

Well no : 34/07-12 Operator : SAGA

Coordinates : 61 16 17.86 N UTM coord. : 6793527 N
 02 06 47.26 E 452441 E

Licence no : 89 Permit no : 567

Rig : TREASURE SAGA Rig type : SEMI-SUB.

Contractor : WILHELMSSEN OFFSHORE SERVICES

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

Spud. date : 87.10.11 Water depth : 190 M

Compl. date : 87.12.17 Total depth : 2784 M

Spud. class : WILDCAT Form. at TD : TRIASSIC

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

Seisloca : SG 8431 ROW 155 COLUMN 534

LICENSEES

3.920000 DEMINEX (NORGE) A/S
 0.980000 DET NORSKE OLJESELSKAP A/S
 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/cm ³
CONDUCTOR	30	327.0	36	379.0	.
SURF.COND.	20	838.0	26	852.0	1.66
INTERM.	13 3/8	1851.0	17 1/2	1870.0	2.23
INTERM.	9 5/8	2366.0	12 1/4	2784.0	.

CONVENTIONAL CORES

Core no.	Intervals cored meters	Recovery		Series
		M	%	
1	2169.0 - 2196.5	27.3	99.3	
2	2196.5 - 2212.8	16.4	100.0	
3	2214.0 - 2215.5	1.5	100.0	
4	2216.0 - 2224.9	8.9	100.0	
5	2228.0 - 2242.0	14.0	100.0	
6	2242.0 - 2262.0	19.5	97.5	
7	2262.0 - 2290.0	27.9	99.6	
8	2290.0 - 2305.5	15.0	96.8	
9	2305.5 - 2333.0	27.0	98.2	
10	2333.0 - 2356.6	23.6	100.0	

MUD PROPERTIES

Depth below KB meter	Mud weight g/cm ³	Viscosity	Mud type
332.000	1.05	0.0	WATER BASED
378.000	1.13	5.0	WATER BASED
852.000	1.17	5.0	WATER BASED
852.000	1.20	6.0	WATER BASED
852.000	1.05	20.0	WATER BASED
852.000	1.05	22.0	WATER BASED
852.000	1.15	6.0	WATER BASED
870.000	1.09	18.0	WATER BASED
1335.000	1.17	22.0	WATER BASED
1544.000	1.25	25.0	WATER BASED
1870.000	1.58	32.0	WATER BASED
2381.000	1.72	31.0	WATER BASED
2480.000	1.70	28.0	WATER BASED
2784.000	1.72	26.0	WATER BASED

DRILL STEM TEST

INTERVALS AND PRESSURES

Test no.	interval meter	Choke size	Pressure (PSI)		
			WHP	BTHP	FFP
1.0	2276.200 - 2282.200 Test temperature: 84.2 °C	12.7	1517.0	4880.3	0.0
2.0	2229.000 - 2235.000 Test temperature: 83.4 °C	12.7	1841.9	4275.5	0.0
3.0	2205.500 - 2209.500 Test temperature: 82.1 °C	14.3	2266.8	4832.4	

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	0	1685	0.000	0.000	0
2.0	881	59383	0.841	0.722	68
3.0	1460	96450	0.840	0.695	66

DRILL BIT CUTTINGS AND WET SAMPLES

SAMPLE TYPE	INTERVAL BELOW KB	NUMBER OF SAMPLES
Cuttings	340-2724	240
Wet Samples		

