

2.0 TESTING OPERATIONS AND RESULTS
(DST NO. 2 DATA TO PL 091 ONLY)

PRODUCTION TESTING, DST'S

Two production tests were performed in well 6406/3-3, both in the upper Tomma I formation.

DST no	Perf.interval m RKB	Formation
1	4003.0-4012.0	Tomma I
2	3940.0-3950.0	Tomma I

Test intervals are shown on the Well Data Summary in chapter 1. Description of test operations and summary of flow data are enclosed.

SEQUENCE OF EVENTS DST#1 AND DST#2 6406/3-3, DYVI DELTA

DST#1, Tomma I 4003-4012 mRKB

YYmmdd hrs Operations:

861007	0628	Set Baker F1 packer at 3925.50 mRKB
	1200	Started to run in hole with teststring.
861008		Continue to run in hole
861009	1710	Landed fluted hanger
	1916	Pressure up tubing to 65 bars
	1923	Opened PCT valve
	1938	Pressured up tubing to 430 bars and bled off to activate firing guns.
	1955	Well perforated, 4003-4012 mRKB
	2017	Open well for first flow on 16/64" adj. choke. Flowing to gauge tank.
	2029	Increase adj. choke to 32/64"
	2151	Well shut in at choke manifold for first buildup. Totally 6.2 sm ³ cushion produced.
861010	0015	Opened well for main flow on 16/64" adj. choke. Flowing to gauge tank.
	0017	Changed to 32/64" adj. choke.
	0018	Changed to 64/64" adj. choke.
	0305	Mud to surface.
	0330	Choke plugged by viscous mud
	0350	Plug removed. Continue flowing to tank.
	0530	Water to surface. Total production of cushion and mud 16 sm ³ .
	0835	Switched to 64/64" fixed choke.
	2045	Started taking water samples.
	2130	Well shut in at choke manifold for final buildup. Total production of formation fluid 39 sm ³ .

861011 0000 Continued buildup.
2400 End final buildup. Close PCT valve.

861012 0006 Opened kill valve.
0019 Opened MORV.
0026 Started reversing out string volume.
0040 Started water sampling.
0102 Sampling terminated.
0119 Closed MORV.
0124 Started bullheading into formation.

END DST#1

Flow data summary, 6406/3-3, DST#1

Perforated interval: 4003-4012 mRKB, Tomma I formation.

Discription	First flow	Main flow
Production time	01:34 hrs	21:15 hrs
Flow rate	90 sm ³ /D	35 sm ³ /D
Fluid	water	water
Well head pressure	2200 kpa	130 kpa
B.H. flowing pressure	1) 39300 kpa	39550 kpa
Bottom hole temperature	2) 135 deg C	136 deg C
Buildup time	02:25 hrs	25:30 hrs
B.H. buildup pressure	1) 40950 kpa	40960 kpa

- 1) Last recorded flowing /buildup pressure at midle of perforated interval.
- 2) Last recorded temperature reading at 3889.50 mRKB.

DST#1, formation water properties:

Density :	1.020 g/cc
Chloride, Cl- :	29800 ppm
PH at 20 deg C :	6.2

Flow data summary, 6406/3-3, DST#2.

Perforated interval : 3940-3950 mRKB, Tomma I formation

Discription :		First flow
-----		-----
Production time		02:13 hrs
Flow rate		0
Fluid		-
Well head pressure		0
B.H. flowing pressure	1)	33960 kpa
Bottom hole temperature	2)	124 deg C
Buildup time		00:30 hrs
B.H. buildup pressure	1)	34000 kpa

- 1) Last recorded flowing /buildup pressure at midle of perforated interval.
- 2) Last recorded temperature reading at 3819.0 m RKB.

Total production of fluid was 110 liters including temperatur expansion and depressurizing of tubing fluid. Tight formation.

DST#2 , Tomma I 3940-3950 mRKB

YYmmdd hrs Operations:

861015 2050 Run in hole with Baker F1 packer.
 2210 Packer stuck at 3855 mRKB.
 2245 Packer sat at 3955 mRKB.
861016 0030 Started to run in hole with teststring.
 0930 Negative pressure test of bottom hole
 assembly. Pull out of hole.
 1600 Continue to run in hole with teststring
 1925 Prepared to hang off teststring.
 Waiting on weather.

861017 0803 Continue to run in hole with string.
 1400 Started space out of landing string.

861018 0141 Pressure up annulus to open PCT valve.
 0200 Pressured up tubing to 430 bars and
 bled off to activate firing guns.
 0215 Well perforated, 3939-3949 mRKB.
 Initial buildup.

