

# WDSS Report

Date: 17/09/96

PB/SKR

Page: 1 / 4

<b>Well no:</b>	<b>Operator:</b>
<b>15/12-08</b>	<b>STATOIL</b>

## Well

Coordinates :	58° 03' 01.85" N 01° 58' 03.41" E	UTM coord. :	6434946.27 N 439060.86 E
License no :	38	Permit no :	684
Rig :	DEEPSEA BERGEN	Rig type :	SEMI-SUB.
Contractor :	ODFJELL DRILLING AND CONSULTING COMPANY A/S		
Bottom hole temp:	123 °C	Elev. KB :	23 M
Spud. date :	91.06.05	Water depth :	87 M
Compl. date :	91.07.14	Total depth :	3053 M
Spud. class :	WILDCAT	Form. at TD :	TRIASSIC
Compl. class :	P&A. GAS/COND. DISC.	Prod.form. :	
Seisloca :	ST 8802, ROW 547, COLUMN 580.		

## Licenses

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/cm3
CONDUCTOR	30	170.5	36	172.0	
INTERM.	20	601.0	26	603.0	1.74
INTERM.	13 3/8	1798.0	17 1/2	1800.0	1.84
INTERM.	9 5/8	2837.0	12 1/4	2840.0	2.01
LINER	7	3051.0	8 1/2	3051.0	

<b>Well no:</b>	<b>Operator:</b>
<b>15/12-08</b>	<b>STATOIL</b>

### Conventional Cores

Core no.	Intervals cored meters	Recovery m	%
1	2841.0 - 2847.4	6.4	100.0
2	2847.4 - 2874.8	27.4	100.0
3	2874.8 - 2902.0	27.2	100.0

### Mud

Depth	Mud weight	Visc.	Mud type
171.0	1.03		WATER BASED
601.0	1.35	20.0	WATER BASED
615.0	1.03		WATER BASED
1036.0	1.20	15.0	WATER BASED
1460.0	1.30	17.0	WATER BASED
1798.0	1.51	22.0	WATER BASED
1815.0	1.35	20.0	WATER BASED
1818.0	1.40	19.0	WATER BASED
2240.0	1.53	31.0	WATER BASED
2482.0	1.51	22.0	WATER BASED
2830.0	1.53	31.0	WATER BASED
2850.0	1.27	18.0	WATER BASED
2855.0	1.53	28.0	WATER BASED
3054.0	1.27	18.0	WATER BASED

### Drill Stem Test (intervals and pressures)

Test no.	Test interval meter	Choke size	Pressure (psi) WHP	BTHP	FFP
1.0	2838.0 - 2869.0	15.9			

### Drill Stem Test (recovery)

Test no.	Oil Sm3/d	Gas Sm3/d	Oil grav. g/cm3	Gas grav. rel. air	GOR m3/m3
1.0	420	550000	0.735	0.817	1308

**WDSS Report**

Date: 17/09/96

PB/SKR

Page: 3 / 4

<b>Well no:</b>	<b>Operator:</b>
<b>15/12-08</b>	<b>STATOIL</b>

**Drill Bit Cuttings and Wet Samples**

Sample type	Interval below KB	Number of samples
WET SAMPLES	620 - 3054	270
CUTTINGS	620 - 3054	420

**Shallow Gas**

Interval below KB	Remarks

**Available Logs**

Log type	Intervals logged	1/200	1/500
ACBL	75.0 - 2829.0		
ACBL VBDL GR	2618.0 - 2989.0		
ACBL VDL GR	110.0 - 1794.0		
CDL GR	23.0 - 484.0		
CDM AP	2830.0 - 3046.0		
DIFL BHC AC GR	23.0 - 3049.0		
FMT	2850.0 - 3009.0		
MLL GR	2829.0 - 3048.0		
MUD	110.0 - 3054.0		
MWD	174.0 - 3054.0		
SYNTHETIC SEISMOGRAM			
TWO-WAY TRAVEL TIME	200.0 - 3000.0		
VSP			

WDSS Report

Date: 17/09/96

PB/SKR

Page: 4 / 4

<b>Well no:</b>	<b>Operator:</b>
<b>15/12-08</b>	<b>STATOIL</b>

ZCDL CN GR	2829.0 - 3043.0			
ZCDL GR	1809.0 - 1810.0			
ZDL CAL GR	1794.0 - 2840.0			

## Main operations for well: 15/12-8

### Main operation: DRILLING

Sub operation:	Minutes:	Hours:	% of total:
BOP ACTIVITIES	900	15,0	2,63
BOP/WELLHEAD EQ	360	6,0	1,05
CASING	9150	152,5	26,75
CIRC/COND	990	16,5	2,89
DRILL	14160	236,0	41,40
HOLE OPEN	990	16,5	2,89
OTHER	1290	21,5	3,77
REAM	870	14,5	2,54
TRIP	5490	91,5	16,05
<b>Total</b>	<b>34200</b>	<b>570,0</b>	<b>100,00</b>

