

STONE
SITE# 31
MINFILE# 105M001ak

1. LOCATION AND ACCESS

The Stone mine site is located in Faro Gulch, 2.3 km north of Keno Summit at 1220m to 1340m elevation. UTM co-ordinates for the site are 7092 500m N and 488 800m E. Access by foot is possible along the Lower Faro Gulch Trail which starts at the Sadie Ladue site, 3 km to the west. Except for one building, the site is located to the south of this trail.

2. SITE PHYSIOGRAPHY (photo 31-1)

The Stone site is located on a moderately steep north-facing slope on Keno Hill, and is likely underlain by permafrost. The site and surrounding area is thickly vegetated with willows, alders, and spruce trees as well as shrubs. The ground is covered with a blanket of moss and decaying leaves. Surface runoff from the mine site flows northward via a small tributary of Faro Gulch, eventually joining the Keno Ladue River 3.1km to the north. The tributary of Faro Gulch starts 65m downslope of the lower adit and flows northward 300m before joining Faro Gulch. Site photos are located in Attachment 1.

3. GEOLOGY AND MINERALIZATION

The bedrock geology is a carbonaceous phyllite, a graphitic phyllite and a siliceous phyllite with greenstone interbeds. A cross-cutting quartz-siderite vein, up to 3m wide, contains galena (PbS), sphalerite ((Zn,Fe)S), freibergite ((Cu, Fe)₁₂Sb₄S₁₃) and chalcopyrite (CuFeS₂).

4. SITE HISTORY

Prior to 1952, two adits were excavated on the property. During this period, 135 tonnes at 3919 g/t silver and 30.3% lead were shipped from the site to Wernecke or Elsa for processing. In 1952, a third adit was driven between two of the earlier adits.

5. MINE DEVELOPMENT

There are three adits on the property and all three were inspected during the site visit. The airphoto indicates possible activity below the road, but this was not investigated. Waste rock piles are located outside the three adits. Site details can be found in Figure 1; site photos are in Attachment 1.

5.1 Mine Openings and Excavations

The three adits are in a line running northeast southwest at different elevations.

Upper Adit (photo 31-2)

All that remains of the upper adit portal is some collapsed rocks and broken timbers at the bottom of a talus slope.

Location: The upper adit is located 280m southeast of the Lower Faro Gulch Trail at an elevation of 1340m.

Dimensions (L x W x H): The portal has collapsed and the original dimensions are unknown.

Supports: The portal was originally supported by timber.

Condition: The portal has collapsed.

Accessibility: The adit cannot be accessed.

Middle Adit (photo 31-4)

The rock and timbers supporting the portal have collapsed, leaving a small 1m by 1m opening that is blocked by ice. There is a building immediately to the west of the adit (discussed in Section 6 below).

Location: The middle adit is located 160m southeast of the Lower Faro Gulch Trail at an elevation of 1280m.

Dimensions (L x W x H): The portal has collapsed and the original dimensions are unknown.

Supports: The portal was originally supported by timber and rock.

Condition: The portal has collapsed.

Accessibility: The adit cannot be accessed.

Lower Adit (photo 31-6)

A shallow depression full of coarse, angular talus material and willows is all that remains of the lower adit. The portal and supporting structures are no longer visible.

Location: The lower adit is located 30m southeast of the Lower Faro Gulch Trail at an elevation of 1230m.

Dimensions (L x W x H): The portal has collapsed and the original dimensions are unknown.

Supports: The original support structure could not be located.

Condition: The portal has collapsed, the area is stable.

Accessibility: The adit cannot be accessed.

5.2 Waste Rock Disposal Areas

There are three waste rock disposal areas located outside each of the three adits.

Waste rock pile #1 (photo 31-3)

The waste rock pile appears to have formed by end dumping from the upper adit opening. A 50cm test pit was excavated from the east side of the waste rock pile. The waste rock is bi-modal with 50% fines, 35% 2mm to 2cm and 15% 2cm to 30cm. Four distinct layers based on colour and oxidation were identified. The surface layer (0-3cm) is moderately oxidized green-brown phyllite and greenstone with 3-8% siderite-sphalerite vein.

The next layer (3-5cm) is a yellow-green oxidized layer. From 5-15cm, there is a green-brown oxidized layer. Below this (15-50cm), is a green-yellow unoxidized material with 27-30cm of dark gray graphitic shear material. There was no surface water or seeps flowing through the rock pile.

Location: The waste rock pile starts immediately outside of the upper adit and continues 45m downslope.

