ATTACHMENT A

Technical Memorandum
Monitoring Update - August 2008, Thermistor Strings and Piezometers NICO Site, Northwest Territories

TECHNICAL MEMORANDUM

Golder Associates Ltd.
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TO:	Kathy Neale, Jim Mucklow, Rick Sehryer, Fortune Minerals	**DATE:**	October 17, 2008
FROM:	Marc Rougier, Pedram Molkara, Golder Associates	**JOB NO:**	05-1117-032
CC;	Gary Ash, Scott MacNeil, John Virgl, Damian Panayi		
RE:	**Monitoring Update- August 2008 Thermistor Strings and Piezometers NICO Site, North West Territories**		

This technical memorandum has been updated from the January 9, 2008 technical memorandum. It includes readings taken on August 22, 2008 of the three dedicated standpipe piezometers, NICO-03-281, -282, and -283. No thermistor or vibrating wire readings were collected in August.

Fortune Minerals staff collect periodic water level and temperature readings at the NICO Site. Temperature profile data are collected from thermistor strings installed within the footprint of the proposed tailings basins and infrastructure (dams or buildings) foundations. The exception is the thermistor string at hole NICO-03-285, which was installed in the "Bowl Zone", upstream of the Grid Ponds.

Water level data are collected from accessible (still open) exploration holes where the casing was left in the ground and from three dedicated piezometers, NICO-03-281, -282, and -283. These piezometers were installed with the specific purpose to not only monitor water levels but also collect groundwater samples from the footwall, mineralized zone and hangingwall bedrock. In three of the boreholes from the geotechnical investigation conducted by Golder Associates Ltd. (Golder) in April, 2006, three vibrating wire piezometers were installed (GA-06-09, GA-06-13, and MC-06-23). These vibrating wire piezometers are located at the proposed Dam A, Dam C and at the Concentrator Building, consecutively.

Locations are shown on Figure 1. Thermistor data plots and tabulations are presented in Appendix A. Water level plots and tabulations are presented in Appendix B.

COMMENTS ON DATA

Consistent with the statement that the NICO Site sits within a zone of discontinuous permafrost, some thermistors in low-lying areas indicate frozen ground (permafrost). The remainder, either collared upslope or near moving ground water (such as NICO-03-285) exhibit temperature at or slightly above zero degrees Celsius (0°C). NICO-03-285's temperature profile is interpreted to be slightly above zero Celsius because of groundwater movement, the "thaw bulb" effect. A summary of the thermistor monitoring data is presented in Table 1.

The water level monitoring data (Appendix B) are collected when the camp is open and the piezometers are accessible. The seasonal rise and fall of ground water levels at the piezometers appears to range from 0.5 to 16 metres.

Interestingly, the water level drops between October, 2006 and April, 2007 readings, at both NICO-03-282 and NICO-03-283 are on the order of 15 m-20 m, bringing the water levels well below their seasonal variation. We infer that these drops are due to the dewatering effects of the Bulk Sample Tunnelling that began in about February 2007. Several drillholes were intercepted during the bulk sample tunnelling, with significant flows. These were plugged. The blocking of these holes is interpreted to be why groundwater levels recovered to their seasonal range by June 2007.

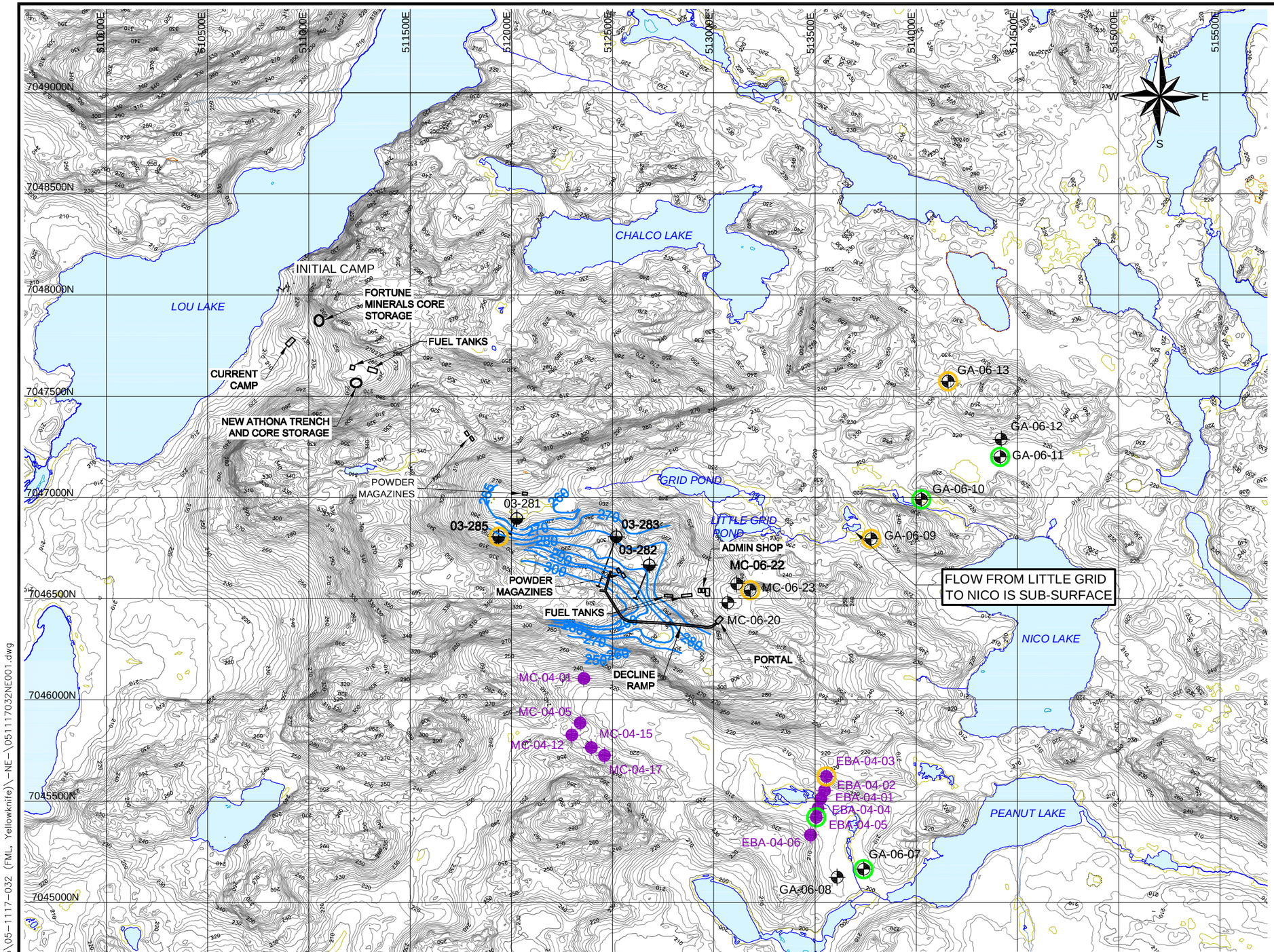
MR/PM/co

n:\active\2008\1118\08-1118-0043 fortune minerals, yellownife - nico mine\002 phase 3000 geology and hydrogeology-mr\thermistor and gw monitoring\tech memos\oct 2008 tech memo\0 - 05-1117-032 tech memooct 17 2008 monitoring update.doc

Table 1: Summary of Thermistor Monitoring Data

Hole ID	Elevation	Northing	Easting	Permafrost
NICO-03-285	281.0	7,046,807	511,938	NO
EBA-04-03	213.0	7,045,608	513,634	NO
EBA-04-05	204.0	7,045,406	513,584	YES
GA-06-07	201.2	7,045,150	513,818	YES
MC-06-23	246.6	7,046,528	513,258	NO
GA-06-09	223.8	7,046,782	513,855	NO
GA-06-10	216.0	7,046,977	514,103	NO
GA-06-11	216.4	7,047,187	514,492	YES
GA-06-13	237.1	7,047,560	514,235	NO

Note: Permafrost at the boreholes is defined as a series of readings with temperature less than zero degrees Celsius (0°C) for more than one year.



LEGEND:

- EXISTING POND/LAKE
- GA-06-11 / MC-06-20 — GEOTECHNICAL INVESTIGATION (GOLDER 2006)
- EBA-04-03 / MC-04-15 — GEOTECHNICAL INVESTIGATION (EBA 2004)
- 03-283 — INCLINED BOREHOLES
- THERMISTORS WITH PERMAFROST
- THERMISTORS WITH NO PERMAFROST
- 300 — GROUNDWATER CONTOURS FROM OPEN EXPLORATION HOLES

NOTES:

1. ALL ELEVATIONS (GEODETIC DATUM) AND GRID COORDINATES (SHIFTED UTM NAD27, ZONE 11) SHOWN IN THIS DRAWING ARE IN METRES.

REFERENCES:

1. BASEMAPPING PROVIDED IN DIGITAL FORMAT BY FORTUNE MINERALS LTD. RECEIVED FEBRUARY 20, 2004.
2. PLANT SITE AND MINE INFRASTRUCTURE PROVIDED BY METCHEM (A1-24031-0102.DWG, REV. A, MAY 1, 2006).
3. OPEN PIT AND WASTE ROCK STORAGE AREA LAYOUT PROVIDED BY FORTUNE (EMAIL DATED AUGUST 8, 2006).

