

Well no : 6407/06-03

Operator : STATOIL

Coordinates : 64 42 31.77 N
07 40 9.84 E

UTM coord. : 7176849 N
436571 E

Licence no : 92

Permit no : 533

Rig : WEST DELTA

Rig type : SEMI-SUB.

Contractor : DYVI OFFSHORE A/S

Bottom hole temperature : deg.C

Elev. KB : 29 M

Spud. date : 86.12.15

Water depth : 222 M

Compl. date : 87.02.17

Total depth : 3220 M

Spud. class : WILDCAT

Form. at TD : L.TRIASSIC

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

Prod. form :

Seisloca : ST 8402-123 SP 762

LICENSEES

10.000000 BRITOIL NORGE A/S
40.000000 MOBIL DEVELOPMENT NORWAY 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	324.0	36	332.0	.
SURF.COND.	20	430.0	26	459.0	1.55
INTERM.	13 3/8	1391.0	17 1/2	1418.0	1.95
INTERM.	9 5/8	2458.0	12 1/4	2470.0	1.98
LINER	7	3083.0	8 1/2	3100.0	1.89

CONVENTIONAL CORES

Core no.	Intervals cored meters	Recovery		Series
		M	%	
1	2472.0 - 2482.6	10.6	100.0	MIDDLE JURASSIC
2	2491.0 - 2509.4	18.4	100.0	
3	2509.4 - 2522.0	11.1	88.1	
4	2522.0 - 2545.0	23.0	100.0	
5	2552.0 - 2566.2	14.2	100.0	
6	2575.0 - 2584.4	9.4	100.0	
7	2588.0 - 2615.0	27.0	100.0	

MUD PROPERTIES

Depth below KB meter	Mud weight g/cm ³	Viscosity	Mud type
462.000	1.15	7200.0	WATER BASED
545.000	1.59	6200.0	WATER BASED
816.000	1.17	6400.0	WATER BASED
1150.000	1.16	6300.0	WATER BASED
1350.000	1.17	6300.0	WATER BASED

1418.000	1.19	6000.0	WATER BASED
1418.000	1.25	6000.0	WATER BASED
1682.000	1.50	6700.0	WATER BASED
1897.000	1.60	9000.0	WATER BASED
2081.000	1.63	7800.0	WATER BASED
2470.000	1.20	6000.0	WATER BASED
2491.000	1.25	4800.0	WATER BASED
3220.000	1.20	6800.0	WATER BASED

DRILL STEM TEST

INTERVALS AND PRESSURES

Test no.	interval meter	Choke size	Pressure (PSI)		
			WHP	BTHP	FFP
1.0	2570.000 - 2577.000	12.7	1711.4	2567.0	2562.7
	Test temperature: 93 °C				
2.0	2546.000 - 2555.000	19.1	2407.5	3698.3	3667.9
	Test temperature: 98 °C				
3.0	2479.000 - 2489.000	19.1	2451.0	3683.8	3660.5
	Test temperature: 96 °C				

RECOVERY

Test no.	Oil Sm3/d	Gas Sm3/d	Oil grav. g/cm3	Gas grav. rel. air	GOR m3/m3
1.0	115	227600	0.818	0.770	1974
2.0	260	753300	0.752	0.755	2893
3.0	326	745800	0.741	0.720	2291

DRILL BIT CUTTINGS AND WET SAMPLES

SAMPLE TYPE	INTERVAL BELOW KB	NUMBER OF SAMPLES
Cutting	459-3220	440
Wet Samples	470-3220	320

SHALLOW GAS

Interval below KB	REMARKS
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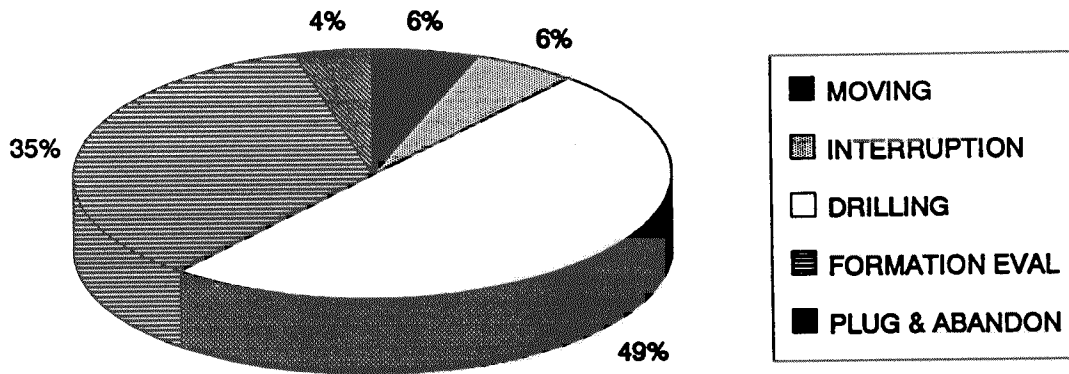
AVAILABLE LOGS

