2014 ANNUAL REPORT

QUARTZ MINING LICENSE QML-0009

March 2015

Prepared for:

YUKON GOVERNMENT - ENERGY, MINES AND RESOURCES

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1 INTRODUCTION

Alexco Keno Hill Mining Corp. (AKHM) was issued Quartz Mining License (QML) QML-0009 on November 17th, 2009. A request for amendment of this License to include mining activities at the Lucky Queen and Onek 990 Mines was submitted in 2012 and approved January 13, 2013. Prior to this, letters of approval for preliminary development of the Onek 990 and Lucky Queen Mines were received in November 2012.

On August 20th, 2010, type A Water Licence QZ09-092 was issued to Alexco Keno Hill Mining Corp. for operation of the Bellekeno Mine and Mill. Subsequently, on September 7th, 2010, the Bellekeno Mine became a "mine under development" as defined in subsection 1(1) and subsection 1(2) of the federal Metal Mining Effluent Regulations. On May 16, 2013, AKHM received an amendment (QZ12-053) to Water Licence QZ09-092 to similarly include the Lucky Queen and Onek 990 Mines. This report serves to fulfill the reporting requirements of the QML as defined under paragraphs 12.5 of QML-0009 and Section 14.0 of the Monitoring and Surveillance Plan. The Districit operations were placed in temporary closure in September 2013, therefore no mining or milling activities occure in 2014. Activities in 2014 focused on care and maintenance, water treatment and monitoring.

1.1 LOCATION

The Bellekeno Mine, owned and operated by Alexco Keno Hill Mining Corp. (AKHM), is located in the vicinity of Keno City (63° 55'N, 135° 29'W), in central Yukon, 354 km (by air) due north of Whitehorse. Access to the property is via a paved, two-lane highway from Whitehorse to Mayo (407 km) and an all-weather gravel road northeast from Mayo to Elsa (45 km); a total distance of 452 km. The property lies along the broad McQuesten River valley with three prominent hills to the south of the valley. Figure 1-1 shows the general project location within Yukon while Figure 1-2 shows the location on a smaller scale. The Bellekeno area is located about 3 km east of Keno City, the Onek 990 Mine is about 0.5 km to the northeast of Keno City ,the Keno Hill District Mill site is about 1.2 km to the west (Figure 1-3), while the Lucky Queen Mine is about 4 km to the north of Keno City.

AKHM

ACCESS

ALEXCO KENO HILL MINING CORP.

QML ANNUAL REPORT

FIGURE 1-1
PROJECT LOCATION

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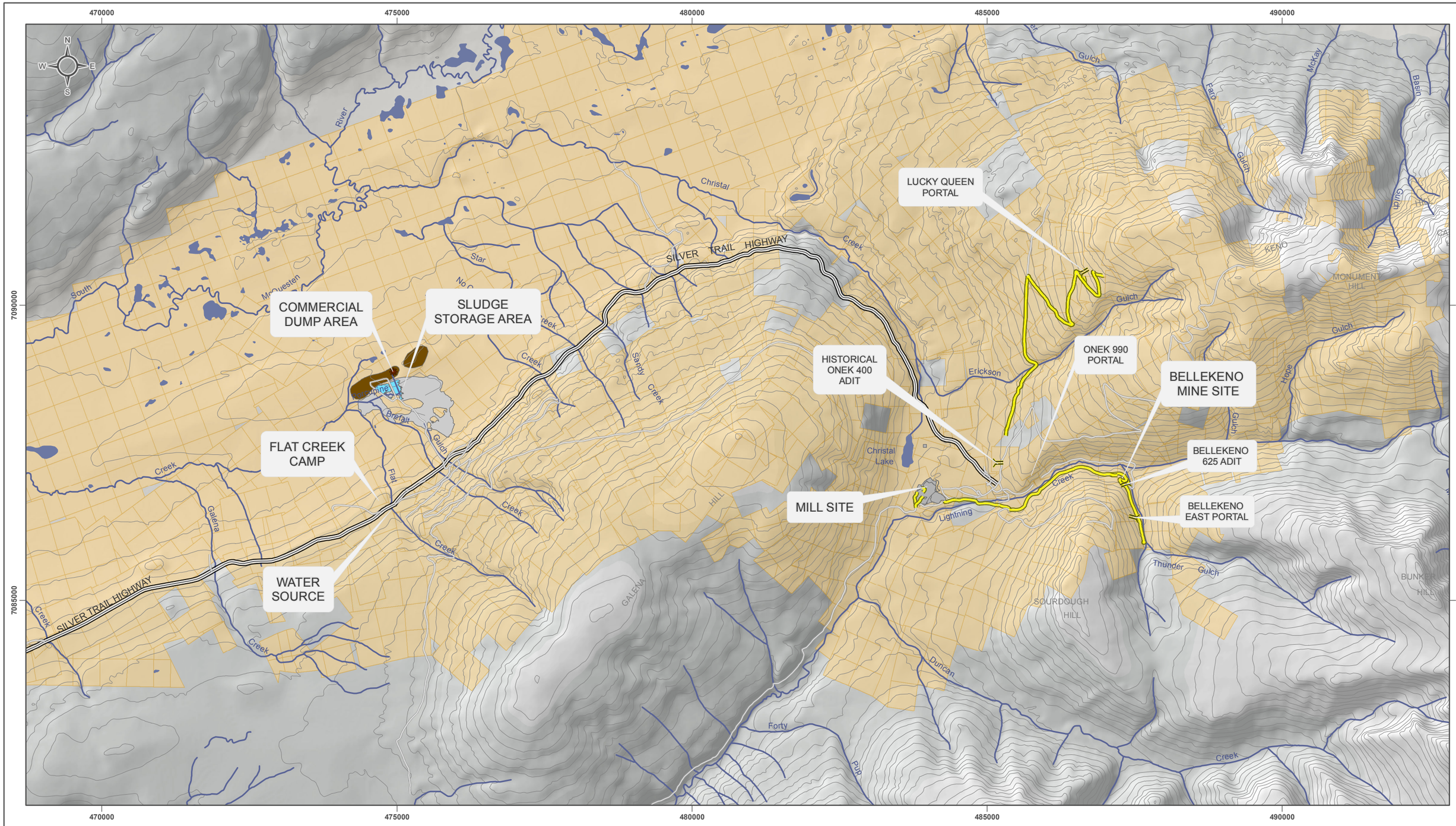
(Last edited by: jpan; 3/5/2014/09:35 AM)



National Topographic Data Base (NTDB) compiled by Natural Resources Canada at a scale of 1:50,000. Cadastral data compiled by Natural Resources Canada. Reproduced underlicense from Her Majesty the Queen in Right of Canada, Department of Natural Resources Canada. All rights reserved. Quartz claim boundaries and ownership current as of February 24th, 2011. Data source: http://geomaticsyukon.ca.

Datum: NAD 83; Map Projection: UTM Zone 8N

1:60,000 (when printed on 11 x17 inch paper)

0 0.5 1 2 3 Kilometers

- Adit
- Alexco Quartz Claims
- Silver Trail Highway
- Haul Road
- Local
- 100 meter contour
- Watercourse
- Waterbody

AKHM

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ANNUAL QUARTZ MINING LICENCE REPORT, QML-0009

FIGURE 1-2
KENO HILL PROPERTY LOCATION MAP

MARCH 2014

I:\ALEX-05-01\Bellekeno\GIS\mxd\Annual_Reports\2013\Fig_1-2_KenoHill_Property20140305.mxd
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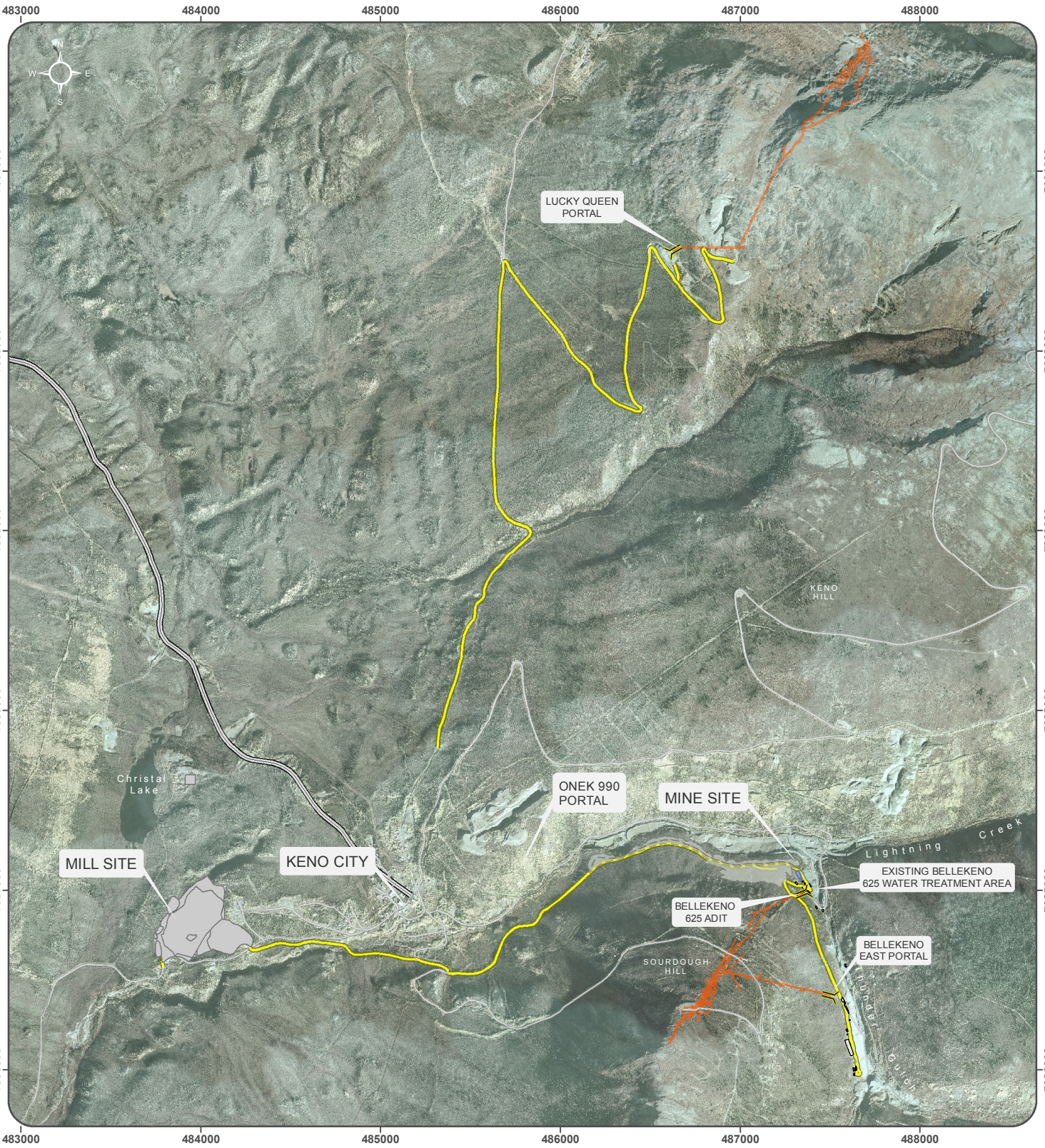

Silver Trail Highway

Haul Road

Local

Underground workings

1:30,000 *When printed on 8.5 be 11 inch paper*

0 500 1,000 Meters

ANNUAL QUARTZ MINING LICENCE REPORT, QML-0009

FIGURE 1-3

BELLEKENO, ONEK 990 AND LUCKY QUEEN LOCATION MAP

AKHM ACCESS

MARCH 2014

Aerial photograph obtained from Geodesy Remote Sensing Inc., Calgary Alberta. Imagery acquired September 13 and 14 2006.

Datum: NAD 83; Map Projection: UTM Zone 8N

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I:\ALEX-05-01\Bellekeno\GIS\mxd\Annual_Reports\2013\Fig_1-3_Bellekeno_Overview20140305.mxd
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2 MINING ACTIVITIES

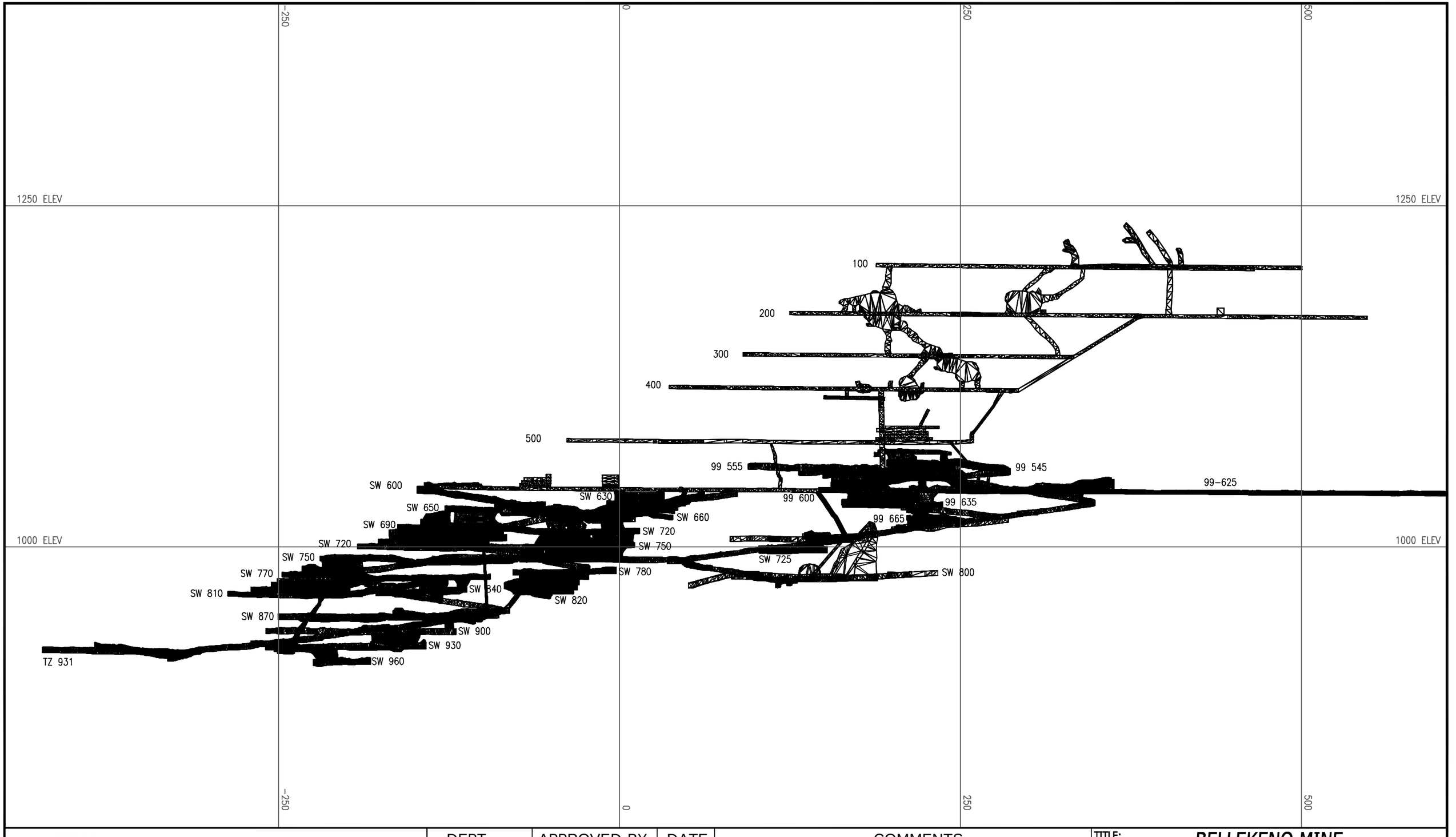
2.1 MINE SITES

2.1.1 Bellekeno

Underground development at Bellekeno was placed under termporary closure in September 2013 and no mining activities occurred in 2014.

Production in 2013 focused mainly in the Southwest and 99 zones of the mine. The majority of development consisted of production mining of the Bellekeno ore body, specifically the SW and 99 Zone. In 2013 the CAPEX development was sustained in these zones. The waste rock development in 2013 focused on additional stope access within the Southwest and 99 zone as well as minor long term infrastructure development. The SW Main Ramp was extended down to the 930 and 960 levels for access to the lowest portion of the mine. Exploration drifting to the south of the known resources is continuing along what is termed the "Thunder Zone". As-builts drawings for the Bellekeno underground workings can be seen in Figure 2-1.

Production activities were carried out in accordance with the Operation Plans submitted as per paragraph 11.1 of QML-0009, and as described in the Project Description of Water Licence Application QZ09-092 & QZ12-053.



ALEXCO RESOURCE CORP
BELLKENO MINE

DEPT.	APPROVED BY	DATE	COMMENTS
SURVEY			
ENGINEERING			
GEOLOGY			
ALEXCO MANAGER			
PROCON SUPER			

TITLE: **BELLEKENO MINE**
Long Section
Figure 2-1

Drawn by: DARIN BAKER	Scale: 1:2500
Date: 07/28/2013	Approval: Date:
File: C:\Users\Darin Baker\Desktop\entire mine.dxf	

2.1.2 Lucky Queen

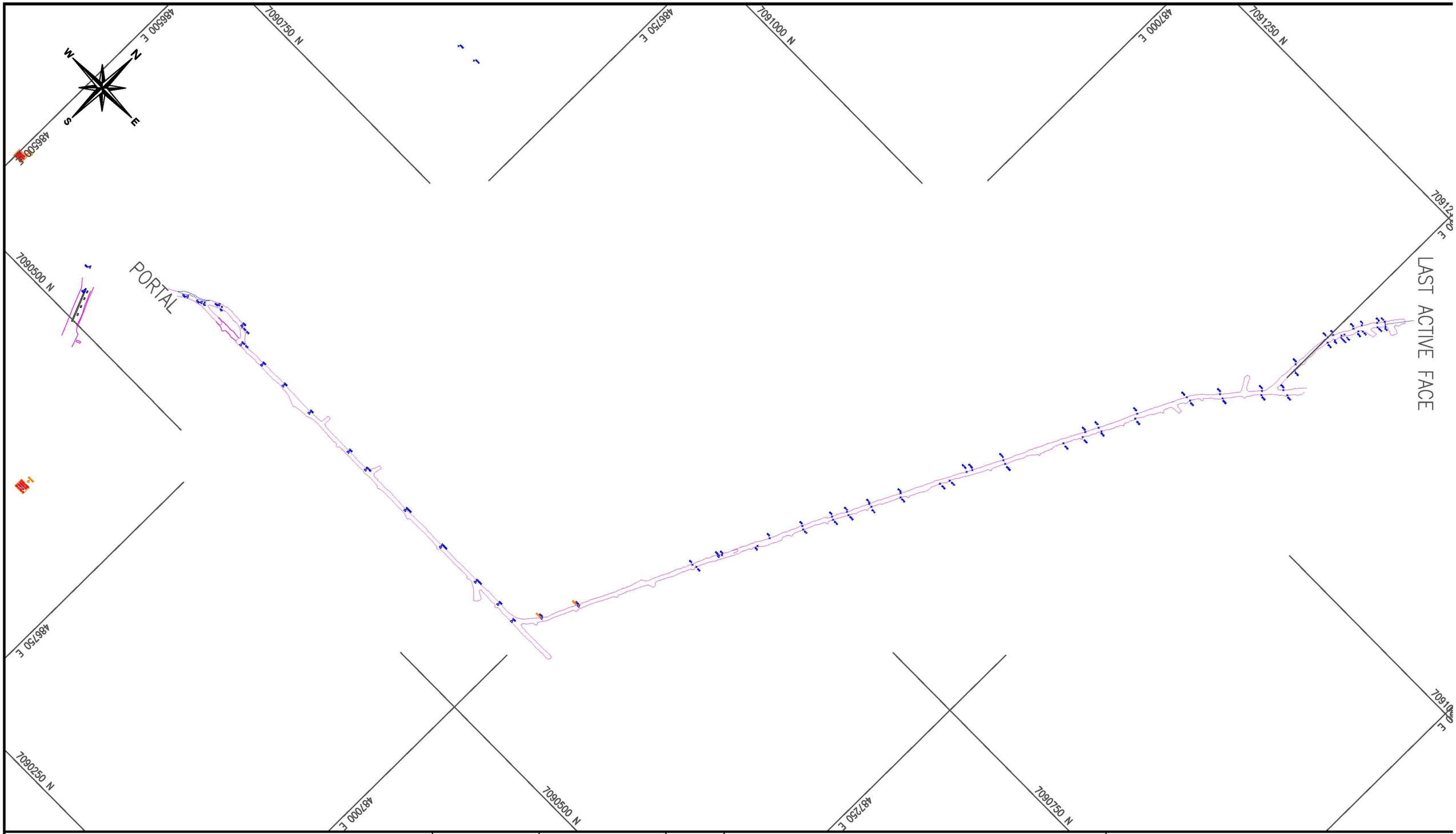
Underground rehab at Lucky Queen (LQ) continued throughout the entire year in 2012 and new CAPEX development was initiated in Q4 2012 and was suspended in 2013 to allow a re-evaluation of the project. Currently the project is on hold pending re-activation of the district mining operations and no activities occurred at LQ in 2014.

There were no issues in regards to stability or permanent closures in 2014. Preliminary activities for the Lucky Queen Mine were approved under the current QML-0009 on November 30, 2012. As-builts for underground workings can be seen in Figure 2-2.

2.1.3 Onek 990

As discussed in the 2012 Pre-Season Summary Report submitted in March 2012, a new portal was to be prepared west of the historical Onek pit called Sign Post Portal. This development proceeded, however following continued community consultation, a new portal location, Onek 990, was found to be more suitable. The Onek 990 portal site is located near Lightning Creek.

New infrastructure for the Onek 990 portal began in August 2012 and included 2 km of road building, site preparation, portal preparation, and was 80% complete by the end of 2012. CAPEX development was initiated and continued into 2013. The Onek 990 portal pad includes a temporary office/dry, shop, compressor and generator shed, several out buildings. A lay down area on the historic Onek waste rock dump is also being used. A final detailed bridge design has been submitted, permitted and construction completed in 2013 to connect the Onek connector road into the BK Haul road. Preliminary activities for the Onek 990 Mine were approved under the current QML-0009 on November 9, 2012. There were no temporary or permanent closures or stability issues that occurred in 2013 or 2014. No activities occurred at Onek 990 in 2014. As-builts for underground workings can be seen in Figure 2-3.



ALEXCO

ALEXCO RESOURCE CORP
BELLKENO MINE

DEPT.	APPROVED BY	DATE	COMMENTS
SURVEY			
ENGINEERING			
GEOLOGY			
ALEXCO MANAGER			
PROCON SUPER			

TITLE: *LUCK QUEEN MINE*

Asbuilt March 8, 2013

Figure 2-2

Drawn by:	*DARIN BAKER*	Scale:	*1:2500*
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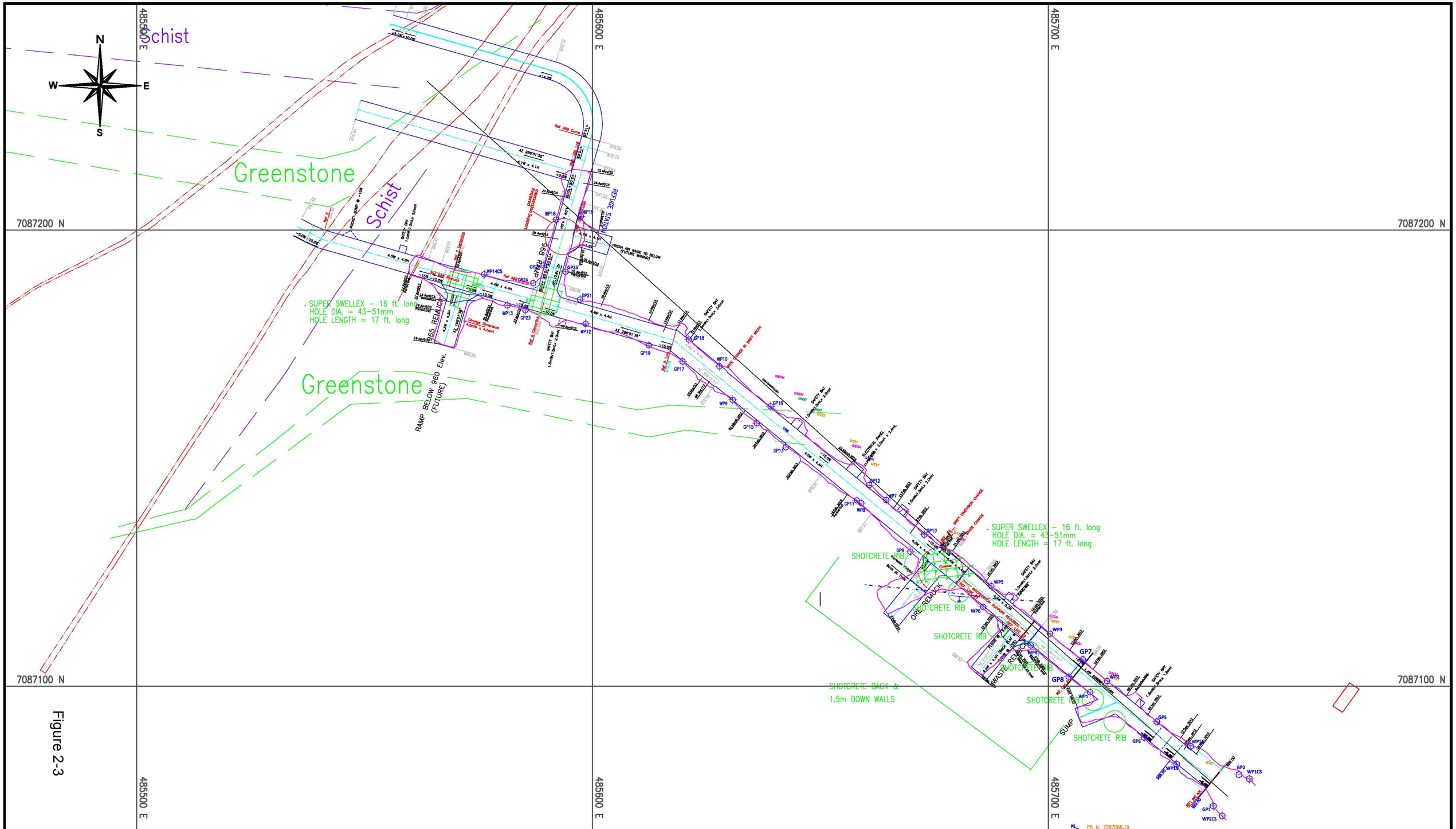

Figure 2-3

ALEXCO

ALEXCO RESOURCE CORP
BELLEKENO MINE

DEPT.	APPROVED BY	DATE	COMMENTS
SURVEY			
ENGINEERING			
GEOLOGY			
ALEXCO MANAGER			
PROCON SUPER			

TITLE: **ONEK**

ASBUILT 30 May 2013

Figure 2-3

Drawn by: *DARIN BAKER*	Scale: *1:750*
Date: *05/30/2013*	Approval: Date:
File: *H:\Bellekeno Underground\Development-Planning\Promine\promine draWi*	

2.2 LIFE OF MINE AND RESERVES

Alexco does not report Mineral Reserves as this definition has certain economic parameters that must be established in order to report as Reserves. Alexco published the technical report "Updated Preliminary Economic Assessment for the Keno Hill Silver District Project – Phase 2, Yukon, Canada" in December 2014 (http://www.alexcoresource.com/i/pdf/reports/Alexco_PEA-Dec2014.pdf). The mineral resource presented in this Updated PEA constitutes the current mineral resource estimate for the five deposits that are part of Alexco's Keno Hill silver district:

- Bellekeno deposit;
- Lucky Queen deposit;
- Flame & Moth deposit;
- Bermingham deposit;
- Onek deposit.

The mineral resources have been estimated in conformity with generally accepted CIM *Estimation of Mineral Resource and Mineral Reserves Best Practices Guidelines* (CIM 2003) and are reported in accordance with the Canadian Securities Administrators' National Instrument 43-101. Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the mineral resource will be converted into mineral reserve.

In the opinion of SRK, the resource evaluations reported herein are a reasonable representation of the global polymetallic mineral resources in the Bellekeno mine, Lucky Queen, and F&M deposits at the current level of sampling.

2.2.1 Bellekeno Mineral Resources

Mineral resources for the Bellekeno deposit were previously prepared by Alexco under the supervision of Mr. Farrow and published in the technical report entitled " Updated Preliminary Economic Assessment for the Eastern Keno Hill Silver District Project – Phase 2, Yukon, Canada " (Alexco 2013), and was restated in the technical report "Updated Preliminary Economic Assessment for the Keno Hill Silver District Project – Phase 2, Yukon, Canada" on December 24, 2014, available on SEDAR.

The Mineral Resource Statement from this report is restated below.

Table 2-1: Updated Mineral Resource Statement for the Bellekeno Deposit, September 30, 2012

Class	Tonnes	Ag (gpt)	Pb (%)	Zn (%)
Indicated*	365,000	658	5.30	5.3
Inferred*	243,000	428	4.1	5.1

* Mineral resources are not mineral reserves and have not demonstrated economic viability. All figures have been rounded to reflect the relative accuracy of the estimates.

Reported at an NSR cut-off of C$185 (US$1 = C$1)/tonne using consensus long term metal prices (US$) and recoveries of Ag US$22.50/oz, recovery 96%; Pb US$ 0.85/lb, recovery 97%; Zn US$ 0.95/lb, recovery 88%; Ag grades capped at 5,000 gpt.

Since the date of the Bellekeno deposit resource statement, mine production totalled 81,000 tonnes at average grades of 722 gpt silver, 8.3% lead, and 4.0% zinc (from November 1, 2012 to September 1, 2013).

2.2.2 Lucky Queen Mineral Resources

Mineral resource estimates for the Lucky Queen deposit were previously prepared by SRK Consulting (Canada) Inc. (SRK) and published in an independent technical report on September 8, 2011 entitled “Technical Report on the Lucky Queen Deposit, Lucky Queen Property, Keno Hill District, Yukon”, and were restated in the technical report “Updated Preliminary Economic Assessment for the Keno Hill Silver District Project – Phase 2, Yukon, Canada” on December 24, 2014, available on SEDAR.

The Mineral Resource Statement from this report is restated below.

Table 2-2: Mineral Resource Statement for the Lucky Queen Deposit, July 27, 2011

Class	Tonnes	Ag (gpt)	Au (gpt)	Pb (%)	Zn (%)
Indicated*	124,000	1,227	0.17	2.57	1.72
Inferred*	150,000	571	0.16	1.37	0.92

* Mineral resources are not mineral reserves and have not demonstrated economic viability. All figures have been rounded to reflect the relative accuracy of the estimates. Reported at an NSR cut-off of $185 (US$1 = C$1)/tonne using long term metal prices (US$) and recoveries developed for the nearby Bellekeno deposit (Ag US$18.50/oz, recovery 96%; Pb US$ 0.90/lb, recovery 97%; Zn US$ 0.95/lb, recovery 88%; Au US$ 1,100/oz, recovery 72%). Ag grades capped at 6,300 gpt; Pb capped at 14.8%, Zn capped at 7%, Au grades capped at 2 gpt.

2.2.3 Flame & Moth Mineral Resources

Mineral resources for the F&M deposit were previously prepared by Alexco under the supervision of Mr. Farrow and published in the technical report entitled "Updated Technical Report on the Flame & Moth Deposit, Flame & Moth Property, Keno Hill District, Yukon" (Alexco 2013), and was restated in the technical report “Updated Preliminary Economic Assessment for the Keno Hill Silver District Project – Phase 2, Yukon, Canada” on December 24, 2014, available on SEDAR.

The Mineral Resource Statement from this report is restated below.

Table 2-3: Mineral Resource Statement for the Flame & Moth Deposit, January 30, 2013

Class	Tonnes	Ag (gpt)	Au (gpt)	Pb (%)	Zn (%)
Indicated*	1,378,000	516	0.42	1.72	5.70
Inferred*	107,000	313	0.27	0.86	4.21

* Mineral resources are not mineral reserves and have not demonstrated economic viability. All figures have been rounded to reflect the relative accuracy of the estimates.

** Reported at an NSR cut-off of $185 (US$0.96 = C$1)/tonne using consensus long term metal prices (US$) and recoveries developed for the nearby Bellekeno deposit (Ag US$24.00/oz, recovery 96%; Pb US$ 0.85/lb, recovery 97%; Zn US$ 0.95/lb, recovery 88%; Au US$ 1,400/oz, recovery 72%).For all veins, Ag grades capped at 3,000 gpt; Pb and Zn capped at 15% and 20%, respectively; Au grades not capped.

2.2.4 Bermingham Mineral Resources

A mineral resource estimate for the Bermingham deposit was prepared by SRK on August 8, 2012 and published in an independent technical report entitled "Technical Report on the Bermingham Deposit, Bermingham Property, Keno Hill District, Yukon" (SRK 2012) and was restated in the technical report "Updated Preliminary Economic Assessment for the Keno Hill Silver District Project – Phase 2, Yukon, Canada" on December 24, 2014, available on SEDAR.

The Mineral Resource Statement from this report is restated below.

Table 2-4: Mineral Resource Statement for the Bermingham Deposit, SRK Consulting, October 15, 2014

Class	Tonnes	Ag (gpt)	Au (gpt)	Pb (%)	Zn (%)
Indicated*	257,000	460	0.06	2.00	2.10
Inferred*	102,000	372	0.09	1.12	1.83

* Mineral resources are not mineral reserves and have not demonstrated economic viability. All figures have been rounded to reflect the relative accuracy of the estimates.

Reported at a dollar cut-off grade of C$185.00/tonne using metal prices (US$) and recoveries of Ag US$20.00/oz, recovery 96%; Pb US$ 0.90/lb, recovery 97%; Zn US$ 0.95/lb, recovery 88%; Au US$ 1,250/oz, recovery 72%. Confidence in the estimate of Inferred mineral resources is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure.

2.2.5 Onek Mineral Resources

Mineral resources for the Onek deposit were previously prepared by SRK in 2011and published in the technical report entitled "Technical Report on the Onek Deposit, Onek Property, Keno Hill District, Yukon" (Alexco 2011), and were re-estimated as part of the technical report "Updated Preliminary Economic Assessment for the Keno Hill Silver District Project – Phase 2, Yukon, Canada" on December 24, 2014, available on SEDAR.

The Mineral Resource Statement from this report is restated below.

Table 2-5: Mineral Resource Statement for the Onek Deposit, SRK Consulting, October 15, 2014

Class	Tonnes	Ag (gpt)	Au (gpt)	Pb (%)	Zn (%)
Indicated*	654,000	200	0.62	1.29	12.30
Inferred*	234,000	134	0.44	1.24	8.86

2.3 MINING METHODOLOGY

No mining occurred in 2014.

2.4 DEVELOPMENT

No development occurred in 2014.

3 CONSTRUCTION ACTIVITIES

In 2014, construction activities carried out at the Keno Hill Silver District Site were minor and only involved surface work near the Mill. The updated surface as-built drawing for the Mill area Facility for 2014 activities is presented as Figure 3-1.

In accordance with our efforts to minimize the impact of the construction activities on the residents of Keno City, the majority of construction materials were delivered using the Christal Lake road to bypass Keno City.

3.1 ROAD CONSTRUCTION

No major upgrades occurred on the roads to Lucky Queen, Christal Lake Road, Keno City Bypass to BKR, or the BKR haul road in 2014. Standard maintenance occurred throughout the year.

3.2 MILL SITE CONSTRUCTION

Construction of a conventional flotation mill at the historic Flame and Moth Site for processing ore and producing concentrate began in February of 2010 and was completed in December 2010. As-built drawings for this construction were submitted as part of the 2011 QML Annual Report and an update mill site as-built was submitted in the 2012 annual report.

The mill yard continues to be ditched and contoured to facilitate channeling melt water in the spring to sediment basins. Organics were consolidated and contoured to allow vegetation to take over and provide a central location for organics borrow source once reclamation begins.

In 2014 the foundation for a second ball mill was poured adjacent to the district mill and a sprung structure (shop/garage) was added near the mill to centralise the KHSD mining opertations in preparation for when the mining activities are resumed (Figure 3-1).

3.2.1 Dry Stack Tailings Facility

The lined area of the dry stack tailings remained at 14,148 m^2 in 2014. Additional area was cleared in 2013 and prepared for liner which will be laid in the future giving a total area of 10,982 m^2 available for additional tailings placement. The DSTF as-built was presented in the 2013 QML annual report. The extent of the cover placed on the DSTF in 2014 is shown on Figure 6-2.

Both a ground temperature cable (GTC) and a shallow monitoring well were installed in the lower bench of the Dry Stack Tailings Facility (DSTF) as part of the ongoing monitoring of the DSTF in 2012. No water was seen during these installations, indicating no free water exists within the pile. The monitoring data collected from the GTC in the DSTF in 2014 is presented in Appendix A.

3.3 MINE SITE CONSTRUCTION

Development of the Bellekeno deposit is the first of potentially many Mines in the Keno Hill Silver District. Because the Bellekeno Mine involved the reopening of existing historical underground mine, use of existing

infrastructure such as water treatment facilities, the reuse of the previously impacted historic Flame and Moth site and the Christal Lake haul road, 'new' environmental footprint is limited in scope.

No significant changes occurred at Bellekeno Mine footprint in 2014.

3.4 ELSA CAMP FACILITIES

A trailer camp, kitchen facility and drillers dry are currently assembled at the old Flat Creek town site (part of Elsa) on Surface Lease 105M13-001. The Camp has a total capacity of 90 permanent beds. There are 4 houses located on Surface Lease 105M13-009 with a total of 28 rooms. On the same lease, an additional 20 rooms are available however this bunkhouse is also not occupied during the winter. These bunks were upgraded to include new framing, roof, and deck.

A Commercial Dump Permit # 81-012 is currently held from YG Environment in accordance with the Environment Act Solid Waste Regulations as well as the Public Health and Safety Act. This permit was renewed effective January 9, 2014 and will continue to be used in support of the Bellekeno Mine operation. In compliance with this permit upgrades to the location of solid waste disposal included upgrades to the electric bear fence and addition of a cattle guard to prevent animals from entering the facility.

Alexco currently holds two (2) sewage disposal system permits at Elsa issued by YG Environmental Health Services: an absorption bed permit for the Flat Creek Camp (Permit #3448) in replacement to a septic tank permit (Permit #3012) and an absorption permit for five houses (Permit #3449) in replacement of a septic tank permit (Permit #3246).

Water for camp consumption is being drawn from Flat Creek or the Flat Creek well and treated through a series of filters and UV light before it is chlorinated and stored in holding tanks ready for consumption under the Yukon Environmental Health standards.

Buildings/Structures

Mill Site Footprint

Mill Site Footprint

Haul Road

Site Roads

Other Roads

Background imagery is a product of the LiDAR survey conducted September 25th 2014

Datum: NAD 83; Projection: UTM Zone 8N

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ALEXCO

ACCESS

ALEXCO KENO HILL MINNING CORP

FIGURE 3-1

MILL AND DSTF LAYOUT

MARCH 2015

\\Acv-fs1\gis\Project\AllProjects\Keno_Area_Mines\ALL-SITES\02-Map\01_Overview\02-District Mill\Mill_and_DSTF_Layout20150310.mxd
(Last edited by: mducharme; 3/11/2015/08:58 AM)

Power for the camp is supplied from the local grid that runs through Elsa to Keno City. Several upgrades were completed in 2012, but no upgrades were completed in 2013 or 2014. Upgrades in 2012 included:

a) removal of the existing overhead line running from the historical pump house to the upper house complex at Elsa and replacing line with an armored tech cable.

b) Decommissioning of old transformers in the upper house complex area at Elsa and replacing with more current transformers and switchgear.

c) brushing out of both the Onek 990 and Elsa substations

d) commissioning an engineering overview of the current electrical system for the purpose of identifying areas needing upgrade in the 2013 season.

e) installing new three phase transformer in camp to remove bunkhouse a from the kitchen complex and distribute the load more evenly

f) installing new three phase transformer in the warehouse to distribute the load more effectively.

g) Commissioning an Engineering overview of the power factor at the Mill for the purpose of identifying why the power factor is low and what can be done to correct it, designed a power factor correction unit.

3.5 ANNUAL INSPECTION

In accordance with Section 12.1 to 12.3 of Quartz Mining License (QML) QML-0009, 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 1st of each year".

EBA Engineering Ltd. was retained to complete the 2014 annual inspection of the surface engineered earth structures located throughout the Bellekeno Mine site.

See Appendix A for a copy of the 2014 Annual Physical Inspection Report which includes surface inspections.

3.6 UPCOMING MAINTENANCE AND UPGRADES

Routine maintenance of Mine and Mill areas continued in 2014.

3.6.1 Mill Upgrades and Maintenance

Several projects were completed in 2014 for the Mill area to improve overall efficiency. These upgrades included the addition of a mill maintenance shop, and pouring the foundation for a second ball mill.

3.6.2 Mine Upgrades and Maintenance

3.6.2.1 Bellekeno

No upgrades were done during temporary closure.

3.6.2.2 Lucky Queen

No upgrades were done during temporary closure.

3.6.2.3 Onek 990

No upgrades were done during temporary closure.

4 MILLING OPERATIONS

Mill operations did not occur in 2014.

5 WASTE MANAGEMENT

5.1 TAILINGS MANAGEMENT

Tailings were not generated in 2014 under temporary closure.

5.2 WASTE ROCK MANAGEMENT

Waste Rock was not generated in 2014 under temporary closure.

