

Report on the Sawtooth Mountain, Antimony
Prospect, Livengood Quadrangle

Oct, 1964

Field Report

Sawtooth Mbn
Livengood Quad

Area VIII

October 20, 1964

Memorandum

To : Robert L. Thorne, Project Coordinator, Area VIII Mineral Resource Office

From : Project Leader, Area VIII Mineral Resource Office

Subject: Summary report 6-803, Sawtooth antimony deposit

Attached is Summary Report of Minerals Examination, form 6-803, for the Sawtooth antimony deposit, Livengood (B-6) quadrangle, Alaska.

The Sawtooth Mountain antimony deposit was discovered in 1942 by Fred Wackwitz, an active prospector who is presently residing at Cleary Hill, Alaska. Although Mr. Wackwitz was not queried about his knowledge or present interests, a review of State mining recording files discloses that he still maintains several lode claims in the area which presumably cover most of the known lode mineral occurrences. During 1950 and 1951, approximately 500 tons of shipping grade ore were mined from the Sb deposit. No production is known nor did observations during the August 1964 examination indicate much work, if any, since 1951.

The Sawtooth Mountain antimony deposit is described in a report by R. M. Chapman, Geologist, U.S. Geological Survey, which was written for the Defense Minerals Administration. Mr. Chapman completed what appears to have been a very thorough examination; he sampled and mapped the mine and area and recorded in detail the history and other applicable data during the period of production in 1951.

Chapman described the Sawtooth antimony deposit as a vertically plunging and hour-glass shaped lens of shipping grade ore. The bottom of a vertical shaft was still in ore at the time of his examination. Recommendations for additional exploration included (1) vertical and horizontal drilling from the bottom of the shaft to determine the vertical and lateral extent of the known orebody, and (2) limited bulldozer trenching in stibnite float areas away from the mine.

Approximately 200 tons of ore were mined in late 1951 subsequent to Chapman's examination. Although not confirmed, rumors are that the bottom of the shipping grade ore lens was reached. However, correspondence in our files indicates the shaft bottoms at 83 feet on shipping grade ore.

R. H. Sander, Mining Engineer, Department of Mines, Territory of Alaska, examined the Sawtooth area in 1957; the antimony shaft was filled with ice to within 6 feet of the collar. Sander reports that according to owner Fred Wackwitz, "the shaft was still in ore when sinking stopped."

Observations in August 1964 add little to the data included in the two above-mentioned reports. The shaft was ice filled to the collar; most of the time was spent examining, sampling, and mapping exposures and float in the shaft area. Approximately 20 tons of unbarreled shipping grade ore were observed at the mine shaft and 39 such 55-gallon barrels of ore were found at the head of Buckeye Creek near the bottom of the Sawtooth Mountain. Of note is that at least 25 percent of the barrels at Buckeye Creek were almost totally rusted out and most of the remaining ore would also have to be rebarreled before further shipping.

Attached are two photographs of the antimony ore pile at the shaft and a copy of the report by R. H. Sander.

R. V. Berryhill

Attachments

cc:

Thomas ✓

Berryhill

Min. File

Min. Prop. File

RVBerryhill:jc

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

SUMMARY REPORT OF MINERALS EXAMINATION

State Alaska County Sawtooth Mountains Mineral Products Antimony

Name of property or deposit locally called "Sawtooth Antimony"

Date examined 8/7/64 Engineer R. V. Berryhill Date of this report 10/9/64

Reason for examination Examine antimony occurrence

Engineer accompanied by E. A. Sander Address Lenora, Kansas

Extent of property 4 claims named the Sawtooth No. 1 and No. 2, and Caribou No. 1 and No. 2

Owner Fred Wackwitz Address Cleary Hill, Alaska

Leased or optioned to ----- Address -----

Location of property (be specific) (65°22'30" N, 149°31'27") at the head of Chocolate Creek, Sawtooth Mountains, Livengood (B-6) quadrangle, Alaska

