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THE PETROLEUM, OR ROCK OIL OF CANADA.

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In the February and March numbers of this Journal attention was drawn to the new branch of industry growing into activity in the township of Enniskillen and elsewhere in the western part of Upper Canada. During the last month, the writer of this descriptive notice has had an opportunity of visiting the Springs and works in operation at Petrolia, and of accumulating a variety of information on the subject, which may be found useful to those who are desirous of engaging in the oil enterprise, or who are interested in its progress and development. Although the results of the enquiries which have been made do not tend to change in any material point the opinions already expressed in this Journal, as far as regards the oil wells of Enniskillen, yet it may be found that the facts which have been recently brought to light will extend the area over which Petroleum may be sought for with valuable results, and give a proper direction to further efforts in search of this useful product, where it may be supposed to exist in remunerative quantities.

History of the Springs—Geology of the Oil Region.

The existence of bituminous springs in Canada has been long made known to the public by the labors of the Geological Commission. In the year 1851, Mr. Murray included in his report for that year a brief notice of the *mineral caoutchouc* of the Western Peninsula, and pointed out the existence of the bituminous springs and beds of bitumen in the township of Enniskillen. The report for the year 1851-52, which contains this notice, being in the hands of private individuals or locked up in the appendices to sessional papers, it is not likely that its contents are widely known, we therefore introduce the following extract, which will suffice to show that the bituminous springs of Enniskillen were well known and briefly described in published documents ten years ago. It is necessary to remind the reader who may be familiar with the geology of Canada, that, during an exploration made in 1855 by Mr. Murray, the supposed black shales at Kettle Point, L. H., were ascertained by him and Mr. Hall to belong to the superior formation, known by the name of the Portage and Chemung group. An

extract from Mr. Murray's report for 1855 will exhibit the area which these rocks are supposed to occupy.

“The black shales of the Hamilton group, in the Western Peninsula, are in general probably more bituminous than those of the Utica slate. Several places in their distribution are characterised by bituminous springs, and a visit was made in the early part of the season to a bed of nearly pure bitumen, of which the existence has been noticed in previous Reports, including that of last year, in which the range of the Hamilton group in the Western Peninsula is given. This bed of bitumen, which in some parts has the consistency of mineral caoutchouc, occurs on the sixteenth lot of the second concession, of Enniskillen in the county of Kent, but its extent does not appear to be so great as we were at first led to understand. It does not seem to exceed half an acre, extending five chains in a north-east direction, with a breadth of rather less than half a chain. By different trial holes which have been sunk through the deposit, it would appear to have a thickness of two feet over about twenty feet square, towards the south-west end, from which it gradually thins towards the edge in all directions, varying in some parts along a low ridge which it forms, from a foot to four inches. The bitumen is underlaid by a very white clay, which I was informed had been bored through in one part for thirty feet. The upper portion of the clay was observed to be more or less penetrated with petroleum, and small black globules of the same were seen scattered through the mass for a depth of four or five feet. Bituminous oil was observed to rise to the surface of the water on the Black Creek, a branch of Bear Creek, in two places on the seventeenth lot of the third concession of Enniskillen, and I was informed that it had been observed at other parts further down the stream, but to what amount the material might be daily collected at any of the places, I am quite unable to say; a freshet prevailed in the river at the time of my visit, the current of which swept away the oil as fast as it rose.”

The following extract from Mr. Murray's report for 1855 contains a short description of the geology of the Western District, which will be found very useful in an attempt to trace the origin and extent of the oil springs of the Western Peninsula.

“In my reports of 1848-49, and 1850-51, the black bituminous shales which were observed at Kettle Point, on Lake Huron, and at the flour mills, on the Sydenham River, are described under the head of the Hamilton formation. The shales in those instances are either altogether destitute of organic remains, or hold only forms of plants and obscure shells of species not then described, and being in each case immediately underlaid by beds of limestone, in which *spirifer mucronatus* and other characteristic fossils of the Hamilton group are abundant, it was inferred that the shales belonged to the group. Mr. Hall, however, on seeing the section at Kettle Point, expressed it as his opinion that the rocks were the lowest measures of the Portage and Chemung group, and this opinion was further confirmed by our subsequently finding a nearly complete section of the Hamilton group on the banks of some of the tributaries of the River Sable (south), shortly afterwards, on the twenty-fifth lot of the third range of Bosanquet. On the banks of a small tributary of the Sable,