

Well no : 2/ 1-06

Operator : BP

Coordinates	: 56 55 14.54 N 03 01 37.84 E	UTM coord.	: 6308700 N UTM zone 31 501654 E
Licence no	: 019 B	Permit no	: 413
Rig	: DYVI ALPHA	Rig type	: SEMI-SUB.
Contractor	: DYVI OFFSHORE A/S		
Bottom hole temperature	: 154 deg.C	Elev. KB	: 25 M
Spud date	: 84.04.30	Water depth	: 66 M
Compl. date	: 84.08.12	Total depth	: 4588 M
Spud class.	: APPRAISAL	Age at TD	: JURASSIC
Compl. class.	: P&A. OIL DISCOVERY		
Seis. loc.	: BP 80 - 27 B SP. 2268		

LICENSEES

26.625	BP PETR. DEV. OF NORWAY A/S
19.375	CONOCO NORWAY INC.
4.000	A/S PELICAN & CO KS
50.000	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	166.0	36	167.0	
SURF.COND.	20	626.0	26	635.0	1.56
INTERM.	13 3/8	2006.0	17 1/2	2016.0	1.90
INTERM.	9 5/8	4112.0	12 1/4	4121.0	2.12
LINER	7	4579.0	8 1/2	4583.0	

CONVENTIONAL CORES

Core no.	Intervals cored meters	Recovery		Series
		M	%	
1	4127.0 - 4153.7	26.7	99.9	UPPER JURASSIC
2	4153.7 - 4180.0	26.3	99.9	UPPER JURASSIC
3	4181.4 - 4208.5	27.1	99.9	UPPER JURASSIC
4	4208.5 - 4235.2	26.7	99.9	UPPER JURASSIC
5	4235.5 - 4245.6	10.1	99.9	UPPER JURASSIC
6	4245.5 - 4254.6	9.1	99.9	UPPER JURASSIC
7	4254.6 - 4263.2	8.6	99.9	UPPER JURASSIC
8	4263.2 - 4265.4	2.2	100.0	UPPER JURASSIC
9	4303.0 - 4313.2	10.2	100.0	UPPER JURASSIC
10	4313.2 - 4336.8	23.6	99.9	UPPER JURASSIC
11	4336.8 - 4364.3	27.5	99.9	UPPER JURASSIC
12	4364.3 - 4391.5	27.2	99.9	UPPER JURASSIC

MUD PROPERTIES

Depth below KB meter	Mud weight g/cm ³	Plastic viscosity mPa.s	Mud type
151.0	1.05		WATER BASED
166.0	1.04		WATER BASED
320.0	1.08	4.0	WATER BASED
481.0	1.09	3.0	WATER BASED
635.0	1.15	5.0	WATER BASED
660.0	1.14	19.0	WATER BASED
1140.0	1.20	14.0	WATER BASED
1415.0	1.42	22.0	WATER BASED
1718.0	1.50	22.0	WATER BASED
2010.0	1.54	23.0	WATER BASED
2220.0	1.55	19.0	WATER BASED
2951.0	1.56	23.0	WATER BASED
3168.0	1.57	27.0	WATER BASED
3208.0	1.58	21.0	WATER BASED
3300.0	1.57	19.0	WATER BASED
3311.0	1.58	22.0	WATER BASED
3876.0	1.57	29.0	WATER BASED
3886.0	1.59	26.0	WATER BASED
3927.0	1.58	30.0	WATER BASED
4121.0	1.69	26.0	WATER BASED
4378.0	1.57	20.0	WATER BASED
4393.0	1.56	16.0	WATER BASED
4478.0	1.55	21.0	WATER BASED

DRILL STEM TEST

INTERVALS AND PRESSURES

Test no.	Interval meter	Choke size	Pressure (MPa)		
			FSIP	BTHP	FFP
1.0	4340.0 - 4328.8	25.4			
2.0	4241.0 - 4210.0	11.1			

RECOVERY

Test no.	Oil	Gas	Oil grav.	Gas grav.	GOR
	Sm ³ /d	M Sm ³ /d	g/cm ³	rel. air	m ³ /m ³
1.0*					
2.0*					