 0242 Open well for first flow on 20/64"
 adj. choke. Flow to tank.

 0400 Closed choke manifold and continue to
 flow through bubble hose.

 0455 Closed well in at bubblehose.

 0516 Closed PCT valve.

 0525 Attemed to open MORV circulating valve.
 No success.

 0550 Sheared SSARV. Started to reverse out
 tubing content of diesel cushion.

END DST#2

MATERIAL COST AND CONSUMPTION ANALYSIS

RIGG: DYVI DELTA

PRODUCT	UNIT SIZE	UNIT PRICE \$	36" SECTION	COST \$	26" SECTION	COST \$	17.5" SECTION	COST \$	12.25" SECTION	COST \$	8.5" SECTION	COST \$	TEST P & A	COST \$	TOTAL USED	TOTAL COST
BARITE	M.T.	86.00		.00	263	22618.00	535	46010.00	1137	97782.00	66	5676.00	216	18576.00	2217	190662.00
BENTONITE	M.T.	219.00	14	3066.00	33	7227.00	5	1095.00	7	1533.00	24	5256.00	10	2190.00	93	20367.00
CAUSTIC SODA	25 KG	11.50	11	126.50	157	1805.50	31	356.50	416	4784.00	16	184.00	1	11.50	632	7268.00
BICARBONATE	50 KG	14.40		.00		.00	2	28.80	9	129.60	80	1152.00	43	619.20	134	1929.60
SODA ASH	30 KG	7.20	6	43.20	2	14.40		.00	1	7.20	32	230.40	2	14.40	43	309.60
GYPSUM	50 KG.	8.50		.00		.00	848	7208.00	458	3893.00		.00		.00	1306	11101.00
BENTONITE	50 KG.	12.00		.00		.00	37	444.00		.00		.00		.00	37	444.00
XC-POLYMER	50 LBS.	288.00		.00		.00	73	21024.00		.00		.00		.00	73	21024.00
DRISPAC REG	50 LBS.	81.50		.00		.00	64	5216.00	21	1711.50	24	1956.00	4	326.00	113	9209.50
DRISPAC SL	50 LBS.	81.50		.00		.00	5	407.50	25	2037.50		.00		.00	30	2445.00
CMC LV	25 KG.	28.50		.00		.00	443	12625.50	530	15105.00		.00		.00	973	27730.50
CMC HV	25 KG.	29.50		.00		.00	117	3451.50	20	590.00		.00	3	88.50	140	4130.00
SPERCELL C	25 KG	12.00		.00		.00		.00	714	8568.00	97	1164.00		.00	811	9732.00
DESCO	25 LBS.	30.60		.00		.00	10	306.00	91	2784.60		.00		.00	101	3090.60
ANCOLIG C	25 KG.	16.00		.00		.00		.00	358	5728.00	281	4496.00		.00	639	10224.00
DETERGENT	200 LIT	297.00		.00		.00		.00	7	2079.00		.00		.00	7	2079.00
AL. STEARATE	25 KG.	53.40		.00		.00		.00		.00		.00		.00	0	.00
ANCO RESIN	25 KG	81.25		.00		.00		.00		.00	289	23481.25		.00	289	23481.25
ZINKCARBONAT	25 KG	54.00		.00		.00	34	1836.00	23	1242.00		.00		.00	57	3078.00
ANCOIDE	25 KG.	64.80		.00		.00		.00	5	324.00		.00		.00	5	324.00
DEFOAMER	25 LIT.	70.80		.00		.00		.00	6	424.80	5	354.00		.00	11	778.80
TOTALS				3235.70		31664.90		100008.80		148298.40		43595.65		21825.60		348629.05
HOLE DRILLED (METRE)				110		628		1250		1616		480				4084
COST PR. METRE				29.42		50.42		80.01		91.77		90.82				85.36
TOTAL DAYS				1		8		8		29		16		20		82
COST PR. DAY				3235.70		3958.11		12501.10		5113.74		2724.73		1091.28		4251.57
MUD MIXED (CU.M)				368		1433		1224		1108		474		463		5070
COST PR. CU.M				8.79		22.10		81.71		133.84		91.97		47.14		68.76

