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Annual Report, Minister of Mines, 1940.

Progress Notes.

COPPER DEPOSITS.

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Rocky Bay and Pine Ridge. Two mineral claims owned by J. W. Cunningham of Sinclair Mills are at the lower end of the Grand Canyon, distant 9 miles up-stream from Sinclair Mills, on opposite sides of the Fraser River and contiguous to ~~the latter~~. The Rocky Bay on the southern side of the river is near the southern boundary of Pre-emption Lot 920, and the Pine Ridge is on Pre-emption Lot 4125, on the northern side of the river directly opposite.

These properties may be readily reached by motor-boat from Sinclair Mills, but this is the only means of access. A framed building sufficient to accomodate two men has been erected on the bank of the river near the Rocky Bay. The mineral showings on these properties are a recent discovery of James Vanslyk of Sinclair Mills, who accompanied the writer at the time of examination.

There are no underground workings at either property, Mineral showings on the Pine Ridge, are exposed by natural agencies only, and the sparse mineralization merely

suggests that prospecting may disclose other veins containing more mineral in the neighbouring region.

On the Rocky Bay, the type of mineral occurrence is that of quartz veins mineralized with pyrite and chalcopyrite occurring in a sandy limestone and in slaty argillite overlying the latter. One vein, named by the owner No. 1 vein varying from 6 inches to 28 inches in width is abundantly mineralized, and is exposed for a distance of 45 feet along its strike. The other veins are not mineralized to the same extent, and are exposed for short distances only along their strike.

The chief surface workings are near the river's edge on gently-sloping ground, where vegetation and a few feet of unconsolidated material obscure vein-outcrops, and render tracing the latter beyond the workings difficult and laborious.

The workings consist of a system of trenches, cross-trenches and strippings, and are designed not only to expose the veins, but also to secure drainage. The sloughed condition of parts of the workings at the time of examination may have obscured certain features which were originally clear. The workings are mainly in a sheared sandy limestone largely replaced with quartz, but expose at their southern extremity carbonaceous slaty argillite overlying the limestone. These rocks strike north 37 to 63 degrees west, and dip 32 to 60 degrees south-westward.

Appearances suggest that a width of about 55 feet of the limestone and slaty argillite has been strongly sheared, the shear-

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planes striking south 50 degrees west and dipping 60 degrees south-eastward. Mineralization with quartz, pyrite and chalcopryite followed the shearing, the sulphides being mainly segregated in bands parallel to the planes of shearing. There is also evidence of a minor amount of cross-fracturing which the mineralization follows to some extent.

No. 1 vein occurs on the foot-wall of the sheared zone and strikes south 50 degrees west, and dips 60 degrees south-eastward. It consists of a band of mixed pyrite and chalcopryite, varying from 6 to 28 inches in width, and is exposed along its strike for a distance of about 45 feet. As near as can be judged mineralization is continuous for this distance, but is widest near the south-western end of the exposure although a few feet farther to the south-west, the vein appears to split, and the mineral to be far less abundant. A sample taken at the best point of mineralization across a width of 28 inches, assayed: Platinum, nil; gold, trace; silver, trace; copper, 3.6 per cent. Another sample taken of the more cupriferous parts of the outcrop only, assayed: Platinum, nil, gold, trace; silver, 0.4 oz. per ton; copper, 17.8 per cent.

No. 2 vein or band is distant 3 feet only to the south-east of No. 1 vein, and consists of a band of pyrite, 8 inches in width. Its strike and dip are the same as ~~in the case of~~ No. 1 vein, but it is exposed for a short distance only along its strike.

No. 3 vein follows the most southerly or hanging-wall

plane or shearing, and is approximately 55 feet to the south-east of No. 1 vein. It is exposed at one point only but appears to have much the same strike and dip as No. 1 vein. No. 3 vein is 6 feet in width at the point of exposure, and is composed of a band of quartz 2 feet wide on the hanging-wall, separated by a band of argillite 2 feet wide from another quartz band 2 feet wide on the foot-wall. These quartz bands are sparsely mineralized with pyrite and chalcopyrite, but on the foot-wall is a band 2 inches wide of compact pyrite and chalcopyrite. A sample of this 2-inch band assayed: Platinum, nil; gold, nil, silver, nil; copper, 18.2 per cent. This vein shows much evidence of post-mineral movement, and both walls are free. Distant 5 feet to the west of No. 3 vein is another quartz vein, No. 1-A, 12 inches in width, mineralized with pyrite and chalcopyrite which is exposed for 10 feet along its strike. The apparent strike is north-westerly with south-westward dip. A sample taken across 12 inches at the point of heaviest mineralization assayed: Platinum, nil; gold, trace; silver, 0.4 oz. per ton; copper 8.8 per cent.

The nearest known intrusive body is a tongue of fine-grained diorite, which outcrops at the summit of the Bearpaw Mountains to the north-east of Sinclair Mills.