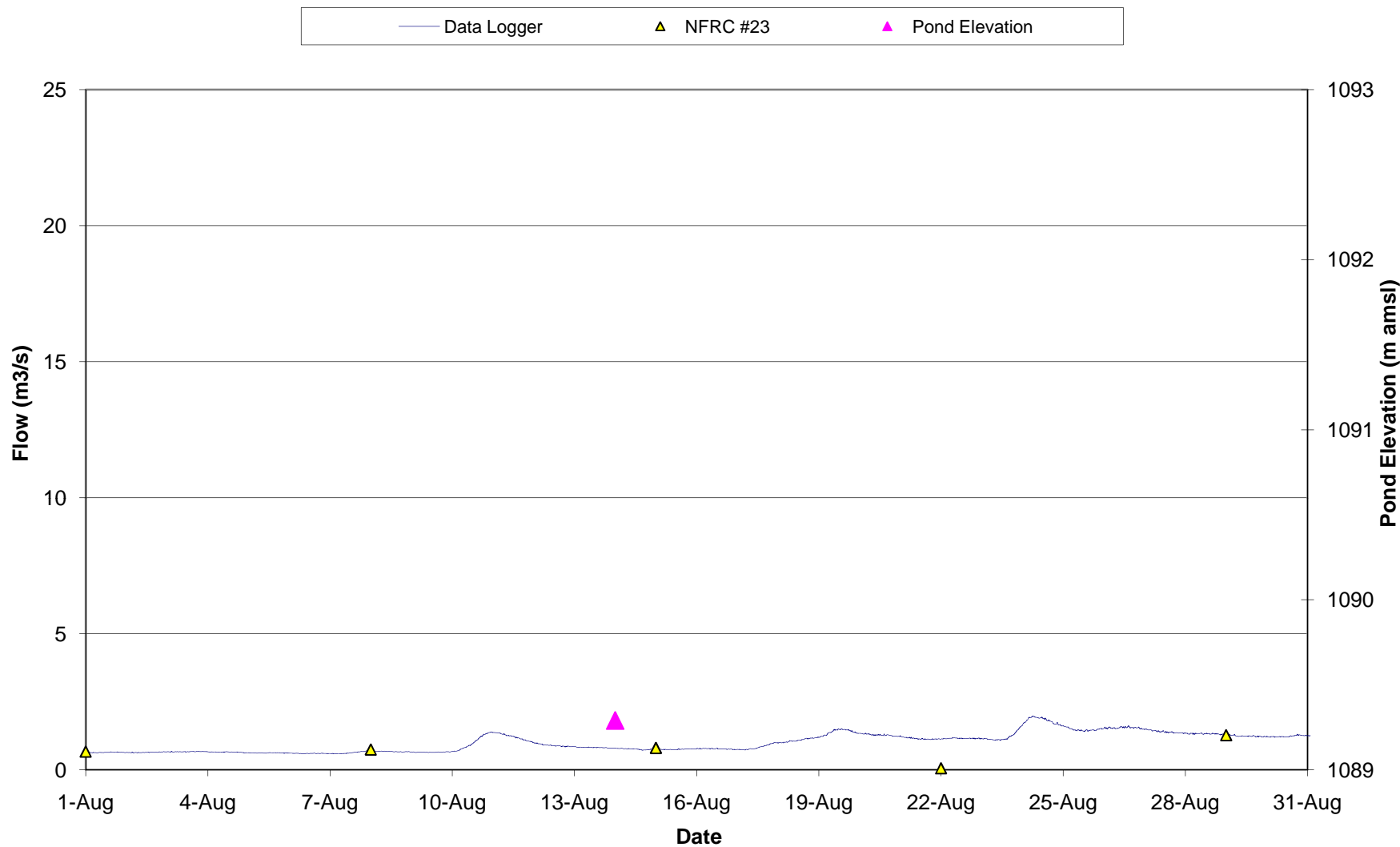


### Pond Elevation and Flow downstream of NFRD - July 2009

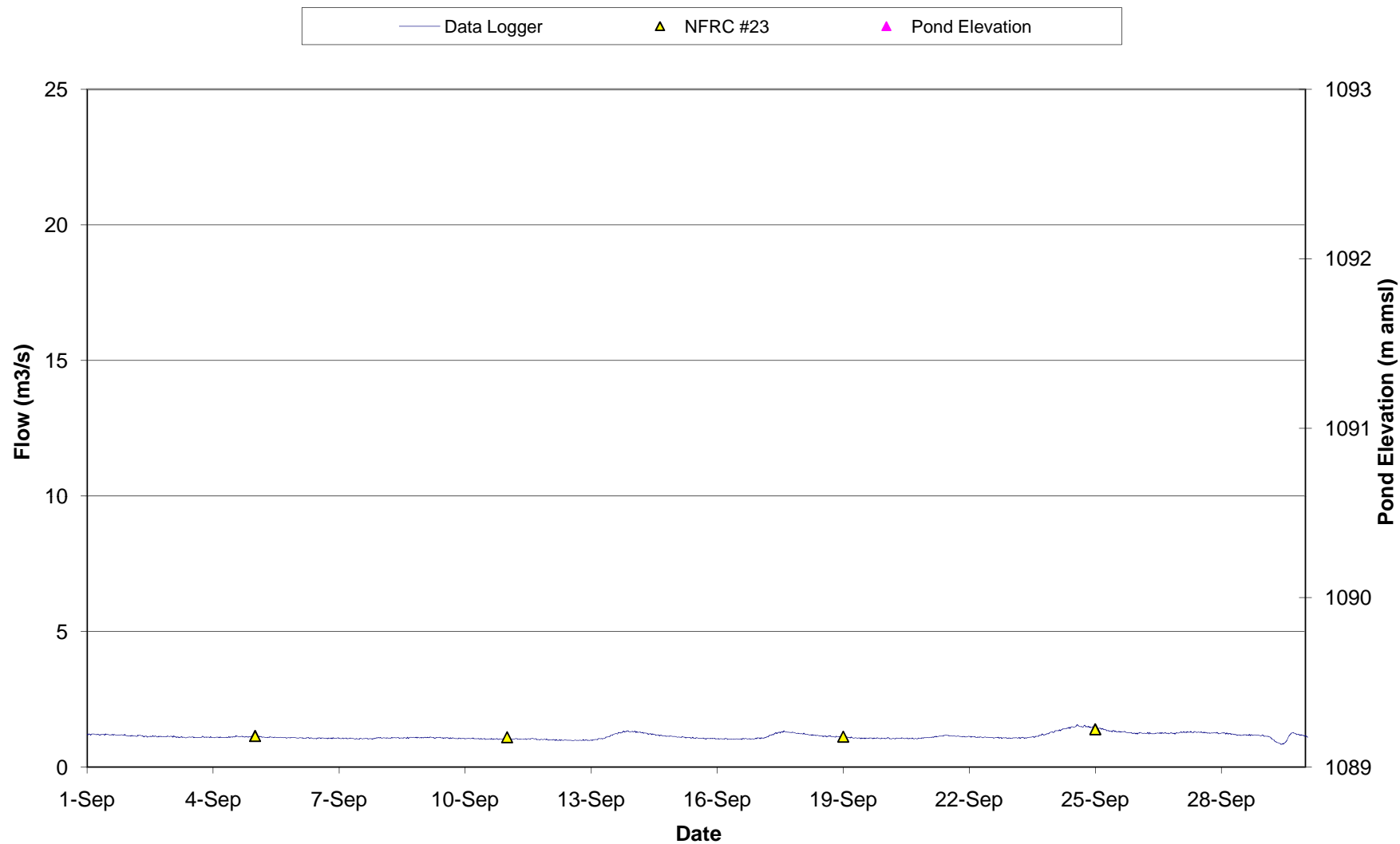




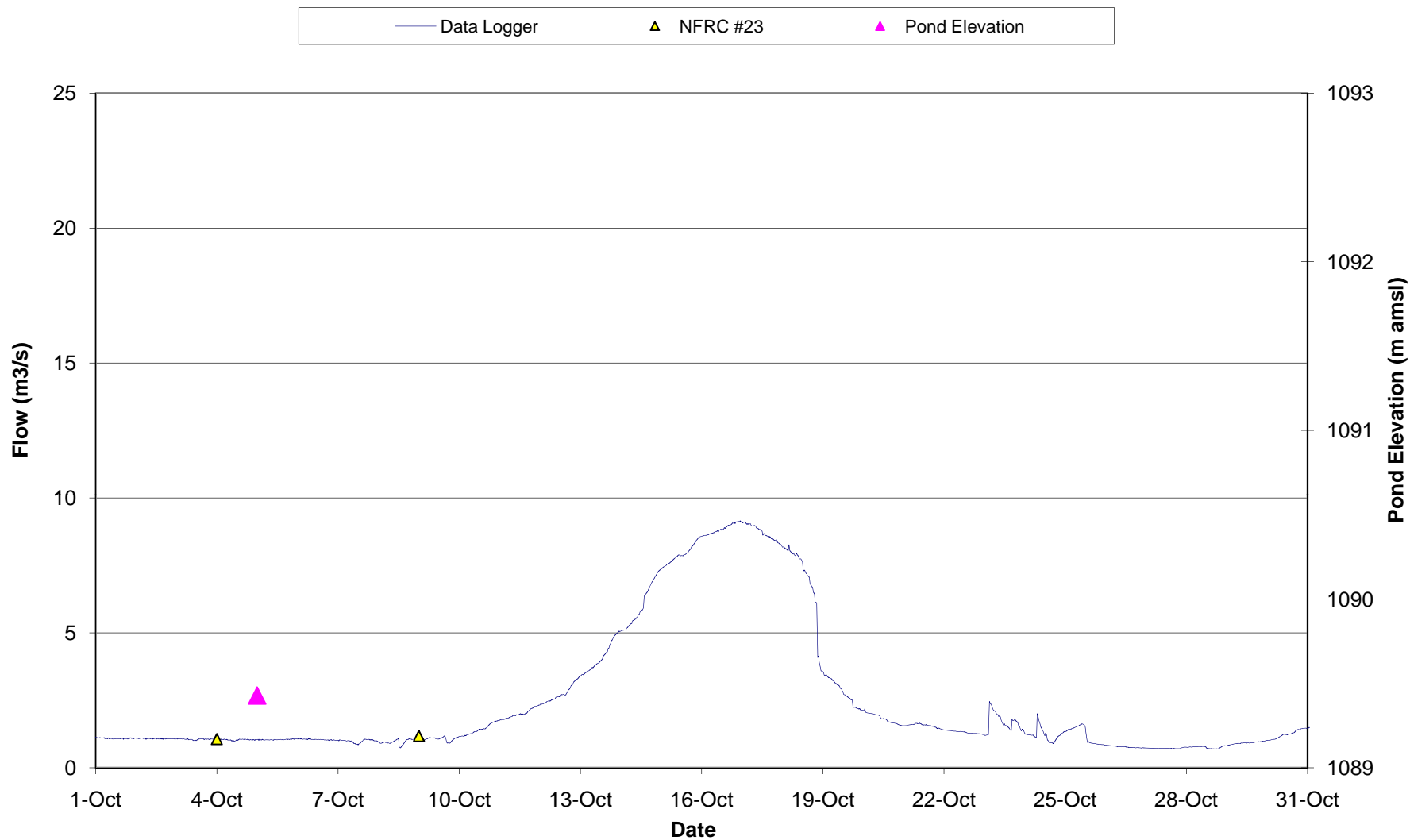
## Pond Elevation and Flow downstream of NFRD - August 2009



