

yellow, or white shade) and hornblende, which occasionally is varied to biotite. Shortly after passing Lemoine's stake or post (put up in 1898) the change to greenish slates and shales, and to sandstones, is noticed, and for the rest of the way to Chibogamoo Lake the shores are in the Huronian formation.

This change is evidenced also by the different outline of the hills, which has changed from the



Gras Chute, Chigobiche River.

rounded character of the gneisses to the sharp and jagged profiles characteristic of the Huronian sediments and volcanics. The remaining 50 miles is an easier journey than before, as one is going downhill slightly, there being a drop of almost 200 feet from the height of land to Lake Chibogamoo. The altitude of Lake Chibogamoo is given as 1,150 feet above sea level; it has a general northeasterly trend, and its northern portion is split into two parts, the one to the east is called "Bay of Islands,"



Chigobiche River—A Chance Meeting with Indian Family.

and on the west has been named "McKenzie Bay." The Bay of Islands has not yet been explored for minerals, nor is it likely to be for some time, as the gneisses of the Laurentian cover the eastern shore so far as is known. Many of the islands in the lake are also gneissic or granitic in character, and devoid of commercial minerals. The western bay, named McKenzie Bay, after Mr. Peter McKenzie, has a shore line showing Huronian rocks,

which, so far as the writer has seen, are diabase, conglomerates, talcose schists and some pyroxenous rocks of species not determined. The alteration of both sediments and plutonics has been very considerable, and there are many sericitic and chloritic species as yet unnoticed. The lower end of the lake and all the west shore is Huronian, but they have not yet been prospected. The ochres which give its name to "Paint Mountain" drew the attention of both the Indians and early white visitors, and it is on Paint Mountain, or at its foot, that occur the chalcopryite and the iron pyrites which both Richardson and Low have mentioned in their reports to the Government.

(To be continued.)

MINING STATISTICS.*

By FREDERICK HOBART, New York,

The question of the collection and use of mining statistics is like all others, in that it has two sides--the theoretical and the practical. The theoretical side has been so well treated by Mr. Eugene Coste, upon former occasions, that I shall have little to say about it. Some experience in the collection and presentation of such statistics have, however, given me definite ideas, the brief presentation of which may be of service.

The first question is, what is the use of such figures? That, I think, is readily answered. A knowledge of the work done is essential for the benefit of producers and traders. To the miner and smelter it is of great importance to know the course of production which may seriously affect the value of his own output. The figures of production in all metals, for instance, have an important bearing on trade. Under or over-production are very important factors. To know what has been done in a given period, and to know it as early as possible, is the chief object of the practical worker. Thus, the approximate return of output for a given year, or other fixed period attainable, say two or three months after the close of that period, is far more valuable than the exact returns published ten months or a year later. Accessible at the earlier date they serve as a guide; later their value is only historical.

The Mines Section of the Geological Survey of Canada has set an excellent example in this respect. Its figures are now before us, and for several years past it has been the practice to present them about this time. The labor involved in this can only be appreciated by those who have done similar work. The United States Geological Survey also collects statistics, but its figures are not usually complete until about a year after their date; that is, the returns for 1903 were not published in full until almost

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