

Well no : 6406/03-03

Operator : STATOIL

Coordinates : 64 59 49.18 N
06 53 27.64 EUTM coord. : 7209958 N
400545 E

Licence no : 91

Permit no : 526

Rig : DYVI DELTA

Rig type : SEMI-SUB.

Contractor : DYVI OFFSHORE A/S

Bottom hole temperature : deg.C

Elev. KB : 29 M

Spud. date : 86.08.04

Water depth : 303 M

Compl. date : 86.10.26

Total depth : 4416 M

Spud. class : WILDCAT

Form. at TD : E.JURASSIC

Compl. class : P&A. DRY HOLE

Prod. form :

Seisloca : ST 8403 - 445 SP. 350

LICENSEES

45.000000 MOBIL DEVELOPMENT NORWAY A.S.
5.000000 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 ³
CONDUCTOR	30	442.0	36	444.0	.
SURF.COND.	20	1064.0	26	1083.0	1.67
INTERM.	13 3/8	2301.0	17 1/2	2536.0	1.99
INTERM.	9 5/8	3918.0	12 1/4	3936.0	1.89
LINER	7	4415.0	8 1/2	4416.0	.

CONVENTIONAL CORES

Core no.	Intervals cored meters	Recovery		Series
		M	%	
1	3938.0 - 3952.5	14.5	100.0	MIDDLE JURASSIC
2	3956.0 - 3972.2	16.2	100.0	

MUD PROPERTIES

Depth below KB meter	Mud weight g/cm ³	Viscosity	Mud type
444.000	1.04	35.0	WATERBASED
446.000	1.12	37.0	WATERBASED
886.000	1.16	32.0	WATER BASED
1067.000	1.12	40.0	WATERBASED
1083.000	1.30	39.0	WATERBASED
1086.000	1.12	43.0	WATERBASED
1155.000	1.55	57.0	WATER BASED
1330.000	1.12	43.0	WATERBASED
1645.000	1.20	51.0	WATERBASED
1970.000	1.25	53.0	WATERBASED

2320.000	1.52	62.0	WATERBASED
2536.000	1.55	54.0	WATERBASED
3281.000	1.68	58.0	WATERBASED
3566.000	1.71	56.0	WATERBASED
3639.000	1.75	57.0	WATER BASED
3649.000	1.71	53.0	WATERBASED
3701.000	1.25	45.0	WATER BASED
3772.000	1.71	56.0	WATERBASED
3797.000	1.75	53.0	WATER BASED
3995.000	1.26	51.0	WATER BASED
4416.000	1.25	57.0	WATERBASED

DRILL BIT CUTTINGS AND WET SAMPLES

SAMPLE TYPE	INTERVAL BELOW KB	NUMBER OF SAMPLES
Cutting	460-4284	570
Wet Samples	460-4416	420