400 0 400 800
SCALE 1:20,000 METRES

Golder Associates
Mississauga, Ontario, Canada

FILE No.	051117032NE001.dwg
PROJECT No.	05-1117-032(9800)
REV.	0
SCALE	AS SHOWN
DATE	MAY 2008
DESIGN	PM
CAD	NK
CHECK	PM
REVIEW	MR

TITLE

NATURAL TOPOGRAPHY AND EXPLORATION PROGRAM FACILITIES INCLUDING BOREHOLES

NICO Project, Fortune Minerals Ltd.

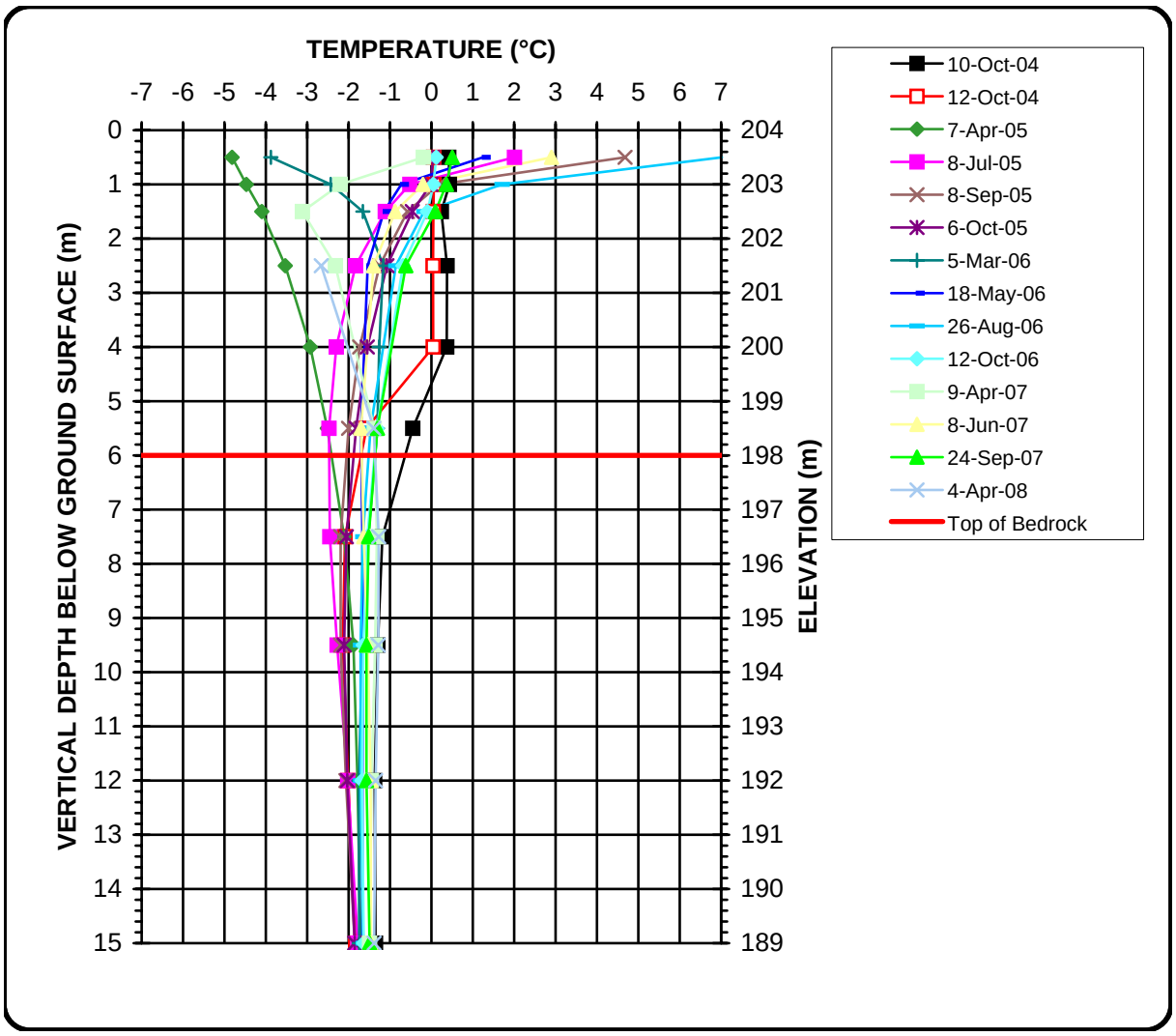
FIGURE 1

PLOT DATE: May 27, 2008
FILENAME: T:\Projects\2005\05-1117-032 (FML, Yellowknife)\-NE-\051117032NE001.dwg

