MAIN FAULT & NABOB

Site # 33

MINFILE # 105M 001aq

1. LOCATION AND ACCESS

The Main Fault & Nabob site is located on the north face of Keno Hill, approximately 0.75km northwest of Monument Hill, adjacent to Keno No. 9 System. Four-wheel drive access is possible via the Silver Basin Gulch Trail, roughly 1km southeast of the Keno Hill Signpost. Approximate UTM co-ordinates for the site are 7 090 640m N and 490 150m E (Latitude: 63° 56'41" N and Longitude 135° 12'00" W).

2. SITE PHYSIOGRAPHY

The site is located at an elevation of 5600ft (1710m), between the Keno and Monument Hill summits, on a gently sloping north-northwest slope of Keno Hill. The site is well above the treeline, in sub-alpine to alpine vegetation which is dominated by shrubs and grasses. The site is underlain by permafrost. Surface runoff at the site flows into Faro Gulch, located 600m to the north, a tributary of the Keno Ladue River.

3. GEOLOGY AND MINERALIZATION

The Main Fault and Nabob adit dump contains Keno Hill Quartzite with a vein material consisting of quartz, with weak oxidized siderite, limonite, and minor galena.

Trench #2 follows the Main Fault for approximately 70m along strike. The vein fault in the trench is a breccia quartzite with weak quartz and oxidized siderite containing trace amounts of galena. The vein breccia is also reported to contain limonite, anglesite, cerussite and minor sulphides.

The other three trenches are in bedrock or in near bedrock Keno Hill Quartzite float.

4. SITE HISTORY

It is reported that in the 1920's and adit, pits, crosscut and drift were excavated. An environmental survey done in 1999 revealed an adit, a shaft and four (4) bulldozer trenches.

5. MINE DEVELOPMENT

There is one adit, one shaft and four trenches and their associated waste rock piles located at the Main Fault and Nabob site. No ore was processed at the site and no tailings were encountered. There is no wastewater treatment

facility at this site. Site details can be found on Figure 1; site photos are located in Attachment 1 and laboratory results from the sampling are in Attachment 2.

5.1 Mine Openings and Excavations

Main Fault Shaft (photo 33-1)

At the west end of Trench #2 is an old collapsed prospect shaft located on the Main Fault.

Dimensions (L x W x H): 1.5m x 1.5m x unknown

Supports: The collar is supported by log cribbing.

Condition: The shaft has collapsed at surface.

Accessibility: A ladder going down the shaft is still in place, however since the shaft has collapsed the shaft can no longer be accessed.

Main Fault and Nabob Adit (photo 33-2)

The adit is located on the west side of Silver Basin Gulch Trail, 150m north of the shaft. The portal has collapsed.

Dimensions (L x W x H): The original dimensions of the portal are estimated to be roughly 1.5m by 1.5m. The length of the adit is unknown.

Supports: The portal was supported with log cribbing.

Condition: The portal and the first 5m (up to the road) of the adit have collapsed. The portal is filled with broken log cribbing and large boulders. No evidence of further stability problems was observed, the road above the adit did not appear to be slumping.

Accessibility: The adit can no longer be accessed.

Trench #1

Trench #1 is located on the west side of the road at the northeast end of the site. The trench is oriented at 310°.

Dimensions (L x W x H): 62m x 3-8m x 2.5m

Condition: The trench walls are gently sloped and do not pose any stability concerns.

Accessibility: The trench is easily accessed.

Trench #2

Trench #2 is located on the east side of Silver Basin Gulch Trail 150m south of the Main Fault and Nabob Adit. The trench is parallel to the road and is oriented at 057°. The Main Fault shaft is located at the southwest end of the trench. At the time of the site visit, a small trickle of water was seeping from mid-way along the eastern trench wall and flowing for a couple of meters before seeping back into the ground.

