

September 29, 1960.

REPORT on the LONE STAR and MITCHELL GROUPS

DAWSON, Y.T.

The Lone Star is situated near the head of Victoria gulch, on the divide separating Eldorado and Bonanza Creeks. The property can be reached from Dawson by the road that follows Bonanza Creek to the foot of Victoria Gulch, a distance of 23 miles.

The Mitchell group of claims is situated on the crest of the divide separating Hunker and Goldbottom Creeks. The property can be reached from Dawson by way of the Hunker Creek road to the top of the divide, a distance of 31 miles.

The Lone Star and Mitchell Groups lie within a large belt of schistose rocks known as the Klondike series, which extends across the entire central portion of the Klondike district. The principal rocks are light colored schists consisting of chlorite, sericite, and quartz with minor amounts of feldspar.

Throughout the schist area quartz is abundant. Many large outcrops of white quartz are found. They are of pegmatitic origin and have been shown to be barren of gold. In addition to these, there are countless seams, veinlets and lenses of quartz found within the schist, parallel to the foliation. Pyrite, in small cubes, is found in association with these veins and is probably of secondary origin. These veins have been shown to be practically barren of gold.

A third and younger group of quartz veins exists and nearly all the gold in the Klondike District can probably be attributed to them. They vary in width from a fraction of an inch to more than a foot and intersect the schistosity almost at right angles. They are lenticular and are not crumpled or distorted like the quartz veinlets which parallel the foliation of the schist. Extensive sampling has shown the gold values to be erratic and apparently associated with small clusters of sulphides.

CONCLUSION

A report on the Lone Star and Mitchell Groups was written by Robert F. Playter in August, 1947. This report was found to be complete and accurate. The following quotation from Mr. Playter's report is a competent summation of the results of past exploration work.

"I believe that practically all the gold in the Lone Star area occurs in the small, flat, younger quartz veins. The hope of a mine depends on finding a sufficiently large volume of rock in which those veins are so closely spaced that they will "carry" the intervening barren material and make the whole mass ore. If we assume that those veins average six inches in width and one ounce per ton in value, they would have to be spaced at two and one-half foot intervals throughout the entire volume of rock, to make an average grade of 0.2 oz. per ton or \$7.00. Even if they were

twice the width, or twice the value, they would have to be spaced at five foot intervals to make the average grade of the mass \$7.00 per ton.

"The work done by Yukon Consolidated Gold Corporation was well done and is ample to conclusively establish the fact that throughout the most likely area on the Lone Star group of claims, the spacing of the auriferous veins is not 2½ feet or even 5 feet, but is more than 40 feet, both laterally and vertically. There is no evidence to indicate that further work might disclose an area sufficiently large to support a large scale mining operation, in which the spacing of the veins would be close enough to make the entire mass ore.

"I cannot say that no large veins will be found. However, although prospecting is difficult because of the dense covering of moss, that ridge between Eldorado and Upper Bonanza Creeks has been prospected diligently by many prospectors for a period now approaching 50 years. Only small veins similar to those on the Lone Star have been found. Prospectors have therefore tended to verify the conclusion that could be drawn from merely a study of the geological conditions - that only small, lenticular veins can exist in such incompetent schists as those of the Klondike series. Therefore I cannot believe that expenditure in search of larger veins is warranted."

"WILFRED PARKER"

Exploration Geologist.



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