

Ms. Rebecca Studer-Halbach, P.Eng.  
Project Manager  
Public Services and Procurement Canada – Western Region  
Environmental Services and Contaminated Sites  
Management  
Government of Canada  
5th Floor, ATB Place, 10025 Jasper Avenue  
Edmonton, Alberta T5J 1S6

**Date**  
October 14, 2021

**Project #**  
60608868

Dear Rebecca,

**Subject: Kwetįłłàà (Rayrock) Remediation Project  
2021 Field Investigation Summary – Test Pit Excavations**

AECOM Canada Ltd. (AECOM) is pleased to provide Public Services and Procurement Canada (PSPC) this report summarizing the results of the test pit excavations completed at the former Rayrock mine (the Site) in July 2021. A summary table with test pit details is provided as **Appendix A**. A figure indicating the test pit locations is provided as **Appendix B**. Test pit logs are provided in **Appendix C**.

## 1. Objectives

Remediation activities are proposed to be undertaken at Rayrock commencing in 2022. Components of the remediation include the removal of waste rock located atop the bedrock surface in the vicinity of the former Rayrock mill pad and the construction of a Confined Disposal Facility (CDF) to contain contaminated materials, also in the vicinity of the former mill pad. The objectives of the 2021 test pit excavations were to:

- Identify the overburden rock thickness in the proposed CDF area, and
- Record field observations of the overburden type in the area of proposed excavation.

## 2. Background

Test pit excavations were previously-conducted by SENES Consultants in September and October of 2013 for the areas surrounding Mill Lake to the south. The 2013 test pit excavations were completed as part of a gap filling program to facilitate the collection of surface and subsurface soil samples, conduct a geophysical survey and site survey, as well as reconnaissance for surface debris. The results of SENES's gap filling program are highlighted in the *2013 Gap Filling Program at Former Rayrock Mine Site* report prepared by SENES Consultants (March 2014). Excerpts of this report focused on the test pit excavations is provided as **Appendix D**.

## 3. Methodology

AECOM personnel visited the Site and advanced test pit excavations between July 14 and July 22, 2021 with the assistance of Ticho Engineering and Environmental Services Ltd. (TEES), who supplied an excavator and operator to complete the task. An AECOM representative worked alongside the operator to coordinate the test pit locations, provide support, and collect field notes.

AECOM and TEES followed the methodology listed below:

- A Kubota K008-3 excavator supplied and operated by TEES was used by to advance test pits at locations specified by AECOM.

- Locations were selected to span the proposed CDF footprint and were modified based on ease of access. Some desired locations could not be reached by the excavator.
- Test pits were excavated to the bedrock surface (where possible) and notes were made regarding:
  - Soil classification, size, and colour.
  - Nature of debris found within the soil (if encountered).
  - Depth to the bedrock surface or refusal.
- Photographs were collected at each of the test pit locations and surrounding areas.
- Sub-Arctic Geomatics of Yellowknife collected survey coordinates (northings, eastings and elevations) of the test pits.

## 4. Results

Twenty-three test pits were advanced in the vicinity of the former mill and surrounding area near Mill Lake. A summary table identifying the coordinates, ground surface elevation and inferred bedrock elevation, where noted, is provided in **Table 1 (Appendix A)**. The test pit locations are shown on **Figure 1 (Appendix B)**. Test pit logs containing photographs and field notes for each test pit location are contained in **Appendix C**.

Field observations included:

- **Excavator Reach:** The operator was unable to reach the bedrock surface in many of the proposed locations due to limitations with the excavator arm. The excavator reached a maximum depth of approximately 1.6 metres below ground surface (mbgs) before it could no longer proceed safely with excavation.
- **Excavator Limitations:** Large rocks and boulders often appeared within the test pits during excavation which the excavator was unable to remove from the ground or advance through to continue the pit. The assessment of a “bedrock” surface was determined where observations indicated that this was the likely case. However, given the small area exposed by the excavator, the possibility of a “bedrock” interpretation has the potential to be a large boulder.
- **Site Access Restrictions:** A few locations were unable to be accessed safely by the excavator and therefore test pits were not advanced in all desired locations. AECOM field personnel strived to relocate and/or fill in the gaps where test pits could not be advanced.
- **Groundwater:** Groundwater was noted to enter the test pits at two locations (TP21-09 and TP21-12). AECOM notes that the water levels in these test pits coincided closely with the elevation of Mill Lake (~215.0 metres above sea level).
- **Debris:** Some wood, metal and concrete were identified in test pit locations, as shown on **Table 1 (Appendix A)** and **Appendix C**.

AECOM has included field observations from the SENES test pits in Table 1. We note that coordinates from these test pits appear to have discrepancies from actual site conditions. AECOM has adjusted some locations in the provided table; however, the interpretations of the northings and eastings from the SENES data should consider that a variance exists. The discrepancy could be a result of a difference between the use of a hand-held global positioning system used for that data collection versus the use of a land surveyor in 2021 (which would have greater accuracy); however, this is not known for certain.

## 5. Closing

We trust this submission meets your requirements. Please contact the undersigned should you have any questions regarding this submission.

Sincerely,  
**AECOM Canada Ltd.**



Joël Nolin, P.Eng.  
Senior Project Manager  
joel.nolin@aecom.com



Mike Gunderson, B.Sc.  
Environmental Engineer-in-Training  
mike.gunderson@aecom.com

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- may be based on information provided to AECOM which has not been independently verified;
- has not been updated since the date of issuance of the Report and its accuracy is limited to the time period and circumstances in which it was collected, processed, made or issued;
- must be read as a whole and sections thereof should not be read out of such context;
- was prepared for the specific purposes described in the Report and the Agreement; and
- in the case of subsurface, environmental or geotechnical conditions, may be based on limited testing and on the assumption that such conditions are uniform and not variable either geographically or over time.

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This Statement of Qualifications and Limitations is attached to and forms part of the Report and any use of the Report is subject to the terms hereof.

# Appendix **A**

Table 1

Test Pit Excavations Summary Data  
Former Mill & Surrounding Area  
Rayrock Remediation Project

Test Pit ID	Date Completed	Consultant	Northing	Easting	Ground Surface Elevation (m)	Inferred Depth to Bedrock (m bgs)	Inferred Bedrock Elevation (m)	Observations at Test Pit Bottom	Groundwater Observations	Other Observations
TP13-1	9/30/2013	SENES	7036081	522530	Not Recorded	Uncertain	NA	Refusal on boulders at 2.0 m		
TP13-2	9/30/2013	SENES	7036066*	522523*	Not Recorded	1.60	NA	Refusal on suspected bedrock at 1.6 m		
TP13-3	9/30/2013	SENES	7036055	522536	Not Recorded	0.70	NA	Refusal on suspected bedrock at 0.7 m		
TP13-4	9/30/2013	SENES	7036049	522538	Not Recorded	0.30	NA	Refusal on suspected bedrock at 0.3 m		
TP13-5	9/30/2013	SENES	7036046	522562	Not Recorded	1.17	NA	Refusal on suspected bedrock at 1.17 m		Metal debris identified
TP13-6	9/30/2013	SENES	7036030	522556	Not Recorded	0.24	NA	Refusal on suspected bedrock at 0.24 m		
TP13-7	9/30/2013	SENES	7036009	522551	Not Recorded	1.50	NA	Refusal on suspected bedrock at 1.5 m		
TP13-8	9/30/2013	SENES	7035979	522549	Not Recorded	Uncertain	NA	Refusal on boulders at 1.2 m		
TP13-9	10/1/2013	SENES	7035963	522551	Not Recorded	Uncertain	NA	Refusal on debris at 1.0 m		Glass, insulation, and construction debris identified
TP13-10	10/1/2013	SENES	7035950	522546	Not Recorded	Uncertain	NA	Refusal on boulders at 1.17 m		Construction debris identified
TP13-11	10/1/2013	SENES	7035932	522540	Not Recorded	1.80	NA	Refusal on suspected bedrock at 1.8 m		Organic soils encountered below sand at 0.91 m depth
TP13-12	10/1/2013	SENES	7035905	522552	Not Recorded	1.30	NA	Refusal on suspected bedrock at 1.3 m		
TP13-13	9/29/2013	SENES	7035936	522680	Not Recorded	0.24	NA	Refusal on suspected bedrock at 0.24 m		
TP13-14	9/29/2013	SENES	7035927	522679	Not Recorded	0.15	NA	Refusal on suspected bedrock at 0.15 m		
TP13-15	9/29/2013	SENES	7035942	522670	Not Recorded	0.20	NA	Refusal on suspected bedrock at 0.2 m		
TP13-16	9/29/2013	SENES	7035941	522658	Not Recorded	0.12	NA	Refusal on suspected bedrock at 0.12 m		Minor surface oxidation identified
TP13-17	9/29/2013	SENES	7035958	522643	Not Recorded	0.20	NA	Refusal on suspected bedrock at 0.2 m		
TP13-18	9/30/2013	SENES	7035997	522646	Not Recorded	0.10	NA	Refusal on suspected bedrock at 0.1 m		
TP13-19	9/30/2013	SENES	7036003	522635	Not Recorded	0.30	NA	Refusal on suspected bedrock at 0.3 m		
TP13-20	9/30/2013	SENES	7035952	522614	Not Recorded	0.20	NA	Refusal on suspected bedrock at 0.2 m	Soil material was wet to saturated with sheen on water	Trace hydrocarbon odour identified (2.5 m x 1 m area)
TP13-21	9/30/2013	SENES	7035945	522597	Not Recorded	0.25	NA	Refusal on suspected bedrock at 0.25 m		
TP13-22	9/30/2013	SENES	7036023	522510	Not Recorded	0.30	NA	Refusal on suspected bedrock at 0.3 m		
TP13-23	9/30/2013	SENES	7036021	522508	Not Recorded	Uncertain	NA	Refusal on waste rock and debris at 0.3 m		Metal and wood debris in test pit

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TP13-24	9/30/2013	SENES	7035956	522621	Not Recorded	0.20	NA	Refusal on suspected bedrock at 0.2 m	Soil material was saturated with trace sheen on water	Faint hydrocarbon odour identified (1 m x 1.8 m area)
TP13-25	Not Advanced	SENES	-	-	-	-	NA			TP wasn't advanced following discussion with PWGSC & AANDC
TP13-26	9/30/2013	SENES	7035900	522579	Not Recorded	Uncertain	NA	Refusal on waste rock at 0.15 m		Staining identified at 0.05 m bgs (area of approx. 1.8 m x 1.8 m)
No Test Pits: TP13-27 to TP13-30										
TP13-31	10/1/2013	SENES	7035852*	522607*	Not Recorded	0.20	NA	Refusal on suspected bedrock at 0.2 m		Staining identified to the SE nearby (area of approx. 1.2 m x 1.5 m)
TP13-32	10/1/2013	SENES	7035854	522609	Not Recorded	0.15	NA	Refusal on suspected bedrock at 0.15 m		Staining identified to the NE nearby (area of approx. 1.2 m x 1.5 m)
TP13-33	10/1/2013	SENES	7035851	522606	Not Recorded	0.15	NA	Refusal on suspected bedrock at 0.15 m		Staining identified to the NW nearby (area of approx. 1.2 m x 1.5 m)
TP13-34	10/1/2013	SENES	7035851	522608	Not Recorded	0.08	NA	Refusal on suspected bedrock at 0.075 m		Staining identified to the SW nearby (area of approx. 1.2 m x 1.5 m)
TP13-35	10/1/2013	SENES	7035848	522612	Not Recorded	0.15	NA	Refusal on suspected bedrock at 0.15 m		Staining identified up gradient to the NW (area of approx. 1.2 m x 1.5 m)
TP13-36	10/1/2013	SENES	7035917	522550	Not Recorded	Uncertain	NA	Refusal due to water and large boulders at 1.75 m	Sheen on water, water level at 1.5 m bgs	Trace hydrocarbon odour identified and organic soils encountered below sand at 1.3 m depth
TP13-37	10/1/2013	SENES	7035905	522552	Not Recorded	Uncertain	NA	Refusal due to water and blast rock at 1.5 m	Water level at 1.1 m bgs	
TP13-38	10/2/2013	SENES	7035922	522562	Not Recorded	1.40	NA	Refusal on suspected bedrock at 1.4 m		Organic soils encountered below sand at 1.22 m depth
TP13-39	10/2/2013	SENES	7035911	522560	Not Recorded	1.00	NA	Refusal on suspected bedrock at 1.0 m		Organic soils encountered below sand on suspected bedrock surface
TP13-40	10/2/2013	SENES	7035888	522560	Not Recorded	0.90	NA	Refusal on suspected bedrock at 0.9 m		Organic soils encountered below sand on suspected bedrock surface

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TP13-41	10/2/2013	SENES	7035803	522629	Not Recorded	0.20	NA	Refusal on suspected bedrock at 0.2 m		
TP13-42	10/2/2013	SENES	7035812	522615	Not Recorded	0.70	NA	Refusal on suspected bedrock at 0.7 m		Organic soils encountered below sand at 0.6 m depth
TP13-43	10/2/2013	SENES	7035823	522609	Not Recorded	0.10	NA	Refusal on suspected bedrock at 0.1 m		
TP13-44	10/2/2013	SENES	7036070	522578	Not Recorded	Uncertain	NA	Refusal due to boulders and water at 0.8 m	Water level at 0.75 m bgs	Surface stain identified (approx. 1 m x 1 m at 0.25 m below grade) along with metal debris
TP13-45	10/3/2013	SENES	7036052	522580	Not Recorded	Uncertain	NA	Refusal due to boulders and water at 1.5 m	Water level at 1.48 m bgs	
SA13-1	10/1/2013	SENES	7035883	522597	Not Recorded	0.08	NA	Refusal on suspected bedrock at 0.075 m		
SA13-2	10/1/2013	SENES	7035886	522588	Not Recorded	0.20	NA	Refusal on suspected bedrock at 0.2 m		
SA13-3	10/1/2013	SENES	7035891	522585	Not Recorded	0.40	NA	Refusal on suspected bedrock at 0.4 m		
SA13-4	10/1/2013	SENES	7035913	522602	Not Recorded	0.50	NA	Refusal on suspected bedrock at 0.5 m		
SA13-5	10/1/2013	SENES	7035921	522606	Not Recorded	0.30	NA	Refusal on suspected bedrock at 0.3 m		
SA13-6	10/1/2013	SENES	7035935	522599	Not Recorded	0.55	NA	Refusal on suspected bedrock at 0.55 m		Wood debris identified
SA13-7	10/2/2013	SENES	7035925	522598	Not Recorded	0.90	NA	Refusal on suspected bedrock at 0.9 m		
SA13-8	10/2/2013	SENES	7035848	522612	Not Recorded	0.70	NA	Refusal on suspected bedrock at 0.7 m		
SA13-9	10/2/2013	SENES	7035916	522595	Not Recorded	1.40	NA	Refusal on suspected bedrock at 1.4 m		
SA13-10	10/2/2013	SENES	7035912	522591	Not Recorded	0.60	NA	Refusal on suspected bedrock at 0.6 m		
SA13-11	10/2/2013	SENES	7035841	522593	Not Recorded	0.20	NA	Refusal on suspected bedrock at 0.2 m		
SA13-12	10/2/2013	SENES	7035886	522588	Not Recorded	0.25	NA	Refusal on suspected bedrock at 0.25 m		
SA13-13	10/2/2013	SENES	7036070	522578	Not Recorded	Uncertain	NA	Refusal due to boulders and water at 0.8 m	Water level at 0.075 m bgs	
SA13-14	10/3/2013	SENES	7035773	522534	Not Recorded	0.15	NA	Refusal on suspected bedrock at 0.15 m		
SA13-15	10/3/2013	SENES	7035888	522560	Not Recorded	0.25	NA	Refusal on suspected bedrock at 0.25 m		
SA13-16	10/3/2013	SENES	7035751	522545	Not Recorded	0.25	NA	Refusal on suspected bedrock at 0.25 m		
SA13-17	10/3/2013	SENES	7035746	522559	Not Recorded	0.50	NA	Refusal on suspected bedrock at 0.5 m		

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SA13-18	10/3/2013	SENES	7035737	522555	Not Recorded	0.40	NA	Refusal on suspected bedrock at 0.4 m		Forest mat root system identified (0.15 m x 0.25 m depth)
SA13-19	10/3/2013	SENES	7035742	522545	Not Recorded	Uncertain	NA	Borehole incomplete at 0.6 m due to limited access		
SA13-20	10/3/2013	SENES	7035747	522525	Not Recorded	0.57	NA	Refusal on suspected bedrock at 0.57 m		
SA13-21	10/3/2013	SENES	7035737	522528	Not Recorded	Uncertain	NA	Borehole incomplete at 0.57 m due to limited access		
SA13-22	10/3/2013	SENES	7036052	522590	Not Recorded	0.95	NA	Refusal on suspected bedrock at 0.95 m		Metal and construction debris identified
SA13-23	10/3/2013	SENES	7036049	522575	Not Recorded	1.05	NA	Refusal on suspected bedrock at 1.05 m		
SA13-24	10/3/2013	SENES	7036064	522560	Not Recorded	Uncertain	NA	Refusal due to water at 0.35 m	Water level at 0.3 m bgs	
SA13-25	10/3/2013	SENES	7036048	522550	Not Recorded	0.10	NA	Refusal on suspected bedrock at 0.1 m		
SA13-26	10/3/2013	SENES	7036054	522557	Not Recorded	Uncertain	NA	Refusal due to large boulders and foundation at 1.8 m		Concrete, metal, and wood debris identified
SA13-27	10/3/2013	SENES	7036034	522565	Not Recorded	0.70	NA	Refusal on suspected bedrock at 0.7 m		Organic soils encountered below sand at 0.4 m - 0.5 m depth
SA13-28	10/3/2013	SENES	7035717	522486	Not Recorded	0.45	NA	Refusal on suspected bedrock at 0.45 m		
SA13-29	10/3/2013	SENES	7035710	522492	Not Recorded	0.40	NA	Refusal on suspected bedrock at 0.4 m		
SA13-30	10/4/2013	SENES	7036070	522593	Not Recorded	0.85	NA	Refusal on suspected bedrock at 0.85 m		Trace oxidation encountered
SA13-31	10/4/2013	SENES	7036088	522625	Not Recorded	0.80	NA	Refusal on suspected bedrock at 0.8 m		Some oxidation encountered
SA13-32	10/4/2013	SENES	7036086	522633	Not Recorded	1.35	NA	Refusal on suspected bedrock at 1.35 m		Some oxidation encountered
SA13-33	10/4/2013	SENES	7036073	522639	Not Recorded	0.90	NA	Refusal on suspected bedrock at 0.9 m		
SA13-34	10/4/2013	SENES	7036063	522644	Not Recorded	Uncertain	NA	Refusal due to large boulders at 0.8 m		
SA13-35	10/4/2013	SENES	7036055	522648	Not Recorded	0.85	NA	Refusal on suspected bedrock at 0.85 m		
SA13-36	10/4/2013	SENES	7036035	522660	Not Recorded	0.85	NA	Refusal on suspected bedrock at 0.85 m		
SA13-37	10/4/2013	SENES	7036014	522667	Not Recorded	0.60	NA	Refusal due to large boulders at 0.6 m		
SA13-38	10/4/2013	SENES	7035994	522574	Not Recorded	Uncertain	NA	Borehole incomplete on slope at 0.2 m		
SA13-39	10/4/2013	SENES	7035991	522570	Not Recorded	Uncertain	NA	Incomplete due to large boulders at 0.4 m		
SA13-40	10/4/2013	SENES	7035976	522642	Not Recorded	0.45	NA	Refusal on suspected bedrock at 0.45 m		

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SA13-41	10/4/2013	SENES	7035988	522613	Not Recorded	0.20	NA	Refusal on suspected bedrock at 0.2 m		
SA13-42	10/4/2013	SENES	7035994	522630	Not Recorded	0.15	NA	Refusal on suspected bedrock at 0.15 m		
SA13-43	10/4/2013	SENES	7035990	522624	Not Recorded	0.20	NA	Refusal on suspected bedrock at 0.2 m		
SA13-44	10/4/2013	SENES	7035987	522633	Not Recorded	0.45	NA	Refusal on suspected bedrock at 0.45 m		Wood debris identified
SA13-45	10/4/2013	SENES	7036002*	522641*	Not Recorded	0.15	NA	Refusal on suspected bedrock at 0.15 m		
SA13-46	10/4/2013	SENES	7036006	522634	Not Recorded	0.26	NA	Refusal on suspected bedrock at 0.26 m		
SA13-47	10/4/2013	SENES	7036018*	522640*	Not Recorded	0.37	NA	Refusal on suspected bedrock at 0.37 m		
SA13-48	10/4/2013	SENES	7036023	522632	Not Recorded	0.13	NA	Refusal on suspected bedrock at 0.13 m		
SA13-49	10/4/2013	SENES	7036025	522627	Not Recorded	0.32	NA	Refusal on suspected bedrock at 0.32 m		
SA13-50	10/5/2013	SENES	7035999	522648	Not Recorded	1.50	NA	Refusal on suspected bedrock at 1.5 m		Construction debris identified
SA13-51	10/5/2013	SENES	7035989	522616	Not Recorded	0.90	NA	Refusal on suspected bedrock at 0.9 m		
SA13-52	10/5/2013	SENES	7035982	522627	Not Recorded	0.90	NA	Refusal on suspected bedrock at 0.9 m		
SA13-53	10/5/2013	SENES	7035963	522606	Not Recorded	1.60	NA	Refusal on suspected bedrock at 1.6 m		
SA13-54	10/5/2013	SENES	7036019	522588	Not Recorded	Uncertain	NA	Refusal due to large cobbles at 0.8 m		
SA13-55	10/5/2013	SENES	7036026	522579	Not Recorded	Uncertain	NA	Refusal due to large cobbles at 1.0 m		
SA13-56	10/5/2013	SENES	7036012	522582	Not Recorded	Uncertain	NA	Refusal due to large cobbles at 1.0 m		
SA13-57	10/5/2013	SENES	7036003	522579	Not Recorded	Uncertain	NA	Refusal due to large cobbles at 1.5 m		Some oxidation encountered
SA13-58	10/5/2013	SENES	7035997	522618	Not Recorded	Uncertain	NA	Refusal due to large cobbles at 0.5 m		
SA13-59	10/5/2013	SENES	7035970	522579	Not Recorded	0.40	NA	Refusal on suspected bedrock at 0.4 m		
SA13-60	10/5/2013	SENES	7036010	522645	Not Recorded	0.45	NA	Refusal on suspected bedrock at 0.45 m		
SA13-61	10/5/2013	SENES	7036035	522634	Not Recorded	0.25	NA	Refusal on suspected bedrock at 0.25 m		
SA13-62	10/5/2013	SENES	7036045	522639	Not Recorded	0.30	NA	Refusal on suspected bedrock at 0.3 m		
SA13-63	10/5/2013	SENES	7036059	522637	Not Recorded	0.20	NA	Refusal on suspected bedrock at 0.2 m		
SA13-64	10/5/2013	SENES	7036057	522612	Not Recorded	0.30	NA	Refusal on suspected bedrock at 0.3 m		Oxidized brown sand and gravel

Table 1

Test Pit Excavations Summary Data  
Former Mill & Surrounding Area  
Rayrock Remediation Project

Test Pit ID	Date Completed	Consultant	Northing	Easting	Ground Surface Elevation (m)	Inferred Depth to Bedrock (m bgs)	Inferred Bedrock Elevation (m)	Observations at Test Pit Bottom	Groundwater Observations	Other Observations
SA13-65	10/5/2013	SENES	7036051	522599	Not Recorded	0.30	NA	Refusal on suspected bedrock at 0.3 m		Oxidized brown sand and gravel
SA13-66	10/5/2013	SENES	7035940	522570	Not Recorded	0.30	NA	Refusal on suspected bedrock at 0.3 m		
SA13-67	10/5/2013	SENES	7035783	522675	Not Recorded	0.30	NA	Refusal on suspected bedrock at 0.3 m		
SA13-68	10/5/2013	SENES	7035782*	522665*	Not Recorded	0.30	NA	Refusal on suspected bedrock at 0.3 m		
SA13-69	10/5/2013	SENES	7035775	522604	Not Recorded	0.30	NA	Refusal on suspected bedrock at 0.3 m		
SA13-70	10/5/2013	SENES	7036044	522605	Not Recorded	0.20	NA	Refusal on suspected bedrock at 0.2 m		
TP21-02	7/14/2021	AECOM	7036048	522543	218.44	Uncertain	NA	Cobbles limited excavation to 0.3 m depth; similar findings when TP relocated in vicinity		
TP21-03	7/14/2021	AECOM	7036067	522530	218.25	Uncertain	NA	Refusal on cobbles at 1.1 m		
TP21-04	Not Advanced	AECOM	7036092	522542	218.64	Uncertain	NA	Not excavated due to steep slope		
TP21-05A	7/14/2021	AECOM	7036131	522572	218.27	Uncertain	NA	Refusal on cobbles at 1.1 m		Orange sand, cloth and wood present
TP21-05B	7/14/2021	AECOM	7036129	522564	217.86	Uncertain	NA	Refusal at 1.5 m depth - unsure if cobbles or bedrock - field observations of topography indicate that bedrock could be 3 m depth (unconfirmed/conjecture)		
TP21-06	7/14/2021	AECOM	7036027	522551	216.78	0.75	216.03	Refusal on suspected bedrock at 0.75 m		
TP21-07	7/15/2021	AECOM	7036047	522564	216.05	0.70	215.35	Refusal on suspected bedrock at 0.7 m		
TP21-08	7/15/2021	AECOM	7036058	522579	216.07	Uncertain	NA	Refusal on cobbles at 1.1 m		
TP21-09	7/15/2021	AECOM	7036050	522587	215.96	Uncertain	NA	Excavation stopped when groundwater encountered at 1.1 m depth	Groundwater filled excavation at 1.1 m depth (approximately the same elevation as Mill Lake - 215.0 m bgs)	
TP21-10	7/15/2021	AECOM	7036017	522563	215.93	Uncertain	NA	Excavation ceased at equipment arm length limitation (1.2 m bgs) and did not reach refusal		Organic soils encountered below waste rock at 0.65 m depth
TP21-11	7/16/2021	AECOM	7035983	522558	215.82	Uncertain	NA	Refusal on boulder at 0.45 m		
TP21-12	7/16/2021	AECOM	7035982	522564	215.39	Uncertain	NA	Excavation ceased at equipment arm length limitation (1.6 m bgs) and did not reach refusal	Groundwater entered excavation at 1.25 m bgs - lower than the Mill Lake elevation of 215.0 m bgs	

Table 1

Test Pit Excavations Summary Data  
Former Mill & Surrounding Area  
Rayrock Remediation Project

Test Pit ID	Date Completed	Consultant	Northing	Easting	Ground Surface Elevation (m)	Inferred Depth to Bedrock (m bgs)	Inferred Bedrock Elevation (m)	Observations at Test Pit Bottom	Groundwater Observations	Other Observations
TP21-13	7/16/2021	AECOM	7036068	522553	216.91	Uncertain	NA	Excavation ceased at equipment arm length limitation (1.5 m bgs) and did not reach refusal		Large metal and wood debris
TP21-14	7/16/2021	AECOM	7036068	522621	216.16	0.90	215.26	Refusal on suspected bedrock at 0.9 m		
TP21-15	7/16/2021	AECOM	7036059	522650	217.13	Uncertain	NA	Refusal on cobbles at 0.8 m		
TP21-16	7/17/2021	AECOM	7036024	522646	221.49	0.75	220.74	Refusal on suspected bedrock at 0.75 m, potential for refusal to also be on cobbles noted		
TP21-17	7/17/2021	AECOM	7036016	522593	221.79	Uncertain	NA	Refusal on cobbles at 1.1 m		Wood debris encountered
TP21-18	7/17/2021	AECOM	7035977	522584	217.62	0.15	217.47	Refusal on suspected bedrock at 0.15 m		
TP21-19	7/17/2021	AECOM	7035978	522628	219.92	1.00	218.92	Refusal on suspected bedrock at 1.0 m		Metal debris identified
TP21-20	7/17/2021	AECOM	7035937	522580	215.81	0.65	215.16	Refusal on cobbles/ boulders at 0.65 m - could be bedrock surface		
TP21-21	7/17/2021	AECOM	7035938	522584	215.85	0.60	215.25	Refusal on cobbles/ boulders at 0.6 m - could be bedrock surface		
TP21-22	7/17/2021	AECOM	7035955	522592	216.95	1.30	215.65	Refusal on suspected bedrock at 1.3 m		
TP21-23	7/22/2021	AECOM	7036007	522574	218.77	Uncertain	NA	Refusal on concrete at 0.9 m		Metal and concrete debris in test pit
TP21-24	7/22/2021	AECOM	7035988	522646	219.43	1.05	218.38	Refusal on suspected bedrock at 1.05 m		
TP21-25	Not Advanced	AECOM	7036001	522641	221.84	Uncertain	NA	Bedrock present at 0.1m to 0.2 m below surface		
TP21-26	Not Advanced	AECOM	7036049	522523	220.22	Uncertain	NA	Excavator unable to proceed due to steep slope		
TP21-27	Not Advanced	AECOM	7036149	522587	216.68	Uncertain	NA	Excavator unable to proceed due to steep slope		

## Notes:

m bgs = metres below ground surface

NA - Not Available

Bedrock Elevation Uncertain: Bedrock surface was not reached during test pit excavation.