Dimensions (L x W x H): 72m x 2-8m x 1.5m

Condition: The trench walls are moderately sloped and do not pose any stability concerns. A small depression observed in the base of the trench could indicate a partial collapse in the Nabob adit below.

Accessibility: The trench is easily accessed.

Trench #3

Trench #3 is located 60m to the south of Trench #2. The trench is oriented at 228°. There are a few small test pits dug at the base of the trench.

Dimensions (L x W x H): 35m x 2-8m x 1.5m

Condition: The trench walls are gently sloped and composed of predominantly blocky talus. They do not pose any stability concerns.

Accessibility: The trench is easily accessed.

Trench #4

Trench #4 is excavated from near the southern end of Trench #2 to the midpoint of Trench #3. The trench is oriented at 340°.

Dimensions (L x W x H): 59m x 2-8m x 1m

Condition: The trench walls are gently sloped and do not pose any stability concerns.

Accessibility: The trench is easily accessed.

5.2 Waste Rock Disposal Areas

Waste rock from the trenches was composed primarily of overburden and quartzite. The waste rock was piled along the sides and ends of the trenches.

There is a waste rock pile measuring 20m by 5m by 3m is located roughly 25m from the portal of the Main Fault and Nabob Adit. Three trestles are still in place on the pile. The surface composition of the pile is Keno Hill Quartzite with quartz veining. The quartz veining contains weakly oxidized siderite, limonite and minor galena. There is no vegetation growing on the pile. No surface water was observed at or near the pile. A sample (Nabob-Waste Rock-Sept.15/99) was collected for analysis. The field paste pH was 5.6 and the conductivity was 10μS/cm.

6. MINE SITE INFRASTRUCTURE

There is an old house and an outhouse located at the site. There is some dismantled rail and trestle near the Main Fault and Nabob Adit. No fuel storage areas, electrical equipment or any milling or processing infrastructure was encountered at this site.

5.1 Buildings

Building 33A (photo 33-3)

There is an old house located on the Silver Basin Gulch Trail at the edge of the cirque, 200m southwest of the trenches. Three additions were built on to the original 5m by 5m log cabin. Most of the asbestos tar paper cladding that covered the exterior walls has fallen off and is scattered around the building. The roof is mostly covered in sheets of asphalt shingling, with one small section, now collapsed, roofed with corrugated tin. No hazardous products were encountered inside of the building.

Building 33B

There is a wooden outhouse located near the Main Fault and Nabob Adit.

5.2 Rail and Trestle

Steel rail and wooden ties extended northwest from the Main Fault and Nabob Adit to the top of the waste rock pile. The rail was dismantled and left scattered in the area between the adit and the waste rock pile. Three trestles are still in place on top of the waste rock pile. An old ore cart was encountered at the base of the pile.

7. SOLID WASTE DUMPS

Two areas of solid waste were encountered at the site, one is near the entrance of the Main Fault and Nabob Adit and the second is near the old house.

Solid Waste Dump #1

The dump is located between the Main Fault and Nabob Adit and the waste rock pile. Material observed in the dump includes corrugated iron sheeting, empty fuel drum, two 1ft by 4ft air tanks and roughly 6.5m^3 of wood waste.

Solid Waste Dump #2

The dump is located near the old house, on the opposite side of the Silver Basin Gulch Trail. Roughly 20m^3 of the waste is asbestos asphalt wall and roofing material, 3m^3 of household debris such as glass, cans and wood, and 15 batteries for miners lamps that have leached.

8. POTENTIAL CONTAMINANTS OF CONCERN

Potential contaminants of concern include acid leaching from the miner's lamp batteries and any metals washing from the waste rock piles.

9. WATER QUALITY

There is a small trickle of water that at approximately the mid-point of Trench #2, the water disappears into a shallow depression. This may be the surface expression of collapsed underground workings.

10. RECLAMATION

No revegetation has occurred at the site at this point likely due to the sub-alpine wind-swept conditions of this area. No reclamation measures have been undertaken at this site.

