

PE 78-6

PRELIMINARY REPORT OF COMBINED AVIATOR AND EYRE GROUPS OF CLAIMS,
CHISANA MINING DISTRICT, ALASKA,
August 13, 1936

Location and Accessibility:

The Aviator and Eyre groups are adjoining groups located on the right limit and 2000' north of Johnson or Chathenda Creek one-half mile below the mouth of Bonanza Creek on the south slope of Gold Hill between elevations of 4600' and 5600'. Gold Hill lies between Johnson (Chathenda) and Chavolda Creek, tributaries of Chisana River in central Chisana district. Chisana, the only town in the district, is located 8 miles southwest of Gold Hill and approximately 50 miles east of the Nabesna Mine at the end of Nabesna road. A rough summer horse route is maintained from Nabesna east to Chisana and from Chisana to and around Gold Hill. One trader with a small store at Chisana freights supplies over this route in summer supplying small amounts of food articles and mail to the placer operations. In winter the freighting is mainly done with dog teams and airplanes. A rough summer landing field has been established at the town of Chisana on an open gravel bar. Regular weekly trips were maintained this season by the Lyle Airways of Copper Center. Return fares on these trips were as low as \$50. Chartered trips were considerably higher. A road has been proposed as a continuation of the Nabesna Road to Chisana and on to the International Boundary, a portion of the proposed International Highway. This season the Alaska Road Commission was engaged in building a portion of this road from Nabesna Road to a plane landing field 8 miles east. This road is partly completed and as a result should lower freight rates to this district. Freight rates and food prices are given in supplement sheet contained in this report.

Owners:

The Aviator group of four claims adjoins the Eyre group of 16 claims on the east. The owners, Louis McCallum of the Aviator group, S. Gamblin, R. Reeves and Earl Hirst of the Eyre group, have agreed to option these as one group. Further, since the showings on the one group are of the same character and extended onto the other, the writer has combined the two groups in this report.

Geology and Showings:

The most extensive geology written on this district is found in U. S. G. S. Bull. 630, "The Chisana-White River District, Alaska" by S. R. Capps. Earlier and less extensive reports are given in Bulls. 592 and 622, "Mineral Resources of Alaska 1913-1914" by A. H. Brooks, etc.

Flour, 100 lb.	\$17.00
Sugar, " "	19.00
Potatoes " "	18.00 - 20.00
Rice " "	22.00
Salt " "	.25 lb.
Eggs, per doz.	.75

Cost of hauling wood per cord from available area to placer district is \$25 per cord.

This season airplane service was maintained from Copper Center weekly with freight rates of 10 cents per pound. The cost of freight from Valdez to Copper Center via plane was the lowest in history for this district, totaling 11 cents per pound. This is limited to food supplies and small articles. Supplies are transported by the operators mainly with dog sleds in the spring from Chisana to the placer field 10 to 12 miles. Wood was also hauled several miles with dogs prior to two years ago when two caterpillar tractors were brought overland during the winter. The season operating placer is limited to approximately 100 days.

The lode possibilities are centered around Gold Hill as many types of mineralization are present in the Beaver Creek area, known for its many outcroppings of quartz, the copper and nickel prospects along the White River. This district would become more active and a larger producer were a road built to it.

were reported in gold from some of the veins. To the east, approximately 300', these veins terminate along a granite contact. The series converge toward an apex in this direction, however, this has not been uncovered. The veins are filled with quartz and gouge with altered mineralized walls. The alteration is greatest on the hanging wall side. Some of the veins have loose walls and others are tight to frozen.

Plate No. 2, Sketch Nos. 2 & 3:

Sketch No. 2 shows two cuts on No. 1 zone with two parallel veins, approximately 200' west of Plate No. 1. These veins are approximately 10' apart and show quartz widths of 8 and 10 inches, respectively. The formation appears from hand specimens of a greenish porphyritic nature grading between andesite to dacite. Fine gold can be panned from the oxidized material.

Sketch No. 3 marks the boundary between the two groups of claims. The opencuts on a vein in zone No. 1 reveal greater widths and heavy pyrite mineralization begins to appear. Sample No. 64 taken across 19" shows 0.50 ounces of gold and trace of silver. However, samples taken in these shallow trenches in leached and partly oxidized mineralization have to be considered as such and values may or may not represent the true value of the vein.

Plate No. 3:

Five opencuts are shown on Plate No. 3 which extends west of Plate No. 2. This is again on the No. 1 zone and approaches nearer the large porphyritic dike to the west. The vein shows greater width with less quartz, more oxides of iron, and galena begins to make its appearance. The country rock is unchanged. Good values in gold and silver were reported from one trench (noted on Plate No. 3).

Plate No. 4:

This plate on a smaller scale shows the No. 1 zone in contact with porphyritic dike, extended west of Plate No. 3 and shows the total ten zones distributed up the slope of the mountain. The second series of northeast veins are shown intersecting the first series. In the vicinity of the dike outcroppings mixed massive pyrite and galena in small widths were noted in place and on the dumps of some of the cuts. Above 5300' elevation galena was absent and the veins contained mainly the iron oxides both limonite and hematite. The three samples taken on the upper zones (note location on sketch) showed low gold and silver values. The veins, however, have greater widths at the lower elevations than the upper.

GENERAL CONDITIONS RELATIVE TO MINING IN CHISANA DISTRICT,
August, 1936.

