



2014 Spring Geotechnical Inspection

Prepared by:
Minto Explorations Ltd.
Minto Mine
August, 2014

Table of Contents

1	Introduction	1
1.1	License Requirements.....	2
1.1.1	Water License QZ96-006, Amendment 8.....	2
1.1.2	Quartz Mining License QML-001.....	2
2	Scope	3
3	Monitoring Instrumentation Data	5
3.1	Dry Stack Tailings Storage Facility / Mill Valley Fill Expansion.....	6
3.2	Main Pit South Wall Buttress.....	7
3.3	Main Waste Dump.....	7
3.4	Mill Water Pond.....	7
3.5	Southwest Waste Dump.....	7
3.6	Water Storage Pond Dam.....	8
3.7	Tailings Diversion Ditch.....	8
3.8	A2 and 118 Pits.....	8
3.9	118 and Mzone Underground Workings.....	9
4	Results and Recommendations	10
5	References	13

List of Tables

Table 1: Facilities Inspected and Guidance Documents	3
Table 2: Summary of Instrumentation Data	5
Table 3: Current Rate of Movement (July, 2014) of DSTSF Survey Hubs.....	6
Table 4: Current Rate of Movement (July, 2014) of Main Pit Survey Hubs.....	7
Table 5: Current Rate of Movement (July, 2014) of Southwest Waste Dump Survey Hubs.....	8
Table 6: Summary of Recommendations.....	10

List of Appendices

Appendix A: Photographs

Appendix B: Instrumentation Figures

1 Introduction

Geotechnical inspections were carried out on May 1 and June 27, 2014 by Eamon Mauer and Kevin Cymbalisky, respectively, of Minto Explorations Ltd. Inspections are conducted bi-annually and include visual observations and a review of monitoring instrumentation (where applicable) to assess geotechnical conditions and stability. The following facilities were inspected:

- Big Creek Bridge
- Dry Stack Tailings Storage Facility (DSTSF)
- Fuel Containment Facility
- Ice Rich Overburden Dump (IROD)
- Main Pit and South Wall Buttress
- Main Waste Dump
- Mill and Camp Site
- Mill Water Pond
- Minto Creek Detention Structure (MCDS)
- Ore stockpiles
- Reclamation Overburden Dump (ROD)
- South Diversion Ditch
- Southwest Waste Dump (SWD)
- Water Storage Pond Dam
- Tailings Diversion Ditch
- A2 and 118 Pits
- 118 and Mzone Underground Workings

The following report summarizes observations and recommendations from the inspections. The report is a requirement of Water Use Licence QZ96-006, Amendment 8, Clause 82 (described in Section 1.1) that physical inspections be completed after spring thaw in May/June and again before the onset of winter in September of each year. In addition, the report fulfills clause 12.1 of the QML-001 Quartz Mining License (described in Section 1.1), which requires that an annual geotechnical inspection of the Minto Mine site be conducted.

1.1 License Requirements

1.1.1 Water License QZ96-006, Amendment 8

82. The Licensee shall complete physical inspections of the facilities and review of physical monitoring data, in accordance with the following conditions:

- a) The inspections and review will encompass the Water Storage Pond Dam, the Mill Water Pond, all waste rock and overburden dumps, all open pits, all water diversion and conveyance structures, and the DSTSF.
- b) The inspections shall be completed by a Professional Engineer(s) licensed to practice in Yukon.
- c) The physical inspections shall be completed after the spring thaw period in May/June of each year and again prior to the on-set of winter in September of each year.
- d) Review by a Professional Engineer of monitoring data from the inspected facilities shall be completed in association with the physical inspections.
- e) The Professional Engineer(s) that completes inspections and review of monitoring data shall prepare a report that includes the results of each inspection and data review, and any recommendations for remedial actions. The report for each inspection shall be submitted to the Board within 45 days of the date of the inspection. The annual report for each year shall include a list of each of the recommendations and an explanation of how each recommendation has been addressed.

1.1.2 Quartz Mining License QML-001

12.0 Reporting and Inspections

12.1 The Licensee must ensure that an annual inspection of the physical stability of all engineered structures, works and installations located at the site is conducted by an engineer by August 1 of each year of the terms of this License, including the tailings facilities and related impoundment structures, the waste rock and overburden storage facilities, the open pits, the underground workings, ore stockpiles, mill site, camp sites, any diversion structures or dams and any other engineered facilities or works associated with the Undertaking.

12.2 Within sixty (60) days of the inspection referred to in paragraph 12.1, the Licensee must submit to the Chief and the Inspector a written report prepared by the engineer that conducted the annual inspection documenting the results of the inspection, including a

- (a) summary of the stability, integrity and status of all the inspected structures, works and installations, and
- (b) any recommendations for remedial actions made as a result of these investigations and evaluations.

2 Scope

Table 1 provides a list of the facilities that were inspected and the design reports and monitoring guidance documents that were used to guide the inspections. Previous inspection reports were also reviewed.

As part of the inspection, instrumentation data was reviewed to check for indications of unusual performance or change in trends. Section 3 of this report presents a list of data reviewed.

Table 1: Facilities Inspected and Guidance Documents

Facility	Design Reports	Monitoring/Inspection Guidance Documents
Dry Stack Tailings Storage Facility (DSTSF)	<i>Geotechnical Design Report, Dry Stack Tailings Storage Facility, Minto Mine, Yukon.</i> EBA File: 1200173. January 2007.	<i>Operation, Maintenance, and Surveillance Manual, Dry Stack Tailings Storage Facility, Minto Mine, YT.</i> Revision 2011-1 EBA File: W14101068.001. January 2011.
Mill Valley Fill (MVFE)	<i>Waste Rock and Overburden Management Plan, Phase IV Development, Minto Mine YT.</i> EBA File: W14101068.015. September 9, 2011. <i>Upstream Water Management for the Mill Valley Fill Expansion and Dry Stack Tailings Storage Facility.</i> EBA File: W14101168.013. September 14, 2011.	<i>Minto Mine Physical Monitoring Plan, June 2014</i>
Main Waste Rock Dump (MWD)	<i>Geotechnical Evaluation Proposed Main Waste Dump Minto Mine, Minto, YT.</i> EBA. April, 1998.	<i>Geotechnical Evaluation Proposed Main Waste Dump Minto Mine, Minto, YT.</i> EBA. April, 1998.
Southwest Waste Dump (SWD)	<i>Geotechnical Design Proposed Southwest Waste Dump, Minto Mine, Yukon.</i> EBA File: W14101068.005. September 2008.	<i>Geotechnical Design Proposed Southwest Waste Dump, Minto Mine, Yukon.</i> EBA File: W14101068.005. September 2008.
Reclamation Overburden Dump (ROD)	<i>Geotechnical Design Proposed Reclamation Overburden Dump, Minto Mine, Yukon.</i> EBA File: W14101068.004. February 2008. <i>Reclamation Overburden Dump Expansion Geotechnical Design Report.</i> EBA File: W14101068.0040. June 29, 2010.	<i>Reclamation Overburden Dump Expansion Geotechnical Design Report.</i> EBA File: W14101068.0040. June 29, 2010.
Ice-Rich Overburden Dump (IROD)	<i>Geotechnical Design Ice-Rich Overburden Dump, Minto Mine, Minto, YT.</i> EBA file: 1200173. January 2006. <i>Ice-Rich Overburden Dump Containment Berm Inspection Report, Minto Mine Site, Minto Yukon.</i> EBA File: 1200173.001. June 19, 2007.	<i>Geotechnical Design Ice-Rich Overburden Dump, Minto Mine, Minto, YT.</i> EBA file: 1200173. January 2006. EBA, 2007.
Ore Stockpiles	None	None
Mill and Camp Site	<i>Geotechnical Evaluation Mill and Camp Site, Minto Project, Yukon.</i> EBA File: 0201-11509. Dec. 1994.	None

Facility	Design Reports	Monitoring/Inspection Guidance Documents
Mill Water Pond (MWP)	-	<i>Construction Quality Assurance Manual for Waste Dumps, Tailings/Water Dam, Mill Water Pond, and Diversion Ditch, Minto Project, Yukon.</i> EBA File 0201-95-11509. August, 1997.
Fuel Containment Facility	Not available	Not available
South Diversion Ditch (SDD)	<i>Design Drawings, South Diversion Ditch & Collection Pond.</i> IFC. EBA, July 2006. <i>Pipe Design for South Diversion Ditch Realignment, Minto Mine, YT.</i> EBA File: W14101068.013. <i>South Diversion Ditch Realignment and Overflow Spillway.</i> SRK Project No.: 1CM002.006.200, February 1, 2013.	None
Minto Creek Detention Structure (MCDS)	<i>Conveyance Network Detention Structure and Water Collection Sump Design.</i> EBA. November 5, 2009. <i>Minto Project: Minto Creek Detention Structure Seepage Monitoring Program.</i> EBA File: W14101068.001. October 25, 2011.	<i>Minto Project: Minto Creek Detention Structure Seepage Monitoring Program.</i> EBA File: W14101068.001. October 25, 2011.
Water Storage Pond Dam (WSP)	<i>Geotechnical Design Tailings/Water Dam, Minto Project, Yukon.</i> EBA File: 0201-95-11509. Dec. 1995. <i>As-built Construction Report, Water Retention Dam, Minto Mine, Minto, YT.</i> EBA File: 1200173.001. April 2008.	<i>Operation, Maintenance and Surveillance Manual, Water Retention Dam, Minto Mine, Minto, YT.</i> EBA File: W14101068.002. July 2014.
Big Creek Bridge	Not available	Not available
South Wall Buttress	<i>Area 1 South Wall Buttress Design Report, Minto Mine, Yukon.</i> EBA File: W141010668.012, July 2011.	<i>Minto Mine Physical Monitoring Plan, June 2014</i>
Main, A2 and 118 Open Pits		<i>Minto Mine Ground Control Plan – Open Pit Operations, June 2014</i>
118 and Mzone Underground Workings		<i>Minto Mine Ground Control Plan – Underground Operations, July 2013</i>

3 Monitoring Instrumentation Data

Table 2 lists instrumentation data reviewed as part of the inspection, with the date of the most recent reading. Instrumentation data summaries are provided in Appendix B. Discussion of data for each facility is contained in the following sections.

Table 2: Summary of Instrumentation Data

Facility	Instrumentation Type	List of Active Instrumentation	Last Reading Date	Figure (Appendix B)
Dry Stack Tailings Storage Facility and Mill Valley Fill Expansion (DSTSF and MVFE)	Survey Hubs	DSSH-06, DSSH-10, DSSH-12, DSSH-14, DSSH-15, DSSH-17, DSSH-18, DSSH-19, DSSH-20, DSSH-21, DSSH-22, DSSH-23, DSSH-24, DSSH-25 ASH05, ASH06 (Airport road behind DSTSF)	July 2014	B.1 B.5
	Inclinometers	DSI-10, DSI-14, DSI-21 A2I-1	June/July 2014	B.2
	Piezometers	DSP-5, DSP-6	June 2014	B.3
	Thermistors	DST-10, DST-11, DST-13, DST-14, DST-15	June 2014	B.4
Main Pit South Wall Buttress	Survey Hubs	M73, M74, M75, M76, M79, M80, M81	July 2014	B.6
Main Waste Rock Dump (MWD)	Inclinometers	MDI-2	June 2014	B.6
Mill Water Pond (MWP)	Thermistors	MWPT-1, MWPT-2, MW-11-01A	July 2014	B.7
Southwest Waste Dump (SWD)	Survey Hubs	SWD-01, SWD-01A, SWD-02, SWD-03A, SWD-04A, SWD-05A	July 2014	B.8
	Inclinometers	SDI-3	July 2014	B.8
	Piezometers	SDP-2, SDP-3, SDP-4	July 2014	B.9
	Thermistors	SDT-1, SDT-2, SDT-3, SDT-4	July 2014	B.10
Water Storage Pond Dam	Survey Hubs	WSP-1, WSP-3, WSP-4, WSP-5	July 2014	B.11
	Piezometers	WDP-2, WDP-3, WDP-3A, WDP-4, WDP-5, WDP-6, WDP-7, WDP-8, WDP-9, WDP-10, WDP-11, WDP-12, WDP-13	July 2014	B.12
	Thermistors	WDT-1, WDT-2, WDT-3, WDT-4, WDT-5, WDT-6, WDT-7, WDT-8	July 2014	B.13, B.14

3.1 Dry Stack Tailings Storage Facility / Mill Valley Fill Expansion

Surface movement rates decreased significantly in mid to late 2012 and again slightly in early 2014 and have remained consistent since then. Construction of the Mill Valley Fill Expansion was completed in March, 2013. Current rates are shown in Table 3. Eight new hubs were installed on the DSTSF and MVFE in February, 2014 to increase monitoring coverage.

Table 3: Current Rate of Movement (July, 2014) of DSTSF Survey Hubs

Survey Hub	Current Trend of Movement Rate (mm/day)
DSSH-06	1.6
DSSH-10	1.4
DSSH-12	1.7
DSSH-14	1.7
DSSH-15	1.4
DSSH-17	1.2
DSSH-18	0.6
DSSH-19	0.9
DSSH-20	0.0
DSSH-21	0.9
DSSH-22	1.3
DSSH-23	1.0
DSSH-24	1.2
DSSH-25	0.7
Average	1.1

Only three inclinometers are still operational – DSI-10, DSI-14 and DSI-21. DSI-10 and DSI-21 are on the south side/abutment and are showing minimal movement. DSI-14 is indicating a consistent shear at Elevation 746-748 moving at rate similar to nearby surface hubs DSSH-18 and DSSH-19.

Piezometer pressures are relatively consistent with the exception of DSP-5A, which has increased approximately 6m in 2014. All sensors are in frozen ground so they may not be reliable.

Thermistors, mostly in warm permafrost with the exception of the deeper parts of DST-11 and DST-13, are indicating no change in ground temperature.

3.2 Main Pit South Wall Buttress

Survey hubs around the south wall buttress all continue to decrease in velocity as construction of the buttress continues. Rates are now between zero and 0.5 mm/day, shown in Table 4.

Table 4: Current Rate of Movement (July, 2014) of Main Pit Survey Hubs

Survey Hub	Current Rate of Movement (mm/day)
M73	0.3
M74	0.5
M75	0.1
M76	0.1
M79	0.2
M80	0.0
M81	0.0
Average	0.2

3.3 Main Waste Dump

Monitoring of inclinometer MDI-2 resumed in October, 2013 (after the previous reading in 2010). No movement has been observed since readings resumed.

3.4 Mill Water Pond

No change in temperatures observed by thermistors since installation.

3.5 Southwest Waste Dump

Surface movements have generally decreased at the north end of the dump, likely due to continued construction of the South Wall Buttress in the Main Pit. Movement rates have increased in the southern end of the dump, likely due to the effect of active dumping. The highest rates of movement are currently in hubs SWD03A (next to low grade dump), SWD04A (next to D51) and SWD05A (next to D51), all showing increased movement since April, 2014. The SWD is nearing completion.

Table 5: Current Rate of Movement (July, 2014) of Southwest Waste Dump Survey Hubs

Survey Hub	Current Rate of Movement (mm/day)
SWD-01A	0.1
SWD-01	0.2
SWD-02A	0.6
SWD-02	0.7
SWD-03A	2.8
SWD-04A	1.3
SWD-05A	1.2
Average	1.0

Inclinometer SDI-3 is showing small but consistent movement. This may correspond with a slight thawing trend indicated by SDT-2. Temperatures in SDT-2 have increased slightly but are still below zero degrees and within the warm permafrost zone.

Southwest dump piezometers are showing inconsistent data, likely due to being located in frozen ground. Many sensors are reading negative pressures, which usually indicates they are either above the water table, malfunctioning, or frozen. Only SDP-2A and SDP-4B are reading positive pressure currently. SDP-4A and SDP-2B both dropped from positive to negative pressure in June 2013, whereas SDP-4B increased at the same time.

