MR 55-2

GEOLOGICAL SURVEY OF WYOMING

CROUCH GOLD PROSPECT, PARK COUNTY, WYOMING

Location and Ownership

The deposit consists of six unpatented lode claims which are located approximately in SW 1/4 Sec. 20, T. 51 N., R. 109 W. The prospect can be reached by following the Eagle Creek trail for a distance of twelve miles by horseback to the western edge of "The Meadows".

The claims are owned by Earl Crouch of Cody, Wyoming, and were examined by the writer on the days of July 8, 9, and 10, 1955.

Mining

Development work consists of a 725 foot adit, a 50 foot caved shaft, and several prospect pits. At the time of examination, the adit appeared in good condition but was fairly wet with slime-coated walls.

Located just below the caved shaft is a five ton mill which consists of a Gibson elliptical roll mill powered by a one cylinder gasoline engine. This unit is a combination crusher, pulverizer, and amalgamator that handles four-inch material and grinds to 80 mesh. Other equipment consists of an Ingersoll-Rand gasoline-powered compressor, combination drifter and jackhammer, 1 1/2-ton ore car, Worthington 2-cylinder pump, 5-ton hoist, and miscellaneous drill steel, bits, pipe, timber and tools. All of the equipment varied from poor to fair condition.

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Sufficient timber and water is readily available for all mining operations.

Geology

Geomorphology

"The Meadows," a glaciated valley approximately two miles long by one-half mile wide, may possibly have been a shallow lake which was dammed by landslide debris at the east end of the valley. Eagle Creek meanders through the valley on the north side, but old meander scars are still evident in the center and on the south side. It is possible that the flat floor of the valley may have originated by the lateral migration of Eagle Creek in softer rocks, but if this were true it would seem that the other tributary stream valleys carved in the same rock types would exhibit the same phenomena, but they do not.

In essence, the general area is exceedingly rugged, and features sharp ridges and peaks and U-shaped valleys. The elevation varies approximately from 8,500 to 11,000 feet.

Petrology

The rocks cropping out in the area are part of the Late Acid and Late Breccia series as designated by Hague (U. S. Geol. Surv. Folios No. 30 and 52). The writer, with the limited time available, could not satisfactorily separate the two units, but it is certain that these rocks overlie the Early Basalt flows.

In general, the rocks in the vicinity of the prospect strike about N. 10° W. and dip gently to the southwest. These consist of dark gray to green andesite porphyry flows that have been intruded by quartz monzonites (not shown on Hague's map). Hand specimens of the andesite porphyries show propylitization as indicated by epidote replacing plagioclase. Some chlorite is occasionally present, and pyrite is often observed on fracture surfaces.

The intrusive rocks are quartz monzonites and quartz monzonite porphyries which vary in color from light gray to brownish gray and vary texturally from fine- to medium-grained. The percentage of ferromagnesian minerals is variable, but individual specimens show either biotite or hornblende as the principal constituent. Some pyrite and an occasional flake of muscovite are usually present. One specimen, which appeared transitional between a dacite porphyry and quartz monzonite porphyry, showed the alteration of the feldspar phenocrysts to montmorillonite (?).

The textural differences might suggest that the body is a multiple intrusion, but further studies would be necessary to outline the size, shape and structure of the body.

Structure

The major structural feature is a N. 30° W.-trending fault zone (lying slightly west of the adit) which is composed of a pink-weathering silicified breccia partially stained with manganese and iron oxides.

Further indications of this fault zone are a small spring issuing from the base of the hill slightly west of the adit and a small saddle on the ridge above. The fault zone is not mineralized and is probably post-mineralization in age. The quartz monzonite(s) have been intruded along this zone, but since they are mineralized it is assumed that the intrusion is the earlier of the two.

The quartz monzonite(s) and adjacent flows in the vicinity of the prospect are highly fractured, and two well-developed joint systems of N. 20° W., and N. 45° W. strike with vertical dip are present. Other joint systems strike N. 25° W. and N. 65° E., and dip 17° NE. and 10° SW. respectively.

Mineralization

The mineralized zone, located slightly east of the fault zone, extends vertically from the base of the hill to the saddle on the ridge between Eagle and Crouch Creeks. As reported earlier in this report, the only open working is the 725 foot adit which has two short northeasterly trending drifts of 30 and 60 feet at distances of 550 and 600 feet respectively. The adit, in general, penetrates an altered silicified and partially pyritized rock that may have originally been a quartz monzonite. Thin incrustrations of sulphur coat fracture surfaces at the portal of the adit.

Altogether five mineralized veins (or veinlets) were intersected by the adit. Four of these are small and vary from one-fourth to one

inch in width. One is offset six feet which lends additional evidence that faulting in the area is post-mineralization. The fifth vein (or mineralized zone), which is reported to carry gold, is about eleven inches wide and partially exposed at the face.

Outcrops above the adit are reported to assay gold, but these are further reported to diminish in value at depth. Evidently the gold occurs in the oxidized zone which is characteristic of the other mineralized areas in the Absaroka Mountains.

The zone of mineralization appears to strike into another zone on the north side of Crouch Creek. Slightly west and topographically higher from the Crouch prospect is another vein striking N. 45° W. The above were not examined by the writer, and no data are available on them.

Metallic minerals, in the order of decreasing abundance, are pyrite, galena, sphalerite, and chalcopyrite. Gangue is chiefly quartz. The metallic minerals occur disseminated in, or as veinlets 1/4 - 1/2 inch wide in a highly altered and silicified rock. Less altered specimens resemble quartz monzonite or andesite. The veinlets either contain only pyrite, or are finely banded with pyrite, galena, and a little sphalerite and chalcopyrite. In places the veinlets show vugs and crustified banding which suggests an epithermal mineralization.

Placer gold is reported from the alluvial deposits in "The Meadows" and Crouch Creek (two miles to the north). No placer gold, however,

has been reported found in creeks that drain into Eagle Creek in "The Meadows". Five holes were drilled into the alluvium here in order to evaluate this deposit, but the results are unknown. At least 87 feet of alluvium was reported penetrated by one of the holes.

Gold assays from the adit are reported to average $10.50 per ton, and a maximum value of $28 per ton has been reported for combined gold and silver. Values for copper, lead and zinc, the principal metallic minerals observed by the writer, were not reported. Some molybdenum has also been reported, but no minerals were observed by the writer.

Two gold shipments were made from the prospect to the Denver Mint sometime during the 1930's. This accounted for a production value of approximately $1000. No production from the placer deposits has been reported.

Signed:

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