Some coordinates provided in 2013 Gap Filling Program At Former Rayrock Mine Site Report (SENES, 2014) did not match locations shown on figures.

\* : AECOM adjusted incorrect coordinates to match approximate locations shown on 2014 SENES Report figures.

# Appendix **B**

Last saved by: STEPHANIE CLARK (2021-08-19) File Name: I:\A\AECOM\NET\COM\LS\AMERICAL\GARY\CACGY3\LEGACY\CACGY3\F5001\PRODD\PROJECTS\60608868\900-CAD\_GIS\020-929 (GIS-GRAPHICS)\02\_MXD\2021 RAYROCK TEST PIT EXCAVATION REPORT\_LOCATIONS.MXD  
 Project Management Initials: Designer: Checked: Approved: ANSIB 279.4mm x 431.8mm

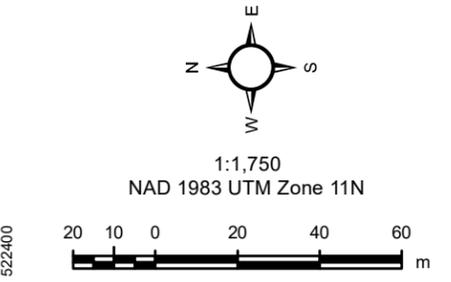


**Legend**

- Test Pit Location - AECOM (2021)
- Proposed 2021 Test Pit Locations – Unable to Advance
- Approximate Test Pit Location – SENES (2013)

**NOTE:**  
 Test pit coordinates provided in 2013 Gap Filling Program at Former Rayrock Mine Site Report (SENES, 2014) contain discrepancies. This figure shows approximate locations for the 2013 test pits.

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Ortho-Imagery: Arcadis Canada Inc. (Photo Date: May 26, 2017)  
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# Appendix **C**

Test Pit ID: TP21-02		
Date Excavated: July 14, 2021	Equipment: Kubota K008-3 Excavator	Northing: 7036048 m
Logged By: MG	Contractor: Tli Cho Engineering and Environmental Services	Easting: 522543 m
	Test Pit Depth: 0.30m	Ground Surface Elevation: 218.44 mASL
		Bedrock Elevation: Uncertain
Soil Description: Rocks with silty sand.		
	<p>Photo 1: This image shows the extents of the ground disturbance that the excavator was able to create in the area of TP21-02. Large rocks prevented the machine from digging any deeper.</p>	
<p>Notes:</p> <ul style="list-style-type: none"> <li>• Large rocks just below the surface made it difficult to dig at this location.</li> <li>• Excavator was unable to excavate deeper than approximately 0.30m due to large rock obstructions.</li> <li>• The nearby areas directly surrounding this location gave the same result when attempted to excavate.</li> <li>• Uncertain how much deeper the sand and rock continue before reaching the bedrock surface in this area.</li> </ul>		

Test Pit ID: TP21-03		
Date Excavated: July 14, 2021	Equipment: Kubota K008-3 Excavator	Northing: 7036067 m
Logged By: MG	Contractor: Tli Cho Engineering and Environmental Services	Easting: 522530 m
	Test Pit Depth: 1.10m	Ground Surface Elevation: 218.25 mASL
		Bedrock Elevation: Uncertain
<b>Soil Description: Silty sand mixed with rocks and some organics.</b>		
	<p>Photo 2: Image shows the location of TP21-03 with waste rock slopes to the NW and SW of the excavated pit.</p>	<p>Photo 3: Excavated TP21-03 until contact with a large rock prevented the machine from continuing deeper. 1.10 metres below ground surface (mbgs) was reached.</p>
<p>Notes:</p> <ul style="list-style-type: none"> <li>• Excavator was able to dig to approximately 1.10 mbgs before contacting a large rock and preventing any further excavation.</li> <li>• Large rock contacted at 1.10 mbgs was estimated as a non-bedrock cobble.</li> <li>• Uncertain how much deeper the sand and rock continue before reaching the bedrock surface in this area.</li> </ul>		

Test Pit ID: TP21-04 (Not Advanced)		
Date Excavated: N/A	Equipment: N/A	Northing: 7036092 m
Logged By: MG	Contractor: Tli Cho Engineering and Environmental Services	Easting: 522542 m
	Test Pit Depth: N/A	Ground Surface Elevation: 218.64 mASL
		Bedrock Elevation: Uncertain
<b>Soil Description: Loose rock with sand.</b>		
	Photo 4: Wildlife monitor standing in the general area proposed for TP21-04. Test pit was not excavated as the adit is nearby and there was potential for rocks sliding from the slope above if excavation were to occur. See notes below.	
<b>Notes:</b> <ul style="list-style-type: none"> <li>• TP21-04 was not excavated because the adit is nearby and the potential for rocks to slide from the slope above if excavation proceeded was noted.</li> <li>• The ground surface elevation in the area of proposed TP21-04 is similar the ground surface elevation at nearby test pits TP21-05A and TP21-05B therefore, sub-surface results may be similar to those pits.</li> <li>• Material in this location is the same as what was discovered in test pits TP21-05A and TP21-05B.</li> </ul>		

Test Pit ID: TP21-05A		
Date Excavated: July 14, 2021	Equipment: Kubota K008-3 Excavator	Northing: 7036131 m
Logged By: MG	Contractor: Tli Cho Engineering and Environmental Services	Easting: 522572 m
	Test Pit Depth: 1.10m	Ground Surface Elevation: 218.27 mASL
		Bedrock Elevation: Uncertain
<b>Soil Description: Small to large rocks mixed with sand.</b>		
	<p>Photo 5: Image shows the location of TP21-05A with Mill Lake to the SE.</p>	<p>Photo 6: Excavated TP21-05A until contact with a large rock prevented the machine from continuing deeper. 1.10 metres below ground surface (mbgs) was reached.</p>
<p>Notes:</p> <ul style="list-style-type: none"> <li>• Excavator was able to dig to approximately 1.10 mbgs before contacting a large rock and preventing any further excavation.</li> <li>• Orange sand and some debris (cloth and wood) were discovered while digging this test pit.</li> <li>• Large rock contacted at 1.10 mbgs was estimated as a non-bedrock cobble.</li> <li>• Uncertain how much deeper the sand and rock continue before reaching the bedrock surface in this area.</li> <li>• Moved west to the toe of the waste rock slope to attempt another excavation in the area (TP21-05B).</li> </ul>		

Test Pit ID: TP21-05B		
Date Excavated: July 14, 2021	Equipment: Kubota K008-3 Excavator	Northing: 7036129 m
Logged By: MG	Contractor: Tli Cho Engineering and Environmental Services	Easting: 522564 m
	Test Pit Depth: 1.15m	Ground Surface Elevation: 217.86 mASL
		Bedrock Elevation: Uncertain
<b>Soil Description: Small to large rocks mixed with sand, some organics, and trace clay.</b>		
	<p>Photo 7: Image shows the location of TP21-05B with TP21-05A in the background nearby.</p>	<p>Photo 8: Excavated TP21-05B until contact with a hard rock surface prevented the machine from continuing deeper. 1.15 metres below ground surface (mbgs) was reached.</p>
<p>Notes:</p> <ul style="list-style-type: none"> <li>• Excavator was able to dig to approximately 1.15 mbgs before contacting a hard rock surface and preventing any further excavation.</li> <li>• Uncertain of whether or not the hard rock surface contacted was large cobbles or bedrock (expect cobbles).</li> <li>• Excavation depths were limited by the size of equipment used to dig the pits. Uncertain of the depth to bedrock.</li> <li>• Estimate rocks and sand continue to a depth of up to 3 mbgs before a bedrock surface is contacted in the area of TP21-05A and TP21-05B.</li> </ul>		

Test Pit ID: TP21-06		
Date Excavated: July 14, 2021	Equipment: Kubota K008-3 Excavator	Northing: 7036027 m
Logged By: MG	Contractor: Tli Cho Engineering and Environmental Services	Easting: 522551 m
	Test Pit Depth: 0.75m	Ground Surface Elevation: 216.78 mASL
		Bedrock Elevation: 216.03 mASL
<b>Soil Description: Small to large rocks mixed with sand and trace organics.</b>		
	<p>Photo 9: Image shows the location of TP21-06 with Mill Lake in the distance to the NE and a waste rock slope to the west.</p>	<p>Photo 10: Excavated TP21-06 until contact with what seemed to be the bedrock surface. 0.75 metres below ground surface (mbgs) was reached.</p>
<b>Notes:</b> <ul style="list-style-type: none"> <li>Excavator was able to dig to approximately 0.75 mbgs before contacting assumed bedrock surface.</li> </ul>		

Test Pit ID: TP21-07		
Date Excavated: July 15, 2021	Equipment: Kubota K008-3 Excavator	Northing: 7036047 m
Logged By: MG	Contractor: Tli Cho Engineering and Environmental Services	Easting: 522564 m
	Test Pit Depth: 0.70m	Ground Surface Elevation: 216.05 mASL
		Bedrock Elevation: 215.35 mASL
<b>Soil Description: Small to large rocks mixed with sand and some organics.</b>		
	<p>Photo 11: Image shows the excavation of TP21-07.</p>	<p>Photo 12: AECOM staff setting up to collect bedrock sample from the bottom of TP21-07.</p>
<p>Notes:</p> <ul style="list-style-type: none"> <li>Excavator was able to dig to approximately 0.70 mbgs before contacting assumed bedrock surface.</li> </ul>		

Test Pit ID: TP21-08		
Date Excavated: July 15, 2021	Equipment: Kubota K008-3 Excavator	Northing: 7036058 m
Logged By: MG	Contractor: Tli Cho Engineering and Environmental Services	Easting: 522579 m
	Test Pit Depth: 1.10m	Ground Surface Elevation: 216.07 mASL
		Bedrock Elevation: Uncertain
<p><b>Soil Description: Small to large rocks mixed with brown sand. Colour change to grey sand around 1.0 mbgs.</b></p>		
	<p>Photo 13: Image shows the excavation of TP21-08.</p>	<p>Photo 14: Excavated TP21-08 until contact with a large rock prevented the machine from continuing deeper. 1.10 metres below ground surface (mbgs) was reached.</p>
<p>Notes:</p> <ul style="list-style-type: none"> <li>• Excavator was able to dig to approximately 1.10 mbgs before contacting a large rock and preventing any further excavation.</li> <li>• Large rock contacted at 1.10 mbgs was estimated as a non-bedrock cobble.</li> <li>• Uncertain how much deeper the sand and rock continue before reaching the bedrock surface in this area.</li> <li>• Moved to the SE to attempt excavation of another pit (TP21-09).</li> </ul>		

Test Pit ID: TP21-09		
Date Excavated: July 15, 2021	Equipment: Kubota K008-3 Excavator	Northing: 7036050 m
Logged By: MG	Contractor: Tli Cho Engineering and Environmental Services	Easting: 522587 m
	Test Pit Depth: 1.10m	Ground Surface Elevation: 215.96 mASL
		Bedrock Elevation: Uncertain
<b>Soil Description: Brown sand mixed with rocks and trace organics. Colour change to grey sand around 1.0 mbgs.</b>		
	<p>Photo 15: Image shows the location of TP21-09 with TP21-08 to the NW in the background.</p>	<p>Photo 16: Excavated TP21-09 until contact with groundwater. 1.10 metres below ground surface (mbgs) was reached.</p>
<p>Notes:</p> <ul style="list-style-type: none"> <li>Excavator was able to dig to approximately 1.10 mbgs before contacting groundwater which continued to fill the hole as we attempted to excavate further. AECOM notes that the depth that groundwater was encountered is the approximate elevation of Mill Lake (215.0 m).</li> <li>Brown sand material changed colour around 1.0 mbgs to a wet grey/black coloured sand material.</li> <li>Uncertain how much deeper the sand and rock continue before reaching the bedrock surface in this area.</li> </ul>		

Test Pit ID: TP21-10		
Date Excavated: July 15, 2021	Equipment: Kubota K008-3 Excavator	Northing: 7036017 m
Logged By: MG	Contractor: Tli Cho Engineering and Environmental Services	Easting: 522563 m
	Test Pit Depth: 1.20m	Ground Surface Elevation: 215.93 mASL
		Bedrock Elevation: Uncertain
<b>Soil Description: Sand mixed with rocks and organics.</b>		
	<p>Photo 17: Image shows the location of TP21-10 with waste rock slope to the east of the excavated pit.</p>	<p>Photo 18: Excavated TP21-10 until a depth of 1.20 mbgs was reached. Native organic material was contacted around 0.65 mbgs and continued to total depth of the pit.</p>
<p>Notes:</p> <ul style="list-style-type: none"> <li>Excavator was able to dig to approximately 1.20 mbgs before running out of arm length to continue digging safely.</li> <li>Sand and rocks were apparent through the first 0.50m of excavation but stopped at 0.65 mbgs where native organic material started.</li> <li>Uncertain how much deeper the organics continue until bedrock surface can be reached.</li> </ul>		

Test Pit ID: TP21-11		
Date Excavated: July 16, 2021	Equipment: Kubota K008-3 Excavator	Northing: 7035983 m
Logged By: MG	Contractor: Tli Cho Engineering and Environmental Services	Easting: 522558 m
	Test Pit Depth: 0.45m	Ground Surface Elevation: 215.82 mASL
		Bedrock Elevation: Uncertain
<b>Soil Description: Silty sand with rocks and some organics.</b>		
	<p>Photo 19: Image shows the location of TP21-11 on the west side of the trail with willows surrounding the trail.</p>	<p>Photo 20: Excavated TP21-11 until contact with a large rock prevented the machine from continuing deeper. 0.45 metres below ground surface (mbgs) was reached.</p>
<p>Notes:</p> <ul style="list-style-type: none"> <li>Excavator was able to dig to approximately 0.45 mbgs before contacting a large rock and preventing any further excavation.</li> <li>Uncertain how much deeper the sand and rock continue before reaching the bedrock surface in this area.</li> <li>Moved east across the trail to excavate another pit in the area (TP21-12).</li> </ul>		

Test Pit ID: TP21-12		
Date Excavated: July 16, 2021	Equipment: Kubota K008-3 Excavator	Northing: 7035982 m
Logged By: MG	Contractor: Tli Cho Engineering and Environmental Services	Easting: 522564 m
	Test Pit Depth: 1.60m	Ground Surface Elevation: 215.39 mASL
		Bedrock Elevation: Uncertain
<b>Soil Description: Silty sand mixed with rocks and some organics.</b>		
	<p>Photo 21: Image shows the location of TP21-12 on the east side of the trail surrounded by willows.</p>	<p>Photo 22: Excavated TP21-12 until the excavator was unable to dig any deeper (arm length reached). 1.60 metres below ground surface (mbgs) was reached.</p>
<p>Notes:</p> <ul style="list-style-type: none"> <li>• Excavator was able to dig to approximately 1.60 mbgs before reaching its maximum arm length.</li> <li>• Majority of the test pit was filled with sand mixed with some rock. Sand colour got darker as depth increased.</li> <li>• <u>Groundwater was noticed at approximately 1.25 mbgs.</u></li> <li>• Uncertain how much deeper the sand and rock continue before reaching the bedrock surface in this area.</li> </ul>		

Test Pit ID: TP21-13		
Date Excavated: July 16, 2021	Equipment: Kubota K008-3 Excavator	Northing: 7036068 m
Logged By: MG	Contractor: Tli Cho Engineering and Environmental Services	Easting: 522553 m
	Test Pit Depth: 1.50m	Ground Surface Elevation: 216.91 mASL
		Bedrock Elevation: Uncertain
<p><b>Soil Description: Small to large rocks mixed with sand and trace organics.</b></p> <p><b>Various metals and wood debris were noticed below the surface in this area.</b></p>		
	Photo 23: Image shows the excavation of TP21-13.	Photo 24: Excavated TP21-13 until contact with large rocks and arm length limitatons prevented the machine from continuing deeper. 1.50 metres below ground surface (mbgs) was reached.
<p>Notes:</p> <ul style="list-style-type: none"> <li>• Excavator was able to dig to approximately 1.50 mbgs before contacting large rocks and reaching excavator arm length maximum prevented any further excavation.</li> <li>• Large metals and wood debris were evident in this test pit.</li> <li>• Uncertain how much deeper the sand and rock continue before reaching the bedrock surface in this area.</li> </ul>		

Test Pit ID: TP21-14		
Date Excavated: July 16, 2021	Equipment: Kubota K008-3 Excavator	Northing: 7036068 m
Logged By: MG	Contractor: Tli Cho Engineering and Environmental Services	Easting: 522621 m
	Test Pit Depth: 0.90m	Ground Surface Elevation: 216.16 mASL
		Bedrock Elevation: 215.26 m
<b>Soil Description: Small to large rocks mixed with sand and organics.</b>		
	<p>Photo 25: Image shows the location of TP21-14 facing NW. TP21-14 is at the base of a waste rock and bedrock slope to the SE.</p>	<p>Photo 26: Excavated TP21-14 until contact with a rock surface prevented the machine from continuing deeper. 0.90 metres below ground surface (mbgs) was reached.</p>
<p>Notes:</p> <ul style="list-style-type: none"> <li>Excavator was able to dig to approximately 0.90 mbgs before contacting the rock surface preventing any further excavation.</li> <li>Rock surface contacted at 0.90 mbgs is likely the bedrock surface.</li> <li>The surrounding area contains bedrock at the surface in some locations and there are large bedrock formations sloping up to the SE from this test pit.</li> </ul>		

Test Pit ID: TP21-15		
Date Excavated: July 16, 2021	Equipment: Kubota K008-3 Excavator	Northing: 7036059 m
Logged By: MG	Contractor: Tli Cho Engineering and Environmental Services	Easting: 522650 m
	Test Pit Depth: 0.80m	Ground Surface Elevation: 217.13 mASL
		Bedrock Elevation: Uncertain
<b>Soil Description: Brown sand mixed with rocks and trace organics.</b>		
	<p>Photo 27: Image shows the location of TP21-15 with Mill Lake in the background to the NE.</p>	<p>Photo 28: Excavated TP21-15 until contact with large rocks prevented the machine from continuing deeper. 0.80 metres below ground surface (mbgs) was reached.</p>
<p>Notes:</p> <ul style="list-style-type: none"> <li>Excavator was able to dig to approximately 0.80 mbgs before contacting large rocks, preventing any further excavation.</li> <li>Large rocks contacted at 0.80 mbgs was estimated as non-bedrock cobbles.</li> <li>Uncertain how much deeper the sand and rock continue before reaching the bedrock surface in this area.</li> </ul>		

Test Pit ID: TP21-16		
Date Excavated: July 17, 2021	Equipment: Kubota K008-3 Excavator	Northing: 7036024 m
Logged By: MG	Contractor: Tli Cho Engineering and Environmental Services	Easting: 522646 m
	Test Pit Depth: 0.75m	Ground Surface Elevation: 221.49 mASL
		Bedrock Elevation: 220.74 mASL *See notes below*
<b>Soil Description: Small to medium sized rocks mixed with sand.</b>		
	<p>Photo 29: Image shows the excavation of TP21-16.</p>	<p>Photo 30: Excavated TP21-16 until contact with rock surface prevented the machine from continuing deeper. 0.75 metres below ground surface (mbgs) was reached.</p>
<p>Notes:</p> <ul style="list-style-type: none"> <li>Excavator was able to dig to approximately 0.75 mbgs before contacting a rock surface, preventing any further excavation.</li> <li>Rock surface contacted at 0.75 mbgs was estimated to be the bedrock surface but could be cobbles.</li> <li>Uncertain how much deeper the sand and rock continue before reaching the bedrock surface if refusal surface is cobbles.</li> </ul>		

Test Pit ID: TP21-17		
Date Excavated: July 17, 2021	Equipment: Kubota K008-3 Excavator	Northing: 7036016 m
Logged By: MG	Contractor: Tli Cho Engineering and Environmental Services	Easting: 522593 m
	Test Pit Depth: 1.10m	Ground Surface Elevation: 221.79 mASL
		Bedrock Elevation: Uncertain
<p><b>Soil Description: Silty sand mixed with rocks and some organics.</b></p> <p><b>Some wood debris noticed just below the surface, supporting the concrete ramp nearby.</b></p>		
	<p>Photo 31: Image shows the location of TP21-17 excavated to the NW of the concrete ramp going up to the old mill foundations.</p>	<p>Photo 32: Excavated TP21-17 until contact with large rocks prevented the machine from continuing deeper. 1.10 metres below ground surface (mbgs) was reached.</p>
<p>Notes:</p> <ul style="list-style-type: none"> <li>• Excavator was able to dig to approximately 1.10 mbgs before contacting large rocks, preventing any further excavation.</li> <li>• Wooden debris was noticed within the test pit. Wooden beams seem to be lined up below the concrete ramp to provide support when the concrete slabs were constructed.</li> <li>• Large rock contacted at 1.10 mbgs was estimated as a non-bedrock cobble.</li> <li>• Uncertain how much deeper the sand and rock continue before reaching the bedrock surface in this area.</li> </ul>		

Test Pit ID: TP21-18		
Date Excavated: July 17, 2021	Equipment: Kubota K008-3 Excavator	Northing: 7035977 m
Logged By: MG	Contractor: Tli Cho Engineering and Environmental Services	Easting: 522584 m
	Test Pit Depth: 0.15m	Ground Surface Elevation: 217.62 mASL
		Bedrock Elevation: 217.47 mASL
Soil Description: Rocks mixed with sand.		
	<p>Photo 33: Image shows the location of TP21-18 which was excavated in the base of a crater in the waste rock to the SW of the old mill foundations.</p>	<p>Photo 34: Excavated TP21-18 until contact with the rock surface prevented the machine from continuing deeper. 0.15 metres below ground surface (mbgs) was reached.</p>
<p>Notes:</p> <ul style="list-style-type: none"> <li>• Excavator was able to dig to approximately 0.15 mbgs before contacting a rock surface, preventing any further excavation.</li> <li>• Height of the surrounding waste rock slopes were estimated to be around 1.5 to 2.0 m from the surface elevation of TP21-18.</li> <li>• Rock surface contacted at 0.15 mbgs was estimated to be the bedrock surface.</li> </ul>		

Test Pit ID: TP21-19		
Date Excavated: July 17, 2021	Equipment: Kubota K008-3 Excavator	Northing: 7035978 m
Logged By: MG	Contractor: Tli Cho Engineering and Environmental Services	Easting: 522628 m
	Test Pit Depth: 1.00m	Ground Surface Elevation: 219.92 mASL
		Bedrock Elevation: 218.92 mASL
<p><b>Soil Description: Small to large rocks mixed with sand, trace organics.</b></p> <p><b>Some metal debris was found in this test pit.</b></p>		
	<p>Photo 35: Image shows the location of TP21-19 located to the SE of the old mill foundations.</p>	<p>Photo 36: Excavated TP21-19 until contact with the rock surface prevented the machine from continuing deeper. 1.00 metres below ground surface (mbgs) was reached.</p>
<p>Notes:</p> <ul style="list-style-type: none"> <li>Excavator was able to dig to approximately 1.00 mbgs before contacting the rock surface, preventing any further excavation.</li> <li>Some metal debris was found in this test pit.</li> <li>Rock surface contacted at 1.00 mbgs was estimated to be the bedrock surface.</li> </ul>		

Test Pit ID: TP21-20		
Date Excavated: July 17, 2021	Equipment: Kubota K008-3 Excavator	Northing: 7035937 m
Logged By: MG	Contractor: Tli Cho Engineering and Environmental Services	Easting: 522580 m
	Test Pit Depth: 0.65m	Ground Surface Elevation: 215.81 mASL
		Bedrock Elevation: 215.16 mASL *See notes below*
<b>Soil Description: Small to medium sized rocks mixed with sand, trace organics.</b>		
	<p>Photo 37: Image shows the location of TP21-20 with the old powerhouse foundation in the background to the east.</p>	<p>Photo 38: Excavated TP21-20 until contact with large rocks prevented the machine from continuing deeper. 0.65 metres below ground surface (mbgs) was reached.</p>
<p>Notes:</p> <ul style="list-style-type: none"> <li>• Excavator was able to dig to approximately 0.65 mbgs before contacting large rocks and preventing any further excavation.</li> <li>• Large rocks contacted at 0.65 mbgs was estimated as non-bedrock cobbles but could potentially be the bedrock surface.</li> <li>• Moved slightly to the north and began another test pit (TP21-21).</li> </ul>		

Test Pit ID: TP21-21		
Date Excavated: July 17, 2021	Equipment: Kubota K008-3 Excavator	Northing: 7035938 m
Logged By: MG	Contractor: Tli Cho Engineering and Environmental Services	Easting: 522584 m
	Test Pit Depth: 0.60m	Ground Surface Elevation: 215.85 mASL
		Bedrock Elevation: 215.25 mASL *See notes below*
<b>Soil Description: Small to medium sized rocks mixed with sand, trace organics.</b>		
	<p>Photo 39: Image shows the excavation TP21-21 proceeding with TP21-20 to the south in the foreground of the photo.</p>	<p>Photo 40: Excavated TP21-21 until contact with large rocks prevented the machine from continuing deeper. 0.60 metres below ground surface (mbgs) was reached.</p>
<p>Notes:</p> <ul style="list-style-type: none"> <li>Excavator was able to dig to approximately 0.60 mbgs before contacting large rocks, preventing any further excavation.</li> <li>Large rocks contacted at 0.60 mbgs confirm and are consistent with the findings in TP21-20. These large rocks may potentially be the bedrock surface.</li> <li>Uncertain how much deeper the sand and rock continue before reaching the bedrock surface in this area if the large rocks contacted are cobbles.</li> </ul>		

Test Pit ID: TP21-22		
Date Excavated: July 17, 2021	Equipment: Kubota K008-3 Excavator	Northing: 7035955 m
Logged By: MG	Contractor: Tli Cho Engineering and Environmental Services	Easting: 522592 m
	Test Pit Depth: 1.30m	Ground Surface Elevation: 216.95 mASL
		Bedrock Elevation: 215.65 mASL
<p><b>Soil Description: Small to large rocks mixed with brown sand. Some orange sand on the north edge of the test pit.</b></p>		
	<p>Photo 41: Image shows the location of TP21-22 with the old powerhouse foundation to the south in the background.</p>	<p>Photo 42: Excavated TP21-22 until contact with rock surface prevented the machine from continuing deeper. 1.30 metres below ground surface (mbgs) was reached.</p>
<p>Notes:</p> <ul style="list-style-type: none"> <li>Excavator was able to dig to approximately 1.30 mbgs before contacting the rock surface, preventing any further excavation.</li> <li>Rock surface contacted at 1.30 mbgs was estimated to be the bedrock surface.</li> </ul>		

Test Pit ID: TP21-23		
Date Excavated: July 22, 2021	Equipment: Kubota K008-3 Excavator	Northing: 7036007 m
Logged By: AR	Contractor: Tli Cho Engineering and Environmental Services	Easting: 522574 m
	Test Pit Depth: 0.90m	Ground Surface Elevation: 218.77 mASL
		Bedrock Elevation: Uncertain
<p><b>Soil Description: Small to large rocks mixed with sand, trace organics. Sand was reddish-grey and brown in colour.</b></p> <p><b>Metals and concrete debris were found in the test pit.</b></p>		
	<p>Photo 43: Image shows the location of TP21-23 located west of the old mill foundation along the waste rock pile edge that slopes down to the west (trail at bottom).</p>	<p>Photo 44: Excavated TP21-23 until contact with large concrete debris prevented the machine from continuing deeper. 0.90 metres below ground surface (mbgs) was reached.</p>
<p>Notes:</p> <ul style="list-style-type: none"> <li>Excavator was able to dig to approximately 0.90 mbgs before contacting large concrete debris, preventing any further excavation.</li> <li>Uncertain how much deeper the sand and rock continue before reaching the bedrock surface. It appears to be &gt;3.0 mbgs to bedrock as the waste rock is piled high in this area.</li> </ul>		

Test Pit ID: TP21-24		
Date Excavated: July 22, 2021	Equipment: Kubota K008-3 Excavator	Northing: 7035988 m
Logged By: AR	Contractor: Tli Cho Engineering and Environmental Services	Easting: 522646 m
	Test Pit Depth: 1.05m	Ground Surface Elevation: 219.43 mASL
		Bedrock Elevation: 218.38 mASL

**Soil Description: Small to large rocks mixed with sand.**



Photo 45: Image shows the location of TP21-24 on top of the waste rock slope to the east of the old mill foundations.



Photo 46: Excavated TP21-24 until contact with rock surface prevented the machine from continuing deeper. 1.05 metres below ground surface (mbgs) was reached.

Notes:

- Excavator was able to dig to approximately 1.05 mbgs before contacting the rock surface, preventing any further excavation.
- Rock surface contacted at 1.05 mbgs was estimated to be the bedrock surface.

