

Well no : 25/02-11

Operator : ELF

Coordinates : 59 52 27.86 N
02 30 59.58 E

UTM coord. : 6637677 N
472930 E

Licence no : 112

Permit no : 536

Rig : NORTRYM

Rig type : SEMI-SUB.

Contractor : GOLAR-NOR OFFSHORE A/S

Bottom hole temperature : 0 deg.C

Elev. KB : 25 M

Spud. date : 87.02.20

Water depth : 118 M

Compl. date : 87.05.10

Total depth : 2075 M

Spud. class : WILDCAT

Form. at TD : E.TERTIARY

Compl. class : P&A. OIL/GAS DISC.

Prod. form : TERTIARY

Seisloca : 8504 - 328 SP. 10253

LICENSEES

21.800000	ELF AQUITAINE NORGE A/S
17.300000	NORSK HYDRO PRODUKSJON A.S
50.000000	DEN NORSKE STATS OLJESELSKAP A.S
10.900000	TOTAL NORGE 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	229.0	36	357.0	.
SURF.COND.	20	765.0	26	808.0	1.38
INTERM.	13 3/8	1214.0	17 1/2	1324.0	1.52
INTERM.	9 5/8	1936.0	12 1/4	1962.0	1.58
LINER	7	2069.0	8 1/2	2075.0	.

CONVENTIONAL CORES

Core no.	Intervals cored meters	Recovery		Series
		M	%	
1	1055.0 - 1073.0	0.0	0.0	
2	1951.0 - 1969.0	18.0	100.0	
3	1969.0 - 1969.8	0.8	100.0	
4	1973.0 - 1975.0	2.0	100.0	

MUD PROPERTIES

Depth below KB meter	Mud weigth g/cm3	Viscosity	Mud type
658.000	1.09	29.0	WATER BASED
678.000	1.10	32.0	WATER BASED
800.000	1.11	27.0	WATER BASED
840.000	1.05	17.0	WATER BASED
917.000	1.06	19.0	WATER BASED
1055.000	1.07	22.0	WATER BASED
1073.000	1.06	23.0	WATER BASED

1230.000	1.07	22.0	WATER BASED
1324.000	1.08	22.0	WATER BASED
1508.000	1.10	23.0	WATER BASED
1632.000	1.15	26.0	WATER BASED
1900.000	1.17	36.0	WATER BASED
1947.000	1.18	35.0	WATER BASED

DRILL STEM TEST

INTERVALS AND PRESSURES

Test no	interval meter	Choke size	Pressure (PSI)		
			WHP	BTHP	FFP
1.0	1950.000 - 1955.000	No results, screen plugged.			
2.0	1950.000 - 1955.000	No results, technical problems			
3.0	1950.000 - 1955.000	30.5	870.2	2613.0	
Test temperature: 61 °C					

RECOVERY

Test no.	Oil Sm3/d	Gas Sm3/d	Oil grav. g/cm3	Gas grav. rel. air	GOR m3/m3
1.0	No results, screen plugged				
2.0	No results, technical problems				
3.0	0	666000	0.000	0.600	0

DRILL BIT CUTTINGS AND WET SAMPLES

SAMPLE TYPE	INTERVAL BELOW KB	NUMBER OF SAMPLES
Cutting	240-2075	80
Wet Samples	240-2075	250

SHALLOW GAS

Interval below KB REMARKS

AVAILABLE LOGS

LOG TYPE	INTERVALS	1/200	1/500	Div.
DIL GR LSS	229.000 - 800.000	X	X	
DIL GR LSS	764.000 - 1226.000	X	X	
DIL GR LSS	1214.000 - 1940.000	X	X	
DIL GR LSS	1935.000 - 2073.000	X	X	
LDL CNL NGL	764.000 - 1226.200	X	X	
LDL CNL NGL	1935.000 - 2074.000	X		
LDT GR	1214.000 - 1940.000	X	X	
DLL MSFL GR	900.000 - 1200.000	X	X	
DLL GR MSFL	1935.000 - 2071.000	X	X	

