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TERRITORY OF ALASKA

DEPARTMENT OF MINES

PROPERTY EXAMINATION REPORT

H & T MINING COMPANY

LAST CHANCE MINE

in

CITY OF SEWARD, ALASKA

KENAI PENINSULA

By

MARTIN W. JASPER

TERRITORIAL MINING ENGINEER

September 1957

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SUMMARY

The Last Chance Mine of the H & T Mining Company, Seward, Alaska, is located upon a strong ~~xxstrong~~ fissure vein. The vein has been filled with 60 to 74 inches of quartz and minor amounts of wallrock "inclusions" as evidenced at the three exposures available for study, in a strike length of 360 feet.*

The gold occurrences are very "spotty", and appear limited to very small localized areas; visible free gold was personally noted only at vein outcrop at pond edge. The owners exhibited several specimen of "hi-grade", which they reported having taken from hanging-wall side of vein when sinking the "new" shaft. The gold in these was fairly fine in size and confined to fractured quartz.

Efforts made to pick up the vein on southwest side of pond by trenching with trench-hoe at right angle to its strike was unsuccessful. Messrs Thomas and Haynes stated they had been unable to pick up the veins southwesterly extensions on the steep mountain slope to date.

Results of the very limited work done upon the vein up to time of examination is not considered very encouraging. It does not justify any consideration being given for building a mill until such time as a great deal more development work has been completed, and an ore-shoot (or ore-shoots) of economic importance definitely blocked out.

Sampling results obtained from the limited exposures do not offer any reasonable expectation of values in the vein material removed in development work being sufficient to carry costs of the operation.

* Refer to Assay Plan & Section Map attached.

INTRODUCTION

At request of Carl Thomas and John Haynes an examination was made of the Last Chance Mine, owned by the H & T.Mining Company, at Seward, Alaska, on May 14th and 15th, 1957.

LOCATION AND ACCESSIBILITY

The property is located within the City limits of Seward. The old adit at northeast end of the property is within 75 to 100 feet of Second Avenue, and the "new" shaft is an estimated 400 to 450 feet northwesterly of the new Seward High School.*

HISTORY AND OWNERSHIP

The mining property is located upon the old, original 240 acre Carlos Brownell homestead. Twenty to twenty five years ago the homestead was sold to the City of Seward, with the mineral rights retained by Mr. Brownell. In 1941 or 1942 the mineral rights were transferred to Carl Thomas and Jack Haynes of Seward. The east limits of the homestead are said to be First Avenue, which, if extended, would cut through the mining property 30 to 50 feet east of the "new" shaft.

The old adit is the northeasterly end of known length (360 feet) of the vein. This abandoned working is short distance beyond limits of the old homestead and is located on a lot owned by Carl Thomas. This adit (caved at the portal) is reported to have been driven in period between 1910 and 1915, and its abandonment suggests no values of real importance were found.

Depth of the old shaft - now caved and/or filled - was not determined, but was probably limited to 10 to 15 feet.

The"new"shaft was sunk by Thomas and Haynes to its present depth of 36 feet in 1941-42.

GEOLOGY AND MINERALIZATION

The vein occupies a strong fissure which cuts the highly warped, steeply dipping sediments of the Chugach Mountains Lower Cretaceous formation at a 40 to 45 degree angle. The vein strike is N50E and its dip averages 85° southeast in 36 foot depth of the shaft. Local strike of the sediments is N10E and their dip is 75° west.*

Horizontal displacement component along strike of the fissure appears to have been at least 100 feet. Insufficient bedrock exposures in the area do not permit a close measurement of either the horizontal or vertical displacements.*

The numerous quartz bands over the old adit portal show there to have been

* Refer to Assay Plan and Section Map attached.

a succession of slippages and widening of the fissure, with the successive reopenings being filled with a narrow band of quartz, rather than the quartz being deposited in a wide, open fissure. This sequence of events is supported by presence of severalnarrow widths of sheared and altered graywacke between some of the quartz bands. Narrow quartz bands were not noted or did not noticeably develop at the other two points examined - there the vein filling is almost entirely a "bull" quartz, somewhat broken and crushed.

