SHANGHAI

SITE #65

MINFILE# 105M 028

1. LOCATION AND ACCESS

Shanghai is located approximately 4.5km east of the junction of Shanghai Creek and the McQuesten River, on the north side of the river. A 6km road connects the property with the South McQuesten Road, at the airport. Vehicle access to the site is not possible since there is no longer a bridge across the McQuesten River. The approximate UTM co-ordinates are 7 088 950m N and 467 650m E (Latitude: 63° 55' 46" N and Longitude: 135° 41' 08" W).

2. SITE PHYSIOGRAPHY

The site is situated at an elevation of 2100ft (640m) on a flat area, at the toe of a steeper unnamed hill to the north. The site is well vegetated with spruce trees, shrubs, grass, alders, willows and moss. A small, unnamed creek flows to the east and joins the South McQuesten River, 150m to the south. No evidence of permafrost was observed.

3. GEOLOGY AND MINERALIZATION

The face of the main adit dump is composed of highly broken dark gray carbonaceous Keno Hill quartzite with approximately 30% of the area having patches of brown to rusty highly oxidized vein material. On the road near the ore-loading chute, approximately five football size pieces of vein material with up to 50% pyrite were seen.

Government geologist report that the underground working explored two sub-parallel vein faults, 2.0 - 6.0m wide, that converge to the southwest and are mineralized by sphalerite, pyrite and galena occurring in irregular quartz-calcite pods in sheared and brecciated Keno Hill Quartzite. Zinc assays in one oreshoot 51.8m in length graded 13.6% Zn over an average width of 2.m and in another oreshoot 9.1m in length, graded 7.2% Zn across an average width of 1.5m.

The zinc content in these oreshoots is considerable higher than in most of the veins of Galena Hill - Keno Hill. Pyrite content may also be significantly higher as was seen in the few vein specimens seen on the road. The presence of these two minerals could result in an acid rock drainage condition. Siderite is absent, but calcite is reported in reported in the vein fault. The amount of calcite is unknown.

4. SITE HISTORY

From 1927 to 1963, exploration work at the site included shallow shafts, adits and drifts, and bulldozer trenching. In the mid 1960's 786.4m of underground lateral development and 48.8m of raising was carried out. In 1972 an attempt was made to mine high-grade ore. Since then, bulldozer trenching and stripping and drilling was carried out until 1993.

5. MINE DEVELOPMENT

The main adit and rock dump and old campsite were visited. None of the workings centered about 500m northeast of the main adit were visited because of limited time available. No ore was processed at Shanghai and no tailings were encountered. There is no wastewater treatment facility at the site. Site details can be found on Figure 1; site photos are located in Attachment 1 and laboratory results for sampling are in Attachment 2.

5.1 Mine Openings and Excavations

Main Adit (photo 65-1)

The main adit is located roughly 30m north of the clearing where the old camp was and where the waste rock was deposited. A 10m long log portal structure built outside of the adit has collapsed. A stream of water flows from the adit.

Dimensions (L x W x H): 835m (total length of all underground development) x 3m x 2m

Accessibility: The adit can no longer be accessed.

5.2 Waste Rock Disposal Areas (photo 65-2)

Waste rock from the adit is spread over a 48m by 34m area in front of the adit. The water flowing from the adit flows around the waste rock pile on the eastern side. No water was observed on the pile.

The face of the waste rock pile is composed of highly broken dark gray carbonaceous Keno Hill quartzite with approximately 30% of the area having patches of brown to rusty highly oxidized vein material. A sample (Shanghai-Waste Rock-Sept.18/99) of the later material gave a paste pH of 4.7 and conductivity of >1000µS/cm.

Most exploration adits generally have a section of the pile where low grade to high grade oreshoot vein material is stored. None was seen at any location along the dump face. It is assumed that no sorting took place.

6. MINE SITE INFRASTRUCTURE

The remains of a building, a fuel cache, core boxes, metal lined storage bin and some rail and ties were encountered. The site was no provided with electricity.

6.1 Building 65A

There is a collapsed rotted wood frame building at the north end of the waste rock pile. There is an old hot water tank in the rubble. No hazardous products were observed.

6.2 Fuel Storage

To the west of the waste rock pile there is a fuel storage area with twenty-four empty 45-gallon drums.

6.3 Rail and Trestle

There are two mine cars and approximately 150m of narrow gauge rail track on top of the waste rock pile.

6.4 Milling and Processing Infrastructure

Between the adit and the waste rock pile there is a 10m by 20m area with are roughly 30 core boxes, some containing core and some empty. To the east of the fuel storage area is a wooden structure with a metal ramp that was used to hand sort the ore.

