

Well no : 30/9-11 Operator : HYDRO

Coordinates : 60° 19' 27.89" N UTM coord. : 668770050 N
 02° 55' 44.00" E 49607229 E

Licence no : 104 Permit no : 652

Rig : VILDKAT EXPLORER Rig type : SEMI-SUB.

Contractor : TRANSNOR RIG AS

Bottom hole temp: 89 °C Elev. KB : 25 M

Spud. date : 90.10.27 Water depth : 108 M

Compl. date : 90.11.19 Total depth : 2570 M

Spud. class : WILDCAT Form. at TD E.JURASSIC

Compl. class : P&A. DRY HOLE Prod.form. :

Seisloca : NH 8502-187 CDP-LINJE 158 - COL 745

LICENSEES

5,000000 CONOCO PETROLEUM NORGE A/S
 5,000000 DNO OLJE A/S
 30,000000 NORSK HYDRO PRODUKSJON A.S
 5,000000 SAGA PETROLEUM A.S.
 50,000000 DEN NORSKE STATS OLJESELSKAP A.S
 5,000000 NORSK AGIP 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	243,0	36	245,0	
INTERM.	13 3/8	906,0	17 1/2	922,0	1,56
INTERM.	9 5/8	2242,0	12 1/4	2260,0	1,58
OPEN HOLE			8 1/2	2570,0	

CONVENTIONAL CORES

Core no.	Intervals cored meters	Recovery	
		M	%
1	2382,0	- 2402,0	20,0 100,0
2	2450,0	- 2454,0	4,0 100,0
3	2455,0	- 2464,0	9,0 100,0
4	2484,0	- 2511,0	27,0 100,0

MUD

Depth	Mud weight	Visc.	Mud type
922,000	1,05		WATER BASED
922,000	1,20	22,0	WATER BASED
1041,000	1,42	14,0	WATER BASED
1164,000	1,20	23,0	WATER BASED
1417,000	1,30	16,0	WATER BASED
1918,000	1,40	18,0	WATER BASED
2140,000	1,24	15,0	WATER BASED

Depth	Mud weight	Visc.	Mud type
2351,000	1,40	13,0	WATER BASED
2403,000	1,22	14,0	WATER BASED
2465,000	1,60	16,0	WATER BASED
2511,000	1,22	15,0	WATER BASED
2570,000	1,23	15,0	WATER BASED

DRILL BIT CUTTINGS AND WET SAMPLES

Sample type	Interval below KB	Number of samples
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SHALLOW GAS

Interval below KB	Remarks
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AVAILABLE LOGS

Log type	Intervals
AMS	905,0 - 2247,0
CDM SHDT	2245,0 - 2565,0
DIL LSS SP GR	905,0 - 2565,0
DRILLING DATA PRESS.	922,0 - 2570,0
FMS NGT CAL	2243,0 - 2562,0
LDL CNL GR	905,0 - 2565,0
MUD	922,0 - 2570,0
MWD	134,0 - 2568,0
NGS	2243,0 - 2562,0
CBL VDL	1000,0 - 2242,0
RFT HP GR	2275,5 - 2504,0
SYNTHETIC SEISMOGRAM	
TEMPERATURE DATA	150,0 - 2570,0
VSP	800,0 - 2800,0
CST GR	2244,0 - 2531,0
VELOCITY	1000,0 - 2560,0

Main operations for well: 30/9-11**Main operation: DRILLING**

Sub operation:	Minutes:	Hours:	% of total:
BOP ACTIVITIES	630	10,5	3,52
BOP/WELLHEAD EQ	870	14,5	4,87
CASING	3960	66,0	22,15
CIRC/COND	540	9,0	3,02
DRILL	7620	127,0	42,62
REAM	120	2,0	0,67
TRIP	4140	69,0	23,15
Total	17880	298,0	100,00

Main operation: FORMATION EVAL

Sub operation:	Minutes:	Hours:	% of total:
CIRC SAMPLES	150	2,5	1,63
CIRC/COND	540	9,0	5,86
CORE	1380	23,0	14,98
LOG	3180	53,0	34,53
TRIP	3960	66,0	43,00
Total	9210	153,5	100,00

Main operation: INTERRUPTION

Sub operation:	Minutes:	Hours:	% of total:
FISH	330	5,5	6,51
MAINTAIN/REP	900	15,0	17,75
OTHER	90	1,5	1,78
WAIT	3750	62,5	73,96
Total	5070	84,5	100,00

