

Well no : 6407/ 4-01

Operator : STATOIL

Coordinates : 64 35 45.36 N  
07 08 42.17 E

UTM coord. : 7164900  
411212

Licence no : 106

Permit no : 474

Rig : ROSS ISLE

Rig type : SEMI-SUB.

Contractor : ROSS DRILLING CO. A/S

Bottom hole temperature : 156.7 deg.C

Elev. KB : 22 M

Spud. date : 85.07.20

Water depth : 225 M

Compl. date : 85.11.15

Total depth : 4835 M

Spud. class : WILDCAT

Form. at TD : TRIASSIC

Compl. class : P&A. GAS/COND. DISC.

Prod. form : JURASSIC

Seisloca : HBGS 83 - 456 SP. 485

## LICENSEES

20.000000 NORSKE CONOCO A/S  
20.000000 ELF AQUITAINE NORGE A/S  
10.000000 SAGA PETROLEUM 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>
CONDUCTOR	30	320.0	36	322.0	
SURF.COND.	20	849.0	26	867.0	1.60
INTERM.	13 3/8	2121.0	17 1/2	2134.0	1.83
INTERM.	9 5/8	3817.0	12 1/4	3828.0	2.03
LINER	7	4528.0	8 1/2	4540.0	2.10
OPEN HOLE			6	4835.0	

## CONVENTIONAL CORES

Core no.	Intervals cored meters		Recovery		Series
			M	%	
1	2286.0	- 2293.4	7.4	100.0	UPPER CRETACEOUS
2	2384.0	- 2392.3	8.3	100.0	UPPER CRETACEOUS
3	3889.0	- 3896.0	7.0	100.0	MIDDLE JURASSIC
4	3898.0	- 3926.0	28.0	100.0	MIDDLE JURASSIC
5	3926.0	- 3953.5	27.5	100.0	MIDDLE JURASSIC
6	3953.5	- 3981.2	27.7	100.0	MIDDLE JURASSIC
7	4021.0	- 4048.6	27.6	100.0	? M/L JURASSIC
8	4048.6	- 4076.2	27.6	100.0	? M/L JURASSIC
9	4278.0	- 4284.0	5.7	95.0	? M/L JURASSIC
10	4284.0	- 4299.7	15.7	100.0	? M/L JURASSIC
11	4301.0	- 4304.5	3.5	100.0	? M/L JURASSIC
12	4304.5	- 4313.6	9.1	95.7	? M/L JURASSIC
13	4314.0	- 4325.0	11.0	100.0	? M/L JURASSIC
14	4327.0	- 4337.7	10.7	97.1	? M/L JURASSIC
15	4605.0	- 4619.3	14.3	100.0	LOWER JURASSIC

## MUD PROPERTIES

Depth below KB meter	Mud weight g/cm <sup>3</sup>	Plastic viscosity mPa.s	Mud type
1368.000	1.18	11.0	WATER BASED
1458.000	1.25	12.0	WATER BASED
1860.000	1.35	14.0	WATER BASED
1920.000	1.40	14.0	WATER BASED
2058.000	1.48	11.0	WATER BASED
2134.000	1.51	11.0	WATER BASED
2286.000	1.57	19.0	WATER BASED
2384.000	1.76	21.0	WATER BASED
3747.000	1.45	22.0	WATER BASED
3825.000	1.76	48.0	WATER BASED
4189.000	1.38	24.0	WATER BASED
4510.000	1.39	26.0	WATER BASED
4529.000	1.41	20.0	WATER BASED

## DRILL STEM TEST

### INTERVALS AND PRESSURES

Test no	interval meter	Choke size	Pressure (PSI)		
			WHP	BTHP	FFP
1.0	4159.000 - 4166.000	15.9	14.5	5801.2	7541.7
2.0	3889.000 - 3919.000	17.5	217.5	826.7	7048.5

### RECOVERY

Test no.	Oil Sm <sup>3</sup> /d	Gas 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					
2.0	20*	32500	0.800	0.810	1625

\* - CONDENSATE

## DRILL BIT CUTTINGS AND WET SAMPLES

SAMPLE TYPE	INTERVAL BELOW KB	NUMBER OF SAMPLES
Cutting	330 - 4835	1140
Wet Samples	330 - 4835	1050

