

RFT RESULTS

WELL: 7/11-8

TEST NO.	DEPTH M	PHI psig	PF psig	PHH psig	REMARKS
1/1	3730.5	8197	-	8198	NO SEAL
2/1	3740.2	8219	7728	8220	GOOD PERM.
3/1	3783.7	8318	7960	8315	GOOD PERM. *)
4/1	3796	8340	7821	8339	GOOD PERM.
5/1	3824.5	8400	7878	8399	GOOD PERM.
6/1	3857	8470	8156	8468	GOOD PERM. *)
7/1	3883	8526	8177	8521	GOOD PERM. *)
8/1	3918.5	8596	8060	8597	FAIR PERM.
9/1	4714	10371	-	10374	NO SEAL
10/1	4728	10386	-	10384	NO SEAL

*) = Supercharged

6.3 MUD REPORT 7/11-8

36" section

The 17 1/2" pilot hole was drilled to 188 m using seawater and high viscous pills. The volume circulated on each connection was 5 m³ prehydrated bentonite containing seawater and Lime. The hole was opened to 36" and displaced with 1.20 rd mud.

26" section

The 17 1/2" pilot hole was drilled to 620 m with prehydrated bentonite and seawater. The solids control equipment was run while drilling. It was necessary to do a clean up trip between the log runs, due to tight hole. The hole was displaced with high viscous mud, using polymer as viscosifier. Underreamed the hole from 183-620 m and pumped high viscous pills every connection. Displaced the hole with 1.11 rd mud with 55 sec. viscosity before the casing was run.

17 1/2" section

The section from 605-1910 m was drilled using a KCl/Polymer system. Reaming was necessary on trips because of tight hole. The mudweight was increased to 1.40 rd during drilling and the weight was increased to 1.58 rd before the casing was run. It was necessary to circulate high viscous pills on connections due to insufficient hole cleaning. Main chemicals: KCl brine, Milpol 302, Drispac, Permalose.

12 1/4" section

Started to drill this section with KCl/Polymer mud. After 300 m drilling the mud was dispersed with lignosulphonate. The weight was 1.47 rd in the beginning and was raised to 1.52 rd after 1000 m drilling. In this section we struggled viscosity problems, due to fine solids from turbine drilling. Some sloughing shale occurred before the mud was weighted up. Casing depth was 3673 m.

Main chemicals: Bentonite, Caustic Soda, Lignosulphonate, Drispac, KCl.

8 3/8" section

The section was drilled with mud containing bentonite lignosulphonate, barite and lignite. The weight was 1.70 rd when drilling out the 9 5/8" shoe and it was then decreased to 1.55 rd. Due to insufficient hole cleaning the cuttings packed around B.H.A and the pipe got stuck. T.D. of the well was 4750 m. Main chemicals: caustic soda, chemtrol x, lignosulphonate, ligcon.



DRILLING MUD RECAP

Contractor WILHELMSEN OPERATOR NORSK HYDRO A/S LEGAL DESCRIPTION _____
 Well Name _____
 Rig No. TREASURE SCOUT And No. 7/11-8 Field EKOFISK COUNTRY NORWAY
 Promud a/s Warehouse TANANGER Spud Date 21/9/83 No. Drilling Days To T.D. 77 DATE T.D. REACHED 5/12/83 TOTAL DEPTH 4750 m TOTAL COST \$ 685,059.53