11. REFERENCES AND PERSONAL COMMUNICATIONS

Minfile #105M 001aq

ATTACHMENT 2: 1999 MAIN FAULT AND NABOB WASTE ROCK SAMPLES LABORATORY RESULTS			
Site Number	Detection Limit	Units	Nabob - Waste Rock - Sept 15/99
Sample Desciption			Composite sample from the waste rock pile outside of the Nabob Adit
Paste pH (field)	N/A	pH	5.6
Conductivity (field)	N/A	µS/cm	10
pH in Saturated Paste			
pH	0.1	pH	6.2
pH in Soil (1:2 water)			
pH	0.01	pH	6.9
ICP Semi-Trace Scan			
Aluminum	5	µg/g	102000
Antimony	2	µg/g	110
Arsenic	2	µg/g	1300
Barium	0.05	µg/g	227
Beryllium	0.1	µg/g	<0.1
Bismuth	5	µg/g	<5
Cadmium	0.1	µg/g	18.9
Calcium	5	µg/g	172
Chromium	0.5	µg/g	16.1
Cobalt	0.1	µg/g	17.4
Copper	0.5	µg/g	105
Iron	1	µg/g	1100000
Lead	1	µg/g	211000
Lithium	0.5	µg/g	2.7
Magnesium	1	µg/g	140
Manganese	0.5	µg/g	119000
Mercury	0.01	µg/g	<0.01
Molybdenum	1	µg/g	27
Nickel	1	µg/g	40
Phosphorus	5	µg/g	477
Potassium	20	µg/g	3050
Selenium	2	µg/g	<2
Silicon	5	µg/g	554
Silver	0.5	µg/g	1360
Sodium	5	µg/g	264
Strontium	1	µg/g	<1
Sulphur	10	µg/g	<10
Thorium	1	µg/g	<1
Tin	1	µg/g	<1
Titanium	0.2	µg/g	28.5
Uranium	5	µg/g	<5
Vanadium	1	µg/g	7
Zinc	0.5	µg/g	29700
Zirconium	0.1	µg/g	11.7