## SHALLOW GAS

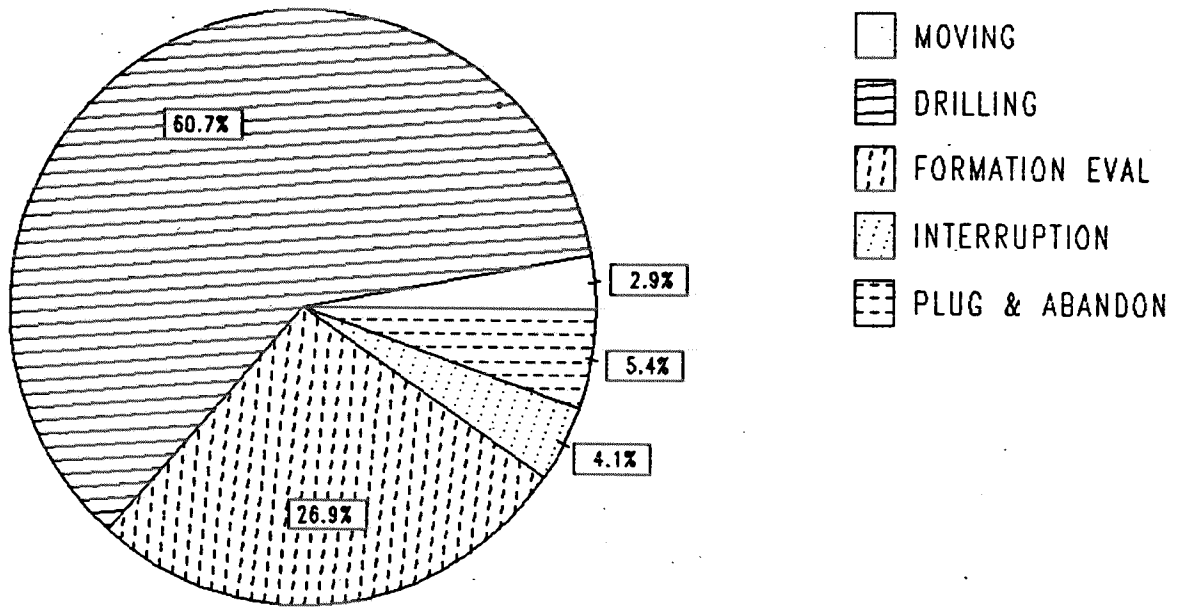
Interval below KB	REMARKS
438 M	POSSIBLE SHALLOW GAS

## AVAILABLE LOGS

LOG TYPE	INTERVALS	1/200	1/500
ISF LSS MSFL GR	322 - 865	X	X
ISF LSS MSFL	849 - 1841	X	X
ISF LSS MSFL	1700 - 2134	X	X
ISF LSS MSFL	2120 - 3825	X	X
ISF LSS	3818 - 3953	X	X
ISF LSS MSFL	3875 - 4521	X	X
ISF LSS MSFL	4529 - 4836	X	X
LDL CNL	322 - 4837	X	X
DLL MSFL	2120 - 4519	X	X
SHDT	2120 - 3828	X	
NGS	3818 - 4523	X	X
NGS	4529 - 4837	X	X
RFT	3891 - 3944	1:100	
RFT	3891 - 4496	1:100	
DRILLING DATA PRESSURE	247 - 4835	1:5000	
PRESSURE EVALUATION	247 - 4835	1:5000	
TEMPERATURE DATA	247 - 4835	1:5000	
CBL VDL	247 - 2121	X	
CBL VDL	2095 - 3816	X	
CBL VDL	3608 - 4529	X	
MUD	247 - 4835		X
VELOCITY	322 - 4836		X
(+ Synthetic Seismogram, Geogram, plot 3-6,			4 stk)
(+ V.S.P., Composite V.S.P.-geogram display,			3 stk)

