

Well no :	7/12-9	Operator :	BP
Coordinates :	57° 04' 21.52" N 02° 52' 56.51" E	UTM coord. :	632562041 N 49286744 E
Licence no :	19	Permit no :	630
Rig :	ROSS ISLE	Rig type :	SEMI-SUB.
Contractor :	TRANSNOR RIG AS		
Bottom hole temp:	166 °C	Elev. KB :	23,5 M
Spud. date :	90.03.18	Water depth :	70 M
Compl. date :	90.05.14	Total depth :	3820 M
Spud. class :	APPRAISAL	Form. at TD	TRIASSIC
Compl. class :	SUSPENDED. OIL/GAS.	Prod.form. :	
Seisloca :	BP84 - 135 BP84 -X- 570		

LICENSEES

10,000000	CONOCO NORWAY INC.
5,000000	KS PELICAN & CO A/S
12,500000	DEN NORSKE STATS OLJESELSKAP A.S
15,000000	SVENSKA PETROLEUM EXPLORATION A/S
57,500000	BP PETROLEUM DEV. OF NORWAY AS

CASING AND LEAK-OFF TESTS

Type	Casing diam.	Depth below KB	Hole diam.	Hole depth below KB	Lot mud eqv. g/cm3
CONDUCTOR	30	166,0	36	170,0	
INTERM.	20	949,0	26	950,0	1,77
INTERM.	13 3/8	2342,0	17 1/2	2350,0	2,13
INTERM.	9 5/8	3680,0	12 1/4	3684,0	1,89
LINER	7	3735,0	8 1/2	3742,0	1,98
OPEN HOLE		3820,0	6	3820,0	

CONVENTIONAL CORES

Core no.	Intervals cored meters	Recovery	
		M	%
1	3689,0 - 3721,5	32,5	100,0

MUD

Depth	Mud weight	Visc.	Mud type
122,000	1,03		WATER BASED
404,000	1,06		WATER BASED
591,000	1,03		WATER BASED
942,000	1,06		WATER BASED
956,000	1,03		WATER BASED
1147,000	1,45		WATER BASED
1416,000	1,50	58,0	OIL BASED
1812,000	1,05	52,0	WATER BASED

Depth	Mud weight	Visc.	Mud type
3077,000	1,55	68,0	OIL BASED
3150,000	1,53	65,0	OIL BASED
3288,000	1,55	63,0	OIL BASED
3353,000	1,03		WATER BASED
3441,000	1,55	62,0	OIL BASED
3620,000	1,41	52,0	WATER BASED
3684,000	1,03		WATER BASED
3732,000	1,03		WATER BASED
3742,000	1,43	46,0	WATER BASED
3742,000	1,40	56,0	WATER BASED
3742,000	1,03		WATER BASED
3820,000	1,40	45,0	OIL BASED

DRILL STEM TEST

INTERVALS AND PRESSURES

Test no.	Interval meter	Choke size	Pressure (PSI) WHP	BTHP	FFP
1,0	3701 - 3719	12,7	286,5	3113	

Test temperature: N/A

RECOVERY

Test no.	Oil Sm3/d	Gas Sm3/d	Oil grav. g/cm3	Gas grav. rel. air	GOR m3/m3
1,0	140	12225	0,821	0,900	87

DRILL BIT CUTTINGS AND WET SAMPLES

Sample type	Interval below KB	Number of samples
WET SAMPLES	1500 - 2880	120
CUTTINGS	950 - 3820	270

SHALLOW GAS

Interval below KB	Remarks

AVAILABLE LOGS

Log type	Intervals	1/200	1/500	Div.
CBL VDL	453,0 - 615,0	X		
CBL VDL GR	1092,0 - 3731,0	X		
DIL LSS PCD GR	946,0 - 2325,0	X	X	

Log type	Intervals		1/200	1/500	Div.
DIL LSS PCD GR	2343,0	- 3676,0	X	X	
DIL GR BHC	3680,0	- 3739,0	X	X	*
DIL BHC GR	3736,0	- 3818,0	X	X	*
LDL CNL GR	3680,0	- 3742,0	X	X	*
LDL CNL GR	3736,2	- 3819,7	X	X	*
MUD	706,0	- 3820,0		X	
NGL RATIOS	3680,7	- 3742,0	X		
DRILLING DATA PRESS.	706,0	- 3820,0			2000
RFT GR	3703,0	- 3738,5	X		
RFT GR	3746,5	- 3784,5	X		
VELOCITY	946,0	- 3818,0		X	
SYNTHETIC SEISMOGRAM	10 cm/s			3	
WELL SEISMIC EDIT	10 cm/s	- 100 cm/c		3	

* BOTH 1:200 AND 1:500 ON THE SAME LOG.

