

GAMBLER
SITE #73
MINFILE #105M 069

1. LOCATION AND ACCESS

Gambler is on the northern slope of Keno Hill, in the Faro Gulch, at an elevation of 1520m (5000 feet). Approximate UTM co-ordinates for the site are 7091 100m N and 489 200m E. Access to the site is possible via the Upper Faro Gulch Trail, a rough road which is part of the Silver Trail Tourism Association's Keno City trail network. The Upper Faro Gulch Trail is a continuation of the Lucky Queen Road and begins at the Lucky Queen site. Four-wheel drive access is possible for the first 1.6km of the Upper Faro Gulch Trail. The site is roughly 300m beyond this point, and can be reached by foot.

2. SITE PHYSIOGRAPHY (Photo 73-1)

The site is on a moderately steep slope located on the northeast headwall of Faro Gulch near the Keno Summit. The site is underlain by permafrost (GSC Bulletin 111; as cited in PWGSC, 1997). Drainage flows from seeps into Faro Gulch, approximately 60m below and 300m east. The site is above tree line and is characterized by subalpine vegetation; shrubs and bushes, willows, stunted spruce trees and a variety of mosses and lichens.

3. GEOLOGY AND MINERALIZATION

Bedrock geology includes thick-bedded quartzite with interbeds of graphite schist and phyllite. The silver-lead-zinc-gold ores strikes 060° and occurs in erratic shoots and lenses lying in vein faults. The Gambler vein dips 60° south and varies in width from 1.5 to 4.6m. The quartz-calcite-siderite vein hosts disseminated to semi-massive pyrite (FeS₂), arsenopyrite (FeAsS), galena (PbS), sphalerite ((Zn, Fe)S) and freibergite ((Cu, Fe)₁₂Sb₄S₁₃) (GSC Bulletin 111; as cited PWGSC, 1997).

4. SITE HISTORY

In 1923, two adits were excavated; the upper adit was developed to a length of 15.2m and the lower adit was developed to a length of 12.1m. Between 1951 and 1953, the lower adit was extended an additional 155m and a 12m raise was excavated. Ore was last recovered from the underground workings in 1957. A total of 223 tonnes of silver/lead ore is reported as being produced (PWGSC, 1997). In the 1980s, bulldozer trenching was undertaken 75m southwest of the adits.

Reference maps (Boyle, 1961) indicate the Gambler site to include a shaft and adit located to the west higher on the slope and at the crest of the ridge above. The histories of these workings are unknown. Two large mine waste rock dumps associated with the 9 Vein Open Pit and the 9 Vein Faro Gulch dump shed portal occur to the

south and upstream in the Faro Gulch cirque headwall. Although not related to the Gambler site, they influence the Faro Gulch drainage.

This site was the focus of a detailed environmental assessment by PWGSC in 1996 (PWGSC, 1997).

5. MINE DEVELOPMENT (Photo 73-1)

There were two adits and associated waste rock piles investigated during the site visit. The shaft and adit located on the ridge to the west are indicated on Boyle's map as caved were not visited. The trenching located at the base of the slope below is closer to the Lake View site (site #34), but is included as part of the development of the Gambler site. Site details can be found on Figure 1: see Attachment 1 for site photos.

5.1 Mine Openings and Excavations

There are two adits and five trenches at this site. A small flow of water was observed coming from the lower adit.

Lower Adit (Photo 73-2)

The entrance to the adit is collapsed and is buried with waste rock and overburden.

Location: The lower adit is located along the trail approximately 220m south of the mine site buildings. There are rail tracks that lead from the adit to a wooden platform.

Dimensions (L x W x H): The adit is collapsed, so the width and height could not be determined. The adit was driven to a length of 167.1m.

Supports: The original supports for the portal have been buried in the rock debris.

Condition: The adit appeared stable at the time of the site visit.

Accessibility: Due to the collapse, the adit can not be accessed.

Upper Adit (Photo 73-3)

The entrance to the adit has collapsed.

Location: On the south side of the trail, 45m west and 15m higher elevation than the lower adit.