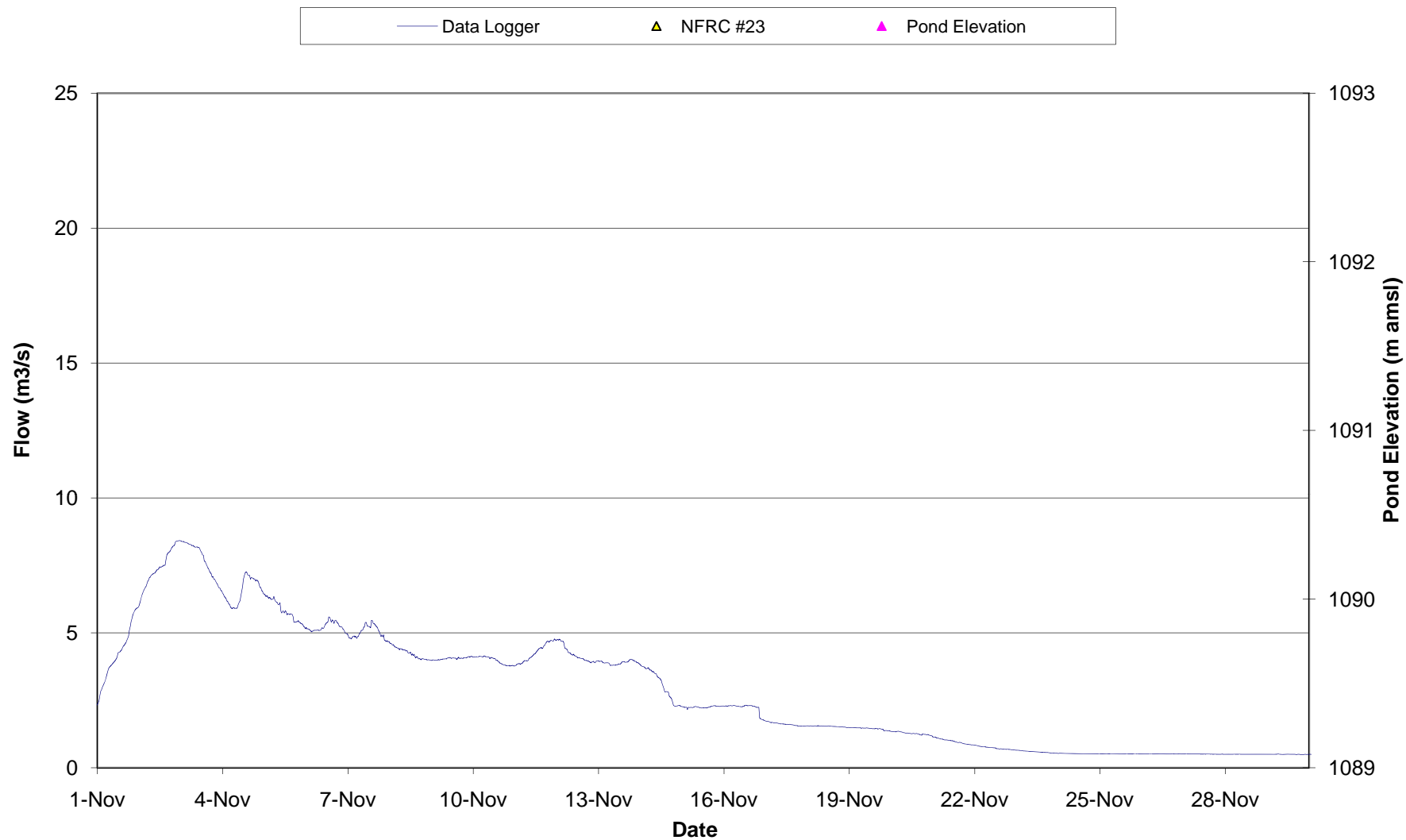
## Pond Elevation and Flow downstream of NFRD - September 2009