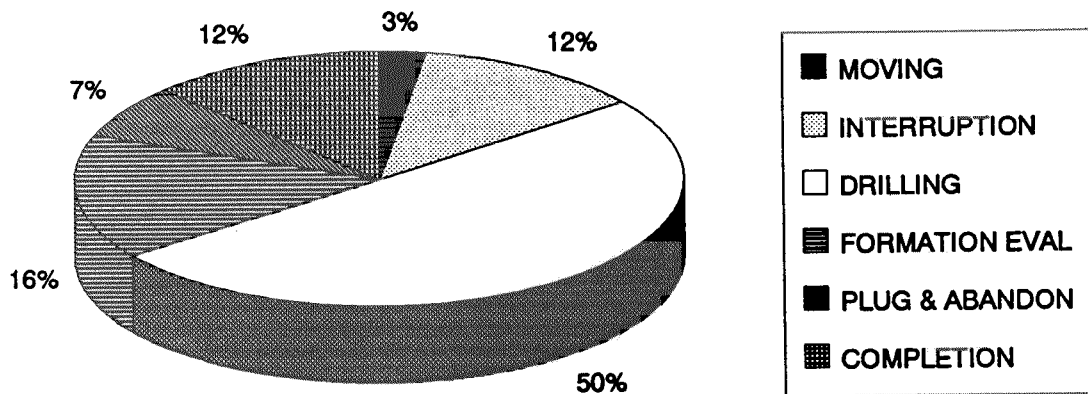
SHDT	764.000 - 1221.000	X	1:10
SHDT	1935.000 - 2075.000	X	1:10
RFT CASED HOLE	764.000 - 1214.000		
RFT HP	1954.000 - 2040.000		
BGT	229.000 - 780.000	X	X
NGT PLAYBACK	764.000 - 1226.200	X	
NGL PLAYBACK	1935.000 - 2074.000	X	X
CBL VDL GR	500.000 - 1208.000	X	
CBL VDL GR CCL	890.000 - 1930.000	X	
CBL VDL GR CCL	1750.000 - 2019.500	X	

VELOCITY LOG 229.000 - 2073.000 1:1000 X

(Airgun velocity survey & calibrated log	1 stk.)
(Display of velocity survey records 1&2	2 stk.)
(VSP,interpreters composite, 10cm/s	2 stk.)
(Two-way travel time,10cm/s	1 stk.)
(Synthetic seismogram	7 stk.)

DAILY DRILLING REPORT SYSTEM

MAIN OPERATIONS FOR WELL: 25/02-11



Main operation	Minutes	Hrs	% of total
MOVING	3180	53,0	2,66
INTERRUPTION	14460	241,0	12,10
DRILLING	60240	1004,0	50,40
FORMATION EVAL	18930	315,5	15,84
PLUG & ABANDON	8100	135,0	6,78
COMPLETION	14610	243,5	12,22
<i>Total</i>	<i>119520</i>	<i>1992,0</i>	<i>100,00</i>

SUB OPERATIONS FOR WELL: 25/02-11

MAIN OPERATION: MOVING

Sub operation	Minutes	Hrs	% of total
TRANSIT	1290	21,5	40,57
ANCHOR	1890	31,5	59,43
<i>Total</i>	3180	53,0	100,00

MAIN OPERATION: INTERRUPTION

Sub operation	Minutes	Hrs	% of total
MAINTAIN/REP	1950	32,5	13,49
FISH	6330	105,5	43,78
WAIT	4650	77,5	32,16
SIDETRACK	990	16,5	6,85
OTHER	540	9,0	3,73
<i>Total</i>	14460	241,0	100,00

MAIN OPERATION: DRILLING

Sub operation	Minutes	Hrs	% of total
TRIP	13830	230,5	22,96
CASING	13020	217,0	21,61
BOP/WELLHEAD EQ	3630	60,5	6,03
DRILL	16800	280,0	27,89
HOLE OPEN	2490	41,5	4,13
SURVEY	990	16,5	1,64
REAM	2100	35,0	3,49
UNDERREAM	4170	69,5	6,92
CIRC/COND	2520	42,0	4,18
BOP ACTIVITIES	630	10,5	1,05
PRESS DETECTION	60	1,0	0,10
<i>Total</i>	60240	1004,0	100,00

MAIN OPERATION: FORMATION EVAL

Sub operation	Minutes	Hrs	% of total
OTHER	540	9,0	2,85
LOG	6060	101,0	32,01
CIRC SAMPLES	390	6,5	2,06
TRIP	5340	89,0	28,21
CORE	630	10,5	3,33
RFT/FIT	1380	23,0	7,29
CIRC/COND	2100	35,0	11,09
DST	240	4,0	1,27
PROD TEST	2250	37,5	11,89
<i>Total</i>	18930	315,5	100,00