Type of deposit and mineralogy (brief description) Shipping-grade stibnite occurring in a vertical pipe or lens at a contact between granite and metasediments

Known dimensions of the deposit
Length 10 feet Width 6 feet Depth 50 feet
(above mined as of 11/19/51)

Attitude of the deposit (strike, dip, etc.) Vertical

Possible extensions; correlation of known showings Vertical extension to an unknown depth below present workings

Mine workings (brief description or attach map or sketch) (indicate whether accessible) -----
1 filled shaft 50 feet deep. Width varies from 6 to 10 feet; length varies from 7 to 9½ feet.

Mining and milling equipment on property. Usable rock-walled 10'x12' bunkhouse

Past production (if any) Approximately 500 tons

Present rate of production (if any) None

Sampling (describe briefly, or attach sketch) Bedrock specimens collected from exposures at the mine shaft plus float and other bedrock chip specimens representing rock types in the area.

Tentative Estimate of Reserves

(Subject to revision when assays are received or after engineering calculations)

Measurable No data tons Grade

Indicated No data tons Grade

Inferred No data tons Grade

Mining method (actual or suggested) Open stope

Milling or processing method (actual or suggested) Ore as mined was shipping grade

Processing tests suggested None

Tentative conclusion and decision No further work recommended at the present time.

To be accompanied by brief letter giving examining engineer's general impression of the deposit, his impression of the owner, and any other confidential information he may care to submit. Refer to any known prior examinations and reports. May be executed in pencil. Should be mailed within 24 hours after examination is completed.

Send original and one copy to Washington Office.

TERRITORY OF ALASKA

DEPARTMENT OF MINES

PE
Livengood #49
File

REPORT ON THE SAWTOOTH MOUNTAIN ANTIMONY PROSPECT, 144-143

LIVENGOOD QUADRANGLE

by

Robert H. Saunders

Territorial Mining Engineer

January
1958

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INTRODUCTION

The Sawtooth Mountain antimony prospect was discovered in 1942 by Fred Wackwitz of Fairbanks. Mention of the prospect is made in Territorial Department of Mines Pamphlet No. 2, STRATEGIC MINERAL OCCURRENCES IN INTERIOR ALASKA, by Henry R. Joesting. During 1950-51 the prospect was mined while under lease to Alamco, Inc. of Fairbanks. This mining venture began when the price of antimony was high, but only a part of the ore that was mined reached the market before the price dropped, and the venture was financially unsuccessful.

In 1957 a trip for the Department of Mines was made in the Rampart District along a route that came within a few miles of Sawtooth Mountain; thus an opportunity to examine the prospect was provided. The examination, made primarily to acquire information for the Department of Mines files, was made on June 25, 1957, by Robert H. Saunders, Territorial Mining Engineer. This report is written from notes taken during that examination and from information furnished by Fred Wackwitz in a conversation on December 19, 1957.

LOCATION AND ACCESSIBILITY

The prospect is in the western part of the Livengood Quadrangle at $65^{\circ} 23'$ N latitude and $149^{\circ} 30'$ W longitude. It is on the east side of Sawtooth Mountain at 4400 feet altitude. The prospect is 35 miles by tractor trail from Livengood, and there is a gravel road from Livengood to Fairbanks, a distance of 80 miles. A road is now being built from Livengood westward to Eureka in the Manley Hot Springs District. When this road is completed, it should be

HISTORY AND PRODUCTION

The property was mined by Alamco, Inc. of Fairbanks during 1950-51; Howard Sparks of Fairbanks was in charge of the work. A vertical shaft was started on the orebody, and the deposit was mined as shaft sinking progressed. The ore was hoisted to the surface with a hand windlass and was packed in drums at the shaft collar. The full drums were hauled by tractor and go-devil down the steep slope to Buckeye Creek, where a dump of filled drums was built; Drums from the dump were loaded on an Athey trailer and hauled by tractor to Livengood. From Livengood they were hauled by truck to Fairbanks, where they were shipped by rail. A total of about 500 tons was mined, but not all of this reached the smelter.