6 MONITORING

6.1 MONITORING AND SURVEILLANCE PLAN

Site environmental monitoring was carried out at the site in accordance with the Monitoring and Surveillance Plan. A revision to the Plan was submitted in September 2011 and approved on May 22, 2012. This updated plan included monitoring and surveillance to reflect requirements of Water License QZ09-092 and also to reflect updates to other terrestrial monitoring (e.g. dust monitoring) which have been developed.

Water quality and groundwater monitoring have been carried out in accordance with the Type A water license QZ09-092. Results of this monitoring were included within the Type A water license 2014 Annual Report. Details can be seen in Appendix E3 of the QZ09-092 2014 Annual Report, which is available on the Yukon Water Board's online registry Waterline (www.yukonwaterboard.ca/waterline). Permafrost monitoring through geotechnical programs installed at the site of the future Non-AML Waste Rock Disposal Area and the Dry Stack Storage Facility is monitored routinely by the engineers of record (EBA Engineering Consultants Ltd) in accordance with the DSTF OMS Manual, which forms part of the DSTF Construction and Operation Plan. As discussed in Section 3.2.1 of this report, an additional GTC and monitoring well were installed on the DSTF, as well as full depth tailings analysis were completed in 2012.

6.1.1 Water Quality Surveillance Network

The existing water quality surveillance network for the Keno Hill Silver District Mining Operations includes surface receiving waters in the Lightning Creek and Christal Creek watersheds. Most of the monitoring stations have been sampled extensively in the past. Current water quality monitoring is required in these areas under Water Licence QZ06-074, Water Licence QZ07-078, and Water Licence QZ09-092. Water Licence QZ06-074 expired in November of 2012 and was renewed as QZ12-057, effective on January 30, 2013. Results can be seen in the QZ09-092 2013 Annual Report, which is available on the Yukon Water Board's online registry Waterline (www.yukonwaterboard.ca/waterline). QZ09-092 surface and groundwater monitoring sites can be seen in Figure 6-1, 6-2 and 6-3.

6.1.2 Groundwater Surveillance Network

A groundwater monitoring plan for the Bellekeno mine has been developed under Water Licence QZ09-092. This program outlines monitoring locations and frequency for the Keno District Mill and Dry Stack Tailings Facility, the non-AML waste rock disposal area, and Keno City.

Groundwater wells are scheduled for monthly monitoring for both water level and quality for the first year after QZ09-092 came into effect to establish baseline conditions, followed by quarterly sampling thereafter, for the duration of the project.

Results can be seen in the QZ09-092 2014 Annual Report, which is available on the Yukon Water Board's online registry Waterline (www.yukonwaterboard.ca/waterline). QZ09-092 groundwater monitoring locations can be seen in Figure 6-2 and Figure 6-3.

475000 480000 485000 490000

7105000 7100000 7095000 7090000 7085000

MILL/CHRISTAL LAKE INSET

KV-6: Christal Creek at Keno Highway
KV-79: Christal Creek d/s of Mackeno Tailings
KV-80: Christal Creek u/s of Mackeno Tailings
KV-52: Natural spring to Christal Lake at Old Mackeno pump house
KV-78A: Onek PAML Waste Rock Storage Facility discharge
KV-100: Onek 990 Settling Pond
KV-45: Onek 400 Adit
KV-51: Christal Creek d/s Hinton Creek
KV-50: Christal Creek u/s Hinton Creek
KV-96: Onek 990 Settling Pond Decant
Mill Weather Station
KV-41: Lightning Creek u/s bridge at Keno City
KV-49: Hinton Creek u/s Christal Creek
Lightning Creek
KV-82: District Millsite collection and sediment pond
KV-83: discharge from the District Millsite collection and sediment pond
KV-81: Lightning Creek Southwest of Mill Site
Christal Lake
0 0.25 0.5 1 Kilometers
1:25,000

KV-72: South McQuesten River at McQuesten Lake

BELLEKENO MINE AREA INSET

KV-76: Thunder Gulch d/s of Bellekeno 625 Adit
KV-44: Bellekeno 625 Seep
KV-38: Lightning Creek u/s Thunder Gulch
KV-43: Bellekeno 625 Treatment Pond Decant
BELLEKENO 625 ADIT
KV-42: Bellekeno 625 Adit
KV-65: Thunder Gulch upstream of Bellekeno
0 0.125 0.25 0.5 Kilometers
1:12,000

KV-98: Lucky Queen N-AML Dump Seep Monitoring Location
KV-97: Settling Pond Decant
KV-34: Lucky Queen Adit
KV-99: Lucky Queen P-AML WRSF
0 50 100 200 300 400 500 Meters
1:20,000

Ladue Lake
Hanson Lakes
Haldane Lake
Ladue Gambler Lake Creek
Keno
Gambler Gulch
Faro Gulch
McKay Gulch
South McQuesten River
KV-1: South McQuesten River u/s Christal Creek
KV-7: Christal Creek at Hanson Road
KV-8: Christal Creek at mouth
Sandy Creek
Star Creek
No Cash Creek
Christal Creek
Erikson Gulch
LUCKY QUEEN INSET
KENO
KV-39: Hope Gulch u/s Lightning Creek
Charity Gulch
Hope Gulch
Pump House Pond
KV-2: South McQuesten River at Pumphouse
Sludge Storage Cell
HILL
MILL INSET
KV-40: Charity Gulch u/s Lightning Creek
MINE INSET
Flat Creek
Porcupine Creek
Brefalt Creek
Christal Lake
Lightning Creek
KV-37: Lightning Creek u/s Hope Gulch
FLAT CREEK CAMP
GALENA
Thunder Gulch
KV-78B: Bellekeno East Temporary Waste Rock Storage Facility
KV-77: Thunder Gulch u/s of Bellekeno East
Galena Creek
Fisher Creek
Kelly Creek
Duncan Creek
Fourty Pup Creek
N W E S
1:80,000 (When printed on 11 by 17 Inch paper)
Contours are 100 ft intervals
0 1 2 3 4 5 Kilometers

475000 480000 485000 490000

- Pending Water Quality Station
- Adit Water Quality Station; Adit Discharge, Quarterly
- Monitored Water Quality Station
- Highway
- Secondary
- Valley Tailings Sludge
- Valley Tailings Borrow Source
- Valley Tailings
- Millsite Footprints
- To be Constructed

AKHM

ANNUAL QUARTZ MINING LICENCE REPORT, QML-0009

FIGURE 6-1

SURFACE WATER QUALITY STATION LOCATIONS

MARCH 2014

National topographic Data Base (NTDB) compiled by Natural Resources Canada at a scale of 1:50,000. Reproduced under license from Her Majesty the Queen, as represented by the Minister of Natural Resources Canada. All rights reserved.
Datum: NAD 83; Projection: UTM Zone 8N

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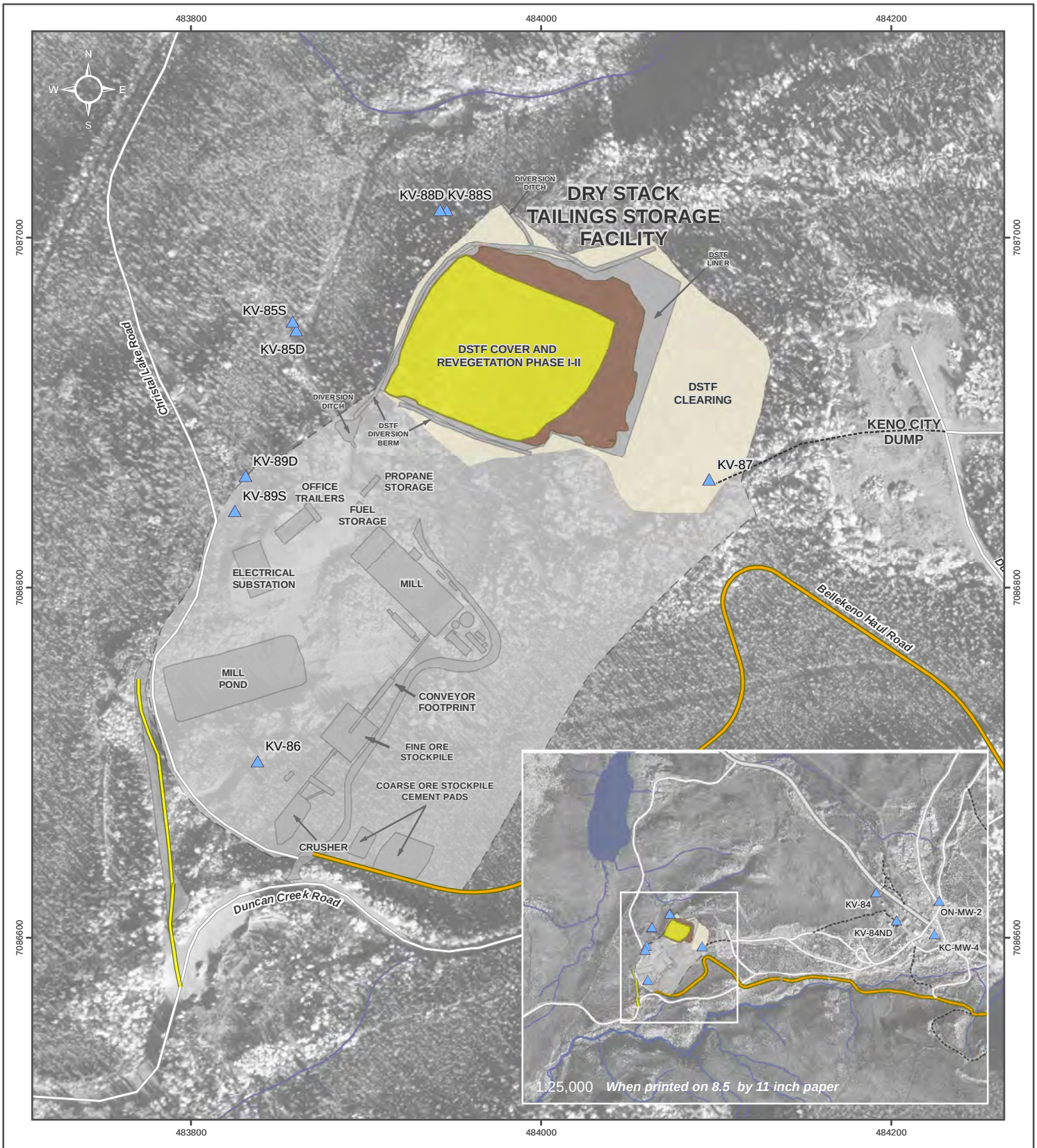
I:\ALEX-05-01\Bellekeno\GIS\mxd\Annual_Reports\2013\SW_Mon_QZ12-053_20140214.mxd (3/5/2014/12:21 PM)



Aerial photography flight date: July 13th 2006. Ortho-rectification produced by Challenger Geomatics Ltd. Site hydrography and contours derived from 2006 aerial imagery. Mill pond survey (Y.E.S. Sept 2010), mill structures, current DSTF footprint and roads survey (ACG, December 2011). Design data obtained from EBA.

Datum: NAD 83; Projection: UTM Zone 8N

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- Groundwater Monitoring Well
- DSTF Clearing
- DSTF Cover and Revegetation
- Building/Structures
- Current DSTF
- Mill Site Footprint
- Haul Road
- Local Roads
- Mill Access Road
- Silver Trail Highway
- Track

1:3,000 *When printed on 8.5 by 11 inch paper*

0 50 100 150 Meters

AKHIM

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FIGURE 6-2

QML-009 GROUNDWATER MONITORING LOCATIONS

DECEMBER 2014

D:\Project\AllProjects\Keno_Area_Mines\ALL-SITES\02-Mapl\03-Permitting\WUL 2015\Groundwater_monitoring_locations_20141217.mxd
(Last edited by: amatlashevska; 12/18/2014/10:19 AM)

484000 485000 486000 487000 488000

7091000 7090000 7089000 7088000 7087000 7086000

N W E S

LUCKY QUEEN SITE
N-AML WRDA
LQ-MW-1
Lucky Queen
P-AML WRSF
LQ-MW-2
Lucky Queen Access
Sign Post Road
MDP-7
MDP-5
MDP-6
ON-MW-4
KC-MW-2
Christal Lake
Christal Lake Road
Lightning Creek Haul Road
P-AML WRSF
KC-MW-3
Onek 400
ON-MW-1
KV-92
KV-84
KC-MW-1B
ON-MW-2
Onek 990 Portal
N-AML WRDA to be constructed
Bellekeno 625 Adit
CAFE WELL
KV-84NS&ND
FIREHALL WELL
KC-MW-4
WELL #3/ VANSUT WELL
HOTEL WELL
Bellekeno Haul Road
KV-88S
KV-88D
KV-85S
KV-85D
KE-MW12-02
KV-89D&S
KE-MW12-01
KV-87
KV-90
KE-MW12-03
KV-103
FM-MW-01
KV-86
FM-MW-03
FM-MW-02
Bellekeno East Portal
Sourdough Trail
Temporary P-AML WRSF

1:18,000 (when printed on 11 x 17 inch paper)

Meters
0 100 200 400 600

484000 485000 486000 487000 488000

- Proposed Monitoring Well
- Monitoring Well
- Private Drilled Well
- Public Drilled Well
- Water Supply Well
- Decommissioned Manual Drive Point
- DSTF Clearing
- DSTF Cover and Revegetation
- Building/Structures
- Current DSTF
- Proposed Features
- Mill Site Footprint
- Adit
- Highway
- Secondary
- Contour (5 m interval)

Aerial photograph obtained from Geodesy Remote Sensing Inc., Calgary Alberta. Imagery acquired September 13th and 14th 2006. Site hydrography and contours derived from 2006 aerial imagery obtained from Aero Geometrics, Calgary Alberta.

Datum: NAD 83; Projection: UTM Zone 8N

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KENO HILL SILVER DISTRICT MINING OPERATIONS

FIGURE 6-3

KENO HILL SILVER DISTRICT GROUNDWATER MONITORING LOCATIONS

DECEMBER 2014

D:\Project\AllProjects\Keno_Area_Mines\ALL-SITES\02-Map\03-Permitting\WUL 2015\Fig6-3_Overview_GW_locations_20141218.mxd
(Last edited by: amatlashevska;12/18/2014/16:00 PM)

6.1.3 Permafrost Monitoring

Geotechnical programs have identified areas of permafrost within operational areas of the project. Specifically, some permafrost was encountered beneath the proposed non-AML Waste Rock Storage Area (WRSA) and in the vicinity of the proposed Dry Stack Tailings Facility (DSTF). Ground temperature and permafrost monitoring is currently in place at these locations. Details on monitoring for the DSTF are included in the DSTF OMS manual, which forms a part of the DSTF Development and Operations Plan.

Locations are monitored routinely by the engineers of record (EBA Engineering Consultants Ltd). Details on permafrost monitoring for the WRSA are included in the Mine Development and operations Plan.

Results of the 2014 permafrost monitoring can be seen in the EBA monitoring memorandums seen in Appendix A.

6.1.4 Physical Inspections

The purpose of the physical inspection is to observe and record sufficient information related to physical and water retaining structures to permit development of a course of action, repair or rehabilitation if it is required. Physical inspections are currently inspected under the Physical Inspections and Reporting Plan prepared for Water Licence QZ09-092. Results of these inspections are presented in Appendix A.

6.1.5 Meteorological Monitoring

As part of closure planning studies, a meteorological station was established on Galena Hill in summer 2007 by Alexco. The station measures air temperature, relative humidity, barometric pressure, rainfall, wind speed and direction, solar radiation, and soil temperature. As a condition of Type A Water Use Licence QZ09-092, a second metrological station and snow course was established at the Keno District Mill site. The location of the mill site weather station is shown on Figure 6-4. A Yukon Government monitored snow course station also exists in the area. An analysis of the meteorological monitoring data can be Results can be seen in the QZ12-053 2014 Annual Report, which is available on the Yukon Water Board's online registry Waterline (www.yukonwaterboard.ca/waterline).

6.1.6 Noise Impacts and Sound Monitoring

The objective of noise impact monitoring was to reduce and mitigate impacts to local residents and the environment resulting from noise produced during the development and operations of the Bellekeno Mine and Keno District Mill. To achieve this goal, AKHM identified potential noise sources and receivers in the Noise Abatement Plan, and will continue to do so during development and production as a part of monitoring. Details can be found in the Noise Abatement Plan submitted under QML-0009. An update to this plan was approved on March 19, 2013, and includes potential noise impact associated with the development of the Lucky Queen and Onek 990 Mines.

As identified in the 2011 review of the data collected from 2009 to 2011 (submitted in the 2011 QML Annual Report) no significant noise impacts (defined as exceedences of daytime or nighttime noise levels as recommended in the Decision Document) have been observed in Keno City as a result of operations. With the approval for development of the Lucky Queen and Onek 990 Mines in November 2012 and the updated Noise

Abatement Plan for 2013, noise monitoring at newly identified sites commenced in 2013. The results for the Noise monitoring program up to 2014 are presented in Appendix C.

6.1.7 Dust Abatement and Monitoring

In accordance with Clause 69 of the Decision Document for the assessment for the Bellekeno Mine Project (YESAB File Number 2009-0030), dustfall monitoring stations were installed at four locations near the Keno District Mill site. Bergerhoff dust monitoring gauges were selected as the appropriate instrumentation to carry out this program. At the time of installation, the Yukon had not yet developed the Ambient Air Quality Standards.

The Bergerhoff deposit dust gauge is designed to measure dust deposition, which can be reported as a weight per unit area over unit time. These results are comparable to the Ambient Air Control Objectives in the Pollution Control Objectives for the Mining, Smelting and Related Industries of BC (1979), which provides an acceptable range of 1.7 to 2.9 mg/(dm^2*d).

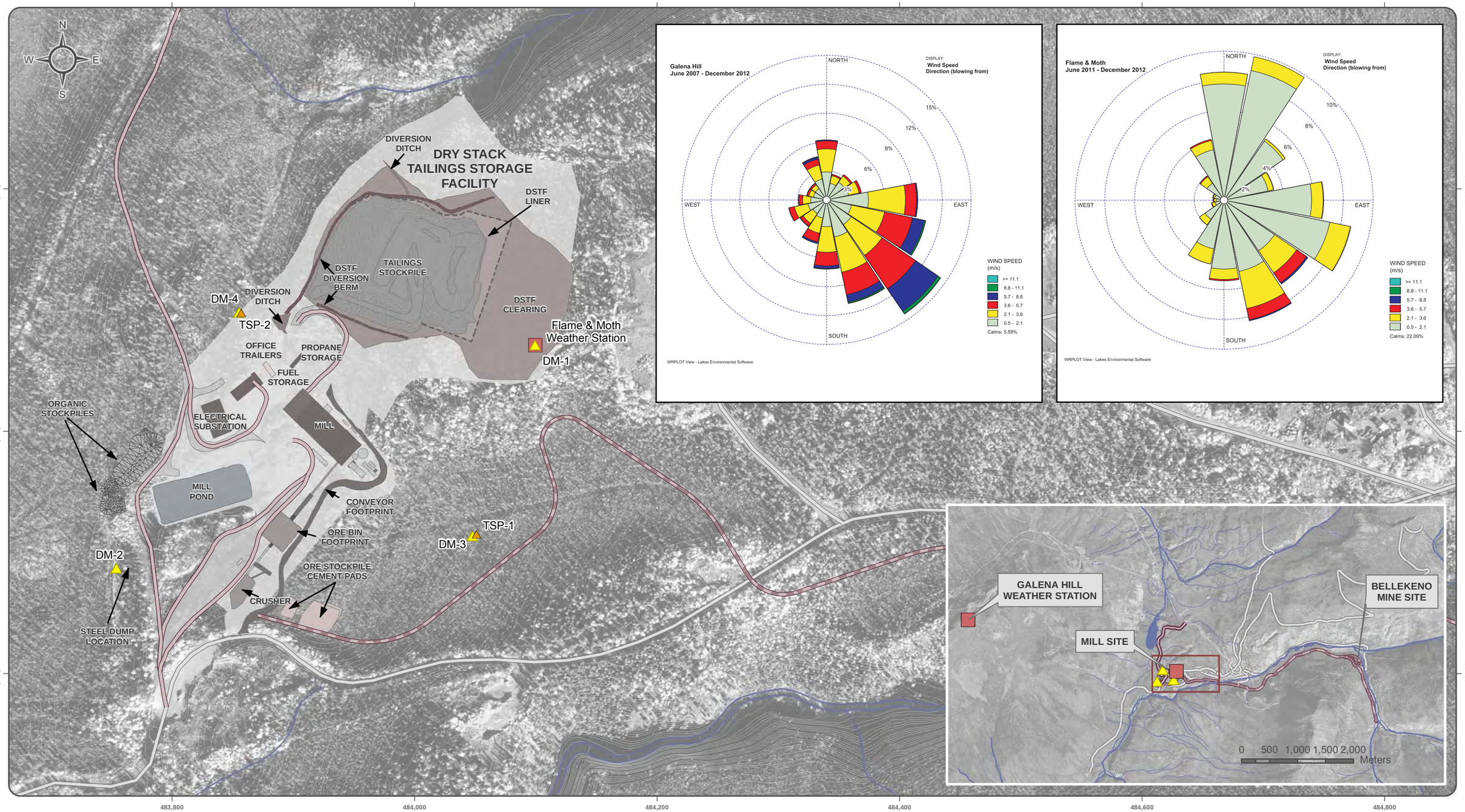
As a result of the updated Monitoring and Surveillance Plan Revision 1.1, as well as the development of the Yukon Ambient Air Quality Standards, two Total Suspended Particulate (TSP) monitoring devices were installed near the Keno District Mill site. After a thorough investigation of both continuous duty (real-time) constant flow air monitoring systems and discrete (gravimetric) samplers, the BGI OMNI sampler was chosen as the most appropriate instrument. TSP results have been compared to the Yukon Ambient Air Quality Standards [TSP = 120 µg/m^3 (24-hr average)].

In addition to TSP monitoring using the BGI OMNI samples, samples from these instruments were analyzed for total metals. The most common metals observed were aluminum, calcium, iron, lead, magnesium, manganese, sulfur, and zinc.

Though several results from the Bergerhoff method exceeded the Ambient Air Control Objectives in the Pollution Control Objectives for the Mining, Smelting and Related Industries of BC, all of the TSP results were well below the Yukon Ambient Air Quality Standards, which is the accepted standard.

The complete 2014 monitoring results can be seen in Appendix D. Dust control measures including dust suppression of haul roads, mill site, and DSTF continue on an as-needed basis throughout the year.

Mill site layout with locations of both the old Bergerhoff dust monitoring gauges and TSP monitoring instruments currently in place are shown on Figure 6-4.



Aerial photography flight date: July 13th 2006. Ortho-rectification produced by Challenger Geomatics Ltd. Data obtained from EBA: "As built" spatial data: Mill pond (Y.E.S.), Mill structure, and current DSTF footprints, Roads (In House survey December 11th 2011). Design spatial data: Conveyance and water collection, diversion ditches and berm.

Datum: NAD 83; Projection: UTM Zone 8N

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Main Map: 1:3,000 Inset Map: 1:65,000
(when printed on 11 x17 inch paper)

0 50 100 150 200 Meters

- Total Suspended Particulates Monitor
- Dust Monitor Station
- Dry Stack Tailings
- Design PU
- AsBuilt; As Built
- Mill Access Road
- Haul Road
- Local Road

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Figure 6-4

DUST MONITORING AND WEATHER STATION LOCATIONS

Drawn By JP	MARCH 2013	Verified by VB

I:\ALEX-05-01\Bellekeno\GIS\mxd\Annual_Reports\2012\Dust_Monitoring_Stns_20130311.mxd
(Last edited by: jpan;3/11/2013/14:25 PM)

6.1.8 Waste Rock Monitoring

All waste rock management facilities are subject to monitoring for physical and geochemical stability (acid rock drainage or metal leaching). A complete Waste Rock Management Plan was attached to the Construction Site Plan Revision 1 and includes detailed descriptions of waste rock monitoring and mine wall testing. This plan was submitted as part of the QML-0009 2010 Annual Report submitted in June 2011. This plan was revised and approved in 2013 to include the Lucky Queen and Onek 990 Mines.

No new waste rock was generated in 2014, therefore no new monitoring was conducted.

6.1.9 Environmental Effects Monitoring

AHKM prepared the first study design for the Environmental Effects Monitoring (EEM) program required under the federal Metal Mining Effluent Regulations (MMER) and submitted in September 2011. The first round of EEM program was completed in 2012 with the EEM interpretive report for Bellekeno completed and submitted in March 2013. Sub-lethal toxicity testing of effluent from the BK625 treatment pond decant was conducted during 2012 and no significant adverse effects were noted during these tests. The results for the first cycle of EEM were presented in the 2012 annual report. The next EEM cycle study design will be completed in early 2015.

6.1.10 Wildlife Monitoring Plan

The Keno Hill Silver District, including Elsa, the Silver Trail Highway, District Mill, Bellekeno, Lucky Queen, and Onek 990 Mine sites, and all associated haul roads are frequented by natural wildlife in the area. This wildlife includes fox, bear, moose, wolverine, rabbit, lynx, and a number of other species of animal and birds. Wildlife encounters are recorded in a log located in the Elsa Admin Office. The most common sightings involved moose, fox, as well as both black and grizzly bears in 2013. Other less common sightings involved lynx, and wolves.

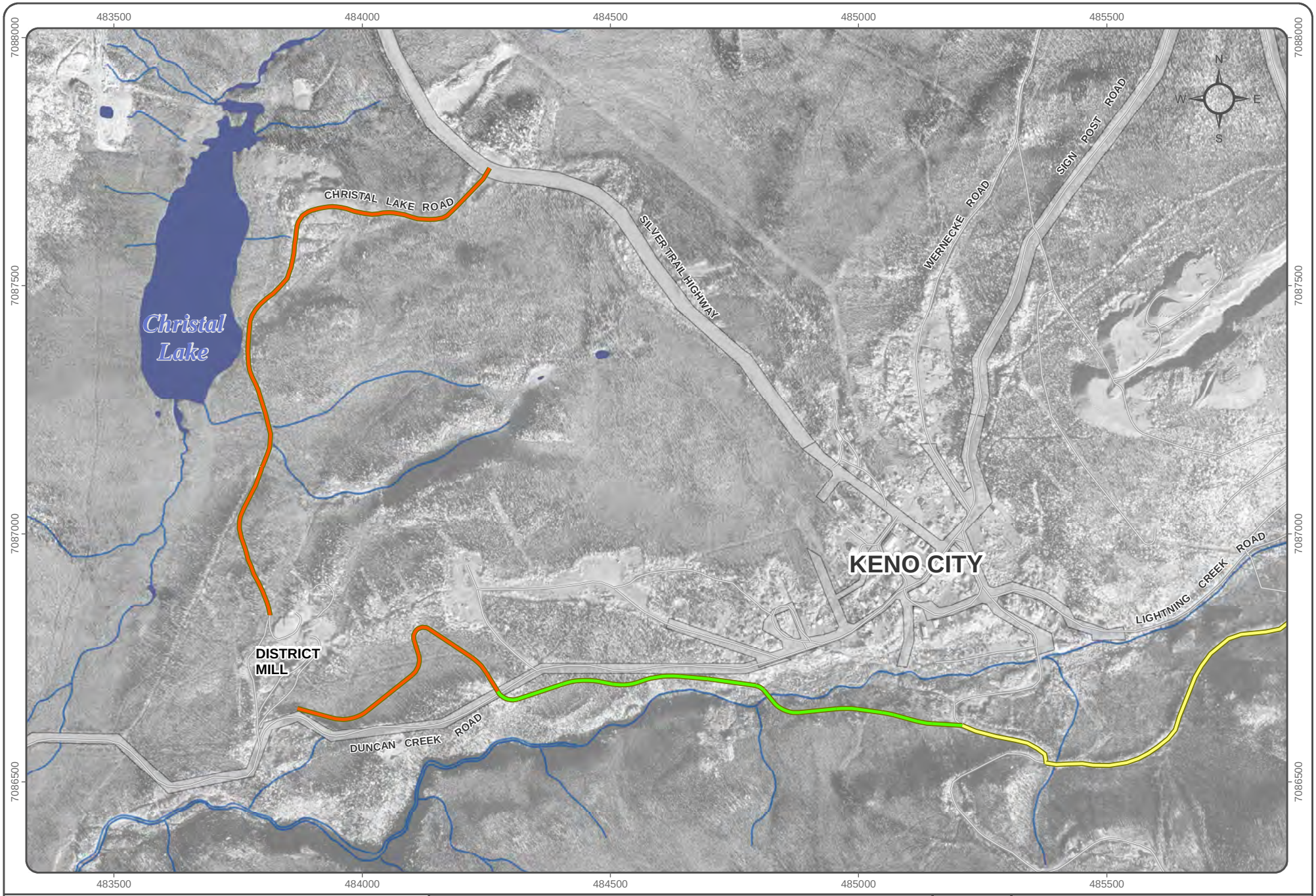
Any encounters between vehicles and wildlife are reported to both the Safety and Environmental departments for documentation and if required, incident investigation. 2014 saw no encounters between AKHM vehicles and wildlife.

6.1.11 Traffic Management

The BKR haul road crosses two public roads in the Keno City area, both Duncan Creek road and the access to the Sourdough Trail. Mine traffic has been redirected around Keno City to ensure that direct ore haulage traffic is routed around the community, effectively minimizing impact on the local community. This road consists of two portions, the Bellekeno Bypass North, which ensures all mill traffic and concentrate haul will bypass Keno City via Chrystal Lake Road, and the Bellekeno Bypass South which connects the Sourdough Trail on the south side of Lightning Creek to the Duncan Creek Road across Lightning Creek. Figure 6-5 shows the routing of traffic around the community along the Bypass Roads.

With the developments of the Lucky Queen and Onek 990 Mines, the Onek Connector Road has been developed from the Wernecke Road, crossing Sign Post Road, along the historic Onek waste rock storage area, to the Onek 990 Portal, crossing Lightning Creek Road and the new Onek Access Bridge across Lightning Creek to the Bellekeno Haul Road (Figure 6-6). The road maybe restricted to one-way travel where conditions prevent construction to 9 m wide. Until the completion of the new Onek Access Bridge in May 2013, some light vehicle

traffic has been directed through Keno City. This traffic was discontinued with the construction of the new Onek Bridge. Estimated traffic volumes during development can be seen in Table 6-1 below. It is expected that occasional traffic will continue to flow through Keno City but the use of the bypass roads will continue to be a priority and policy.



Aerial photograph obtained from Geodesy Remote Sensing Inc., Calgary Alberta. Imagery acquired September 13th and 14th 2006.Site hydrography derived from 2006 aerial imagery obtained from Aero Geometrics, Calgary Alberta

Datum: NAD 83; Map Projection: UTM Zone 8N

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1:10,000 *When printed on 81/2 by 11 inch paper*

0 100 200 300 Meters

- Bellekeno Project Bypass Road North
- Bellekeno Project Bypass Road South
- Bellekeno Haul Road

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FIGURE 6-5

BELLEKENO PROJECT BYPASS ROAD

MARCH 2013

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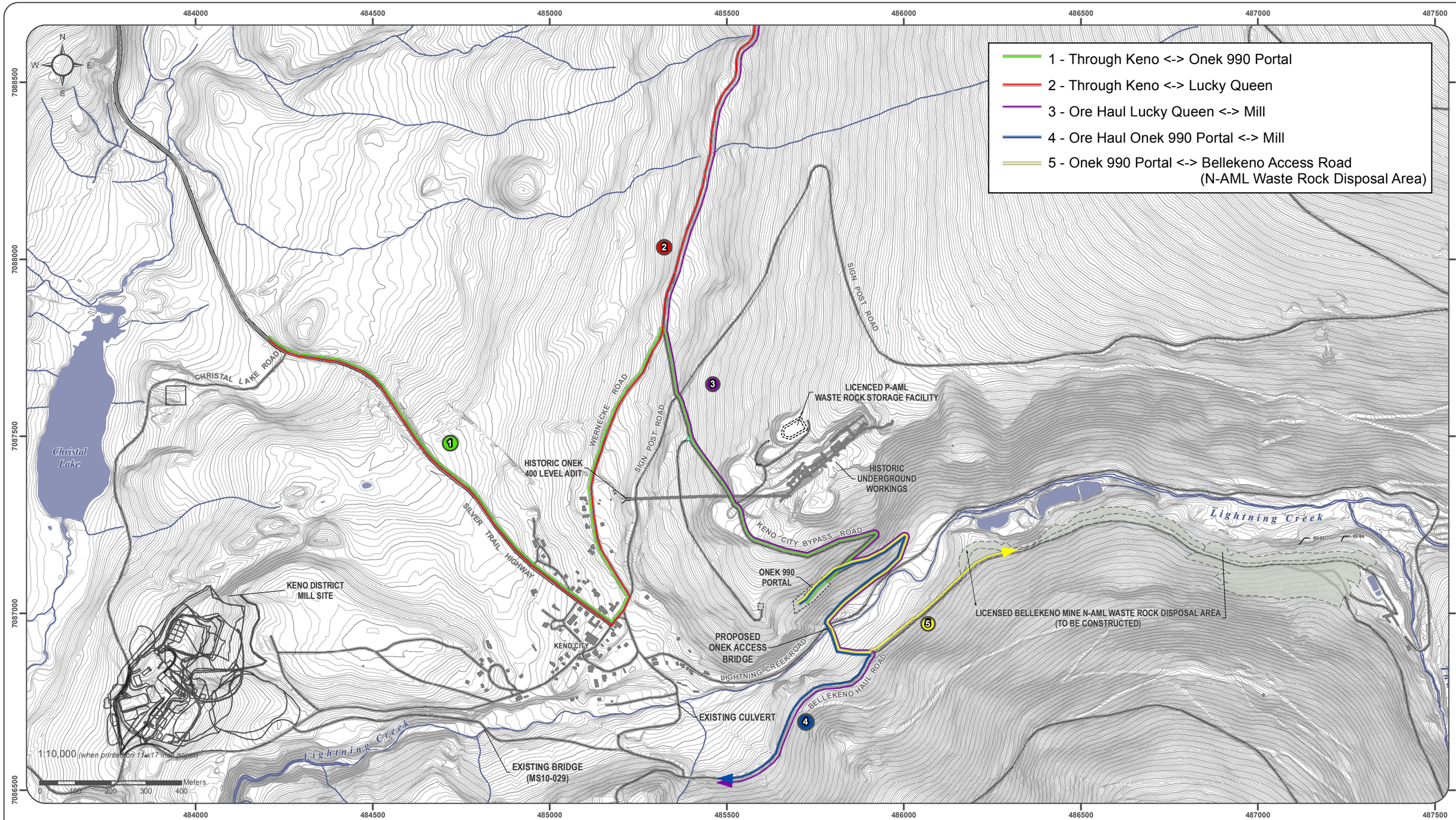

Aerial photograph obtained from Geodesy Remote Sensing Inc., Calgary Alberta. Imagery acquired September 13th and 14th 2006.

Site contours and hydrography derived from 2006 aerial imagery obtained from Aero Geometrics, Calgary Alberta.

Datum: NAD 83; Projection: UTM Zone 8N

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- Proposed Road
- Highway
- Secondary
- Existing Features
- Building/Structure
- Contour (5 m interval)
- Contour (1 m interval)

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FIGURE 6-6

LUCKY QUEEN, ONEK 990 AND BELLEKENO ACCESS ROUTES

MARCH 2014

I:\Keno_Area_Mines\LQ\Maps\1_Overview_Maps\Project_Overview\TrafficManagement_20140305.mxd
(Last edited by: jpan;3/5/2014/09:52 AM)

6.2 ADAPTIVE MANAGEMENT PLAN

Pursuant to Clause 90 and Clause 91 of QZ09-092, Alexco developed a Bellekeno Adaptive Management Plan, which was submitted to Yukon Water Board in April, 2011. This plan was based on the framework established by the District Wide Adaptive Management Plan, but was customized for the specific activities and developments of the Bellekeno Undertaking. The Adaptive Management Plan was updated in 2013 to include the Onek 990 and Lucky Queen Mines. No adaptive management triggers or activities were undertaken during 2014.

Reporting for the AMP including a summary of any adaptive management triggers and actions was prepared for the WUL QZ09-092 2014 Annual Report. The QZ09-092 2014 Annual Report is available on the Yukon Water Board's online registry Waterline (www.yukonwaterboard.ca/waterline).

7 UNAUTHORIZED DISCHARGE

7.1 REPORTABLE SPILLS

No reportable spill occurred in 2014.

7.1.1 Non-Reportable Spills

There were no non-reportable spills recorded at the Site in 2014 according to the reportable spill quantities defined in Schedule A of the Yukon Spill Regulations.

7.2 PERMIT EXCEEDENCES

There were no Water Licence exceedences during the course of 2014 relating to mine discharge.

8 CARE AND MAINTENANCE AND RECLAMATION

The care and maintenance activities at the Keno Hill District are the primary objective of Water Use License QZ06-074, which was renewed for 5 years and issued as QZ12-057 effective January 30, 2013. The purpose of this license is to obtain water, divert water, store water and to deposit waste for the purpose of care and maintenance activities for the Keno Hill Mines Property.

Alexco Resource Canada Corporation was issued Water Use Licence QZ07-078 on October 3, 2008, for the purpose to obtain water, store water, and to deposit a waste for the purpose of advanced exploration and preliminary development activities at the Bellekeno Mine on the Keno Hill Property. The Bellekeno project has since moved into production (under QZ09-092) and in 2011, Alexco applied to amend QZ07-078 to remove clauses pertinent to the mine production Licence. Alexco Keno Hill Mining Corp. (AKHM) was issued Water Use Licence QZ10-060 on November 16, 2011 for the amended purpose: to store water and to deposit a waste for the purpose of maintaining the Onek P-AML Waste Rock Storage Facility on the Keno Hill Property. Licence QZ07-078 was cancelled on January 14, 2015 as all activities are now part of QZ12-053.

Information and analyses pertaining to the Bellekeno Mine, Lucky Queen Mine, Onek 990 Mine and District Mill areas have been fully developed through WUL QZ12-053.

8.1 CARE AND MAINTENANCE ACTIVITIES

Prevention of environmental degradation within the Keno Hill Silver District is accomplished largely by the daily operation of lime-addition water treatment systems existing at Galkeno 900, Galkeno 300, Silver King 100, and Bellekeno 625 adits. The Valley Tailings Facility is also treated on an as-required basis during spring and early summer. Care and Maintenance activities and performance monitoring (i.e. water quality monitoring) is undertaken by Elsa Reclamation and Development Company Ltd. (ERDC), using on-site laboratory facilities for daily and weekly water quality analysis. Monitoring of surface and groundwater sites as well as physical conditions is completed as per WL monitoring schedules.

A detailed discussion of these results and other Care and Maintenance activities can be found in 2014 Annual Water License report submitted to the Yukon Water Board as per Water Use License QZ06-074 (QZ12-057 effective January 30, 2013) in February 2015.

8.2 RECLAMATION ACTIVITIES

Progressive reclamation of the Dry Stack Tailings Facility (DSTF) was initiated during the summer of 2012 as presented in the Reclamation and Closure Plan to prevent potential dusting and erosion of exposed tailings slopes. Final slope and bench elevations were reached on the west toe of the DSTF, allowing final reclamation to begin.

The progressive reclamation included four areas (block A, B, C, & D) on the DSTF which were covered with granular/organic material and seeded to test various cover trials. The cover material was local material that had been cleared and stockpiled during the initial construction of the Keno District Mill. The seed material (Keno District Dry Land Seed Mix) was selected using a blend of suitable species seeded at the Brewery Creek and Minto Mine sites also located in the Yukon. Additional slopes were contoured in 2013 for preparation of progressive reclamation that completed in 2014 including covering portions of the DSTF and seeding the cover.

In 2014, further progressive reclamation activities were completed for the DSTF cover, which expanded the cover over the majority of the DSTF, 8,703 m^2 (Figure 6-2).

9 REFERENCES

Alexco Resource Corp., Updated Preliminary Economic Assessment for the Keno Hill Silver District Project – Phase 2, Yukon, Canada, 2014

Alexco Resource Corp., Updated Preliminary Economic Assessment for the Eastern Keno Hill Silver District Project – Phase 2, Yukon, Canada, 2013a

Alexco Resource Corp., Updated Technical Report on the Flame & Moth Deposit, Flame & Moth Property, Keno Hill District, Yukon, 2013b

Alexco Resource Corp.,Technical Report on the Onek Deposit, Onek Property, Keno Hill District, Yukon, 2011

Canadian Institue of Mining, Estimation of Mineral Resource and Mineral Reserves Best Practices Guidelines, 2003

SRK Consulting, Technical Report on the Bermingham Deposit, Bermingham Property, Keno Hill District, Yukon, 2012

SRK Consulting, Technical Report on the Lucky Queen Deposit, Lucky Queen Property, Keno Hill District, Yukon. SRK Project 2CA017.001. Prepared for Alexco Resource Corporation, September 8, 2011a.

SRK Consulting, Technical Report on the Onek Deposit, Onek Property, Keno Hill District, Yukon. SRK Project 2CA017.001. Prepared for Alexco Resource Corporation, September 8, 2011b.

APPENDIX A

2014 ANNUAL PHYSICAL INSPECTION

TETRA TECH EBA

December 19, 2014

ISSUED FOR USE – REVISION I
FILE: W14103450-01
Via Email: kwoloshyn@alexcoresource.com

Alexco Resource Corp.
3 – 151 Industrial Road
Whitehorse, YT Y1A 2V3

Attention: Kai Woloshyn – Environmental Manager

Subject: 2014 Annual Inspection – Surface Engineered Earth Structures
Bellekeno Mine, Keno City, YT

1.0 INTRODUCTION

1.1 General

Alexco Resource Corp. (Alexco) retained Tetra Tech EBA Inc. (Tetra Tech EBA) to complete the 2014 annual inspection of the surface engineered earth structures at the Bellekeno Mine near Keno City, Yukon. Authorization for this work was provided by purchase order (PO #15945) on July 11, 2014. The following structures were identified as requiring inspection:

- Potentially acid generating (PAG) waste storage facility
- Bellekeno 625 water treatment ponds
- Bellekeno waste rock pile
- Lightning Creek bridge abutments (Onek Road)
- Lightning Creek bridge abutments (Bellekeno Haul Road)
- Mill water storage pond
- Dry stacked tailings facility (DSTF)

The location of each structure is shown on Figure 1.

1.2 Scope of Services

EBA's scope of services for the 2014 annual inspection of the structures is as follows:

- Complete a visual inspection of the structures at the Bellekeno Mine prior to September 30, 2014.
- Prepare a report containing the results of the inspection, summary of the stability, integrity, and status of all inspected structures, and recommendations for remedial actions, if any.

Tetra Tech EBA Inc.
61 Wasson Place
Whitehorse, YT Y1A 0H7 CANADA
Tel 867.668.3068 Fax 867.668.4349

2.0 INSPECTION SUMMARY AND RECOMMENDATIONS

The 2014 annual inspection was completed by Justin Pigage, P.Eng. August 12 to 13, 2014. The following sections summarize inspection results, for each structure, and provide recommended remedial actions, if necessary. Recommended remedial actions have been separated based on geotechnical stability concerns and ongoing facility operation (maintenance) concerns. Select photographs taken during the site inspection are attached to this report; the complete set of photographs taken during the inspection are available upon request.

2.1 PAG Waste Storage Facility

The PAG waste storage facility is located south of the existing Bellekeno portal, as shown on Figure 1. At the time of the inspection the facility perimeter berms appeared intact (Photo 1) with no visible signs of instability (tension cracks, erosion rills, slumps, etc.). The facility was impounding some surface water (Photo 2). This is likely a result of the laydown area immediately south (upslope) of the facility being generally graded toward the entrance (Photo 3). To reduce the amount of surface runoff water captured by the facility, the upslope laydown area can be regraded to drain away from the facility entrance or a diversion berm can be constructed to direct surface runoff around the entrance to the facility. This work can be completed during regular facility maintenance and is not a facility stability concern.

The north and west liner anchor trenches along the berm crests remain incomplete. For several years a recommendation to complete the trenching to adequately anchor the liner system has been made. The liner components have now been displaced by wind, due to insufficient anchoring (Photo 4). The liner system should be properly anchored before wind rips the material.

As noted in previous years, the protective geotextile and geonet materials have only been placed in the north half of the facility. Some waste rock currently being stored in the facility extends beyond this protection and is in direct contact with the liner (Photo 5). Large angular waste rock has the potential to puncture the liner and should be carefully relocated to the north (protected) end of the facility prior to the placement of additional material in the south end of the facility. Ultimately, the geotextile and geonet materials should be installed throughout the entire facility as was intended in the original facility design.

2.2 Bellekeno 625 Water Treatment Ponds

The Bellekeno 625 water treatment ponds are located about 750 m north of the Bellekeno portal, as shown on Figure 1. The facility consists of two water treatment ponds that were both operating at the time of the inspection (Photo 6). The perimeter berms and liners appeared intact at the time of the inspection (Photo 7). Surface water runoff transporting fine grained soil has been accumulating outside the southwest corner of the primary treatment pond (Photo 8). Fines in this area should be monitored and removed as part of facility maintenance to prevent accumulation to the point of allowing surface runoff water to enter the treatment pond. If sediment transport and accumulation continues to be an issue in this area, a diversion structure should be constructed upgradient of the facility.

The primary treatment pond had a freeboard of about 0.5 m below the perimeter berm crest at the time of the inspection. Water in the secondary pond was about 0.1 m below the discharge invert elevation and the pond had a freeboard of about 1.0 m below the perimeter berm crest (Photo 9). The discharge line appeared intact at the time of the inspection. Consistent with recommendations made in previous years, rip-rap armouring is required at the discharge location (Photo 10) to limit damage to the natural hillside.

2.3 Bellekeno Waste Rock Pile

The Bellekeno waste rock pile forms a portion of the Bellekeno Haul Road and is located north of the Bellekeno portal, as shown on Figure 1. At the time of the inspection the waste rock pile sideslopes appeared intact and stable (Photo 11). South of the Bellekeno waste rock pile, ditching exists along the upslope side of the Bellekeno Haul Road to control surface water runoff. The ditching ends as the road passes through the waste rock pile and the surface water fans out across the roadway (Photo 12). During regular maintenance operations, the ditching should be continued on the upslope side of the Bellekeno Haul Road through the waste rock pile to prevent erosion damage to the road surface and waste rock pile sideslopes.

2.4 Lightning Creek Bridge Abutments (Onek Road)

The Lightning Creek bridge on the Onek Road is located east of Keno City, as shown on Figure 1. The road was closed at the time of the inspection and the bridge was not in use. The bridge is a single span steel bridge with a 12 m long steel deck (Photo 13) founded on compacted earth fill and timber abutments. The abutments appeared stable at the time of the inspection (Photo 14). The abutments are sufficiently protected from erosion by rip-rap armouring (Photo 15). No remedial action is required for the Lightning Creek bridge on the Onek Road at this time.

2.5 Lightning Creek Bridge Abutments (Bellekeno Haul Road)

The Lightning Creek bridge on the Bellekeno Haul Road is located southwest of Keno City, as shown on Figure 1. The bridge was in service at the time of the inspection. The bridge is a single span steel bridge with a 18 mm wooden deck (Photo 16) founded on earth filled timber cribbing abutments (Photo 17). The abutments are sufficiently protected from erosion by rip-rap armouring (Photo 18). No remedial action is required for the Lightning Creek bridge on the Bellekeno Haul Road at this time.

2.6 Mill Water Storage Pond

The mill water storage pond is located at the Keno Hill District Mill Site, approximately 1 km west of Keno City, as shown on Figure 1. At the time of the inspection the pond was not operating but contained water with a freeboard of about 1 m below the perimeter berm crest (Photo 19). The pond liner and perimeter berms appeared intact with no signs of instability.

Following up on observations made during the annual inspection last year, no additional erosion was noted along the exterior berm in the southwest portion of the pond (Photo 20).

The surface water collection system below the DSTF collects runoff water and conveys it to the mill water pond for storage. Sediment collected in this system is also transported into the pond and has been depositing near the inlet (Photo 21). Additional bales of hay can be installed in the DSTF surface water collection system to control runoff velocity and limit the volume of sediment deposited in the mill water storage pond.

2.7 Dry Stacked Tailings Facility

The dry stacked tailings facility (DSTF) is located at the Keno Hill District Mill Site, approximately 1 km west of Keno City, as shown on Figure 1. No additional tailings have been placed in the DSTF since the 2013 annual inspection because milling operations have stopped. Regrading of tailings placed within the DSTF to date was completed and progressive reclamation was underway at the time of the inspection. The front face of the lower bench has been covered, seeded, and grass has been established (Photo 22). Most of the tailings placed to date were covered and seeded at the time of the inspection (Photo 23), except for the very top of the facility where tailings placement will resume when milling operations begin again (Photo 24).

The DSTF sideslopes, liner system, and surface water runoff collection system appeared intact at the time of the inspection. The surface water runoff collection system was observed to contain tailings transported by surface water runoff (Photo 25). Tailings within the collection system should be mucked out and transported to the active portion of the facility to limit the potential for overtopping of the collection system during future surface water runoff events. In general, construction and performance of the DSTF has been consistent with the design to date.

2.7.1 Instrumentation

Performance of the DSTF is monitored with compaction testing during tailings placement and regular instrumentation readings. DSTF instrumentation consists of seven ground temperature cables installed to monitor permafrost conditions (six in natural soils adjacent to the DSTF and one through tailings placed within the DSTF footprint) and three slope indicators installed to monitor lateral movement of the frozen foundation soils. The locations of installed instrumentation are shown on Figure 2.

2.7.1.1 Background Ground Temperature Readings

Updated ground temperature profiles developed from readings collected from the six ground temperature cables installed in natural soils adjacent to the DSTF are included in Appendix B. As indicated on the included ground temperature profiles, a slight warming trend, resulting in a thickening of the active layer, has been observed in most monitored locations in recent years. The observed warming trend may be associated with disturbance to the insulating vegetative cover caused by instrumentation installation or a result of a broader trend in regional climate conditions. Continued regular instrumentation readings are recommended to monitor background subsurface conditions.

2.7.1.2 DSTF Ground Temperature Readings

The ground temperature cable installed in BH40, through the placed tailings and into the foundation soils below the DSTF, has not returned proper readings since May 2013. During the site inspection a new connector was spliced onto the cable lead in an attempt to repair the cable (Photo 26). The repair was ineffective, leading us to believe the damage is within the buried portion of the cable and thus not repairable. The next time a geotechnical drill program is conducted near the DSTF, a borehole should be advanced through the placed tailings to install a replacement cable for the malfunctioning one in BH40.

2.7.1.3 Slope Indicator Readings

Updated lateral movement profiles developed from readings collected from two of the three slope indicator installations in natural soils adjacent to the DSTF are included in Appendix C. No significant lateral movement of the foundation soils has been observed in the slope indicator results to date. The slope indicator casing in BH30 was broken near the surface due to frost jacking of the protective monument and has filled with water which has subsequently frozen. Despite modest repair efforts, instrumentation readings in BH 30 have not been possible since April 2013. In the summer of 2015, a steam unit should be used to thaw the ice within the slope indicator casing and a proper repair of the casing near surface should be completed. If casing repair does not salvage the installation, a replacement borehole should be advanced the next time a geotechnical drill program is conducted near the DSTF.

3.0 CONCLUSIONS

The structures inspected pose no significant risk to the environment or human health and safety in their current condition. The remedial actions recommended in the previous sections should be completed as soon as possible. The following Table 1 summarizes the recommended remedial actions for each structure:

Table 1: Summary of Remedial Recommendations

Structure	Remedial Recommendations (Stability)	Remedial Recommendations (Maintenance)
PAG Waste Storage Facility	▪ Re-align liner system components and complete proper anchor trenching along north and west sides of facility.	▪ Regrade laydown above entrance to facility or construct diversion berm to limit the capture of surface water runoff. ▪ Complete placement of protective geotextile and geonet materials in southern portion of facility or remove waste rock stored in direct contact with exposed liner to limit risk of punctures.
Bellekeno 625 Water Treatment Ponds	▪ Armour discharge location with rip-rap to protect hillside.	▪ Monitor sediment accumulation outside perimeter berm in southwest corner of primary pond and excavate as required to prevent surface water from entering pond.
Bellekeno Waste Rock Pile	▪ No stability related remedial action required.	▪ Continue ditch on upslope side of the Bellekeno Haul Road through the Bellekeno waste rock pile section to control surface water runoff and limit erosion to road surface and waste rock pile sideslopes.
Lightning Creek Bridge Abutments (Onek Road)	▪ No stability related remedial action required.	▪ No maintenance related remedial action required.
Lightning Creek Bridge Abutments (Bellekeno Haul Road)	▪ No stability related remedial action required.	▪ No maintenance related remedial action required.
Mill Water Storage Pond	▪ No stability related remedial action required.	▪ Consider adding bales of hay to the DSTF surface water collection system to control runoff velocity and limit the volume of sediment deposited in the pond.
Dry Stacked Tailings Facility	▪ Muck out tailings in the surface water runoff collection system to limit the potential for overtopping of the collection system during future surface water runoff events. ▪ Repair slope indicator casing in BH30 or advance replacement borehole during future geotechnical drill investigation if salvage of the existing installation is not possible. ▪ Advance replacement borehole for malfunctioning ground temperature cable in BH40 during future geotechnical drill investigation.	▪ Continue regular instrumentation readings to monitor DSTF foundation conditions.

4.0 LIMITATIONS OF REPORT

This report and its contents are intended for the sole use of Alexco Resource Corp. and their agents. Tetra Tech EBA Inc. (Tetra Tech EBA) does not accept any responsibility for the accuracy of any of the data, the analysis, or the recommendations contained or referenced in the report when the report is used or relied upon by any Party other than Alexco Resource Corp., or for any Project other than the proposed development at the subject site. Any such unauthorized use of this report is at the sole risk of the user. Use of this report is subject to the terms and conditions stated in Tetra Tech EBA's Services Agreement. Tetra Tech EBA's General Conditions are provided in Appendix A of this report.

5.0 CLOSURE

We trust this report meets your present requirements. If you have any questions or comments, please contact the undersigned.

Respectfully submitted,
Tetra Tech EBA Inc.

Prepared by:
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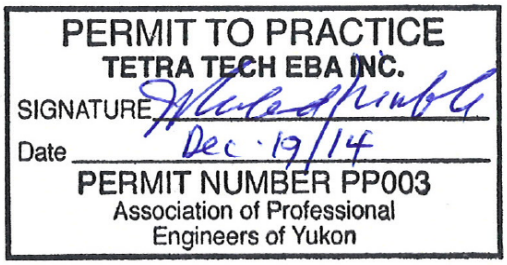


REVISION I SUMMARY:

Added content to differentiate between stability and maintenance related remedial recommendations.

FIGURES

Figure 1 Site Plan Showing Structure Locations
Figure 2 DSTF Site Plan Showing Instrumentation Locations

Christal Lake

SILVER TRAIL HIGHWAY

Keno City

Lightning Creek

BELLEKENO MINE HAUL ROAD

Lightning Creek

Thunder Creek

DRY STACKED TAILINGS STORAGE FACILITY

MILL WATER STORAGE POND

LIGHTNING CREEK BRIDGE ABUTMENTS (BELLEKENO ROAD)

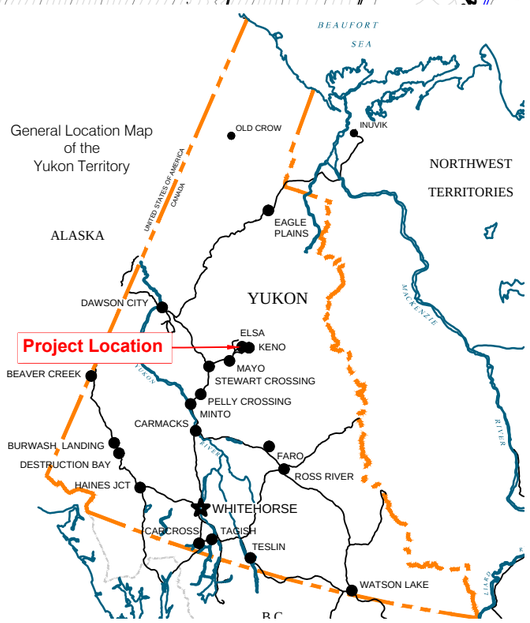
LIGHTNING CREEK BRIDGE ABUTMENTS (ONEK ROAD)

WASTE ROCK PILE

BELLEKENO 625 WATER TREATMENT POND

BELLEKENO MINE PORTAL

PAG WASTE STORAGE FACILITY



General Location Map of the Yukon Territory

0 500

Scale: 1: 15 000 (metres)

NOTES

CONTOUR INFORMATION IS BASED ON DRAWING PROVIDED BY ALEXCO RESOURCE INC.

CLIENT

ALEXCO

TETRA TECH EBA

2014 ANNUAL INSPECTION
BELLEKENO MINE SITE - KENO CITY, YUKON

SITE PLAN SHOWING STRUCTURE LOCATIONS

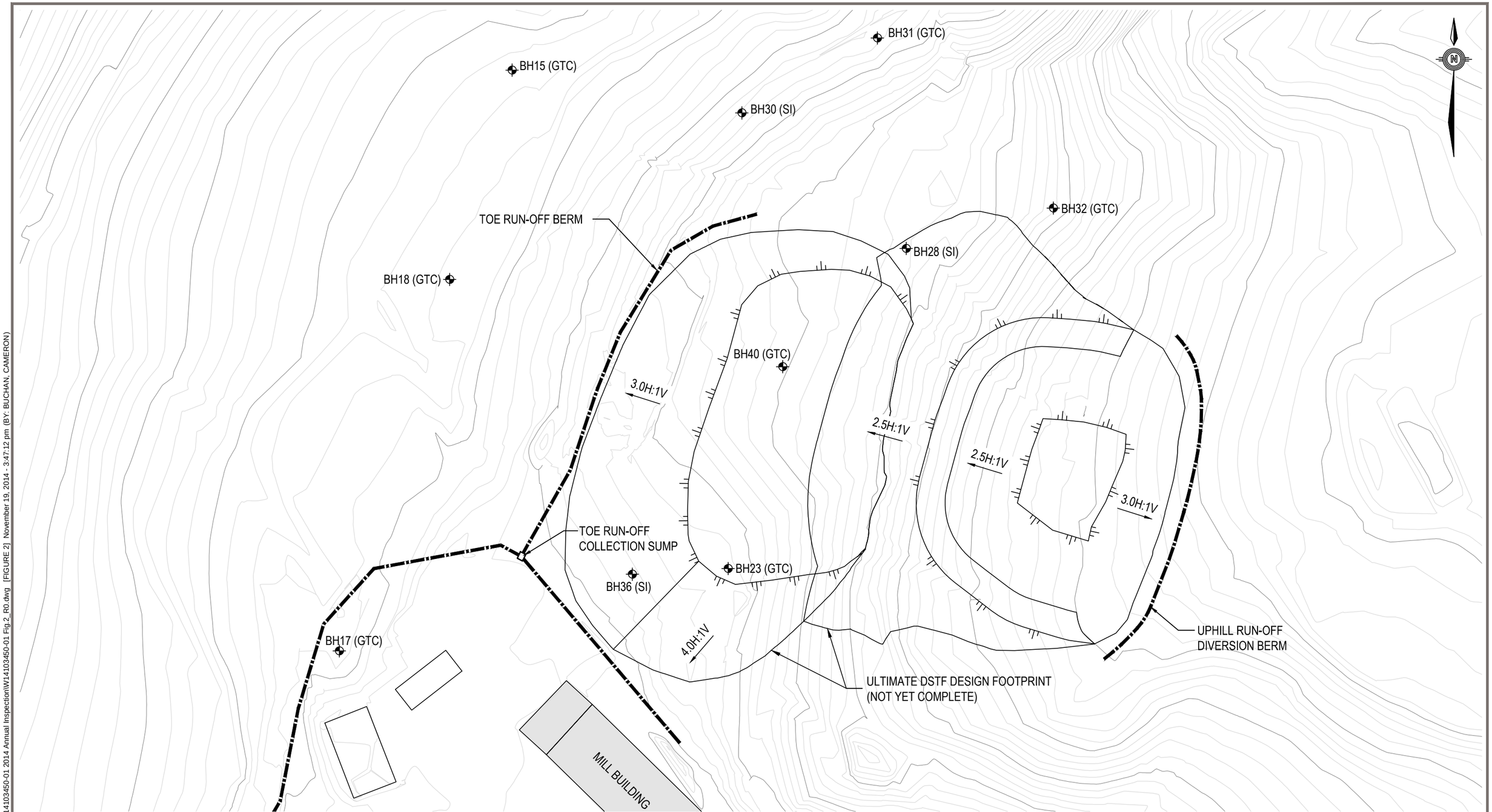
PROJECT NO.	DWN	CKD	REV
W14103450-01	CB	JTP	0

OFFICE: EBA-WHSE

DATE: November 17, 2014

Figure 1

Q:\Whitehorse\Data\0201drawings\Keno\W14103450-01 2014 Annual Inspection\W14103450-01 Fig 1 Rd.dwg [FIGURE 1] November 17, 2014 - 11:22:08 am (BY: BUCHAN, CAMERON)



LEGEND

GTC - GROUND TEMPERATURE CABLE

SI - SLOPE INDICATOR

0 50m

Scale: 1:1,250 @ 11"x17"

CLIENT

ALEXCO

TETRA TECH EBA

2014 ANNUAL INSPECTION
BELLEKENO MINE SITE - KENO CITY, YUKON

SITE PLAN SHOWING
BOREHOLE AND INSTRUMENTATION LOCATIONS

PROJECT NO.	DWN	CKD	REV
W14103450-01	CB	JTP	0

OFFICE: EBA-WHSE

DATE: November 17, 2014

Figure 2

Q:\Whitehorse\Data\0201drawings\Keno\W14103450-01 2014 Annual Inspection\W14103450-01 Fig.2_R0.dwg [FIGURE 2] November 19, 2014 - 3:47:12 pm (BY: BUCHAN, CAMERON)

PHOTOGRAPHS

Photo 1: **PAG Waste Storage Facility**
Facility berms and sideslopes
Facing north – August 12, 2014

Photo 2: **PAG Waste Storage Facility**
Surface water in facility
Facing north – August 12, 2014

Photo 3: **PAG Waste Storage Facility**
Laydown area graded toward facility entrance
Facing south – August 12, 2014

Photo 4: **PAG Waste Storage Facility**
Liner components displaced due to wind
Facing east – August 12, 2014

Photo 5: **PAG Waste Storage Facility**
Angular waste rock in direct contact with liner
Facing east – August 12, 2014

Photo 6: **Bellekeno 625 Water Treatment Ponds**
Facility overview
Facing north – August 12, 2014

Photo 7: **Bellekeno 625 Water Treatment Ponds**
Intact perimeter berms and liners
Facing east – August 12, 2014

Photo 8: **Bellekeno 625 Water Treatment Ponds**
Surface water and sediment accumulation outside southwest corner of primary pond
Facing west – August 12, 2014

Photo 9: **Bellekeno 625 Water Treatment Ponds**
Freeboard in secondary pond at outlet location
Facing east – August 12, 2014

Photo 10: **Bellekeno 625 Water Treatment Ponds**
Discharge location
Facing south – August 12, 2014

Photo 11: **Bellekeno Waste Rock Pile**
Intact sideslopes
Facing east – August 12, 2014

Photo 12: **Bellekeno Waste Rock Pile**
Surface water and erosion on roadway
Facing west – August 12, 2014

Photo 13: **Lightning Creek Bridge Abutments (Onek Road)**
Bridge overview
Facing south – August 12, 2014

Photo 14: **Lightning Creek Bridge Abutments (Onek Road)**
Stable timber bridge abutments
Facing west – August 12, 2014

Photo 15: **Lightning Creek Bridge Abutments (Onek Road)**
Rip-rap armouring bridge abutments
Facing north – August 12, 2014

Photo 16: **Lightning Creek Bridge Abutments (Bellekeno Haul Road)**
Bridge overview
Facing west – August 12, 2014

Photo 17: **Lightning Creek Bridge Abutments (Bellekeno Haul Road)**
Stable earth filled timber abutments
Facing west – August 12, 2014

Photo 18: **Lightning Creek Bridge Abutments (Bellekeno Haul Road)**
Rip-rap armouring bridge abutments
Facing west – August 12, 2014

Photo 19: **Mill Water Storage Pond**
Water level in pond
Facing west – August 13, 2014

Photo 20: **Mill Water Storage Pond**
Stable berm sideslope
Facing west – August 13, 2014

Photo 21: **Mill Water Storage Pond**
Sediment deposited at inlet from DSTF surface water collection system
Facing east – August 13, 2014

Photo 22: **Dry Stacked Tailings Facility**
Grass on front face of lower bench
Facing north – August 13, 2014

Photo 23: **Dry Stacked Tailings Facility**
Progressive reclamation of upper bench (cover and seed mixture applied)
Facing east – August 13, 2014

Photo 24: **Dry Stacked Tailings Facility**
Top of facility where tailings placement will continue
Facing west – August 13, 2014

Photo 25: **Dry Stacked Tailings Facility**
Tailings in the surface water runoff collection system
Facing north – August 13, 2014

Photo 26: **Dry Stacked Tailings Facility**
Attempted repair of the ground temperature cable in BH40
Facing north – August 13, 2014

APPENDIX A

TETRA TECH EBA'S GENERAL CONDITIONS

GENERAL CONDITIONS

GEOTECHNICAL REPORT

This report incorporates and is subject to these “General Conditions”.

1.0 USE OF REPORT AND OWNERSHIP

This geotechnical report pertains to a specific site, a specific development and a specific scope of work. It is not applicable to any other sites nor should it be relied upon for types of development other than that to which it refers. Any variation from the site or development would necessitate a supplementary geotechnical assessment.

This report and the recommendations contained in it are intended for the sole use of Tetra Tech EBA’s Client. Tetra Tech EBA does not accept any responsibility for the accuracy of any of the data, the analyses or the recommendations contained or referenced in the report when the report is used or relied upon by any party other than Tetra Tech EBA’s Client unless otherwise authorized in writing by Tetra Tech EBA. Any unauthorized use of the report is at the sole risk of the user.

This report is subject to copyright and shall not be reproduced either wholly or in part without the prior, written permission of Tetra Tech EBA. Additional copies of the report, if required, may be obtained upon request.

2.0 ALTERNATE REPORT FORMAT

Where Tetra Tech EBA submits both electronic file and hard copy versions of reports, drawings and other project-related documents and deliverables (collectively termed Tetra Tech EBA’s instruments of professional service), only the signed and/or sealed versions shall be considered final and legally binding. The original signed and/or sealed version archived by Tetra Tech EBA shall be deemed to be the original for the Project.

Both electronic file and hard copy versions of Tetra Tech EBA’s instruments of professional service shall not, under any circumstances, no matter who owns or uses them, be altered by any party except Tetra Tech EBA. Tetra Tech EBA’s instruments of professional service will be used only and exactly as submitted by Tetra Tech EBA.

Electronic files submitted by Tetra Tech EBA have been prepared and submitted using specific software and hardware systems. Tetra Tech EBA makes no representation about the compatibility of these files with the Client’s current or future software and hardware systems.

3.0 ENVIRONMENTAL AND REGULATORY ISSUES

Unless stipulated in the report, Tetra Tech EBA has not been retained to investigate, address or consider and has not investigated, addressed or considered any environmental or regulatory issues associated with development on the subject site.

4.0 NATURE AND EXACTNESS OF SOIL AND ROCK DESCRIPTIONS

Classification and identification of soils and rocks are based upon commonly accepted systems and methods employed in professional geotechnical practice. This report contains descriptions of the systems and methods used. Where deviations from the system or method prevail, they are specifically mentioned.

Classification and identification of geological units are judgmental in nature as to both type and condition. Tetra Tech EBA does not warrant conditions represented herein as exact, but infers accuracy only to the extent that is common in practice.

Where subsurface conditions encountered during development are different from those described in this report, qualified geotechnical personnel should revisit the site and review recommendations in light of the actual conditions encountered.

5.0 LOGS OF TESTHOLES

The testhole logs are a compilation of conditions and classification of soils and rocks as obtained from field observations and laboratory testing of selected samples. Soil and rock zones have been interpreted. Change from one geological zone to the other, indicated on the logs as a distinct line, can be, in fact, transitional. The extent of transition is interpretive. Any circumstance which requires precise definition of soil or rock zone transition elevations may require further investigation and review.

6.0 STRATIGRAPHIC AND GEOLOGICAL INFORMATION

The stratigraphic and geological information indicated on drawings contained in this report are inferred from logs of test holes and/or soil/rock exposures. Stratigraphy is known only at the locations of the test hole or exposure. Actual geology and stratigraphy between test holes and/or exposures may vary from that shown on these drawings. Natural variations in geological conditions are inherent and are a function of the historic environment. Tetra Tech EBA does not represent the conditions illustrated as exact but recognizes that variations will exist. Where knowledge of more precise locations of geological units is necessary, additional investigation and review may be necessary.

7.0 PROTECTION OF EXPOSED GROUND

Excavation and construction operations expose geological materials to climatic elements (freeze/thaw, wet/dry) and/or mechanical disturbance which can cause severe deterioration. Unless otherwise specifically indicated in this report, the walls and floors of excavations must be protected from the elements, particularly moisture, desiccation, frost action and construction traffic.

8.0 SUPPORT OF ADJACENT GROUND AND STRUCTURES

Unless otherwise specifically advised, support of ground and structures adjacent to the anticipated construction and preservation of adjacent ground and structures from the adverse impact of construction activity is required.

9.0 INFLUENCE OF CONSTRUCTION ACTIVITY

There is a direct correlation between construction activity and structural performance of adjacent buildings and other installations. The influence of all anticipated construction activities should be considered by the contractor, owner, architect and prime engineer in consultation with a geotechnical engineer when the final design and construction techniques are known.

10.0 OBSERVATIONS DURING CONSTRUCTION

Because of the nature of geological deposits, the judgmental nature of geotechnical engineering, as well as the potential of adverse circumstances arising from construction activity, observations during site preparation, excavation and construction should be carried out by a geotechnical engineer. These observations may then serve as the basis for confirmation and/or alteration of geotechnical recommendations or design guidelines presented herein.

11.0 DRAINAGE SYSTEMS

Where temporary or permanent drainage systems are installed within or around a structure, the systems which will be installed must protect the structure from loss of ground due to internal erosion and must be designed so as to assure continued performance of the drains. Specific design detail of such systems should be developed or reviewed by the geotechnical engineer. Unless otherwise specified, it is a condition of this report that effective temporary and permanent drainage systems are required and that they must be considered in relation to project purpose and function.

12.0 BEARING CAPACITY

Design bearing capacities, loads and allowable stresses quoted in this report relate to a specific soil or rock type and condition. Construction activity and environmental circumstances can materially change the condition of soil or rock. The elevation at which a soil or rock type occurs is variable. It is a requirement of this report that structural elements be founded in and/or upon geological materials of the type and in the condition assumed. Sufficient observations should be made by qualified geotechnical personnel during construction to assure that the soil and/or rock conditions assumed in this report in fact exist at the site.

13.0 SAMPLES

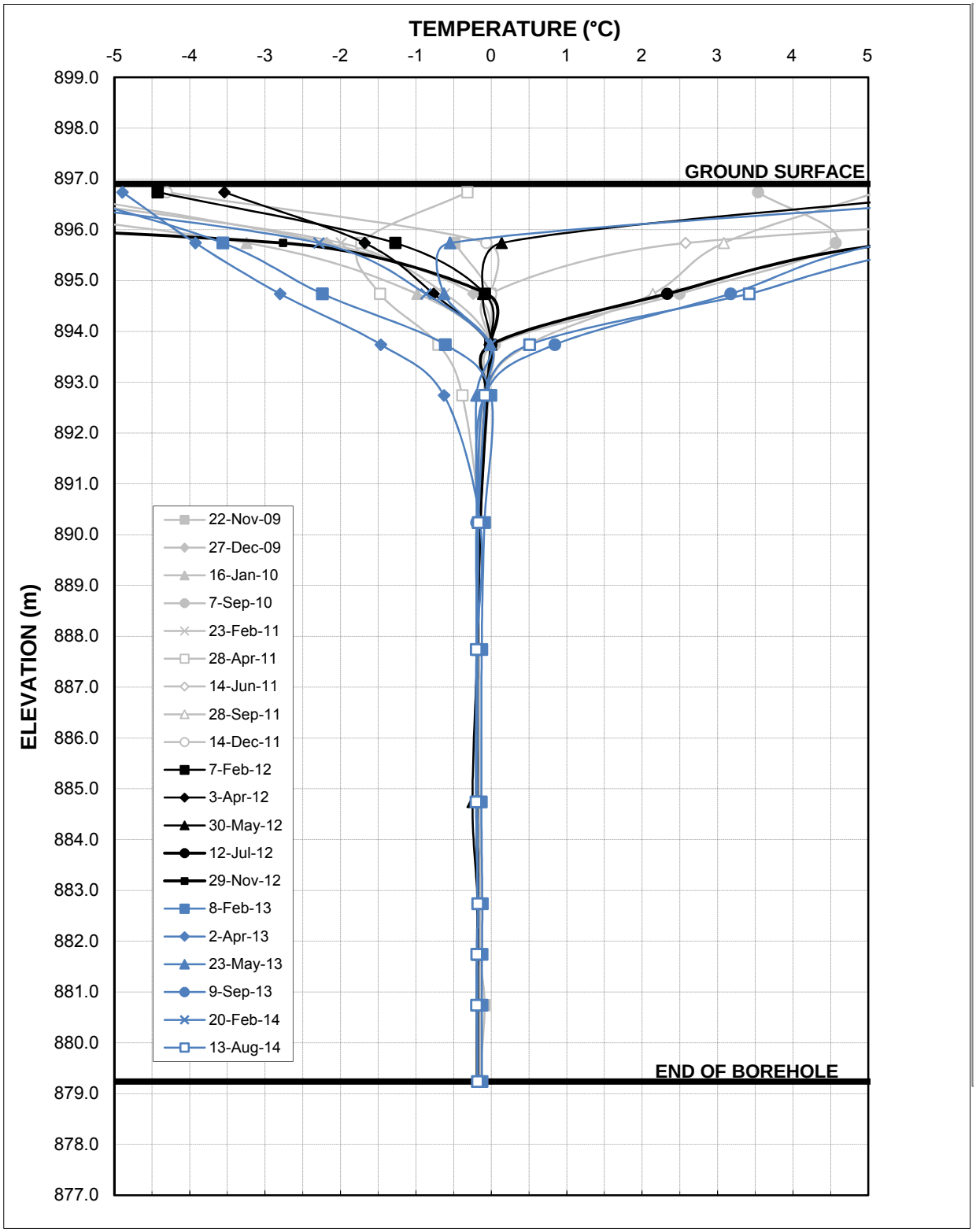
Tetra Tech EBA will retain all soil and rock samples for 30 days after this report is issued. Further storage or transfer of samples can be made at the Client's expense upon written request, otherwise samples will be discarded.

14.0 INFORMATION PROVIDED TO TETRA TECH EBA BY OTHERS

During the performance of the work and the preparation of the report, Tetra Tech EBA may rely on information provided by persons other than the Client. While Tetra Tech EBA endeavours to verify the accuracy of such information when instructed to do so by the Client, Tetra Tech EBA accepts no responsibility for the accuracy or the reliability of such information which may affect the report.

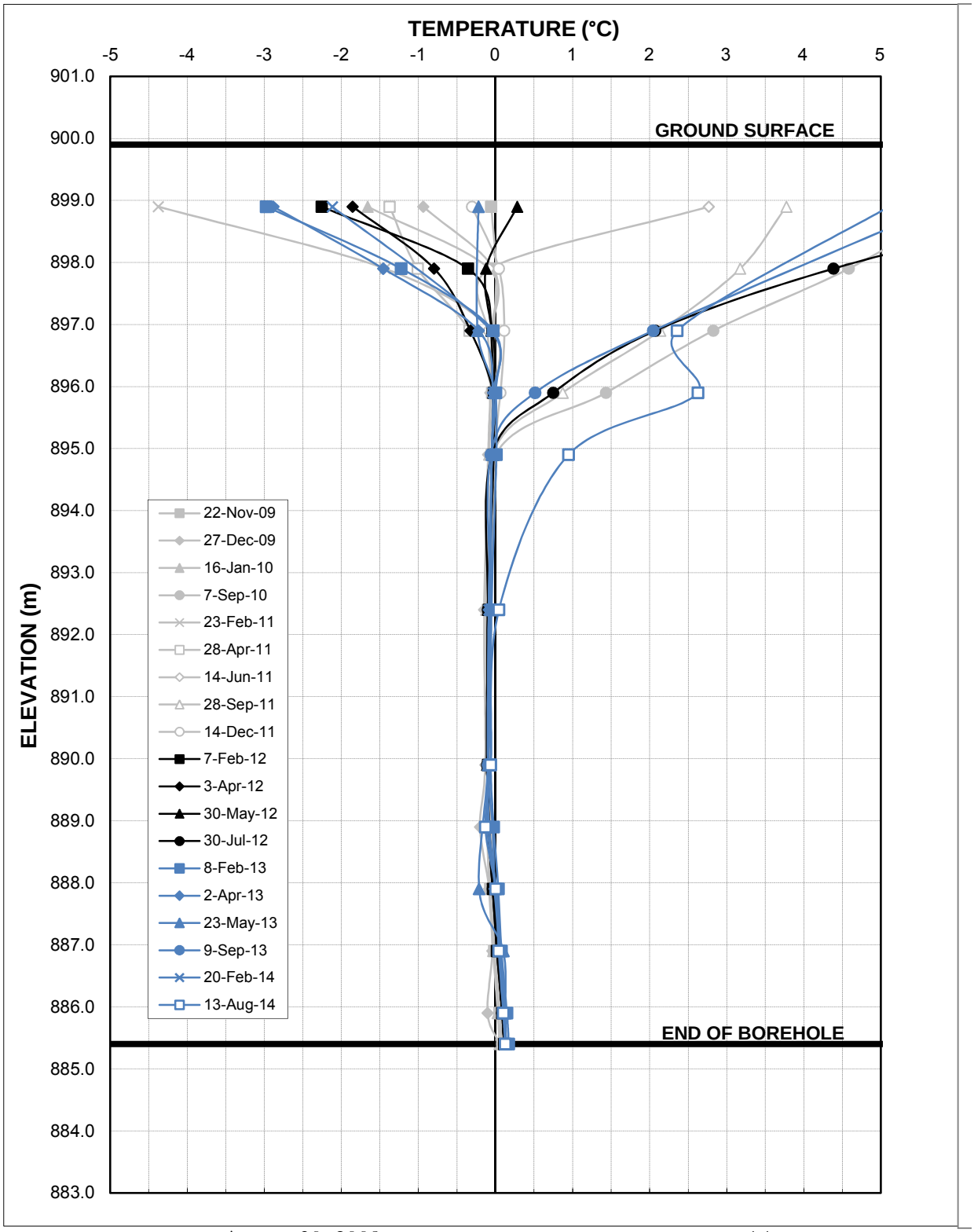
APPENDIX B

DSTF GROUND TEMPERATURE PROFILES



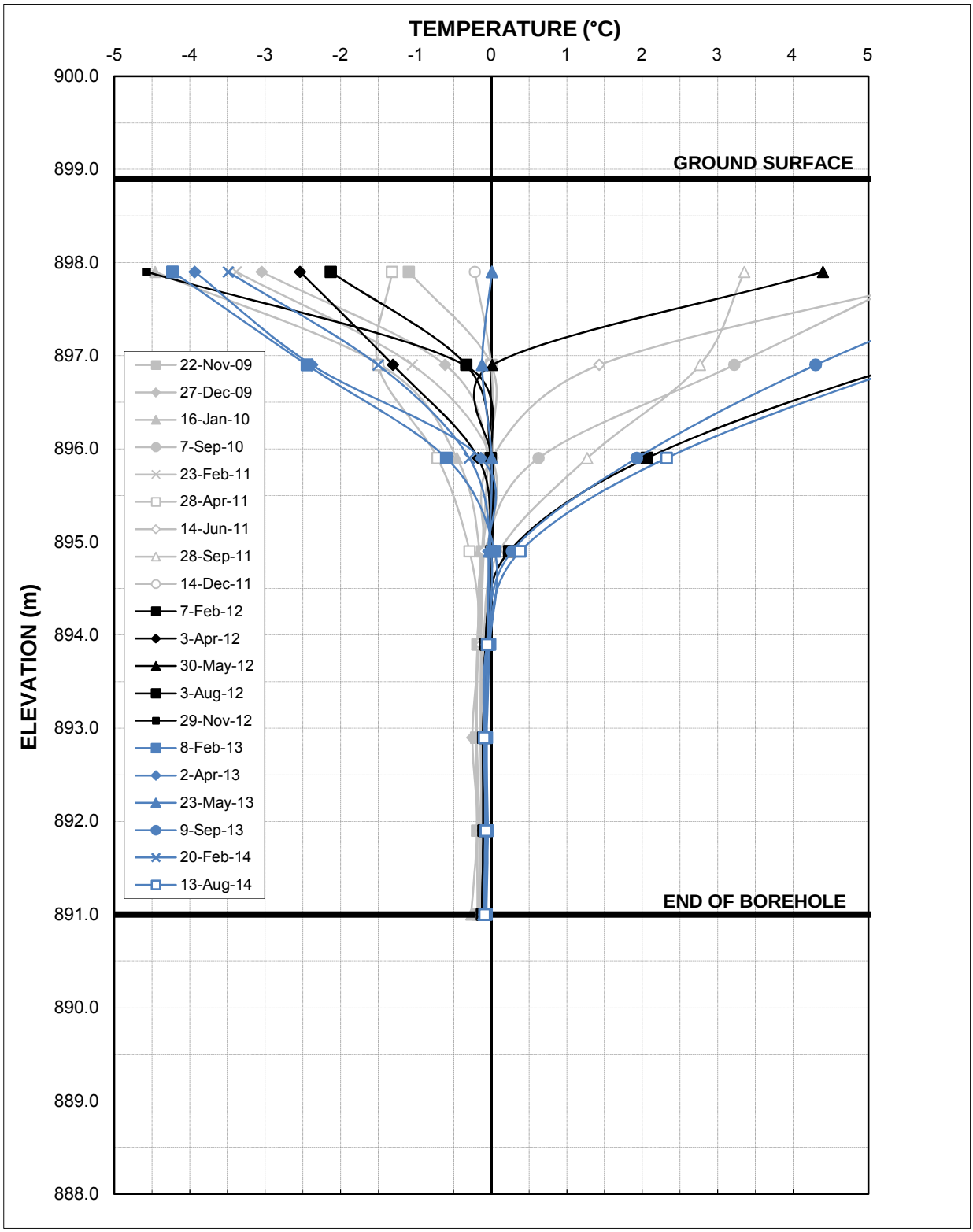
Install Date	August 30, 2009
Last Updated	August 13, 2014
Cable No:	2207

