

**NO CASH 100 #7**  
**(MINFILE # 105M 001f)**

**1. LOCATION AND ACCESS**

Access to the site is from the Elsa townsite along Calumet Road crossing over porcupine gulch and taking a left turn onto the No Cash 100 Road. The site has a latitude of 63° 55'08"N and longitude of 135° 27' 51"W. The NTS is 105M 14. The site is at an approximate altitude of 1100m. UTM co ordinates for the site are 7 088 058m N 477 230m E.

**2. SITE PHYSIOGRAPHY**

The No Cash 100 mine site is located on the northwest slope of Galena Hill at an elevation of 1100 metres above sea level. The mine site is similar in drainage to the No Cash 500 site. Drainage eventually empties into the No Cash Creek, down gradient of the site, towards the wetlands northeast of the Elsa tailings.

Vegetation in the area consists of stunted black spruce, willows, and alder with a floor covering of mosses, indicative of a permafrost environment.

**3. GEOLOGY AND MINERALIZATION**

The vein is hosted in barren, massive thick-bedded quartzites interbedded with graphitic schist, phyllite and thin-bedded quartzites. The vein material is reported to be heavily weathered with strong limonite and manganese staining. The vein material is reportedly composed of brecciated quartzite with limonite, manganese oxides, siderite, quartz stringers, galena, sphalerite, freibergite, their oxides, pyrite and arsenopyrite.

**4. SITE HISTORY**

The No Cash site has been in operation since the 1920's and from 1928 to 1931, 19 tonnes of ore were produced at 25m drifting on the 50-level. From 1948 to 1975, mining was conducted from the 500-level adit measuring 1115m in length producing a 5900 tonne dump at the portal. There are four raises and the Brefalt Shaft, plus a very small pit at the northeast end of the veins. Deep trenches can be found on the surface near the shaft.

**5. MINE DEVELOPMENT**

**5.1 Mine Openings and Excavations**

### No Cash 100 Level Portal

Wood frame construction, with wooden doors and a metal screen door (unlocked). Portal walls are collapsing. No water discharge was observed. The steel rails were still in place.

### Brefalt Shafthouse

This structure is wood frame construction; tarpaper covered wood walls with the roof partially collapsed. Skip is on doors covering shaft (blocking any access), manway has partially collapsed.

### Raises

A raise exists 160 meters West of Brefalt Shaft. The raise cover has collapsed downslope however, no obvious subsidence was noted in the area.

### Open Pits

There are no open pits associated with this site.

### Trenches

#### Trench #1

Location: West of compressor house (~ 50 meters)

Dimensions (L x W x H): 40 m x 25 m x 4m.

Vein material: quartzite with 1-2% disseminated pyrite, quartz veinlets with disseminated pyrite.

Wall rock: graphitic schist and quartzite

#### Trench #2

Location: Southwest of compressor house (20 meters)

Dimensions (L x W x H): 60 m x 15 m x 6 m

Wall rock: graphitic schist with quartz stringers

#### Trench #3

Location: South of Brefalt Shafthouse (20 meters)

Dimensions (L x W x H): 60 m x 15 m x 4 m.

Wall rock: graphitic schist and quartzite with quartz stringers and disseminated pyrite.

#### Trench #4

Eastern trench

Location: About 180 meters northeast of tramway mid-station (Photo 6-1)

Dimensions (L x W x H): 40 m x 20 m x 6 m.

Wall rock: interbedded schists and quartzites

Near vein: quartzite flooded with quartz veinlets

## 5.2 Waste Rock Disposal Areas

From trench # 1

~ 5,000 tonnes - a mixture of barren schists and quartzite

From trench # 2

~ 7,500 tonnes - barren graphitic schist with quartz veinlets

From trench # 3 (Photo 6-2)

~ 40,000 tonnes - barren graphitic schist with quartz veinlets and quartzite blocks

From trench # 4

~ 15,000 tonnes - barren quartzite with some schist

From Brefalt Shaft

~ 40,000 tonnes - difficult to estimate accurately because it has been reworked by equipment.

- quartzite, schist and vein material

- there are two kill zones below this dump (50 m. x 100 m.) with only minor revegetation occurring

## 5.3 Tailings Impoundments

No tailings were observed at the site.

## 5.4 Tailings Ponds

No tailings ponds were observed at the site.

## 5.5 Minesite Water Treatment

Water at this site is not being treated.

## 6. MINE SITE INFRASTRUCTURE

### 6.1 Buildings

There are a total of five buildings located at the No Cash 100 mine site. These five structures consist of a tramway mid-station, garage, shaft house, lunchroom and adit.

#### Building 7A – Tramway Mid-station (photo 6-3)

Location: Located on the No Cash 100 site map 130m to the northeast of the shafthouse.

Dimensions (L x W x H): 26m x 6m x 5m

Construction: The structure consists of wood frame construction.

Paint: Structure is unpainted.

Asbestos: No asbestos was noted at the building site.

Foundation: There was no foundation as the tramway was constructed on timber piles with wood bracing.

Non-Hazardous Contents: Some steel cables were located under the tramway.

Hazardous Contents: No hazardous materials were observed at the tramway site.

Samples: None collected.

#### Building 7B – Garage(Photo 6-4)

Location: Located on the No Cash 100 site map approximately 10m west of the shafthouse.

Dimensions (L x W x H): 14m x 14m x 10m

Construction: The structure consists of wood frame construction with metal sheathing on exterior walls and roof. The garage has 3 bays with painted double wooden doors on each bay.

Paint: Structure is unpainted except for the garage doors.

