

Well no : 2/ 1-08 Operator : BP

Coordinates : 56 53 40.63 N UTM coord. : 6305802  
 03 06 55.95 E 507039

Licence no : 19 Permit no : 473

Rig : NEDDRILL TRIGON Rig type : JACK-UP

Contractor : NEDDRILL (NEDERLAND) B.V.

Bottom hole temperature : 140.5 deg.C Elev. KB : 38 M

Spud. date : 85.07.28 Water depth : 66 M

Compl. date : 85.11.24 Total depth : 4158 M

Spud. class : APPRAISAL Form. at TD : TRIASSIC

Compl. class : P&A. OIL/GAS DISC. Prod. form : JURASSIC

Seisloca : BP 80 - 37 SP. 400

## LICENSEES

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26.625000 BP PETROLEUM DEVELOPMENT OF NORWAY A.S  
 19.375000 CONOCO NORWAY INC.  
 4.000000 KS PELICAN & CO A/S  
 50.000000 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 <sup>3</sup>
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CONDUCTOR	30	193.0	36	193.0	
SURF.COND.	20	625.0	26	635.0	1.76
INTERM.	13 3/8	2000.0	17 1/2	2005.0	2.04
INTERM.	9 5/8	3888.0	12 1/4	3898.0	2.12
OPEN HOLE			8 1/2	4158.0	

## DRILL STEM TEST

### INTERVALS AND PRESSURES

Test no.	interval meter	Choke size	Pressure (PSI)		
			WHP	BTHP	FFP
1.0	3919.000 - 3926.000	6.4			
2.0	3900.500 - 3926.000	11.1			

### RECOVERY

Test no.	Oil Sm <sup>3</sup> /d	Gas M Sm <sup>3</sup> /d	Oil grav. g/cm <sup>3</sup>	Gas grav. rel. air	GOR m <sup>3</sup> /m <sup>3</sup>
1.0	305	0.18	0.826	0.740	99
2.0	954	0.63	0.825	0.825	107

## DRILL BIT CUTTINGS AND WET SAMPLES

SAMPLE TYPE	INTERVAL BELOW KB	NUMBER OF SAMPLES
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Cutting

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Wet Samples

## SHALLOW GAS

Interval below KB	REMARKS
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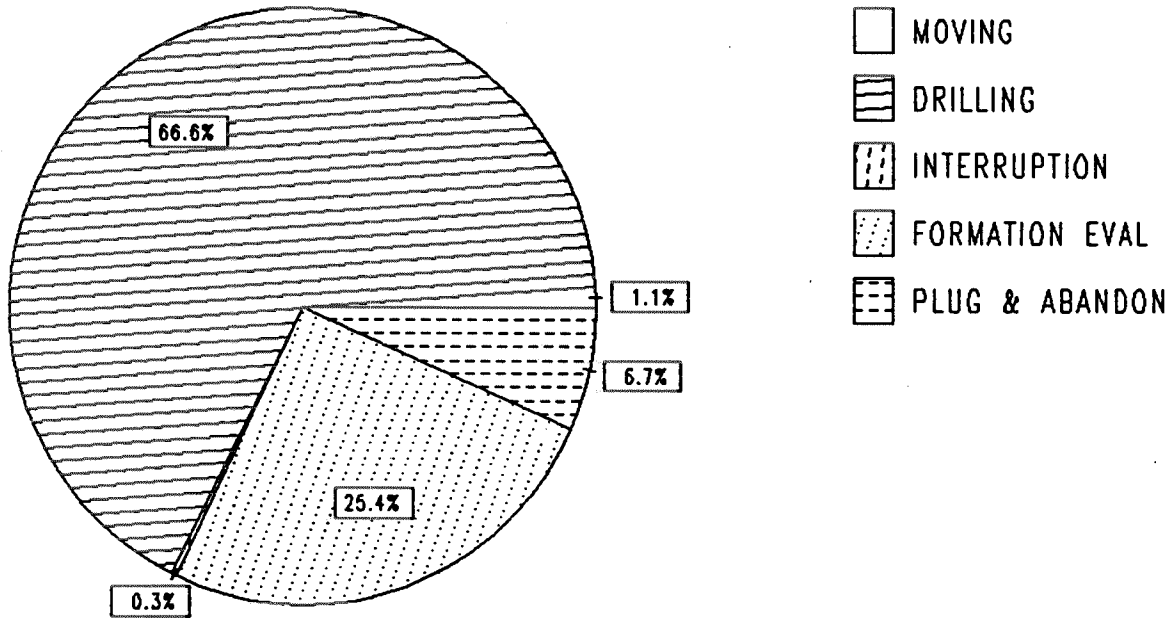
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NONE