APPENDIX A
THERMISTOR DATA

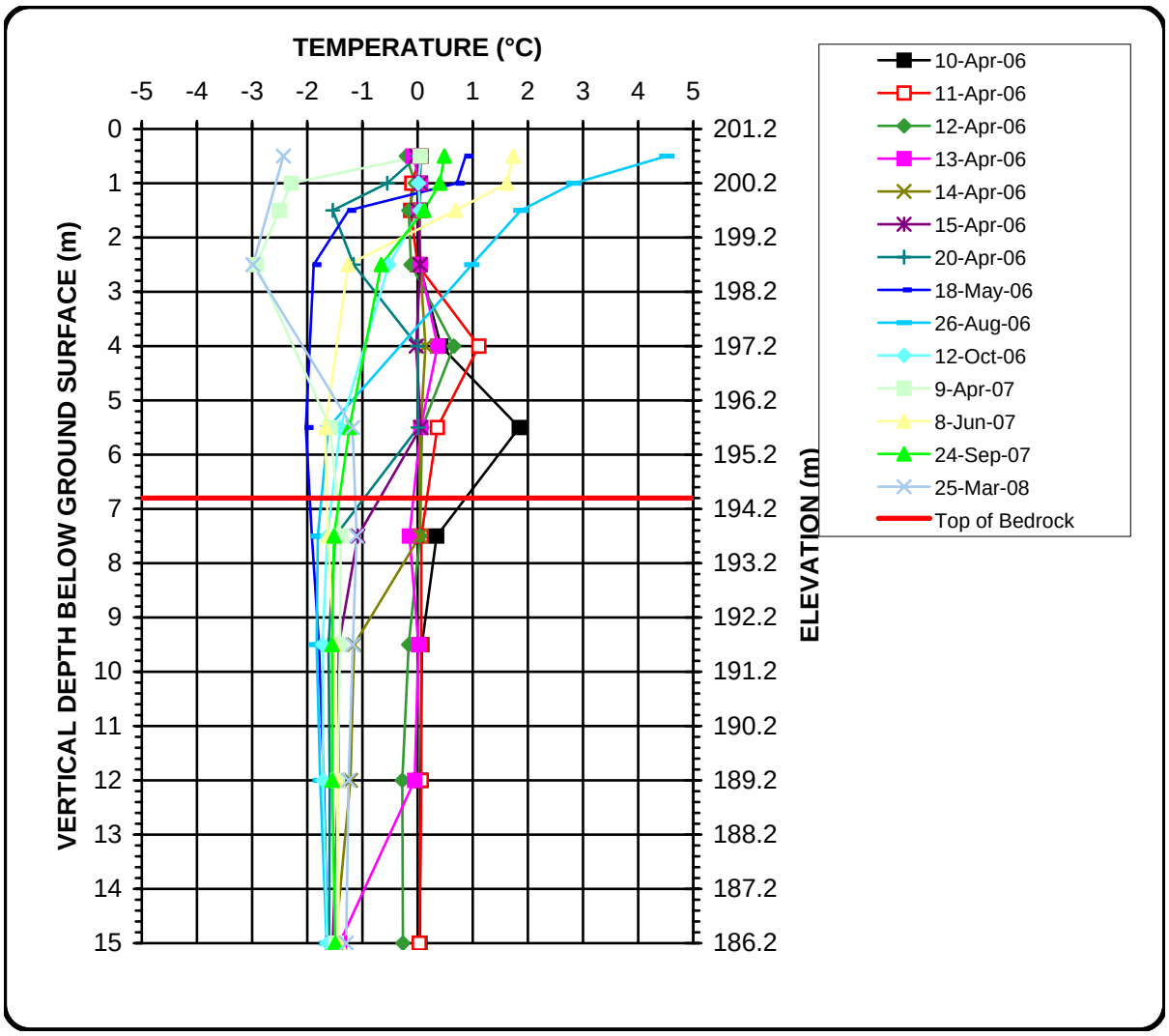
EBA-04-05

GROUND ELEVATION: 204.0 m



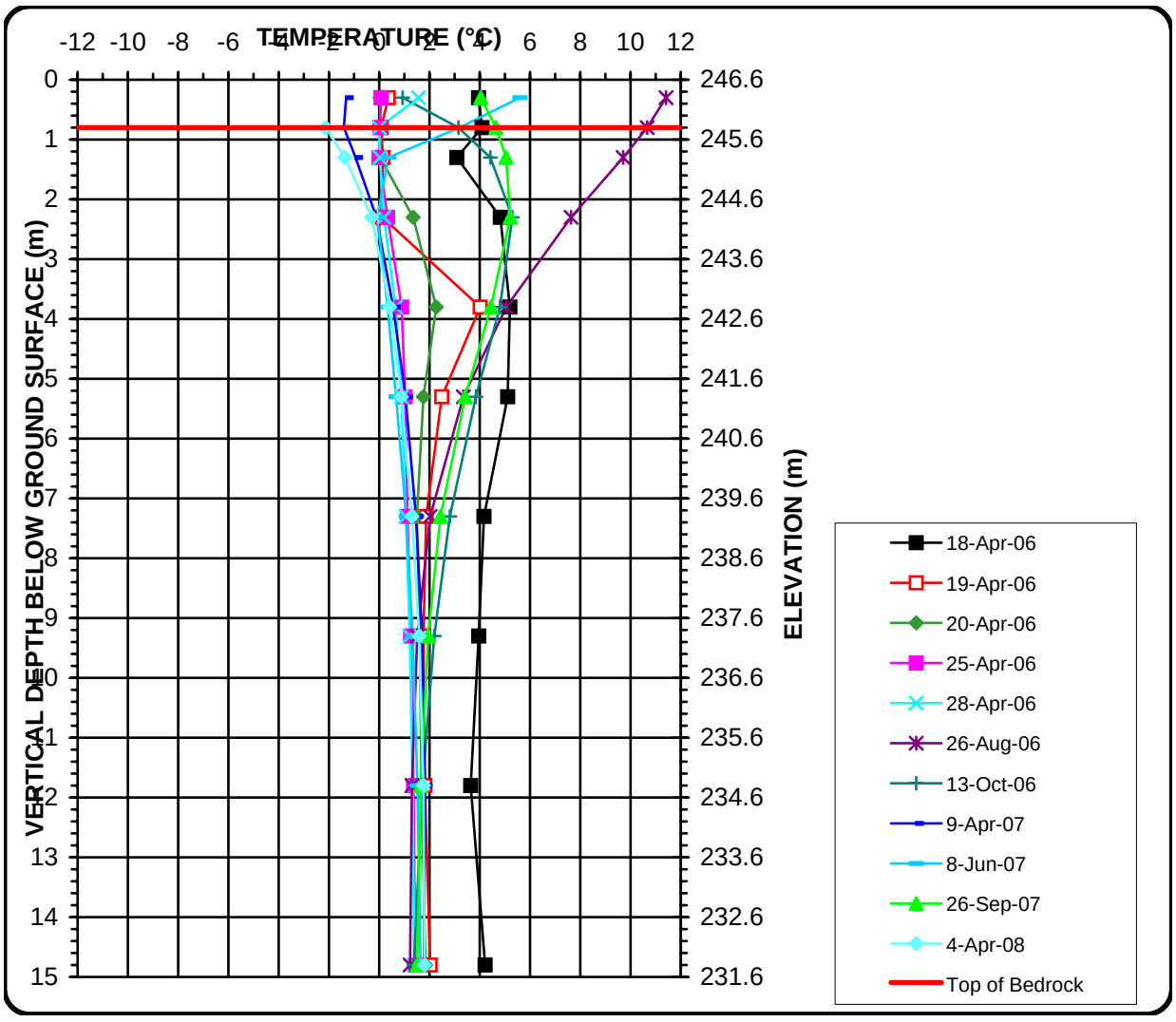
GA-06-07

GROUND ELEVATION: 201.2 m



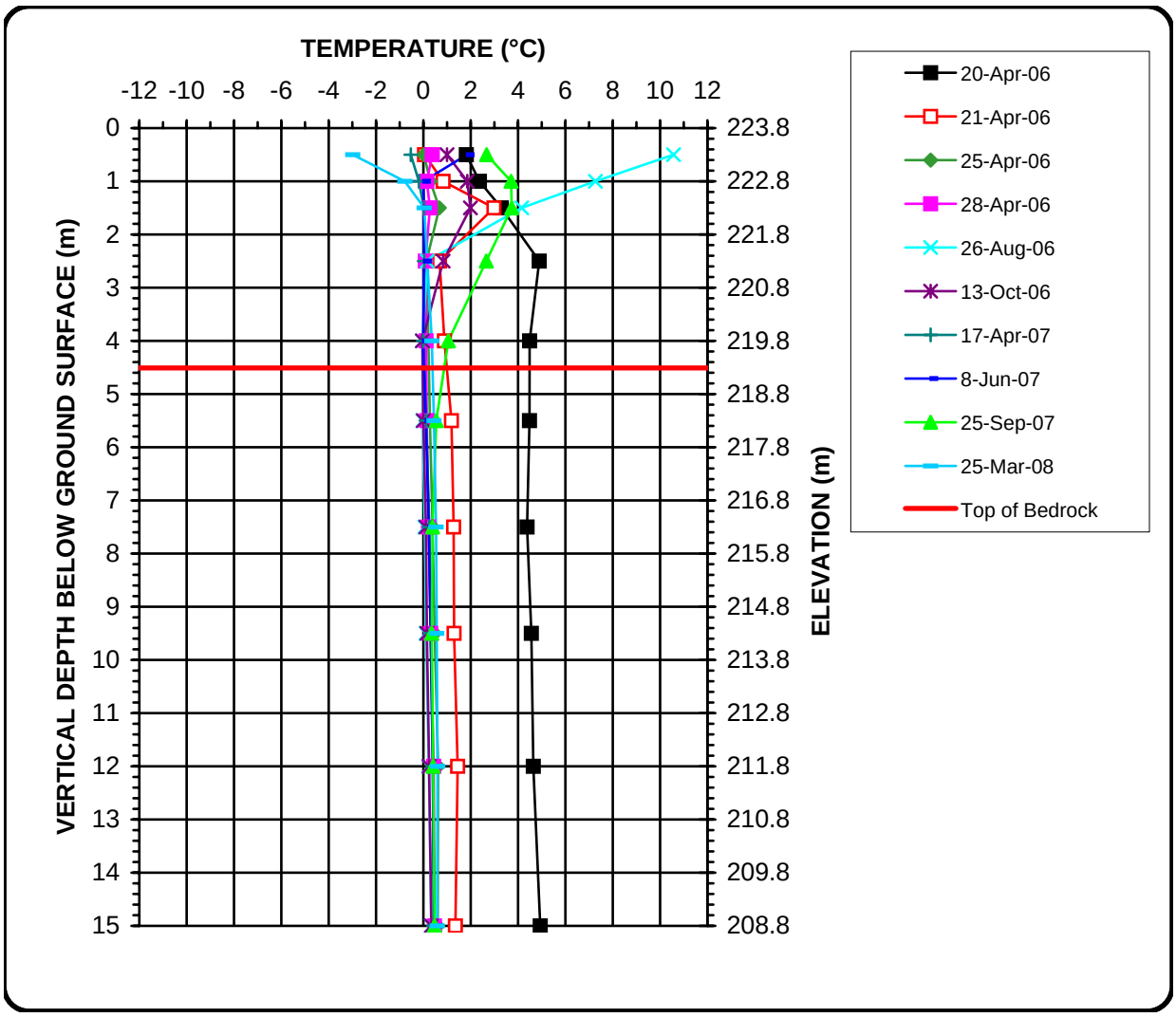
MC-06-23

GROUND ELEVATION: 246.6 m



