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TERRITORY OF ALASKA

DEPARTMENT OF MINES

PE 68-3

REPORT ON THE EMERICKS PROSPECT, MT HAYES QUADRANGLE

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by

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INTRODUCTION

The Emericks prospect is in the Mt Hayes Quadrangle at $63^{\circ} 21'$ N latitude and $145^{\circ} 35'$ W longitude; the location of the prospect is shown on the accompanying map. The veins covered by the claims are in the walls of a canyon that lies about two miles northwest of the top of Rainbow Mountain. Drainage from the north end of the canyon goes into Miller Creek and drainage from the south end goes into Delta River. A few years ago, rock was quarried from the canyon to be used for rerap along a part of the Richardson Highway. At that time an access road was built into the canyon from a place on the Richardson Highway about two miles south of Miller Creek bridge.

In late September, 1955, Dean Ricks visited the prospect with the owner, Rollie Emericks, and, while he was there, he picked up several pieces of copper-stained rock, which he brought to the TDM office at College. An examination with the spectroscope showed that the rocks contained about one per cent copper, and it appeared likely that there might be a large, low-grade copper deposit on the property. The probability of finding a high-grade gold deposit also seemed somewhat favorable because Rollie Emericks, or an associate, had picked up a sample on the prospect that assayed over \$700 per ton in gold. Unfortunately, a number of samples were taken at that time without a record of the sampling being made, and Emericks does not know where the high-grade sample was taken.

The prospect was examined October 4, 1955, and again on June 18 to 22, 1956, by Robert H. Saunders, Associate Mining Engineer. In July, 1956, a field trip down the Richardson Highway to examine

another prospect provided an opportunity to visit the property again and see the results of the work being done. The examination in 1955 was made during a snow storm that left about six inches of snow on the ground. It became apparent during that examination that the copper mineralization was confined to a number of narrow stringers rather than disseminated throughout the main body of rock and that the overall copper content of any large rock mass found thus far would be too low to make a commercial deposit. The examination of 1956, therefore, consisted mostly of a search to find the high-grade gold-bearing vein that had provided the sample that assayed over \$700 per ton.

GEOLOGY AND MINERAL DEPOSITS

The geology of the country in which the prospect lies has been described in U.S.G.S. Bulletin 498, HEADWATER REGIONS OF GULKANA AND SUSITNA RIVERS, ALASKA by Fred H. Moffit, 1912. A major fault lies along the southwest side of the lower part of the Canwell Glacier; pre-Cambrian Birch Creek Schist lies on the northeast side of the fault, and diorite of Jurassic age lies on the southwest. Near the north end of the canyon there is a contact between the diorite and a series of metamorphosed rocks of Carboniferous age. The diorite is on the north side of the contact and the Carboniferous series on the south side. The Carboniferous rocks have been folded, and in places a schistose structure has been developed. Most of the bedrock exposed along the canyon walls is dense, dark-green rock, apparently of igneous origin. This is probably diabasic

intrusive or flow rock described by Moffit as a part of the Carboniferous series.

Along the canyon walls there are many small veins varying in thickness from one-quarter inch to more than two feet; many of these veins are stained in places with secondary copper minerals. About at the midpoint in the canyon, a ridge juts out from the east wall and terminates in a brilliantly colored, orange-red knob; a similar-colored fracture zone extends from the knob in a southerly direction, angling up the east wall of the canyon. About 1500 feet north of the orange-red knob a small lens of galena has been exposed on the east side of the canyon.

SAMPLES AND ASSAYS

During the 1955 examination five samples were taken. One was a sample of the bedrock for a spectroscopic examination; according to the examination the rock consists mostly of silicon and aluminum with minor amounts of calcium, magnesium, iron, titanium, and sodium, and traces of manganese, copper, lead, barium, lithium, and tungsten. Of the other four samples, three contained nothing of value, and the fourth assayed 0.46 ounces of gold per ton. This sample was taken from a flat-lying quartz vein about one foot thick outcropping in the embayment opposite from the orange-red knob.

During the 1956 examination a great number of samples were taken; most of these were crushed and panned in the field and only those that panned metallic sulfides were saved for assay. Many

of the veins are too high on the canyon walls to be reached by climbing, and samples from those veins were obtained by searching for float on the talus slopes. No gold was found in any of the samples that were panned. One sample of material from the orange-red knob was examined with the spectroscope; it consisted mostly of silicon and iron with about 1.0 per cent lead, 0.01 per cent each of copper, molybdenum, and chromium, and traces of antimony and silver. Twenty-two samples were taken to the College Assay Office for assay; none of them contained valuable minerals in commercial quantities.