Ground Temperature Profile
Keno Hill District Mill Site Borehole BH15
Figure T1



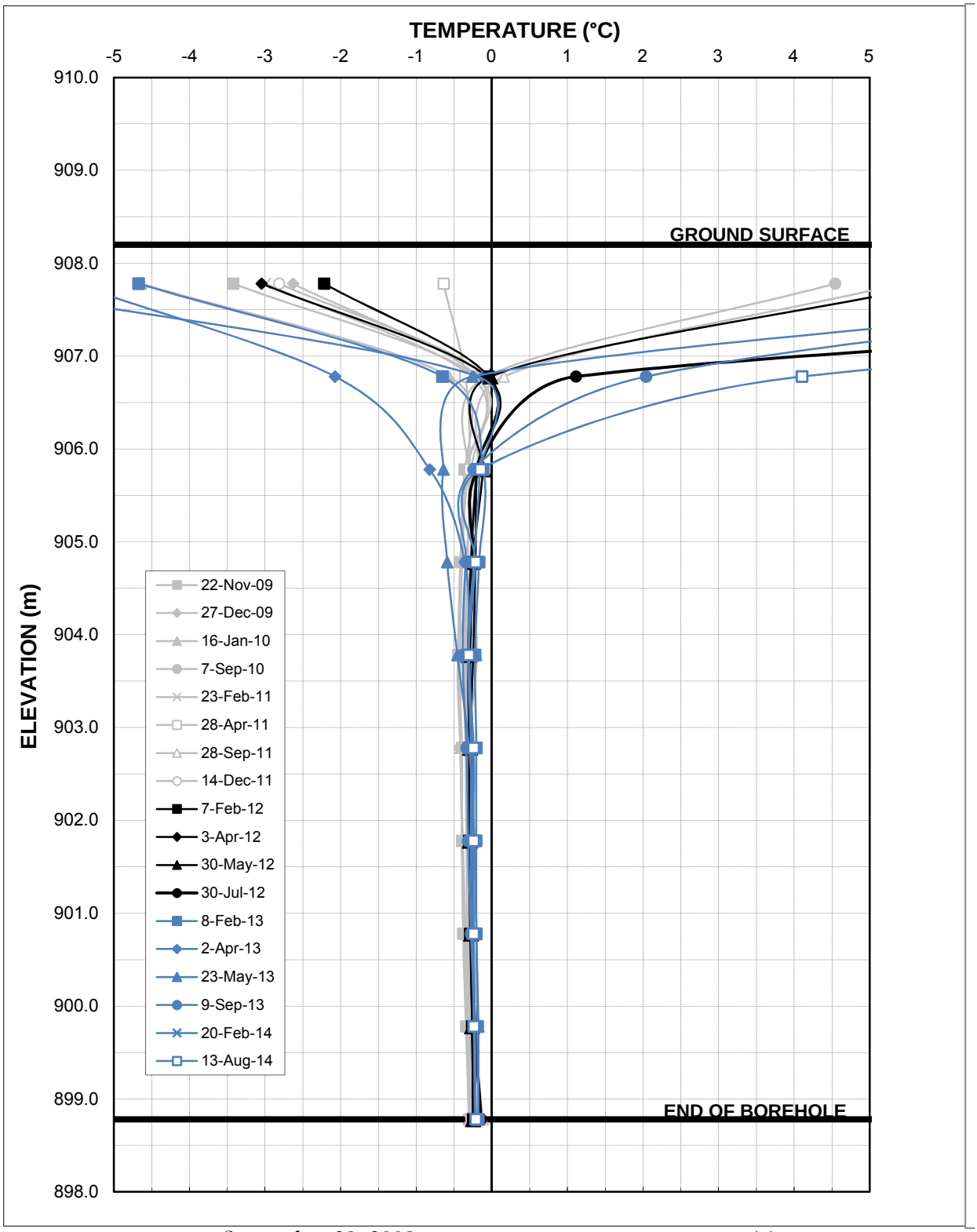
Install Date	August 30, 2009
Last Updated	August 13, 2014
Cable No:	2208

Ground Temperature Profile
Keno Hill District Mill Site Borehole BH17
Figure T2



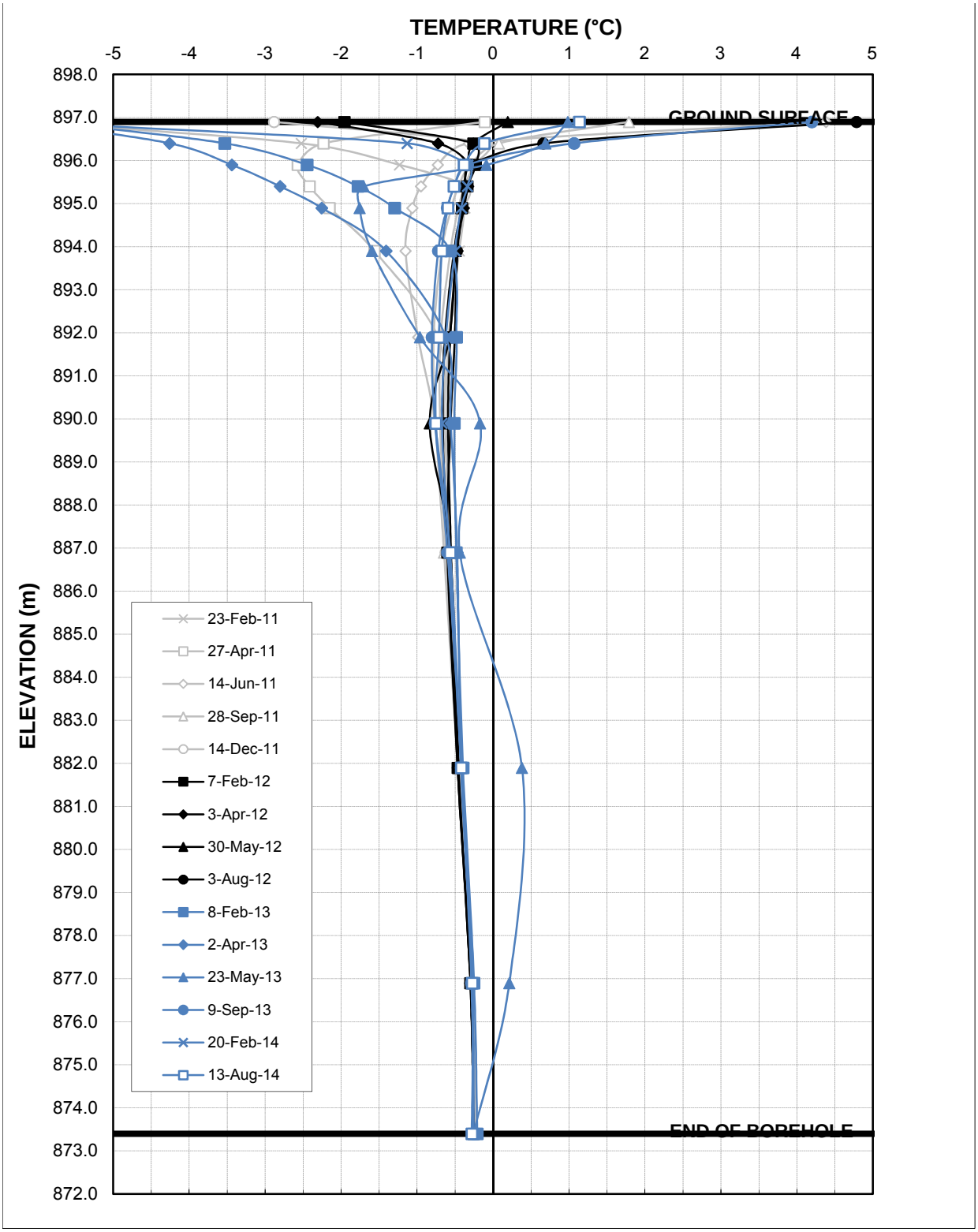
Install Date	September 2, 2009
Last Updated	August 13, 2014
Cable No:	2209

Ground Temperature Profile
Keno Hill District Mill Site Borehole BH18
Figure T3



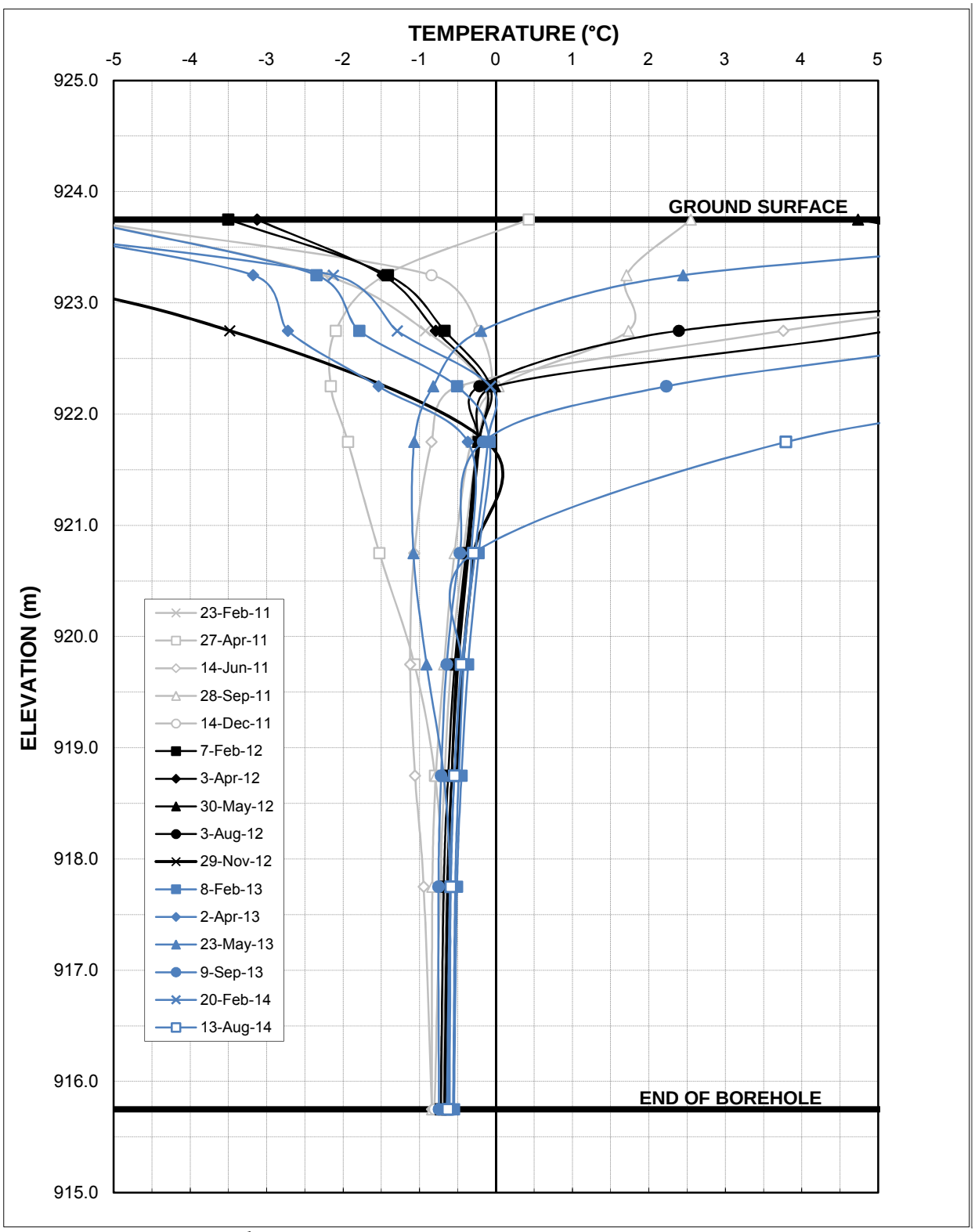
Install Date	September 29, 2009
Last Updated	August 13, 2014
Cable No:	2210

Ground Temperature Profile
Keno Hill District Mill Site Borehole BH23
Figure T4



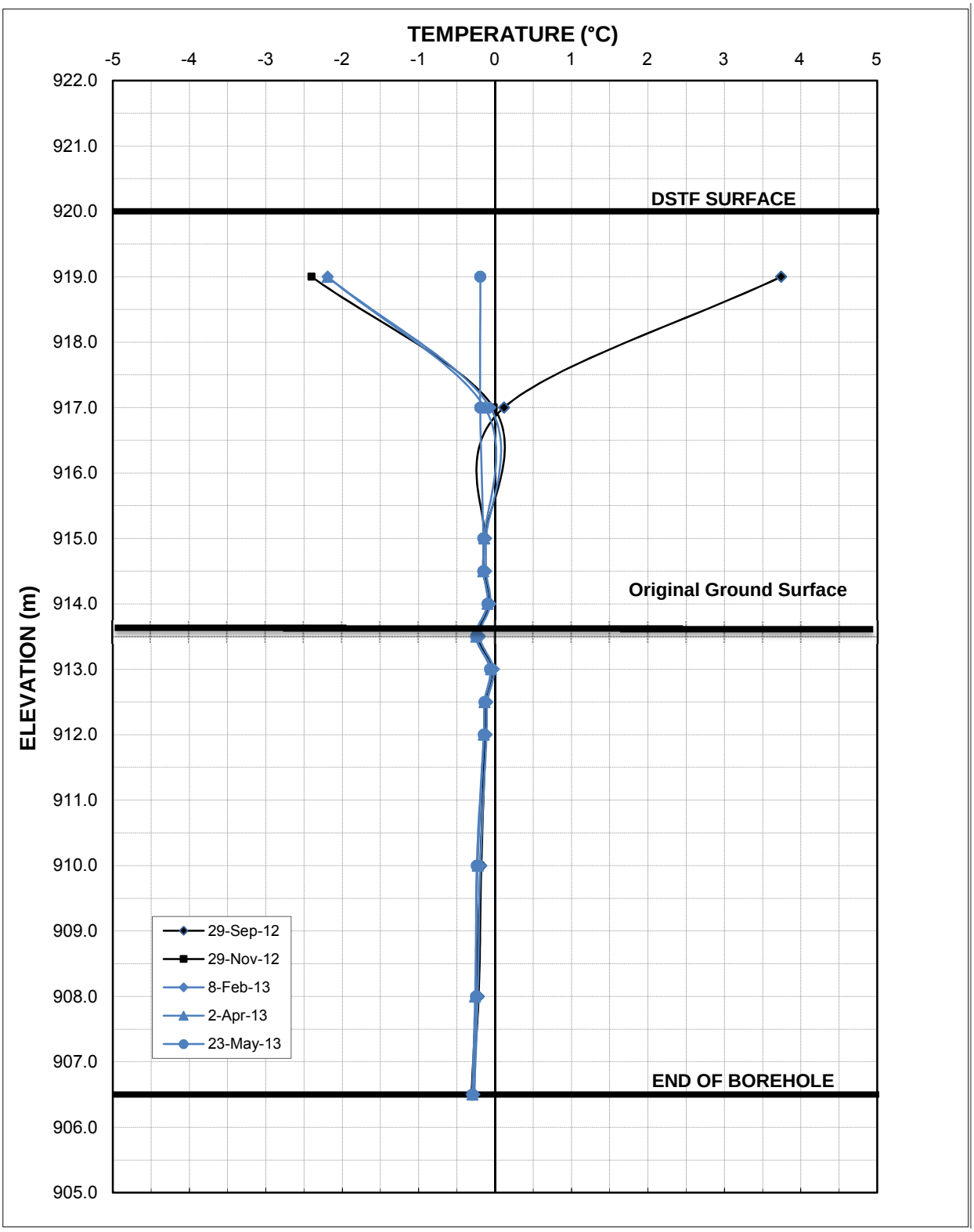
Install Date	February 22, 2011
Last Updated	August 13, 2014
Cable No:	2263

Ground Temperature Profile
Keno Hill District Mill Site Borehole BH31
Figure T5



Install Date	February 22, 2011
Last Updated	August 13, 2014
Cable No:	2264

Ground Temperature Profile
Keno Hill District Mill Site Borehole BH32
Figure T6



Install Date	August 2, 2012
Last Updated	May 23, 2013
Cable No:	2356

Ground Temperature Profile
Keno Hill District Mill Site Borehole BH40
Figure T7

APPENDIX C
DSTF LATERAL MOVEMENT PROFILES

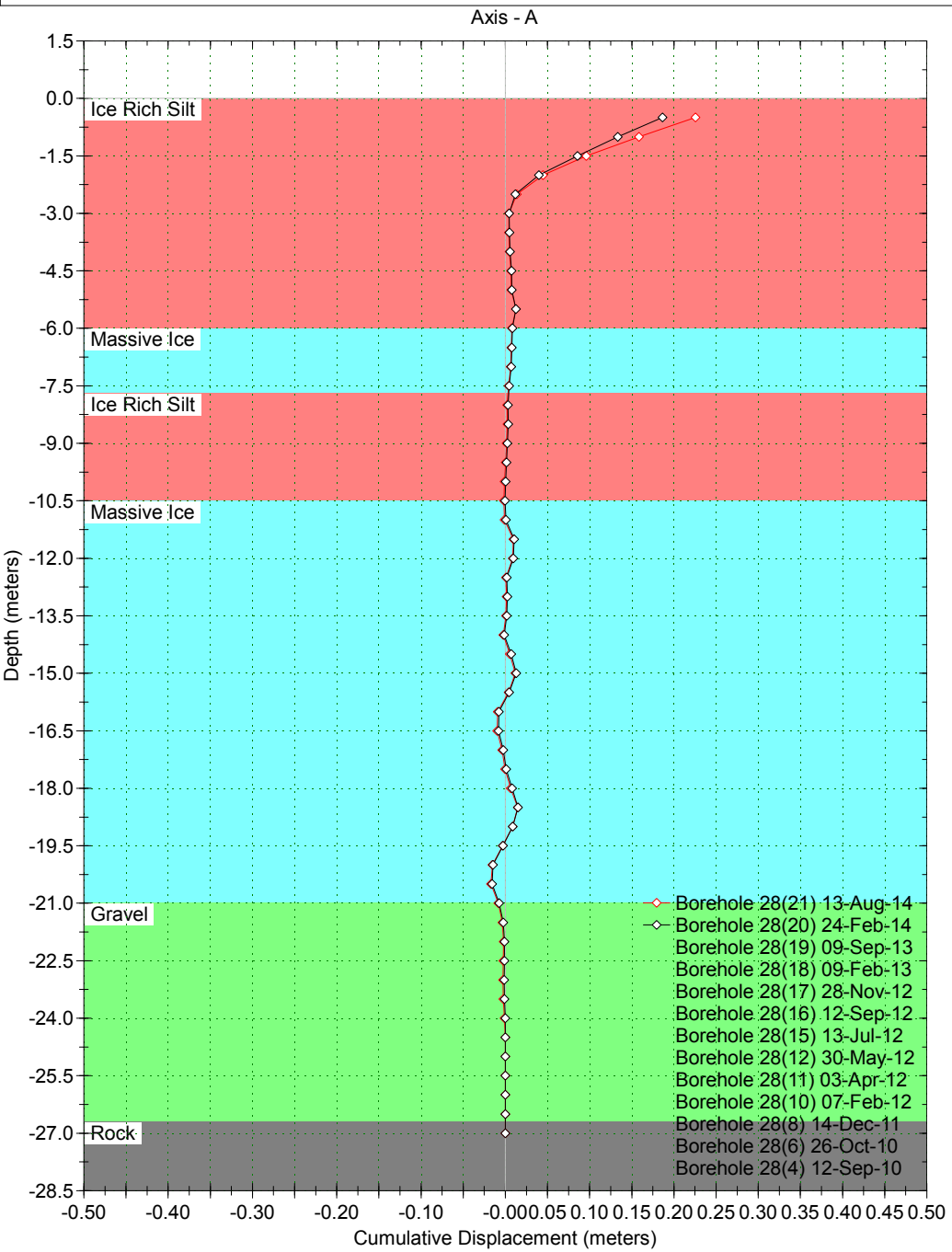
RST Instruments Ltd.

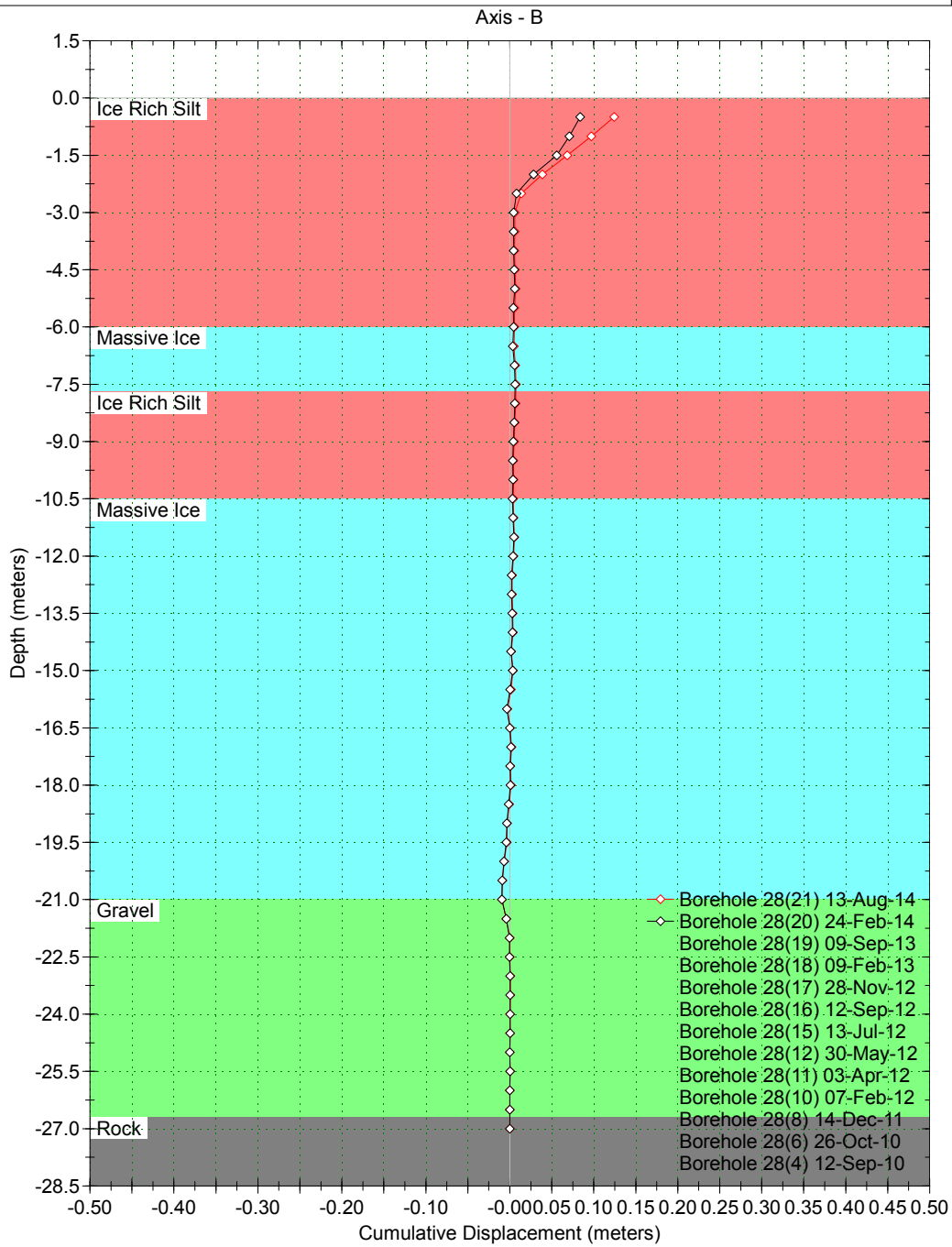
CUMULATIVE DISPLACEMENT

Inclinalysis v. 2.43.1

Borehole : BH28
Project : Keno
Location : DSTF
Northing : 7086985
Easting : 484026
Collar :

Spiral Correction : N/A
Collar Elevation : 0.0 meters
Borehole Total Depth : 27.0 meters
A+ Groove Azimuth :
Base Reading : 2010 Sep 07 10:08
Applied Azimuth : 0.0 degrees





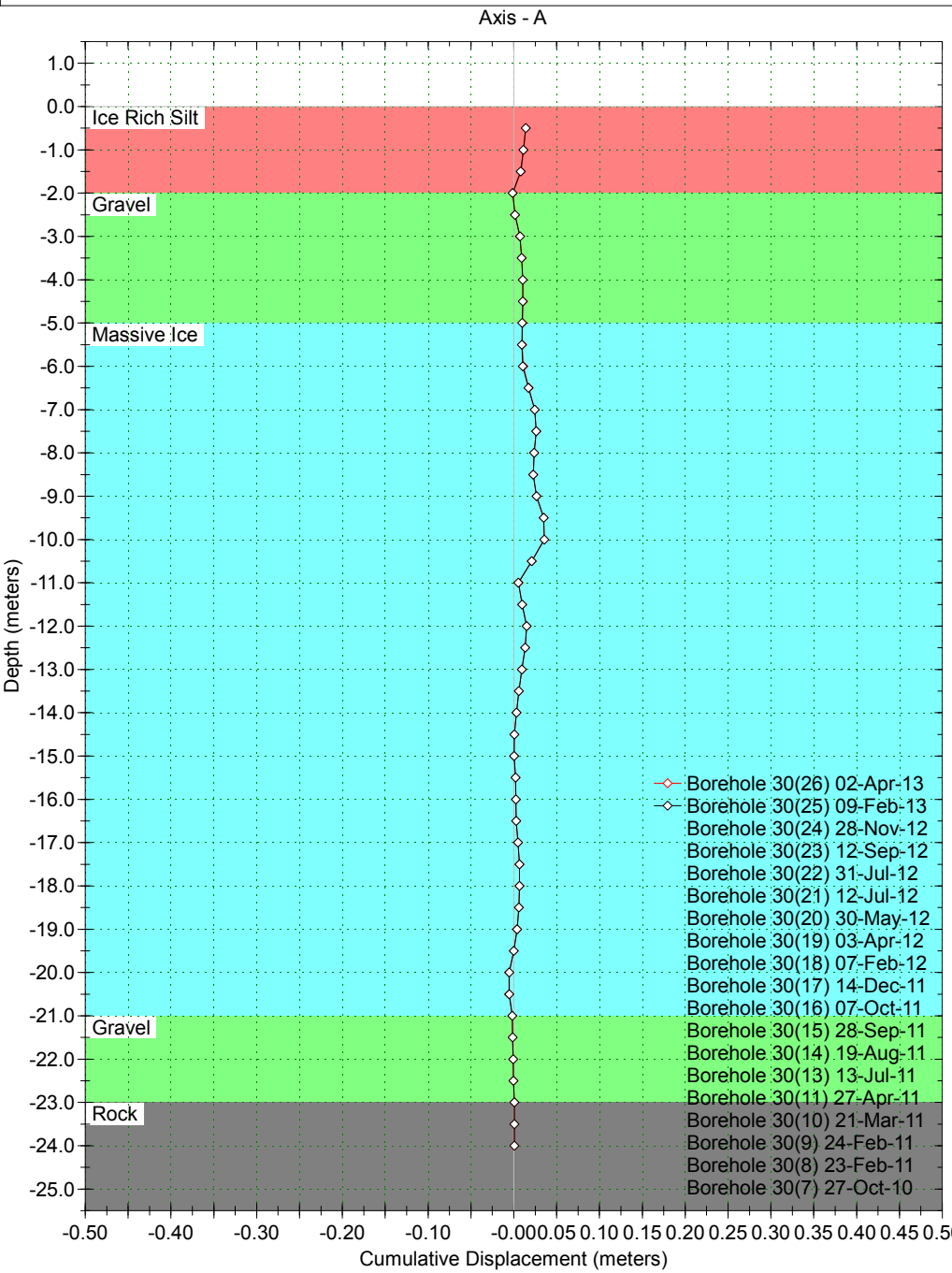
RST Instruments Ltd.

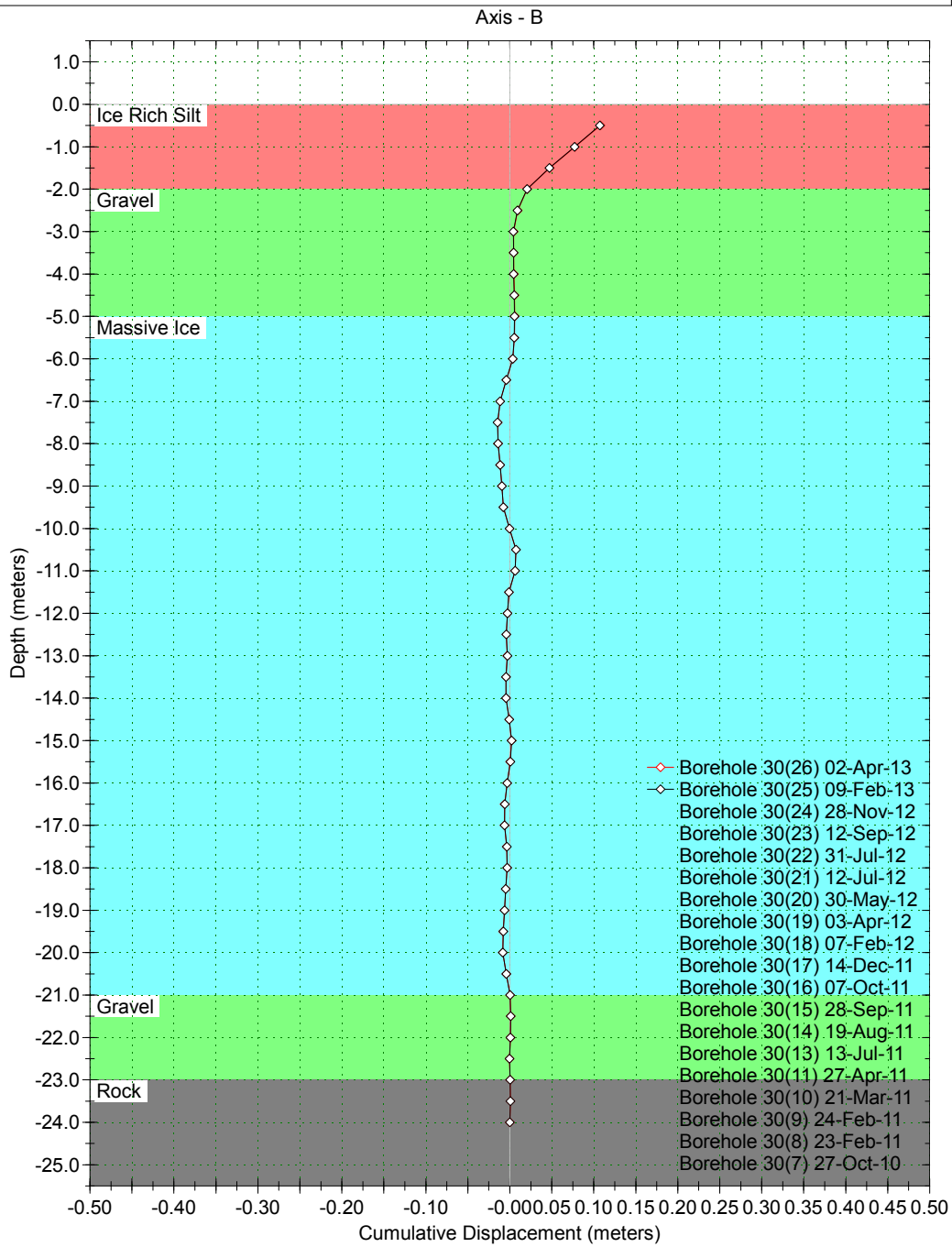
CUMULATIVE DISPLACEMENT

Inclinalysis v. 2.43.1

Borehole : BH30
Project : Keno
Location : DSTF
Northing : 7087032
Easting : 483969
Collar :

Spiral Correction : N/A
Collar Elevation : 0.0 meters
Borehole Total Depth : 24.0 meters
A+ Groove Azimuth :
Base Reading : 2010 Oct 26 15:40
Applied Azimuth : 0.0 degrees





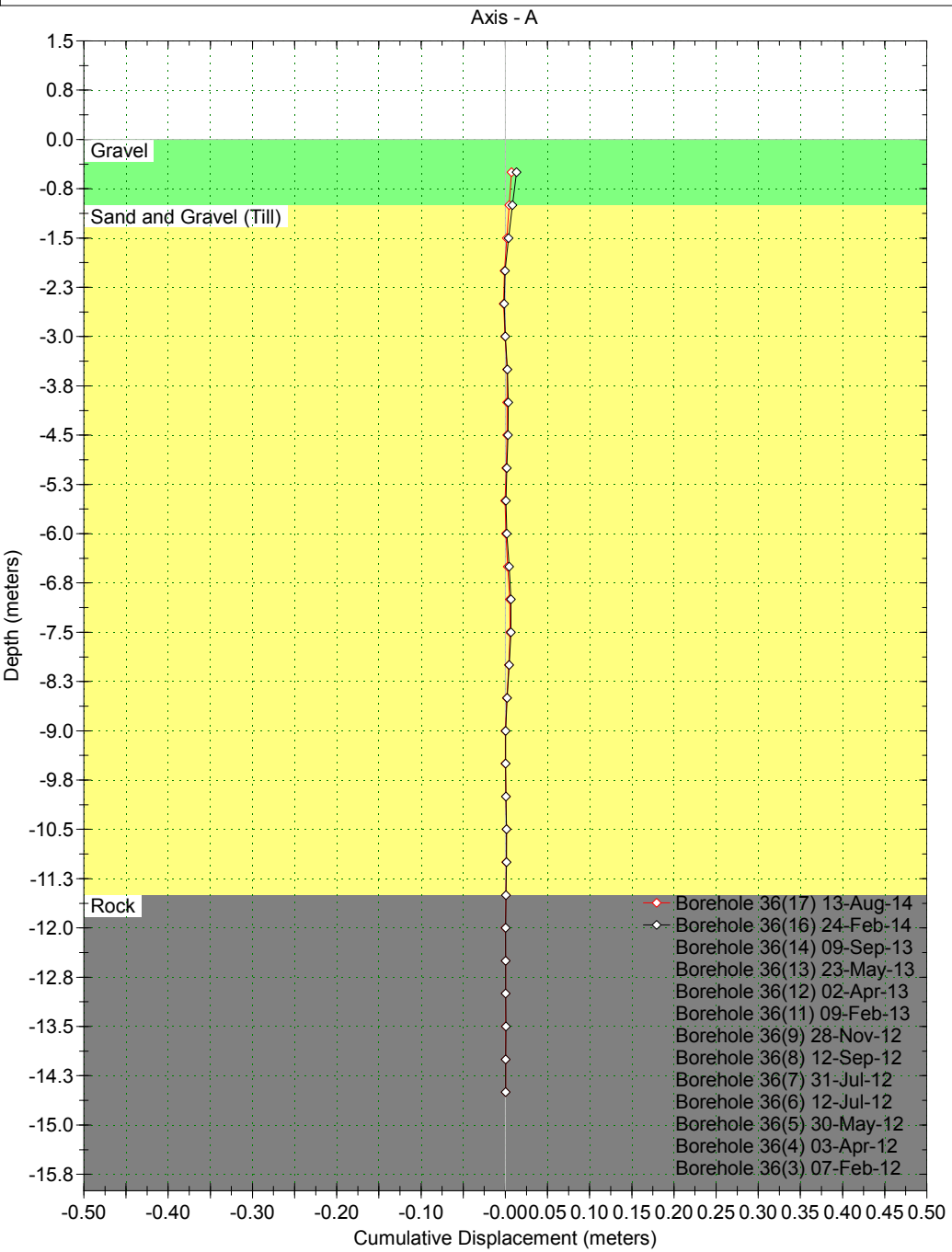
RST Instruments Ltd.

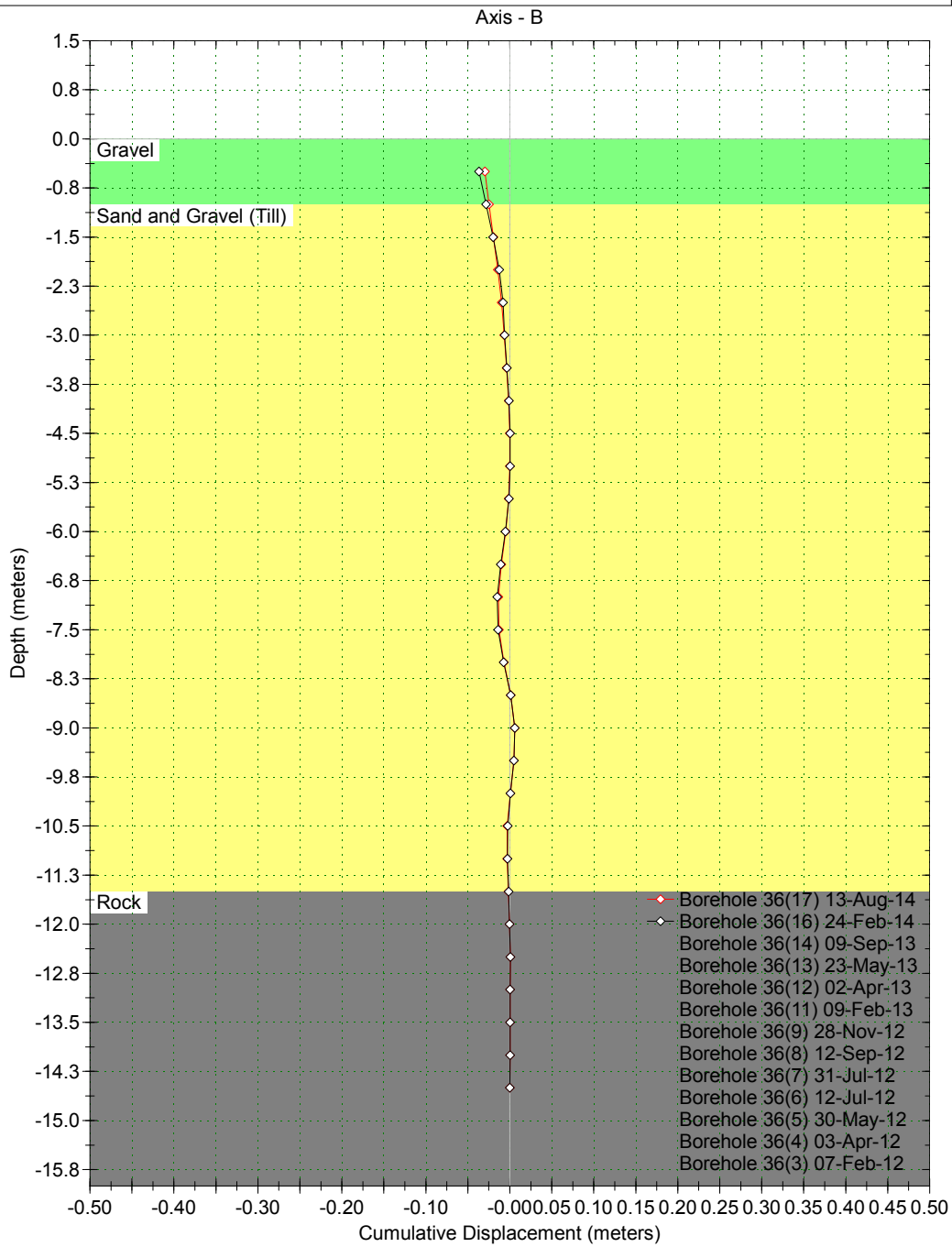
CUMULATIVE DISPLACEMENT

Inclinalysis v. 2.43.1

Borehole : BH36
Project : Keno
Location : DSTF
Northing : 7086872
Easting : 483931
Collar :

Spiral Correction : N/A
Collar Elevation : 0.0 meters
Borehole Total Depth : 14.5 meters
A+ Groove Azimuth :
Base Reading : 2011 Dec 14 16:52
Applied Azimuth : 0.0 degrees