PROPERTY AND OWNERSHIP

The prospect was discovered and staked in 1942 by Fred Wackwitz of Fairbanks, who still owns the claims. The claims are recorded in the office of the U. S. Commissioner at Fairbanks. According to Fred Wackwitz, all of the mined stibnite on the property and along the trail belongs to the Alaska National Bank of Fairbanks.

GENERAL GEOLOGY

The geology of the area in which the prospect lies has been described in USGS Bulletin 872, THE YUKON-TANANA REGION, ALASKA, by J. B. Mertie, Jr. The country rock in the immediate vicinity of the prospect is a formation of Mississippian age; the rocks making up this formation are non-calcareous meta-sediments including slate, argillite, chert, conglomerate, and sandstone. The main part of

the top of Sawtooth Mountain is Tertiary quartz monzonite. The stibnite prospect lies a short distance from the contact on the southeast side of the intrusion. There are also rocks of Devonian and Cretaceous ages in the surrounding area. The rock formations present are shown on the accompanying map.

MINERAL DEPOSITS

The stibnite deposit is in a fracture zone or a fault that strikes N 42° E and dips vertically. At the surface the width of the deposit is about six feet, but the width is reported to vary in depth. The orebody is lenticular in shape, and its length along the strike is reported to vary. The shaft is reported to have reached a depth of 83 feet, and the orebody was of at least sufficient size to produce 500 tons of ore between the surface and that depth. According to Fred Wackwitz, the shaft was still in ore when sinking was stopped. From the dump it appears that part of the material mined was stibnite mixed with varying amounts of quartz, and part was coarsely crystalline stibnite without quartz.

In the saddle at the highest part of the tractor trail a bulldozer trench has been dug on the east side of the trail. The sides of the trench have sloughed so that the bedrock no longer is exposed. Fred Wackwitz reported that another stibnite deposit had been uncovered by this trench. He reported that the strike and dip of this deposit are not the same as the strike and dip of the orebody at the shaft, and he believes this deposit to be in a different fracture zone or fault.

DEVELOPMENT AND WORKINGS

There are no underground workings except the shaft and the stopes beside it. At the time of the examination, the shaft was filled with ice to within six feet of the collar. The tripod head-frame and the hand windlass that were used for hoisting are still in place over the shaft.

A shelter cabin of rock and timber has been built near the shaft; a photograph of the cabin is included in the appendix.

SAMPLES AND ASSAYS

During this examination one sample was taken from the dump near the shaft; it was assayed at the Territorial Department of Mines Assay Office at College by Donald Stein, and it contained 46.19 per cent antimony, 0.02 ounces per ton of gold, and 0.44 ounces per ton of silver.

ORE RESERVES

Mining by Alanco, Inc. was done during the summers of 1950 and 1951. Freighting of ore and supplies was done in late winter and early spring while the ground was frozen. Early in 1952 the price of antimony began to drop, and it soon became so low that even the ore that was already mined could not be marketed profitably.

Freighting was stopped and some stibnite was left on the property and along the trail to Livengood. According to Fred Wackwitz, all of this mined stibnite is owned by the Alaska National Bank of Fairbanks; it consists of the following:

the dump near the shaft	35 tons
a pile of broken sacks on upper Buckeye Creek, (reported by F. Wackwitz)	10
the dump of drums on upper Buckeye Creek, (90 drums)	45
at the Athey trailer on Buckeye Creek, (35 drums)	17
at the mouth of Chocolate Creek, (reported by F. Wackwitz)	5
Total	112 tons.

There are no unmined ore reserves blocked out, however, the ore shoot that has been partly mined reportedly extends in depth below the bottom of the shaft. There is a possibility that other ore shoots may lie along the fracture zone or fault, and the discovery in the trench near the summit of the tractor trail indicates that there is at least one other mineralized zone.