

# NORSK PETROLEUM SERVICES A/S

OPERATING AREA Statoil 30/6-6

OPERATOR Statoil

WELL NAME/No. 30/6-6

CONTRACTOR Odfjell Drilling and Consultant Co

RIG Deep Sea Saga

BAROID ENGINEERS Tattersfield, Craddock, Howard

T.D. 3225 m

HOLE SIZE	CASING SIZE	CASING SET AT	MUD TYPE	MUD COST	DRILLING DAYS
36"	30"	199.5m	Spud mud	\$4,531.70	1/2
26"	20	605m	Gel Seawater Spud mud	\$12,128.80	1
17 1/2"	13 3/8	1793m	Gyp/Polymer	\$175,277.24	8 1/2
12 1/4"	9 5/8	2551m	Gyp/Lignosulfonate	\$91,973.78	8 1/2
8 1/2"	7"	3220	Gel/Lignosulfonate	\$62,583.62	12

# NORSK PETROLEUM SERVICES A/S.

OPERATING AREA Statoil 30/6-6

## MATERIALS USED PER CASING INTERVAL

30" CASING SET AT 199.5 m

Materials	Units	Estimated		Actual	
		Qty	Cost \$	Qty	Cost \$
BARITE	M/T	4	466.00	2	239.00
WYO BENTONITE	M/T	21	6,632.43	12	3,907.20
CAUSTIC SODA	25 kg	15	258.45	14	240.80
SODA ASH	50 kg	6	103.44	4	82.00
LIME	40 kg	15	153.90	11	62.70
TOTAL COST			7,614.22		4,531.70
COST PER DAY		3	2,538.07	1	4,531.70
COST PER BARREL		1300	5.87	1300	3.48
COST PER BBL/DAY			1.95		3.48
COST PER METER		62	122.81	61	74.29

# NORSK PETROLEUM SERVICES A/S.

OPERATING AREA Statoil 30/6-6

## MATERIALS USED PER CASING INTERVAL

20" CASING SET AT 605 m

Materials	Units	Estimated		Actual	
		Qty	Cost \$	Qty	Cost \$
WYO BENTONITE	M/T	38	12,001.54	21	6,837.60
CAUSTIC SODA	25 kg	65	1,119.95	28	481.60
LIME	40 kg	29	297.54	7	39.90
BARITE	M/T	68	7,922.00	30	3,585.00
HPD POLYMER	25 kg			16	1,088.00
CAL CHLORIDE	50 kg			3	76.20
TOTAL COST			21,737.55		12,128.80
COST PER DAY		5	4,347.51	5	2,425.76
COST PER BARREL		5150	4.22	2180	5.56
COST PER BBL/DAY			0.84		1.11
COST PER METER		400	54.34	405	29.95

# NORSK PETROLEUM SERVICES A/S.

OPERATING AREA Statoil 30/6-6

## MATERIALS USED PER CASING INTERVAL

13 3/8" CASING SET AT 1793 m

Materials	Units	Estimated		Actual	
		Qty	Cost \$	Qty	Cost \$
BARITE	M/T	240	27,960.-	394	47,083.-
WYO BENTONITE	M/T	23	7,264.09	35	11,396.-
CAUSTIC SODA	25 kg	56	964.88	291	5,005.20
SODA ASH	50 kg	5	86.20	73	1,496.50
DEXTRID	50 lb	413	16,404.36	1000	52,000.00
BARPOL	50 lb	206	26,806.78	132	16,764.-
XC POLYMER	50 lb	26	6,992.70	55	17,314.-
GYP	40 kg	585	6,815.25	625	5,687.50
TORQ TRIM II	55 gal	35	20,371.75	17	11,900.-
CON DET	55 gal			4	1,548.-
Q-BROXIN	25 kg			208	4,093.44
LIME	40 kg			37	336.70
BICARBONATE	50 kg			7	150.50
HPD	25 kg			1	68.-
WALLNUT (F)	25 kg			15	252.-
BENTONITE	100 lb			12	182.40
TOTAL COST			113,666.01		175,277.24
COST PER DAY		25	4,546.64	16	10,954.83
COST PER BARREL		5160	22.03	7086	24.74
COST PER BBL/DAY			0.88		1.55
COST PER METER		1200	94.72	1188	147.54

# NORSK PETROLEUM SERVICES A/S.

OPERATING AREA Statoil 30/6-6

## MATERIALS USED PER CASING INTERVAL

9 5/8" CASING SET AT 2553 m

Materials	Units	Estimated		Actual	
		Qty	Cost \$	Qty	Cost \$
BARITE	M/T	272	31,688.-	226	27,007.-
BENTONITE	M/T	11	3,474.13	5	1,628.-
CAUSTIC SODA	25 kg	45	775.35	154	2,648.80
SODA ASH	50 kg	15	258.60	58	1,189.-
LIME	40 kg			58	527.80
TORQ TRIM	55 gal			32	22,400.-
DEXTRID	50 lb	192	7,626.24	362	18,824.-
BARAZAN (XC POL)	50 lb	12	3,227.40	6	1,888.80
CMC LV	25 kg			80	4,480.-
GYPSUM	40 kg	275	3,227.40	324	2,948.40
Q-BROXIN	50 kg			421	8,285.28
AL STEARATE	15 kg			3	146.70
BARPOL	50 lb	96	12,492.48		
TOTAL COST			62,745.95		91,973.78
COST PER DAY		15	4,183.06	13	7,074.91
COST PER BARREL		3820	16.43	3444	26.71
COST PER BBL/DAY			1.10		2.05
COST PER METER		700	89.64	760	121.02

