

Confidential
H.T.S.

RECEIVED
TOWNSEND
NOV 28 1925

IR 195-48

805 PIONEER BUILDING
SEATTLE, WASH.

November 17, 1925

Noel W. Smith,
General Manager,
Alaska Railroad.

A.M.S.

Sir:

Since I have now received all my assay returns, I can give you a fair idea regarding the merits of prospects which I examined under the direction of Dr. Philip S. Smith, Chief Alaskan Geologist, and B. D. Stewart, Supervising Mining Engineer, Geological Survey, U. S. Department of the Interior.

In the Iron Creek district and beyond on the upper Talkeetna River, fifty to seventy miles from the railroad, I examined fifteen widely scattered prospects. Of these only two show any promise at all. The Copper King has a lens of about 5' copper about fifty feet long and five feet wide. The ore body occurs at the intersection of a dike and shear zone.

XX-76-21

see also 2 sketches

The Phoenix has two feet of 2% copper in an open outcrop is greatly leached, and I believe that the Phoenix vein carries high grade copper ore, but the amount of ore carried and the extent of the vein are still to be determined.

XX 76-21

see also sketch

On the whole I was much disappointed in the Iron Creek district. The two copper ore bodies found are small and barren of gold and silver. However I obtained some unusual results sampling slightly mineralized fresh granite and quartz porphyry. At one place a twenty foot width (part of a much greater width) of fresh silicified granite yielded 2.00 per ton in gold. This result strongly indicates that there should be more prospecting in the granite areas rather than only in the greenstones of the district.

Ten miles from the Gold Creek station and near the head of Clear Creek is the Caribou Prospect. It is now owned by Vest and Gray, formerly by Smith and Hewitt. A fair amount of sampling on this property gave an average return of twenty cents in gold, a very little silver, and no platinum. see also
3 sketches

The Golden Zone is the most promising property seen during the summer. By the present trail it is twelve miles from the railroad at Colorado station. A sample across ten feet of an oxidized outcrop averaged \$25.00 in gold, \$20.00 in arsenic, with the oxide at 4% per lb, and over a dollar in silver. The extent of the lens is apparently less than twenty feet in one direction, but the surface is covered in the other direction, and there is a considerable area of lower grade ore outcropping. A hundred foot extension of the Golden Zone tunnel is work fully justified, and underground exploration of the vein across the gulch is also justified by the outcrop. A small amount of cautious work might well be done on the Riverside prospect, which is not far from the Golden Zone. see
also
3 sketches
KX-67-10

On Costello Creek, about ten miles from the railroad, is an outcrop of coal twenty five feet wide with a foot of sandstone in the middle, and with no hanging wall exposed. It lies nearly flat dipping 5 degrees southerly. Mr. Stewart has given you the results of testing this coal. It appears to be a very desirable sub-bituminous coal for domestic use, but too light for locomotives. KX-67-48

Other prospects seen in the Upper Chulitna district contain small lenses of good ore, but do not appear promising to me. I did not see the Hector copper prospect or Dr. McCallie's Ohio Creek prospects on account of a heavy snow.

In the Lope district I found that Mr. Sumner Smith had located his faulted vein in the lowest 200 foot level of the mine of the

Alaska Minerals Co. At Mr. Sumner Smith's request, I took twelve samples across the vein at points ten feet apart. Most of these samples assayed very low, but there is one ore shoot thirty to forty feet long averaging \$14.00 in gold across an average width of 22 inches. There is also a chance that the main ore shoot may be still ahead of the work in the drift. A half dozen other prospects in the district were examined. The one showing the greatest promise is the Gold Mint, where a \$12.00 assay was obtained across two feet with no footwall exposed. The Gold Mint is well worth work. It is high on the mountain above the Palmer Creek wagon road about eight miles from Hope.

KX
95-47

See
also
Sketch
KX
95-38

On the Mothers Lode at Mile 43¹ and on the Rose Group at Mile 37, the uniform result of considerable sampling was only a trace of gold and a trace of silver.

See
sketches
of both

In closing I will mention two prospects that I examined in previous years, that are well worth work. One is the Mint Ruby Silver ten miles east of Chalitna on Portage Creek. At one place I obtained 12 ounces of silver across 6 feet of dike and 32 ounces silver across four additional feet of quartz with no wall. The silver occurs in ruby silver crystals, and there is a fair chance of finding a lens of very high grade ore on this property.

KX
76-11

On the Quisley Group, ninety miles west of McKinley Park station, I obtained ten dollars in gold and silver across twenty feet of quartz with no walls exposed. There are other showings on the Quisley Group worth work.

KX-66-15442

Any one searching for antimony will find an attractive prospect on Stampede Creek running into Stony Creek, Lantishna district. I am very reliably informed that there is a twenty foot width of unknown length and depth, that will assay 50% metallic antimony.

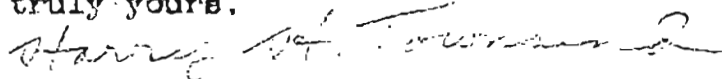
KX-66-71

In 1924 I visited the Liberty Bell mine ten miles east of Perry station, and found that they had developed 8,000 tons of ore assaying 14.00 in gold and 3% metallic arsenic. As they have worked over a year since then, they have undoubtedly developed considerably more ore. The vein is flat and requires a great deal of development work to assure tonnage.

I have heard numerous good reports of new prospects, but have no reliable information. I have never been in either the Willow Creek or Fairbanks districts, where most of the metal mining development is being done.

Will you kindly consider this letter confidential until you have seen Dr. Philip S. Smith, as he should be the first to receive my report and maps, which are not yet prepared. I feel sure that he will approve my giving you this definite information, and I will send you my complete report and maps as soon as prepared and approved.

Very truly yours,



Associate Mining Engineer,
Geological Survey, U. S. Dept. of the
Interior

Copies to
Dr. Philip S. Smith
Mr. E. D. Stewart