

Well no : 30/ 3-04 Operator : STATOIL

Coordinates : 60 45 56.85 N UTM coord. : 6736868
 02 51 30.20 E 492284

Licence no : 52 Permit no : 451

Rig : DEEPSEA BERGEN Rig type : SEMI-SUB.

Contractor : ODFJELL DRILLING AND CONSULTING COMPANY A/S

Bottom hole temperature : 118.9 deg.C Elev. KB : 23 M

Spud. date : 85.02.05 Water depth : 164 M

Compl. date : 85.06.12 Total depth : 3287 M

Spud. class : APPRAISAL Form. at TD : JURASSIC

Compl. class : SUSPENDED. OIL/GAS Prod. form : JURASSIC

Seisloca : ST 8318 - 650 SP. 368

LICENSEES

5.000000 DEMINEX (NORGE) A/S
 10.000000 NORSK HYDRO PRODUKSJON A.S
 5.000000 PETROCANADA NORWAY A/S
 50.000000 DEN NORSKE STATS OLJESELSKAP A.S
 30.000000 UNOCAL NORGE 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	248.0	36	248.0	
SURF.COND.	20	600.0	26	606.0	1.46
INTERM.	13 3/8	1583.0	17 1/2	1605.0	1.89
INTERM.	9 5/8	2796.0	12 1/4	2812.0	1.86
LINER	7	3280.0	8 1/2	3287.0	

CONVENTIONAL CORES

Core no.	Intervals cored meters		Recovery		Series
			M	%	
1	2830.0	2834.3	4.3	90.0	MIDDLE JURASSIC
2	2835.0	2839.2	4.2	85.0	MIDDLE JURASSIC
3	2840.0	2851.8	11.8	90.4	MIDDEL JURASSIC
4	2853.0	2862.0	9.0	75.0	MIDDLE JURASSIC
5	2865.0	2879.5	14.4	93.0	MIDDLE JURASSIC
6	2880.5	2908.0	27.4	100.0	M/L JURASSIC
7	2908.0	2928.8	20.8	94.0	LOWER JURASSIC
8	2930.0	2937.3	7.3	91.0	LOWER JURASSIC
9	2938.0	2952.5	14.6	97.0	LOWER JURASSIC
10	2953.0	2972.3	19.3	100.0	LOWER JURASSIC
11	3086.0	3113.0	27.0	100.0	LOWER JURASSIC
12	3113.0	3131.7	17.7	100.0	LOWER JURASSIC

MUD PROPERTIES

Depth below KB meter	Mud weighth g/cm3	Funnel viscosity s/qt	Mud type
606.000	1.09	42.0	WATER BASED
792.000	1.14	52.0	WATER BASED
1470.000	1.13	41.0	WATER BASED
1514.000	1.15	50.0	WATER BASED
1652.000	1.25	52.0	WATER BASED
1710.000	1.35	54.0	WATER BASED
1788.000	1.43	58.0	WATER BASED
1792.000	1.45	60.0	WATER BASED
2000.000	1.50	68.0	WATER BASED
2172.000	1.51	67.0	WATER BASED
2795.000	1.33		WATER BASED
2812.000	1.51	57.0	WATER BASED
2908.000	1.33		WATER BASED
3248.000	1.23		WATER BASED
3287.000	1.33	48.0	WATER BASED

DRILL STEM TEST

INTERVALS AND PRESSURES

Test no	interval meter	Choke size	Pressure (PSI)		
			WHP	BTHP	FFP
1.0	3079.000 - 3096.000	23.8	783.2	3335.7	
2.0	2931.000 - 2941.000	19.1	543.9	4612.0	
3.0	2903.000 - 2923.000	20.6	1348.8	4452.5	
4.0	2866.000 - 2882.000	18.3	1508.3	4394.5	
5.0	2850.000 - 2857.000	19.1	623.6	2741.1	
6.0	2826.000 - 2833.000	25.4	63.8	3915.9	

