

GEOLOGY OF THE BUFFALO QUADRANGLE

The strata composing the surface rocks of this quadrangle as delineated on the map have an aggregate thickness of 804 feet, of which 310 feet are exposed by the difference of elevation between the lowest horizon, 570 feet above tide, where the north line of the quadrangle crosses Niagara river, and the highest land 880 feet above tide in the southeast corner near Orchard Park; 494 feet of this thickness are brought up by the northeastern elevation of the beds which thus show the average dip to be 28 feet a mile.

This dip, however, is variable as the strata roll in broad undulations, and it is also modified by changes in the thickness of the different formations throughout their extent. In the vicinity of Black Rock the dip is about 40 feet a mile toward the south, while in the southern part of the quadrangle it decreases to 25 feet.

In a well put down by the Lackawanna Steel Co. in 1904 on the bank of Smoke's creek in West Seneca, the bottom of the Onondaga limestone was found at the depth of 292 feet or 288 feet above tide, and that horizon appears in the quarry of the Buffalo Cement Co., 10½ miles north of the well at 640 feet above tide, showing a southward dip of 352 feet or an average of nearly 34 feet a mile.

SUCCESSION OF STRATA

The following formations are represented on this quadrangle:

Devonic	Neodevonic	Senecan	Portage	Rhinestreet black shale Cashaqua gray shale Middlesex black shale
			Genesee	West River shale Genundewah limestone Genesee black shale
			Erian	Moscow shale Tichenor limestone Ludlowville shale Skaneateles shale
	Mesodevonic	Ulsterian	Hamilton	Cardiff shale Stafford limestone Marcellus black shale
			Marcellus	Onondaga limestone
	Paleodevonic	Oriskanian	Onondaga	Oriskany sandstone
Oriskany			Cobleskill waterlime	
Siluric	Cayugan	Salina	Bertie waterlime Camillus shale	