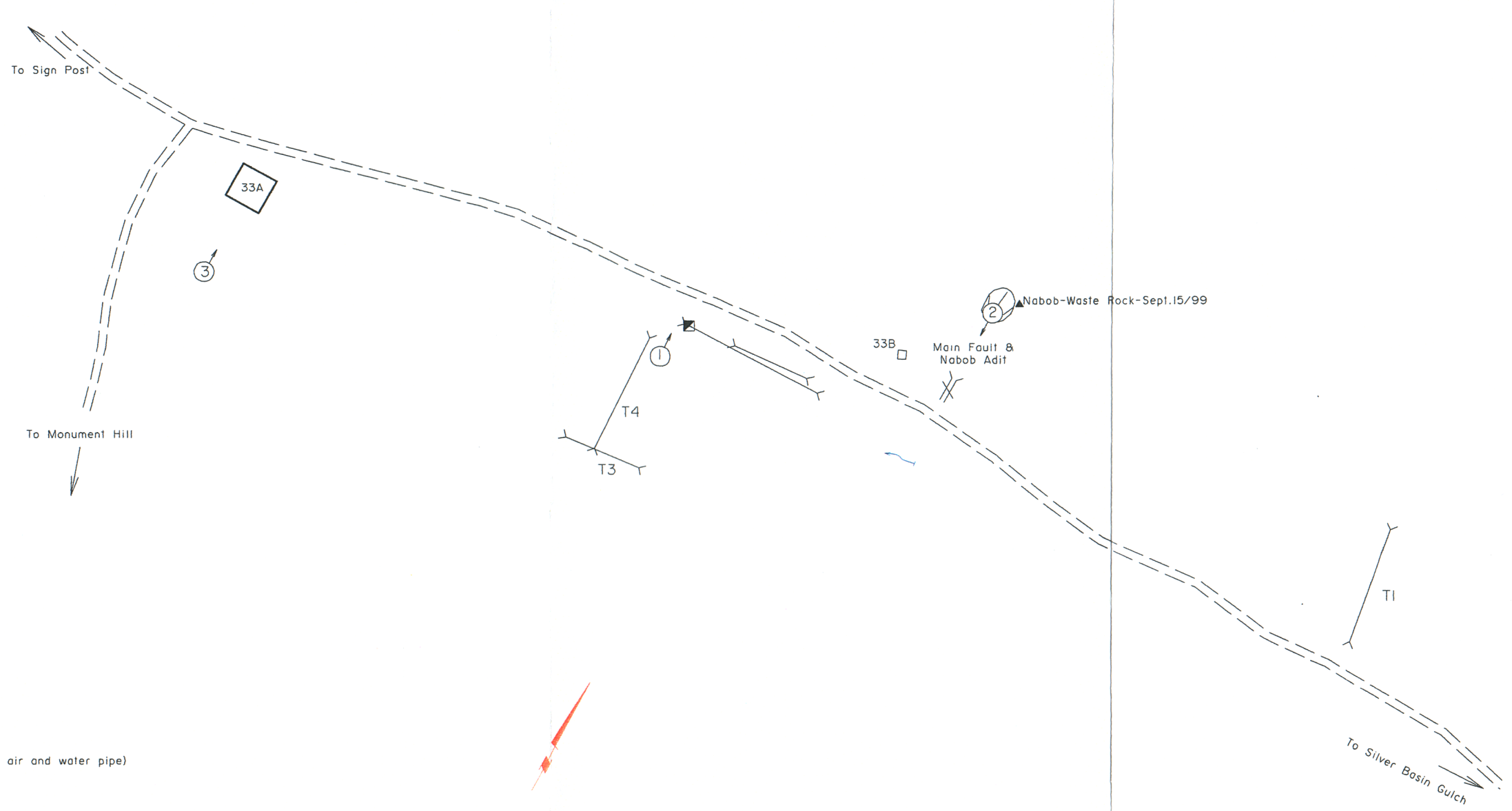
ATTACHMENT 2: 1999 MAIN FAULT AND NABOB WASTE ROCK LABORATORY RESULTS
MODIFIED SOBEK METHOD ACID-BASE ACCOUNTING TEST

SAMPLE	SITE DESCRIPTION	PASTE pH	S(T) %	S(SO4) %	AP	NP	NET NP	NP/AP
Nabob - Waste Rock - Sept.15/99	Composite sample from the waste rock pile outside of the Nabob Adit	7.3	0.02	0.03	-0.3	2.1	2.4	<0.1

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.

- Building (22A: building site present reference*) Indicates Asbestos Material
- 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)
- WO-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 Loaction (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)



Traced From Air Photo NW95030-62

0 25 50 75 100

Scale 1:2000

CAD FILE: SITE33.DGN

Public Works And Government Services Canada / Travaux publics et Services gouvernementaux Canada

Architectural & Engineering Services
Western Region

Drawing title: / Titre du dessin:

Main Fualt & Nabob Site #33
Site Assessment
Yukon Territory

designed by: / concu par:		date:
drawn by: / dessine par:	C.S.	Nov./99
approved by: / approuve par:		
revisions:		
project no. / no. du projet: 125-12.01	dwg. no. / dessin no. 1 of 1	

Photo 33-1 : Main Fault and Nabob. View of the Main Fault shaft, Gambler Lake is in the background. (Azimuth330°)

Photo 33-2 : Main Fault and Nabob. Collapsed Main Fault -Nabob Adit, truck is on Silver Basin Gulch Trail. (Azimuth150°)

Photo 33-3 : Main Fault and Nabob Old log house on the south side of the Silver Basin Gulch Trail. (Azimuth335°)