SHALLOW GAS

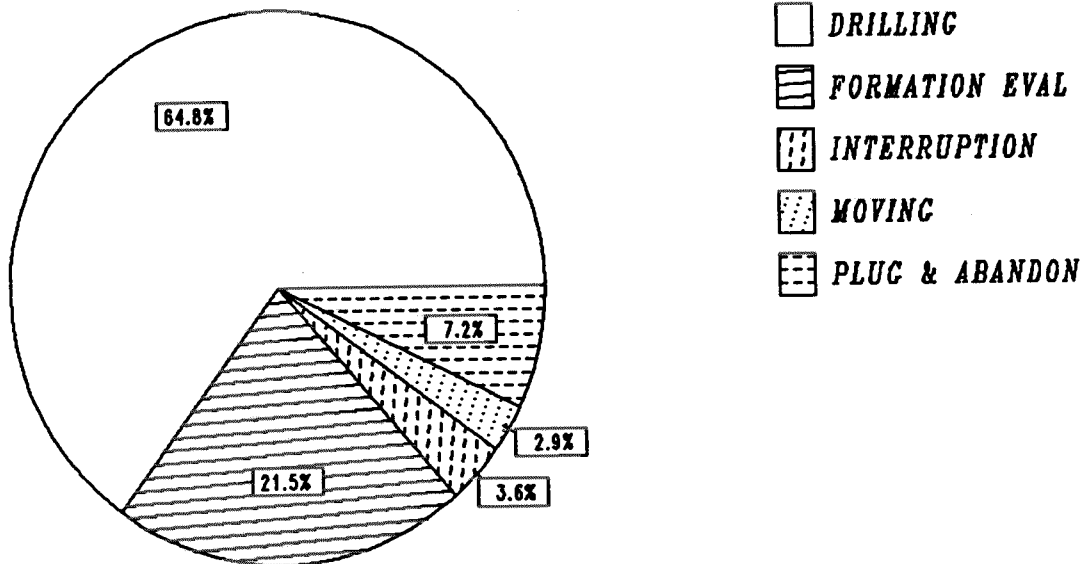
Interval REMARKS
below KB

AVAILABLE LOGS

LOG TYPE	INTERVALS	1/200	1/500	Div.
ISF LSS MSFL GR	2301.000 - 3937.000	X	X	
ISF LSS MSFL GR	3937.000 - 4421.000	X	X	
LDL CNL GR	2301.500 - 3938.000	X	X	
LDL CNL GR	3921.000 - 4419.000	X	X	
DLL GR	3921.000 - 4419.000	X	X	
CDM AP/SHDT	3923.000 - 4420.000	X	X	
SHDT	3921.000 - 4420.000	X	X	
RFT GR	3193.000 - 4398.500		1:100	
HP	3193.000 - 4256.000		1:100	
CBL VDL GR CCL	2249.000 - 3919.000	X		
CBL VDL GR CCL	3700.000 - 4125.000	X		
CBL VDL GR CCL	3775.000 - 4379.000	X		
DRILLING DATA	444.000 - 4416.000		1:5000	
TEMP. LOG	693.500 - 1512.900			
MUD	444.000 - 4416.000			X
VELOCITY	2281.000 - 4390.000		1:1000X	
(Velocity, time/depth, drift curve			4 stk.)	
(Two-way travel time, 10cm/s			1 stk.)	
(Synthetic seismogram, 10cm/s. plot 8-10			5 stk.)	
(VSP, 5cm/s. plot 1			2 stk.)	
(VSP, 10-20cm/s. plot 2-7			10 stk.)	

DAILY DRILLING REPORT SYSTEM

Main operations for well : 6406/03 -03



Total : 2064.00 hours

Main operation	Minutes	Hours	% of total
DRILLING	80280	1338.00	64.83
FORMATION EVAL	26670	444.50	21.54
INTERRUPTION	4440	74.00	3.59
MOVING	3540	59.00	2.86
PLUG & ABANDON	8910	148.50	7.19

MAIN OPERATIONS FOR WELL : 6406 / 03 - 03

MAIN OPERATION : DRILLING

Sub operations	Minutes	Hrs	% of total
BOP ACTIVITIES	2580	43.00	3.21
BOP/WELLHEAD EQ	2790	46.50	3.48
CASING	13050	217.50	16.26
CIRC/COND	4650	77.50	5.79
DRILL	36870	614.50	45.93
HOLE OPEN	3030	50.50	3.77
OTHER	30	0.50	0.04
PRESS DETECTION	240	4.00	0.30
REAM	900	15.00	1.12
SURVEY	750	12.50	0.93
TRIP	15270	254.50	19.02
UNDERREAM	120	2.00	0.15
Total	80280	1338.00	100.00

MAIN OPERATION : FORMATION EVAL

Sub operations	Minutes	Hrs	% of total
CIRC SAMPLES	390	6.50	1.46
CIRC/COND	810	13.50	3.04
CORE	540	9.00	2.02
DST	6480	108.00	24.30
LOG	7470	124.50	28.01
RFT/FIT	1470	24.50	5.51
TRIP	9510	158.50	35.66
Total	26670	444.50	100.00

MAIN OPERATION : INTERRUPTION

Sub operations	Minutes	Hrs	% of total
FISH	270	4.50	6.08
LOST CIRC	150	2.50	3.38
MAINTAIN/REP	1710	28.50	38.51
WAIT	2310	38.50	52.03
Total	4440	74.00	100.00