Test Pit ID: TP21-25 (Not Advanced)		
Date Excavated: July 22, 2021	Equipment: N/A	Northing: 7036001 m
Logged By: AR	Contractor: Tli Cho Engineering and Environmental Services	Easting: 522641 m
	Test Pit Depth: N/A	Ground Surface Elevation: 221.84 mASL
		Bedrock Elevation: Uncertain
<b>Soil Description: Waste rock mixed with sand.</b>		
	Photo 47: Image shows the location of TP21-25 where no excavation took place since bedrock was visible at the surface.	
Notes: <ul style="list-style-type: none"> <li>• Bedrock was noticed at the surface or covered by 0.1 to 0.2 m of rocks and sand in this area.</li> <li>• No excavation was required.</li> </ul>		

Test Pit ID: TP21-26 (Not Advanced)		
Date Excavated: July 22, 2021	Equipment: N/A	Northing: 7036049 m
Logged By: AR	Contractor: Tli Cho Engineering and Environmental Services	Easting: 522523 m
	Test Pit Depth: N/A	Ground Surface Elevation: 220.22 mASL
		Bedrock Elevation: Uncertain
<b>Soil Description: Small to large rocks mixed with sand.</b>		
	Photo 48: Image shows the location of TP21-26 which was proposed to be excavated at the top of the waste rock slope.	
Notes: <ul style="list-style-type: none"> <li>Excavator was unable to safely travel up the waste rock slope to this location.</li> <li>No excavation was advanced in this area.</li> </ul>		

Test Pit ID: TP21-27 (Not Advanced)		
Date Excavated: July 22, 2021	Equipment: N/A	Northing: 7036149 m
Logged By: AR	Contractor: Tli Cho Engineering and Environmental Services	Easting: 522587 m
	Test Pit Depth: N/A	Ground Surface Elevation: 216.68 mASL
		Bedrock Elevation: Uncertain
<b>Soil Description: Small to large rocks mixed with sand.</b>		
	Photo 49: Image shows the proposed location of TP21-27 with waste rock slopes to the NW.	
Notes: <ul style="list-style-type: none"> <li>Excavator was unable to safely proceed to this location due to the steepness of the waste rock slope to the NW.</li> <li>No excavation was advanced in this area.</li> </ul>		

# Appendix **D**

# **2013 GAP FILLING PROGRAM AT FORMER RAYROCK MINE SITE**

**Prepared for:**

**Public Works and Government Services Canada**

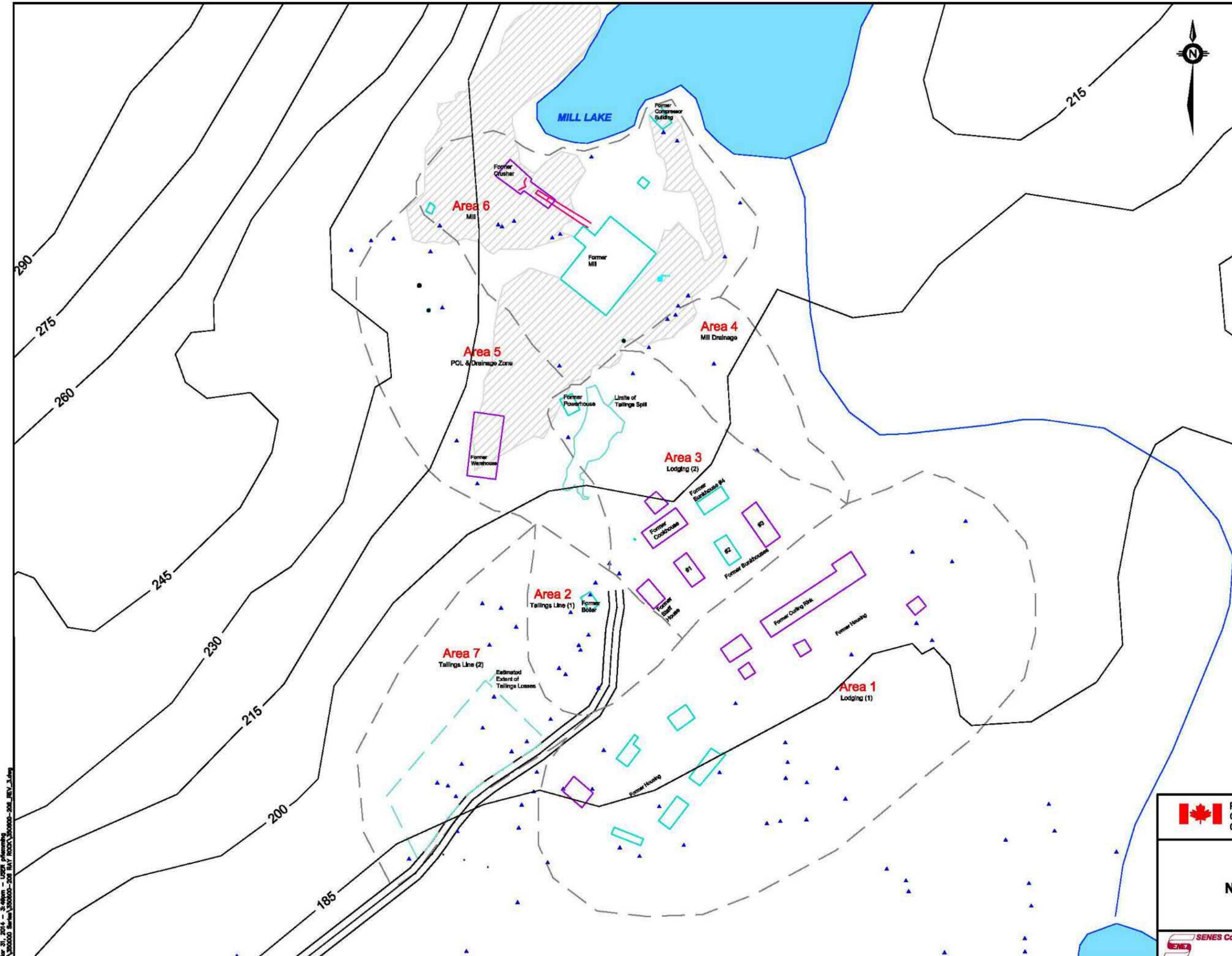
**Prepared by:**

**SENES Consultants**  
121 Granton Drive, Unit 12  
Richmond Hill, Ontario  
L4B 3N4

March 2014

Printed on Recycled Paper Containing Post-Consumer Fibre



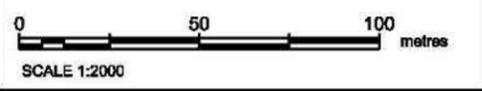


**LEGEND:**

	DELINEATION AREA
	FORMER BUILDING (Foundation Located)
	FORMER BUILDING (Location Approximate)
	DEBRIS AND DRUMS
	WASTE ROCK
	ROADWAY
	FORMER OIL TANKS
	CONTOUR LINE
	CREEK
	LAKE

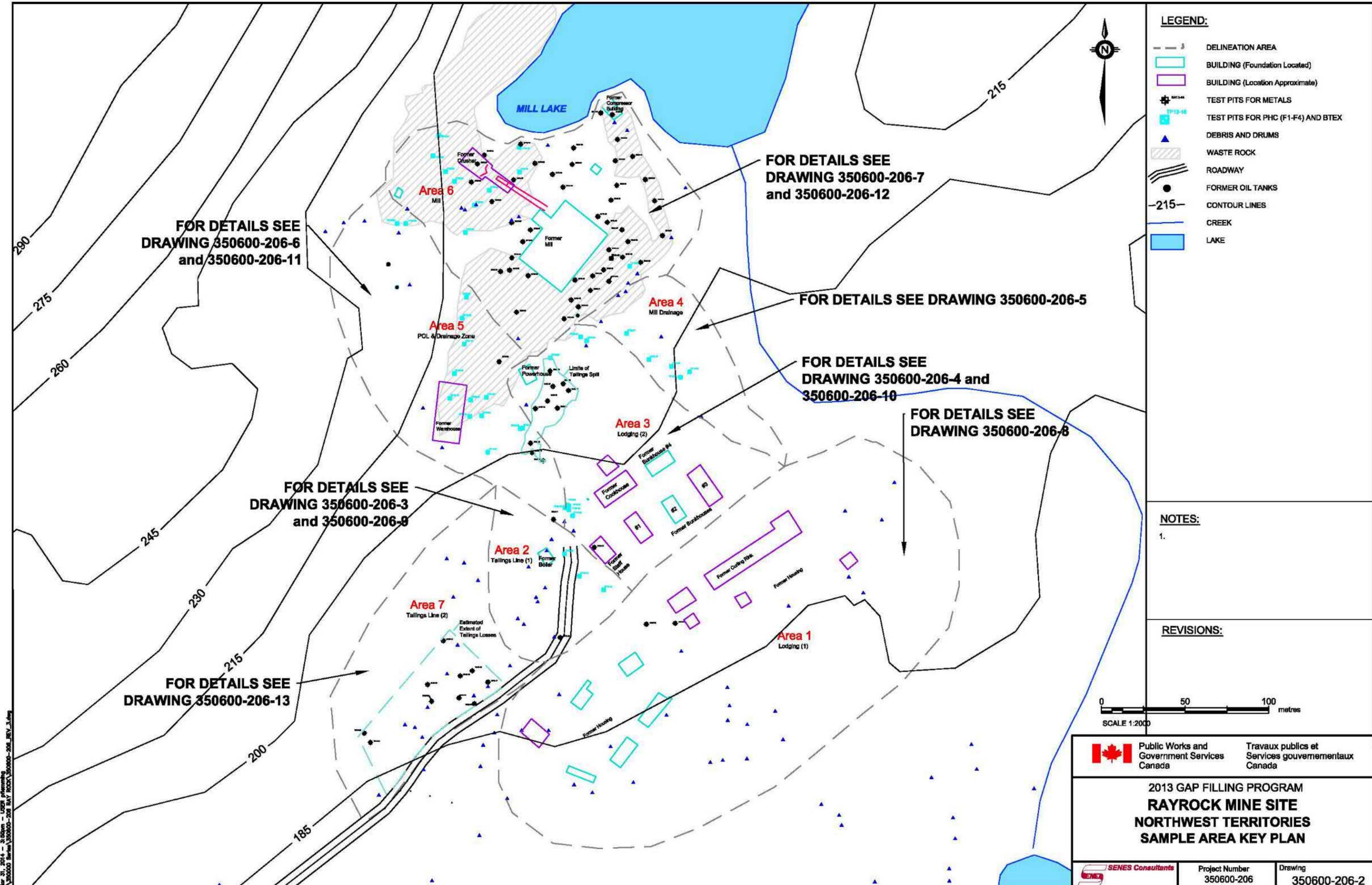
**NOTES:**  
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**REVISIONS:**



	Public Works and Government Services Canada	Travaux publics et Services gouvernementaux Canada
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	Project Number 350600-206	Drawing 350600-206-1

Mar 31, 2014 - 3:45pm - L201 Planning  
 25,00000 350600-206-101 350600-206-101.dwg



FOR DETAILS SEE  
DRAWING 350600-206-6  
and 350600-206-11

FOR DETAILS SEE  
DRAWING 350600-206-7  
and 350600-206-12

FOR DETAILS SEE DRAWING 350600-206-5

FOR DETAILS SEE  
DRAWING 350600-206-4 and  
350600-206-10

FOR DETAILS SEE  
DRAWING 350600-206-8

FOR DETAILS SEE  
DRAWING 350600-206-3  
and 350600-206-9

FOR DETAILS SEE  
DRAWING 350600-206-13

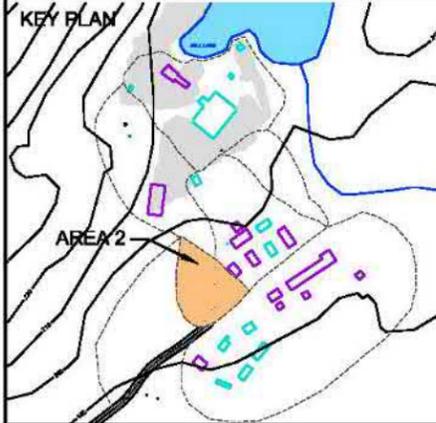
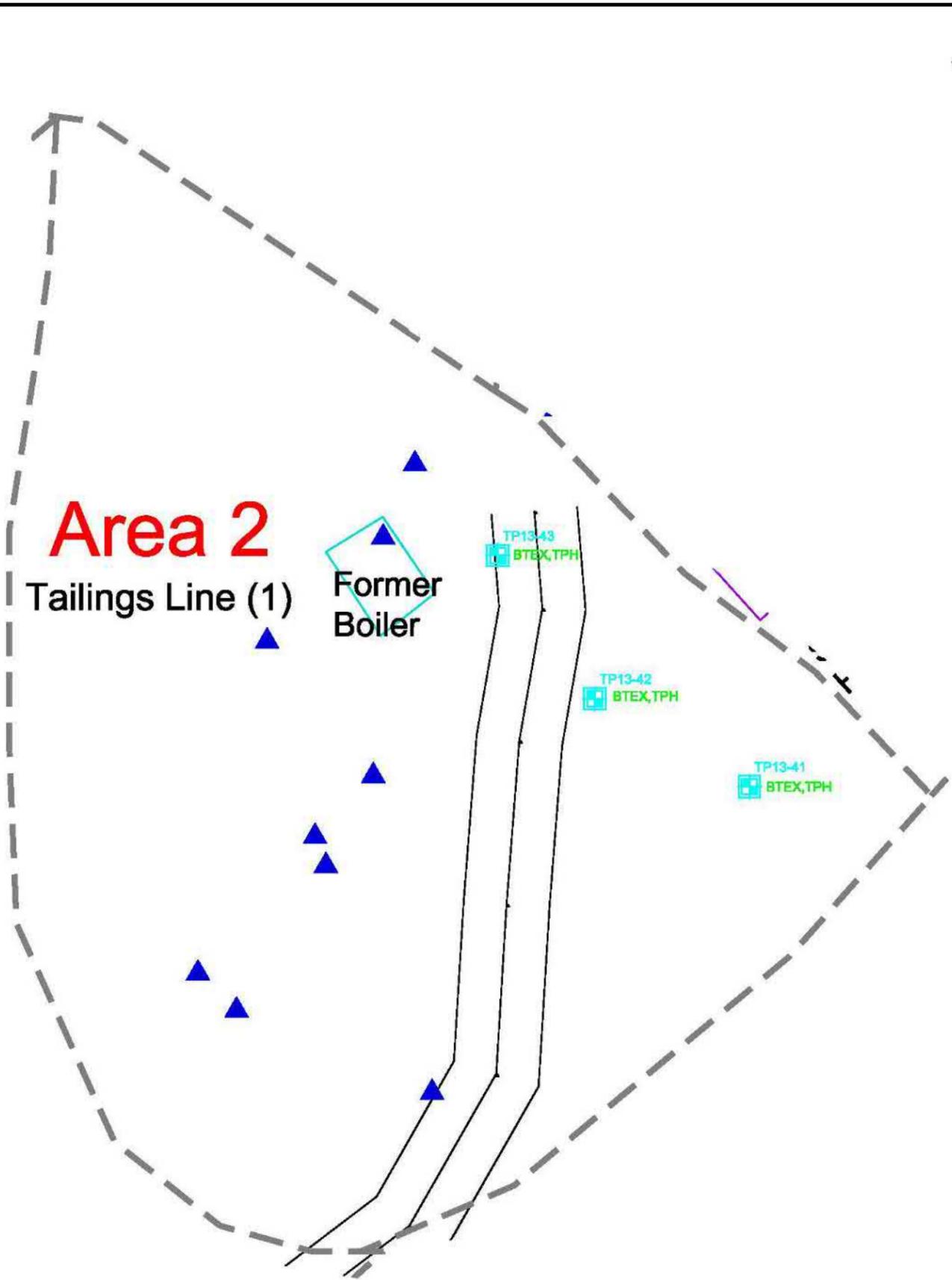
Mar 31, 2014 - 3:50pm - L201 Planning  
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Public Works and Government Services Canada  
 Travaux publics et Services gouvernementaux Canada

2013 GAP FILLING PROGRAM  
**RAYROCK MINE SITE**  
 NORTHWEST TERRITORIES  
**SAMPLE AREA KEY PLAN**

SENES Consultants	Project Number 350600-206	Drawing 350600-206-2
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Mar 31, 2014 - 3:58pm - User: p...  
24, 20000 Series (35000-206 Ray Rock) 35000-206 REV. 3.dwg



**LEGEND:**

- DELINEATION AREA
- FORMER BUILDING (Foundation Located)
- FORMER BUILDING (Location Approximate)
- TEST PITS FOR PHC (F1-F4) AND BTEX
- DEBRIS AND DRUMS
- WASTE ROCK
- ROADWAY

**LIBRARY**

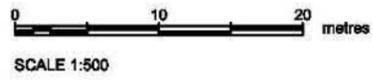
PHC	Petroleum Hydrocarbons
F1	(C6-C9) Hydrocarbons
F2	(C10-C16) Hydrocarbons
F3	(C16-C34) Hydrocarbons
F4	(C34-C60) Hydrocarbons
BTEX	Benzene

**BTEX - GREEN DENOTES PARAMETER MEETS CRITERIA**  
**F1 - RED DENOTES ELEVATED PARAMETER RESULT**

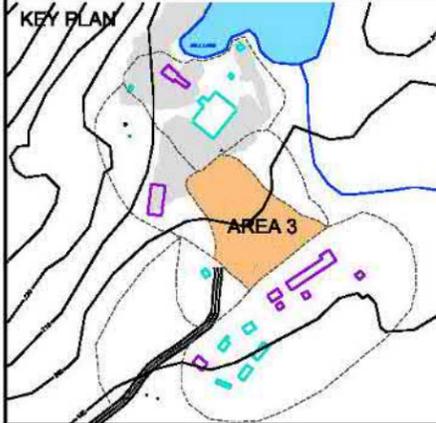
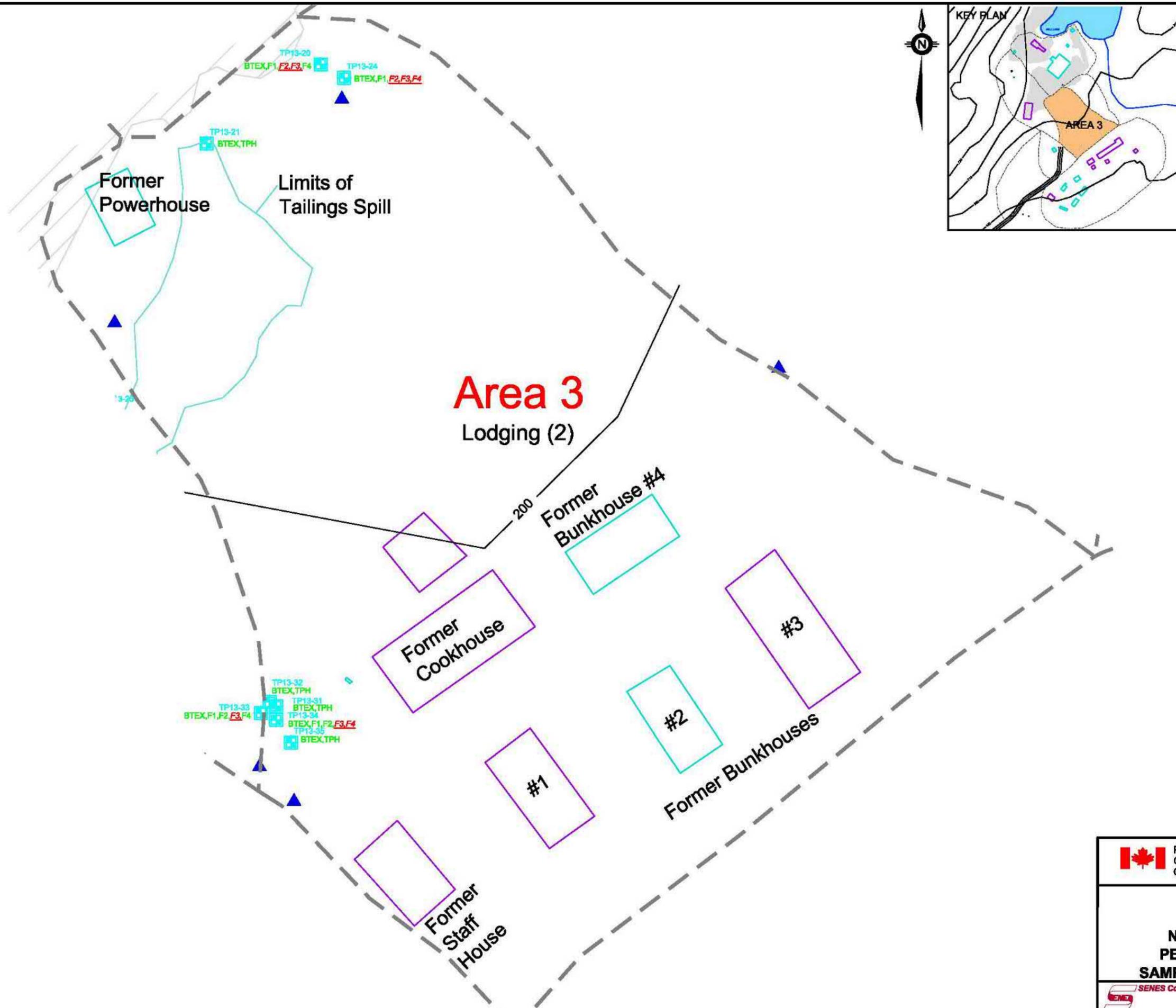
**NOTES:**

1.

**REVISIONS:**



	Public Works and Government Services Canada	Travaux publics et Services gouvernementaux Canada
	<b>2013 GAP FILLING PROGRAM</b> <b>RAYROCK MINE SITE</b> <b>NORTHWEST TERRITORIES</b> <b>PETROLEUM HYDROCARBON</b> <b>SAMPLE LOCATION PLAN (AREA 2)</b>	
	Project Number 350600-206	Drawing 350600-206-3



**LEGEND:**

- DELINEATION AREA
- FORMER BUILDING (Foundation Located)
- FORMER BUILDING (Location Approximate)
- TEST PITS FOR PHC (F1-F4) AND BTEX
- DEBRIS AND DRUMS
- WASTE ROCK
- ROADWAY
- 215- CONTOUR LINE

**LIBRARY**

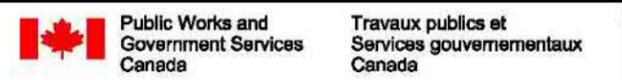
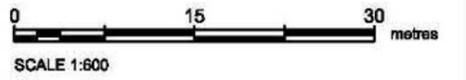
PHC	Petroleum Hydrocarbons
F1	(C6-C9) Hydrocarbons
F2	(C10-C16) Hydrocarbons
F3	(C16-C34) Hydrocarbons
F4	(C34-C60) Hydrocarbons
BTEX	Benzene

**BTEX** - GREEN DENOTES PARAMETER MEETS CRITERIA  
**F1** - RED DENOTES ELEVATED PARAMETER RESULT

**NOTES:**

1.

**REVISIONS:**

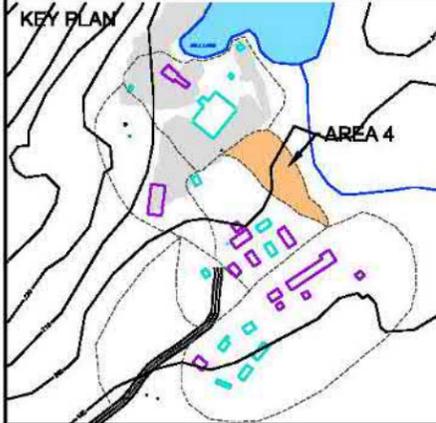
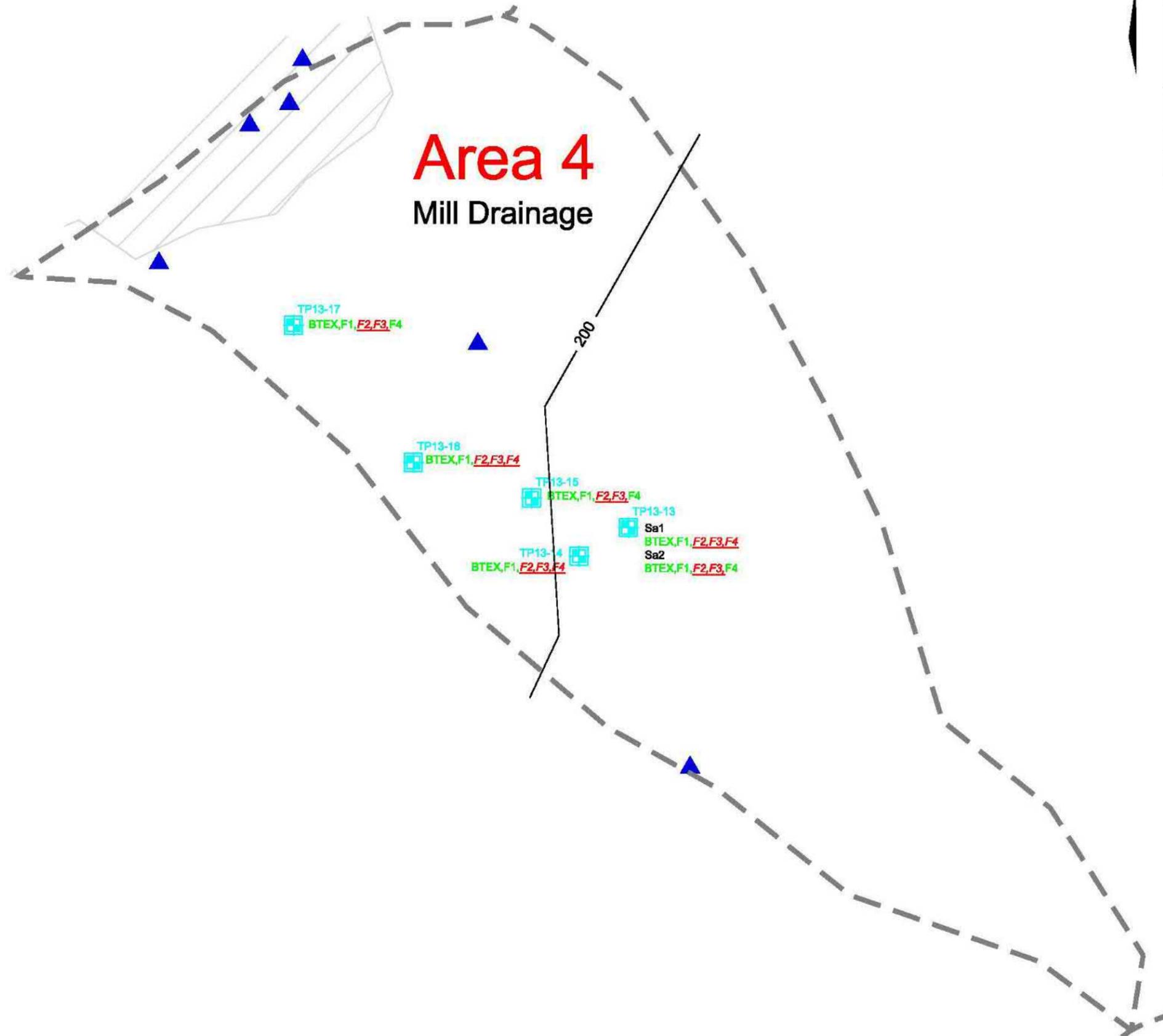


**2013 GAP FILLING PROGRAM**  
**RAYROCK MINE SITE**  
**NORTHWEST TERRITORIES**  
**PETROLEUM HYDROCARBON**  
**SAMPLE LOCATION PLAN (AREA 3)**

	Project Number 350600-206	Drawing 350600-206-4
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Mar 31, 2014 - 3:00pm - 1:00pm  
 25, 30000 Series 350600-206 Rev. 1004 350600-206 REV. 3.1km

Mar 28, 2014 - 3:05pm - User: pfrancis  
 25, 350000 Series 350000-206 Ray Rock 350000-206 REV 3.dwg



**LEGEND:**

	DELINEATION AREA
	FORMER BUILDING (Foundation Located)
	FORMER BUILDING (Location Approximate)
	TEST PITS FOR PHC (F1-F4) AND BTEX
	DEBRIS AND DRUMS
	WASTE ROCK
	ROADWAY
	-215- CONTOUR LINES

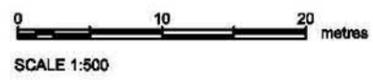
**LIBRARY**

PHC	Petroleum Hydrocarbons
F1	(C8-C9) Hydrocarbons
F2	(C10-C16) Hydrocarbons
F3	(C16-C34) Hydrocarbons
F4	(C34-C60) Hydrocarbons
BTEX	Benzene

**BTEX** - GREEN DENOTES PARAMETER MEETS CRITERIA  
**F1** - RED DENOTES ELEVATED PARAMETER RESULT

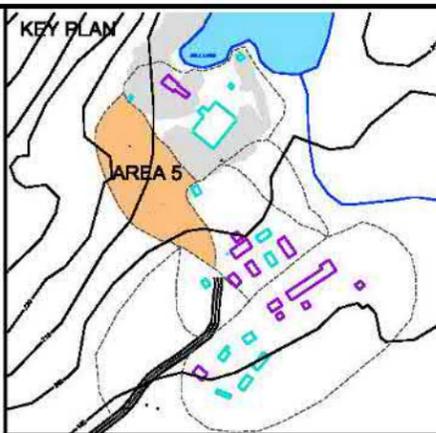
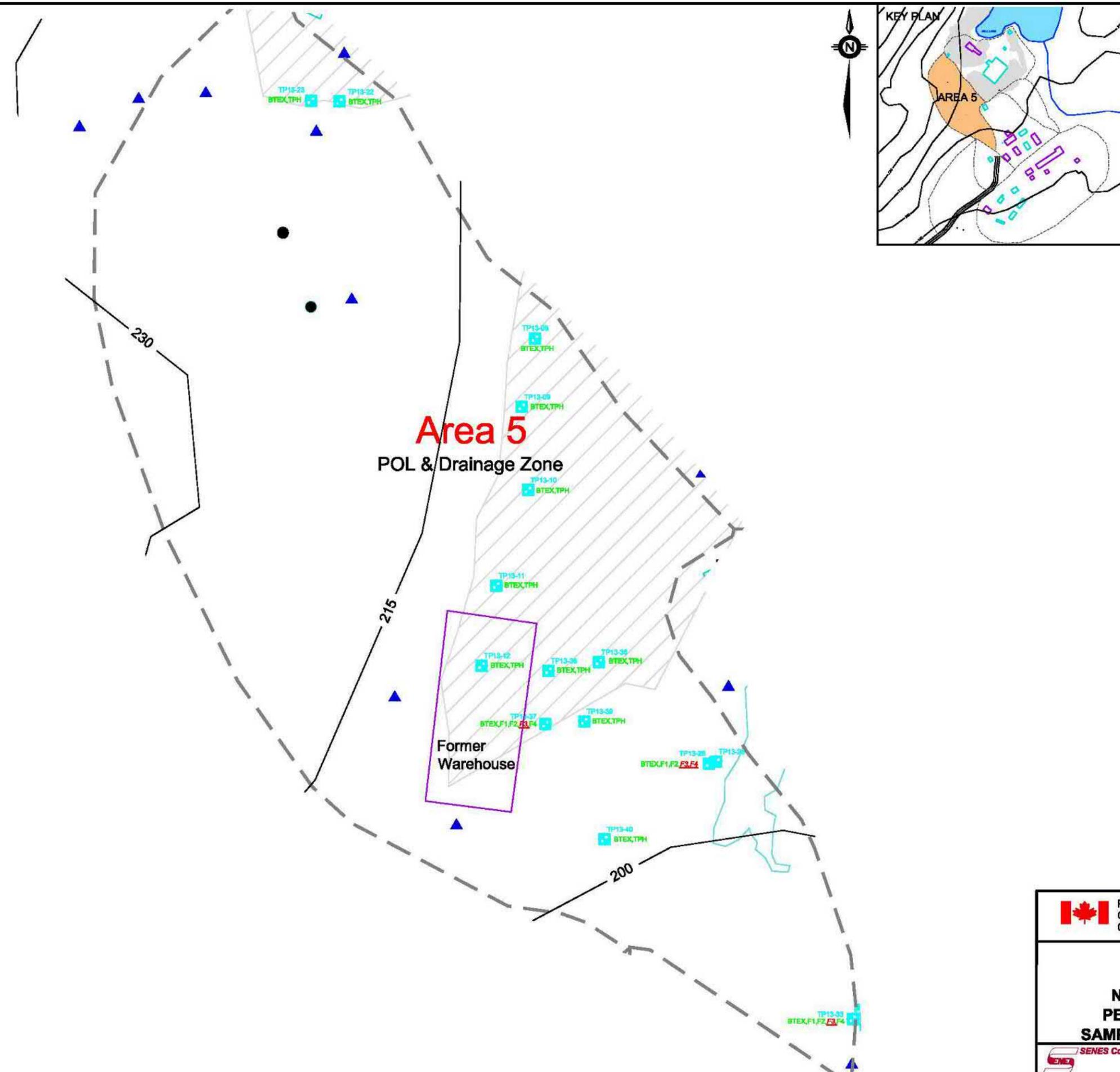
**NOTES:**  
1.

