PE-077-03

TERRITORY OF ALASKA
DEPARTMENT OF MINES

PE 77-3

PROPERTY EXAMINATION REPORT

FRED BRONNICKE'S GOLD-QUARTZ PROSPECT

AITELL CREEK, SLANA DISTRICT, COPPER CENTER PRECINCT

GULKANA QUADRANGLE, ALASKA

By

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Territorial Mining Engineer

May 1956

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U.S.G.S. Bul. 824 B.
U.S.G.S. Bul. 904.
U.S.G.S. Bul. 943 B.
U.S.G.S. Bul. 989. Plate 7 and text.

Maps 1 and 2, attached.

SUMMARY

The limited work completed (confined to the 35 foot adit) at time of investigation, has not been productive of encouraging results to date.

The gold occurrence in this true fissure vein is very erratic. The selected samples taken do not indicate that the presence of small amounts of sphalerite, galena, or chalcopyrite have any special significance, or that the gold is associated with these sulfides.

Arsenopyrite or pyrite may be the significant "markers". However, no arsenopyrite was observed in samples taken nor in the quartz vein where it was available for study in the short untimbered section of the adit.

The sample taken of the footwall gouge and oxidized footwall at adit face was the only one having encouraging value. With disseminated pyrite present the gold could possibly be associated with it.

Samples taken by owner while driving the adit an additional 18 feet the past winter did not carry gold values of interest.

INTRODUCTION

At request of Fred Bronnicke Ahtell creek gold-quartz prospect owned by him was visited July 24-25, 1955.

LOCATION AND ACCESSIBILITY

The property is located at approximate geographical coordinates Longitude 144° 00' west and Latitude 62° 45' north. It is about a two mile walk over good trail from Mile 58 on the Slana-Tok highway. The adit and Bronnicke's camp is located on east bank of Ahtell creek, and about 4 miles upstream from where the creek crosses highway at Mile 60.

The Ahtell-Grubstake creek trail and winter tractor road is followed for 1½ mile, passing through a low divide at about one mile from the highway. A few hundred yards beyond the divide Bronnickes trail takes off down the hill to east and reaches the property in 3/4 mile.

CLIMATE AND VEGETATION

Typical of the upper Copper River Valley, summer months are generally hot and dry with occassional rains. The winters are usually severe with good deal of sub-zero weather and fairly heavy snowfall.

In this area and altitude (2600 to 3000 feet above sea-level) there is a heavy spruce growth, with some birch and cottonwood. In the more open sections of Ahtell valley there is some willow and alder. Grass is fairly abundant. The area is generally one easy to travel on foot or horseback.

Timber

There is an abundance of spruce suitable for mine timber and camp construction.

WATER SUPPLY

Along this section of Ahtell creek there is an ample supply of water throughout the year, sufficient for domestic use and mining and milling requirements.

TOPOGRAPHY

Located in the southern fringe of the Alaska Range foothills, the immediate area is one of relatively low relief. Elevations range from 2600 feet at the property to 4000 feet within a radius of two miles.

HISTORY AND OWNERSHIP

The gold-quartz vein upon which the work has been done was discovered by Fred Bronnicke three or four years ago, and one claim was located and held since then by performance of annual assessment work.

The vein outcrops in a low bluff - 45 to 50 feet high - half of which is composed of glacial drift.

An adit has been driven on the vein for 35 feet on east side of Ahtell creek, and its portal is four feet above normal stream level. During the past winter the adit has been extended and its face is reported to now be in 53 feet.*

GEOLOGY

The area has been mapped by the U.S. Geological Survey as one of "shale, arkosic sandstone, and conglomerate, with basaltic flows and intrusives of Permian age".**
On south side of creek their mapping shows "undifferentiated igneous rocks of various kinds - dark-gray diorite, basic intrusives, lavas, and tuffs of late Paleozoic and Mesozoic" age. The contact between these two groups is shown on U.S.G.S. map about one mile to the west and their contact on south side is obscured by the alluvials in floor of the narrow (at this point) Ahtell creek valley.**

The gold-quartz showing on the Bronnicke property is true fissure vein. Four to twelve inches of gouge and lenticular scales of wall rock on the footwall side of adit shows a very strong "post mineral" fault movement.

