# GERLITSKI

## SITE #63

## MINFILE# 105M026

### 1. LOCATION AND ACCESS

Gerlitski is located just north of a prominent knob on the south side of the McQuesten River valley between Galena Creek and Thompson Creek. The site is 0.5km north of Hwy #2, 1.2km west of the turnoff to the Silver King site. Approximate UTM co-ordinates are 7 085 550m N and 470 800m E. There are no roads to the site; foot access is possible by hiking through thick bush.

### 2. SITE PHYSIOGRAPHY

Gerlitski is on level ground vegetated with second-growth alders; willows and small bushes grow at and around the site. Site drainage reports to Flat Creek, located 1.25km to the north. There was no surface water encountered at the site.

### 3. GEOLOGY AND MINERALIZATION

According to the Minfile report, the host rock is the Keno Hill Quartzite, a medium to thick-bedded quartzite with carbonaceous phyllite. Numerous veins in this area have good length and width, moderate lead and zinc, but are low in silver. The Gerlitski vein is 150m long, up to 9.1m wide and is weakly mineralized with galena (PbS), sphalerite ((Zn,Fe)S), and tetrahedrite ($Cu_{12}Sb_4S_{13}$). Outcropping of the Keno Hill Quartzite with minor quartz veining is exposed along the trench walls.

### 4. SITE HISTORY

During five periods of exploration, extensive drilling and some bulldozer trenching were completed at this site. The first phase of drilling and bulldozer trenching were undertaken between 1956-58. Over 750 more drill holes were drilled in the years 1962, 1966, 1972-76 and 1980.

### 5. MINE DEVELOPMENT

Two trenches were located during the site visit. The main trench (trench 1) runs north-south with a small trench (Trench 2) starting at its northern end. There is evidence of drilling on the northern section of trench 1. Waste rock has been deposited on the western side of trench 1. Site photos are located in Attachment 1.

## 5.1 Mine Openings and Excavations

### Trench 1 (photo 63-1)

Trench 1 has exposed bedrock along its eastern side; the western side is much lower and has been covered with waste rock piles. The southern end is narrow and overgrown with alders and bushes. There is a clearing at the northern end; core boxes and small pieces of core scattered in this open area indicate that the trench was drilled (photo 63-2).

Location: The southern tip of the trench begins approximately 15m west of the northwest toe of the prominent knob.

Dimensions (L x W x H): 242m x 2.5m x 2m (maximum width and height)

Condition: The trench walls are nearly vertical but not very high. At the time of inspection the walls appeared stable, however there is a small volume of rock debris on the trench floor that has broken off.

Accessibility: The southern end has become overgrown with alders, otherwise the trench is easily accessible.

### Trench 2

There is a small volume of exposed bedrock along the northern side of the trench; the southern side has been covered with a low waste rock pile.

Location: The south end of Trench 2 is turned 70° to the west from Trench 1.

Dimensions (L x W x H): 70m x 8m x 1.5m

Condition: The low walls of the trench appeared stable at the time of the inspection.

Accessibility: The trench is easily accessed.

## 5.2 Waste Rock Disposal Areas

The majority of the waste rock was deposited in the northern half of Trench 1, on the western side of the trench. Smaller volumes of waste rock were deposited on the west side of the southern half of Trench 1, and on the southern side of Trench 2. Individual waste rock piles were difficult to distinguish. For the purposes of this report the waste rock has been grouped into 4 different piles based on small changes in geologic composition and on the shape and volume of the pile. There was no evidence of surface or subsurface drainage flowing over or through any the waste rock piles.

### Waste rock pile #1

The waste rock in this pile was excavated from the southern half of Trench 1. This section of the trench is much narrower and shallower than the northern half and subsequently the waste rock pile associated with it is long but not very high or wide. A thick carpet of green moss covers much of the surface of the rock pile and small bushes have begun to grow. The waste rock is composed of predominantly of quartzite and weakly mineralized

(0.5 – 1 % sulphides) quartz vein material; approximately 25% of the waste rock is overburden. There is minor iron (Fe) staining on the surface of the rocks.