3.6 Water Storage Pond Dam

No movement indicated by survey hubs.

All thermistors indicate temperatures above zero, possibly with a slight warming trend.

Piezometers indicate a moderate trend of decreasing pressure. This decrease in pressure corresponds relatively well with the lowering of the water storage pond water elevation, which has been kept progressively lower over the past two years.

3.7 Tailings Diversion Ditch

Construction was observed at the Tailings Diversion Ditch, please see Figure 1 in Appendix A. Construction methodology was observed to be following general specifications and guidelines outlined in EBA's construction quality assurance manual, file number 0201-95-11509 August 1997.

3.8 A2 and 118 Pits

It was observed that weekly visual inspections of the A2 and 118 Open Pits are being conducted by Minto's geotechnical and geology departments in compliance with the Minto Mine Ground Control Plan - Open Pit Ground Control June 2014. In addition a Ground Probe radar is utilized to provide real time monitoring of any movement in the active area within the A2 pit. A system of prisms is used in areas where the ground probe radar is not providing coverage.

As reported in the Aug 9, 2014 Area 2 and Area 118 Pit Weekly Monitoring Logs both pits are stable. Local zones at 4 locations in the Area 2 Pit (West Wall Fault Zone, South Wall 739-763, East Wall 739 Crest and East Wall 787 Crest) where wedges or local discontinuities are present have been identified and it was

observed that barricade / catchment berms had been constructed below them to mitigate any safety risks.

3.9 118 and Mzone Underground Workings

It was observed that, in compliance with the Minto Mine Ground Control Plan – Underground Operations July 2013, daily inspections of active underground workings are being conducted by the Underground Supervisors and documented within the Underground Ground Control Log Book. Inspections and geologic mapping are also being conducted by Minto's Geotechnical and Geology departments as well as monthly pull testing of ground support.

The underground workings at the 118 and Mzone were observed to be stable.

4 Results and Recommendations

Findings of the inspection are documented in the photographic compilation of figures in Appendix A. Photos of all facilities from the inspection are stored on the mine site server for review during subsequent inspections. A summary of the recommendations is provided in Table 6.

Table 6: Summary of Recommendations

Area	Appendix A Figure #	Recommendation
Big Creek Bridge	-	Continue regular annual monitoring of sediment accumulation in the culverts. If sediments continue to accumulate, clean them out.
Dry Stack Tailings Storage Facility & Mill Valley Fill Extension	2,3	Evaluate water management requirements immediately South of the DSTSF. If the evaluation concludes that changes are needed, develop and implement an appropriate plan.
Ice-Rich Overburden Dump	-	None.
Main Pit	-	None.
Main Waste Dump	-	None.
Mill and Camp Site	4	Surface grading / cutting a small ditch behind the new camp to mitigate ponding water which is occurring in the area.
	5	The retaining wall near the mill's apron feeder tunnel should be inspected periodically as it is showing signs of having the potential to topple forward. Should its condition deteriorate remedial action should be taken.
Mill Water Pond	-	None. The Mill Pond is no longer in service.
Minto Creek Detention Structure	-	Continue annual monitoring for signs of instability or seepage on the downstream slope of the MCDS.
Ore Stockpiles	-	None.
Reclamation Overburden Dump	6	None. Localized crest failure on the southeast toe into the ponded water area was observed but is not a large scale stability concern.
South Diversion Ditch	7	Remove ditch obstructions such as road fill, vegetation, GCL to increase the flow capacity. This was completed in July 2014 (after the inspection was conducted)
	8	Remove the three large boulders at the overflow spillway and replace with traffic pylons.
	9	Complete an as-built survey of the pipe intake structure and overflow spillway and confirm that the spillway is constructed to design.
South Wall Buttress	10	Tension cracks on the west wall fill appear to have increased/dilated since the previous inspection. Install prisms to monitor movement.
Southwest Waste Dump	-	Continue monitoring instruments. Review if movement rates do not stabilize after completion.
Water Storage Pond Dam	-	Continue regular monitoring of the dam, noting specifically the clarity of the seepage and flow exiting the stilling basin and the seepage rate through the weir.

Area	Appendix A Figure #	Recommendation
	11	Ditching of the ponded water on the south abutment of the WSP Dam should be considered to ensure low groundwater pressures are maintained on the dam face
	-	The discharge point of the water (from the pit, water treatment plant, etc.) influences the seepage pump data at W-3 in the seepage pump house. Options to obtain accurate seepage measurements should be explored such as moving the discharge point a further downstream of the pump house. The issue should be resolved prior to 2015 spring melt.

This report, "2014 Spring Geotechnical Inspection, Minto Mine, YT", was prepared by

Original Stamped and Signed

Eamon Mauer, P.Eng
Minto Explorations Ltd.

Original Stamped and Signed

Kevin Cymbalisky, P.Eng
Minto Explorations Ltd.

Reviewed by:

Original Stamped and Signed

Sebastien Tolgyesi, P.Eng
Mine Manager, Minto Explorations Ltd.

Original Stamped and Signed

Pooya Mohseni, P.Eng
Chief Engineer, Minto Explorations Ltd.

All data used as source material plus the text, tables, figures, and attachments of this document have been reviewed and prepared in accordance with generally accepted professional engineering and environmental practices.

5 References

- EBA 1994. Geotechnical Evaluation, Mill and Camp Site, Minto Project, Yukon. EBA Engineering Consultants Ltd. File Number: 0201-11509. Dec.
- EBA 1995. Geotechnical Design Tailings/Water Dam, Minto Project, Yukon. EBA Engineering Consultants Ltd. File Number: 0201-95-11509. Dec.
- EBA 1997. Construction Quality Assurance Manual for Waste Dumps, Tailings/Water Dam, Mill Water Pond, and Diversion Ditch, Minto Project, Yukon. EBA Engineering Consultants Ltd. File Number: 0201-95-11509. Submitted to Minto Explorations, Ltd. Aug.
- EBA 1998. Geotechnical Evaluation, Proposed Main Waste Dump, Minto Project, Yukon Territory. EBA Engineering Consultants Ltd. File Number: 0201-95-11509. Apr.
- EBA 2006a. Geotechnical Design, Ice-Rich Overburden Dump, Minto Mine, Minto, YT. EBA Engineering Consultants Ltd. File Number: 1200173. Jan.
- EBA 2006b. Design Drawings, South Diversion Ditch and Collection Pond. IFC. EBA Engineering Consultants Ltd. July.
- EBA 2007. Ice-Rich Overburden Dump Containment Berm Inspection Report, Minto Mine Site, Minto, Yukon. EBA Engineering Consultants Ltd. File: Number 1200173.001. June 19.
- EBA 2008a. Geotechnical Design, Proposed Reclamation Overburden Dump, Minto Mine, Yukon. EBA Engineering Consultants Ltd. File Number: W14101068.004. Feb.
- EBA 2008b. As-Built Construction Report, Water Retention Dam, Minto Mine, Minto, YT. EBA Engineering Consultants Ltd. File Number: 1200173.001. Apr.
- EBA 2008c. Draft Operation, Maintenance, and Surveillance Manual, Water Retention Dam, Minto Mine, Minto, YT. EBA Engineering Consultants Ltd. File Number: W14101068.002. Apr.
- EBA 2008d. EBA Engineering Consultants Ltd., 2008. Geotechnical Design, Proposed Southwest Waste Dump, Minto Mine, Yukon. EBA Engineering Consultants Ltd. File Number: W14101068.005. Sept.
- EBA 2010. Reclamation Overburden Dump Expansion Geotechnical Design Report. EBA Engineering Consultants Ltd. File Number: W14101068.0040. June 29.
- EBA 2011a. Revision 2011-1 Operation, Maintenance, and Surveillance Manual, Dry Stack Tailings Storage Facility, Minto Mine, YT. EBA Engineering Consultants Ltd. File Number: W14101068.001. Jan.
- EBA 2011b. Waste Rock and Overburden Management Plan, Phase IV Development, Minto Mine YT. EBA Engineering Consultants Ltd. File Number: W14101068.015. Sept. 9.

- EBA 2011c. Upstream Water Management for the Mill Valley Fill Expansion and Dry Stack Tailings Storage Facility. EBA Engineering Consultants Ltd. File Number: W14101168.013. Sept. 14.
- EBA 2011d. Southwest Waste Dump – 2011 Annual Review, Minto Mine, YT. EBA Engineering Consultants Ltd. File Number: W14101068.037. Oct. 6.
- EBA 2011e. Minto Project: Minto Creek Detention Structure Seepage Monitoring Program. EBA Engineering Consultants Ltd. File Number: W14101068.001. Oct. 25.
- EBA 2011f. Area 1 South Wall Buttress Design Report, Minto Mine, Yukon. EBA Engineering Consultants Ltd. File Number: W14101068.012. July 2011.
- EBA 2012. Pipe Design for South Diversion Ditch Realignment, Minto Mine, YT. EBA Engineering Consultants Ltd. File Number: W14101068.013. May 4.
- Minto Mine 2012a. Minto Mine Water Licence QZ96-006, Dry Stack Tailings Storage Facility Deformation Monitoring Plan and Report. Nov.
- Minto Mine 2012b. Minto Mine Water Licence QZ96-006, Mine Waste Structures—Deformation Monitoring Plan and Report. Dec.
- SRK 2012a. Letter Report: Detailed Review of Foundation Performance at Select Mine Waste Facilities and Main Pit South Wall. Prepared for Minto Exploration, Ltd. SRK Consulting (Canada) Inc. Project Number 219500.050. Nov. 19.
- SRK 2012b. Letter Report: Detailed Review of Foundation Performance at the South Waste Dump and Stability of the Main Pit South Wall. Prepared for Minto Exploration, Ltd. Vancouver (BC). SRK Consulting Canada) Inc. Project Number: 219500.050. Nov. 19.
- SRK, 2012c. 2012 Geotechnical Annual Review, Minto Mine, YT. Prepared for Minto Exploration Ltd. Vancouver (BC). SRK Consulting (Canada) Inc. Project Number: 1CM002.006.400. Nov.
- SRK 2013. South Diversion Ditch Realignment and Overflow Spillway. Vancouver (BC). SRK Consulting (Canada) Inc. Project Number: 1CM002.006.200. Feb. 1.

Appendix A: Photographic Report



Figure 1: Tailings Diversion Ditch – Construction was observed at the Tailings Diversion Ditch



Figure 2: Dry Stack Tailings Storage Facility - South side of DSTSF.



Figure 3: Dry Stack Tailings Storage Facility - South side of DSTSF at East end.



Figure 4: Mine Camp - The low spot behind the new camp should be graded using gravel to continue the drainage channel behind the back of the new camp, as opposed to the ponding which currently occurs.



Figure 5: Mill - The retaining wall at the mill's apron feeder tunnel should be monitored, it is tilting forward in an active condition with the potential for overtopping.



Figure 6: Reclamation Overburden Dump - Crest failure on southeast side of the ROD. Not a concern to large scale stability.



Figure 7: South Diversion Ditch - Should the South Diversion Ditch continue service, the deciduous vegetation should be cut back and removed.



Figure 8: South Diversion Ditch - The swale for the South Diversion ditch should be completed as per SRK's South Diversion Ditch construction drawings, it is lacking width. The two boulders should also be removed.



Figure 9: South Diversion Ditch, cont'd - The swale for the South Diversion ditch should be completed as per SRK's South Diversion Ditch construction design, it is lacking width, the downstream outlet for the swale is blocked

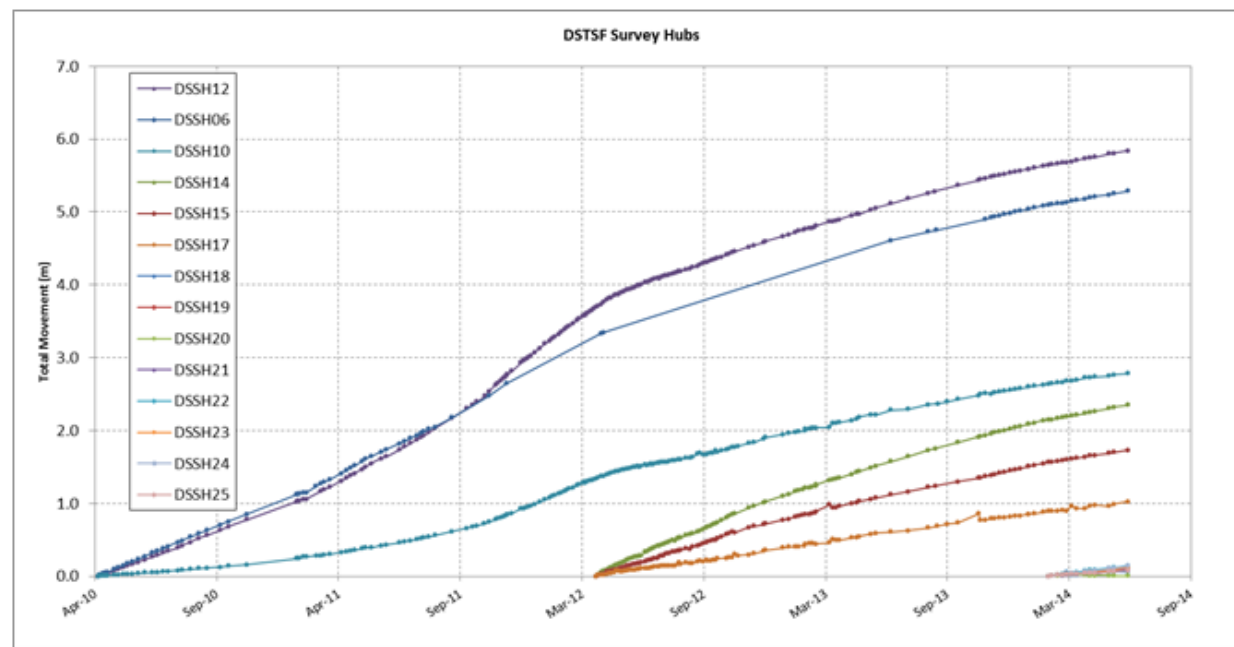


Figure 10: Main Pit South Wall Buttress – Tension cracks appear to have increased/dilated from the previous inspection. Install prisms along crest to monitor movement.