Asbestos: No asbestos was noted at the building site.

Foundation: The foundation consists of an above grade concrete slab.

Non-Hazardous Contents: A large air compressor (photo 6-5) is located on the exterior wall on the northeast corner of the garage. An old abandoned air compressor (photo 6-6) is located near the southwest corner of the garage. Inside the structure is a boiler room that houses a boiler, compressor, electrical panel, and fan unit.

Hazardous Contents: A sample was taken of product labeled as 350 Chevron, from a 23L drum located immediately inside the garage (07-03-drum). There are no hazardous wastes associated with building 7B other than hydrocarbon products potentially contained within the on-site equipment. There was evidence that the equipment in the boiler room had been leaking product onto the surrounding concrete floor. A few fuel drums around the exterior of the garage were found to be empty. Soils surrounding the fuel drums were not stained. Soil staining was evident along the north side fronting the 3 bays, however, the staining was weathered and did not appear to have penetrated deeply into the surrounding soils.

Note: a small wood frame structure (photo 6-7) was located adjacent to the southeast corner of the garage. The structure measured 2.5m x 2.5m x 2.5m. There was one drum within the structure that

was ¾ full of an unknown viscous product. A sample was conducted on the drum to determine content (07-04-drum).

Samples:

<u>Sample #</u>	<u>Sample Medium</u>	<u>Location</u>	<u>Lab Results</u>
07-03-drum	liquid	garage	PCB Content - <0.1 ppm
07-04-drum	liquid	shed behind garage	PCB Content – 2.69 ppm

Building 7C - Shaft House (Photo 6-8)

Location: Located on the No Cash 100 site map approximately 10m east of the garage.

Dimensions (L x W x H): 12m x 7m x 4m.

Construction: The shaft house is of wood frame construction with timber clad sheathing. Tarpaper has been utilized on the shaft housing and on the roof. Tarpaper was also used on the wood exterior.

Paint: Structure is unpainted.

Asbestos: No asbestos was noted at the building site.

Foundation: The foundation consists of wood plank flooring on grade.

Non-Hazardous Contents: The shaft house has been insulated with fibreglass insulation and there is some wood debris scattered due to deterioration of the structure. The structure should be considered a safety hazard.

Hazardous Contents: There were no hazardous materials noted at building site 7C.

Samples: No samples were taken at building site 7C.

Building 7D – Lunch Room

Location: Located on the No Cash 100 site map 30m north of the adit.

Dimensions (L x W x H): 4m x 8m x 4m

Construction: The structure was of wood frame construction and plywood.

Paint: Structure is unpainted.

Asbestos: The floor and partial wall (1m in height) is sheathed with 2 cm-thick asbestos board (photo 6-9).

Foundation: The foundation consists of wood plank flooring on grade covered with asbestos board.

Non-Hazardous Contents: The lunchroom had no other materials within the structure.

Hazardous Contents: There were no hazardous materials noted in building 7D.

Samples: No samples were taken in building 7D.

Building 7E – Adit (photo 6-10)

Location: Located on the No Cash 100 site map 30m south of the lunchroom.

Dimensions (L x W x H):

Construction: The structure was of wood frame construction and wood sheathing.

Paint: Structure is unpainted.

Asbestos: No asbestos was noted at building site 7E.

Foundation: No foundation.

Non-Hazardous Contents: The adit contained no material other than a retaining wall of chain link fencing as an entry restriction.

Hazardous Contents: There were no hazardous materials noted at building site 7E.

Sample: No samples were taken at building site 7E.

## 6.2 Fuel Storage

There were no fuel storage areas located at the No Cash 100 mine site. No above ground fuel storage tanks were noted at the site.

## 6.3 Rail and Trestle

### Tramway Debris

There is an old tramway mid-station located at the site. There are a number of old steel cables that have been placed under the tramway.

- 4 1 cm. diameter cables
- 2 2 cm. diameter cables
- 2 4 cm. diameter cables
- 1 5 cm. bundle of telephone cables

## 6.4 Milling and Processing Infrastructure

There was no milling or processing structures observed at the site.

## 6.5 Electrical Equipment

There are no longer services to the site, however, there are still intermittent lines running to some of the structures.

## 7. SOLID WASTE DUMPS

There are two solid waste dumps adjacent to each other located at the site (photo 6-11). One of the dumps is very minor and consists of some metals but mostly household garbage. The other site consists of metal debris that has rusted and corroded. No product was noted in any of the fuel drums or containers observed in the dump. Both dumps were located on waste rock sites and it is

difficult to determine if the kill zones (photo 6-12) adjacent to the dumps were from historical products dumped at the site, or if the impacted vegetation is a result of the existing/past impact from waste rock drainage.

No samples were taken at the site.

## 8. POTENTIAL CONTAMINANTS OF CONCERN

### 8.1 Out-of-Service Transformers

No transformers were observed at the site.

### 8.2 Metals and Hydrocarbons in Soil

There was some indication that spills had occurred on both the exterior and interior of the garage. These spills were associated with the equipment inside the boiler room that has leaked product onto both the concrete floor and immediately outside of the bay doors of the garage. The soils on the exterior of the building were investigated. Staining appears to be surficial and does not pose a significant impact on the surrounding environment.

### 8.3 Liquid Hazardous Materials

Liquid hazardous materials samples were collected from two drums at the No Cash 100 mine site. One of the drums was located in the garage and the other was found in a small shed behind the garage.

Location(s): Garage

Volume(s): 10L

Label information: Solvent 350 Chevron

Contents: The drum was approximately 1/2 full of a viscous, amber coloured fluid.

