

Well no : 31/ 6-06

Operator : STATOIL

Coordinates	: 60 41 57.08 N 03 56 4.61 E	UTM coord.	: 6729804 N UTM zone 31 551028 E
Licence no	: 085	Permit no	: 416
Rig	: DEEPSEA BERGEN	Rig type	: SEMI-SUB.
Contractor	: ODFJELL DRILLING AND CONSULTING COMPANY A/S		
Bottom hole temperature	: 67 deg.C	Elev. KB	: 23 M
Spud date	: 84.05.22	Water depth	: 313 M
Compl. date	: 84.07.29	Total depth	: 2290 M
Spud class.	: APPRAISAL	Age at TD	: JURASSIC
Compl. class.	: P&A. GAS DISCOVERY		
Seis. loc.	: NH 8007-129 SP. 156		

LICENSEES

9.000	NORSK HYDRO PRODUKSJON A.S
6.000	SAGA PETROLEUM A.S.
85.000	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
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CONDUCTOR	30	423.0	36	425.0	
SURF.COND.	20	699.0	26	723.0	1.53
INTERM.	13 3/8	1443.0	17 1/2	1460.0	1.55
INTERM.	9 5/8	1755.0	12 1/4	1771.5	1.49
OPEN HOLE			8 1/2	2290.0	

CONVENTIONAL CORES

Core no.	Intervals cored meters	Recovery		Series
		M	%	
1	1525.0 - 1552.0	19.9	74.0	UPPER JURASSIC
2	1552.0 - 1579.5	23.7	87.0	UPPER JURASSIC
3	1579.5 - 1607.0	27.9	99.9	UPPER JURASSIC
4	1607.0 - 1634.5	26.5	96.0	UPPER JURASSIC
5	1634.5 - 1662.0	27.5	99.9	UPPER JURASSIC
6	1662.0 - 1689.0	27.0	99.9	U/M JURASSIC
7	1689.0 - 1716.5	27.5	98.2	MIDDLE JURASSIC
8	1716.5 - 1744.0	27.5	99.9	MIDDLE JURASSIC
9	1744.0 - 1771.5	27.5	100.0	MIDDLE JURASSIC

MUD PROPERTIES

Depth below KB meter	Mud weight g/cm ³	Funnel viscosity s/qt	Mud type
336.0	1.03		WATER BASED
723.0	1.06	40.0	WATER BASED
726.0	1.22	39.0	WATER BASED
1099.0	1.23	46.0	WATER BASED
1525.0	1.21	49.0	WATER BASED
1755.0	1.10	53.0	WATER BASED
1771.5	1.21	49.0	WATER BASED
1897.0	1.10	49.0	WATER BASED

DRILL STEM TEST

INTERVALS AND PRESSURES

Test no.	Interval meter	Choke size	Pressure (PSI)		
			FSIP	BTHP	WHP
1.0	1567.0 - 1562.5	25.4		2087.3	1174.5
2.0	1536.0 - 1523.0	12.7		158.4	64.7

