

Well no : 34/10-13

Operator : STATOIL

Coordinates : 61 12 01.93 N
02 18 3.03 EUTM coord. : 6785487 N
462422 E

Licence no : 050

Permit no : 300

Rig : DEEPSEA SAGA

Contractor : ODFJELL DRILLING AND CONSULTING COMPANY A/S

Bottom hole temperature : 108 deg.C Elev. KB : 25 M

Spud. date : 81.08.24 Water depth : 214 M

Compl. date : 82.01.05 Total depth : 3392 M

Spud. class : APPRAISAL Form. at TD : TRIASSIC

Compl. class : P&A. OIL DISC. Prod. form :

Seisloca : 3D - 185 SP:385.

LICENSEES

 9,000 NORSK HYDRO PRODUKSJON A.S
 6,000 SAGA PETROLEUM A.S
 85,000 DEN NORSKE STATS OLJESELSKAP A.S

CASING AND LEAK-OFF TESTS

Type	Casing diam.	Depth below KB	Hole diam.	Hole depth below KB	Lot mud eqv. g/cm
CONDUCTOR	30	299,0	36	300,0	
SURF.COND.	20	869,0	26	893,0	1,47
INTERM.	13 3/8	1536,0	17 1/2	1542,0	1,80
INTERM.	9 5/8	1720,0	12 1/4	1725,0	1,95
LINER	7	2680,0	8 1/2	2700,0	1,96
OPEN HOLE			6	3392,0	

CONVENTIONAL CORES

Core no.	Intervals cored meters	Recovery		Series
		M	%	
1	1931.0 - 1931.3	0.1	33.3	E. JURASSIC
2	1931.3 - 1942.3	10.5	95.5	E. JURASSIC
3	1942.0 - 1944.0	0.0	0.0	E. JURASSIC
4	1944.0 - 1961.0	15.8	92.9	E. JURASSIC
5	1961.0 - 1963.0	0.8	40.0	E. JURASSIC
6	1963.0 - 1974.0	10.6	96.4	E. JURASSIC
7	1974.0 - 1988.0	13.3	95.0	E. JURASSIC
8	1988.0 - 2003.0	9.1	60.7	E. JURASSIC
9	2003.0 - 2011.5	8.1	95.3	E. JURASSIC
10	2011.5 - 2018.5	5.2	74.3	E. JURASSIC
11	2018.5 - 2035.0	15.6	94.5	E. JURASSIC
12	2035.0 - 2047.0	9.4	78.3	E. JURASSIC
13	2047.0 - 2065.5	16.1	87.0	L. TRIASSIC
14	2065.5 - 2077.0	9.9	86.1	L. TRIASSIC
15	2077.0 - 2087.0	8.7	87.0	L. TRIASSIC
16	3373.5 - 3391.5	16.6	92.2	L. TRIASSIC

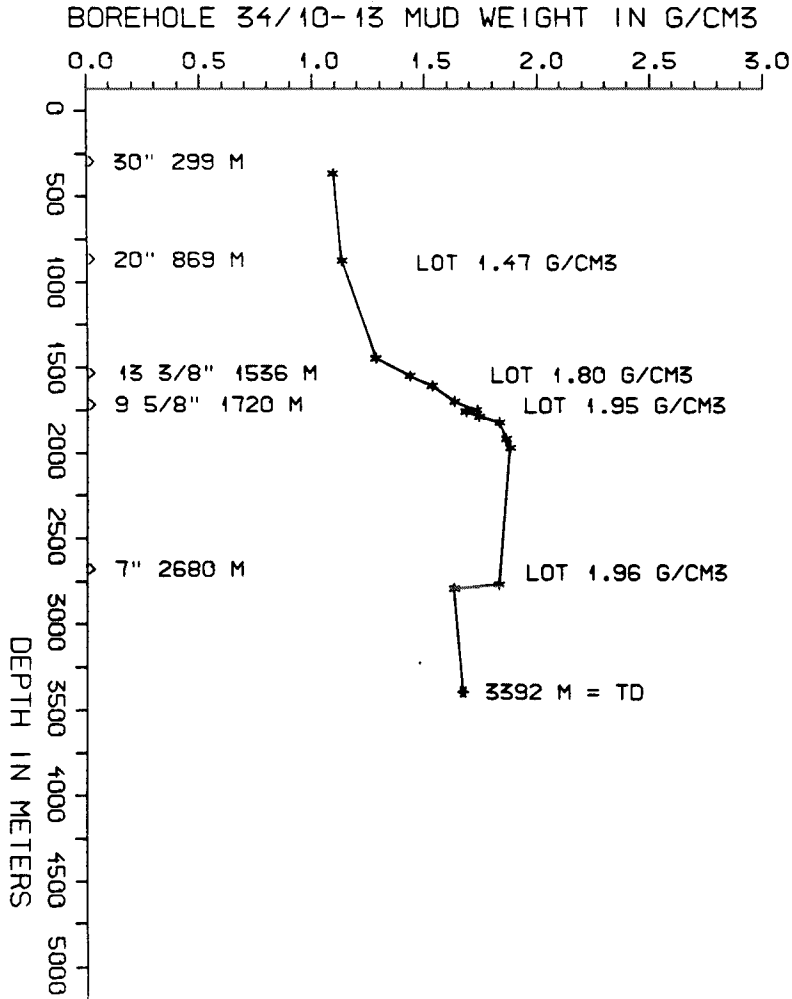
DRILL STEM TEST									
TEST NO	DEPTH BELOW KB	CHOKE SIZE mm	RECOVERY					PRESS. (psi)	
			OIL Sm3 /d	GAS M Sm3 /d	OIL GRAV. g/cm3	GAS GRAV. rel. air	GOR m3/m3	FSIP	WHP
1	2107 - 2114	12.7	467	37.6	0.876	0.686	80.5		
2	2003 - 2009	12.7	860	81.7	0.825	0.645	95.0		