Mineralization is at the adit outcrop is much stronger than elsewhere, with arsenopyrite fairly abundant, appreciable pyrite is present, and strong bands of limonite occur.

Only small amounts of arsenopyrite and lesser pyrite was noted in the quartz vein filling in the shaft and at the pond level vein exposure 30 feet beyond.

In the "new" shaft (pumped out for examination) the vein width at the few points not covered by lagging varied from 60 to 74 inches. The walls show very little gouge development; the ground should be easy to control in mining. During period of sinking this shaft Messrs Thomas and Haynes report sorting out small amounts of "hi-grade" with visible free gold, which was dumped on lower side of the dump area on the surface. That good ore may possibly have been limited to short,narrow, discontinuous lenses of banded quartz; specimen examined suggest that to be the case.

At the vein outcrop exposed by lowering of the pond 3 to 4 feet its width is 52 inches with neither wall exposed. This width is entirely quartz with no banding noted, and it contained few disseminated grains of arsenopyrite and pyrite. On hangingwall side of this exposure a few grains of fairly fine free gold was observed in several specimen obtained from the outcrop. These were obtained in the 12 inch section where sample No. 131-A was taken. Residual material from few inches above the outcrop and on the hanging-wall side showed a few fine colors on panning.

While at the property a trench-hoe was employed in effort to locate the vein on its strike projection, at foot of the steep mountain slope on southwest side of the pond. A trench 33 feet in length, 10 to 12 feet in depth, and an average 10 foot width at top and 4 feet in bottom was dug at right angles to the vein strike. Digging depth of the trench hoe was 12 feet, which was insufficient to reach bedrock. No quartz was found, although the southeast end was thought to be approaching a mineralized zone, as the hoe was bringing up reddish-brown residual material. Presence of frozen muck and some talus, two foot in thickness near surface, at southeast end, could not be ripped by the ¼ yard trench hoe, forced suspension of that work until the ground thawed.

Failure of Mr. Thomas and Mr. Haynes to locate the vein on the steep mountain slope, plus topographic structural features, indicates the presence of northerly striking fault in trenched area. Horizontal displacement of vein on other side of the fault may be of considerable magnitude.

Sampling

Results of sampling at the three accessible (and only) exposures are as follows:-

Assay Results

Sample No.	Width ins	Au oz	Ag oz	Value $	Location and Description
119-A	Grab	Nil	Nil		Soft, reddish-brown oxidized material from bottom near SE end of 33'x8'x12' trench-hoe cut.
120-A	Grab	Tr	"		From 15 points on "new" shaft dump. 250# grab sample sent DECo said to have run 3.5 oz.
121-A	Grab	0.38	"	13.30	Taken @ 7 points of dumps lower side where hi-grade was reported dumped.
122-A	23	0.48	"	16.80	Shaft, SW side 30' below collar. Cut from HW toward FW of 74" quartz vein width.
123-A	36	0.02	"	0.70	Ajoins "122-A on FW side. Quartz.
124-A	15	0.20	"	7.00	Adjoins #123-A and finishes section to FW. Quartz.
125-A	38	Tr	"		Shaft, NE side 24' below collar. Quartz. Lagging covered balance of 60" vein width.
126-A	18	0.06	"	2.10	Shaft, SW side 1' above bottom, and 5' below #122-A. Cut from HW toward FW.
127-A	54	Tr	"		Adjoins #126-A and completes section across quartz vein to argillite FW.
128-A	28	0.10	"	3.50	Shaft, SW side 24' below collar. Cut from graywacke HW toward FW of 64" qtz vein.
129-A	36	Nil	"		Adjoins #128-A and complets section to argillite FW. Quartz.
130-A	40	0.03	"	1.05	Exposed vein few inches above lowered pond level, 30 SW of shaft. FW not exposed.
131-A	12	0.92	"	32.20	Adjoins #130-A on SE side. HW not exposed and quartz veins full width not determined. Little fine freeAu noted in hand specimen. Residual material above & on HW side showed few fine colors on panning.
132-A	19	0.02	0.42	1.08	Outcrop above portal of caved adit portal. Cut from graywacke HW toward FW. Graywacke with qtz bands (stringers). Some arsenopyrite in center. Limonite fairly abundant.
133-A	10	Nil	Nil		Adjoins #132-A on FW side. 4" banded qtz & 6" sugary qtz with abundant limonite. Little arsenopyrite & pyrite.
134-A	24	0.32	Tr	11.20	Adjoins #133-A on FW side. 9" oxidized qtz & limonite, 15" banded oxidized qtz. Abundant limonite, little arsenopyrite.
135-A	10	Tr	Nil		Adjoins #134-A. Finishes section to FW. Seval bands of oxidized qtz. Limonite abundant. Little arsenopyrite and pyrite.