Dimensions (L x W x H): The adit is collapsed, so the width and height could not be measured. The adit was driven to a length of 15.2m.

Supports: The original supports for the portal have been buried in the rock debris.

Condition: The adit appeared stable at the time of the site visit, although intermittent rock fall from excavation is expected.

Accessibility: Due to the collapse, the adit can not be accessed.

Trenches (Photo 73-1)

There are six bulldozer trenches located in a cluster at the base of the slope roughly 250 metres east of the camp buildings. A cat road turns east down the slope from the access trail just past the camp. Three of the trenches are 50m in length and oriented at 045°, 047° and 050°. The other three trenches are 20m in length and oriented at 110°, 110° and 160°. The trenches are easily accessed, shallow and have been partially backfilled.

5.2 Waste Rock Disposal Areas

There are two waste rock piles located at the Gambler site. These piles were to be composed of approximately 5000 tonnes of waste rock (PWGSC, 1997). Four waste rock samples were collected in 1996 (PWGSC, 1997). No waste rock samples were collected during the 1999 site visit.

Waste Rock Pile WR-01

Waste rock pile WR-01 appears to have formed by end dumping from the upper adit by hand car. The slope of the material is approximately the same slope as the surrounding talus and varies from 40° at the crest to 30° near the toe.

The surface waste rock is predominately blocky quartzite. There was no apparent adverse impacts on the vegetation below the dump. There was no surface or subsurface water draining from the waste rock pile at the time of the site visit.

Location: The waste rock pile is directly outside of the upper adit.

Dimensions (L x W x H): 42m x 15m x 1.5m

Sampling: One sample was collected from WR-01 in 1996 (GA/WR/P201; PWGSC, 1997). No samples were collected during the 1999 site visit.

Waste Rock Pile WR-02

Waste rock pile WR-02 appears to have formed by end dumping from the lower adit from a rail line. The waste rock consists predominantly of pebble sized graphitic quartzite material and blocky quartzite. Two kinds of alteration were observed; a layer that was oxidized reddish and a darker graphitic layer (PWGSC, 1997). A small groundwater seep associated with the lower adit was sampled in both 1996 and 1999. In 1996 the waste rock pile was observed to have slump features on the face of the pile near the crest (PWGSC, 1997). Waste rock pile WR-01 appeared to be stable when inspected in 1999.

Location: The waste rock pile is roughly 20m east of the lower adit.

Dimensions (L x W x H): 45m x 30m x 2.5m

Sampling: Three samples were collected from this WR-02 in 1996 (GA/WR/P202, GA/WR/P203-1 and GA/WR/P203-2; PWGSC, 1997). No samples were collected during the 1999 site visit.

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 at this site.

6. MINE SITE INFRASTRUCTURE

There are 5 buildings located at the site; a cabin, a shed, a wooden platform, a partially collapsed outhouse, and a wooden tent frame. Railway tracks extend from the lower adit to a wooden platform at the edge of waste pile WR-02. A single powerline (or aerial tram) tower was observed on the slope of the Faro Gulch cirque above the Gambler mine to the south. This was not investigated. Site details can be found on Figure 1: see Attachment 1 for site photos.

6.1 Buildings (Photo 73-4)

There are 5 buildings at the site. Most of the buildings appeared to be in the same condition as they were in 1996 (PWGSC, 1997). Buildings locations are marked on the site map (Figure 1). A pile wooden platforms or collapsed walls occurs adjacent to the lower adit. There could be part of a collapsed

Building 73A: Cabin

Dimensions (L x W x H): The main building measures 6m x 5m x 2.5m; there is a small addition on the southwest corner.

Construction: wooden framed

Paint: none observed

Asbestos: none observed

Foundation: none

Non-Hazardous Contents: table, shelves, kitchen sink, bed frame

Hazardous Contents: none observed

Building 73B: Shed

The shed is fairly unstable: the roof has partially collapsed and the floor is in fair to poor condition.