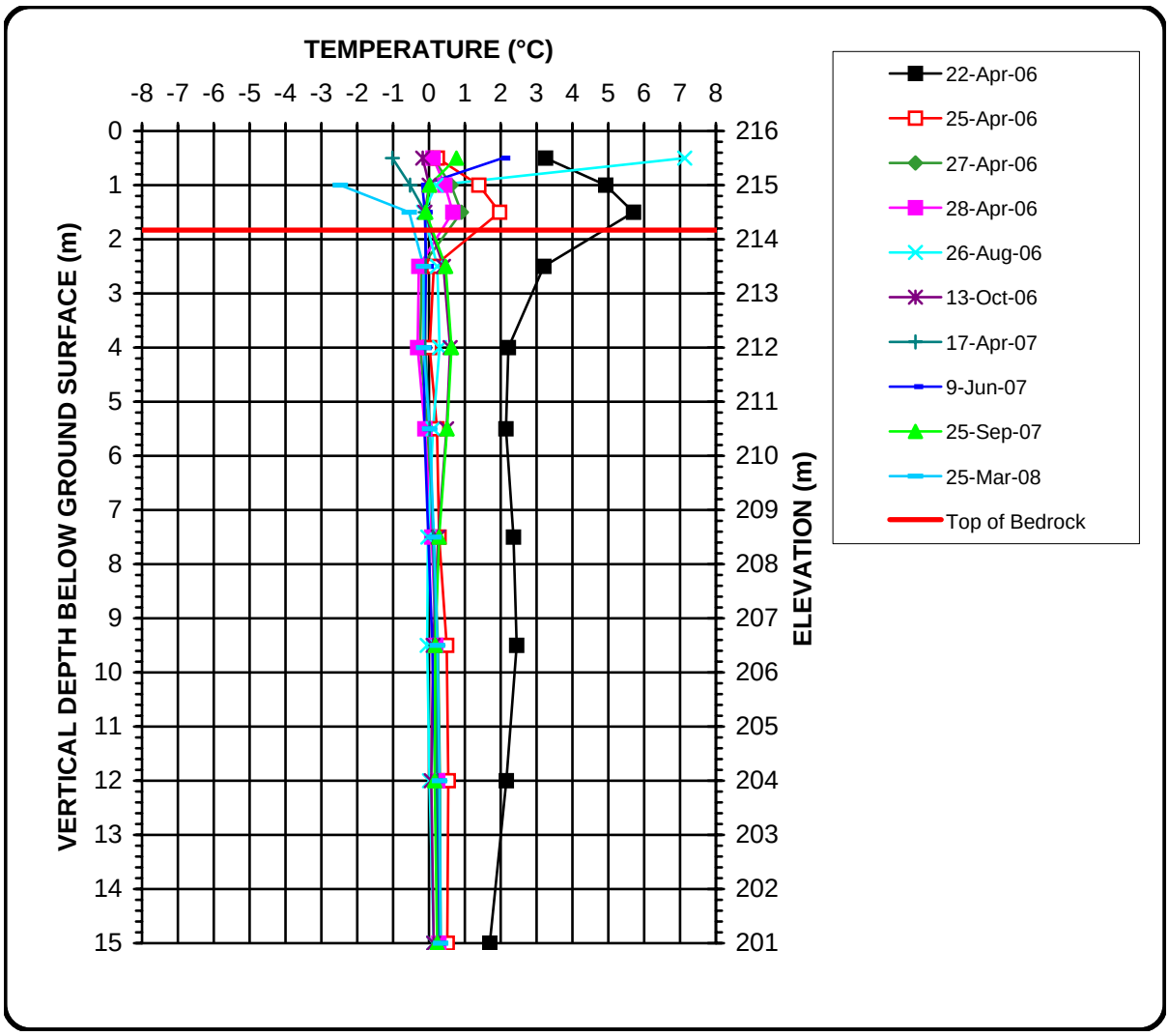
GA-06-09

GROUND ELEVATION: 223.8 m



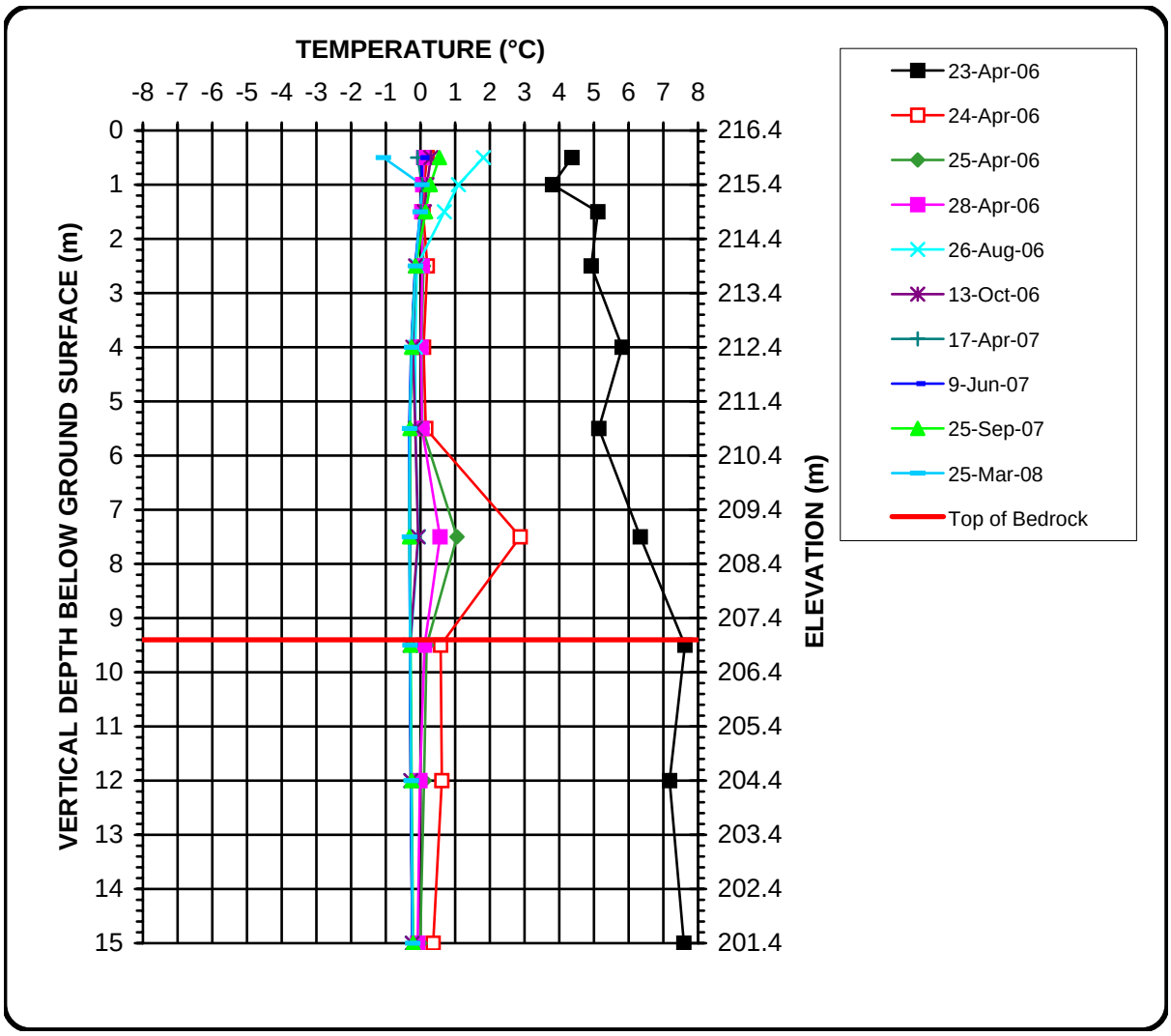
GA-06-10

GROUND ELEVATION: 216.0 m



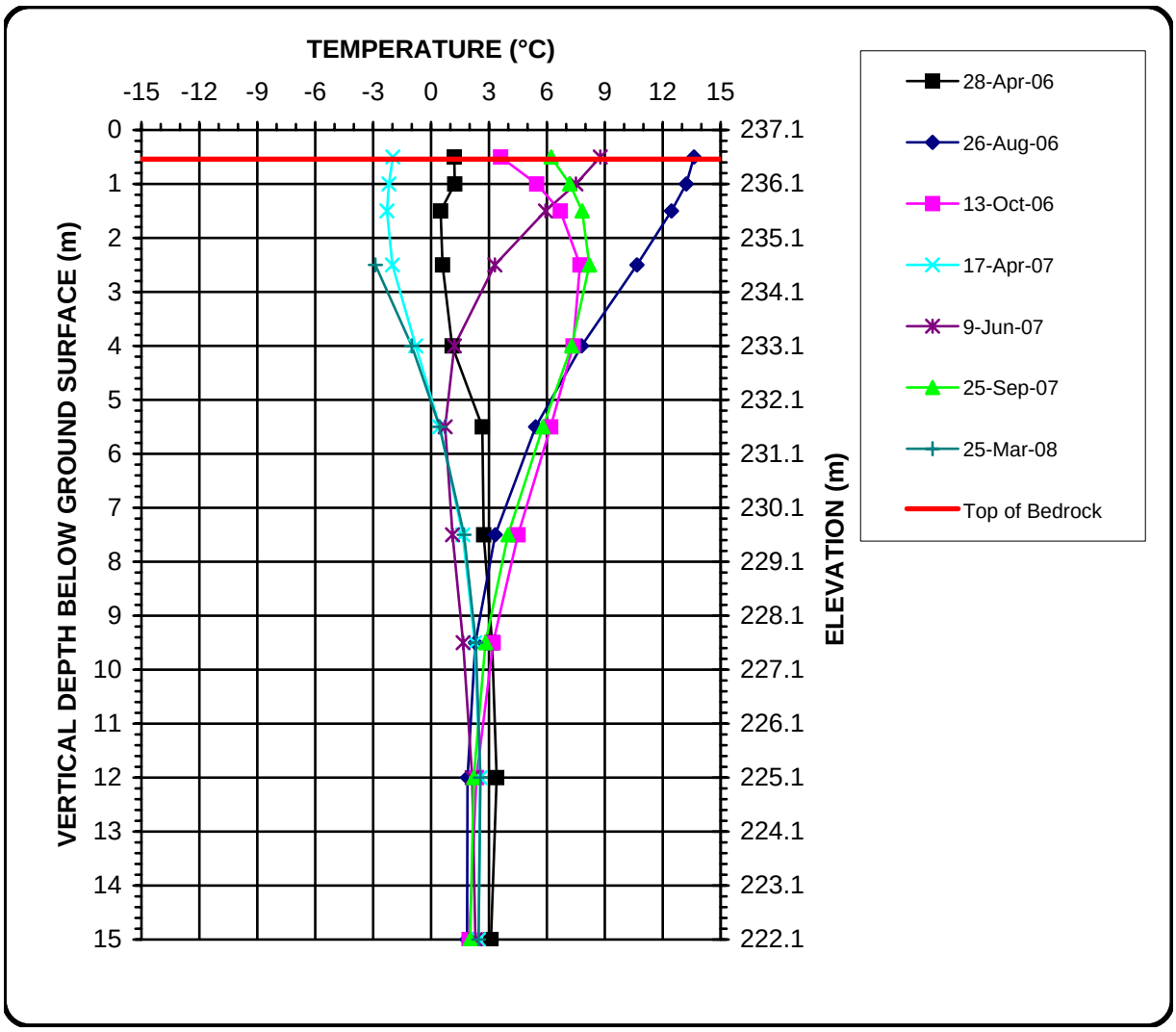
GA-06-11

GROUND ELEVATION: 216.4 m



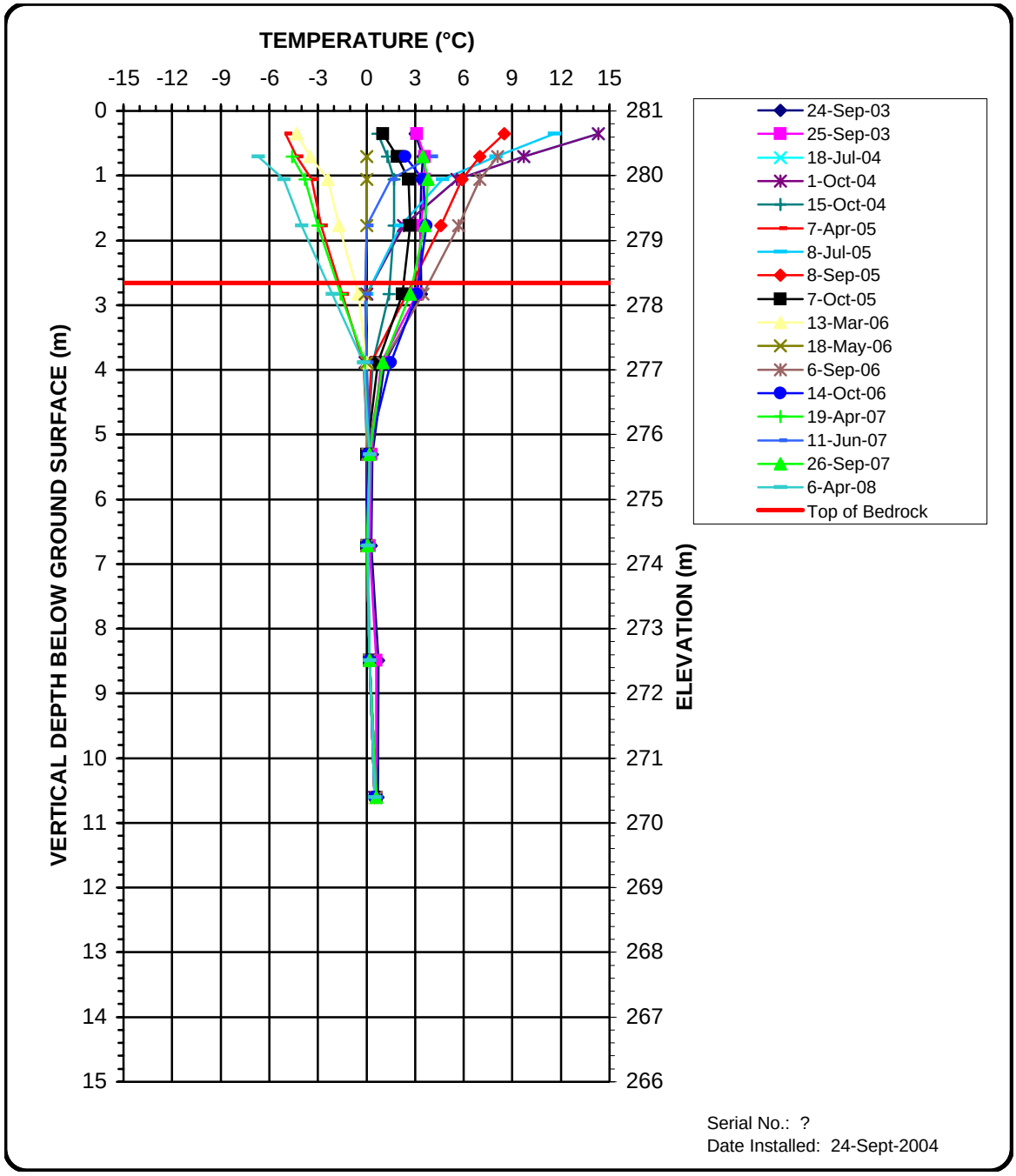
GA-06-13

GROUND ELEVATION: 237.1 m



NICO-03-285

GROUND ELEVATION: 281.0 m



Notes:

1) Surface elevations were derived from a digital topographic map. The actual elevations may be +/- 2m.

2) September 24th and 25th 2003 readings are representative of latent heat during installation.

