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ANNUAL REPORT OF THE MINISTER OF MINES FOR 1937.

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Part B -- Special Report

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by J. T. Mandy

CORNUCOPIA GROUP This group of seven claims is owned by J. C. Simpson and associates of Telegraph Creek. It is situated in the headwaters basin area of McDame Creek, about one mile north of "Quartz City", and adjoins the Klondike Fraction on the west and the Mac group on the north-east. A branch trail extends for about one and a half miles from "Wing's Camp" at 3475 feet elevation on the main trail, to the showings around 3700 feet elevation. The claims are located on the east side and within about half a mile of Quartz Creek on the lower, south-westerly slope of Sheep Mountian. They were staked in 1933, and the initial exposures are referred to in the Annual Report for that year.

The claims cover a gently-sloping knolled and ridged locality which is sparingly timbered and thinly covered with glacial overburden.

The area is about 7 miles north-easterly of the main eastern contact of the Cassiar granodiorite batholith which strikes north across the Cottonwood River from about one mile west of Petefowler Mountain (Needle Point) To Twin Peake. The formation of the locality consists of a complex of altered bedded tuffs and andesitic flows with possibly some porphyritic intrusives, of the McLeod Series, and in one section, a small isolated area of argillite. The tuffs are generally carbonatized and locally pyritized, and exhibit rusty outcrops. They strike generally nort-westerly and dip steeply north-

easterly, with intervening bands and irregular areas of greenstone and altered augite porphyry. One dyke of porphyritic diorite was observed cutting all rocks of the complex.

A series of thirteen practically parallel quartz veins strike north-easterly to easterly and dip steeply southerly. These veins vary from 6 to 49 inches in width and are generally barren of sulphide mineralization. In a few places the quartz is sparingly mineralized with small patches and blebs of pyrite, in one vein with sparse blebs of sphalerite and some arsenopyrite, and is locally "vuggy" and cellular. Native gold is reported by J. Simpson to have been found in four veins, and specks of native gold were observed by the writer in vuggy quartz in two veins, and also in numerous specimens on the dump from them, occurring loosely attached in the vugs associated with limonite, and also in the quartz. The veins occur generally in the tuffs adjacent or close to the contact of these rocks with the greenstones and intrusives.

The veins outcrop in a belt about 1100 feet wide on the opposing slopes of two ridges which strike northerly, separated by a swampy gully about 250 feet wide.

At 3660 feet elevation on the southerly end of the westerly ridge, a quartz vein 12 to 18 inches wide outcrops in rusty, carbonatized tuff. The vein strikes north 83 degrees east and dips 85 degrees south, and has been stripped along the edge of the ridge for 150 feet. For the last 50

feet of the westerly exposure, the vein disperses into three stringers 6 inches wide. Further continuity of the vein at both ends of this exposure is obscured by overburden. About 25 feet south-westerly of the westerly end is an outcrop of quartz 24 inches wide. The quartz in these exposures contains limonite and is barren of sulphide mineralization.

At 3670 feet elevation, 350 feet north-westerly from this exposure, a quartz vein 12 inches wide has been stripped for a length of 50 feet down the westerly slope of the westerly ridge. It occurs in rusty carbonatized tuff, strikes north 83 degrees east and dips steeply towards the south. About 25 feet north-westerly of this, a similar and parallel quartz vein 12 to 16 inches wide has been stripped at intervals in shallow overburden for 60 feet. These veins contain some limonite, but are barren of metallic mineralization.

At 3690 feet elevation on the crest of the ridge, and 125 feet north-westerly from the last-mentioned showings, a quartz vein 12 to 16 inches wide is exposed by stripping and open-cutting for a length of 54 feet. The vein strikes north 76 degrees east and dips 85 degrees south-easterly. The continuity of the vein to the east is obscured by overburden. An open-cut 39 feet south-westerly of the stripping exposes a barren quartz vein 7 inches wide. On the westerly slope of the ridge, 33 feet south-westerly of this and on the strike of the vein, an open-cut exposes rusty carbonatized tuff.

About 140 feet northerly of this, a dense crystalline rock

that is possibly an altered intrusive, is naturally exposed for a width of 60 feet. At 3670 feet elevation, on the easterly slope of the westerly ridge, 215 feet northerly of this, an oxidized quartz vein 6 to 10 inches wide, striking north 83 degrees east and dipping steeply south, outcrops in oxidized and pyritized tuff and has been traced for a length of 40 feet by stripping. Specks of native gold are reported by the owners to have been found in this vein, but no native gold was seen by the writer. Further definite continuity beyond this exposure is obsured by overburden. In approximate alignment and 280 feet easterly across the draw and at 3670 feet elevation at the foot of the easterly ridge, an opencut 20 feet long and 2.5 feet deep ending in a shaft 8 feet deep, exposes an oxidized quartz vein 4.1 feet wide striking north 83 degrees east and dipping 70 degrees south.