Location(s): Shed adjacent to garage

Volume(s): 20L

Label information: Not labeled

Contents: The drum was approximately 3/4 full and the liquid inside the drum was a viscous dark fluid.

Samples:

<u>Sample #</u>	<u>Drum/pail ID &amp; location</u>	<u>PCB screen results</u>
07-03-drum	Garage	<0.1 ppm
07-04-drum	Shed	2.69 ppm

#### **8.4 Solid Hazardous Materials**

No solid hazardous wastes were observed at the site.

#### **9. WATER QUALITY**

There were no water quality samples taken at the site as no water was present at the time of the site investigation. The upper reaches of Star Creek passes through the site, however, at the time of the site investigation the streambed was dry.

#### **10. RECLAMATION**

There are four kill zones at the No Cash 100 site. These areas are down gradient of the mine waste dump sites. The area has moderate revegetation (between 10 to 50%) which has occurred naturally with mosses and lichens. Further down the kill zone, low shrubs have re-colonized the area.

#### **11. OTHER SOURCES OF INFORMATION AND DATA**

No other sources of information and data were identified.

#### **12. REFERENCES AND PERSONAL COMMUNICATIONS**

United Keno Hill Mines Limited. 1996. *United Keno Hill Mines Limited – Site Characterization*. Report No. UKH/96/01, prepared by Access Mining Consultants Limited.

United Keno Hill Mines Limited. 1996. *United Keno Hill Mines Limited – Site Characterization, Technical Appendices I-VI*. Report No. UKH/96/01, prepared by Access Mining Consultants Limited.

**ANALYTICAL REPORT**

47697-7      07-03 - Drum - 99/09/17

ICP Semi-

Trace Scan      Detection

Analyte	Result	Limit	Units
Aluminum	<5	5	µg/g wet
Antimony	<2	2	µg/g wet
Arsenic	<2	2	µg/g wet
Barium	2.93	0.05	µg/g wet
Beryllium	<0.1	0.1	µg/g wet
Bismuth	<5	5	µg/g wet
Cadmium	0.3	0.1	µg/g wet
Calcium	1390	5	µg/g wet
Chromium	<0.5	0.5	µg/g wet
Cobalt	<0.1	0.1	µg/g wet
Copper	<0.5	0.5	µg/g wet
Iron	1	1	µg/g wet
Lead	<1	1	µg/g wet
Lithium	<0.5	0.5	µg/g wet
Magnesium	4	1	µg/g wet
Manganese	<0.5	0.5	µg/g wet
Mercury	<0.01	0.01	µg/g wet
Molybdenum	<1	1	µg/g wet
Nickel	<0.2	0.2	µg/g wet
Phosphorus	476	5	µg/g wet
Potassium	40	20	µg/g wet
Selenium	<2	2	µg/g wet
Silicon	<5	5	µg/g wet
Silver	<0.5	0.5	µg/g wet
Sodium	21	5	µg/g wet
Strontium	3	1	µg/g wet
Sulphur	2530	10	µg/g wet
Thorium	<1	1	µg/g wet
Tin	4	1	µg/g wet
Titanium	<0.2	0.2	µg/g wet
Uranium	<5	5	µg/g wet
Vanadium	<1	1	µg/g wet
Zinc	515	0.5	µg/g wet
Zirconium	<0.1	0.1	µg/g wet

47697-7      07-03 - Drum - 99/09/17

PCBs

Detection

Analyte	Result	Limit	Units
Total PCBs	<0.1		0.1 ppm

**ANALYTICAL REPORT**

47697-6                      07-04 - Drum - 99/09/17

**ICP Semi-Trace Sc Detection**

<b>Analyte</b>	<b>Result</b>	<b>Limit</b>	<b>Units</b>
Aluminum	12	5	µg/g wet
Antimony	<2	2	µg/g wet
Arsenic	<2	2	µg/g wet
Barium	0.21	0.05	µg/g wet
Beryllium	<0.1	0.1	µg/g wet
Bismuth	<5	5	µg/g wet
Cadmium	<0.1	0.1	µg/g wet
Calcium	8	5	µg/g wet
Chromium	<0.5	0.5	µg/g wet
Cobalt	0.1	0.1	µg/g wet
Copper	<0.5	0.5	µg/g wet
Iron	32	1	µg/g wet
Lead	2230	1	µg/g wet
Lithium	<0.5	0.5	µg/g wet
Magnesium	<1	1	µg/g wet
Manganese	<0.5	0.5	µg/g wet
Mercury	0.22	0.01	µg/g wet
Molybdenum	<1	1	µg/g wet
Nickel	0.6	0.2	µg/g wet
Phosphorus	<5	5	µg/g wet
Potassium	<20	20	µg/g wet
Selenium	<2	2	µg/g wet
Silicon	<5	5	µg/g wet
Silver	<0.5	0.5	µg/g wet
Sodium	1280	5	µg/g wet
Strontium	<1	1	µg/g wet
Sulphur	4600	10	µg/g wet
Thorium	<1	1	µg/g wet
Tin	4	1	µg/g wet
Titanium	1.3	0.2	µg/g wet
Uranium	<5	5	µg/g wet
Vanadium	<1	1	µg/g wet
Zinc	0.8	0.5	µg/g wet
Zirconium	<0.1	0.1	µg/g wet

47697-6                      07-04 - Drum - 99/09/17

<b>PCBs</b>	<b>Detection</b>	<b>Units</b>
<b>Analyte</b>	<b>Result      Limit</b>	<b>ppm</b>
Total PCBs	2.7      0.1	

**NO CASH 500 #7**  
**(MINFILE# 105M 001f)**

**1. LOCATION AND ACCESS**

The No Cash 500 is located on the mid northwest slope of Galena Hill and is accessed by a .75 km road leading from the Elsa-Calumet road. The site has NTS coordinates of 105M 14, latitude of 63°55'08"N and longitude of 135°27'51"W with an approximate altitude of 1100m. UTM coordinates for the site are 7 088 058m N 477 230m E.