7. SOLID WASTE DUMPS (photo 65-3)

There is a fair amount of waste near the collapsed building. Material observed include $10m^3$ of wood waste, $5m^3$ of asbestos tar paper, metal debris, 20m of water and air pipes, and a receiving air tank 0.7m in diameter and 2.4m high.

8. POTENTIAL CONTAMINANTS OF CONCERN

No hazardous products were encountered. Potential contaminants of concern include metals washing from the waste rock pile, the adit or from the high grade vein pieces.

9. WATER QUALITY

There is a stream of water flowing from the adit at a rate of approximately 4L/sec (visual estimation). The stream flows around the waste rock on the eastern side and presumably joins the South McQuesten River. A sample (Shanghai – 09/18/99) was collected for analysis. The field pH was 6.2 and the conductivity was 480µS/cm. Laboratory results are in Attachment 2.

10. RECLAMATION

The areas around the main adit, the sorting bin and the fuel cache have mature second growth vegetation of primarily willows and alders. There are some small trees and bushes growing in the cleared area where the campsite and waste rock pile are, however most of it does not have any vegetation growing on it

11. REFERENCES AND PERSONAL COMMUNICATIONS

Minfile #105M 028

ATTACHMENT 2: 1999 SHANGHAI WATER SAMPLES LABORATORY RESULTS			
Sample Number	**Detection Limit**	**Units**	**Shanghai - 09/18/99**
Site Desciption			Sample collected from the water coming out of the adit
pH (field)	N/A	pH	6.2
Conductivity (field)	N/A	µS/cm	480
pH (Lab)	0.01	pH	7.6
Conductivity (Lab)	0.01	µS/cm	1350
Total Alkalinity	5	mg CaCO3/L	297
Chloride	0.25	mg/L	<0.25
Hardness (CaCO3 equiv)	5	mg/L	814
Nitrate-N	0.05	mg/L	<0.05
Nitrite-N	0.003	mg/L	<0.003
Sulphate	1	mg/L	466
Total Dissolved Solids	5	mg/L	1010
Analysis by ICP-USN			
Aluminum	0.0008	mg/L	0.0456
Antimony	0.005	mg/L	0.005
Arsenic	0.01	mg/L	0.01
Barium	0.00004	mg/L	0.007
Beryllium	0.00001	mg/L	<0.00001
Bismuth	0.0004	mg/L	0.0004
Boron	0.002	mg/L	<0.002
Cadmium	0.00006	mg/L	0.0151
Calcium	0.002	mg/L	208
Chromium	0.00006	mg/L	<0.00006
Cobalt	0.00003	mg/L	0.0005
Copper	0.00003	mg/L	0.00641
Iron	0.00001	mg/L	0.42
Lead	0.0003	mg/L	0.0139
Lithium	0.001	mg/L	0.019
Magnesium	0.0005	mg/L	73.3
Manganese	0.00002	mg/L	0.108
Mercury	0.0001	mg/L	<0.0001
Molybdenum	0.00007	mg/L	0.0005
Nickel	0.00001	mg/L	0.0062
Phosphorus	0.03	mg/L	<0.03
Potassium	0.4	mg/L	1
Selenium	0.004	mg/L	0.006
Silicon	0.004	mg/L	4.29
Silver	0.00005	mg/L	<0.00005
Sodium	0.004	mg/L	1.8
Strontium	0.00002	mg/L	0.615
Sulphur	0.008	mg/L	153
Thallium	0.001	mg/L	<0.001
Titanium	0.00002	mg/L	<0.00002
Vanadium	0.00003	mg/L	<0.00003
Zinc	0.0002	mg/L	1.79
Analysis by Hydride AA			
Arsenic	0.0002	mg/L	0.0073
Selenium	0.0001	mg/L	0.0008

