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TERRITORY OF ALASKA

DEPARTMENT OF MINES

COLLEGE, ALASKA

ITINERARY REPORT

TO: Phil R. Holdsworth, Commissioner of Mines

FROM: Robert H. Saunders, Associate Mining Engineer

SUBJECT: FIELD TRIP TO THE VALDEZ CREEK DISTRICT, JULY 27 TO AUGUST 5, 1953.

The Valdez Creek District is on the south flank of the Alaska Range; the approximate center of the District is at 63° 10' N latitude and 147° 20' W longitude. It is in the northern part of the Cook Inlet-Susitna Region about 50 miles east of Cantwell, a station at Mile 319 on the Alaska Railroad.

The discovery of gold in Valdez Creek in 1903 by the Monahan party was followed by a minor gold rush into the District, and the village of Denali was built near the mouth of the creek. The total gold production of the District to the end of 1936 was $720,000, all of which came from the placers on Valdez Creek and its tributaries. Although there has been no production from gold lodes, several prospects have been found that indicate the presence of minable lode deposits.

The U S Geological Survey has published five bulletins that describe the geology of the Valdez Creek District; they are: Bulletin 498, HEADWATER REGIONS OF THE GULKANA AND SUSITNA RIVERS by Fred H, Moffitt; Bulletin 608, THE BROAD PASS REGION, ALASKA by Fred H. Moffitt; Bulletin 849-H, THE VALDEZ CREEK MINING DISTRICT, ALASKA by Clyde P. Ross; Bulletin 897-B, THE VALDEZ CREEK MINING DISTRICT, ALASKA IN 1936 by Ralph Tuck; and Bulletin 907, GEOLOGY OF THE ALASKA RAILROAD REGION by Stephen R. Capps.

The Monahan party made the first trip into Valdez Creek by going over the Valdez Glacier in the winter with dog teams. The glacier route was used for access again in 1904. In the fall of 1904 a trail was established from Denali to Gakona; it served as the transportation route for the District until the Alaska Railroad was built. Since the construction of the Railroad, freight has gone into the District over the trail from Cantwell on tractor-drawn or horse-drawn sleds. Freighting has been done during the winters, when the Susitna River could be crossed on the ice. The Paxson-Cantwell Road, which is now under construction, will cross the Susitna River about

nine miles south of Denali. It will provide a new access route to the whole southern flank of the Alaska Range between the railroad and the Richardson Highway. There has been some mineralization in the mountains north of the proposed route, but in most of the mountainous area there has not been sufficient prospecting to indicate the extent of the mineralization.

This trip was made to learn about the present prospecting and mining activity in the Valdez Creek District and to determine in what areas, if any, the geological conditions are favorable enough to justify further investigations.

July 27 - Left Fairbanks at 6 a m via Fairbanks Air Service and arrived at Denali at 7:40 a m. Visited the hydraulic mine operated by A. B. Smith on Valdez Creek.

At Denali I met A. B. Smith, who is now the only permanent resident of the town. He has an hydraulic mining operation on a small tributary on the left limit of Valdez Creek. The mining equipment used includes one No.2 giant, wooden sluice boxes with longitudinal steel rail riffles, and a stiff-leg derrick that is used for picking large boulders out of the cut. A four-wheel-drive vehicle furnishes the hoisting power for the derrick; after the boulders are hoisted, the boom is swung horizontally by hand. One man, John Kimball, is employed by Smith to help with the mining, but they apparently mine only part of the time.

July 28 - Denali to White Creek on foot.

July 29 - Reconnaisance on White Creek.

RX-69-114

The ground on White Creek that formerly was mined by the Wickersham brothers is covered by a group of claims that extends about four miles upstream from the mouth of the creek. The location notices show that the claims are held by Thomas and Freda C. Snyder of Anchorage, and a notice on the cabin door states that the assessment work for the year ending July 1, 1953 has been done. On the claims there are a small prospect drill, a two-drum hoist, some hydraulic equipment, and a few small tools. The hydraulic cut is a few hundred yards upstream from the cabin.

July 30 - White Creek to Roosevelt Lake on foot. Reconnaisance around Roosevelt Lake.

Lower White Creek. Valley of Valdez Creek in background.

Hydraulic cut and upper White Creek valley.