**2. SITE PHYSIOGRAPHY**

The site is on the northwest slope of Galena Hill at an approximate elevation of 1100 metres above sea level. The discharge from the adit flows down gradient from the site to No Cash Creek and then down gradient towards the wetlands northeast of the Elsa tailings.

The entire site is located within an alpine ecosystem consisting of stunted black spruce and willow. The site is in an area of discontinuous permafrost however, no surface indications of permafrost were noted during the site investigation.

**3. GEOLOGY AND MINERALIZATION**

The No Cash 500 adit and dump are located in the Lower Schists with no known surface mineralization. The surface exposures of the mineralized vein are 900 meters upslope to the Southeast. The vein is hosted in barren, massive thick-bedded quartzites interbedded with graphitic schist, phyllite and thin-bedded quartzites. The vein material is reported to be heavily weathered with strong limonite and manganese staining. The vein material is reportedly composed of brecciated quartzite with limonite, manganese oxides, siderite, quartz stringers, galena, sphalerite, freibergite, their oxides, pyrite and arsenopyrite.

**4. SITE HISTORY**

The No Cash site has been in operation since the 1920's and from 1928 to 1931 19 tonnes of ore were produced at 25m drifting on 50 level. From 1948 to 1975, mining was conducted from the 500 level adit measuring 1115m in length producing a 5900 tonne dump at the portal. There are four raises and the Brefalt Shaft, plus a very small pit at the northeast end of the veins. Deep trenches are located at the surface near the shaft.

## **5. MINE DEVELOPMENT**

### **5.1 Mine Openings And Excavations**

#### No Cash 500 Portal

~2 m. x 3 m. wood frame construction, insulated with fiberglass with aluminum foil backing. Structure appears sound, blocked with a locked metal screen gate and wooden insulated doors. The interior appears sound. A wooden culvert carries drainage to the edge of the dump, serviceable tracks are in place and no other mine services observed.

### **5.2 Waste Rock Disposal Areas**

#### No Cash 500 Portal Dump

The portal dump is composed of a base mixture of glacial till and surface colluvium, excavated to expose the portal site, followed by a layer of development waste (quartzite and schists) with an upper layer of vein material, graphitic shists with disseminated pyrite, quartzite with disseminated pyrite and minor quartz veining with disseminated pyrite and arsenopyrite. No waste rock samples were collected.

### **5.3 Tailings Impoundments**

No tailings impoundments were observed at the No Cash 500 mine site.

### **5.4 Tailings Ponds**

No tailings ponds were observed at the site.

### **5.5 Minesite Water Treatment**

No mine site water treatment is being conducted at the site.

## **6. MINE SITE INFRASTRUCTURE**

### **6.1 Buildings**

There are two buildings located at the No Cash 500 mine site. These consist of a garage with a boiler room and the adit/portal structure. Both buildings appear to be in fair structural condition. A timber crib structure is located to the northeast corner of the garage and appears to be an old adit that has been infilled (photo 6-13). A timber retaining wall approximately 1.5m in height has been constructed behind the garage and extends for 83m to the adit structure. A timber retaining wall

constructed for the loading area is 30m in length and 15m in depth, consisting of both timber crib works and timber sheathing (photo 6-14). The access road, building site, and parking area are constructed of waste rock materials.

#### Building 7F – Garage (photo 6-15)

Location: Located on the No Cash 500 site map and listed as Building 7F.

Dimensions (L x W x H): 6m x 6.5m x 5m

Construction: The garage consists of a wood frame structure overlaid with tarpaper and metal sheathing on the east wall approximately .75 m in height from the foundation and metal sheathing on the roof. The interior of the structure is insulated with fibreglass.

Paint: Structure is unpainted.

Asbestos: There was no asbestos observed on the building.

Foundation: The structure has wood plank flooring on grade.

Non-Hazardous Contents: There were minor amounts of rubber hose and piping stored within the building.

Hazardous Contents: There was no evidence during the investigation that any hazardous materials were being stored at the building site.

Samples: No samples were taken at building 7F.

#### Building 7G – Adit (photo 6-16)

Location: Located on the No Cash 500 site map and listed as 7G.

Dimensions (L x W x H): 4m x 3m x 2.5m

Construction: The structure is wood frame with wood sheathing on the exterior. The exterior frame is insulated with fibreglass insulation.

Paint: The structure is unpainted.

Asbestos: There was no asbestos observed on the building.

Foundation: There is no foundation for this structure.

Non-Hazardous Contents: No materials were noted at the site other than trestle tracks leading from the interior of the structure.

Hazardous Contents: There were no hazardous materials noted inside or surrounding the structure.

Samples: No samples were taken at building 7G.

## 6.2 Fuel Storage

There was no fuel storage observed at the site.

## 6.3 Rail and Trestle (photo 6-17)

Location: Rail extends from the interior of the adit around to the loading area.

Fabrication: Steel tracks with wood components.

Amount of materials: Approximately 125 metres of track have been laid with additional rails stacked alongside.