CONCLUSIONS

Assay results of samples taken last May and of those (available) taken previosly (shown on attached Assay Plan and Section Map), at the three points along the 360 foot vein segment, do not justify serious consideration being given to purchase and erection of a small mill (15 to 30 tons per day) at this time. Sampled values shown do not offer a reasonable expectation that vein material removed in development work would pay costs of that program.

At two points samples taken by the owners while sinking the 36 foot depth showed hi-grade. These were 13 inches with 3.28 ounces ($114.80) and 14.84 ounces ($519.40) across 6 inches. A mining width of 3 feet to include these sections would reduce grade of ore to $41.45 and $86.57 respectively. These values would be further reduced by 50% as full width of vein would have to be mined, as the erratic values might occur on or near either wall or elsewhere in the vein.

It is considered an average minimum grade of $40.00 per ton mill feed would be required to permit a continuing development program and a profit in a well designed small mill. Beneficiation of the ore by hand sampling does not appear practical due to erratic occurrence of the gold. The limited work to date has not indicated presence of a "possible" ore-shoot of required grade and tonnage.

Unless the veins faulted southwestern extension can be located, and ore-shoots of economic interest proven, chances of making a profitable operation in area limited to the 360 foot vein segment are ~~are~~ considered to be poor.

RECOMMENDATIONS

The following development program is suggested:-

1. First efforts be directed toward locating the (indicated) faulted southwest vein extension on steep mountain slope. With fault displacement of probable considerable magnitude, contour stripping (mechanically, if practical) or trenching from east limits of homestead westerly 500 to 600 feet. If vein is located it should be drifted upon several hundred feet in effort effort to find and block out oreshoots, and sampled each round.

2. If negative results found above, strip the full 360 feet of vein segment and sampled every five feet. If results are low the project should be abandoned. Should their average value be of economic interest the shaft should be deepened to 110 feet, and vein drifted on to properties northeast limits and southwest to intersection of the assumed fault. Samples should be taken after each round for full width of vein. Where good values show raises should be run at 25 to 50 intervals to outline limits of "possible" ore-bodies.

Results of this program will determine whether a mill is justified and plant size required.

Cost estimates for the above program, excluding mining equipment, are:-

1. Stripping and/or trenching -	$500.00 to $1000.00
2. Shaft extension to 110 foot depth - per foot	$ 40.00 to $ 50.00
3. Drifting on vein - per foot	$ 20.00 to $ 30.00
4. Raising on vein - per foot	$ 20.00 to $ 30.00

By- Martin W. Jasper

Martin W. Jasper
Territorial Mining Engineer

Anchorage, Alaska
September 30, 1957

October 4, 1957

COPY

Mr. Carl Thomas,
Box 981 and
Mr. Jack Haynes,
Box 1138,
H & T Mining Company,
Seward, Alaska.

KT 95-275

Dear Carl & Jack:

Enclosed you will find 1 copy each of my report on the Last Chance Mine, covering examination of the property last May. Also enclosed with each report is a Map showing Dahners and your samples, as well as my own. The latters locations are shown on sections of the shaft and over the portal, which is always desirable in case a check sampling is desired.

With kind personal regards and the hope that you may have been able to uncover more encouraging showings since my visit,

Yours truly,

Martin Jeaper
Territorial Mining Engineer

cc: Jack Haynes
✓: Phil R. Holdsworth

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