LOG TYPE	INTERVALS	1/200	1/500	Div.
DIFL LS BHC AC GR	430.000 - 1210.500	X	X	
DIFL LS BHC AC GR	1393.000 - 2468.000	X	X	
DIFL LS BHC AC GR	2459.000 - 3095.500	X	X	
DIFL LS BHC AC	3083.000 - 3222.000	X	X	
CDL CNL GR	2459.000 - 3095.500	X		
CDL CNL GR	3083.000 - 3222.500	X		
DLL MLL GR	2459.000 - 3095.500	X		

SHDT	2455.000 - 3090.000	X	
CDM AP/4-ARM	2455.000 - 3090.000	X	X
CDM AP/SHDT	2455.000 - 3090.000	1:25	
SPECTRALOG	2459.000 - 3095.000	X	X
FMT	2470.000 - 3018.000		
ACBL VDL	1100.000 - 2303.000	X	
ACBL VDL	2295.000 - 2636.000	X	X
TEMPERATURE	200.000 - 900.000	X	X
TEMPERATURE LOG	1300.000 - 2315.000	X	X
MUD	251.000 - 3222.500		X
VELOCITY	466.000 - 3183.000		X
VELOCITY (TVD)	500.000 - 3200.000		X
(+ VSP, 10 CM/S, PLOT 1-8			8 stk.)
(+ VSP, walkaway line, 10-20 cm/s, plot 1-9			9 stk.)
(+ VSP, encl. to walkaway line			3 stk.)
(+ VSP, composite geogram, 10cm/s			2 stk.)
(+ Geogram, synthetic seismogram, 10 cm/s			4 stk.)
(+ Geogram, synthetic seismogram, 10 cm/s			4 stk.)
(+ Frequency test, 10cm/s			4 stk.)
(+ Frequency test, 10cm/s, TVD			4 stk.)

DAILY DRILLING REPORT SYSTEM

MAIN OPERATIONS FOR WELL: 6407/06-03



Main operation	Minutes	Hrs	% of total
MOVING	6240	104,0	6,10
INTERRUPTION	5670	94,5	5,55
DRILLING	50790	846,5	49,68
FORMATION EVAL	35430	590,5	34,65
PLUG & ABANDON	4110	68,5	4,02
<i>Total</i>	102240	1704,0	100,00

SUB OPERATIONS FOR WELL: 6407/06-03

MAIN OPERATION: MOVING

Sub operation	Minutes	Hrs	% of total
TRANSIT	2550	42,5	40,87
ANCHOR	3300	55,0	52,88
POSITION	390	6,5	6,25
<i>Total</i>	6240	104,0	100,00

MAIN OPERATION: INTERRUPTION

Sub operation	Minutes	Hrs	% of total
MAINTAIN/REP	1890	31,5	33,33
WAIT	3780	63,0	66,67
<i>Total</i>	5670	94,5	100,00

