

# Mining Throughout British Columbia

Receipts at Trail—Development on Gabbro Claims—Report on Graphite—St. Eugene to Re-open—Reconnaissance on Stikine River—Developments on Portland Canal—Mining Notes.

The following is a list of the ore received at the Trail smelter during the week ending August 7th, 1920:

Mine.	Location.	Gross Tons.
Canada Copper Co.,	Greenwood .....	14
Index, Zwicky .....		12
Josie, Rossland .....		228
Mandy, Le Pas, Man. ....		733
North Star, Kimberley .....		120
Providence, Greenwood .....		42
Velvet, Velvet .....		34
Company mines .....		9038

10,221

The Gabbro Copper Mines, Ltd., owning the Gabbro Group at Jordon River, Vancouver Island, has been working a small crew of men continuously since the middle of last March on its property.

The work consists largely of open cuts for the purpose of ascertaining the grade and continuity of the ore zones.

A tunnel was driven into the Hornet zone on Sinn Fein Creek, from which some good ore was taken. The most promising showings, however, were found on the Sunlock Cave zone where it crosses the Jordon River into the Gabbro group.

In a series of open cuts it shows a width of from 5 to 25 feet along a length of between 300 and 400 feet. The grade of the ore is exceptionally good. Where the zone reaches its maximum width it will average 3% copper or better. This is the best surface showing that has been found as yet at the Jordon River. Two parallel zones have also been worked on; the Cliff zone and the Turnbull zone. Both show a very fair grade of ore. The Turnbull zone is a new discovery made this season. Float was found at the roots of some down trees. Close prospecting revealed the ore zone near by, where it had a width of 10 feet.

The zones on the Gabbro group are in basalts of Eocene age, which have been intruded by a stock of gabbro. There has been much shearing of the basalts, due probably in part to the shrinkage of the gabbro mass when cooling, and also to regional stresses. There has also been some shearing and ore deposition in the gabbro. Continuity of the ore at depth in these shear zones is shown by the tunnels on the adjoining Sunlock property, which give a vertical depth of over 500 feet. The Sunlock is one of the very few mines in this province that has had no serious set back since the beginning of mining operations on it in 1917.

John D. Galloway, district mining engineer for the Northeastern district, has gone into the Cariboo district, where he will spend a month examining some new mining properties that have recently been opened up. He is also assembling a collection of ore samples which will be included in an elaborate display to be made by the provincial mines department at an exhibition of natural resources at London, England. The engineer is doing everything possible to have his district as well represented as possible. Good specimens have been sent in from Nine-Mile Mountain and also from the Silver Standard Mine.

A report on graphite, just published by the Dominion mines branch, contains a wealth of information on the subject of this interesting and important mineral. The report is written by H. S. Spence, mining engineer of the Department, and treats of the properties, occurrence, distribution, mining and uses of graphite in almost comprehensive manner. Interesting information is given on the present status of the graphite industry in Canada and on the outlook for the industry as it is likely to be effected by foreign competition.

The reports points out that Canada possesses deposits of flake graphite superior in richness and quality of flake to any on the American continent. What is probably the largest and richest deposit of flake graphite known in the world occurs in Ontario and is worked by the Black Donald Graphite Company of Calabogie. Difficulties of concentrating and refining the graphite, however, have long hampered operators and have militated against the establishment of a flourishing industry. Quite recently, these difficulties have been overcome by the employment of the oil flotation system of ore concentration, which yields for better results than were obtained by the old method both in the richness in carbon of the concentrate made, and in the amount of graphite recoverable from ore treated. Several Canadian mills have now been equipped with the above flotation process and are producing refined graphite equal, if not superior, to the best graphite on the market.

Besides being used in lead pencils and stove polish, two of the earliest common uses of the mineral, it enters to a surprising extent into modern industry. Crucibles used in the melting of steel and alloys consume a large proportion of the graphite produced, and other important uses are in lubricants, paints, foundry facings, pencils, stove polishes, dry batteries, dynamo and motor commutator brushes, electrodes and boiler scale preventives. In all, about fifty different uses of graphite are listed in the report, which, in addition, gives much interesting information on the methods of manufacture of a number of the more important graphite products. The report consists of about 200 pages and is profusely illustrated with photographs, drawings and maps.

The reported reopening of the famous St. Eugene mine is creating interest in Moyie, a few years ago the most prosperous mining camp in British Columbia. Word has reached Moyie that the Bureau of Canadian Information has made the announcement through the Department of Colonization and Development of the Canadian Pacific Railway to the effect that the St. Eugene will again take its place with the big shippers. The heavy tonnage from the Sullivan at Kimberley to the Trail smelter necessitates wet ore from the St. Eugene to act as a flux. The St. Eugene has produced over 5,000,000 ounces of silver and 229,000,000 pounds of lead, valued at more than \$10,000,000. When the St. Eugene closed down in 1910 it was reported that the ore deposits had played out, but miners who are familiar with the mine say there are big bodies of ore yet to be worked. A small crew of men are now at work.

Commissioned by Hugh Sutherland, the Winnipeg ex-railway magnate, to inspect the Evening Star mine, on Dayton Creek, near here, J. L. Parker, mining engineer, who was engineer of the Sullivan in the old days, recently visited the mine with Manager William Moore, who is operating the Evening Star for Mr. Sutherland. Two other engineers were also in the party.

A new Cameron pump, shipped by Mr. Sutherland from Winnipeg by express, has been installed for unwatering the shaft and connected workings, the pump first used having broken down after the operation of unwatering was nearly completed.

After the workings are free of water, and are connected with the new tunnel, the winze in the old portion of the tunnel will be unwatered.

Mr. Parker will remain at the property until the pumping operations are completed, when he will make his survey.

A large crew of men accompanied Mr. Moore to start work at once.

After several years' quiescence the Evening Star, which is a dry silver property, was re-opened by Mr. Moore last fall for Mr. Sutherland, development taking the form of a long crescent and drift to give new depth on the ore body.

Mining is causing a little excitement on Valdez Island. New discoveries have been made that give great promise.