Canada's Mineral Resources.

The Windy Arm District.

A few months ago, Mr. R. G. McConnell, of the Geological Survey, wrote a short report on the Windy Arm district just north of the British Columbia boundary, where rich strikes of silver and copper are being worked. This season, Mr. D. D. Cairnes, of the same department, has been commissioned to survey the district, and his preliminary notes make interesting reading.

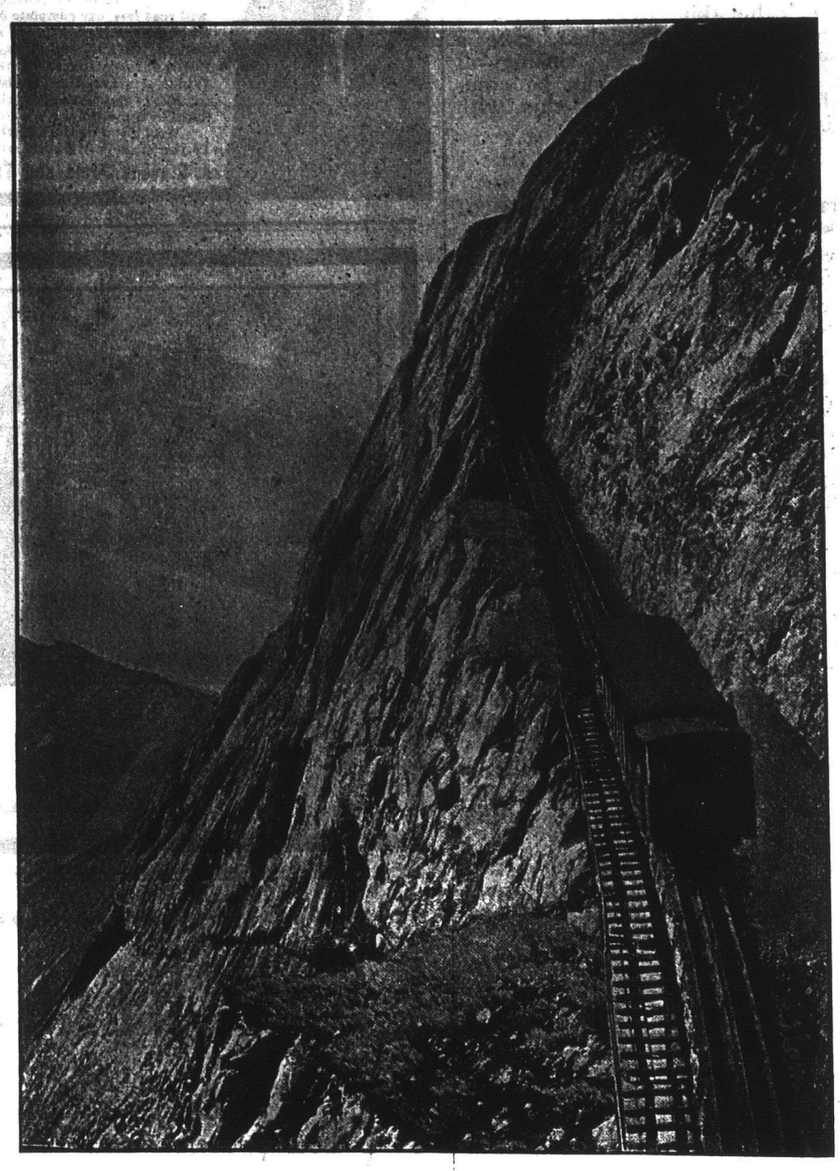
Mr. Cairnes says: In the district north of the boundary, south of Carcross, and between Windy Arm and Lake Bennett (an area of about 14 by 8 or 9 miles), over 260 claims are being held and a great deal of development is going on. The Conrad Consolidated Company own a great many of these properties and are pushing forward operations at seven of their camps. Machine drills are used at the Venus mine. The power is generated by a 50 horse-power gasoline engine. But, as there is enormous water-power on many of the creeks, piping, etc., has arrived to establish water-power to replace gasoline engines. A double-cable tramway is in operation from the Montana mine to the beach at Conrad city, 3,400 feet below. Four other tramways, it is reported, are to be erected.

Conrad city was practically started this spring and is quite a little town; it is built on the west shore of Windy Arm and already boasts three hotels, three stores, a drug store, restaurant, etc.

The Anglo-American Consolidated Company have a number of promising looking properties working to the south of Conrad, on Windy Arm. The leads are quartz, carrying high gold and silver values, and can, in most cases, be traced for considerable distances. Though the leads are generally narrow, from a few inches up to two feet, they are high grade.

The mineralized rock of the Venus mine is exceptionally wide, sometimes as much as 32 feet, and averaging, for considerable distances, over 20 feet; it can be traced over 3,000 feet. It is interbanded quartz and porphyrite, and will average about $25 per ton.

A tunnel over 700 feet long has been run on the Montana lead, proving it to be from 2 to 4½ feet wide. About 14 inches will average $80 and the rest will go over $20 per ton. Wherever galena is present in these quartz veins, the returns are invariably high on account of associated minerals—silver chloride, ruby silver, silver glance, stephanite, etc. Assays running into the hundreds and even thousands of dollars per ton are rather common from picked samples, rich stringers, etc. On the whole the camp looks quite promising, and, no doubt, will continue to go ahead rapidly.



Tunnel on the Mount Pilatus Railway

Native copper is found in a number of places on the east side of Windy Arm, distributed through the rock, which is a slate and chert series, near contact with old peridotite intrusions. No leads have, as yet, been found, but scarcely any work or prospecting has been done.

Some rich copper ores carrying nickel and cobalt values, as yet rather low, have been, however, found on Marsh lake near here, and I am thinking of taking two or three days to look at the properties, as they are quite close, and are very interesting.

A recent free-gold strike has been made up the Wheaton river, about fifteen miles west of Robson. As this has just started, reports vary, but some very rich rock is coming down. This is in my district and I will see it soon.

All interested parties are very anxious to have more work done than I can possibly do this season, but I will work as late as possible and can cover a good-sized area.

Communications received by the Director from several of the field parties of the Geological Survey show that the work is everywhere progressing favorably.

Suggestions From the Geological Survey for a Cobalt Coinage.

The discovery of cobalt ore in large quantities in northern Ontario and the limited market for that metal have had a disastrous effect upon its price, which has fallen from three dollars to thirty-seven cents a pound.

At the present time cobalt and its compounds are almost wholly used for pigments, chiefly for coloring glass or the glaze for pottery, beautiful blue, green, yellow and bronze colors, suitable for these purposes being obtained from a cobalt base. The metal is said to be very effective for electrical storage batteries, while as a plating material it is much superior to nickel, the coating being harder, brighter and more tenacious. Experiments conducted with a view to the use of cobalt in a manner similar to nickel as an alloy of iron have not proved successful up to the present, notwithstanding that cobalt from his hardness and high magnetic properties would naturally be expected to give superior results.

The market for cobalt colors is a limited one, and in competition with cheaper artificial colors it is not rapidly increasing. The improvements in storage batteries will probably cause an increased demand for the metal, while the cheapening of cobalt consequent to the new discoveries may greatly increase its use as a superior plating material.

Cobalt is a white, slightly reddish metal similar in properties to iron, being slightly harder and more tenacious, and having about the same degree of malleability. It tarnishes very slowly and is not easily attacked by most acids, or by alkalies.

The present small silver coinage of Canada, especially the five-cent pieces, is inconvenient and is easily lost; in the place of these it is proposed to substitute a larger coin of cobalt approximating in size the nickel five-cent pieces of the United States, while a smaller coin might replace the present bronze cents. Owing to its hardness, malleability and lack of tarnish, cobalt is an ideal metal for these coins of low value. It would furnish a unique coinage and would assist greatly in absorbing the surplus of cobalt now being mined. The issue of these coins would secure a considerable profit to the government, and their introduction would fittingly mark the establishment of the new Canadian mint at Ottawa.

Mr. Camsell, in the Similkameen, has finished the mapping of the Princeton coal basin, and has left to examine the Roche river, Kennedy and Copper Mountain camps along the South Similkameen from the international boundary northward.

Mr. Brock reports good progress in the detailed study and mapping of Rossland camp, and sees no difficulty in completing the work before the end of the season. He has sent for analysis specimens of sands from Little Sheep Creek, which he suspects contain platinum, along with a considerable amount of gold.

No word has been received from Mr. Leach, in the Bulkley valley, nor from Mr. Dowling, who is tracing northward the anthracite coal area on the eastern slopes of the mountains.

From the plains Prof. Macoun writes frequently and enthusiastically concerning the soil and crops of the country along the line of the Grand Trunk Pacific Railway to the west of Manitoba, while Mr. Chalmers has been employed giving advice as to the clays and the boring prospects in the same region.

The parties of Mr. McInnes and Mr. O'Sullivan, who are exploring the country between the Saskatchewan river and Hudson Bay have not been heard from, nor has word been received from Mr. Collins nor Mr. Wilson in northern Ontario and Quebec.