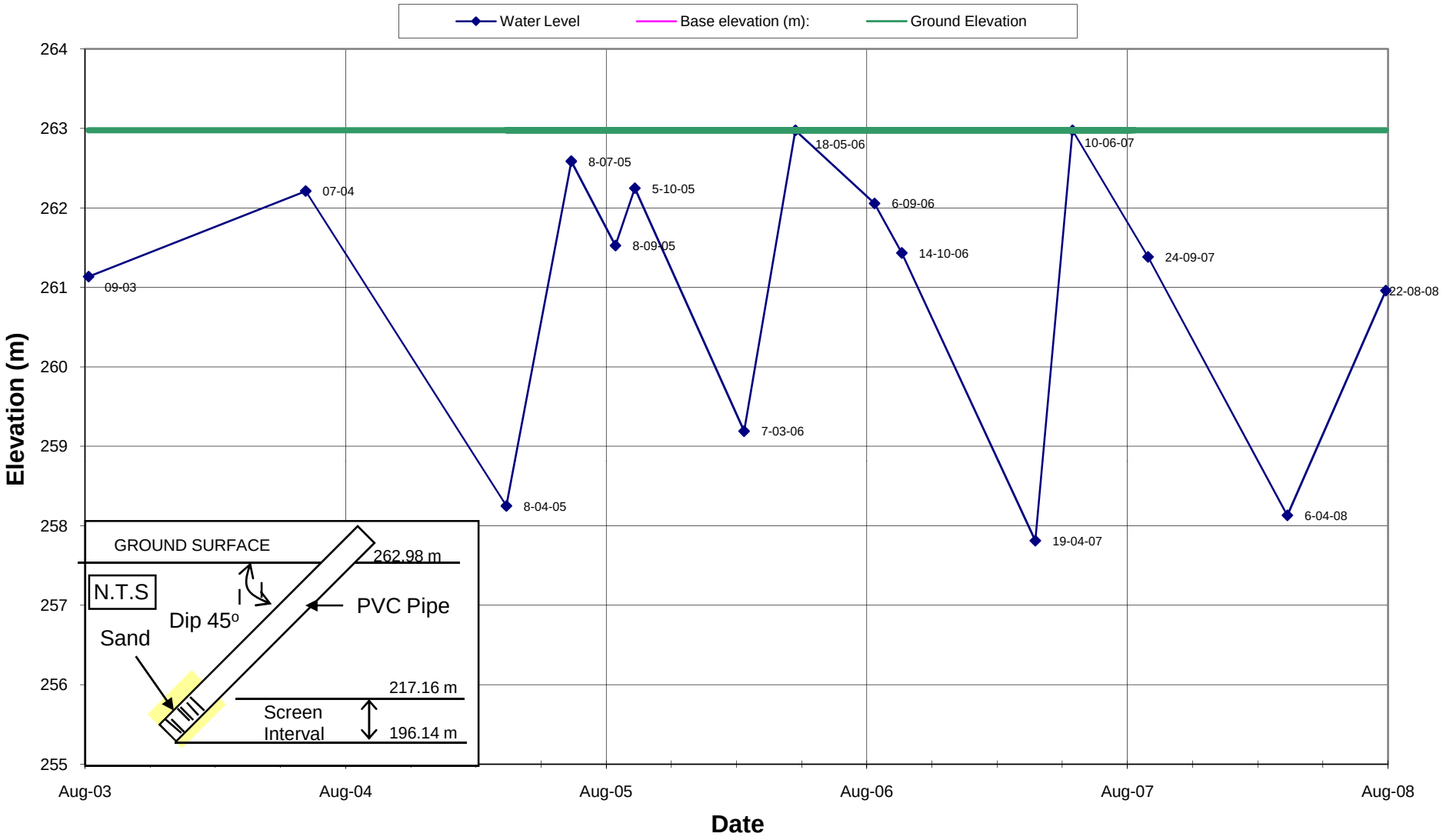
APPENDIX B
WATER LEVEL MONITORING DATA

Monthly Total Precipitation
Yellowknife, NWT

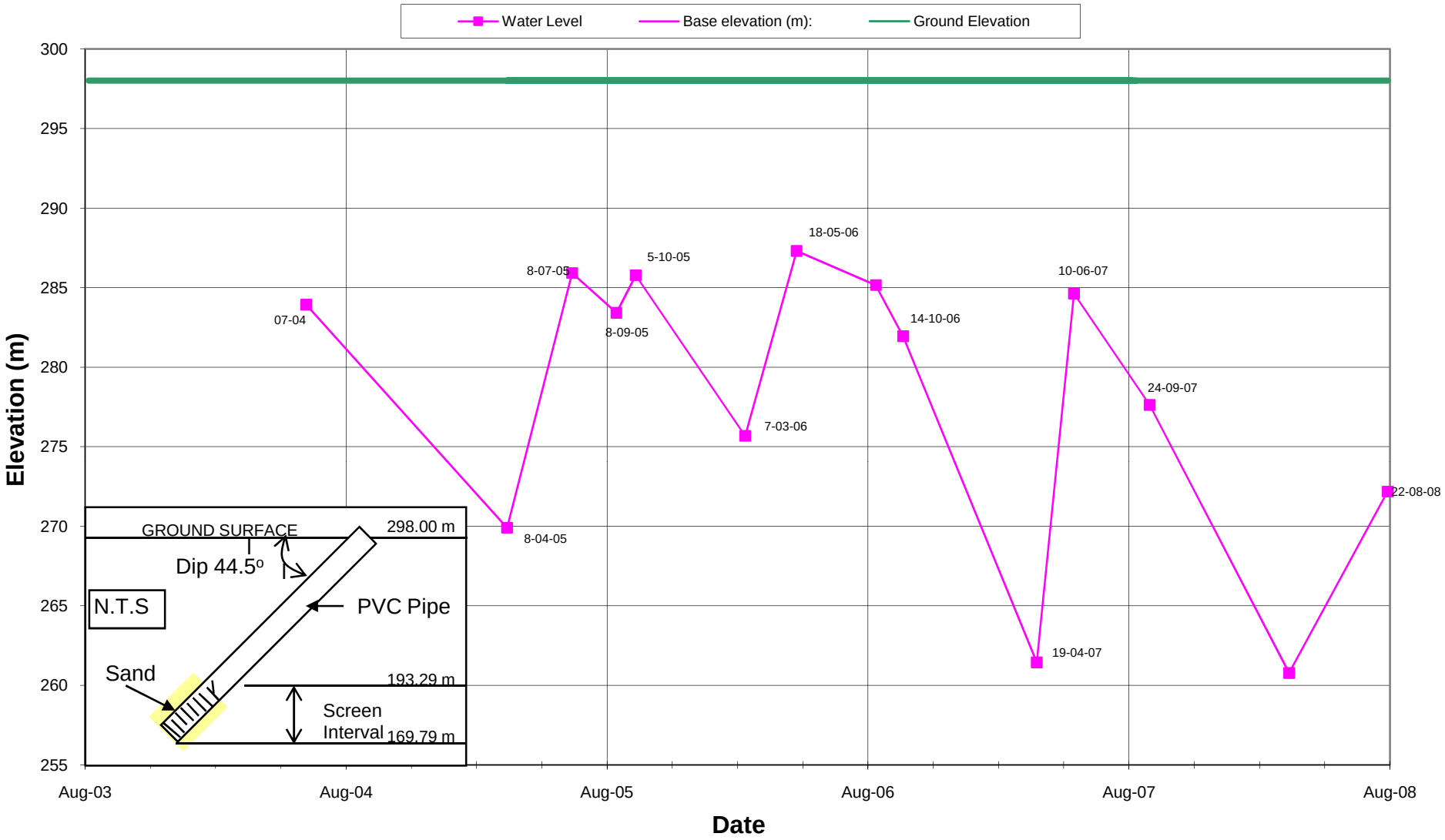
	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Annual
1943	31.2	25.1	25.4	29.5	29.5	9.8	47.9	25	14.7	33.9	13.4	17.1	302.5
1944	13.8	5.9	2.1	2.3	27.3	49.4	17.1	42.3	8.9	32.8	18.2		220.1
1945	7.8	15.5	24.6	11.9	5.6	14.2	52.5	9.5	34.5	40.6	4.1	36.8	257.6
1946	32.4	12.9	14.7	12	26.5	1.4	18.6	25.7	10.2	39.5	19	27	239.9
1947	25.7	18.8	7.1	4.2	5.3	5.4	17.2	28.7	25.6	20.8	21.2	14.9	194.9
1948	12	12.4	4.2	2	6.1	22.9	94.3	48.4	57.4	8.6	25.7	15	309
1949	13.9	6.9	16.3	19.6	14	25	8.1	22.7	22.8	42.4	36.3	8.7	236.7
1950	8.1	17.6	4.5	7	12.5	38.4	23.4	36.2	30.1	26.2	8.8	35.2	248
1951	8.5	9.1	8.9	6.1	23.5	37.5	25.6	28.4	36.3	28.4	16.6	23.1	252
1952	9.1	19.4	15.2	20.3	29.8	13.3	39	57.1	62	23.3	21.3	23.4	333.2
1953	10.9	11.9	5.7	3.1	10.9	13.3	28.3	81.2	27.6	28.9	24.5	27	273.3
1954	12.5	10.5	23.4	4.8	6.1	12.6	68.9	31.1	43	16.1	49.1	28.1	306.2
1955	13.8	13.5	8.6	24.2	6.9	15.4	48.4	13.6	17.5	14.2	28	17	221.1
1956	18.1	18.4	10.4	5.1	20.6	16.7	29.9	45	41.3	33.9	29.7	24.3	293.4
1957	19.2	19.3	14.1	13.2	66.3	53	79.3	14.6	42.5	17	35.1	37.3	410.9
1958	28.9	18.5	21.2	28.7	32	3	28.5	130.6	55.7	53.1	31.2	57.4	488.8
1959	10.5	16.4	54.3	28	11.2	6.4	70.2	46.1	53.1	76.6	44.7	40.1	457.6
1960	14.7	25.1	24	5.2	28.7	16.9	47.8	49	40.6	75.3	54.1	23	404.4
1961	45.5	27.1	27.6	12.9	2.8	6.6	65.2	22.5	42.5	65.9	42.8	27.1	388.5
1962	33.3	15.4	9.7	3.8	6.9	34.1	38	55.6	8.1	19.7	50.4	29.3	304.3
1963	32.5	22.3	15.4	9.3	4.8	33.4	60.1	46.8	27.3	15.1	42.3	13.1	322.4
1964	18.6	20.6	9.1	14.5	16.6	7.7	5.5	13.7	59.4	28.5	24.4	11.3	229.9
1965	11.4	10.2	6.6	17.3	2.8	42	42.5	19.5	7.7	32	61.7	20.7	274.4
1966	12.5	7	27.7	24.1	19.8	36.3	18.8	8.1	29.5	47.6	35.3	29.9	296.6
1967	12.6	22.8	19.1	4	11.5	24.6	19.7	8	15.2	107.4	36.1	18	299
1968	32	19.4	8.8	17.1	18.4	16.9	16.1	18.4	68.5	29	40.2	14.1	298.9
1969	14.7	12.4	13.6	29.3	26.2	14.5	20.9	152.4	17.1	11.4	32.9	23.9	369.3
1970	17.9	27.5	21.4	16.3	20.5	15.8	40.8	92.9	31.4	30	17.1	29.8	361.4
1971	27.7	15.6	21.7	15	24.1	14.5	15.7	69	28	45.6	52.5	17.5	346.9
1972	12.4	20.4	28.9	27.1	6	17.5	39.9	34	38.9	54.6	33.4	21.1	334.2
1973	20.7	16.5	32.2	12.3	12.8	16.1	27.2	132.2	18.6	52.5	63.7	29.6	434.4