DATE	TIME	DEPTH meters	WT (ppg)	FV APIw	PV cp w	YIELD POINT (lb/100ft ²)	GELS (lb/100ft ²) 0/10	pH	FILTRATE (ml/30 min)			Cake (32nd in)	Alkalinity		Chloride (ppm)	Calcium (ppm)	Sand (% by Vol.)	Solids (% by Vol.)	Oil (% by Vol.)	Water (% by Vol.)	Methy. Blue (mg/ml mud)	K+ ppb	Circ. Volume (dbb)	REMARKS	
									API	HT-HP	OF		P _m	P _f /M _f											
19/83																									
22/9	2400		1.20	100+				9.5							40									Spud mud. Drilling 36" hole.	
23/9	2400	188	1.03	100+				10						140	20									Run 30" casing.	
24/9	2400	400	1.09	33	3	10	10/15	9.5						17000	140		3		97				110	Drilling 17 1/2" pilot hole.	
25/9	2400	620	1.10	55	10	25	15/25	9.5						15500	160		4		96				206	Logging.	
26/9	2400	430	1.11	34	9	22	10/21	9.5						14000	200		4		96				175	Ream hole to 26".	
27/9	2400	620	1.11	54	11	25	12/22	9.5						14000	200		4		96				190	POOH to run casing.	
28/9	2400	620	1.11	36	9	22	10/21	9.5						14500	180		4		96				35	Running casing.	
29/9	2400	605				Mixing mud.																		Running stuck.	
30/9	2400	605	1.10	50	14	10	5/15	8.5	18		1	.19	.1/4	60000	200		5		95				30	254	Test BOPs.
1/10	2400	700	1.10	43	14	11	3/5	8.5	10		1	.19	.1/4	60000	200		7		93	8		40	211	Drilling. Leak off.	
2/10	2400	1198	1.14	55	13	12	3/7	8.5	12		1	.25	.15/4	62000	180		8		92	8		45	287	Drilling.	
3/10	2400	1503	1.21	43	11	11	4/6	8.5	15		2	.2	.15/4.5	49000	120		10		90	15		32	334	Drilling. Washing. Reaming.	
4/10	2400	1773	1.22	50	11	14	3/7	8.5	15		2	.12	.1/3.5	60000	120		10		90	15		37	400	Drilling.	
5/10	2400	1905	1.40	50	13	12	4/8	8.0	20		2	.1	.1/3.5	55000	200		16		84	20		35	437	Raise mw. to 1.40.	
6/10	2400	1910	1.45	65	12	15	6/10	8.0	25		2	.1	.1/3.5	51000	120		17		83	25		28	441	Reaming. Raise mw. to 1.45.	
7/10	2400	1910	1.55	55	12	23	5/15	8.0	29		2	.1	.1/5	51000	440		18		82	30		31	425	Reaming. Raise mw. to 1.55.	
8/10	2400	1910	1.55	52	16	14	5/15	8.0	30		2	.1	.05/5	52000	400		19		81	31		31	435	Logging.	
9/10	2400	1910	1.58	64	14	17	6/18	8.0	30		2	.1	0/5	50000	450		20		80	32		30	437	Run casing.	
10/10	2400	1895				Build volume.																		Run casing.	
11/10	2400	1895	1.47	52	15	12.5	2/6	9.0	9.0		1	.7	.7/6	42000	100		16		84	10		22	275	Work on seal assembly.	
12/10	2400	1895	1.47	52	18	19	2.5/6	10	7.0		1	.7	.7/6	42000	100		16		84	10		22	275	Test BOPs.	
13/10	2400	1895	1.47	47	15	13.5	2.5/6	10	6.5		1	.7	.7/6	42000	100		16		84	10		22	275	Work on seal assembly.	
14/10	2400	1939	1.47	44	18	9.5	2.5/4	11	10		1	.4	.13/36	42000	500		16		84	10		25	290	Change BHA.	
15/10	2400		1.47	50	23	14.5	3/8	11	8.0	20	250	1	.5	.13/9	40000	500	TR	16		84	17.5	22	300	Drilling 12 1/4" hole.	
16/10	2400	2205	1.47	50	23	12	3/9	10	10	21	250	1	.5	.21/24	37000	500	TR	16		84	20	21	314	Drilling 12 1/4" hole.	
17/10	2400	2223	1.47	50	13	7.5	2.5/7	9.5	9.0	21	250	1	.6	.05/9	40000	500	TR	16		84	20	24	320	POOH. Run turbine.	
18/10	2400		1.47	55	15	9.5	4/15	9.5	9.5	21	250	1	.7	.06/2	37000	350	TR	16		84	25	20	314	Drilling 12 1/4".	
19/10	2400	2455	1.47	55	14	13.5	9/24	8.5	9.0	24	250	1	.7	.03/2	36000	410	TR	16		84	30	20	323		

Promud a/s _____
 Date 19/10/83 Technical Representative Hutchings. District North Sea. Region Norway. PAGE 1 OF 3



