

Dickinson, 1996

Data Set 16

Reference: Dickinson, B., 1996, The Puffin Field: the appraisal of a complex HP-HT gas-condensate accumulation: in A. Hurst and others, ed., Geology of the Humber Group: Central Graben and Moray Firth, UKCS, Geological Society Special Publication No. 114, p. 299-328.

Author's affiliation: Arco British Ltd.

Age: Late Jurassic

Formation: Fulmar Formation, Humber Group

Location: Puffin Field, Central Graben, North Sea, United Kingdom sector

Well: 29/5a-5

Depth: approximately 14,300 feet.

Depositional environment: "shallow marine sandstones divided into four units." Unit 1 is the shallowest. "Presence of marine fossils and abundant bioturbation at all horizons indicates deposition in a shallow marine environment. The thorough bioturbation indicates relatively slow deposition, although there is evidence at some horizons of rather more rapid deposition."

Lithology: "The Fulmar Formation sandstones are sub-lithic arenites. ... Original depositional texture is the principal control on permeability which reflects average grain size and amount of ductile clays."

Unit 1: "A fining-upward sequence of fine-to-very fine sandstone becoming increasingly argillaceous upwards, containing internal fining-up cycles. Sedimentary structures are obliterated by pervasive bioturbation."

Unit 2: "Fine to very fine sandstones with minor argillaceous content. Internal fining-upward cycles. Bedding better preserved than in other units and ripple cross-beds and lamination are seen. Shell lags and/or slightly scoured bases sometimes evident. ..."

Unit 3: "Very fine-grained sandstones becoming less argillaceous upward and with small-scale cleaning-upward cycles. Sedimentary structures mostly obliterated by intense bioturbation."

Unit 4: "Argillaceous, fine-grained to clean, medium-grained sandstones with a basal pebble lag. The unit is overall cleaner than the base of the overlying Unit 3."

Production: overpressured gas condensate

Core measurement conditions: not stated.

Data entry: manual entry from Figure 22C.