Main operations for well: 7/12-9

Main operation: DRILLING

Sub operation:	Minutes:	Hours:	% of total:
BOP ACTIVITIES	750	12,5	1,36
BOP/WELLHEAD EQ	2265	37,8	4,12
CASING	10744	179,1	19,53
CIRC/COND	3480	58,0	6,33
DRILL	24042	400,7	43,71
OTHER	1530	25,5	2,78
REAM	1605	26,8	2,92
SURVEY	480	8,0	0,87
TRIP	8850	147,5	16,09
WAIT	1260	21,0	2,29
Total	55006	916,8	100,00

Main operation: FORMATION EVAL

Sub operation:	Minutes:	Hours:	% of total:
CIRC/COND	1440	24,0	8,16
CORE	450	7,5	2,55
DST	2880	48,0	16,33
LOG	4620	77,0	26,19
PROD TEST	3900	65,0	22,11
RFT/FIT	390	6,5	2,21
TRIP	3960	66,0	22,45
Total	17640	294,0	100,00

Main operation: INTERRUPTION

Sub operation:	Minutes:	Hours:	% of total:
MAINTAIN/REP	1514	25,2	34,22
OTHER	30	0,5	0,68
WAIT	2880	48,0	65,10
Total	4424	73,7	100,00

Main operation: MOVING

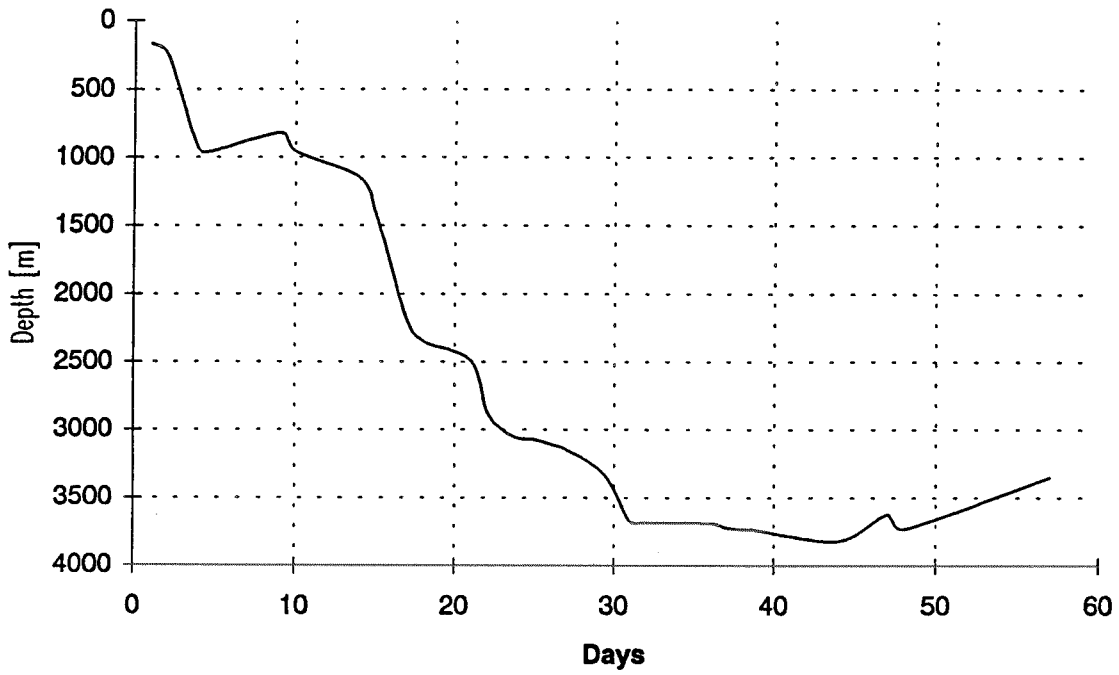
Sub operation:	Minutes:	Hours:	% of total:
ANCHOR	2130	35,5	57,72
SKID	1440	24,0	39,02
TRANSIT	120	2,0	3,25
Total	3690	61,5	100,00