**REVISIONS:**



	Public Works and Government Services Canada	Travaux publics et Services gouvernementaux Canada
	<b>2013 GAP FILLING PROGRAM</b> <b>RAYROCK MINE SITE</b> <b>NORTHWEST TERRITORIES</b> <b>PETROLEUM HYDROCARBON</b> <b>SAMPLE LOCATION PLAN (AREA 4)</b>	
	Project Number 350600-206	Drawing 350600-206-5

Mar 31, 2014 - 3:55pm - User: p...  
 25, 20000 Series (35000-206) File: 35000-206-REV\_3.dwg



**LEGEND:**

- DELINEATION AREA
- FORMER BUILDING (Foundation Located)
- FORMER BUILDING (Location Approximate)
- TEST PITS FOR PHC (F1-F4) AND BTEX
- ▲ DEBRIS AND DRUMS
- WASTE ROCK
- ROADWAY
- FORMER OIL TANKS
- 215- CONTOUR LINE

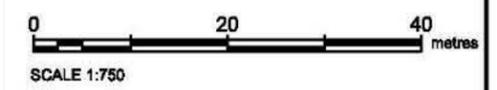
**LIBRARY**

PHC	Petroleum Hydrocarbons
F1	(C6-C9) Hydrocarbons
F2	(C10-C16) Hydrocarbons
F3	(C16-C34) Hydrocarbons
F4	(C34-C60) Hydrocarbons
BTEX	Benzene

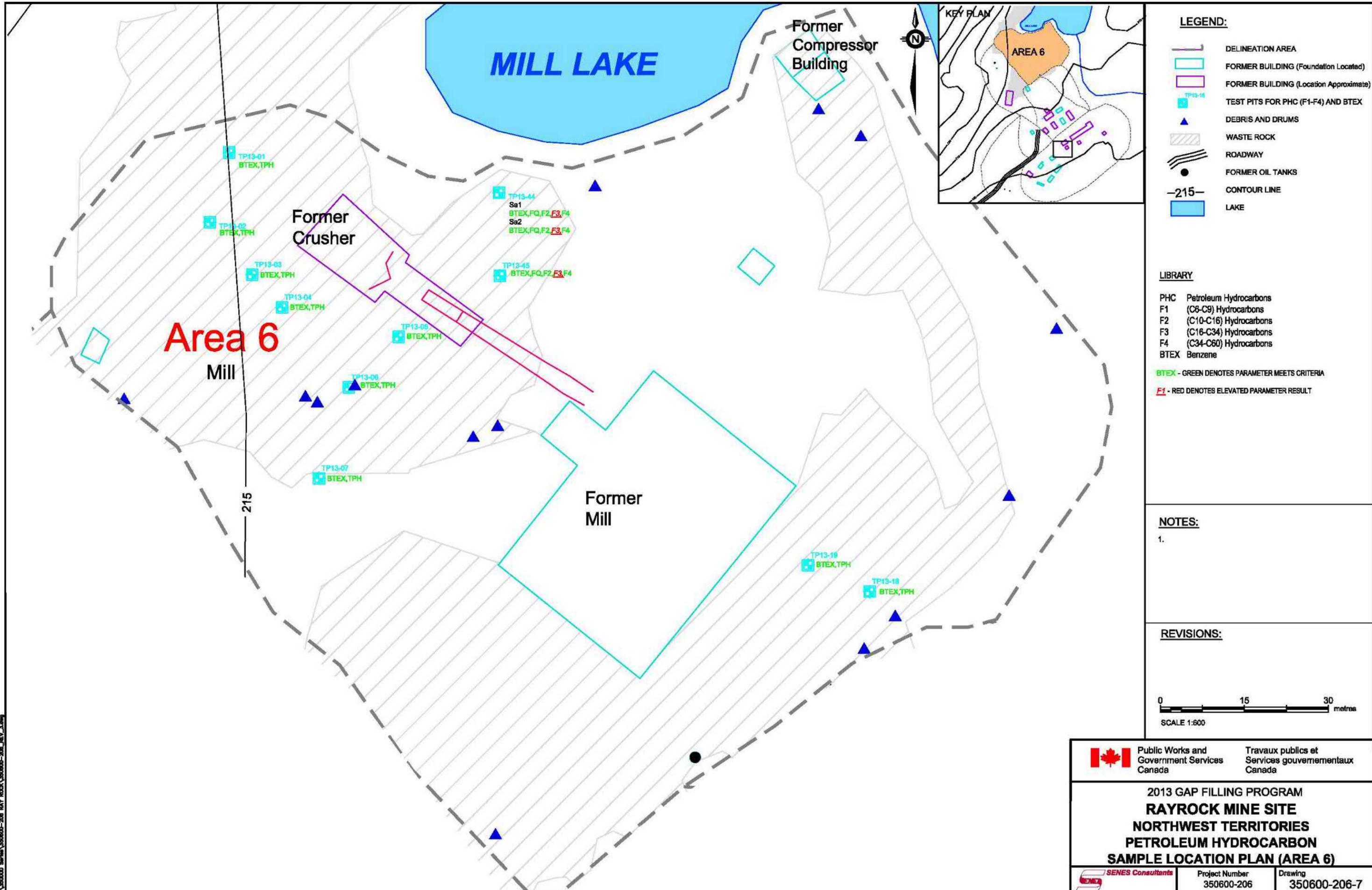
BTEX - GREEN DENOTES PARAMETER MEETS CRITERIA  
E1 - RED DENOTES ELEVATED PARAMETER RESULT

**NOTES:**  
1.

**REVISIONS:**



	Public Works and Government Services Canada	Travaux publics et Services gouvernementaux Canada
<b>2013 GAP FILLING PROGRAM</b> <b>RAYROCK MINE SITE</b> <b>NORTHWEST TERRITORIES</b> <b>PETROLEUM HYDROCARBON</b> <b>SAMPLE LOCATION PLAN (AREA 5)</b>		
	Project Number 350600-206	Drawing 350600-206-6



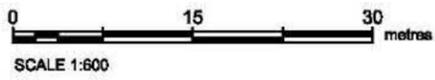
- LEGEND:**
- DELINEATION AREA
  - FORMER BUILDING (Foundation Located)
  - FORMER BUILDING (Location Approximate)
  - TEST PITS FOR PHC (F1-F4) AND BTEX
  - DEBRIS AND DRUMS
  - WASTE ROCK
  - ROADWAY
  - FORMER OIL TANKS
  - CONTOUR LINE
  - LAKE

- LIBRARY**
- PHC Petroleum Hydrocarbons
  - F1 (C6-C9) Hydrocarbons
  - F2 (C10-C16) Hydrocarbons
  - F3 (C16-C34) Hydrocarbons
  - F4 (C34-C60) Hydrocarbons
  - BTEX Benzene
- BTEX - GREEN DENOTES PARAMETER MEETS CRITERIA**
- F1 - RED DENOTES ELEVATED PARAMETER RESULT**

**NOTES:**

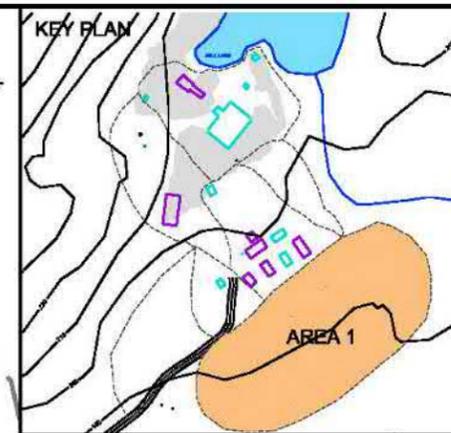
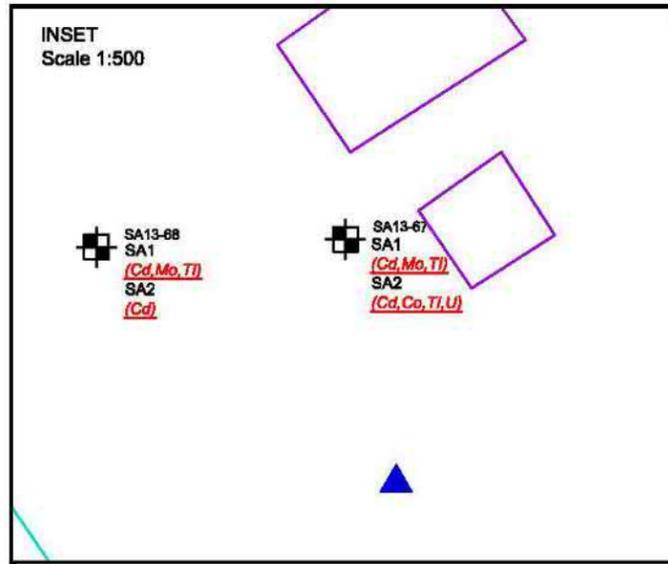
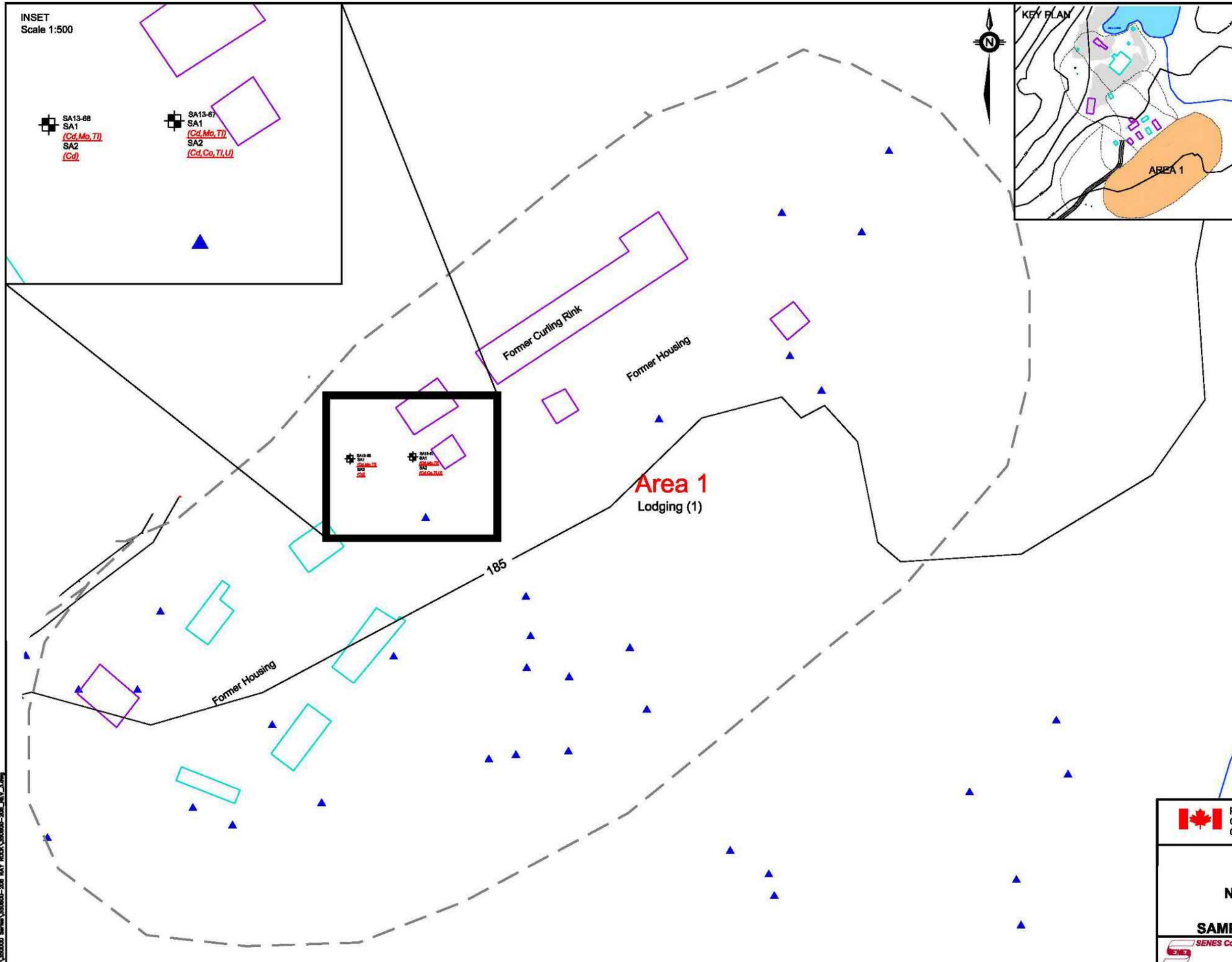
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**REVISIONS:**



	Public Works and Government Services Canada	Travaux publics et Services gouvernementaux Canada
	<b>2013 GAP FILLING PROGRAM</b> <b>RAYROCK MINE SITE</b> <b>NORTHWEST TERRITORIES</b> <b>PETROLEUM HYDROCARBON</b> <b>SAMPLE LOCATION PLAN (AREA 6)</b>	
	Project Number 350600-206	Drawing 350600-206-7

Mar 31, 2014 - 3:53pm - User: p...  
 25, 20000 Series (350600-206) (RAYROCK) (350600-206) REV. 3.1.dwg



- LEGEND:**
- DELINEATION AREA
  - FORMER BUILDING (Foundation Located)
  - FORMER BUILDING (Location Approximate)
  - TEST PITS FOR METALS
  - ▲ DEBRIS AND DRUMS
  - WASTE ROCK
  - ROADWAY
  - 215- CONTOUR LINE

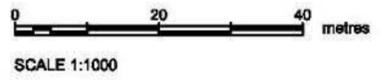
**LIBRARY**

Al	Aluminum	Se	Selenium
Ag	Silver	Sn	Tin
As	Arsenic	Tl	Thallium
B	Boron	U	Uranium
Co	Cobalt	V	Vanadium
Cr	Chromium IV	Zn	Zinc
Cu	Copper	Fe	Iron
Hg	Mercury	Mo	Molybdenum
Ni	Nickel	Naph	Naphthalene
Mn	Manganese		Toluene
Phenanth	Phenanthrene		Ethylbenzene
Pb	Lead		Xylene

metals - GREEN DENOTES PARAMETER MEETS CRITERIA  
 Co, Mo - RED DENOTES ELEVATED PARAMETER RESULT

**NOTES:**  
 1.

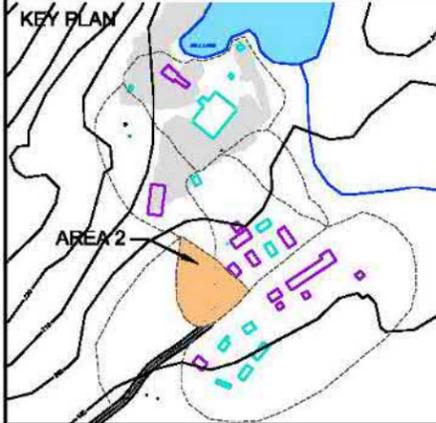
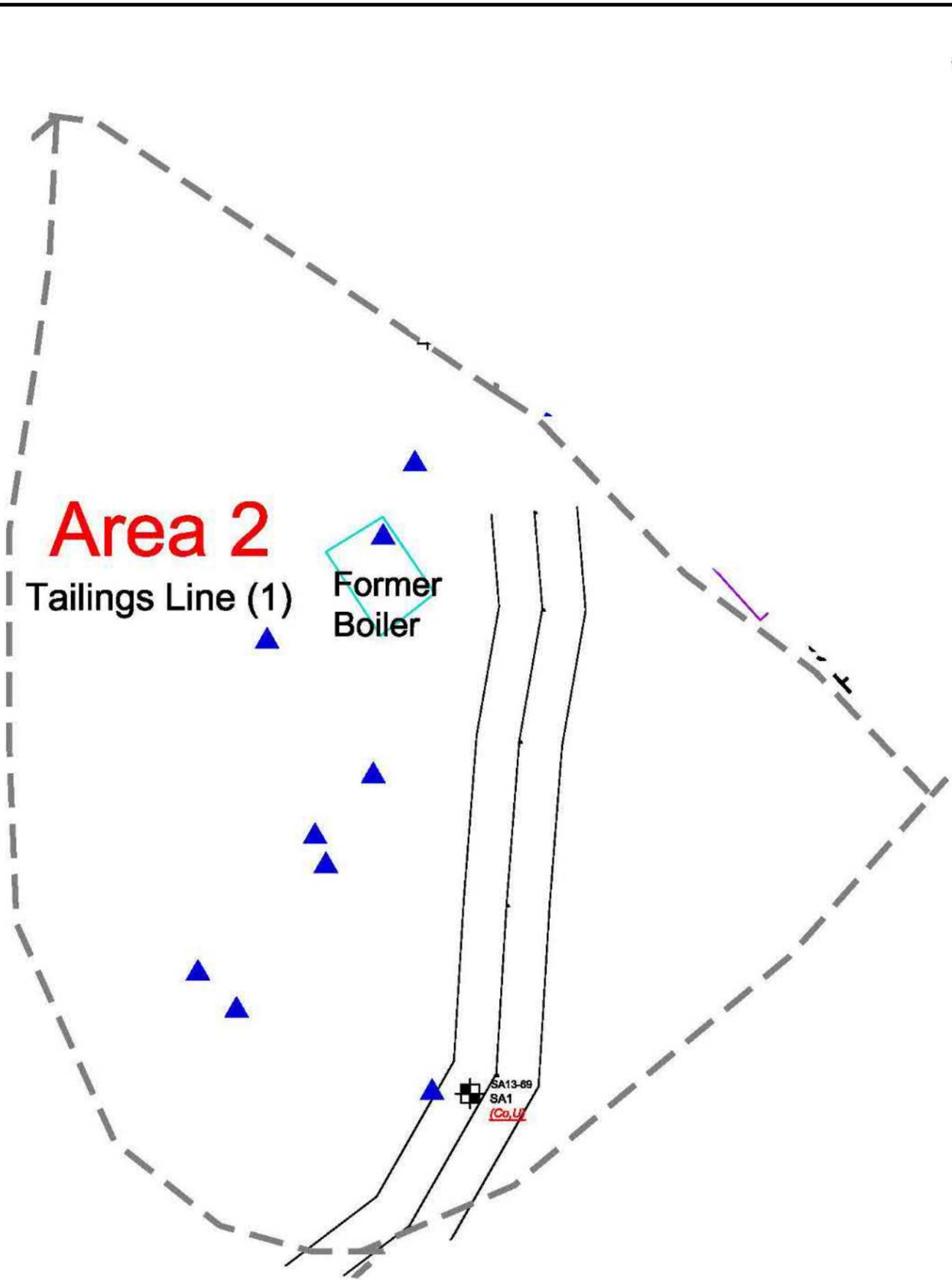
**REVISIONS:**



Mar 31, 2014 - 3:53pm - USER: p...  
 24, 250000 Series (350600-206) (RAY ROCK) (350600-206) REV: 3.1.dwg

Public Works and Government Services Canada	Travaux publics et Services gouvernementaux Canada
<b>2013 GAP FILLING PROGRAM</b> <b>RAYROCK MINE SITE</b> <b>NORTHWEST TERRITORIES</b> <b>METALS</b> <b>SAMPLE LOCATION PLAN (AREA 1)</b>	
Project Number 350600-206	Drawing 350600-206-8

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**LEGEND:**

	DELINEATION AREA
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	FORMER BUILDING (Location Approximate)
	TEST PITS FOR METALS
	DEBRIS AND DRUMS
	WASTE ROCK
	ROADWAY

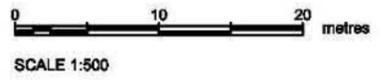
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Ag	Silver	Sn	Tin
As	Arsenic	Tl	Thallium
B	Boron	U	Uranium
Co	Cobalt	V	Vanadium
Cr	Chromium IV	Zn	Zinc
Cu	Copper	Fe	Iron
Hg	Mercury	Mo	Molybdenum
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Mn	Manganese		Toluene
Phenanth	Phenanthrene		Ethylbenzene
Pb	Lead		Xylene

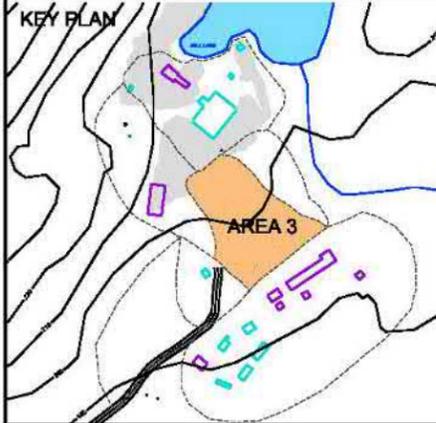
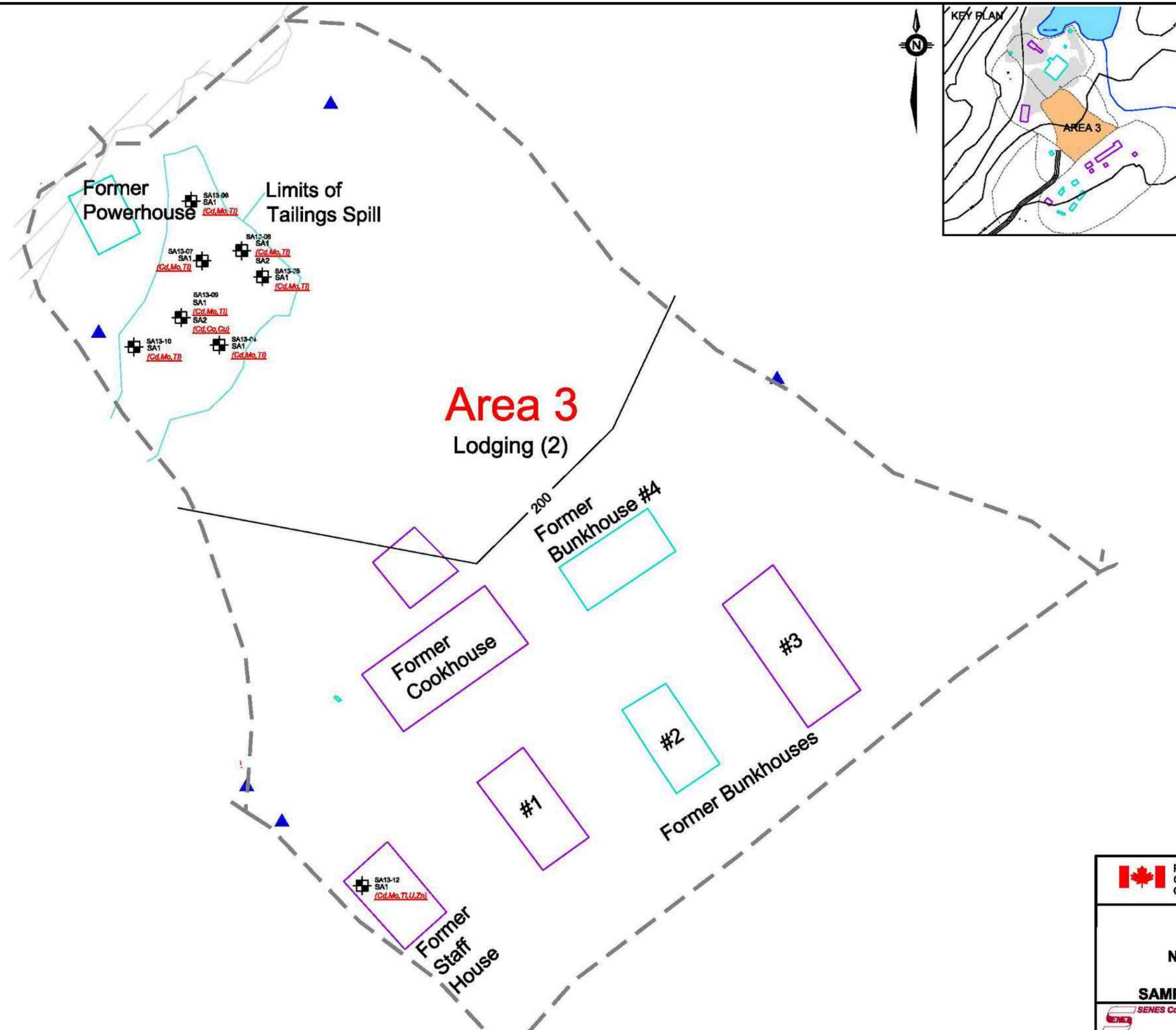
metals - GREEN DENOTES PARAMETER MEETS CRITERIA  
 Co, Mo - RED DENOTES ELEVATED PARAMETER RESULT

**NOTES:**  
 1.

**REVISIONS:**



	Public Works and Government Services Canada	Travaux publics et Services gouvernementaux Canada
	<b>2013 GAP FILLING PROGRAM</b> <b>RAYROCK MINE SITE</b> <b>NORTHWEST TERRITORIES</b> <b>METALS</b> <b>SAMPLE LOCATION PLAN (AREA 2)</b>	
	Project Number 350600-206	Drawing 350600-206-9



**LEGEND:**

- DELINEATION AREA
- FORMER BUILDING (Foundation Located)
- FORMER BUILDING (Location Approximate)
- TEST PITS FOR METALS
- DEBRIS AND DRUMS
- WASTE ROCK
- ROADWAY
- 215- CONTOUR LINE