## Pond Elevation and Flow downstream of NFRD - October 2009



## Pond Elevation and Flow downstream of NFRD - November 2009



## **FARO CREEK DIVERSION CANAL**

## **STAFF GAUGES**

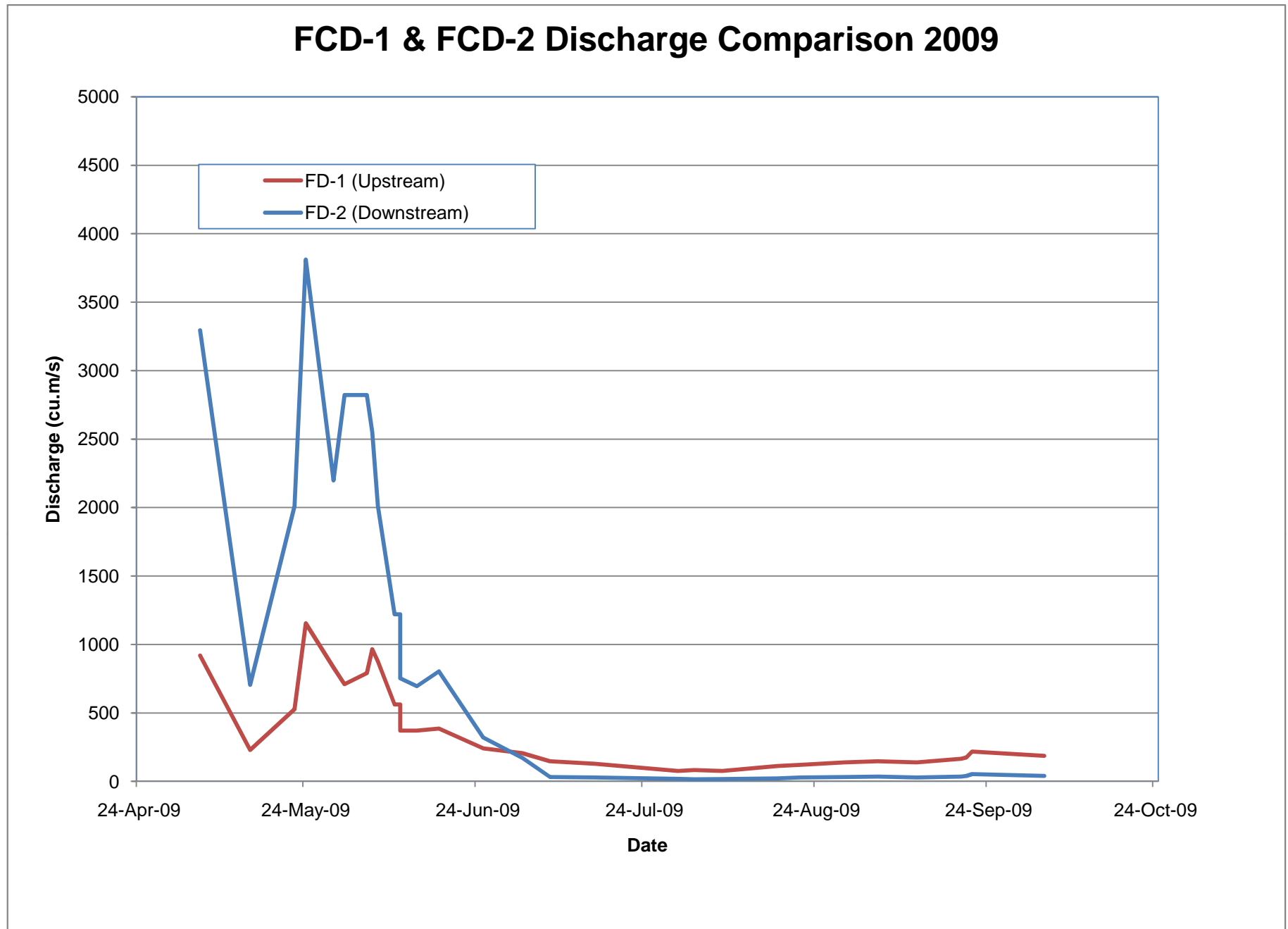
## FCD-1 Gauge

Date	Time (PST)	Reading (m)	Discharge (Lps)	Comment
24-May-07	19:50:00	0.480	1022	newly installed
25-May-07	09:40:00	0.412	984.0	
13-Jun-07	15:20:00	0.300	662	
26-Jun-07	15:10:00	0.215	395	
27-Jun-07	09:30:00	0.218	302.5	tail end of thundershower
11-Jul-07	13:30:00	0.175	179	
18-Jul-07	14:00:00	0.200	236	
18-Jul-07	12:40:00	0.200	249.0	
24-Jul-07		0.153	107.2	
1-Aug-07	11:50:00	0.170	198	
8-Aug-07	15:20:00	0.172	151.9	LES survey, conclude gauge zero is 97.677 (average of 4 trials)
4-Sep-07	15:40:00		155.0	
6-Sep-07		0.220	277.0	
26-Jun-08	08:00:00	0.240	342	
4-Jul-08	10:40:00	0.220	289	
7-Jul-08	11:40:00	0.250	371	
14-Jul-08	11:00:00	0.265	415	
15-Jul-08	10:40:00	0.630	2213	Heavy Rain - Last 24hrs
6-Aug-08	11:00:00	0.185	207	
25-Aug-08	12:55:00	0.440	1105	
13-Sep-08	08:15:00	0.250	371	
5-May-09		0.400	919	
14-May-09	8:20 AM	0.195	229	
22-May-09	6:35 AM	0.300	527	
24-May-09	7:00 AM	0.450	1155	
29-May-09	8:40 AM	0.380	833	
31-May-09	7:00 AM	0.350	710	
4-Jun-09	1:45 PM	0.370	791	
5-Jun-09	6:30 AM	0.410	964	
6-Jun-09	7:55 AM	0.390	876	
9-Jun-09	6:48 AM	0.310	562	
10-Jun-09	6:48 AM	0.310	562	
10-Jun-09	2:30 PM	0.250	371	
13-Jun-09	8:55 AM	0.250	371	
17-Jun-09	5:15 PM	0.255	385	
25-Jun-09	3:10 PM	0.200	241	
2-Jul-09	12:53 PM	0.185	207	
7-Jul-09	5:40 PM	0.155	147	
15-Jul-09	10:30 AM	0.145	129	
30-Jul-09	3:05 PM	0.110	76	
2-Aug-09	8:05 AM	0.115	83	
7-Aug-09	9:00 AM	0.110	76	
17-Aug-09	8:20 AM	0.135	113	
21-Aug-09	10:25 AM	0.140	121	
29-Aug-09	12:32 PM	0.150	138	
4-Sep-09	9:57 AM	0.155	147	
11-Sep-09	8:05 AM	0.150	138	
19-Sep-09	4:24 PM	0.165	166	
20-Sep-09	12:14 PM	0.170	176	
21-Sep-09	4:22 PM	0.190	218	
4-Oct-09	5:35 PM	0.175	186	

## FCD-2 Gauge

Date	Time (PST)	Reading (m)	Discharge (Lps)	Comment
24-May-07	18:30:00	0.460	1133	lots of shore ice rapidly melting: gain is invalid
25-May-07	11:40:00	0.475	1069	newly installed gauge. Gain is invalid due to heavy melting on banks
13-Jun-07	16:05:00	0.340	525	Anvil Lab checked survey = OK
26-Jun-07	15:30:00	0.255	326	
27-Jun-07	12:30:00	0.247	308.3	tail end of thundershower, invalid
11-Jul-07	14:30:00	0.195	130	
18-Jul-07	14:20:00	0.210	158	
18-Jul-07	11:30:00	0.210	165.0	Good check Anvil Lab vs LES flows
24-Jul-07	17:00:00	0.185	87.9	rainfall affected
1-Aug-07	12:25:00	0.195	133	
8-Aug-07	14:40:00	0.200	106.3	
4-Sep-07	15:10:00	0.202	112.1	
6-Sep-07	PM	0.241	235.0	affected by construction
26-Jun-08	08:00:00	0.325	470	
4-Jul-08	10:40:00	0.280	320	
7-Jul-08	11:40:00	0.355	591	
14-Jul-08	11:00:00	0.390	753	
15-Jul-08	10:40:00	0.880	6178	Heavy Rain - Last 24hrs
6-Aug-08	11:00:00	0.195	126	
25-Aug-08	12:55:00	0.590	2197	
13-Sep-08	08:15:00	0.395	779	
5-May-09		0.690	3294	
14-May-09	8:20 AM	0.380	705	
22-May-09	6:35 AM	0.570	2010	
24-May-09	7:00 AM	0.730	3811	
29-May-09	8:40 AM	0.590	2197	
31-May-09	7:00 AM	0.650	2823	
4-Jun-09	1:45 PM	0.650	2823	
5-Jun-09	6:30 AM	0.625	2550	
6-Jun-09	7:55 AM	0.570	2010	
9-Jun-09	6:48 AM	0.470	1221	
10-Jun-09	6:48 AM	0.470	1221	
10-Jun-09	2:30 PM	0.390	753	
13-Jun-09	8:55 AM	0.378	695	
17-Jun-09	5:15 PM	0.400	804	
25-Jun-09	3:10 PM	0.280	320	
2-Jul-09	12:53 PM	0.220	171	
7-Jul-09	5:40 PM	0.115	32	
15-Jul-09	10:30 AM	0.110	29	
30-Jul-09	3:05 PM	0.092	18	
2-Aug-09	8:05 AM	0.085	15	
7-Aug-09	9:00 AM	0.090	17	
17-Aug-09	8:20 AM	0.100	22	
21-Aug-09	10:25 AM	0.110	29	
29-Aug-09	12:32 PM	0.115	32	
4-Sep-09	9:57 AM	0.120	36	
11-Sep-09	8:05 AM	0.110	29	
19-Sep-09	4:24 PM	0.120	36	
20-Sep-09	12:14 PM	0.125	40	
21-Sep-09	4:22 PM	0.140	53	
4-Oct-09	5:35 PM	0.125	40	





## FCD-3 Gauge

Date	Time (PST)	Reading (m)	Discharge (Lps)	Comment
26-Jun-08	08:00:00	0.250	na	Previously called FD-1A
4-Jul-08	10:40:00	0.230	na	
7-Jul-08	11:40:00	0.270	na	
14-Jul-08	11:00:00	0.285	na	
15-Jul-08	10:40:00	0.640	na	Heavy Rain - Last 24hrs
6-Aug-08	11:00:00	0.190	na	
25-Aug-08	12:55:00	0.400	na	
13-Sep-08	08:15:00	0.290	na	
5-May-09		0.980	na	
14-May-09	8:20 AM	0.300	na	
22-May-09	6:35 AM	0.350	na	
24-May-09	7:00 AM	0.480	na	
29-May-09	8:40 AM	0.400	na	
31-May-09	7:00 AM	0.390	na	
4-Jun-09	1:45 PM	0.390	na	
5-Jun-09	6:30 AM	0.400	na	
6-Jun-09	7:55 AM	0.390	na	
9-Jun-09	6:48 AM	0.300	na	
10-Jun-09	6:48 AM	0.300	na	
10-Jun-09	2:30 PM	0.270	na	
13-Jun-09	8:55 AM	0.265	na	
17-Jun-09	5:15 PM	0.275	na	
25-Jun-09	3:10 PM	0.210	na	
2-Jul-09	12:53 PM	0.185	na	
7-Jul-09	5:40 PM	0.150	na	
15-Jul-09	10:30 AM	0.141	na	
30-Jul-09	3:05 PM	0.105	na	
2-Aug-09	8:05 AM	-	na	
7-Aug-09	9:00 AM	0.100	na	
17-Aug-09	8:20 AM	0.125	na	
21-Aug-09	10:25 AM	0.135	na	
29-Aug-09	12:32 PM	0.160	na	
4-Sep-09	9:57 AM	0.160	na	
11-Sep-09	8:05 AM	0.155	na	
19-Sep-09	4:24 PM	0.150	na	
20-Sep-09	12:14 PM	0.170	na	
21-Sep-09	4:22 PM	0.190	na	
4-Oct-09	5:35 PM	0.175	na	
9-Oct-09	11:03 AM	Frozen	na	

\*Rating curve is needed for this instrument

## FCD-4 Gauge

Date	Time (PST)	Reading (m)	Discharge (Lps)	Comment
26-Jun-08	08:00:00	0.250	na	Previously called FD-1B
4-Jul-08	10:40:00	0.270	na	
7-Jul-08	11:40:00	0.270	na	
14-Jul-08	11:00:00	0.290	na	
15-Jul-08	10:40:00	0.540	na	Heavy Rain - Last 24hrs
6-Aug-08	11:00:00	0.195	na	
25-Aug-08	12:55:00	0.405	na	
13-Sep-08	08:15:00	0.285	na	
5-May-09		0.820	na	
14-May-09	8:20 AM		na	
22-May-09	6:35 AM	0.320	na	
24-May-09	7:00 AM	0.450	na	
29-May-09	8:40 AM	0.400	na	
31-May-09	7:00 AM	0.360	na	
4-Jun-09	1:45 PM	0.385	na	
5-Jun-09	6:30 AM	0.420	na	
6-Jun-09	7:55 AM	0.400	na	
9-Jun-09	6:48 AM	0.300	na	
10-Jun-09	6:48 AM	0.300	na	
10-Jun-09	2:30 PM	0.260	na	
13-Jun-09	8:55 AM	0.250	na	
17-Jun-09	5:15 PM	0.270	na	
25-Jun-09	3:10 PM	0.240	na	
2-Jul-09	12:53 PM	0.215	na	
7-Jul-09	5:40 PM	0.190	na	
15-Jul-09	10:30 AM	<0.15	na	
30-Jul-09	3:05 PM	>0.15	na	
2-Aug-09	8:05 AM	-	na	
7-Aug-09	9:00 AM	-	na	
17-Aug-09	8:20 AM	0.160	na	
21-Aug-09	10:25 AM	0.170	na	
29-Aug-09	12:32 PM	0.195	na	
4-Sep-09	9:57 AM	0.190	na	
11-Sep-09	8:05 AM	0.180	na	
19-Sep-09	4:24 PM	0.199	na	
20-Sep-09	12:14 PM	0.200	na	
21-Sep-09	4:22 PM	0.220	na	
4-Oct-09	5:35 PM	0.205	na	
9-Oct-09	11:03 AM	Frozen	na	

\*Rating curve is needed for this instrument

**APPENDIX III**  
**RCDC STAINING (LETTER REPORT BY DES)**



# MEMORANDUM

TO: Jon Bronson, Kaori Torigai, File  
DATE: 8 January 2010  
FROM: Jay Cherian  
SUBJECT: Preliminary X3, X10 Review

---

## Background

Staining was observed in the Rose Creek Diversion Channel (RCDC) just downstream of X3. The staining was reddish in colour, indicating the possibility of iron precipitating from groundwater seepage in the creek.

In the location that the staining was observed and at the time of year that the staining was observed, it is likely that the water table in the neighbouring tailings containment area was higher than that of the RCDC. It was therefore assumed that a likely source of the groundwater seepage was the tailings area.

This preliminary review summarizes the results of steps taken to review the history of staining observations along the RCDC and water quality in the creek, to determine whether or not an immediate Care and Maintenance response was necessary.