AVAILABLE LOGS				
LOG TYPE	INTERVALS	1/200	1/500	
GR	240 - 299	x		
ISF BHC MSFL GR	299 - 892	x		
ISF BHC	869 - 1540	x		
ISF BHC MSFL	1536 - 1722	x		
ISF SONIC	1717 - 2697	x		
ISF SONIC	2682 - 3393	x		
ISF SONIC GR	240 - 3393		x	
LSS	1898 - 2155	x		
FDC CNL	299 - 893	x	x	
FDC CNL	869 - 1541	x	x	
FDC CNL	1536 - 1724	x	x	
FDC CNL	1717 - 2698	x	x	
FDC CNL	2632 - 3394	x	x	
DLL MSFL	1717 - 2160	x	x	
CDM	1717 - 2687	x		
CDM	2682 - 3394	x		
CDM AP	1721 - 2688	x	x	
CDM AP/CYBERDIP	2682 - 3394	x	x	
GEODIP	1920 - 2055	1:40		p.r.high density program.
RFT (TEST: ALL)		x		
RFT (TEST: 1)		x		
BGT	864 - 1555		x	
TDT	1920 - 2371	x		
TDT	1923 - 2007	x		
TDT	1920 - 2045	x		
CBL VDL	694 - 1536	x		
CBL VDL	1150 - 1717	x		
CBL VDL	1596 - 2682	x		
CBL VDL	1590 - 2380	x		
CBL VDL	1875 - 2048	x		
MUD	299 - 3391		x	
VELOCITY	299 - 3393	1:1000	x	
(Air Gun Well Velocity Survey & C.L.D. 1stk)				
(Synthetic Seismogram Marine, 10 cm/s, 1stk)				
(Synthetic Seismogram, b/p-w/t, 10 cm/s, 2stk)				
(Two Way Travel Time, 10 cm/s, 1stk)				

MUD PROPERTIES			
DEPTH BELOW KB m	WEIGHT g/cm3	FUNNEL VISC. sec	FILTRATE LOSS cm3
300	1.06	70	
810	1.10	48	
875	1.11	48	
1165	1.10	49	
1380	1.25	49	
1480	1.40	49	
1540	1.50	50	
1630	1.60	50	
1680	1.70	49	
1690	1.65	49	
1720	1.71	49	
1750	1.80	55	
1850	1.83	54	
1900	1.85	56	
2425	1.86	53	
2700	1.80	53	
2725	1.60	55	
3392	1.65	55	

DRILL BIT CUTTINGS AND WET SAMPLES		
SAMPLE TYPE	INTERVAL BELOW KB	NUMBER OF SAMPLES
CUTTINGS	300 - 3392	715
WET SAMPLES	300 - 3378	719

SHALLOW GAS	
DEPTH INTERVAL m KB	REMARKS
	NONE



WELL HISTORY - 34/10-13

GENERAL :

The primary objective of well 34/10-13 was to test the sandstone of Early Jurassic age (Statfjord fm.) on the Delta structure in block 34/10.

The secondary objectives were sandstones of Triassic age. The Statfjord and Cormorant formations were found hydrocarbon bearing.

The Triassic sandstones were waterbearing.

OPERATIONS :

Well 34/10-13 was spudded 24.08.81 by the drilling rig "Deepsea Saga". Lost circulation occurred while drilling the 12 1/4" pilot hole in the 26" section. No further drilling problems occurred in this section nor did any occur in the 17 1/2" section. While drilling the 12 1/4" section at 1690 m, circulation was lost (after the mud weight had been raised to 1.70s.g.). The mudweight was lowered (to 1.65 s.g.) and the hole was drilled to 1725 m when the well started to flow. The influx was circulated out with 1.69 s.g. mud. 15 cores were taken in the 8 1/2" section. A total of 21.5 days were lost due to a strike after the drilling of the 6" section had been initiated. 1 core was taken in the 6" section. When sampling with the RFT, this got stuck at 2882 m. The tool was left in the hole and the well was plugged back and tested.

TESTING :

DST no.1 was aborted prematurely due to bad weather. The test included an 8 minute initial flow and a 64 minute initial build up before a main flow period of 336 minutes followed by the aborted build-up which lasted 13 minutes. One separator sample and 5 wellhead samples were taken during this test. DST no.2 included 3 flow and build-up periods. 6 separator and 2 bottomhole samples were taken during this test. DST no.2 was followed by an injection test in the water zone. Two RFT samples were also taken in this well (One in the Statfjord and one in the Triassic).

GEOLOGICAL TOPS

WELL: 34/10-13

	<i>Depth m (RKB)</i>
<i>Nordland Group</i>	<i>239 m</i>
<i>Hordaland Group</i>	<i>956 m</i>
<i>Rogaland Group</i>	<i>1539 m</i>
<i>Balder Fm</i>	<i>1539 m</i>
<i>Lista Fm</i>	<i>1596 m</i>
<i>Shetland Group</i>	<i>1707 m</i>
<i>Dunlin Group</i>	<i>1905 m</i>
<i>Amundsen Fm</i>	<i>1905 m</i>
<i>Statfjord Fm</i>	<i>1924 m</i>
	<u><i>TD = 3392 m</i></u>