**LIBRARY**

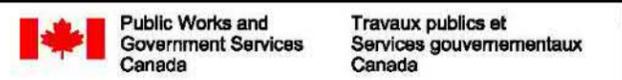
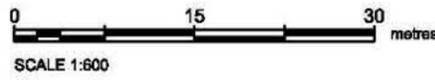
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B	Boron	U	Uranium
Co	Cobalt	V	Vanadium
Cr	Chromium IV	Zn	Zinc
Cu	Copper	Fe	Iron
Hg	Mercury	Mo	Molybdenum
Ni	Nickel	Naph	Naphthalene
Mn	Manganese		Toluene
Phenar	Phenanthrene		Ethylbenzene
Pb	Lead		Xylene

metals - GREEN DENOTES PARAMETER MEETS CRITERIA  
 Co,Mo - RED DENOTES ELEVATED PARAMETER RESULT

**NOTES:**

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**REVISIONS:**

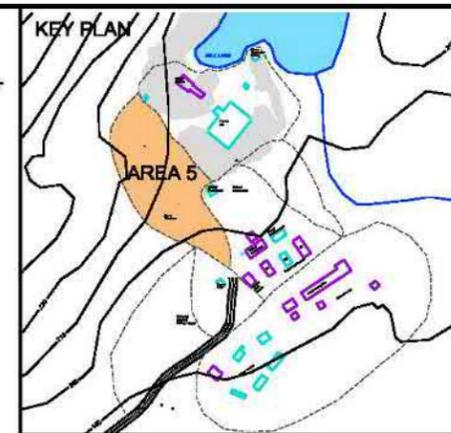
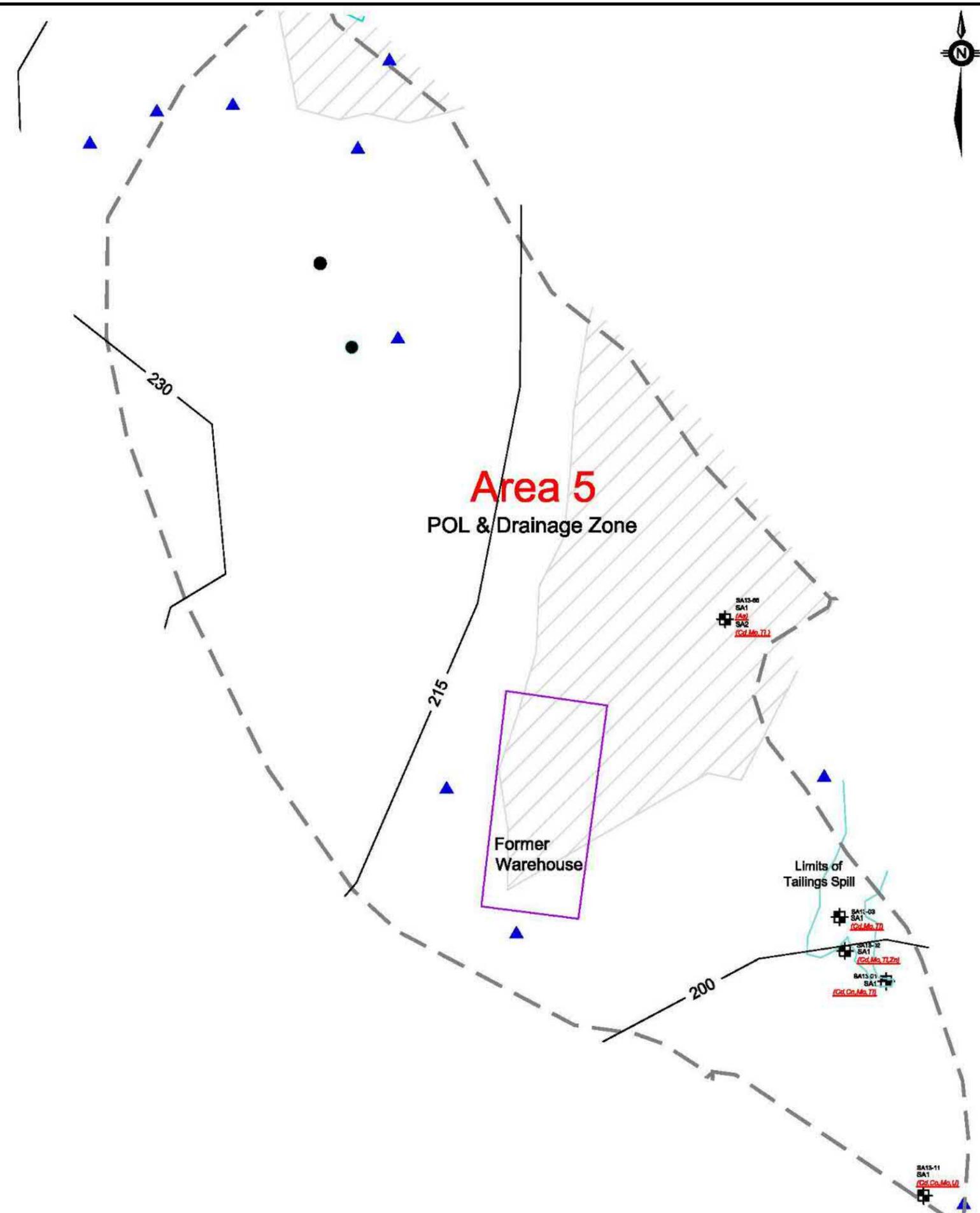


**2013 GAP FILLING PROGRAM**  
**RAYROCK MINE SITE**  
**NORTHWEST TERRITORIES**  
**METALS**  
**SAMPLE LOCATION PLAN (AREA 3)**

	Project Number 350600-206	Drawing 350600-206-10
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 25, 20000 Series (35000-206) File: 350600-206-REV\_3.dwg



**LEGEND:**

- DELINEATION AREA
- FORMER BUILDING (Foundation Located)
- FORMER BUILDING (Location Approximate)
- + TEST PITS FOR METALS
- ▲ DEBRIS AND DRUMS
- WASTE ROCK
- ROADWAY
- FORMER OIL TANKS
- 215- CONTOUR LINE

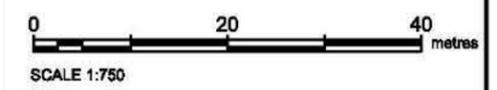
**LIBRARY**

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B	Boron	U	Uranium
Co	Cobalt	V	Vanadium
Cr	Chromium IV	Zn	Zinc
Cu	Copper	Fe	Iron
Hg	Mercury	Mo	Molybdenum
Ni	Nickel	Naph	Naphthalene
Mn	Manganese		Toluene
Phenanth	Phenanthrene		Ethylbenzene
Pb	Lead		Xylene

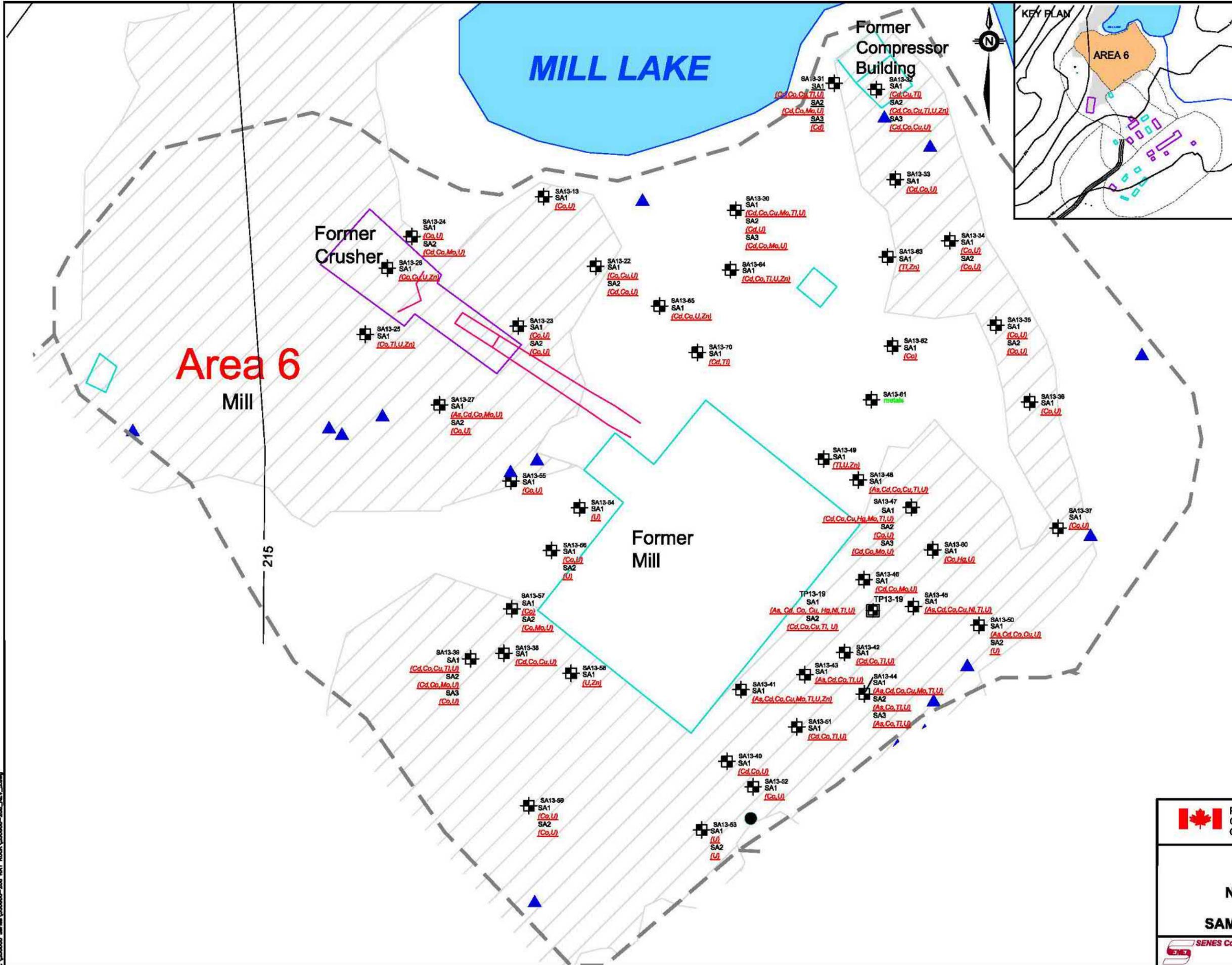
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 Co, Mo - RED DENOTES ELEVATED PARAMETER RESULT

**NOTES:**  
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**REVISIONS:**



	Public Works and Government Services Canada	Travaux publics et Services gouvernementaux Canada
<b>2013 GAP FILLING PROGRAM</b> <b>RAYROCK MINE SITE</b> <b>NORTHWEST TERRITORIES</b> <b>METALS</b> <b>SAMPLE LOCATION PLAN (AREA 5)</b>		
	Project Number 350600-206	Drawing 350600-206-11



- LEGEND:**
- DELINEATION AREA
  - FORMER BUILDING (Foundation Located)
  - FORMER BUILDING (Location Approximate)
  - TEST PITS FOR METALS
  - TEST PITS FOR METALS
  - DEBRIS AND DRUMS
  - WASTE ROCK
  - ROADWAY
  - FORMER OIL TANKS
  - CONTOUR LINE
  - LAKE

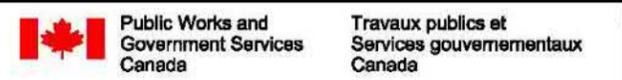
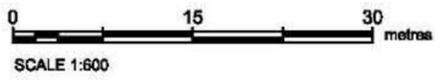
**LIBRARY**

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B	Boron	U	Uranium
Co	Cobalt	V	Vanadium
Cr	Chromium IV	Zn	Zinc
Cu	Copper	Fe	Iron
Hg	Mercury	Mo	Molybdenum
Ni	Nickel	Naph	Naphthalene
Mn	Manganese		Toluene
Phenanth	Phenanthrene		Ethylbenzene
Pb	Lead		Xylene

**metals** - GREEN DENOTES PARAMETER MEETS CRITERIA  
**Co, Mo** - RED DENOTES ELEVATED PARAMETER RESULT

**NOTES:**  
 1.

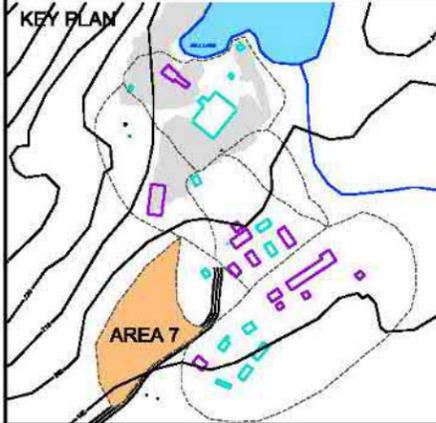
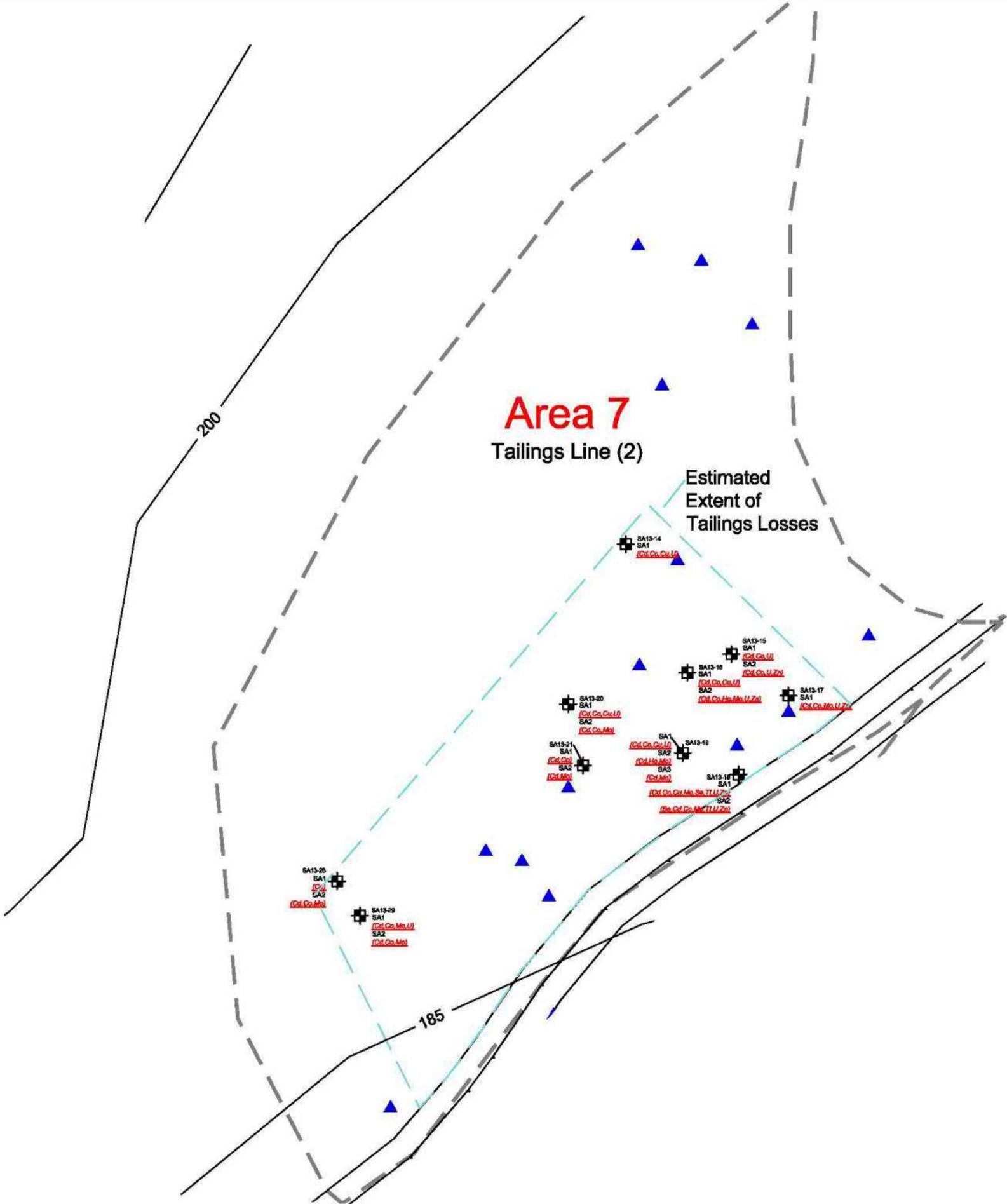
**REVISIONS:**



**2013 GAP FILLING PROGRAM**  
**RAYROCK MINE SITE**  
**NORTHWEST TERRITORIES**  
**METALS**  
**SAMPLE LOCATION PLAN (AREA 6)**

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Mar 28, 2014 - 3:58pm - User: p...  
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**LEGEND:**

- DELINEATION AREA
- FORMER BUILDING (Foundation Located)
- FORMER BUILDING (Location Approximate)
- + TEST PITS FOR METALS
- ▲ DEBRIS AND DRUMS
- WASTE ROCK
- ROADWAY
- 215- CONTOUR LINE

**LIBRARY**

Al	Aluminum	Se	Selenium
Ag	Silver	Sn	Tin
As	Arsenic	Tl	Thallium
B	Boron	U	Uranium
Co	Cobalt	V	Vanadium
Cr	Chromium IV	Zn	Zinc
Cu	Copper	Fe	Iron
Hg	Mercury	Mo	Molybdenum
Ni	Nickel	Naph	Naphthalene
Mn	Manganese		Toluene
Phenan	Phenanthrene		Ethylbenzene
Pb	Lead		Xylene

metals - GREEN DENOTES PARAMETER MEETS CRITERIA  
 Co,Mo - RED DENOTES ELEVATED PARAMETER RESULT

**NOTES:**  
 1.

**REVISIONS:**



	Public Works and Government Services Canada	Travaux publics et Services gouvernementaux Canada
<b>2013 GAP FILLING PROGRAM</b> <b>RAYROCK MINE SITE</b> <b>NORTHWEST TERRITORIES</b> <b>METALS</b> <b>SAMPLE LOCATION PLAN (AREA 7)</b>		
	Project Number 350600-206	Drawing 350600-206-13

**APPENDIX E**  
**Compiled Field Report**

# SENES Consultants

## MEMORANDUM



121 Granton Drive, Unit 12  
Richmond Hill, Ontario  
Canada L4B 3N4  
Tel: (905) 764-9380  
Fax: (905) 764-9386  
E-mail: [senes@senes.ca](mailto:senes@senes.ca)  
Web Site: <http://www.senes.ca>

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TO: Jessie Hoyt, PWGSC Project No: 350600-206  
FROM: Mike Weber Date: 9 November 2013  
SUBJECT: Rayrock Mine Site 2013 GAP Filling Program

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### A. Introduction

The following is a summary of activities related to the above referenced 2013 Rayrock Mine Site GAP Filling Program. The program was carried out in accordance with the scope of work as outlined in our Level of Effort Estimate for 2013 Gap Filling Program dated 20 September 2013 and the SENES memo prepared on 25 September 2013. Additional work items were added to the field program as the work progressed. Initial mobilization for the field program took place on September 27<sup>th</sup>, 2013 with the on-site program being carried out between September 29<sup>th</sup> and October 6<sup>th</sup>, 2013.

### B. Overview of Activities

**B.1 Preparation** - Pre-trip planning and organization activities were carried out, during the summer of 2013 to immediately before the commencement of field activities. This included: procurement, assembly and calibration of field equipment, project logistics, program planning and organization as well as pre-site assessment preparation in Yellowknife.

**B.2 Implementation** – The GAP filling program included the excavation of test pits to facilitate the collection of subsurface soil samples, surface soil sampling, a geophysical survey, site survey as well as site reconnaissance to locate readily evident surface debris. Additional daily activities included sample screening and logging as well as packaging for shipment to the Maxxam Analytics (Maxxam) depot in Yellowknife. Ancillary project work activities included organizing for and maintaining scientific gear/equipment, planning and logistics associated with coordinating daily movement of people and equipment as well as preparing project daily reports. While implementing the field program, the SENES team travelled daily from Yellowknife to Rayrock Mine Site using a Twin Otter float plane, chartered through Summit Air.

**B.3 Follow-up** - Activities including site related demobilization efforts for various field participants, final sample handling, packaging and shipment in Yellowknife, equipment return/storage, and data processing/recording were completed after completion of the field component of the project.

### **C. Monitoring Team**

The members of the 2013 SENES team and their respective roles in the program are listed below.

- Mr. Mike Weber – Senior Professional
- Mr. Grant Yule – Senior Environmental Technician (Site Inspection and H & S)
- Ms. Crystal Rielly – Field Technician
- Mr. Lee Scudds – Field Technician
- Mr. Herb Legge – Operator - Camco Construction Ltd.
- Mr. Ricky Drygeese – Wildlife Monitor
- Mr. Andrew Befus – Excel Geophysics
- Mr. Peter Mawhinney – Excel Geophysics
- Mr. Chris Oliver – Ollerhead Surveying

Additional persons attended the site for very limited periods (typically not more than two days) including Mr. Pat Harrison, Senior Environmental Technician, Mr. Jeremy Steward, CAMCO, Mr. Jessie Hoyt, PWGSC and Mr. Andrew Richardson, AANDC.

### **D. Summary of Program Activities**

#### **Pre Mobilization Activities**

Prior to initiation of the field activities, conceptual and detailed planning and organization for the September/October field program was completed, as well as program specific preparatory activities, as identified previously in Section B.

AANDC requested that the soil sampling locations selected for PHC analysis and metal analysis be identified through distinct labels. Thus, sample locations selected for PHC analysis were identified by the prefix TP13-XX and sample locations for metals analysis were identified through the prefix SA13-XX.



*Day 1 – Sunday, September 29<sup>th</sup> 2013*

**Weather:** Partly cloudy in morning, clearing by mid-day and becoming overcast in afternoon, low wind, temperatures of 6 to 11°C

**D1. ACTIVITY SUMMARY DAY 1:**

Day 1 was a scheduled mobilization/site reconnaissance day. Activities included:

- Loading Twin Otter at the Summit Air Float Base terminal in Yellowknife.
- Flight direct to Rayrock with crew and gear.
- Aircraft to hold on-site for the day.
- Team on site by 0900 hrs – unloading field gear and supplies to the Muster Point location.
- Tailgate Health & Safety Meeting.
- Walk-over reconnaissance of site.
- Organize scientific gear in preparation for sampling.
- Initiate sampling program.
- Conduct condition assessment of on-site equipment provided by AANDC (i.e., Can-Dig Excavator & Polaris Quad) in accordance with the Bailment Agreement. Take photos and video showing condition of this equipment.

**1.1 Initiation of Field Work**

At 0915, hrs, Mr. Grant Yule and Mr. Mike Weber performed site reconnaissance of the former Rayrock Mine Site including both tailings areas and former landfill area. The remaining field team equipment and supplies to Muster Station.

**1.1.1 Site Reconnaissance.**

A visual inspection of the following areas was completed:

- Area 1 (Lodging)
- Area 2 (Tailings line)
- Area 3 (Lodging)
- Area 4 (Mill Drainage)
- Area 5 (POL & Drainage Zone)
- Area 6 (Mill)
- Area 7 (Tailings Line)
- North Tailings Area
- South Tailings Area



- Former Landfill Area

### 1.1.2 Soil Sampling

Soil sampling was initiated by Grant Yule in Area 4 (Mill Drainage). Soil samples were collected down slope of the former mill in locations where sediment had accumulated within a flow channel over exposed bedrock.

**TABLE 1**  
**SUMMARY OF SOIL SAMPLING CONDUCTED**

2013 Sampling Locations	Collected From AREA	Date of Collection	GPS Location		Sample Analyses Collected for
TP13-13 Sa 1 & Sa 2	Area 4	Sept. 29	N63.45114	W116.54520	PHC - Soil
TP13-14 Sa-1 & Sa-2	Area 4	Sept. 29	N63.45106	W116.54522	PHC - Soil
TP13-15 SA-1	Area 4	Sept. 29	N63.45119	W116.54541	PHC - Soil
TP13-16 Sa-1	Area 4	Sept. 29	N63.45119	W116.54565	PHC - Soil
TP13-17 Sa-1	Area 4	Sept. 29	N63.45134	W116.54594	PHC - Soil

### 1.2 General End of Day

Return flight to Yellowknife to Summit Air Float Base terminal 1830 hrs.

Carried out evening efforts related to daily sampling data, perform headspace readings and gamma readings on each soil sample collected, sample preparation and chain of custody preparation and daily log write-up and submission.

**Day 2 – Monday, September 30<sup>th</sup> 2013**

**Weather:** Partly cloudy with temperature of 3 to 8°C.

#### D2. ACTIVITY SUMMARY DAY 2:

Day 2 was a scheduled Mobilization (CAMCO staff), site reconnaissance (SENES with PWGSC staff) and sampling day. Activities included:

- Loading Twin Otter at the Summit Air Float Base terminal in Yellowknife.
- Flight direct to Rayrock with crew and gear.
- Aircraft to hold on-site for the day.
- Team on site by 0845 hrs – unloading gear to the Muster Point location.



- Tailgate Health & Safety Meeting.
- Site reconnaissance for benefit of PWGSC staff.
- Organizing scientific gear in preparation for sampling.
- Continue sampling program.
- Confirm operational status of Can-Dig excavation and Polaris quad with CAMCO staff now on-site to operate equipment.

## 2.1 Initiation of Field Work

At 0915 hrs the field team continued soil sampling program of former Rayrock Mine Site starting in Areas 4 & 6, prioritizing the petroleum hydrocarbon sample locations. CAMCO staff assembled Can-Dig Excavator and mobilized to first sampling location @ 1045 hrs.

### 2.1.1 Site Inspection and Soil Sampling.

Mike Weber accompanied Jessie Hoyt for a site inspection of the mine site during Day 2:

- Area's 1 & 3 (Lodging Area)
- Area 2 & 7 (Tailings Area)
- Area 4 (Mill Drainage Area)
- Area 5 (POL & Drainage Area)
- Area 6 (Mill Area)

During the course of the site inspections, Jessie Hoyt requested additional test pit locations be excavated in the former Mine Dry area south to the former Cold Storage area. These locations were selected to assess soil conditions at the bedrock interface. The concern was that releases from two oil storage tanks formerly located atop bedrock could potentially have migrated over the bedrock surface into the soils located at the base of the outcrop.

### 2.1.2 Soil Sampling

Continue with soil sampling program. Assembled into two field teams; one team using the Can-Dig Excavator and the second team excavating test pits by hand. Collected samples from sixteen (16) test pits on 30 September 2013.



**TABLE 2  
SUMMARY OF DAY 2 SOIL SAMPLING**

2013 Sampling Locations	Collected From AREA	Date of Collection	GPS Location		Sample Analyses Collected for
TP13-1 Sa-1	Area 6	Sept. 30	N63.45245	W116.54819	PHC - Soil
TP13-2 Sa-1	Area 6	Sept. 30	N63.45232	W116.54883	PHC - Soil
TP13-3 Sa-1	Area 6	Sept. 30	N63.45222	W116.54808	PHC - Soil
TP13-4 Sa-1	Area 6	Sept. 30	N63.45216	W116.54803	PHC - Soil
TP13-5 Sa-1	Area 6	Sept. 30	N63.45213	W116.54755	PHC - Soil
TP13-6 Sa-1	Area 6	Sept. 30	N63.45199	W116.54768	PHC - Soil
TP13-7 Sa-1	Area 6	Sept. 30	N63.45180	W116.54778	PHC - Soil
TP13-8 Sa-1	Area 6	Sept. 30	N63.45153	W116.54783	PHC - Soil
TP13-18 Sa-1	Area 4	Sept. 30	N63.45169	W116.54588	PHC - Soil
TP13-19 Sa-1 & Sa-2	Area 4	Sept. 30	N63.45174	W116.54610	PHC - Soil
TP13-20 Sa-1	Area 4	Sept. 30	N63.45129	W116.54652	PHC - Soil
TP13-21 Sa-1	Area 4	Sept. 30	N63.45123	W116.54687	PHC - Soil
TP13-22 Sa-1	Area 5	Sept. 30	N63.45193	W116.54861	PHC - Soil
TP13-23 Sa-1	Area 5	Sept. 30	N63.45191	W116.54865	PHC - Soil
TP13-24 Sa-1	Area 4	Sept. 30	N63.45132	W116.54638	PHC - Soil
TP13-26 Sa-1	Area 5	Sept. 30	N63.45082	W116.54723	PHC - Soil

## 2.2 General End of Day

Return flight to Yellowknife to Summit Air Float Base terminal 1900 hrs.

Carried out evening efforts related to daily sampling data, perform headspace readings and gamma readings on each soil sample collected, sample preparation and chain of custody preparation, and daily individual field note write-ups and daily log write-up and submission. Samples collected from 29 and 30 September 2013 to be dropped off at float plane base for Maxxam pick-up tomorrow morning.



**Day 3 – Tuesday, October 1 2013**

**Weather:** Partly cloudy, very light wind. Temperatures ranged from 3 to 7°C

**D.3 Activity Summary Day 3:**

Drop off soil samples in walk-in cooler at Summit Air Float Base. Maxxam was informed and confirmed sample pick-up.