Figure 1, attached, shows the results of a preliminary water quality review of select parameters in the RCDC upstream and downstream of the observed staining. The last date shown in the figures is for the last sampling event that had been undertaken at the time of the writing of this memo: December 1, 2009. The staining was observed in late December 2009, which is after this date. Results have nevertheless been reviewed for historic trends that may have been observable prior to staining having been visible.

## Assessment

Figure 1 shows that for all the parameters selected (iron, sulphate, copper, nickel, lead, magnesium, sodium, zinc), with the possible exception of magnesium, iron and zinc, the concentrations of X3 and X10 are comparable. Statistical analysis would be required to determine whether or not the differences are significant between for magnesium, iron and zinc. In addition, the results for all parameters, including zinc show generally that trends at X3 parallel trends at

X10, indicating that no increasing trend in concentrations at X10 with respect to X3 is observable.

While detailed statistical analysis of the iron, magnesium and zinc may show that there is some loading to the RCDC within the reach from X3 to X10, it can be concluded from the preliminary review that the loading rate is not increasing with respect to historic rates.

Overall, water quality at X3 and X10 is comparable with historic water quality and it is possible that statistical analysis shows improved water quality generally, likely due to the capture of groundwater prior to recharge to the North Fork of Rose Creek, downstream from the Rock Drain, in the S-Wells area.

Anecdotal evidence solicited from site staff, indicates that similar staining has been observed in the past in the RCDC, although the exact location and extent was not clear.

### **Follow-Up Recommendations**

It is recommended that water quality at X3 and X10 be compared again after January monitoring events (the first working week of January), to include results after the staining was observed. From the comparison assessment further recommendations will be made.

Preliminary assessment, which excludes post staining data, does not show an immediate Care and Maintenance issue with respect to the possibility of slow degradation of the tailings containment compoundment and RCDC. Therefore, no immediate Care and Maintenance response, other than continued monitoring and additional follow-up assessment, is recommended.

The existence of evidence of possible seepage from the tailings to the Rose Creek Diversion Channel does have possible implications with respect long term site operations and to closure of the site, since current plans are to leave the existing RCDC unlined.

It is recommended that efforts be made to determine the extent and verify the source of the seepage, as part of closure planning. As a preliminary step, DES Care and Maintenance staff have marked the location of the seepage area. It is proposed that an additional sampling location be established immediately downstream of the observed stain area, as the first step towards establishing a record of water quality. It is recommended that samples of the seepage / recharge source water be collected and tested to the extent that it is possible to determine the source. The parameters recommended for testing would be the same as for X3 and X10 (includes metals, pH, EC, sulphate and sodium), as would the frequency (monthly).

It is recommended that the scope of a seepage source determination project be undertaken outside of the scope of DES Care and Maintenance.

This review process will be repeated after January testing results have been returned.

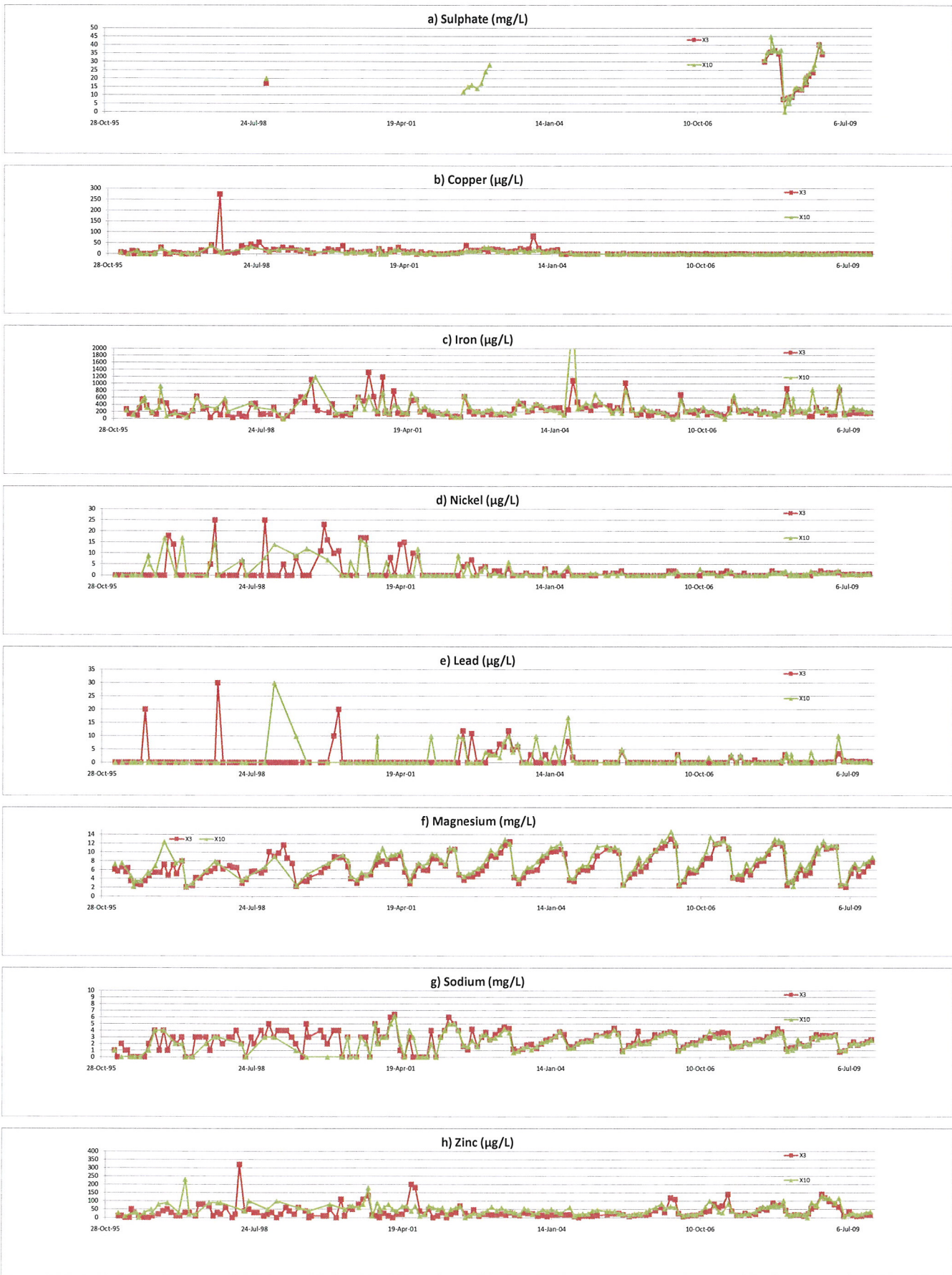
Regards,



Jay Cherian,  
Environmental Coordinator  
Faro Mine Complex

JC

Figure 1a - h: Comparison of X3 and X10 for Select Water Quality Parameters





# MEMORANDUM

TO: DES: Jon Bronson, Roy Morrell; YG: Kaori Torigai, John Brodie  
DATE: February 8, 2010  
FROM: Jay Cherian, Denison Environmental Services (DES)  
SUBJECT: Jan 2010 Follow-Up to X3, X10 Review

---

## Background

On December 24, 2009, staining was observed in the Rose Creek Diversion Channel (RCDC) just downstream of the X3 sampling site. The staining was reddish in colour, indicating the possibility of iron precipitating from groundwater seepage into the creek. While iron precipitation from groundwater into creeks is observed in the Yukon, at non-disturbed or natural sites, the proximity of the RCDC to the Faro Mine Complex tailings impoundments review of water quality was undertaken.

On January 7, a preliminary review of water quality in the Rose Creek Diversion was submitted to the Yukon Government (YG), based on existing and historic water quality data (i.e. prior to the observed staining). A follow-up review was recommended, after January 2010 water quality sampling had been undertaken to further review water quality along the RCDC and to verify whether or not an immediate Care and Maintenance response is necessary.

Since the preliminary review, further anecdotal evidence collected indicates that similar staining in the RCDC was observed as early as 1995.<sup>1</sup> Additional anecdotes recount an orange tinge being evident along stretches of the RCDC.<sup>2</sup>

Approximately 25 years ago, the tailings impoundment failed and tailings went into the diversion. The failure was at the secondary impoundment. While this failure was addressed shortly after that time, creek sediments were found to still contain tailings after that time, and approximately five years ago, rock and soils were moved from the RCDC and the area between tailings impoundment and the RCDC. In addition, the tailing impoundments were reinforced. While the tailings impoundment failure occurred downstream of the stained area observed in December of 2009, the impoundment was reinforced along its length.<sup>3</sup>

## Water Quality Results and Assessment

The attached Figure 1, illustrates a comparison of select analytes at X3 and X10 from late 1995 to the most recent sampling event of January 11, 2010.

---

<sup>1</sup> Wels, Christoph. Roberston GeoConsultants. Telephone conversation with Jay Cherian, DES. January 14, 2010.

<sup>2</sup> Sparling, Paul. White Mountain. Personal communication with Jay Cherian, DES. February 3, 2010.

<sup>3</sup> Ramsay, Kevin. DES. Phone communication relayed from Dan Duivenvorden, DES to Jay Cherian, DES. February 2, 2010.

As in the preliminary review, Figure 1 shows that for all the parameters reviewed (with the possible exception of magnesium, iron and zinc), the concentrations of X3 and X10 are comparable. Statistical analysis would be required to determine whether or not the differences are significant for magnesium, iron and zinc. In addition, the results for all parameters, including zinc show generally that trends at X3 parallel trends at X10, indicating that no increasing trend in concentrations at X10 with respect to X3 is observable.

While detailed statistical analysis of the iron, magnesium and zinc may show that there is some loading to the RCDC within the reach from X3 to X10. A visual review of the graphs on Figure 1 indicates that the concentrations for each of the reviewed parameters are not increasing with respect to historic rates.

Overall, water quality at X3 and X10 is comparable with historic water quality and it is possible that statistical analysis would show improved water quality due to the capture of groundwater in the S-Wells area.

An additional location in the RCDC was sampled on January 11, 2010 at location RCSG#4 (Rose Creek Staff Gauge #4), immediately downstream of the previously observed staining. The results of water quality monitoring at RCGS#4 are shown in Table 1, along with at X3 and X10, for select parameters.