* - WATER INJECTION

DRILL BIT CUTTINGS AND WET SAMPLES

SAMPLE TYPE	INTERVAL BELOW KB	NUMBER OF SAMPLES
CUTTINGS	170 - 4582	525
WET SAMPLES	170 - 4581	800

SHALLOW GAS

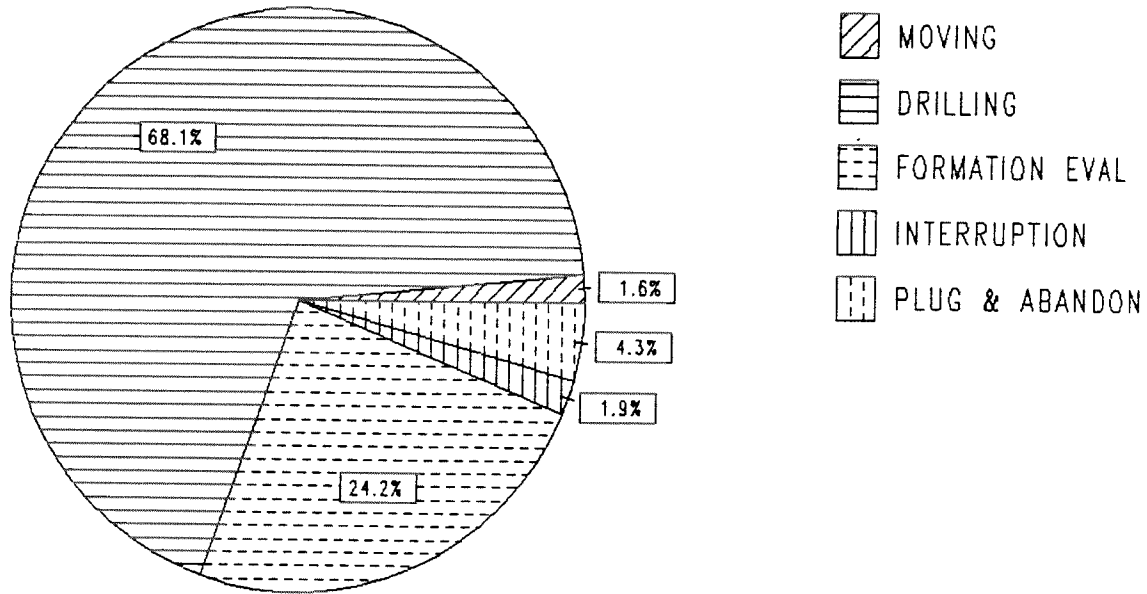
INTERVAL BELOW KB	REMARKS
	NONE

AVAILABLE LOGS

LOG TYPE	INTERVALS	1/200	1/500
ISF LSS GR	90 - 634	X	X
ISF SLS MSFL	626 - 2001	X	X
ISF BHC MSFL CALI SP	2006 - 3913	X	X
ISF BHC MSFL CALI SP	3600 - 4123	X	X
ISF LSS MSFL CALI SP	4113 - 4586	X	X
LDL CNL NGL	4113 - 4587	X	X
DLL MSFL SP CALI	4113 - 4584	X	X
CDM AP	4113 - 4588	X	X
CDM AP/CYBERDIP	4113 - 4588	X	
SHDT	4113 - 4588	X	
NGT RATIO	4113 - 4587	X	X
RFT	4177 - 4568	X	
CBL VDL	500 - 2000	X	
CBL VDL CCL	1800 - 4100	X	
CBL VDL CCL	3921 - 4541	X	
MUD	165 - 4588		X
VELOCITY	96 - 4586		X
(+ Synthetic Seismogram, Geogram, 10+ 20 cm/s, 6 stk)			
(+ V.S.P., 650 - 4578 1 stk)			

DAILY DRILLING REPORT SYSTEM

Main operation : 02/01-06



Total : 2544.00 HRS

Main operation	Minutes	Hours	% of total
MOVING	2370	39.50	1.5
DRILLING	103890	1731.50	68.0
FORMATION EVAL	36885	614.75	24.1
INTERRUPTION	2925	48.75	1.9
PLUG & ABANDON	6570	109.50	4.3

MAIN OPERATION: MOVING

Sub operations	Min	% of total
ANCHOR	1245	52.53
TRANSIT	1125	47.47
TOTAL	2370	100.00

MAIN OPERATION: DRILLING

Sub operations	Min	% of total
TRIP	24975	24.04
DRILL	44835	43.16
CIRC/COND	5670	5.46
CASING	11280	10.86
WAIT	1755	1.69
BOP/WELLHEAD EQ	8910	8.58
BOP ACTIVITIES	630	0.61
REAM	3765	3.62
SURVEY	1710	1.65
OTHER	240	0.23
PRESS DETECTION	120	0.12
TOTAL	103890	100.00

MAIN OPERATION: FORMATION EVAL

Sub operations	Min	% of total
LOG	6870	18.63
CORE	3915	10.61
TRIP	17265	46.81
CIRC/COND	975	2.64
OTHER	420	1.14
DST	7200	19.52
WAIT	240	0.65
TOTAL	36885	100.00