# NORSK PETROLEUM SERVICES A/S.

OPERATING AREA Statoil 30/6-6

## MATERIALS USED PER CASING INTERVAL

8 1/2" HOLE WITH 7" LINER SET AT 3220 m

Materials	Units	Estimated		Actual	
		Qty	Cost \$	Qty	Cost \$
WYO BENTONITE	M/T	22	6,948.26	26	8,465.60
CAUSTIC SODA	25 kg	55	947.65	157	2,700.40
SODA ASH	50 kg	7	120.68	9	184.50
Q-BROXIN	25 kg	175	3,094.00	266	5,234.88
CC 16	50 lb	195	3,478.80	336	7,224.00
BARPOL	50 lb	50	6,506.50		
CMC LV	25 kg	65	3,244.80	129	7,224.00
BARITE	M/T	70	8,155.00	91	10,874.50
SOD BICARBONATE	50 kg			56	1,204.00
HPD	25 kg			3	204.00
TORQ TRIM	55 gal			6	4,200.-
XC POLYMER	50 lb			15	4,722.00
AL STEARATE	25 kg			4	195.60
COAT 45	25 kg			143	10,150.14
TOTAL COST			32,495.69		62,583.62
COST PER DAY		25	1,299.83	21	2,980.17
COST PER BARREL		2435	13.35	3365	18.60
COST PER BBL/DAY			0.53		0.89
COST PER METER			45.13		92.85

# NORSK PETROLEUM SERVICES A/S.

OPERATING AREA Statoil 30/6-6

## MATERIALS USED PER CASING INTERVAL

### TESTING AND PLUGGING

MATERIALS	UNITS	QUANTITY	COST \$
Barite	M/T	61	7,289.50
Bentonite	M/T	2	651.00
Caustic Soda	25 kg	8	137.60
Bicarbonate	50 kg	2	43.00
Soda Ash	50 kg	3	64.50
Barazan	50 lb	7	2,203.60
CMC LV	25 kg	12	672.00
HPD Polymer	25 kg	4	272.00
Coat 45	25 kg	25	1,774.50
TOTAL COST			<hr/> 13,107.70

**NORSK PETROLEUM SERVICES A/S**  
 c/o Dolphin Services A/S  
 4056 Tananger, Norway. Telephone 04-696524. Telex 33235

**WELL NAME:** 30/6-6 STATOIL

**MUD PROPERTY RECAP**

DATE	DEPTH <del>feet</del> metres	DENSITY <del>PPG</del> SG	VISC- OSITY secs	FILTRATE ccs	HY/HP III			pH	RHEOLOGY				FILTRATE ANALYSIS					RETORT ANALYSIS			CEC	OTHER																				
					°500psi		PV		YP	10"	10'	Cl	Ca	PI	MI	Pm	Oil	Water	Corr. Solids	PPB		SD	EX	GYP																		
					1" / 32"	1" / 32"															cp				lbs/100ft <sup>3</sup>	mg/litre	ppm	%	%	%	Bent. Eq.	%	PPB									
1982																																										
9/1	PIT	1.04	100																																							
10/1	PIT	1.04	46																																							
	PIT	1.04	43																																							
11/1	PIT	1.04	40																																							
	253	1.07	42	-	-	-	-	11.7	7	16	8	8	9.500	160	.5	.65	-	0	96	4	20																					
12/1	470	1.08	53					9.6	8	42	37	35	11.000	280	.15	.2	-	0	95	5	22																					
	486	1.09	53					9.6	7	43	32	32	11.000	280	.15	.2	-	0	94	6	22																					
	620	1.09	54					9.5	6	51	35	35	12.000	340	.1	.15	-	0	94	6	22																					
13/1	PIT	1.10	53					9.6	7	49	33	33	12.000	240	.1	.15	-	0	94	6	22																					
	PIT	1.07	70																																							
14/1	PIT	1.05	120+																																							
16/1	620	1.10	72	4.4	1			9.7	23	12	3	8	13500	2160	.15	.35	2.5	0	96	4	15.0																					
17/1	622	1.11-	66	4.3	1			10.5	21	14	3	7	13500	2100	.21	.51	2.7	0	97	3	15																					
	705	1.10+	68	3.6	1			10.7	21	21	7	25	13000	1800	.12	.15	2.8	0	95.5	4.5	15																					
	822	1.10	53	4.2	1			10.5	16	14	6	25	13500	1880	.15	.30	2.2	0	94	6	14																					







**NORSK PETROLEUM SERVICES A/S**  
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 4056 Tananger, Norway. Telephone 04-606524. Telex 33236