The increase of the price of gold to \$35 an ounce and the establishing of a landing field for planes on a gravel bar at Chisana, with resulting lower freight rates, has acted as an incentive for more activity in placer mining in this district. These factors have led the prospectors to exploring the benches on which profitable pay was found. Due to high freight rates and costs, together with higher expenses in removing material, the bench claims had not heretofore been worked in this district. The lower pay gravels of the creeks are also worked. This year eleven placer operations were carried on in this district in the vicinity of Gold Hill. The limited supply of water is a factor that holds operations to small proportions. Large amounts are not available. This last season considerable rain during the season helped make for an advantageous season for all operators. The largest operation was the N. P. Nelson Mining Company, located on upper Bonanza Creek. Five men were employed during the season. One giant was in operation and 9,000' of bedrock was cleaned. Nearly \$30,000 was recovered. Thus a total production for the district is estimated at approximately \$50,000.

The new discovery of massive sulphides of iron and copper carrying gold values, discovered in the bed of Big Eldorado Creek while sluicing may stimulate interest in lode prospecting. Very little work was done on the two lode prospects on the south side of Gold Hill, known as the Eyre and Aviator groups. Only five men were engaged in lode prospecting. However, reports of prospectors in the White and Beaver creek areas to the east were heard. Numerous quartz showings were reported in the Beaver Creek area.

It was generally expressed by several in this district that the proposed road from Nabesna to Chisana, a distance of 54 miles, would be a great factor in developing this district. Greater activity in placer mining and more prospecting and development of lode prospects would be the result. This road would be a means of access for the White River, Walkers Fork and Chicken areas, since overland travel is possible east of Chisana, due to rolling topography and scarcity of dense timber. It would be a great factor in developing these remote areas.

The present prices of food stuffs at the one trading post at Chisana owned and operated by Lou Anderton are high. These are freighted by pack horses from Nabesna in summer with rates at 10 cents a pound, and winter with dogs at 7 cents a pound.

The formations on these groups consist of porphyritic lavas mainly andesite and dacite in close proximity to a granitic mass. These lavas range in color from light green to a dark grayish green. Feldspar phenocrysts are evident in most hand specimens. The granite intrusive appears to be of a dioritic nature and grades into a diorite on the northwest end of Gold Hill. Here andesite was found intruded into diorite. The porphyritic lavas have been intruded by a gray to bluish fine crystalline, porphyritic dike. This dike strikes N. 45° W. and has nearly a vertical dip. It is mineralized and outcrops in two places with deep red gossan as a surface covering and has a width from 40 to 50'. The position and outcroppings of this dike are shown in Plate No. 4. Two series of more or less parallel fissuring is evident in the lavas and contained in these fissures are the lode showings of these groups. The most numerous fissure zones strike a little north of east with a steep dip to the north. The other series intersects the first and strikes N. 20° E. and dips 56° N. No displacement at the intersection was seen. The first series occurs in zones of usually two fissures in close proximity to each other. Ten such zones were noted over a distance of 1200' on the side of the mountain. Some of the veins with the extent of the altered and mineralized wall rock vary to widths of 15'. However, the majority range between a few inches to two feet. The widest portions appeared to be near the large porphyry dike and gradually narrow to small tight quartz veins near the granite contact.

A total of 58 opencuts are distributed along these ten zones exposing the veins a few feet below the surface. The surface contains numerous barren spots while the greater portion is covered with slide rock. Nearly half of the cuts were seen and mapped, some in detail, note accompanying plates. Since the remaining were reported as much the same nature and on the same series of veins, they were not visited. Generally, the veins narrowed to the east and were of greatest width near the porphyry dike. The mineralization appeared with less quartz and a more basic mineralization near the dike and more acid with higher gold values to the east nearer the granite mass. A short description as followed or crossed on route is given in following descriptions of the Plates 1 to 4, inclusive.

Aviator Group, Plate I:

Along the east bank of a small creek between elevations 4720' and 4750' fourteen small veins are exposed. These are exposed over a width of 40' and exposed in length a few feet cutting the bank. The veins range in width from one inch to one foot. Four veins are close together with a width of 3' with altered wall rock between. Values

Conclusion:

In conclusion the writer wishes the reader to bear these thoughts in mind: Generally, the district, mainly Gold Hill and its surrounding area, is interesting geologically. The formations consisting of fractured lavas of andesitic nature, the surrounding slates and sediments with the dioritic to granitic intrusives in them, is favorable for gold ore deposition. The two fracture systems, with altered walls from mineralizing solutions and quartz filled contents carrying gold and silver values, while small and numerous, show extensive mineralization. The occurrence of massive sulphides, pyrite, marcasite and chalcopyrite, with associated gold values, that have been uncovered recently in the bed of Big Eldorado Creek in diorite, shows another phase of this mineralization. The occurrence of a small silver, lead, copper and zinc vein located on the right limit of Bonanza (short description on supplement sheet) affords another phase of this mineralization.

The occurrence of tertiary gravels on the top of Gold Hill, as described in Bull. 630, "The Chisana-White River District" by S. W. Capps, page 97, points toward a possibility that the gold contained may have had its origin in the vicinity of Gold Hill. A. H. Brooks in Bull. 592, "Mineral resources of Alaska, 1913" speaks of the quartz lodes as a possible source of the placer gold as, "In view of the presence of auriferous quartz veins in the district there can be little doubt as to the source of the placer gold. One such mineralized quartz vein, which has long been known, lies close to the mouth of Bonanza Creek and therefore near the scene of the first gold discovery. The auriferous mineralization is doubtless connected with the intrusion of the igneous rocks." Immediately the question of the extent of erosion so as to ascertain if orebodies existed whether or not they have been totally or partially eroded away.

In view of these problems and such the logical procedure is the need of detail geology of this district with respect to its economic possibilities. This accompanied by intelligent prospecting and possibly development may produce favorable results.