

ris. The sand and gravel are quickly washed away. To break rock and scatter beds of heavy boulders dynamite is used. The practice is not to wash the soil down into the lake, and very little finds its way thither. After an area has been thoroughly cleaned of debris it is carefully examined and surveyed. Subsequently in clearing an adjoining area the first is allowed to become covered again.

Already the work done at the Nipissing has been rewarded by the uncovering of several narrow veins of good ore, and it seems likely that this unusual method of surface prospecting will prove very profitable. Cheap power is available at Cobalt, and the cost of hydraulic prospecting is consequently much lower than in localities where steam-developed power is used.

The accompanying photos show the pump house, pipe line, and nozzle. A pressure gauge at the nozzle regis-

ters, under present working conditions, about 130 pounds.



Stream Washing Sand and Gravel from Rock Surface

MINING AND THE CANADIAN NORTHERN RAILWAY

(Continued from June 1st Issue).

"The St. Lawrence lowlands, floored with nearly horizontal Palaeozoic strata, and bounded on the north by the southern edge of the Laurentian plateau, represent in Canada the north-eastern extension of the great plain-like area of the interior of the continent. Commencing near the city of Quebec, the lowlands stretch southwesterly on both sides of the St. Lawrence with slightly diverging boundaries, until, at Montreal, the level country is approximately 120 miles wide. Beyond Montreal, the northern boundary pursues a westerly course up the Ottawa valley to a point about fifty miles beyond Ottawa city, where a ridge of broken country—a low spur of the Laurentian highlands—projects southerly, crossing the St. Lawrence between Brockville and Kingston to join the elevated Adirondack region of northern New York. Near Kingston, at the foot of Lake Ontario, the lowlands again commence and occupy the portion of the Ontario peninsula lying between Lakes Huron, Erie and Ontario, and bounded on the north by a nearly straight east and west line from Kingston to the foot of Georgian Bay, Lake Huron.

"The widespread clays of glacial and post-glacial age that often completely hide the underlying rocks over considerable areas of the St. Lawrence lowlands have furnished the material for numerous brick and tile industries both in Ontario and Quebec. Advantage has also been taken, for the same purpose, of the shales in various of the lower Palaeozoic formations. The raw materials for the manufacture of Portland cement are abundantly displayed in the region, and support a number of large industries. Some of these utilize marls—deposits of calcium carbonate in lakes scattered over the uneven surface of the post-glacial deposits, and the clay beds of these deposits, while others use Palaeozoic limestone. These limestones of several of the formations, and more especially of the Trenton group, are also extensively quarried both for building stones and for the production of lime. At several points the limestones are also used in the making of calcium carbide, while the dolomites are used in the manufacture of pulp.

"The Laurentian Plateau region, surrounding Hudson Bay with a U-shaped form, has an area of over 2,000,000 square miles. Limited in the east by the North Atlantic and by the gulf and estuary of the St. Lawrence as far as the City of Quebec, its southern boundary there passes inland and up the Ottawa river to beyond the City of Ottawa, then turns abruptly to the south and crosses the International boundary at Brockville. Farther west, at the foot of Lake Ontario, it crosses back into Canada and follows a nearly due east and west line to the foot of Georgian Bay, from which point the two upper Great Lakes form the bounding line. West of Lake Superior the Laurentian plateau region extends south into the United States. In southeastern Manitoba the boundary again enters Canada, and from there passes along a general northwesterly course through Lake Winnipeg, Great Slave Lake, and Great Bear Lake, to the shores of the Arctic Ocean.

"Noted for its timber resources, the Laurentian plateau, where best known, is no less important from the standpoint of mineral wealth. Along the southern margin occur the noted copper and nickel ores of Sudbury, and to the north of these lie the Cobalt silver deposits. In eastern Ontario, and the adjoining portion of Quebec, are numerous and important deposits of graphite and mica. All through the region occur iron deposits, some now being mined, and many in the near future destined to become commercially important. Besides these, many other ores, both metallic and non-metallic, are known, although the country cannot in any sense be said to have been closely prospected. Nor do these mineralized belts seem to be confined to the southern part of the country, but everywhere through the Laurentian Plateau region the general conditions appear to be similar, and it is certain that many deposits of economic value yet remain to be discovered.

Gold.—"In Eastern Ontario the auriferous deposits appear to be confined to a belt of varying width and about seventy miles long, extending through Peterborough, Hastings, Addington, Frontenac, and into Lanark County. This region is occupied by crystalline lime-