DRILLING MUD RECAP

Contractor WILHELMSEN OPERATOR NORSK HYDRO A/S LEGAL DESCRIPTION _____
 Rig No. TREASURE SCOUT Well Name And No. 7/11-8 Field EKOELSK COUNTRY NORWAY
 Promud a/s Warehouse TANANGER Spud Date 21/9/83 No. Drilling Days To T.D. 77 DATE T.D. REACHED 5/12/83 TOTAL DEPTH 4750 m TOTAL COST \$ 685,059.53

DATE (Y83)	TIME	DEPTH meters	WT (ppg)	FV API _w	PV cp _w	YIELD POINT (lb/100ft ²)	GELS (lb/100ft ²) 0/10	pH	FILTRATE (ml/30 min)			Cake (32nd in)	Alkalinity		Chloride (ppm)	Calcium (ppm)	Sand (% by Vol.)	Solids (% by Vol.)	Oil (% by Vol.)	Water (% by Vol.)	Methy. Blue (mg/ml mud)	Circ. Volume (bbl)	REMARKS	
									API	HT-HP	°F		P _m	P _i /M _t										
20/10	2400	2569	1.47	72	17	14	10/30	10	9.0	22	250	1	.58	.1/44	31 K	380	TRC	18		82	32	340	Drill with turbine.	
21/10	2300	2569	1.47	51	13	12.5	2/15	9	9.0	23	250	1	.48	08/42	31 K	340	TRC	18		82	30	335	POOH for washout.	
22/10	2300	2643	1.47	65	15	13	5/15	9	9.0	24	250	1	.7	22/5	30 K	340	TRC	18		82	28	340	RH. Ream at 2440.	
23/10	2400	2767	1.47	67	14	16	2/12	9.2	10	25	250	1	.84	.2/.6	34 K	300	TRC	20		82	35	351	Drill gel from formation.	
24/10	2400	2870	1.52	75	15	26	12/24	9.5	10	25	250	1	.80	.18/58	32 K	340	TRC	20		80	42	361	Raise rd due to sluffing.	
25/10	2400	2910	1.52	67	19	15	8/17	10	10	25	250	1	.4	.2/28	30 K	300	TRC	20		80	40	360	P.O. for washout.	
26/10	1830	2964	1.52	53	10	10	3/9	9.8	8	24	250	1	.38	.2/.2	25 K	280	TRC	20		80	32	369	Drill. Everything OK.	
27/10	2300	3081	1.52	54	12	11	3/11	9.5	9	24	250	1	.5	.16/36	20 K	360	TRC	20		80	28	374	RH 8 m fill. Drill.	
28/10	2300	3090	1.52	52	9	10.5	2/11	9.8	8.2	24	250	1	.42	.16/.4	20 K	380	TRC	20		80	27	369	Drill 4 std. Dummy OK.	
29/10	2300	3160	1.52	50	12	13	3/10	9.8	8.0	23	250	1	.46	.15/38	20 K	400	TRC	20		80	27	371	P.O. Test BOPs. 20 m fill.	
30/10	2400	3160	1.52	61	11	11	2.5/10	10	8.4	24	250	1	.34	.18/28	18 K	400	TRC	20		80	28	377	Drill pump Hi-Vis pill.	