RECOVERY

Test no.	Oil Sm ³ /d	Gas M Sm ³ /d	Oil grav. g/cm ³	Gas grav. rel. air	GOR m ³ /m ³
1.0	910	0.110	0.820	0.770	118
2.0					
3.0	1500	0.109	0.830	0.680	73
4.0	1300	0.101	0.834	0.770	70
5.0	550	0.049	0.820	0.770	91
6.0					0

DRILL BIT CUTTINGS AND WET SAMPLES

SAMPLE TYPE	INTERVAL BELOW KB	NUMBER OF SAMPLES
Cutting	253 - 3287.5	760
Wet Samples	260 - 3287.5	720

SHALLOW GAS

Interval below KB	REMARKS
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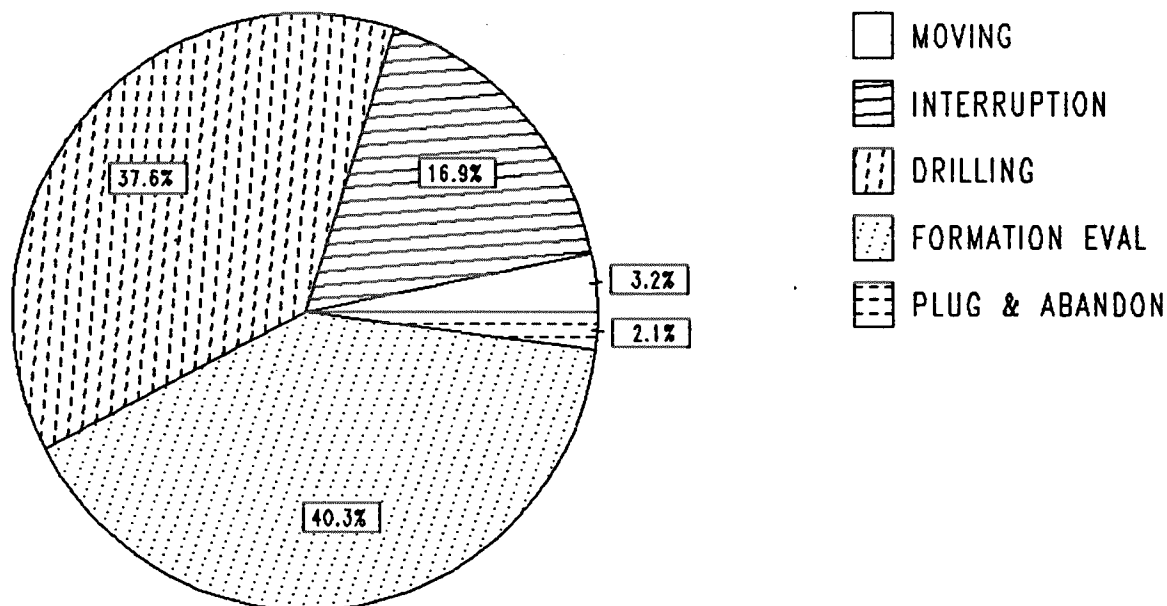
NONE

AVAILABLE LOGS

LOG TYPE	INTERVALS	1/200	1/500
DIL BHC AC GR	600 - 3286		X
DIFL LS BHC AC CAL	600 - 1781	X	
DIFL LS BHC AC CAL	1583 - 2809	X	
DIFL LS BHC AC CAL	2790 - 3286	X	
CDL	600 - 1781	X	X
CDL CNL	1582 - 2803	X	X
CDL CNL	2790 - 3286	X	X
DLL MLL	2790 - 3285	X	X
CDM	2690 - 2812	X	
CDM AP	2690 - 2812	X	X
CDM AP	2800 - 3284	X	X
SPECTRA LOG	2790 - 3279	X	X
TEMPERATURE	2750 - 2980	X	
FMT	2827 - 3271		X
CBL VDL AC	165 - 2805	X	
CBL VDL AC	2559 - 3245	X	
CBL VDL AC	2776 - 2980	X	
CBL VDL AC	2600 - 2895	X	
CBL VDL AC	180 - 1583	X	
MUD	640 - 3287		X
VELOCITY	601 - 3276		X
(+ Synthetic Seismogram, nor/rev. pol, 20 cm/s,			1 stk)
(+ Zero Offset V.S.P., 20 cm/s,			8 stk)
(+ Two Way Travel Time, 10 cm/s,			1 stk)