Table 1: Water Quality at X3, RCSG#4 and X10 on January 11, 2010

Monitoring Location	pH	SO <sub>4</sub> (mg/L)	Cu-T (mg/L)	Fe-T (mg/L)	Ni-T (mg/L)	Mg-T (mg/L)	Na-T (mg/L)	Pb-T (mg/L)	Zn-T (mg/L)
X3	7.6	28	0.0004	0.090	0.00065	10.2	3.22	0.000264	0.0219
RCSG#4	7.9	28	0.00084	0.292	0.00080	10.4	3.11	0.00142	0.0381
X10	8.0	26	0.0004	0.104	0.00079	11.5	3.03	0.000145	0.0447

For all parameters except sulphate (SO<sub>4</sub>) and sodium (Na), concentrations are slightly higher at RCSG#4 than at X3, located upstream of the previously observed staining.

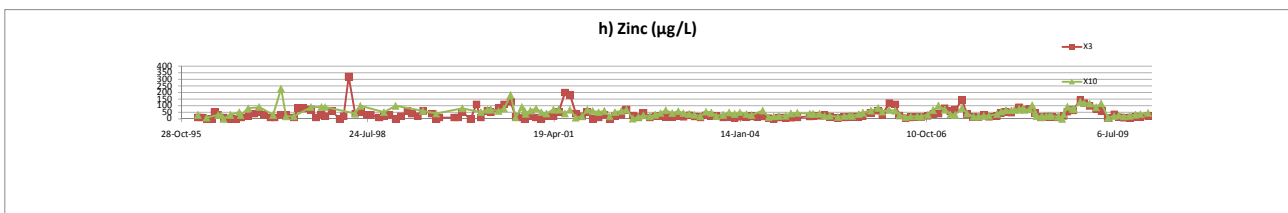
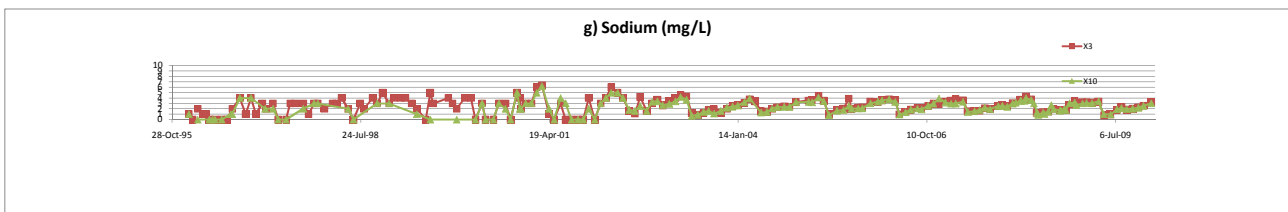
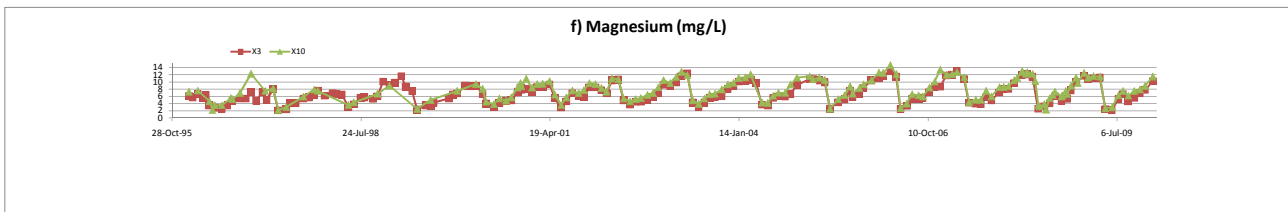
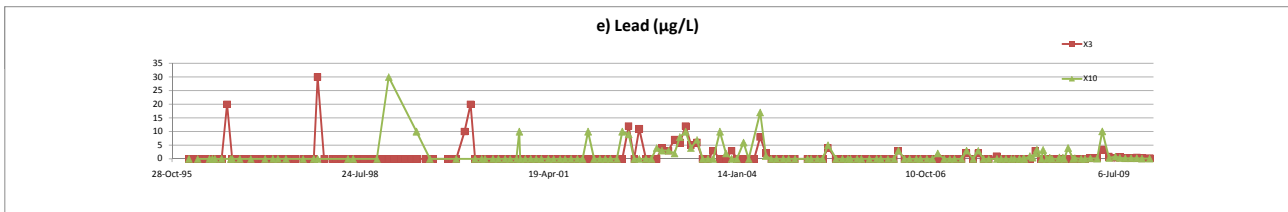
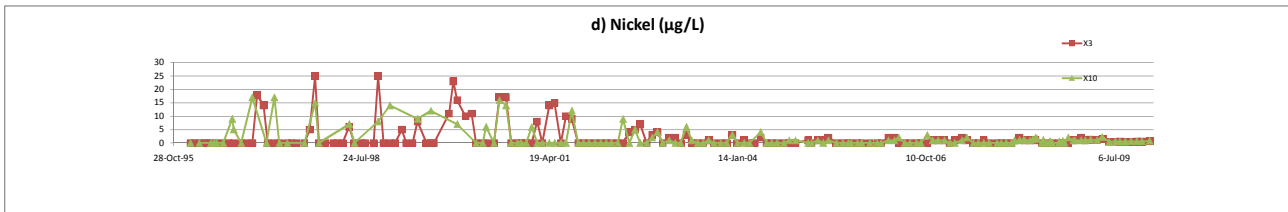
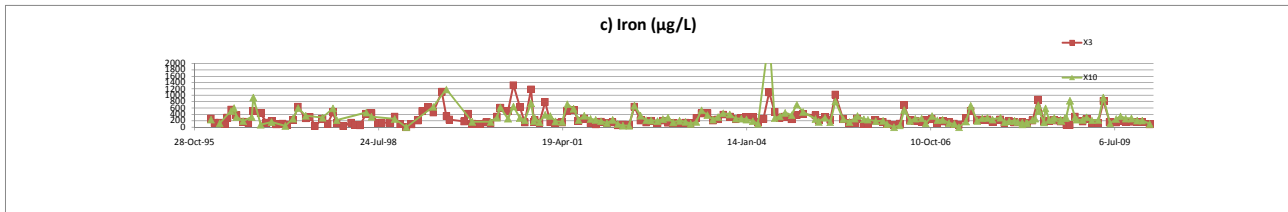
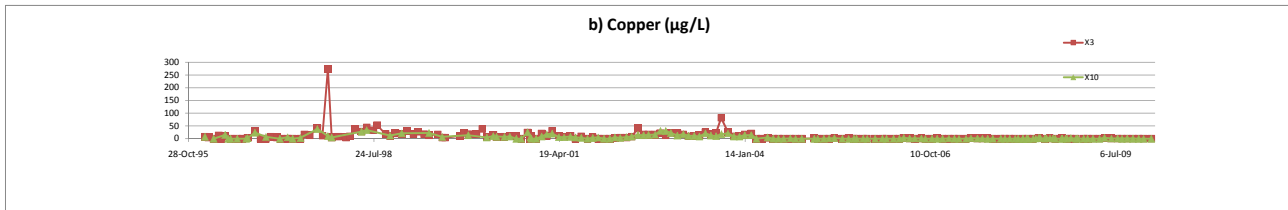
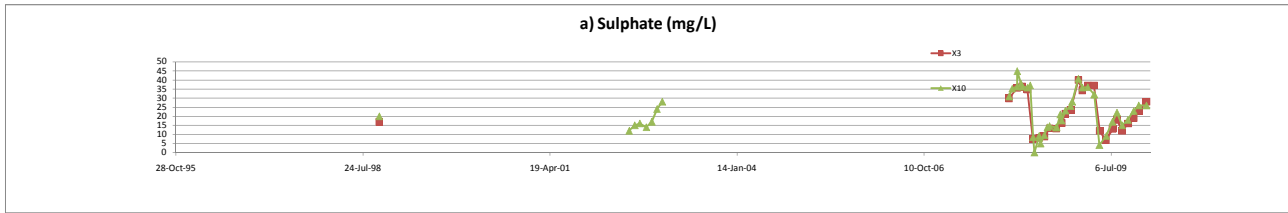
### Follow-Up Conclusions and Recommendations

The follow-up assessment described above does not indicate the need for an immediate Care and Maintenance response to the observed staining. Additionally, no further water quality assessment is recommended within the scope of the Care and Maintenance responsibilities.

As concluded in the preliminary review, the evidence of possible seepage from the tailings to the Rose Creek Diversion Channel does have possible implications with respect to long term site operations and to closure activities.

Therefore, it is recommended that efforts be made to determine the extent and verify the source of the seepage, as part of closure planning. This is especially recommended given the groundwater capture rates put forth in the closure planning process to meet long term water quality targets. DES has taken the preliminary step of adding a sampling location (immediately downstream of the observed stain area) to the monthly water quality monitoring program, however no other monitoring sites have been added, and no other investigations are planned. The water quality monitoring at this additional location is undertaken to start a historic record at this site, with the assumption that further studies will be forthcoming, whether that be through DES or another agency / consultant / contractor, as part of closure planning.