# DAILY DRILLING REPORT SYSTEM

Main operation : 6407/04-01



Total : 2904 HRS

Main operation	Minutes	Hours	% of total
MOVING	4980	83.00	2.86
DRILLING	105688	1761.47	60.66
FORMATION EVAL	46950	782.50	26.95
INTERRUPTION	7172	119.53	4.12
PLUG & ABANDON	9450	157.50	5.42

MAIN OPERATIONS WELL : 6407/04-01

MAIN OPERATION: DRILLING

Sub operations	Min	Hrs	% of total
OTHER	870	14.50	0.82
DRILL	46830	780.50	44.31
SURVEY	540	9.00	0.51
CIRC/COND	7560	126.00	7.15
TRIP	21060	351.00	19.93
CASING	13408	223.47	12.69
BOP/WELLHEAD EQ	3240	54.00	3.07
BOP ACTIVITIES	3810	63.50	3.60
PRESS DETECTION	3360	56.00	3.18
UNDERREAM	1020	17.00	0.97
REAM	3990	66.50	3.78
<b>TOTAL</b>	<b>105688</b>	<b>1761.47</b>	

MAIN OPERATION: MOVING

Sub operations	Min	Hrs	% of total
TRANSIT	1500	25.00	30.12
ANCHOR	3480	58.00	69.88
<b>TOTAL</b>	<b>4980</b>	<b>83.00</b>	

MAIN OPERATION: FORMATION EVAL

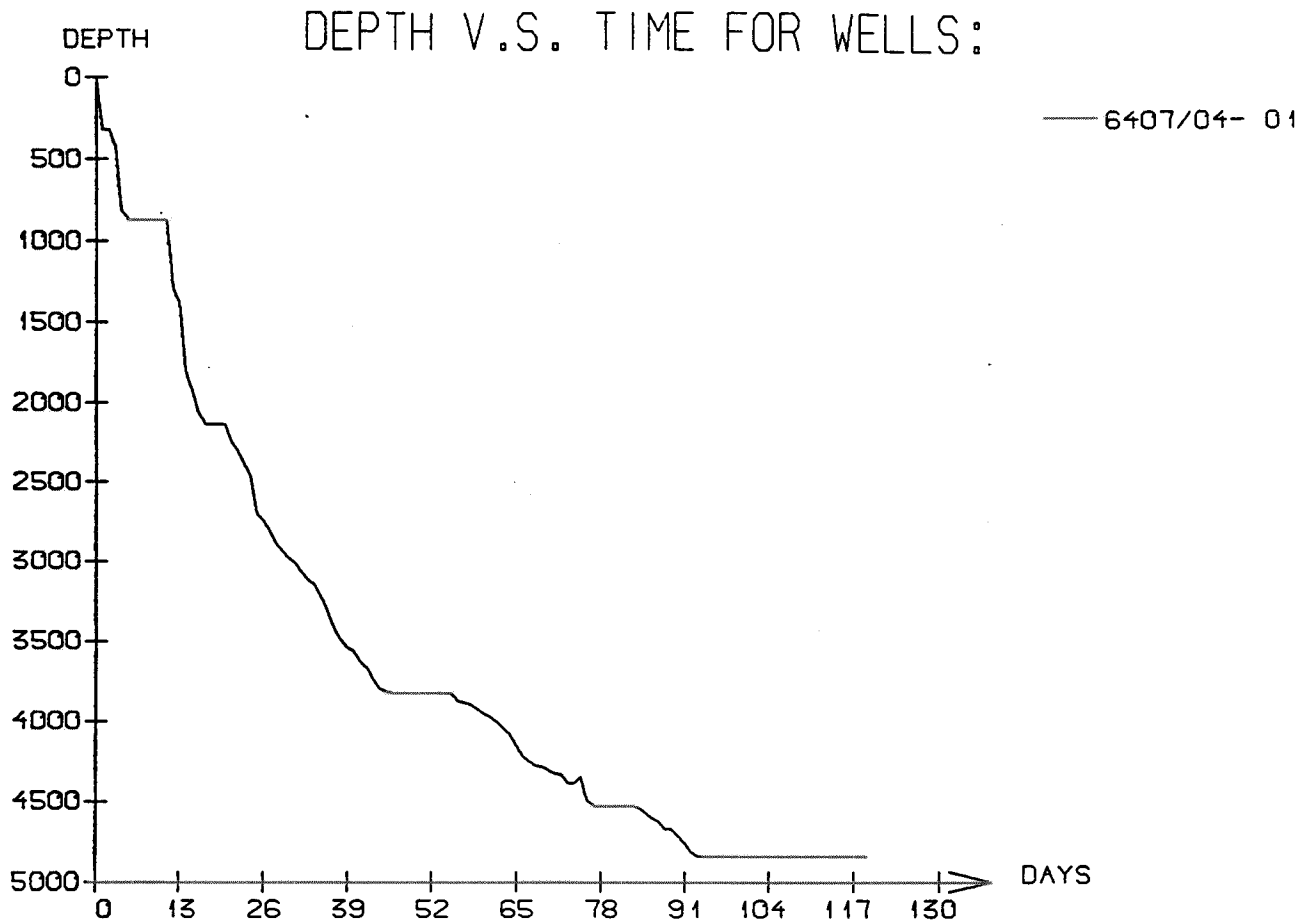
Sub operations	Min	Hrs	% of total
TRIP	7770	129.50	16.55
LOG	11250	187.50	23.96
CIRC SAMPLES	480	8.00	1.02
CIRC/COND	960	16.00	2.04
CORE	7830	130.50	16.68
RFT/FIT	1920	32.00	4.09
DST	16740	279.00	35.65
<b>TOTAL</b>	<b>46950</b>	<b>782.50</b>	

