

TERRITORY OF ALASKA  
DEPARTMENT OF MINES

NOTES ON THE MINERAL RESOURCES OF LIVENGOOD  
CREEK, HESS CREEK, AND THEIR TRIBUTARIES

by

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December 1958

## HISTORICAL SKETCH.

Gold was first discovered in the Rampart District in 1882 by the Schieffelin brothers (original discoverers of gold at Tombstone, Arizona), who found stream bars about 80 miles above Tanana that would yield a man \$10 per day. These stream bars probably were on Minook Creek, Hess Creek, and their tributaries. The Schieffelin brothers returned to San Francisco in the Fall of 1882, and apparently they did not follow up their discoveries. Placer gold was found in the Hess Creek basin in 1892 by Mike Hess. In 1893, John Minook, a Russian half-breed, found gold in Minook Creek, Hess Creek, and other nearby streams. At about the same time, another prospector, O. C. Miller, did some mining in a gulch near the head of Hess Creek. In the Spring of 1896, a permanent white settlement was established at Rampart, and organized placer mining was begun in the Rampart District; most of this mining was on Minook Creek and its tributaries.

The discovery of gold in the Fairbanks District in 1902 caused one of the major stampedes in the history of Alaskan mining, and, throughout the entire Yukon-Tanana Region, a period of intensive prospecting ensued. Although Livengood Creek was directly in the line of summer ridge travel between Fairbanks and Rampart, gold was not found on Livengood Creek until 1914, when the first discovery was made by Jay Livengood and N. R. Hudson. During 1914 and 1915, hundreds of people flocked to Livengood; the early stampeders staked the creek placers, and the late comers had to satisfy themselves with staking ground removed two and three tiers of claims from the creek. As mining progressed, it became apparent that the creek placers did not amount to much but that there was a rich paystreak in the bench deposits staked by the late comers. Most of the deposits were mined by "drift mining", a process of sinking shafts to bedrock and removing the gold-bearing gravel with picks, shovels, and wheelbarrows. The ground was thawed by steam. The mined gravel was hoisted to the surface and put through conventional sluice boxes to recover the gold.

During World War I, mining at Livengood declined, but when the war ended, the mining began to resume its pre-war proportions. By 1922, drift mining had almost run its course; small outfits were working ground left behind by former operators, and more attention was being given to shallower deposits that could be worked by open-cut methods. In the late 1930's, Livengood Creek was investigated to determine the feasibility of a dredging program.

Mining on Livengood Creek had been plagued by a shortage of water since the first discovery. In 1916, a ditch was built on the South Fork of Hess Creek to bring water onto the divide at the head of Livengood Creek to hydraulic a channel through the divide so that water could be brought from the South Fork over to Livengood. The divide is composed mostly of unconsolidated material; a drill hole on the crest of the divide showed a depth of 205 feet to bedrock. This early attempt did not get far beyond the construction of the ditch.

In the late 1930's, Livengood Placers, Inc. (financed by the Reconstruction Finance Corporation) built an earthen dam across the South Fork, drove a tunnel through the divide, and built a dredge on

Livengood Creek. Dredging was carried on during the last half of the 1941 season and throughout the 1942 season. In late 1942, the project was shut down by the war-time executive order closing gold mines. Dredging was carried on again during 1951, 1952, and 1953, but apparently changing economic conditions had made the program unprofitable. In 1954, the dredge was sold to the United States Smelting Refining and Mining Co. and was moved to the Hogatza River. The property owned or held by Livengood Placers, Inc. was leased to Yukon Placers, Inc., and this latter company mined by bulldozer and dragline in 1955, 1956, and 1957.

From time to time throughout the years, good prospects have been found in the drainage of the South Fork of Hess Creek, but none of these prospects have led to the development of any mining operations larger than small-scale, hand-mining operations.

PRODUCTION AND NUMBER OF MEN EMPLOYED).

Figures have been published showing the gold production and number of men employed for the Tolovana District. In addition to Livengood Creek, the South Fork of Hess Creek, and their tributaries, the Tolovana District includes some small tributaries to Tolovana River upstream from Livengood Creek. The great bulk of the production has come from Livengood Creek and its tributaries, and the production from the other creeks would have little effect on the figures for the entire district. The total production from the Tolovana District to the end of 1930 was \$5,233,600. The total production to the present time is about \$7,000,000.

TABLE SHOWING PRODUCTION AND  
NUMBER OF MEN EMPLOYED IN THE  
TOLOVANA DISTRICT

<u>Year</u>	<u>Number of Plants</u>	<u>Number of Men Employed</u>	<u>Production</u>
1915	-	-	\$80,000
1916	21	250	700,000
1917	-	-	1,160,000
1922	-	150-200	-
1932	13	54	-
1938	17	96	-
1940	11	187	-
1946	8	52	-
1948	8	48	-
1950	6	96	-
1952	6	81	-
1954	4	57	-
1956	4	20	-
1958	1	1	-

## MINERALIZATION.

The distribution of placer gold in Livengood Creek and its tributaries indicates that the bedrock source of most of the gold was on the ridge between Livengood Creek and Tolovana River. It appears that, in the early geologic history of this area, the upper part of the present Livengood Creek drainage flowed into the South Fork across what is now the divide at the head of Livengood Creek. It is probable that at that time gold was transported from the ridge southeast of Livengood Creek into the South Fork drainage basin. Later, there was a bedrock divide northeast of Livengood Dome, and the upper drainage of the South Fork flowed out through the valley of Livengood Creek. It was at this time that the rich bench placers were formed on Livengood Creek, and most of the gold that previously had been transported to the South Fork was carried back to the Livengood Creek valley. Eventually the bedrock divide northeast of Livengood Dome was eroded away; the South Fork recaptured a part of its former drainage; and the present drainage pattern was established.

Fairly productive pockets of gold-bearing gravel have been found on the South Fork, however, none of these have proved to be a part of a continuous paystreak, and, in view of the drainage history of this area, it is most unlikely that there is a continuous paystreak on the South Fork.

Because Goldstream Creek drains the northeast end of the ridge that has been the source of most of the Livengood gold, there is some possibility that there are potentially important placers in bench deposits on upper Goldstream Creek. The presence of small amounts of gold in some of the other tributaries to the South Fork indicates that there has been scattered mineralization of the bedrock throughout the drainage basin, but, thus far, none of these occurrences have proved to be indicative of commercially important placers. Scheelite, chromite, cinnabar, and nickel are known to occur in the Tolovana District, but no commercially important deposits of these minerals have been found.

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