MAIN OPERATION: DRILLING

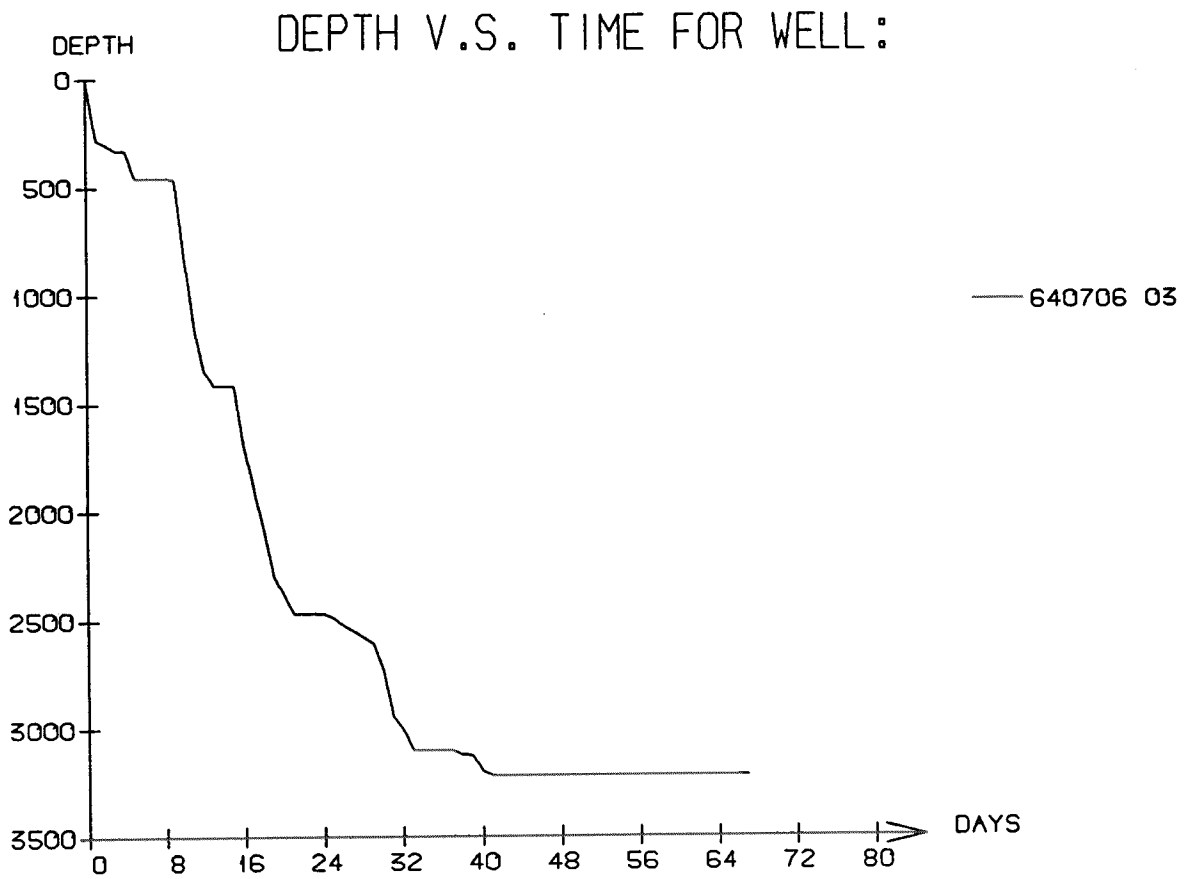
Sub operation	Minutes	Hrs	% of total
TRIP	10200	170,0	20,08
WAIT	3660	61,0	7,21
DRILL	17730	295,5	34,91
CIRC/COND	3360	56,0	6,62
SURVEY	720	12,0	1,42
REAM	420	7,0	0,83
HOLE OPEN	450	7,5	0,89
CASING	9150	152,5	18,02
BOP/WELLHEAD EQ	2130	35,5	4,19
BOP ACTIVITIES	2940	49,0	5,79
OTHER	30	0,5	0,06
<i>Total</i>	50790	846,5	100,00

MAIN OPERATION: FORMATION EVAL

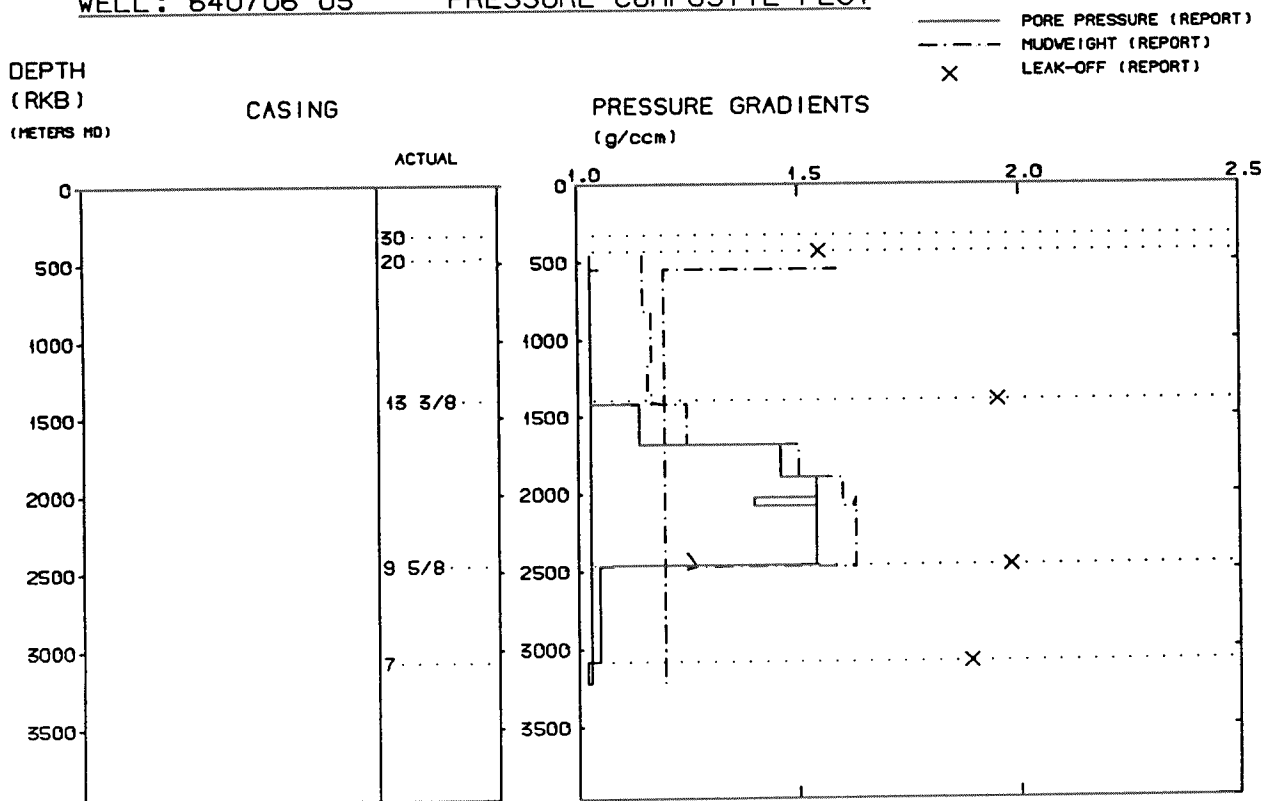
Sub operation	Minutes	Hrs	% of total
LOG	7470	124,5	21,08
TRIP	3450	57,5	9,74
CIRC/COND	330	5,5	0,93
CORE	3750	62,5	10,58
CIRC SAMPLES	150	2,5	0,42
DST	20280	338,0	57,24
<i>Total</i>	35430	590,5	100,00