The foot-wall and hanging-wall of the vein is probably a tuffaceous sediment, which at surface outcrop is well oxidized for ten feet or more on each side of vein. Beyond that to the east bedrock is covered with soil and vegetation. To the west of the adit the tuffaceous sediments (?) are present for first 100 feet, sections of which are well oxidized and contain considerable disseminated pyrite.***

Continuing west the next 30 to 40 feet appears to be an oxidized porphyry zone, and beyond this for 75 to 100 feet the bedrock is a fine to medium grained gabbro (or diorite?). Beyond this the bedrock is obscured by soil and vegetation.***

* Refer to U.S.G.S. Bul. 989, Plate 7.
** Refer to Maps 1 and 2, attached.
*** Refer to Map 2, attached.

Near adit portal a few feet in the hanging-wall there are several quartz stringers. At 40 to 60 feet west of portal there are three narrow fractures filled with calcite and quartz, containing a little pyrite.

Jointing (and minor fracturing) in the tuffaceous sediment varies from N80E to N50W.*

With a muskeg "flat" extending north of the bluff for a reported 1000 feet or more continuing driving the adit in that direction will not permit development of appreciable "possible" tonnages for that distance.

Mineralization

This quartz vein is sparsely mineralized. The sulfides present are sphalerite, chalcopyrite, galena, arsenoprite, and pyrite. They occur as small to coarse grains or crystals, "blebs" disseminated in the quartz, and occassionally as small "bunches". Several of the sulfides may occur fairly close together but it was not noted at any point where they were intimately intermixed.

The gold present is very erratically distributed. Effort was made to determine whether its occurrence depended upon a particular sulfide mineral association but results were inconclusive. Separate samples of quartz with sphalerite as only sulfide visible showed 0.03 ounces gold, and the selected sample of quartz with little galena the only sulfide present showed the same gold content. A sample of quartz with little chalcopyrite as only sulfide carried no gold.

A sample across 12 inches of the footwall gouge and soft, "scaly" wallrock gave the only encouraging gold value, carrying 0.90 ounces.

Some of the samples sent in by the owner from time to time have shown good gold values. With some arsenopyrite present in them that mineral might be the significant marker for occurrence of gold in the vein. Their width was not given.

* Refer to Map 2.

Sampling

Results of samples taken during the examination are listed below.

Sampling Results

Sample No.	Width in.	Au oz	Ag oz	Description
1-FB	12	0.90	0.76	Adit face 35 ft. from portal. Sheared "gougy" footwall. Little fine pyrite visible.
2-FB	29	0.02	0.28	Adit face. Adjoins No. 10FB. Quartz with few grains of sulfides.
3-FB	14	0.14	0.42	Adit face. Adjoins No. 2-FB, to hanging-wall. This is section owner reported getting best values as adit advanced. Quartz with little sulfides.
4-FB	Grab	0.03	0.10	Selected sample from adit of quartz with little sphalerite in effort to determine which sulfide might be the favored mineral for gold association.
5-FB	Grab	nil	0.29	Selected sample from adit of quartz and little chalcopyrite being only sulfide noted. To determine favored mineral association with gold occurrence.
6-FB	Grab	0.03	0.20	Selected sample from adit. Quartz with little galena as only sulfide noted. Taken to determine favored mineral association with gold occurrence.
7-FB	Grab	nil	nil	Grab from powder box full of quartz crushed by owner.
8-FB	12	0.06	Tr	East wall of adit 8 ft. from portal. Composed of footwall with few calcite and quartz veinlets with little disseminated sulfides, fine grained.
9-FB	6	0.04	0.36	Narrow oxidized surface outcrop with few quartz and calcite veinlets, west of adit portal.
10-FB	4	0.04	0.32	19 ft. east of 9-FB. Outcrop in low bluff few ft. above Ahtell creek. Few disseminated grains of sulfides (pyrite) in quartz and calcite veinlets.

Note:- All samples were checked for scheelite but none was found present.

No radioactivity was found in the area.

CONCLUSIONS

The gold occurrences in this vein are very erratic and the limited work completed up to time of examination does not show values of economic interest except in some selected samples sent by the owner. The twelve inch sample taken at adit face of the footwall gouge and small "scaly" lenses of the footwall, created by "drag" of the wallrock during period of post-mineral movement along plane of the vein, carried the only encouraging values in samples taken.

Further work may possibly give more encouragement. It should be borne in mind, however, that oreshoots of sufficient size to support a small scale operation would have to average over $40.00 per ton to be profitable to work across the average vein width disclosed to date.

With only a few feet of "backs" possible to obtain under the flat terrain which lies ahead of the face for a long distance, conditions dictate that it would be necessary to sink a shaft and drift upon the vein to develop any tonnage.

Efforts to find continuation of vein on south side of creek have been unsuccessful to date.