Main operation: PLUG & ABANDON

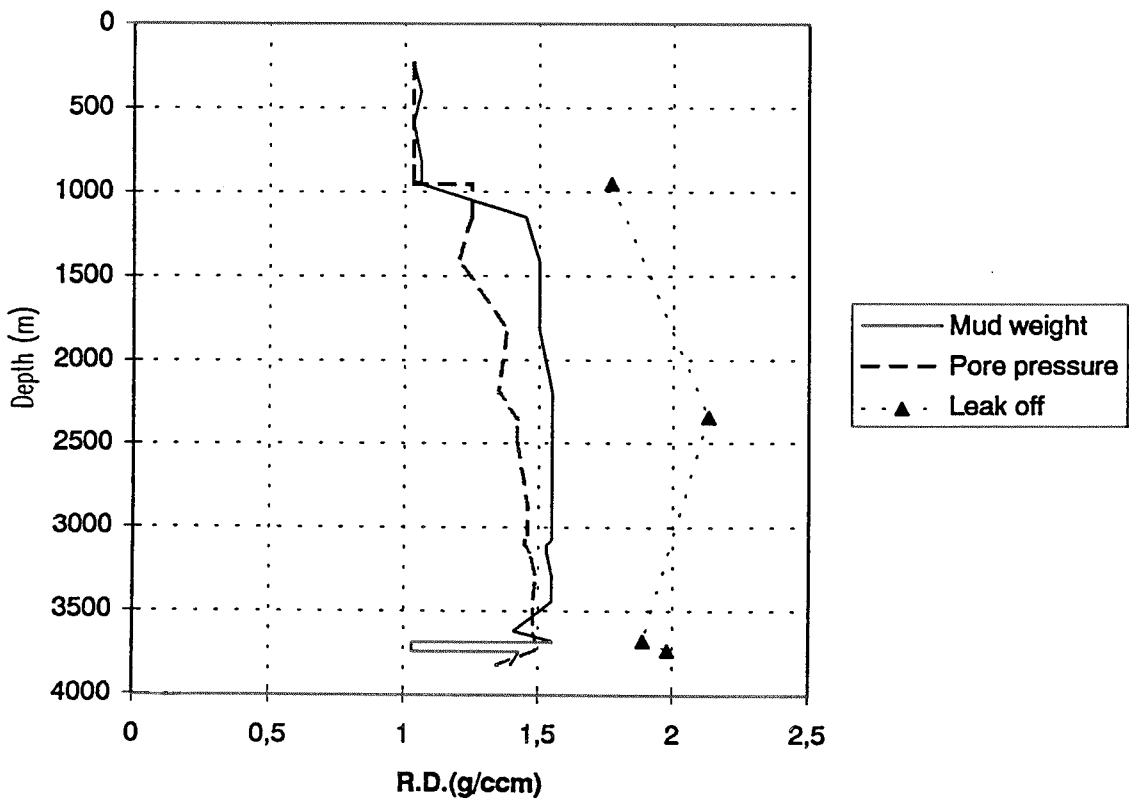
Sub operation:	Minutes:	Hours:	% of total:
CEMENT PLUG	960	16,0	13,88
CIRC/COND	630	10,5	9,11
CUT	165	2,8	2,39
EQUIP RECOVERY	945	15,8	13,67
MECHANICAL PLUG	420	7,0	6,07
OTHER	480	8,0	6,94
PERFORATE	240	4,0	3,47
TRIP	3075	51,3	44,47
Total	6915	115,3	100,00

Total time used: Hours

Depth vs time for well: 7/12-9



Composite plot for well: 7/12-9



Well History 7/12-9.

General:

Well 7/12-9 was the ninth appraisal well to be drilled on the Ula field. In addition fourteen development wells have been completed from the Ula Platform. The target of the well was Late Jurassic sandstones of the Ula formation. Details of the transition zone between the Early Carbonaceous member and the top of the Ula formation will be obtained by coring this section. The well was to be drilled 50 m below the base of the Ula formation to obtain details of the lower reservoir stratigraphy. The primary well objectives were to prove sufficient mobile oil in place in the South-East sector to support further development in this field extension.. A secondary objective of this well was as a possible future water injector. The information gained was to be used to evaluate whether sufficient reserves were present to support an economic development of the South-East Ula section of the field. The well would also penetrate the Ula lower members to enable a full evaluation of the Ula reservoir. Shallow gas has not been encountered in any of the wells previously drilled in the Ula Field.

Operations:

Appraisal well 7/12-9 was spudded by the semi-submersible rig Ross Isle 18 March 1990 and completed 15 May 1990 at a depth of 3820 m RKB in rocks of Triassic age. Shallow gas was encountered at 677-680 m RKB. The Ula formation was penetrated 20.5 m TVD shallower than predicted. The 6" section identified base Ula formation at 3759.5 m RKB, and the formation thickness was found to be 58.5 m. This is 20.5 m thinner than expected. The uppermost reservoir zones 1A - 1B are absent in this well, and all the remaining zones were thinner than prognosed. One core was cut from the lowermost Farsund formation down to the middle of the Ula formation reservoir zone 2B with 100 % recovery. Good oil shows were observed. Indications of stratigraphically localised zones of high pressure prohibited further coring. Well 7/12-9 reached TD in poorly sorted Triassic "Red Beds". The lowermost Ula formation and the Triassic sections were waterbearing. The well was plugged and abandoned with oil and gas shows.

Testing:

One DST test was performed and resulted in an oilrate of 140 Sm³/d through a 12.7 mm choke. GOR 87 Sm³/Sm³.

Geological Tops.

Well:7/12-9

	Depth m (RKB).
Nordland Group	92,0
Hordaland Group	
Rogaland Group	2771,5
Balder Fm	2771,5
Sele Fm	2804,0
Lista Fm	2888,0
Våle Fm	
Shetland Group	2961,0
Ekofisk Fm	2961,0
Tor Fm	3071,5
Hod Fm	3346,5
Hidra Fm	
Cromer Knoll Group	3425,5
Rødby Fm	3425,5
Valhall Fm	3487,0
Tyne Group	3631,5
Mandal Fm	3631,5
Farsund Fm	3651,5
Haugesund Fm	
Vestland Group	3701,0
Ula Fm	3701,0
Triassic Group	3759,5
Skagerak Fm	3759,5
T.D.	3823,0