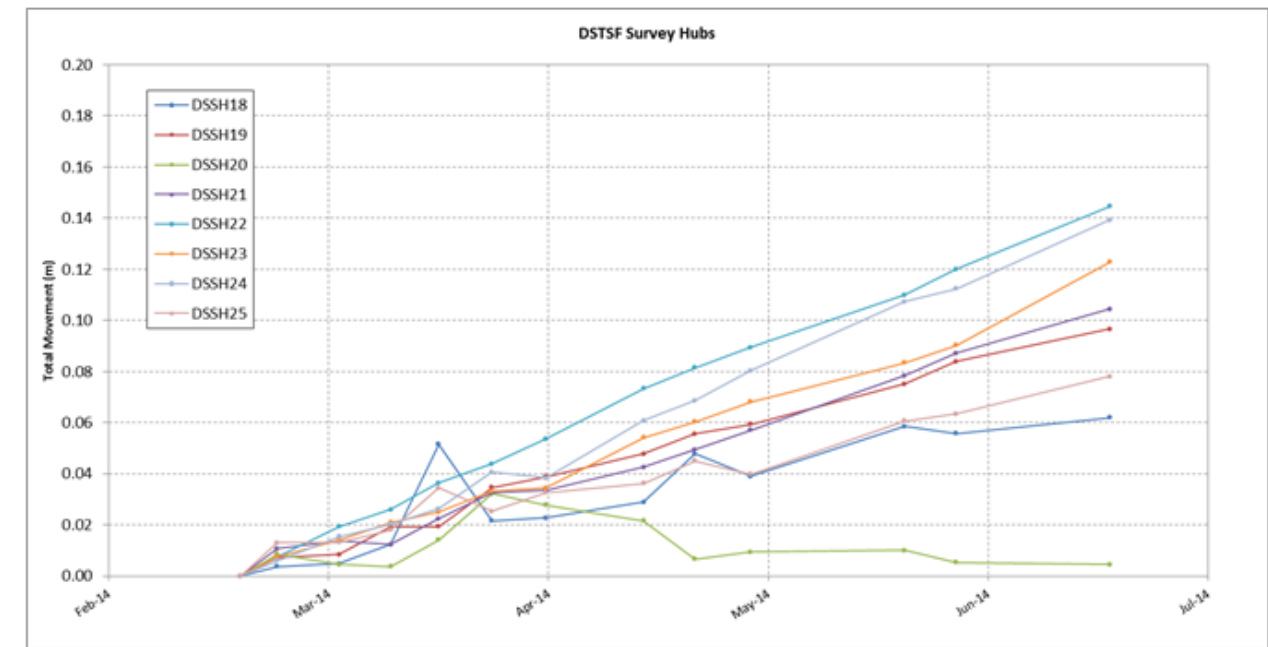


Figure 11: Water Storage Pond Dam - Ditching of the ponded water on the south abutment of the WSP Dam should be considered to ensure low groundwater pressures are maintained on the dam face

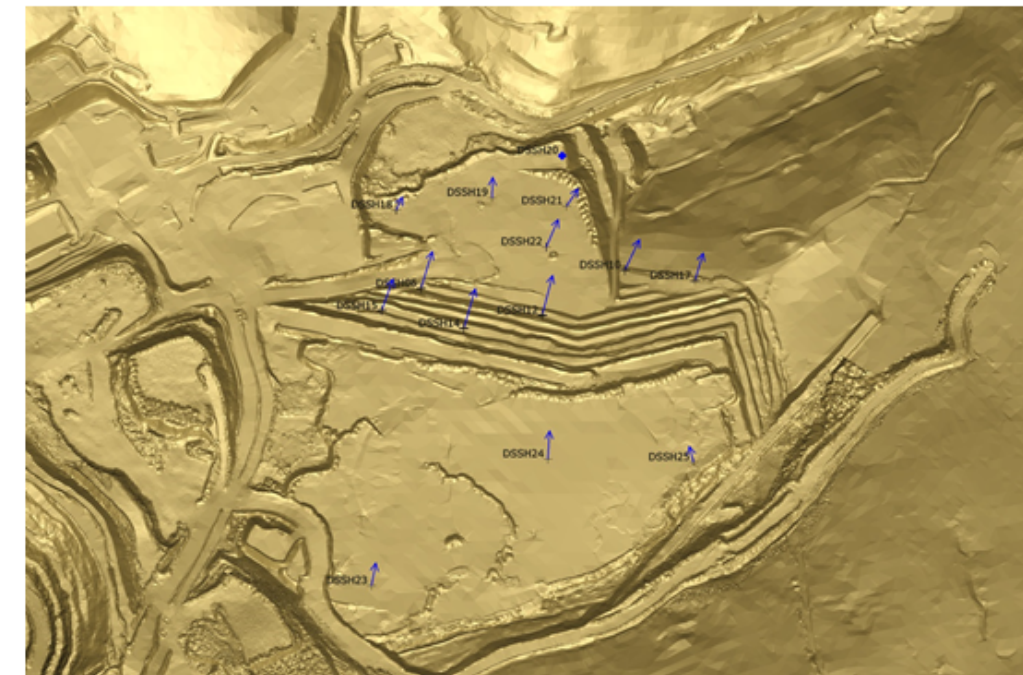
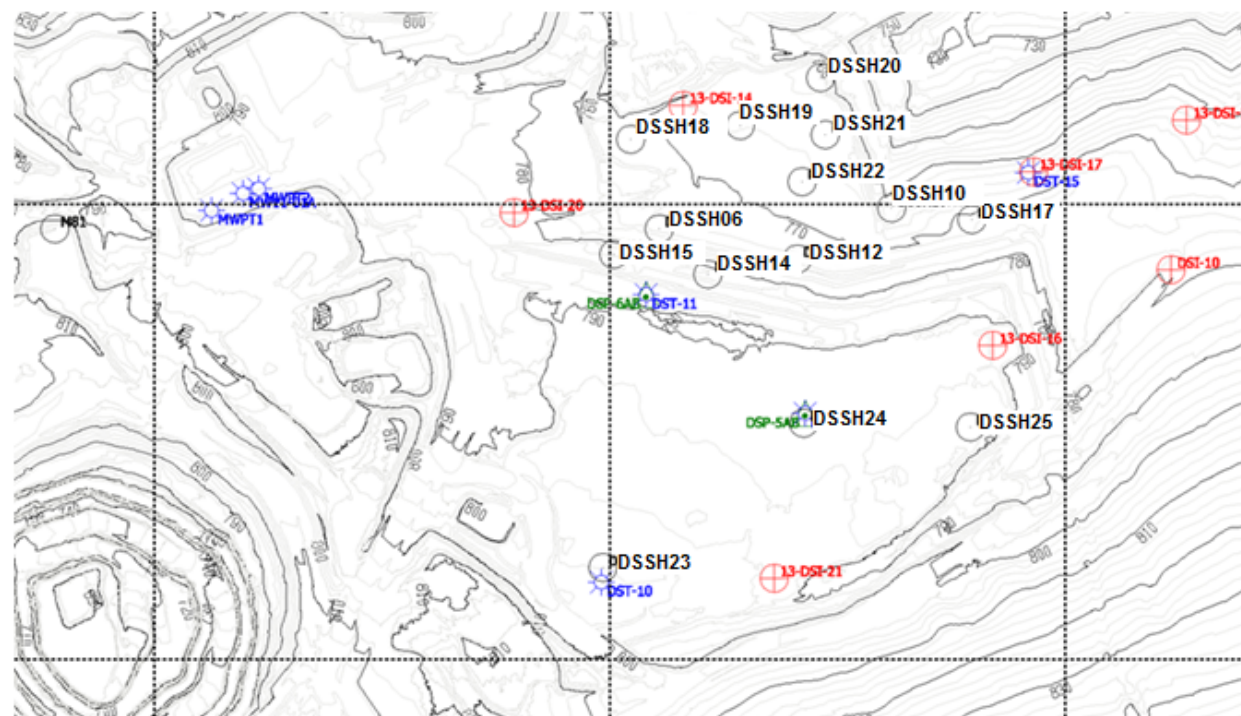
Appendix B: Instrumentation Data




a) All DSTSF and MVF Survey Hubs – Data Since Installation

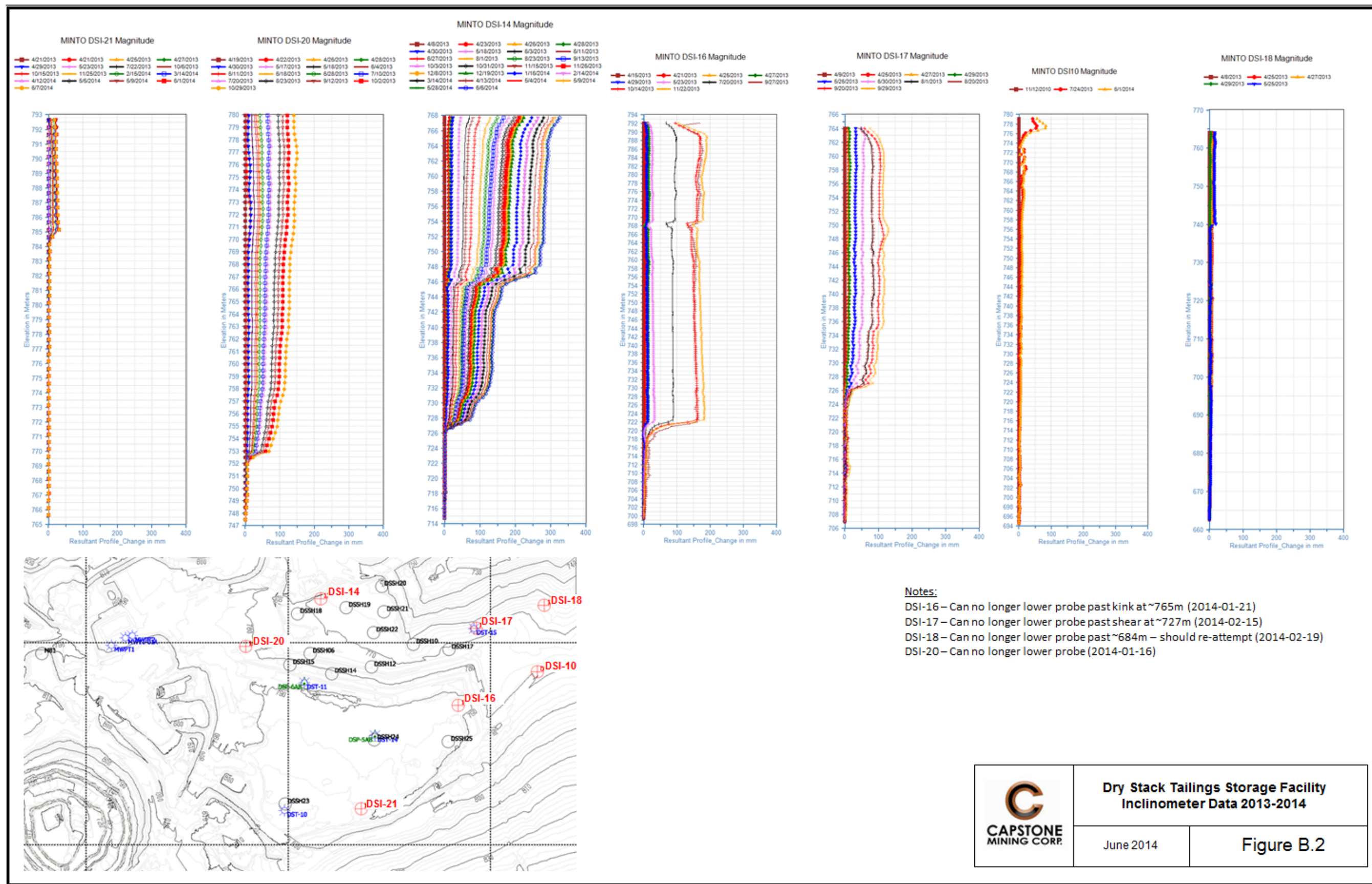


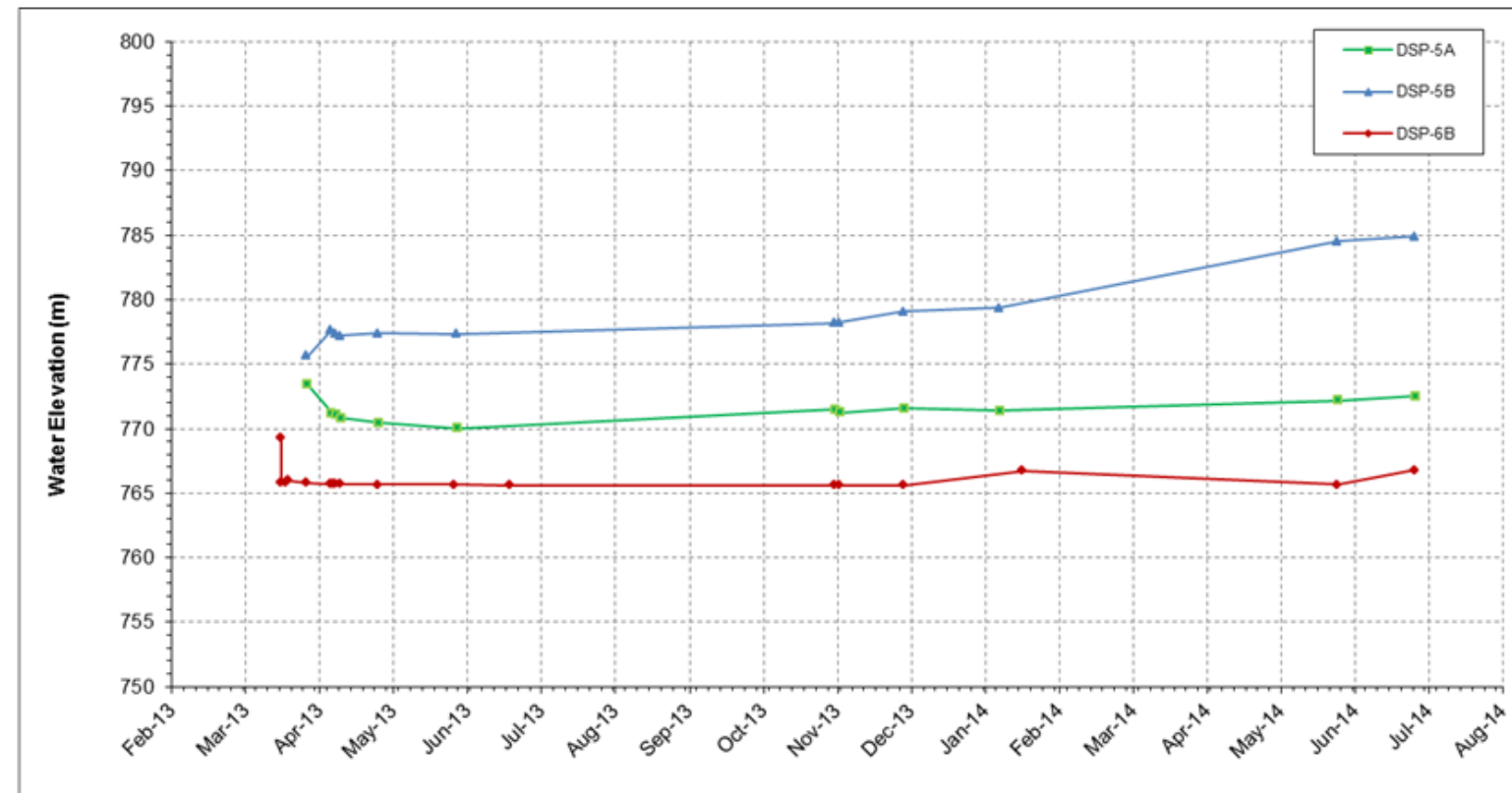
b) DSTSF and MVF Survey Hubs Installed in 2014



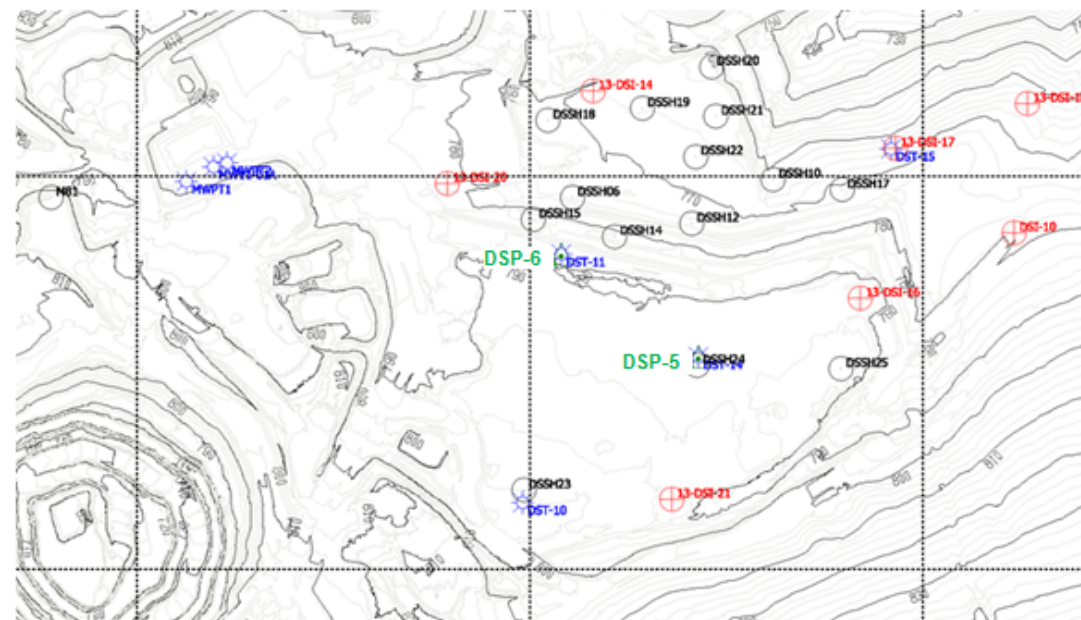
c) Movement vectors for DSTSF and MVF Survey Hubs