Dimensions (L x W x H): 5m x 4.5m x 2m

Construction: wooden framed

Paint: none observed

Asbestos: none observed

Foundation: none

Non-Hazardous Contents: none observed

Hazardous Contents: none observed

Building 73C: Wooden Tent Platform

The floor is in fair to poor condition.

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

Construction: wooden framed

Paint: none observed

Asbestos: none observed

Foundation: none

Non-Hazardous Contents: none observed

Hazardous Contents: none observed

Building 73D: Wooden Tent Frame

This open topped structure was designed to be covered by a canvas roof. The walls and floor are in reasonable condition.

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

Construction: wooden framed

Paint: none observed

Asbestos: none observed

Foundation: none

Non-Hazardous Contents: none observed

Hazardous Contents: none observed

Building 73E: Wooden Outhouse

The outhouse leans at angle, but is in stable condition.

6.2 Fuel Storage

There were no fuel tanks or drums still containing fuel encountered at the site. Thirteen empty 205 litre steel barrels were observed below the waste rock from the lower adit. Four were marked as having contained diesel fuel. The labels for the other barrels had worn off.

6.3 Rail and Trestle

Location: Rail extends from the entrance to the lower adit 30m to a wooden platform at the edge of a waste rock pile.

Fabrication: The trestle is made of non-treated timbers and the rail is made of steel.

Amount of materials: There is less than 5m³ of trestle and less than 1m³ of rail.

Condition: The trestle that extends beyond the waste rock pile has partially collapsed and is now part of the debris sticking out of the waste rock. The tracks are twisted but in reasonable condition.

6.4 Milling and Processing Infrastructure

No ore was processed at this site.

6.5 Electrical Equipment

No electrical equipment was encountered at this site.

7. SOLID WASTE DUMPS

There are two areas where solid waste has been dumped. There is a small garbage debris site containing mostly waste cans and beer cans located behind the outhouse. At least 13 barrels and an ore car have been scattered below waste rock pile WR-02. No samples were collected.

Garbage Debris Site

Dimensions (L x W x H): 3m x 1.5m area

Drainage: No surface drainage or seeps were observed within 100m of the debris site. Site drainage flows into Faro Gulch.

Impacted vegetation: There was no evidence that the solid waste dump have impacted vegetation.

8. POTENTIAL CONTAMINANTS OF CONCERN

No hazardous waste was encountered at the site. Dissolved metals from either mine or waste rock drainage pose the only risk. See discussion below in the water quality section.

9. WATER QUALITY

The only surface water encountered at the site was flowing from the lower adit at a rate of less than 1 L/s (visual determination). The water flowed at the surface for less than 10m before disappearing into the ground at the northern edge of the waste pile. No water was observed flowing from the upper adit.

In 1996, water samples were collected from four locations. Samples for two of these sites were collected for comparison during the 1999 site visit. Two samples (sample plus a duplicate sample) were collected from upstream of the mine as part of the investigation of the Keno #9 Vein site (site #36). A summary of the sites and the field measurements taken in 1996 and in 1999 is presented in Table 1.

Table 1: 1996 and 1999 Field Data for Surface Water Sampling

1996 Sample No.	1999 Sample No.	Location	1996 Flow	1999 Flow	1996 pH	1999 pH	1996 Cond. ($\mu\text{S}/\text{cm}$)	1999 Cond. ($\mu\text{S}/\text{cm}$)
GAWQ/Str001	Not Sampled	Faro Gulch, 1km downstream of mine area	8 L/s	N/A	8	N/A	390	N/A
Not Sampled	73WQ-Str01-01/-02	Seep from toe of slope, 200m below the lower adit.	N/A	1 L/min	N/A	8.1	N/A	140
GAWQ/Str002	Not Sampled	Tributary of Faro Gulch, 400m below camp	2 L/s	N/A	8	N/A	440	N/A
Not Sampled	73WQ-Str02-01/-02	Faro Gulch 400m below camp.	N/A	2 L/min	N/A	8.2	N/A	340
GAWQ/Str003	9Vein(S1)@Waste-Rock-09/18/99	Faro Gulch, upstream of mine and waste rock area	4 L/s	N/A	7	6.2	840	500
GAWQ/S100	73WQ-AD1-01/-02	5m from lower adit on north edge of waste rock	<1 L/s	1 L/min	7	7.9	50	20

10. RECLAMATION

No active reclamation has taken place at the site. Due to the high elevation and aspect, natural revegetation has been slow to grow back.