APPENDIX B

2014 TAILINGS HUMIDITY CELL DATA

Bellekeno Mill Tailings Humidity Cell Water Quality Results, 2011 to 2014

Parameter	Units	17/08/2011	24/08/2011	31/08/2011	07/09/2011	14/09/2011	21/09/2011	28/09/2011	05/10/2011	12/10/2011	19/10/2011	26/10/2011	02/11/2011	09/11/2011	16/11/2011	23/11/2011	30/11/2011	07/12/2011	14/12/2011	21/12/2011	28/12/2011	04/01/2012	11/01/2012	18/01/2012	25/01/2012	01/02/2012	08/02/2012	15/02/2012
		Week 0	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15	Week 16	Week 17	Week 18	Week 19	Week 20	Week 21	Week 22	Week 23	Week 24	Week 25	Week 26
Total Volume In	mL	750	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Total Volume Out	mL	550	460	460	450	450	475	435	485	475	450	500	460	460	480	450	475	470	450	460	410	445	425	420	490	425	475	425
pH (lab)	pH units	7.89	7.70	7.86	7.81	7.91	7.81	7.91	7.86	7.84	7.79	7.91	7.83	7.85	7.91	7.87	7.95	7.90	7.83	7.93	7.95	7.88	7.84	7.84	7.89	7.97	7.91	7.89
Specific Conductance (lab)	µS/cm	1950	1050	1050	822	648	553	523	415	463	435	438	428	359	408	362	374	362	341	397	512	525	505	472	435	409	410	410
Hardness (from dissolved)	mg/L																											
Total Acidity	mg/L	5.0	4.8	5.8	10.9	5.0	3.4	5.6	7.1	7.2	6.3	10.4	5.1	6.2	7.5	5.8	7.7	4.8	5.7	7.8	6.2	7.1	6.2	6.2	8.8	4.1	6.8	8.8
Alkalinity, total	mg/L	43.0	45.0	68.3	64.5	49.6	62.7	68.4	78.3	73.7	73.9	72.1	75.6	71.3	71.7	72.3	72.4	72.7	71.2	64.9	58.2	48.7	62.8	66.3	66.1	58.2	58.2	61.9
Chloride	mg/L	15.6	7.4	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Fluoride	mg/L	0.354	0.37	0.34	0.34	0.288	0.270	0.254	0.208	0.183	0.164	0.161	0.179	0.138	0.125	0.124	0.113	0.111	0.174	0.097	0.106	0.111	0.108	0.098	0.101	0.092	0.094	0.082
Bromide	mg/L	<0.050	<0.50	<0.5	<0.50	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Sulphate, dissolved	mg/L	1150	513	595	455	320	248	230	158	189	172	181	184	128	159	129	138	130	119	129	194	206	193	175	148	141	141	142
Nitrite (N)	mg/L	0.0845	0.089	0.011	<0.010	0.0064	<0.0010	0.0036	0.0046	<0.0010	0.0016	0.0012	0.0043	0.0046	0.0052	0.0056	0.0046	0.0040	0.0069	0.0054	0.0049	0.0026	0.0056	0.0045	0.0025	0.0052	0.0074	0.0021
Nitrate (N)	mg/L	10.1	3.36	<0.050	<0.050	0.0148	0.0065	0.0096	0.0052	<0.0050	<0.0050	0.0070	0.0066	0.0064	0.0062	0.0141	0.0061	<0.0050	0.0101	0.0137	<0.0050	0.0061	0.0100	0.0096	0.0076	0.0104	0.0091	0.0060
Aluminum (Al), dissolved	mg/L	<0.010	<0.010	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0219	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050
Antimony (Sb), dissolved	mg/L	0.0230	0.0241	0.0222	0.0178	0.0159	0.0166	0.0159	0.0160	0.0164	0.0154	0.0155	0.0152	0.0141	0.0146	0.0145	0.0142	0.0130	0.0129	0.0130	0.0124	0.0107	0.00990	0.00986	0.0103	0.00943		0.00910
Arsenic (As), dissolved	mg/L	0.00081	0.00195	0.00248	0.00150	0.00139	0.00104	0.00079	0.00091	0.00080	0.00080	0.00083	0.00078	0.00075	0.00087	0.00076	0.00084	0.00083	0.00082	0.00089	0.00092	0.00076	0.00084	0.00098	0.00145	0.00110		0.00126
Barium (Ba), dissolved	mg/L	0.0985	0.0560	0.0372	0.0359	0.0387	0.0347	0.0371	0.0381	0.0395	0.0368	0.0389	0.0371	0.0397	0.0441	0.0397	0.0417	0.0415	0.0389	0.0427	0.0465	0.0450	0.0431	0.0413	0.0464	0.0407		0.0415
Beryllium (Be), dissolved	mg/L	<0.00020	<0.00020	<0.00020	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		<0.00010
Bismuth (Bi), dissolved	mg/L	<0.0010	<0.0010	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050		<0.00050
Boron (B), dissolved	mg/L	0.166	0.157	0.185	0.117	0.075	0.076	0.054	0.037	0.134	0.029	0.025	0.024	0.019	0.018	0.015	0.017	0.015	0.012	0.014	0.013	0.011	0.010	0.011	<0.010	<0.010		<0.010
Cadmium (Cd), dissolved	mg/L	0.0264	0.0216	0.0339	0.0292	0.0228	0.0263	0.0249	0.0205	0.0294	0.0292	0.0333	0.0328	0.0272	0.0329	0.0318	0.0342	0.0351	0.0343	0.0372	0.0391	0.0465	0.0485	0.0479	0.0528	0.0433		0.0515
Calcium (Ca), dissolved	mg/L	439	217	240	192	150	119	121	90.3	101	94.3	100	94.2	79.2	94.6	79.7	80.6	80.6	79.5	76.7	102	103	104	97.4	85.3	83.5		80.9
Chromium (Cr), dissolved	mg/L	<0.0010	<0.0010	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050		<0.00050
Cobalt (Co), dissolved	mg/L	0.00155	0.00089	0.00289	0.00318	0.00179	0.00198	0.00200	0.00150	0.00223	0.00200	0.00223	0.00219	0.00164	0.00213	0.00183	0.00194	0.00188	0.00173	0.00175	0.00184	0.00188	0.00201	0.00209	0.00241	0.00195		0.00240
Copper (Cu), dissolved	mg/L	0.0049	<0.0010	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	0.00062	0.00074	0.00078	0.00056	0.00073	<0.00050	<0.00050	0.00059	0.00099	0.00101	0.00082		0.00208
Iron (Fe), dissolved	mg/L	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030		<0.030
Lead (Pb), dissolved	mg/L	0.192	0.161	0.137	0.104	0.111	0.128	0.123	0.0971	0.0956	0.107	0.104	0.0985	0.0893	0.0894	0.0927	0.0918	0.0886	0.0852	0.0830	0.0794	0.0943	0.0898	0.0966	0.0898	0.0809		0.0781
Lithium (Li), dissolved	mg/L	0.0608	0.0495	0.0488	0.0269	0.0196	0.0162	0.0113	0.00832	0.00740	0.00656	0.00592	0.00589	0.00417	0.00426	0.00365	0.00339	0.00291	0.00267	0.00280	0.00297	0.00282	0.00284	0.00252	0.00247	0.00238		0.00234
Magnesium (Mg), dissolved	mg/L	17.3	10.6	10.3	6.94	4.64	3.70	2.89	1.89	2.05	1.71	1.67	1.46	1.09	1.28	1.04	1.09	1.00	0.904	0.974	1.28	1.39	1.45	1.28	1.28	1.07		1.03
Manganese (Mn), dissolved	mg/L	3.69	1.81	4.07	3.71	2.11	2.13	2.08	1.53	1.81	1.59	1.72	1.60	1.18	1.50	1.22	1.47	1.27	1.15	1.15	1.13	1.20	1.23	1.30	1.36	1.04		1.06
Mercury (Hg), dissolved	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010		<0.000010
Molybdenum (Mo), dissolved	mg/L	0.00463	0.00467	0.00422	0.00327	0.00376	0.00393	0.00387	0.00361	0.00333	0.00314	0.00299	0.00319	0.00295	0.00277	0.00268	0.00265	0.00259	0.00248	0.00226	0.00268	0.00266	0.00231	0.00233	0.00219	0.00223		0.00204
Nickel (Ni), dissolved	mg/L	0.0037	0.0015	0.0042	0.00415	0.00193	0.00223	0.00209	0.00154	0.00264	0.00217	0.00238	0.00209	0.00158	0.00200	0.00161	0.00175	0.00163	0.00140	0.00148	0.00157	0.00125	0.00143	0.00141	0.00180	0.00145		0.00180
Phosphorus (P), dissolved	mg/L	0.61	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30		<0.30
Potassium (K), dissolved	mg/L	27.1	13.0	8.75	4.78	3.74	2.88	2.23	1.57	1.58	1.30	1.29	1.17	0.846	0.923	0.807	0.794	0.727	0.642	0.652	0.715	0.702	0.618	0.583	0.627	0.497		0.481
Selenium (Se), dissolved	mg/L	0.00176	0.00109	0.00076	0.00075	0.00054	0.00044	0.00042	0.00028	0.00031	0.00029	0.00028	0.00026	0.00020	0.00022	0.00017	0.00020	0.00019	0.00017	0.00018	0.00022	0.00020	0.00017	0.00017	0.00016	0.00017		0.00017
Silicon (Si), dissolved	mg/L	2.48	2.82	4.61	3.76	4.07	4.28	4.42	4.11	3.97	3.98	4.07	4.17	3.67	3.71	3.73	3.51	3.62	3.36	3.21	3.01	2.95	2.98	2.94	3.25	2.87		2.73
Silver (Ag), dissolved	mg/L	0.00801	0.000588	<0.000020	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010		<0.000010
Sodium (Na), dissolved	mg/L	67.5	23.3	10.4	3.64	2.14	1.35	0.853	0.562	0.746	0.460	0.477	0.426	0.350	0.352	0.295	0.305	0.289	0.264	0.285	0.338	0.322	0.315	0.282	0.309	0.241		0.242
Strontium (Sr), dissolved	mg/L	1.33	0.623	0.565	0.382	0.276	0.249	0.245	0.179	0.185	0.166	0.168	0.187	0.129	0.148	0.147	0.144	0.134	0.119	0.111	0.147	0.174	0.146	0.143	0.120	0.119		0.107
Sulphur (S), dissolved	mg/L	459	249	198	147	111	86.1	78.8	53.1	63.5	58.5	60.9	57.7	43.4	54.1	44.3	46.7	43.5	40.5	44.4	65.8	70.6	65.8	59.3	50.5	50.7		49.1
Thallium (Tl), dissolved	mg/L	0.000564	0.000455	0.000381	0.000248	0.000147	0.000189	0.000218	0.000232	0.000105	0.000097	0.000099	0.000263	0.000076	0.000079	0.000243	0.000267	0.000222	0.000176	0.000074	0.000078	0.000238	0.000091	0.000287	0.000098	0.000058		0.000048
Tin (Sn), dissolved	mg/L	<0.00020	<0.00020	<0.00020	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		<0.00010
Titanium (Ti), dissolved	mg/L	<0.010	<0.010	<0.010	<0.010	0.016	0.014	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	0.011	<0.010	<0.010	<0.010	<0.010	<0.010	0.011	<0.010	<0.010	<0.010	<0.010		<0.010
Uranium (U), dissolved	mg/L	0.000725	0.000413	0.000698	0.000526	0.000315	0.000276	0.000261	0.000179	0.000243	0.000193	0.000212	0.000188	0.000127	0.000184	0.000124	0.000147	0.000129	0.000103	0.000115	0.000200	0.000178	0.000153	0.000130	0.000112	0.000099		0.000093
Vanadium (V), dissolved	mg/L	<0.0020	<0.0020	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		<0.0010
Zinc (Zn), dissolved	mg/L	0.478	0.587	1.97	2.16	1.16	1.77	1.82	1.56	2.34	2.23	2.71	2.87	2.14	2.69	2.55	2.71	2.76	2.64	2.72	2.18	2.69	2.98	2.91	3.47	2.76	3.02	3.02

Bellekeno Mill Tailings Humidity Cell Water Quality Results, 2011 to 2014

Parameter	Units	22/02/2012	29/02/2012	07/03/2012	14/03/2012	21/03/2012	28/03/2012	04/04/2012	11/04/2012	18/04/2012	25/04/2012	02/05/2012	09/05/2012	16/05/2012	23/05/2012	30/05/2012	06/06/2012	13/06/2012	20/06/2012	27/06/2012	04/07/2012	11/07/2012	18/07/2012	25/07/2012	01/08/2012	08/08/2012	15/08/2012	22/08/2012
		Week 27	Week 28	Week 29	Week 30	Week 31	Week 32	Week 33	Week 34	Week 35	Week 36	Week 37	Week 38	Week 39	Week 40	Week 41	Week 42	Week 43	Week 44	Week 45	Week 46	Week 47	Week 48	Week 49	Week 50	Week 51	Week 52	Week 53
Total Volume In	mL	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Total Volume Out	mL	500	450	460	475	500	470	425	480	455	475	475	500	455	485	495	490	475	475	475	470	475	475	480	475	475	470	475
pH (lab)	pH units	7.86	7.94	7.91	7.85	7.94	7.91	7.93	7.79	7.92	7.91	7.89	7.85	7.88	7.80	7.86	7.80	7.91	7.90	7.93	7.87	7.87	7.92	7.91	7.88	7.89	7.93	7.91
Specific Conductance (lab)	µS/cm	345	407	382	344	351	369	383	322	341	332	309	294	330	299	299	292	281	277	274	271	270	256	260	245	265	254	245
Hardness (from dissolved)	mg/L																											
Total Acidity	mg/L	5.3	10.8	5.4	7.4	8.3	9.0	11.5	6.9	10.3	15.0	12.8	8.0	6.2	8.8	14.9	14.3	8.7	7.7	12.9	5.3	6.8	14.9	6.2	7.6	7.5	8.6	9.0
Alkalinity, total	mg/L	53.6	61.9	65.5	64.8	59.8	54.9	57.1	49.0	61.2	58.8	49.2	55.3	49.3	57.9	55.5	62.8	58.8	48.5	47.4	49.1	56.2	57.4	59.1	51.4	61.6	55.3	58.0
Chloride	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Fluoride	mg/L	0.077	0.080	0.080	0.080	0.073	0.071	0.071	0.059	0.068	0.067	0.059	0.050	0.058	0.052	0.050	0.048	0.044	0.041	0.037	0.038	0.040	0.033	0.035	0.031	0.032	0.031	0.030
Bromide	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Sulphate, dissolved	mg/L	116	140	124	109	112	122	131	102	112	106	94.3	88.7	108	92.9	90.9	87.4	81.8	82.7	82.3	79.9	78.0	75.6	74.4	68.4	73.8	70.7	64.4
Nitrite (N)	mg/L	0.0017	0.0013	0.0015	0.0019	0.0014	0.0017	0.0019	0.0018	0.0010	0.0014	0.0012	<0.0010	<0.0010	<0.0010	<0.0010	0.0019	0.0018	<0.0010	0.0013	0.0019	0.0012	<0.0010	0.0016	<0.0010	<0.0010	0.0012	0.0017
Nitrate (N)	mg/L	<0.0050	<0.0050	0.0063	0.0074	0.0085	0.0095	0.0056	0.0057	<0.0050	0.0069	<0.0050	0.0194	0.0061	0.0054	0.0067	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0150	<0.0050	<0.0050	<0.0050	0.0128	<0.0050	<0.0050
Aluminum (Al), dissolved	mg/L		<0.0050		<0.0050		<0.0050		<0.0050		<0.0050		<0.0050		<0.0050		<0.0050		<0.0050		<0.0050		<0.0050		<0.0050		<0.0050	
Antimony (Sb), dissolved	mg/L		0.00901		0.00812		0.00817		0.00804		0.00749		0.00858		0.00770		0.00800		0.00729		0.00719		0.00753		0.00729		0.00757	
Arsenic (As), dissolved	mg/L		0.00131		0.00155		0.00129		0.00168		0.00145		0.00154		0.00160		0.00168		0.00137		0.00141		0.00169		0.00185		0.00152	
Barium (Ba), dissolved	mg/L		0.0418		0.0393		0.0424		0.0388		0.0419		0.0408		0.0446		0.0465		0.0468		0.0479		0.0509		0.0487		0.0502	
Beryllium (Be), dissolved	mg/L		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010	
Bismuth (Bi), dissolved	mg/L		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050	
Boron (B), dissolved	mg/L		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		0.011		<0.010	
Cadmium (Cd), dissolved	mg/L		0.0497		0.0491		0.0486	0.0498	0.0538	0.0604	0.0485	0.0564	0.0525	0.0505	0.0596	0.0614	0.0611	0.0614	0.0481	0.0493	0.0513	0.0596	0.0601	0.0582	0.0578	0.0638	0.0489	0.0533
Calcium (Ca), dissolved	mg/L		81.4		62.1		67.0		58.2		67.9		55.3		53.9		56.6		52.8		51.2		50.2		48.7		44.5	
Chromium (Cr), dissolved	mg/L		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050	
Cobalt (Co), dissolved	mg/L		0.00254		0.00256		0.00268		0.00277		0.00299		0.00307		0.00350		0.00402		0.00360		0.00407		0.00446		0.00458		0.00442	
Copper (Cu), dissolved	mg/L		0.00158		0.00192		0.00240		0.00225		0.00315		0.00261		0.00241		0.00315		0.00261		0.00311		0.00463		0.00341		0.00333	
Iron (Fe), dissolved	mg/L		<0.030		<0.030		<0.030		<0.030		<0.030		<0.030		<0.030		<0.030		<0.030		<0.030		<0.030		<0.030		<0.030	
Lead (Pb), dissolved	mg/L		0.0871		0.0779		0.0847		0.0834		0.0850		0.0926		0.0831		0.0867		0.0875		0.0901		0.0860		0.0800		0.0865	
Lithium (Li), dissolved	mg/L		0.00231		0.00172		0.00184		0.00099		0.00162		0.00148		0.00207		0.00093		0.00165		0.00158		0.00155		0.00194		0.00127	
Magnesium (Mg), dissolved	mg/L		0.999		0.862		0.987		0.939		1.12		1.02		1.32		1.43		1.46		1.54		1.51		1.27		1.49	
Manganese (Mn), dissolved	mg/L		1.05		1.09		0.958		1.03		0.978		1.01		1.14		1.20		1.06		1.20		1.28		1.27		1.16	
Mercury (Hg), dissolved	mg/L		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010	
Molybdenum (Mo), dissolved	mg/L		0.00193		0.00178		0.00175		0.00158		0.00165		0.00162		0.00139		0.00133		0.00138		0.00131		0.00118		0.00112		0.00122	
Nickel (Ni), dissolved	mg/L		0.00191		0.00188		0.00189		0.00204		0.00221		0.00234		0.00278		0.00313		0.00282		0.00332		0.00378		0.00404		0.00389	
Phosphorus (P), dissolved	mg/L		<0.30		<0.30		<0.30		<0.30		<0.30		<0.30		<0.30		<0.30		<0.30		<0.30		<0.30		<0.30		<0.30	
Potassium (K), dissolved	mg/L		0.439		0.385		0.374		0.331		0.349		0.317		0.329		0.318		0.311		0.311		0.306		0.283		0.283	
Selenium (Se), dissolved	mg/L		0.00017		0.00014		0.00015		0.00012		0.00014		0.00013		0.00015		0.00015		0.00015		0.00013		0.00012		0.00014		0.00014	
Silicon (Si), dissolved	mg/L		2.57		2.72		2.43		2.41		2.58		2.45		2.57		2.62		2.48		2.49		2.63		2.60		2.50	
Silver (Ag), dissolved	mg/L		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010	
Sodium (Na), dissolved	mg/L		0.226		0.209		0.200		0.184		0.202		0.172		0.183		0.179		0.159		0.160		0.159		0.135		0.134	
Strontium (Sr), dissolved	mg/L		0.118		0.104		0.112		0.101		0.103		0.103		0.0966		0.0928		0.0919		0.0854		0.0778		0.0742		0.0736	
Sulphur (S), dissolved	mg/L		46.1		36.7		39.4		34.7		36.7		29.6		31.1		29.3		27.4		27.0		25.3		23.1		23.7	
Thallium (Tl), dissolved	mg/L		0.000046		0.000038		0.000059		0.000039		0.000042		0.000041		0.000039		0.000042		0.000037		0.000040		0.000037		0.000034		0.000036	
Tin (Sn), dissolved	mg/L		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010	
Titanium (Ti), dissolved	mg/L		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010	
Uranium (U), dissolved	mg/L		0.000091		0.000049		0.000066		0.000042		0.000050		0.000037		0.000035		0.000031		0.000030		0.000028		0.000028		0.000019		0.000023	
Vanadium (V), dissolved	mg/L		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010	
Zinc (Zn), dissolved	mg/L	3.46	3.34	4.25	3.72	3.14	3.11	3.35	3.48	4.28	3.01	3.87	3.29	2.60	3.86	3.65	3.61	4.07	2.63	2.89	2.96	3.96	3.43	4.06	3.48	4.14	2.59	3.53

Bellekeno Mill Tailings Humidity Cell Water Quality Results, 2011 to 2014

Parameter	Units	29/08/2012	05/09/2012	12/09/2012	19/09/2012	26/09/2012	03/10/2012	10/10/2012	17/10/2012	24/10/2012	31/10/2012	07/11/2012	14/11/2012	21/11/2012	28/11/2012	05/12/2012	12/12/2012	19/12/2012	26/12/2012	02/01/2013	09/01/2013	16/01/2013	23/01/2013	30/01/2013	06/02/2013	13/02/2013	20/02/2013	27/02/2013
		Week 54	Week 55	Week 56	Week 57	Week 58	Week 59	Week 60	Week 61	Week 62	Week 63	Week 64	Week 65	Week 66	Week 67	Week 68	Week 69	Week 70	Week 71	Week 72	Week 73	Week 74	Week 75	Week 76	Week 77	Week 78	Week 79	Week 80
Total Volume In	mL	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Total Volume Out	mL	480	475	490	470	495	475	500	500	450	475	475	475	475	450	400	460	475	475	500	405	500	450	465	475	460	425	500
pH (lab)	pH units	7.91	7.87	7.87	7.91	7.99	7.91	7.80	7.88	7.86	7.90	7.26	7.93	7.83	7.91	7.94	7.97	7.92	7.96	7.93	7.97	7.86	7.88	7.94	7.89	7.86	7.94	7.98
Specific Conductance (lab)	µS/cm	246	228	224	241	226	230	213	206	197	198	116	223	215	207	215	193	202	196	188	197	199	196	188	196	192	190	192
Hardness (from dissolved)	mg/L																											
Total Acidity	mg/L	6.6	9.4	5.9	7.2	9.1	7.3	6.1	6.7	7.1	3.4	2.9	4.5	4.3	3.1	3.7	5.3	4.8	3.7	5.0	9.0	5.2	3.9	3.8	2.9	4.0	5.5	4.1
Alkalinity, total	mg/L	57.4	63.4	54.6	59.8	49.4	56.5	55.6	58.8	48.8	59.9	30.6	57.5	55.9	51.7	56.3	58.7	57.8	65.9	55.9	51.2	54.7	58.1	55.3	54.6	63.9	55.1	63.7
Chloride	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Fluoride	mg/L	0.034	0.028	0.026	0.026	0.026	0.024	0.023	<0.020	0.021	<0.020	<0.020	0.023	0.023	<0.020	0.021	0.020	<0.020	<0.020	0.021	0.025	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Bromide	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Sulphate, dissolved	mg/L	66.9	56.9	60.3	64.6	62.7	60.6	52.8	47.8	46.1	45.5	24.7	57.1	53.4	50.1	51.5	42.7	45.0	42.4	38.8	44.1	44.5	42.6	41.1	43.5	40.4	39.9	39.9
Nitrite (N)	mg/L	0.0027	<0.0010	0.0016	0.0016	0.0017	0.0022	0.0024	0.0019	0.0026	0.0029	0.0026	0.0066	0.0025	0.0017	0.0060	0.0133	0.0051	0.0017	0.0026	0.0060	0.0024	0.0026	0.0017	0.0020	0.0034	0.0028	0.0027
Nitrate (N)	mg/L	0.0128	0.0123	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0055	<0.0050	<0.0050	<0.0050	0.0068	0.0120	0.0052	0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0093	0.0055	0.0052	<0.0050	<0.0050	<0.0050	0.0070	<0.0050
Aluminum (Al), dissolved	mg/L	<0.0050		<0.0050		<0.0050		<0.0050		<0.0050		<0.0050		<0.0050		<0.0050		<0.0050		<0.0050		<0.0050		<0.0050		<0.0050		<0.0050
Antimony (Sb), dissolved	mg/L	0.00735		0.00690		0.00733		0.00643		0.00642		0.00415		0.00653		0.00689		0.00663		0.00623		0.00611		0.00587		0.00606		0.00582
Arsenic (As), dissolved	mg/L	0.00156		0.00161		0.00159		0.00154		0.00146		0.00102		0.00132		0.00156		0.00168		0.00187		0.00192		0.00151		0.00188		0.00153
Barium (Ba), dissolved	mg/L	0.0499		0.0510		0.0487		0.0516		0.0456		0.0300		0.0545		0.0715		0.0531		0.0500		0.0520		0.0467		0.0618		0.0508
Beryllium (Be), dissolved	mg/L	<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010
Bismuth (Bi), dissolved	mg/L	<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050
Boron (B), dissolved	mg/L	<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010
Cadmium (Cd), dissolved	mg/L	0.0482	0.0503	0.0550	0.0523	0.0489	0.0499	0.0490	0.0460	0.0430	0.0419	0.0293	0.0395	0.0474	0.0373	0.0498	0.0355	0.0428	0.0397	0.0359	0.0365	0.0421	0.0437	0.0314	0.0321	0.0489	0.0303	0.0394
Calcium (Ca), dissolved	mg/L	47.6		44.8		44.7		40.4		35.7		20.1		41.1		39.0		37.0		33.9		36.1		35.1		37.4		34.3
Chromium (Cr), dissolved	mg/L	<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050
Cobalt (Co), dissolved	mg/L	0.00433		0.00483		0.00465		0.00489		0.00404		0.00210		0.00538		0.00540		0.00459		0.00418		0.00470		0.00373		0.00573		0.00505
Copper (Cu), dissolved	mg/L	0.00304		0.00325		0.00327		0.00361		0.00323		0.00115		0.00386		0.00450		0.00305		0.00275		0.00269		0.00242		0.00374		0.00304
Iron (Fe), dissolved	mg/L	<0.030		<0.030		<0.030		<0.030		<0.030		<0.030		<0.030		<0.030		<0.030		<0.030		<0.030		<0.030		<0.030		<0.030
Lead (Pb), dissolved	mg/L	0.0835		0.0772		0.0844		0.0833		0.0708		0.0574		0.0866		0.0811		0.0827		0.0809		0.0743		0.0794		0.0802		0.0785
Lithium (Li), dissolved	mg/L	0.00172		0.00124		0.00144		0.00111		0.00076		<0.00050		0.00140		0.00143		0.00131		0.00060		<0.00050		0.00102		<0.00050		0.00071
Magnesium (Mg), dissolved	mg/L	1.53		1.47		1.48		1.33		1.12		0.630		1.45		1.82		1.31		1.18		1.29		1.21		1.54		1.28
Manganese (Mn), dissolved	mg/L	1.22		1.41		1.36		1.50		1.13		0.699		1.50		1.48		1.31		1.26		1.30		1.09		1.52		1.28
Mercury (Hg), dissolved	mg/L	<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010
Molybdenum (Mo), dissolved	mg/L	0.00127		0.00109		0.00123		0.00102		0.00112		0.000631		0.000987		0.00117		0.00101		0.000989		0.000910		0.000948		0.000870		0.000827
Nickel (Ni), dissolved	mg/L	0.00376		0.00436		0.00426		0.00466		0.00379		0.00203		0.00501		0.00497		0.00435		0.00398		0.00460		0.00374		0.00576		0.00496
Phosphorus (P), dissolved	mg/L	<0.30		<0.30		<0.30		<0.30		<0.30		<0.30		<0.30		<0.30		<0.30		<0.30		<0.30		<0.30		<0.30		<0.30
Potassium (K), dissolved	mg/L	0.288		0.286		0.268		0.248		0.224		0.119		0.273		0.380		0.252		0.244		0.246		0.233		0.291		0.236
Selenium (Se), dissolved	mg/L	0.00014		0.00013		0.00015		0.00012		0.00011		<0.00010		0.00012		0.00011		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010
Silicon (Si), dissolved	mg/L	2.50		2.39		2.42		2.28		1.97		1.02		2.20		2.10		2.14		1.98		1.98		1.78		1.94		1.87
Silver (Ag), dissolved	mg/L	<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010
Sodium (Na), dissolved	mg/L	0.135		0.130		0.123		0.109		0.089		0.052		0.113		0.157		0.173		0.097		0.098		0.094		0.129		0.097
Strontium (Sr), dissolved	mg/L	0.0753		0.0666		0.0713		0.0629		0.0560		0.0328		0.0635		0.0642		0.0641		0.0591		0.0608		0.0590		0.0619		0.0616
Sulphur (S), dissolved	mg/L	22.8		19.8		20.3		17.3		14.6		8.17		17.3		17.0		14.7		12.7		15.0		13.5		14.1		13.2
Thallium (Tl), dissolved	mg/L	0.000036		0.000032		0.000039		0.000034		0.000031		0.000016		0.000034		0.000042		0.000034		0.000033		0.000032		0.000032		0.000033		0.000031
Tin (Sn), dissolved	mg/L	<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010
Titanium (Ti), dissolved	mg/L	<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010
Uranium (U), dissolved	mg/L	0.000021		0.000016		0.000020		0.000013		0.000011		<0.000010		0.000015		0.000015		0.000011		<0.000010		0.000014		0.000011		0.000010		0.000010
Vanadium (V), dissolved	mg/L	<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010
Zinc (Zn), dissolved	mg/L	2.34	2.52	2.98	2.92	2.55	2.76	2.75	2.50	2.21	2.19	0.981	1.71	2.51	1.62	2.17	1.63	2.06	1.91	1.65	1.61	1.95	2.15	1.36	1.31	2.20	1.28	1.91

Bellekeno Mill Tailings Humidity Cell Water Quality Results, 2011 to 2014

Parameter	Units	06/03/2013	13/03/2013	20/03/2013	27/03/2013	03/04/2013	10/04/2013	17/04/2013	24/04/2013	01/05/2013	08/05/2013	15/05/2013	22/05/2013	29/05/2013	05/06/2013	12/06/2013	19/06/2013	26/06/2013	03/07/2013	10/07/2013	17/07/2013	24/07/2013	31/07/2013	07/08/2013	14/08/2013	21/08/2013	28/08/2013	04/09/2013
		Week 81	Week 82	Week 83	Week 84	Week 85	Week 86	Week 87	Week 88	Week 89	Week 90	Week 91	Week 92	Week 93	Week 94	Week 95	Week 96	Week 97	Week 98	Week 99	Week 100	Week 101	Week 102	Week 103	Week 104	Week 105	Week 106	Week 107
Total Volume In	mL	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Total Volume Out	mL	450	475	475	455	475	465	460	475	475	450	475	450	460	460	465	425	455	455	465	460	450	460	475	460	475	470	450
pH (lab)	pH units	7.98	7.97	7.94	7.97	8.00	7.95	7.98	7.91	7.87	7.91	7.98	8.02	7.94	7.97	8.00	7.96	8.01	8.05	8.00	7.94	7.98	7.98	7.92	7.94	7.99	8.01	7.94
Specific Conductance (lab)	µS/cm	186	180	187	176	190	185	182	203	194	171	197	186	180	178	194	181	190	185	208	225	216	199	221	199	198	213	207
Hardness (from dissolved)	mg/L																				111		98.9		94.4		106	
Total Acidity	mg/L	7.9	3.2	3.8	2.0	2.9	3.2	3.5	4.4	2.9	3.7	2.7	2.6	3.0	6.7	6.3	3.0	4.9	1.9	2.7	6.7	2.4	4.2	4.3	7.9	4.6	2.4	14.4
Alkalinity, total	mg/L	55.7	52.4	52.9	52.1	58.4	54.2	58.3	61.0	64.7	55.2	63.3	62.3	55.2	66.6	57.0	54.5	63.1	62.0	57.8	71.9	67.0	64.1	73.9	62.5	64.3	64.3	68.6
Chloride	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Fluoride	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.022	<0.020	<0.020	0.023	0.023	0.021	<0.020	0.021	0.021	0.021	0.021	0.020	0.022	<0.020	<0.020	0.020	<0.020	<0.020	<0.020	<0.020
Bromide	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Sulphate, dissolved	mg/L	39.1	36.9	38.1	35.9	40.5	37.1	34.8	40.6	39.8	33.6	40.0	40.6	38.7	35.7	41.4	37.5	37.9	38.0	38.5	41.7	39.0	34.3	40.4	31.9	34.6	38.0	35.5
Nitrite (N)	mg/L	0.0029	0.0022	0.0019	0.0026	0.0018	0.0019	0.0063	0.0020	0.0020	<0.0010	0.0024	0.0043	0.0014	<0.0010	0.0018	0.0015	<0.0010	<0.0010	0.0037	0.0044	0.0049	0.0016	0.0038	0.0015	0.0015	0.0028	<0.0010
Nitrate (N)	mg/L	<0.0050	0.0053	0.0060	0.0053	<0.0050	<0.0050	0.0053	<0.0050	0.0066	0.0061	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0060	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Aluminum (Al), dissolved	mg/L		<0.0050		<0.0050		<0.0050		<0.0050		<0.0050		<0.0050		<0.0050		<0.0050		<0.0050		<0.0050		<0.0050		<0.0050		<0.0050	
Antimony (Sb), dissolved	mg/L		0.00537		0.00515		0.00524		0.00552		0.00520		0.00503		0.00428		0.00396		0.00454		0.00440		0.00401		0.00424		0.00413	
Arsenic (As), dissolved	mg/L		0.00128		0.00125		0.00135		0.00172		0.00154		0.00151		0.00188		0.00155		0.00145		0.00150		0.00149		0.00123		0.00127	
Barium (Ba), dissolved	mg/L		0.0479		0.0440		0.0458		0.0511		0.0406		0.0433		0.0457		0.0404		0.0426		0.0523		0.0440		0.0417		0.0449	
Beryllium (Be), dissolved	mg/L		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010	
Bismuth (Bi), dissolved	mg/L		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050	
Boron (B), dissolved	mg/L		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010	
Cadmium (Cd), dissolved	mg/L	0.0290	0.0328	0.0381	0.0299	0.0315	0.0379	0.0402	0.0456	0.0416	0.0315	0.0368	0.0254	0.0231	0.0359	0.0355	0.0238	0.0325	0.0284	0.0384	0.0450	0.0393	0.0402	0.0443	0.0406	0.0308	0.0384	0.0404
Calcium (Ca), dissolved	mg/L		34.7		32.0		33.3		37.5		33.3		36.6		34.9		33.7		35.5		40.5		36.3		34.7		38.9	
Chromium (Cr), dissolved	mg/L		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050		<0.00050	
Cobalt (Co), dissolved	mg/L		0.00415		0.00356		0.00527		0.00583		0.00382		0.00295		0.00436		0.00291		0.00353		0.00625		0.00552		0.00553		0.00570	
Copper (Cu), dissolved	mg/L		0.00239		0.00240		0.00268		0.00293		0.00191		0.00174		0.00186		0.00140		0.00152		0.00257		0.00197		0.00206		0.00189	
Iron (Fe), dissolved	mg/L		<0.030		<0.030		<0.030		<0.030		<0.030		<0.030		<0.030		<0.030		<0.030		<0.030		<0.030		<0.030		<0.030	
Lead (Pb), dissolved	mg/L		0.0721		0.0663		0.0750		0.0746		0.0623		0.0665		0.0608		0.0510		0.0650		0.0715		0.0585		0.0586		0.0595	
Lithium (Li), dissolved	mg/L		0.00054		0.00091		0.00086		0.00161		0.00071		0.00104		0.00107		0.00110		0.00122		0.00148		0.00092		<0.00050		0.00124	
Magnesium (Mg), dissolved	mg/L		1.20		1.23		1.35		1.51		1.33		1.80		1.94		2.01		2.08		2.46		2.00		1.88		2.08	
Manganese (Mn), dissolved	mg/L		1.09		0.973		1.21		1.40		0.944		0.758		0.981		0.672		0.743		1.18		1.12		1.11		1.15	
Mercury (Hg), dissolved	mg/L		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010	
Molybdenum (Mo), dissolved	mg/L		0.000818		0.000812		0.000690		0.000692		0.000689		0.000786		0.000500		0.000503		0.000512		0.000415		0.000317		0.000332		0.000282	
Nickel (Ni), dissolved	mg/L		0.00409		0.00355		0.00550		0.00626		0.00411		0.00319		0.00469		0.00324		0.00400		0.00744		0.00673		0.00702		0.00778	
Phosphorus (P), dissolved	mg/L		<0.30		<0.30		<0.30		<0.30		<0.30		<0.30		<0.30		<0.30		<0.30		<0.30		<0.30		<0.30		<0.30	
Potassium (K), dissolved	mg/L		0.220		0.217		0.252		0.253		0.211		0.247		0.232		0.226		0.220		0.237		0.226		0.217		0.221	
Selenium (Se), dissolved	mg/L		<0.00010		<0.00010		<0.00010		0.00010		<0.00010		<0.00010		<0.00010		<0.00010		0.00010		0.00010		0.00011		<0.00010		0.00012	
Silicon (Si), dissolved	mg/L		1.70		1.62		1.74		2.04		1.59		1.64		1.53		1.37		1.49		1.85		1.65		1.58		1.57	
Silver (Ag), dissolved	mg/L		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010		<0.000010	
Sodium (Na), dissolved	mg/L		0.096		0.084		0.100		0.104		0.087		0.104		0.098		0.103		0.104		0.111		0.098		0.144		0.094	
Strontium (Sr), dissolved	mg/L		0.0579		0.0580		0.0633		0.0659		0.0621		0.0758		0.0768		0.0775		0.0946		0.0850		0.0729		0.0795		0.0762	
Sulphur (S), dissolved	mg/L		11.7		11.6		12.0		13.3		11.2		13.5		11.6		12.2		12.7		13.7		11.2		10.6		12.7	
Thallium (Tl), dissolved	mg/L		0.000030		0.000031		0.000030		0.000031		0.000035		0.000035		0.000029		0.000026		0.000032		0.000036		0.000031		0.000029		0.000030	
Tin (Sn), dissolved	mg/L		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010		<0.00010	
Titanium (Ti), dissolved	mg/L		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010		<0.010	
Uranium (U), dissolved	mg/L		<0.000010		<0.000010		<0.000010		0.000011		<0.000010		0.000011		<0.000010		<0.000010		0.000013		0.000013		<0.000010		<0.000010		0.000014	
Vanadium (V), dissolved	mg/L		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010		<0.0010	
Zinc (Zn), dissolved	mg/L	1.15	1.42	1.76	1.17	1.25	1.81	1.92	2.13	1.86	1.21	1.66	0.871	0.654	1.25	1.28	0.739	1.17	0.857	1.40	1.92	1.58	1.65	1.87	1.65	1.05	1.49	1.69

Bellekeno Mill Tailings Humidity Cell Water Quality Results, 2011 to 2014

Parameter	Units	11/09/2013	18/09/2013	25/09/2013	02/10/2013	09/10/2013	16/10/2013	23/10/2013	30/10/2013	06/11/2013	13/11/2013	20/11/2013	27/11/2013	04/12/2013	11/12/2013	18/12/2013	24/12/2013	31/12/2013	08/01/2014	15/01/2014	22/01/2014	29/01/2014	05/02/2014	12/02/2014	19/02/2014	26/02/2014	04/03/2014	12/03/2014	19/03/2014
		Week 108	Week 109	Week 110	Week 111	Week 112	Week 113	Week 114	Week 115	Week 116	Week 117	Week 118	Week 119	Week 120	Week 121	Week 122	Week 123	Week 124	Week 125	Week 126	Week 127	Week 128	Week 129	Week 130	Week 131	Week 132	Week 133	Week 134	Week 135
Total Volume In	mL	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Total Volume Out	mL	460	470	475	500	450	470	450	450	450	465	460	455	475	440	455	435	450	450	450	450	445	450	470	450	450	440	440	450
pH (lab)	pH units	7.94	7.99	8.04	7.99	7.98	7.97	7.98	8.03	7.92				7.94				8.07				8.02				8.05			
Specific Conductance (lab)	µS/cm	207	197	227	208	211	220	217	207	212				235				235				246				239			
Hardness (from dissolved)	mg/L	99.8		113		106		114		101				116				113				127				125			
Total Acidity	mg/L	8.8	1.3	5.4	3.8	2.4	2.8	3.0	1.9	3.0				3.7				3.1				1.2				<1.0			
Alkalinity, total	mg/L	67.1	66.5	72.0	68.2	70.6	75.4	75.7	64.9	66.1				70.3				64.2				73.7				72.2			
Chloride	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50				<0.50				<0.50				<0.50				<0.50			
Fluoride	mg/L	<0.020	<0.020	0.021	<0.020	<0.020	0.020	<0.020	0.021	<0.020				0.023				0.028				0.029				0.028			
Bromide	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050				<0.050				<0.050				<0.050				<0.050			
Sulphate, dissolved	mg/L	35.2	33.9	43.5	35.7	38.1	40.3	36.9	35.5	36.8				43.9				49.5				50.5				47.8			
Nitrite (N)	mg/L	0.0025	0.0038	0.0104	0.0027	0.0023	0.0031	0.0043	0.0058	0.0026				0.0039				0.0056				0.0072				0.0035			
Nitrate (N)	mg/L	<0.0050	<0.0050	<0.0050	0.0058	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050				<0.0050				<0.0050				<0.0050				0.0053			
Aluminum (Al), dissolved	mg/L	<0.0050		<0.0050		<0.0050		<0.0050		<0.0050				<0.0050				<0.0050				<0.0050				<0.0050			
Antimony (Sb), dissolved	mg/L	0.00420		0.00448		0.00385		0.00411		0.00370				0.00371				0.00322				0.00315				0.00287			
Arsenic (As), dissolved	mg/L	0.00114		0.00122		0.00141		0.00143		0.00131				0.00094				0.00107				0.00105				0.00093			
Barium (Ba), dissolved	mg/L	0.0445		0.0453		0.0430		0.0473		0.0397				0.0419				0.0330				0.0345				0.0244			
Beryllium (Be), dissolved	mg/L	<0.00010		<0.00010		<0.00010		<0.00010		<0.00010				<0.00010				<0.00010				<0.00010				<0.00010			
Bismuth (Bi), dissolved	mg/L	<0.00050		<0.00050		<0.00050		<0.00050		<0.00050				<0.00050				<0.00050				<0.00050				<0.00050			
Boron (B), dissolved	mg/L	<0.010		0.011		<0.010		<0.010		<0.010				<0.010				<0.010				<0.010				<0.010			
Cadmium (Cd), dissolved	mg/L	0.0399	0.0337	0.0306	0.0312	0.0338	0.0376	0.0384	0.0247	0.0376				0.0399				0.0194				0.0243				0.0175			
Calcium (Ca), dissolved	mg/L	36.6		41.2		38.8		42.2		36.8				42.1				40.0				44.4				44.1			
Chromium (Cr), dissolved	mg/L	<0.00050		<0.00050		<0.00050		<0.00050		<0.00050				<0.00050				<0.00050				<0.00050				<0.00050			
Cobalt (Co), dissolved	mg/L	0.00583		0.00493		0.00521		0.00623		0.00551				0.00624				0.00224				0.00316				0.00198			
Copper (Cu), dissolved	mg/L	0.00205		0.00182		0.00153		0.00181		0.00152				0.00169				0.00088				0.00108				0.00098			
Iron (Fe), dissolved	mg/L	<0.030		<0.030		<0.030		<0.030		<0.030				<0.030				<0.030				<0.030				<0.030			
Lead (Pb), dissolved	mg/L	0.0519		0.0514		0.0468		0.0519		0.0469				0.0418				0.0396				0.0390				0.0255			
Lithium (Li), dissolved	mg/L	0.00089		0.00147		0.00154		0.00128		0.00137				0.00080				0.00147				0.00121				0.00101			
Magnesium (Mg), dissolved	mg/L	2.01		2.39		2.21		2.14		2.19				2.60				3.21				3.84				3.61			
Manganese (Mn), dissolved	mg/L	1.09		0.970		1.02		1.13		1.07				1.22				0.493				0.594				0.478			
Mercury (Hg), dissolved	mg/L	<0.000010		<0.000010		<0.000010		<0.000010		<0.000010				<0.000010				<0.000010				<0.000010				<0.000010			
Molybdenum (Mo), dissolved	mg/L	0.000271		0.000371		0.000235		0.000282		0.000182				0.000187				0.000231				0.000195				0.000169			
Nickel (Ni), dissolved	mg/L	0.00745		0.00641		0.00663		0.00820		0.00740				0.00846				0.00297				0.00446				0.00300			
Phosphorus (P), dissolved	mg/L	<0.30		<0.30		<0.30		<0.30		<0.30				<0.30				<0.30				<0.30				<0.30			
Potassium (K), dissolved	mg/L	0.237		0.232		0.225		0.212		0.228				0.232				0.218				0.242				0.223			
Selenium (Se), dissolved	mg/L	0.00011		0.00013		0.00011		0.00013		0.00011				0.00014				0.00015				0.00018				0.00015			
Silicon (Si), dissolved	mg/L	1.57		1.60		1.57		1.71		1.48				1.54				1.14				1.31				1.04			
Silver (Ag), dissolved	mg/L	<0.000010		0.000012		<0.000010		<0.000010		<0.000010				<0.000010				<0.000010				<0.000010				<0.000010			
Sodium (Na), dissolved	mg/L	0.094		0.119		0.094		0.097		0.090				0.108				0.122				0.112				0.098			
Strontium (Sr), dissolved	mg/L	0.0697		0.0835		0.0735		0.0776		0.0775				0.0823				0.0806				0.0704				0.0603			
Sulphur (S), dissolved	mg/L	11.6		14.3		12.5		12.8		11.9				15.2				16.4				16.4				15.7			
Thallium (Tl), dissolved	mg/L	0.000039		0.000035		0.000030		0.000040		0.000029				0.000036				0.000030				0.000034				0.000028			
Tin (Sn), dissolved	mg/L	<0.00010		<0.00010		<0.00010		<0.00010		<0.00010				<0.00010				<0.00010				<0.00010				<0.00010			
Titanium (Ti), dissolved	mg/L	<0.010		<0.010		<0.010		<0.010		<0.010				<0.010				<0.010				<0.010				<0.010			
Uranium (U), dissolved	mg/L	0.000013		0.000023		0.000012		0.000018		0.000012				0.000019				0.000026				0.000029				0.000027			
Vanadium (V), dissolved	mg/L	<0.0010		<0.0010		<0.0010		<0.0010		<0.0010				<0.0010				<0.0010				<0.0010				<0.0010			
Zinc (Zn), dissolved	mg/L	1.62	1.20	1.14	1.04	1.19	1.33	1.59	0.843	1.41				1.59				0.402				0.593				0.378			