Dimensions (L x W x H): 40m x 20m x 5m

Sampling: Sample 31WR01-01 was collected from the test pit and analyzed. The field paste pH was 8.5 and the conductivity was 40uS/cm.

Waste rock pile #2 (photo 31-5)

The waste rock pile appears to have formed by end dumping from the middle adit opening. A 30cm test pit was excavated from the middle of the pile. The waste rock in the pit appeared uniform and is composed of dark gray graphitic phyllite with 2-5% quartz-siderite veinlets and vugs. The waste rock is bi-modal with 50% fines (<2mm); 40% 2mm-5cm, and 10% greater than 5cm. There was no surface water or seeps flowing through the rock pile.

Location: The waste rock pile starts immediately outside of the middle adit and continues 50m downslope.

Dimensions (L x W x H): 60m x 50m x 8m

Sampling: Sample 31WR01-01 was collected from the test pit and sent for Acid-Base Accounting (ABA) and metals analysis. The field paste pH was 8.5 and the conductivity was 40µS/cm.

Waste rock pile #3

The waste rock pile likely formed by end dumping from the lower adit opening. The waste rock is composed of large angular blocks of greenstone and lesser dark gray graphitic phyllite. There was no surface water or seeps flowing through the rock pile.

Location: The waste rock pile starts immediately outside of the lower adit and continues 15m downslope.

Dimensions (L x W x H): 15m x 6m x 2m

Sampling: Sample 31WR02-01 was collected from the test pit and sent for Acid-Base Accounting (ABA) and metals analysis. The field paste pH was 8.4 and the conductivity was 120µS/cm.

5.3 Tailings Impoundments

No ore was processed at the site; no tailings were encountered.

5.4 Minesite Water Treatment

There is no water treatment facility located at this site.

6. MINE SITE INFRASTRUCTURE

There are four buildings associated with the property. A small volume of rail was encountered near the middle adit. Site details are located on Figure 1: site photos can be found in Attachment 1.

6.1 Buildings

There are two buildings located near the middle adit (Buildings 31-A and 31-B). Two more buildings are next to the Lower Faro Gulch Trail, 380m northwest of the Lower adit.

Building 31-A: Dry Building (photo 31-7)

Dimensions (L x W x H): 7.3m x 4.3m x 3.0m

Location: The building is located 60m to the northwest of and at the same elevation as the middle adit.

Construction: The entire building, frame, roof, floor and sides are constructed with wood. The floors are rotting but the rest of the building is moderately sound. The exterior of the building is painted white.

Asbestos: None observed

Non-Hazardous Contents: Two 45-gallon drums, empty.

Hazardous Contents: None.

Building 31-B

Dimensions (L x W x H): 4.5m x 3m x 3.0m

Location: Immediately east of the entrance to the middle adit.

Construction: The building was constructed with a wood frame and aluminum siding. The building has almost completely collapsed.

Asbestos: none observed

Non-Hazardous Contents: none

Hazardous Contents: none

The frames of both Building 31-C and 31-D appear to have been removed; the roofing and siding material for the buildings is all that is left.

Building 31-C (see Photo 31-8)

Dimensions (L x W x H): Building material is spread out over a 24m x 15m area.

Location: North of the Lower Faro Gulch Trail, 380m northwest of the Lower Adit.

Construction: The roof and wall panel are likely constructed with an asbestos-containing material.

Asbestos: Suspect that the roof and wall board contain asbestos.

Non-Hazardous Contents: none

Hazardous Contents: none

Building 31-D

Dimensions (L x W x H): Building material is spread out over a 20m by 15m area.

Location: South of the Lower Faro Gulch Trail, 380m northwest of the lower adit.

Construction: Wood construction.

Asbestos: None observed.

Non-Hazardous Contents: several empty crushed drums (semi-buried).

Hazardous Contents: none

6.2 Fuel Storage

No fuel storage areas were encountered on the Stone site.

6.3 Rail and Trestle

Location: Some demolished rail noted by the middle adit.

Fabrication: Steel with wooden rail ties.

Amount of materials: Roughly 15 cubic metres of demolished rail line.

Condition: Safe and overgrown.

6.4 Milling and Processing Infrastructure

No milling or processing was done at this site.

6.5 Electrical Equipment

No electrical equipment was encountered.

7. SOLID WASTE DUMPS

There is no one location where solid waste was dumped. Empty fuel drums were found outside of Building 31-C and assorted steel debris (rails, piping) were dumped around the middle adit and waste rock dump.