Main operation: MOVING

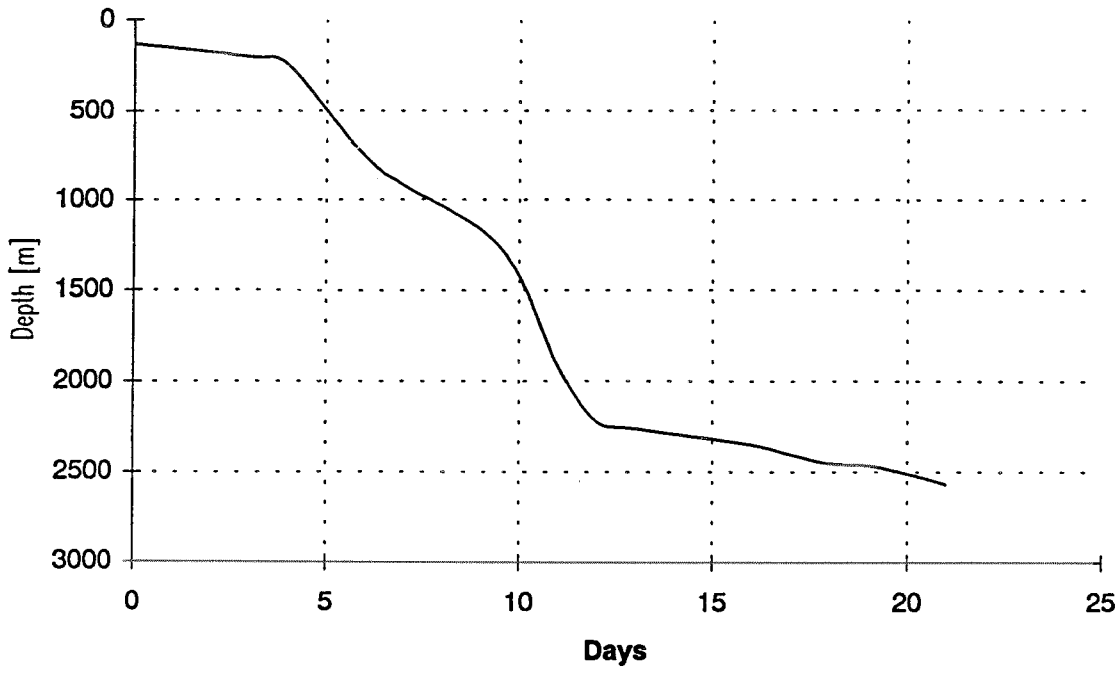
Sub operation:	Minutes:	Hours:	% of total:
ANCHOR	2760	46,0	78,63
TRANSIT	750	12,5	21,37
Total	3510	58,5	100,00