John Babel, C. A. MacGahan, and Olaf Thorgaard were camped near Roosevelt Lake and were prospecting for lode deposits in the vicinity. C. A. MacGahan formerly had an interest in the Yellowhorn prospect, and, in 1936, John Babel was one of the original discoverers of the Lucky Top, a lode prospect on the ridge between Lucky Gulch and Roosevelt Creek. They came into the area this year to restake the Lucky Top, but they found that it had been staked by James Frey of Palmer in 1950 or 1951. They then established the camp on Roosevelt Lake and began prospecting in that area. James Frey made a trip into the area by float plane this summer and visited them. He told them to disregard his stakes because he no longer was interested in the claims and had not done the assessment work. After his visit they restaked the Lucky Top, but they did not have time to move their camp and work on it. They plan to return in 1954 to work on the Lucky Top.

KX-69-22

Prospecting party. Roosevelt Lake in the background.

Valley of Surprise Creek. Tenas Lake in left foreground.

We went to a vein that they had found in a gulch near the head of an unnamed tributary of Roosevelt Creek; it is the first left-limit tributary upstream from El Dorado Creek. The vein filling is quartz with visible amounts of pyrite; a sample from the vein was taken to the College assay office, but nothing of interest was found in the sample. Some specimens of yellow-stained rock from this same gulch were tested for radioactivity with a Geiger counter, but they were not radioactive.

The members of this party had a unique device for crushing samples. For a mortar they used a steel 2-in pipe cap from which the threads had been cut on a lathe. Samples were placed inside the pipe cap and crushed with a round-faced carpenters' hammer. These tools work satisfactorily, and they are lighter than a mortar and pestle of comparable size.

During one of our conversations, John Babel said that he knew of a bornite deposit near the glaciers around the head of Eureka Creek, tributary of the Delta River. He said that the deposit is seven miles from Eureka Creek and that it was examined several years ago by W. E. Dunkel of Anchorage.

July 31 - On foot from Roosevelt Lake to White Creek to Denali.

The men in the prospecting party at Roosevelt Lake were flown back to the Richardson Highway by C. B. MacMahan. He was able to land his small plane on Roosevelt Lake, but he could carry only one passenger so he had to make three trips to take the men out.

Aug 1 - With John Kimball went on foot from Denali to Kimball's trapping cabin at the mouth of Windy Creek.

Windy Creek is a tributary of the Susitna that parallels Valdez Creek and empties into the river five miles south of the mouth of Valdez Creek. John Kimball and A. B. Smith said that they had seen some copper-stained specimens in a partly-collapsed cabin on Windy Creek. The specimens were said to have been found by a man who was prospecting in the Windy Creek drainage. This part of the trip was made to try to find the specimens and if possible to find other indications of copper mineralization in the area.

Aug 2 - Reconnaisance on Windy Creek.

Windy Creek is about the same size as Valdez Creek, and it is also similar in that the lower part flows through a deep gorge. The benches on both sides of the gorge are hummocky as though deposited by a glacier. There seem to be fewer boulders on Windy Creek than on Valdez Creek.

Our reconnaisance was hampered by wind, rain, and fog, and we returned to the cabin early in the afternoon.

Aug 3 - On foot from Windy Creek to Denali.

On the way back to Denali we searched for the prospector's cabin where the copper-stained rocks were reported to be. Kimball was in the cabin several years ago, but his memory of its location was vague, and we were unable to find the cabin.

Aug 4 - At Denali. With A. B. Smith visited the sites of past mining operations near Denali.

The upper part of Valdez Creek flows through a broad, glaciated valley. About four miles above its mouth, the creek enters a narrow gorge through which it flows until it emerges on the Susitna lowlands. The original discovery by the Monahan party was made at the lower end of the gorge. As the mining progressed upstream, a point was reached where the gold content of the stream gravel decreased abruptly. Prospecting the sides of the gorge to determine the cause of this abrupt decrease led to the discovery of an ancient, gold-bearing channel, which was named the Tammany Channel. Upstream from the point of intersection, the Tammany Channel lies on the north side of, and nearly parallel to, the Valdez Creek gorge. The intersection occurs where Valdez Creek swings northward and crosses the Tammany Channel. The richest part of Valdez Creek was downstream from this intersection. When the discovery was made, the Tammany Channel was about forty feet above the elevation of Valdez Creek; subsequent mining has filled the lower part of the gorge with tailings so that the creek bottom is now about even with the bottom of Tammany Channel.

RX-67-24

Lower end of Tammany Channel. Valdez Creek in foreground.