### Main operation: FORMATION EVAL

Sub operation:	Minutes:	Hours:	% of total:
CIRC SAMPLES	150	2,5	0,89
CIRC/COND	180	3,0	1,07
CORE	870	14,5	5,16
DST	9780	163,0	58,01
LOG	3990	66,5	23,67
OTHER	300	5,0	1,78
RFT/FIT	1110	18,5	6,58
TRIP	390	6,5	2,31
WAIT	90	1,5	0,53
<b>Total</b>	<b>16860</b>	<b>281,0</b>	<b>100,00</b>

### Main operation: INTERRUPTION

Sub operation:	Minutes:	Hours:	% of total:
FISH	240	4,0	9,09
MAINTAIN/REP	1980	33,0	75,00
OTHER	420	7,0	15,91
<b>Total</b>	<b>2640</b>	<b>44,0</b>	<b>100,00</b>

### Main operation: MOVING

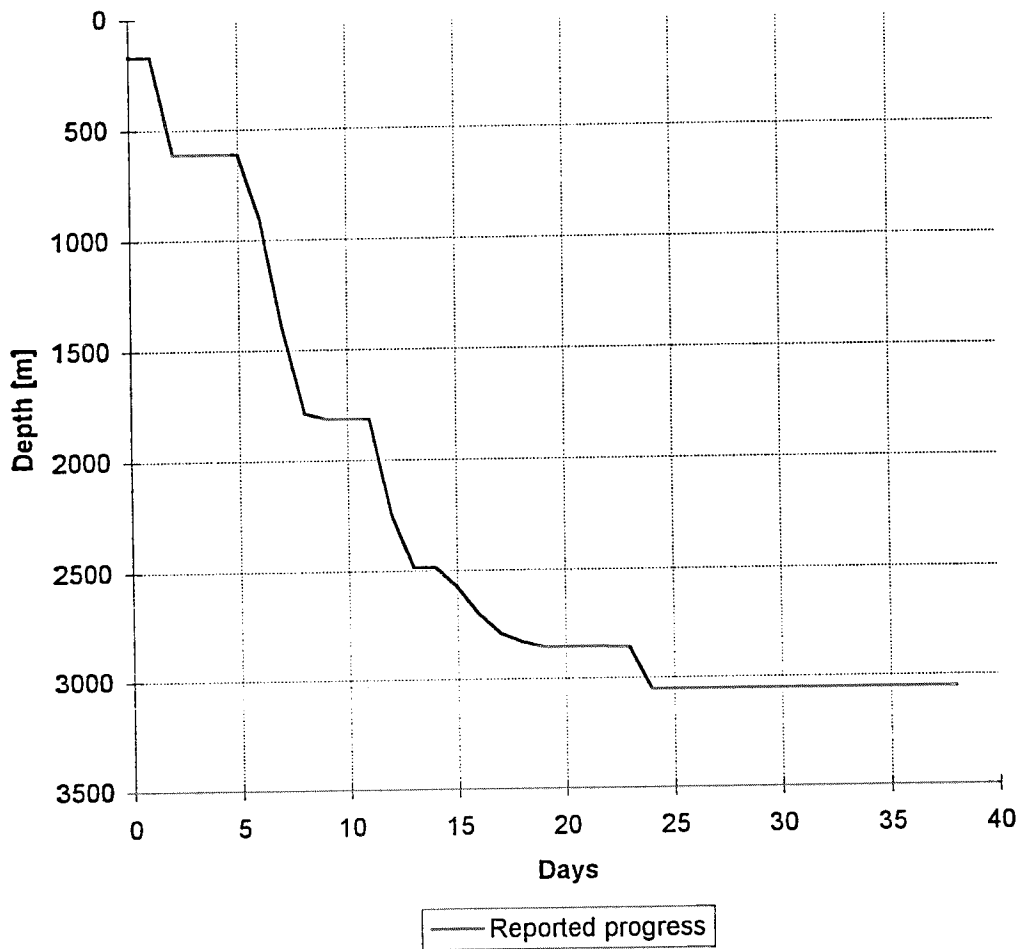
Sub operation:	Minutes:	Hours:	% of total:
ANCHOR	510	8,5	12,88
TRANSIT	3450	57,5	87,12
<b>Total</b>	<b>3960</b>	<b>66,0</b>	<b>100,00</b>