STATOIL WELL NO-6406/3-3

DRILLING MUD PROPERTIES RECORD

MUD SYSTEM:		SPUD MUD/GYP POLYMER/GEL-LIGN.										AREA RIG	HALTENBANKEN DYVI DELTA										
DAY No.	DATE 1986	DEPTH metre	M.W. sg	F.V. s/qt	600	300	A.V cps	P-V cps	Y.P	GEL 0	GEL 10	pH	API Filt.	CAKE 32nds	HTHP ml.	Chl.ppm #1000	Calc. g/lit.	Pf %Sol.	%Oil	%Sand	MBT ppb	GYP ppb	
1	8/ 4	409	1.05	100			0	0	0			11	N.C										
2	8/ 5	442	1.05	35	28	25	14	3	22			10	N.C					4				12	
3	8/ 6	446	1.12	37	36	32	18	4	28	10	11	9.5	N.C					7		.5		12	
4	8/ 7	757	1.12	42	41	37	20.5	4	33	13	15	9	N.C					7		.25		13.5	
5	8/ 8	1067	1.12	40	53	48	26.5	5	43	12	14	9.8	N.C					7		.25		12	
6	8/ 9	1067	1.12	41	54	49	27	5	44	14	15	9.6	N.C					7		.25		12.5	
7	8/10	1046	1.13	37	46	42	23	4	38	14	15	9.8	N.C					8		Tr.		12.5	
8	8/11	1083	1.3	39	54	49	27	5	44	12	19	9.8	N.C					12		Tr.		12.5	
9	8/12	1083	1.3	42	31	25	15.5	6	19	15	18	10	N.C										
10	8/13	1083	1.12	51	34	24	17	10	14	4	5	9.2	6.1	1		20.5	3.6	.1	6				5.40
11	8/14	1086	1.12	43	29	21	14.5	8	13	3	4	10	6.2	1		20.5	5.04	.1	6	.5			6.90
12	8/15	1203	1.12	42	26	20	13	6	14	3	3	10.1	6.5	1		19.5	4.8	.1	7	.5	2	6.20	
13	8/16	1660	1.2	51	43	31	21.5	12	19	4	5	8.9	5.1	1		20	4.8	.05	10	.25	6	6.20	
14	8/17	1970	1.25	55	50	35	25	15	20	5	20	8.9	5.3	1		19.5	4.3	.05	13	.25	11	4.20	
15	8/18	2320	1.52	62	72	46	36	26	20	7	36	8.9	5.6	1		19.5	4.4	.05	20	1	18	4.10	
16	8/19	2320	1.55	66	70	45	35	25	20	8	38	8.6	5.8	1		20	4.24	.05	20	1	20	4.60	
17	8/20	2320	1.55	70	71	45	35.5	26	19	8	36	8.5	6	1		20	4.3	.05	21	1	21	4.40	
18	8/21	2517	1.55	54	58	35	29	23	12	4	27	10	5.5	1		20.5	3.6	.15	21	1	12	5.20	
19	8/22	2701	1.68	65	90	58	45	32	26	12	60	9.5	6.4	1	23	20.5	2.9	.1	23	1	19	3.70	
20	8/23	2850	1.68	58	71	44	35.5	27	17	9	62	9.6	6.3	1	22	20.5	2.8	.1	22	1	21	4.70	
21	8/24	2932	1.68	65	75	47	37.5	28	19	9	63	10.2	5.6	1	19	20.5	2.6	.2	22	1	22	4.30	
22	8/25	2963	1.68	62	67	42	33.5	25	17	9	56	9.6	5.4	1	19	20.5	2.6	.15	22.5	1	22	4.90	
23	8/26	3052	1.68	53	58	36	29	22	14	7	45	10.1	5.8	1	19	20.5	2	.15	22.5	.75	20	3.60	
24	8/27	3093	1.68	65	60	38	30	22	16	7	53	9.5	5.8	1	19	20.5	2.2	.15	22.5	.75	18	3.80	
25	8/28	3138	1.68	59	63	39	31.5	24	15	6	46	10.2	4.8	1	19	20.5	2.18	.2	22.5	.75	19	3.90	
26	8/29	3191	1.68	50	53	33	26.5	20	13	5	28	9.9	4.6	1	19	20.5	2.3	.2	22.5	.5	19	3.80	