SHALLOW GAS

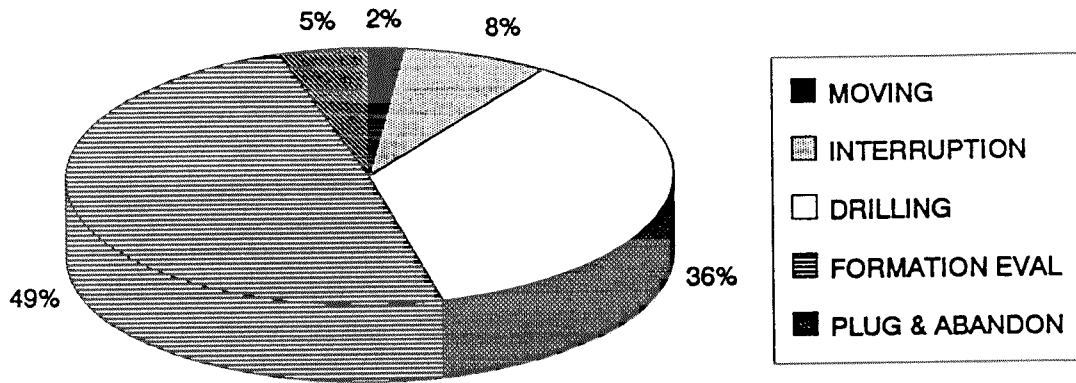
Interval below KB	REMARKS

AVAILABLE LOGS

LOG TYPE	INTERVALS	1/200	1/500	Div.
MWD	327.000 - 2781.000	X	X	
DIFL BHC AC GR	838.000 - 1853.000	X	X	
DIFL BHC AC GR	1852.000 - 2784.000	X	X	
CDL GR	838.000 - 1836.000	X	X	
CDL CNL GR	2100.000 - 2480.000	X	X	
CDL CNL GR	1852.000 - 2784.000	X	X	
CDL CNL GR	2140.000 - 2784.000	X	X	
DLL MLL GR	2100.000 - 2476.000	X	X	
DLL MLL GR	2125.000 - 2784.000	X	X	
SHDT	1852.000 - 2784.000	X		
CDM AP/4-ARM COMPUTED	1852.000 - 2784.000	X	X	
FMT HP C.G.	2171.000 - 2312.000			X
FMT HP C.G.	2210.000 - 2474.000	X		X
FMT HP C.G.	2210.000 - 2692.000			X
FMT HP C.G.	0.000 - 2784.000			X
FMT	0.000 - 2784.000			X
AC CBL VDL GR	600.000 - 1852.000	X		X
AC CBL VDL GR	1450.000 - 2326.000	X		X
AC CBL VDL GR	2095.000 - 2266.000	X		
AC CBL VDL SIGNATURE	2065.000 - 2266.000	X		
TEMP. DATA LOG	330.000 - 2775.000			1:5000
WIRELINE DATA PRESS.	850.000 - 2784.000			1:5000
PRESSURE EVALUATION	216.000 - 2784.000			1:5000
DRILLING DATA PRESSURE	216.000 - 2784.000			1:5000
MUD	332.000 - 2784.000			X
VELOCITY LOG L.T.S.	838.000 - 2784.000			1:1000X
(Airgun well velocity and calibr.log data				1 stk.)
(Display of well velocity survey rec. 1-6				6 stk.)
(Two-way travel time. 5-10-20 cm/s				3 stk.)
(Synthetic seismogram, marine, 10-20 cm/s				8 stk.)
(VSP, 10-20 cm/s				11 stk.)

DAILY DRILLING REPORT SYSTEM

MAIN OPERATIONS FOR WELL: 34/07-12



Main operation	Minutes	Hrs	% of total
MOVING	2160	36,0	2,21
INTERRUPTION	7590	126,5	7,75
DRILLING	35490	591,5	36,24
FORMATION EVAL	48120	802,0	49,14
PLUG & ABANDON	4560	76,0	4,66
<i>Total</i>	<i>97920</i>	<i>1632,0</i>	<i>100,00</i>

SUB OPERATIONS FOR WELL: 34/07-12

MAIN OPERATION: MOVING

Sub operation	Minutes	Hrs	% of total
POSITION	720	12,0	33,33
ANCHOR	1440	24,0	66,67
<i>Total</i>	2160	36,0	100,00