**WELL NAME:**

**MUD PROPERTY RECAP**

DATE	DEPTH <del>feet</del> metres	DENSITY <del>PPG/Sp. G</del> SG	VISC-O-SITY secs	FILTRATE		HY/HP IIII		pH	RHEOLOGY				FILTRATE ANALYSIS				RETORT ANALYSIS			CEC PPB	OTHER			
				Cake 1" / 32"	° 500psi ccs / 32"	PV cp	YP lbs/100ft <sup>2</sup>		10" cp	10' cp	Cl mg/litre	Ca ppm	Pi	Mf	VT	Oil %	Water %	Corr. Solids %	Bent. Eq.		SD %	EX GYP PPB		
																							ccs	ccs
1982	24/1	1742	1.25	51	7.4	2			9.4	14	23	22	27	18500	1280	.1	.5	2.0	0	86	14	22	1/2	3.5
		1757	1.25	50	7.9	2			9.6	16	17	20	31	18500	1200	.1	1.2	2.1	0	86	14	21	1/2	3.8
		1797	1.25	52	6.6	2			10.9	13	28	28	62	18500	1080	.1	1.1	2.1	0	86	14	27	1/2	3.9
	25/1	1815	1.31	58	6.4	2			10.0	13	29	45	45	18500	1080	.3	.8	2.9	0	86	14	29.5	1/4	5.8
		1815	1.31	56	6.0	1			10.7	16	22	21	38	18500	1180	.15	.75	2.3	0	87	13	25.5	1/4	4.2
		1815	1.31	57	6.0	1			10.6	17	19	20	37	18000	1180	.13	.70	2.2	0	86	14	26	1/2	4.0
		1815	1.35	54	5.8	1			9.7	20	11	17	38	18500	980	.13	.58	2.0	0	87	13	27	1/2	3.75
		1815	1.35	54	5.6	1			10.1	18	16	21	46	18500	960	.12	1.0	1.9	0	87	13	28.5	1/2	3.5
	26/1	1815	1.35	53	4.9	1			10.3	15	17	19	47	18500	960	.10	1.0	1.95	0	87	13	28.5	1/4	3.6
		1815	1.36	50	4.9	1			10.0	16	17	18	34	18500	960	.13	.74	1.9	0	87	13	28.0	1/4	3.5
		1816	1.35	57	5.8	1			10.7	18	18	18	38	18000	1000	.17	.71	1.8	0	86	14	25.0	1/2	3.5
		1815	1.35	57	6.0	1			10.6	17	20	18	35	18500	960	.14	.73	1.9	0	86	14	26.5	1/2	3.5
	27/1	1815	1.35	55	6.0	1			10.7	18	18	18	37	18500	980	.15	.70	1.9	0	86	14	25.5	1/4	3.5
		1815	1.36	53	6.0	1			10.5	18	18	20	40	18500	980	.15	.73	1.9	0	86	14	26.0	1/2	3.5
		1815	1.38+	59	5.4	1			11.0	18	22	25	58	18500	980	.28	1.35	2.05	0	86	14	30.0	1/2	3.8





**NORSK PETROLEUM SERVICES A/S**

c/o Dolphin Services A/S  
4056 Tananger, Norway. Telephone 04-696524. Telex 33233

**WELL NAME:**

**MUD PROPERTY RECAP**

DATE	DEPTH feet metres	DENSITY PPG/ Spct/ SG	VISC- OSITY secs	FILTRATE		HY/HP III		pH	RHEOLOGY				FILTRATE ANALYSIS					RETORT ANALYSIS			CEC PPB	OTHER		
				Cake 1" 32/mm	°500psi ccs 32/mm	PV cp	YP lbs/100ft <sup>3</sup>		10" gms/100 cm <sup>2</sup>	10' mg/litre	Cl ppm	Ca	Pf	Mf	Pm	Oil %	Water %	Corr. Solids %	PPB Bent. Eq.					
6/2	2410	1.45	56	5.4	2			10.2	19	19	13	48	19500	1160	.30	1.0	1.95	0	83	17	26	1/3	3.5	
7/2	2435	1.45	55	5.6	2			10.3	17	19	13	46	19500	1060	.25	.73	1.95	0	84	16	25	1/4	3.6	
	2441	1.45	57	5.8	2			10.0	18	22	16	50	19500	1060	.20	.70	1.95	0	84	16	30	1/4	3.5	
	2461	1.45	55	5.0	1			10.0	16	20	14	48	19500	1000	.22	.56	1.8	0	84	16	27	1/4	3.3	
	2470	1.45	52	5.1	1			10.0	16	18	10	31	19500	1140	.25	.70	1.95	0	84	16	26	1/2	3.5	
8/2	2486	1.45	53	4.8	1			10.8	18	16	10	43	19500	1040	.23	1.0	1.85	0	84	16	28	1/3	3.3	
	2491	1.45	58	4.9	1			10.7	19	14	9	40	19500	1040	.20	.96	1.85	0	84	16	27	1/4	3.3	
	2517	1.45	53	4.8	1			10.2	20	19	11	48	19500	1080	.30	1.0	1.85	0	84	16	29	1/4	3.3	
	2526	1.45	57	4.8	1			10.1	20	23	11	53	19500	1100	.32	.92	1.85	0	84	16	28	1/3	3.3	
	2546	1.45	55	4.3	1			10.8	20	22	8	50	19500	1080	.35	1.12	1.7	0	84	16	30	1/4	3.0	
9/2	2563	1.45	56	4.4	1			10.8	21	18	8	47	19500	1060	.38	1.25	1.65	0	84	16	28.5	1/4	2.9	
	2565	1.45	63	4.6	1			10.9	25	20	8	50	19500	1060	.35	1.30	1.65	0	84	16	27.5	1/4	2.9	
	2565	1.48	57	4.2	1			10.9	23	18	5	29	19500	1000	.53	1.28	1.65	0	82	18	27.5	1/3	2.9	
	2565	1.48	59	4.2	1			11.0	24	20	6	45	19500	1040	.55	1.23	1.75	0	82	18	27	1/2	3.1	
10/2	2565	1.48	58	4.4	1			10.8	21	17	6	38	19500	1000	.48	1.17	1.7	0	82	18	27	1/3	3.0	
	2565	1.48	59	4.0	1			10.8	22	16	4.5	32	19500	1000	.43	1.2	1.65	0	82	18	27.5	1/4	2.9	
	2565	1.48	59	4.2	1			10.7	23	18	4.5	33	19500	1200	.35	.92	1.85	0	81	18.5	29	1/4	3.2	
11/2	2565	1.48	60	4.2	1			10.9	24	19	6	39	19500	1360	.40	.88	2.0	0	81	19	29	1/4	3.45	
	2565	1.495	60	3.8	1			10.6	21	17	5	36	20000	1440	.42	1.05	2.2	0	81	19	28	1/4	3.8	