Bellekeno Mill Tailings Humidity Cell Water Quality Results, 2011 to 2014

Parameter	Units	26/03/2014	02/04/2014	09/04/2014	16/04/2014	23/04/2014	30/04/2014	07/05/2014	14/05/2014	21/05/2014	28/05/2014	03/06/2014	11/06/2014	18/06/2014	25/06/2014	02/07/2014	09/07/2014	16/07/2014	23/07/2014	30/07/2014	06/08/2014	13/08/2014	20/08/2014	27/08/2014	03/09/2014	10/09/2014	17/09/2014	24/09/2014	01/10/2014	08/10/2014
		Week 136	Week 137	Week 138	Week 139	Week 140	Week 141	Week 142	Week 143	Week 144	Week 145	Week 146	Week 147	Week 148	Week 149	Week 150	Week 151	Week 152	Week 153	Week 154	Week 155	Week 156	Week 157	Week 158	Week 159	Week 160	Week 161	Week 162	Week 163	Week 164
Total Volume In	mL	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Total Volume Out	mL	440	460	450	440	530	485	480	500	495	480	500	475	510	500	475	450	475	565	475	475	480	500	495	475	500	495	480	500	500
pH (lab)	pH units	8.03				7.90				8.02				8.10				7.90				7.96				7.96				7.75
Specific Conductance (lab)	µS/cm	238				248				240				243				217				247				243				235
Hardness (from dissolved)	mg/L	127				133				125				129				117				130				127				124
Total Acidity	mg/L	1.2				3.2				1.6				1.4				1.6				3.6				3.7				3.6
Alkalinity, total	mg/L	78.7				86.2				87.8				95.2				78.2				88.6				89.4				81.1
Chloride	mg/L	<0.50				<0.50				<0.50				<0.50				<0.50				<0.50				<0.50				<0.50
Fluoride	mg/L	0.029				0.026				0.021				<0.020				0.021				0.020				<0.020				<0.020
Bromide	mg/L	<0.050				<0.050				<0.050				<0.050				<0.050				<0.050				<0.050				<0.050
Sulphate, dissolved	mg/L	47.6				46.5				40.6				42.4				38.5				37.9				38.2				40.0
Nitrite (N)	mg/L	0.0044				0.0075				0.0029				0.0033				0.0019				0.0065				0.0026				0.0020
Nitrate (N)	mg/L	<0.0050				<0.0050				0.0050				<0.0050				<0.0050				<0.0050				<0.0050				<0.0050
Aluminum (Al), dissolved	mg/L	<0.0050				<0.0050				<0.0050				<0.0050				<0.0050				<0.0050				<0.0050				<0.0050
Antimony (Sb), dissolved	mg/L	0.00256				0.00250				0.00241				0.00253				0.00190				0.00229				0.00210				0.00180
Arsenic (As), dissolved	mg/L	0.00092				0.00091				0.00108				0.00101				0.00094				0.00094				0.00086				0.00080
Barium (Ba), dissolved	mg/L	0.0213				0.0262				0.0242				0.0219				0.0177				0.0238				0.0190				0.0171
Beryllium (Be), dissolved	mg/L	<0.00010				<0.00010				<0.00010				<0.00010				<0.00010				<0.00010				<0.00010				<0.00010
Bismuth (Bi), dissolved	mg/L	<0.00050				<0.00050				<0.00050				<0.00050				<0.00050				<0.00050				<0.00050				<0.00050
Boron (B), dissolved	mg/L	<0.010				<0.010				<0.010				<0.010				<0.010				<0.010				<0.010				0.010
Cadmium (Cd), dissolved	mg/L	0.0170				0.0324				0.0292				0.0270				0.0206				0.0241				0.0236				0.0227
Calcium (Ca), dissolved	mg/L	44.3				46.8				45.2				46.9				42.5				47.7				46.4				45.3
Chromium (Cr), dissolved	mg/L	<0.00050				<0.00050				<0.00050				<0.00050				<0.00050				<0.00050				<0.00050				<0.00050
Cobalt (Co), dissolved	mg/L	0.00206				0.00437				0.00434				0.00427				0.00327				0.00433				0.00378				0.00363
Copper (Cu), dissolved	mg/L	0.00086				0.00111				0.00085				0.00088				0.00065				0.00100				0.00075				0.00076
Iron (Fe), dissolved	mg/L	<0.030				<0.030				<0.030				<0.030				<0.030				<0.030				<0.030				<0.030
Lead (Pb), dissolved	mg/L	0.0208				0.0233				0.0206				0.0165				0.00845				0.0199				0.0110				0.00800
Lithium (Li), dissolved	mg/L	0.00070				0.00095				0.00122				0.00104				0.00076				0.00077				0.00086				0.00101
Magnesium (Mg), dissolved	mg/L	3.91				3.82				2.89				2.76				2.51				2.63				2.64				2.68
Manganese (Mn), dissolved	mg/L	0.493				0.968				1.05				1.11				0.809				0.821				0.916				0.930
Mercury (Hg), dissolved	mg/L	<0.000010				<0.000010				<0.000010				<0.000010				<0.000010				<0.000010				<0.000010				<0.000010
Molybdenum (Mo), dissolved	mg/L	0.000153				0.000105				0.000091				0.000114				0.000105				0.000136				0.000104				0.000099
Nickel (Ni), dissolved	mg/L	0.00327				0.00684				0.00654				0.00628				0.00464				0.00630				0.00516				0.00517
Phosphorus (P), dissolved	mg/L	<0.30				<0.30				<0.30				<0.30				<0.30				<0.30				<0.30				<0.30
Potassium (K), dissolved	mg/L	0.197				0.206				0.189				0.207				0.184				0.193				0.198				0.188
Selenium (Se), dissolved	mg/L	0.00020				0.00019				0.00017				0.00018				0.00018				0.00017				0.00017				0.00017
Silicon (Si), dissolved	mg/L	1.02				1.19				1.23				1.23				1.02				1.22				1.12				1.14
Silver (Ag), dissolved	mg/L	<0.000010				<0.000010				<0.000010				<0.000010				<0.000010				0.000018				<0.000010				<0.000010
Sodium (Na), dissolved	mg/L	0.097				0.082				0.075				0.071				0.067				0.070				0.075				0.164
Strontium (Sr), dissolved	mg/L	0.0593				0.0539				0.0530				0.0501				0.0454				0.0515				0.0494				0.0495
Sulphur (S), dissolved	mg/L	15.8				15.7				13.6				14.6				13.0				12.3				12.9				13.4
Thallium (Tl), dissolved	mg/L	0.000022				0.000027				0.000025				0.000026				0.000018				0.000024				0.000026				0.000019
Tin (Sn), dissolved	mg/L	<0.00010				<0.00010				<0.00010				<0.00010				<0.00010				<0.00010				<0.00010				<0.00010
Titanium (Ti), dissolved	mg/L	<0.010				<0.010				<0.010				<0.010				<0.010				<0.010				<0.010				<0.010
Uranium (U), dissolved	mg/L	0.000026				0.000022				0.000020				0.000026				0.000022				0.000026				0.000026				0.000022
Vanadium (V), dissolved	mg/L	<0.0010				<0.0010				<0.0010				<0.0010				<0.0010				<0.0010				<0.0010				<0.0010
Zinc (Zn), dissolved	mg/L	0.363				0.988				0.890				0.851				0.573				0.864				0.744				0.721

Bellekeno Mill Tailings Humidity Cell Water Quality Results, 2011 to 2014

Parameter	Units	15/10/2014	22/10/2014	29/10/2014	05/11/2014	12/11/2014	19/11/2014	26/11/2014	03/12/2014	10/12/2014	17/12/2014	22/12/2014	30/12/2014
		Week 165	Week 166	Week 167	Week 168	Week 169	Week 170	Week 171	trite result co	Week 173	Week 174	Week 175	Week 176
Total Volume In	mL	500	500	500	500	500	500	500	500	500	500	500	500
Total Volume Out	mL	470	510	500	475	485	475	475	470	485	475	450	425
pH (lab)	pH units				7.89				7.88				8.08
Specific Conductance (lab)	µS/cm				210				191				247
Hardness (from dissolved)	mg/L				107				106				121
Total Acidity	mg/L				2.0				1.6				2.9
Alkalinity, total	mg/L				74.0				74.1				74.9
Chloride	mg/L				<0.50				<0.50				<0.50
Fluoride	mg/L				<0.020				<0.020				0.030
Bromide	mg/L				<0.050				<0.050				<0.050
Sulphate, dissolved	mg/L				36.2				33.6				52.0
Nitrite (N)	mg/L				0.0026				0.0254				0.0165
Nitrate (N)	mg/L				<0.0050				<0.0050				<0.0050
Aluminum (Al), dissolved	mg/L				<0.0050				<0.0050				<0.0050
Antimony (Sb), dissolved	mg/L				0.00157				0.00155				0.00187
Arsenic (As), dissolved	mg/L				0.00073				0.00072				0.00114
Barium (Ba), dissolved	mg/L				0.0126				0.0108				0.0137
Beryllium (Be), dissolved	mg/L				<0.00010				<0.00010				<0.00010
Bismuth (Bi), dissolved	mg/L				<0.00050				<0.00050				<0.00050
Boron (B), dissolved	mg/L				<0.010				<0.010				<0.010
Cadmium (Cd), dissolved	mg/L				0.0144				0.0111				0.0103
Calcium (Ca), dissolved	mg/L				38.7				38.0				43.1
Chromium (Cr), dissolved	mg/L				<0.00050				<0.00050				<0.00050
Cobalt (Co), dissolved	mg/L				0.00201				0.00158				0.00145
Copper (Cu), dissolved	mg/L				0.00054				0.00054				0.00054
Iron (Fe), dissolved	mg/L				<0.030				<0.030				<0.030
Lead (Pb), dissolved	mg/L				0.00385				0.00378				0.0111
Lithium (Li), dissolved	mg/L				0.00081				0.00072				0.00099
Magnesium (Mg), dissolved	mg/L				2.62				2.61				3.12
Manganese (Mn), dissolved	mg/L				0.635				0.557				0.364
Mercury (Hg), dissolved	mg/L				<0.000010				<0.000010				<0.000010
Molybdenum (Mo), dissolved	mg/L				0.000087				0.000106				0.000205
Nickel (Ni), dissolved	mg/L				0.00273				0.00227				0.00199
Phosphorus (P), dissolved	mg/L				<0.30				<0.30				<0.30
Potassium (K), dissolved	mg/L				0.181				0.179				0.178
Selenium (Se), dissolved	mg/L				0.00017				0.00017				0.00022
Silicon (Si), dissolved	mg/L				0.922				0.859				0.887
Silver (Ag), dissolved	mg/L				<0.000010				<0.000010				<0.000010
Sodium (Na), dissolved	mg/L				0.087				0.066				0.078
Strontium (Sr), dissolved	mg/L				0.0426				0.0413				0.0501
Sulphur (S), dissolved	mg/L				11.9				11.3				17.9
Thallium (Tl), dissolved	mg/L				0.000017				0.000019				0.000021
Tin (Sn), dissolved	mg/L				<0.00010				<0.00010				<0.00010
Titanium (Ti), dissolved	mg/L				<0.010				<0.010				<0.010
Uranium (U), dissolved	mg/L				0.000023				0.000028				0.000051
Vanadium (V), dissolved	mg/L				<0.0010				<0.0010				<0.0010
Zinc (Zn), dissolved	mg/L				0.324				0.228				0.227

APPENDIX C

2014 NOISE MONITORING RESULTS

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Memorandum

To: Alexco Resource Corp.

From: Access Consulting Group

CC: Kai Woloshyn, Alexco Resource Corp.

Date: March 17, 2015

Re: Noise Monitoring Data Summary, Keno, YT

INTRODUCTION

As part of the Keno Hill Silver District Mining Operations Noise Management Plan (the Plan) Alexco Keno Hill Mining Corp. (AKHM) has been monitoring noise levels in Keno City. The Plan was initially developed to address any potential noise effects that might occur with the addition of the two new mines, Lucky Queen and Onek 990. In addition to noise mitigation measures and the creation of a Noise Disturbance Notification Form and Noise Disturbance Register to track noise disturbance claims, AKHM committed to monitor noise levels within the community at various locations to assess the actual versus predicted noise levels and to determine if the noise abatement measures are effective. These noise data can now be used in the context of the Flame and Moth Mine development.

The predicted noise levels were presented in the Noise Impact Assessment (NIA) completed by Patching Associates Acoustical Engineering Ltd (PAAE) conducted during the *Yukon Environmental and Socio-Economic Assessment Act* (YESAA) process (Project 2011-0315). The NIA identifies the noise sources from the current mining-related activities, noise receptors, and predicts the anticipated noise level from all existing sources and those associated with the addition of Lucky Queen and Onek 990 mining operations.

This memo presents noise monitoring results from April 2013 to December 2014.

NOISE RECEPTORS

AKHM has monitored noise at the five locations selected in the NIA as being potential noise receptors within the 2 km radius study area around Keno City. Starting in November 2013, noise has also been monitored at the Keno City campground. These locations are listed in Table 1 and shown in Figure 1.

Table 1 Representative Locations Assessed in Keno City

Monitoring Location	GPS Location	Description
R01	N63.90827 W135.29599	East end Residence, north side of Lightning Creek Road
R02	N63.91019 W135.29968	Residence, east side of Sign Post Road
R03	N63.91023 W135.30205	Town Center, north from the Snack Bar
R04	N63.91239 W135.30376	Residence, west side of Wernecke Road
R05	N63.90851 W135.30993	Residence, about 850m east from the Mill
Cmpgrnd	N63.90772 W135.29998	Keno City campground

The background noise levels experienced by these locations vary considerably, depending on location and local activities. Past and proposed mining operations are in addition to normal fluctuations in background levels. Climate parameters, such as relative humidity, temperature, and temperature inversions impact the sound level and propagation experienced by each of these receptors.

MONITORING TIMING

For the period from April 2013 to December 2014, a total of 32 monitoring events were carried out. Mining took place at Bellekeno, and milling at the Keno District Mill throughout 2013, until these were suspended on September 3rd, 2014. Operations at Onek 990 ceased at the end of May 2013. Exploration activities at Flame & Moth took place from late March to early November 2014. Thus, September 2013 through March 2014 and December 2014 data can be considered as baseline as no mining or exploration activities were taking place at that time.

RESULTS

The results from 31 monitoring events from April 2013 to November 2014 are presented in Appendix A. These readings were taken using an Extech integrating sound level datalogger model 407780 to measure average dBA over 10 minutes. The wind speed, wind direction, temperature and precipitation data from the Keno District Mill weather station associated with each noise monitoring event have been reported as these can have a significant effect on measured noise levels. Any notable noise sources associated with the monitoring event were also documented.

Starting in December 2014 noise monitoring readings were taken with a Casella CEL-63X Sound Level Meter and a Casella CEL-495 Microphone programmed to record over a 24 hour period. The microphone was mounted on a tri-pod at approximately 1.5 meters above ground and surrounded by a windscreen provided by Casella for use with this microphone to reduce wind impacts as required for outdoor sound measurements. The sound level meter and battery power source were housed inside a weather-proof case which was held in a locked metal box for extra security.

Noise levels measured at all testing locations were well within or below the 50-90 dBA range deemed “what is socially acceptable for daytime noise limits” as defined in the past YESAB assessment for the Bellekeno Mine development (Project 2009-0030), with all measurements being below 70 dBA. Of the 17 measurements above 50 dBA, four occurred on April 8th, 2013 (R01, R02, R03, and R04) and two on May 19th, 2013 (R01 and R03). While this corresponds to the period of operations at Onek, only one observation associated with the measurements appears to be linked with mining operations (May 19th measurement at R03: ‘water truck went

by'). In addition, observations for the May 19th event refer to creeks flowing, likely at their highest during spring freshet, and birds chirping, while wind conditions for the April 8th measurements were recorded as 'Windy SSE'. The crusher was operating during most of the April 8th, most of the May 19th and all of the June 18th noise measurements. No crushing took place during measurements on April 10th, May 6th, July 24th, 2013 or during the winter, but preparation for mantle change out took place on July 24th. While the crusher could be a contributing noise source, other natural, anthropogenic or mine-related noise sources likely play an important role.

The other 11 measurements above 50 dBA occurred in 2014, while no mining operations were taking place, although explorations activities occurred during all but three (January 20th - R05, November 14th – R01, and November 23rd – R03) of these above 50 dBA measurements. The elevated January R05 measurement is associated with a Yukon Government grader driving by, while the elevated November measurements are associated with trucks driving by. The activities documented during the April measurement at R03 include a loader driving by, a backup alarm, a car driving by, a car horn, people talking and a dog barking. The elevated May measurement at the campground is associated with the creek, which likely had high flows associated with spring freshet, while the June campground measurement was associated with wind in the trees and the creek. The activities documented during the June measurement at R02 include wind in the trees, a car driving by, a chainsaw, ravens, and people talking, while a pickup truck with the engine running was noted at R02 during the August measurement. On September 3rd, noise measurements above 50 dBA were associated with trucks driving by, dogs barking and wind at R03 and with vehicles, wind and the creek at the campground. On September 18th, noise levels of 53.9 dBA were associated with ATVs and birds at R02.

Figure 2 shows the noise levels measured compared to the predicted current and proposed mining operations noise levels plus ambient sound levels from the NIA. Many of the measurements exceeded the predicted levels, which range from 32 to 39 dBA, both in the period of mining operations and after operations had ceased. No mining or exploration activities took place between September 2013 and March 2014, this period can therefore be considered baseline. As can be observed in Figure 2, the baseline noise levels can vary considerably with different levels of activity in Keno City. Baseline noise levels were greater than those predicted in the NIA on several occasions, indicating that many of the notable noise sources are not linked to Keno mining or milling operations.

Noise levels at the campground were around 30 dBA throughout the winter and increased to around 50 dBA in the spring and summer. This increase is associated with natural sounds such as the creek flowing and birds chirping.

In December 2014 a 24-hour baseline noise monitoring program was initiated, with measurements taken at R02, R03, R05 and the campground. The equipment was set up and run at R01 and R04; however, there was an equipment malfunction and noise levels were not recorded at these sites in December. The equivalent continuous level, LA_{eq}, defined as the equivalent continuous sound which would contain the same sound energy as the time varying sound, is reported for each site in Table 2.

Table 2 December 2014 24-hour equivalent continuous level

Site	Duration	Start Date/Time	End Date/Time	LA_{eq} (dB)
R02	23:59:00	15/12/2014 16:20	16/12/2014 16:19	**44.30**
R03	23:59:00	17/12/2014 10:00	18/12/2014 9:59	**58.60**
R05	23:59:00	18/12/2014 10:30	19/12/2014 10:29	**42.00**
Campground	23:59:00	22/12/2014 12:30	23/12/2014 12:29	**25.40**

Compared with the sound levels predicted in the NIA for R02, R03 and R05 (36, 32 and 35 dBA, respectively), the equivalent continuous level over 24 hours at all sites exceeded the predictions.

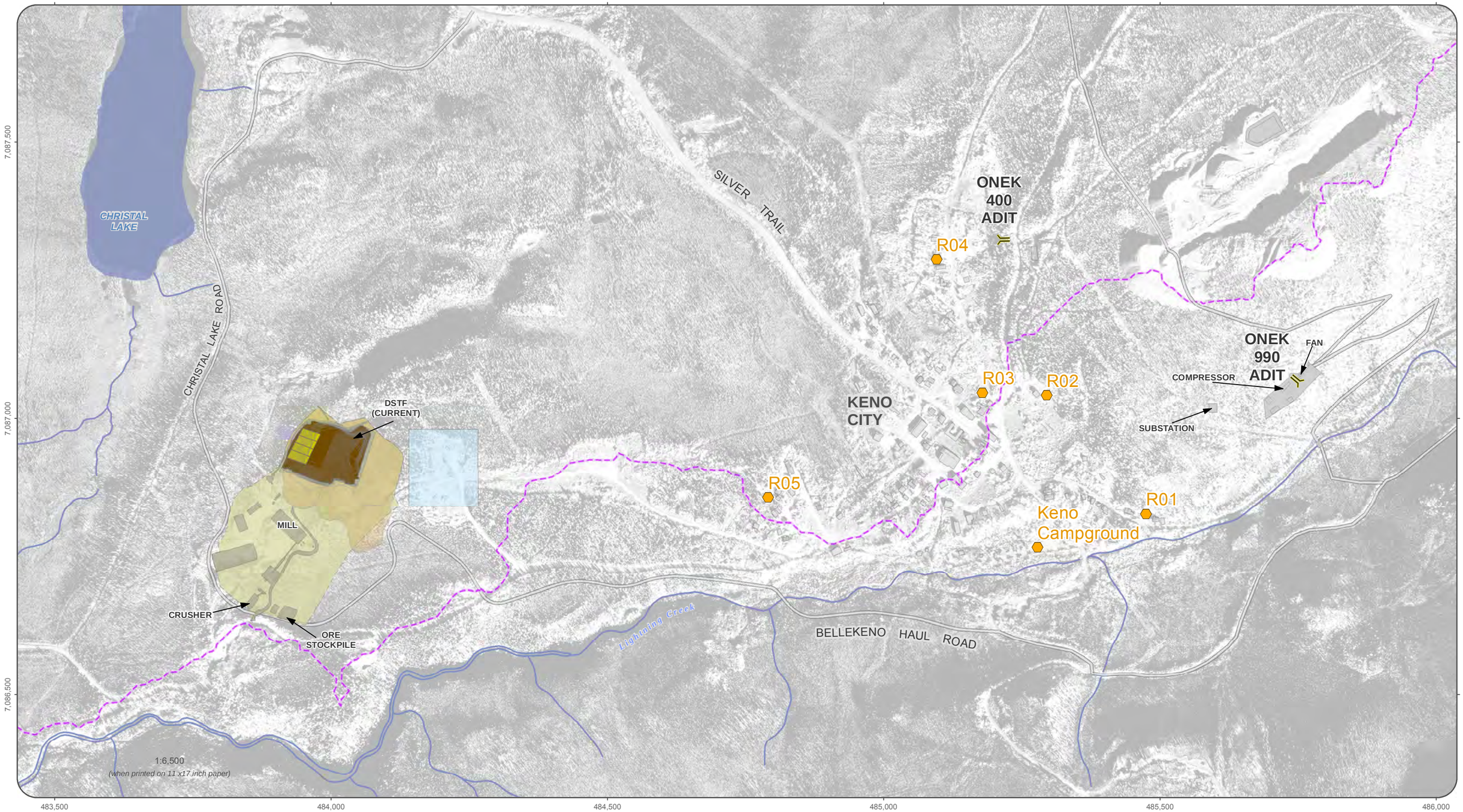
NOISE COMPLAINTS

One formal noise complaint was received by AKHM in 2014. In August 2014 a noise complaint was received from a Keno City resident. Following investigation to the complaint, the noise complaint received was associated with the activities related to the commencement of a new exploration drill hole on the east side of Lightning Creek by the Flame and Moth exploration program authorised under Mining Land Use Approval LQ0240. Following the findings of the investigation, the commencement of new exploration drill holes in overburden material where hammering is required was identified as an activity to occur between 7AM and 7PM to limit the potential noise impacts to Keno City residents.

CONCLUSION

Noise levels measured at all noise receptors were well within or below the 50-90 dBA range deemed to be socially acceptable for daytime noise limits. Many of the measurements exceed the predicted current and proposed mining operations noise levels (plus ambient sound levels) from the NIA, despite the cessation of mining and milling operations in the Keno Hill Silver District in September 2013.

Given the short measurement interval of 10 minutes for measurements prior to December 2014, measurements could have been influenced by fluctuations in background levels and climate parameters impacting noise levels and propagation. However, even over the longer 24-hour interval of measurement in December 2014 while no mining operations or exploration took place, lower noise levels were not measured. Continued monthly monitoring over a 24-hour interval will provide further data which can better inform noise monitoring thresholds. It is recommended that proposed mining operations noise levels plus ambient sound levels generated in the NIA be revised using 24-hour noise monitoring data collected from December 2014 onward while operations have ceased, prior to the re-commencement of mining in the Keno Hill Silver District.



Aerial photography flight date: July 13th 2006. Ortho-rectification produced by Challenger Geomatics Ltd. Data obtained from EBA: "As built" spatial data: Mill pond (Y.E.S.), Mill structure, and current DSTF footprints, Roads (In House survey December 11th 2011). Design spatial data: Conveyance and water collection, diversion ditches and berm.

Datum: NAD 83; Projection: UTM Zone 8N

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- Noise Monitoring Station
- Roads
- Watercourse
- Watershed Boundaries
- Mill Site Footprint
- DSTF Cover and Revegetation Phase I
- Land Disposition Garbage Dump
- Buildings/Structures
- DSTF 322,000 Tonnes Design
- As Built, DSTF, Sept2013

AKHM
ACCESS

KENO HILL SILVER DISTRICT MINING OPERATIONS

FIGURE 1

NOISE MONITORING STATIONS

MARCH 2014

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(*Last edited by: jpan;3/18/2014/11:16 AM*)

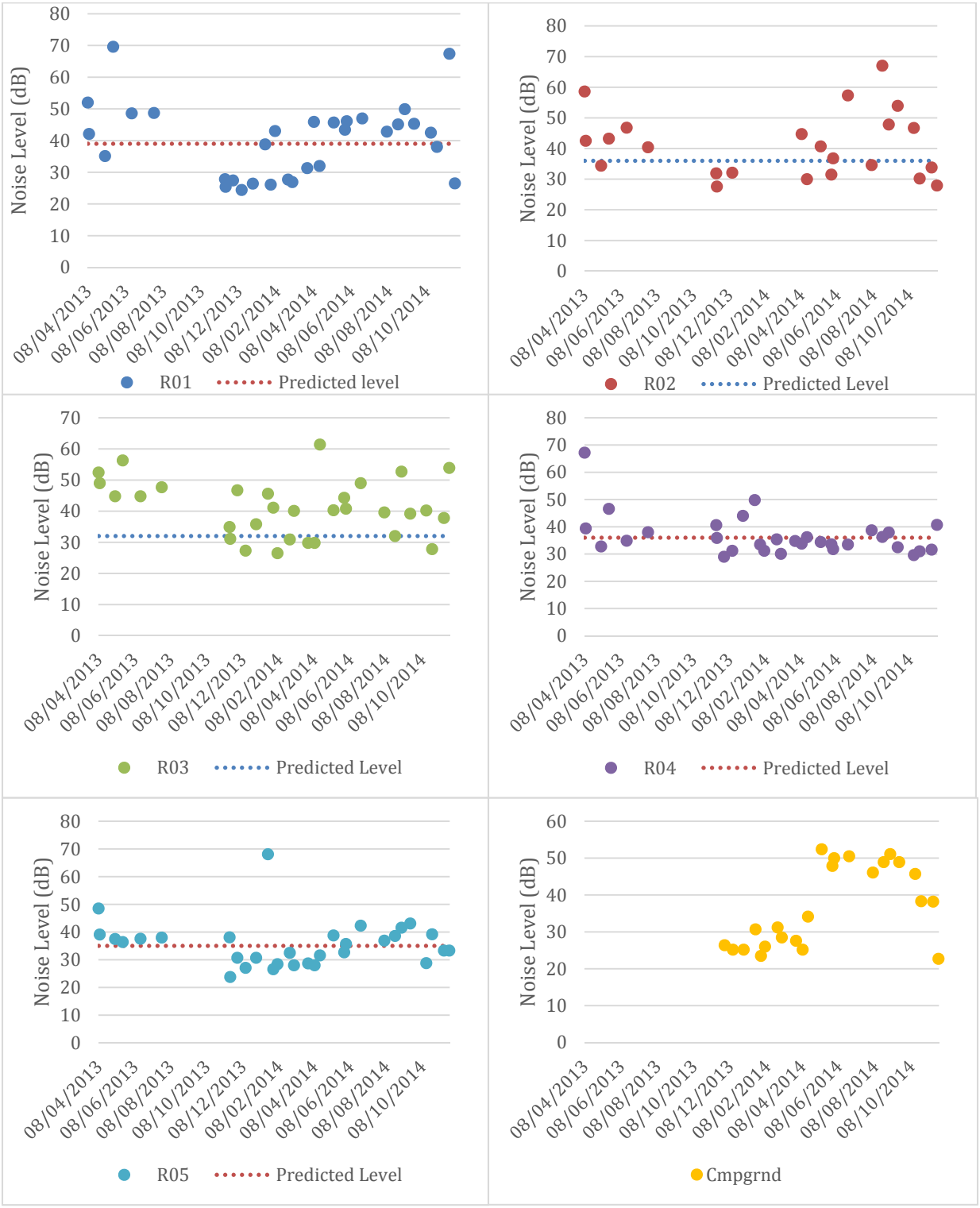


Figure 2 Keno Noise Monitoring Data

APPENDIX A

KENO NOISE MONITORING DATA
SEPTEMBER 2013 TO NOVEMBER 2014

Keno Noise Monitoring Data

Date	Location	Time	Temp (°C)	Wind	Precipitation	DBA	Observations
08/04/2013	R01	12:26	2	Windy SSE	None	52.0	
08/04/2013	R02	12:05	2	Windy SSE	None	58.6	
08/04/2013	R03	11:45	2	Windy SSE	None	52.4	
08/04/2013	R04	11:25	2	Windy SSE	None	67.2	A dog barked 2 times.
08/04/2013	R05	11:04	2	Windy SSE	None	48.5	
10/04/2013	R01	11:33	-6	Light SSW	None	42.1	
10/04/2013	R02	13:00	-6	Light SSW	None	42.5	
10/04/2013	R03	12:40	-6	Light SSW	None	49.0	Doors slamming. People talking.
10/04/2013	R04	12:20	-6	Light SSW	None	39.4	
10/04/2013	R05	12:00	-6	Light SSW	None	39.1	
06/05/2013	R01	15:30	2	Wind West	None	35.1	Backup alarm at Onek. Tarps flapping in wind.
06/05/2013	R02	15:30	2	Slight breeze	None	34.4	
06/05/2013	R03	15:30	2	Windy	None	44.8	Dog barking. Boart truck.
06/05/2013	R04	15:30	2	Slight breeze	None	32.8	
06/05/2013	R05	15:30	2	Slight breeze	None	37.5	Dog barking.
19/05/2013	R01	10:25	-2	Light (<10km/h) N	Light snow	69.6	Creek flowing loud. Squirrels making noise. Tarp flapping. Volvo going by on the BKR.
19/05/2013	R02	10:10	-2	Light (<10km/h) E	Light snow	43.2	Creek flowing below. A few birds chirping. Boart pickup went by.
19/05/2013	R03	9:55	-2	Light (<10km/h) E	Light snow	56.3	A few birds. Talking and trucks in town in the distance. Water truck went by.
19/05/2013	R04	9:30	-2	Light (<10km/h) E	Light snow	46.6	Lots of birds calling and a woodpecker pecking close by.
19/05/2013	R05	8:55	-2	Light (<10km/h) E	Light snow	36.4	A few birds and a squirrel chirping.
18/06/2013	R01	16:25	22	Light (<10km/h) S	None	48.6	Creek flowing. Leaves rustling.
18/06/2013	R02	16:10	22	Light (<10km/h) S	None	46.8	Volvo on BKR. 2 vehicles drove past. Gusts of wind rustling trees. Chainsaw nearby in town.
18/06/2013	R03	15:55	22	Light (<10km/h) S	None	44.8	People talking and walking close by. 2 Vehicles driving through town and 1 driving by.
18/06/2013	R04	15:40	21	Light (<10km/h) S	None	34.9	Wind rustling leaves. Birds calling.
18/06/2013	R05	14:55	21	Light (<15km/h) S	None	37.6	Wind rustling leaves. Volvo on the BKR.
24/07/2013	R01	11:07	23	light (<20km/h) S	None	48.7	Leaves rustling. Creek nearby. Birds chirping.
24/07/2013	R02	10:55	23	light (<10km/h) S	None	40.4	Three vehicles driving nearby. Leaves rustling.
24/07/2013	R03	10:43	23	light (<10km/h) S	None	47.7	Backup alarm at Mill. Leaves rustling. Someone in town hammering. Two vehicles drove by.
24/07/2013	R04	10:30	23	light (<10km/h) SE	None	38.0	Backup alarm at Mill. Mill crusher. Leaves rustling. Car drove by twice. Car on Silver Trail.
24/07/2013	R05	10:14	23	Calm	None	38.0	Backup alarm at Mill. Volve down BKR. Mill crusher.
16/11/2013	R01	14:11	-20	Calm	None	27.8	Birds.
16/11/2013	R02	13:51	-20	Calm	None	31.9	Squirrel, ravens, birds noise.
16/11/2013	R03	13:35	-20	Calm	None	34.9	Squirrel, ravens, birds noise+ truck.
16/11/2013	R04	13:20	-20	Calm	None	40.6	Lots of ravens activity, birds.
16/11/2013	R05	14:27	-20	Calm	None	38.1	Birds, truck plus door slaming + humain voive + dog barking. All at about 200 meters from sound meter.
17/11/2013	R01	12:46	-30	Calm	None	25.4	Birds.
17/11/2013	R02	12:25	-30	Calm	None	27.6	Birds, squirrel and vehicle.
17/11/2013	R03	12:07	-30	Calm	None	31.1	Ravens, squirrel and vehicle.
17/11/2013	R04	11:48	-30	Calm	None	35.9	Ravens.
17/11/2013	R05	13:01	-30	Calm	None	23.8	Quiet.
29/11/2013	Cmpgrnd	15:08	-23	Calm	None	26.4	Chainsaw in town, birds chirping.
29/11/2013	R01	14:52	-23	Calm	None	27.4	Birds chirping, snowmobile in distance.
29/11/2013	R03	14:36	-23	Calm	None	46.7	Ravens, chainsaw and dog barking in the distance, water truck drove by and backed up (alarm) nearby.
29/11/2013	R04	14:20	-23	Calm	None	29.0	squirrels and little birsds in distance, ravens flying by, someone coughing, doors closing mearby, dog barking.
29/11/2013	R05	13:59	-24	Calm	None	30.7	Raven calling, snowmobile in distance, squirrel nearby.
13/12/2013	Cmpgrnd	10:55	-20	N-W Calm	None	25.2	Quiet, birds signing once.
13/12/2013	R01	10:35	-20	N-W Calm	None	24.4	Quiet.
13/12/2013	R02	10:17	-20	N-W Calm	None	32.1	Raven, birds, squirrel.
13/12/2013	R03	10:02	-20	N-W Calm	None	27.3	Raven, birds, squirrel.
13/12/2013	R04	9:44	-20	N-W Calm	None	31.2	Raven flying and walking around. Birds signing.

13/12/2013	R05	11:13	-20	N-W Calm	None	27.1	Quiet, squirrel.
31/12/2013	R05	13:52	-18	calm	None	30.7	A few little birds chirping.
31/12/2013	R04	14:06	-18	Calm	None	44.0	lots of ravens flying, calling. Dog chewing on bone nearby. Person walking by, closing door.
31/12/2013	R03	14:20	-17	Light (<10km/h)S	None	35.8	Two vehicles drove through town. Flagpole dinging in the wind. People talking, walking in town.
31/12/2013	R01	14:34	-17	Calm	None	26.4	Little birds chirping. Raven flew by.
31/12/2013	Cmpgrnd	14:49	-17	Calm	None	25.2	Ravens calling in distance. Someone coughing. Little birds chirping.
20/01/2014	R04	14:04	-14	Calm	None	49.8	Distant grader. Birds. Vehicle.
20/01/2014	R03	14:24	-13	Calm	None	45.6	Distant grader. Birds.
20/01/2014	Cmpgrnd	14:39	-13	Calm	None	30.7	Distant grader.
20/01/2014	R01	15:13	-14	Calm	None	38.8	Distant grader. Vehicle.
20/01/2014	R05	14:56	-14	Calm	None	68.1	Grader went by.
29/01/2014	R05	15:07	-12	Calm	None	26.6	Squirrels, whiskeyjack calling nearby.
29/01/2014	R04	15:23	-12	Calm	None	33.5	Small bird chirping, ravens calling and flying by.
29/01/2014	R03	15:36	-12	Calm	None	41.1	Ravens calling, truck driving by, squirrel chatting, small bird chirping.
29/01/2014	R01	15:50	-12	Calm	None	26.1	Squirrel chatting, door closing in distance, birds calling, neighbour getting firewood.
29/01/2014	Cmpgrnd	16:06	-12	Calm	None	23.5	Squirrel chatting, bird chirping, ravens flying over and calling.
05/02/2014	R05	12:55	-20	light (5km/h)	None	28.4	Raven calling, squirrel chattering.
05/02/2014	R04	13:12	-20	light(<5km/h)	None	31.2	Small bird chirping, ravens calling and flying, door closing in distance X3, neighbour getting firewood.
05/02/2014	R03	13:27	-20	light(<5km/h)	None	26.5	Ravens calling in distance. Squirrel chattering, small birds, truck creaking.
05/02/2014	R01	13:40	-18	light(<5km/h)	None	43.0	Squirrel chattering, ice inside old dump truck (beside sample site) cracked loudly, birds chirping.
05/02/2014	Cmpgrnd	13:59	-19	light(<5km/h)	None	26.0	Small birds chirping, ravens in distance.
26/02/2014	R05	14:14	-9	Calm	None	32.5	Water truck running nearby, driving. Squirrel chattering, little birds calling.
26/02/2014	R04	14:31	-8	Calm	None	35.4	Ravens calling, person walking by and into house.
26/02/2014	R03	14:56	-8	Calm	None	30.9	Lots of squirrels chattering, dog barking in distance, small birds chirping, radio from neighbours house, raven calling.
26/02/2014	R01	15:10	-8	Calm	None	27.7	Little birds chirping. Squirrels.
26/02/2014	Cmpgrnd	15:26	-8	Calm	None	31.2	Someone chainsawing in town. Birds chirping.
05/03/2014	R05	14:19	-14	Calm	None	28.0	Raven calling in distance. Lots of little birds chirping nearby.
05/03/2014	R04	14:37	-14	Slight breeze	None	30.1	Ravens calling nearby. Squirrels chattering. Helicopter in distance. Little birds chirping. Ravens flying by.
05/03/2014	R03	14:50	-13	light (<10km/h)	None	40.1	Vehicle in town idling. Lots of little birds chirping. Raven calling. Flags tinging on flagpoles. Helicopter in distance. Vehicle driving through town and by twice.
05/03/2014	R01	15:04	-13	calm	None	26.9	lots of little birds chorping. Rvens in distance. Helicopter faintly in distance.
05/03/2014	Cmpgrnd	15:19	-14	very slight breeze	None	28.5	little birds chirping. Ravens in distance. Helicopter in distance. Backup alarm in town.
29/03/2014	R05	14:31	-3	Slight breeze	None	28.7	Lots of small birds calling nearby. Squirrel chattering.
29/03/2014	R04	14:48	0	light (10 km/h)	None	34.8	Ravens calling closeby. Small birds calling. Diamond drill and equipment working in distance. Wind chimes. Someone scraping snow.
29/03/2014	R03	15:00	0	light (10 km/h)	None	29.8	Flags hitting flagpoles. Lots of small birds calling nearby. Raven calling. Squirrel chattering. Squirrel climbing on sign nearby.
29/03/2014	R01	15:13	0	Slight breeze	None	31.3	Small birds. Squirrel chattering. Steel pipe made sound as it expanded.
29/03/2014	Cmpgrnd	15:34	0	Slight breeze	None	27.6	Small birds calling. Bulldozer (drillers) going down Duncan creek road in distance. Someone working on something in town. Raven calling.
09/04/2014	R01	10:04	-10	Calm	None	45.9	Pickup , backup alarm. Birds.
09/04/2014	R02	9:55	-10	Calm	None	44.7	Water truck x 2, delivering.
09/04/2014	R03	9:24	-10	Calm	None	29.8	Water truck x 2, delivering.
09/04/2014	R04	9:00	-10	Calm	None	33.8	Ravens.
09/04/2014	R05	10:47	-10	Calm	None	28.0	Ravens.
09/04/2014	Cmpgrnd	10:32	-10	Calm	None	25.2	Squirrel.
18/04/2014	R01	15:43	2	Calm	None	32.0	Birds, loader, backup alarm far away.
18/04/2014	R02	16:22	2	Calm	Snow/rain	30.0	Car, birds.
18/04/2014	R03	15:20	2	Calm	Snow	61.4	Loader, backup alarm. Car +horn. People talking, dog barking.
18/04/2014	R04	15:04	2	Calm	Snow	36.2	Ravens, birds.
18/04/2014	R05	16:37	2	Calm	None	31.6	Birds.
18/04/2014	Cmpgrnd	15:04	2	Calm	Rain/snow	34.2	Birds.