8. POTENTIAL CONTAMINANTS OF CONCERN

No hazardous waste was encountered at the site. Potential contaminants of concern include any metals washing from the waste rock piles.

9. WATER QUALITY

Surface runoff from the mine site flows northward into a small, unnamed tributary of Faro Gulch. Two samples were collected downstream of the mine site to be tested for routine water quality and metals. Sample 31WQ01-01/02 was collected from Faro Gulch, just upstream of the small tributary. Sample 31WQ02-01/02 is from the small tributary.

Field Test Results

Sample 31WQ01-01/02 pH: 8.1 Conductivity: 310 μ S/cm

Sample 31WQ02-01/02 pH: 8.3 Conductivity: 350 μ S/cm

10. RECLAMATION

Natural revegetation of mostly alders has occurred in most of the disturbed areas.

11. REFERENCES

Minfile #105M001ak

**ATTACHMENT 2: 1999 STONE WATER SAMPLES
LABORATORY RESULTS**

Sample Number	Detection Limit	Units	31-WQ01-01 - Stone - Sept 14/99	31-WQ02-02 - Stone - Sept 14/99
Site Description			Faro Gulch upstream of tributary	Faro Gulch tributary downstream of mine site
pH (field)	N/A	pH	8.1	8.3
Conductivity (field)	N/A	µS/cm	310	350
pH (Lab)	0.01	pH	7.76	8
Conductivity (Lab)	0.01	µS/cm	370	500
Total Alkalinity	5	mg CaCO3/L	49	129
Chloride	2.5	mg/L	<0.25	<0.25
Hardness (CaCO3 equiv)	5	mg/L	181	261
Nitrate-N	0.05	mg/L	<0.05	0.47
Nitrite-N	0.003	mg/L	<0.003	<0.003
Sulphate	1	mg/L	120	113
Total Dissolved Solids	5	mg/L	246	332
Analysis by ICP-USN				
Aluminum	0.0008	mg/L	0.02	0.0096
Antimony	0.005	mg/L	<0.005	<0.005
Arsenic	0.01	mg/L	<0.01	<0.01
Barium	0.00004	mg/L	0.0357	0.0254
Beryllium	0.00001	mg/L	<0.00001	<0.00001
Bismuth	0.0004	mg/L	<0.0004	<0.0004
Boron	0.002	mg/L	<0.002	<0.002
Cadmium	0.00006	mg/L	0.00158	0.000018
Calcium	0.002	mg/L	48.6	70.8
Chromium	0.00006	mg/L	0.00027	0.00019
Cobalt	0.00003	mg/L	0.00011	<0.00003
Copper	0.00003	mg/L	0.0014	0.00198
Iron	0.00001	mg/L	0.059	0.008
Lead	0.0003	mg/L	0.0115	<0.0003
Lithium	0.001	mg/L	<0.001	0.002
Magnesium	0.0005	mg/L	11.7	16.8
Manganese	0.00002	mg/L	0.0543	0.00093
Mercury	0.0001	mg/L	<0.0001	<0.0001
Molybdenum	0.00007	mg/L	0.00044	0.00044
Nickel	0.00001	mg/L	0.0014	<0.00001
Phosphorus	0.03	mg/L	<0.03	<0.03
Potassium	0.4	mg/L	<0.4	<0.4
Selenium	0.004	mg/L	0.009	<0.004
Silicon	0.004	mg/L	1.75	1.66
Silver	0.00005	mg/L	<0.00005	<0.00005
Sodium	0.004	mg/L	0.7	0.5
Strontium	0.00002	mg/L	0.178	0.145
Sulphur	0.008	mg/L	39.8	36.8
Thallium	0.001	mg/L	<0.001	<0.001
Titanium	0.00002	mg/L	0.00041	<0.00002
Vanadium	0.00003	mg/L	<0.00003	<0.00003
Zinc	0.0002	mg/L	0.14	0.0016
Analysis by Hydride AA				
Arsenic	0.0002	mg/L	0.0008	0.0007
Selenium	0.0001	mg/L	<0.0001	<0.0001

