Well no : 34/10-33 Operator : STATOIL

Coordinates	: 61 07 34.44 N 02 12 57.10 E	UTM coord.	: 6777262 N 457756 E
Licence no	: 50	Permit no	: 591
Rig	: WEST DELTA	Rig type	: SEMI-SUB.
Contractor	: A/S SMEDVIG DRILLING CO.		
Bottom hole temperature	: 124 deg.C	Elev. KB	: 29 M
Spud. date	: 88.09.25	Water depth	: 134 M
Compl. date	: 88.12.15	Total depth	: 3872 M
Spud. class	: APPRAISAL	Form. at TD	: E.JURASSIC
Compl. class	: P&A. OIL DISCOVERY	Prod. form	: JURASSIC
Seisloca	: ST 8134 - 156 CELLEPKT. 296		

LICENSEES

9.000000	NORSK HYDRO PRODUKSJON A.S
6.000000	SAGA PETROLEUM A.S.
85.000000	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/cm3
CONDUCTOR	30	173.0	36	.0	.
CONDUCTOR	30	225.0	36	.0	.
SURF.COND.	20	459.0	26	483.0	1.43
INTERM.	13 3/8	1828.0	17 1/2	1844.0	1.53
INTERM.	9 5/8	3148.0	12 1/4	3161.0	1.99
LINER	7	3769.0	8 1/2	.0	1.96

CONVENTIONAL CORES

Core no.	Intervals cored meters	Recovery M	Recovery %	Series
1	3152.0 - 3161.5	0.0	000.0	
2	3188.0 - 3197.0	9.0	100.0	
3	3199.0 - 3218.7	19.7	100.0	
4	3223.0 - 3235.0	11.7	97.5	
5	3235.0 - 3251.0	15.8	98.8	
6	3251.0 - 3271.0	20.0	100.0	
7	3273.5 - 3283.2	9.7	100.0	
8	3285.5 - 3289.5	3.5	87.5	
9	3289.5 - 3308.0	18.1	97.8	
10	3308.0 - 3336.0	28.0	100.0	
11	3336.0 - 3349.5	12.8	94.8	
12	3349.5 - 3373.0	23.5	100.0	
13	3373.0 - 3382.5	9.5	100.0	
14	3382.5 - 3410.5	27.7	98.9	
15	3410.5 - 3435.0	24.4	99.6	

16	3799.0 -	3815.5	16.5	100.0
17	3815.5 -	3825.9	10.4	100.0
18	3830.0 -	3840.0	10.0	100.0

MUD PROPERTIES

Depth below KB meter	Mud weigth g/cm3	Viscosity	Mud type
592.000	1.10	12.0	WATER BASED
2709.000	1.25	17.0	WATER BASED
2931.000	1.28	16.0	WATER BASED
3014.000	1.34	18.0	WATER BASED
3111.000	1.40	23.0	WATER BASED
3199.000	1.45	20.0	WATER BASED
3280.000	1.49	23.0	WATER BASED
3602.000	1.53	75.0	WATER BASED
3619.000	1.50	21.0	WATER BASED
3763.000	1.49	19.0	WATER BASED
3776.000	1.50	21.0	WATER BASED
3870.000	1.40	22.0	WATER BASED

DRILL STEM TEST

INTERVALS AND PRESSURES

Test no	interval meter	Choke size	Pressure (PSI) WHP	BTHP	FFP
1.0	3378.000 - 3394.000	12.7	N/A	N/A	N/A
1.1	3378.000 - 3394.000	12.7	N/A	N/A	N/A
1.2	3359.000 - 3374.000	7.9	N/A	N/A	N/A
1.3	3359.000 - 3374.000	28.6	N/A	N/A	N/A
1.4	3378.000 - 3394.000	28.6	N/A	N/A	N/A
2.1	3279.000 - 3307.000	19.1	2182.7	N/A	N/A
2.2	3279.000 - 3329.000	19.1	2739.6	N/A	N/A

RECOVERY

Test no.	Oil Sm3/d	Gas Sm3/d	Oil grav. g/cm3	Gas grav. rel. air	GOR m3/m3
1.0	288	N/A	0.854	0.680	176
1.1	290	N/A	0.853	N/A	176
1.2	354	N/A	0.856	0.675	187
1.3	1320	N/A	0.856	0.680	161
1.4	1320	N/A	0.856	0.068	161
2.1	850	377	0.850	0.665	448
2.2	1396	318	0.850	0.660	228