**NORSK PETROLEUM SERVICES A/S**  
 c/o Dolphin Services A/S  
 4056 Tananger, Norway. Telephone 04-696524. Telex 33235

**WELL NAME:**

**MUD PROPERTY RECAP**

DATE	DEPTH feet metres	DENSITY PPG/ Spc/ SG	VISC- OSITY secs	FILTRATE		HY/HP IIII		pH	RHEOLOGY				FILTRATE ANALYSIS					RETORT ANALYSIS			CEC PPB Bent. Eq.	OTHER				
				Cake ccs	1" 32/mm	° 500psi ccs	1" 32/mm		PV cp	YP lbs/100ft <sup>3</sup> -gms/100 cm <sup>2</sup>	10" cm <sup>2</sup>	10' cm <sup>2</sup>	Cl mg/litre	Ca ppm	Pl	MI	Pm	Oil %	Water %	Corr. Solids %		PPB				
	2565	1.485	51	4.2	1			10.7	20	14	4	28	19500	1520	.40	.97	1.95	0	81	19	29	1/4	3.15			
	2565	1.485	52	4.2	1			10.8	20	14	45	30	19500	1480	.45	1.08	1.95	0	81	19	29	1/4	3.2			
12/2	2565	1.485	58	3.9	1			10.9	21	15	5	35	19500	1600	.42	1.14	2.1	0	81	19	29	1/4	3.4			
	2565	1.485	59	3.7	1			10.3	19	16	4.5	35	19500	1600	.43	1.24	2.1	0	81	19	28	1/4	3.45			
13/2	2565	1.49	55	3.9	1			10.6	19	12	4	31	19500	1520	.46	1.18	2.05	0	81	19	29	1/4	3.4			
	2565	1.49	53	3.6	1			10.4	19	11	3.5	24	19500	1440	.40	.96	2.0	0	81	19	29	1/4	3.4			
14/2	2565	1.49	52	3.8	1			10.6	18	12	5	28	19500	1600	.47	1.09	2.0	0	81	19	28	1/4	3.3			
	PIT5	1.22	60	4.2	1/2			10.4	16	11	2	10	13500	200	.41	1.20	1.75	0	92	8	15.5	1/2				
	PIT5	1.24	53	4.3	1/2			10.4	16	10	2	6	13500	200	.41	1.20	1.7	0	92	8	16	1/2				
15/2	PIT4	1.24	51	4.3	1/2	12.8	1.5	10.4	16	9.5	2	7	13500	200	.43	1.23	1.67	0	92	8	16	1/2				
	2565	1.25	49	4.8	1/2	16.8	1	10.8	14	8	2	6	14500	400	.6	1.25	2.3	0	91	9	15	1/2				
16/2	2568	1.24	46	5.0	1/2	17.2	2	11.7	12	9	1.5	10	15000	480	.66	1.35	3.85	0	91	9	15.5	1/2				
	2578	1.23	46	5.2	1/2	17.4	2	11.7	12	8	2	10	15000	460	.63	1.28	3.85	0	91	9	15	1/2				
	2597	1.24	50	4.9	1/2	17.0	2	10.9	14	8	2 1/2	20	14000	220	.51	1.23	2.75	0	91	9	17.5	1/4				
	2612	1.23+	55	5.0	1/2	17.2	2	10.7	16	8	2	15	14000	200	.56	1.30	2.60	0	91	9	18	1/4				
	2629	1.235	51	4.6	1/2				15	9	1 1/2	14														
17/2	2672	1.24+	62	5.0	1	15.5	2	10.6	20	13	4	26	14000	180	.58	1.25	2.30	0	91	9	21.5	1/2				
	2680	124+	69	5.1	1	15.8	2	10.6	18	14	5	32	14500	180	.55	1.23	2.30	0	91	9	23	1/2				
	2699	1.25	69	4.8	1/2			10.8	21	16	5	33	11													





**NORSK PETROLEUM SERVICES A/S**

c/o Dolphin Services A/S  
4056 Tananger, Norway. Telephone 04-696524. Telex 33235

