

Well no :	15/12-6 S	Operator :	STATOIL
Coordinates :	58° 04' 40.30" N 01° 53' 25.41" E	UTM coord. :	6438063 13 N 43455291 E
Licence no :	38	Permit no :	644
Rig :	DEEPSEA BERGEN	Rig type :	SEMI-SUB.
Contractor :	ODFJELL DRILLING AND CONSULTING COMPANY A/S		
Bottom hole temp:	115 °C	Elev. KB :	23 M
Spud. date :	90.08.19	Water depth :	84 M
Compl. date :	90.11.04	Total depth :	3050 M
Spud. class :	WILDCAT	Form. at TD	TRIASSIC
Compl. class :	SUSPENDED. OIL	Prod.form. :	
Seisloca :	ST 8802 - 381 SP. 948		

LICENSEES

50,000000	DEN NORSKE STATS OLJESELSKAP A.S
50,000000	ESSO EXPL. & PROD. NORWAY A/S

CASING AND LEAK-OFF TESTS

Type	Casing diam.	Depth below KB	Hole diam.	Hole depth below KB	Lot mud eqv. g/cm ³
CONDUCTOR	30	167,0	36	167,0	
INTERM.	20	599,0	26	615,0	1,56
INTERM.	13 3/8	1700,0	17 1/2	1715,0	1,82
INTERM.	9 5/8	2743,0	12 1/4	2757,0	1,97
LINER	7	3046,0	8 1/2	3050,0	

CONVENTIONAL CORES

Core no.	Intervals cored meters	Recovery	
		M	%
1	2838,0 - 2865,0	26,6	100
2	2865,0 - 2892,0	26,8	100
3	2892,0 - 2907,9	16,0	100
4	2910,0 - 2937,5	27,4	100
5	2937,5 - 2952,5	15,0	100
6	2953,0 - 2964,4	11,4	100
7	2980,0 - 2988,5	8,5	100

MUD

Depth	Mud weight	Visc.	Mud type
615,000	1,03		DUMMY
618,000	1,15	15,0	WATER BASED
1710,000	1,30	23,0	WATER BASED
2155,000	1,40	20,0	WATER BASED
2200,000	1,50	22,0	WATER BASED
2310,000	1,55	23,0	WATER BASED

Depth	Mud weight	Visc.	Mud type
2310,000	1,58	23,0	WATER BASED
2474,000	1,50	22,0	WATER BASED
2520,000	1,55	23,0	WATER BASED
2560,000	1,50	23,0	WATER BASED
2587,000	1,55	23,0	WATER BASED
2743,000	1,32	28,0	WATER BASED
2757,000	1,61	26,0	WATER BASED
3050,000	1,32	28,0	WATER BASED

DRILL STEM TEST

INTERVALS AND PRESSURES

Test no.	Interval meter		Choke size	Pressure (PSI) WHP	BTHP	FFP
1,0	2922,000	-	2930,000	12,7		
2,0	2875,000	-	2895,000	15,9		

Test temperature: N/A

RECOVERY

Test no.	Oil Sm3/d	Gas Sm3/d	Oil grav. g/cm3	Gas grav. rel. air	GOR m3/m3
1,0	153,8	11683			76
2,0	866,0	52530	0,843	0,740	61

DRILL BIT CUTTINGS AND WET SAMPLES

Sample type	Interval below KB	Number of samples
WET SAMPLES	620 - 2787	150

SHALLOW GAS

Interval below KB	Remarks

AVAILABLE LOGS

Log type	Intervals		1/200	1/500	Div.
DIFL BHC AC GR	2742,9	- 3048,7	X	X	
BHC AC DIFL GR	1699,3	- 2756,5	X	X	
CBL VDL GR	106,0	- 1700,8	X	X	*
CBL VDL GR	2576,0	- 2917,0	X		
CDL CN GR	1699,0	- 2757,0	X	X	

Log type	Intervals		1/200	1/500	Div.
C-ZDL CNL	2742,0	- 3049,0	X	X	
CDM	2401,0	- 2755,0	X		
CDM	2743,0	- 3049,0	X		
CDM AP	2401,0	- 2755,0	X	X	*
CDM AP	2743,0	- 3049,0	X	X	*
CDM AP - STRATAGON	2743,0	- 3049,0	X	X	*
DLL MLL	2742,9	- 3019,0	X	X	
FMT	2429,0	- 2470,0		X	
HP VPC FMT	2743,0	- 3048,0		X	
GR	2638,0	- 2824,0	X		
GR	2646,0	- 2766,0	X		
MUD	168,0	- 3050,0			
MWD	170,0	- 3090,0		X	
SPECTRALOG	2742,9	- 3049,2	X	X	
VELOCITY LOG	1699,0	- 3049,0		X	1:1000
SYNTHETIC SEISMOGRAM	10 cm/s				5
TWO WAY TRAVEL TIME	10 cm/s				1
V.S.P.,	10 cm/s				6
AIRGUN WELL VELOCITY					1
DISPLAY OF WELL					1

* BOTH 1:200 AND 1:500 ON
THE SAME LOG.