DRILL BIT CUTTINGS AND WET SAMPLES

SAMPLE TYPE	INTERVAL BELOW KB	NUMBER OF SAMPLES
Cutting	480-3870	360
Wet Samples	480-3870	360

SHALLOW GAS

Interval below KB	REMARKS

AVAILABLE LOGS

LOG TYPE		INTERVALS	1/200	1/500	Div.
DIFL LS BHC AC GR		163.000 - 465.000	X		
DIFL LS BHC AC GR		459.000 - 1805.000	X		
DIFL LS BHC AC GR		1829.000 - 3151.000	X		
DIFL GR		3146.000 - 3769.000	X		
DIFL LS BHC AC GR		3772.000 - 3872.000	X		
DIFL BHC AC GR		163.000 - 3872.000		X	
CDL		163.000 - 465.000	X		
CDL		459.000 - 1805.000	X		
CDL		1829.000 - 3151.000	X		
CDL CNL		3146.000 - 3760.000	X		
CDL CNL		3772.000 - 3872.000	X		
CDL CNL				X	
DLL SP BHC AC		3146.000 - 3772 000	X	X	
MWD		228.000 - 3767.000		X	
AC CBL VDL GR		163.000 - 1830.000	X		
AC CBL VDL GR		3772.000 - 3872.000	X		
FMT HP CRYSTAL GAUGE*		3188.000 - 3414.000	X	X	
CDM		2850.000 - 3151.000	X		
CDM AP	*	3146.000 - 3766.000	X	X	
CDM AP	*	3772.000 - 3872.000	X	X	
STRATADIP		3146.000 - 3766.000	1:40		
SPECTRALOG		3146.000 - 3400.000	X		
MUD		163.000 - 3870.000		X	
VELOCITY LOG		470.000 - 3865.000	1:1000	X	

(Synthetic Seismogram, 10 cm/s 2 stk)
(V.S.P, Zero Offset V.S.P, 10cm/s 5 stk)
(V.S.P, Interpreters Composite, 10 cm/s 1 stk)
(V.S.P, Deconvolved Upwave, 10 cm/s 4 stk)

* BÅDE 1:200 OG 1:500 PÅ SAMME LOGGEN.

MAIN OPERATIONS FOR WELL: 003410 33

Main operation: DRILLING

Sub operations	Minutes	Hrs	% of total
BOP ACTIVITIES	960	16,0	1,93
BOP/WELLHEAD EQ	2400	40,0	4,83
CASING	11670	194,5	23,48
CIRC/COND	3420	57,0	6,88
DRILL	17490	291,5	35,18
HOLE OPEN	1080	18,0	2,17
OTHER	300	5,0	0,60
PRESS DETECTION	90	1,5	0,18
REAM	840	14,0	1,69
TRIP	10140	169,0	20,40
WAIT	1320	22,0	2,66
Total	49710	828,5	100,00

Main operation: FORMATION EVAL

Sub operations	Minutes	Hrs	% of total
CIRC/COND	1530	25,5	2,94
CORE	6690	111,5	12,87
DST	18240	304,0	35,08
LOG	7350	122,5	14,14
RFT/FIT	1500	25,0	2,89
TRIP	16590	276,5	31,91
WAIT	90	1,5	0,17
Total	51990	866,5	100,00

Main operation: INTERRUPTION

Sub operations	Minutes	Hrs	% of total
FISH	2010	33,5	14,73
LOST CIRC	240	4,0	1,76
MAINTAIN/REP	7650	127,5	56,04
WAIT	2160	36,0	15,82
WELL CONTROL	1590	26,5	11,65
Total	13650	227,5	100,00

