

Well no : 34/07-10 Operator : SAGA

Coordinates : 61 25 02.64 N UTM coord. : 6809754 N
 02 07 36.23 E 453388 E

Licence no : 89 Permit no : 527

Rig : TREASURE SAGA Rig type : SEMI-SUB.

Contractor : WILHELMSSEN OFFSHORE SERVICES

Bottom hole temperature : deg.C Elev. KB : 26 M

Spud. date : 86.08.26 Water depth : 300 M

Compl. date : 86.10.29 Total depth : 3000 M

Spud. class : WILDCAT Form. at TD : TRIASSIC

Compl. class : P&A. OIL DISCOVERY Prod. form : E.JURASSIC

Seisloca : G/E 3D 1983 LINJE 185 SP. 445

LICENSEES

3.920000 DEMINEX (NORGE) A/S
 0.980000 DET NORSKE OLJESELSKAP AS
 7.840000 ELF AQUITAINE NORGE A/S
 14.700000 ESSO NORGE A.S
 11.760000 NORSK HYDRO PRODUKSJON A.S
 9.800000 SAGA PETROLEUM A.S.
 51.000000 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	423.0	36	430.0	.
SURF.COND.	20	901.0	26	918.0	1.55
INTERM.	13 3/8	1907.0	17 1/2	1920.0	1.81
INTERM.	9 5/8	2755.0	12 1/4	3000.0	.

CONVENTIONAL CORES

Core no.	Intervals cored meters	Recovery		Series
		M	%	
1	2522.0 - 2539.1	17.1	100.0	
2	2540.5 - 2551.6	11.1	100.0	
3	2552.5 - 2558.5	5.9	98.3	
4	2558.5 - 2574.0	15.5	100.0	
5	2574.0 - 2577.7	3.7	100.0	
6	2592.0 - 2598.0	6.0	100.0	
7	2599.5 - 2602.0	2.5	100.0	
8	2602.0 - 2608.5	6.5	100.0	
9	2608.5 - 2617.5	9.0	100.0	
10	2617.5 - 2624.0	6.5	100.0	
11	2624.0 - 2635.5	11.5	100.0	
12	2635.5 - 2641.5	6.0	100.0	
13	2641.5 - 2655.0	13.5	100.0	
14	2655.0 - 2663.0	8.0	100.0	

MUD PROPERTIES

Depth below KB meter	Mud weight g/cm ³	Viscosity	Mud type
430.000	1.07	0.0	WATER BASED
730.000	1.11	7.0	WATER BASED
918.000	1.13	8.0	WATER BASED
918.000	1.15	9.0	WATER BASED
1323.000	1.11	18.0	WATER BASED
1665.000	1.30	24.0	WATER BASED
1920.000	1.40	29.0	WATER BASED
1920.000	1.45	16.0	WATER BASED
2058.000	1.50	20.0	WATER BASED
2280.000	1.65	24.0	WATER BASED
2973.000	1.70	28.0	WATER BASED
3000.000	1.71	35.0	WATER BASED

DRILL STEM TEST

INTERVALS AND PRESSURES

Test no	interval meter	Choke size	Pressure (PSI)		
			WHP	BTHP	FFP
1.0	2636.700 - 2632.700 Test temperature: 82 °C	6.4	20.3	4988.0	3692.0
2.0	2615.000 - 2609.500 Test temperature: 90.3 °C	12.7	334.0	5451.0	2815.0
3.0	2570.500 - 2561.000 Test temperature: 95 °C	12.7	1520.0	5583.0	4320.0
4.0	2551.500 - 2549.000 Test temperature: 78.3 °C	6.4	1650.0	5570.0	4326.0

RECOVERY

Test no.	Oil Sm ³ /d	Gas Sm ³ /d	Oil grav. g/cm ³	Gas grav. rel. air	GOR m ³ /m ³
1.0	3	0	0.847	0.000	0
2.0	219	17080	0.877	1.010	78
3.0	960	45160	0.838	0.838	47
4.0	272	17950	0.835	0.835	66