DAILY DRILLING REPORT SYSTEM

Main operation : 30/03-04



Total : 3240 HRS

Main operation	Minutes	Hours	% of total
MOVING	6155	102.58	3.17
INTERRUPTION	32815	546.92	16.88
DRILLING	73020	1217.00	37.56
FORMATION EVAL	78330	1305.50	40.29
PLUG & ABANDON	4080	68.00	2.10

MAIN OPERATIONS WELL : 30/03-04

MAIN OPERATION: DRILLING

Sub operations	Min	Hrs	% of total
TRIP	16980	283.00	23.25
DRILL	27300	455.00	37.39
CIRC/COND	3720	62.00	5.09
SURVEY	420	7.00	0.58
CASING	13620	227.00	18.65
BOP/WELLHEAD EQ	5190	86.50	7.11
HOLE OPEN	300	5.00	0.41
BOP ACTIVITIES	3300	55.00	4.52
REAM	1590	26.50	2.18
OTHER	120	2.00	0.16
WAIT	450	7.50	0.62
PRESS DETECTION	30	0.50	0.04
TOTAL	73020	1217.00	

MAIN OPERATION: MOVING

Sub operations	Min	Hrs	% of total
TRANSIT	4380	73.00	71.16
ANCHOR	1775	29.58	28.84
TOTAL	6155	102.58	

MAIN OPERATION: FORMATION EVAL

Sub operations	Min	Hrs	% of total
LOG	5340	89.00	6.82
CIRC SAMPLES	240	4.00	0.31
TRIP	14550	242.50	18.58
CIRC/COND	1800	30.00	2.30
CORE	5640	94.00	7.20
RFT/FIT	1560	26.00	1.99
DST	49200	820.00	62.81
TOTAL	78330	1305.50	

