

Montgomery, 1997

Data Set 44

Reference: Montgomery, S.L., 1997, Permian Bone Spring Formation: sandstone play in the Delaware Basin, Part II-Basin: American Association of Petroleum Geologists Bulletin, v. 81, n. 9, p. 1423-1434.

Author's affiliation: petroleum consultant

Age: Permian

Formation: Bone Spring Formation

Location: Red Tank field, northern Delaware Basin, southern New Mexico, United States

Well: Yates Petroleum 1 Thyme "APY" Federal

Depth range: approximately 3500 m

Depositional environment: "The Avalon sandstone is a thin unit within the Bone Spring Formation, and is considered a submarine-fan deposit."

Composition of Avalon sandstone: "Very fine to fine-grained sandstone that is subrounded to moderately rounded and well sorted in texture, well consolidated and slightly calcareous. Reservoir zones have water saturations of 40-62% due to high irreducible water. ... Better reservoir quality is linked to coarser grain size and to reduced amounts of detrital and authigenic clays, organic matrix material, and dolomite cement. ... The Avalon interval is generally considered a secondary reservoir."

Comment on other sandstones of the Bone Spring Formation: "The third Bone Spring sandstone, also interpreted as a submarine-fan deposit, is present only locally along the northern slope of the Delaware basin." [the author is vague concerning the samples labeled "Delaware Group and Bone Spring Fm.", it appears that the samples represent updip occurrences of a sandstone unit that thickens south of the sampled well.]

Production: oil

Core measurement conditions: not given.

Data entry: manual entry from Figure 3 of the referenced paper.