DRILL BIT CUTTINGS AND WET SAMPLES

SAMPLE TYPE	INTERVAL BELOW KB	NUMBER OF SAMPLES
Cutting	430-3000	460
Wet Samples	460-2999	420

SHALLOW GAS

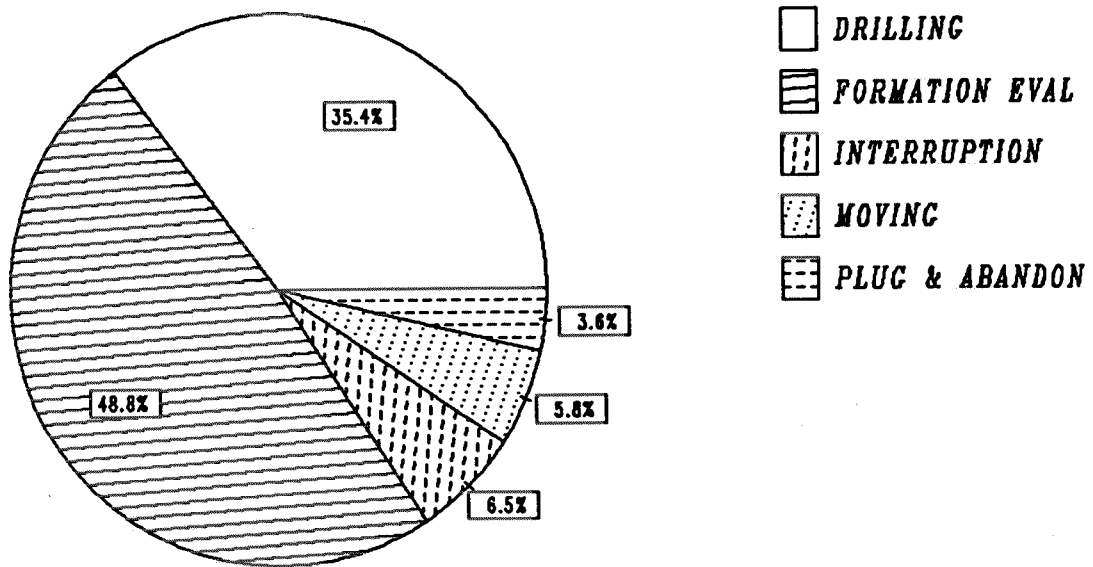
Interval REMARKS
below KB

AVAILABLE LOGS

LOG TYPE	INTERVALS	1/200	1/500	Div.
DIFL LS BHC AC GR	300.000 - 1905.000	X	X	
DIFL LS BHC AC	1850.000 - 2700.000	X	X	
DIFL LS BHC AC	2500.000 - 2999.500	X	X	
CDL CNL GR	1850.000 - 2700.000	X		
CDL CNL GR	2500.000 - 2998.500	X		
DLL MLL GR	2400.000 - 2699.500	X		
CDM-AP/PRODIP	1204.000 - 2998.000	X		
SHDT/DIPLOG	1904.000 - 2998.000	X		
CDM AP/4-ARM DIPLOG	1904.000 - 2998.000	X		
FMT HP CRYSTAL	2441.500 - 2684.500			X
FMT HP CRYSTAL	2533.000 - 2874.000	X		
FCHT HP CRYSTAL	2601.000 - 2601.000	X		
ACBL VDL	600.000 - 1910.000	X		X
ACBL VDL	1430.000 - 2723.000	X		
ACBL VDL	2525.000 - 2625.000	X		
MUD	326.000 - 3000.000			X
VELOCITY ADJUSTED	874.000 - 2974.120		1:1000	X
VELOCITY GR DENSITY	874.000 - 2974.000		1:1000	X
VELOCITY TIME/DEPTH	874.000 - 2974.000		1:5000	
(VSP Zero offset 5-10cm/s.plot1-9				9 stk.)
(Synthetic seismogram, 10 cm/s.plot 8-11				8 stk.)
(Two-way travel, 5-10 cm/s				2 stk.)