Day 3 was a scheduled sampling day. Activities included:

- Loading Twin Otter at the Summit Air Float Base terminal in Yellowknife.
- Flight direct to Rayrock with crew and gear.
- Aircraft to hold on-site for the day.
- Team on site by 0930 hrs – unloading gear to the Muster Point location.
- Tailgate Health & Safety Meeting.
- Continue sampling program.

**3.1 Site Inspection and Soil Sampling and Debris Mapping**

Complete lay-out of all test pit locations and began to record locations of discarded drums and metal debris throughout the mine site as encountered during field operations.

**3.1.1 Soil Sampling**

Assembled into two teams, one team using the Can-Dig Excavator and the second team excavating the test pits by hand. Collect samples from seventeen (17) test pits pm 1 October 2013.



**TABLE 3  
SUMMARY OF DAY 3 SOIL SAMPLING**

2013 Sampling Locations	Collected From AREA	Date of Collection	GPS Location		Sample Analyses Collected for
TP13-9 Sa-1	Area 5	Oct. 1	N63.45139	W116.54779	PHC - Soil
TP13-10 Sa-1	Area 5	Oct. 1	N63.45127	W116.54790	PHC - Soil
TP13-11 Sa-1	Area 5	Oct. 1	N63.45111	W116.54801	PHC - Soil
TP13-12 Sa-1	Area 5	Oct. 1	N63.45087	W116.54778	PHC - Soil
TP13-31 Sa-1	Area 5	Oct. 1	N63.45339	W116.54909	PHC - Soil
TP13-32 Sa-1	Area 5	Oct. 1	N63.45041	W116.54665	PHC - Soil
TP13-33 Sa-1	Area 5	Oct. 1	N63.45038	W116.54671	PHC - Soil
TP13-34 Sa-1	Area 5	Oct. 1	N63.45038	W116.54666	PHC - Soil
TP13-35 Sa-1	Area 5	Oct. 1	N63.45035	W116.54659	PHC - Soil
TP13-36 Sa-1	Area 5	Oct. 1	N63.45098	W116.54781	PHC - Soil
TP13-37 Sa-1	Area 5	Oct. 1	N63.45087	W116.54778	PHC - Soil
SA13-1 Sa-1	Area 6	Oct. 1	N63.45067	W116.54689	Metals - Soil
SA13-2 Sa-1 & Sa-2	Area 6	Oct. 1	N63.45070	W116.54707	Metals - Soil
SA13-3 Sa-1	Area 6	Oct. 1	N63.45074	W116.54712	Metals - Soil
SA13-4 Sa-1	Area 6	Oct. 1	N63.45094	W116.54678	Metals - Soil
SA13-5 Sa-1	Area 6	Oct. 1	N63.45101	W116.54670	Metals - Soil
SA13-6 Sa-1	Area 6	Oct. 1	N63.45114	W116.54684	Metals - Soil

### 3.2 General End of Day

Return flight to Yellowknife to Summit Air Float Base terminal 1845 hrs.

Carried out evening efforts related to daily sampling data, perform headspace readings and gamma readings on each soil sample collected, sample preparation and chain of custody preparation, and daily individual field note write-ups and daily log write-up and submission.



**Day 4 – Wednesday, October 2 2013**

**Weather:** Partly cloudy to cloudy in AM with light snow showers. Clearing in the afternoon. The daily temperature was 2 to 15°C.

**D.4 Activity Summary Day 4:**

Day 4 was a scheduled sampling day and site reconnaissance visit with PWGSC and AANDC staff. Activities included:

- Loading Twin Otter at the Summit Air Float Base terminal in Yellowknife.
- Flight direct to Rayrock with crew and gear.
- Aircraft to hold on-site for the day.
- Team on site by 0845 hrs – unloading gear to the Muster Point location.
- Tailgate Health & Safety Meeting.
- Site reconnaissance with PWGSC and AANDC staff to evaluate program.
- Continue sampling program.
- Continued to record the locations of discarded drums and metal debris.

**4.1 Site Inspection and Soil Sampling**

**4.1.1 Site Inspection**

Mike Weber (SENEC), Jessie Hoyt (PWGSC), Andrew Richardson (AANDC), Sean Richardson (AANDC Job Shadow) toured the site:

- Area 2 & 7 (Tailings Line)
- Area 4 (Mill Drainage)
- Area 5 (POL & Drainage Zone)
- Area 6 (Mill Area)

During the course of the site inspections with PWGSC and AANDC staff, Mr. Richardson inspected an outcrop area where a reported tailings line spill had occurred. Additional test pit locations were located along the base of the outcrop down slope from where the tailing line formerly traversed this area to assess impacts from spilled tailings.

Other SENES field staff collected the GPS co-ordinates for the three zones that the geophysics crew will be conducting electromagnetic (EM) surveys. The first zone will include Areas 3, 4, 5 & 6 (general vicinity of the former Mill Area). Second zone is Area 2 (former Boiler house) and third zone is the former Landfill. The objective of the EM survey is to identify area of potentially buried debris.



#### 4.1.2 Soil Sampling

Continue with soil sampling. Assembled into two teams, one team using the Can-Dig Excavator and the second team excavating the test pits by hand. Collect samples from fourteen (14) test pits on 2 October 2013.

**TABLE 4**  
**SUMMARY OF DAY 4 SOIL SAMPLING**

2013 Sampling Locations	Collected From AREA	Date of Collection	GPS Location		Sample Analyses Collected for
TP13-38 Sa-1 & Sa-2	Area 5	Oct. 2	N63.45102	W116.54758	PHC - Soil
TP13-39 Sa-1	Area 5	Oct. 2	N63.45092	W116.54762	PHC - Soil
TP13-40 Sa-1	Area 5	Oct. 2	N63.45072	W116.54762	PHC - Soil
TP13-41 Sa-1	Area 2	Oct. 2	N63.44995	W116.54624	PHC - Soil
TP13-42 Sa-1	Area 2	Oct. 2	N63.45003	W116.54653	PHC - Soil
TP13-43 Sa-1	Area 2	Oct. 2	N63.45013	W116.54664	PHC - Soil
TP13-44 Sa-1 & Sa-2	Area 6	Oct. 2	N63.45235	W116.54724	PHC - Soil
SA13-7 Sa-1	Area 6/3	Oct. 2	N63.45105	W116.54685	Metals - Soil
SA13-8 Sa-1	Area 6/3	Oct. 2	N63.45035	W116.54659	Metals - Soil
SA13-9 Sa-1 & Sa-2	Area 6/3	Oct. 2	N63.45097	W116.54691	Metals - Soil
SA13-10 Sa-1	Area 6/3	Oct. 2	N63.45093	W116.54700	Metals - Soil
SA13-11 Sa-1	Area 3	Oct. 2	N63.45029	W116.54696	Metals - Soil
SA13-12 Sa-1 & Sa-2	Area 2	Oct. 2	N63.45070	W116.54707	Metals - Soil
SA13-13 Sa-1	Area 6	Oct. 2	N63.45235	W116.54724	Metals - Soil

#### 4.3 General End of Day

Return flight to Yellowknife to Summit Air Float Base terminal 1830 hrs.

Carried out evening efforts related to daily sampling data, perform headspace readings and gamma readings on each soil sample collected, sample preparation and chain of custody preparation, and daily individual field note write-ups and daily log write-up and submission. Samples collected from 1 and 2 October 2013 to be dropped off for Maxxam pick-up tomorrow morning at float plan base.



*Day 5 – Thursday, October 3 2013*

**Weather:** Partly cloudy to cloudy in AM becoming overcast in PM. The daily temperatures were -2 to 5°C.

**D.5 Activity Summary Day 5:**

Dropped off soil samples in walk-in cooler at Summit Air Float Base for pre-arranged pick-up by Maxxam. Maxxam staff confirmed pick-up.

Day 5 was a scheduled sampling day. Activities included:

- Loading Twin Otter at the Summit Air Float Base terminal in Yellowknife.
- Flight direct to Rayrock with crew and gear.
- Aircraft to hold on-site for the day.
- Team on site by 0900 hrs – unloading gear to the Muster Point location.
- Tailgate Health & Safety Meeting.
- Continue sampling program.
- Continued to record locations of discarded drums and metal debris.

Staff from PWGSC, ANND, a Native Elder and the AANDC Job Shadow all attended the site in a separate aircraft (for benefit of the Native Elder) as well as carry out the specific activities as described below.

**5.1 Site Inspection and Soil Sampling**

**5.1.1 Site Inspections**

Jessie Hoyt (PWGSC), Andrew Richardson (AANDC), Ron Breadmore (AANDC), Noel Drybones (Native Elder) & Sean Richardson (Job Shadow) undertook a site reconnaissance of the following areas:

- Area 2 & 7 (Tailings Line)
- Area 4 (Mill Drainage)
- Area 5 (POL & Drainage Zone)
- Area 6 (Mill Area)

AANDC installed two signs on the property. One sign was placed at the location of the mine audit and second sign placed at the South end of the former Run Way/Winter Road entrance to the site.



During the course of the site inspections, additional test pit locations were identified by AANDC staff along the former tailings line to check for possible spills.

### 5.1.2 Soil Sampling

Continue with soil sampling. Assembled into two teams, one team using the Can-Dig Excavator and the second team excavating the test pits by hand. Collect samples from seventeen (17) test pits on 3 October 2013.

**TABLE 5  
SUMMARY OF DAY 5 SOIL SAMPLING**

2013 Sampling Locations	Collected From Area	Date of Collection	GPS Location		Sample Analyses Collected for
TP13-45 Sa-1	Area 6	Oct. 3	N63.45219	W116.54719	PHC - Soil
SA13-14 Sa-1	Area 7	Oct. 3	N63.44969	W116.54815	Metals - Soil
SA13-15 Sa-1 & Sa-2	Area 7	Oct. 3	N63.45072	W116.54762	Metals - Soil
SA13-16 Sa-1	Area 7	Oct. 3	N63.44949	W116.54794	Metals - Soil
SA13-17 Sa-1	Area 7	Oct. 3	N63.44944	W116.54766	Metals - Soil
SA13-18 Sa-1 & Sa-2	Area 7	Oct. 3	N63.44936	W116.54775	Metals - Soil
SA13-19 Sa-1 & Sa-2	Area 7	Oct. 3	N63.44941	W116.54795	Metals - Soil
SA13-20 Sa-1 & Sa-2	Area 7	Oct. 3	N63.44945	W116.54835	Metals - Soil
SA13-21 Sa-1 & Sa-2	Area 7	Oct. 3	N63.44936	W116.54829	Metals - Soil
SA13-22 Sa-1 & Sa-2	Area 6	Oct. 3	N63.45219	W116.54699	Metals - Soil
SA13-23 Sa-1, Sa-2 & Sa-3	Area 6	Oct. 3	N63.45216	W116.54729	Metals - Soil
SA13-24 Sa-1 & Sa-2	Area 6	Oct. 3	N63.45230	W116.54760	Metals - Soil
SA13-25 Sa-1	Area 6	Oct. 3	N63.45215	W116.54780	Metals - Soil
SA13-26 Sa-1	Area 6	Oct. 3	N63.45221	W116.54766	Metals - Soil
SA13-27 Sa-1 & Sa-2	Area 6	Oct. 3	N63.45203	W116.54751	Metals - Soil
SA13-28 Sa-1 & Sa-2	Area 6	Oct. 3	N63.44919	W116.54912	Metals - Soil
SA13-29 Sa-1 & Sa-2	Area 6	Oct. 3	N63.44912	W116.54901	Metals - Soil

## 5.2 General End of Day

Return flight to Yellowknife to Summit Air Float Base terminal 1835 hrs.



Carried out evening efforts related to daily sampling data, perform headspace readings and gamma readings on each soil sample collected, sample preparation and chain of custody preparation, and daily individual field note write-ups and daily log write-up and submission.

**Day 6 – Friday October 4 2013**

**Weather:** Partly cloudy to cloudy in AM becoming partly cloudy in PM. The daily temperature was 2 to 5°C.

**D.6 Activity Summary Day 6:**

Day 6 was a scheduled sampling day. Activities included:

- Loading Twin Otter at the Summit Air Float Base terminal in Yellowknife.
- Flight direct to Rayrock with crew and gear.
- Aircraft to hold on-site for the day.
- Team on site by 0845 hrs – unloading gear to the Muster Point location.
- Tailgate Health & Safety Meeting.
- Continue sampling program.
- Continue to record locations of discarded drums and metal debris.

**6.1 Soil Sampling**

Continue with soil sampling. Assembled into two teams, one team using the Can-Dig Excavator and the second team excavating the test pits by hand. Collect samples from twenty (20) test pits on 4 October 2013.

**TABLE 6  
SUMMARY OF DAY 6 SOIL SAMPLING**

2013 Sampling Locations	Collected From AREA	Date of Collection	GPS Location		Sample Analyses Collected for
SA13-30 Sa-1, Sa-2 & Sa-3	Area 6	Oct. 4	N63.45235	W116.54693	Metals - Soil
SA13-31 Sa-1, Sa-2 & Sa-3	Area 6	Oct. 4	N63.45251	W116.54629	Metals - Soil
SA13-32 Sa-1, Sa-2 & Sa-3	Area 6	Oct. 4	N63.45249	W116.54612	Metals - Soil
SA13-33 Sa-1	Area 6	Oct. 4	N63.45237	W116.54602	Metals - Soil
SA13-34 Sa-1 & Sa-2	Area 6	Oct. 4	N63.45228	W116.54591	Metals - Soil
SA13-35 Sa-1 & Sa-2	Area 6	Oct. 4	N63.45221	W116.54583	Metals - Soil
SA13-36 Sa-1	Area 6	Oct. 4	N63.45203	W116.54559	Metals - Soil



2013 Sampling Locations	Collected From AREA	Date of Collection	GPS Location		Sample Analyses Collected for
SA13-37 Sa-1	Area 6	Oct. 4	N63.45184	W116.54546	Metals - Soil
SA13-38 Sa-1 & Sa-2	Area 6	Oct. 4	N63.45167	W116.54732	Metals - Soil
SA13-39 Sa-1	Area 6	Oct. 4	N63.45164	W116.54741	Metals - Soil
SA13-40 Sa-1	Area 6	Oct. 4	N63.45150	W116.54597	Metals - Soil
SA13-41 Sa-1	Area 6	Oct. 4	N63.45161	W116.54654	Metals - Soil
SA13-42 Sa-1	Area 6	Oct. 4	N63.45166	W116.54620	Metals - Soil
SA13-43 Sa-1	Area 6	Oct. 4	N63.45163	W116.54633	Metals - Soil
SA13-44 Sa-1 & Sa-2	Area 6	Oct. 4	N63.45160	W116.54614	Metals - Soil
SA13-45 Sa-1	Area 6	Oct. 4	N63.45173	W116.54976	Metals - Soil
SA13-46 Sa-1	Area 6	Oct. 4	N63.45177	W116.54613	Metals - Soil
SA13-47 Sa-1, Sa-2 & Sa-3	Area 6	Oct. 4	N63.45188	W116.54992	Metals - Soil
SA13-48 Sa-1	Area 6	Oct. 4	N63.45192	W116.54615	Metals - Soil
SA13-49 Sa-1	Area 6	Oct. 4	N63.45194	W116.54625	Metals - Soil

## 6.2 General End of Day

Return flight to Yellowknife to Summit Air Float Base terminal 1700 hrs.

Carried out evening efforts related to daily sampling data, perform headspace readings and gamma readings on each soil sample collected, sample storage and chain of custody preparation, and daily individual field note write-ups and daily log write-up and submission. Samples collected from 3 and 4 October 2013 to be dropped off at float plane base for Maxxam pick-up tomorrow morning.

### *Day 7 – Saturday, October 5 2013*

**Weather:** Overcast with light drizzle in AM, becoming cloudy in PM. The daily temperature was 2 to 15°C.

## D.7 Activity Summary Day 7:

Dropped off soil samples in walk-in cooler at Summit Air Float Base for pre-arranged pick-up by Maxxam. Maxxam staff confirmed pick-up.



Day 7 was a scheduled sampling and geophysics survey day. Activities included:

- Loading Twin Otter at the Summit Air Float Base terminal in Yellowknife.
- Flight direct to Rayrock with crew and gear.
- Aircraft to hold on-site for the day.
- Team on site by 0915 hrs – unloading gear to the Muster Point location.
- Tailgate Health & Safety Meeting.
- Site reconnaissance with Geophysics survey crew from Ollerhead & Associates Ltd. to familiarize them with the intended survey areas and evaluate program.
- Complete sampling program.
- Completed the recording the locations of discarded drums and metal debris throughout the mine site.
- Equipment demobilization.

## 7.1 Soil Sampling

Continued and completed sampling program. Assembled into two teams, one team using the Can-Dig Excavator and the second team excavating the test pits by hand. Collect samples from twenty one (21) test pits on 5 October 2013. All samples collected on 5 October 2013 were prepared for shipment. Samples to be delivery to the lab by SENES staff on 6 October 2013

**TABLE 7  
SUMMARY OF DAY 7 SOIL SAMPLING**

2013 Sampling Locations	Collected From AREA	Date of Collection	GPS Location		Sample Analyses Collected for
SA13-50 Sa-1 & Sa-2	Area 6	Oct. 5	N63.45171	W116.54584	Metals - Soil
SA13-51 Sa-1	Area 6	Oct. 5	N63.45162	W116.54649	Metals - Soil
SA13-52 Sa-1	Area 6	Oct. 5	N63.45156	W116.54626	Metals - Soil
SA13-53 Sa-1 & Sa-2	Area 6	Oct. 5	N63.45139	W116.54668	Metals - Soil
SA13-54 Sa-1	Area 6	Oct. 5	N63.45189	W116.54705	Metals - Soil
SA13-55 Sa-1	Area 6	Oct. 5	N63.45195	W116.54723	Metals - Soil
SA13-56 Sa-1 & Sa-2	Area 6	Oct. 5	N63.45183	W116.54717	Metals - Soil
SA13-57 Sa-1 & Sa-2	Area 6	Oct. 5	N63.45175	W116.54722	Metals - Soil
SA13-58 Sa-1	Area 6	Oct. 5	N63.45169	W116.54645	Metals - Soil
SA13-59 Sa-1	Area 6	Oct. 5	N63.45145	W116.54722	Metals - Soil
SA13-60 Sa-1	Area 6	Oct. 5	N63.45181	W116.54590	Metals - Soil
SA13-61 Sa-1	Area 6	Oct. 5	N63.45203	W116.54611	Metals - Soil



2013 Sampling Locations	Collected From AREA	Date of Collection	GPS Location		Sample Analyses Collected for
SA13-62 Sa-1	Area 6	Oct. 5	N63.45212	W116.54602	Metals - Soil
SA13-63 Sa-1	Area 6	Oct. 5	N63.45225	W116.54605	Metals - Soil
SA13-64 Sa-1	Area 6	Oct. 5	N63.45223	W116.54655	Metals - Soil
SA13-65 Sa-1	Area 6	Oct. 5	N63.45218	W116.54681	Metals - Soil
SA13-66 Sa-1 & Sa-2	Area 6	Oct. 5	N63.45118	W116.54742	Metals - Soil
SA13-67 Sa-1 & Sa-2	Area 1	Oct. 5	N63.44977	W116.54534	Metals - Soil
SA13-68 Sa-1 & Sa-2	Area 1	Oct. 5	N63.44976	W116.54730	Metals - Soil
SA13-69 Sa-1	Area 1	Oct. 5	N63.44970	W116.54676	Metals - Soil
SA13-70 Sa-1	Area 6	Oct. 5	N63.45211	W116.54669	Metals - Soil

## 7.2 Geophysics Survey

Initiate geophysical survey. Begin work in Area 5 & 6 (vicinity of former Mill). This area substantially completed 5 October 2013.

## 7.3 Equipment Demobilization

- The field crew packed up all the equipment and sampling gear for sampling program. The AANDC equipment (Can-Dig Excavator and Polaris quad) was returned to the location where this equipment was initially dropped off and prepared for demobilization from the site by helicopter. Photos and a video of the Can-Dig Excavator and Polaris quad were taken after the equipment had been prepared for shipment in accordance with the Bailment Agreement.

## 7.4 General End of Day

Return flight to Yellowknife to Summit Air Float Base terminal 1905 hrs.

Carried out evening efforts related to daily sampling data, perform headspace readings and gamma readings on each soil sample collected, sample storage and chain of custody preparation, and daily individual field note write-ups and daily log write-up and submission.



**Day 8 – Sunday, October 6 2013**

**Weather:** Clear in the morning becoming cloudy in PM. Daily temperatures ranged from 1 to 5°C.

**D.8 Activity Summary Day 8:**

Day 8 was a scheduled geophysical survey and site survey day. Activities included:

- Loading Twin Otter at the Summit Air Float Base terminal in Yellowknife.
- Flight direct to Rayrock with crew and gear.
- Aircraft to hold on-site for the day.
- Team on site by 0900 hrs – unloading gear to the Muster Point location.
- Tailgate Health & Safety Meeting.
- Complete both geophysical and site survey programs.

**8.1 Geophysics Survey**

Geophysical survey of Area 5 & 6 (vicinity of former Mill), Area 2 (around the former Boiler House) and former Landfill Area completed.

Only Mr. Yule and the wildlife monitor attended the site on 6 October 2013. The balance of the SENES field staff remained in Yellowknife preparing sample logs and photo plates. The soil samples collected from 5 October 2013 were dropped off at the Maxxam depot in Yellowknife.

**8.2 Site Survey**

Excel Geophysics on site to complete site survey. An existing control point, C.L.S. '77 Post # 13, located on the North Shore of Sherman Lake was located. Completed the site survey; tying in all the soil sample locations, North & South Tailings Pond areas, former landfill area, roadways, existing foundations of former buildings, limits of tailings spill area near former Powerhouse and limits of waste rock in vicinity of the former Mill.

**8.3 General End of Day**

Return flight to Yellowknife to Summit Air Float Base terminal 1900 hrs.

Carried out evening efforts related to daily individual field note write-ups and daily log write-up and submission.



**E. General Comment and Observations**

The program was carried out as planned with no issues or concerns with onsite available equipment.

Additional sampling locations included AREA 5 (POL & Drainage Zone) to assess potential impacts as a result of releases and/or spills from the former Oil Tanks.

Additional sampling locations included AREA 7 (Tailings Pipeline) to assess potential impacts as a result of tailings losses.

Yours very truly,

**SENES Consultants**

Mike Weber,  
Senior Environmental Scientist



## **APPENDIX G**

### **Test Pit Logs**

FORMER RAYROCK MINE SITE

TEST PIT LOGS - PHC's

Date: 30-Sep-13 Logged by: CR Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: TP13-1 Area 6 CRUSHER			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
					Parameters	Gamma	Gastech			
Area 6 Mill	0.0 - 1.1m	Brown, wet, SAND and GRAVEL, medium, some cobbles and boulders	GR					Sample from bottom of pit. No evidence of environmental impacts (staining or odour). TP incomplete due to boulders		
	1.1 - 2.0m	Brown, wet, SAND and GRAVEL, some rounded cobbles and boulders	GR	Sa-1	PHCS/BTEX 1.9 - 2.0	10 uR/hr	0 ppm			
Date: 30-Sep-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: TP13-2 Area 6 CRUSHER			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
					Parameters	Gamma	Gastech			
Area 6 Mill	0.0 - 0.66m	Brown, moist, SAND and GRAVEL, medium to coarse, some cobbles and boulders, some to trace roots in upper 0.15m	GR					Sample from bottom of pit. No evidence of environmental impacts (staining or odour). TP completed on bedrock.		
	0.66 - 1.6m	Brown, moist, SAND, medium to coarse, some cobble	SA	Sa-1	PHCS/BTEX 1.5 - 1.6	6 uR/hr	0 ppm			
Date: 30-Sep-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: TP13-3 Area 6 CRUSHER			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
					Parameters	Gamma	Gastech			
Area 6 Mill	0.0 - 0.12m	Brown, moist, SAND, medium to coarse, some rounded cobbles and boulders						Sample from bottom of pit. No evidence of environmental impacts (staining or odour). TP completed on bedrock.		
	0.7m	Brown, moist, medium to coarse SAND, some large rounded boulders, cobbles	GR	Sa-1	PHCS/BTEX 0.6 - 0.7	5 uR/hr	0 ppm			
Date: 30-Sep-13 Logged by: LS Method: Excavator Location: Rayrock, NWT			Test Pit: TP13-4 Area 6 CRUSHER			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
					Parameters	Gamma	Gastech			
Area 6 Mill	0.0 - 0.30	Brown, moist, SAND, medium to coarse, some rounded cobble and boulders, angular gravel on surface.	GR	Sa-1	PHCS/BTEX 0.0 - 0.30	7 uR/hr	0 ppm	No evidence of environmental impacts (staining or odour). TP completed on bedrock.		
Date: 30-Sep-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: TP13-5 Area 6 CRUSHER			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
					Parameters	Gamma	Gastech			
Area 6 Mill	0.0 - 0.46m	Brown, moist, SAND, medium to coarse, some angular cobbles and boulders, some debris (steel plates & rods)						No evidence of environmental impacts (staining or odour). TP completed on bedrock.		
	0.46 - 1.17m	Brown, moist, medium to coarse SAND, angular cobble and boulders	GR	Sa-1	PHCS/BTEX 1.0 - 1.17	8 uR/hr	0 ppm			
Date: 30-Sep-13 Logged by: LS Method: Excavator Location: Rayrock, NWT			Test Pit: TP13-6 Area 6 CRUSHER			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
					Parameters	Gamma	Gastech			
Area 6 Mill	0.0 - 0.24m	Brown, moist, SAND, medium to coarse, some angular cobble and gravel	GR	Sa-1	PHCS/BTEX 0.0 - 0.24	9 uR/hr	0 ppm	No evidence of environmental impacts (staining or odour). TP completed on bedrock.		
Date: 30-Sep-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: TP13-7 Area 6 CRUSHER			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
					Parameters	Gamma	Gastech			
Area 6 Mill	0.0 - 0.20m	Brown, moist, SAND, medium to coarse, some gravel on surface, some rounded cobbles and boulders						No evidence of environmental impacts (staining or odour). TP completed on bedrock.		
	0.20 - 1.50m	Brown, moist, medium to coarse SAND, round gravel and cobbles	GR	Sa-1 & DUP #2	PHCS/BTEX 1.4 - 1.5	5 uR/hr	0 ppm			

FORMER RAYROCK MINE SITE

TEST PIT LOGS - PHC's

Date: 30-Sep-13 Logged by: GCY Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: TP13-8 Area 5 POL & Drainage			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
					Parameters	Gamma	Gastech			
Area 5 POL & Drainage Zone	0.0 - 0.30m	dark brown, SAND and GRAVEL, some cobbles						Downgradient of former fuel oil tanks. No evidence of environmental impacts (staining or odour). TP incomplete due to large boulders.		
	0.30 - 1.2m	Brown, damp, SAND and GRAVEL, some cobbles	GR	Sa-1	PHCS/BTEX 1.1 - 1.2	6.5 uR/hr	0 ppm			
Date: 1-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: TP13-9 Area 5 POL & Drainage			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
					Parameters	Gamma	Gastech			
Area 5 POL & Drainage Zone	0.0 - 0.10m	Brown, moist, SAND, medium to coarse, some gravel, trace organics (moss & roots), trace glass and insulation						Downgradient of former fuel oil tanks. No evidence of environmental impacts (staining or odour). TP incomplete due to debris.		
	0.10 - 1.0m	Brown, moist, SAND, medium to coarse, some rounded gravel, angular cobble and boulders, trace construction debris at bottom of TP	GR	Sa-1	PHCS/BTEX 0.9 - 1.0	6.5 uR/hr	0 ppm			
Date: 1-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: TP13-10 Area 5 POL & Drainage			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
					Parameters	Gamma	Gastech			
Area 5 POL & Drainage Zone	0.0 - 0.28m	Brown, moist, SAND, some construction debris, medium to coarse sand and angular cobbles and boulders						Downgradient of former fuel oil tanks. No evidence of environmental impacts (staining or odour). TP incomplete due to boulders.		
	0.28 - 1.17m	Brown, moist, SAND, medium to coarse, angular cobble and boulder	GR	Sa-1	PHCS/BTEX 1.0 - 1.17	30 uR/hr	0 ppm			
Date: 1-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: TP13-11 Area 5 POL & Drainage			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
					Parameters	Gamma	Gastech			
Area 5 POL & Drainage Zone	0.0 - 0.91m	Brown, moist, SAND, medium to coarse, some roots, angular gravel & cobbles, some boulders						Downgradient of former fuel oil tanks. No evidence of environmental impacts (staining or odour). TP completed on bedrock.		
	0.91 - 1.20m	Black, moist, PEAT, some round gravel								
	1.20 - 1.80m	Brown to dark brown, moist, SAND, medium to coarse, some rounded cobble and boulders, some oxidation	GR	Sa-1	PHCS/BTEX 1.7 - 1.8	9 uR/hr	0 ppm			
Date: 1-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: TP13-12 Area 5 POL & Drainage			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
					Parameters	Gamma	Gastech			
Area 5 POL & Drainage Zone	0.0 - 0.50m	Brown, moist, SAND, medium to coarse, some angular cobbles and boulders						Downgradient of former fuel oil tanks. No evidence of environmental impacts (staining or odour). TP complete on bedrock.		
	0.50 - 0.60m	Black, moist, PEAT, some dark brown to red medium to coarse sand and rounded gravel								
	0.60 - 1.30m	Dark brown, SAND and GRAVEL, medium to coarse, some rounded cobble, some oxidation	GR	Sa-1	PHCS/BTEX 1.2 - 1.3	12 uR/hr	0 ppm			
Date: 29-Sep-13 Logged by: GCY Method: Hand Dug Location: Rayrock, NWT			Test Pit: TP13-13 Area 4 Mill Drainage			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
					Parameters	Gamma	Gastech			
Area 4 Mill Drainage	0.0 - 0.13m	MOSS - organic-rich, abundant roots, some rounded gravel to 0.1 m	OR	Sa-1	PHCS/BTEX 0 - 0.13	16 uR/hr	0 ppm	Downgradient of former fuel oil tanks. No evidence of environmental impacts (staining or odour). TP completed on bedrock.		
	0.13 - 0.24m	Dark brown, damp, SAND and MOSS, trace to some rounded gravel	SA	Sa-2	PHCS/BTEX 0.13 - 0.24	9 uR/hr	0 ppm			
Date: 29-Sep-13 Logged by: GCY Method: Hand Dug Location: Rayrock, NWT			Test Pit: TP13-14 Area 4 Mill Drainage			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
					Parameters	Gamma	Gastech			
Area 4 Mill Drainage	0.0 - 0.15m	Reddish brown, damp, SAND, some gravel and small cobbles	GR	Sa-1 & DUP # 7	PHCS/BTEX 0 - 0.15	6 uR/hr	0 ppm	No evidence of environmental impacts (staining or odour). Completed on bedrock.		