MAIN OPERATION : MOVING

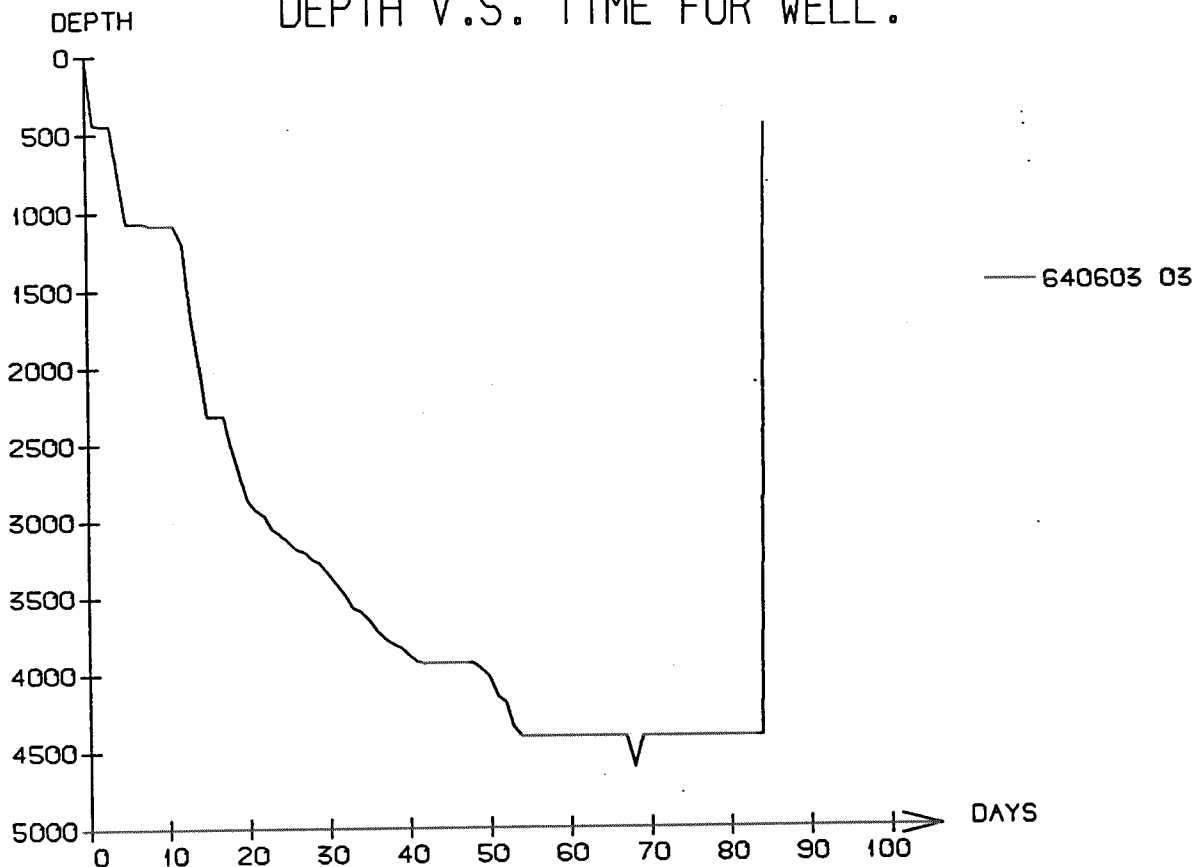
Sub operations	Minutes	Hrs	% of total
ANCHOR	2940	49.00	83.05
TRANSIT	600	10.00	16.95
Total	3540	59.00	100.00

MAIN OPERATION : PLUG & ABANDON

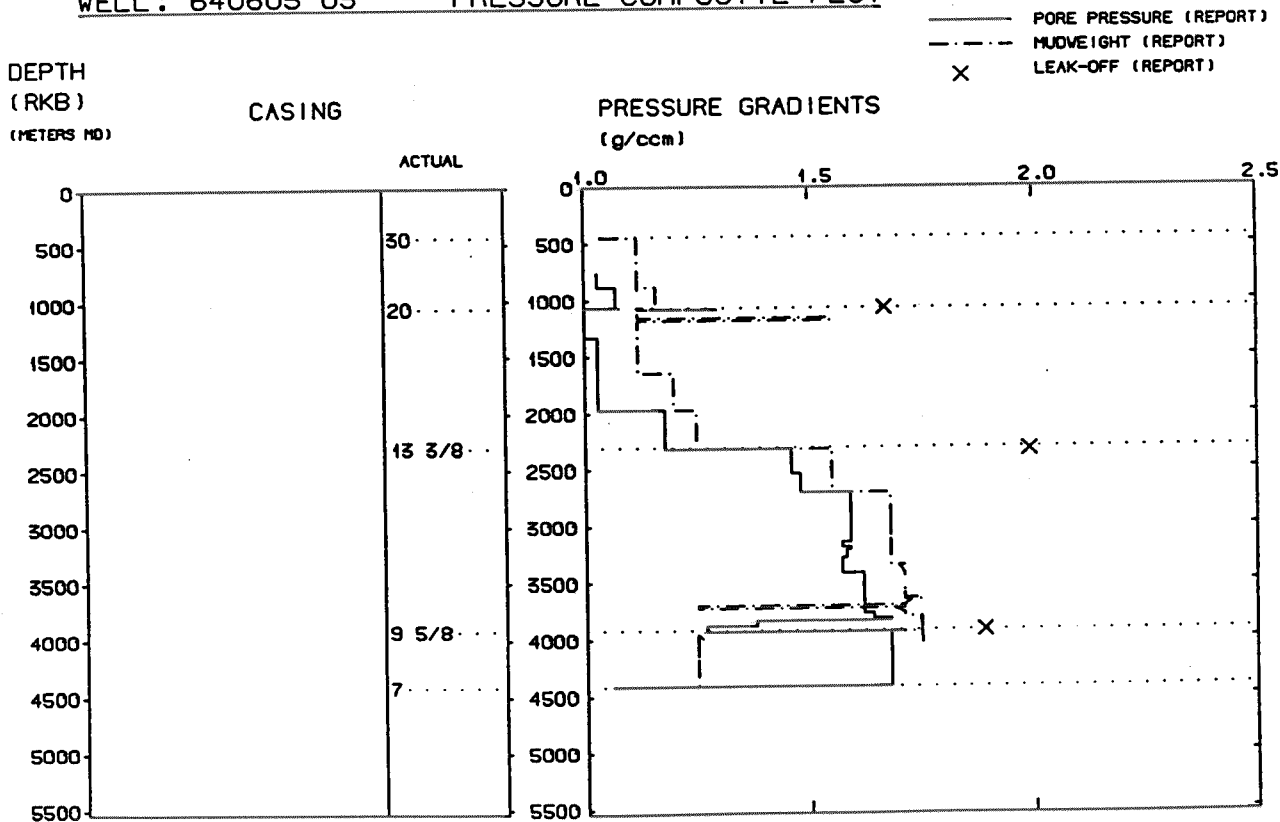
Sub operations	Minutes	Hrs	% of total
CEMENT PLUG	540	9.00	6.06
CIRC/COND	1380	23.00	15.49
CUT	330	5.50	3.70
EQUIP RECOVERY	2010	33.50	22.56
MECHANICAL PLUG	450	7.50	5.05
OTHER	600	10.00	6.73
PERFORATE	420	7.00	4.71
SQUEEZE	30	0.50	0.34
TRIP	3150	52.50	35.35
Total	8910	148.50	100.00