ATTACHMENT 2: 1999 STONE WASTE ROCK SAMPLES

LABORATORY RESULTS

Sample Number	Detection Limit	Units	31WR01-01 - Sept 14/99	31WR02-01 - Sept 14/99
Site Description			Upper Level Adit waste rock pile (#1)	Middle Level Adit waste rock pile (#2)
Paste pH (field)	N/A	pH	8.5	8.4
Conductivity (field)	N/A	µS/cm	40	120
pH in Saturated Paste				
pH	0.1	pH	7.9	7.8
pH in Soil (1:2 water)				
pH	0.01	pH	8.1	8.3
ICP Semi-Trace Scan				
Aluminum	5	µg/g	14500	29400
Antimony	2	µg/g	<2	<2
Arsenic	2	µg/g	64	48
Barium	0.05	µg/g	88.6	226
Beryllium	0.1	µg/g	0.2	0.7
Bismuth	5	µg/g	<5	<5
Cadmium	0.1	µg/g	2.7	20.2
Calcium	5	µg/g	71300	33200
Chromium	0.5	µg/g	9.3	26.5
Cobalt	0.1	µg/g	18.4	10.2
Copper	0.5	µg/g	35	13
Iron	1	µg/g	66000	24000
Lead	1	µg/g	70	147
Lithium	0.5	µg/g	7.8	3.5
Magnesium	1	µg/g	18000	7450
Manganese	0.5	µg/g	11600	3650
Mercury	0.01	µg/g	3.5	<0.01
Molybdenum	1	µg/g	1	2
Nickel	1	µg/g	32.6	29.4
Phosphorus	5	µg/g	684	950
Potassium	20	µg/g	4480	12700
Selenium	2	µg/g	<2	<2
Silicon	5	µg/g	692	979
Silver	0.5	µg/g	9.9	1.9
Sodium	5	µg/g	55	329
Strontium	1	µg/g	9	14
Sulphur	10	µg/g	2100	4630
Thorium	1	µg/g	<1	<1
Tin	1	µg/g	<1	1
Titanium	0.2	µg/g	39.7	140
Uranium	5	µg/g	<5	<5
Vanadium	1	µg/g	43	36
Zinc	0.5	µg/g	345	1760
Zirconium	0.1	µg/g	11.8	20.8

**ATTACHMENT 2: 1999 STONE WASTE ROCK SAMPLES LABORATORY RESULTS
MODIFIED SOBEEK METHOD ACID-BASE ACCOUNTING TEST**

SAMPLE	SITE DESCRIPTION	PASTE pH	S(T) %	S(SO4) %	AP	NP	NET NP	NP/AP
31WR01-01 - Sept./99 - Soil	Upper Level Adit waste rock pile (#1)	8.8	0.20	<0.01	6.3	196.5	190.3	31.4
31WR02-01 - Sept./99 - Soil	Middle Level Adit waste rock pile (#2)	8.8	0.56	<0.01	17.5	137.8	120.3	7.9
31WR02-01 - Sept./99 - Soil RE	Middle Level Adit waste rock pile (#2): Duplicate	-	0.54	<0.01	16.9	-	-	-

AP = ACID POTENTIAL IN TONNES CaCO₃ EQUIVALENT PER 1000 TONNES OF MATERIAL.

NP = NEUTRALIZATION POTENTIAL IN TONNES CaCO₃ EQUIVALENT PER 1000 TONNES OF MATERIAL.

NET NP = NET NEUTRALIZATION POTENTIAL = TONNES CaCO₃ EQUIVALENT PER 1000 TONNES OF MATERIAL.

NOTE: WHEN S(T) AND/OR S(SO₄) IS REPORTED AS <0.01, IT IS ASSUMED TO BE ZERO FOR THE AP CALCULATION.