## AVAILABLE LOGS

LOG TYPE	INTERVALS	1/200	1/500
ISF LSS SP GR	193 - 633	X	X
ISF LSS MSFL CALI	625 - 2003	X	X
ISF BHC MSFL CALI SP	2000 - 3895	X	X
ISF BHC SP	3887 - 4159	X	X
ISF SONIC MSFL	97 - 4157	1:1000	
LDL CNL NGL CALI	3887 - 4159	X	X
DLL MSFL CALI	3887 - 4159	X	X
CDM AP	3887 - 4156	X	X
SHDT	3887 - 4156	X	
RFT	3902 - 4141	1:100	
HP RFT	3902 - 4141	1:100	
CBL VDL	50 - 2000	X	
CBL VDL CCL	1745 - 3678	X	
CBL VDL CCL	3685 - 4012	X	
MUD	193 - 4151		X
VELOCITY	194 - 4150	1:1000 X	
(+ Airgun Well Velocity and Calibr. log data,		1 stk)	
(+ Synthetic Seismogram, 5 + 10 + 20 cm/s,		6 stk)	
(+ Two-Way Travel Time, 5 + 10 + 20 cm/s,		3 stk)	

# DAILY DRILLING REPORT SYSTEM

Main operation : 02/01-08



Total : 2880 HRS

Main operation	Minutes	Hours	% of total
MOVING	1860	31.00	1.08
DRILLING	115050	1917.50	66.58
INTERRUPTION	465	7.75	0.27
FORMATION EVAL	43905	731.75	25.41
PLUG & ABANDON	11520	192.00	6.67

MAIN OPERATIONS WELL : 02/01-08

MAIN OPERATION : DRILLING

Sub operations	Min	Hrs	% of total
OTHER	6285	104.75	5.46
DRILL	46560	776.00	40.47
SURVEY	660	11.00	0.57
REAM	4740	79.00	4.12
CIRC/COND	4545	75.75	3.95
TRIP	26445	440.75	22.99
CASING	12390	206.50	10.77
DRIVE	2970	49.50	2.58
BOP/WELLHEAD EQ	7590	126.50	6.60
BOP ACTIVITIES	2865	47.75	2.49
<b>TOTAL</b>	<b>115050</b>	<b>1917.50</b>	

MAIN OPERATION: MOVING

Sub operations	Min	Hrs	% of total
POSITION	300	5.00	16.13
JACK	1140	19.00	61.29
SKID	420	7.00	22.58
<b>TOTAL</b>	<b>1860</b>	<b>31.00</b>	

MAIN OPERATION: FORMATION EVAL

Sub operations	Min	Hrs	% of total
LOG	3405	56.75	7.76
RFT/FIT	30	0.50	0.07
CIRC SAMPLES	420	7.00	0.96
CORE	3720	62.00	8.47
PROD TEST	35220	587.00	80.22
WAIT	1110	18.50	2.53
<b>TOTAL</b>	<b>43905</b>	<b>731.75</b>	