### Main operation: PLUG & ABANDON

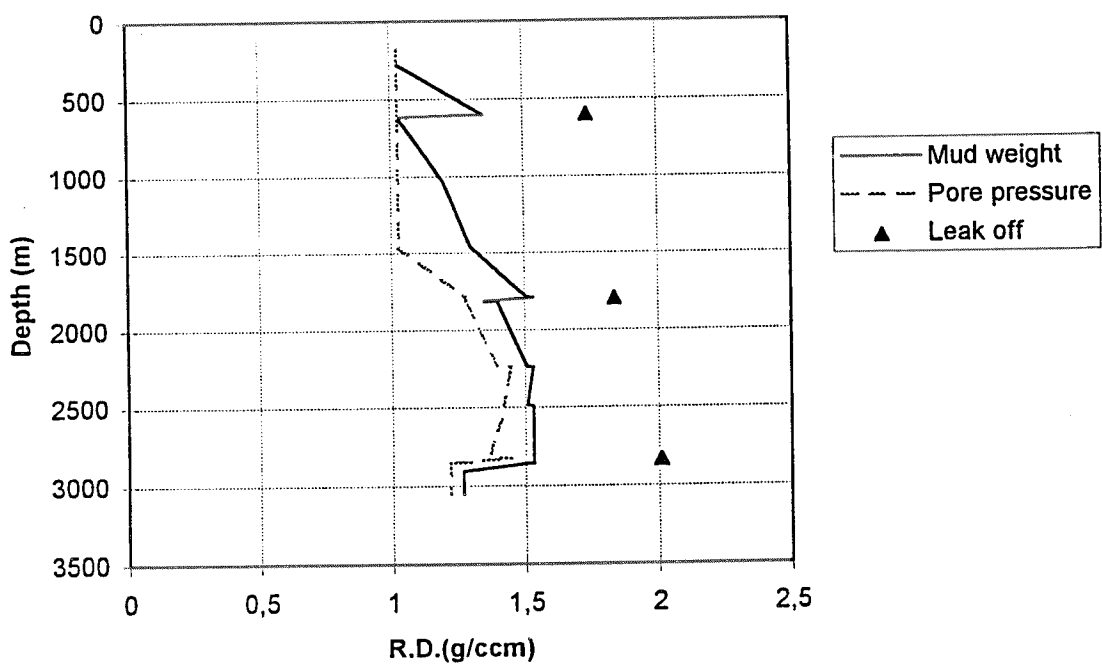
Sub operation:	Minutes:	Hours:	% of total:
CEMENT PLUG	90	1,5	6,82
CIRC/COND	390	6,5	29,55
OTHER	30	0,5	2,27
TRIP	810	13,5	61,36
<b>Total</b>	<b>1320</b>	<b>22,0</b>	<b>100,00</b>

Total time used: 983,0 Hours

Depth vs time for well: 15/12-8



Composite plot for well: 15/12-8



# Well History 15/12-8.

## General:

Well 15/12-8 was designed to drill on the Beta East South structure which is an undrilled separate structure on a slightly rotated fault block with sediment layers gently dipping to the east. The structure may have been filled from the 15/12-5 segment of the Beta West structure from where a possible communication may still exist. Block 15/12-8 is situated between the following main structural elements: Jæren High to the south, Central Graben to south-southwest, Andrew Ridge to the west, Ling Graben to the north and Viking Graben to the north-northwest.

The mapped area shows a very complex geological history. Salt movements, sea level changes and tectonics have played a major role in controlling the sediment distribution throughout the area from Permian to present. The main objective of the well was to test the potential for hydrocarbons in sandstones of Oxfordian - and Trias age in the Central part of the Beta East-South structure. Seismic anomalies at 437, 467, 479 and 803 m RKB might indicate possibility for shallow gas. The well was prognosed to be drilled to 3260 m RKB.

## Operations:

Wildcat well 15/12-8 was spudded by the semi-submersible rig Deepsea Bergen 5 June 1991, and completed as a discovery 14 July 1991 at a depth of 3053 m RKB in rocks of Triassic age, the Skagerak Formation. Drilling and logging operations went on without any significant problems.

In order to core, the well was sidetracked at 2623 m RKB with a TD at 2940 m RKB, and a total of three conventional cores were cut in the interval 2841 - 2902 m RKB. A total of 100 sidewall cores were attempted and 86 were recovered. No shallow gas was encountered in this well.

The well proved hydrocarbon bearing sandstones of Jurassic and Triassic age from 2838 to 2877 m RKB. The gas/water contact was estimated to 2877 m RKB and confirmed from wireline logs. The well was permanently plugged and abandoned.

## Testing:

One DST test was performed in the interval 2838 - 2869 m RKB. The well produced 550 000 Sm<sup>3</sup>/d gas and 420 Sm<sup>3</sup>/d condensate.

# Geological Tops.

## Well:.15/12-8

	Depth m (RKB).
Nordland Group	110.0
Utsira Fm	1166.0
Hordaland Group	1207.0
Rogaland Group	2251.0
Balder Fm	2251.0
Sele Fm	2268.0
Lista Fm	2333.0
Våle Fm	2441.0
Shetland Group	2464.0
Kickoff point 2623.0.	
Ekofisk Fm	2464.0
Tor Fm	2496.0
Hod Fm	2626.0
Blodoks Fm	2738.0
Cromer Knoll Group	2770.0
Rodby Fm	2770.0
Sola Fm	2783.0
Tuxen Fm	2797.0
Mime Fm	2811.0
Åsgard Fm	2818.0
Viking Group	2828.5
Draupne Fm	2828.5
Undefined Jurassic Sst.	2838.0
Triassic Group	2854.0
Skagerak Fm	2854.0
T.D.	3054.0