Main operation: MOVING

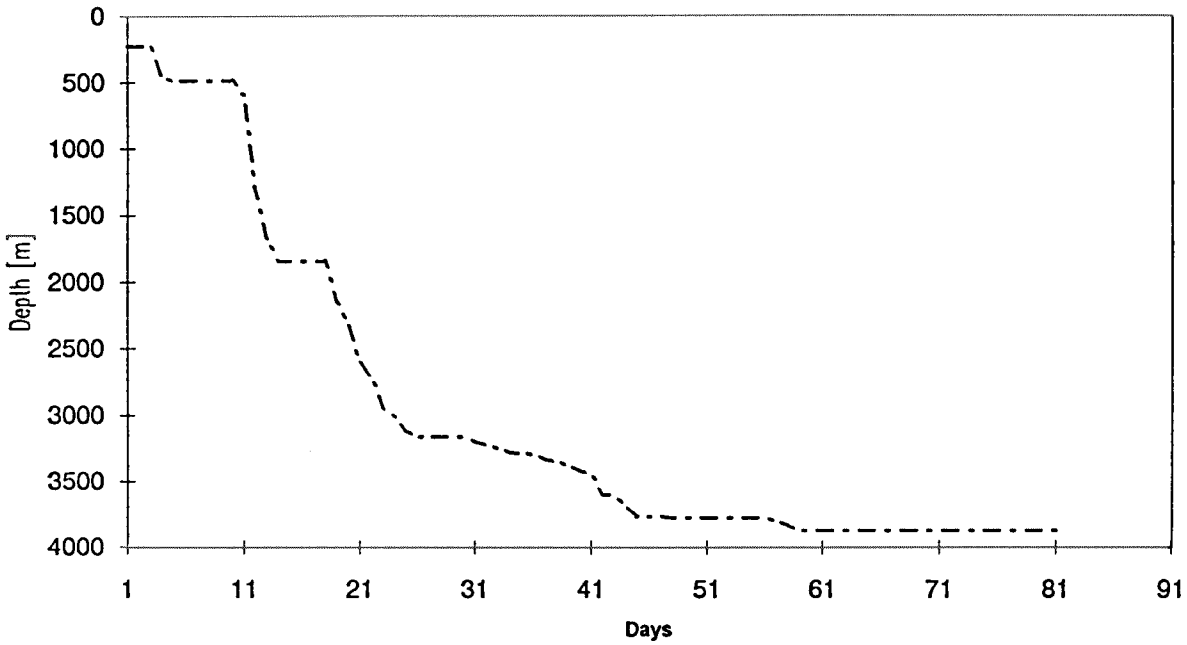
Sub operations	Minutes	Hrs	% of total
ANCHOR	1080	18,0	17,73
TRANSIT	5010	83,5	82,27
Total	6090	101,5	100,00

Main operation: PLUG & ABANDON

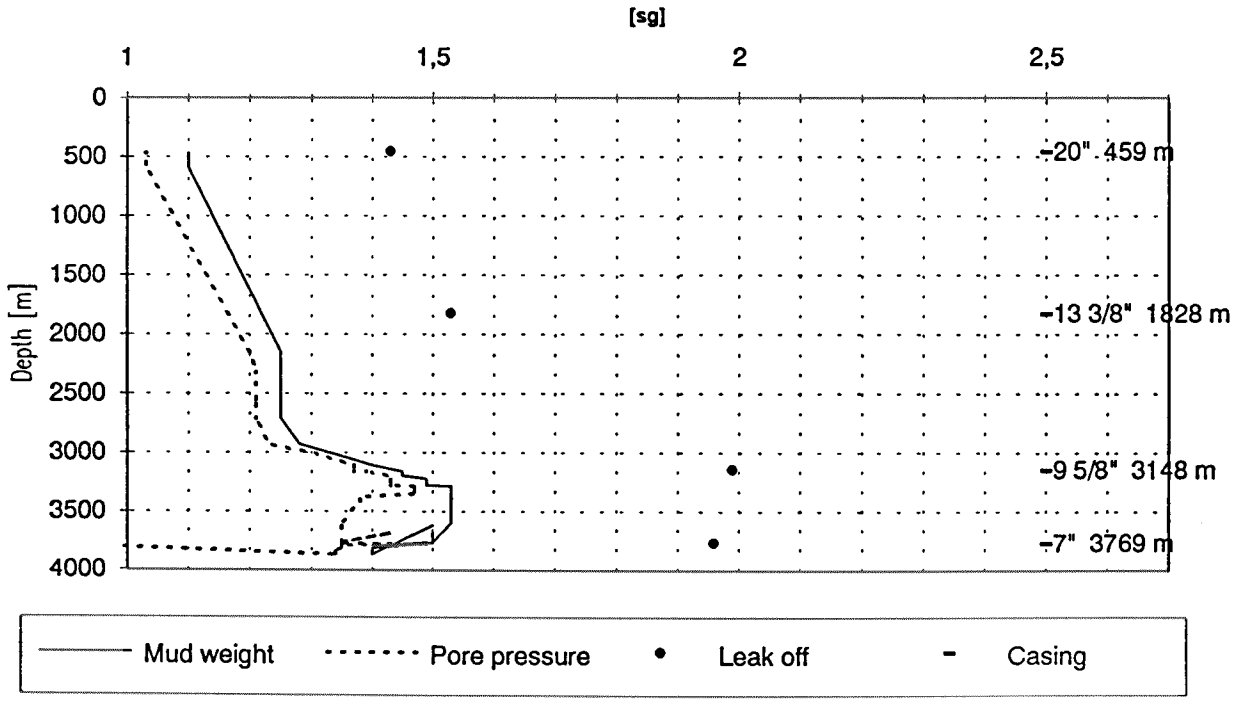
Sub operations	Minutes	Hrs	% of total
CEMENT PLUG	690	11,5	28,75
CIRC/COND	330	5,5	13,75
TRIP	1170	19,5	48,75
WAIT	210	3,5	8,75
Total	2400	40,0	100,00