11/05/2014	R01	9:14		strong N wind	None	45.7	Birds, creek.
11/05/2014	R02	8:58		Light N wind	None	40.7	Birds, car, house doors slamming.
11/05/2014	R03	8:42		Light N wind	None	40.3	Birds.
11/05/2014	R04	8:27		calme	None	34.4	Birds.
11/05/2014	R05	10:21		Light N wind	None	38.8	Wind in trees, bear or moose cracking branches.
11/05/2014	Cmpgrnd	9:30		Light N wind	None	52.4	Creek.
29/05/2014	R01	10:50		Light SW wind	None	43.4	Creek.
29/05/2014	R02	10:30		Light SW wind	None	31.5	Raven, truck.
29/05/2014	R03	9:50		Light SW wind	None	44.3	Raven, car, truck running idle, starting.
29/05/2014	R04	9:40		Light SW wind	None	33.6	Ravens.
29/05/2014	R05	11:40		Light SW wind	None	32.7	Birds.
29/05/2014	Cmpgrnd	11:20		Light SW wind	None	47.9	Creek.
01/06/2014	R01	15:49		strong wind all directions	None	46.1	Creek, wind, dog barking.
01/06/2014	R02	15:33		strong wind all directions	None	36.8	Doors slammimg x 2.
01/06/2014	R03	15:20		strong wind all directions	None	40.8	Truck, trailer, horn.
01/06/2014	R04	15:03		light wind all directions	None	31.8	ATV far away.
01/06/2014	R05	16:18		strong wind all directions	None	35.7	Silent.
01/06/2014	Cmpgrnd	16:03		strong wind all directions	None	50.0	Creek.
26/06/2014	R01	12:52		strong N wind	None	47.0	Wind in trees,creek, birds.
26/06/2014	R02	12:38		strong N wind	None	57.3	Wind in trees, car, chainsaw, ravens, people talking.
26/06/2014	R03	12:25		N wind	None	49.0	Wind in trees, ATV, music, car, ravens.
26/06/2014	R04	12:09		N wind	None	33.5	Wind in trees, birds.
26/06/2014	R05	13:30		N wind	None	42.3	Wind in trees, birds.
26/06/2014	Cmpgrnd	13:11		N wind	None	50.5	Wind in trees, creek.
05/08/2014	R01	10:14		N wind	None	42.8	Wind in trees, creek, birds.
05/08/2014	R02	9:51		N wind	None	34.6	Truck running, people talking, door slamming, wind.
05/08/2014	R03	9:33		N wind	None	39.6	Truck running, people talking, wind.
05/08/2014	R04	9:19		N wind	None	38.7	Car starting, door slamming,, car passing by, wind.
05/08/2014	R05	11:47		N wind	None	36.9	Wind in willows.
05/08/2014	Cmpgrnd	11:17		N wind	None	46.1	Creek, wind, people talking.
23/08/2014	R01	13:36		N wind	None	45.1	Creek, house building.
23/08/2014	R02	13:19		N wind	None	67	Pickup truck, motor running.
23/08/2014	R03	13:07		N wind	None	32	Dog barking x 2, vehicles.
23/08/2014	R04	12:43		N wind	None	36.3	Ravens.
23/08/2014	R05	15:44		N wind	None	38.6	Dump truck, vehicles, drill far away.
23/08/2014	Cmpgrnd	13:54		N wind	None	48.9	Creek, vehicles.
03/09/2014	R01	16:01		W wind, strong	None	49.9	Wind + creek.
03/09/2014	R02	15:47		W wind, strong	None	47.8	Dogs barking, ATV's, wind, door slamming.
03/09/2014	R03	15:35		W wind, strong	None	52.7	2 trucks drove by, dogs barking, wind.
03/09/2014	R04	15:22		W wind, strong	None	37.9	Wind, ravens.
03/09/2014	R05	16:29		W wind, strong	None	41.6	Drill, wind.
03/09/2014	Cmpgrnd	16:15		W wind, strong	None	51.1	Wind, creek, vehicles.
18/09/2014	R01	16:02		NW little wind	None	45.3	Strong wind, creek.
18/09/2014	R02	15:48		NW little wind	None	53.9	ATVs, birds.
18/09/2014	R03	15:35		NW little wind	None	39.2	ATVs, birds.
18/09/2014	R04	15:22		NW little wind	None	32.5	Birds.
18/09/2014	R05	16:30		NW little wind	None	43.1	Little wind, leaves in wind.
18/09/2014	Cmpgrnd	16:15		NW little wind	None	48.9	Strong wind, creek.
15/10/2014	R01	14:28		No Wind	None	42.5	Creek, ravens, birds.
15/10/2014	R02	14:14		No Wind	None	46.7	Car, ravens, birds, squirrels.
15/10/2014	R03	14:00		No Wind	None	40.2	Car, ravens.
15/10/2014	R04	13:40		No Wind	None	29.6	Squirrel, birds, door slamming.
15/10/2014	R05	15:31		No Wind	None	28.8	Ravens, birds.

15/10/2014	Cmpgrnd	14:46		No Wind	None	45.7	Creek, ravens, birds.
25/10/2014	R01	9:33		No Wind	None	38.0	Calm, creek, ravens, birds.
25/10/2014	R02	9:08		No Wind	None	30.2	Calm, ravens, birds.
25/10/2014	R03	8:53		No Wind	None	27.8	Calm, ravens, birds.
25/10/2014	R04	8:37		No Wind	None	31.0	Calm, ravens, birds.
25/10/2014	R05	10:36		No Wind	None	39.2	Calm, ravens.
25/10/2014	Cmpgrnd	10:22		No Wind	None	38.3	Calm, creek, ravens.
14/11/2014	R01	10:57		No Wind	None	67.4	Water truck, squirrel, creek.
14/11/2014	R02	10:37		No Wind	None	33.8	Calm.
14/11/2014	R03	10:10		No Wind	None	37.8	Car x 2.
14/11/2014	R04	9:56		No Wind	None	31.6	Ravens, calm.
14/11/2014	R05	11:30		No Wind	None	33.3	Calm.
14/11/2014	Cmpgrnd	11:12		No Wind	None	38.2	Creek, truck.
23/11/2014	R01	9:45		No Wind	None	26.5	Squirrel.
23/11/2014	R02	9:22		No Wind	None	27.9	Ravens.
23/11/2014	R03	9:01		No Wind	None	53.9	Ravens, truck x2.
23/11/2014	R04	8:46		No Wind	None	40.7	Ravens, truck idling.
23/11/2014	R05	10:12		No Wind	None	33.3	Ravens.
23/11/2014	Cmpgrnd	9:58		No Wind	None	22.7	Ravens.
01/12/2014							Noise Mointoring coverted to 24 hours from 10 min measurements in December 2014

*All readings are taken using an Extech integrating sound level datalogger model 407780 to measure DBA for 10 min.Reading from 16/11/13 taken with an Casella CEL-63X model.(Laeq, Db.)

APPENDIX D

2014 DUST MONITORING RESULTS

Memorandum

To: Alexco Resource Corp.

From: Catherine Henry, Access Consulting Group

CC: Kai Woloshyn, Alexco Resource Corp.

Date: March 9, 2015

Re: Air Quality Data Summary, Keno, YT

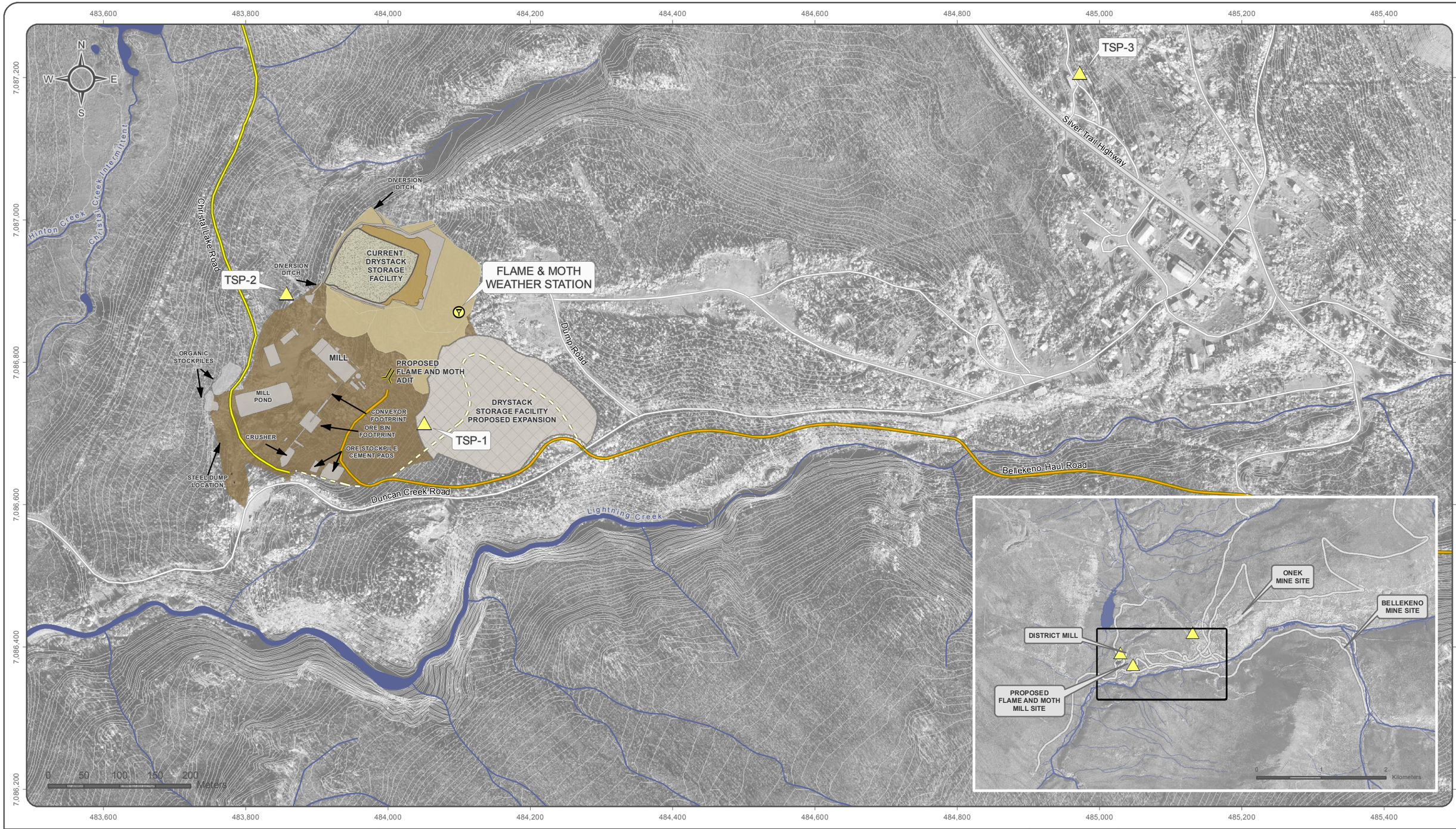
1. INTRODUCTION

In accordance with Clause 69 of the Decision Document for the assessment of the Bellekeno Mine Project (YESAB File Number 2009-0030), dustfall monitoring was installed at two initial locations near the Keno District Mill site in March 2011 and two additional sampling locations were established in August 2011. Bergerhoff dust monitoring gauges were initially selected as the appropriate instrumentation to carry out this program. In accordance with clauses 36 and 37 of the Decision Document for the assessment of the Onek and Lucky Queen Deposit production (YESAB File Number 2011-0315), total suspended particulates (TSP) monitoring was subsequently initiated in August 2012 and dustfall monitoring was discontinued in January 2013. This memorandum presents the results of the TSP monitoring to date.

2. INSTRUMENTATION AND METHODOLOGY

Two BGI Omni Ambient Air Quality Samplers (see Figure 1) were commissioned in August 2012, one to the East of the mill and crusher (TSP-1) and one at the toe of the dry stack tailings facility (TSP-2). A third sampler (TSP-3), located in Keno City, was commissioned in December 2014, in accordance with the revised Dust Abatement and Monitoring Plan required in the Decision Document for the assessment of the Flame & Moth Development and Production Program (YESAB file Number 2013-0161), which will be submitted to Yukon Government for review and approval as part of the application to amend the Quartz Mining License. The sampling locations are shown on Figure 2. The BGI Omni samplers are set up with Total Suspended Particulates (TSP) inlets, and use the filter reference method. Samples are collected over 24-hour periods and sent to Maxxam Analytics laboratory for gravimetric analysis and ICP metals mass spectrometry. Four samples per location are collected every month, in order to capture the different weather conditions that may affect dust sources and transport. The BGI Omni Ambient Air Quality Samplers cannot collect samples below -20°C and therefore some winter months will have reduced data.

Figure 1 BGI Omni Ambient Air Quality Sampler



Aerial photography flight date: July 13th 2006. Ortho-rectification produced by Challenger Geomatics Ltd. Data obtained from EBA: "As built" spatial data: Mill pond (Y.E.S.), Mill structure, and current DSTF footprints, Roads (In House survey December 11th 2011). Design spatial data: Conveyance and water collection, diversion ditches and berm.

Datum: NAD 83; Projection: UTM Zone 8N

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- Dust Monitoring Station
- Weather Station
- Flame and Moth Adit
- Former Haul Road
- Mill Road
- Haul Road
- Highway
- Local Road
- Mill Infrastructure
- Proposed DSTF Expansion
- DSTF Cover and Revegetation
- Current DSTF
- DSTF 322k Tonnes Design
- District Mill Footprint

ALEXCO

ACCESS

ALEXCO KENO HILL MINING CORP.

FIGURE 2

DUST MONITORING AND WEATHER STATION LOCATIONS

MARCH 2015

D:\Project\AllProjects\ALEX-05-01\gis\mxd\Overview_Maps\SpecificTopics\Monitoring\Dust Monitoring and Air Quality\Dust_Monitoring_Stns_20150310.mxd
(Last edited by: mheynen;10/03/2015/14:23 PM)

3. RESULTS

3.1. TOTAL SUSPENDED PARTICULATES

Results of the gravimetric analyses can be converted into 24-hour average ambient concentrations based on the flow rate of the instruments. This can then be compared with the Yukon Ambient Air Quality Standard (YAAQS) of 120 µg/m^3 for TSP (24-hour average). Table 1 below presents summary statistics for TSP-1, TSP-2 and TSP-3, while the complete result tables are presented in Appendix A. When results were below the detection limit a value of half the detection limit was used to calculate the statistics. Table 1 shows that all results are well below the Yukon TSP standard, most results being between 5 and 20 times below. Note that over half of the results are below the detection limit at all three stations.

The air quality monitors located on site are 160 (TSP-1) and 46 (TSP-2) meters away from the dry stack tailings facility (DSTF) and 163 (TSP-1) and 240 (TSP-2) meters away from the crusher, two of the main potential dust sources. The nearest residence is at a distance of 710 meters from the DSTF and 860 meters from the crusher. TSP levels experienced at the nearest residence are better approximated by levels observed at air quality monitor TSP-3, located in Keno City (950 m from the DSTF and 1240 m from the crusher).

Table 1 24-Hour Total Suspended Particulate Summary Statistics, 2012-2015

	TSP-1 (µg/m^3)	TSP-2 (µg/m^3)	TSP-3 (µg/m^3)
Average	6.5	7.1	4.7
Count	95	92	7
Minimum	<5.6	<5.6	<5.6
Maximum	53.2	62.2	16
Geometric Mean	4.7	5.1	3.6
Count <DL	55	49	6
% <DL	57.9	53.3	85.7
Standard Deviation	7.7	7.8	5
1st Quartile	<5.6	<5.6	<5.6
Median	<5.6	<5.6	<5.6
3rd Quartile	7.4	8.6	2.8
Count Over Standard	0	0	0
% Over Standard	0	0	0

3.2. METAL SPECIATION

There are no ambient air quality standards for metals in Yukon, however the Ontario Ministry of Environment has developed a comprehensive list of Ambient Air Quality Criteria (AAQC) that includes 24-hour average concentrations for a number of metals. Table 2 below presents the summary statistics for TSP-1, TSP-2 and TSP-3, while the complete result tables are presented in Appendix A. For reference, the Ontario AAQCs are

indicated in the first row where available. When results were below the detection limit a value of half the detection limit was used to calculate the statistics.

Very few exceedences of the Ontario AAQCs are observed overall, in fact samples are below the detection limit for most parameters. Parameters for which exceedences have occurred include lead (2.2% of samples) at TSP-1 and cadmium (1.1% of samples), lead (1.1% of samples) and manganese (3.3% of samples) at TSP-2. No exceedences were observed at TSP-3 to date. Note that the detection limit for beryllium and cadmium is greater than the Ontario AAQC and in many cases, it cannot be determined if exceedences of these parameters have occurred. Also, the chromium and manganese criteria do not come into effect until July 1, 2016, but are still used here for reference.

Table 2 24-hour Metal Concentrations Summary Statistics (µg/m^3) 2012-2015

	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	P	K	Se	Si	Ag	Na	Sr	S	Sn	Ti	V	Zn	Zr
Ontario Air Quality Criteria		**25**	**0.3**	**10**	**0.01**	**120**	**0.025**		**0.5**	**0.1**	**50**	**4**	**0.5**		**0.4**	**120**	**2**			**10**		**1**		**120**		**10**	**120**	**2**	**120**	
TSP-1																														
Average	0.291	0.139	0.056	0.003	0.006	0.027	0.014	0.468	0.08	0.035	0.035	0.394	0.079	0.046	0.019	0.035	0.035	0.208	0.694	0.035	0.809	0.021	0.275	0.003	0.183	0.059	0.014	0.021	0.038	0.035
Count	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	48	91	91	91	91	91	91	91	91	91
Minimum	0.139	0.139	0.056	0.002	0.006	0.021	0.014	0.139	0.021	0.035	0.035	0.021	0.056	0.021	0.006	0.035	0.035	0.208	0.694	0.035	0.208	0.021	0.208	0.002	0.139	0.056	0.014	0.021	0.014	0.035
Maximum	5.292	0.139	0.056	0.022	0.006	0.264	0.014	8.722	0.139	0.035	0.035	2.528	1.083	0.429	0.301	0.035	0.035	0.208	0.694	0.035	3.875	0.021	1.458	0.017	0.708	0.193	0.042	0.021	0.558	0.035
Geometric Mean	0.17	0.139	0.056	0.002	0.006	0.022	0.014	0.202	0.073	0.035	0.035	0.329	0.062	0.03	0.009	0.035	0.035	0.208	0.694	0.035	0.474	0.021	0.245	0.002	0.164	0.057	0.014	0.021	0.022	0.035
Count <DL	81	91	91	80	91	88	91	75	10	91	91	1	86	70	67	91	91	91	91	91	24	91	77	85	77	89	90	91	62	91
Standard Deviation	0.763	0	0	0.004	0	0.036	0	1.3	0.028	0	0	0.339	0.133	0.069	0.043	0	0	0	0	0	0.984	0	0.19	0.003	0.119	0.019	0.003	0	0.073	0
1st Quartile	0.139	0.139	0.056	0.002	0.006	0.021	0.014	0.139	0.071	0.035	0.035	0.292	0.056	0.021	0.006	0.035	0.035	0.208	0.694	0.035	0.208	0.021	0.208	0.002	0.139	0.056	0.014	0.021	0.014	0.035
Median	0.139	0.139	0.056	0.002	0.006	0.021	0.014	0.139	0.085	0.035	0.035	0.338	0.056	0.021	0.006	0.035	0.035	0.208	0.694	0.035	0.32	0.021	0.208	0.002	0.139	0.056	0.014	0.021	0.014	0.035
3rd Quartile	0.139	0.139	0.056	0.002	0.006	0.021	0.014	0.139	0.099	0.035	0.035	0.393	0.056	0.021	0.012	0.035	0.035	0.208	0.694	0.035	0.976	0.021	0.208	0.002	0.139	0.056	0.014	0.021	0.034	0.035
Count Over Standard	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Over Standard	0	0	0	0	0	0	0	0	0	0	0	0	2.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TSP-2																														
Average	0.177	0.139	0.056	0.002	0.006	0.023	0.014	0.246	0.082	0.035	0.035	0.405	0.08	0.034	0.038	0.035	0.035	0.208	0.694	0.035	0.887	0.021	0.233	0.003	0.182	0.056	0.014	0.021	0.038	0.035
Count	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	47	91	91	91	91	91	91	91	91	91
Minimum	0.139	0.139	0.056	0.002	0.006	0.021	0.014	0.139	0.021	0.035	0.035	0.021	0.056	0.021	0.006	0.035	0.035	0.208	0.694	0.035	0.208	0.021	0.208	0.002	0.139	0.056	0.014	0.021	0.014	0.035
Maximum	1.625	0.139	0.056	0.022	0.006	0.099	0.036	3.472	0.132	0.035	0.035	1.431	0.736	0.124	0.651	0.035	0.035	0.208	0.694	0.035	5.028	0.021	0.917	0.032	0.736	0.056	0.014	0.021	0.294	0.035
Geometric Mean	0.151	0.139	0.056	0.002	0.006	0.022	0.014	0.174	0.075	0.035	0.035	0.358	0.065	0.028	0.011	0.035	0.035	0.208	0.694	0.035	0.532	0.021	0.223	0.002	0.165	0.056	0.014	0.021	0.023	0.035
Count <DL	86	91	91	86	91	88	90	77	8	91	91	1	83	70	61	91	91	91	91	91	22	91	84	87	75	91	91	91	60	91
Standard Deviation	0.218	0	0	0.002	0	0.011	0.002	0.44	0.029	0	0	0.232	0.096	0.028	0.104	0	0	0	0	0	1.01	0	0.098	0.003	0.104	0	0	0	0.057	0
1st Quartile	0.139	0.139	0.056	0.002	0.006	0.021	0.014	0.139	0.069	0.035	0.035	0.307	0.056	0.021	0.006	0.035	0.035	0.208	0.694	0.035	0.208	0.021	0.208	0.002	0.139	0.056	0.014	0.021	0.014	0.035
Median	0.139	0.139	0.056	0.002	0.006	0.021	0.014	0.139	0.086	0.035	0.035	0.354	0.056	0.021	0.006	0.035	0.035	0.208	0.694	0.035	0.486	0.021	0.208	0.002	0.139	0.056	0.014	0.021	0.014	0.035
3rd Quartile	0.139	0.139	0.056	0.002	0.006	0.021	0.014	0.139	0.101	0.035	0.035	0.425	0.056	0.021	0.015	0.035	0.035	0.208	0.694	0.035	1.264	0.021	0.208	0.002	0.139	0.056	0.014	0.021	0.032	0.035
Count Over Standard	0	0	0	0	0	0	1	0	0	0	0	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Over Standard	0	0	0	0	0	0	1.1	0	0	0	0	0	1.1	0	3.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TSP-3																														
Average	0.139	0.139	0.056	0.002	0.006	0.021	0.014	0.182	0.083	0.035	0.035	0.219	0.056	0.021	0.009	0.035	0.035	0.208	0.694	0.035	0.743	0.021	0.208	0.002	0.139	0.056	0.014	0.021	0.014	0.035
Count	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Minimum	0.139	0.139	0.056	0.002	0.006	0.021	0.014	0.139	0.053	0.035	0.035	0.021	0.056	0.021	0.006	0.035	0.035	0.208	0.694	0.035	0.208	0.021	0.208	0.002	0.139	0.056	0.014	0.021	0.014	0.035
Maximum	0.139	0.139	0.056	0.002	0.006	0.021	0.014	0.319	0.103	0.035	0.035	0.367	0.056	0.021	0.021	0.035	0.035	0.208	0.694	0.035	1.569	0.021	0.208	0.002	0.139	0.056	0.014	0.021	0.014	0.035
Geometric Mean	0.139	0.139	0.056	0.002	0.006	0.021	0.014	0.17	0.081	0.035	0.035	0.135	0.056	0.021	0.008	0.035	0.035	0.208	0.694	0.035	0.546	0.021	0.208	0.002	0.139	0.056	0.014	0.021	0.014	0.035
Count <DL	8	8	8	8	8	8	8	6	0	8	8	2	8	8	6	8	8	8	8	8	3	8	8	8	8	8	8	8	8	8
Standard Deviation	0	0	0	0	0	0	0	0.08	0.019	0	0	0.155	0	0	0.006	0	0	0	0	0	0.566	0	0	0	0	0	0	0	0	0

	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	P	K	Se	Si	Ag	Na	Sr	S	Sn	Ti	V	Zn	Zr
Ontario Air Quality Criteria		**25**	**0.3**	**10**	**0.01**	**120**	**0.025**		**0.5**	**0.1**	**50**	**4**	**0.5**		**0.4**	**120**	**2**			**10**		**1**		**120**		**10**	**120**	**2**	**120**	
1st Quartile	0.139	0.139	0.056	0.002	0.006	0.021	0.014	0.139	0.072	0.035	0.035	0.054	0.056	0.021	0.006	0.035	0.035	0.208	0.694	0.035	0.208	0.021	0.208	0.002	0.139	0.056	0.014	0.021	0.014	0.035
Median	0.139	0.139	0.056	0.002	0.006	0.021	0.014	0.139	0.088	0.035	0.035	0.293	0.056	0.021	0.006	0.035	0.035	0.208	0.694	0.035	0.59	0.021	0.208	0.002	0.139	0.056	0.014	0.021	0.014	0.035
3rd Quartile	0.139	0.139	0.056	0.002	0.006	0.021	0.014	0.181	0.098	0.035	0.035	0.342	0.056	0.021	0.008	0.035	0.035	0.208	0.694	0.035	1.191	0.021	0.208	0.002	0.139	0.056	0.014	0.021	0.014	0.035
Count Over Standard	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Over Standard	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

3.3. WIND ANALYSIS

An analysis of the hourly wind speed and direction collected between June 2011 and February 2015 at the Keno District Mill weather station (shown on Figure 2), at a height of 10 meters, indicates that dominant winds are blowing from the North and from the Southeast. The wind rose in Figure 3, which has data availability of 93.5% for that period, depicts this information based on 16 wind direction categories. The average wind speed is 1.25 m/s and winds are calm 18.41% of the time. Note that the wind sensor experienced occasional icing during the winter months and extended periods of zero wind speed were excluded from this analysis. Also, winter wind speeds may occasionally be underestimated due to the presence of ice on the sensor, but these occurrences cannot be detected in the data record.

Table 3 below compiles the wind speed and direction frequency distribution based on 8 wind direction categories, and 6 wind speed categories.

Table 3 Wind Frequency Distribution, Keno District Mill, June 2011-Feb. 2015

Directions / Wind Classes (m/s)	0.5 - 1.0	1.0 - 2.0	2.0 - 3.0	3.0 - 4.0	4.0 - 5.0	>= 5.0	Total (%)
N	5.62	8.01	2.85	0.49	0.05	0.02	15.94
NE	5.78	4.92	1.32	0.17	0.01	0	11.40
E	3.53	7.55	2.58	0.44	0.09	0.01	13.28
SE	3.58	5.54	3.27	1.49	0.59	0.30	13.81
S	3.08	5.54	2.36	0.48	0.11	0.04	10.86
SW	0.74	1.77	1.34	0.34	0.04	0.01	3.97
W	0.36	0.55	0.43	0.29	0.09	0.08	1.68
NW	0.86	1.55	1.22	0.49	0.23	0.09	4.16
Sub-Total	22.03	33.13	14.36	3.92	1.13	0.51	75.09
Calms							18.41
Missing/Incomplete							6.50
Total							100

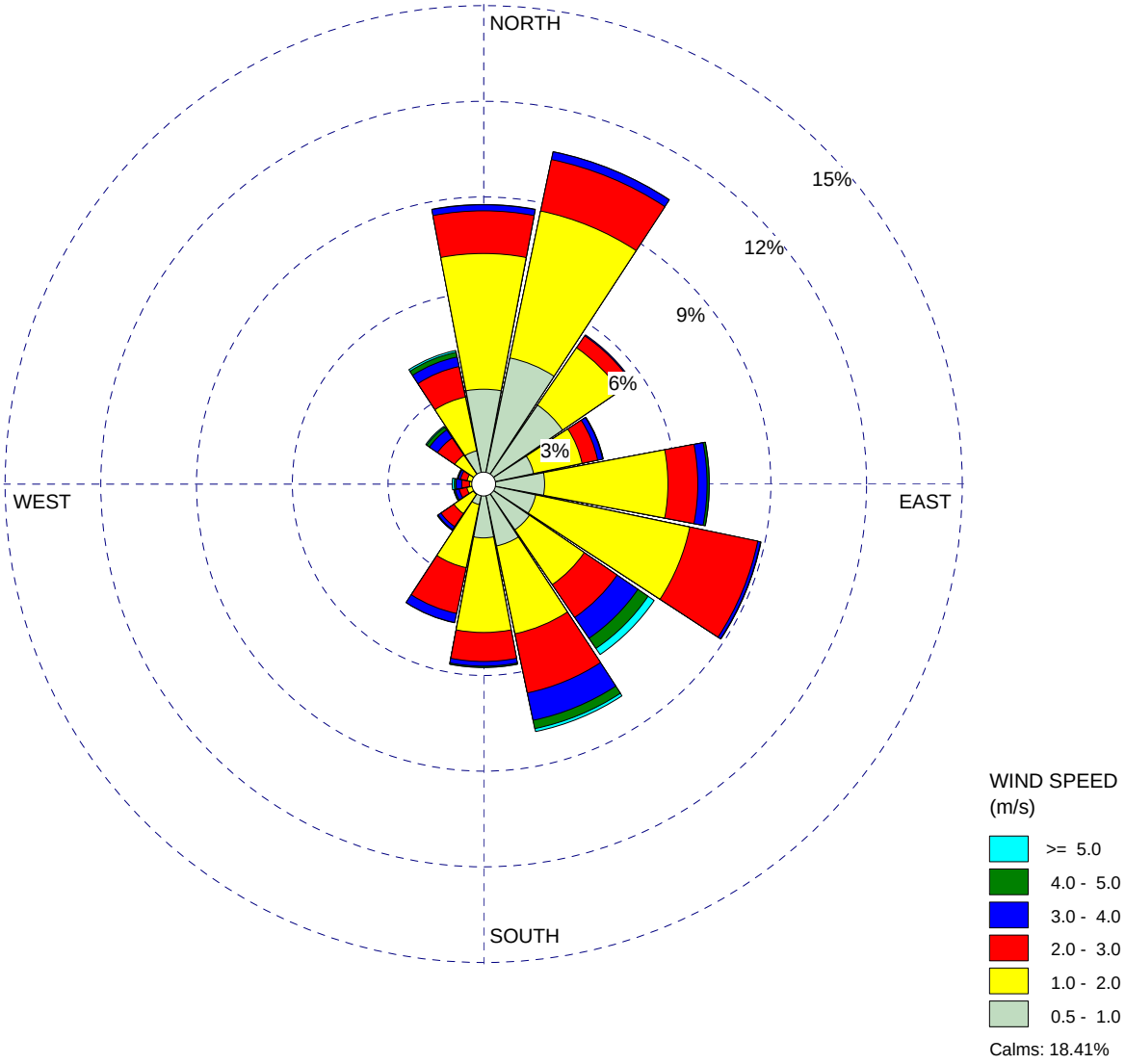
The dominant wind direction is from the north (15.94% of the time), followed by southeast (13.81%) and east (13.28%). As can be seen on the wind rose, the strongest winds tend to originate from the southeast. Referring back to Figure 2, we can see that air quality station TSP-1 is located downwind from the DSTF when the wind blows from the north, but generally upwind from the DSTF and crusher when the wind blows from the SE. Station TSP-2 is generally downwind from the DSTF and may capture the influence of the crusher when the wind is from the SE but not when it is from the north. TSP-3, located in Keno City and further away from the DSTF and crusher, is generally east (ENE) of these potential dust sources. Based on Table 3 above, westerly winds only occur 1.68% of the time (or 9.81% of the time when combining NW, W and SW), so the DSTF and crusher are expected to have very limited influence on air quality in Keno City (TSP-3).

WIND ROSE PLOT:

Figure 3 - Keno District Mill Wind Rose
June 2011 - Feb. 2015

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS: Excludes periods of ice affected or missing data Anemometer height: 10m	DATA PERIOD: **Start Date: 6/2/2011 - 00:00** **End Date: 2/13/2015 - 10:00**	COMPANY NAME:	
		MODELER:	
	CALM WINDS: **18.41%**	TOTAL COUNT: **30339 hrs.**	
	AVG. WIND SPEED: **1.25 m/s**	DATE: **3/8/2015**	PROJECT NO.:

The average TSP concentration is slightly higher at TSP-2 than at TSP-1 (7.1 µg/m^3 versus 6.5 µg/m^3), however both values are over ten times below the YAAQS. The average TSP concentration at TSP-3 is even lower at 4.7 µg/m^3, but is based on fewer observations. When comparing metal concentrations for the two samplers located within the site, only iron, manganese and silicon are on average higher at TSP-2, while all the other metals are equal or higher at TSP-1. None of the differences between TSP-1 and TSP-2 are however statistically significant based on results of unpaired student t-tests at a 0.05 significance level. Metal concentrations are all lower or equal at TSP-3. Figure 4 shows that comparison for all parameters that were above detection limit for at least one sample. Note that half the detection limit (RDL) was used to calculate averages for samples that were below RDL.

Dust originating from the DSTF would be expected to contain high concentrations of iron, manganese, calcium, zinc, lead, magnesium, arsenic and aluminum, based on metal characterization analyses of the tailings conducted monthly in 2012 and 2013. Metal speciation results of the air samples obtained to date indicate that manganese is found in higher concentrations at TSP-2, which, based on wind direction distribution, would be more frequently downwind of the DSTF than TSP-1. Therefore, the DSTF could be contributing source of ambient dust observed at TSP-2, but other sources are likely predominant.

On days where TSP levels were higher than average and where exceedences of the Ontario AAQCs were observed for lead at TSP-1, winds were generally blowing from the Northeast and from the East (on October 23, 2012 and June 18, 2013 respectively). A source of TSP in this case could have been the roads. Roads within the vicinity of the TSP stations include mine access roads as well as public roads including Duncan Creek Road.

On days where TSP levels were higher than average and/or where exceedences of the Ontario AAQCs were observed for lead at TSP-2, winds were generally blowing from the N-NNE (on August 23, 2012). On days TSP levels were higher than average and/or where exceedences of the Ontario AAQCs were observed for manganese at TSP-2, winds were generally blowing from the NE (March 23-24, 2013) and from the East (April 7, 2013). In this case the DSTF could have been the main source of TSP at TSP-2. On days where exceedences of the Ontario AAQCs were observed for cadmium at TSP-2, winds were generally blowing from the NE, so the DSTF could have been a source in this case as well.

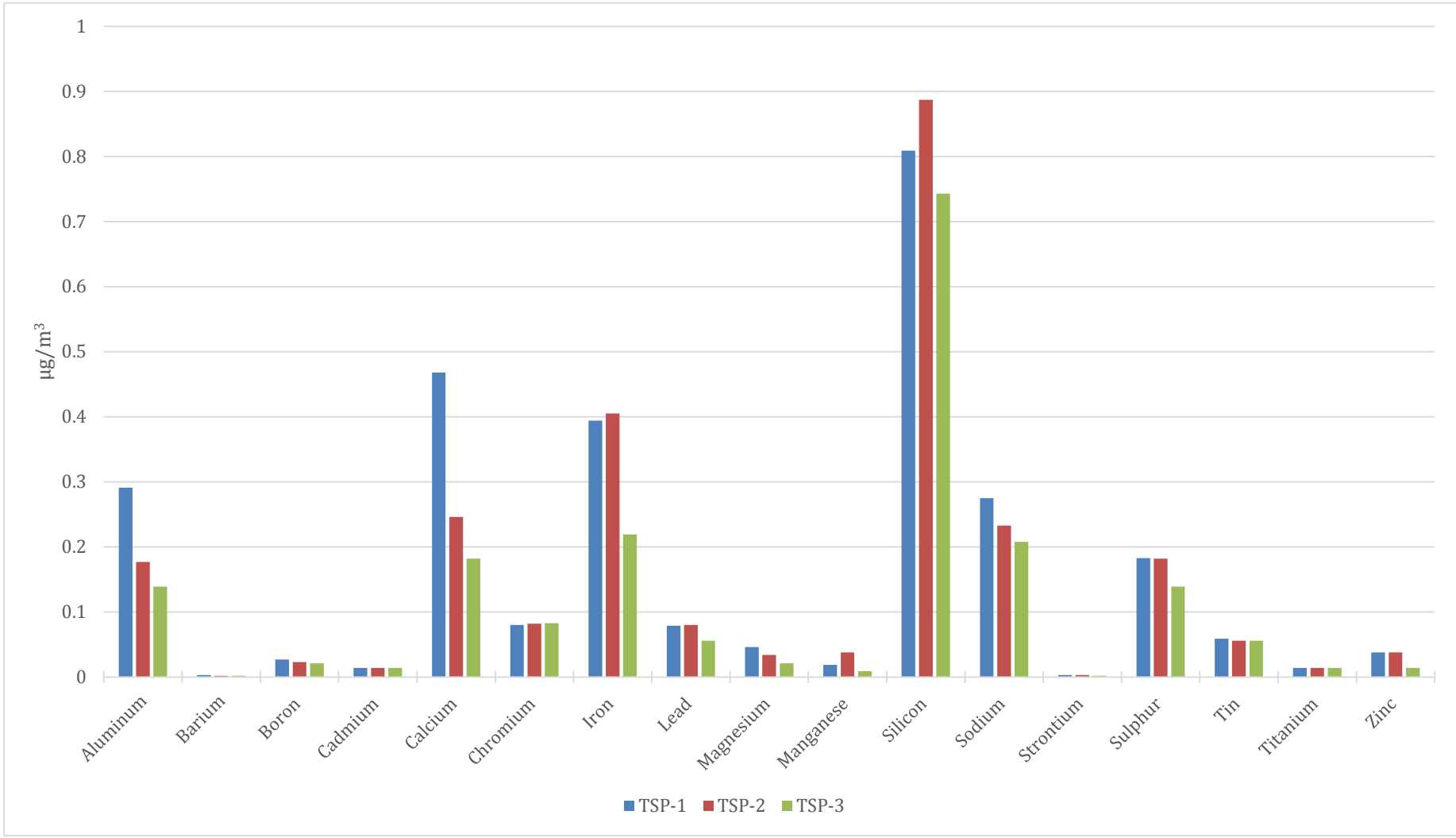


Figure 4 24-hour Average Ambient Metal Concentrations

4. PM_{10} Sampling By Yukon Government

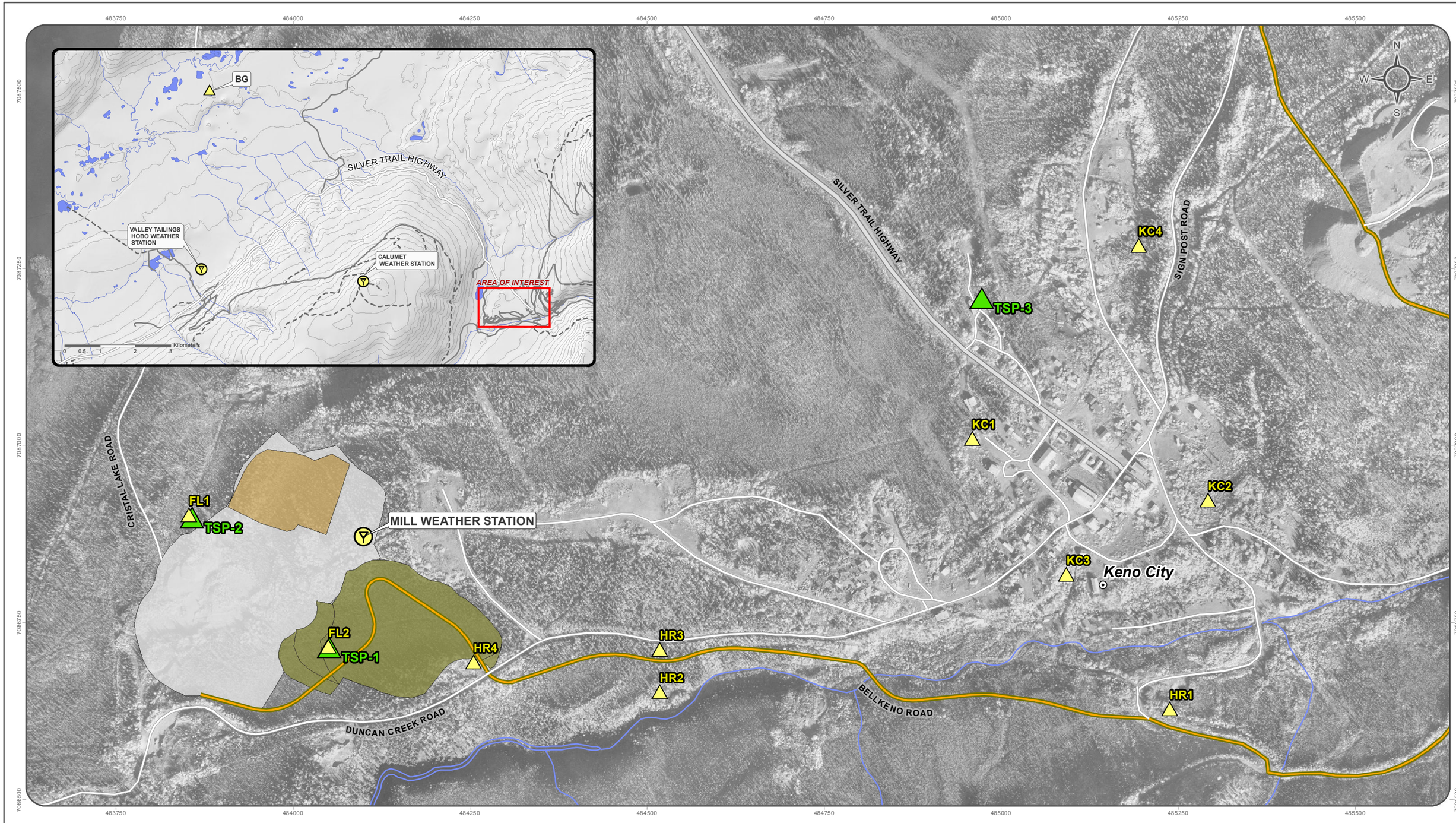
Independent PM_{10} sampling was conducted by Yukon Government in 2013 at the locations shown in Figure 5. The station labelled BG represents background (8 km outside of Keno), stations labelled KC are located in Keno City, stations labelled HR are along the Bellekeno Haul Road and stations labelled FL are fence line stations and correspond to TSP-1 and TSP-2 locations. 5-minute data averaged over the different sampling periods are presented in Table 4 below. The sampling period varies between sites (ranges from about 14 to 53 hours) but for comparison purposes, the average results are all below the 24-hour YAAQS of 50 µg/m^3. Note that in some cases the measured background PM_{10} concentration is higher than that measured at some of the receptors, suggesting that there is some variability in the data and that the difference between background and receptors sites may not be significant.