**WELL NAME:**

**MUD PROPERTY RECAP**

DATE	DEPTH	DENSITY	VISC-OSITY	FILTRATE	HT/HP filter		pH	RHEOLOGY				FILTRATE ANALYSIS					RETORT ANALYSIS			CEC	OTHER										
					feet	metres		PPG/Spc/SG	secs	ccs	Cake 1 1/2"/32"	°500psi		PV	YP	10'	10'	Cl	Ca		Pl	Ml	Pm	Oil	Water	Corr. Solids	PPB	Bent. Eq.			
												ccs	1 1/2"/32"																		
23/2	PIT	1.23	53	5.1	1	14.8	2	10.7	13	8	1	10	16000	100	.85	2.6		0	90	10	20	TR									
	2964	1.23+	56	5.2	1	15.2	2	10.7	13	9	1	9	16000	100	.85	2.6		0	90	10	20	1/8									
	2964	1.23+	56	5.2	1	15.2	2	10.7	13	9	1	9	16000	100	.85	2.6		0	90	10	20	1/8									
24/2	PIT	1.23	55	4.8	1	15.0	2	10.8	14	10	1	17	16000	120	.9	2.6		0	90	10	20	TR									
	2979	1.23	53	5.1	1	15.0	2	10.8	9	25	6	13	16500	100	.95	2.8		0	11	89	20	TR									
	2984	1.23	55	5.3	1	15.2	2	10.8	13	19	6	14	16500	100	.95	2.9		0	11	89	20	TR									
25/2	3018	1.23+	57	5.1	1	15.2	2	10.8	15	11	2	17	17000	100	1.0	2.9		0	11	89	19	TR									
	3029	1.23+	58	5.0	1	15.0	2	10.8	15	11	2	16	16500	100	.95	2.8		0	11	89	19	TR									
	3034	1.24	61	5.2	1	15.4	2	10.8	16	11	2	17	16500	100	.95	2.8		0	12	88	19	TR									
	3057	1.23	53	5.0	1	15.4	2	10.4	13	10	1	16	17000	100	.7	2.4		0	11	89	19	TR									
26/2	3068	1.23	56	5.0	1	15.2	2	10.4	14	11	2	18	16500	100	.7	2.5		0	11	89	20	TR									
	3071	1.23	57	5.2	1	15.6	2	10.4	14	11	2	17	16500	100	.7	2.5		0	11	89	20	TR									
	PIT	1.23+	63	4.9	1	14.8	2	10.9	16	12	3	23	16500	100	.9	2.9		0	11	89	20	TR									
27/2	PIT	1.24	62	4.8	1	14.8	2	10.9	16	12	2	21	16500	100	.9	2.9		0	11	89	20	TR									
	3135	1.23	54	6.2	1	16.4	2	10.7	12	9	1	15	16500	100	.8	2.7		0	11	89	18	TR									
	3142	1.23	56	6.2	1	16.4	2	10.7	12	11	1	17	16500	100	.8	2.8		0	11	89	18	TR									
28/2	PIT	1.23	53	5.8	1	16.4	2	10.3	12	9	2	18	16500	80	.65	2.4		0	11	89	19	TR									
	3179	1.24	57	6.1	1	16.6	2	10.3	13	11	2	18	16500	80	.65	2.4		0	12	88	19	1/8									
	3225	1.23	55	5.8	1	16.0	2	10.9	14	10	1	17	16500	80	.85	2.6		0	12	88	19	TR									

**NORSK PETROLEUM SERVICES A/S**  
 c/o Dolphin Services A/S  
 4056 Tananger, Norway. Telephone 04-696524. Telex 33235

**WELL NAME:**

**MUD PROPERTY RECAP**

DATE	DEPTH feet metres	DENSITY PPG/ Spc/ SG	VISC- OSITY secs	FILTRATE		HYHP III		pH	RHEOLOGY				FILTRATE ANALYSIS					RETORT ANALYSIS			CEC PPB	OTHER					
				Cake 1" 32/mm	° 500psi 1" 32/mm	PV	YP		10"	10'	CI	Ca	Pf	Mf	Pm	Oil	Water	Corr. Solids	Bent. Eq.								
																				ccs		ccs	cp	lbs/100ft <sup>2</sup> -gms/cm <sup>2</sup>	mg/litre	ppm	%
10/3		1.22	46	6-9	1			11.2	10	6	1	7	17000	200	1.0	2.45	0	90½	9½	19½							
11/3		1.23	45	6.7	1			11.2	10	7	1.5	10	17000	200	1.0	2.4	0	90½	9½	19							
		1.23	45	6.6	1			11.1	10	8	1	10	17000	200	.95	2.4	0	90½	9½	19							
12/3	IN	1.23	54	5.9	1			11.2	16	8	2	15	17000	160	.90	2.45	0	10	20								
	PIT	1.23	51	5.5	1			11.2	14	8	1.5	15	17000	160	.90	2.55	0	90	10	20							
13/3	PIT	1.23	52	5.5	1			10.8	12	8	1.5	13	17000	160	.80	2.45	0	90	10	20							
	PIT	1.23	50	6.0	1			10.3	11	7	1	11	17000	165	.72	2.40	0	90	10	20							
14/3	PIT	1.22	48	6.0	1			10.3	11	7	1	11	17500	150	.74	2.40	0	90½	9½	20							
	PIT	1.22	47	6.0	1			10.1	11	7	1	13	17500	155	.68	2.38	0	90½	9½	20							
15/3	IN	1.22	49	5.8	1			9.9	11	7	1	12	17500	145	.70	2.45	0	90½	9½	19							
	PIT	1.22	49	5.8	1			9.9	11	7	1	12															
16/3	PIT	1.23	51	6.0	1			9.7	12	7	1.5	10	17500	135	.55	1.95	0	90½	9½	19½	<0.5						
	PIT	1.23	50	6.2	1			9.6	10	7	1	8															
17/3	IN	1.46	56	6.3	1			11.2	21	10	4	30	17500	190	1.0	2.45	0	82	18	19½	1.0						
	PIT	1.45	55	6.1	1			11.2	19	10	4	30	17500	195	0.97	2.4	0	82	18	19½	1.0						
18/3	PIT	1.47	52	6.4	1			10.9	18	9	3.5	30	17500	190	1.10	2.4	0	82	18	19½	1.0						
	705	1.44	62	6.6	2			11.3	22	10	4	47	16000	244	.77	1.9	.5	83½	16	17½	.75						
19/3	PIT	1.45	65	7.7	2			11.2	20	9	3	30	16000	200	.68	1.74	0	83	17	20	1.0						
	PIT	1.47	55	6.6	2			11.4	20	9	2	45	17500	255	.5	1.4	0	82	18	17.5	0.5						