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		779			
2.0		11			

DRILL BIT CUTTINGS AND WET SAMPLES

SAMPLE TYPE	INTERVAL BELOW KB	NUMBER OF SAMPLES
CUTTINGS	440 - 2290	330
WET SAMPLES	440 - 2290	270

SHALLOW GAS

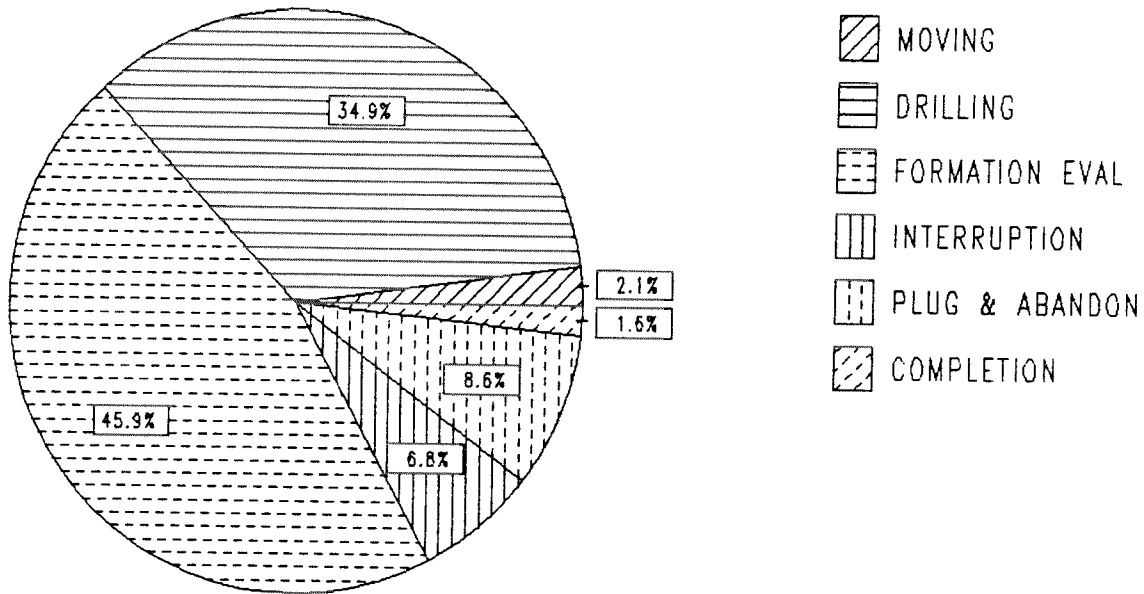
INTERVAL BELOW KB	REMARKS
	NONE

AVAILABLE LOGS

LOG TYPE	INTERVAL	1/200	1/500
DIFL BHC AC GR	330 - 721	X	
DIFL BHC AC	695 - 1455	X	
DIFL BHC AC	1439 - 1769	X	
DIFL BHC AC	1750 - 2286	X	
DIFL BHC AC	330 - 2286		X
CDL	695 - 1455	X	X
CDL CNL	1439 - 1768	X	X
CNL	1750 - 2286	X	X
DLL MLL	1439 - 1768	X	X
CDM	1443 - 1768	X	
CDM	1750 - 2286	X	
CDM AP	1443 - 1768	X	X
CDM AP	1750 - 2286	X	X
CBL VDL	333 - 1440	X	
CBL VDL	1100 - 1750	X	
FMT	1524 - 1602		X
PRESSURE EVALUATION LOG	423 - 2290	1:5000	
DRILLING DATA PRESSURE LOG	423 - 2290	1:5000	
TEMPERATURE DATA LOG	423 - 2290	1:5000	
MUD	336 - 2290		X
VELOCITY	429 - 2277		X
(+ Synthetic Seismogram, Marine, 10 - 20 cm/s,			2 stk)
(+ Synthetic Seismogram, 10 - 20 cm/s,			4 stk)
(+ V.S.P., 10 - 20 cm/s,			13 stk)

DAILY DRILLING REPORT SYSTEM

Main operation : 31/06-06



Total : 1680.00 HRS

Main operation	Minutes	Hours	% of total
MOVING	2160	36.00	2.1
DRILLING	35160	586.00	34.8
FORMATION EVAL	46260	771.00	45.8
INTERRUPTION	6900	115.00	6.8
PLUG & ABANDON	8670	144.50	8.6
COMPLETION	1650	27.50	1.6

MAIN OPERATION: MOVING

Sub operations	Min	% of total
TRANSIT	1140	52.78
ANCHOR	1020	47.22
TOTAL	2160	100.00