MAIN OPERATION: INTERRUPTION

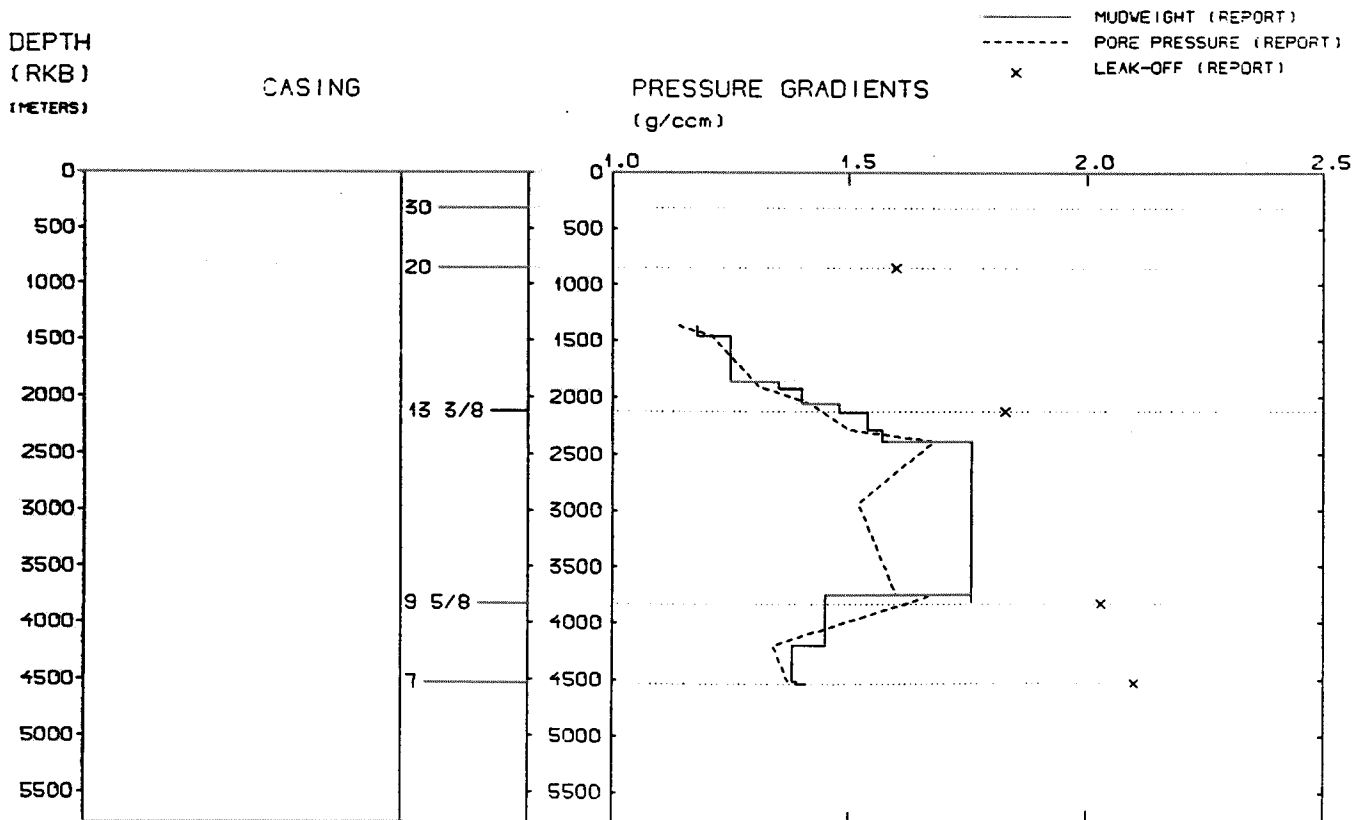
Sub operations	Min	Hrs	% of total
MAINTAIN/REP	4470	74.50	62.33
LOST CIRC	420	7.00	5.86
WELL CONTROL	452	7.53	6.30
FISH	690	11.50	9.62
WAIT	1140	19.00	15.90
<b>TOTAL</b>	<b>7172</b>	<b>119.53</b>	