Location: The pile forms the western side of the trench for the southern half of trench 1.

Dimensions (L x W x H): 127m x 1m x 1m

Sampling: No samples were collected.

**Waste rock pile #2**

This is the highest of the waste rock piles and it is sparsely vegetated with small spruce trees and bushes. The waste rock is from Trench 1 and is composed of predominantly quartzite and some mineralized (3-5% disseminated pyrite and trace amounts of other sulphides) quartz veining; roughly 20% of the waste rock is overburden. It also contains minor amount of sandstone and schist.

Location: The pile is approximately mid-way along the western side of Trench 1.

Dimensions (L x W x H): 35m x 5m x 3m

Sampling: A 30cm deep test pit was dug and sample #63-02-waste was collected (photo 63-3). The surface 2-4mm of the waste rock pile is oxidized but there is no oxidation observed occurring below this surface layer. The waste rock is bimodal; grain size is from sand to cobble sized. The field pH of the sample was 6.8 and the conductivity was 26 uS/cm.

**Waste rock pile #3 (photo 63-4)**

This waste rock pile has been leveled to an average width of roughly 1m to form a large cleared area. The waste rock in this pile was excavated from the northern half of Trench 1. It is composed of predominantly of unmineralized quartzite and overburden. The pile has small areas of quartzite and quartz veining with higher mineralization and with stronger iron (Fe) staining. Besides a few clumps of grasses, very little vegetation is growing on this pile.

Location: The pile forms the western side of the trench along the northern half of Trench 1.

Dimensions (L x W x H): 65m x 45m x 1m

Sampling: A 30cm test pit was dug in an area of stronger Fe-staining and sample #63-01-waste was collected (photo 63-5). The waste rock was oxidized at surface but there is no oxidation occurring below surface. The waste rock is bimodal; grain size is from sand to cobble sized. The field pH of the sample was 5.5 and the conductivity was 510 uS/cm.

**Waste rock pile #4**

This small waste rock pile is very overgrown with moss, shrubs and young alders. The source of the pile is from the excavation of Trench 2. The major rock type is quartzite and minor quartz vein material with 25% of the pile composed of overburden. No oxidation was observed on the surface of the waste rock pile.

Location: The pile is on the south side of Trench 2.

Dimensions (L x W x H): 70m x 1m x 1m

Sampling: No samples were collected.

### 5.3 Tailings Impoundments

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

### 5.4 Minesite Water Treatment

There is no water treatment facility at this site.

## 6. MINE SITE INFRASTRUCTURE

No mine site infrastructure was encountered at this site.

## 7. SOLID WASTE DUMPS

No solid waste dumps were encountered at this site.

## 8. POTENTIAL CONTAMINANTS OF CONCERN

No hazardous products were encountered. Potential contaminants of concern include any metals washing from the waste rock piles or off the trench walls.

## 9. WATER QUALITY

There was no surface water encountered at the time of the site visit. No water samples were collected.

## 10. RECLAMATION

Natural revegetation has occurred in Trench 2 and in the southern half of Trench 1. The northern section of Trench 1 has naturally revegetated within the trench however the waste rock associated with the excavation of this trench has patchy areas of natural revegetation.