Figure 1a - h: Comparison of X3 and X10 for Select Water Quality Parameters



**APPENDIX IV  
SEDIMENT AT CROSS VALLEY DAM SEEPAGE WEIR  
(DES MEMORANDUM)**



**Denison**  
Environmental  
Services  
a division of Denison Mines Inc.



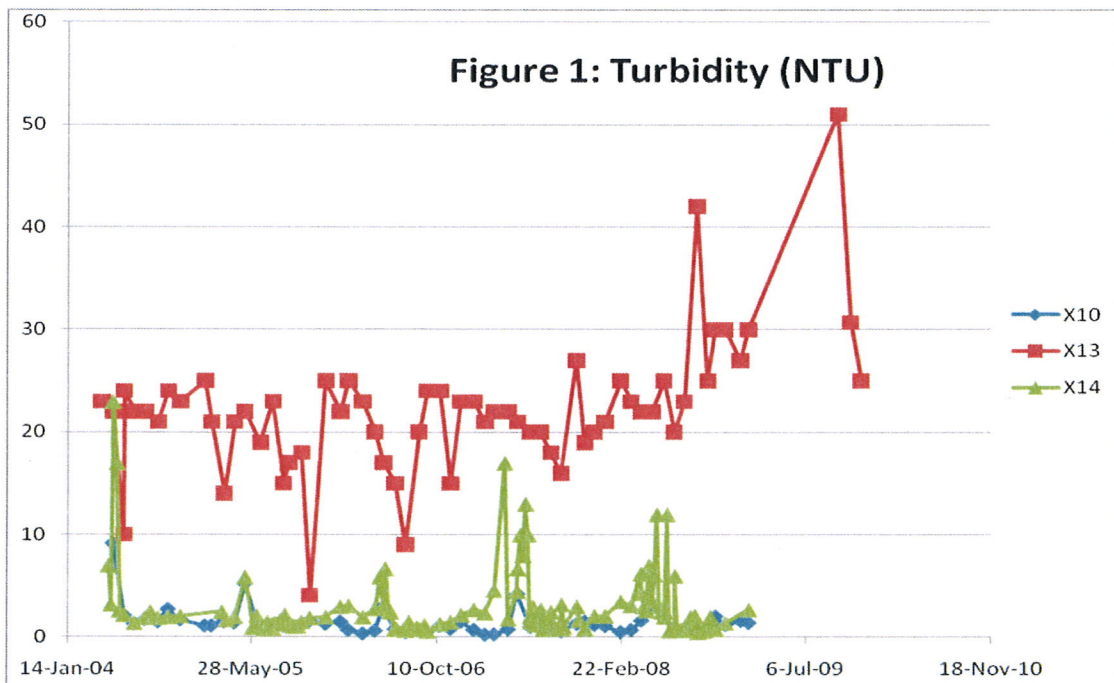
# MEMORANDUM

TO: Jon Bronson, Kaori Torigai  
DATE: 8 January 2010  
FROM: Jay Cherian  
SUBJECT: X13 Turbidity Review

---

## Background

Turbidity at X13 has been shown to be consistently higher than the effluent quality standard for samples collect in 2009. While the October 2009 result (October 4, 2009: 51 NTU) did not reach the certified lab in time to be analysed within the recommended holding time, and the result may therefore be questionable, the November 2009 sample was assessed within the recommended holding time. A review of historic turbidity at X13 was therefore undertaken. The results of the review, including turbidity at X10 and X14, located in Rose Creek, upstream and downstream, respectively, of the confluence of X13 (combined Cross Valley Dam seepage) flows with Rose Creek, are shown in Figure 1.



**Assessment**

The review of historic trends shows that turbidity at X13 has generally exceeded the effluent quality standard of 15 NTU, as specified in Appendix B of the Care and Maintenance Contract, since the beginning of the available historic record (April 2004).

The historic trend review shows an increasing trend of X13 turbidity since September, 2008.

December 2009 turbidity results are within the range of historically observed results at X13, indicating the potential of an anomalous sample/reading in October.

The historic trend review shows that no observable correlation between X13 turbidity and X14 turbidity; a correlation between X10 and X13 turbidity is observable.

The Canadian Council of Ministers of the Environment, Aquatic Life Guidelines do not set a guideline value for turbidity. The British Columbia Ministry of the Environment, British Columbia Approved Water Quality Guidelines (2006) set a 30-day average turbidity guideline value of 2 NTU. During the period from July 2008 to February 2009, turbidity at X14 has been 2.7 NTU or lower, based on a single grab sample.

Since turbidity testing at X14 (and X10) has not been required since March of 2009, no turbidity results are available from these sites after February 2009.

**Follow-Up Recommendations**

Calibration standards have been purchased and received in Faro, as of the writing of this memo, for a Lamotte turbidity meter that was among the assets turned over to the Yukon Government when YG took over responsibility for the site in March of 2009. It appears from the expiry date of the existing standards that the meter had not been in use for at least three years, and therefore there may be some question as to its functionality. DES chemists will undertake to re-activate the meter, so that turbidity results can be determined on-site and within the recommended holding time of 48 hours, which can be difficult to achieve given the time generally required for shipping samples from Faro to Vancouver. It is believed that this will improve the reliability of the results.

It is recommended that observations be undertaken upstream of X13, at X11 and X12, to take steps to determine the source of the increasing turbidity.

The turbidity results will be forwarded to the consulting engineers undertaking the Annual Geotechnical Review to include as part of their assessment.

It is recommended that turbidity testing at X10 and X14 be resumed.

Regards,

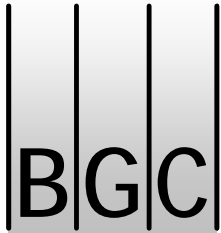


Jay Cherian,  
Environmental Coordinator  
Faro Mine Complex

JC/kbm

**APPENDIX V**  
**RECOMMENDATIONS ON RAPID DRAWDOWN**  
**(BGC MEMORANDUM)**





**BGC ENGINEERING INC.**  
**AN APPLIED EARTH SCIENCES COMPANY**

200, 1121 Centre Street NW, Calgary, Alberta, Canada. T2E 7K6  
Phone (403) 250-5185 Fax (403) 250-5330

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**PROJECT MEMORANDUM**

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<b>To:</b>	<b>Denison Environmental Services</b>	<b>Fax No.:</b>	<b>via e-mail</b>
<b>Attention:</b>	<b>Roy Morrell</b>	<b>CC:</b>	<b>John Brodie</b>
<b>From:</b>	<b>Gerry Ferris, P.Eng.</b>	<b>Date:</b>	<b>Sept. 25, 2009</b>
<b>Subject:</b>	<b>Support for 2009 Freshet</b>		
<b>No. of Pages (including this page):</b>	<b>17</b>	<b>Project No:</b>	<b>0762-001-01</b>

---

**1.0 INTRODUCTION**

Denison Environmental Services (Denison) requested that BGC Engineering Inc. (BGC) provide geotechnical advice and ongoing review of data during the 2009 Freshet at the Faro Mine, Yukon. This advice was related to the spring drawdown of the Cross Valley Pond to allow room to store the water expected from the spring run-off. The snow pack in 2009 was high and the polishing pond was not considered (by Denison and the Yukon Government) to have enough capacity to handle the expected inflow without lowering the polishing pond.

This memorandum has been written to summarize the services provided by BGC related to allowable drawdown rates for the Cross Valley and Intermediated Dams. Limits on the drawdown rates or amounts of drawdown are in place to limit the possibility of initiating a failure of the upstream side of the dam when the water levels are reduced, this type of failure is termed a rapid drawdown failure. During the last 10 years or so the reservoir has been drawn down a number of times at different rates and no rapid drawdown failures have resulted from these past activities. There have been instances of damage to rip rap by ice forces and wave erosion when the water elevation was held too low.

This memorandum provides a summary of the advice provided by BGC prior to initiation of the drawdown in the spring of 2009, monitoring results during the drawdown and provides recommendations for dealing with similar situations in the future. It is expected that these recommendations should be incorporated into future operations plans.

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## 2.0 ACTIVITIES PRIOR TO DRAWDOWN

### 2.1 Cross Valley Polishing Pond

#### 2.1.1 Past Drawdown

The Cross Valley Dam pond elevation has fluctuated between a maximum of 1031.7 m and a minimum of 1026.3 m between 1999 and 2008. The maximum daily drawdown rate recorded is 191 mm/day, the maximum average drawdown is 133 mm/day. Figure 1 shows all of the major drawdown events recorded since 1999 during the freshet period.

The average drawdown rates associated to Figure 1 are listed below.

Year	Average Drawdown Rate (mm/day)
2005	133
2006	84
2007	104
2008	56

#### 2.1.2 Rapid Drawdown Analysis

A rapid drawdown analysis has not been completed for the Cross Valley Dam. See section 4.0 for more details.

#### 2.1.3 Recommendations

On April 3, 2009 the following recommendations were provided by Mr. Gerry Ferris, P.Eng. to Mr. Roy Morrell.

These recommendations were based on historical trends the drawdown of the Cross Valley Dam pond elevation. It was recommended that:

- Rate of drawdown no greater than 100 mm/day.
- Minimum allowable pond elevation is 1026.8 m, corresponding to the bottom of the riprap protection.
- Monitor structure as outlined in Section 2.3.

## 2.2 Intermediate Tailings Pond

#### 2.2.1 Past Drawdown

The Intermediate Dam pond elevation has fluctuated between a maximum of 1048.0 m and a minimum of 1045.5 m between 1999 and 2008. The maximum daily drawdown rate recorded is 67 mm/day with the maximum average drawdown rate of 44 mm/day. Figure 2 shows all of the major drawdown events recorded since 1999 during the spring freshet period.

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The maximum drawdown rates associated to Figure 2 are listed below.

Year	Average Drawdown Rate (mm/day)
2006	44
2007	9
2008	28

### 2.2.2 Rapid Drawdown Analysis

In 2008 BGC updated the Operations, Maintenance and Surveillance (OMS) Manual and Emergency Response Plan (ERP) for the Intermediate, Cross Valley and Little Creek Dams. During the update, trigger levels were set for the both the Intermediate and Cross Valley Dams based on instrumentation monitoring data. The Intermediate Dam was analyzed for stability in a rapid drawdown event. The findings of the rapid drawdown analysis (as outlined in the OMS Manual) are provided below in Table 1.

**Table 1 Rapid Drawdown Incident Levels**

Incident Level	Pond elevation range for different incident levels (m amsl) [drawdown from initial elevation m]	
Starting Tailings pond Elevation (m amsl)	1047.7	1046.5
Normal	1047.7 to 1047.4 [0 to 0.3]	1046.5 to 1046 [0 to 0.5]
Alert	1047.4 to 1046.8 [0.3 to 0.9]	1046 to 1044.3 [0.5 to 2.2]
Emergency	1046.8 to 1045.8 [0.9 to 1.9]	1044.3 to 1043.5 [2.2 to 3] <sup>2</sup>
Failure	1045.8 to 1044.9 [1.9 to 2.8]	

The rapid drawdown analysis is based on the assumption that normal piezometric conditions are present in the core of the Dam while the pond water is instantaneously removed. It is assumed that the upstream filter and shell drains just as rapidly as the pond water elevation drops, leaving the piezometric elevation of the core unchanged. This would constitute the worst case scenario. See section 4.0 for more details.

### 2.2.3 Recommendations

On April 3, 2009 the following recommendations were made by Mr. Gerry Ferris, P.Eng. to Mr. Roy Morrell.