ATTACHMENT 2: 1999 SHANGHAI WASTE ROCK LABORATORY RESULTS			
Site Number	**Detection Limit**	**Units**	**Shanghai - Waste Rock - Sept 18/99**
Sample Desciption			Sample collected from the waste rock pile outside of the adit.
Paste pH (field)	N/A	pH	4.7
Conductivity (field)	N/A	µS/cm	>1000
pH in Saturated Paste			
pH	0.1	pH	3.9
pH in Soil (1:2 water)			
pH	0.01	pH	4.4
ICP Semi-Trace Scan			
Aluminum	5	µg/g	19000
Antimony	2	µg/g	180
Arsenic	2	µg/g	1350
Barium	0.05	µg/g	1.47
Beryllium	0.1	µg/g	<0.1
Bismuth	5	µg/g	<5
Cadmium	0.1	µg/g	2220
Calcium	5	µg/g	864
Chromium	0.5	µg/g	21.6
Cobalt	0.1	µg/g	17.5
Copper	0.5	µg/g	1690
Iron	1	µg/g	140000
Lead	1	µg/g	3450
Lithium	0.5	µg/g	10.8
Magnesium	1	µg/g	2930
Manganese	0.5	µg/g	2980
Mercury	0.01	µg/g	4.2
Molybdenum	1	µg/g	4
Nickel	1	µg/g	61.9
Phosphorus	5	µg/g	152
Potassium	20	µg/g	5800
Selenium	2	µg/g	<2
Silicon	5	µg/g	70
Silver	0.5	µg/g	431
Sodium	5	µg/g	205
Strontium	1	µg/g	1
Sulphur	10	µg/g	183000
Thorium	1	µg/g	<1
Tin	1	µg/g	9
Titanium	0.2	µg/g	56.1
Uranium	5	µg/g	<5
Vanadium	1	µg/g	32
Zinc	0.5	µg/g	160000
Zirconium	0.1	µg/g	12.4

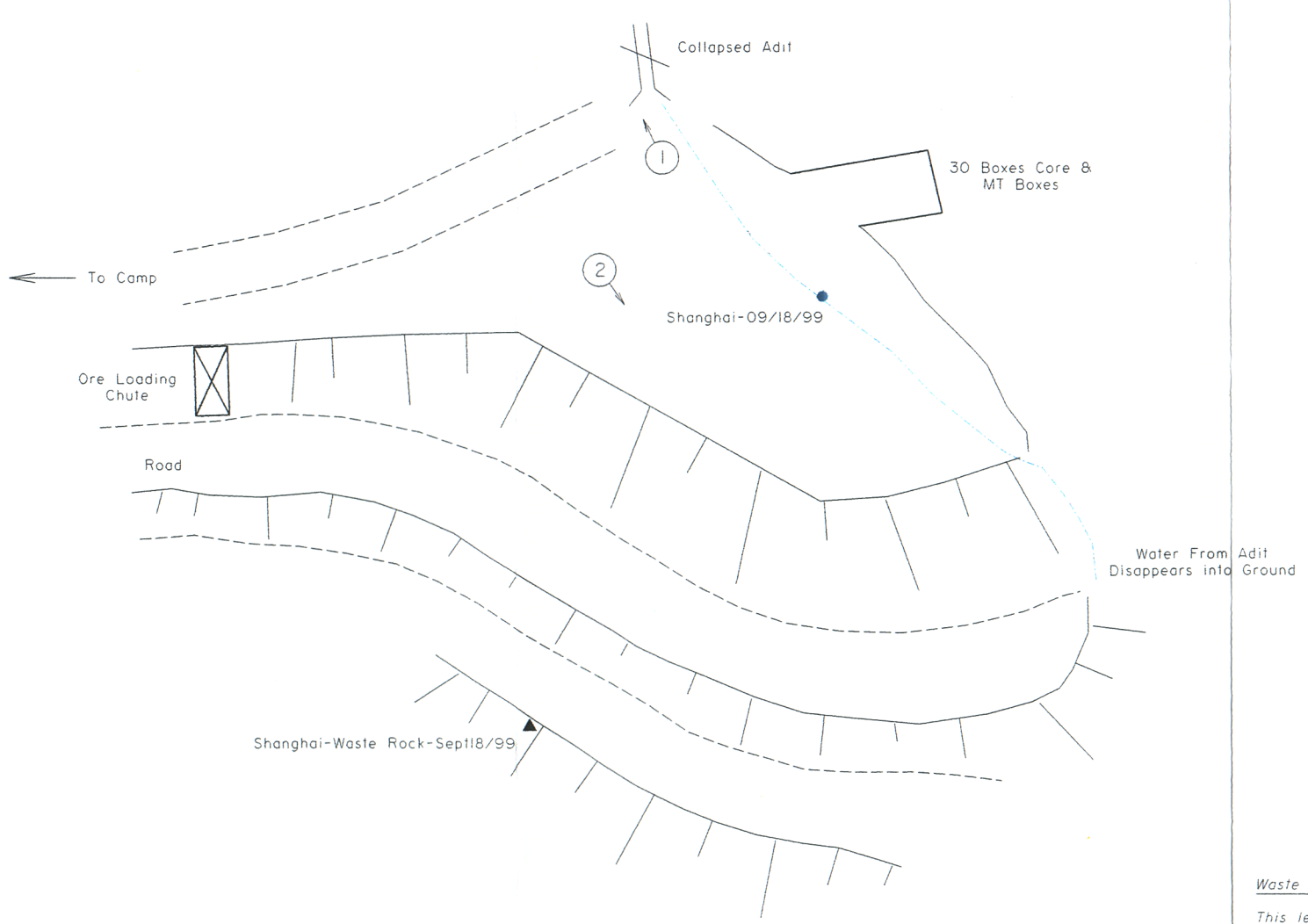
ATTACHMENT 2: 1999 SHANGHAI WASTE ROCK LABORATORY RESULTS
MODIFIED SOBEK METHOD ACID-BASE ACCOUNTING TEST