On the north side of the creek the Tammany Channel has been mined by hydraulic open-cut for about 1200 ft. According to A. B. Smith, the channel has been mined 3600 ft beyond the face of the open-cut by drift mining through a tunnel and three vertical shafts. He gives the depths of the three shafts as 155 ft, 165 ft, and 191 ft. The channel varies in width from 25 to 70 ft at bedrock. On the south side of the creek, the Tammany Channel has not been definitely identified.

On the south side of Valdez Creek, A. B. Smith has staked a group of claims that extends from the mouth of Timberline Creek to the Susitna lowlands. He believes that these claims cover another ancient channel, which, near its lower end, is joined by the Tammany Channel. He said that he has had encouraging results from some churn-drill holes on the claims. He further stated that the logs of those drill holes are now in the possession of the Yuba Co, and he believes that the Yuba Co will begin work on the claims after the Paxson-Cantwell Road is completed.

In Bulletin 849-H, Clyde P. Ross cites a few geological reasons to explain why it is logical to expect another ancient channel on the south side of Valdez Creek, and why such a channel might be gold-bearing.

Larry Young was doing preparatory work on Dry Creek, a short, left-limit tributary that enters Valdez Creek near Denali. He had two men employed. He planned to complete the laying of a pipe line this year and to start mining in 1954.

In the past there has been some prospecting on Timberline Creek for both lodes and placers, but there is no activity there at the present time.

Aug 6 - Left Denali at 11 a m via Fairbanks Air Service and arrived at Fairbanks at 1:30 p m.

Because there has been much mining activity on Valdez Creek proper, it is logical to assume that there has been much prospecting on its tributaries, particularly for placers. No important discoveries have been made on the tributaries that flow into Valdez Creek from the north. On the tributaries that come from the south, important discoveries have been confined to Rusty Creek, White Creek, and Lucky Gulch. The information that has been accumulated to date indicates that the small area drained by those three creeks is the source of most of the gold in Valdez Creek, and

that area is the most favorable part of the Valdez Creek drainage in which to search for lode deposits.

On Rusty Creek and Lucky Gulch there may remain small volumes of placer gravel rich enough to be mined. On White Creek there is probably a large volume of placer gravel comparable in value to that mined in former years. On lower Valdez Creek, if any minable placer ground remains, it is most likely in an extension of the Tammany Channel or another channel similar to it. The favorable areas in the Valdez Creek drainage are staked or are being prospected.

A few of the right-limit tributaries of Windy Creek head against the drainage of Rusty Creek and White Creek, and the area drained by those tributaries is a good place in which to search for gold lodes and placers. There appears to be no record to indicate how much prospecting has been done in the Windy Creek drainage. The topography of the Windy Creek valley is almost identical to the topography of the Valdez Creek valley. If gold is found in the tributaries of Windy Creek, the possibility of finding a buried channel similar to the Tammany Channel should be considered.

The rocks in the mountains south of Windy Creek are members of the belt of ,Mesozoic greenstones that extend from the railroad east beyond the Richardson Highway. The Albertson-Pettyjohn copper prospect on the MacLaren River lies in this greenstone belt, and the fact that this large, conspicuous outcrop remained undiscovered until recently indicates that the greenstone belt has been prospected but little between the Susitna and MacLaren Rivers.

Butte Creek empties into the Susitna River from the west about four miles south of the mouth of Windy Creek. The geology of the lower part of Butte Creek is similar to the geology of Windy Creek in that greenstones lie on the south side and Mesozoic sediments and their intrusives lie on the north. The Monahan party discovered gold on Butte Creek and two of its tributaries: Gold Creek and Wickersham Creek. An unsuccessful attempt to mine on Wickersham Creek was made in the early days. Fred H. Moffitt in USGS Bulletin 608 mentions a large vein of chalcopyrite having been found in the greenstones south of the eastward bend of Butte Creek.

The examination of the chalcopyrite vein reported by Moffitt would be a worthwhile project for the Department of Mines. At the same time the north part of the Butte Creek drainage could be visited to determine if the gold discoveries of the early days have been followed by

any later activity. If there has been little or no prospecting or mining since the one reported attempt to mine on Wickersham Creek, the northern part of the Butte Creek drainage will be a favorable area in which to search for gold lodes and placers. Another project that would gain important information would be a reconnaisance along the greenstone belt between the Susitna and MacLaren Rivers.

Respectfully submitted,

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