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82F/6W  
82F/5W-88

ROYAL CANADIAN

The Royal Canadian holdings are a part of the group of claims known as the Royal Canadian and Nevada. The last record of ownership is under the name of Kootenay Nevada Mines Limited, sponsored by J. G. Allan of Vancouver. The claims in the original group consisted of the Royal Canadian, Nevada, five other full claims and three fractions, all Crown-granted. The property is located on the upper Granite road, about 8 miles west of Nelson and just west of the Venango. It is easily accessible all year.

The Royal Canadian vein is a quartz-filled fissure in granodiorite. Sulphide mineralization consists principally of pyrite with minor amounts of chalcopyrite, galena and sphalerite. The sulphides frequently occur as small, heavy concentrations, lenticular in outline and parallel to the vein walls. The underground exposures of the vein have not been displaced noticeably by faulting but on the lowest drift it is not visible for a considerable length on account of the intrusion of a wide and flat-lying lamprophyre dyke. There is no obvious displacement of the vein but it was necessary to drive 180' on its strike to pass from the hanging to the footwall of the dyke. There has been some faulting at acute angles to the strike of the vein, but this causes only very slight movement of the vein. However, it was sufficient to confuse the operators and on two levels they

followed the direction of the faulting as well as that of the vein.

Brief description of the workings examined is as follows: At an elevation of 2650 feet the lowest, or No. 4 drift has been driven on the vein which strikes south 10 degrees east, dips 65-70 degrees eastward. For the first 220 feet the vein is exposed in the back. At this distance from the portal the lamprophyre dyke, previously mentioned, cuts it off in the back. From 220 feet to 400 feet the adit extends on the same bearing in dyke rock. At 400 feet from the portal the footwall dyke has risen above the floor of the drift and permits exposure of the vein in the floor. Also at 400 feet from the portal a fault which strikes south 15 degrees west and dips 80 degrees west is exposed on the left wall of the drift; the adit was extended on the bearing of the fault for an additional 104 feet. The operators then realized that the vein did not follow the faulting and, at 427 feet from the portal, slashed the left wall, found it leading off in that direction on a bearing of south 10 degrees east, and followed it to the present face at 570 feet from the portal. In this section, as well as in the outer drifting, vein widths vary from 4 inches to 30 inches, with a general average of probably between 12 and 15 inches.

From the No. 4 level three raises have been driven and a winze sunk. At 210 feet from the portal one raise was started on the vein and broke through to surface on the

dump outside the No. 3 level drift, 65 feet above. From 193 feet to 220 feet the vein has been stoped for a short distance above the drift. At 360 feet from the portal a second raise was collared on the vein and broke through in the No. 3 level drift at 102 feet from the portal of that drift. At 392 feet from the portal of 4 level a vertical prospect raise was driven upward to a height of 28 feet above the rail. This raise crosscuts the lamprophyre dyke and exposes the vein on its hanging wall side. The width of the dyke indicated by this working is slightly over 20 feet. At 220 feet from the portal a winze was sunk on the vein; it is now full of water.

At an elevation of 2715 feet the No. 3 level, bearing south 10 degrees east, has been driven as a drift on the vein; vein widths and mineralization are very similar to those in the No. 4 level. The main drift is 438 feet long and the vein is exposed fairly continuously for the entire length. At 235 feet from the portal a branch working, bearing south 65 degrees east, was driven 39 feet. The reason for this divergent working was presumably to explore a fault which strikes south 20 degrees west, dips 55 degrees west and was intersected by the main drift at 230 feet. At 102 feet from the portal the main raise from the No. 4 level breaks into this drift. This is the raise which was collared at 360 feet from the portal of No. 4 drift. At 198 to 208 feet

from the portal a raise and some stoping have been driven upward. The raise breaks through to the No. 2 level. At 26 feet above the No. 3 level a short blind level has been driven as a drift on the vein. From 275 to 300 feet from the portal stoping has been carried upward to a height of about 10 feet above the back of the drift. In this stoped distance the vein fissure is 4 to 5 feet wide but only on the hanging wall side does the fissure filling consist of solid quartz; between 3 and 4 feet of the width is filled by a mixture of quartz and crushed granodiorite wall rock.

At an elevation of 2770 feet the No. 2 level has been driven due south for 68 feet as a drift on the vein. At 28 feet from the portal the raise breaks through which was collared at 198 feet from the portal at No. 3 level. The working is in poor condition as the back has sloughed through the surface in several places.

There is a higher No. 1 working which is apparently not connected with these three lower adits. The writer did not find this upper drift.

The vein exposures on Nos. 2, 3 and 4 levels were all examined carefully with the ultra violet light. Tungsten was found to occur widely distributed throughout the vein as small grains and in some cases as isolations up to 2 inches square. In general, the scheelite is certainly too disseminated to permit selective mining and shipping of crude ore, and it also appears

too sparse to permit economic extraction by milling. Only one sample was taken, as, short of bulk sampling, little information appeared available by this procedure. This one provides the best possible grade of mill feed available from the present exposures. It was taken <sup>a cross</sup> 14 inches at the south face on the intermediate level between 2 and 3 levels. Here there is exposed the best showing of scheelite seen on the property, comprised of one conspicuous segregation of the mineral, approximately 2 inches square and 2 or 3 other smaller isolations. The assay showed 1.65% Oxide of Tungsten; Gold, nil. Even this degree of natural concentration gives no promise of successful selective mining for crude ore.

Finally, it does not appear that the property is particularly attractive on account of the tungsten content. It has already been abandoned as a possible source of gold at current prices and it seems very unlikely that there is sufficient recoverable scheelite to make any difference to the status of the property unless there is evolved some cheap way of extracting small amounts of tungsten ore profitably in a nearby plant. In other words, if customs ore could be treated cheaply at the Granite mill and extraction of tungsten and gold could be reasonably complete the Royal Canadian might bear consideration.