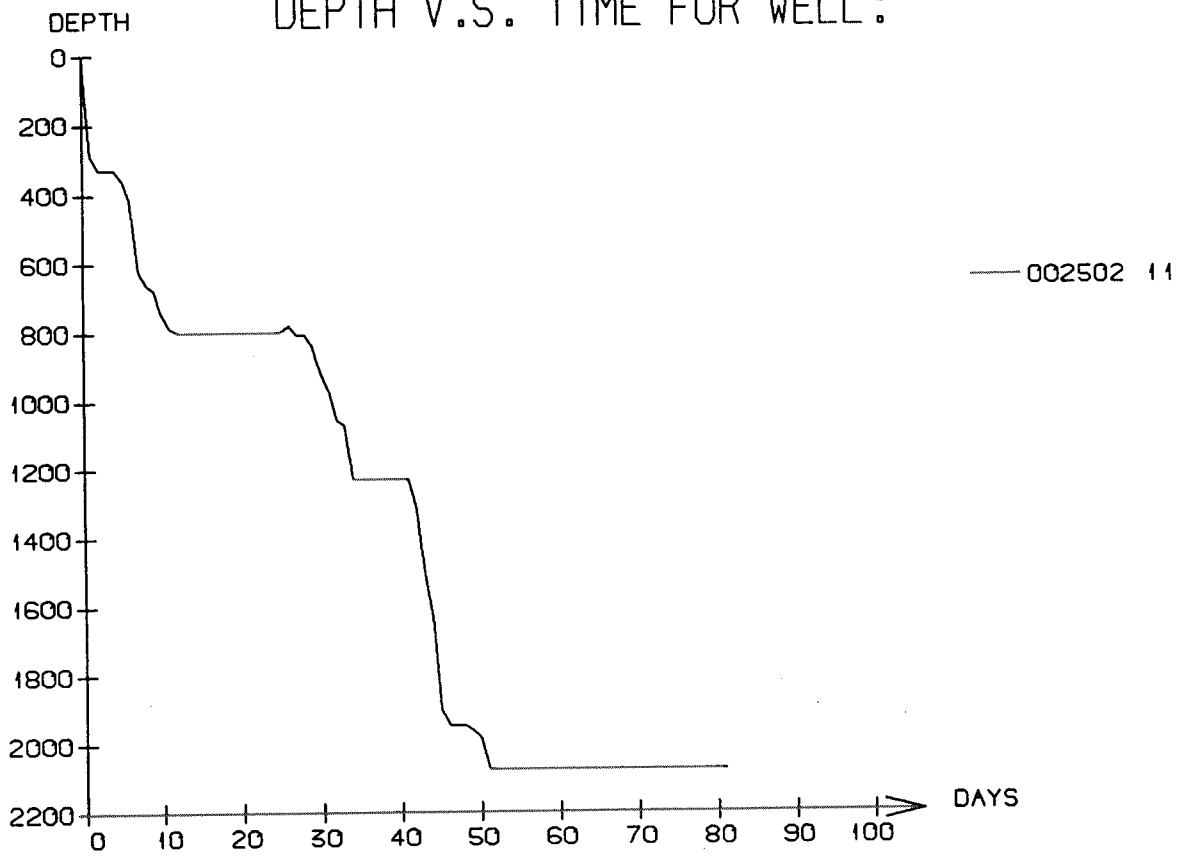
MAIN OPERATION: PLUG & ABANDON

Sub operation	Minutes	Hrs	% of total
TRIP	3030	50,5	37,41
CEMENT PLUG	960	16,0	11,85
CIRC/COND	60	1,0	0,74
OTHER	60	1,0	0,74
MECHANICAL PLUG	300	5,0	3,70
PERFORATE	420	7,0	5,19
EQUIP RECOVERY	2250	37,5	27,78
CUT	1020	17,0	12,59
<i>Total</i>	8100	135,0	100,00