MAIN OPERATION: DRILLING

Sub operations	Min	% of total
CASING	8910	25.34
WAIT	690	1.96
HOLE OPEN	630	1.79
CIRC/COND	1650	4.69
SURVEY	870	2.47
TRIP	4950	14.08
REAM	870	2.47
DRILL	8370	23.81
BOP/WELLHEAD EQ	4140	11.77
UNDERREAM	1200	3.41
BOP ACTIVITIES	2850	8.11
OTHER	30	0.09
TOTAL	35160	100.00

MAIN OPERATION: FORMATION EVAL

Sub operations	Min	% of total
LOG	4050	8.75
CIRC SAMPLES	210	0.45
CORE	5880	12.71
TRIP	8970	19.39
CIRC/COND	3361	7.27
RFT/FIT	420	0.91
PROD TEST	14459	31.26
OTHER	1080	2.33
DST	7830	16.93
TOTAL	46260	100.00

MAIN OPERATION: INTERRUPTION

Sub operations	Min	% of total
MAINTAIN/REP	3750	54.35
LOST CIRC	1350	19.57
FISH	1680	24.35
WELL CONTROL	120	1.74
TOTAL	6900	100.00

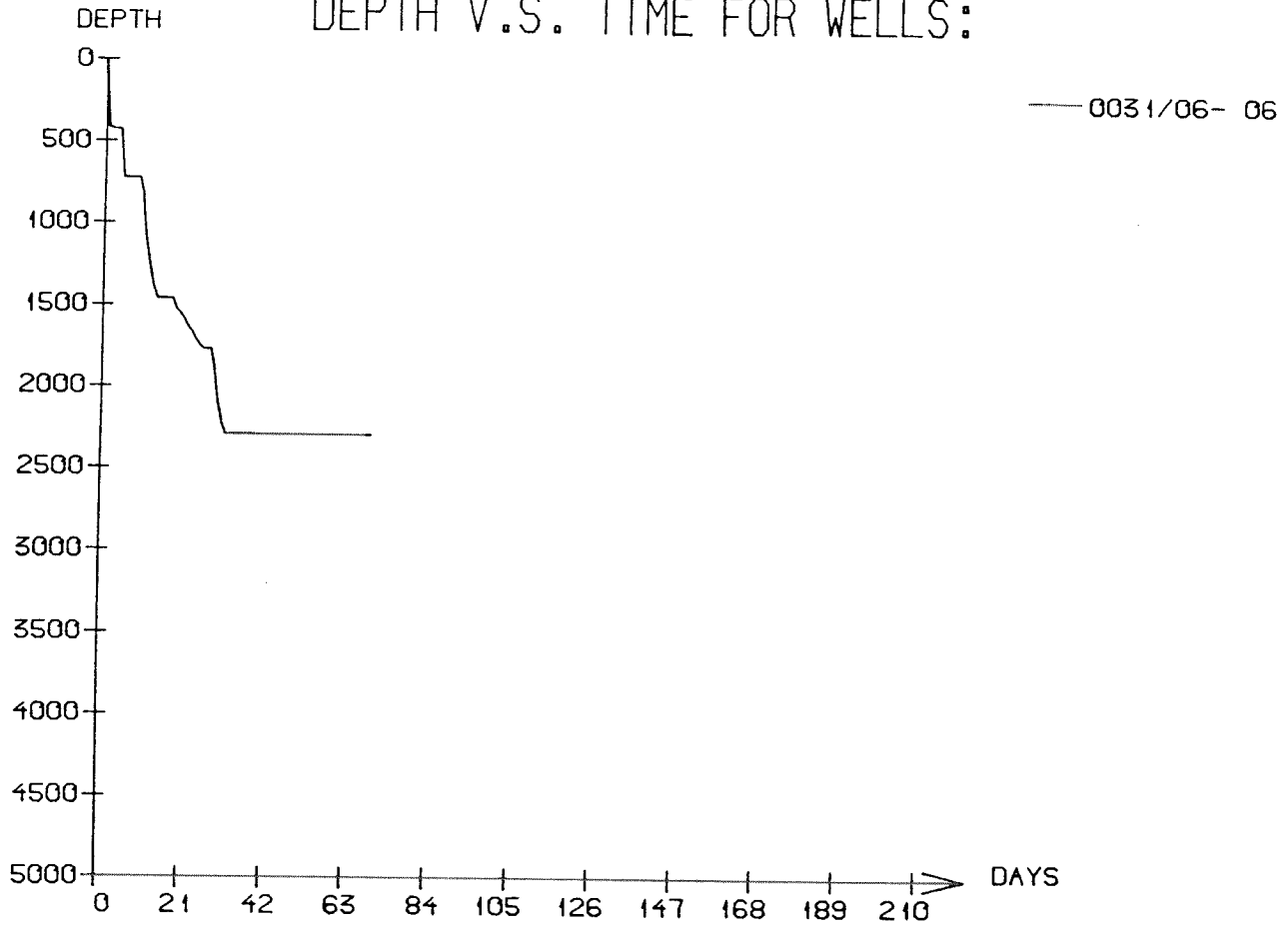
MAIN OPERATION: PLUG & ABANDON

Sub operations	Min	% of total
TRIP	4200	48.44
CIRC/COND	780	9.00
CEMENT PLUG	1020	11.76
MECHANICAL PLUG	240	2.77
EQUIP RECOVERY	1170	13.49
CUT	510	5.88
OTHER	360	4.15
PERFORATE	210	2.42
WAIT	180	2.08
TOTAL	8670	100.00

