

width, running from 2½ to about 4 feet, and the ore, which contains a considerable amount of visible gold, is said to average \$20 in free milling gold and \$5 in concentrates per ton. The Ferguson mine, belonging to the Seine River Gold Mines Co., and the Lucky Coon or Hillier mine, which has been taken hold of by Edinburgh capitalists, promises well.

"Many locations have been taken up in the Keewatin schists east of Shoal Lake, and also along Little Turtle River and Lake, north of Bad Vermilion Lake. These deposits are mainly bedded veins or fahnbands, and have been very little developed, though rich specimens of free gold come from them. On Rainy Lake itself gold has been found at a number of points; but the only mines worked are two in Minnesota. North of Rainy Lake and south of the Canadian Pacific Railway, at Wabigoon, is a very promising region on the shores of Lake Manitou, and smaller bodies of water near by. Ore deposits of varying kinds and of all degrees of richness occur here, and brilliant specimens are found, but nothing that can be dignified with the name of mining has yet been attempted. Gold has been found at various points north of the railway, e.g., on Minnetakie and Sturgeon Lakes; but locations are yet only in the prospecting stage."

The Regina Gold Mining Co.'s property on the Lake of the Woods was visited next. The vein on which most work has been done begins in a mass of protogine granite near the shore, and runs into a weathered diabase (trap) toward the south. There is a rich shoot of ore running down through the granite into the diabase. The gold is fine and difficult to save by the present concentrators. The mill is of ten stamps, and the number of men employed about fifty. "Many locations have been taken up near the Regina and farther north-west on Yellow Girl, and other bays, but none have been worked seriously. Nearer Rat Portage, however, especially along the contact of Laurentian and Huronian, running north-west from Andrew Bay to Black Sturgeon Lake, a number of shafts have been sunk, generally to a depth of fifty feet. At the time of our visit only two mines were producing gold, the Golden Gate, whose ore was being crushed at the mill of the adjoining Gold Hill mine, and the Triumph, which was having its ore tested with a two-stamp Tremaine mill." The Sultana mine, owned by J. F. Caldwell, Winnipeg, is situated on an island seven miles south-east of Rat Portage; it is the most famous in the district, having, the report says, "a great body of rich quartz, in places forty feet wide, and already followed more than three hundred feet in depth. Nearly a thousand feet of drifting has been done, and there is ore enough in sight to keep the well-equipped ten-stamp mill, or one double its size, running for years. The ore bodies appear to be lenticular, the lower one of immense size, and are enclosed in the sheared and schistose edge of an area of coarse porphyritic granitoid gneiss, mapped by the Geological Survey as Laurentian, but adjoining green Huronian rocks. The ore is somewhat quartzitic looking, contains one or two per cent. of iron pyrites, and is free milling, to the extent of 75 or 80 per cent. A recently finished chlorination plant extracts the gold carried by the sulphides very satisfactorily."

The Mikado mine on Western Shoal Lake is owned by an English syndicate, of which W. T. Engledue is chairman. It has been worked enough to show that the ore is very rich, though not enough sinking has been

done to prove the extent of the deposit. The quartz contains a variety of sulphides, including a sulphide of bismuth new to the Lake of the Woods region, and a considerable part of the gold is carried by these refractory minerals. But probably two-thirds of the gold contents are free milling, the gold occurring as thin plates rather than nuggets. The ore treated is the richest found in large quantities in Ontario, and the ore now on the dump, after only a few months' work by a small force, contains values sufficient to pay for the mine and a simple equipment. Several other finds of very rich ore have been made in the vicinity of the Mikado, and next summer will probably see the development of an important mining camp in that district.

"At a number of other points on Lake of the Woods and its bays promising finds of gold have been made, e.g. at Camp Bay, to the southeast, but none of them have been worked sufficiently to make sure of their value. Looking at our gold mining region as a whole, one is struck by the wide extent over which gold has been found, the variety of deposits that occur, the ease with which they may be reached, the free milling character of most of the ores, all points in its favor as compared with most gold regions.

"No part of the region is more than forty miles from a railway or steamboat, and most of the mines are within a few miles of them. In winter a road sufficient to take heavy machinery may be made without difficulty to any point in the region, and the Ontario Government has shown itself liberal in granting assistance to such roads. All parts are readily reached by canoes in summer. Plenty of water of good quality is found everywhere, and wood for fuel, building or mine timbering almost everywhere." Dr. Coleman says, in conclusion, "The region is not an inaccessible desert, nor covered with malarious swamps, nor cut off from civilization by precipitous mountains. Supplies of all sorts are cheap; efficient labor can be obtained on easy terms, the labor of white men, not of negroes or Indians, and life and property are as safe as anywhere on the globe."

ANTHRACITE, ANTHRAXOLITE, WHICH?

Since the building of the Grand Trunk Railway nothing so full of promise for the development of Ontario industries has occurred as the reported discovery of anthracite near Sudbury, Ont. At the time of writing, the genuineness of the discovery is a point about which discussion rages, and until the report of Dr. A. P. Coleman on the mineral is made public the question which heads this paragraph cannot be definitely answered. We hope before the last of these pages goes to press that the report may be handed out, so that we may present the decision of the Ontario Bureau of Mines to our readers. In the event of the deposit not proving true anthracite, if it is sufficiently extensive it may be applied to great advantage in the reduction of the various ores with which the northern part of Ontario is so rich. Much turns, then, on the report of the nature of the mineral, but much also depends upon the amount available.

GAUGING THE RIVER ST. LAWRENCE.

During the latter part of October, the third year students in civil and mining engineering at McGill University, under the direction of Prof. McLeod, assisted by Profs. Kerry and Smith, made a three-day trip down the St. Lawrence, about 45 miles, to Lanoraie. The yacht "Wild Rose," belonging to Mr. Drummond, and under the supervision of Mr. Frank Redpath, was placed at the disposal of the party.