MAIN OPERATION: INTERRUPTION

Sub operation	Minutes	Hrs	% of total
MAINTAIN/REP	2790	46,5	36,76
WAIT	2970	49,5	39,13
WELL CONTROL	30	0,5	0,40
FISH	1800	30,0	23,72
<i>Total</i>	7590	126,5	100,00

MAIN OPERATION: DRILLING

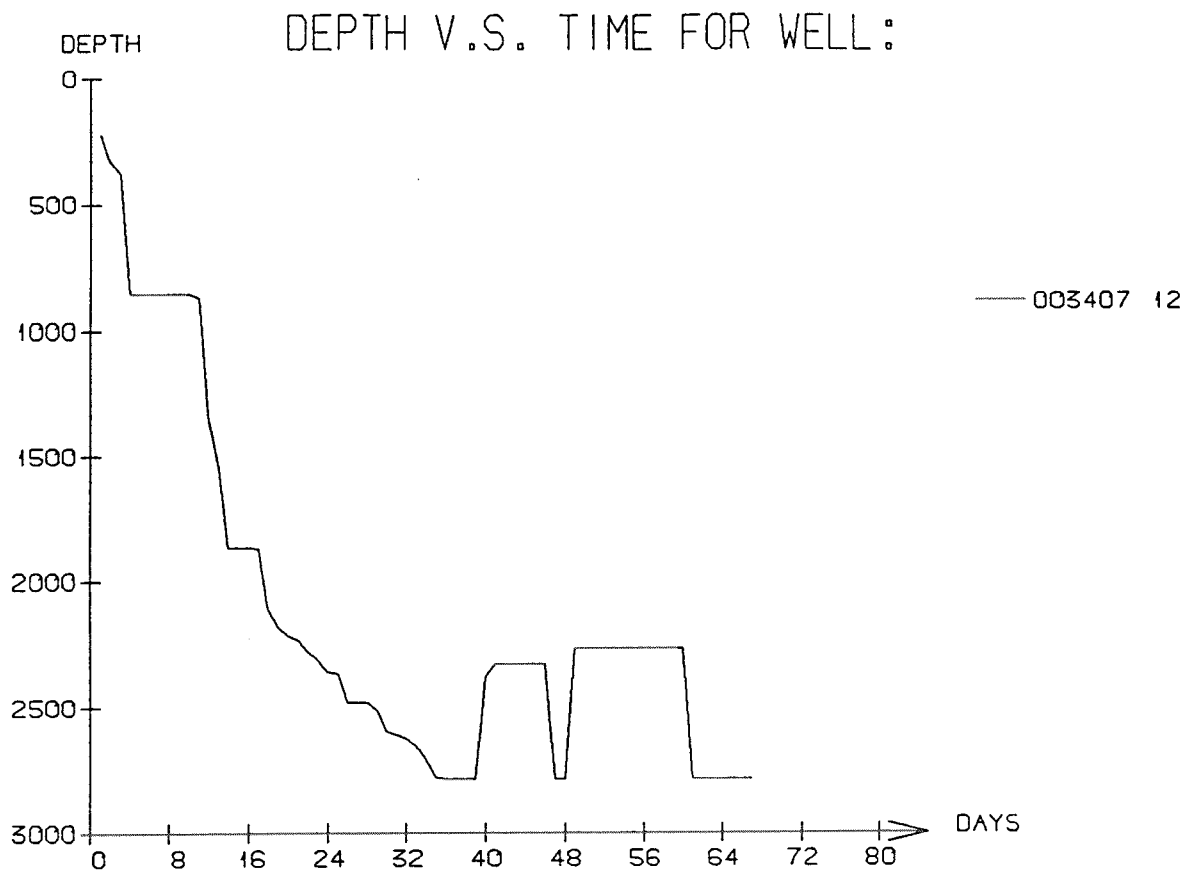
Sub operation	Minutes	Hrs	% of total
BOP/WELLHEAD EQ	3120	52,0	8,79
TRIP	6960	116,0	19,61
DRILL	14580	243,0	41,08
SURVEY	120	2,0	0,34
CIRC/COND	750	12,5	2,11
CASING	6540	109,0	18,43
UNDERREAM	1140	19,0	3,21
PRESS DETECTION	360	6,0	1,01
BOP ACTIVITIES	1380	23,0	3,89
REAM	540	9,0	1,52
<i>Total</i>	35490	591,5	100,00