Main operation: PLUG & ABANDON

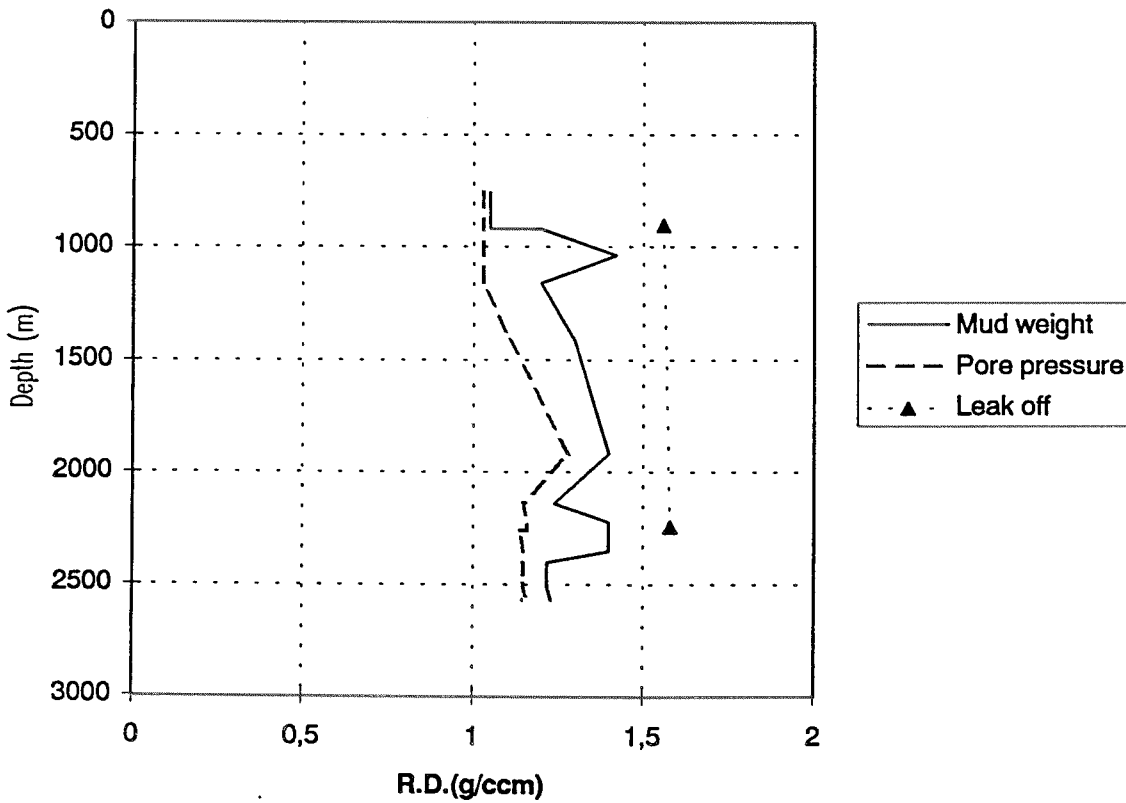
Sub operation:	Minutes:	Hours:	% of total:
CEMENT PLUG	90	1,5	4,05
CIRC/COND	240	4,0	10,81
CUT	210	3,5	9,46
EQUIP RECOVERY	630	10,5	28,38
MECHANICAL PLUG	420	7,0	18,92
TRIP	630	10,5	28,38
Total	2220	37,0	100,00

Total time used: Hours

Depth vs time for well: 30/9-11



Composite plot for well: 30/9-11



Well History 30/9-11.

General:

Well 30/9-11 was designed to drill the eastern part of the J-East structure, and was the seventh and last commitment well in the license. The main target of the well was the Tarbert/ Ness and the Etive/Rannoch/Oseberg (ORE) reservoirs in the Middle Jurassic Brent Group. The Statfjord formation was considered to be non prospective at this location. Amplitude anomalies indicated possible shallow gas at 219-, 225- og 230 m RKB. The primary objectives of the well were to:

- prove oil within the Brent Group of the J-East prospect and subsequently increase the probability for filling of the J-Central prospect.
- define oil/water contacts for the Tarbert/Ness and ORE reservoirs.
- verify the reservoir model for the Tarbert sands postulated to thicken downdip, and thereby establish the potential for the Tarbert/Ness reservoirs.
- verify the reservoir model for the ORE sequence.

The well was planned to be drilled 50 m into the Dunlin formation.

Operations:

Wildcat well 30/9-11 was spudded 27 October 1990 by the semi-submersible rig Vildkat Explorer, and completed 19 November 1990 at a depth of 2570 m RKB in rocks of Early Jurassic age. No shallow gas was encountered in the well. Drilling went on without any significant problems. A total of four cores were cut in the Brent Group. The Brent Group was found to be entirely water bearing. A total of 30 sidewall cores were attempted, and 26 were recovered. During drilling of the 30" hole, boulders were encountered between 186 m and 201 m RKB. The well was temporary plugged and abandoned and prepared to be sidetracked below the 13 3/8" casing shoe.

Testing:

No DST tests were performed in this well.

Geological Tops.

Well:30/9-11

	Depth m (RKB).
Nordland Group	134,0
Utsira Fm	653,0
Hordaland Group	829,0
Rogaland Group	1951,0
Balder Fm	1951,0
Sele Fm	1975,0
Lista Fm	2050,0
Våle Fm	2188,0
Shetland Group	2193,0
Cromer Knoll Group	2228,0
Viking Group	2291,0
Heather Fm	2291,0
Brent Group	2384,0
Tarbert Group	2384,0
Ness Fm	2390,0
Etive/Rannoch Fm	2507,0
Oseberg Fm	2514,0
Dunlin Group	2516,0
Drake Fm	2516,0
T.D.	2570,0