Condition: Track is in good condition, however, the loading area is a safety hazard due to loss of fill in some areas. The timber retaining wall and crib have also deteriorated.

#### **6.4 Milling and Processing Infrastructure**

There is no mill facility on site.

#### **6.5 Electrical Equipment**

No transformers were noted on site, however, electrical poles and lines were still intact. Four electrical power poles with lines running to both structures totaled approximately 100m of power cable.

### **7. SOLID WASTE DUMPS**

No solid waste dumps were noted at the No Cash 500 mine site. There was some metal debris that had been deposited over the edge of the mine waste dump and stored near the adit (photo 6-18), however, only minor quantities of non-hazardous material are present. No sampling was performed at this site.

### **8. POTENTIAL CONTAMINANTS OF CONCERN**

#### **8.1 Out-of-Service Transformers**

No transformers were observed at the site.

#### **8.2 Metals and Hydrocarbons in Soil**

The site investigation did not indicate any surficial staining of the surrounding soils. No above ground storage tanks or abandoned fuel drums were noted in the area.

#### **8.3 Liquid Hazardous Materials**

No liquid hazardous materials were observed at the site.

#### **8.4 Solid Hazardous Materials**

No solid hazardous materials were observed at the No Cash 500 mine site.

## 9. WATER QUALITY

There is water flowing quite rapidly from the adit, while not visible at the structure, it is audible. An outfall is located to the west of the adit protruding through the outcrop of mine waste rock at the loading/dump site. The water from this outfall is flowing at 3 L/s. Sample analysis results can be found in Attachment B.

Samples:

Two water samples were taken at the No Cash 500 mine site. Sample 07-01-water was taken at the outfall below the adit, and sample 07-02-water was taken approximately 100m downstream of the outfall.

07-01-water (photo 6-19)

There was no surrounding vegetation at sample location 07-01-water. This would partially be due to the perpendicular angle of the slope, but more obviously to the mine waste rock. The volume of discharge was approximately 3 L/s.

07-02-water (photo 6-20)

Sample location 07-02-water exhibited vegetation growth in the form of spruce and scrub brush. Moss and lichens were visible on the surrounding rocks of the streambed at this location. The volume of water flow at this location was approximately 5 L/s.

Previous Environmental Studies/Sampling

Previous sampling at the site indicates that the level 500 adit discharge is high in metals, however, there is little evidence of metal loading in downstream water samples. The discharge water from the adit flows into No Cash Creek. Water quality sampling of the Creek indicates there is a consistent decrease in metal loading over the length of the Creek. Water quality sampling has been conducted at the site for the past five years and appears to be consistent with no significant increase or decrease in production. There are variations during the peak flows occurring the spring months and it is thought that the pH decreases are consistent with the flushing of acid salts and appears to be reflected in the water chemistry with peak flows coinciding with peak concentrations.

## 10. RECLAMATION

The No Cash 500 mine site has naturally revegetated with dwarf brushes and grasses in the vicinity of the structures. The waste rock dump has been "push dumped" and has little vegetation, although

there has been some growth in localized areas. An outfall structure is located to the west of the adit and appears to have impacted down gradient vegetation. Bright orange staining is apparent along the water drainage route from the site.

#### 11. OTHER SOURCES OF INFORMATION AND DATA

No other sources of information and data were identified.

#### 12. REFERENCES

United Keno Hill Mines Limited. 1996. *United Keno Hill Mines Limited – Site Characterization*. Report No. UKH/96/01, prepared by Access Mining Consultants Limited.

United Keno Hill Mines Limited. 1996. *United Keno Hill Mines Limited – Site Characterization, Technical Appendices I-VI*. Report No. UKH/96/01, prepared by Access Mining Consultants Limited.

## Metal Analysis

## Water Analysis

	Detection Limit	Units	47694-2 07-01 - Water - 99/09/17
<b>ICP-USN Total Metals Scan in Water</b>			
Aluminum	0.0008	mg/L	0.101
Antimony	0.005	mg/L	<0.005
Arsenic	0.01	mg/L	0.02
Barium	0.00004	mg/L	0.00363
Beryllium	0.00001	mg/L	<0.00001
Bismuth	0.0004	mg/L	<0.0004
Boron	0.002	mg/L	<0.002
Cadmium	0.00001	mg/L	0.141
Calcium	0.002	mg/L	228
Chromium	0.00006	mg/L	0.00027
Cobalt	0.00003	mg/L	0.0107
Copper	0.00003	mg/L	0.0194
Iron	0.00001	mg/L	2.77
Lead	0.0003	mg/L	0.0159
Lithium	0.001	mg/L	0.032
Magnesium	0.0005	mg/L	26
Manganese	0.00002	mg/L	6.96
Mercury	0.0001	mg/L	<0.0001
Molybdenum	0.00007	mg/L	0.00036
Nickel	0.0001	mg/L	0.0859
Phosphorus	0.03	mg/L	<0.03
Potassium	0.4	mg/L	0.4
Selenium	0.004	mg/L	<0.004
Silicon	0.004	mg/L	2.32
Silver	0.00005	mg/L	0.00141
Sodium	0.004	mg/L	0.9
Strontium	0.00002	mg/L	0.214
Sulphur	0.008	mg/L	199
Thallium	0.001	mg/L	0.018
Titanium	0.00002	mg/L	<0.00002
Vanadium	0.00003	mg/L	<0.00003
Zinc	0.0002	mg/L	10.1

### Total Arsenic by Hydride AA

Arsenic	0.0002	mg/L	0.0163
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### Total Selenium by Hydride AA