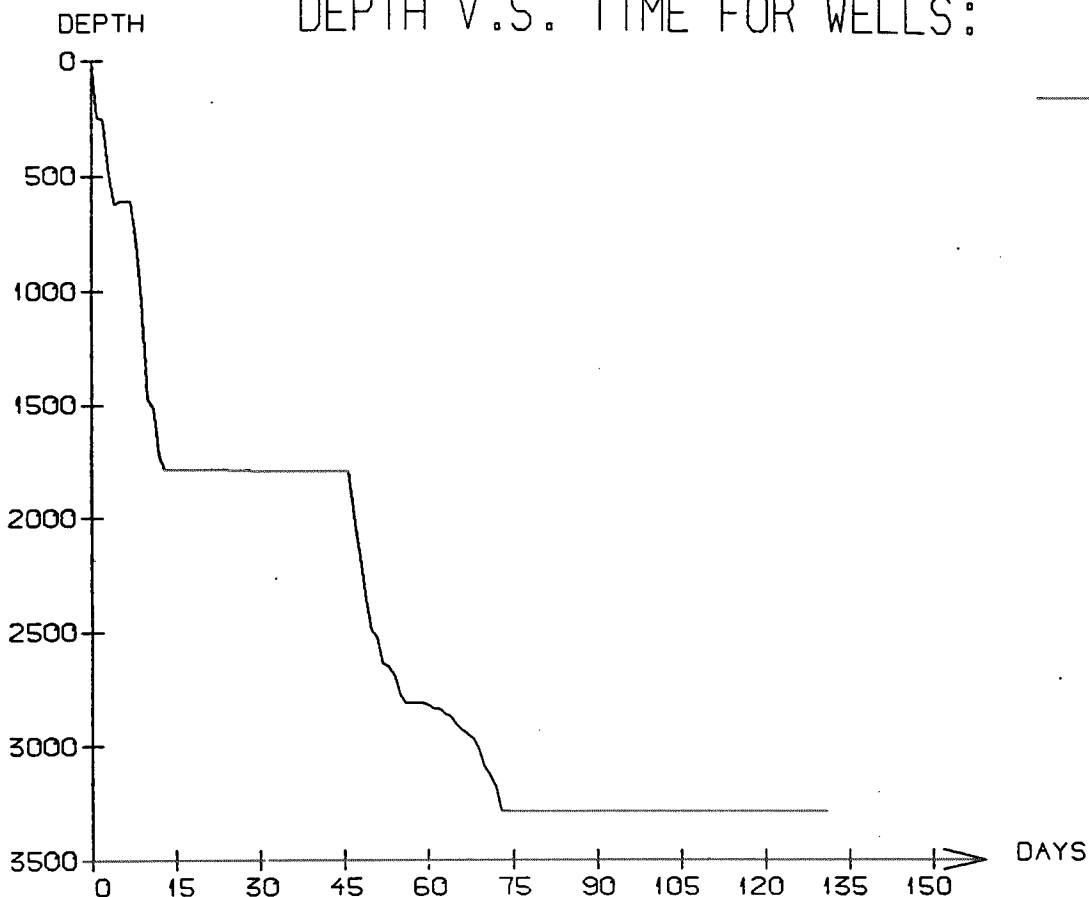
MAIN OPERATION: INTERRUPTION

Sub operations	Min	Hrs	% of total
WAIT	3210	53.50	9.78
MAINTAIN/REP	5715	95.25	17.42
FISH	19110	318.50	58.24
SIDETRACK	3720	62.00	11.34
OTHER	1060	17.67	3.23
TOTAL	32815	546.92	