Total time used 2064.00 hrs

DEPTH V.S. TIME FOR WELL:



WELL: 640603 03 PRESSURE COMPOSITE PLOT



Well History 6406/3-3.

GENERAL:

Well 6406/3-3 was drilled on the Smørbukk South structure on Haltenbanken. It was designed to appraise the southern part of the Beta structure, named Smørbukk South. This well was the fourth well on Smørbukk South, and it was a joint well between licenses PL 091 and PL 094. The primary target for the well was the Halten Group sandstones of Middle-Early Jurassic age.

The main objectives of the well were to:

- to verify the structural interpretation
- to verify the geological model
- to evaluate the development, quality and lateral continuity of the reservoir sands of Garn formation
- to give a better understanding of diagenesis and its influence on variation of reservoir characteristics
- to penetrate the untested section of the Garn formation in a position where it is hydrocarbon-bearing.
- to give information of hydrocarbon fluid characteristics
- to define hydrocarbon/water contacts in the Ile and Tilje formations
- to reduce uncertainties in calculations of reserves and verify the distribution of the reserves in Garn formation
- to establish further reservoir input for the full field development plan.

OPERATIONS:

Appraisal well 6406/3-3 was spudded 4 August 1986 by Dyvi Offshore A/S semi-submersible rig Dyvi Delta, and completed 26 October 1986 at a depth of 4416 m in the Åre Formation. Drilling proceeded without significant problems.

The top of the reservoir came in at 3933 m, 49 m deeper than prognosed. 2 cores were cut in the intervals 3938 - 3952.5 and 3956 - 3972.2 m RKB. There were no shows in Ile or Tilje Formations.

RFT-data indicates that the rest of the Fangst and Båt Groups contain water. The oil/water contact is almost 65 m higher than the other holes in the Beta structure.

The well was abandoned as a dry well.

TESTING:

There were performed 2 DST tests in this well. The first at 4003 - 4012 m RKB, and the second at 3940 - 3950 m RKB.

GEOLOGICAL TOPS

WELL: 6406/3-3

Depth m (RKB)

<i>Nordland Group</i>	331
<i>Naust Fm.</i>	331
<i>Kai Fm.</i>	1390
<i>Hordaland Group</i>	1987
<i>Rogaland Group</i>	2256
<i>Tare Fm.</i>	2256
<i>Tang Fm.</i>	2307
<i>Shetland Group</i>	2368
<i>Cromer Knoll Group</i>	3188
<i>Viking Group</i>	3800
<i>Spekk Fm.</i>	3800
<i>Melke Fm.</i>	3843
<i>Fangst Group</i>	3939
<i>Garn Fm.</i>	3939
<i>Not Fm.</i>	4038
<i>Ile Fm.</i>	4066
<i>Båt Group</i>	4131
<i>Ror Fm.</i>	4131
<i>Tilje Fm.</i>	4201.5
<i>Åre Fm.</i>	4404
<i>T.D.</i>	4416