Selenium	0.0001	mg/L	<0.0001
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	Detection Limit	Units	47694-2 Water - 99/09/17
<b>Alkalinity, total</b>			
Total Alkalinity	5	mg CaCO <sub>3</sub> /L	106
<b>Chloride in Water</b>			
Chloride	0.25	mg/L	<0.25
<b>Electrical Conductivity</b>			
Electrical Conduc	0.01	µS/cm	1300
<b>Hardness</b>			
Hardness (CaCO	5	mg/L	785
<b>Nitrate - Nitrogen in Water</b>			
Nitrate-N	0.05	mg/L	<0.05
<b>Nitrite Nitrogen</b>			
Nitrite-N	0.003	mg/L	<0.003
<b>pH in Water</b>			
pH	0.01	pH	7.46
<b>Sulphate in Water</b>			
Sulphate	1	mg/L	580
<b>Total Dissolved Solids</b>			
Total Dissolved S	5	mg/L	1030

## Metal Analysis

	Detection Limit	Units	47694-4 07-02 - Water - 99/09/17
<b>ICP-USN Total Metals Scan in Water</b>			
Aluminum	0.0008	mg/L	0.0159
Antimony	0.005	mg/L	<0.005
Arsenic	0.01	mg/L	<0.01
Barium	0.00004	mg/L	0.0309
Beryllium	0.00001	mg/L	<0.00001
Bismuth	0.0004	mg/L	<0.0004
Boron	0.002	mg/L	<0.002
Cadmium	0.00001	mg/L	0.00013
Calcium	0.002	mg/L	33.9
Chromium	0.00006	mg/L	0.00021
Cobalt	0.00003	mg/L	<0.00003
Copper	0.00003	mg/L	0.0019
Iron	0.00001	mg/L	0.016
Lead	0.0003	mg/L	<0.0003
Lithium	0.001	mg/L	<0.001
Magnesium	0.0005	mg/L	9.57
Manganese	0.00002	mg/L	0.00189
Mercury	0.0001	mg/L	<0.0001
Molybdenum	0.00007	mg/L	<0.00007
Nickel	0.0001	mg/L	0.0009
Phosphorus	0.03	mg/L	<0.03
Potassium	0.4	mg/L	<0.4
Selenium	0.004	mg/L	<0.004
Silicon	0.004	mg/L	3.5
Silver	0.00005	mg/L	<0.00005
Sodium	0.004	mg/L	1.1
Strontium	0.00002	mg/L	0.0639
Sulphur	0.008	mg/L	29.9
Thallium	0.001	mg/L	<0.001
Titanium	0.00002	mg/L	0.00024
Vanadium	0.00003	mg/L	<0.00003
Zinc	0.0002	mg/L	0.0236

### Total Arsenic by Hydride AA

Arsenic	0.0002	mg/L	0.0007
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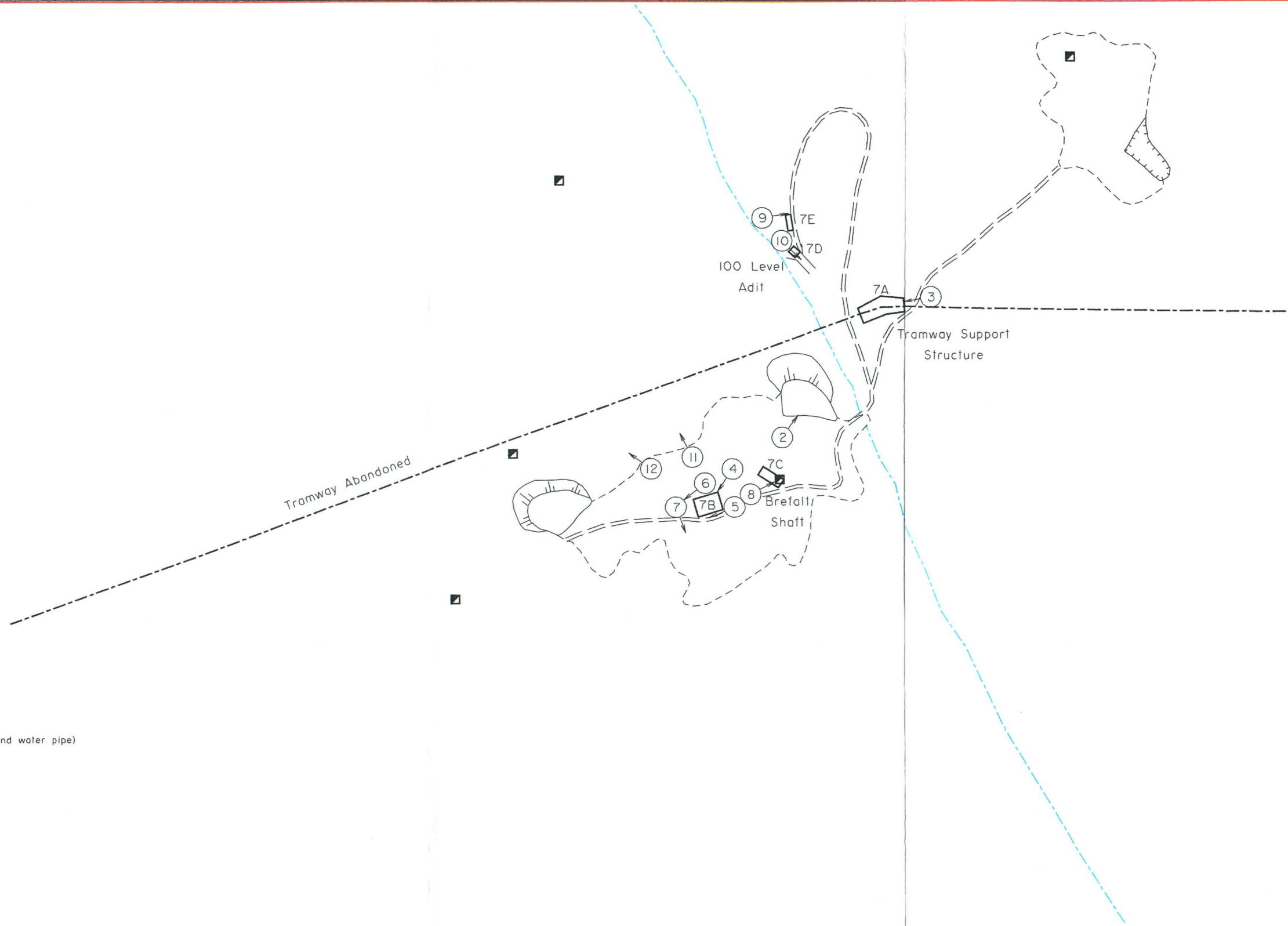
### Total Selenium by Hydride AA