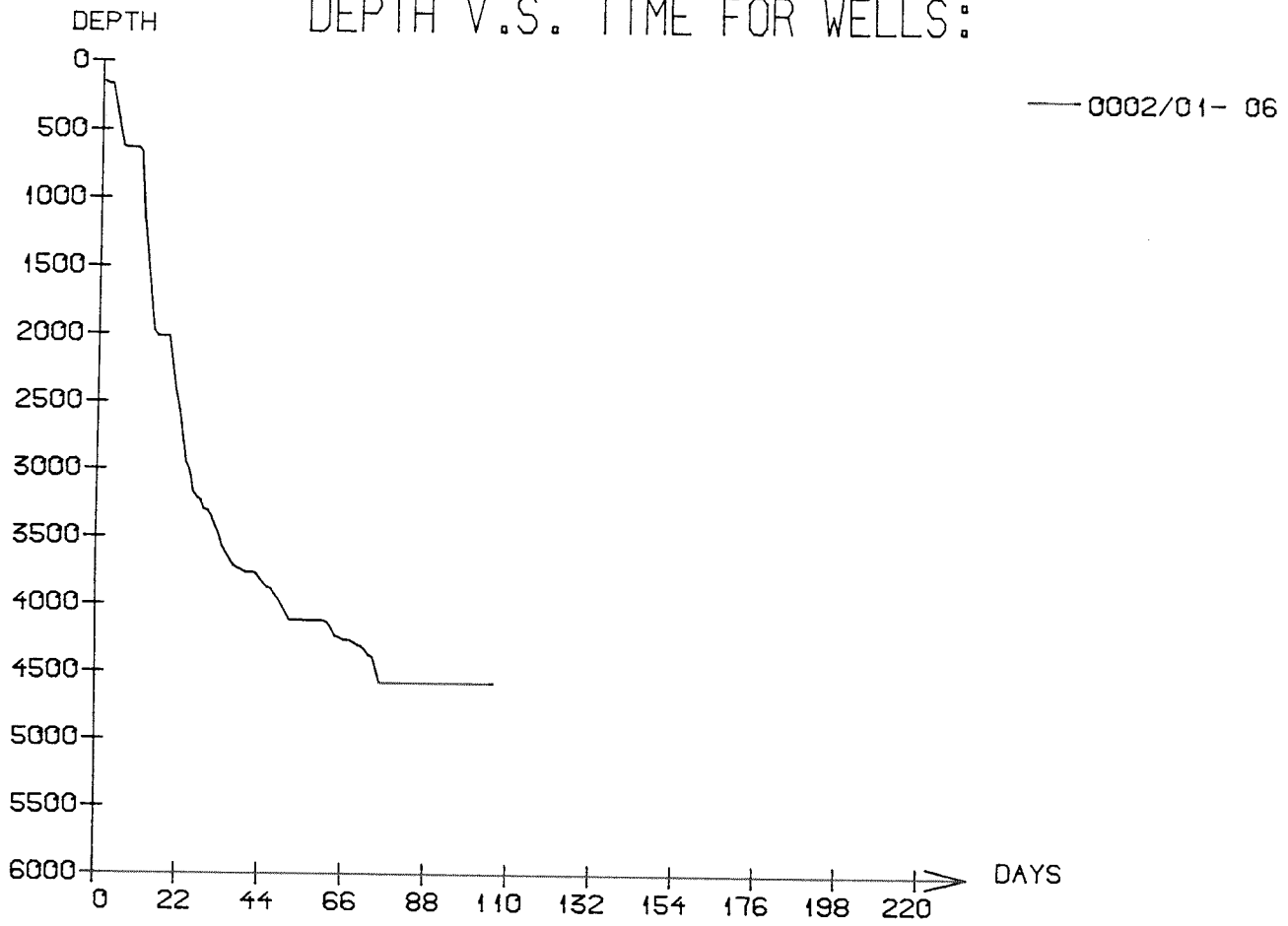
MAIN OPERATION: INTERRUPTION

Sub operations	Min	% of total
MAINTAIN/REP	1875	64.10
FISH	1050	35.90
TOTAL	2925	100.00

MAIN OPERATION: PLUG & ABANDON

Sub operations	Min	% of total
MECHANICAL PLUG	420	6.39
TRIP	855	13.01
CIRC/COND	330	5.02
CEMENT PLUG	315	4.79
OTHER	570	8.68
PERFORATE	120	1.83
EQUIP RECOVERY	2640	40.18
CUT	1320	20.09
TOTAL	6570	100.00

DEPTH V.S. TIME FOR WELLS:



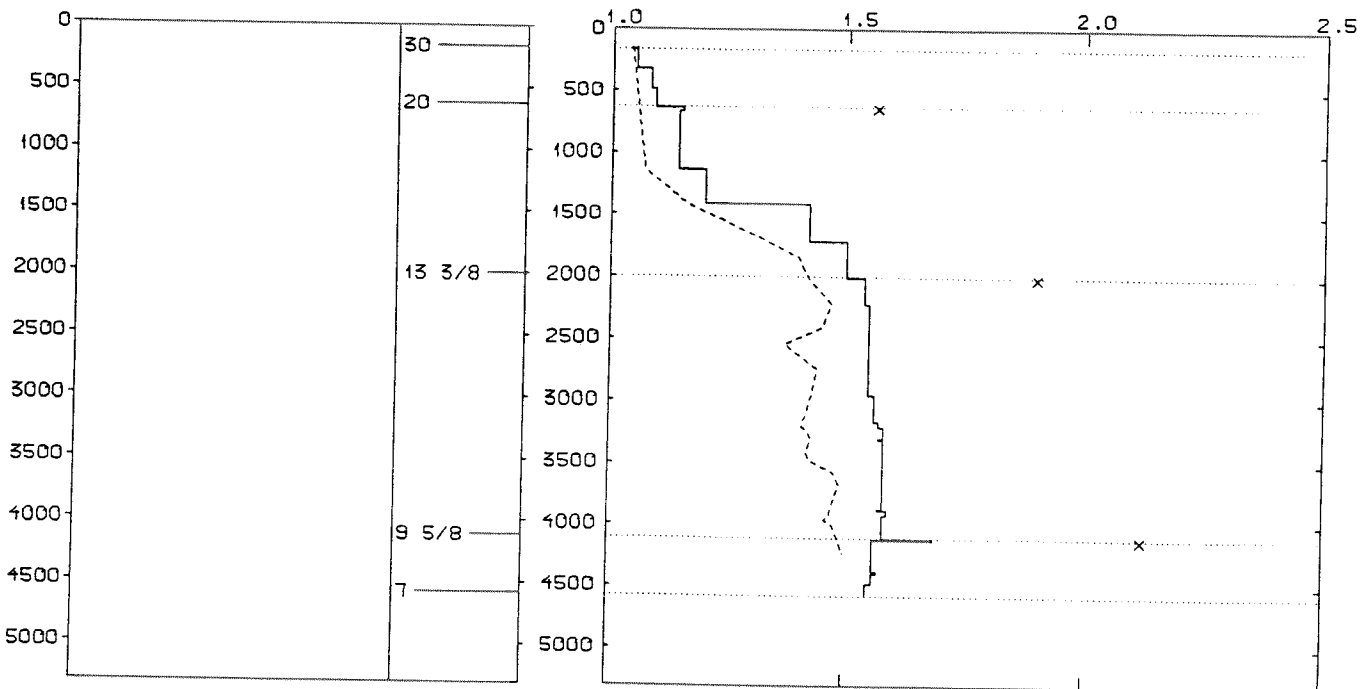
WELL: 000201 06 PRESSURE COMPOSITE PLOT

DEPTH
(RKB)
(METERS)

CASING

PRESSURE GRADIENTS
(g/ccm)

— MUDWEIGHT (REPORT)
- - - PORE PRESSURE (REPORT)
x LEAK-OFF (REPORT)



WELL HISTORY - 2/1-6

GENERAL:

The main objectives of the appraisal well 2/1-6 were to establish an oil-water contact in the 2/1-North structure and to establish whether this structure was in communication with the 1/3-3 discovery (See WDSS vol.14). Oil shows were recorded in a tight zone, a possible OWC was established and the 2/1-North structure was not found to be in communication with the 1/3-3 discovery.

OPERATIONS:

The appraisal well 2/1-6 was spudded 12.08.84 by the semi-submersible rig Dyvi Alpha. 12 cores were cut in the Upper Jurassic sequence. The pipe was stuck at 4471 m, but was recovered. The well was drilled using water based mud.

TESTING:

Two water injection tests were performed in the water bearing part of the reservoir.

GEOLOGICAL TOPS

WELL: 2/ 1-06

Depth m (RKB)

<i>Nordland Group</i>	91.000
<i>Hordaland Group</i>	1793.000
<i>Rogaland Group</i>	2947.000
<i>Balder Fm</i>	2947.000
<i>Sele Fm</i>	2970.000
<i>Fiskebank Fm</i>	2987.000
<i>Lista Fm</i>	3033.000
<i>Våle Fm</i>	3127.500
<i>Shetland Group</i>	3215.000
<i>Ekofisk Fm</i>	3215.000
<i>Tor Fm</i>	3312.000
<i>Hod Fm</i>	3660.000
<i>Blodøks Fm</i>	3788.000
<i>Hidra Fm</i>	3806.000
<i>Cromer Knoll Group</i>	3825.000
<i>Rødby Fm</i>	3825.000
<i>Åsgard Fm</i>	3895.000
<i>Tyne Group</i>	4104.000
<i>Mandal Fm</i>	4104.000
<i>Farsund Fm</i>	4165.000
<i>Haugesund Fm</i>	4426.000
<i>Vestland Group</i>	4560.000
<i>Ula Fm</i>	4560.000
<i>Bryne Fm</i>	4566.000
<i>TD =</i>	4588.000