

Montgomery and Leetaru, 2000

Data Set 46

Reference: Montgomery, S.L., and H.E. Leetaru, 2000, Storms Consolidated Field, Illinois Basin: Identifying new reserves in a mature area: American Association of Petroleum Geologists Bulletin, v. 84, n. 2, p. 157-173.

Reference: Leetaru, H.E., 2000, Sequence stratigraphy of the Aux Vases Sandstone: a major oil producer in the Illinois Basin: American Association of Petroleum Geologists Bulletin, v. 84, n. 3, p. 399-422.

Authors' affiliations: consultant and Illinois State Geological Survey

Age: Mississippian

Formation: Aux Vases Sandstone

Location: Storms Consolidated Field, Illinois Basin, White County, Illinois, United States

Well: Rudolph 26 Tract 11A

Depth range: 2925 - 2950 feet.

Depositional environment: "a series of shallow marine bars separated by nonreservoir areas of siltstone, shale, and shaly sandstone."

Lithology: Fine to medium grained quartz arenites and subarkoses.

Alteration: "Based upon x-ray diffraction of samples from a continuous whole-rock core at the 26 Rudolph well, these sandstones contain 60-80% quartz, 3-9% feldspar, 6-20% calcite, and 2-9% clay minerals. Dominant clays include illite (1-9%), mixed-layer illite/smectite (1-5%), and iron-bearing chlorite (0.5-3.3%). Clays appear authigenic in origin and are absent at grain-to-grain contacts. Cements include calcite, clay minerals, and minor quartz overgrowths. Sandstones with maximum reservoir quality are poorly cemented, very friable, and contain mostly clay cement. Both primary and secondary porosity are present, with the latter resulting from dissolution of early calcite cement and feldspar grains."

Production: oil

Core measurement conditions: not stated.

Data entry: manual entry from Figures 10 and 11 of Montgomery and Leetaru, 2000.