Based upon work completed up to time of examination last year it is the undersigned's opinion the owner will be well advised to abandon the project.

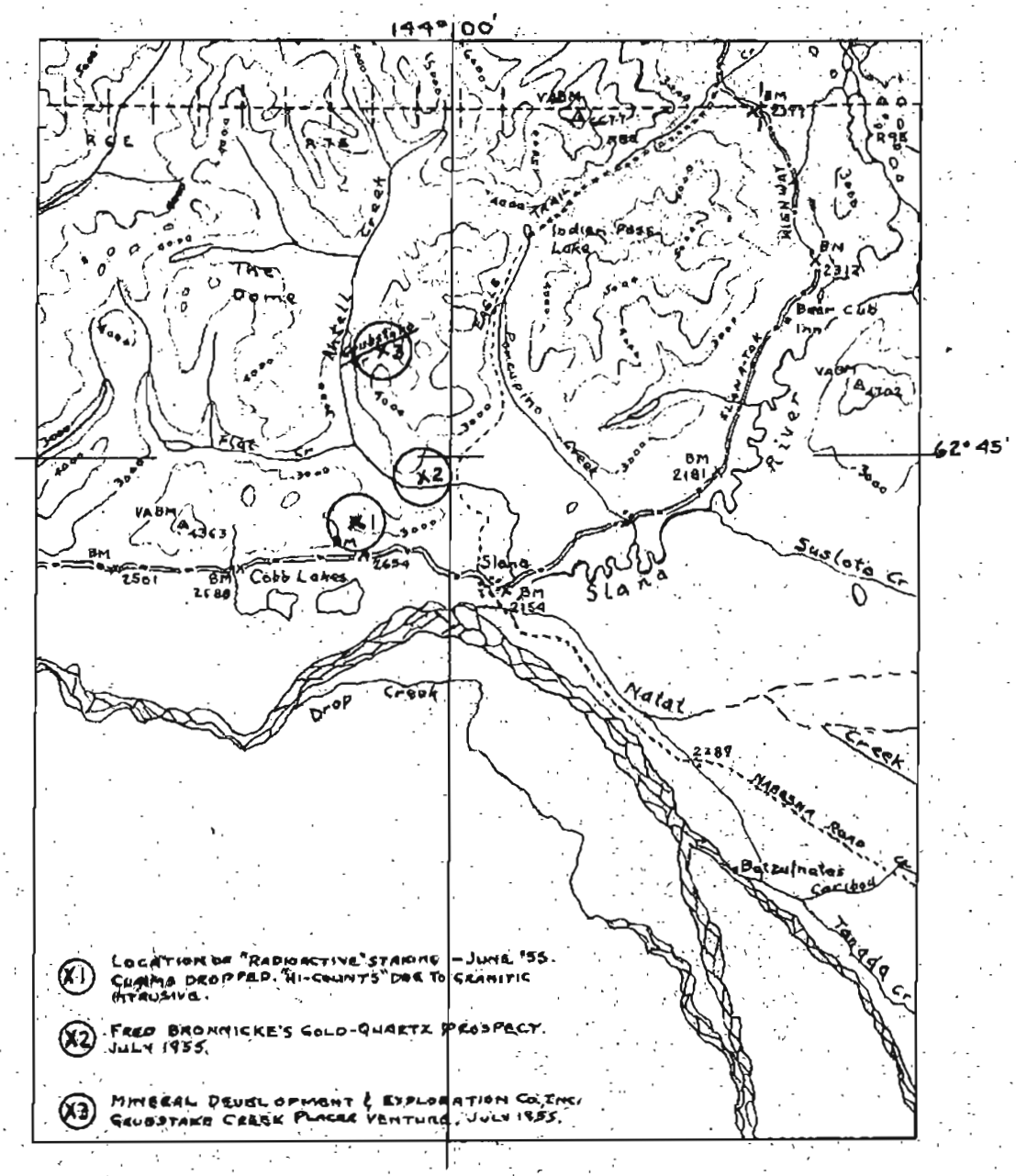
RECOMMENDATIONS

In view of cost to assemble equipment to permit sinking a winze (or shaft) to explore possibility of locating an oreshoot should further work be decided upon, it is suggested that the adit be extended another 50 to 100 feet to north in hope of finding a vein section containing encouraging and persistent values of economic interest. However, as pointed out above results to date offer little encouragement of doing so.

