the management of Mr. A. B. Whiteley, and several of the veins are showing up well, though more sinking is required to settle the final value of the property.

What has been known as the Lucky Coon mine is now in the hands of Edinburgh capitalists who intend to purchase and work it, if on development it continues to look as well at present.

Some work has been done on several other Shoal lake properties, and it is probable that a number of prosperous mines will be operating in a year or two.

Just north of Bad Vermilion lake, in the Little Turtle region, a number of very rich finds have been made, the deposits being bedded veins in green Keewatin schist. As there has been no development work it is hard to estimate the value of the region. In general it displays richer pockets of ore, but smaller and less certain ore-bodies than the Shoal lake district to the south.

What has been said of Little Turtle applies also to the Manitou country, twenty or thirty miles south of Wabigoon on the C. P. R. Exceedingly rich pockets have been found providing attractive specimens, but practically no mining has been done. A Tremaine two stamp prospecting mill has been run for a few days on Little Manitou under the management of Mr. E. B. Haycock, representing an Ottawa company. He states that during a run of seventy hours, eighteen tons of ore were crushed, "job lots" from various veins, averaging about $25.00 in free gold per ton.

It is probable that when a good road gives easy access this region will be an important gold producer. A custom mill should do well somewhere on the lake.

Turning now to the Lake of the Woods region, which is really the continuation of the gold region so far described, one naturally touches first on the Sultana mine, seven miles south of Rat Portage, owned and worked by Mr. John F. Caldwell. Here large ore bodies, probably lenticular, occur at the edge of an area of porphyritic syenite gneiss. A shaft has been sunk to nearly 300 feet and nearly 1,000 feet of drifting have been done, proving the existence of an immense deposit of quartz, in places 40 feet wide and at least several hundred feet in length. The quartz contains a moderate quantity of sulphides, 1 or 2 per cent., and 75 or 80 per cent. of the gold is free milling.

The stamping capacity of the mill, ten-stamps, will be doubled, and a larger mining plant put in shortly. A chlorination plant which has recently been put up saves most of the gold retained in the concentrates. A weekly gold brick is produced with great regularity, running in value, it is said, from $1,500 to $3,000 or more. The pluck and business ability which Mr. Caldwell has shown in developing the Sultana in spite of many discouragements to its present prosperous state deserve the fortune which is already in sight.

The only other property deserving the name of mine on the Lake of the Woods is the Regina, on Whitefish Bay, to the east of the lake. Here a vein beginning in granite of the protogine type and crossing into green Huronian rock has been sunk upon to a depth of 160 feet and 500 feet of drifting has been done. A rich ore chute has been defined in the vein on which most work has been done, running from $20.00 to $160.00 per ton; but the gold is very fine and difficult to save in the ten-stamp mill in operation at the mine. Lieutenant-General H. C. Wilkinson is managing director, and Mr. J. Leechman, A.R.S.M., mining engineer, for the English company owning the mine.

A small amount of development is going on at several other points on the Lake of the Woods, *e.g.*, at the Triumph mine, under Mr. C. S. Morris, who has sunk 55 feet and is testing the ore with a two-stamp Tremaine mill; and at the Golden Gate mine near Pine Portage Bay, where sinking is being carried on and ore crushed at the ten-stamp mill belonging to the Gold Hill mine, which is not now working.

The Scramble mine, five miles from Rat Portage, is notable as being located on a fahl band, a wide band of schist strongly impregnated with pyrites, but yet showing a considerable amount of free gold when panned; and several other properties of a similar character and of promising appearance have been located in the neighborhood, but too little development has been done to determine their real value.

Of the great number of more or less promising "prospects" on the Lake of the Woods no more need be said than that far more work must be done upon them before their gold contents can be settled.

One remarkable ore deposit on Shoal lake, not the expansion of the Seine but a lake of the same name forming part of the boundary between Ontario and Manitoba, is deserving of mention, the Mikado mine. Here a wide ore body occurs in granite of the protogine type near altered diabase of Huronian age. The quartz is heavily charged with sulphides but carries also a quantity of gold in plate-like form. A run of 114 tons of this ore at the Rat Portage Reduction Works is said to have yielded about $7,000 worth of gold, *i.e.*, at the rate of more than $60.00 per ton without reckoning the concentrates. The mine is being worked by an English company with Mr. Theo. Breidenbach as manager.

The gold region of Western Ontario is about 200 miles from east to west by 100 in the other direction, but not the whole of this area is auriferous. In general the region consists of larger or smaller areas of so-called Laurentian granitoid gneiss or of eruptive granite, both of which have pushed themselves through the green (Keewatin) schists, generally considered Huronian in age. The contact between the two sets of rocks is always an eruptive one, and the most promising gold deposits have thus far been found within two or three miles of the contact. Many of the veins occur in the green schists, and these are of a bedded and lenticular character, often very rich in gold, but not often forming large ore bodies. The veins in the granite or granitoid gneiss are generally true fissures and more likely to be continuous. It should be added, however, that the best mine in the region, the Sultana, is not on a fissure vein, but probably on a series of great lenses.

Only a small part of the wide-reaching series of contacts of granite with green schists has been explored, but already we have ample proof that gold is widely distributed in the region and at many points in quantities that will pay for working

When one considers the great advantages of this region it is strange that it has been so slow in developing. Probably, however, this is due to the failure of several early ventures, often badly managed, with insufficient capital and beginning at the wrong end by erecting mills for treating ores which had not been proved to exist in bodies large enough to justify working. Now that one or two mines have passed the critical, experimental stage and proved by their yield that they have a right to exist, we may expect to see gold mining prosper in Western Ontario.

Plenty of pure water, a healthy climate, a region within easy reach of railroads and steamboats, with cheap food supplies and plenty of labor at reasonable rates right at hand, all combine to make this attractive as a gold mining region. Beside this there is the fact that the ores are exceptionally easy of treatment, being largely free-milling, so that a simple stamp mill with chlorination plant to treat concentrates is all that is necessary, instead of the half million outlay for smelting works required in many other countries.

There is no reason why at least some of these gold deposits, like those of certain mines in Nova Scotia, and the Treadwell and other mines in American territory, should not be mined and crushed at a cost of less than $2.00 per ton when worked on a fairly large scale; and it is probable that a fifty-stamp mill could be readily supplied with ore from such masses of quartz as occur at several points in the province, such as at the Sultana mine.

Mr. Milton L. Hersey, B. A. Sc., a graduate of McGill, who has for some years been associated with the Canadian Pacific Railway in the capacity of assayer, has opened a well equipped mineralogical and testing laboratory in Montreal. Mr. Hersey is a bright and reliable young chemist whom we sincerely wish well in his enterprise.