MAIN OPERATION: PLUG & ABANDON

Sub operation	Minutes	Hrs	% of total
TRIP	1230	20,5	29,93
CIRC/COND	270	4,5	6,57
MECHANICAL PLUG	270	4,5	6,57
SQUEEZE	120	2,0	2,92
CEMENT PLUG	360	6,0	8,76
PERFORATE	120	2,0	2,92
CUT	300	5,0	7,30
EQUIP RECOVERY	1380	23,0	33,58
WAIT	60	1,0	1,46
<i>Total</i>	4110	68,5	100,00



WELL: 640706 03 PRESSURE COMPOSITE PLOT



Well History 6407/6-3.

GENERAL:

Well 6407/6-3 was the third well drilled on the Beta North structure as the last commitment well. Since the well should be drilled near where West Vanguard experienced a blowout due to shallow gas, special precautions had to be taken.

The primary purpose of the well was to test for hydrocarbon accumulation in the Middle Jurassic sandstone reservoir on the Beta Structure.

Secondary target was to test for hydrocarbon accumulation in the Lower Jurassic sandstone, and to verify the geophysical and structural interpretation, and improve geological- paleontological and geochemical understanding of the area. The well was prognosed to terminate in Triassic rocks at a TD of 4000 m RKB.

OPERATIONS:

Wildcat well 6407/6-3 was spudded by Dyvi Offshore semi-submersible rig Dyvi Delta 13 December 1986, and completed 17 February 1987 at a depth of 3220 m RKB in rocks of Triassic age. No shallow gas was encountered either from MWD-logs or increased gas content in the mud. Drilling proceeded without any significant problems. Middle Jurassic sandstone came in at 2462 m RKB and was hydrocarbon bearing.

From FMT a water/gas contact was established at 2557 m RKB, and top of reservoir is set at 2457 m RKB.

Coring commenced at 2472 m RKB, and a total of seven cores were cut down to 2615 m RKB. Plugged and abandoned as a gas/condensate discovery.

TESTING:

Three DST-tests were performed in this well.

GEOLOGICAL TOPS

WELL: 6407/6-3

	Depth m (RKB)
Nordland Group	251,0
Naust Fm	251,0
Kai Fm	1227,0
Hordaland Group	1463,0
Brygge Fm	1463,0
Rogaland Group	1950,0
Tare Fm	1950,0
Tang Fm	1977,5
Shetland Group	2069,0
Springar Fm	2069,0
Nise Fm	2125,0
Kvitnos Fm	2322,0
Cromer Knoll Group	2414,0
Lyr Fm	2414,0
Viking Group	2444,5
Spekk Fm	2444,5
Melke Fm	2451,0
Fangst Group	2461,0
Garn Fm	2461,0
Not Fm	2492,0
Ile Fm	2547,5
Båt Group	2638,5
Ror Fm	2638,5
Tofte Fm	2691,0
Ror Fm	2698,0
Tilje Fm	2727,0
Åre Fm	2902,0
TD=	3220,0