**NORSK PETROLEUM SERVICES A/S**

c/o Dolphin Services A/S  
4056 Tananger, Norway. Telephone 04-696524. Telex 33239

**WELL NAME:**

**MUD PROPERTY RECAP**

DATE	DEPTH	DENSITY	VISC-OSITY	FILTRATE		HYMP III		pH	RHEOLOGY				FILTRATE ANALYSIS					RETORT ANALYSIS			CE C	OTHER			
				feet	metres	PPG/Spct/SG	secs		ccs	Cake	°500psi	PV	YP	10"	10'	Cl	Ca	Pf	Mf	Pm		Oil	Water	Corr. Solids	PPB
					32/mm	32/mm	ccs	32/mm	cp	lbs/100ft <sup>2</sup>	gms/cm <sup>2</sup>	mg/litre	ppm				%	%	%	Bent. Eq.					
20/3	PIT	1.45	64	6.8	2			11.2	20	7	2	45	17500	300	.45	1.4		0	84	16	17½	1.0			
	PIT	1.48	62	6.7	2			11.7	19	14	4	47	17000	290	.43	1.4		0	82	18	17½	1.0			
21/3	PIT	1.42	53	7	2			12.3	23	11	4	38	14000	400	.47	1.0		0	83	17	15	1.0			
	PIT	1.44	57	6.6	2			11.6	18	15	3	42	16000	600	.45	1.2		0	84	16	20	1.0			
22/3	PIT	1.43	57	6.3	2			11.1	19	11	2	30	17000	500	.51	1.4		0	84	16	17½	1.0			
	PIT	1.46	58	6.4	2			10.8	20	18	8	48	16000	400	.48	1.1		0	84	16	17½	1.0			

Well 30/6-6	<b>FLOW DATA</b>	CHP/PG A1-8/1
DST no. 1		Perfs.: 2946-62 m RKB
		Zone tested BRENT (Etive)

Date/ time	Bottom hole		Well head		Chokes 1/64"		Separator/Surge tank data						Liq. and gas analysis						
	press. bar	temp. °C	press. bar	temp. °C	manifold	heater	press. bar	temp. °C	gas rate 10 Sm <sup>3</sup> /D	water rate Sm <sup>3</sup> /D	GOR Sm <sup>3</sup> /Sm <sup>3</sup>	sp.gr.W. /°C	sp.gr. gas	Water %	Sedim. %	CO <sub>2</sub> %	H <sub>2</sub> S (ppm)	NaCl	PH
13.03.82 23.00	296.7	112.9	2.97		128	Bypassed			-	328.14									
24.00	299.3	113.4	8.02	22.2	64	"						1.03/18.6			5	0			
14.03.82 01.00	304.8	113.9	13.93		"	"	<4.0		-	185.3		1.03/19.9			4	0	38000	7	
02.00	296.3	114.4	5.68	30.0	"	"	"			321.6				100	0	9	0	38000	7
03.00	294.1	114.9	4.56		"	"	"			356.3				100	0			35000	7
03.30	Bypassed separator to get stabilized WHP, rate measurements from surge tank															7	0		
03.45	293.2	115.4	3.89		64	Bypassed				376.1								38000	7
04.15	292.9	115.4	3.93		"	"				376.1									
04.45	292.8	115.4	3.93		"	"				382.8									
05.15	292.7	116.0	3.99		"	"				384.2					2	0			
05.45	292.7	116.0	3.93		"	"				376.1									
06.15	292.4	116.0	3.95		"	"				378.8				100	0	9	0		
06.45	292.5	116.0	3.97		"	"				378.8		1.02/34.8							
07.15	292.3	116.5	4.08		"	"				381.5						8	0		
07.45	292.1	116.5	3.89		"	"				381.5									
7.48					shut in														
										137.77 m <sup>3</sup>									

**Remarks**

WHP from Sperry Sun MRPG No. 0120

BHP and BHT from Sperry Sun MK 1-11-1584 at 2956.0 mRKB

Rest of data from Flopetrols well testing report 30/6-6

Rate measurements from 3.45 to 7.45 should be used for analysis.

