VENANGO PROPERTY

82F-13W-87

This group of claims, Crown-granted, is owned by A. Norcross and Associates of Nelson. It lies on the west side of Eagle Creek and adjoins the Granite-Poorman ground which covers the eastward bank of that creek. The property is accessible from Nelson by 4 miles of highway and 3½ miles of branch road.

In general, the ground surface in this vicinity slopes comparatively gently toward the north and the Kootenay River; there has been no difficulty in construction of roads in gravel overburden.

On the property there is a combined bunkhouse and cook-house adequate for six men. Diesel compressor and all other necessary mining equipment are in place. At present the property is idle but the owners hope to carry on with development work this spring.

Geological conditions are simple. The vein under development is a quartz-filled fissure in granodiorite. There is apparently very little irregularity in the vein alongs its strike or down its dip. No faulting of sufficient magnitude to create difficulties in development has been encountered. One large lamprophyre dyke intersects the vein at the hroizon at the No. 1 level near the portal and it was encountered again in the shaft sunk below 1 level, but there has been very little movement on it. There is some branching of the vein into narrow stringers of quartz which lead off at flat angles; the owners report that they have noticed a narrow-

ing of the vein at these intersections but have no record of corresponding changes in values.

Little intensive work was done on the property until 1939. For some years the ground had been recognized as of potential value due to its proximity to the Granite-Poorman. Until 1939, when the property was acquired by Norcross and his associates, development had been concentrated on the surface by means of ground sluicing. In 1939, Norcross initiated an additional programme of stripping by means of sluicing, and followed this by active underground development.

As a result of the type of surface work which has been the fashion at this property there has been a great deal of stripping down the slope of the hill in comparison to the comparatively small vein exposures which were shown by the work. Norcross was fortunate enough to find several outcroppings of vein in place and it was on the basis of these that his programme of development was planned.

A shaft was sunk on a vein which strikes slightly west of north, dips at 50 degrees to the east. At 50 feet from the collar, at elevation of 2692 feet, a drift was driven northward to break out on the surface and southward into the hill. The total length of drifting on this

level is 420 feet. From this No. 1 level the shaft was extended an additional 100 feet downwards on the dip of the vein. Nearly 600 feet due north of the portal of No. 1 level, at an elevation of 2519 feet, a second adit was started which was supposed to drift on the vein to a point below the foot of the shaft. Unfortunately, of the 740 feet driven in the general direction of the strike of the vein, some 500 feet were apparently in the hanging wall of the vein. In this 500-foot length a narrow quartz stringer was followed but it seems unlikely that this is the downward extension of the main vein exposed by the upper workings. This is corroborated by drill holes which were driven westward from the lower adit and intersected vein material at about the correct location of the vein as projected downward from the exposure in the upper level. Also, at the end of the lower working, a crosscut was driven to the west and at about the correct location vein material was again intersected; this exposure is almost directly below the projected downward extension of the shaft.

The owner states that the property has produced approximately 900 tons which contain an average of 0.70 oz. of gold per ton. Practically all of this production was from a stope above the No. 1 level, just to the south of

the shaft. At the shaft, stoping was carried to the surface; at the south end of the stope there are still 80 feet of backs, indicating that the ore shoot raked downward to the south at approximately 30 degrees. In the stoped length, approximately 150 feet, the vein varies in width from 4 to 24 inches. Typically the vein is sheeted by fractures parallel to the walls and contains irregular concentrations of pyrite, chalcopyrite, galena and sphalerite. Several specks of free gold were noted in a small pillar of vein below the stoped ground.