DAILY DRILLING REPORT SYSTEM

Main operations for well : 0034/07 -10



Total : 1704.00 hours

Main operation	Minutes	Hours	% of total
DRILLING	36150	602.50	35.36
FORMATION EVAL	49890	831.50	48.80
INTERRUPTION	6630	110.50	6.48
MOVING	5880	98.00	5.75
PLUG & ABANDON	3690	61.50	3.61

MAIN OPERATIONS FOR WELL : 0034 / 07 - 10

MAIN OPERATION : DRILLING

Sub operations	Minutes	Hrs	% of total
BOP ACTIVITIES	2130	35.50	5.89
BOP/WELLHEAD EQ	3660	61.00	10.12
CASING	7560	126.00	20.91
CIRC/COND	1860	31.00	5.15
DRILL	13650	227.50	37.76
HOLE OPEN	1380	23.00	3.82
OTHER	180	3.00	0.50
PRESS DETECTION	90	1.50	0.25
REAM	60	1.00	0.17
SURVEY	270	4.50	0.75
TRIP	5310	88.50	14.69
Total	36150	602.50	100.00

MAIN OPERATION : FORMATION EVAL

Sub operations	Minutes	Hrs	% of total
CIRC/COND	1170	19.50	2.35
CORE	6600	110.00	13.23
DST	23880	398.00	47.87
LOG	5190	86.50	10.40
OTHER	1020	17.00	2.04
TRIP	11850	197.50	23.75
WAIT	180	3.00	0.36
Total	49890	831.50	100.00

MAIN OPERATION : INTERRUPTION

Sub operations	Minutes	Hrs	% of total
MAINTAIN/REP	2310	38.50	34.84
OTHER	120	2.00	1.81
WAIT	4200	70.00	63.35
Total	6630	110.50	100.00

MAIN OPERATION : MOVING

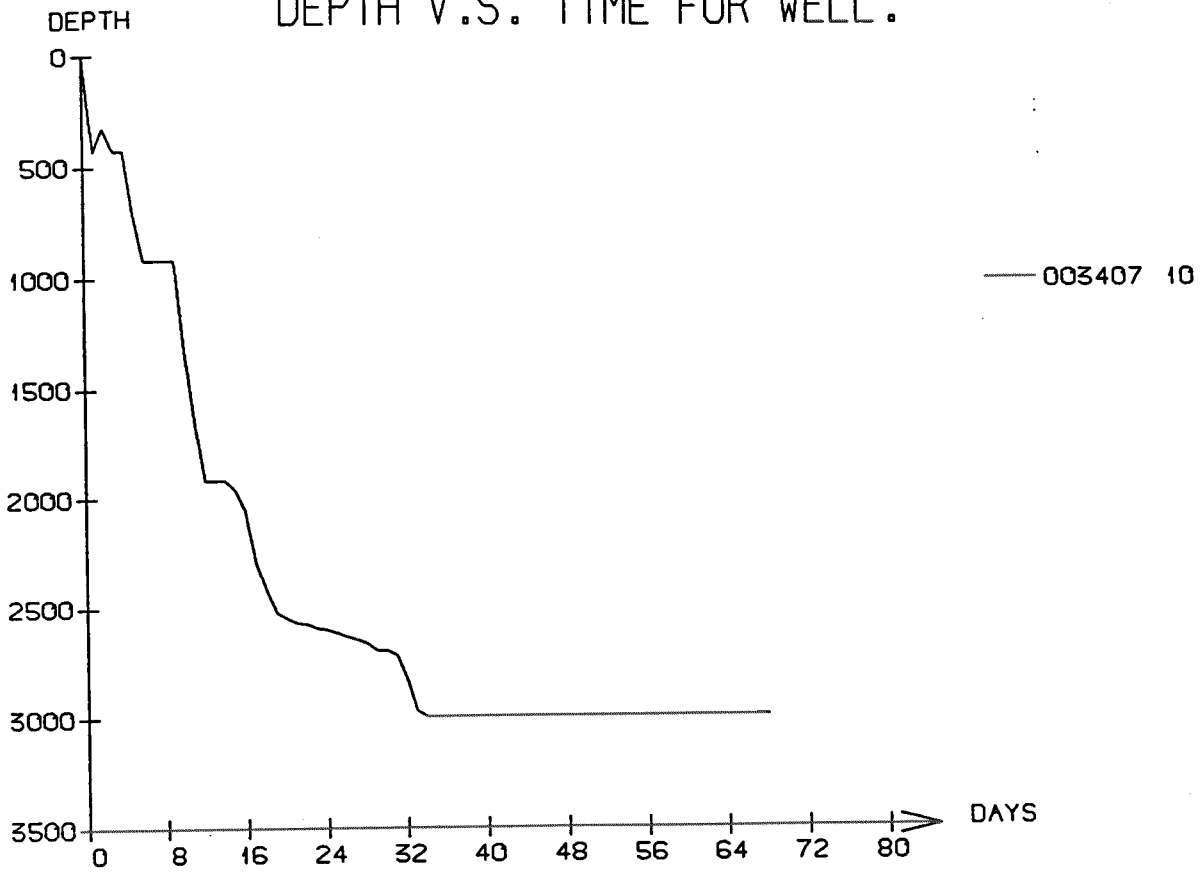
Sub operations	Minutes	Hrs	% of total
ANCHOR	2250	37.50	38.27
TRANSIT	3630	60.50	61.73
Total	5880	98.00	100.00