Well 30/6-6	PARAMETERS USED IN THE ANALYSIS	CHP/PG A1-9/1
DST no. 1		Perfs.: 2946-62mRKB
		Zone tested BRENT (Etive)

Test results:

$\bar{q}_w = 379.5 \text{ Sm}^3/\text{D}$  at 1" choke

$P_f = 292.1 \text{ bar}$  2956.0 m RKB (Sperry Sun MK.1-11-1584)

$= 292.3 \text{ bar}$  2960.7 m RKB (Flopetrol SSDR-1 no. 81048)

$T_{\text{max}} = T_{\text{stable}} = 116.5^\circ\text{C}$  at 2956.0 mRKB (Sperry Sun)

$T_{\text{max}} = T_{\text{stable}} = 113.9^\circ\text{C}$  at 2960.7 mRKB (SSDR-1)

Production time initial flow:  $t_p = 4 \text{ mins}$

" " 2. flow:  $t_p = 577 \text{ mins.}$  (522)

Parameters from petrophysical evaluation:

$\bar{\phi} = 18\%$

$S_w = 100\%$

$h_{\text{max}} = 21 \text{ m}$

$h_{\text{perf}} = 16 \text{ m}$

$r_w = 0.108 \text{ m}$  (8½" bit)

Results from Statoil lab.:

$R_w = 0.175 \text{ ohm-m}$  ved  $20^\circ\text{C}$

$\text{NaCl} = 40889 \text{ mg/l}$  (79770 ppm)

$\text{Cl}^- = 24781 \text{ mg/l}$  (24104 ppm)

$\rho_w = 1.0281 \text{ g/cc}$  ved  $20^\circ\text{C}$

Correlation data:

$C_w = 5.06 \cdot 10^{-5} \text{ bar}^{-1}$

$C_f = 5.52 \cdot 10^{-5} \text{ bar}^{-1}$   $3.81 \cdot 10^{-6} \text{ psi}^{-1}$

$B_w = 1.049 \text{ Res m}^3/\text{Sm}^3$

$\mu_w = 0.27 \text{ cp}$

$RS_w = 3.1 \text{ Sm}^3/\text{Sm}^3$

Well 30/6-6	<b>RFT DATA</b>	Run no. 1,2 and 3
Formation BRENT		

Test no	Depth m	Cor. hydr. pr. before test bar	Cor. hydr. pr. before test (g/cc)	Drawdown bar	Build up time sec	Cor. formation pres. bar	Cor. formation pres. (g/cc)	Cor. hydr. pr. after test bar	Cor. hydr. pr. after test (g/cc)	Remarks
1	2323	341.05	1.226	9.93	58	302.58	1.087	340.91	1.225	
2	232	341.53	1.230	2.96	100	303.13	1.091	341.46	1.230	
3		342.70	1.231	8.00	56	304.09	1.092	342.57	1.231	
4	243	342.84	1.230	1.79	55	304.30	1.091	342.84	1.230	
5	284	343.26	1.230	2.96	55	304.58	1.091	343.26	1.230	
6	2843	343.60	1.230	2.41	68	304.85	1.091	343.60	1.230	
7	2846	344.01	1.231	2.55	57	305.20	1.091	344.01	1.231	
8	2853	344.91	1.231	54.81/ 129	101	306.09	1.092	344.84	1.250	Some supercharged
9	2866	346.57	1.231	191.54	120	308.85	1.097	346.70	1.232	Intern. plugging Supercharged
10	2879	348.22	1.231	24.48	129	308.43	1.090	347.73	1.230	Sample point
11	2879	347.94	1.230	8.55	81	308.23	1.090	348.01	1.231	Repeat
12	2881	348.22	1.230	160.30	92	308.51	1.090	348.22	1.230	
13	2896	350.22	1.231	11.03	70	309.78	1.089	350.01	1.230	
14	2918	353.05	1.232	12.62	81	312.26	1.089	352.84	1.231	
15	2921	353.05	1.230	77.50	95	312.47	1.089	352.56	1.229	
16	2924	353.46	1.231	54.26	79	312.75	1.089	353.39	1.230	
17	2934	354.70	1.231	78.94	48	313.37	1.087	354.49	1.230	
18	2936.5	354.77	1.230	10.96	59	313.64	1.087	354.77	1.230	
19	2939.5	355.11	1.230	139.14	117	313.85	1.087	354.98	1.229	
20	2944	355.53	1.229	24.13	49	314.19	1.086	355.46	1.229	
21	2947	355.94	1.230	142.58	60	314.54	1.086	355.87	1.229	
22	2950	356.08	1.229	72.39	130	314.81	1.086	356.15	1.229	
23	2953	356.70	1.230	24.96	68	315.09	1.086	356.56	1.229	