 <p>CAPSTONE MINING CORP.</p>	<p>Dry Stack Tailings Storage Facility and Mill Valley Fill Survey Hub Data</p>	
	<p>June 2014</p>	<p>Figure B.1</p>




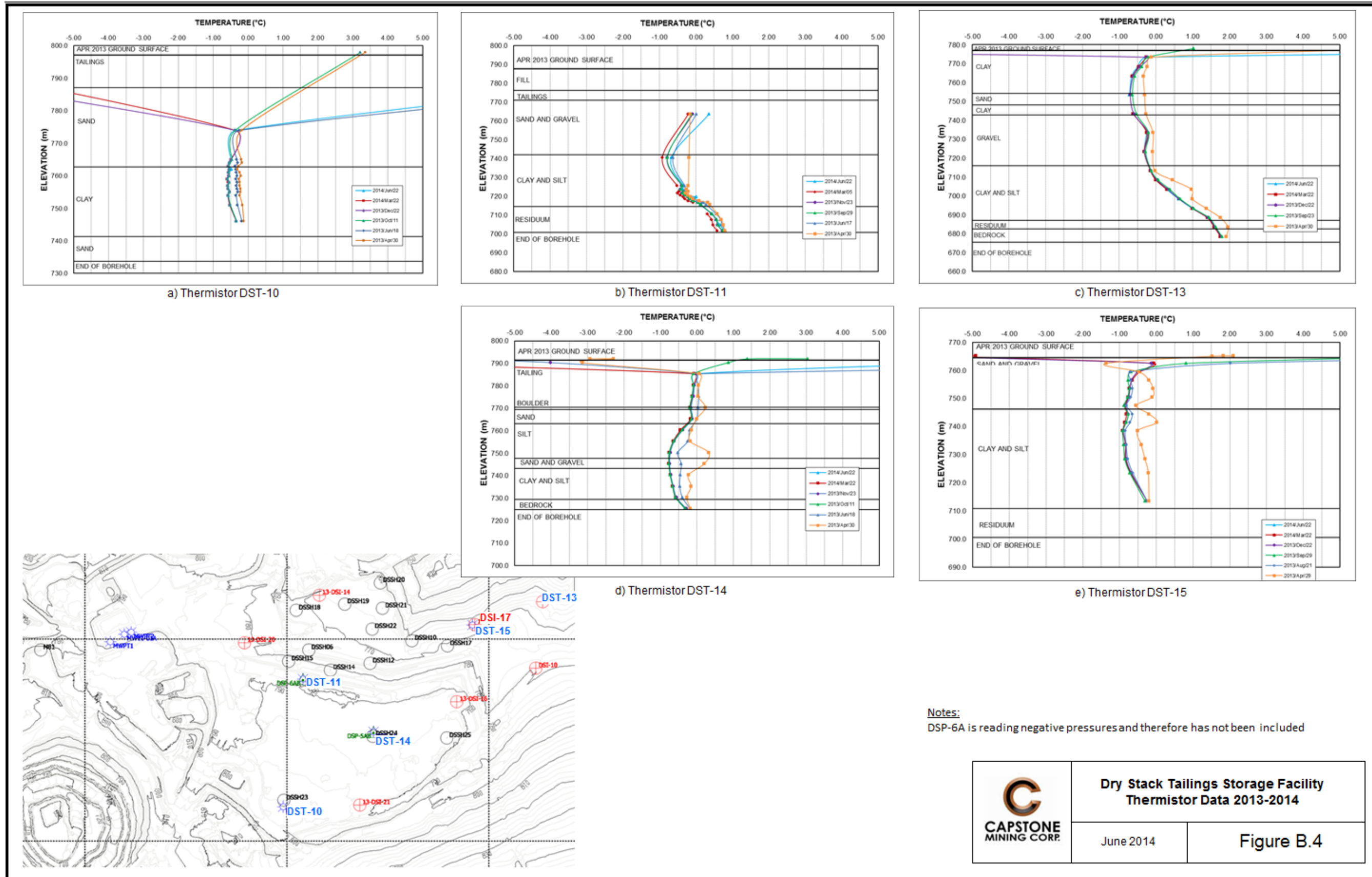


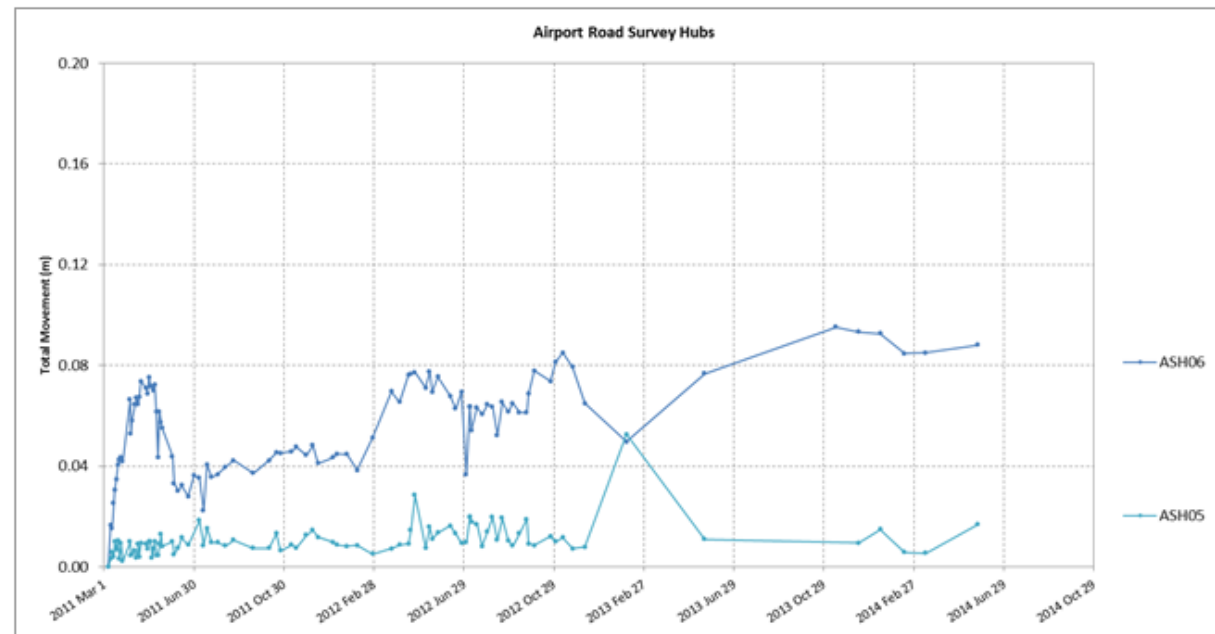
a) Piezometers DSP-5A, DSP-5B, DSP-6B



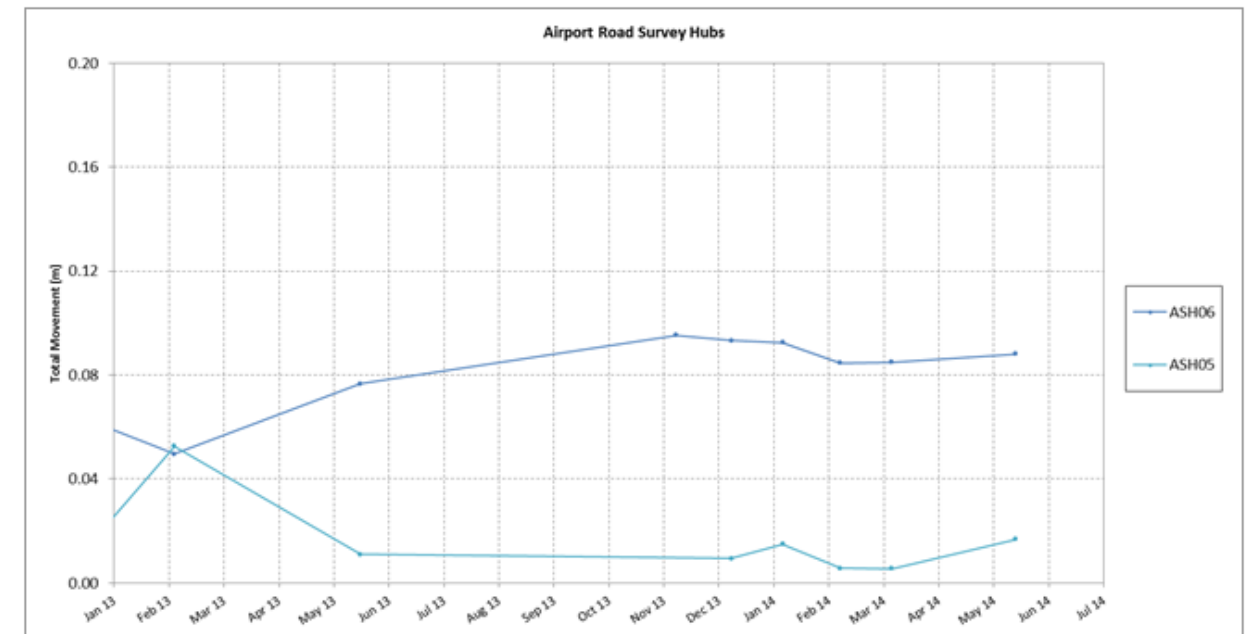
Notes:
 DSP-6A is reading negative pressures and therefore has not been included

 <p>CAPSTONE MINING CORP.</p>	<p>Dry Stack Tailings Storage Facility Piezometer Data 2013-2014</p>	
	<p>June 2014</p>	<p>Figure B.3</p>

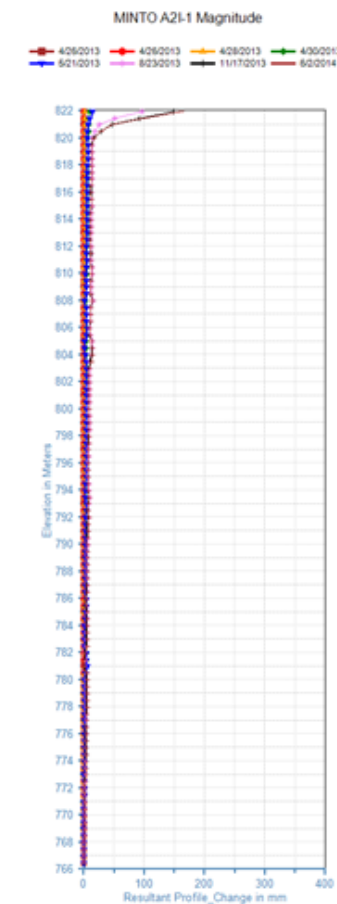
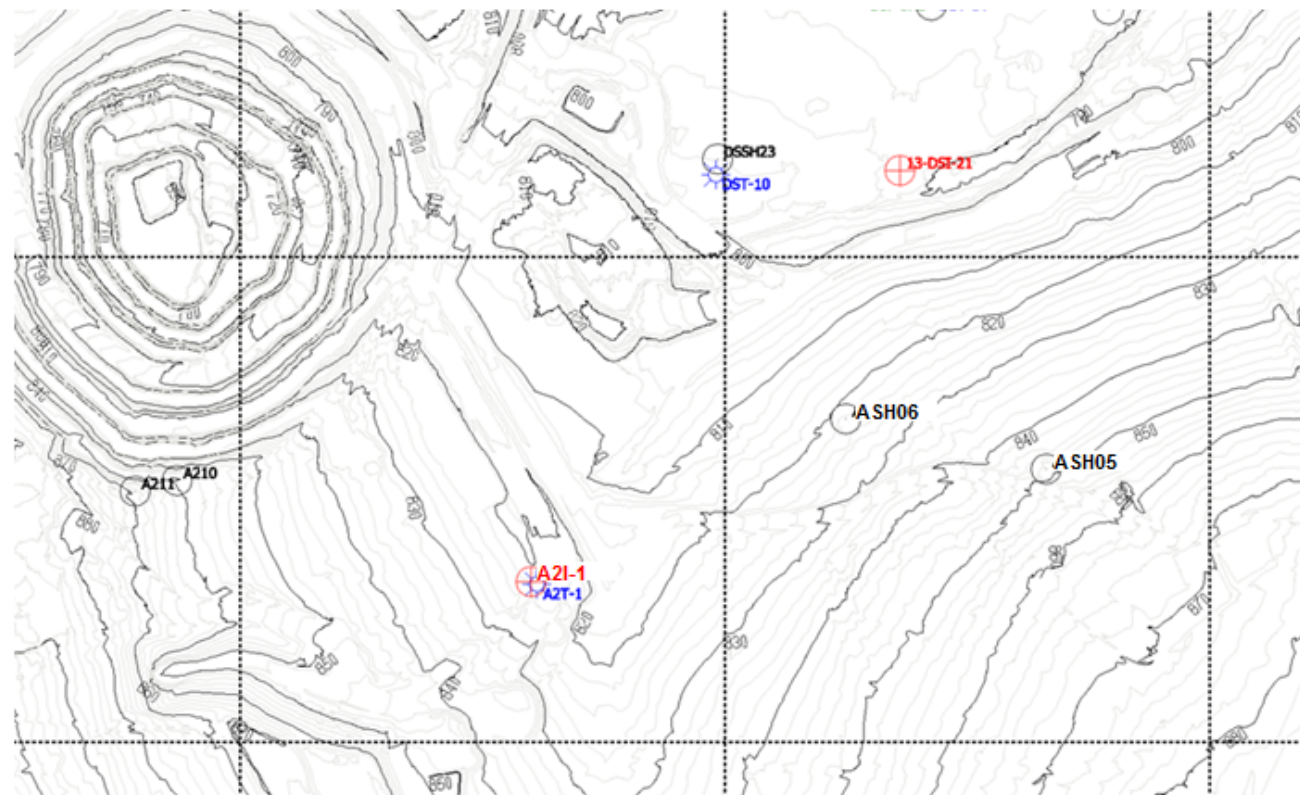