Martin W. Jasper

Territorial Mining Engineer

Anchorage, Alaska
May 12, 1956



KEY MAP

OF

ANTELL CREEK - SLANA RIVER AREA

TAKEN FROM

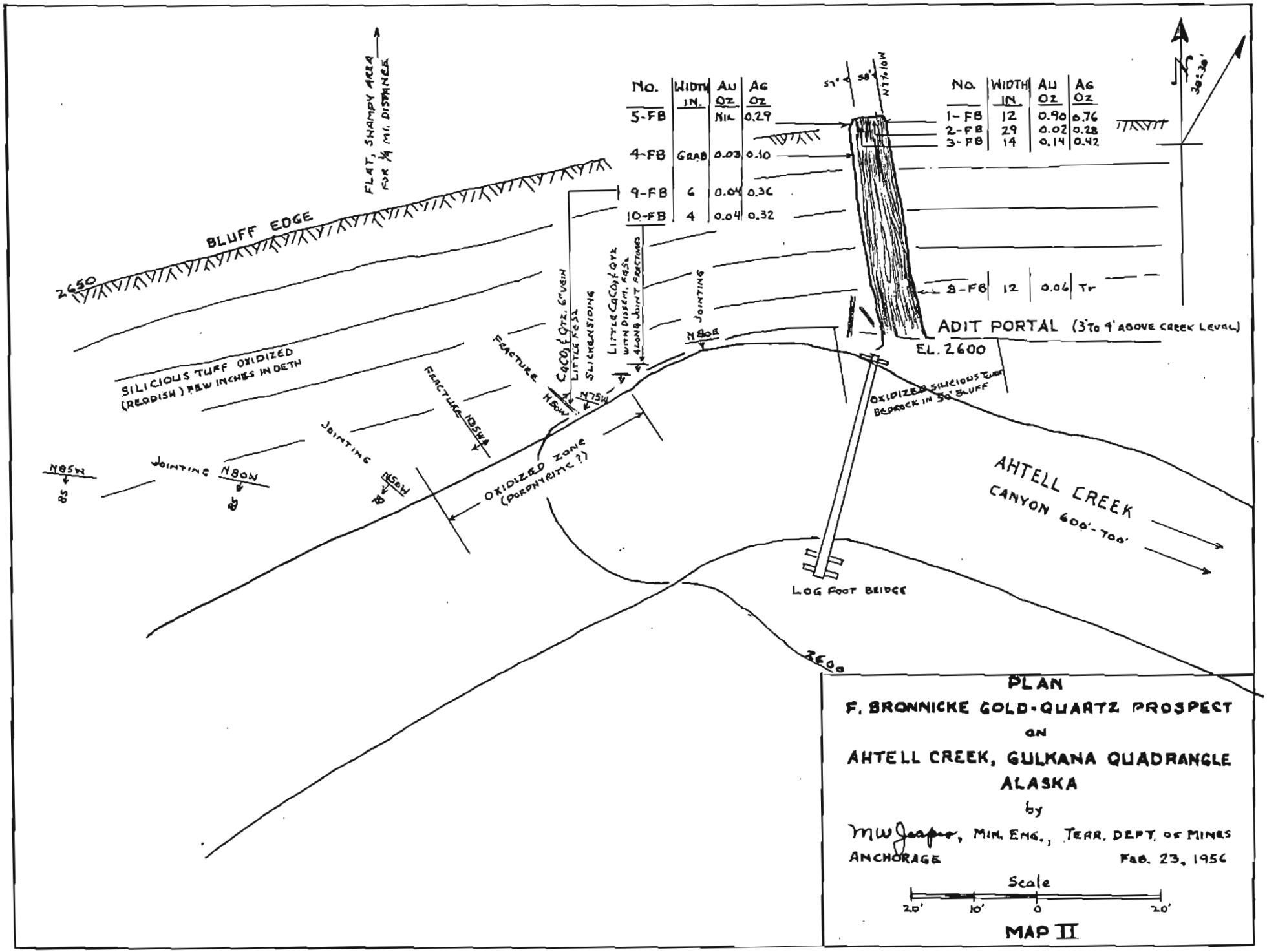
U.S.G.S. GULKANA & NABESNA QUADRANGLES

by

MW Jaeger, Min. Eng., Terr. Dept. of Mines
Anchorage, Alaska Feb. 23, 1956.

Scale

MAP I



PLAN
F. BRONNICKE GOLD-QUARTZ PROSPECT
ON
AHTELL CREEK, GULKANA QUADRANGLE
ALASKA

by

MW Jeapes, MIN. ENG., TERR. DEPT. OF MINES
ANCHORAGE

FEB. 23, 1956

Scale

20' 10' 0 20'

MAP II