MAIN OPERATION: FORMATION EVAL

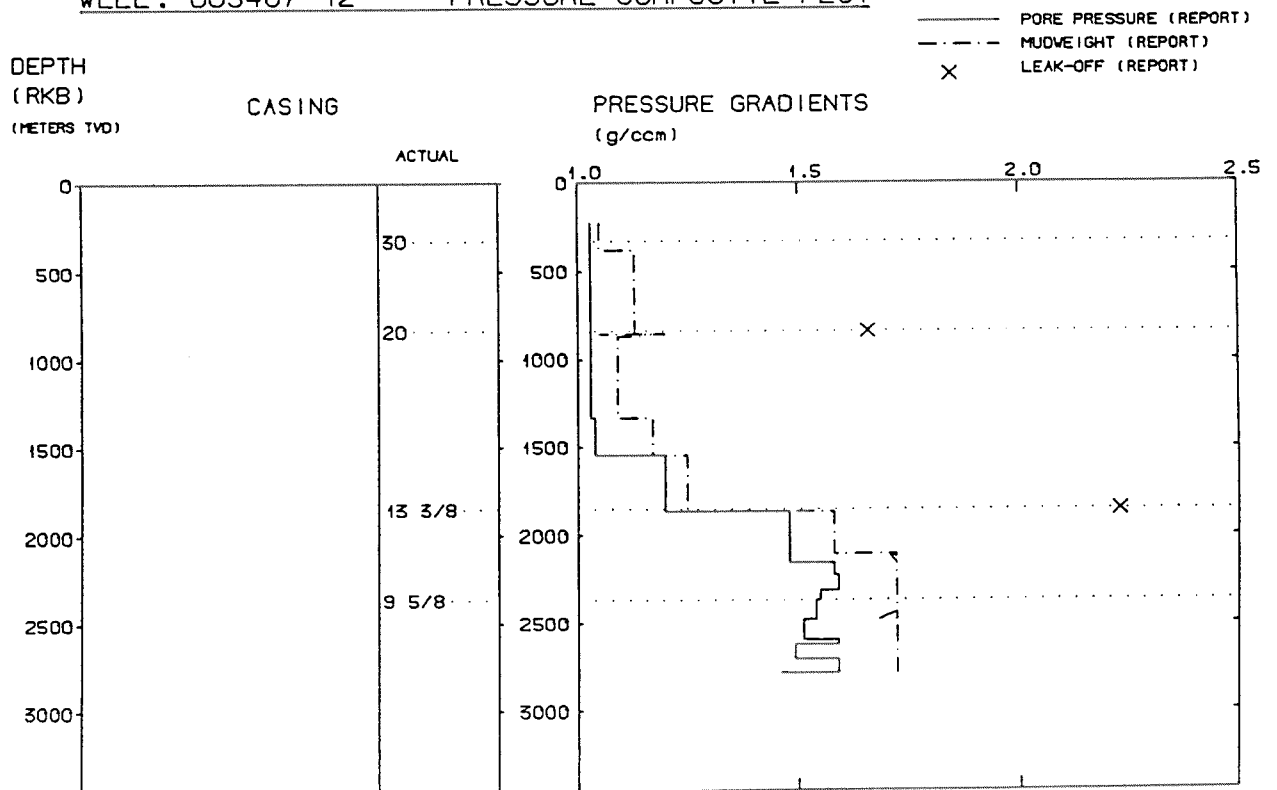
Sub operation	Minutes	Hrs	% of total
CIRC/COND	930	15,5	1,93
TRIP	8760	146,0	18,20
LOG	7800	130,0	16,21
CORE	4620	77,0	9,60
CIRC SAMPLES	120	2,0	0,25
DST	25680	428,0	53,37
OTHER	210	3,5	0,44
<i>Total</i>	48120	802,0	100,00