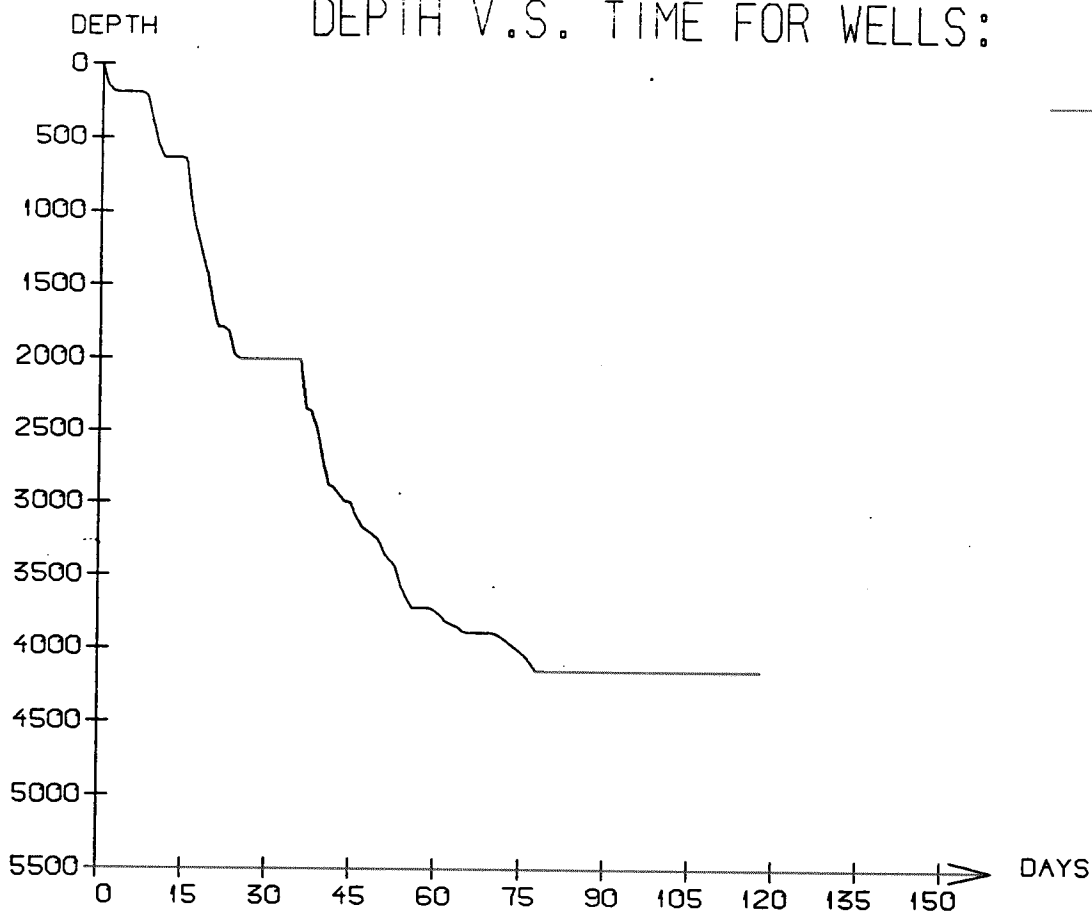
MAIN OPERATION: INTERRUPTION

Sub operations	Min	Hrs	% of total
MAINTAIN/REP	465	7.75	100.00
<b>TOTAL</b>	<b>465</b>	<b>7.75</b>	

MAIN OPERATION: PLUG & ABANDON

Sub operations	Min	Hrs	% of total
TRIP	1050	17.50	9.11
CIRC/COND	390	6.50	3.39
CEMENT PLUG	1710	28.50	14.84
MECHANICAL PLUG	1395	23.25	12.11
CUT	1950	32.50	16.93
EQUIP RECOVERY	3585	59.75	31.12
OTHER	1440	24.00	12.50
<b>TOTAL</b>	<b>11520</b>	<b>192.00</b>	

# DEPTH V.S. TIME FOR WELLS:



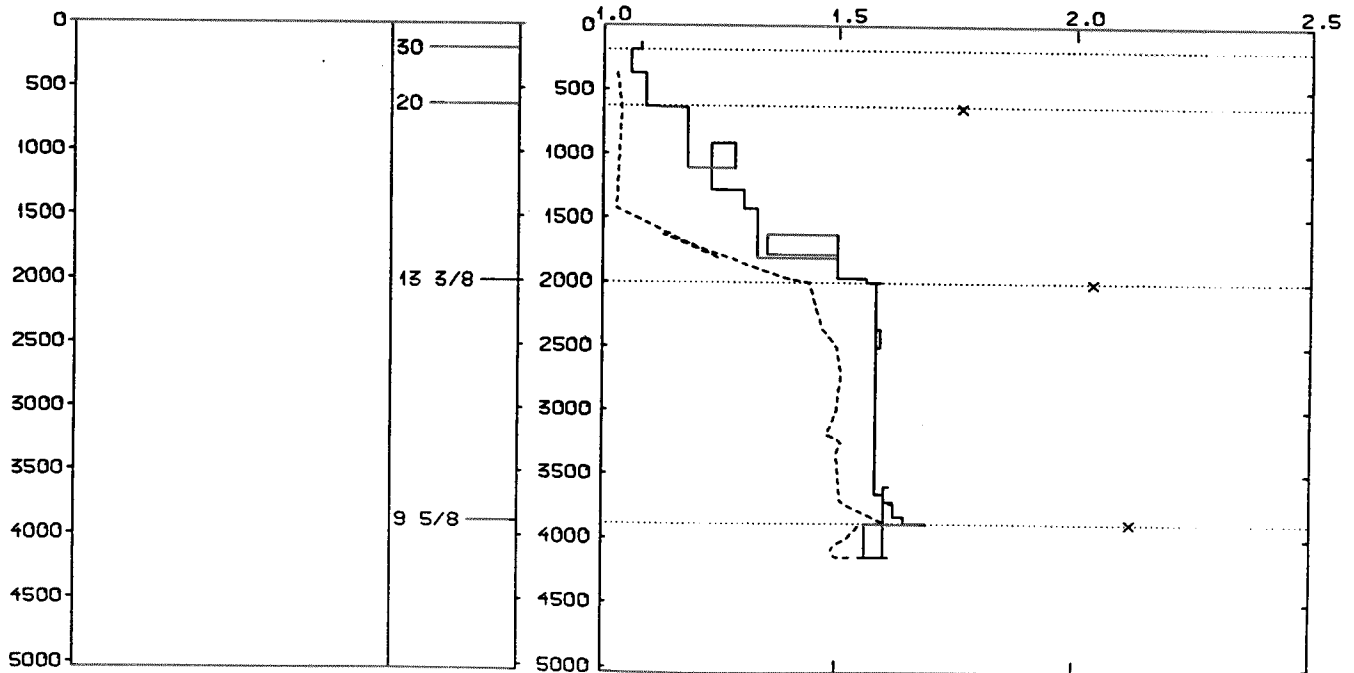
## WELL: 000201 08 PRESSURE COMPOSITE PLOT