FORMER RAYROCK MINE SITE

TEST PIT LOGS - PHC's

Date: 29-Sep-13 Logged by: GCY Method: Hand Dug Location: Rayrock, NWT			Test Pit: TP13-15 Area 4 Mill Drainage			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech			
Area 4 Mill Drainage	0.0 - 0.20m	Dark brown, moist to wet, SAND and GRAVEL, medium to coarse	GR	Sa-1	PHCs/BTEX 0 - 0.2	6.5 uR/hr	0 ppm	No evidence of environmental impacts (staining or odour). Completed on bedrock.		
Date: 29-Sep-13 Logged by: GCY Method: Hand Dug Location: Rayrock, NWT			Test Pit: TP13-16 Area 4 Mill Drainage			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech			
Area 4 Mill Drainage	0.0 - 0.12m	Orange brown, wet, SAND, fine to medium, organic-rich, trace silt, oxidized at surface	SA	Sa-1	PHCs/BTEX 0 - 0.12	11 uR/hr	0 ppm	No evidence of environmental impacts (staining or odour). Completed on bedrock.		
Date: 29-Sep-13 Logged by: GCY Method: Hand Dug Location: Rayrock, NWT			Test Pit: TP13-17 Area 4 Mill Drainage			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech			
Area 4 Mill Drainage	0.0 - 0.20m	Black, moist, SAND, some organics and gravel, trace cobbles	GR	Sa-1	PHCs/BTEX 0 - 0.2	14 uR/hr	0 ppm	No evidence of environmental impacts (staining or odour). Completed on bedrock.		
Date: 30-Sep-13 Logged by: CR Method: Hand Dug Location: Rayrock, NWT			Test Pit: TP13-18 Area 4 Mill Drainage			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech			
Area 4 Mill Drainage	0 - 0.10m	Brown, moist, SAND, coarse, some angular gravel, trace rootlets	GR	Sa-1	PHCs/BTEX 0 - 0.1	18 uR/hr	0 ppm	No evidence of environmental impacts (staining or odour). TP completed on bedrock.		
Date: 30-Sep-13 Logged by: CR Method: Hand Dug Location: Rayrock, NWT			Test Pit: TP13-19 Area 4 Mill Drainage			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech			
Area 4 Mill Drainage	0 - 0.1m	Beige to brown, moist, SILTY SAND, fine	SA	Sa-1	PHCs/BTEX & Metals 0 - 0.1	135 uR/hr	0 ppm	No evidence of environmental impacts (staining or odour) TP completed on bedrock.		
	0.1 - 0.3m	Brown, moist, SAND, medium to coarse, some subangular gravel	SA	Sa-2	PHCs/BTEX & Metals 0.1 - 0.3	70 uR/hr	0 ppm			
Date: 30-Sep-13 Logged by: CR Method: Hand Dug Location: Rayrock, NWT			Test Pit: TP13-20 Area 4 Mill Drainage			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech			
Area 4 Mill Drainage	0.0 - 0.20m	Dark brown, wet to saturated with sheen on water, SILTY SAND, fine to medium, some peat, moss and roots. Trace hydrocarbon odour.	GR	Sa-1 & DUP #1	PHCs/BTEX 0 - 0.2	6 uR/hr	0 ppm	Downgradient of former POL. Sample in rock crevice. Trace hydrocarbon odour. Area is approximately 2.5m x 1m. TP completed on bedrock.		
Date: 30-Sep-13 Logged by: CR Method: Hand Dug Location: Rayrock, NWT			Test Pit: TP13-21 Area 4 Mill Drainage			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech			
Area 4 Mill Drainage	0.0 - 0.25m	Dark grey, damp to moist, SILTY SAND, fine, some organics, trace rootlets.	GR	Sa-1	PHCs/BTEX 0 - 0.25	23 uR/hr	0 ppm	Downgradient of former POL. North end of tailings spill area. TP completed on bedrock.		

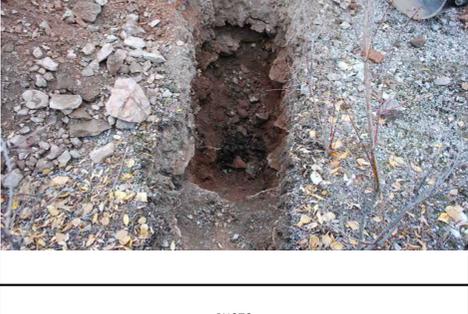
FORMER RAYROCK MINE SITE

TEST PIT LOGS - PHC's

Date: 30-Sep-13 Logged by: CR Method: Hand Dug Location: Rayrock, NWT			Test Pit: TP13-22 Area 5 Former Oil Tanks			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech			
Area 5 POL & Drainage Zone	0.0 - 0.30m	Dark brown, moist, SAND, coarse, organics and gravel	GR	Sa-1	PHCS/BTEX 0.15 - 0.3	15 uR/hr	0 ppm	Downgradient of former fuel oil tanks. No evidence of environmental impacts (staining or odour). TP completed on bedrock.		
Date: 30-Sep-13 Logged by: CR Method: Hand Dug Location: Rayrock, NWT			Test Pit: TP13-23 Area 5 Former Oil Tanks			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech			
Area 5 POL & Drainage Zone	0.0 - 0.30m	Brown, damp, SAND and GRAVEL, coarse	GR	Sa-1	PHCS/BTEX 0.0 - 0.3	16 uR/hr	0 ppm	Downgradient of former fuel oil tanks. Angle iron and timber buried in excavation. No evidence of environmental impacts (staining or odour). TP incomplete due to waste rock and debris.		
Date: 30-Sep-13 Logged by: CR Method: Hand Dug Location: Rayrock, NWT			Test Pit: TP13-24			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech			
Area 4 Mill Drainage	0.0 - 0.20m	Dark brown, saturated, ORGANIC SILT, trace gravel, trace sheen on water. Faint hydrocarbon odour.	OML	Sa-1	PHCS/BTEX 0.0 - 0.2m	5 uR/hr	0 ppm	Downgradient of former POL. Faint hydrocarbon odour. Area is 1m x 1.8m. TP completed on bedrock.		
Date: 30-Sep-13 Logged by: CR Method: Hand Dug Location: Rayrock, NWT			Test Pit: TP13-25			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech			
Area 3 Lodging (2)	-	Brown, moist, SAND, medium to coarse, some angular gravel, trace to some tailings material	-	-	-	-	-	Not Sampled after discussion with PWGSC & AANDC.		
Date: 30-Sep-13 Logged by: CR Method: Hand Dug Location: Rayrock, NWT			Test Pit: TP13-26			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech			
Area 3 Lodging (2)	0.0 - 0.15m	Brown, moist, SAND, medium to coarse, some angular gravel, trace to some tailings material	SA	Sa-1	PHCS/BTEX 0.05 - 0.15	8 uR/hr	0 ppm	Center of Rescan 2011 sample location (S5007). Size of stain is 1.80m x 1.80m, and 0.05m below grade. No odour. TP incomplete due to waste rock.		
<b>Note - No testpits TP13-27 to TP13-30 were excavated.</b>										
Date: 1-Oct-13 Logged by: CR Method: Hand Dug Location: Rayrock, NWT			Test Pit: TP13-31			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech			
Area 3 Lodging (2)	0.0 - 0.20m	Brown, moist, SAND, medium to coarse, some organics, trace silt, roots and angular gravel	SA	Sa-1	PHCS/BTEX 0 - 0.2	10 uR/hr	0 ppm	NW of stain (PHC 2). Size of stain is 1.2m x 1.5m. No odour. TP completed on bedrock.		
Date: 1-Oct-13 Logged by: CR Method: Hand Dug Location: Rayrock, NWT			Test Pit: TP13-32			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech			
Area 3 Lodging (2)	0.0 - 0.15m	Brown, moist, SAND, medium to coarse, some roots, trace silt and gravel	SA	Sa-1	PHCS/BTEX 0 - 0.15	7.5 uR/hr	0 ppm	SW of stain (PHC 2). Size of stain is 1.2m x 1.5m. No odour. TP completed on bedrock.		

FORMER RAYROCK MINE SITE

TEST PIT LOGS - PHC's

Date: 1-Oct-13 Logged by: CR Method: Hand Dug Location: Rayrock, NWT			Test Pit: TP13-33			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
					Parameters	Gamma	Gastech			
Area 3 Lodging (2)	0.0 - 0.15m	Brown, moist, SAND, medium, trace silt, gravel and roots	SA	Sa-1	PHCs/BTEX 0 - 0.15	8 uR/hr	0 ppm	SE of stain (PHC 2). Size of stain is 1.2m x 1.5m. No odour. TP completed on bedrock.		
Date: 1-Oct-13 Logged by: GY Method: Hand Dug Location: Rayrock, NWT			Test Pit: TP13-34			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area 3 Lodging (2)	0 - 0.075	Dark brown to black, damp, SAND and HUMUS, fine to medium, some gravel	OSA	Sa-1 & DUP # 3	PHCs/BTEX 0 - 0.075	10 uR/hr	0 ppm	NE of stain (PHC 2). Size of stain is 1.2m x 1.5m. No odour. TP completed on bedrock.		
Date: 1-Oct-13 Logged by: GY Method: Hand Dug Location: Rayrock, NWT			Test Pit: TP13-35			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area 3 Lodging (2)	0.0 - 0.05m	Black, MOSS and ROOTS	PT					Down gradient (SE) of stain (PHC 2). Size of stain is 1.2m x 1.5m. No odour. TP completed on bedrock.		
	0.05 - 0.15m	Brown, moist to damp, SAND, medium to coarse, some gravel	SA	Sa-1	PHCs/BTEX 0.05 - 0.15	7 uR/hr	0 ppm			
Date: 1-Oct-13 Logged by: CR Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: TP13-36			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area 5 POL & Drainage Zone	0.0 - 0.25m	Pinkish brown, moist, SAND, medium to coarse, some gravel and cobbles						Downgradient of former fuel oil tanks. Water level at 1.50m. Sheen on water & trace hydrocarbon odour. TP incomplete due to water and large boulders.		
	0.25 - 0.75m	Brown, moist, SAND, medium to coarse, some gravel and cobbles, trace oxidization.								
	0.75 - 1.30m	Dark brown, moist, SAND, medium to coarse, some gravel and cobbles, trace roots and humus								
	1.30 - 1.75m	Organics, PEAT, some medium coarse rounded sand	GR	Sa-1 & DUP # 4	PHCs/BTEX 1.40 - 1.60	11 uR/hr	0 ppm			
Date: 1-Oct-13 Logged by: CR Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: TP13-37			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area 5 POL & Drainage Zone	0.0 - 1.5m	Brown coarse SAND and GRAVEL, damp to wet	GR	Sa-1	PHCs/BTEX 1.3 - 1.5	6 uR/hr	0 ppm	Downgradient of former fuel oil tanks. Water level at 1.10m. No evidence of environmental impacts (staining or odour). TP incomplete due to water and blast rock.		
Date: 2-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: TP13-38			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area 5 POL & Drainage Zone	0.0 - 0.18m	Pinkish brown, moist, SAND, medium to coarse, some gravel and cobbles						Downgradient of former fuel oil tanks. No evidence of environmental impacts (staining or odour). TP completed on bedrock.		
	0.18 - 0.42m	Brown, moist, SAND, medium to coarse, some gravel and cobbles, trace oxidization.								
	0.42 - 1.22m	Dark brown, moist, SAND, medium to coarse, some gravel and cobbles, trace roots and humus	SA	Sa-1	PHCs/BTEX 0.42 - 1.22	7 uR/hr	0 ppm			
	1.22 - 1.40m	Organics, PEAT, some medium coarse rounded sand	PT	Sa-2	PHCs/BTEX 1.22 - 1.40	6 uR/hr	0 ppm			
Date: 2-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: TP13-39			SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area 5 POL & Drainage Zone	0.0 - 0.35m	Brown, damp, SAND, medium to coarse, some gravel and cobbles, trace roots	SA					Downgradient of former fuel oil tanks. No evidence of environmental impacts (staining or odour). TP completed on bedrock.		
	0.35 - 1.0m	Brown, moist, SAND, medium to coarse, some cobbles and gravel, black peat layer on bedrock, trace oxidization	SA	Sa-1	PHCs/BTEX 0.9 - 1.0	7 uR/hr	0 ppm			

FORMER RAYROCK MINE SITE

TEST PIT LOGS - PHC's

Date: 2-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: TP13-40				COMMENTS	PHOTO
Area			Type	Sample I.D.	Analysis & Depth of Sample (m)			
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech	
Area 5 POL & Drainage Zone	0.0 - 0.30m	Pinkish brown, damp to moist, SAND, medium to coarse, some gravel and cobbles, trace roots	SA					
	0.30 - 0.50m	Brown to dark reddish brown, damp to moist, SAND, some gravel and cobbles	SA					
	0.50 - 0.90m	Brown, damp to moist, SAND, medium coarse, some cobbles and gravel, peat on bedrock	SA	Sa-1	PHCS/BTEX 0.8 - 0.9	20 uR/hr	0 ppm	
Downgradient of former fuel oil tanks. No evidence of environmental impacts (staining or odour). TP completed on bedrock.								
								
Date: 2-Oct-13 Logged by: CR Method: Hand Dug Location: Rayrock, NWT			Test Pit: TP13-41				COMMENTS	PHOTO
Area			Type	Sample I.D.	Analysis & Depth of Sample (m)			
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech	
Area 2 Tailings Line	0.2m	Medium to fine SANDY SILT, some roots, trace gravel, brown to dark brown, moist	SA-ML	Sa-1 & DUP # 5	PHCS/BTEX 0 - 0.2	5 uR/hr	0 ppm	
Reported location of PHC 1. No evidence of environmental impacts (staining or odour). TP completed on bedrock.								
								
Date: 2-Oct-13 Logged by: CR Method: Hand Dug Location: Rayrock, NWT			Test Pit: TP13-42				COMMENTS	PHOTO
Area			Type	Sample I.D.	Analysis & Depth of Sample (m)			
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech	
Area 2 Tailings Line	0.0 - 0.60m	Brown, moist, SAND, medium to coarse, some gravel, trace roots	SA	Sa-1	PHCS/BTEX 0.0 - 0.6	7 uR/hr	0 ppm	
	0.60 - 0.70m	Dark brown, wet, PEAT, trace gravel and roots	SA	Sa-2				
Reported location of PHC 1. No evidence of environmental impacts (staining or odour). TP completed on bedrock.								
								
Date: 2-Oct-13 Logged by: CR Method: Hand Dug Location: Rayrock, NWT			Test Pit: TP13-43				COMMENTS	PHOTO
Area			Type	Sample I.D.	Analysis & Depth of Sample (m)			
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech	
Area 2 Tailings Line	0.0 - 0.10m	brown to dark brown, moist, SANDY SILT, medium to fine, trace roots and gravel	SA-ML	Sa-1	PHCS/BTEX 0 - 0.1	10 uR/hr	0 ppm	
Reported location of PHC 1. No evidence of environmental impacts (staining or odour). TP completed on bedrock.								
								
Date: 2-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: TP13-44				COMMENTS	PHOTO
Area			Type	Sample I.D.	Analysis & Depth of Sample (m)			
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech	
Area 6 Mill	0.0 - 0.25m	Dark brown to black, damp, SAND and GRAVEL, medium coarse, no odour.	GR	Sa-1	PHCS/BTEX 0.0 - 0.25	10 uR/hr	0 ppm	
	0.25 - 0.80m	Brown, moist to damp, SAND and GRAVEL, medium coarse, some crushed boulders, no odour.	GR	Sa-2	PHCS/BTEX 0.6 - 0.75	14 uR/hr	0 ppm	
Surface stain approximately 1m x 1m and 0.25m below grade. 45 gallon drum cut lengthwise at 0.30m. Water level at 0.75m. TP incomplete due to boulders and water.								
								
Date: 3-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: TP13-45				COMMENTS	PHOTO
Area			Type	Sample I.D.	Analysis & Depth of Sample (m)			
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech	
Area 6 Mill	0.0 - 0.65m	Brownish grey, moist, SAND, medium to coarse, some cobbles, gravel and boulders	SA					
	0.65 - 1.15m	Brown, moist to wet, SAND, medium to coarse, some gravel and organics, some oxidation.	SA					
	1.15 - 1.50m	Brown, saturated, SAND, fine to medium, some rounded medium to coarse sand	SA	Sa-1	PHCS/BTEX 1.3 - 1.5	10 uR/hr	0 ppm	
Water level at 1.48m. TP incomplete due to boulders and water.								
								

**FORMER RAYROCK MINE SITE  
TEST PIT LOGS - METALS**

Date: 1-Oct-13 Logged by: GCY Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-1					SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)							
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech	Parameters	Gamma	Gastech		
Area 5 POL & Drainage Zone	0.0 - 0.075m	Dark greyish brown, damp, SILTY SAND, fine, trace rootlets	SA	Sa-1	Metals - Soils	10 uR/hr	0 ppm				Tailings Spill. Complete on Bedrock @ 0.075m. No evidence of environmental impact (staining or odour).	
Date: 1-Oct-13 Logged by: GCY Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-2					SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)							
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech	Parameters	Gamma	Gastech		
Area 5 POL & Drainage Zone	0.0 - 0.075m	Dark greyish brown, damp, SILTY SAND, fine, trace gravel	SA	Sa-1	Metals - Soils	8 uR/hr	0 ppm				Tailings Spill. Complete on Bedrock @ 0.20m. No evidence of environmental impact (staining or odour).	
	0.075 - 0.20m	Reddish brown, damp, SAND and GRAVEL, medium to coarse, trace cobbles	GR	Sa-2	Metals	9 uR/hr	0 ppm					
Date: 1-Oct-13 Logged by: GCY Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-3					SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)							
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech	Parameters	Gamma	Gastech		
Area 5 POL & Drainage Zone	0.0 - 0.40m	Dark greyish brown, damp, SILTY SAND, fine, trace rootlets and gravel	SA	Sa-1	Metals - Soils	6 uR/hr	0 ppm				Tailings Spill. Complete on Bedrock @ 0.40m. No evidence of environmental impact (staining or odour).	
Date: 1-Oct-13 Logged by: GCY Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-4					SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)							
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech	Parameters	Gamma	Gastech		
Area 3 Lodging (2)	0.0 - 0.50m	Dark greyish brown, damp, SILTY SAND, fine, trace gravel	SA	Sa-1	Metals - Soils	6 uR/hr	0 ppm				Tailings Spill. Complete on Bedrock @ 0.50m. No evidence of environmental impact (staining or odour).	
Date: 1-Oct-13 Logged by: GCY Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-5					SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)							
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech	Parameters	Gamma	Gastech		
Area 3 Lodging (2)	0.0 - 0.30m	Dark greyish brown, damp, SILTY SAND, fine, trace rootlets and gravel	SA	Sa-1	Metals - Soils	7 uR/hr	0 ppm				Tailings Spill. Complete on Bedrock @ 0.30m. No evidence of environmental impact (staining or odour).	

**FORMER RAYROCK MINE SITE  
TEST PIT LOGS - METALS**

Date: 1-Oct-13 Logged by: GCY Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-6					SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech	Analysis & Depth of Sample (m)				
Area 3 Lodging (2)	0.0 - 0.40m	Dark greyish brown, damp, <b>SILTY SAND</b> , fine, some to trace rootlets	SA	Sa-1	Metals - Soils	6 uR/hr	0 ppm				Tailings Spill. Test Pit was Hand Dug to 0.4m and was incomplete due to wood debris. CANDIG Excavator extended test pit, removed wood directly on bedrock. Complete on Bedrock @ 0.55m. No evidence of environmental impact (staining or odour).	
Date: 2-Oct-13 Logged by: LS Method: Can-Dig Location: Rayrock, NWT			Test Pit: SA13-7					SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech	Analysis & Depth of Sample (m)				
Area 3 Lodging (2)	0.0 - 0.90m	Brownish grey, damp, <b>SAND</b> , medium to fine, some angular cobbles	SA	Sa-1	Metals - Soils	6 uR/hr	0 ppm				Tailings Spill. Complete on Bedrock @ 0.90m. No evidence of environmental impact (staining or odour).	
Date: 2-Oct-13 Logged by: GCY Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-8					SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech	Analysis & Depth of Sample (m)				
Area 3 Lodging (2)	0.0 - 0.40m	Dark greyish brown, damp, <b>SILTY SAND</b> , fine, some cobbles/boulders	SA	Sa-1	Metals - Soils	6 uR/hr	0 ppm				Tailings Spill. Complete on Bedrock @ 0.70m. No evidence of environmental impact (staining or odour).	
	0.40 - 0.70m	Brown, damp, <b>SAND</b> and <b>GRAVEL</b> , coarse, some cobbles	GR	Sa-2	Metals - Soils	5 uR/hr	0 ppm					
Date: 2-Oct-13 Logged by: GCY Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-9					SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech	Analysis & Depth of Sample (m)				
Area 3 Lodging (2)	0.0 - 1.0m	Dark greyish brown, damp to dry, <b>SILTY SAND</b> , fine, trace cobbles	SA	Sa-1 & Dup # 6	Metals - Soils	6 uR/hr	0 ppm				Tailings Spill. Complete on Bedrock @ 1.40m. No evidence of environmental impact (staining or odour).	
	1.0 - 1.40m	Pinkish brown, damp, <b>SAND</b> , medium	SA	Sa-2	Metals - Soils	29 uR/hr	0 ppm					
Date: 2-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: SA13-10					SAMPLES			COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech	Analysis & Depth of Sample (m)				
Area 3 Lodging (2)	0.0 - 0.60m	Dark greyish brown, <b>SILTY SAND</b> , fine, trace angular gravel	SA	Sa-1	Metals - Soils	5 uR/hr	0 ppm				Tailings Spill. Complete on Bedrock @ 0.20m. No evidence of environmental impact (staining or odour).	

**FORMER RAYROCK MINE SITE  
TEST PIT LOGS - METALS**

Date: 2-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: SA13-11					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
			Parameters	Gamma	Gastech					
Area 5 POL & Drainage Zone	0.0 - 0.20m	Brown, damp to moist, SAND, medium to coarse, some cobbles and gravel	SA	Sa-1	Metals - Soils	7 uR/hr	0 ppm	Tailings Spill. Complete on Bedrock @ 0.20m. No evidence of environmental impact (staining or odour).		
Date: 2-Oct-13 Logged by: CR Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-12					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
			Parameters	Gamma	Gastech					
Area 3 Lodging (2)	0.0 - 0.25m	Dark brown, moist to damp, SANDY SILT, some gravel, organics, trace roots	SAML	Sa-1	Metals - Soils	9 uR/hr	0 ppm	Complete on Bedrock @ 0.25m. No evidence of environmental impact (staining or odour).		
Date: 2-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: SA13-13					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
			Parameters	Gamma	Gastech					
Area 6 Mill	0.0 - 0.25m	Dark brown to black, damp, SAND and GRAVEL, medium coarse, no odour.	GR	Sa-1	Metals - Soils	10 uR/hr	0 ppm	Water level at 0.075m, test pit incomplete due to boulders and water. No evidence of environmental impact (staining or odour). Samples taken from adjacent TP13-44.		
	0.25 - 0.80m	Brown, moist to damp, SAND and GRAVEL, medium coarse, some crushed boulders, no odour.	GR	Sa-2	Metals - Soils	14 uR/hr	0 ppm			
Date: 3-Oct-13 Logged by: CR Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-14					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
			Parameters	Gamma	Gastech					
Area 7 Tailings Line (2)	0.0 - 0.15m	Pinkish brown, moist, SAND, fine to medium, trace silt, roots and organics	SA	Sa-1 & DUP # 7	Metals - Soils	60 uR/hr	0 ppm	Complete on Bedrock @ 0.15m. No evidence of environmental impact (staining or odour).		
Date: 2-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: SA13-15					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
			Parameters	Gamma	Gastech					
Area 7 Tailings Line (2)	0.0 - 0.15m	Pinkish brown, moist, SAND, fine to medium, trace silt and roots	SA	Sa-1	Metals - Soils	38 uR/hr	0 ppm	Complete on Bedrock @ 0.25m. No evidence of environmental impact (staining or odour).		
	0.15 - 0.25m	Brown, moist, SANDY SILT, medium, trace roots	SAML	Sa-2	Metals - Soils	19 uR/hr	0 ppm			

**FORMER RAYROCK MINE SITE  
TEST PIT LOGS - METALS**

Date: <b>Test Pit: SA13-16</b>			SAMPLES					COMMENTS	PHOTO
Logged by: Rayrock, NWT			Type	Sample I.D.	Analysis & Depth of Sample (m)				
Area	Depth (m)	Description			Parameters	Gamma	Gastech		
Area 7 Tailings Line	0.0 - 0.15m	Pinkish brown, moist, <b>SAND</b> , fine to medium, trace silt and roots	SA	Sa-1	Metals - Soils	42 uR/hr	0 ppm	Complete on Bedrock @ 0.25m. No evidence of environmental impact (staining or odour).	
	0.15 - 0.25m	Brown, moist, <b>SANDY SILT</b> , medium, trace roots	SA-ML	Sa-2	Metals - Soils	16 uR/hr	0 ppm		
Date: 3-Oct-13 <b>Test Pit: SA13-17</b>			SAMPLES					COMMENTS	PHOTO
Logged by: CR			Type	Sample I.D.	Analysis & Depth of Sample (m)				
Area	Depth (m)	Description			Parameters	Gamma	Gastech		
Area 7 Tailings Line (2)	0.0 - 0.50m	Brown, moist, <b>SAND</b> , medium to coarse, some gravel and cobbles, trace silt and roots	SA	Sa-1	Metals - Soils	7.5 uR/hr	0 ppm	Complete on Bedrock @ 0.50m. No evidence of environmental impact (staining or odour).	
Date: 3-Oct-13 <b>Test Pit: SA13-18</b>			SAMPLES					COMMENTS	PHOTO
Logged by: CR			Type	Sample I.D.	Analysis & Depth of Sample (m)				
Area	Depth (m)	Description			Parameters	Gamma	Gastech		
Area 7 Tailings Line (2)	0 - 0.15m	Pinkish brown, <b>SAND</b> , medium coarse	SA	Sa-1	Metals - Soils	120 uR/hr	0 ppm	Complete on Bedrock @ 0.40m. No evidence of environmental impact (staining or odour).	
	0.15 - 0.25m	Dark brown, <b>FOREST MATT</b> , lots of roots	PT						
	0.25 - 0.40m	Dark brown, damp, <b>SAND</b> , medium to fine, some organics	SA	Sa-2	Metals - Soils	14 uR/hr	0 ppm		
Date: 3-Oct-13 <b>Test Pit: SA13-19</b>			SAMPLES					COMMENTS	PHOTO
Logged by: CR			Type	Sample I.D.	Analysis & Depth of Sample (m)				
Area	Depth (m)	Description			Parameters	Gamma	Gastech		
Area 7 Tailings Line (2)	0 - 0.10m	Pinkish brown, moist, <b>SAND</b> , medium to coarse, trace roots	SA	Sa-1	Metals - Soils	49 uR/hr	0 ppm	No evidence of environmental impact (staining or odour). Borehole incomplete due to access.	
	0.10 - 0.15m	dark brown, moist, <b>FOREST MAT</b> , lots of roots	PT						
	0.15 - 0.30m	Oxidized brown, moist, <b>SAND</b> , medium to coarse, trace gravel and roots	SA	Sa-2	Metals - Soils	5 uR/hr	0 ppm		
	0.30 - 0.60m	Beige, dry, <b>SAND</b> , fine to medium	SA	Sa-3 & DUP # 8	Metals - Soils	9 uR/hr	0 ppm		
Date: 3-Oct-13 <b>Test Pit: SA13-20</b>			SAMPLES					COMMENTS	PHOTO
Logged by: CR			Type	Sample I.D.	Analysis & Depth of Sample (m)				
Area	Depth (m)	Description			Parameters	Gamma	Gastech		
Area 7 Tailings Line (2)	0.0 - 0.13m	Pinkish brown, moist, <b>SAND</b> , medium coarse	SA	Sa-1	Metals - Soils	46 uR/hr	0 ppm	Complete on Bedrock @ 0.57m. No evidence of environmental impact (staining or odour).	
	0.13 - 0.17m	Dark brown, moist, <b>FOREST MAT</b> , some organics	PT						
	0.17 - 0.57m	Brown, moist, <b>SANDY SILT</b> , trace gravel, cobbles and roots	SAML	Sa-2	Metals - Soils	14 uR/hr	0 ppm		

**FORMER RAYROCK MINE SITE  
TEST PIT LOGS - METALS**

Date: 3-Oct-13 Logged by: CR Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-21					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
			Parameters	Gamma	Gastech					
Area 7 Tailings Line (2)	0.0 - 0.13m	Pinkish brown, moist, SAND, medium to coarse, trace roots	SA	Sa-1	Metals - Soils	14 uR/hr	0 ppm	No evidence of environmental impact (staining or odour). Borehole incomplete due to access.		
	0.17 - 0.57m	Beige, dry, SAND, trace roots and angular gravel	SA	Sa-2	Metals - Soils	7 uR/hr	0 ppm			
Date: 3-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: SA13-22					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
			Parameters	Gamma	Gastech					
Area 6 Mill	0.0 - 0.30m	Pinkish grey, SAND, medium to coarse, some cobbles and gravel, some construction debris and metal	SA	Sa-1	Metals - Soils	62 Ur/hr	0 ppm	Complete on Bedrock @ 0.95m. No evidence of environmental impact (staining or odour).		
	0.3 - 0.95m	Brown, SAND, medium to coarse, some angular cobbles and gravel, some silty fine sand on bedrock.	SA	Sa-2	Metals - Soils	35 uR/hr	0 ppm			
Date: 3-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: SA13-23					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
			Parameters	Gamma	Gastech					
Area 6 Mill	0 - 0.12m	Reddish brown, damp, SAND, medium to coarse, some cobbles and boulders	SA	Sa-1	Metals - Soils	7.5 uR/hr	0 ppm	Complete on Bedrock @ 1.05m. No evidence of environmental impact (staining or odour).		
	0.12 - 0.14m	Black, damp, PEAT, some moss and roots	PT							
	0.14 - 0.65m	Pinkish brown, damp, SAND, medium to coarse, some gravel and angular cobbles	SA	Sa-2	Metals - Soils	12.5 uR/hr	0 ppm			
	0.65 - 1.05m	Brown, SAND and GRAVEL, medium to coarse	GR	Sa-3	Metals - Soils	14 uR/hr	0 ppm			
Date: 3-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: SA13-24					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
			Parameters	Gamma	Gastech					
Area 6 Mill	0 - 0.2m	Pinkish brown, moist, SAND and GRAVEL, some cobbles, trace roots	GR	Sa-1	Metals - Soils	6 uR/hr	0 ppm	Water level @ 0.3m. Test pit incomplete. No evidence of environmental impact (staining or odour).		
	0.2 - 0.35m	Brown, moist, SAND, medium to coarse, some angular gravel and cobbles	SA	Sa-2 & DUP # 9	Metals - Soils	10 uR/hr	0 ppm			
Date: 3-Oct-13 Logged by: LS Method: Hand dig Location: Rayrock, NWT			Test Pit: SA13-25					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
			Parameters	Gamma	Gastech					
Area 6 Mill	0 - 0.10m	Brown, damp, SAND, medium to coarse, some angular gravel	SA	Sa-1	Metals - Soils	7.5 uR/hr	0 ppm	Complete on Bedrock @ 0.10m. No evidence of environmental impact (staining or odour).		

