MARITIME MINING RECORD

Vol. 20 Stellarton, N. S., February 27th., 1918 No 16.

DIATOMACEOUS EARTH.

This material known under the names of "tripolite," "tripoli," and "infusorial earth," is a pulverulent substance, white when pure, but often having a brownish discoloration. Deposits are common in lakes and swamps in many parts of Nova Scotia. It is rarely pure and usually is mixed with carbonate of lime and magnesia, clay and other substances, the silica contents varying between 75 and 90 per cent.

The following is condensed from an article in the Annual Report of the Geological Survey, contributed some years ago:—

"Diatomaceous earth is very porous, the specific gravity being 0.25 to 0.30, owing to the numerous interstitial spaces and air cavities between the spicules and shells and within the latter, giving lightness and great absorbent power.

The uses to which diatomaceous earth is put are very varied and are probably capable of greater extension. Formerly, it was widely used in the manufacture of dynamite as an absorbent of the nitro-glycerine, its porosity, which allows of its absorbing liquids to the extent of four to five times its own weight, rendering it eminently adapted to that purpose. But in this connection it has been wholly replaced by cheaper absorbents such as wood pulp, sawdust, etc. At present its chief use is as a polishing material, the grains being sharp and cutting, but fine enough not to scratch metal surfaces; it is also used as a boiler covering, its porosity rendering it a good non-conductor of heat. It can be used in the manufacture of bricks when great lightness is required, but owing to the difficulty of manufacture, these bricks are costly and cannot on that account be used for ordinary purposes. Such bricks can be made of one quarter the weight of ordinary bricks. Diatomaceous earth is also used to some extent in the manufacture of certain soaps, and as filtering material, etc."

The most important deposits discovered up to that time were in Nova Scotia and New Brunswick. In Nova Scotia it is found in the following places:—

Folly Lake, Cumberland County. The deposit at this place is the largest yet known in the province. It occupies the bed and shores of Folly Lake. The lake has an area of over 200 acres, two-thirds of which are probably covered with this deposit. Its surface is 600 feet above sea level. The deposit has been worked to a small extent for the manufacture of polishing material, and for use as a non-conductor of heat.

Fountain Lake, Cumberland County. A valuable deposit of tripolite has been found at this place. It occupies the bed of the lake which is on the road to River Philip, Westchester Mountain. It is of remarkable purity and the lake is said to be easy to drain. It is eight miles distant from Minas Basin at Port-au-Pie, and about the same distance from the Intercolonial Railway. The deposit is worked to a small extent. Other deposits of less extent occur in the numerous lakes of this region.

Upper Barney's River, Pictou County. In 1886 four tons of infusorial earth were shipped from a deposit at Alex. Sutherland's, in a marsh. The extent of the deposit is not known. The marsh is 50 yards wide and of indefinite length. The deposit is two feet thick and immediately under the sod.

Englishtown, Cape Breton County. A deposit of infusorial earth, said to be of excellent quality, has been largely dug by Mr. F. Torrence. The deposit is in a small lake behind the village.

River Denys, Inverness County. A deposit at this place has had a certain amount of work done on it.

Castlereagh, Cumberland County. A large deposit of infusorial earth occurs in Bass River Lake. The lake has been drained for the purpose of working the deposit.

St. Ann's, Victoria County. For several years an important deposit of infusorial earth was worked at a lake near St. Ann's. The deposit is from 3 to 4 feet thick and extends over a large area.

Other places at which Diatomaceous earth has been found are: Lake Ainslie, Inverness County; Lochaber, Antigonish County; MacKay Lake, Garden of Eden Lake, Grant Lake, Ben Lake, Pictou County; MacKintosh Lake, Gully Lake, Colchester County; Grand Lake and Dartmouth Lakes, Halifax County; and Kempt Lake, Kings County. There is no large demand for this mineral at the present time. Its turn, however, may come.

MOLYBDENUM.

Molybdenite is the most common ore of Molybdenum and the ore of molybdenum most widely occurring in Canada. It is found in foliated masses or scales and resembles graphite, but it differs from graphite in having a bluer color and giving a greenish streak on porcelain. It is a very soft metal and can be scratched by the finger-nail. It usually occurs in a hard gangue, largely quartz and feldspar. Its specific gravity is from 4.7 to 4.8.

Molybdenum is a metal of the Chromium group, resembling iron in its white color, malleability, difficult fusibility, and its capacity for forming steel-like alloys with carbon. Its specific gravity is 9.01, symbol Mo., atomic weight, 96.0. It occurs only in combination, chiefly in Molybdenite, wulfenite and scheelite, and in small amounts in ores of iron and copper.

It is used in the form of ferro-molybdenum to harden steel. Certain compounds of it are used in coloring pottery and fabric and in analytical chemistry.

How's Mineralogy, published in 1868, gives the first information of molybdenite in Nova Scotia. It mentions Gabarus, in Cape Breton County, Hammonds Plains and Musquodoboit in Halifax County,

Continued on page 15.