The examination was conducted principally on account of the scheelite content in the vein. In the past two years, the owners have produced some very spectacular specimens of scheelite, but unfortunately the places from which these were obtained have been mined out in the course of obtaining gold ore. Norcross reports one lense of scheelite which extended from near the collar of the shaft to the level of No. 1 drift. He gives this maximum dimensions of 50 feet by 12 feet by 10 inches in thickness, stating that the body was lenticular and narrowed both in width and thickness towards its extremities. This lense was mined and shipped to the smelter at Trail as gold ore, in spite of the fact that assays on the scheelite returned only $0.80 to the ton in gold. Norcross informs the writer that on the carload shipment following

the one which contained most of this large lense of scheelite the smelter reported an assay of 3/10 of 1% WO3. In 1941, when the writer examined the property for scheelite he saw two lenses in the vein at the level of the No. 1 drift. One of these was approximately 5 feet long, the other approximately 10 feet long; widths varied up to several inches and the scheelite was sufficiently massive to permit hand cobbing and shipments of crude tungsten ore. Neither of these two smaller lenses were included in the shipment which contained the 3/10 of 1%; these were mined and shipped for gold ore since examination was made and just before operations ceased in 1941.

From the foregoing it might be assumed that the scheelite mineralization occurs within the vein only at the locations of better than average gold values. While the development to date certainly indicates that the largest concentrations of scheelite lay within the shoot mined as gold ore, the general distribution of the mineral within the vein is widespread in the length developed by the No. 1 level. There is no continuous exposure of the mineral, admittedly, but at most locations there are either specks of it or small isolations up to an inch in length and as much as 2 inches long. This is particularly

true south of the shaft. Thus, while it does appear that there may be some direct relationship between gold and tungsten values, the development to date is too limited to permit acceptance of this as an established fact. This is true especially in view of the massive nature of most of the scheelite within the limits of the gold shoot which suggests that consideration of structure, as well as of mineralogy, might be well advised. Of the scheelite mineralization which remains, probably more than half occurs in close association with sulphides but this still does not provide conclusive proof of genetic relationship between the tungsten and gold mineralization. There is little opportunity to obtain data on structural control of the scheelite mineralization. Norcross says that the large lenticular mass of scheelite raked downward at about 60 degrees to the north--or at about right angles to the rake of the shoot of gold ore--but this information is of little help without being able to study the mass in place. Of the remaining scheelite mineralization some occursa as grains along the sheeted fracturing within the vein, but much of it is apparently unrelated to any particular structural feature within the vein.

Thus the situation at the present time is that there is little information available other than that a considerable amount of scheelite occurs within the vein. Of

this amount some is sufficiently concentrated to permit selective mining of high-grade, crude tungsten ore; some, more dispersed, would permit selective mining of a small tonnage which might be milled separately to produce gold and tungsten concentrates; some is so widely scattered that, where the gold values are also low, it would not be possible to produce an economic concentrate even of combined values. The samples taken by the writer were on sections of the vein in which the disseminated scheelite mineralization was at a maximum and thus represent the best grade which might be mined selectively and milled to produce gold and scheelite concentrates. The average of these samples gave 3.39 per cent WO3 and 0.05 ounces gold per ton across 4.6 inches. Note that all these samples were from the remaining vein exposures along No. 1 drift - not stoped because considered too low grade in gold and too narrow to be economic.

In conclusion, the property appears attractive by virtue of:

(1) The length of stoping ground for gold ore already provided by the comparatively short length of drifting on the vein.

(2) The satisfactory grade of the gold ore mined.

(3) The continuity of the vein.

(4) The production record of the adjacent and similar Granite-Poorman property.

(5) The maintained presence of scheelite within the vein.

(6) The occasional segregations of scheelite which permit shipment of crude tungsten ore.

(7) The excellent location of the property.

Sampling and Assays

These samples were all taken within 100 feet of the face of the No. 1, or Upper Level, across full vein widths, at locations showing the best concentrations of scheelite.

Width in inches	Gold oz./ton	Silver oz./ton	Oxide of Tungsten %
3	Tr.	0.7	0.33
4	0.01	0.3	1.13
3	nil	nil	5.30 ~~45.30~~ (cut)
10	nil	nil	5.30
8	nil	nil	5.30 ~~14.30~~ (cut)
5	0.34	nil	2.30
3	0.10	0.1	2.25
3	nil	0.3	0.05
2	0.11	0.3	1.92
Arithmetical Average 4.6	Weighted Average 0.05		Weighted Average 3.39