**FORMER RAYROCK MINE SITE  
TEST PIT LOGS - METALS**

Date: 3-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: SA13-26					COMMENTS	PHOTO
SAMPLES			Type	Sample I.D.	Analysis & Depth of Sample (m)				
Area	Depth (m)	Description			Parameters	Gamma	Gastech		
Area 6 Mill	0 - 0.75m	Brown, moist, SAND and GRAVEL, some angular cobbles and boulders, trace wood timbers and metal	SA					No evidence of environmental impact (staining or odour). Incomplete due to large boulders and foundation @ 1.8m.	
	0.75 - 0.90m	Concrete foundation							
	0.90 - 1.80m	Brown, moist, SAND and GRAVEL, some angular cobbles and boulders, trace wood timbers and metal	SA	Sa-1	Metals - Soils	15 uR/hr	0 ppm		
Date: 3-Oct-13 Logged by: CR Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-27					COMMENTS	PHOTO
SAMPLES			Type	Sample I.D.	Analysis & Depth of Sample (m)				
Area	Depth (m)	Description			Parameters	Gamma	Gastech		
Area 6 Mill	0.0 - 0.40m	Brown, moist, SAND, medium to coarse, some gravel and organics	SA	Sa-1	Metals - Soils	9 uR/hr	0 ppm	Complete on Bedrock @ 0.70m. No evidence of environmental impact (staining or odour).	
	0.40 - 0.50m	Black to dark brown, moist, PEAT	PT						
	0.50 - 0.70m	Brown, moist, SAND, medium to coarse, trace fine sand	SA	Sa-2	Metals - Soils	8 uR/hr	0 ppm		
Date: 3-Oct-13 Logged by: CR Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-28					COMMENTS	PHOTO
SAMPLES			Type	Sample I.D.	Analysis & Depth of Sample (m)				
Area	Depth (m)	Description			Parameters	Gamma	Gastech		
Area 7 Tailings Line (2)	0 - 0.15m	Pinkish brown, moist, SAND, medium coarse, trace roots	SA	Sa-1	Metals - Soils	22 uR/hr	0 ppm	Complete on Bedrock @ 0.45m. No evidence of environmental impact (staining or odour).	
	0.15 - 0.18m	Dark brown, moist, FOREST MAT, lots of roots	PT						
	0.18 - 0.45m	Brown, moist, SAND, medium to coarse, trace gravel, roots and silt	SA	Sa-2	Metals - Soils	11 uR/hr	0 ppm		
Date: 3-Oct-13 Logged by: CR Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-29					COMMENTS	PHOTO
SAMPLES			Type	Sample I.D.	Analysis & Depth of Sample (m)				
Area	Depth (m)	Description			Parameters	Gamma	Gastech		
Area 7 Tailings Line (2)	0 - 0.15m	Pinkish brown, moist, SAND, medium to coarse, trace roots	SA	Sa-1	Metals - Soils	12.5 uR/hr	0 ppm	Complete on Bedrock @ 0.40m. No evidence of environmental impact (staining or odour).	
	0.15 - 0.20m	Dark brown, moist, FOREST MAT	PT						
	0.20 - 0.40m	Brown, moist, SAND, medium to coarse, trace gravel and roots	SA	SA-2	Metals - Soils	7 uR/hr	0 ppm		
Date: 4-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: SA13-30					COMMENTS	PHOTO
SAMPLES			Type	Sample I.D.	Analysis & Depth of Sample (m)				
Area	Depth (m)	Description			Parameters	Gamma	Gastech		
Area 6 Mill	0.0 - 0.15m	Dark brown to black, PEAT, trace roots, medium to fine sand and cobbles	PT	Sa-1	Metals - Soils	32 uR/hr	0 ppm	Complete on Bedrock @ 0.85m. No evidence of environmental impact (staining or odour).	
	0.15 - 0.45m	Light brown, SAND, fine, some gravel, trace oxidization	SA	Sa-2	Metals - Soils	9 uR/hr	0 ppm		
	0.45 - 0.85m	Brownish grey, SAND, fine, trace coarse sand and rounded gravel	SA	Sa-3	Metals - Soils	15 uR/hr	0 ppm		

**FORMER RAYROCK MINE SITE  
TEST PIT LOGS - METALS**

Date: 4-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: SA13-31					COMMENTS	PHOTO
			SAMPLES						
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)				
					Parameters	Gamma	Gastech		
Area 6 Mill	0.0 - 0.25m	Dark brownish black, SAND, fine to coarse, some cobbles, trace roots and gravel	SA	Sa-1	Metals - Soils	21 uR/hr	0 ppm	Complete on Bedrock @ 0.80m. No evidence of environmental impact (staining or odour).	
	0.25 - 0.55m	Brownish red, SAND, fine, trace gravel, some oxidization	SA	Sa-2	Metals - Soils	7 uR/hr	0 ppm		
	0.55 - 0.80m	Brown to grey, SAND, fine, trace gravel	SA	Sa-3	Metals - Soils	8 uR/hr	0 ppm		
Date: 4-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: SA13-32					COMMENTS	PHOTO
			SAMPLES						
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)				
					Parameters	Gamma	Gastech		
Area 6 Mill	0.0 - 0.15m	Blackish dark brown, damp, SAND, fine, trace gravel, cobbles and roots	SA	Sa-1	Metals - Soils	8 uR/hr	0 ppm	Complete on Bedrock @ 1.35m. No evidence of environmental impact (staining or odour).	
	0.15 - 0.35m	Dark brown, damp, SAND, coarse, some fine sand, trace gravel and organics	SA	Sa-2	Metals - Soils	9 uR/hr	0 ppm		
	0.35 - 1.35m	Reddish brown, SAND, fine to coarse, trace gravel, some oxidization	SA	Sa-3	Metals - Soils	8 uR/hr	0 ppm		
Date: 4-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: SA13-33					COMMENTS	PHOTO
			SAMPLES						
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)				
					Parameters	Gamma	Gastech		
Area 6 Mill	0.0 - 0.90m	Dark brown, damp, SAND and GRAVEL, fine to coarse, some angular cobbles	GR	Sa-1	Metals - Soils	9 uR/hr	0 ppm	Complete on Bedrock @ 0.90m. No evidence of environmental impact (staining or odour).	
Date: 4-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: SA13-34					COMMENTS	PHOTO
			SAMPLES						
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)				
					Parameters	Gamma	Gastech		
Area 6 Mill	0.0 - 0.30m	Brown to greyish brown, SAND and GRAVEL, some cobbles and boulders	GR	Sa-1	Metals - Soils	12.5 uR/hr	0 ppm	Incomplete due to large boulders @ 0.80m. No evidence of environmental impact (staining or odour).	
	0.30 to 0.80m	Brown, SAND and GRAVEL, medium to coarse, some angular cobbles and gravel	GR	Sa-2	Metals - Soils	23 uR/hr	0 ppm		
Date: 4-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: SA13-35					COMMENTS	PHOTO
			SAMPLES						
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)				
					Parameters	Gamma	Gastech		
Area 6 Mill	0.0 - 0.25m	Dark brown, SAND, fine to coarse, some organics and angular gravel and cobbles	SA	Sa-1	Metals - Soils	9 uR/hr	0 ppm	Complete on Bedrock @ 0.85m. No evidence of environmental impact (staining or odour).	
	0.25 - 0.85m	Greyish brown, SAND and GRAVEL, some angular cobbles	GR	Sa-2	Metals - Soils	12.5 uR/hr	0 ppm		

**FORMER RAYROCK MINE SITE  
TEST PIT LOGS - METALS**

Date: 4-Oct-13 Logged by: LS Method: Can-Dig Location: Rayrock, NWT			Test Pit: SA13-36					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech			
Area 6 Mill	0.0 - 0.85m	Brown, damp, <b>SAND and GRAVEL</b> , medium to coarse, some angular cobbles and boulders, trace roots near surface	GR	Sa-1	Metals - Soils	15 uR/hr	0 ppm	Complete on Bedrock @ 0.85m. No evidence of environmental impact (staining or odour).		
Date: 4-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: SA13-37					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech			
Area 6 Mill	0 - 0.60m	Brown, moist, <b>SAND and GRAVEL</b> , medium to coarse, some angular cobbles	GR	Sa-1	Metals - Soils	12 uR/hr	0 ppm	Complete on Bedrock @ 0.60m. No evidence of environmental impact (staining or odour).		
Date: 4-Oct-13 Logged by: CR Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-38					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech			
Area 6 Mill	0 - 0.20m	Pinkish brown, moist, <b>SAND</b> , medium	SA	Sa-1	Metals - Soils	85 uR/hr	0 ppm	Incomplete on slope @ 0.20m. No evidence of environmental impact (staining or odour).		
Date: 4-Oct-13 Logged by: CR Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-39					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech			
Area 6 Mill	0 - 0.05m	Brown, moist to wet, <b>SANDY SILT</b> , medium, trace roots	SA-ML	Sa-1	Metals - Soils	40 uR/hr	0 ppm	Incomplete due to large boulders - No access for CAN-DIG. No evidence of environmental impact (staining or odour).		
	0.05 - 0.10m	Beige, moist, <b>SAND</b> , medium to coarse, compact, trace angular gravel	SA	Sa-2 & DUP # 10	Metals - Soils	11 uR/hr	0 ppm			
	0.10 - 0.40m	Reddish brown, moist, <b>SANDY GRAVEL</b> , some cobbles, trace roots	GR	Sa-3	Metals - Soils	11 uR/hr	0 ppm			
Date: 4-Oct-13 Logged by: CR Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-40					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech			
Area 6 Mill	0.0 - 0.45m	Brown, moist, <b>SAND</b> , some gravel and large cobbles, trace silt and roots	SA	Sa-1	Metals - Soils	15 uR/hr	0 ppm	Complete on Bedrock @ 0.45m. No evidence of environmental impact (staining or odour).		

**FORMER RAYROCK MINE SITE  
TEST PIT LOGS - METALS**

Date: 4-Oct-13 Logged by: CR Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-41					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
					Parameters	Gamma	Gastech			
Area 6 Mill	0.0 - 0.20m	Dark brown to grey, moist, <b>SAND and GRAVEL</b> , trace silt and roots	GR	Sa-1	Metals - Soils	11 uR/hr	0 ppm	Complete on Bedrock @ 0.20m. No evidence of environmental impact (staining or odour).		
Date: 4-Oct-13 Logged by: CR Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-42					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
					Parameters	Gamma	Gastech			
Area 6 Mill	0.0 - 0.15m	Brown, moist, <b>SAND and GRAVEL</b> , medium to coarse, trace roots	GR	Sa-1	Metals - Soils	13 uR/hr	0 ppm	Complete on Bedrock @ 0.15m. No evidence of environmental impact (staining or odour).		
Date: 4-Oct-13 Logged by: CR Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-43					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
					Parameters	Gamma	Gastech			
Area 6 Mill	0 - 0.20m	Brown to dark brown, moist, <b>SAND</b> , medium to coarse, some silt and gravel, trace roots and organics	SA	Sa-1	Metals - Soils	13 uR/hr	0 ppm	Complete on Bedrock @ 0.20m. No evidence of environmental impact (staining or odour).		
Date: 4-Oct-13 Logged by: Cr Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-44					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
					Parameters	Gamma	Gastech			
Area 6 Mill	0.0 - 0.04m	Brown to dark brown, moist, <b>SANDY SILT</b> , medium to coarse, some gravel, trace roots	SA-ML	Sa-1	Metals - Soils	24 uR/hr	0 ppm	Complete on Bedrock @ 0.45m. No evidence of environmental impact (staining or odour).		
	0.04 - 0.10m	Reddish brown, moist, <b>SAND</b> , coarse, some gravel, trace angular cobbles	SA	Sa-2	Metals - Soils	10 uR/hr	0 ppm			
	0.10 - 0.45m	Brown, moist, <b>SAND</b> , medium to coarse, some gravel, trace silt, wood in bottom of TP	SA	Sa-3	Metals - Soils	11 uR/hr	0 ppm			
Date: 4-Oct-13 Logged by: CR Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-45					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
					Parameters	Gamma	Gastech			
Area 6 Mill	0.0 - 0.15m	Pinkish brown, moist, <b>SAND</b> , fine to medium, trace gravel	SA	Sa-1	Metals - Soils	130 uR/hr	0 ppm	Complete on Bedrock @ 0.15m. No evidence of environmental impact (staining or odour).		

**FORMER RAYROCK MINE SITE  
TEST PIT LOGS - METALS**

Date: 4-Oct-13 Logged by: CR Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-46					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech	COMMENTS	PHOTO	
Area 6 Mill	0.0 - 0.26m	Brown, moist, SAND and GRAVEL & COBBLES, coarse, trace silt	GR	Sa-1	Metals - Soils	20 uR/hr	0 ppm	Complete on Bedrock @ 0.26m. No evidence of environmental impact (staining or odour).		
Date: 4-Oct-13 Logged by: CR Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-47					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech	COMMENTS	PHOTO	
Area 6 Mill	0.0 - 0.07m	Brown, moist, SANDY SILT, medium to coarse, trace roots	SAML	Sa-1	Metals - Soils	55 uR/hr	0 ppm	Complete on Bedrock @ 0.37m. No evidence of environmental impact (staining or odour).		
	0.07 - 0.22m	Beige, moist, SAND and GRAVEL, coarse	GR	Sa-2	Metals - Soils	9 uR/hr	0 ppm			
	0.22 - 0.37m	Brown, moist, SAND and GRAVEL, coarse, trace silt, roots and cobbles		Sa-3	Metals - Soils	16 uR/hr	0 ppm			
Date: 4-Oct-13 Logged by: CR Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-48					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech	COMMENTS	PHOTO	
Area 6 Mill	0.0 - 0.13m	Pinkish brown, moist, SAND, medium to coarse, trace gravel	SA	Sa-1	Metals - Soils	49 uR/hr	0 ppm	Complete on Bedrock @ 0.13m. No evidence of environmental impact (staining or odour).		
Date: 4-Oct-13 Logged by: CR Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-49					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech	COMMENTS	PHOTO	
Area 6 Mill	0.0 - 0.32m	Brown, moist, SANDY SILT, some gravel, trace roots	SA-ML	Sa-1	Metals - Soils	9 uR/hr	0 ppm	Complete on Bedrock @ 0.32m. No evidence of environmental impact (staining or odour).		
Date: 5-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: SA13-50					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech	COMMENTS	PHOTO	
Area 6 Mill	0.0 - 0.40m	Greyish brown, damp, SAND, medium to coarse, some angular cobbles and angular boulders, trace roots	SA	Sa-1	Metals - Soils	24 uR/hr	0 ppm	Complete on Bedrock @ 1.50m. No evidence of environmental impact (staining or odour).		
	1.20 - 1.50m	Light brown, SAND, medium to coarse, some cobbles and construction debris @ 0.80m	SA	Sa-2	Metals - Soils	10 uR/hr	0 ppm			

**FORMER RAYROCK MINE SITE  
TEST PIT LOGS - METALS**

Date: 5-Oct-13 Logged by: LS Method: Can-Dig Location: Rayrock, NWT			Test Pit: SA13-51					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech			
Area 6 Mill	0.0 - 0.90m	brown, damp, SAND, medium to coarse, some angular cobbles and gravel, trace roots at surface	SA	Sa-1	Metals - Soils	9 uR/hr	0 ppm	Complete on Bedrock @ 0.90m. No evidence of environmental impact (staining or odour).		
Date: 5-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: SA13-52					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech			
Area 6 Mill	0.0 - 0.90m	Brown, SAND, medium to coarse, some angular cobbles and gravel, trace roots at surface	SA	Sa-1	Metals - Soils	8 uR/hr	0 ppm	Complete on Bedrock @ 0.90m. No evidence of environmental impact (staining or odour).		
Date: 5-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: SA13-53					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech			
Area 6 Mill	0 - 0.50m	Greyish brown, damp to moist, SAND, coarse, some angular cobbles and gravel	SA	Sa-1	Metals - Soils	6.5 uR/hr	0 ppm	Complete on Bedrock @ 1.60m. No evidence of environmental impact (staining or odour).		
	0.50 - 1.60m	Brown to grey, SAND, medium to coarse, some angular cobbles, gravel and boulders	SA	Sa-2	Metals - Soils	6 uR/hr	0 ppm			
Date: 5-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: TP13-54					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech			
Area 6 Mill	0.0 - 0.80m	greyish brown, damp, SAND, medium to coarse, some angular cobbles and gravel (blast rock), trace roots at surface	SA	Sa-1	Metals - Soils	7 uR/hr	0 ppm	Incomplete due to large cobbles @ 0.80m. No evidence of environmental impact (staining or odour).		
Date: 5-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: SA13-55					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech			
Area 6 Mill	0.0 - 1.0m	Brown, damp to moist, SAND, medium to coarse, some angular cobbles and gravel	SA	Sa-1	Metals - Soils	9 uR/hr	0 ppm	Incomplete due to large cobbles @ 1.0m. No evidence of environmental impact (staining or odour).		

**FORMER RAYROCK MINE SITE  
TEST PIT LOGS - METALS**

Date: 5-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: SA13-56					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
			Parameters	Gamma	Gastech					
Area 6 Mill	0.0 - 0.50m	Greyish brown, damp to moist, <b>SAND</b> , medium to coarse, some angular cobbles and gravel	SA	Sa-1	Metals - Soils	9 uR/hr	0 ppm	Incomplete due to large cobbles @ 1.0m. No evidence of environmental impact (staining or odour).		
	0.50-1.0m	Brown, moist, <b>SAND</b> , medium to coarse, some angular cobbles and gravel	SA	Sa-2	Metals - Soils	8 uR/hr	0 ppm			
Date: 5-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: SA13-57					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
			Parameters	Gamma	Gastech					
Area 6 Mill	0.0 - 0.50m	Reddish brown, damp to moist, <b>SAND</b> , medium to coarse, some angular cobbles and gravel, some oxidization	SA	Sa-1	Metals - Soils	9 uR/hr	0 ppm	Incomplete due to large cobbles @ 1.50m. No evidence of environmental impact (staining or odour).		
	0.50 - 1.50	Brown, damp, <b>SAND</b> , medium to coarse, some angular cobbles and gravel	SA	Sa-2	Metals - Soils	14 uR/hr	0 ppm			
Date: 5-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: SA13-58					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
			Parameters	Gamma	Gastech					
Area 6 Mill	0.0 - 0.50m	Brown, damp, <b>SAND</b> , medium to coarse, some angular boulders and cobbles and gravel	SA	Sa-1	Metals - Soils	7.5 uR/hr	0 ppm	Incomplete due to large cobbles @ 0.50m. No evidence of environmental impact (staining or odour).		
Date: 5-Oct-13 Logged by: LS Method: Can-Dig Excavator Location: Rayrock, NWT			Test Pit: SA13-59					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
			Parameters	Gamma	Gastech					
Area 6 Mill	0.0 - 0.20m	Dark greyish brown, damp, <b>SAND</b> , medium to coarse, some angular cobbles and gravel	SA	Sa-1	Metals - Soils	15 uR/hr	0 ppm	Complete on Bedrock @ 0.40m. No evidence of environmental impact (staining or odour).		
	0.20 - 0.40m	Pinkish brown, damp, <b>SAND</b> , medium to coarse, some gravel and angular cobbles	SA	Sa-2	Metals - Soils	10 uR/hr	0 ppm			
Date: 5-Oct-13 Logged by: CR Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-60					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
			Parameters	Gamma	Gastech					
Area 6 Mill	0.0 - 0.45m	Light brown, damp, <b>SAND and GRAVEL</b> , coarse, some large cobbles	GR	Sa-1	Metals - Soils	20 uR/hr	0 ppm	Complete on Bedrock @ 0.45m. No evidence of environmental impact (staining or odour).		

**FORMER RAYROCK MINE SITE  
TEST PIT LOGS - METALS**

Date: 5-Oct-13 Logged by: CR Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-61					COMMENTS	PHOTO
			SAMPLES						
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)				
					Parameters	Gamma	Gastech		
Area 6 Mill	0.0 - 0.25m	Light brown, moist, SAND and GRAVEL, coarse, some cobbles	GR	Sa-1	Metals - Soils	6 uR/hr	0 ppm	Complete on Bedrock @ 0.25m. No evidence of environmental impact (staining or odour).	
Date: 5-Oct-13 Logged by: CR Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-62					COMMENTS	PHOTO
			SAMPLES						
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)				
					Parameters	Gamma	Gastech		
Area 6 Mill	0.0 - 0.30m	Brown to light brown, damp to moist, SAND and GRAVEL, medium to coarse, trace roots	GR	Sa-1	Metals - Soils	6 uR/hr	0 ppm	Complete on Bedrock @ 0.30m. No evidence of environmental impact (staining or odour).	
Date: 5-Oct-13 Logged by: CR Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-63					COMMENTS	PHOTO
			SAMPLES						
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)				
					Parameters	Gamma	Gastech		
Area 6 Mill	0.0 - 0.20m	Dark brown, moist to wet, SAND and GRAVEL, medium to coarse, trace roots	GR	Sa-1	Metals - Soils	7 uR/hr	0 ppm	Complete on Bedrock @ 0.20m. No evidence of environmental impact (staining or odour).	
Date: 5-Oct-13 Logged by: CR Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-64					COMMENTS	PHOTO
			SAMPLES						
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)				
					Parameters	Gamma	Gastech		
Area 6 Mill	0.0 - 0.30m	Oxidized brown, damp to moist, SAND and GRAVEL, medium to coarse, trace roots	GR	Sa-1 & DUP # 11	Metals - Soils	26 uR/hr	0 ppm	Complete on Bedrock @ 0.30m. No evidence of environmental impact (staining or odour).	
Date: 5-Oct-13 Logged by: CR Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-65					COMMENTS	PHOTO
			SAMPLES						
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)				
					Parameters	Gamma	Gastech		
Area 6 Mill	0.0 - 0.30m	Oxidized brown, moist, SAND and GRAVEL, medium to coarse, trace roots	GR	Sa-1	Metals - Soils	20 uR/hr	0 ppm	Complete on Bedrock @ 0.30m. No evidence of environmental impact (staining or odour).	

**FORMER RAYROCK MINE SITE  
TEST PIT LOGS - METALS**

Date: 5-Oct-13 Logged by: CR Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-66					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech	COMMENTS	PHOTO	
Area 6 Mill	0.0 - 0.10m	Beige, damp, SAND and GRAVEL, coarse	GR	Sa-1	Metals - Soils	6 uR/hr	0 ppm	Complete on Bedrock @ 0.30m. No evidence of environmental impact (staining or odour).		
	0.10 - 0.30m	Brown, moist, SAND, medium to coarse, trace gravel, cobbles and roots	SA	Sa-2	Metals - Soils	6 uR/hr	0 ppm			
Date: 5-Oct-13 Logged by: CR Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-67					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech	COMMENTS	PHOTO	
Area 1 Lodging (1)	0.0 - 0.10m	Brownish grey, damp, SILTY SAND, fine, trace clay, trace roots	ML-SA	Sa-1	Metals - Soils	6.5 uR/hr	0 ppm	Complete on Bedrock @ 0.30m. No evidence of environmental impact (staining or odour).		
	0.10 - 0.30m	Brown, damp, SAND, fine to medium, some cobbles, trace gravel.	SA	Sa-2	Metals - Soils	8 uR/hr	0 ppm			
Date: 5-Oct-13 Logged by: CR Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-68					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech	COMMENTS	PHOTO	
Area 1 Lodging (1)	0.0 - 0.10m	Brown to grey, damp, SILTY SAND, fine, trace clay and roots	ML-SA	Sa-1	Metals - Soils	5.5 uR/hr	0 ppm	Complete on Bedrock @ 0.30m. No evidence of environmental impact (staining or odour).		
	0.10 - 0.30m	Dark brown, moist, SILTY SAND, trace gravel and roots	ML-SA	Sa-2	Metals - Soils	6 uR/hr	0 ppm			
Date: 5-Oct-13 Logged by: CR Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-69					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech	COMMENTS	PHOTO	
Area 2 Tailings Line (1)	0.0 - 0.30m	Pinkish brown, moist, SAND and GRAVEL, coarse, some cobbles, trace roots	GR	Sa-1	Metals - Soils	9 uR/hr	0 ppm	Complete on Bedrock @ 0.30m. No evidence of environmental impact (staining or odour).		
Date: 5-Oct-13 Logged by: CR Method: Hand Dig Location: Rayrock, NWT			Test Pit: SA13-70					SAMPLES	COMMENTS	PHOTO
Area	Depth (m)	Description	Type	Sample I.D.	Analysis & Depth of Sample (m)					
Area	Depth (m)	Description	Type	Sample I.D.	Parameters	Gamma	Gastech	COMMENTS	PHOTO	
Area 2 Tailings Line (1)	0.0 - 0.20m	Brown, moist, SAND, medium to coarse, lots of roots, trace silt and gravel	SA	Sa-1	Metals - Soils	6 uR/hr	0 ppm	Complete on Bedrock @ 0.20m. No evidence of environmental impact (staining or odour).		