Selenium	0.0001	mg/L	0.0003
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## Water Analysis


	Detection Limit	Units	47694-4 07-02 - Water - 99/09/17
<b>Alkalinity, total</b>			
Total Alkalinity	5	mg CaCO <sub>3</sub> /L	37
<b>Chloride in Water</b>			
Chloride	0.25	mg/L	<0.25
<b>Electrical Conductivity</b>			
Electrical Conductivity	0.01	µS/cm	280
<b>Hardness</b>			
Hardness (CaCO <sub>3</sub> eq)	5	mg/L	148
<b>Nitrate - Nitrogen in Water</b>			
Nitrate-N	0.05	mg/L	0.2
<b>Nitrite Nitrogen</b>			
Nitrite-N	0.003	mg/L	<0.003
<b>pH in Water</b>			
pH	0.01	pH	7.39
<b>Sulphate in Water</b>			
Sulphate	1	mg/L	88.3
<b>Total Dissolved Solids</b>			
Total Dissolved Solids	5	mg/L	196

-  22A Building (22A: building site present reference\*) Indicates Asbestos Material
-  22A Collapsed Building
-  Adit
-  Collapsed Adit
-  Shaft
-  Collapsed/Backfilled Shaft
-  Mine Rock Dump
-  Bedrock Open Pit
-  Trench
-  Stripped Overburden Stockpile
-  Stripped / Disturbed Area
-  Outcrop Boundary
-  Highway
-  Road (gravel, 2 wheel drive)
-  Road (gravel, 4X4 accessible)
-  Road (inaccessible)
-  Trail
-  Culvert
-  24501-01 1999 Soil Sample (this study)
-  Pre 1999 Soil Sample (other sources)
-  25WR04-01 1999 Waste Rock Sample (this study)
-  Pre 1999 Waste Rock Sample (other sources)
-  W0-12-06 1999 Water Sample
-  Pre 1999 Water Sample
-  Tension Cracks
-  Mass Movement (note: for Forms; BelleKeno)
-  Groundwater Seep
-  Surface Water Flow (Stream, Creek, River)
-  Lake
-  Settling Pond / Water Treatment Pond
-  Tailings Dam / Tailings Pond / Mill Tails
-  Ponded Water / Trench
-  Barrels
-  Abandoned Equipment (compressors, ore cars, rails, air and water pipe)
-  Mine Rails / Trestle
-  Collapsed Trestle
-  Solid Waste Disposal Site
-  Area of Soil Contamination
-  \*(6) Transformer Location (number of transformer in brackets)
-  Power Line
-  Power Line Collapsed
-  Aerial Transmission Towers
-  5 Photo Site (arrow shows view direction)
-  GPS Survey Location
-  Former Building Site (Elsa)