Main operations for well: 15/12-6 S

Main operation: DRILLING

Sub operation:	Minutes:	Hours:	% of total:
BOP ACTIVITIES	1470	24,5	2,67
BOP/WELLHEAD EQ	4230	70,5	7,67
CASING	12480	208,0	22,63
CIRC/COND	960	16,0	1,74
DRILL	23550	392,5	42,71
OTHER	1590	26,5	2,88
PRESS DETECTION	30	0,5	0,05
REAM	1650	27,5	2,99
TRIP	4260	71,0	7,73
WAIT	4920	82,0	8,92
Total	55140	919,0	100,00

Main operation: FORMATION EVAL

Sub operation:	Minutes:	Hours:	% of total:
CIRC/COND	1530	25,5	3,41
CORE	1650	27,5	3,68
DST	28530	475,5	63,65
LOG	5760	96,0	12,85
OTHER	150	2,5	0,33
TRIP	7200	120,0	16,06
Total	44820	747,0	100,00

Main operation: INTERRUPTION

Sub operation:	Minutes:	Hours:	% of total:
FISH	6570	109,5	99,10
MAINTAIN/REP	60	1,0	0,90
Total	6630	110,5	100,00

Main operation: MOVING

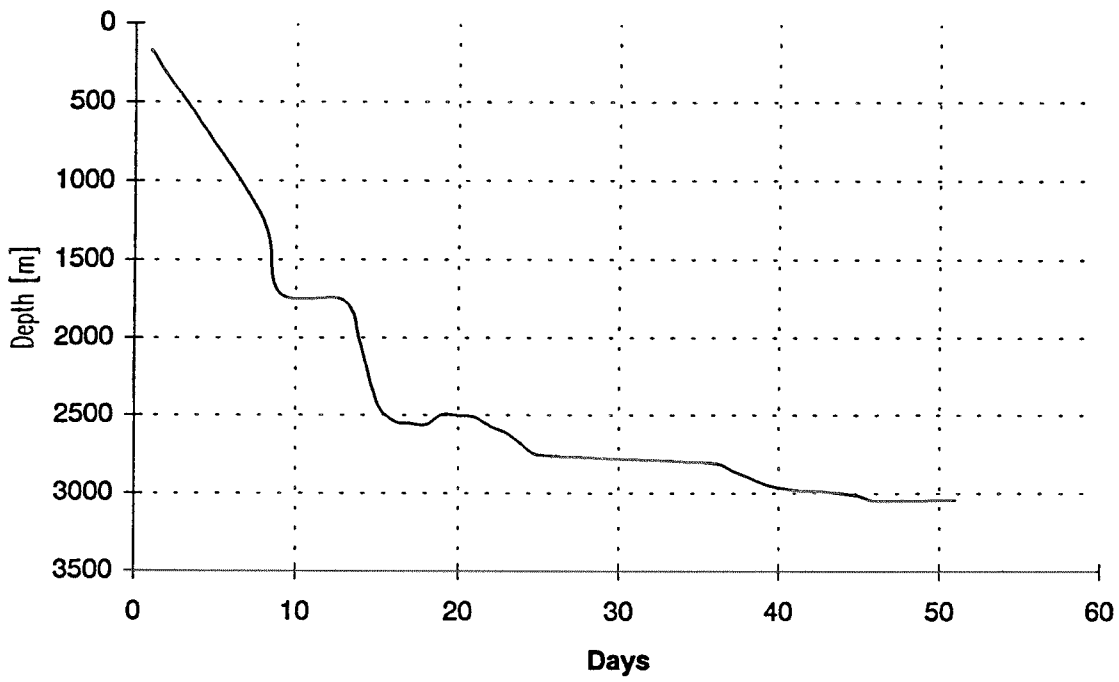
Sub operation:	Minutes:	Hours:	% of total:
ANCHOR	990	16,5	52,38
TRANSIT	900	15,0	47,62
Total	1890	31,5	100,00