SAMPLE	SITE DESCRIPTION	PASTE pH	S(T) %	S(SO4) %	AP	NP	NET NP	NP/AP
Shanghai - Waste Rock - Sept.18/99	Sample collected from the waste rock pile outside of the adit.	5.1	15.40	0.36	470.0	1.4	-468.6	<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 (22A*)
- Collapsed Building (22A)
- 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)



0 5 10 15 20

Scale 1:500

CAD FILE: SITE65.DGN

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).

Quarternary: (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) Suphide (galena-sphalerite) *quartz*siderite veins.

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

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

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

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

Architectural & Engineering Services
Western Region

designed by:
concu par:
drawn by: C.S. Nov./99
dessine par:
approved by:
approuve par:
revisions:

Drawing title: / Titre du dessin:

Shanghai Site #65
Site Assessment
Yukon Territory

project no. / no. du projet: 125-12.01

dwg. no. / dessin no. 1 of 1

Photo 65-1 : Shanghai. Collapsed Main Adit with water flowing. (Azimuth 340°)

Photo 65-2 : Shanghai. Aerial view of waste rock pile and mine site debris. (Azimuth 120°)

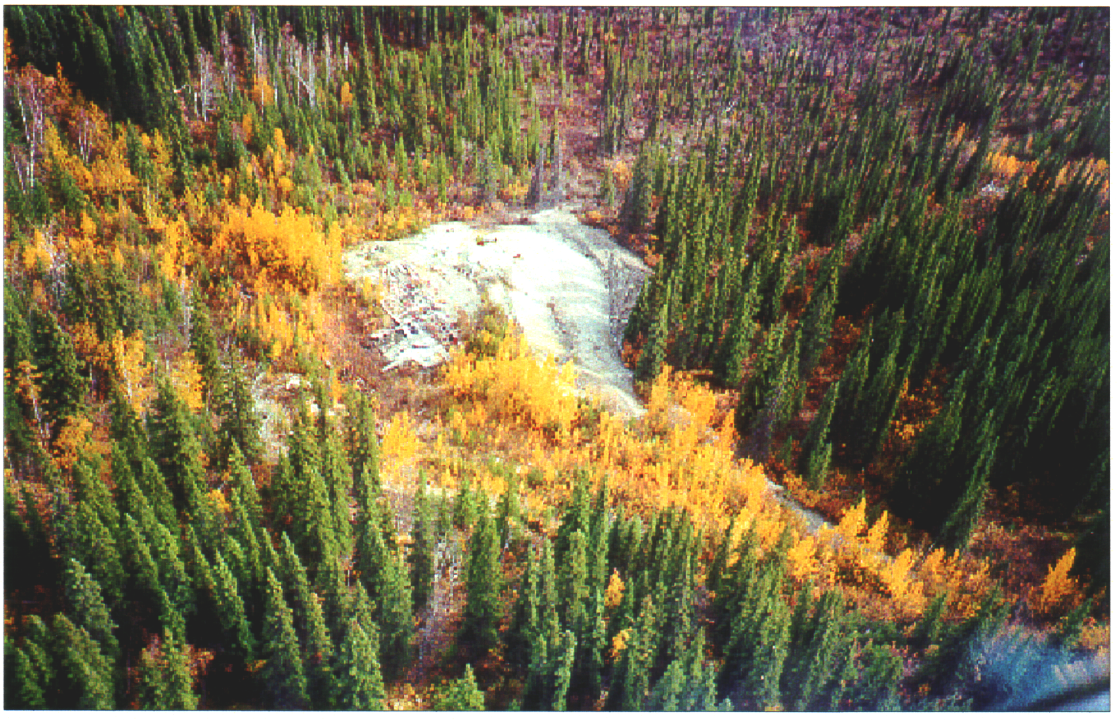


Photo 65-3 : Shanghai. Close-up of the scattered debris at the site. (Azimuth 120°)