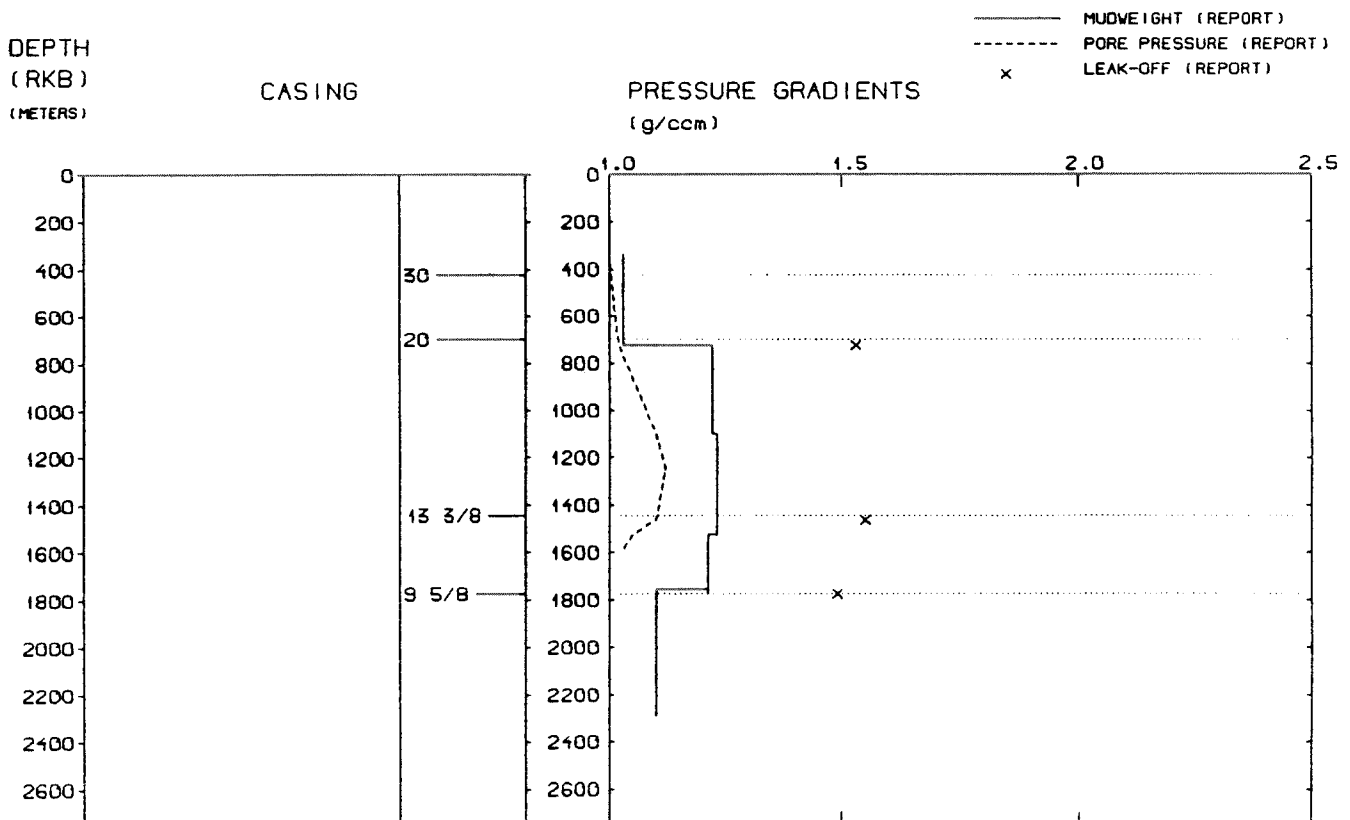
MAIN OPERATION: COMPLETION

Sub operations	Min	% of total
WIRE LINE	270	16.36
SAND CONTROL	1380	83.64
TOTAL	1650	100.00

DEPTH V.S. TIME FOR WELLS:



WELL: 003106 06 PRESSURE COMPOSITE PLOT



WELL HISTORY - 31/6-6

GENERAL:

The appraisal well 31/6-6 was designed to test possible gas accumulations in the Upper to Middle Jurassic sandstones and to test the quality of the reservoir siltstone in the Heather Formation. The well encountered hydrocarbons in both reservoirs, the Heather Formation showed a low production rate.

OPERATIONS:

The well was spudded 22.05.84 by the semi-submersible rig Deepsea Bergen. Nine cores were cut in Upper to Middle Jurassic. Some problems occurred when stabbing the 30" casing in the hole. Some tight spots had to be reamed and washed in the 26" hole section. Problems with tight hole and lost circulation occurred in the 17 1/2" hole. A drilling break occurred at 1523 m in the 12 1/4" hole section. The well was drilled using water based mud.

