

REPORT ON SOME OF THE QUARTZ PROSPECTS  
OF THE CHANDALAR DISTRICT

This report is based on my visit to the Chandalar in September 1927 and a subsequent report to the Chandalar Gold Mines, Inc. The transportation, freight rates, etc. have been fully gone into in my report on placer conditions.

The quartz prospects in the Chandalar Region are all situated in a small isolated group of mountains at the head of Big Squaw, Little Squaw, McClellan, Tobin and Big Creeks. Most of the prospects lie at an approximate average elevation of 4,000 ft. above sea level. No over 80 days of the year at this height is free from snow and freezing weather. Exploratory and prospecting work would have to be confined to this time. Under actual mining conditions, the ore would have to be transported for milling to a lower elevation on Little Squaw Creek or Tobin Creek, probably by means of an aerial tram. A power station (diesel) could be located on Big Creek or even at Caro, eliminating the worst part of the fuel haul over the divide at the head of Little Squaw Creek. No water power or coal is available in the district.

The country rock is an extremely hard schist which cleaves with weathering into peculiar blocks and long, narrow slabs. The general strike of all the veins in the district is east and west or slightly northwest and southeast. This strike seems to indicate an east-west zone of shearing in the country rock. The main drainage cuts across this shear zone. The country rock between the veins seems to be unfractured. The veins themselves are lines of movement and fracture and are more easily eroded than the surrounding rock.

They seem to be indicated by draws and gulches at right angles to the main drainage and by swales or notches in the divides between the creeks. The average dip of all the veins seen in the district is about  $90^{\circ}$ . They might vary a few degrees north or south of this but the general tendency of the veins is to dip vertically. The small 2-stamp mill at Little Squaw has been torn down. A new 5-stamp mill will be freighted in this winter. A pack trail has been built up the valley of Little Squaw Creek from Little Squaw Settlement to the Big Creek divide.

Going south from the settlement of Little Squaw along Little Squaw Creek, the first quartz lead encountered is about opposite the upper end of Creek Claim No. 3 Above Discovery. This lead is indicated by slight draws on opposite sides of the valley and notches in the valley walls. Several cross-out trenches have been made and an adit started on this lead, but it is said to contain too low values to be worth holding or working on at the present time. The strike appears to be east and west and the dip about vertical. The width of the vein is about 3 ft. About  $1/2$  mile south of the above lead is the Little Squaw Lead. This lead is also indicated on the surface by apposing draws in the sides of the valley and notches at the top of the valley walls. The general strike is about N.  $80^{\circ}$  -  $85^{\circ}$  W. The vein has been traced from the Little Squaw - Little McClellan divide, across Little Squaw Creek to the Little Squaw - Big Squaw Creek divide. On the Little Squaw kede claim an adit has been driven into the mountain for 150 ft. At about 75 ft. from the portal, a winze has been sunk 60 ft. and at 100 ft. from the portal, a raise put in 75 ft. to the surface. In the adit the dip appears to be vertical (about

80° S. according to J. B. Mertie, Jr. in U.S.G.S. Bulletin No.773) and the vein to be 4 ft. wide. The ore is yellowish and iron-stained and shows many sulphides.

No correct estimate has ever been attempted of the values per ton. Hand specimens show much free gold. Most probably the swing of the claims in the Little Squaw Group to the south beyond the Little Squaw Lode Claim is a mistake. The lead probably follows in more north-westerly direction as indicated by the surface draws and in Little Squaw Creek Valley. The lead on the Cosine Lode Claim is a part of the <sup>Eneveloe</sup> ~~xxxxxx~~ lead. About 1/2 mile south of the Little Squaw lead is the Eneveloe (or Bonanza) lead. An adit has been started on the western end of the Eneveloe Lode Claim and some cross-cut work and trenching done on the Bonanza and Golden Eagle Lode claims. The width of the vein seems to be about 5 ft. The vein matter is yellow and iron-stained the same as that of the Little Squaw lead, but not showing so much pyrite. The strike is approximately east and west and the dip about vertical (70° to the north).

Adjacent to the Eneveloe group of claims on the south is the Woodchuck group. Very little work has been done on this lead. The strike is east-west and the dip approximately vertical. Adjacent and south of the Woodchuck group of claims on the divide between Big Creek and Big Squaw Creek, is a group of claims belonging to Charles Schultz et al. This lead (or leads) was not examined at the time because of depth of snow on the divide. However it is said to be the best showing on any group of claims on the Chandalar District. Lying south of this last group of claims and on the left limit of St. Mary's Gulch is the Star group of claims. The Star lead has been

cross-cut by trenching in 2 places on the eastern end of the Star No. 3 Lode Claim and a shaft sunk 15 ft. deep on the eastern end of Star No. 2 Lode Claim. A shaft 40 ft. deep has also been sunk on this lead in the bottom of the valley of Big Creek on the American Eagle Lode Claim belonging to A. L. Newton. The vein matter here appears to be less iron-stained than that of either the Little Squaw and Eneveloe leads, but seems to show more mineralization than that of the Eneveloe lead. The width of the vein appears to be about 5 ft. The strike is approximately east-west (or a little north of east). The dip is approximately vertical (or very steep to the north).

South and to the west of the Star lead is the Mikado lead. This lead lies along the right limit of the head of Tobin Creek and may continue over into St. Mary's Gulch. This group of claims because of the lateness of the season was not visited. It is understood that an adit has been driven from the base of the hill on Tobin Creek for about 450 ft. to within 40 ft. of the vein and directly under ~~it~~ a 100 ft. shaft. This adit is on the line between the Tobin and Little Mikado Lode Claims. The quartz is yellow and iron-stained and highly mineralized. Some very spectacular hand specimens were seen from this lead. No systematic sampling or appraisal of values per ton has ever been made.

There are said to be quartz leads on Boulder Creek to the west of Big Squaw Creek. However these were not visited and no data could be obtained on them.