Bloch and others, 2002 Data Set 6

Reference: Bloch, S., R.H. Lander, L. Bonnell, 2002, Anomalously high porosity and permeability in deeply buried sandstone reservoirs: origin and predictability: American Association of Petroleum Geologists Bulletin, v. 86, n. 2, p. 301-328.

Author's affiliation: Consultant (Bloch), Geocosm (Lander and Bonnell)

Age: Jurassic

Formation: Ile Formation of Fangst Group

Location: Haltenbanken area, North Sea

Well: unnamed well in Block 6406

Depth range: 4560-4700 m. All samples taken within a 30.5 (100 ft) interval of the Ile Formation.

Depositional environment: "tidally influenced upper shoreface/delta-front environment."

Grain size: "Chlorite-coated sandstones with a mean grain size greater than 0.45 mm have, with a few exceptions, higher permeabilities of greater than 10 md (10 md corresponds to a porosity of roughly 18% in the studied sample suite) than finer grained chlorite-coated sandstones of less than 10 md."

Alteration: "a sedimentologic study … determined that the presence of chlorite coats is confined to fluvially influenced, highest-energy zones of nearshore marine environments." ... "Many of the samples in the cored interval display anomalously high porosity and permeability. Porosity and permeability clearly do not correlate with depth. The best reservoir quality is invariably associated with well-developed chlorite coats in the Tilje, Tofte, and Ile formations. By contrast, in sandstones devoid of chlorite coats, average porosity either follows the general porosity-depth trend for the Haltenbanken area or falls below this trend."

Production: not stated.

Core measurement conditions: not given.

Data entry: manual entry from Figure 12 of the referenced paper.