a) Airport Road Survey Hubs – Data Since Installation

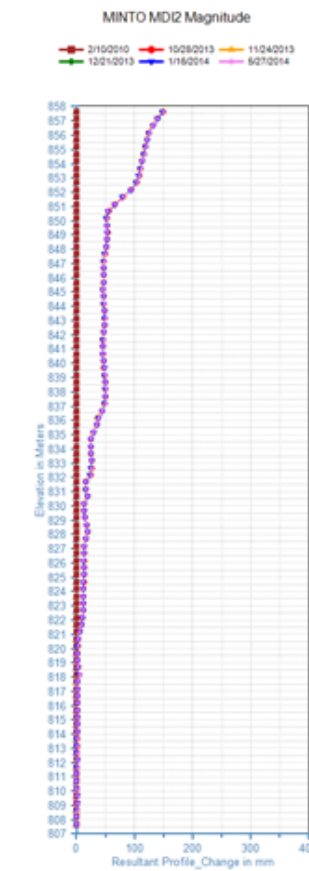
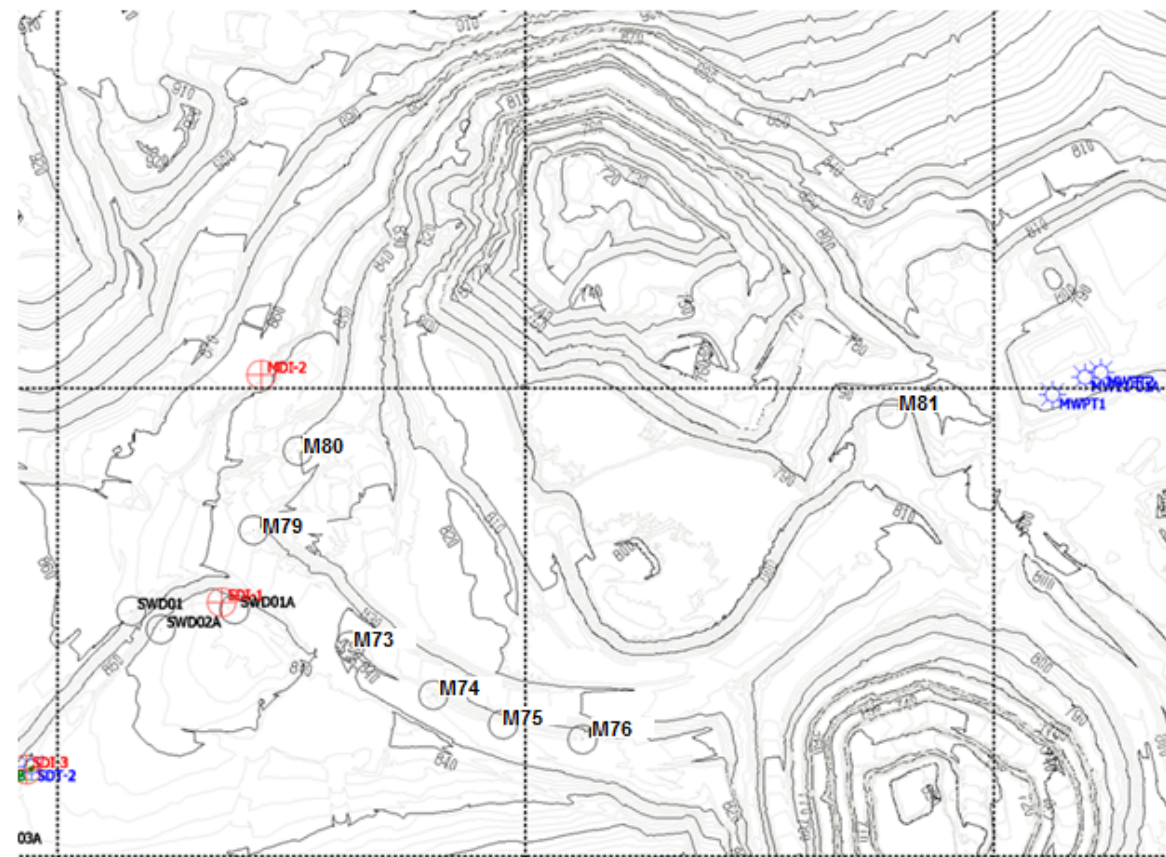
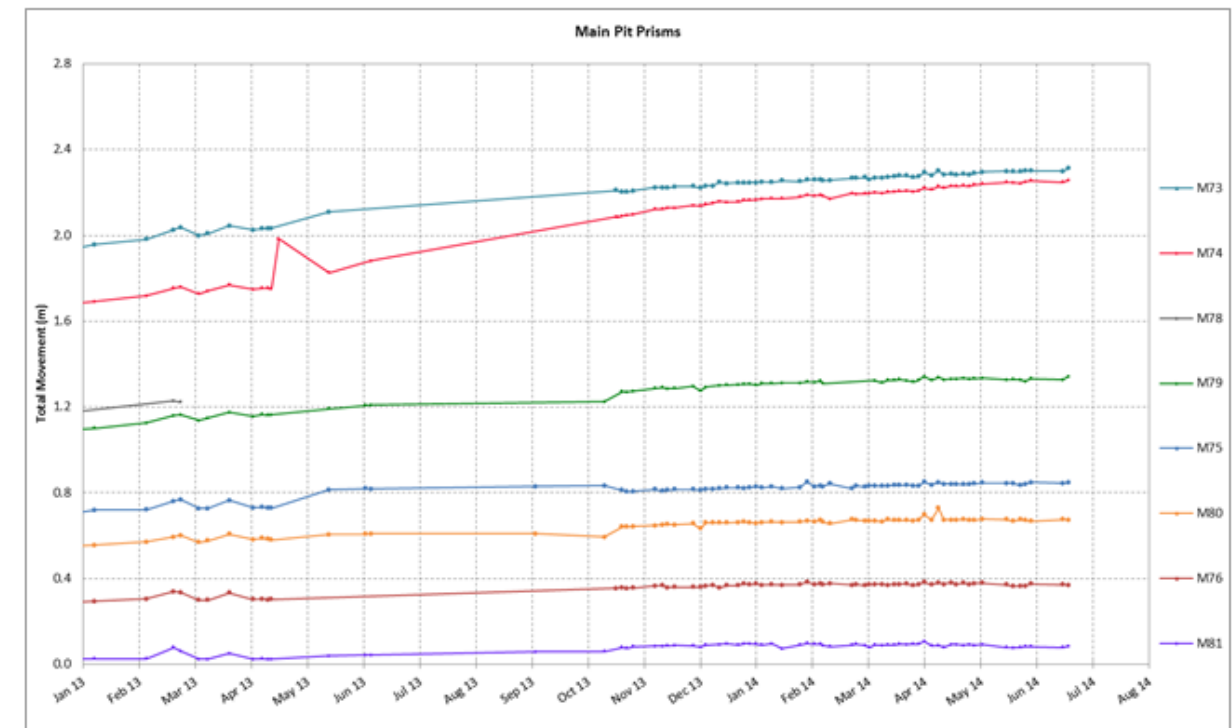
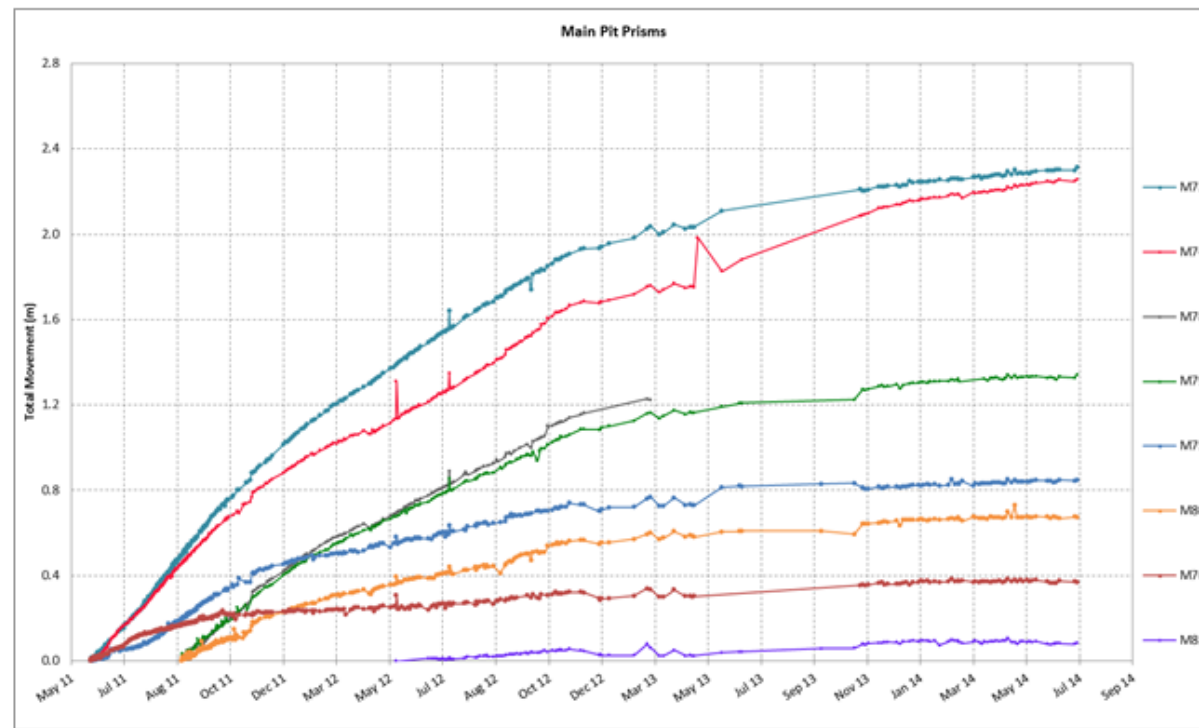



b) Airport Road Survey Hubs –2013-2014 Data

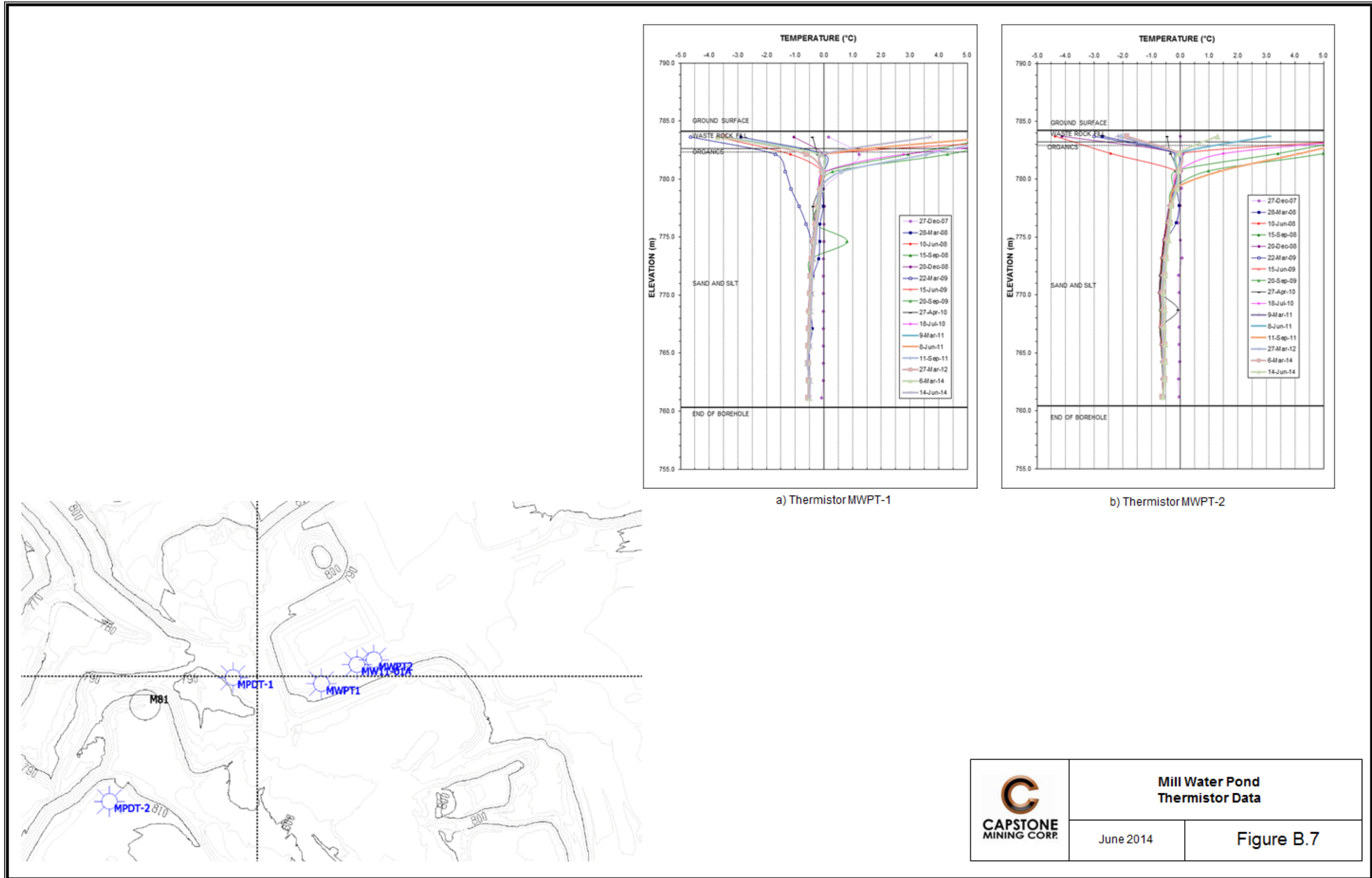



c) A21-1 Inclinometer Data

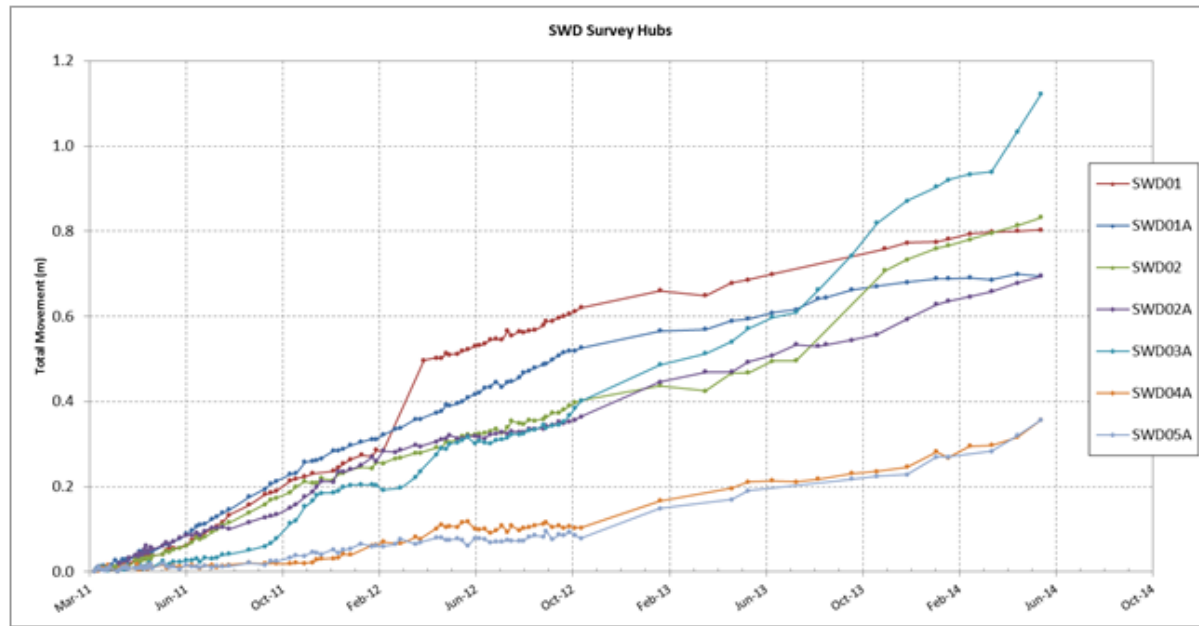
 <p>CAPSTONE MINING CORP.</p>	<p>Area 2 and Airport Road Survey Hub and Inclinometer Data</p>	
	<p>June 2014</p>	<p>Figure B.5</p>



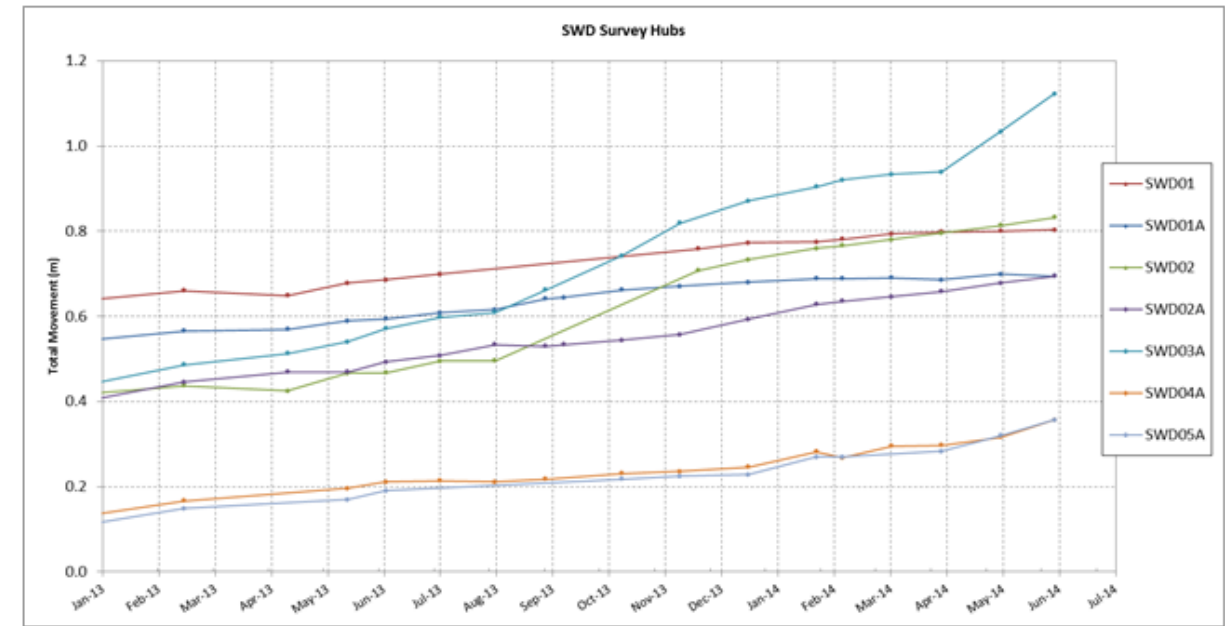
 <p>CAPSTONE MINING CORP.</p>	<p>Main Pit/South Wall Buttress Survey Hub and Incliner Data</p>	
	<p>June 2014</p>	<p>Figure B.6</p>