11. OTHER INFORMATION AND DATA

As part of the 1993 Arctic Environmental Strategy Action on Waste program, DIAND Technical Services completed Phase I environmental assessments of abandoned exploration and mine sites. On the basis of the initial assessments, Gambler was one of the sites selected for further investigation. A Phase II investigation of Gambler was undertaken by SRK in 1996 for Public Works and Government Services Canada (PWGSC, 1997). The results from this investigation can be as an attachment to this report. Personnel investigating the site in 1999 did not observe any physical changes at the site compared to what was reported in 1996.

12. REFERENCES

Public Works and Government Services Canada. 1997. *Phase II Environmental Assessment of the Gambler Abandoned Mine Site*. Report No. P118401, prepared by Steffen Robertson and Kirsten Inc.

Boyle, R.W., 1965. *Lead-Zinc-Silver Deposits, Keno Hill-Galena-Hill Area*, Geological Survey of Canada, Bulletin 111.

ATTACHMENT 2: 1999 GAMBLER WATER SAMPLES

LABORATORY RESULTS

Sample Number	Detection Limit	Units	73WQ-A01-01/02 Gambler - 99/09/16	73 WQ-A01-03/04 - Gambler - 99/09/16	73WQ-Str01-01/02 - Gambler - 16/09/99	73WQ-Str02-01/02 - Gambler - 16/09/99
Site Description			5m from Lower Adit on north edge of waste rock	5m from Lower Adit on north edge of waste rock: Duplicate	Seep from toe of slope 200m below Lower Adit	Faro Gulch, downstream of mine and waste rock drainage
pH (field)	na	pH	7.9	na	8.1	8.2
Conductivity (field)	na	µS/cm	20	na	140	340
pH (Lab)	0.01	pH	6.71	6.23	7.78	7.24
Conductivity (Lab)	0.01	µS/cm	59	58	520	360
Total Alkalinity	5	mg CaCO3/L	6	6	82	25
Chloride	0.25	mg/L	na	na	<0.25	<0.25
Chloride	0.01	mg/L	0.07	0.06	na	na
Hardness (CaCO3 equiv)	5	mg/L	22	23	251	158
Nitrate-N	0.05	mg/L	0.32	0.32	0.17	0.3
Nitrite-N	0.003	mg/L	<0.003	<0.003	<0.003	<0.003
Sulphate	1	mg/L	18	17.8	177	137
Total Dissolved Solids	5	mg/L	38	45	354	249
Analysis by ICP-USN						
Aluminum	0.0008	mg/L	0.01	0.0098	0.139	0.0371
Antimony	0.005	mg/L	<0.005	<0.005	<0.005	<0.005
Arsenic	0.01	mg/L	0.01	<0.01	<0.01	<0.01
Barium	0.00004	mg/L	0.00474	0.00437	0.0285	0.027
Beryllium	0.00001	mg/L	<0.00001	<0.00001	<0.00001	<0.00001
Bismuth	0.0004	mg/L	<0.0004	<0.0004	<0.0004	<0.0004
Boron	0.002	mg/L	<0.002	<0.002	<0.002	<0.002
Cadmium	0.00006	mg/L	0.0134	0.0129	0.00219	0.00659
Calcium	0.002	mg/L	6.3	6.16	73.4	42.6
Chromium	0.00006	mg/L	<0.00006	<0.00006	0.0004	0.00031
Cobalt	0.00003	mg/L	<0.00003	<0.00003	0.00016	0.00061
Copper	0.00003	mg/L	0.00041	0.00242	0.00198	0.00193
Iron	0.00001	mg/L	0.105	0.114	0.331	0.152
Lead	0.0003	mg/L	0.0278	0.0241	0.0045	0.019
Lithium	0.001	mg/L	<0.001	<0.001	0.002	<0.001
Magnesium	0.0005	mg/L	1.06	1.05	16.9	12.7
Manganese	0.00002	mg/L	0.00638	0.00829	0.0326	0.364
Mercury	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum	0.00007	mg/L	<0.00007	<0.00007	0.00051	0.00012
Nickel	0.00001	mg/L	0.0039	0.0039	0.002	0.0109
Phosphorus	0.03	mg/L	<0.03	0.43	<0.03	<0.03
Potassium	0.4	mg/L	<0.4	<0.4	<0.4	<0.4
Selenium	0.004	mg/L	<0.004	<0.004	<0.004	<0.004
Silicon	0.004	mg/L	1.86	1.83	2.73	1.53
Silver	0.00005	mg/L	<0.00005	<0.00005	<0.00005	0.00014
Sodium	0.004	mg/L	0.4	<0.4	1.2	0.5
Strontium	0.00002	mg/L	0.0214	0.0201	0.279	0.12
Sulphur	0.008	mg/L	5.71	5.58	53.6	44
Thallium	0.001	mg/L	<0.001	<0.001	<0.001	<0.001
Titanium	0.00002	mg/L	<0.00002	<0.00002	0.00462	0.00066
Vanadium	0.00003	mg/L	<0.00003	<0.00003	0.00017	<0.00003
Zinc	0.0002	mg/L	1.12	1.15	0.234	0.551
Zirconium	0.00004	mg/L				
Analysis by Hydride AA						
Arsenic	0.0002	mg/L	0.01	0.0038	0.0013	0.0008
Selenium	0.0001	mg/L	<0.0001	<0.0001	0.0003	0.0002



