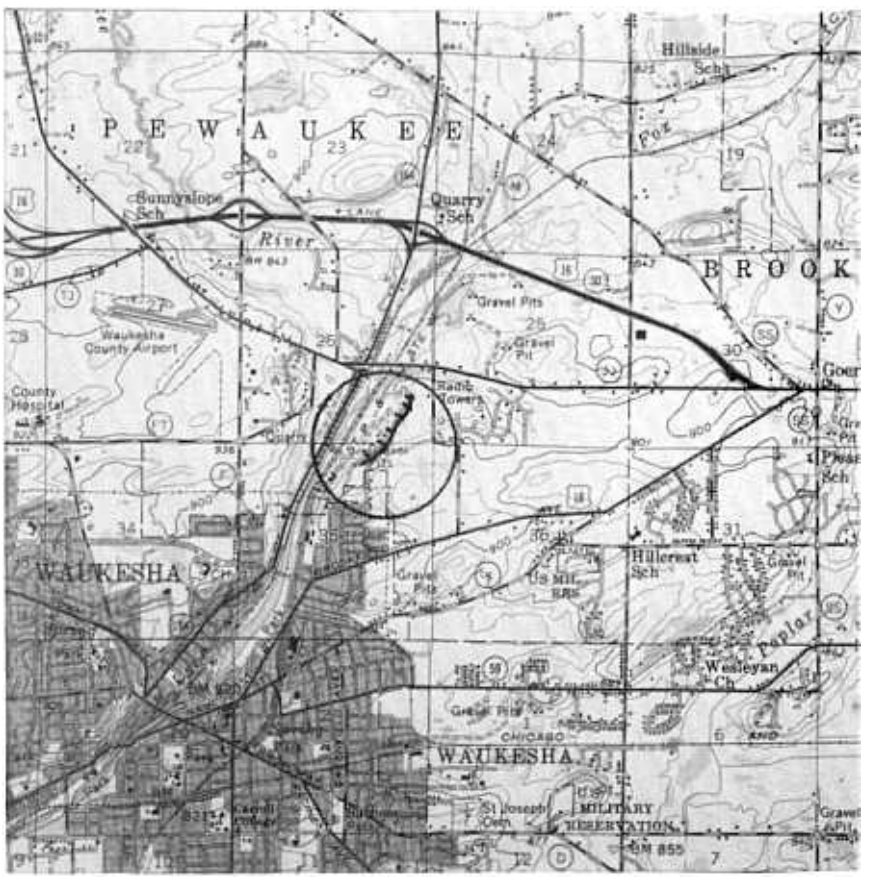
Title: Waukesha Lime and Stone Co. Pit

Location: SE 1/4, Sec. 26, T. 7 N., R. 20 E., Waukesha 15' Quadrangle, Waukesha County. Permission is necessary to enter and should be obtained from Mr. Douglas Dewey.




Author: David M. Mickelson (after Whittecar, 1976)

Description: Quarry is primarily for dolomite (Niagaran) but exposures in glacial deposits (a drumlin) are excellent. As in the Valley Sand and Gravel Pit, the drumlin is cored with sand and gravel. In the northern part, gravels are flat-lying beneath a thick till unit. The upper part of the unit is buff-to brown, sandy till and below this is grey, sandy till. Do these tills represent two different glacial advances? How might one determine this?

In the pit face just south of the quarry a large overturned fold is present in the gravel (Whittecar and Mickelson, 1977). This style of folding is different than that seen in the Valley Sand and Gravel Pit. This folding (and possible faulting) is due to compression due to ice flow.

In most pits there is no way to determine if the gravels were deposited by the ice that formed the drumlins or if it pre-existed. Here, in the pit face south of the fold there is a paleosol beneath the upper tills. Examine the buried soil carefully. Note that it is developed in a thin silt unit just above gravels. Weathering in the soil and underlying gravels is intense. Although this soil has not been dated, a log from gravels in a nearby drumlin is dated at 30,800 years B.P. (Whittecar, 1977; Black and Rubin, 1968). In Illinois and Wisconsin, the mid-Wisconsin (40,000-22,000 years B.P.) or Farmdalian (31,000-22,000 years B.P.) was a warm period of time when the soil could have developed. An older, red silty till underlies the gravels and can be seen at the south edge of the quarry atop dolomite. This till probably correlates with one of several red silty tills in southern Wisconsin, but sufficient work has not been done to document this.

Significance: Sand and gravel and a paleosol in the care of the drumlin demonstrate that the drumlin is an erosional form. The shape itself is due to subglacial erosion of preexisting material and deposition of till produced a veneer over the eroded form (see Valley Sand and Gravel).