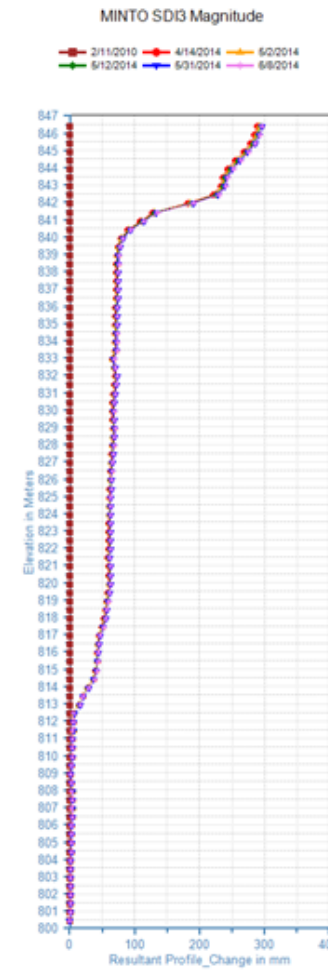
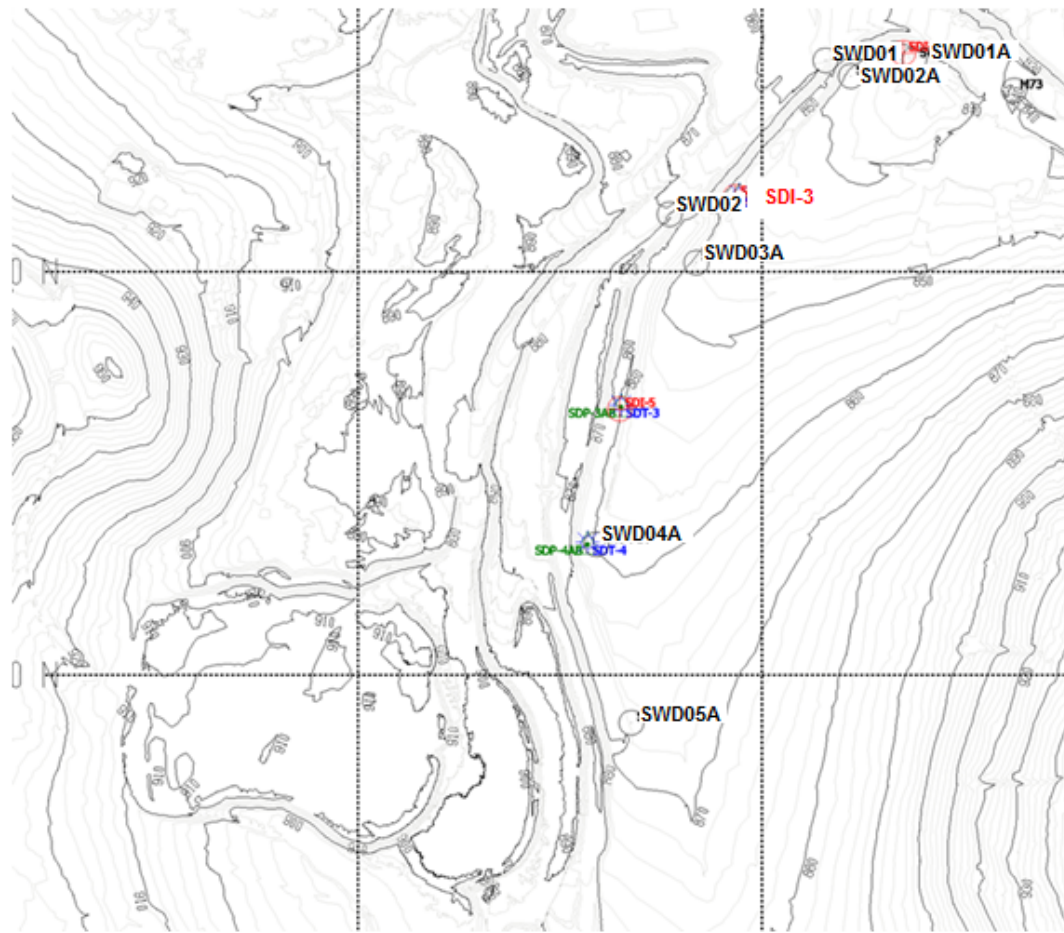
 CAPSTONE MINING CORP.	Mill Water Pond Thermistor Data	
	June 2014	Figure B.7




a) All SWD Survey Hubs – Data Since Installation

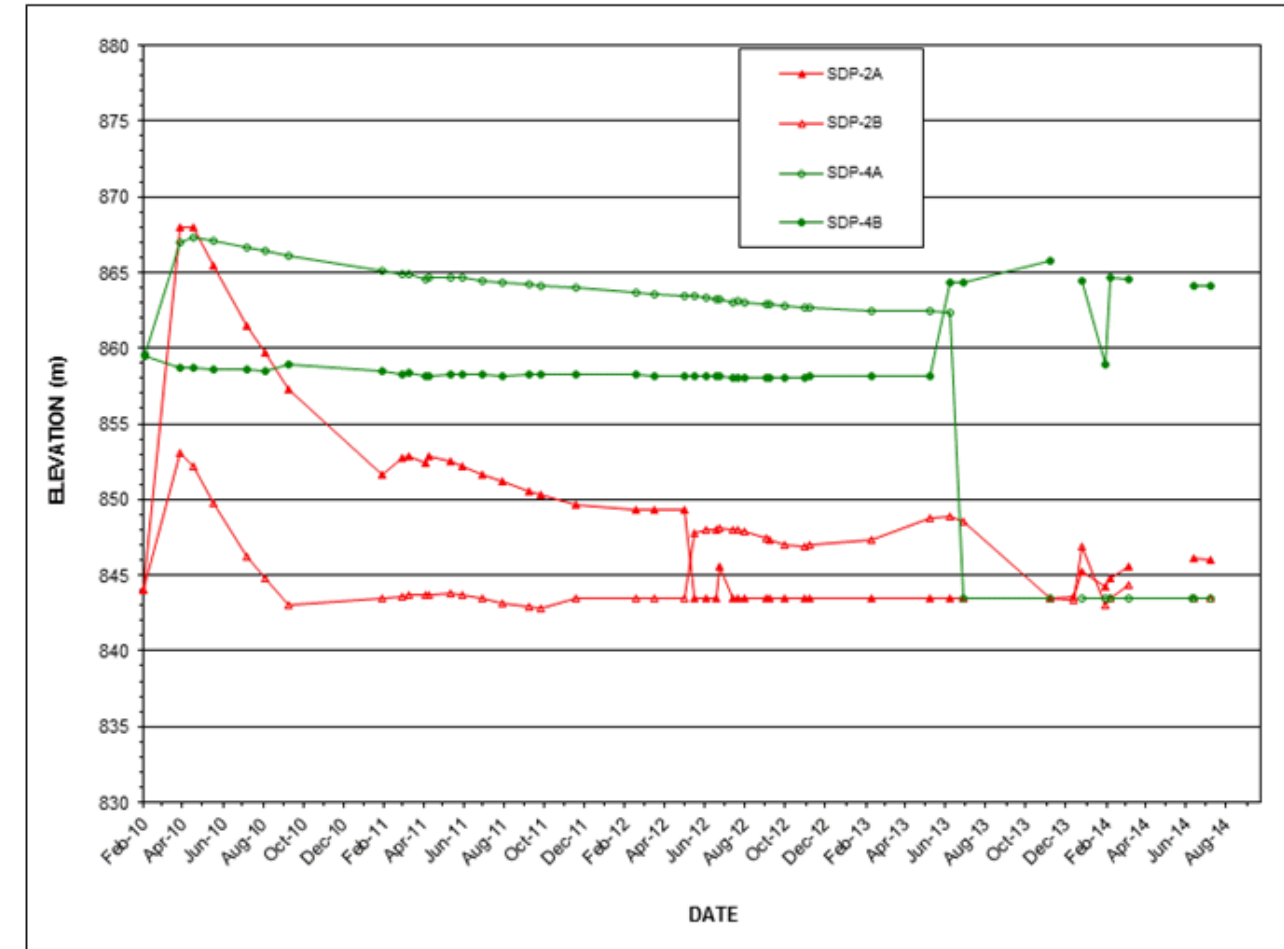
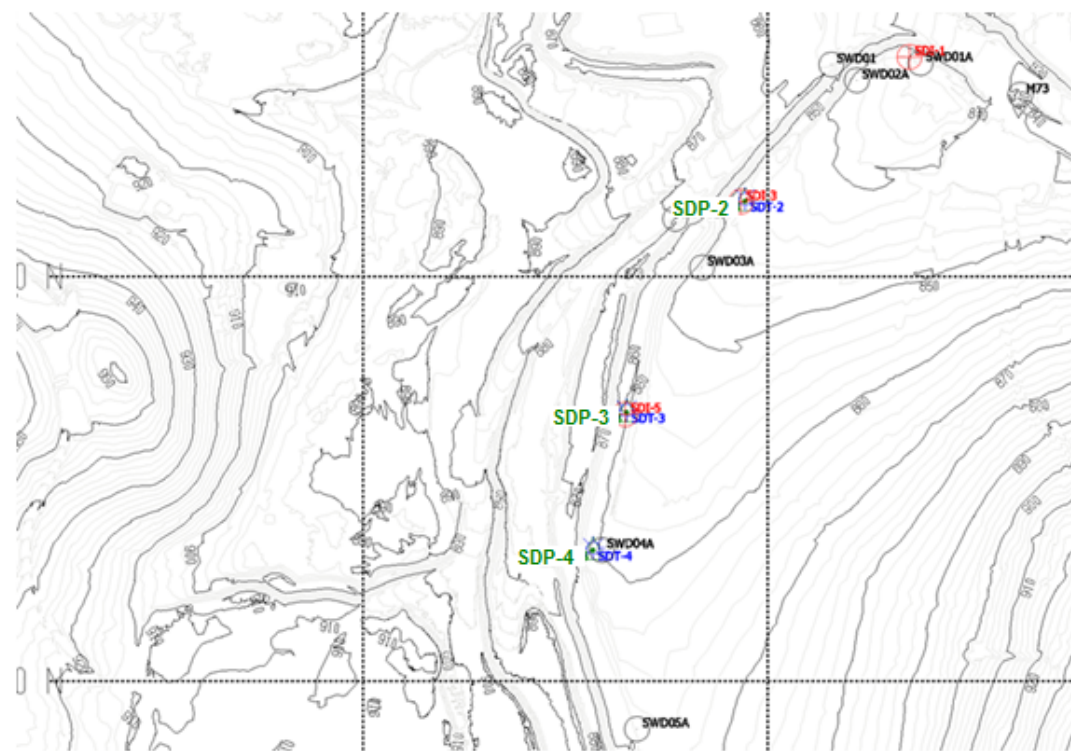


b) All SWD Survey Hubs – 2013-2014 Data




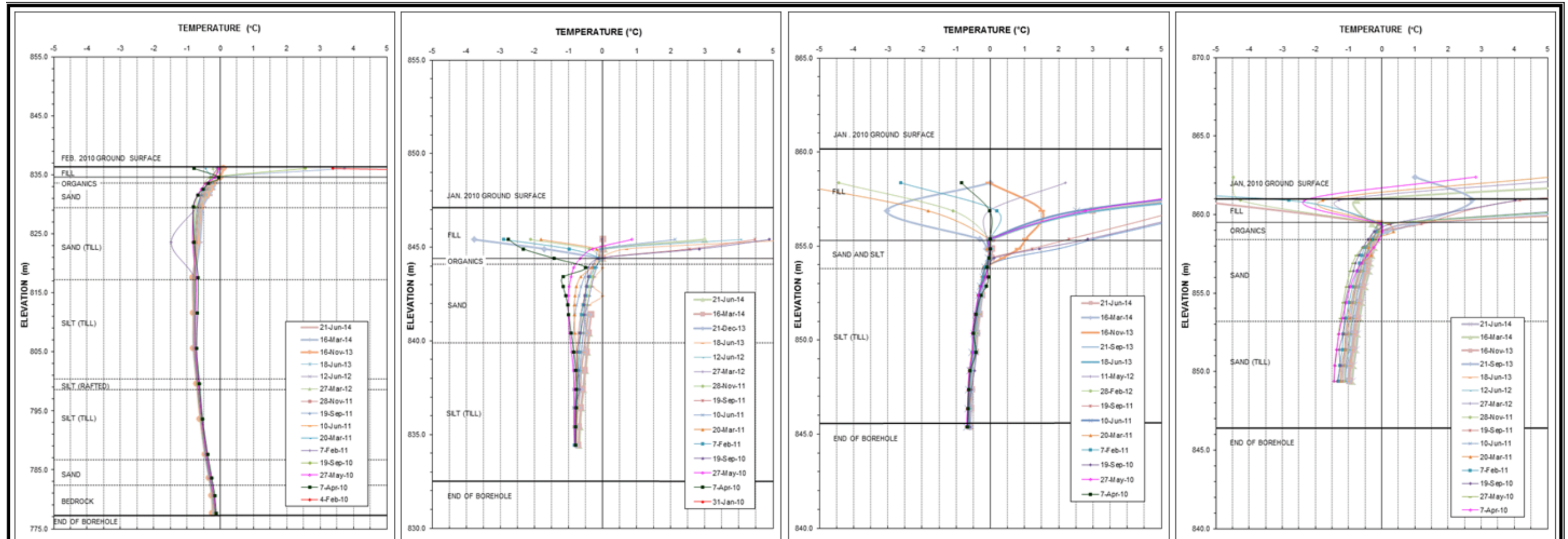
c) SDI-3 Inclinometer Data

 <p>CAPSTONE MINING CORP.</p>	<p>Southwest Waste Dump Survey Hub and Inclinometer Data</p>	
	<p>June 2014</p>	<p>Figure B.8</p>



Notes: SDP-3 has been reading negative pressures since spring 2012 and therefore is not included here
 SDP-2B and SDP-4A are now reading negative pressures

 <p>CAPSTONE MINING CORP.</p>	<p>Southwest Waste Dump Piezometer Data</p>	
	<p>June 2014</p>	<p>Figure B.9</p>