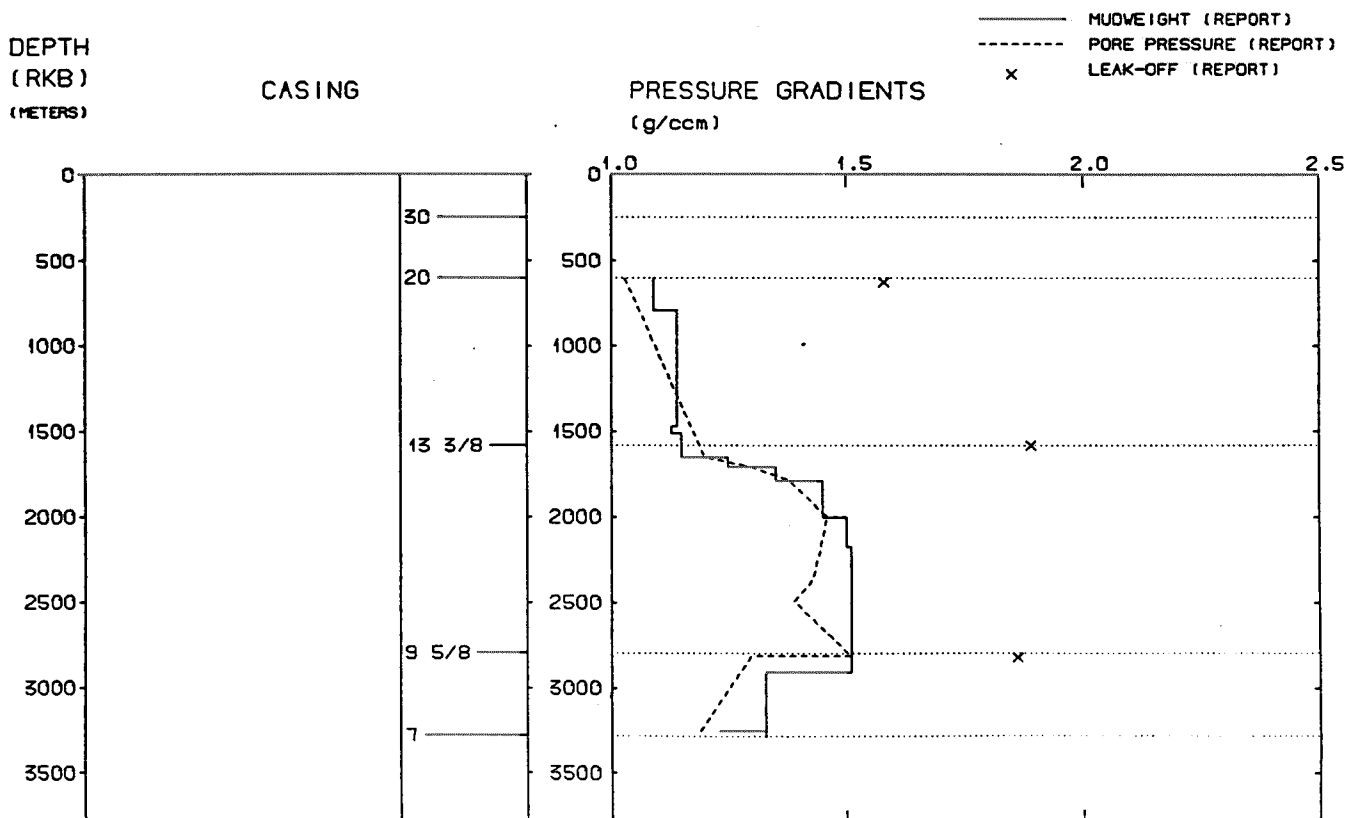
MAIN OPERATION: PLUG & ABANDON

Sub operations	Min	Hrs	% of total
TRIP	1710	28.50	41.91
CIRC/COND	330	5.50	8.09
CEMENT PLUG	360	6.00	8.82
MECHANICAL PLUG	120	2.00	2.94
EQUIP RECOVERY	1110	18.50	27.21
OTHER	450	7.50	11.03
TOTAL	4080	68.00	

DEPTH V.S. TIME FOR WELLS:



WELL: 003003 04 PRESSURE COMPOSITE PLOT



WELL HISTORY 30/3-4

GENERAL:

Appraisal well 30/3-4 was drilled on the Veslefrikk Field. The primary objectives of the well were to investigate possible oil accumulations in sandstones in Ness and Etive Formations, and to determine the oil/water contact. Secondary objective was sandstone of the Lower Jurassic Dunlin Group.

OPERATIONS:

The well was spudded 5 February 1985 by the semi-submersible rig Deepsea Bergen. Drilling went without problems to a depth of 1788 m. While running the 13 3/8" casing a wedge got stuck in the BOP and locked the casing. Problems caused by this made a technical sidetrack necessary. This was kicked off from 790 m, and drilled to 1792 m. An attempt to set 13 3/8" casing at this depth was unsuccessful, as the shoe got stuck at 1178 m. The casing was cut at 872 m and a second technical sidetrack was kicked off from 630 m. The problems encountered while running casing might have been caused by differential pressure between the Utsira sand and sand at 1700 m. Drilling to TD proceeded without further problems. The interval below 3131 m was drilled with turbine. Hydrocarbons were encountered in both Ness and Etive Formations and in the Intra Dunlin sand. Top reservoir in the Brent Group is at 2843 m, and the oil/water contact is at 2930 m. Top Intra Dunlin sand came in at 3078 m, and the possible oil/water contact is at 3129 m. 12 cores were cut in the interval 2830-3131 m.

TESTING:

Six Drill Stem Tests were performed with good results. The high production rate from Cook Formation was especially interesting.

GEOLOGICAL TOPS

WELL: 30/03-04

	Depth m (RKB)
<i>Nordland Group</i>	187,0
<i>Utsira Fm</i>	731,0
<i>Hordaland Group</i>	903,0
<i>Rogaland Group</i>	1981,0
<i>Balder Fm</i>	1981,0
<i>Sele Fm</i>	2067,0
<i>Lista Fm</i>	2104,0
<i>Shetland Group</i>	2267,0
<i>Cromer Knoll Group</i>	2775,0
<i>Viking Group</i>	2792,0
<i>Heather Fm</i>	2792,0
<i>Brent Group</i>	2826,0
<i>Ness Fm</i>	2826,0
<i>Etive Fm</i>	2873,0
<i>Dunlin Group</i>	2949,0
<i>Drake Fm</i>	2949,0
<i>Cook Eqv. Fm</i>	3079,0
<i>Amundsen/Burton Fm</i>	3128,0
<i>Statfjord Fm</i>	3232,0
<i>TD=</i>	3287,0