about twenty feet thick, is observed to attain a thickness of one hundred feet in Eramosa, Nassagaweya and Caledon. This limestone, as well as the underlying Clinton limestone, is everywhere well adapted to form an excellent and durable building material, and is likewise of good quality for burning into lime. It forms wherever it crops out a bold escarpment (which may be called the Niagara ridge) owing to its solid and apparently unstratified character. This escarpment is distinctly traced from West Flamboro' eastward into Nelson, where it takes a sweeping turn to the north, and maintains a nearly straight course in that direction until it reaches Owen Sound near Sydenham village. The dark bituminous limestone which forms the upper member of the group follows the same course, which, however, is not so distinctly marked, owing to its being stratified in thinner beds, and occupies throughout from the Niagara River to Owen Sound, a breadth of country varying from eighteen to twenty or twenty-two miles.

The red marl which forms the base of our series of rocks is supposed to be about 614 feet thick. The bore which yields the mineral water at St. Catherines pierces it for a depth of nearly four hundred and seventy feet without passing through it, and the level at which the bore commences is one hundred feet below its upper surface. It seems geographically to come to an abrupt termination at the west bank of the Creek at Oakville, and is there succeeded by the Lorraine Shales, or Hudson River Group—an older formation consisting of alternate very thin beds of limestone and shale, which extend from this point along the north side of Lake Ontario to the River Rouge in the township of Pickering, immediately adjoining Scarboro'. A good section of this formation is exposed on the east bank of the Don at Toronto. A bore which was executed under my directions at the Toronto Station of the Great Western Railway, penetrated it for a depth of one hundred and fifty feet without change. The water which this bore yielded was salt and bitter, and a considerable quantity of carburetted hydrogen gas was evolved.

I may here remark in passing that in the spring of 1855 a great land-slide occurred on the slope of the mountain a little below Dundas Station, which displaced a portion of the track of the Great Western Railway, and was caused by the weight of the debris of the harder rocks above sliding along the face of the soft shales which, by exposure to the weather, resolve themselves into an unctuous sort of clay.

I may also notice that in filling up the old channel of the Desjardins