MAIN OPERATION : PLUG & ABANDON

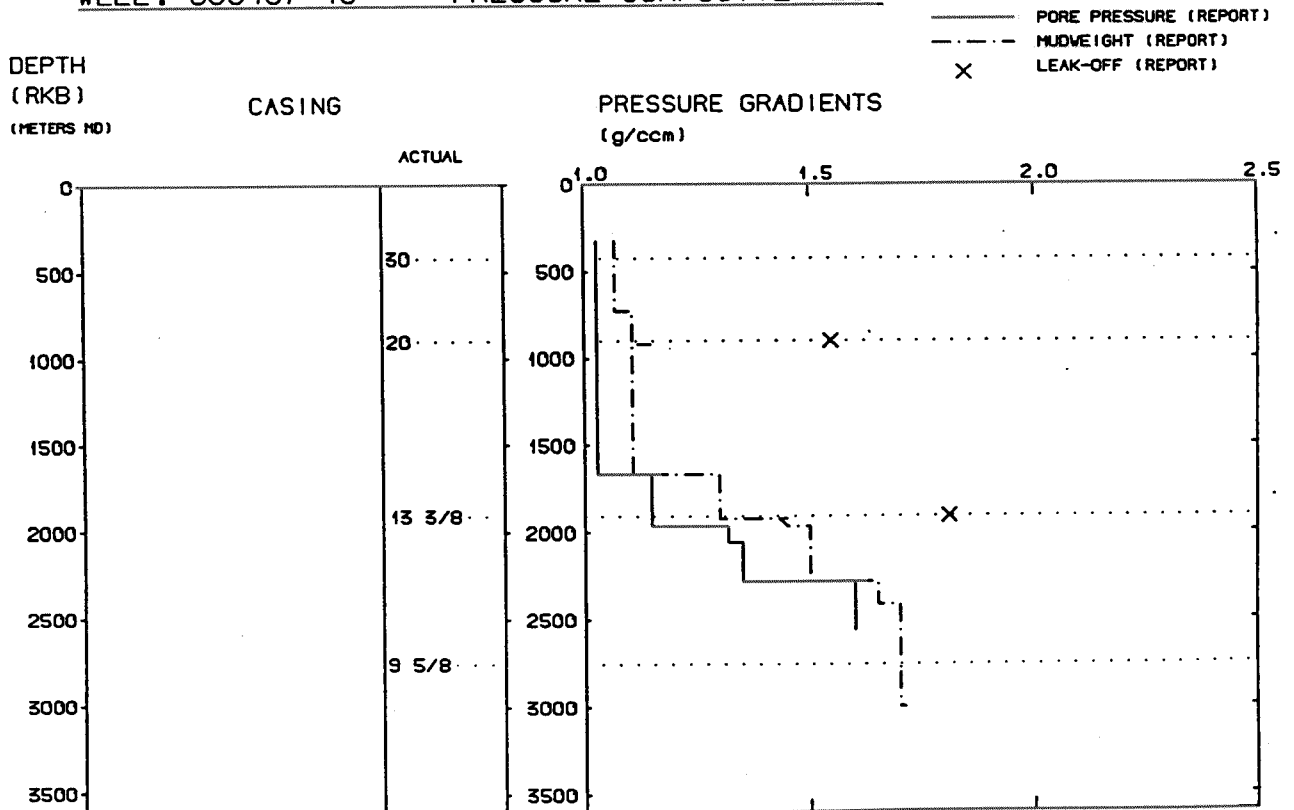
Sub operations	Minutes	Hrs	% of total
CEMENT PLUG	270	4.50	7.32
CIRC/COND	420	7.00	11.38
CUT	780	13.00	21.14
EQUIP RECOVERY	900	15.00	24.39
PERFORATE	420	7.00	11.38
SQUEEZE	90	1.50	2.44
TRIP	810	13.50	21.95
Total	3690	61.50	100.00