DEPTH  
(RKB)  
(METERS)

CASING

PRESSURE GRADIENTS  
(g/ccm)

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



## Well History 2/1-8.

### GENERAL:

2/1-8 was drilled as the third appraisal well at a down-faulted structure on the Northern half of block 2/1. The main objective was to examine the extend, thickness and reservoir quality of the oil-bearing upper Jurassic reservoir sandstone "the 2/1-3 Sand" in the southern part of the field.

### OPERATIONS:

The well was spudded by the jack-up rig Neddrill Trigon on the 25th of July 1985. Drilling operations proceeded without significant problems. The drillstring got stuck while pulling out of the hole at 3474 m RKB, but was freed after pumping oil into the hole.

The assumed Triassic red-beds were encountered at a depth of 4151 m RKB and the well was terminated at a total depth of 4159 in a 8 3/8" hole. Upper Jurassic Sandstone was reached at a depth of 3899,5 m RKB (LD) 18 m above the prognosis, and was oil-bearing in a 40 m zone.

Conventional coring took place 6 m beneath the Upper Jurassic reservoir sandstone and in the underlying mudstone of the Farsund- and Haugesund fm.

There is a discrepancy between Loggers depth and Drillers depth below 2000 m RKB of 8 m.

The well was plugged and abandoned after testing.

### TESTING:

Two drillstem tests were performed, both in the Upper Jurassic "2/1-3 Sand".

# GEOLOGICAL TOPS

WELL: 2-1-8

	<i>Depth m (RKB)</i>
<i>Nordland Group</i>	103
<i>Hordaland Group</i>	1790
<i>Rogaland Group</i>	2847
<i>Balder Fm.</i>	2847
<i>Sele Fm.</i>	2901
<i>Forties Fm. eqv.</i>	2908.5
<i>Lista Fm.</i>	3022
<i>Maureen Fm. eqv.</i>	3037
<i>Chalk Group</i>	3148
<i>Ekofisk Fm.</i>	3148
<i>Tor Fm.</i>	3230
<i>Hod Fm.</i>	3521
<i>Blodøks Fm.</i>	3610
<i>Hidra Fm.</i>	3621
<i>Cromer Knoll Group</i>	3630
<i>Rødby Fm.</i>	3630
<i>Sola Fm.</i>	3711
<i>Ran Sst</i>	3713
<i>Sola Fm.</i>	3716
<i>Tuxen Fm.</i>	3802
<i>Tyne Group</i>	3880.5
<i>Mandal Fm.</i>	3880.5
<i>Farsund Fm</i> " <i>2/1-3 Sand</i> "	3899.5
<i>Lower Mudstone Member</i>	3939.5
<i>Haugesund Fm.</i>	3965
<i>Vestland Group</i>	4037
<i>Ula Fm.</i>	4037
<i>Bryne Fm.</i>	4063
<i>"Triassic Group"</i>	4081
<i>T.D.</i>	4159