Table 4 Average PM_{10} concentrations (µg/m^3)

	June 11-13	July 15-17	August 21-22
BG	2.8	10.2	3.8
KC1	6.2		
KC2	3.8		
KC3	8.3		
KC4	2.1		
HR1		5.2	
HR2		2.1	
HR3		13.8	
HR4		16.4	
FL1			0.8
FL2			39.3

Source: Yukon Government, 2014

The data presented in Table 4 was obtained from Yukon Government and not collected by Alexco, therefore details of the collection have not been presented within this report. The data is assumed to be accurate and valid, but potentially not representative of all conditions observed over a year due to the limited dataset.



National Topographic Data Base (NTDB) compiled by Natural Resources Canada at a scale of 1:50,000. Cadastral data compiled by Natural Resources Canada. Reproduced underlicense from Her Majesty the Queen in Right of Canada, Department of Natural Resources Canada. All rights reserved.

Quartz claim boundaries current as of October[th], 2013. Data source: http://geomaticsyukon.ca.

Datum: NAD 83; Map Projection: UTM Zone 8N

1:5,000 (when printed on 11 x17 inch paper)

0 50 100 200 300 400 Meters

- Weather Stations
- Alexco TSP Monitoring Stations
- YG PM10 Monitoring Sites 2013
- Haul Road
- Highway
- Secondary Road
- Current DSTF
- Proposed DSTF
- District Mill Footprint

AKHM

ACCESS

KENO HILL SILVER DISTRICT MINING OPERATIONS

FIGURE 5

METEOROLOGICAL AND AIR QUALITY MONITORING STATIONS LOCATION

MARCH 2015

D:\Project\All\Projects\Keno_Area_Mines\FM\Map\02_Permit\YESAB_IR\Dust-Monitoring\Air Dispersal Model\03_01_Meteorological_and_air_quality_monitoring_stations_20150310.mxd
(Last edited by: mheynen; 10/03/2015/15:39 PM)

5. CONCLUSION

- All TSP samples collected to date near the District Mill and DSTF are on average at least 10 times below the Yukon air quality standard for TSP.
- Two metal concentrations (lead) exceeded the Ontario ambient air quality criteria for TSP-1 out of 91 samples collected to date and 5 exceedances (3 manganese, 1 lead and 1 cadmium) were measured at TSP-2 from 91 samples collected to date. Air quality samples will continue to be collected 4 times per month to identify if these are infrequent events or if any trends can be established. Note that no exceedences were observed since June 2013.
- A few samples were damaged during transport to the lab and could not be analyzed. Precautions have been taken to prevent this from happening again in the future.

6. REFERENCES

Ontario Ministry of Environment. 2012. Ontario's Ambient Air Quality Criteria. Standards Development Branch. PIBS#6570e01. April 2012.

Yukon Environment. 2014. Yukon Ambient Air Quality Standards. April 2010, updated March 2014.

APPENDIX A

TABULAR DATA

Table A-1 24-Hour Average Total Suspended Particulate Results, 2012-2015

Sample Date	TSP-1 (µg/m³)	TSP-2 (µg/m³)	TSP-3 (µg/m³)
23/08/2012	10.1	12.8	-
27/09/2012	<5.6	<5.6	-
29/09/2012	<5.6	<5.6	-
16/10/2012	5.8	-	-
17/10/2012	<5.6	-	-
23/10/2012	53.2	-	-
15/12/2012	<5.6	13.6	-
14/01/2013	<5.6	-	-
16/01/2013	<5.6	<5.6	-
23/03/2013	<5.6	18.2	-
24/03/2013	<5.6	23.2	-
25/03/2013	<5.6	13.5	-
26/03/2013	9.6	11.1	-
07/04/2013	-	17.1	-
10/04/2013	5.7	7.2	-
13/04/2013	<5.6	6.9	-
15/04/2013	6.5	6.5	-
16/04/2013	7.2	6.4	-
28/05/2013	6.8	-	-
16/06/2013	8.2	-	-
17/06/2013	-	<5.6	-
18/06/2013	47.2	6.3	-
21/06/2013	7.2	<5.6	-
23/06/2013	-	<5.6	-
24/06/2013	<5.6	-	-
28/06/2013	-	62.2	-
19/07/2013	5.6	<5.6	-
20/07/2013	12.2	<5.6	-

Sample Date	TSP-1 (µg/m³)	TSP-2 (µg/m³)	TSP-3 (µg/m³)
21/07/2013	<5.6	<5.6	-
22/07/2013	<5.6	10.1	-
22/08/2013	<5.6	<5.6	-
23/08/2013	<5.6	-	-
24/08/2013	<5.6	-	-
25/08/2013	<5.6	<5.6	-
26/08/2013	-	<5.6	-
28/08/2013	-	7.2	-
31/08/2013	-	<5.6	-
21/09/2013	-	<5.6	-
24/09/2013	<5.6	<5.6	-
27/09/2013	<5.6	<5.6	-
28/09/2013	<5.6	<5.6	-
29/09/2013	<5.6	-	-
30/09/2013	-	6.0	-
24/10/2013	-	<5.6	-
25/10/2013	7.6	<5.6	-
26/10/2013	<5.6	<5.6	-
27/10/2013	6.8	<5.6	-
28/10/2013	<5.6	-	-
28/11/2013	7.8	8.8	-
29/11/2013	7.6	7.5	-
30/11/2013	8.9	8.5	-
1/12/2013	6.7	7.2	-
03/01/2014	13.2	11.8	-
04/01/2014	12.6	9.3	-
05/01/2014	18.6	11.4	-
06/01/2014	11.9	11	-

Sample Date	TSP-1 (µg/m³)	TSP-2 (µg/m³)	TSP-3 (µg/m³)
01/02/2014	9.7	11.9	-
02/02/2014	<5.6	<5.6	-
03/02/2014	<5.6	<5.6	-
04/02/2014	<5.6	6.4	-
05/03/2014	<5.6	<5.6	-
06/03/2014	<5.6	<5.6	-
07/03/2014	<5.6	<5.6	-
25/03/2014	<5.6	<5.6	-
12/04/2014	<5.6	<5.6	-
13/04/2014	6.8	8.1	-
14/04/2014	18.8	20.3	-
15/04/2014	15.7	14.4	-
11/05/2014	21.9	23.2	-
12/05/2014	14.4	10	-
13/05/2014	<5.6	18.6	-
29/05/2014	17.1	<5.6	-
26/06/2014	<5.6	-	-
27/06/2014	<5.6	5.6	-
28/06/2014	-	<5.6	-
29/06/2014	<5.6	<5.6	-
30/06/2014	<5.6	<5.6	-
08/07/2014	<5.6	<5.6	-
27/07/2014	<5.6	<5.6	-
28/07/2014	<5.6	<5.6	-
29/07/2014	<5.6	<5.6	-
22/08/2014	<5.6	<5.6	-
23/08/2014	6.9	16.7	-
24/08/2014	<5.6	5.6	-

Sample Date	TSP-1 (µg/m³)	TSP-2 (µg/m³)	TSP-3 (µg/m³)
25/08/2014	<5.6	-	-
26/08/2014	-	<5.6	-
20/09/2014	<5.6	<5.6	-
23/09/2014	5.6	6.9	-
24/09/2014	5.6	6.9	-
27/09/2014	5.6	<5.6	-
15/10/2014	9.7	18.1	-
16/10/2014	<5.6	2.8	-
23/10/2014	<5.6	2.8	-
24/10/2014	<5.6	2.8	-
19/11/2014	10	-	-
20/11/2014	<5.6	-	-
22/11/2014	-	<5.6	-
23/11/2014	-	5.8	-
24/11/2014	<5.6	-	-
25/11/2014	10.4	8.1	-
12/12/2014	10.3	7.8	-
13/12/2014	5.8	11.7	16
14/12/2014	-	5.6	<5.6
15/12/2014	<5.6	<5.6	<5.6
17/12/2014	<5.6	-	-
10/01/2015	5.6	<5.6	-
11/01/2015	<5.6	<5.6	-
12/01/2015	-	-	<5.6
13/01/2015	<5.6	<5.6	-
15/01/2015	6.1	<5.6	<5.6
16/01/2015	-	-	<5.6
18/01/2015	-	-	<5.6

Table A-2 24-Hour Average Metal Concentrations, TSP-1, 2012-2015

Sample Date	Aluminum (Al), total µg/m3	Antimony (Sb), total µg/m3	Arsenic (As), total µg/m3	Barium (Ba), total µg/m3	Beryllium (Be), total µg/m3	Boron (B), total µg/m3	Cadmium (Cd), total µg/m3	Calcium (Ca), total µg/m3	Chromium (Cr), total µg/m3 *	Cobalt (Co), total µg/m3	Copper (Cu), total µg/m3	Iron (Fe), total µg/m3	Lead (Pb), total µg/m3	Magnesium (Mg), total µg/m3	Manganese (Mn), total µg/m3 *	Molybdenum (Mo), total µg/m3	Nickel (Ni), total µg/m3	Phosphorus (P), total µg/m3	Potassium (K), total µg/m3	Selenium (Se), total µg/m3	Silicon (Si), total µg/m3	Silver (Ag), total µg/m3	Sodium (Na), total µg/m3	Strontium (Sr), total µg/m3	Sulphur (S), total µg/m3	Tin (Sn), total µg/m3	Titanium (Ti), total µg/m3	Vanadium (V), total µg/m3	Zinc (Zn), total µg/m3	Zirconium (Zr), total µg/m3
Ontario AAQC (24-hr avg)		**25**	**0.3**	**10**	**0.01**	**120**	**0.025**		**0.5**	**0.1**	**50**	**4**	**0.5**		**0.4**	**120**	**2**			**10**		**1**		**120**		**10**	**120**	**2**	**120**	
23/08/12	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	0.486	<0.042	<0.069	<0.069	0.554	0.174	0.061	0.045	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	0.708	<0.111	<0.028	<0.042	0.118	<0.069
27/09/12	0.667	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	1.722	<0.042	<0.069	<0.069	<0.042	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.039	<0.069
23/10/12	0.653	<0.278	<0.111	0.022	<0.011	<0.042	<0.028	1.153	<0.042	<0.069	<0.069	2.528	1.083	0.308	0.301	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	0.569	<0.111	<0.028	<0.042	0.558	<0.069
15/12/12	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	<0.042	<0.069	<0.069	0.194	0.139	<0.042	0.053	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.094	<0.069
14/01/13	0.403	<0.278	<0.111	0.010	<0.011	<0.042	<0.028	2.069	<0.042	<0.069	<0.069	0.815	<0.111	0.217	0.026	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	0.875	0.007	0.556	0.174	<0.028	<0.042	0.196	<0.069
16/01/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	0.444	<0.042	<0.069	<0.069	0.126	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.039	<0.069
23/03/13	0.292	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	1.347	<0.042	<0.069	<0.069	0.318	<0.111	0.072	0.034	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	0.347	<0.111	<0.028	<0.042	0.043	<0.069
24/03/13	<0.278	<0.278	<0.111	0.019	<0.011	<0.042	<0.028	0.597	<0.042	<0.069	<0.069	0.293	<0.111	0.094	0.066	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.067	<0.069
25/03/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.057	<0.069	<0.069	0.181	<0.111	0.058	0.021	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.039	<0.069
26/03/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	<0.042	<0.069	<0.069	0.168	<0.111	0.057	0.019	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.050	<0.069
10/04/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.043	<0.069	<0.069	0.272	<0.111	0.082	0.017	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	0.292	<0.111	<0.028	<0.042	0.035	<0.069
13/04/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	0.306	0.053	<0.069	<0.069	0.465	<0.111	0.106	0.022	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	0.375	<0.111	<0.028	<0.042	0.038	<0.069
15/04/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.047	<0.069	<0.069	0.169	<0.111	0.061	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	0.333	<0.111	<0.028	<0.042	<0.028	<0.069
16/04/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	<0.042	<0.069	<0.069	0.107	<0.111	0.046	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
28/05/13	5.292	<0.278	<0.111	0.009	<0.011	0.264	<0.028	8.722	0.049	<0.069	<0.069	0.313	<0.111	0.222	0.013	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	0.583	0.017	0.306	<0.111	<0.028	<0.042	0.079	<0.069
16/06/13	5.236	<0.278	<0.111	0.012	<0.011	0.264	<0.028	8.597	0.076	<0.069	<0.069	0.879	0.224	0.211	0.083	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	0.722	0.016	0.292	<0.111	<0.028	<0.042	0.164	<0.069
18/06/13	0.861	<0.278	<0.111	0.019	<0.011	<0.042	<0.028	1.417	0.075	<0.069	<0.069	2.153	0.794	0.318	0.218	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	0.569	0.005	0.681	<0.111	0.042	<0.042	0.382	<0.069
21/06/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	0.319	0.068	<0.069	<0.069	0.372	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	0.431	<0.004	<0.278	<0.111	<0.028	<0.042	0.058	<0.069
24/06/13	<0.278	<0.278	<0.111	0.018	<0.011	<0.042	<0.028	<0.278	0.103	<0.069	<0.069	0.450	<0.111	<0.042	0.018	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	0.444	<0.004	<0.278	<0.111	<0.028	<0.042	0.032	<0.069
19/07/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.128	<0.069	<0.069	0.419	<0.111	<0.042	0.017	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.032	<0.069
20/07/13	<0.278	<0.278	<0.111	0.005	<0.011	<0.042	<0.028	0.444	0.100	<0.069	<0.069	1.367	<0.111	0.096	0.175	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.096	<0.069
21/07/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.106	<0.069	<0.069	0.322	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
22/07/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.119	<0.069	<0.069	0.493	<0.111	<0.042	0.032	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.051	<0.069
22/08/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.078	<0.069	<0.069	0.383	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.029	<0.069
23/08/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.053	<0.069	<0.069	0.194	<0.111	0.054	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
24/08/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.088	<0.069	<0.069	0.388	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
25/08/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.046	<0.069	<0.069	0.208	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
24/09/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.096	<0.069	<0.069	0.319	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
27/09/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.086	<0.069	<0.069	0.435	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
28/09/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.083	<0.069	<0.069	0.351	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
29/09/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.088	<0.069	<0.069	0.672	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
25/10/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.096	<0.069	<0.069	0.360	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
26/10/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.115	<0.069	<0.069	0.269	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
27/10/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.103	<0.069	<0.069	0.331	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069

Sample Date	Aluminum (Al), total µg/m3	Antimony (Sb), total µg/m3	Arsenic (As), total µg/m3	Barium (Ba), total µg/m3	Beryllium (Be), total µg/m3	Boron (B), total µg/m3	Cadmium (Cd), total µg/m3	Calcium (Ca), total µg/m3	Chromium (Cr), total µg/m3 *	Cobalt (Co), total µg/m3	Copper (Cu), total µg/m3	Iron (Fe), total µg/m3	Lead (Pb), total µg/m3	Magnesium (Mg), total µg/m3	Manganese (Mn), total µg/m3 *	Molybdenum (Mo), total µg/m3	Nickel (Ni), total µg/m3	Phosphorus (P), total µg/m3	Potassium (K), total µg/m3	Selenium (Se), total µg/m3	Silicon (Si), total µg/m3	Silver (Ag), total µg/m3	Sodium (Na), total µg/m3	Strontium (Sr), total µg/m3	Sulphur (S), total µg/m3	Tin (Sn), total µg/m3	Titanium (Ti), total µg/m3	Vanadium (V), total µg/m3	Zinc (Zn), total µg/m3	Zirconium (Zr), total µg/m3
28/10/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.097	<0.069	<0.069	0.308	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
28/11/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.086	<0.069	<0.069	0.308	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.042	<0.069
29/11/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.104	<0.069	<0.069	0.358	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
30/11/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.083	<0.069	<0.069	0.361	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
01/12/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.085	<0.069	<0.069	0.417	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
03/01/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.099	<0.069	<0.069	0.378	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	1.750	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
04/01/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.076	<0.069	<0.069	0.335	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	1.500	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
05/01/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.089	<0.069	<0.069	0.322	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	3.875	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
06/01/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.079	<0.069	<0.069	0.342	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	2.736	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
01/02/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.075	<0.069	<0.069	0.312	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
02/02/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.115	<0.069	<0.069	0.294	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.032	<0.069
03/02/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.075	<0.069	<0.069	0.308	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
04/02/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.107	<0.069	<0.069	0.368	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.031	<0.069
05/03/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.09	<0.069	<0.069	0.193	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.057	<0.069
06/03/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.079	<0.069	<0.069	0.218	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.04	<0.069
07/03/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.099	<0.069	<0.069	0.319	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
25/03/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.089	<0.069	<0.069	0.231	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
12/04/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.081	<0.069	<0.069	0.253	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
13/04/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.053	<0.069	<0.069	0.232	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
14/04/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.071	<0.069	<0.069	0.276	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	1.167	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
15/04/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.089	<0.069	<0.069	0.21	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	1.792	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
11/05/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.086	<0.069	<0.069	0.472	<0.111	0.047	0.02	<0.069	<0.069	<0.417	<1.389	<0.069	3.583	<0.042	<0.417	<0.004	0.333	<0.111	<0.028	<0.042	0.039	<0.069
12/05/14	0.861	<0.278	<0.111	0.012	<0.011	0.05	<0.028	1.847	0.074	<0.069	<0.069	0.478	<0.111	0.078	0.012	<0.069	<0.069	<0.417	<1.389	<0.069	2.694	<0.042	<0.417	0.016	<0.278	<0.111	<0.028	<0.042	0.039	<0.069
13/05/14	0.667	<0.278	<0.111	0.009	<0.011	<0.042	<0.028	1.403	0.086	<0.069	<0.069	0.411	<0.111	0.068	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	0.583	<0.042	<0.417	0.012	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
29/05/14	<0.278	<0.278	<0.111	0.006	<0.011	<0.042	<0.028	1.319	0.096	<0.069	<0.069	0.556	<0.111	0.429	0.012	<0.069	<0.069	<0.417	<1.389	<0.069	3.764	<0.042	0.431	<0.004	0.306	<0.111	<0.028	<0.042	0.074	<0.069
26/06/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.094	<0.069	<0.069	0.338	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	0.431	0.431	<0.417	<0.004	0.306	<0.111	<0.028	<0.042	<0.028	<0.069
27/06/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.074	<0.069	<0.069	0.344	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	0.306	<0.111	<0.028	<0.042	<0.028	<0.069
29/06/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.086	<0.069	<0.069	0.413	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	0.708	0.708	<0.417	<0.004	0.306	<0.111	<0.028	<0.042	<0.028	<0.069
30/06/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.072	<0.069	<0.069	0.328	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	0.306	<0.111	<0.028	<0.042	<0.028	<0.069
08/07/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.139	<0.069	<0.069	0.397	<0.111	<0.042	0.017	<0.069	<0.069	<0.417	<1.389	<0.069	0.458	0.458	<0.417	<0.004	0.306	<0.111	<0.028	<0.042	<0.028	<0.069
27/07/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.076	<0.069	<0.069	0.351	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	0.306	<0.111	<0.028	<0.042	<0.028	<0.069
28/07/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.114	<0.069	<0.069	0.308	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	0.306	<0.111	<0.028	<0.042	<0.028	<0.069
29/07/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.081	<0.069	<0.069	0.368	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	0.306	<0.111	<0.028	<0.042	0.029	<0.069
22/08/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.079	<0.069	<0.069	0.333	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
23/08/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.118	<0.069	<0.069	0.365	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
24/08/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.067	<0.069	<0.069	0.204	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
25/08/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.087	<0.069	<0.069	0.293	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
20/09/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.111	<0.069	<0.069	0.319	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	0.444	<0.042	0.583	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069

Sample Date	Aluminum (Al), total µg/m3	Antimony (Sb), total µg/m3	Arsenic (As), total µg/m3	Barium (Ba), total µg/m3	Beryllium (Be), total µg/m3	Boron (B), total µg/m3	Cadmium (Cd), total µg/m3	Calcium (Ca), total µg/m3	Chromium (Cr), total µg/m3 *	Cobalt (Co), total µg/m3	Copper (Cu), total µg/m3	Iron (Fe), total µg/m3	Lead (Pb), total µg/m3	Magnesium (Mg), total µg/m3	Manganese (Mn), total µg/m3 *	Molybdenum (Mo), total µg/m3	Nickel (Ni), total µg/m3	Phosphorus (P), total µg/m3	Potassium (K), total µg/m3	Selenium (Se), total µg/m3	Silicon (Si), total µg/m3	Silver (Ag), total µg/m3	Sodium (Na), total µg/m3	Strontium (Sr), total µg/m3	Sulphur (S), total µg/m3	Tin (Sn), total µg/m3	Titanium (Ti), total µg/m3	Vanadium (V), total µg/m3	Zinc (Zn), total µg/m3	Zirconium (Zr), total µg/m3
23/09/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.090	<0.069	<0.069	0.347	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	0.431	<0.042	0.542	<0.004	0.306	<0.111	<0.028	<0.042	<0.028	<0.069
24/09/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.082	<0.069	<0.069	0.308	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	0.514	<0.004	0.542	<0.111	<0.028	<0.042	<0.028	<0.069
27/09/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.100	<0.069	<0.069	0.369	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	0.528	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
15/10/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.071	<0.069	<0.069	0.211	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	0.958	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
16/10/14	0.306	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.075	<0.069	<0.069	0.307	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
23/10/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.086	<0.069	<0.069	0.292	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
24/10/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.104	<0.069	<0.069	0.338	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
19/11/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.126	<0.069	<0.069	0.410	<0.111	<0.042	0.020	<0.069	<0.069	<0.417	<1.389	<0.069	0.764	<0.042	0.889	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
20/11/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.108	<0.069	<0.069	0.386	<0.111	<0.042	0.014	<0.069	<0.069	<0.417	<1.389	<0.069	0.931	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
24/11/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.100	<0.069	<0.069	0.424	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	0.833	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
25/11/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.086	<0.069	<0.069	0.344	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	1.333	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
12/12/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.099	<0.069	<0.069	0.246	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	1.125	<0.042	1.458	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
13/12/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.135	<0.069	<0.069	0.338	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	1.028	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
15/12/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.069	<0.069	<0.069	0.321	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	0.193	<0.028	<0.042	<0.028	<0.069
17/12/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.076	<0.069	<0.069	0.457	<0.111	<0.042	0.031	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
10/01/15	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.121	<0.069	<0.069	0.389	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	0.472	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
11/01/15	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.096	<0.069	<0.069	0.360	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
13/01/15	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.079	<0.069	<0.069	0.411	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
15/01/15	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.054	<0.069	<0.069	0.054	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	0.458	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069

** Criteria effective on July 1, 2016*

Table A-3 24-Hour Average Metal Concentrations, TSP-2, 2012-2015

Sample Date	Aluminum (Al), total µg/m³	Antimony (Sb), total µg/m³	Arsenic (As), total µg/m³	Barium (Ba), total µg/m³	Beryllium (Be), total µg/m³	Boron (B), total µg/m³	Cadmium (Cd), total µg/m³	Calcium (Ca), total µg/m³	Chromium (Cr), total µg/m³ *	Cobalt (Co), total µg/m³	Copper (Cu), total µg/m³	Iron (Fe), total µg/m³	Lead (Pb), total µg/m³	Magnesium (Mg), total µg/m³	Manganese (Mn), total µg/m³ *	Molybdenum (Mo), total µg/m³	Nickel (Ni), total µg/m³	Phosphorus (P), total µg/m³	Potassium (K), total µg/m³	Selenium (Se), total µg/m³	Silicon (Si), total µg/m3	Silver (Ag), total µg/m³	Sodium (Na), total µg/m³	Strontium (Sr), total µg/m³	Sulphur (S), total µg/m³	Tin (Sn), total µg/m³	Titanium (Ti), total µg/m³	Vanadium (V), total µg/m³	Zinc (Zn), total µg/m³	Zirconium (Zr), total µg/m³
Ontario AAQC (24-hr avg)		**25**	**0.3**	**10**	**0.01**	**120**	**0.025**		**0.5**	**0.1**	**50**	**4**	**0.5**		**0.4**	**120**	**0.2**			**10**		**1**		**120**		**10**	**120**	**2**	**120**	
23/08/12	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	<0.042	<0.069	<0.069	0.439	0.736	0.047	0.033	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	0.736	<0.111	<0.028	<0.042	0.108	<0.069
27/09/12	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	0.375	<0.042	<0.069	<0.069	<0.042	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.039	<0.069
15/12/12	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	<0.042	<0.069	<0.069	0.533	0.181	0.076	0.066	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.122	<0.069
16/01/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	<0.042	<0.069	<0.069	0.143	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
23/03/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	0.375	<0.042	<0.069	<0.069	1.431	0.321	0.089	0.407	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	0.389	<0.111	<0.028	<0.042	0.244	<0.069
24/03/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	0.486	<0.042	<0.069	<0.069	1.174	0.361	0.124	0.651	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	0.389	<0.111	<0.028	<0.042	0.278	<0.069
25/03/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	0.417	0.056	<0.069	<0.069	1.163	0.367	0.108	0.390	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	0.403	<0.111	<0.028	<0.042	0.264	<0.069
26/03/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	0.375	0.046	<0.069	<0.069	0.921	0.153	0.117	0.290	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	0.319	<0.111	<0.028	<0.042	0.142	<0.069
07/04/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	0.486	<0.042	<0.069	<0.069	1.161	0.417	0.119	0.471	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	0.333	<0.111	<0.028	<0.042	0.294	<0.069
10/04/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.043	<0.069	<0.069	0.439	<0.111	0.081	0.049	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.069	<0.069
13/04/13	0.306	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.044	<0.069	<0.069	0.199	<0.111	0.081	0.017	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	0.375	<0.111	<0.028	<0.042	<0.028	<0.069
15/04/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.047	<0.069	<0.069	0.268	<0.111	0.079	0.025	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	0.333	<0.111	<0.028	<0.042	<0.028	<0.069
16/04/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.043	<0.069	<0.069	0.165	<0.111	0.065	0.013	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	0.319	<0.111	<0.028	<0.042	<0.028	<0.069
17/06/13	0.361	<0.278	<0.111	0.009	<0.011	<0.042	<0.028	0.708	<0.042	<0.069	<0.069	0.232	<0.111	0.053	0.016	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
18/06/13	1.583	<0.278	<0.111	0.005	<0.011	0.071	<0.028	2.569	0.122	<0.069	<0.069	0.825	0.133	0.094	0.078	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	0.542	0.005	<0.278	<0.111	<0.028	<0.042	0.096	<0.069
21/06/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.089	<0.069	<0.069	0.432	<0.111	<0.042	0.014	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	0.472	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
23/06/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	0.361	0.054	<0.069	<0.069	0.282	<0.111	0.072	0.017	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.031	<0.069
28/06/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	0.500	0.054	<0.069	<0.069	0.414	<0.111	0.082	0.046	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	0.319	<0.111	<0.028	<0.042	0.071	<0.069
19/07/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.117	<0.069	<0.069	0.526	<0.111	<0.042	0.027	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.039	<0.069
20/07/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.065	<0.069	<0.069	0.381	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
21/07/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.096	<0.069	<0.069	0.500	<0.111	<0.042	0.052	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.029	<0.069
22/07/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	0.292	0.094	<0.069	<0.069	1.122	<0.111	0.071	0.134	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.092	<0.069
22/08/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.094	<0.069	<0.069	0.314	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
25/08/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.050	<0.069	<0.069	0.185	<0.111	0.047	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
26/08/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.074	<0.069	<0.069	0.496	<0.111	<0.042	0.012	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.046	<0.069
28/08/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.071	<0.069	<0.069	0.496	<0.111	<0.042	0.046	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.122	<0.069
31/08/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.057	<0.069	<0.069	0.200	<0.111	0.047	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
21/09/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.097	<0.069	<0.069	0.347	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
24/09/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.114	<0.069	<0.069	0.424	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
27/09/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.126	<0.069	<0.069	0.479	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
28/09/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	0.036	<0.278	0.086	<0.069	<0.069	0.338	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.047	<0.069
30/09/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.069	<0.069	<0.069	0.450	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
24/10/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.076	<0.069	<0.069	0.326	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069

Sample Date	Aluminum (Al), total µg/m³	Antimony (Sb), total µg/m³	Arsenic (As), total µg/m³	Barium (Ba), total µg/m³	Beryllium (Be), total µg/m³	Boron (B), total µg/m³	Cadmium (Cd), total µg/m³	Calcium (Ca), total µg/m³	Chromium (Cr), total µg/m³ *	Cobalt (Co), total µg/m³	Copper (Cu), total µg/m³	Iron (Fe), total µg/m³	Lead (Pb), total µg/m³	Magnesium (Mg), total µg/m³	Manganese (Mn), total µg/m³ *	Molybdenum (Mo), total µg/m³	Nickel (Ni), total µg/m³	Phosphorus (P), total µg/m³	Potassium (K), total µg/m³	Selenium (Se), total µg/m³	Silicon (Si), total µg/m3	Silver (Ag), total µg/m³	Sodium (Na), total µg/m³	Strontium (Sr), total µg/m³	Sulphur (S), total µg/m³	Tin (Sn), total µg/m³	Titanium (Ti), total µg/m³	Vanadium (V), total µg/m³	Zinc (Zn), total µg/m³	Zirconium (Zr), total µg/m³
25/10/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.096	<0.069	<0.069	0.303	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
26/10/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	0.667	0.124	<0.069	<0.069	0.311	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
27/10/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.075	<0.069	<0.069	0.268	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
28/11/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.083	<0.069	<0.069	0.538	<0.111	<0.042	0.042	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.042	<0.069
29/11/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.069	<0.069	<0.069	0.361	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
30/11/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.079	<0.069	<0.069	0.372	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
01/12/13	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.096	<0.069	<0.069	0.363	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
03/01/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.079	<0.069	<0.069	0.314	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	1.458	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
04/01/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.108	<0.069	<0.069	0.611	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	1.833	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
05/01/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.09	<0.069	<0.069	0.361	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	1.542	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.054	<0.069
06/01/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.069	<0.069	<0.069	0.371	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	1.861	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.038	<0.069
01/02/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.082	<0.069	<0.069	0.281	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
02/02/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.101	<0.069	<0.069	0.381	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
03/02/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.121	<0.069	<0.069	0.321	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
04/02/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.079	<0.069	<0.069	0.39	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	-	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
05/03/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.106	<0.069	<0.069	0.325	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.029	<0.069
06/03/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.09	<0.069	<0.069	0.351	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.049	<0.069
07/03/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.082	<0.069	<0.069	0.276	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
25/03/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.083	<0.069	<0.069	0.267	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	0.597	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.031	<0.069
12/04/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.086	<0.069	<0.069	0.239	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	0.306	<0.111	<0.028	<0.042	<0.028	<0.069
13/04/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.114	<0.069	<0.069	0.301	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	0.625	<0.042	<0.417	<0.004	0.375	<0.111	<0.028	<0.042	<0.028	<0.069
14/04/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.086	<0.069	<0.069	0.315	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	2.236	<0.042	<0.417	<0.004	0.347	<0.111	<0.028	<0.042	0.032	<0.069
15/04/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.075	<0.069	<0.069	0.186	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	0.944	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.031	<0.069
11/05/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	0.139	0.081	<0.069	<0.069	0.376	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	5.028	<0.042	<0.417	<0.004	0.319	<0.111	<0.028	<0.042	<0.028	<0.069
12/05/14	1.625	<0.278	<0.111	<0.004	<0.011	0.099	<0.028	3.472	0.089	<0.069	<0.069	0.506	<0.111	0.113	0.013	<0.069	<0.069	<0.417	<1.389	<0.069	1.736	<0.042	0.417	0.032	0.292	<0.111	<0.028	<0.042	0.04	<0.069
13/05/14	<0.278	<0.278	<0.111	0.005	<0.011	<0.042	<0.028	0.569	0.09	<0.069	<0.069	0.426	<0.111	0.056	0.014	<0.069	<0.069	<0.417	<1.389	<0.069	3.750	<0.042	<0.417	0.005	<0.278	<0.111	<0.028	<0.042	0.029	<0.069
29/05/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	0.139	0.071	<0.069	<0.069	0.489	<0.111	<0.042	0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
27/06/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.079	<0.069	<0.069	0.408	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	0.736	0.736	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
28/06/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.104	<0.069	<0.069	0.389	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	0.736	0.736	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
29/06/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.078	<0.069	<0.069	0.326	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
30/06/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.119	<0.069	<0.069	0.365	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
08/07/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.114	<0.069	<0.069	0.378	<0.111	<0.042	0.013	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
27/07/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.086	<0.069	<0.069	0.34	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
28/07/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.096	<0.069	<0.069	0.354	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
29/07/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.028	0.126	<0.069	<0.069	0.431	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
22/08/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.132	<0.069	<0.069	0.317	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	1.028	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
23/08/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.071	<0.069	<0.069	0.331	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	2.722	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069

Sample Date	Aluminum (Al), total µg/m³	Antimony (Sb), total µg/m³	Arsenic (As), total µg/m³	Barium (Ba), total µg/m³	Beryllium (Be), total µg/m³	Boron (B), total µg/m³	Cadmium (Cd), total µg/m³	Calcium (Ca), total µg/m³	Chromium (Cr), total µg/m³ *	Cobalt (Co), total µg/m³	Copper (Cu), total µg/m³	Iron (Fe), total µg/m³	Lead (Pb), total µg/m³	Magnesium (Mg), total µg/m³	Manganese (Mn), total µg/m³ *	Molybdenum (Mo), total µg/m³	Nickel (Ni), total µg/m³	Phosphorus (P), total µg/m³	Potassium (K), total µg/m³	Selenium (Se), total µg/m³	Silicon (Si), total µg/m3	Silver (Ag), total µg/m³	Sodium (Na), total µg/m³	Strontium (Sr), total µg/m³	Sulphur (S), total µg/m³	Tin (Sn), total µg/m³	Titanium (Ti), total µg/m³	Vanadium (V), total µg/m³	Zinc (Zn), total µg/m³	Zirconium (Zr), total µg/m³
24/08/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.107	<0.069	<0.069	0.335	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
26/08/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.093	<0.069	<0.069	0.315	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
20/09/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.101	<0.069	<0.069	0.350	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	0.472	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
23/09/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.079	<0.069	<0.069	0.358	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	0.458	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
24/09/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.106	<0.069	<0.069	0.338	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	0.486	<0.042	<0.417	<0.004	0.569	<0.111	<0.028	<0.042	<0.028	<0.069
27/09/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.100	<0.069	<0.069	0.354	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	0.458	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
15/10/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.069	<0.069	<0.069	0.242	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	2.167	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
16/10/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.087	<0.069	<0.069	0.239	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
23/10/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.090	<0.069	<0.069	0.386	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
24/10/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.054	<0.069	<0.069	0.161	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
22/11/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.132	<0.069	<0.069	0.353	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	0.611	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
23/11/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.115	<0.069	<0.069	0.339	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	0.833	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
25/11/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.104	<0.069	<0.069	0.258	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	1.458	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
12/12/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.094	<0.069	<0.069	0.362	<0.111	<0.042	0.017	<0.069	<0.069	<0.417	<1.389	<0.069	1.167	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
13/12/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.114	<0.069	<0.069	0.414	<0.111	<0.042	0.043	<0.069	<0.069	<0.417	<1.389	<0.069	1.361	<0.042	0.917	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
14/12/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.096	<0.069	<0.069	0.378	<0.111	<0.042	0.021	<0.069	<0.069	<0.417	<1.389	<0.069	0.833	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
15/12/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.126	<0.069	<0.069	0.381	<0.111	<0.042	0.020	<0.069	<0.069	<0.417	<1.389	<0.069	0.931	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
10/01/15	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.110	<0.069	<0.069	0.342	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	0.444	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
11/01/15	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.082	<0.069	<0.069	0.281	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
13/01/15	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.061	<0.069	<0.069	0.263	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.042	<0.069
15/01/15	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.061	<0.069	<0.069	0.333	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	0.028	<0.069

** Criteria effective on July 1, 2016*

Table A-4 24-Hour Average Metal Concentrations, TSP-3, 2014-2015

Sample Date	Aluminum (Al), total µg/m³	Antimony (Sb), total µg/m³	Arsenic (As), total µg/m³	Barium (Ba), total µg/m³	Beryllium (Be), total µg/m³	Boron (B), total µg/m³	Cadmium (Cd), total µg/m³	Calcium (Ca), total µg/m³	Chromium (Cr), total µg/m³ *	Cobalt (Co), total µg/m³	Copper (Cu), total µg/m³	Iron (Fe), total µg/m³	Lead (Pb), total µg/m³	Magnesium (Mg), total µg/m³	Manganese (Mn), total µg/m³ *	Molybdenum (Mo), total µg/m³	Nickel (Ni), total µg/m³	Phosphorus (P), total µg/m³	Potassium (K), total µg/m³	Selenium (Se), total µg/m³	Silicon (Si), total µg/m3	Silver (Ag), total µg/m³	Sodium (Na), total µg/m³	Strontium (Sr), total µg/m³	Sulphur (S), total µg/m³	Tin (Sn), total µg/m³	Titanium (Ti), total µg/m³	Vanadium (V), total µg/m³	Zinc (Zn), total µg/m³	Zirconium (Zr), total µg/m³
Ontario AAQC (24-hr avg)		**25**	**0.3**	**10**	**0.01**	**120**	**0.025**		**0.5**	**0.1**	**50**	**4**	**0.5**		**0.4**	**120**	**0.2**			**10**		**1**		**120**		**10**	**120**	**2**	**120**	
12/12/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	0.306	0.096	<0.069	<0.069	0.367	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	0.694	<0.069	1.472	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
13/12/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	0.319	0.097	<0.069	<0.069	0.315	<0.111	<0.042	0.021	<0.069	<0.069	<0.417	0.694	<0.069	1.097	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
14/12/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.103	<0.069	<0.069	0.272	<0.111	<0.042	0.014	<0.069	<0.069	<0.417	<1.389	<0.069	0.611	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
15/12/14	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.099	<0.069	<0.069	0.339	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	1.569	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
12/01/15	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.081	<0.069	<0.069	0.351	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
15/01/15	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.053	<0.069	<0.069	<0.042	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
16/01/15	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.076	<0.069	<0.069	0.065	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	0.569	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069
18/01/15	<0.278	<0.278	<0.111	<0.004	<0.011	<0.042	<0.028	<0.278	0.061	<0.069	<0.069	<0.042	<0.111	<0.042	<0.011	<0.069	<0.069	<0.417	<1.389	<0.069	<0.417	<0.042	<0.417	<0.004	<0.278	<0.111	<0.028	<0.042	<0.028	<0.069