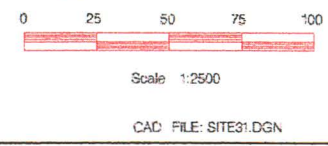
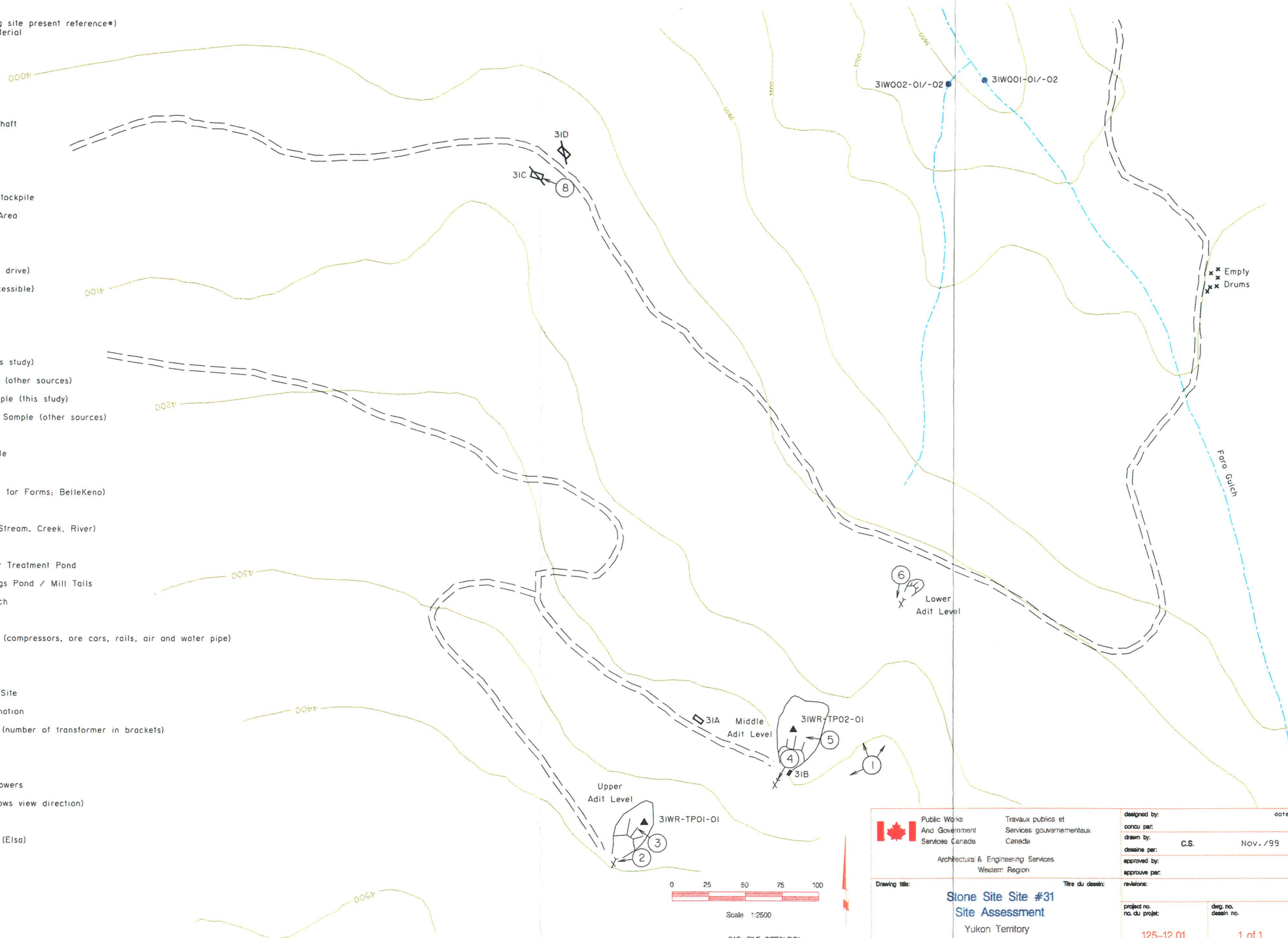
N/D = NO DUPLICATE ASSAY. CALCULATIONS ARE BASED ON ASSAY RESULTS OF THE INITIAL SAMPLE.

RE = REPLICATE.

NOTE - A HIGH LEVEL OF SOLUBLE METALS (ESPECIALLY IRON) WERE OBSERVED IN MANY SAMPLES DURING THE ABA TITRATIONS.

SAMPLES WITH A NEGATIVE NET NP SHOULD BE TESTED FOR MOBILE METALS USING STANDARD SHAKE FLASK EXTRACTION TESTS.

- 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)



	Public Works and Government Services Canada	Travaux publics et Services gouvernementaux Canada	designed by: _____	date: _____
	Architecture & Engineering Services Western Region		drawn by: C.S.	Nov. / 99
Drawing title: Stone Site Site #31 Site Assessment Yukon Territory			approved by: _____	revisions: _____
project no. / no. du projet: 125-12.01		dep. no. / dessin no.: 1 of 1		

