

Brook road, there are exposed several feet of dark brown very bituminous dolomite; succeeded a little way up, on the left bank, by a mass of whitish coralline dolomite, which appears on the side of the road. About half a mile above Guelph, near the right bank of the Speed, there is a quarry in a whitish sub-crystalline dolomite, the strata of which are altogether about twelve feet thick. All the beds contain obscure casts of fossils; chiefly of corals and bivalve shells. . . . The strata are probably a little higher in the series than those of the same color at the bridge. Similar beds are extensively wrought a little below the town, and yield an excellent building stone. Some of the beds are burned for lime.

"Nearly five miles below Guelph, where a bridge crosses the Speed, on the town line between the fifth and sixth ranges of the Gore of Puslinch, there is a section, consisting, at the base, of fifteen feet of black, hard, compact, bituminous dolomite, without observed fossils; followed by seven feet of brown bituminous strata. On these . . . seven feet of buff or pale drab dolomites, holding obscure fossils. These exposures on the Speed are nearly in the strike of the strata. The light colored dolomites, which are here seen to rest upon dark colored bituminous strata, are regarded as the base of the Guelph formation." (250) (See also under Waterloo county).

"About fourteen miles north from Breslau, in Pilkington and Nichol, on the banks of the Irvine and Grand Rivers, near their junction at Elora, perpendicular cliffs of these dolomites occur, varying in height from seventy-five to eighty or eighty-two feet. The upper portion of these strata is probably near the top of the Guelph formation. The beds in descending order are as follows:

"1. Light drab or reddish compact magnesian limestone, in beds of from three to six inches, with small cavities, and cracks, lined with calc spar, 12 feet.

"2. Buff colored coralline magnesian limestone, 14 feet.

"3. Pale bluff or yellowish white compact magnesian limestone with a conchoidal fracture, in massive beds holding fossils, 56 feet. Total, 82 feet.

"At Fergus, which is on the Grand River, at such a distance above the mouth of the Irvine as would give 3 miles across the measures, a section occurs at Mr. Webster's mill, displaying about twenty feet of strata, which would underlie the preceding. About

sixteen feet of these are a pale buff magnesian limestone, with casts and impressions of fossils. . . . The remaining four feet consist of a grey hard magnesian limestone, which rests upon a mass of the same color, but somewhat closer grained, forming the bed of the stream. About a mile farther up the stream, on the land of Mr. James Webster, there are beds of pale yellowish-grey magnesian limestone weathering to a light buff. These would be still somewhat lower than the beds at Fergus. . . . Some of the Fergus beds yield good lime; they range from two inches to two feet in thickness, but are for the greater part thin and irregular, and although some of them are used for rough buildings, the stone for facing is brought to Fergus from Guelph. . . .

"The exposures which have been mentioned between Puslinch and Bentinck, belong to the upper part of the formation, and indicate the strike of its summit northward, as far as the Rocky Saugeen. In this region, with the exception of the space occupied by the westward spur of the Niagara series on the Rockwood anticlinal, the Guelph formation presents a breadth of about twenty-five miles, opposite to Puslinch, which gradually increases to thirty-five miles, opposite to Bentinck. This great breadth is probably due in part to the fact that the country rises with the general slope of the strata, to the edge of the eastern escarpment, though at a somewhat smaller angle; and in part also to a series of north and south undulations, which appear to exist in this region.

"Between Rockwood and Erin, the base of the formation forms a small sinus up the Speed, to Everton; while to the southward, it forms another sinus running down the stream to Eden. These two turns in the distribution of the rock are occasioned by an undulation transverse to the Rockwood anticlinal. Its axis, with a bearing a little east of north, would pass under Eden, Rockwood and Everton, and thence to Orangeville." (251)

"More rarely, the cavities thus formed have been filled up with calcareous matter, apparently replacing the substance of the shell; and in one place, great numbers of eucrinall fragments have become replaced by a white sparry dolomite, whose color contrasts with the yellowish hue of the base. This last rock, which came from Strange's quarry, Rockwood, was, however, like the others, cellular, and a pure dolo-

(250) Ibid, 336-37.

(251) G.S.C., 1863, pp. 341-43.