These recommendations were based on historical trends and previous analysis conducted by BGC. The drawdown of the Intermediate Dam pond elevation should be as follows:

- Rate of drawdown no greater than 25 mm/day.
- Minimum allowable pond elevation should be above 1045.7 m, which is the base of

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riprap on as-built drawings.

- Monitor structure as outlined in Section 2.3.

## 2.3 Visual Monitoring

The monitoring to be conducted during the 2009 freshet and drawdown is as follows:

- Visually monitor the dams 2 times per week. The field form to fill out during the inspections is located in Appendix A. The main items of concern are:
  - Wet spots (dirty or clean water present);
  - Cracking;
  - Slumps; and
  - Any changes noted.
- Survey pond levels 2 times per week.
- Instrument readings:
  - Crest of Cross Valley Dam 2 times per week
  - Toe of Cross Valley Dam 1 time per week
  - Intermediate Dam instruments 1 time every 2 weeks.

The Rose Creek Diversion Canal (RCDC) and the North Valley Interceptor Ditch (NVID) should also be monitored as any changes to these diversion structures will directly affect both the Intermediate and Cross Valley Dams. The RCDC and the NVID should be monitored as follows:

- Visually inspect flow in channel looking for any blockages (ice, debris) 2 times per week.

It was also noted that riprap placed on the upstream side of the dam will be directly affected by the drawdown of the pond. It is recommended that the riprap be visually monitored and photos be taken at the beginning and the end of the drawdown process.

## 3.0 DRAWDOWN DURING SPRING 2009

Drawdown began in March for both the Intermediate and Cross Valley ponds. Figure 1 and 2 outline the pond elevations during drawdown for 2009 and historic records. Average drawdown rates for 2009 were 39 and 5 mm/day for the Cross Valley and Intermediate ponds, respectively. The 2009 drawdown rates were below rates measured in previous years and were lower than to recommendations provided by BGC (as outlined in sections 2.1.3 and 2.2.3). Monitoring was conducted as per Section 2.3.

Visual monitoring was conducted during the drawdown period and ice plucking was noted to be a side effect of the drawdown. Figure 3 is a photo of the toe of the Intermediate dam during drawdown in April and Figure 4 shows the upstream face of the Cross Valley Dam. It is apparent that cracking and slumping of the ice on the face of the dams was taking place. Figure

---

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---

**BGC Project Memorandum**

To: Roy Morrell.

From: Gerry Ferris, P. Eng.

Date: Sept 25, 2009

Subject: Support for 2009 Freshet

Proj. No: 0762-001

---

5 shows the upstream face of the Cross Valley Dam in May. The riprap on the face of the dam has been pulled down by the ice due to the drawdown of the water. This will need to be repaired as the riprap protects the face of the dam from wave and water erosion during the summer months.

Figure 6 outlines the polishing pond elevation and the piezometric condition of the instruments on the Cross Valley Dam. See Figure 7 for the locations of the piezometers on the Cross Valley Dam. All of the piezometers follow the drawdown of the polishing pond except the shallow tip CVDC-4 because it is in the core. It shows no change over the course of the drawdown and holds its piezometric condition, confirming the rapid drawdown assumptions used in the stability analysis.

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## **4.0 REVISED RECOMMENDATIONS**

Based on the information collected in the 2009 drawdown the following recommendations are made for future drawdowns:

- Intermediate Dam
  - Maximum allowable drawdown depends on initial water levels at start of drawdown. See Table 1 for limits.
  - Maximum drawdown rate is not provided, as long as limits on total drawdown from the initial water elevation shown in Table 1 are respected.
  - Minimum pond level should respect limits in Table 1, or 1045.7 m. This is based on the expected elevation of the riprap and can be modified if the riprap is found to be different than expected.
  - Monitor instruments 1 time per week.
- Cross Valley Dam
  - Rate of drawdown should be no greater than 100 mm/day, pending further analysis.
  - Minimum pond elevation should be 1026.8 m, this is based on expected riprap elevation.
  - Monitor instruments once per week.
  - Complete rapid drawdown analysis to set maximum allowable elevation changes as done for Intermediate Dam.

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## 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**

**Original Signed By:**

Ashton Friesen, E.I.T. (AB)  
Mining Engineer

Reviewed By:

**Original Signed By:**

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

**Original Signed By:**

Holger Hartmaier, M.Eng., P.Eng (AB)  
Senior Geotechnical Engineer

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## FIGURES

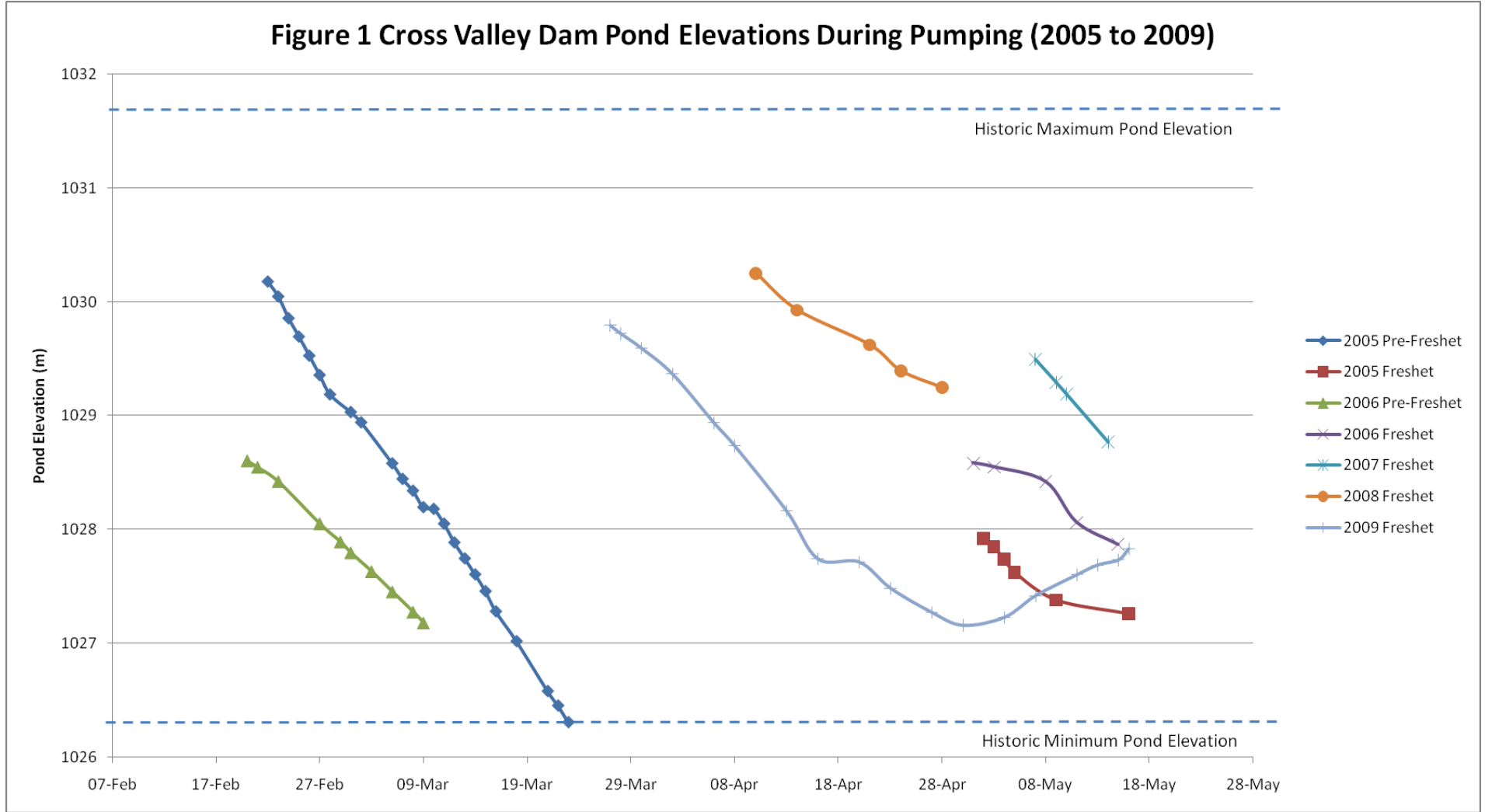
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**Figure 1 Cross Valley Dam Pond Elevations During Pumping (2005 to 2009)**



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DRAWN:	ALF	APPROVED:	GWF

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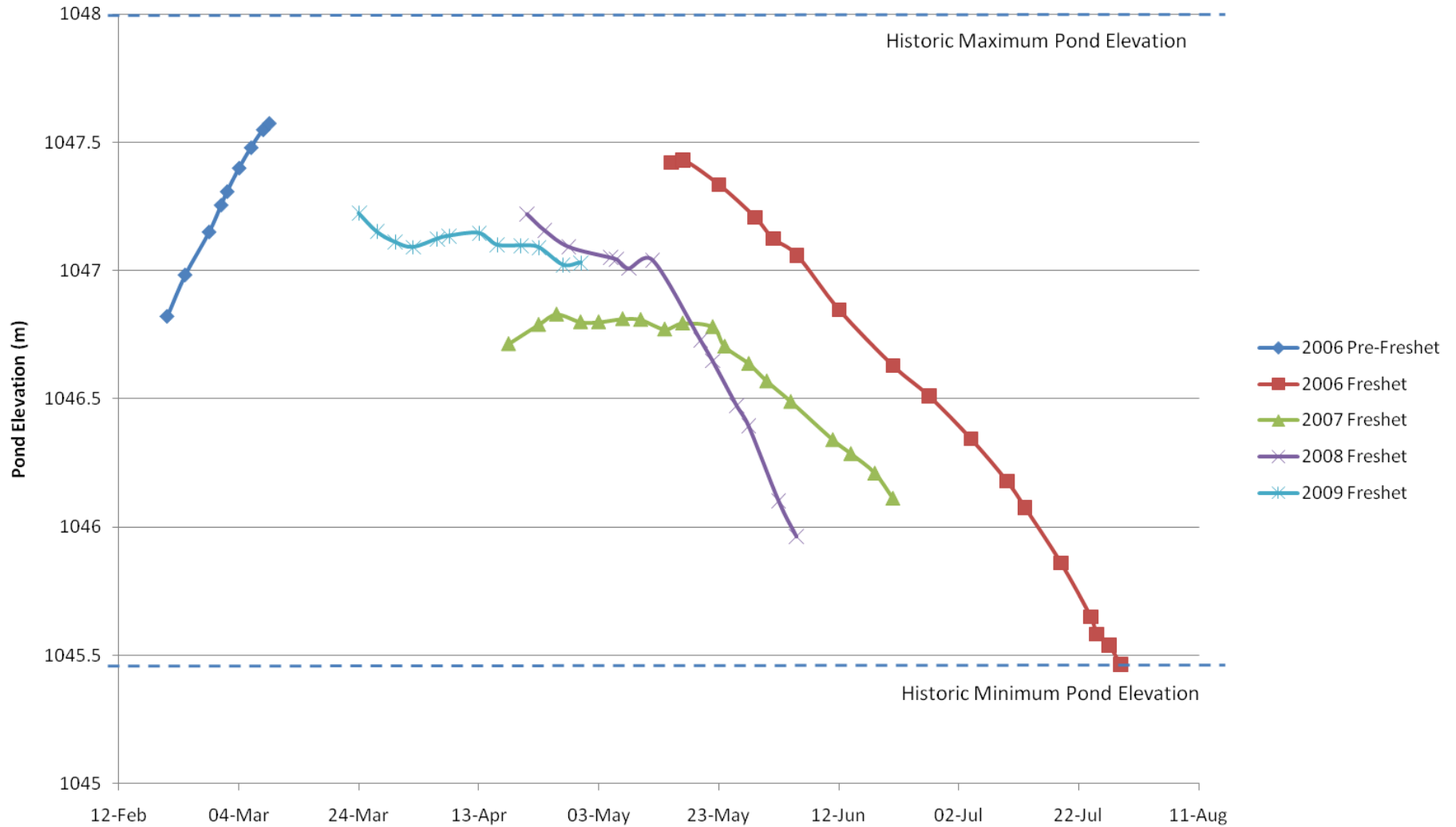
PROJECT:	SUPPORT FOR 2009 FRESHET
TITLE:	CROSS VALLEY DAM POND ELEVATIONS

