PE-075-01

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JILES-KNUDSON PROSPECT

September 29, 1948

[redacted]

Mr. I. W. Purkeypile
Poorman, Alaska

Dear I.W.:

Enclosed you will find several pictures that were taken during my visit to your prospect in the Tonzona District. I am sending these pictures in advance of other information because I think they may be of interest to you. You will find a short word description on the back of each picture. The pictures marked Pan. No. 1, No. 2 and No. 3 can be put together in the order named to form one picture showing the general area covered during my examination. These pictures were taken enroute from the lake to the Boulder Creek cabin.

Tonzona River is the large river to the south of the area, and the creek east of the lake, Jiles cabin located on west bank, is Cathedral Creek. Boulder Creek, to the north, flows into Chedotlothna River. The names of these streams were taken from the map of the Toklat-Tonzona Region.

The material, previously identified as gossan, from the Jiles-Knudson prospect on Boulder Creek, has been identified as ferriferous dolomite, calcium-magnesium-iron carbonate. Sample JK 200 which is this same material taken from the dump near the collar of the shaft was tested for copper, lead and zinc with negative results. Previous assays, run for gold and silver, on the same material showed only traces. (photo JK No. 2)

Sample JK 201, a chip sample across 10' of the mineralized zone above the collar of shaft, assayed a trace of gold, 2 ounces of silver per ton at a total value of $1.80 per ton. This sample contains two types of minerals, sulphides and oxides. The sulphides are principally arsenopyrite with a small amount of pyrite, and perhaps, a trace of chalcopyrite. The balance of the sample is composed of the iron-oxide limonite. Microscopic study reveals a small amount of pyrite and or pyrrohitite, as well as quartz. It appears likely that this material represents rather complete oxidation of a sulphide ore. No gold or other values were detected by panning and leaching tests. (Photo JK No. 1 & No. 1a)

Sample JK 202, a chip sample across 30' of the iron-stained zone 250' south of shaft, assayed a trace of gold and no silver. The bulk of this sample constituted an iron-stained silicified schist, probably a quartzitic phase of the neighboring silicified sediments. Sulphides identified as pyrrhotite and chalcopyrite, Sample JK 203, constituted a small percentage of the entire zone. These sulphide minerals occur in narrow seams and occasionally as irregular lenticular shaped bodies parallel to the bedding planes. No large continuous sulphide bodies were seen. (Photo JK NO. 3 and No. 4)

Sample JK 204, composed of iron-stained rock specimens from the high hills west of the Jiles-Knudson prospect, identified as silicious schist, phyllite, and calcareous schist. The igneous rock is granite. The bedding planes of the metamorphic rocks strike N 80° E and stand vertical; the attitude of these rocks is comparable to those within the immediate vicinity of the prospect.

The results of the assays and identifications of samples taken at the Mespelt prospect are as follows:

Sample M 300, quartz from brecciated zone near contact between calcareous schist and granite, assay 0.04 ounce gold per ton, no silver, value $1.40 per ton. Sample M 301, rocks from immediate area of Sample M 300, consist of silicious limestone, schist, shale and granite. The granite intrudes the older sedimentary and metamorphic rocks.

Sample M 302, sample of quartz float found on talus near contact at head of small creek above old Mespelt cabin. Assay, gold 0.10 ounce per ton, silver 8.30 ounces per ton, value $10.97 per ton.

Sample M 303, float gossan found along contact above Mespelt cabin, assay, trace gold, silver 6.48 ounces per ton, value $5.83 per ton.

Sample M 304, galena float found in talus; this material is comparable to that which you submitted for assay during the early part of the summer.

Sample M 305, green and blue stained galena float found on talus near location of Sample M 304; the green stain is malacite and the blue is azurite, both these minerals are copper carbonates. The red-brown mineral included with the forementioned minerals was iron-oxide, limonite. This specimen was not assayed.

The iron-stained rocks on the southwest side of Cathedral Creek are the same as those rocks found at Boulder Creek and in the vicinity of the Mespelt prospect. These rocks include silicious schist, shale, calcareous schist, phyllite, some silicious limestone. The forementioned rocks are oldest and they are intruded by serpentine, which is found as dikes parallel with the bedding planes. The large rock mass to the southwest is granite. No sulphide mineralization was found, however, the iron staining, over a large area, justifies a thorough search for the same sulphide minerals that are found elsewhere in the district.

Was it possible for you to uncover any galena in place, in the area close to the old Mespelt cabin? The large pieces of talus no doubt caused much trouble in tracing the float in this area.

Trusting the enclosed pictures will be of some interest to you I wish to remain

Yours very truly,

Bruce I. Thomas
Associate Mining Engineer
Department of Mines

ENCL: