

The Canadian Pacific Railway Co. has given a reduced rate upon such shipments for testing purposes, so that it has become quite possible to treat small lots of British Columbia ore. Some of these, especially the dry ores of gold and silver offer a very good field for testing. At the Kingston School of Mining, each year, ores suitable for testing in the matter of free milling, cyanidation, etc., are treated before Christmas; those for concentration after Christmas. The tests are usually on a considerable quantity so that besides affording solid instruction the metals or concentrates saved are a commercial quantity and more than pay for the tests in some cases.

It is right that people should know that such work is being done to the mutual advantage of the students and the miner, and that the country is getting back something of value in trained men, and mill tests, for the support given.

During the past two years these tests have been more in the mill than the laboratory, that is they have been made with conditions of commercial magnitude, not with models.

Free milling and other treatment has been applied to gold ores from Jack Lake in north-western Ontario, and from discoveries north of Sault Ste. Marie. Various leaching processes have been used upon dry gold-silver ores from British Columbia. Magnetic separation has been used on iron ores from Quebec for the elimination of titanium and on the flue dust of the Hamilton Furnace Co. Concentration tests with various classifiers and oil upon ores from British Columbia and on molybdenite and graphite from Eastern Ontario.

Jig and table concentration on considerable lots of zinc and lead ore from Frontenac County.

A considerable amount of work has also been done by the Mineralogy Department on the new Nickle Colbalt ores of Temiskaming.

Yours truly,

J. C. GWILLIM.

Kingston, January 3rd, 1905.

[Prof. Gwillim's letter opens an inviting vista for discussion of the curriculum adopted in our Mining Schools, and of the lines of practical work done or attempted in the summer schools after the close of the regular session. The REVIEW has asked some of the professors in other mining schools to give our readers the benefit of their views, and herewith extends an invitation to engineers, who are not professors, to use the columns for any contribution to the subject they desire to submit.—EDITOR.]

The Centre Star Mine.*

By L. HEBBER COLE.

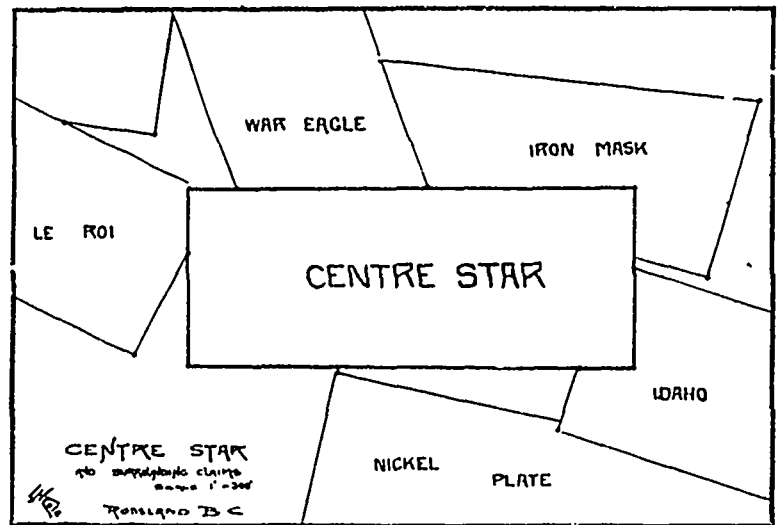
The Centre Star Mine at Rossland, B.C., is located on the slopes of Red Mountain to the north-west of the city. It is bounded on the west by the Le Roi Mineral Claim, on the north-west by the War Eagle and Iron Mask Claims, the north-east by the Idaho and to the south-east by the Nickel Plate Claim.

It is full sized, 1,500 ft. long by 600 ft. wide and was located in 1890.

The ore of this mine consists of iron and copper sulphides (pyrrhotite, chalcopryrite, and pyrite, accompanied by arsenopyrite). The principal value is in gold, which is chiefly car-

ried by the chalcopryrite, but the copper makes an important addition, and there is always a small amount of silver present.

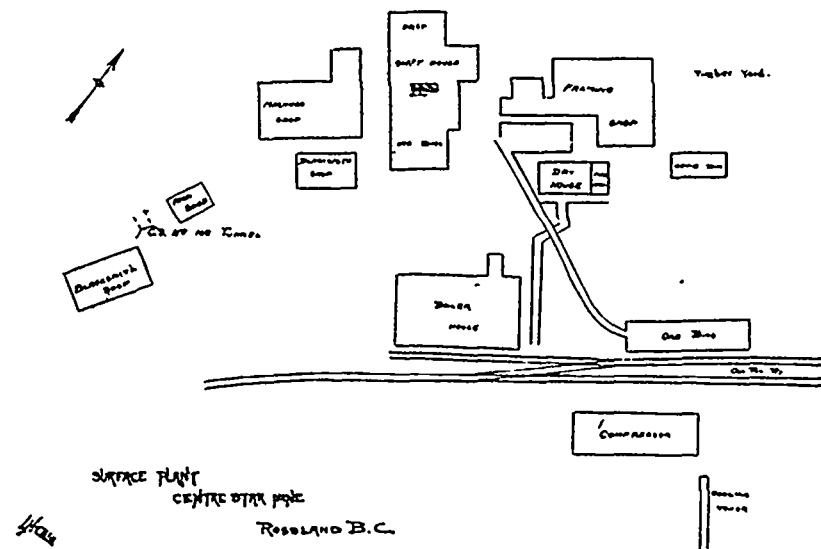
The veins vary in width from a few inches to 40 or 50 feet, and the pay shutes in some cases extend from wall to wall, while in others, only parts of the veins are enriched. Some-



times the walls are very indistinct and the values run into the country and gradually decrease witho any sharp line of division between ore and country.

The mine consists of several veins, either extensions from bordering claims or else veins starting in the claim itself. The main Centre Star vein, however, and the one in which most of the work is done, is the large Shear Zone Fissure consisting of parallel platings of the rock produced by shearing under high compression. This vein runs along the southern slope of Red Mountain and appears in the Le Roi Mine; it has a dip varying from 60 degrees to 70 degrees and a strike that is approximately N. 68 E. It varies greatly in width and is cut by a large number of dykes and faults.

As the Centre Star and War Eagle Mines are under the same management, the offices are placed so as to be convenient to both. The office building, besides containing rooms for the general office work, has draughting rooms, blue print



room, photographic dark room, surveyor's instrument room, and the private offices of the general manager and superintendent. The assay office is conveniently near the main office.

The collar of the main shaft is located 500 feet from the west end line and 225 feet from the north side line of the

*Abstract of a paper read before the Mining Section of the Canadian Society of Civil Engineers.