## 11. REFERENCES

Minfile #105M026

| ATTACHMENT 2: 1999 GERLITSKI WASTE ROCK SAMPLES LABORATORY RESULTS | | | | |
|---|---|---|---|---|
| **Site Number** | **Detection Limit** | **Units** | **63-01-Waste - Gerlitzki - 15cm - Sept. 21/99** | **63-02-Waste - Gerlitzki - 15cm - Sept. 21/99** |
| **Sample Desciption** | | | East side of Waste Rock Pile #3 | North Side of Waste Rock Pile #2 |
| Paste pH (field) | | pH | 5.5 | 6.8 |
| Conductivity (field) | | µS/cm | 510 | 26 |
| ***pH in Saturated Paste*** | | | | |
| pH | 0.1 | pH | 5.8 | 7.6 |
| ***pH in Soil (1:2 water)*** | | | | |
| pH | 0.01 | pH | 6.2 | 7.4 |
| ***ICP Semi-Trace Scan*** | | | | |
| Aluminum | 5 | µg/g | 27700 | 21400 |
| Antimony | 2 | µg/g | 12 | <2 |
| Arsenic | 2 | µg/g | 560 | 293 |
| Barium | 0.05 | µg/g | 516 | 448 |
| Beryllium | 0.1 | µg/g | 0.2 | 0.4 |
| Bismuth | 5 | µg/g | 16 | <5 |
| Cadmium | 0.1 | µg/g | 513 | 34.8 |
| Calcium | 5 | µg/g | 2200 | 7060 |
| Chromium | 0.5 | µg/g | 38.8 | 37.9 |
| Cobalt | 0.1 | µg/g | 12 | 10.8 |
| Copper | 0.5 | µg/g | 696 | 231 |
| Iron | 1 | µg/g | 86000 | 46000 |
| Lead | 1 | µg/g | 1730 | 247 |
| Lithium | 0.5 | µg/g | 9.9 | 8.8 |
| Magnesium | 1 | µg/g | 1760 | 1870 |
| Manganese | 0.5 | µg/g | 2920 | 2690 |
| Mercury | 0.01 | µg/g | 0.33 | <0.01 |
| Molybdenum | 1 | µg/g | 6 | 2 |
| Nickel | 1 | µg/g | 25.4 | 24.3 |
| Phosphorus | 5 | µg/g | 650 | 811 |
| Potassium | 20 | µg/g | 9100 | 6800 |
| Selenium | 2 | µg/g | <2 | <2 |
| Silicon | 5 | µg/g | 403 | 212 |
| Silver | 0.5 | µg/g | 188 | 49.8 |
| Sodium | 5 | µg/g | 643 | 955 |
| Strontium | 1 | µg/g | 46 | 41 |
| Sulphur | 10 | µg/g | 55000 | 1310 |
| Thorium | 1 | µg/g | <1 | <1 |
| Tin | 1 | µg/g | 41 | 15 |
| Titanium | 0.2 | µg/g | 108 | 230 |
| Uranium | 5 | µg/g | <5 | <5 |
| Vanadium | 1 | µg/g | 44 | 43 |
| Zinc | 0.5 | µg/g | 37000 | 3690 |
| Zirconium | 0.1 | µg/g | 15.5 | 16.7 |

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

| SAMPLE | SITE DESCRIPTION | PASTE pH | S(T) % | S(SO4) % | AP | NP | NET NP | NP/AP |
|---|---|---|---|---|---|---|---|---|
| 63-01-Waste - Gerlitzki - 15cm - 21/09/99 - Waste Rock | East side of Waste Rock Pile #3 | 6.3 | 3.68 | 0.16 | 110.0 | 13.0 | -97.0 | 0.1 |
| 63-02-Waste - Gerlitzki - 15cm - 21/09/99 - Waste Rock | North side of Waste Rock Pile #2 | 7.9 | 0.07 | 0.07 | 0.0 | 2.3 | 2.3 | ~~~ |

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.

Photo 63-1: Trench 1 with waste rock pile #2 on left side. (Azimuth 070°)

Photo 63-2: Core boxes and other debris lying in trench 1. (Azimuth 170°)

Photo 63-3: Test pit from waste rock pile #2. Note the shallow oxidation horizon. (Azimuth 170°)

Photo 63-4: The large, leveled area is Waste rock pile #3, trench # is to the right just off the photo. (Azimuth 080°)

Photo 63-5: Test pit from waste rock pile #3. Note the oxidation at the surface of the pit. (Azimuth 240°)