The vein in the east face of the shaft shows decomposed and quartzose vein-material for a width of 4.1 feet with gossaned fractures parallel to the strike, and branching quartz stringers on the hanging-and foot-wall. The west face of the shaft shows 3 feet of quartz with gossaned fractures parallel to the strike, and quartz stringers on the hanging- and foot-wall. In this face the quartz is vuggy and honeycombed and mineralized with some blebs and patches of pyrite mainly in the form of small crystals, and some finely divided arsenopyrite. A few specks of native gold were observed in some of the vugs in the quartz in this face. A selected sample

of the pyrite from the bottom and east face of the pit, assayed: Gold, 1.06 oz. per ton; silver, 0.4 oz per ton; arsenic, 2.2. per cent. Native gold occurring in gossaned honeycomb quartz and rarely, also contained in the quartz, was observed in numerous specimens on the dump at this working. At 3690 feet elevation and 40 feet easterly along the projection of this vein, an open-cut 25 feet long ending in a pit 3 feet deep exposes a width of 30 inches of very decomposed and oxidized vein-matter.

At 3710 feet elevation on the west slope of the east ridge and 60 feet northerly of the last showing, a parallel, rusty and glassy quartz vein in greenstone is stipped and open-cut for a length of 30 feet up the 15-degree hill-slope. It is slightly gossaned and vuggy and sparsely mineralized with small blebs of pyrite and some blebs of honey-coloured sphalerite about the size of a pea. Some specks of native gold were observed in the vugs associated with limonite. A sample across a width of 1.2 feet of this vein with no vugs or gosan, taken at 10 feet from the southerly end of the cut, assayed: Gold 2.30 oz. per ton; silver, 0.2 oz. per ton.

At about 3720 feet elevation on the east ridge and 80 feet northerly of the preceding vein, cross-stripping for 100 feet in a northerly direction, exposes bands of greenstone and tuff and three parallel quartz veins in mixed carbonatized tuff and greenstone. The most southerly of these is 12 to 18 inches wide, and composed of barren, rusty quartz. Fifteen

feet northerly is a similar quartz vein 6 inches in width. Forty feet north of this, a rusty, glassy quartz vein 12 to 24 inches in width is uncovered in a band of carbonatized tuff 45 feet wide, flanked by greenstone. This vein strikes north 71 degrees east and dips 85 degrees south-easterly, and has been stripped for 40 feet south-westerly down the hill-slope to its intersection by a fault striking south 82 degrees east and dipping vertically. The continuity of the vein at the north-easterly extremity of the stripping is obscured by overburden.

The quartz of the vein proper is vuggy and streaked with limonite, and no metallic mineralization was observed, but sparse blebs of pyrite occur in quartz stringers on the hanging-wall. Specks of native gold are reported by the owners to have been found in this vein.

The extreme southerly working on the easterly ridge is located about 380 feet southerly from this working and extends for a distance of 230 feet between 3680 feet and 3720 feet elevation on the westerly slope of the ridge. This is a series of trenches 2 feet deep, which expose quartz veins in an involved complex of argillite, tuff and greenstone, intersected by a porphyritic diorite dyke 15 feet wide which strikes easterly to south-easterly and dips 70 degrees southerly. The dyke is opidotized and contains segregation patches of pogmatite.

At 3680 feet elevation, a trench in a north-easterly direction up the ridge-slope for 160 feet, adjacent to the

foot-wall of the dyke at its southerly end, exposes highly oxidized argillite for the first 100 feet. At this point the dyke swings south - easterly and the trench enters greenstone which continues for 60 feet to its end. At the commencement of the greenstone, a rusty quartz vein 12 to 24 inches in width, striking north 80 degrees east and dipping vertically, is exposed on the north side of the trench. It continues for 55 feet to the east end of the trench where it enters mixed greenstone and carbonatized tuff, and continues as a series of quartz stringers and patches up to 24 inches in width, across a total width of 6 feet. In alignment with the strike of this vein and 80 feet easterly, at 3720 feet elevation, a cross-trench and open-cut for 80 feet in a northerly direction exposes oxodized argillite.

At 3680 feet elevation, a trench in oxidized argillite on the footwall-side of the dyke follows a quartz vein 8 to 10 inches wide for a distance of 60 feet in an easterly direction on the contact of the dyke and argillite. This vein strikes north 80 degrees east and dips 70 degrees southerly. At the easterly end of the trench the dyke swings southerly across the face, but the vein may continue along the hanging-wall of the dyke. About 100 feet easterly of the easterly end of the trench, on the footwall-side of, and 25 feet from the dyke, which at this point intersects the greenstone, shallow stripping exposes a lenticular and barren, white quartz vein 10 inches wide striking east and dipping 70 degrees south.