Water Quality Results - Gambler Site

Sample ID. Sample Date	GA/WO/ Str001 18-Sep-96	GA/WO/ Str002 18-Sep-96	GA/WO/ Str003 18-Sep-96	GA/WO/ S100 18-Sep-96	CCME Freshwater Aquatic Life
Physical Tests					
Conductivity (umhos/cm)	371	456	792	79.2	NA
Hardness (as CaCO ₃)	166	228	396	26	NA
pH	7.69	7.95	6.99	6.99	6.5 - 9.0
Dissolved Anions					
Acidity (as CaCO ₃)	2.0	2.0	7.1	3.1	NA
Alkalinity - Total (as CaCO ₃)	42.5	73.2	12.7	4.9	NA
Sulphate (as SO ₄)	131	143	403	22.4	NA
Total Metals					
Aluminum T-Al	0.111	0.337	0.138	0.14	0.005 to 0.1 *
Arsenic T-As	0.0048	0.0009	0.0113	0.0738	0.05
Barium T-Ba	0.03	0.05	0.02	<0.01	NA
Beryllium T-Be	<0.005	<0.005	<0.005	<0.005	NA
Boron T-B	<0.1	<0.1	<0.1	<0.1	NA
Cadmium T-Cd	0.004	<0.0002	0.0238	0.0114	0.002 to 0.018 *
Calcium T-Ca	46.5	70.9	88.6	7.94	NA
Chromium T-Cr	<0.001	<0.001	<0.001	<0.001	NA
Cobalt T-Co	<0.02	<0.02	<0.02	<0.02	NA
Copper T-Cu	0.003	<0.001	0.003	0.014	0.002 to 0.004 *
Iron T-Fe	0.32	0.04	0.23	1.08	0.3
Lead T-Pb	0.091	<0.001	0.074	0.805	0.001 to 0.007
Lithium T-Li	<0.02	0.05	<0.02	<0.02	NA
Magnesium T-Mg	12	12.3	42.6	1.5	NA
Manganese T-Mn	0.142	<0.005	1.43	0.275	NA
Mercury T-Hg	<0.00005	<0.00005	<0.00005	<0.00005	0.0001
Molybdenum T-Mo	<0.03	<0.03	<0.03	<0.03	NA
Nickel T-Ni	<0.02	<0.02	0.03	<0.02	0.025 to 0.150
Selenium T-Se	0.0012	0.0014	0.002	0.0006	0.001
Silver T-Ag	0.0005	<0.0001	0.0008	0.004	0.0001
Sodium T-NA	<2	<2	<2	<2	NA
Vanadium T-V	<0.03	<0.03	<0.03	<0.03	NA
Zinc T-Zn	0.35	0.008	3.58	1.05	0.03