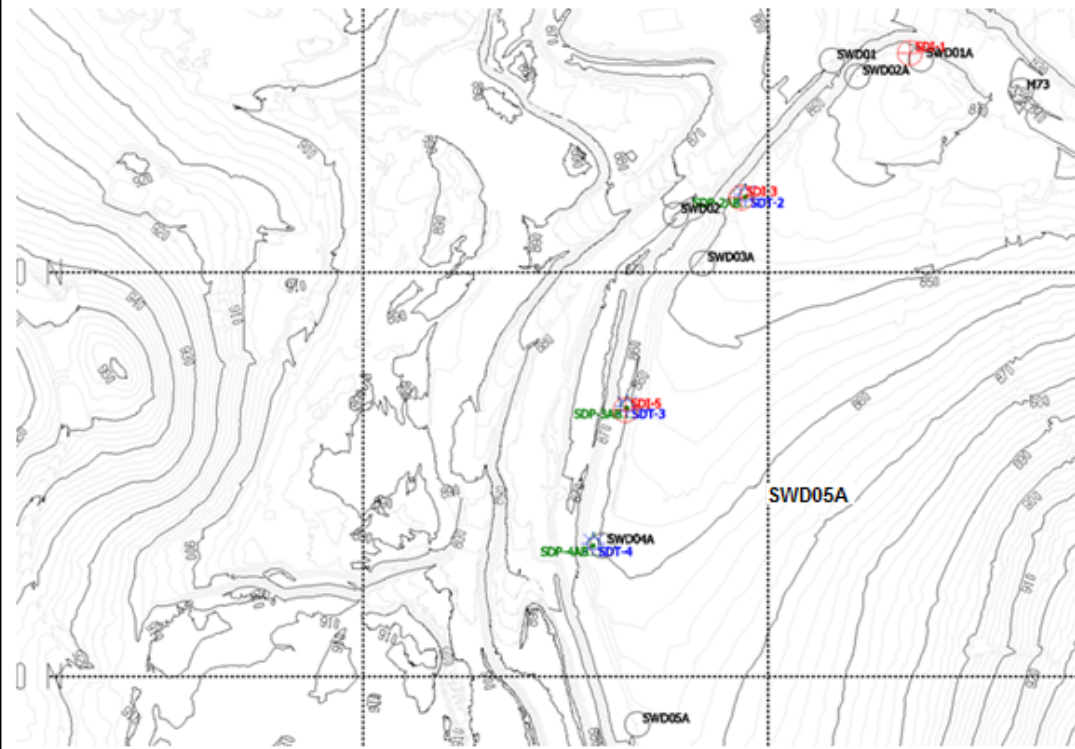



a) Thermistor SDT-1

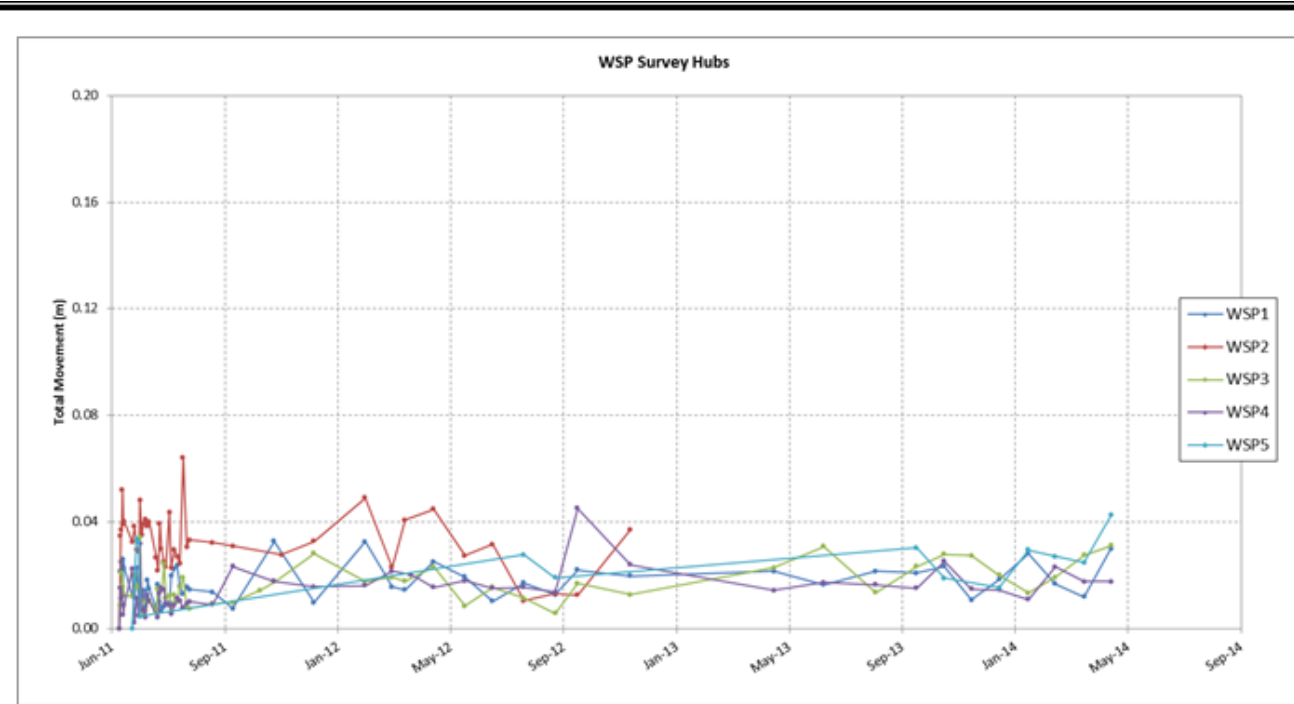
b) Thermistor SDT-2

c) Thermistor SDT-3

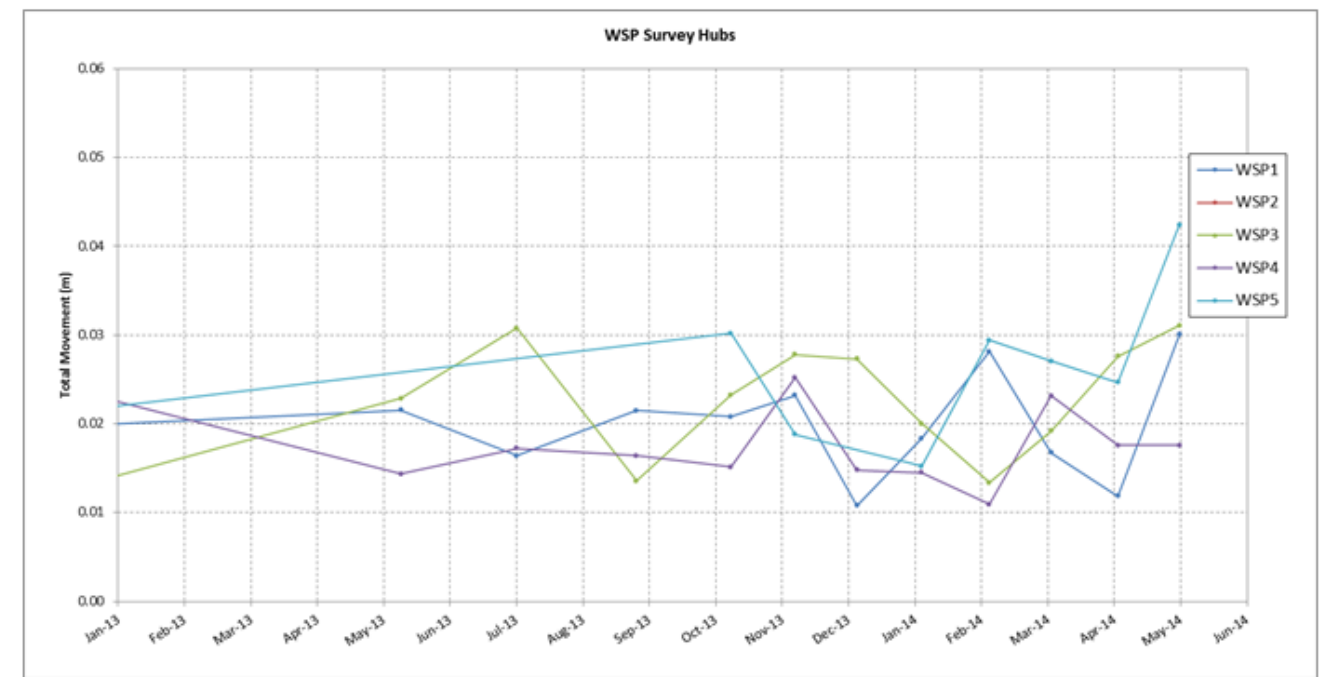
d) Thermistor SDT-4



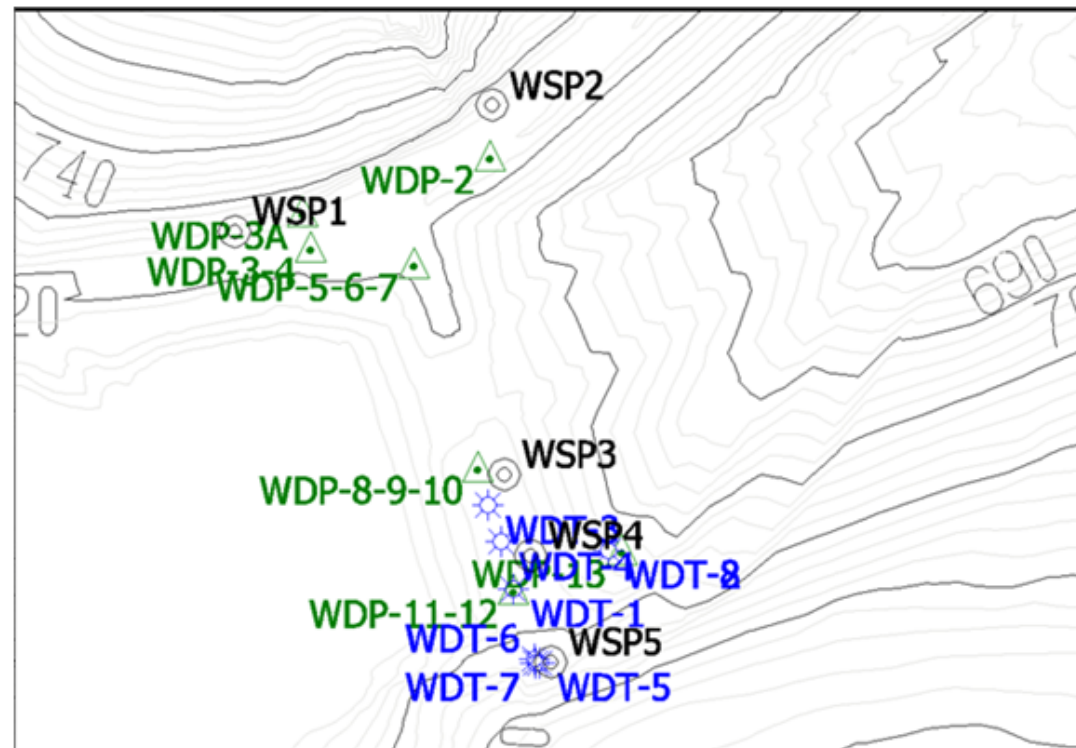
 <p>CAPSTONE MINING CORP.</p>	<p>Southwest Waste Dump Thermistor Data</p>	
	<p>June 2014</p>	<p>Figure B.10</p>