Main operation: PLUG & ABANDON

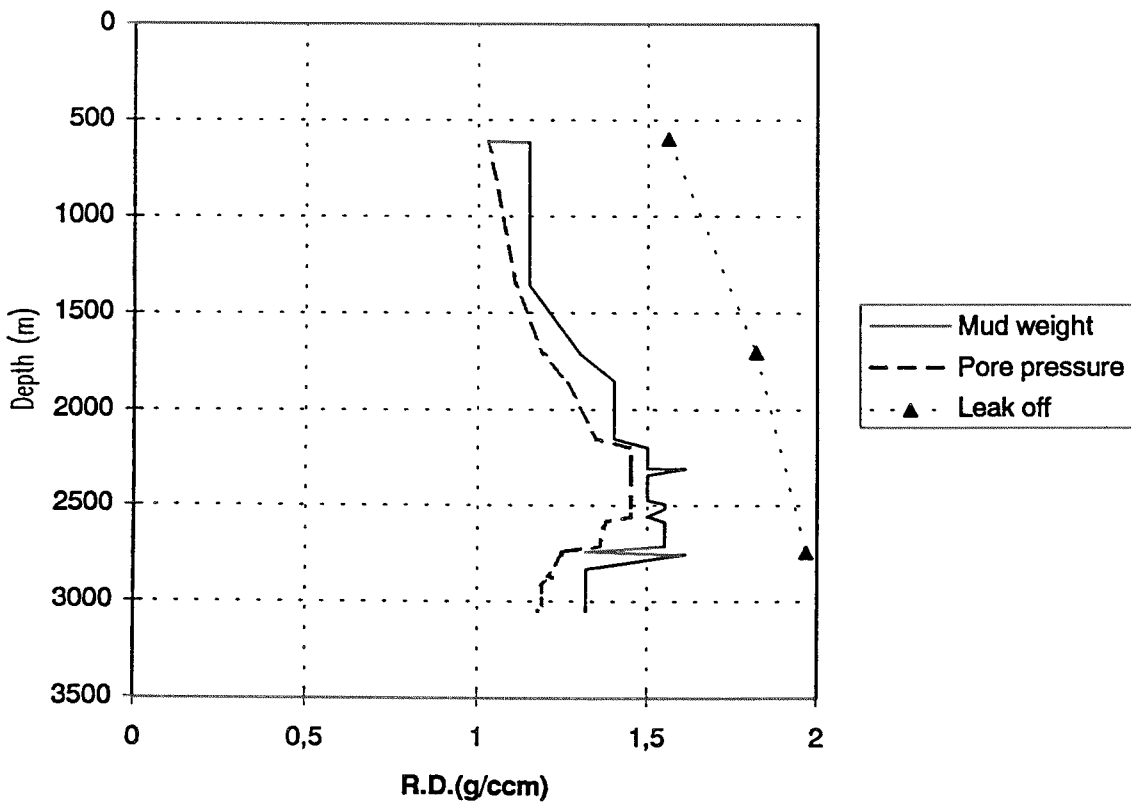
Sub operation:	Minutes:	Hours:	% of total:
CEMENT PLUG	210	3,5	10,29
CIRC/COND	30	0,5	1,47
MECHANICAL PLUG	330	5,5	16,18
OTHER	1080	18,0	52,94
TRIP	390	6,5	19,12
Total	2040	34,0	100,00

Total time used: Hours

Depth vs time for well: 15/12-6 S



Composite plot for well: 15/12-6 S



Well History 15/12-6 S.

General:

Well 15/12-6 S was the third well within the license area, and was designed to drill the structural high on the north-western segment of the Beta West structure. Block 15/12 is situated between the Jæren High to the south, Central Graben to the south-southwest, Andrew Ridge to the west, Ling Graben to the north and Viking Graben to the north-northwest. The area shows a very complex geological history with salt movements, sea-level changes and tectonics that played a major role in controlling the sedimentation from Permian to present. The main objective for the well was to test the hydrocarbon potential in the Oxfordian sandstone in the north-western segment of the Beta west structure. Secondary objectives were Paleocene sandstones (Maureen formation) and Triassic sandstones. Due to possible shallow gas problems, the well was moved 100 south to avoid this problem.

Operations:

Appraisal well 15/12-6 S was spudded 19 August 1990 by the semi-submersible rig Deepsea Bergen and completed 4 November 1990 at a depth of 3050 m RKB in rocks of Triassic age. No shallow gas was encountered in this well. A total of seven cores were cut, six in the interval 2838 to 2966 m MD RKB and the seventh from 2980 to 2988,5 m MD RKB. Top Trias, the Skagerak formation came in 5.5 m shallower than expected, and the Late Jurassic Oxfordian sandstone came in 80.5 m deeper than prognosed. While drilling the 12 1/4" hole the penetration stopped because the MWD- tool was twisted off. Cemented back the hole and sidetracked from 2495 m RKB with increased mud weight. Ran 7" liner to 3046 m RKB, and cemented inside the liner to 2960 m MD RKB. The well was temporary plugged and suspended with oil shows.

Testing:

Two DST tests were performed in this well:

No 1 from 2922 - 2930 m MD RKB, produced 153.8 Sm³/d oil and 11.683 Sm³/d gas through a 12.7 mm choke.

No 2 from 2875 - 2895 m MD RKB, produced 866 Sm³/d oil and 52530 Sm³/d gas through a 15.9 mm choke.

Geological Tops.

Well:15/12-6 S

	Depth m (RKB).
Nordland Group	107,0
Hordaland Group	1252,0
Rogaland Group	2311,0
Balder Fm	2311,0
Sele Fm	2323,0
Lista Fm	2350,5
Våle Fm	2421,0
Shetland Group	2428,0
Tor Fm	2428,0
Hod Fm	2548,0
Blodøks Fm	2708,0
Cromer Knoll Group	2732,0
Viking Group	2746,0
Draupne Fm	2746,0
Heather Fm	2834,0
Vestland Group	2870,5
Oxfordian Sst	2870,5
Sleipner Fm	2870,5
Triassic Group	2978,5
Skagerak Fm	2978,5
T.D.	3050,0