Well 30/6r6	<b>RFT DATA</b>	Run no. 1,2 and 3
Formation BRENT/DUNLIN		

Test no	Depth m	Cor. hydr.pr. before test bar	Cor. hydr.pr. before test (g/cc)	Drawdown bar	Build up time sec	Cor formation pres. bar	Cor.formation pres. (g/cc)	Cor. hydr.pr. after test bar	Cor. hydr.pr. after test (g/cc)	Remarks
24	2956	356.98	1.229	16.55	67	315.37	1.086	356.98	1.229	
25	2959	357.32	1.229	23.58	71	315.64	1.086	357.39	1.230	
26	3167.5	382.42	1.229	20.75	243	360.60	1.159	382.35	1.229	
27	3172	382.62	1.228	3.65	67	360.73	1.158	382.56	1.228	
28	3175	382.90	1.228	2.79	63	360.94	1.157	382.83	1.228	
29	3178	383.80	1.230	4.21	57	361.84	1.159	383.87	1.230	
30	3187.5	384.56	1.229	6.00	54	362.18	1.157	384.42	1.228	
31	3191	384.76	1.228	263.79	-	362.53	1.157	-	-	Interm. plugg
32	3178	383.31	1.228	4.07	-	361.28	1.157	-	-	
33	2881	347.32	1.227	88.60	145	307.89	1.088	347.53	1.228	
34	2881	347.94	1.229	62.40	83	308.23	1.089	347.88	1.229	Rep., interm plug
35	2921	352.98	1.230	75.80	70	312.06	1.087	352.70	1.229	
36	2936.5	354.70	1.230	-	-	-	-	354.56	1.229	Tight
37	2935.5	354.56	1.230	-	-	-	-	353.74	1.227	"
38	2956	357.18	1.230	10.41	77	315.23	1.085			Sampling
39	2955	356.77	1.229	26.61	73	315.02	1.085			Sampling

Well 30/6-6	<b>RFT DATA</b>	Run no. 1
Formation BRENT		

Test no	Depth m	Cor.hydr.pr. before test bar	Cor.hydr.pr. before test (g/cc)	Cor.formation pres. bar	Cor.formation pres. (g/cc)	$P_{RFT} - P_{HP}$ $\Delta P$ bar	Temperature C°	Remarks
1	2823	342.38	1.235	303.64	1.094	1.034	84.9	
2	2827	342.67	1.234	304.00	1.094	0.855	85.5	
3	2834	343.51	1.234	304.63	1.094	0.517	86.0	
4	2837	343.80	1.234	304.90	1.094	0.586	86.4	
5	2840	344.21	1.234	305.26	1.094	0.662	86.8	
6	2843	344.58	1.234	305.55	1.094	0.683	87.2	
7	2846	344.96	1.234	305.85	1.094	0.634	87.6	
8	2853	345.78	1.234	306.73	1.094	0.621	87.9	
9	2866	347.18	1.233	309.02	1.097	0.152	87.9	Supercharged
10	2879	348.82	1.233	308.85	1.092	0.400	87.2	Sample
11	2879	348.59	1.233	308.59	1.091	0.338	87.2	Repeat
12	2881	348.94	1.233	308.92	1.091	0.400	88.4	
13	2896	350.79	1.233	310.12	1.090	0.324	88.2	
14	2918	353.68	1.234	312.71	1.091	0.427	87.7	
15	2921	345.87	1.205	312.97	1.090	0.483	88.2	Hydrostatic low
16	2924	342.34	1.192	312.87	1.089	0.103	88.5	"
17	2934	349.94	1.214	314.04	1.089	0.655	88.3	" ,plug
18	2936.5	335.62	1.163	314.38	1.090	0.717	89.4	"
19	2939.5	349.57	1.210	314.69	1.090	0.820	89.9	"
20	2944	356.57	1.233	314.99	1.089	0.779	90.8	"
21	2947	346.63	1.197	315.31	1.089	0.758	91.3	"
22	2950	357.27	1.233	315.67	1.089	0.834	91.9	
23	2953	357.66	1.233	315.89	1.089	0.779	92.4	
24	2956	353.57	1.218	316.18	1.089	0.793	92.9	



Well 30/6-6	<b>RFT DATA</b>	Run no. 1
Formation BRENT/DUNLIN		

Test no	Depth m	Cor. hydr. pr. before test bar	Cor. hydr. pr. before test (g/cc)	Cor. formation pres. bar	Cor. formation pres. (g/cc)	$P_{RFT} - P_{HP}$ $\Delta P$ bar	Temperature C°	Remarks
25	2959	354.46	1.220	316.41	1.088	0.752	93.3	
26	3167.5	383.99	1.234	361.83	1.163	1.213	100.4	Not temp. stab
27	3172	383.90	1.232	361.96	1.162	1.207	101.7	
28	3175	384.16	1.232	362.17	1.161	1.213	102.4	
29	3178	384.61	1.232	362.52	1.161	0.669	103.1	
30	3187.5	386.01	1.232	363.56	1.161	1.365	103.8	
31	3191	386.09	1.232	350.72	1.118	11.8	104.3	Intern plugging
32	3178	376.46	1.206	362.43	1.161	+1.110	104.9	Hydrost. low

Well 30/6-6	RFT DATA	Run no.
Formation BRENT	from sampling	

PRE - TEST INFORMATION

Sample no.	Depth m	Cor.hydr. pr. before test bar (g/cc)	Cor.form. pressure bar (g/cc)	Hydr. pressure after test bar (g/cc)	Recovery l	Sampling time s	Chamber size gal	Cor.hydr. pr. after sample bar	Remarks
1	2879	348.22	308.43	347.73	9	555	2 3/4	346.15	Plugged
		(1.231)	(1.090)	(1.230)	0	138	1	(1.224)	
2	2956	357.18	315.23	NA	3.5	740	2 3/4	354.56	Intermittent plugging
		1.230	1.085		0	90	1	1.221	Plugged
3	2955	356.77	315.02	NA	4	1586	2 3/4	353.18	Intermittent plugging
		1.229	1.085		0.5	514	1	1.217	Intermittent plugging
All sample chambers without pressure when opened on surface. Recovered fluid was water with salinity lower than both formation and mud filtrate.									