MAIN OPERATION: PLUG & ABANDON

Sub operations	Min	Hrs	% of total
CEMENT PLUG	1110	18.50	11.75
CIRC/COND	300	5.00	3.17
TRIP	4470	74.50	47.30
PERFORATE	960	16.00	10.16
OTHER	240	4.00	2.54
MECHANICAL PLUG	420	7.00	4.44
EQUIP RECOVERY	1530	25.50	16.19
CUT	240	4.00	2.54
SQUEEZE	180	3.00	1.90
<b>TOTAL</b>	<b>9450</b>	<b>157.50</b>	



WELL: 640704 01      PRESSURE COMPOSITE PLOT



## WELL HISTORY 6407/4-1

### GENERAL:

Wildcat well 6407/4-1 was drilled on the Alpha structure in the central part of the block.  
The Alpha structure is an isolated domelike structure, all inside the block borders.  
Well 6407/4-1 is placed a little downflank on the biggest segment in the south-east part.  
The main objective was hydrocarbon accumulations in the Middle Jurassic, Tomma Formation.  
The second objective was Middle Jurassic, Aldra Formation.

### OPERATIONS:

6407/4-1 was spudded 20 July 1985 by the semi-submersible rig Ross Isle.  
Drilling the well proceeded without significant problems.  
Top reservoir, in Tomma Formation, came in at 3889.5 m, 28 m higher than prognosed.  
Gas was produced from the reservoir, but reservoir qualities were poor.

### TESTING:

Two Drill Stem Tests were performed.



# GEOLOGICAL TOPS

WELL: 6407-4-1

	<i>Depth m (RKB)</i>
<i>Nordland Group</i>	247
<i>Naust Fm.</i>	247
<i>Kai Fm.</i>	1264.5
<i>Hordaland Group</i>	1656
<i>Brygge Fm.</i>	1656
<i>Rogaland Group</i>	2097.5
<i>Tare Fm.</i>	2097.5
<i>Tang Fm.</i>	2174
<i>Shetland Group</i>	2264
<i>Cromer Knoll Group</i>	3010
<i>Lange Fm.</i>	3012
<i>Viking Group</i>	3710
<i>Spekk Fm.</i>	3710
<i>Melke Fm.</i>	3772
<i>Fangst Group</i>	3889.5
<i>Garn Fm.</i>	3889.5
<i>Not Fm.</i>	3969
<i>Ile Fm.</i>	4021
<i>Båt Group</i>	4106
<i>Ror Fm.</i>	4106
<i>Tofte Fm.</i>	4150
<i>Ror Fm.</i>	4209
<i>Tilje Fm.</i>	4272.5
<i>Åre Fm.</i>	4472
<i>T.D.</i>	4836