NOTES:

CCME = Canadian Council of Resource and Environmental Ministers
 All concentrations are in mg/L unless stated otherwise.
 0.004 = number in bold exceeds CCME criteria for parameter listed

str = stream sample
 S = seep (groundwater) sample
 A = adit sample

Aluminum: 0.1 mg/L if pH >6.5, Ca²⁺ >4.0 mg/L, and DOC >2.0 mg/L
 Cadmium: 0.008 mg/L if hardness is 60 - 120 mg/L CaCO₃
 0.018 mg/L if hardness is >180 mg/L CaCO₃
 Chromium: 0.02 mg/L to protect fish and 0.002 mg/L to protect
 aquatic life, including zooplankton and phytoplankton.

Copper: 0.002 mg/L if hardness is 0 - 120 mg/L CaCO₃
 0.004 mg/L if hardness is >180 mg/L CaCO₃
 Lead: 0.002 mg/L if hardness is 60 - 120 mg/L CaCO₃
 0.004 mg/L if hardness is 120 - 180 mg/L CaCO₃
 0.007 mg/L if hardness is >180 mg/L CaCO₃
 Nickel: 0.065 mg/L if hardness is 60 - 120 mg/L CaCO₃
 0.150 mg/L if hardness is >180 mg/L CaCO₃

Waste Rock Test Results

Parameter	Units	Sample Number GAWR/			
		P201	P202	P203/1	P203/2
Field Paste pH		6.62	4.78	3.47	3.02
Field Cond	µS/cm	10	330	350	470
Lab Paste pH		7.62	5.71	5.74	4.30
Total Sulfur	%	0.07	3.75	1.37	1.11
Sulfate	%	0.05	0.24	0.28	0.17
AP		0.6	109.7	34.1	29.4
NP		-1.6	7.8	9.1	2.0
NET NP		-2.2	-101.9	-24.9	-27.4
NP/AP		<0.1	<0.1	0.30	<0.1
Aluminum	%	0.22	0.23	0.16	0.46
Antimony	ppm	9	614	127	28
Arsenic	ppm	1357	905	1135	1836
Barium	ppm	60	36	39	45
Beryllium	ppm	<0.1	<0.1	<0.1	<0.1
Bismuth	ppm	<1	8	<1	<1
Cadmium	ppm	<0.1	>100	33.9	27.6
Calcium	%	0.09	0.30	0.54	0.26
Chromium	ppm	142	84	92	114
Cobalt	ppm	6	9	6	3
Copper	ppm	16	635	101	20
Gallium	ppm	<1	<1	<1	<1
Iron	%	1.62	4.64	3.95	2.00
Lead	ppm	547	>10000	>10000	1142
Lithium	ppm	2	<1	<1	<1
Magnesium	%	0.04	0.19	0.10	0.04
Manganese	ppm	372	9792	4399	940
Molybdenum	ppm	6	21	11	6
Nickel	ppm	18	57	33	12
Potassium	%	0.05	0.05	0.06	0.07
Phosphate	ppm	420	450	650	500
Silver	ppm	2.7	>200	108.3	17.3
Sodium	%	<0.01	<0.01	<0.01	<0.01
Strontium	ppm	17	14	13	11
Thorium	ppm	<1	<1	<1	<1
Tin	ppm	2	8	5	2
Titanium	%	<0.01	<0.01	<0.01	<0.01
Tungsten	ppm	8	97	14	10
Uranium	ppm	<1	<1	<1	<1
Vanadium	ppm	6.4	5.8	6.2	3.6
Zinc	ppm	214	>10000	5383	2088