STATOIL WELL NO-6406/3-3

DRILLING MUD PROPERTIES RECORD

MUD SYSTEM:		SPUD MUD/GYP POLYMER/GEL-LIGN.										AREA RIG	HALTENBANKEN DVVI DELTA										
DAY No.	DATE 1986	DEPTH metre	M.W. -sg	F.V. s/qt	600	300	A.V cps	P.V cps	Y.P	GEL 0	GEL 10	pH	API Filt.	CAKE 32nds	HTHP ml.	Chl.ppm #1000	Calc. g/lit.	Pf	%Sol.	%Oil	%Sand	MRT ppb	GYP ppb
27	8/30	3207	1.68	51	56	35	28	21	14	4	29	10.3	4.5	1	19	20.5	2.12	.2	23	.5	19	3.60	
28	8/31	3259	1.68	55	55	35	27.5	20	15	5	29	10.3	4.8	1	20	20.5	2.04	.2	23	.25	19	3.30	
29	9/ 1	3285	1.68	58	54	34	27	20	14	5	36	10	4.9	1	19	20.5	2.2	.15	23	.25	20	3.60	
30	9/ 2	3349	1.71	55	53	33	26.5	20	13	5	36	10.1	5	1	21	20.5	2.3	.15	24	.5	19	3.70	
31	9/ 3	3418	1.71	58	57	36	28.5	21	15	5	40	10.2	4.6	1	21	20.5	2.18	.2	24	.25	20	3.70	
32	9/ 4	3488	1.71	53	55	35	27.5	20	15	5	31	10.4	4.6	1	19	20.5	1.92	.2	24	.25	20	3.70	
33	9/ 5	3573	1.71	56	57	36	28.5	21	15	5	37	10	4.9	1	21	19	1.72	.15	24	.5	20	2.80	
34	9/ 6	3598	1.71	59	60	38	30	22	16	5	33	10	4.6	1	21	20	1.68	.15	24	.5	20	2.30	
35	9/ 7	3649	1.71	53	53	33	26.5	20	13	4	28	9.9	4.7	1	21	20	1.68	.15	24	.5	20	1.80	
36	9/ 8	3716	1.71	54	59	37	29.5	22	15	6	46	10.5	5	1	21	20	1.4	.25	24	.5	20	1.70	
37	9/ 9	3772	1.71	56	56	35	28	21	14	5	39	9.9	5.1	1	21	19	1.28	.15	24	.5	21	2.00	
38	9/10	3812	1.75	60	62	39	31	23	16	6	40	9.4	4.9	1	21	20	1.28	.1	26	.5	21	1.90	
39	9/11	3836	1.75	58	68	42	34	26	16	8	42	9.4	5.3	1	21	20	1.2	.05	26	1.5	21	1.90	
40	9/12	3881	1.75	55	62	38	31	24	14	4	31	10.2	5.3	1	21	19	.8	.2	26	.75	22	1.70	
41	9/13	3929	1.75	53	68	42	34	26	16	6	33	9.6	4.9	1	22	20	.8	.1	26	.5	22	1.70	
42	9/14	3936	1.75	52	64	40	32	24	16	5	30	9.5	5	1	21	20	.84	.1	26	.75	22		
43	9/15	3936	1.75	52	64	40	32	24	16	5	30	9.5	5	1	21	20	.84	.1	26	.75	22		
44	9/16	3936	1.75	58	71	43	35.5	28	15	6	30	9.2	5.4	1	21	20	.8	.1	26	.5	22		
45	9/17	3936	1.75	48	64	38	32	26	12	5	27	9.3	5.1	1	22	20	.8	.15	26	.5	22		
46	9/18	3936	1.75	53	66	41	33	25	16	5	18	9	6	1	22	20	.8	.5	26	.5	22		
47	9/19	3936	1.7	60	66	42	33	24	18	6	77	13	8.2	1	22	20	.4	2.7	24	.5	21		
48	9/20	3936	1.25	50	37	24	18.5	13	11	5	31	10.1	5.6	1	20	8	.4	.3	10	.5	22		
49	9/21	3978	1.25	60	34	22	17	12	10	3	14	11.8	6.6	1	20	9	.2	.5	11	.25	19		
50	9/22	4026	1.25	58	41	26	20.5	15	11	3	20	10.6	6.7	1	20	11.5	.24	.6	9	.25	17		
51	9/23	4153	1.25	50	41	25	20.5	16	9	3	14	10.7	5	1	19	8	.28	.4	9	Tr.	21		
52	9/24	4192	1.25	57	39	24	19.5	15	9	3	12	10.7	4.8	1	16	8.5	.34	.4	9	Tr.	21		