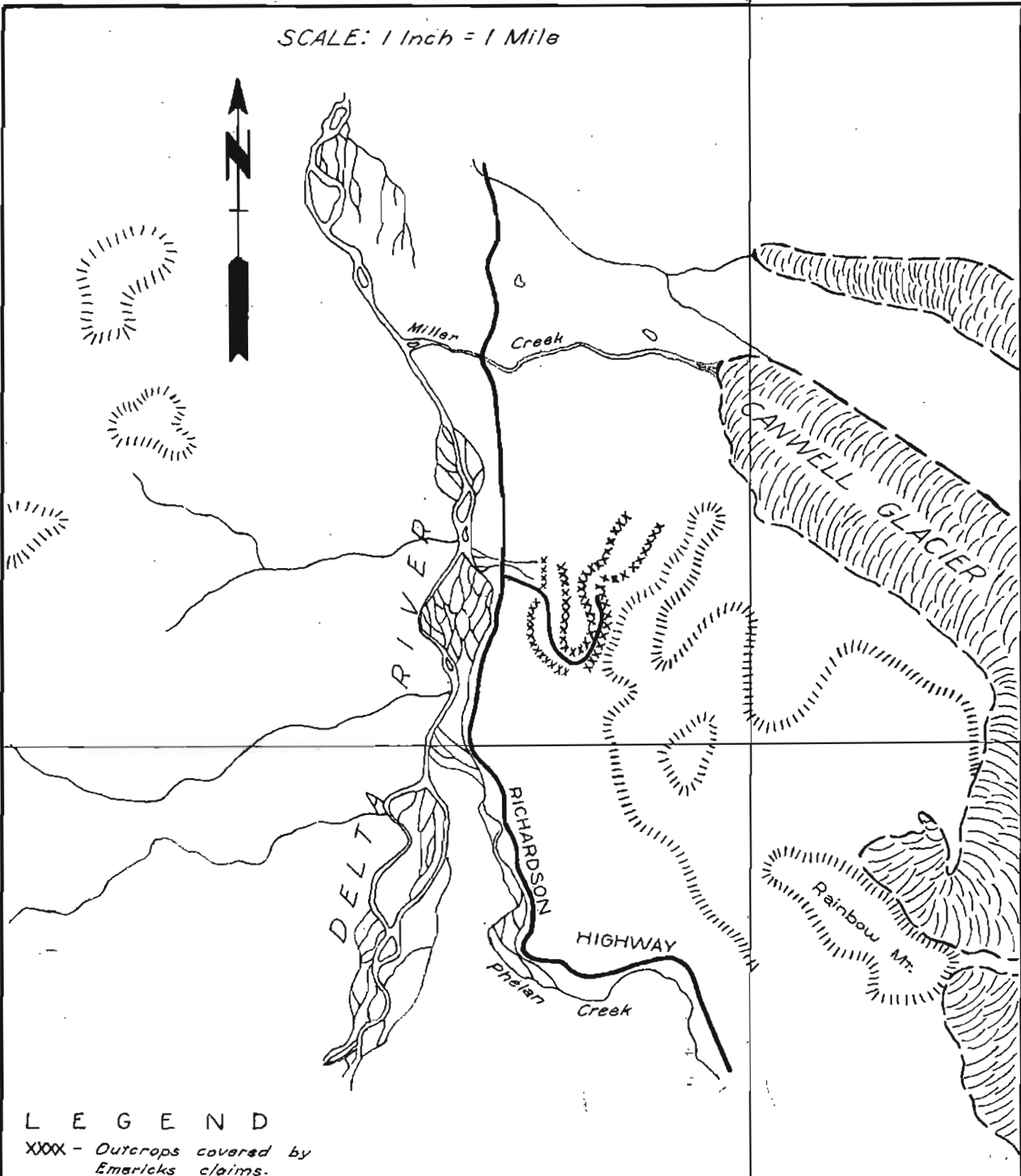
SUMMARY

In July, 1956, Emericks did some excavating by hand on the galena deposit. The deposit proved to be lenticular in shape and too small to be of economic importance. There is a possibility that there may be larger lenses along the fracture. However, a sample of the galena assayed only 9.11 ounces of silver per ton; and a much higher silver content would be necessary to make the mining of galena profitable in this region.

As yet no deposits that can be mined profitably have been found on the claims, however, the fact that small amounts of a variety of metals have been found makes the area a favorable place in which to prospect. Some prospecting is justified in the mountainous area east of the canyon where the claims are staked.

SCALE: 1 Inch = 1 Mile

145°40'



63°20'

L E G E N D

XXXX - Outcrops covered by Emericks claims.

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EMERICKS' PROSPECT
AND VICINITY

Adapted from USGS Mt
Hayes B-4 Map.

R. H. Saunders Oct. 1956