

Sneider and others, 1977

Data Set 59

Reference: Sneider, R.M., F.H. Richardson, D.D. Paynter, R.E. Eddy, and I. A. Wyant, 1977, Predicting reservoir rock geometry and continuity in Pennsylvanian reservoirs, Elk City Field, Oklahoma: Journal of Petroleum Technology, v. 29, p. 851-864.

Authors' affiliation: Sneider & Meckel Associates, Inc., Shell Oil Co., Shell Oil Co., Occidental Petroleum, Inc. and independent.

Age: Pennsylvanian

Formation: L and M zones

Location: Elk City Field, Anadarko Basin, Oklahoma

Well: Shell G. Slatten No. 1

Depth range: 9,370 - 9,440 feet

Depositional Setting: barrier bar deposit. "Accretion of a barrier bar basinward results in deposition of progressively coarser material over fine material." The result is a coarsening-upward grain-size profile that is reflected in the porosity and permeability data.

Primary mineralogy: not given.

Grain size, sorting, and porosity: Sorting improves with decreasing grain size such that pebble conglomerates are poorly sorted and very fine-grained sandstones are well to very well sorted. Porosity increases with decreasing grain size such that porosity in pebble conglomerates range from 10 to 15 percent and porosity in fine-grained sandstones ranges from 18 to 24 percent. (see Figures 4A and 4B of the reference).

Production: oil

Core measurement conditions: not stated.

Data entry: manual entry from Figure 11 in the referenced paper.