31/10	2400	3160	1.52	70	13	11	4/13	10	8.4	25	250	1	.32	.2/.3	18 K	360	TRC	20		80	28	389	P.O. due to washouts. (4).	
1/11	2300	3225	1.52	63	13	14.5	3/13	9.8	8.6	25	250	1	.36	.18/32	18 K	340	TRC	20		80	28	391	Drill. Raise viscosity.	
2/11	2300	3308	1.52	60	15	12.5	3/12	9.8	8.0	24	250	1	.5	.2/38	18 K		TRC	20		80	28	378	Drill. Raise viscosity.	
3/11	2300	3402	1.52	57	12	10.5	3/10	9.8	8.0	23	250	1	.5	.2/36	18 K	300	TRC	20		80	28	394	Drill. Raise viscosity.	
4/11	2300	3402	1.52	55	14	11	3/14	10	7.5	22	250	1	.6	.2/36	18 K	300	TRC	20		80	28	392	Drill. POOH without.	
5/11	2300	3492	1.52	57	14	11.5	3/14	10	7.6	22	250	1	.66	28/44	18 K	280	TRC	20		80	28	397	Drill. POOH without.	
6/11	358	3584	1.52	57	13	13.5	3/11	10	7.8	23	250	1	.58	.3/42	18 K	240	TRC	20		80	28	410	Drill 311 mm hole.	
7/11	2300	3633	1.52	69	16	13.5	3/17	9.8	7.6	21	250	1	.55	22/.4	18 K	240	TRC	20		80	28	415	Drill 311 mm hole.	
8/11	2200	3644	1.52	52	12	8	2.5/10	9.8	9.0	22	250	1	.54	.2/38	18 K	240	TRC	20		80	28	415	POOH for bit & BOP test.	
9/11	2300	3664	1.52	59	16	14	4/15	10	8.0	20	250	1	.56	28/42	21000	240	TRC	20		80	27	419	Seawater contam. due to BOP test.	
10/11	2300	3689	1.52	64	16	13.5	3/15	10	7.6	17	250	1	.6	28/44	21000	240	TRC	20		80	28	417	Drill 311 hole.	
11/11	0800	3698	1.52	58	15	12	3/14	10	7.5	16.8	250	1	.7	36/52	20000	240	TRC	20		80	28	419	POOH to log.	
12/11	1600	3698	1.52	67	15	11.5	3/12	10	8.0	17.0	250	1	.5	26/42	20000	240	TRC	20		80	28	408	Clean out trip.	
13/11	2200	3698	1.52	63	16	12	3/13	10	8.0	17.0	250	1	.54	28/.4	20000	240	TRC	20		80	28	419	Clean out trip for casing.	
14/11	2300	3598	1.52	60	17	10.5	3/14	10	8.0	17.6	250	1	.56	32/48	20000	240	TRC	20		80	28	216	Run casing cement.	
15/11																								
16/11	1800	3698	1.52	60	15	10.5	3/13	10	7.8	17.6	250	1	.6	.18/.32	20000	240	TRC	20		80	28	380	Work on casing.	

