



Wellbore History

GENERAL

Exploration well 17/12-1R was drilled on the northern margin of the Egersund Basin in the North Sea, towards the Åsta Graben. Its primary target was Jurassic sands with estimated top at 2161 m (7090 feet) and with 61 m (200 feet) thickness. Sand developments within the Early Cretaceous and Triassic sections were regarded as secondary objectives. Planned TD was 8 m (25 feet) into the Zechstein salt.

The top hole down to TD in the 26" section at 458 m, well 17/12-1, had been spudded and drilled the year before by the jack-up installation Mærsk Explorer.

Well 17/12-1R is Reference Well for the Egersund Formation.

OPERATIONS AND RESULTS

Well 17/12-1 was re-entered (17/12-1R) with the semi-submersible installation Ocean Viking on 14 March 1972 and drilled to TD at 4298 m, 165 m into the Late Permian Zechstein Formation. The well bore was drilled water based with a 3 % - 6 % diesel addition.

Top of the primary reservoir target was encountered in the Middle Jurassic at 2292 m. The reservoir section contained several sands separated by mudstone beds. The two uppermost sands in the Sandnes Formation were water wet. The next two sands below, in the Bryne Formation, yielded 162 Sm3 oil/day on a six hours test. The tests indicated an OWC between DST 1 and DST 7, i.e between 2337.2 m and 2344 m. No sands were encountered in the Early Cretaceous and sand development within the Triassic was limited to thin, fine to course grained, continental-type clastic beds. No conventional cores were cut and no fluid samples were taken on wire line. Twenty-six sidewall cores were recovered in the interval 1371 m to 2382 m.

The well was permanently abandoned on 21 June 1972 as an oil discovery.

TESTING

Three out of 7 DST's produced oil and gas to surface.

DST 1 perforated the interval 2337.2 m to 2341.4 m and produced 141 Sm3 oil /day on a 12/64" choke. GOR was 20.5 Sm3/Sm3 and oil gravity was 29 deg API.

DST 2 perforated the interval 2316.4 m to 2325.0 m and produced 80 Sm3 oil /day on a 1 1/2" choke. GOR was 48 Sm3/Sm3 and oil gravity was 34.1 deg API.

DST 5 and DST 6 perforated the intervals 2316.4m to 2325 m, 2331.7 m to 2332.9 m, and 2337.2 m to 2341.4 m. After acid treatment DST 5 was run with full water cushion. This test did not produce. DST 6 was run without water cushion, and after clean-up flow this test produced 162 Sm3 oil/day through an 8/64" choke based on a 6 hrs flow. GOR was Sm3/Sm3 and oil gravity was 32.4 deg API.

DST 3 (2308.6 m to 2314.7 m) and DST 4 (2295.1 m to 2304.3) in the two uppermost sands did not produce hydrocarbons. DST 7 perforated the interval from 2344 m to 2347.9 m and did not produce hydrocarbons.

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LITHOSTRATIGRAPHY & HISTORY FOR WELL: 17/12-1 R