AP = Acid Potential in tonnes CaCO₃ equivalent per 100 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

na = no assay / analysis

< = lower detection limit

> = upper detection limit

Steffen Robertson and Kirsten
February, 1997

CLIENT : ASL LTD.
PROJECT : PWGSC
PROJECT # : P118041
TEST : MODIFIED SOBEK METHOD ACID-BASE ACCOUNTING

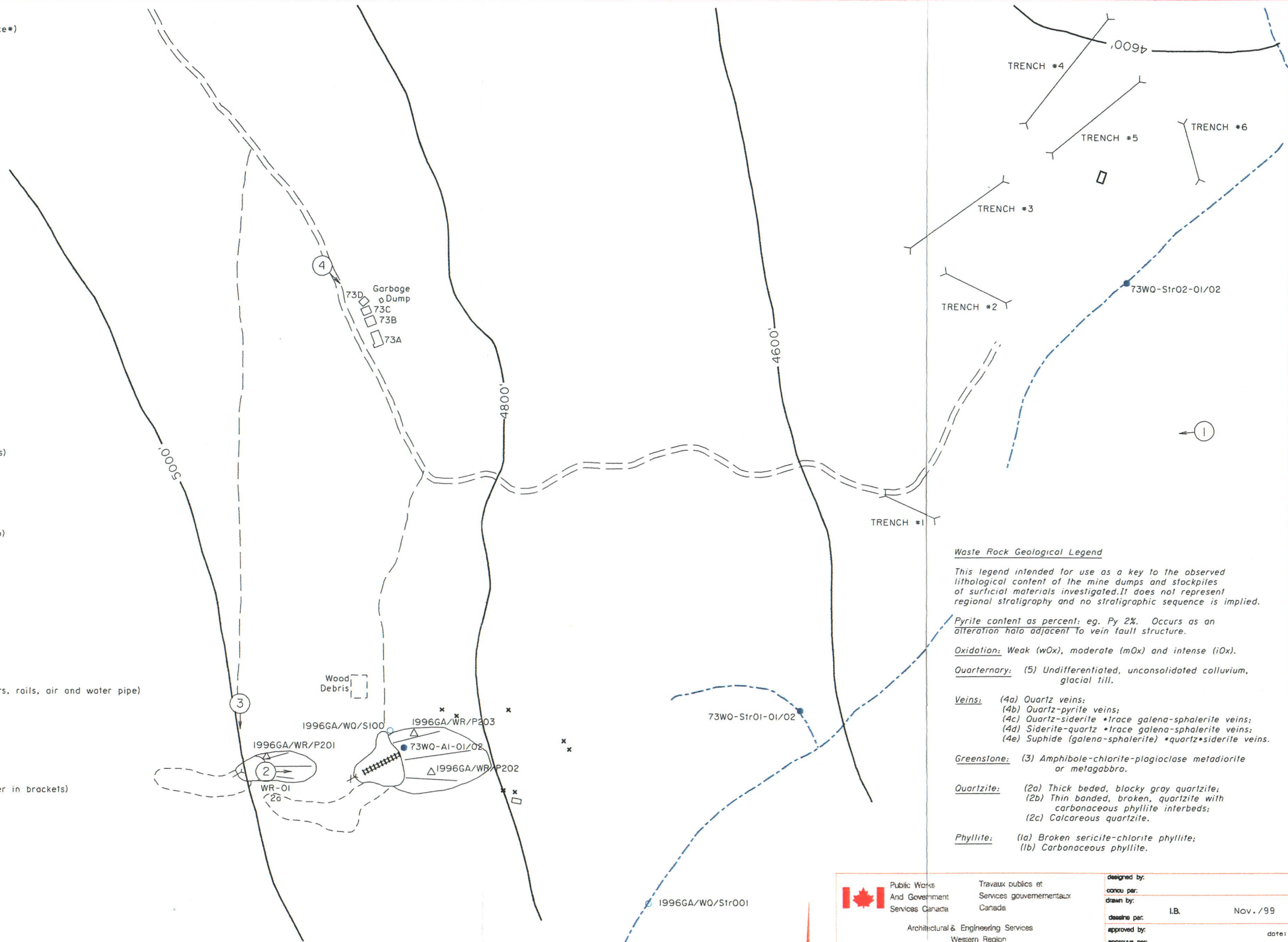
SAMPLE #	PASTE pH	S(T) %	S(SO4) %	AP	NP	NET NP	NP/AP
CLWR/P201	8.79	0.20	0.05	4.7	36.5	31.8	7.8
CLWR/P202	7.90	1.40	0.56	26.3	370.6	344.4	14.1
CLWR/P203	9.39	0.09	0.05	1.3	4.9	3.7	4.0
GAWR/P201	7.62	0.07	0.05	0.6	-1.6	-2.2	<0.1
GAWR/P202	5.71	3.75	0.24	109.7	7.8	-101.9	<0.1
GAWR/P203/1	5.74	1.37	0.28	34.1	9.1	-24.9	0.3
GAWR/P203/2	4.30	1.11	0.17	29.4	2.0	-27.4	<0.1
GAWR/P204	6.68	0.11	0.05	1.9	3.4	1.6	1.8
GAWR/P205	7.83	0.71	0.18	16.6	111.3	94.7	6.7
GAWR/P206	8.47	0.30	0.17	4.1	103.9	99.8	25.6
GAWR/P207	8.46	0.70	0.16	16.9	109.0	92.1	6.5
TIWR/P1-1	8.65	0.82	0.57	7.8	669.5	661.7	85.7