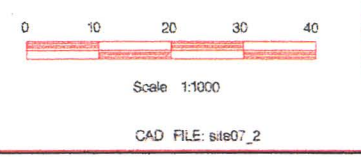
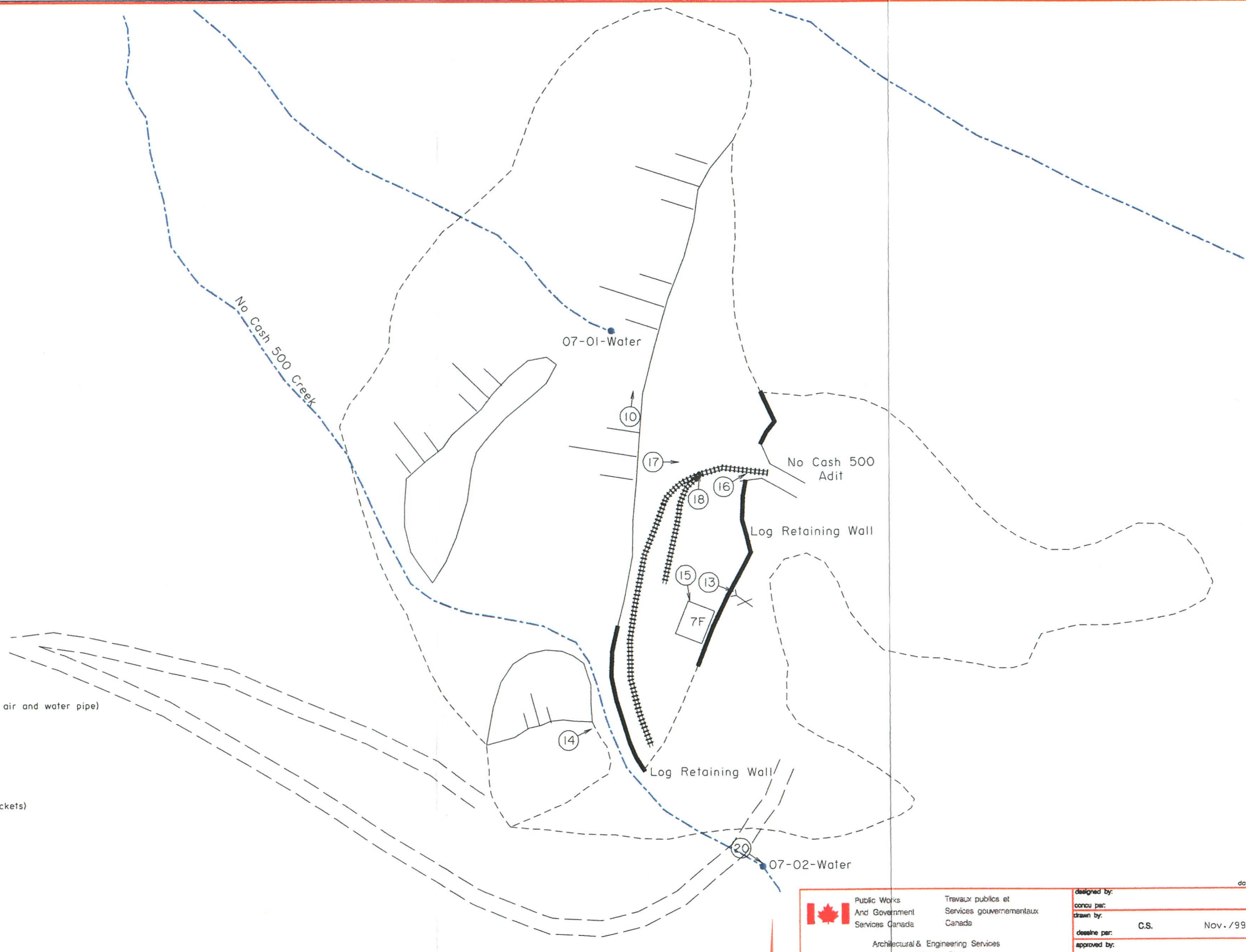


Scale 1:2500

CAD FILE: site07\_1

 Public Works And Government Services Canada  Travaux publics et Services gouvernementaux Canada  Architecture & Engineering Services Western Region	designed by: conçu par:	notes:
	drawn by: C.S. dessiné par:	Nov. / 99
Drawing title: <b>No Cash 100 Site #7 Site Assessment</b> Yukon Territory	Titre du dessin:	revisions:
project no. no. du projet:	125-12.01	dwp. no. dessin no.: 1 of 2

- 22A\* Building (22A: building site present reference\*)  
Indicates Asbestos Material
- 22A Collapsed Building
- Adit
- Collapsed Adit
- Shaft
- Collapsed/Backfilled Shaft
- Mine Rock Dump
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- Ponded Water / Trench
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- Abandoned Equipment (compressors, ore cars, rails, air and water pipe)
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- Collapsed Trestle
- Solid Waste Disposal Site
- Area of Soil Contamination
- \*(6) Transformer Location (number of transformer in brackets)
- Power Line
- Power Line Collapsed
- Aerial Transmission Towers
- (5) Photo Site (arrow shows view direction)
- GPS Survey Location
- Former Building Site (Elsa)
- Pre 1999 Piezometer Sample



Public Works And Government Services Canada  Travaux publics et Services gouvernementaux Canada  Architectural & Engineering Services Western Region	designed by: conçu par: drawn by: dessiné par:	C.S. Nov. / 99	date:
	approved by: approuvé par: revisions:	project no. no. du projet:  125-12.01	dwg. no. dessin no.:  2 of 2
Drawing title:		Titre du dessin:	
<b>No Cash-500 Site #7 Site Assessment Yukon Territory</b>			



Photo 7-1: Eastern trench of the No Cash 100 mine site



Photo 7-2: Tramway midstation located in background with an outhouse in foreground.



Photo 7-3: Tramway midstation structure.



Photo 7-4: Garage structure located adjacent to the shafthouse. Note the batteries in the foreground.



Photo 7-5: Receiving tank located on the outside of the garage structure. Tank was insulated with fibreglass.



Photo 7-6: Abandoned compressor located on the northwest corner of the garage.



Photo 7-7: Shed on the southwest corner of garage that housed unknown product (samples taken).



Photo 7-8: Shafthouse located to the east of the garage.



Photo 7-9: Interior of the lunchroom. Note the asbestos board on the walls.



Photo 7-10: Adit to the No Cash 100 level. Note the tramway in the background.



Photo 7-11: Dump site that contained miscellaneous metal debris. Wooden pipe can be seen in the foreground.



Photo 7-12: Kill zone below the waste rock dump.



Photo 7-13: Old adit structure that has collapsed and caved in.



Photo 7-14: Timber retaining wall for the loading dock.



Photo 7-15: Garage structure located to the south of the adit.



Photo 7-16: Adit structure leading to the 500 level..



Photo 7-17: Rails extending from the adit.



Photo 7-18: Wood and metal track debris located near the adit.



Photo 7-19: Waste rock dump with pipe in the background providing drainage from the underground workings.



Photo 7-20: Water sample location taken upstream of the site.