Total time used 2064 hrs (86 days)

Depth v.s. time plot for well: 003410 33



Composite plot for well: 003410 33



Well History 34/10-33

GENERAL:

Well 34/10-33 was the sixth well drilled to reservoir level at the Gullfaks South structure. The main objective of the well was to confirm the oil- and gas reserves in the Brent Group in the northern part of the structure by confirming the depth conversions, the petrophysical parameters and the geological model. Further the gas/oil contact and the oil/water contact were to be confirmed at 3324 m and 3395 m. Secondary objective was to penetrate 50 m of the Statfjord Formation to obtain data to better understand the structural development in the area, and also update the geological model for the upper part of the formation. A positive result would lead to the drilling of a horisontal testing well as a sidetrack from this well.

OPERATIONS:

Appraisal well 34/10-33 was spudded 25 September 1988 by Smedvig semi-submersible rig West Delta and completed 15 December 1988 at a depth of 3870 m in Early Jurassic rocks. There were some shallow gas at 477-478 m. Due to this the 20" casing was set at 450 m.There was a problem with a leakage in the BOP. The drillstring got stuck when setting the 13 3/8" casing and the MWD and drillbit had to be changed.

18 cores were cut in the well. 1 core was cut between 3152 - 3161.5 m, 14 cores in the interval 3188 - 3435 m and 3 cores between 3799 - 3840 m. Suprisingly much oil was found in the Brent Group. Oil/water contact was not encountered. FMT data showed a gas/oil contact at 3270 m. Approx. 150 m of oil was found vertically. There was experienced a pressure change of 1.5 - 2 bar in the oil zone at 3350 m. This has not been observed at Gullfaks South earlier.

Due to the large amount of oil in the Brent Group, the oil in place estimate was ajusted to 50-60 mill. Sm^3. This implies that the Brent Group oil is now more interesting than the Brent Group gas.

TESTING:

2 DST tests were performed in this well. DST 1.1 between 3378 - 3394 m, DST 1.2 between 3378 - 3394 m and 3359 - 3374 m, DST 2.1 between 3279 - 3307 m and DST 2.2 between 3279 - 3307 m and 3311.5 - 3329 m.

GEOLOGICAL TOPS

WELL: 34/10-33

	Depth m (RKB)
Nordland Group	*163.0*
Utsira Fm.	*915.0*
Hordaland Group	*980.0*
Rogaland Group	*1827.0*
Balder Fm.	*1827.0*
Sele Fm.	*1877.0*
Lista Fm.	*2008.0*
Shetland Group	*2054.5*
Cromer Knoll Group	*3014.0*
Viking Group	*3027.5*
Draupne Fm.	*3027.5*
Heather Fm.	*3056.5*
Brent Group	*3185.5*
Tarbert Fm.	*3185.5*
Ness Fm.	*3234.0*
Etive Fm.	*3365.0*
Rannoch Fm.	*3374.0*
Dunlin Group	*3423.5*
Drake Fm.	*3423.5*
Cook Fm.	*3513.5*
Amundsen Fm.	*3676.0*
Statfjord Fm.	*3798.5*
T.D.	*3870.0*