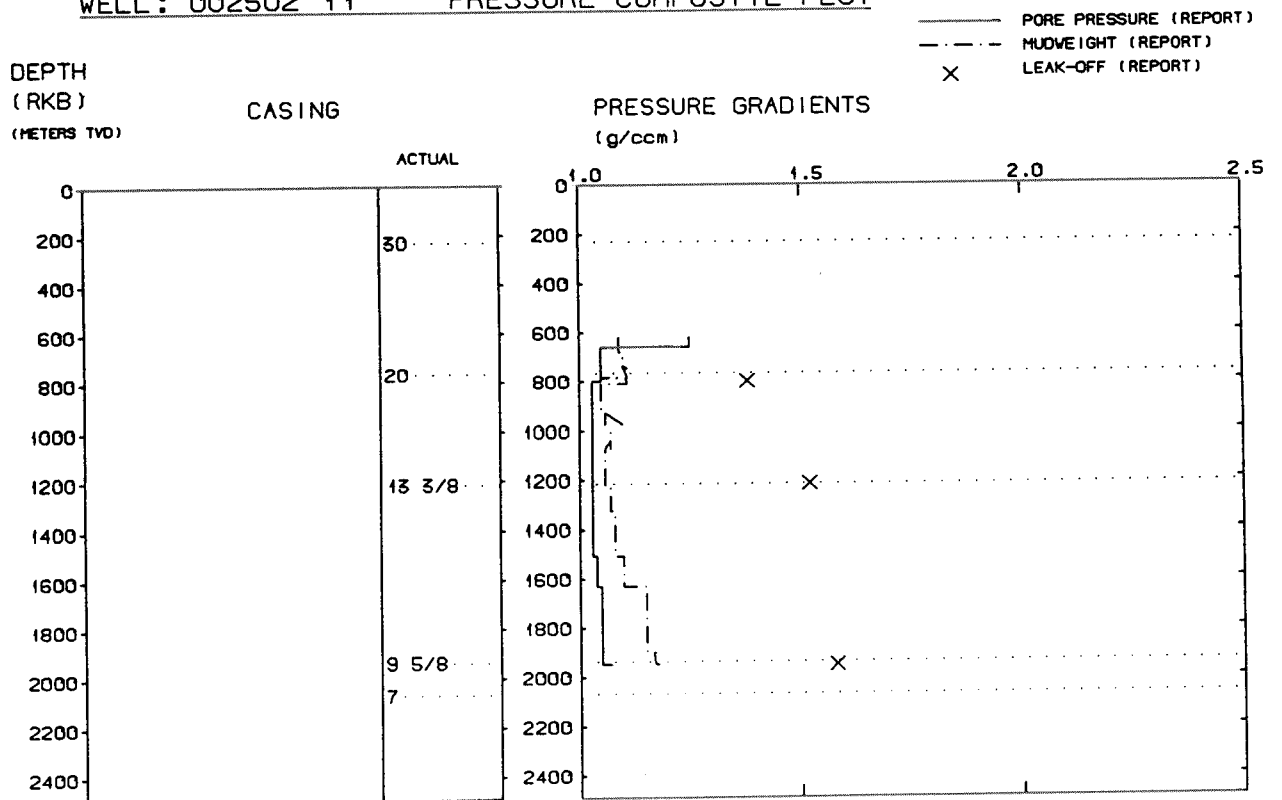
MAIN OPERATION: COMPLETION

Sub operation	Minutes	Hrs	% of total
BOP/WELLHEAD EQ	750	12,5	5,13
COMPL STRING	9030	150,5	61,81
FLOW	2850	47,5	19,51
CIRC/COND	480	8,0	3,29
PERFORATE	420	7,0	2,87
WAIT	1020	17,0	6,98
OTHER	60	1,0	0,41
<i>Total</i>	14610	243,5	100,00

DEPTH V.S. TIME FOR WELL:



WELL: 002502 11 PRESSURE COMPOSITE PLOT



Well History 25/2-11.

GENERAL:

Well 25/2-11 was the second well to be drilled on the East Frigg Gamma structure in the Viking Graben. Seismic anomalies indicated shallow gas in the area.

The well was primarily designed to test the reservoir productivity. Secondly to test for possible gas accumulation in Late Oligocene sands which might represent a continuation of the gas-bearing sands encountered in the 25/2-10 well, which due to technical problems had to be abandoned without logging and testing.

TD was prognosed to be 2075 m, the Frigg Fm at 1930 m and the Oligocene sands at 1005 m.

OPERATIONS:

Wildcat well 25/2-11 was spudded 20 February 1987 by Golar-Nor Offshore semi-submersible rig Nordtrym and completed 11 May 1987 at a depth of 2075 m RKB in rocks of Eocene age. Due to the seismic anomalies that indicated shallow gas, the well was spudded 100 m north of the original location.

Top Oligocene was penetrated 20 m below prognosed depth, and top Frigg formation came 23 m below prognosis. Oil/water contact was encountered at 1975 m RKB, and gas/oil contact at 1960 m RKB.

Hard calcite cemented sands were encountered in Miocene where unconsolidated sands were prognosed. This caused 17 extra days of drilling, underreaming and sidetracking. Coring commenced from 1950 m RKB to 1986 m RKB with 50% recovery. The instability of shales on top of the Frigg formation excluded open hole testing, and the 7" liner was perforated for testing purposes.

The well was plugged and abandoned as a gas and oil discovery.

TESTING:

Three DST-tests were performed in this well.

GEOLOGICAL TOPS

WELL: 25/2-11

Depth m (RKB)

<i>Nordland Group</i>	143.0
<i>Utsira Fm</i>	273.0
<i>Hordaland Group</i>	1024.5
<i>Undefined</i>	1024.5
<i>Skade Fm</i>	1046.0
<i>Undefined</i>	1262.0
<i>Grid Fm</i>	1352.0
<i>Undefined</i>	1450.0
<i>Frigg Fm</i>	1950.0
<i>TD=</i>	2075.0