Promud a/s Technical Representative Carter. District North Sea. Region Norway. PAGE 2 OF 3
 Date 16/11/83.



DRILLING MUD RECAP

Contractor WILHELMOSEN OPERATOR NORSK HYDRO A/S LEGAL DESCRIPTION _____
 Rig No. TREASURE SCOUT Well Name 7/11-8 Field EKOFISK COUNTRY NORWAY
 Promud a/s Warehouse TANANGER Spud Date 21/9/83 No. Drilling Days To T.D. 77 DATE T.D. REACHED 5/12/83 TOTAL DEPTH 4750 m TOTAL COST \$ 685,059.53

DATE (US)	TIME	DEPTH meters	WT (ppg)	FV API	PV cp	YIELD POINT (lb/100ft ²)	GELS (lb/100ft ²) 0/10	pH	FILTRATE (ml/30 min)			Cake (32nd in)	Alkalinity			Chloride (ppm)	Calcium (ppm)	Sand (% by Vol.)	Solids (% by Vol.)	Oil (% by Vol.)	Water (% by Vol.)	Methy. Blue (me/ml mud)	Circ. Volume (bbl)	REMARKS
									API	HT-HP	°F		P _m	P ₁ /M ₁										
17/11	2400	3679	1.52	65	15	11	3/15	10	8	20	250	1	.6	.2/.5	20000	260	TR	20		80	30	380	Work on casing.	
18/11	2400	3679	1.52	64	15	12	3/15	10	8	20	250	1	.6	.2/.5	20000	260	TR	20		80	30	380	Work on casing.	
19/11	2400	3679	1.50	55	10	15	3/11	10	10	22	250	1	.7	4/56	21000	240	TR	20		80	30	380	Work on casing.	
20/11	2300	3679	1.55	55	12	16	3/14	10	10.1	22	250	1	.7	4/61	20000	200	TR	21		79	30	288	RIH to drill. Raise mw. to 1.70.	
21/11	1800	3721	1.70	50	15	7	3/16	10	10	20	250	1	.7	3/65	22000	700	TR	28		71	30	304	Drill cement.	
22/11	2300	3744	1.70	50	17	4.5	3/15	10.4	8.5	19	250	1	.7	3/61	23000	700	TR	28		72	30	298	RIH. Drill. POOH. RIH with core barrel.	
23/11	2400	3830	1.65	53	17	5.5	3/15	9	9.5	19	250	1	.6	3/62	23000	650	TR	24		76	30	303	Drill, reducing mud weight.	
24/11	2400	3942	1.63	50	19	6	5/17	10.4	8	18	250	1	.6	3/61	21000	350	TR	25		75	30	318	Drill, short trip for survey	
25/11	2400	4008	1.63	50	19	5.5	3/14	10	8.6	19	250	1	.7	3/61	21000	260	TR	25		75	30	314	Pipe stuck. Mixing pill.	
26/11	2400	4024	1.55	50	12	8	2/12	10.5	8	18	250	1	.7	4/71	21000	200	TR	22		78	30	319	Drill. Reduce mud weight.	
27/11	2400	4187	1.55	55	18	9	5/16	10.2	8	18	250	1	.8	4/6	19000	200	TR	22		78	30	326	Drill. Short trip for survey	
28/11	2400	4335	1.55	53	19	7	5/14	10	8	18	250	1	.7	5/73	20000	200	TR	22		78	30	324	Drill. Short trip for survey	
29/11	2400	4388	1.55	50	19	5.5	3/13	10	8	18	250	1	.7	4/61	20000	200	TR	22		78	30	328	POOH for bit. Test BOP.	
30/11	2400	4490	1.55	52	18	4	3/12	10.3	7.9	18	250	1	.7	4/81	20000	190	TR	22		78	30	331	Drill.	
1/12	2400	4592	1.55	51	19	6.5	3/15	10.2	8	18	250	1	.8	5/84	20000	250	TR	22		78	30	354	Drill. Short trip for survey	
2/12	2400	4600	1.55	50	17	5	3/14	10	7.9	18	250	1	.8	4/61	20000	250	TR	22		78	30	354	Logging.	
3/12	2400	4600	1.55	49	17	4	3/12	10.1	8	18	250	1	.7	5/51	20000	250	TR	22		78	30	354	Logging.	
4/12	2400	4704	1.55	55	17	6	3/13	10	8.7	18	250	1	.7	3/5	20000	250	TR	22		78	30	352	Drilling 8 3/8" hole.	
5/12	2400	4750	1.55	52	17	5	3/12	10	8.5	18	250	1	.7	5/72	20000	250	TR	22		78	30	358	Logging.	
6/12	2400	4750	1.55	55	18	6	4/12	10	8.6	18	250	1	.7	4/62	20000	250	TR	22		78	30	358	P & A.	
7/12	2400		1.55	36	18	7	3/15	10.4										22		78			P & A.	

Date 7/12/83. Promud a/s Technical Representative Hutchings. District North Sea. Region Norway. PAGE 3 OF 3



DAILY DRILLING MUD ADDITIONS

Contractor WILHELMSSEN OPERATOR NORSK HYDRO A/S LEGAL DESCRIPTION _____
 Rig No. TREASURE SCOUT Well Name And No. 7/11-8 Field EKOFISK COUNTRY NORWAY
 Promud a/s Warehouse TANANGER Spud Date 21/9/83 No. Drilling Days To T.D. 77 DATE T.D. REACHED 5/12/83 TOTAL DEPTH 4750 m TOTAL COST \$ 685,059.53