a) All Water Storage Pond Survey Hubs – Data Since Installation

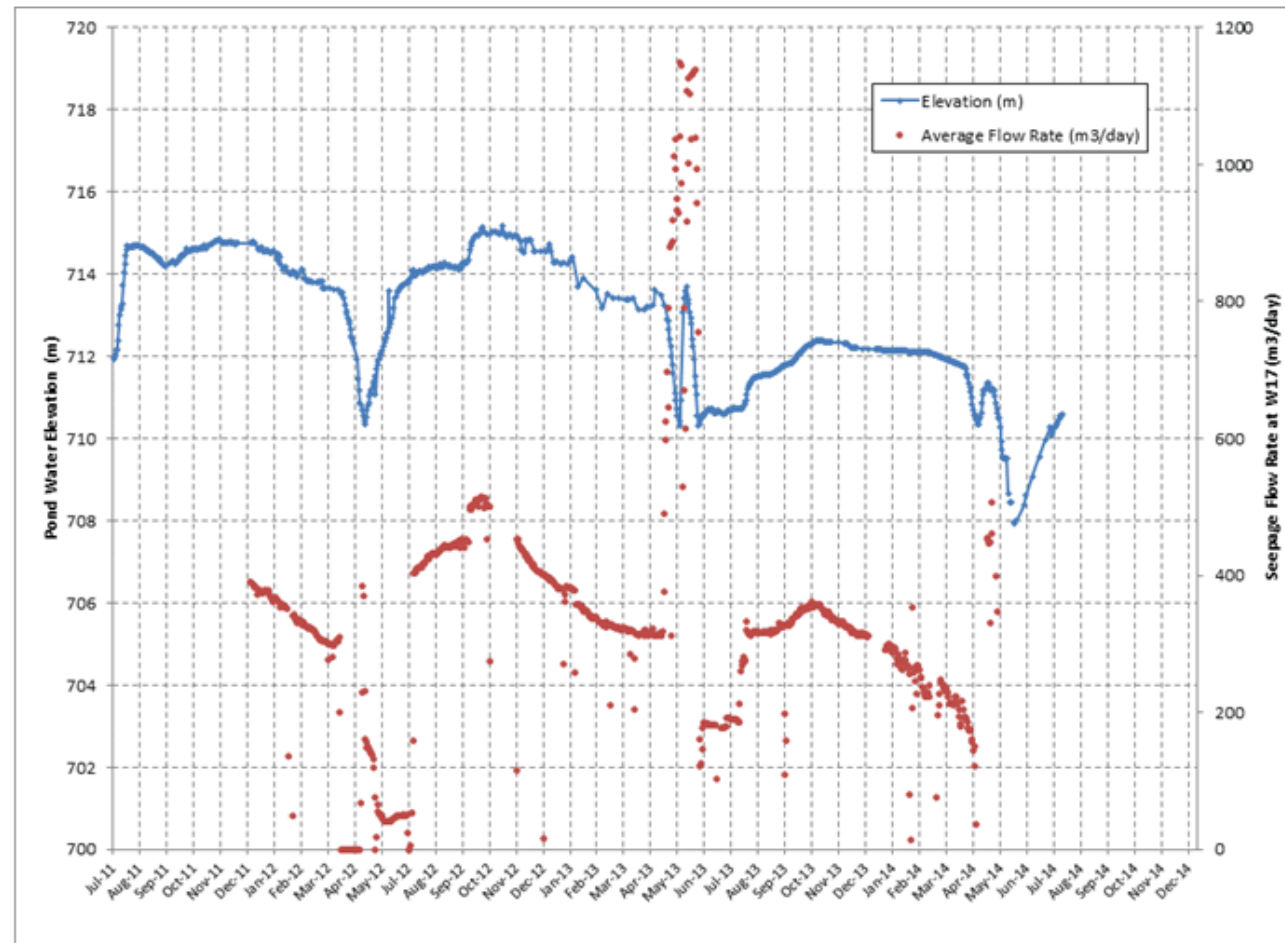


b) All Water Storage Pond Survey Hubs - 2013-2014 Data

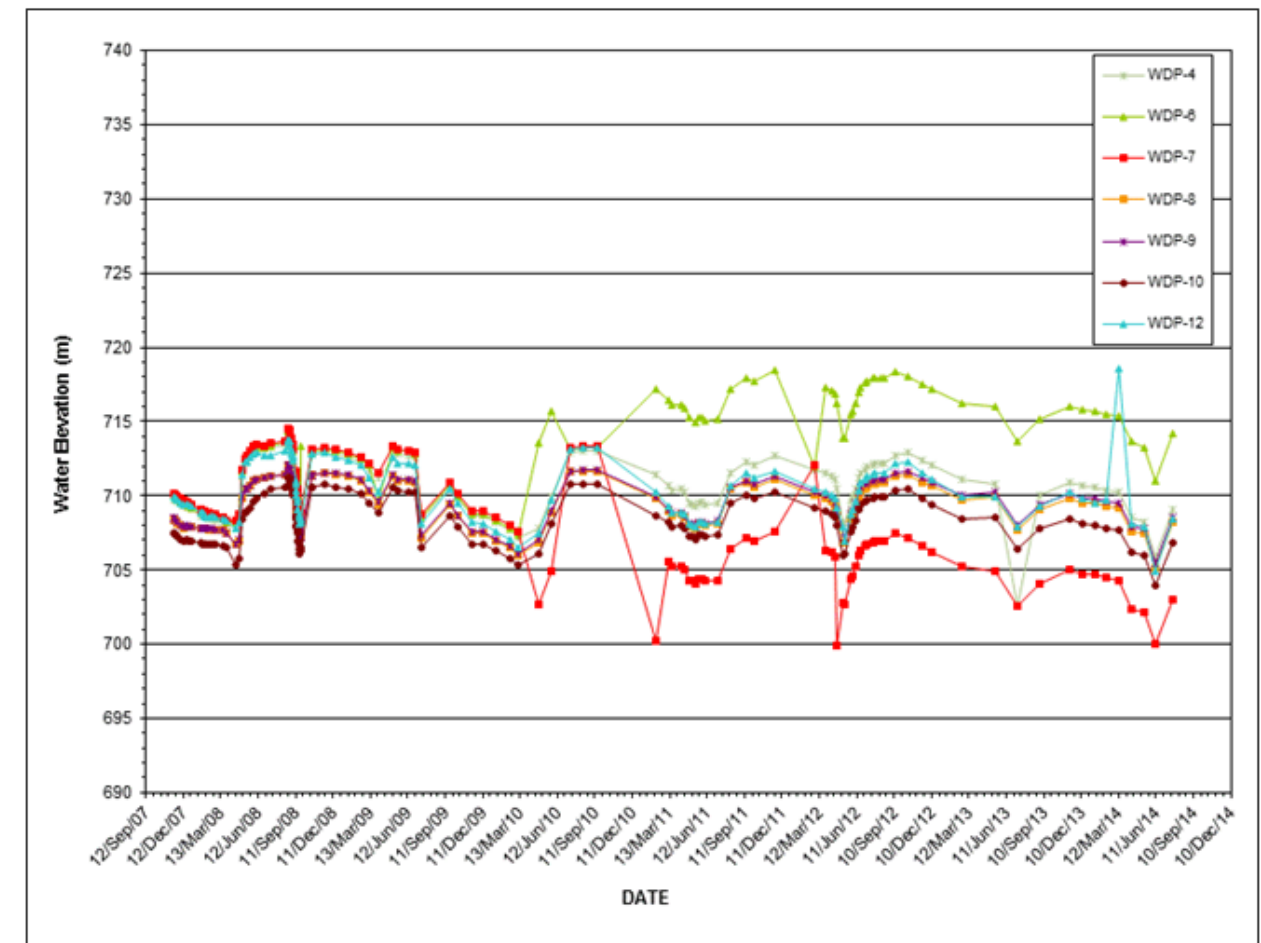


Notes:
WSP2 is no longer operational

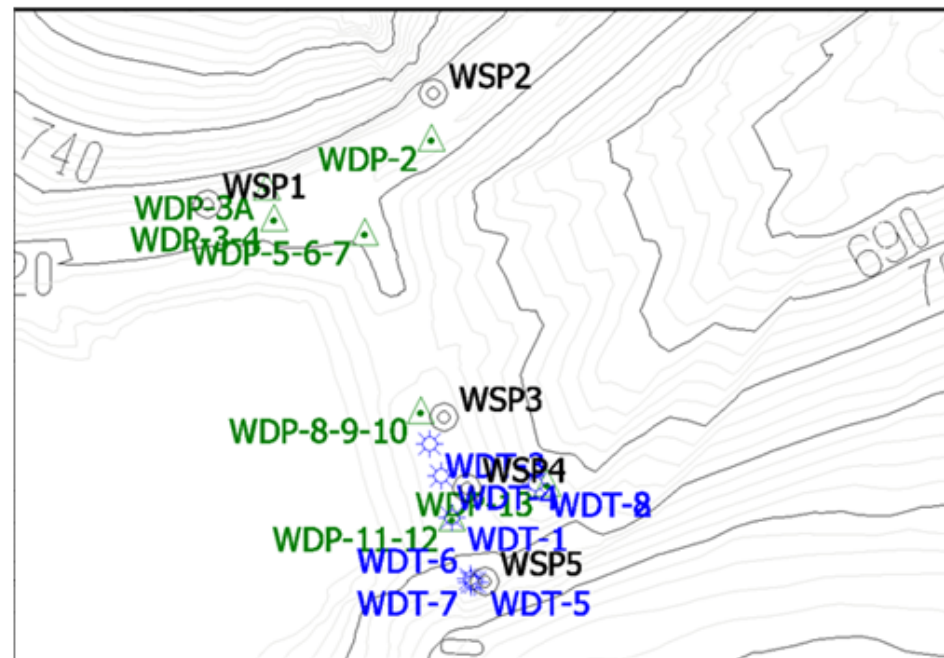
 <p>CAPSTONE MINING CORP.</p>	<p>Water Storage Pond Dam Survey Hub Data</p>	
	<p>June 2014</p>	<p>Figure B.11</p>



a) Water Storage Pond Elevation and Downstream(W17) SeepageRate




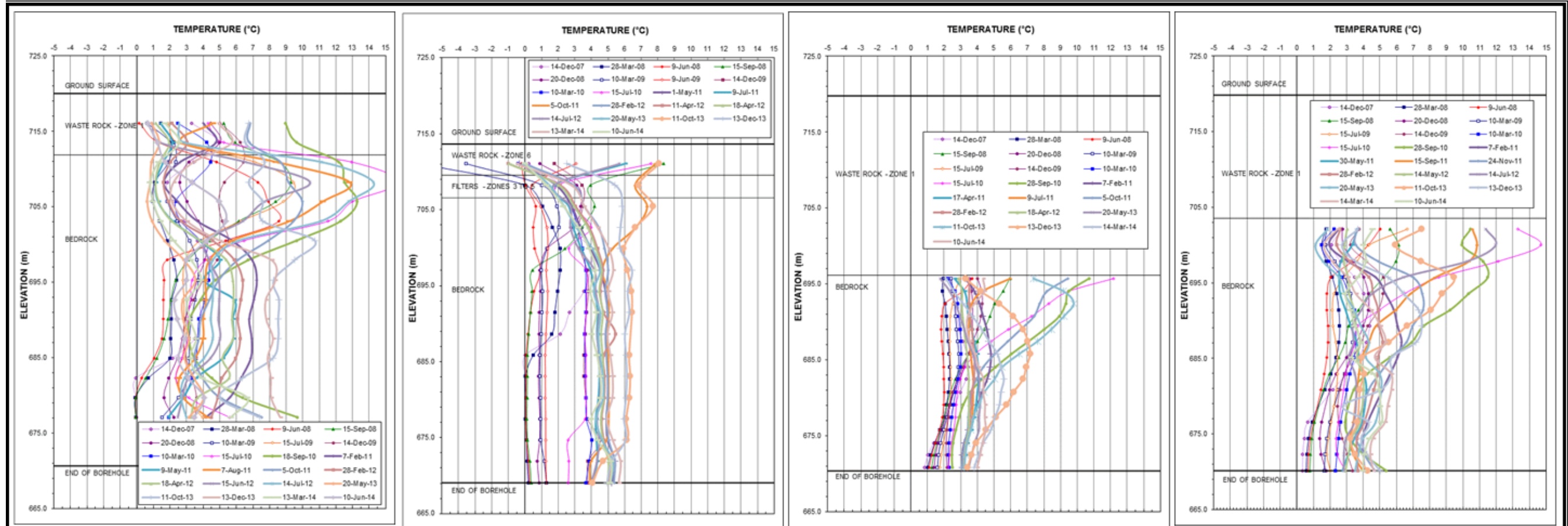
b) Water Storage Pond Piezometer Data



Notes:

WDP-2, WDP-3, WDP-5 and WDP-11 are all reading negative pressures, indicating they are above the water table and are not likely reliable

 <p>CAPSTONE MINING CORP.</p>	<p>Water Storage Pond Dam Piezometer, Water Elevation and Seepage Data</p>	
	<p>June 2014</p>	<p>Figure B.12</p>

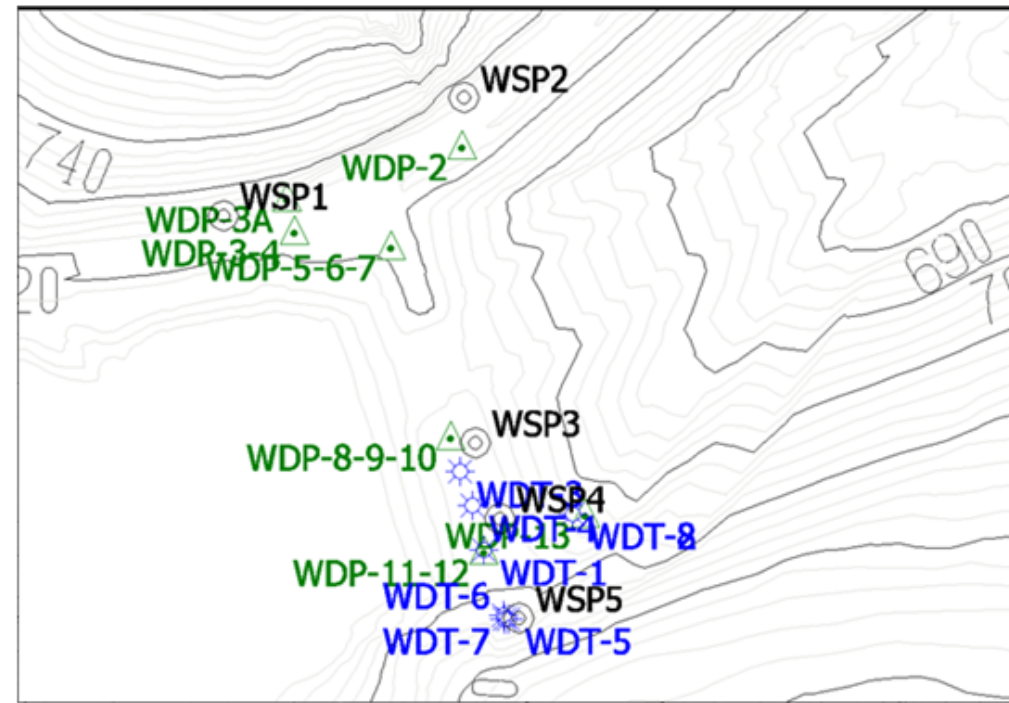



a) Thermistor WDT-1

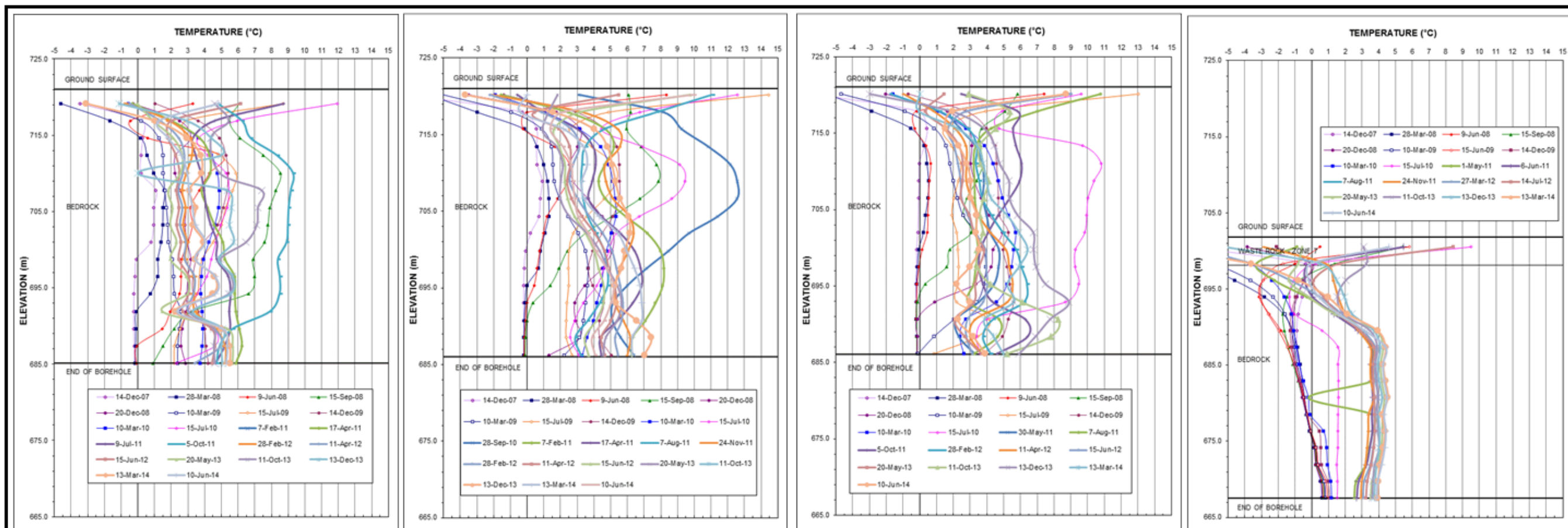
b) Thermistor WDT-2

c) Thermistor WDT-3

d) Thermistor WDT-4



 <p>CAPSTONE MINING CORP.</p>	<p>Water Storage Pond Dam Thermistor Data</p>	
	<p>June 2014</p>	<p>Figure B.13</p>

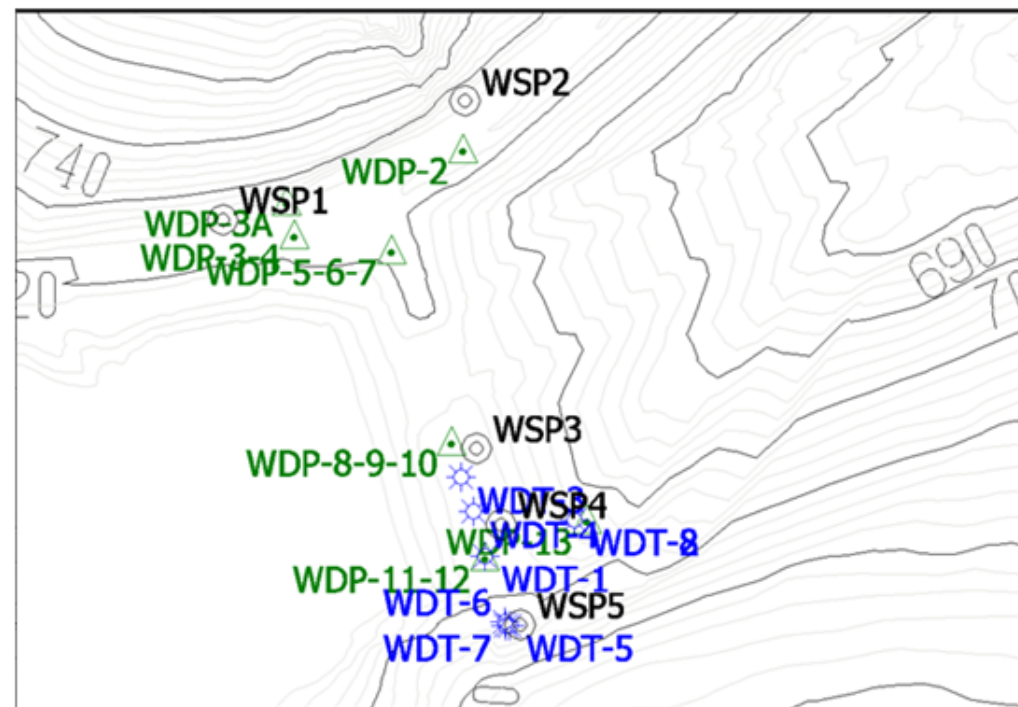



e) Thermistor WDT-5

f) Thermistor WDT-6

g) Thermistor WDT-7

h) Thermistor WDT-8



 <p>CAPSTONE MINING CORP.</p>	<p>Water Storage Pond Dam Thermistor Data Continued</p>	
	<p>June 2014</p>	<p>Figure B.14</p>