STATOIL WELL NO.6406/3-3

DRILLING MUD PROPERTIES RECORD

MUD SYSTEM:		SPUD MUD/GYP POLYMER/GEL-LIGN.										AREA RIG	HALTENBANKEN DYVI DELTA										
DAY No.	DATE 1986	DEPTH metre	M.W. sg	F.V. s/qt	600	300	A-V cps	P-V cps	Y.P. cps	GEL 0	GEL 10	pH	API Filt.	CAKE 32nds	HTHP ml.	Chl.ppm *1000	Calc. g/lit.	Pf	%Sol.	%Oil	%Sand	MBT ppb	GYP ppb
53	9/25	4353	1.25	60	39	24	19.5	15	9	3	10	10.6	4.6	1	16	9	.34	.3	10	.25	22		
54	9/26	4416	1.25	57	38	23	19	15	8	3	10	10.5	4.3	1	15	9.5	.28	.2	10	.2	23		
55	9/27	4416	1.25	70	49	29	24.5	20	9	3	10	10.2	4.4	1	15	10	.36	.2	10	.25	23		
56	9/28	4416	1.25	75	60	35	30	25	10	3	12	10	4.5	1	15	10	.28	.2	10	.25	23		
57	9/29	4416	1.25	125	59	35	29.5	24	11	3	22	10.8	4.1	1	16	9.5	.42	.3	10	.25	23		
58	9/30	4416	1.25	130	56	33	28	23	10	3	19	10.7	4.1	1	16	9.5	.42	.3	10	.25	23		
59	10/ 1	4416	1.25	119	58	34	29	24	10	3	17	10.5	4.1	1	16	10	.42	.25	10	.25	23		
60	10/ 2	4416	1.25	90	48	28	24	20	8	3	11	10.2	4.1	1	17	10	.34	.15	10	.25	23		
61	10/ 3	4416	1.25	87	46	27	23	19	8	3	13	10.6	4.1	1	16	11	.38	.25	10	.25	23		
62	10/ 4	4416	1.25	70	40	24	20	16	8	3	10	10.6	4.4	1	17	12	.4	.25	9.5	.25	22		
63	10/ 5	4416	1.25	55	34	21	17	13	8	3	14	12.5	5	1	17	11.5	.28	1	9.5	.25	22		
64	10/ 6	4416	1.25	60	35	22	17.5	13	9	4	25	12.5	7.8	1	18	9.5	.42	1.5	9.5	Tr.	22		
65	10/ 7	4416	1.25	50	30	19	15	11	8	4	26	12.5	8.8	1	19	11	.42	1.3	9.5	Tr.	21		
66	10/ 8	4416	1.25	49	29	18	14.5	11	7	4	24	12.5	8.8	1	19	11.5	.42	1.3	9	Tr.	21		
67	10/ 9	4416	1.25	48	29	17	14.5	12	5	3	22	12.8	9	1	22	11.5	.44	1.4	9	Tr.	21		
68	10/10	4416	1.25	48	29	18	14.5	11	7	2	20	12.8	9	1	23	12	.44	1.3	9	Tr.	21		
69	10/11	4416	1.25	54	50	30	25	20	10	4	31	12.5	8.5	1	23	13	.24	1.1	9	Tr.	21		
70	10/12	4416	1.25	54	31	18	15.5	13	5	3	16	12.6	8	1		14	.36	1	9	Tr.	20		
71	10/13	4416	1.25	52	31	18	15.5	13	5	2	17	12	7.9	1		13	.36	.9	9	.25	18		
72	10/14	4416	1.25	50	30	17	15	13	4	2	16	12	8.3	1		12	.4	.75	9	.25	18		
73	10/15	3995	1.26	51	25	15	12.5	10	5	2	8	12.7	8.5	1		12	.28	.85	9	.25	18		
74	10/16	3995	1.25	55	30	17	15	13	4	2	9	12.3	8.5	1		12	.28	.85	9	.25	18		
75	10/17	3995	1.25	55	30	17	15	13	4	2	9	12.1	8.5	1		12	.27	.8	9	.25	18		
76	10/18	3995	1.25	50	24	14	12	10	4	2	9	12.2	8.5	1		12	.32	.8	9	.25	16		
77	10/19	3720	1.25	45	22	13	11	9	4	2	8	12.5	8.4	1		12	.3	.8	9	.25	16P		
78	10/20	3701	1.75	70	49	27	24.5	22	5	7	46	12.2	8.8	2		12	.24	.6	25	1.5	15		
79	10/21	3696	1.75	57	51	28	25.5	23	5	7	48	12.2	8.7	2		12	.24	.6	25	1.5	15		
80	10/22	1155	1.55	57	45	28	22.5	17	11	12	71	12.8	9.4	2		14	.32	1	17	1	16		
81	10/23	886	1.16	32	13	10	6.5	3	7	3	12	9.8	N-C			18	.54	.15	6	.25	10		