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.

- 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 (Eiso)



Waste Rock Geological Legend

This legend intended for use as a key to the observed lithological content of the mine dumps and stockpiles of surficial materials investigated. It does not represent regional stratigraphy and no stratigraphic sequence is implied.

Pyrite content as percent: eg. Py 2%. Occurs as an alteration halo adjacent to vein fault structure.

Oxidation: Weak (wOx), moderate (mOx) and intense (iOx).

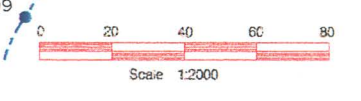
Quaternary: (5) Undifferentiated, unconsolidated colluvium, glacial till.

Veins: (4a) Quartz veins;
(4b) Quartz-pyrite veins;
(4c) Quartz-siderite + trace galena-sphalerite veins;
(4d) Siderite-quartz + trace galena-sphalerite veins;
(4e) Sphide (galena-sphalerite) + quartz-siderite veins.

Greenstone: (3) Amphibole-chlorite-plagioclase metadiorite or metagabbro.

Quartzite: (2a) Thick bedded, blocky gray quartzite;
(2b) Thin bedded, broken, quartzite with carbonaceous phyllite interbeds;
(2c) Calcareous quartzite.

Phyllite: (1a) Broken sericite-chlorite phyllite;
(1b) Carbonaceous phyllite.



CAD FILE SITE37.DGN

Public Works And Government Services Canada	Travaux publics et Services gouvernementaux Canada	designed by:	
		concep. par:	
Architectural & Engineering Services Western Region		drawn by:	I.B. Nov. /99
		approved by:	
Drawing title:		revisions:	
Gambler Site #73 Site Assessment Yukon Territory		project no. no. du projet:	125-12.01
		desig. no. desin. no.	1 of 1



Photo 73-1: Overview of Gambler site showing mine workings to left, camp buildings left of middle, and more recent surface cat trenches at bottom.



Photo 73-2: Overview of lower adit level from upper adit level. Photo Direction (Azimuth 060°)



Photo 73-3: Upper Gambler adit level. (Azimuth 170°)



Photo 73-4: Lower Gambler adit drainage sample site (73-WQ-A01-01/-02). (Azimuth 070°)



Photo 73-5: Overview of Gambler camp buildings. No changes noted since 1996 inspection. (Azimuth 130°)