MAIN OPERATION: PLUG & ABANDON

Sub operation	Minutes	Hrs	% of total
TRIP	2190	36,5	48,03
CIRC/COND	120	2,0	2,63
CEMENT PLUG	390	6,5	8,55
CUT	720	12,0	15,79
EQUIP RECOVERY	1050	17,5	23,03
OTHER	90	1,5	1,97
<i>Total</i>	4560	76,0	100,00



WELL : 003407 12 PRESSURE COMPOSITE PLOT



Well History 34/7-11 X & 12

GENERAL:

Wells 34/7-11 X and 12 was designed to drill the "B" structure in the southern part of block 34/7. The primary objective was to test the hydrocarbon potential in the structure. Secondary objectives were to establish the thickness and reservoir quality of the Brent Group, and assess the potential of the Dunlin Group's Cook Formation as well as the Statfjord Formation. Determining the OWC was another important objective. The well was prognosed to terminate in the upper Lunde Formation of the Triassic Hegre Group. TD was prognosed to 2900 m RKB.

OPERATIONS:

Wildcat well 34/7-11 X was spudded by Wilh. Wilhelmsen semi-submersibel rig Treasure Saga 2 October 1987 and completed 11 October 1987. The well was drilled through the Pliocene Late Miocene Nordland Group, and terminated at a depth of 861 m RKB, junked due to technical reasons.

Wildcat well 34/7-12 was spudded by the same unit 11 October 1987, after having moved the rig 20 m northward, and was completed 17 December 1987 at a depth of 2784 m RKB in Triassic rocks.

The Brent Group came in at 2169 m RKB, and Statfjord Formation at 2606 m RKB. Lunde Formation was encountered at 2763 m RKB. Oil/water contact was defined in the Ness Formation at 2250 m RKB.

Coring commenced from 2169 m RKB, and a total of 10 cores were cut in the Brent Group, and 20 m into the Dunlin Group, to a depth of 2360,5 m RKB with a recovery of 94.4 %. The well was plugged and abandoned as an oil discovery.

TESTING:

Three DST-tests were performed in well 34/7-12.

GEOLOGICAL TOPS

WELL: 34/7-11,12

	Depth m (RKB)
<i>Nordland Group</i>	327,0
<i>Utsira Fm</i>	930,0
 <i>Hordaland Group</i>	 1021,0
 <i>Rogaland Group</i>	 1643,5
<i>Balder Fm</i>	1643,5
<i>Sele Fm</i>	1691,5
<i>Lista Fm</i>	1801,0
 <i>Shetland Group</i>	 1832,0
<i>Jordsalfare Fm</i>	1832,0
<i>Kyrre Fm</i>	2014,0
 <i>Viking Group</i>	 2160,5
<i>Heather Fm</i>	2160,5
 <i>Brent Group</i>	 2169,0
<i>Tarbert Fm</i>	2169,0
<i>Ness Fm</i>	2213,0
<i>Etive Fm</i>	2251,5
<i>Rannoch Fm</i>	2268,5
<i>Broom Fm</i>	2333,5
 <i>Dunlin Group</i>	 2340,5
<i>Drake Fm</i>	2340,5
<i>Cook Fm</i>	2462,0
<i>Burton Fm</i>	2518,0
<i>Amundsen Fm</i>	2547,0
 <i>Statfjord Fm</i>	 2606,0
 <i>Hegre Group</i>	 2763,0
<i>Lunde Fm</i>	2763,0
 TD.	 2784,0