

JONPHYRY HILL

GREENHORN  
MT. REGION  
SUSANVILLE  
DISTRICT

All the above statements concerning these porphyry deposits were furnished by J. C. Haskell, one of the owners. Channel samples taken by the writer in a tunnel cross-cutting a massive and hard part of one of the dikes averaged \$1.80 a ton for 15 feet. It is stated that in the principal workings at the bottom of a winze a rich streak of ore is made up of sulphides similar to those in other parts of the district.

*Susanville Summary.*—The conclusions reached from a casual visit to this district leads one to believe that a large dredging area might be developed on the Middle fork. Also that several veins

contain some shipping ore, but most of these bodies of ore have their sulphides, which are mainly arsenical, in so massive and low grade form that but little can be shipped crude, while the sulphide content is so great that concentration is not effective. Perhaps all of these ores could be successfully roasted and cyanided. The porphyry dikes and perhaps some of the adjoining slate might average sufficiently high to be mined in a plant with a large daily tonnage capacity.

SOUTH GEM MINE

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(See North Gem Mine)

## PORPHYRY HILL

North of Elk creek, between the claims just described and as far west as Quartz gulch, which enters Elk creek from the north, is what is known as "Porphyry hill." This hill is made up of slate cut by several light-colored, much-altered dikes. The dikes have a general E.-W. strike and dip N. into the hill at high angles. Three dikes were noted from 30 to 40 feet wide.

In thin section these dikes are seen to consist of larger grains of quartz, imbedded in a much finer-grained ground mass consisting of quartz, feldspar and sericite. These larger grains are curious in that they do not have a true crystal outline, but appear to be made up of broken fragments. The ground mass is undoubtedly of igneous origin, although some of the quartz and the sericite is secondary.

These dikes are probably quartz porphyries, which after consolidation were shattered at depth. The formation of secondary quartz in the ground mass has obliterated the evidence of shattering, but the large quartz crystals show it in a striking manner. The intergrowth of quartz and feldspar indicate that this porphyry has aplitic tendencies.

Although there has been but little development, ore has been shipped or milled at various times. Shipments of a few tons each have been made that reported gross values from \$80 to \$100 per ton. Ore was treated in an arrastre with returns of \$3,162 from 150 tons. This ore came from the slate adjoining the porphyry. At another time from porphyry \$1,600 from 80 tons was received; at another time in a Huntington mill, 44 tons returned \$7 per ton; later  $8\frac{3}{4}$  tons produced \$237; some 80 odd tons milled from a dump returned \$125; and from another claim 31 tons were arrastred, producing \$5 per ton; and on still another claim a 9-foot channel sample assayed \$4.10.

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