Total time used 1704.00 hrs

DEPTH V.S. TIME FOR WELL:



WELL: 003407 10 PRESSURE COMPOSITE PLOT



Well History 34/7-10

GENERAL:

Well 34/7-10 was drilled in the northern part of the block towards the southern limit of the Snorre Field. The Late Triassic - Early Jurassic reservoirs of the Snorre Field are made up of a complete series of rotated fault blocks dipping between 5 and 12 degrees to the west and northwest. The structure is divided into elongated fault blocks by major NNE-SSW trending faults.

The main objective of the well was to prove Statfjord Formation reserves in the south-east Snorre. Further objectives were to test the Statfjord Formation thickness and sand distribution, to test the extent and quality of the middle Statfjord member and to establish a Statfjord Formation OWC and reservoir parameters of the Statfjord Formation and underlying upper Lunde Formation.

OPERATIONS:

Wildcat well 34/7-10 was spudded 26 August 1986 by Wilh. Wilhelmsen Offshore Services semisubmersible rig Treasure Saga and completed 29 October 1986 at a depth of 3000 m in Triassic rocks. Drilling proceeded without significant problems.

1 core was cut in the interval 2522 - 2539.1 m RKB, one between 2540.5 - 2551.6 m, 4 between 2552.5 - 2577.7 m and 9 cores in the interval 2592 - 2663 m. The oil/water contact is indicated at 2615 m, the same as at Snorre West.

The well is plugged and abandoned as an oil discovery.

TESTING:

4 DST tests were performed in this well. The lower zone, 2633 - 2636 m, 20 m below indicated oil/water contact, produced oil. It is probable that this is an isolated body of sand. The other three DST tests were performed in the intervals 2609 - 2615 m, 2561 - 2570 m and 2549 - 2552 m.

GEOLOGICAL TOPS

WELL: 34/7-10

Depth m (RKB)

<i>Nordland Group</i>	326.0
<i>Utsira Fm.</i>	993.0
<i>Hordaland Group</i>	1093.0
<i>Skade Fm.</i>	1093.0
<i>Rogaland Group</i>	1682.0
<i>Balder Group</i>	1682.0
<i>Sele Group</i>	1728.0
<i>Lista Group</i>	1779.0
<i>Shetland Group</i>	1862.5
<i>Jorsalfare Fm.</i>	1862.5
<i>Kyrre Fm.</i>	2045.0
<i>Cromer Knoll Group</i>	2394.0
<i>Mime Fm.</i>	2394.0
<i>Dunlin Group</i>	2400.0
<i>Burton Fm.</i>	2400.0
<i>Amundsen Fm.</i>	2441.0
<i>Statfjord Fm.</i>	2531.5
<i>Hegre Group</i>	2636.5
<i>Lunde Fm.</i>	2636.5
<i>T.D.</i>	3000.0