

Sequence Stratigraphy of the Pottsville Formation in Southern Ohio, Ronald L. Martino, Andrew McCormick, and Charles Sorden, Marshall University, 1 John Marshall Dr., Huntington, WV 25755-2550, martinor@marshall.edu

A sequence stratigraphic framework has been developed for the Lower–Middle Pennsylvanian Pottsville Formation in southern Ohio. Core data from more than a dozen wells, and over 200 geophysical logs have been used along with outcrop data from southern Ohio and eastern Kentucky. The Pottsville Formation extends from the base of the Sharon Sandstone to the base of the No. 4 coal and varies in thickness from 91 to greater than 137 m (300 to > 450 feet). Greater thicknesses occur where infilling of paleovalleys occurred along the regional Mississippian-Pennsylvanian unconformity. Six incised-valley fills (IVF's) ranging from 18–30 m (60–100 feet) thick have been identified. The fluvio-estuarine IVF's truncate and are laterally equivalent to packages of coarsening upward shale-to-sandstone parasequences which are usually capped by paleosols and coals. These CU-units average about 9–12 m (30–40 feet thick) and contain *Lingula* and shallow to marginal marine trace fossils. High frequency base level changes were likely due to eustatic sea level changes, which combined with longer term tectonically induced transgressions from thrust loading to control facies architecture.

Although shows of hydrocarbons are frequently reported in Pottsville strata, only limited production has occurred to date in Lawrence and Gallia Counties. Wireline logs indicate that reservoir quality sands are common. A more comprehensive understanding of the stratigraphic framework and depositional systems may facilitate future discoveries of bypassed Pottsville hydrocarbons bound in stratigraphic or combination traps.