1974	25.9	14.8	20.5	7.7	31.3	38.7	80	65.1	53.3	61.9	38.5	68.6	506.3
1975	18.3	14.7	11.3	12.9	16.7	3.6	12.7	89.9	26.3	60.9	32.1	36.8	336.2
1976	26.4	21.1	18.7	12.1	19.9	42.7	28.2	40.3	47.3	18.3	20.1	16.8	311.9
1977	24	25.6	11.7	8.9	39.7	10.2	26.6	22.5	19	38	46.6	23.6	296.4
1978	11.9	7.2	17.4	26.5	10.9	25.3	81.7	7.9	40.1	49.7	31.5	36.4	346.5
1979	11.9	5.6	20.9	19	34.7	6.1	25.3	45.9	19.2	60.1	34.3	20.6	303.6
1980	38.2	12.4	4.1	7	63.6	15.2	13	34	41.8	38.9	40.8	14.1	323.1
1981	21.1	24.4	12.8	23.5	4.3	40.6	27	39.6	46.6	60.5	34.2	15.5	350.1
1982	3.6	40.9	5.4	6.3	47.8	17	13.4	12.4	66.1	26.3	29.9	34.5	303.6
1983	35.4	11.8	22.5	9.4	31.4	14.8	51.2	35	32.6	36.1	40.4	11	331.6
1984	22.6	43	21	10.9	9.3	74.6	65.9	31.7	17.4	46.6	37	15.9	395.9
1985	19.6	50.1	14.3	33.1	28.7	12	61.5	49.1	28.4	54.6	51.3	24.9	427.6
1986	23.2	20.7	27.2	8.7	21.4	50.1	24	77.1	12.7	31.1	17.8	34.1	348.1
1987	28.9	51.7	12.2	13.6	7.2	52.3	11.4	31.9	50.9	41.3	62	31.7	395.1
1988	24.9	22.3	10.3	28.2	22.5	76.2	112.2	18.7	37.7	27.8	68.5	19.7	469
1989	38.6	7.7	19	1.7	23.4	31.9	49.2	12.1	26.1	36.7	59.6	30.2	336.2
1990	30.7	16.4	13.1	16.5	7.1	11.7	75	89.9	17.4	53.1	28.3	42.1	401.3
1991	34.2	23.9	28	19.3	35.6	65.6	20.2	66.8	37.4	60.1	48.1	22.1	461.3
1992	43.7	22.2	35.4	19.8	18.2	36.8	27.7	11.8	37	37.1	40.3	17.1	347.1
1993	11.2	31.2	22	7.7	44.4	3.9	72.4	18.6	46.3	25	28.8	50.7	362.2
1994	16.3	12.9	36.7	7.6	16.3	22.9	30.7	6.5	24	36	52.9	31.2	294
1995	22.9	22.5	57.2	12.8	5.7	14.6	30.3	17.1	37.3	27.4	27.8	48.4	324
1996	12.2	25.5	23.7	30.1	9.7	37.8	15.5	51	63.9	26.2	31.7	28	355.3
1997	28.9	9	34.6	4.2	31.1	37.5	23.9	31.6	50.9	43.2	43.3	25.6	363.8
1998	28.5	21.9	6	27.3	0.3	46.3	13.8	59.5	48.3	59.2	28.3	22	361.4
1999	25.2	26.2	22.6	15.6	25.6	13.1	20.9	42.1	44	36.8	36.8	34.8	343.7
2000	8.9	15.4	15.2	12.5	13	46.4	43.9	92.3	30.1	59.5	55.7	14.3	407.2
2001	29.9	12.5	43.7	8.2	40.6	6.4	63.2	82.1	55.1	25.8	38.5	44.5	450.5
2002	8.2	31.5	13.6	6.4	20.5	20.3	107.3	55.9	33.2	38.6	21.5	38	395
2003	11.4	11.2	21.7	15.9	33	37.9	13.1	60	26.6	18.1	44.4	43.1	336.4
2004	19.5	19.7	8.9	20.4	10.9	5.7	26.6	7.8	44.6	45.8	37.7	25.7	273.3
2005	41.4	32.8	24.1	21.6	9.5	43.9	48.2	65.9	86.3	33.7	57.1	22.2	486.7
2006	23.6	20.3	27.2	23.6	37.4	33.1	44.4	55.9	23.4	14.7	95.2	20.4	419.2
2007	45.9	25.9	27.8	11.4	26.5	6.7	93.1	30.4	55.1				