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PROJECT No.:	0762-001-01	FIGURE No.:	1	REV.:	0
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### Figure 2 Intermediate Dam Pond Elevations During Pumping (2006 to 2009)



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PROJECT No.:	0762-001-01	FIGURE No.:	2	REV.:	0
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DRAWN:	ALF	APPROVED:	GWF



PROJECT:	SUPPORT FOR 2009 FRESHET
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TITLE:	DOWNSTREAM TOE OF INTERMEDIATE DAM—MARCH
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CLIENT:

PROJECT No.:	0762-001-01	FIGURE No.:	3	REV.:	0
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PROJECT:	SUPPORT FOR 2009 FRESHET
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TITLE:	UPSTREAM FACE OF CROSS VALLEY DAM—MARCH
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CLIENT:	
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PROJECT No.:	0762-001-01	FIGURE No.:	4	REV.:	0
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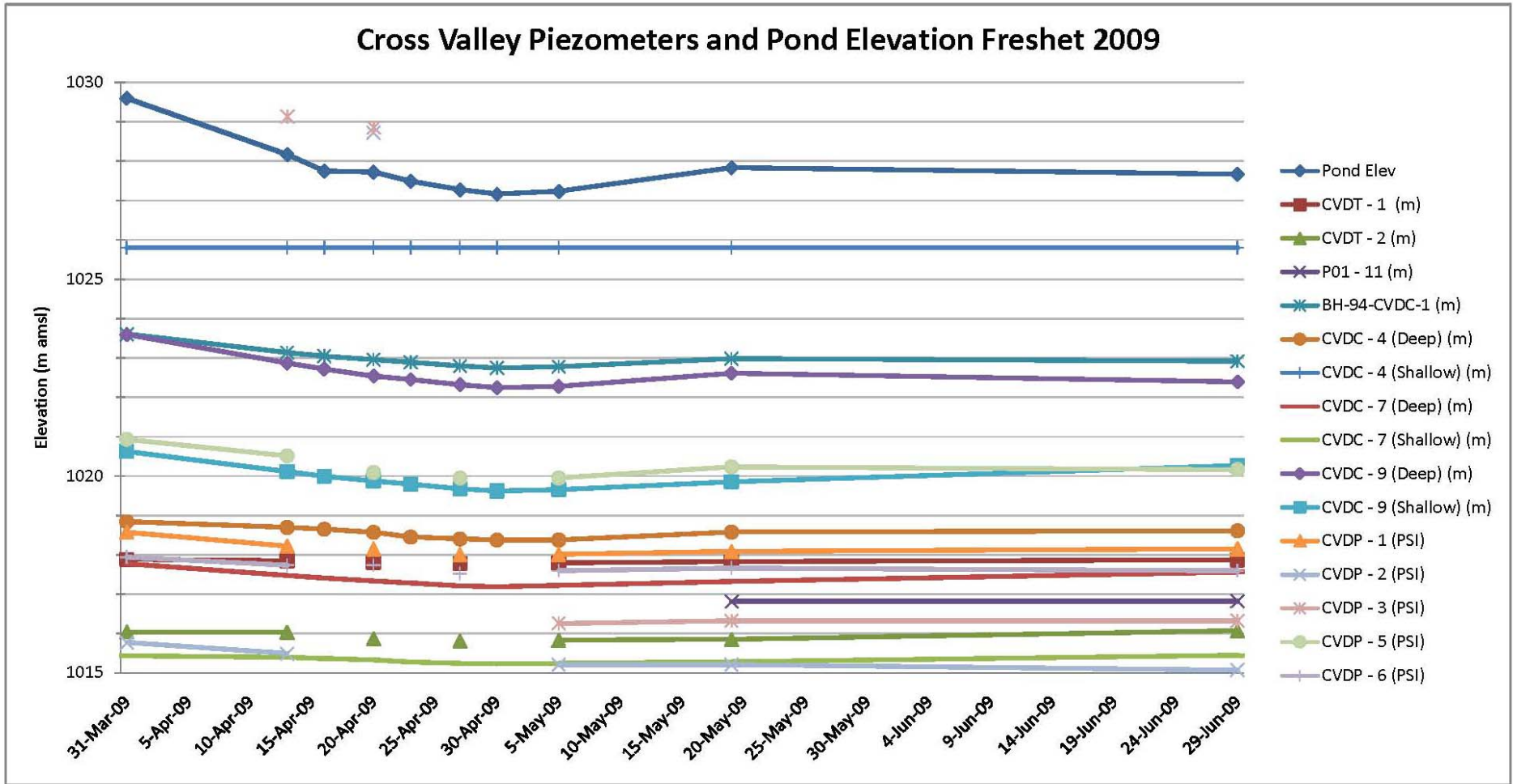
PROJECT: SUPPORT FOR 2009 FRESHET

TITLE: UPSTREAM FACE OF CROSS VALLEY DAM—MAY

CLIENT: 

PROJECT No.:	FIGURE No.:	REV.:
0762-001-01	5	0

## Cross Valley Piezometers and Pond Elevation Freshet 2009



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PROJECT:	SUPPORT FOR 2009 FRESHET		
TITLE:	INTERMEDIATE DAM POND ELEVATIONS		

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PROJECT No.:	0762-001-01	FIGURE No.:	6	REV.:	0
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## APPENDIX A

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# Visual Inspection Form Faro Mine Structures

**Schedule:** Perform weekly, as required in the Water License. Additionally, perform immediately following a significant earthquake in the vicinity of the dam, and as appropriate during and following a major flood event.

**Structure:** \_\_\_\_\_  
**Inspector:** \_\_\_\_\_ **Date:** \_\_\_\_\_  
**Reservoir Elev.:** \_\_\_\_\_ m **Time:** \_\_\_\_\_  
**Weather:** \_\_\_\_\_ **Temperature:** \_\_\_\_\_ °C

For any question answered "YES" below, please provide additional information describing the situation as completely as possible under item 6, "Additional Information." Include hand drawn sketches or photographs when appropriate.

**1. Upstream Slope of the Structure:**

Any new evidence of significant erosion due to wave action?	No	Yes
Any new sinkholes, depressions, sloughs, or areas of unusual settlement?	No	Yes
Any evidence of whirlpools in the reservoir?	No	Yes
Any other changed conditions?	No	Yes

**2. Crest of the Structure:**

Any new cracks, either transverse or longitudinal?	No	Yes
Any evidence of changed conditions in previously reported cracks?	No	Yes
Any new sinkholes, depressions, or areas of unusual settlement?	No	Yes
Any evidence of changed conditions in previously reported sinkholes, depressions, or settlement?	No	Yes
Any other changed conditions?	No	Yes

**3. Downstream Slope of the Structure:**

Any new seepage areas or wet areas?	No	Yes
Any changes in conditions at existing seepage areas or wet areas?	No	Yes
Any evidence of materials being transported by seepage flows at new or existing seepage areas (such as discolored seepage water or sediment deposits)?	No	Yes
Any new sinkholes, depressions, sloughs, bulges, or areas of unusual settlement?	No	Yes
Any other changed conditions?	No	Yes

**4. Downstream Toe Area, Abutments, and Areas Downstream of the Dam:**

Any evidence of materials being transported by seepage flows at existing seepage areas (such as discolored seepage water or sediment deposits)?	No	Yes
Any new seepage areas or wet areas?	No	Yes
Any changes in conditions at existing seepage areas or wet areas?	No	Yes
Any new sinkholes, sloughs, areas of unusual settlement or bulges?	No	Yes
Any evidence of seepage emerging in downstream river channels, such as turbid water or unusual flow patterns?	No	Yes
Any other changed conditions?	No	Yes

**5. Spillway/Diversion Channel:**

Note: Document spillway/Diversion Channel performance during periods of high discharge rates using videos and/or photos (preferably obtained from consistent locations) that indicate flow conditions in the upstream channel, inlets and outlets, over the full length of the spillway/channel, and in the downstream channel.

Any new or enlarged cracks?	No	Yes
Any evidence of unusual deformations or displacements?	No	Yes
Any unusual flow patterns or conditions during releases?	No	Yes
Any evidence of erosion of the spillway?	No	Yes
Any other changed conditions?	No	Yes

**6. Additional Information:**

**NOTE:** All descriptions should include specific location information and all other seemingly relevant information. Seepage area descriptions should include: estimated seepage amount and water clarity description (clear/cloudy/muddy, etc.). Crack descriptions should include orientation and dimensions.