DATE (19 83)	DEPTH meters	Barite		Caustic Soda		Bentonite		W.O. 21		Lime		Al Stearate		Desco		Mi-lpolymer 302		Drisspac R		Soda Ash		Permalose		Mi-lbar		Mi-lpolymer 352 L		KCl		Drisspac SL		MD		DAILY COST	CUMULATIVE COST			
		Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost	Unit	Cost							
22/9	14	6	18	2																													10066.94	10066.94				
23/9	188		9	6		2																											2656.29	17723.19				
24/9	400		9																															202.23	12925.42			
25/9	620		10	18	10																													10211.30	23136.72			
26/9	430		17	3																														1480.32	24617.04			
27/9	620	4	3		10																													3404.81	28021.85			
28/9	605																																	NIL	28021.85			
29/9	605											16	30	4	20	10																		11381.82	39403.67			
30/9	605																						9											66.15	39290.06			
1/10	700	14		5								8	18	1	5									11									49024.22	88314.28				
2/10	1198	3										27	20	2	33									57									28979.82	117294.10				
3/10	1503											3	7	2	19									30			223	15	2				16707.96	134002.06				
4/10	1773																																	44133.76	179135.82			
5/10	1905	24								2				7	8	200																	860	42	44133.76	179135.82		
6/10	1910	180												1	2	5																		600	30	25282.33	204418.15	
7/10	1910	192																																	100	26	40032.58	244450.73
8/10	1910	120																																	260	31	43902.30	288353.03
9/10	1910	22										50																							200	17	33125.20	321478.23
9/10	1910	22										7	2																						100	4	7224.98	328703.21
10/10	1895	24	9											12	20	9	15																			11949.00	340652.21	
11/10	1895	50												3	8		14																			10746.82	351399.03	
12/10	1895	30																																			9331.00	360730.03
13/10	1895																																				1554.00	362284.16
14/10	1939																																				6849.32	369178.48

Date 14/10/83. Promud a/s Technical Representative Hutchings. District North Sea. Region Norway. PAGE 1 OF 4



DAILY DRILLING MUD ADDITIONS

Contractor WILHELMSEN **OPERATOR** NORSK HYDRO A/S **LEGAL DESCRIPTION**
Rig No. TREASURE SCOUT **Well Name And No.** 7/11-8 **Field** EKOFISK **COUNTRY** NORWAY
Promud a/s Warehouse TANANGER **Spud Date** 21/9/83 **No. Drilling Days To T.D.** 77 **DATE T.D. REACHED** 5/12/83 **TOTAL DEPTH** 4750 m **TOTAL COST \$** 685,059.53

DATE (19 83)	DEPTH meters	Barite		Drispac R		Mi-lpolymer 302		Permalose		Drispac SL		Caustic		Ligcon		Unical		KCl		Bentonite		Lime		Chemtrol X		Al Stearate		Soda Ash		DAILY COST	CUMULATIVE COST
		Unit	Coef	Unit	Coef	Unit	Coef	Unit	Coef	Unit	Coef	Unit	Coef	Unit	Coef	Unit	Coef	Unit	Coef	Unit	Coef	Unit	Coef	Unit	Coef	Unit	Coef	Unit	Coef		
15/10		45	14	21	18	9																							17852.23	387030.81	
16/10	2205	8				16	12									60													6156.04	393186.85	
17/10	2223	28				16	5									60													9029.75	402216.60	
18/10		22				14	13					100	40																9697.60	411974.20	
19/10	2455	41				13	15					110	30																12409.80	424323.67	
20/10	2569	59				2	18	15	148	40																			14401.56	438724.67	
21/10	2569	20																											3024.00	441749.23	
22/10	2643	70				9	40	60	20	1	2	7																	14808.85	456558.08	
23/10	2767	115				9	60	140	142		4	5																	26136.63	482694.71	
24/10	2870	120				10	75	100	100														10						25952.20	508646.91	
25/10	2910	33				7	35	40															7						7713.39	516360.30	
26/10	2964	79				6	80	100															2						16728.02	533088.32	
27/10	3018	46				6	40	40															7	3					10095.28	543183.60	
28/10	3081	37				14	25	60															14						9369.88	552553.48	
29/10	3090	6				5										3	3	3											2550.75	555103.48	
30/10	3160	8				12										4		8											3921.04	559024.52	
31/10	3160					2												1											146.34	559170.86	
1/11	3225	18				18												3	9										4054.86	563225.72	
2/11	3308					6	10	40										6	1										2020.20	565245.92	
3/11	3348	3				7												8											1422.09	566668.01	
4/11	3402	5				8												6											1544.16	568212.17	
5/11	3491					8	5	20								7		10								2			4654.24	572866.41	
6/11	3584	5				8												10											1949.76	574816.17	

Date 6/11/83. Promud a/s Technical Representative Hutchings/Carter. District North Sea. Region Norway. PAGE 2 OF 4

