Industrial Opportunities in Mining in B.C.

Mr. E. A. Haggen, editor of the Mining and Engineering Record, writing in The Daily Province, Vancouver, points out a number of cases where industrial development of mineral resources would add greatly to the prosperity of the Province and afford opportunities for the profitable employment of capital.

In a consideration of the mineral resources of British Columbia, which are available for industrial purposes, the gypsum deposits have been hitherto overlooked. During the period of building activity in the coast cities an immense amount of plaster was used, and the demand is still great. This material is derived from gypsum, of which extensive deposits are known in British Columbia. The mineral is also used as land plaster and in the manufacture of Portland cement. So far all the requirements have been imported from Alaska, Puget Sound points, or Manitoba, where there are extensive calcining plants. If the home resources of the raw material were utilized an important industry might be developed.

On the north bank of the Thompson River at Spatsum, and close to the C. P. R. line on the south bank of the river, there is a deposit well located for transportation. This deposit is owned by Vancouver men. The largest deposits occur at Grande Prairie, where the Manitoba Gypsum Company has acquired interests with a view to operating as soon as the Okanagan branch of the C. N. R. system, which passes through the property, are available. Other deposits have been reported from the North Thompson, Nicola and Similkameen.

While the best source of aluminum, as bauxite, has not been reported here, deposits of aluminite, on the west coast of Vancouver Island, have been worked by a chemical company at Victoria for the manufacture of abrasives and polishes, and the production of metallic aluminum from these deposits has been under consideration, as there is an ample supply of hydro-electric power in the vicinity of the deposits.

Antimony is used in type-founding, manufacture of trimmings, machine bearings, paint and enamelling. Better prices than have ruled of late are expected on account of increased demand. Deposits which might be profitably mined under these conditions occur at Donald, and on the Spillimachene River in East Kootenay; at Lillooet; and on the north fork of Carpenter Creek in the Slocan. Trail smelter has produced some marketable antimony derived from silver lead ores treated there.

The smelters handle a good deal of ore with which arsenic is associated, and they could save it as a by-product at less cost than it can be produced in any other way. A great deal of arsenic is thus produced by United States smelters, but so far the smelters operating in British Columbia have made no effort to save it. There is a growing market for this mineral as an insecticide, accounted for by the extension of fruit-growing and agriculture; and there is no reason why the home market should not be entirely supplied from a local source.

British Columbia has a large supply of barytes, which is used in the manufacture of paint, lithophone, wall paper, glass, artificial ivory, insecticides, fertilizers, preparation of oxygen, barium salts, boiler compounds, vermin poisons, and green fire, and there is no reason why some of the industries utilizing it should not be developed here.

One of the most important industries to which British Columbia should devote attention is the production of potash. There is a world-wide demand for this mineral, and its supply is an essential of agriculture and fruit-growing, as well as of various chemical industries. The feldspars in the granite, the pegmatites and the leucites carry billions of tons of potash; and the kelp beds of the coast carry probably 10,000,000 tons of the chloride. It is also possible that the bitterns of the lower Similkameen, and the soda deposits of Cariboo may be associated with potash, the specific gravity of which would make this the basic mineral. To ascertain whether such resources are available in this Province, diamond drilling might be done either by the Government or by private parties. At the World's Fair in Chicago was exhibited a sample of potash salt which was stated to have come from Southern British Columbia—probably the Similkameen. The exhibit attracted much attention and the locality of its origin was a subject of interest to the United States Department of Agriculture, as it was stated to represent just such a deposit as the Department, and the United States Geological Survey in co-operation with it, had been searching for. It is possible the Bitter Lakes of the Similkameen may afford the solution of the mystery.

The utilization of the kelp beds is a practical scheme. Their dried substance contains potash and iodine of a value of $20 a ton. Here is the possible foundation of an industry which, if it can be successfully developed, would afford employment to many, and would be a boon to the agricultural and industrial development of the Province. Practically all the potash used in the United States and Canada in the production of fertilizers has hitherto been derived from Stassfurt, Germany. The chemical products dependent on this mineral are: Fertilizers, carbonate, cyanide, nitrate, sulphate, hydrate of potassium, caustic potash, bleaching chemicals, dyestuffs and explosives.

British Columbia imports a considerable amount of sulphur to supply the pulp mills, explosives works and chemical works. It is now mostly derived from Japan. The entire demand could be supplied from local sources. At the Hidden Creek Mine of the Granby Consolidated Mining, Smelting & Power Company, it is estimated that about 8,000,000 tons are available of a pyritic ore which carries from 40 to 45 per cent. sulphur, and a half per cent. copper. As this ore is too low grade to work for its copper, it could well be used as source of supply of sulphur, and the company would be only too glad to mine and deliver it in bunkers at tidewater on reasonable terms to industries utilizing it.

A similar deposit occurs on the Eckstall River, a tributary of the Skeena. This property is owned by the B. C. Pyrites Limited of Victoria, but is not sufficiently developed to allow of reliable estimates being made of its value as a source of sulphur.

There is an ample supply of graphite on the coast to provide both for local demand and export of stove polish, foundry facings, paint pigments, lubricating material and perhaps lead pencil manufacture. Graphite can also be manufactured in electrical furnaces.

One of the most important, and at the same time one of the most valuable industrial minerals of British Columbia, is magnesite, of which large deposits are reported in the Atlin district, and it is stated transportation rates can be obtained favorable to the utilization of these deposits. When it is considered that the United States has been dependent on Austria, Greece and Germany for its supplies, and that the British Columbia requirements are filled second-hand from the United States imports, it will be seen that there is a large market for this mineral and its products. Magnesite is used as a refractory for brick, furnace hearths and crucibles for smelters; as magnesium sulphite for digestion and whitening of wood pulp; in manufacture of carbon dioxide; for oxychloride or Sorel cement and for magnesia salts. In addition to shipments of the crude material, there is an industrial field for calcining and grinding in this Province.

The enumeration of a few of these mineral resources of the Province shows how varied they are, and in how many directions it may be possible to build up from them new industries of importance.