TESTING:

Two tests were performed. One in the Sognefjord Formation and one in the Heather Formation, both produced gas.

NOTE:

The three licensees in licence 085 are equal, they do all three operate boreholes in the licence.

GEOLOGICAL TOPS

WELL: 31/ 6-06

	Depth m (RKB)
<i>Nordland Group</i>	336.000
<i>Hordaland Group</i>	531.000
<i>Rogaland Group</i>	650.000
<i>Balder Fm</i>	650.000
<i>Sele Fm</i>	798.000
<i>Lista Fm</i>	949.000
<i>Shetland Group</i>	1018.000
<i>Cromer Knoll Group</i>	1204.000
<i>Viking Group</i>	1392.000
<i>Draupne Fm</i>	1392.000
<i>Upper Heather Fm</i>	1515.000
<i>Sognefjord Fm</i>	1561.000
<i>Middle Heather Fm</i>	1706.000
<i>Fensfjord Fm</i>	1719.000
<i>Krossfjord Fm</i>	1947.000
<i>Lower Heather Fm</i>	1975.500
<i>Brent Group</i>	2008.000
<i>Ness Fm</i>	2008.000
<i>Dunlin Group</i>	2045.000
<i>Drake Fm</i>	2045.000
<i>Johansen Fm</i>	2122.000
<i>Amundsen Fm</i>	2193.000
<i>Statfjord Fm</i>	2225.000
<i>Hegre Group</i>	2277.000
<i>TD =</i>	2290.000