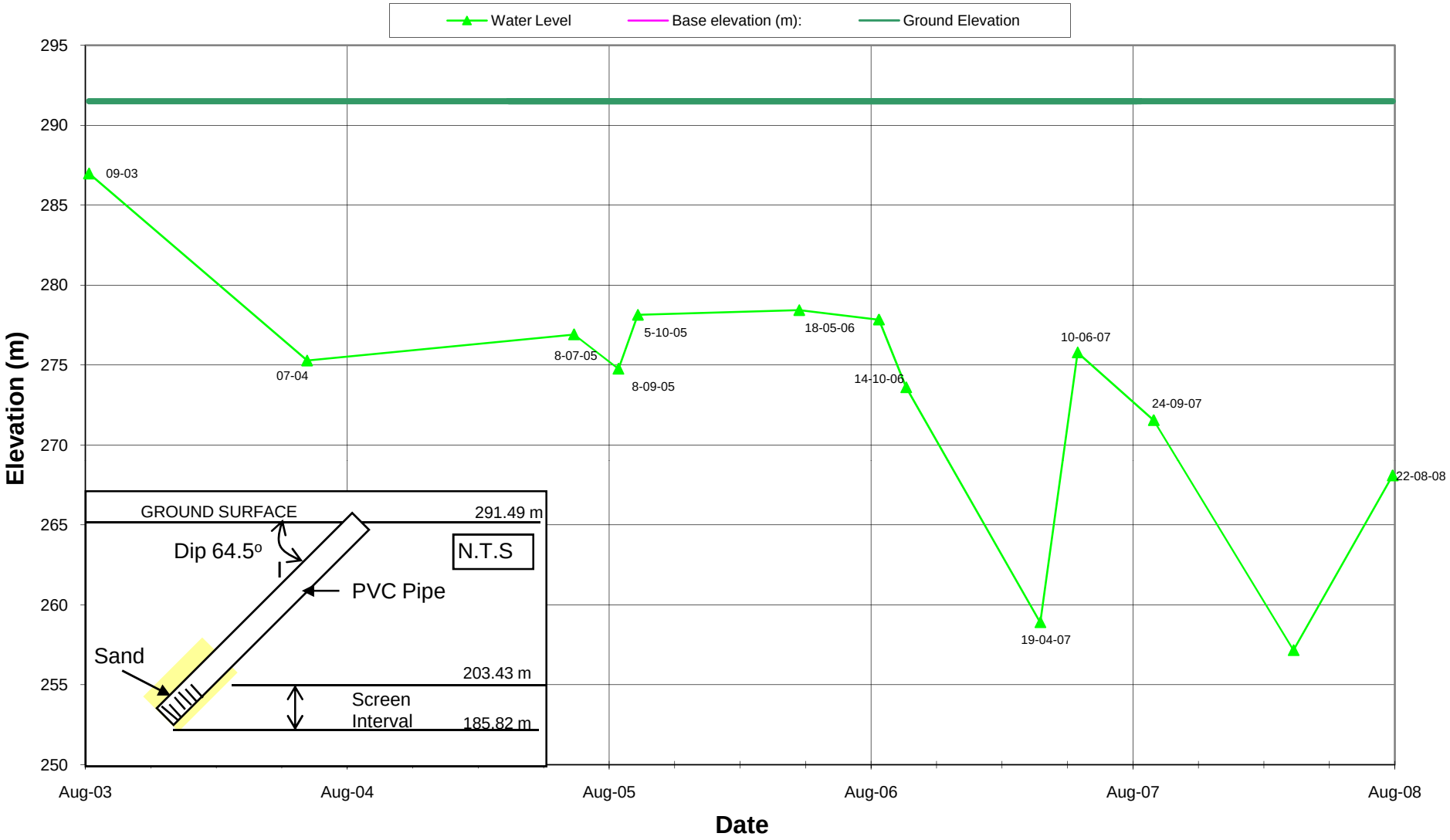
Static Water Level Data
NICO 03-281



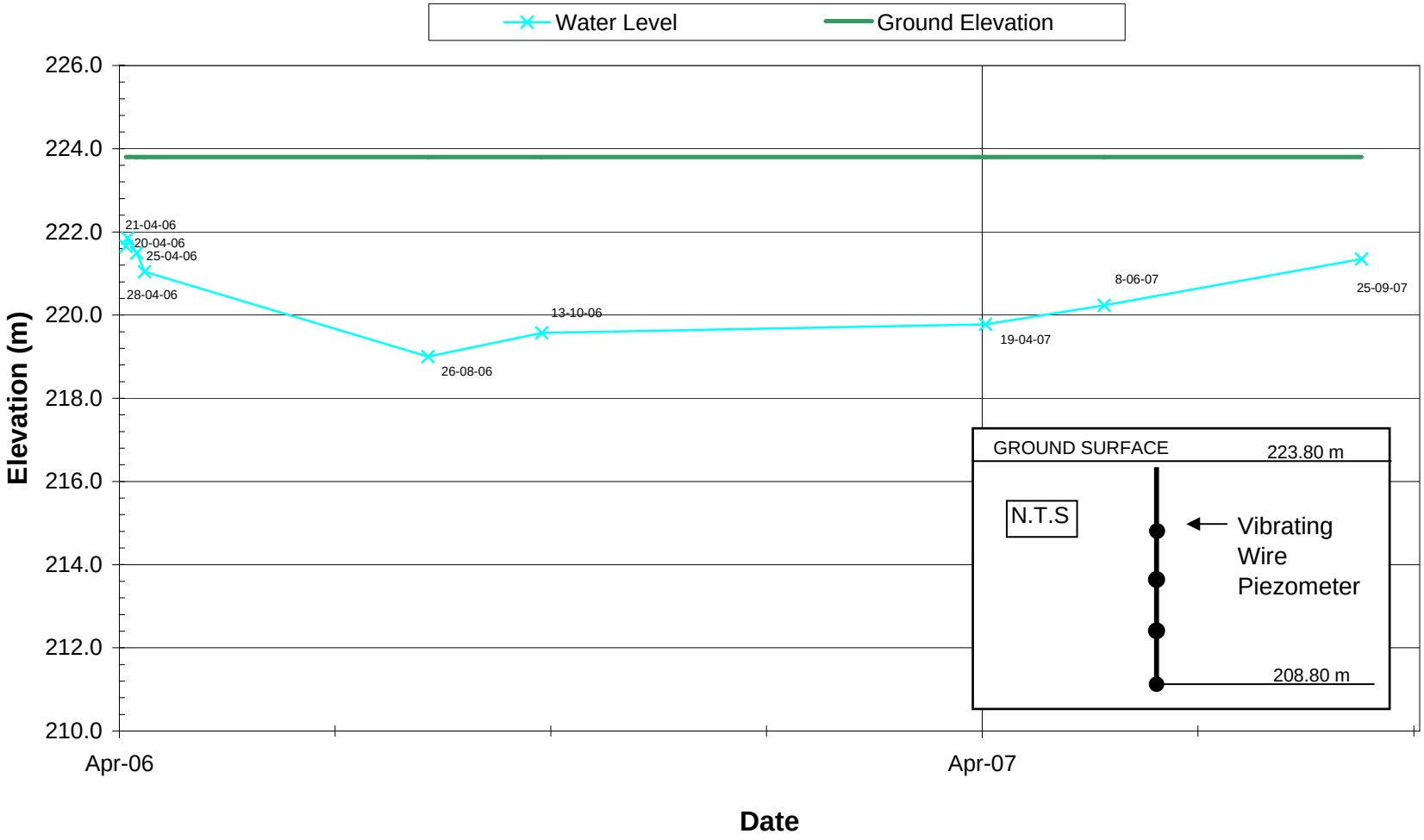
Static Water Level Data
NICO 03-282



Static Water Level Data
NICO 03-283



Static Water Level Data
GA-06-09



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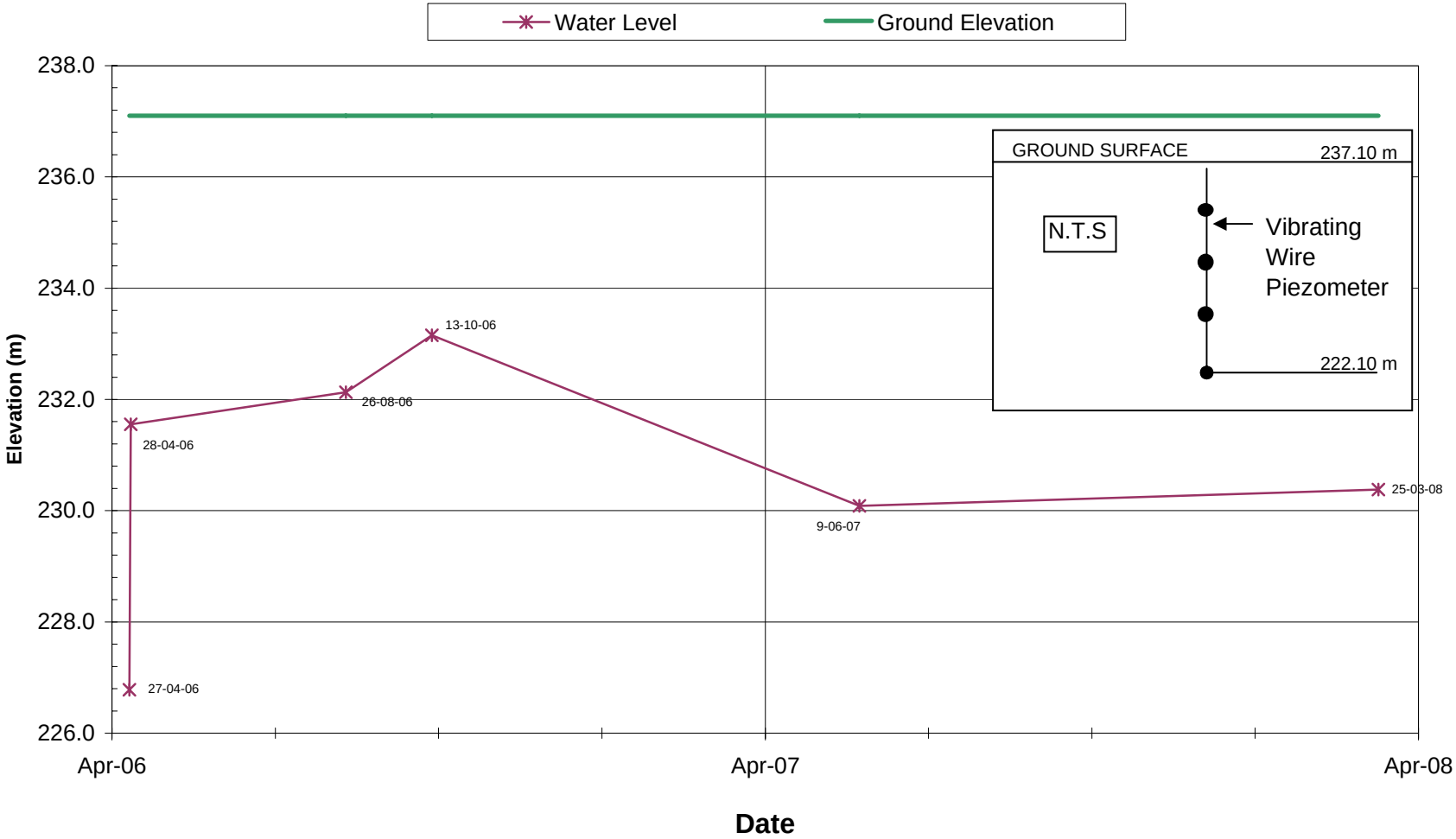
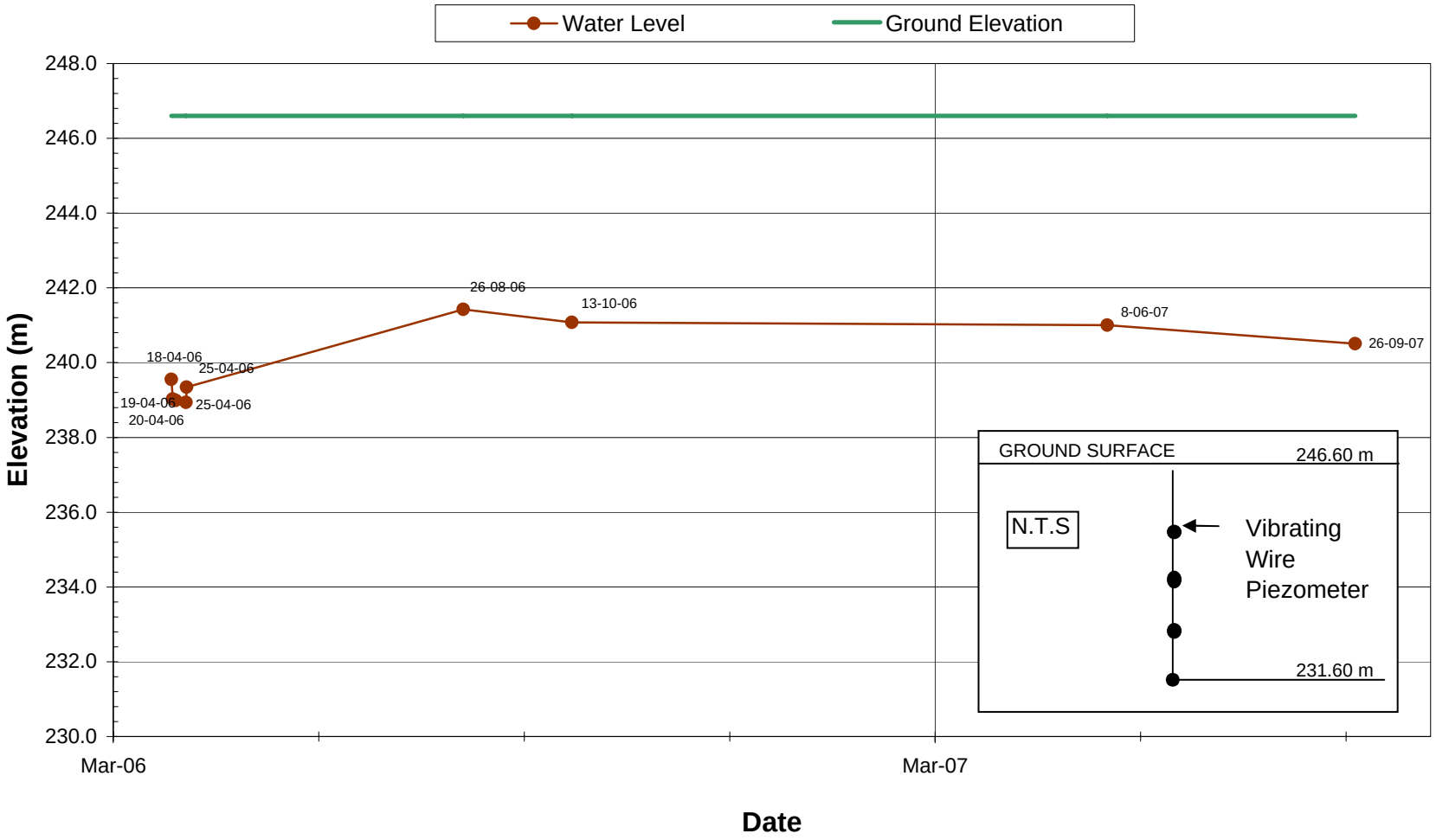
GA-06-13



WATER LEVEL
MC-06-23



Golder Associates

Nico Site (08-1118-0043)

From: Rougier, Marc
Sent: June 23, 2009 4:08 PM
To: Jim Mucklow
Cc: Nico Site (08-1118-0043); Minano, Rosa
Subject: Hydrogeology Background data and your message
Attachments: 0 - 05-1117-032 Tech MemoOct 17 2008 Monitoring Update Complete.pdf

Hi Jim

Attached is a relatively recent tech memo on piezometer and thermistors monitoring data, Nico. Rick and Kristen collected a small about of thermistors data during their 2009 spring visit, but I have not updated the memo for it.

Tom Rinaldi requested the meeting, specifically asking for June 30th. I reckon he celebrates July 4th rather than July 1st.

Regards,
Marc