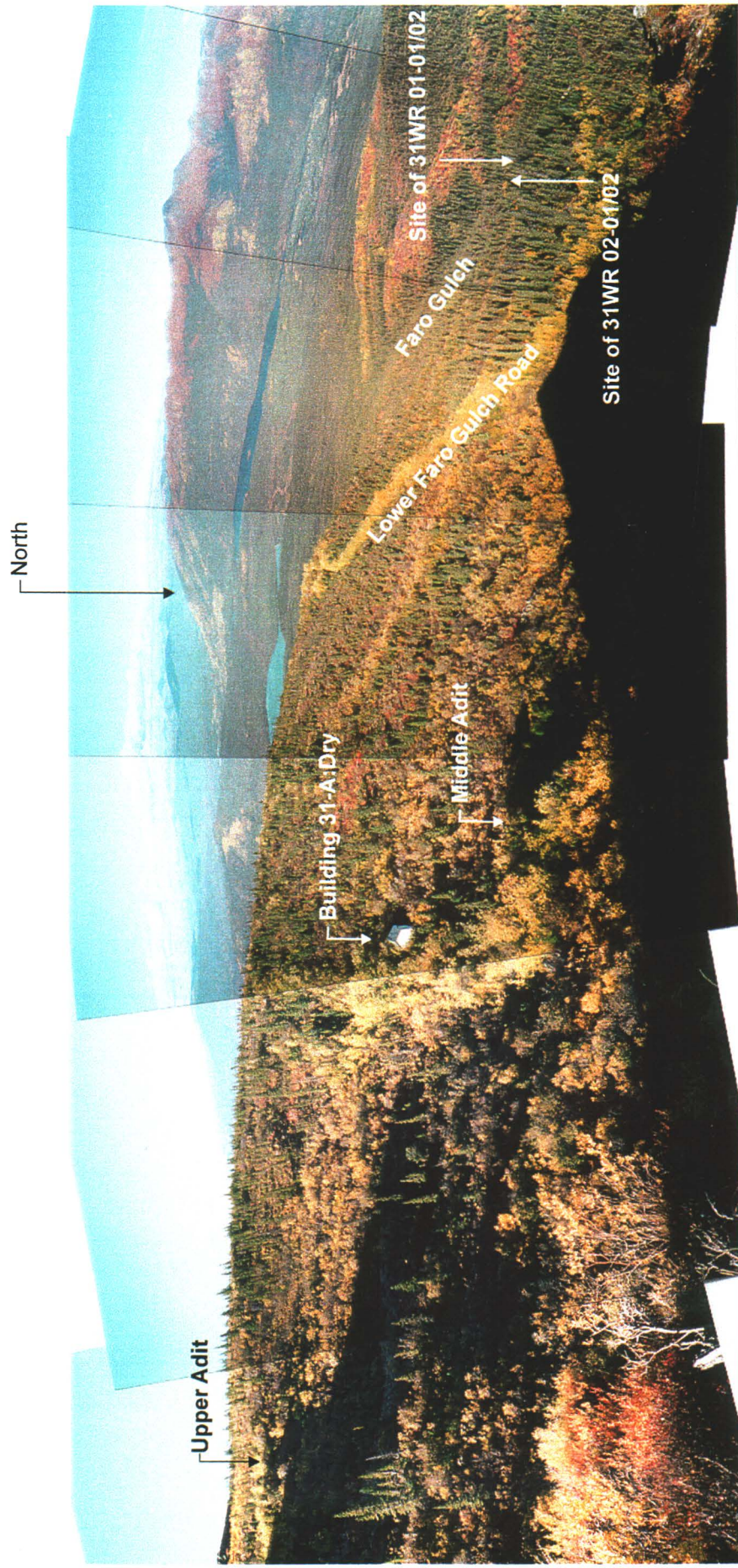


Photo 31-1: Panorama of Stone site.



Photo 31-2: Collapsed upper adit portal. Note hammer in old portal timbers.
Photo Direction (Azimuth 230^o)



Photo 31-3: Upper adit level waste rock dump.
Photo Direction (Azimuth 300^o)



Photo 31-4: Collapsed middle adit portal and storage shed (Bldg. 31-B). Note damp ground from mine seepage. (Azimuth 160°)



Photo 31-5: Middle adit level waste rock dump with mine dry in background.
Photo Direction (Azimuth 270°)



Photo 31-6: Collapsed lower adit portal.
Photo Direction (Azimuth 032°)



Photo 31-7: Interior of dry (Bldg 31-A) showing rafters, wallboard and water tanks for shower and sauna.



Photo 31-8: Demolished buildings (Bldgs. 31-C, D) along road west of Stone. Note discarded asbestos containing siding at right and in background held by field personnel. at depth in pit and abundant siderite vein cobbles.
Photo Direction (Azimuth 290°)