

# RFT RESULTS

WELL: 30/6-10 A

No	Depth(mRKB)	F.P.(PS)	PERM
<b>RUN 1</b>			
1/1	2481.5	4041	V. good
2/1	2486.5	4043	"
3/1	2500.5	4047	Low
4/1	2508.5	4049	V. good
5/1	2511.5	4050	"
6/1	2520	4052	Good
7/1	2548.5	4059	V. good
8/1	2556.5	4061	"
9/1	2572.5	4066	"
10/1	2577	4066	"
11/1	2587	4070	"
12/1	2592	4070	"
13/1	2596	4073	"
14/1	2600	4076	"
15/1	2602.5	4078	"
16/1	2605	4080	"
17/1	2607	4082	Good
18/1	2596	4073	V. good

Took segr. sample at 2596 m and recovered from 2 3/4 gal chamber:  
332.4 cu.ft. gas, 5.85 l oil, 0.65 l solids. (Drained on rig floor).

<b>RUN 2</b>			
1/2	2605.5	4078	V. good

Took segr. sample at 2605.5 and recovered from 2 3/4 gal chamber:  
298.8 cu.ft. gas, 2.8 l oil, 3.5 l filtrate, 0.7 l solids.

<b>RUN 3</b>			
1/3	2592	4067	V. good

Took segr. sample at 2592 m and recovered from 2 3/4 gal chamber:  
736 cu.ft. gas, 0.5 l condensate with traces of oil.

NOTE F.P. readings from H.P. gage

Checked Jas  
Date. 26.7.83

# DST RESULTS

WELL: 30/6-10 A

## DST 1

**Perforated interval:** 2600-2602 m  
**Choke size:** 32/64"  
**Flow rates:** 3540 STB/D, grav: 35,7° API  
2,85 MMSCF/D, grav: 0,685  
**GOR:** 805 SCF/STB

## DST 4

**Perforated interval:** 2480,5-2486,5 m  
**Choke size:** 64/64"  
**Flow rates:** 1590 STB/D, grav: 60,2° API  
28,2 MMSCF/D, grav: 0,665  
**GOR:** 17 800 SCF/STB

## DST 2

**Perforated interval:** 2587-2590 m  
**Choke size:** 40/64"  
**Flow rates:** 1135 STB/D, grav: 58,7° API  
19,3 MMSCF/D, grav: 0,660  
**GOR:** 17 100 SCF/STB

## DST 3

**Perforated intervals:** 2546-2555 m  
**Choke size:** 40/64"  
**Flow rates:** 1080 STB/D, grav: 60,2° API  
19,7 MMSCF/D, grav: 0,655  
**GOR:** 18 200 SCF/STB

**Checked:** Jas  
**Date:** 26.7.83

6.3 Mud Report

Ran in hole with new bit, turbine and 2° bent sub. Circulated bottoms up for samples. At 2414 m circulated and conditioned the mud. Pipe got stuck at 2665 m. Pumped 80 bbl of unweighted pipe lax pill and displaced with mud, left 5 bbl of pill inside string.

Pumped 20 bbls diesel, followed by 80 bbls of Imco spot pill. Displaced with 125 bbls of mud. Pumped 187 bbls of diesel, 59 bbls of 1.32 rd mud and 68 bbls of 1.23 rd mud. Displaced slowly with 72 bbls 1.32 rd mud and pipe came free.

Circulated and conditioned the mud, ran 9-5/8" casing. Materials used in this section were: Barite, Bentonite, Bicarbonate, Caustic Soda, Milpolymer, Permalose and KCL.



# DRILLING MUD RECAP

Contractor WILHELMSEN OPERATOR NORSK HYDRO A/S LEGAL DESCRIPTION \_\_\_\_\_  
 Rig No. TREASURE SCOUT Well Name 30/6-10A Field BERGEN COUNTRY NORWAY  
 Promud a/s Warehouse OCB BERGEN Spud Date 4/10/82 No. Drilling Days To T.D. 102 DATE T.D. REACHED 13/1/83 TOTAL DEPTH 2665 m TOTAL COST \$ 694,573.11

DATE (1982)	TIME	DEPTH meters	WT (ppg)	PV API	PV cc/g	YIELD POINT (lb/100ft <sup>2</sup> )	GELS (lb/100ft <sup>2</sup> ) 6/10	pH	FILTRATE (ml/30 min)			Coke (ppm)	Alkalinity		Chloride (ppm)	Calcium (ppm)	Sand (% by Vol.)	Solids (% by Vol.)	OH (% by Vol.)	Water (% by Vol.)	Methy. Blue (me/ml mud)	K+ (ppm)	Circ. Volume (bbl)	Re-serve M	REMARKS
									API	HT-MP	Op		P <sub>m</sub>	P <sub>r</sub> /M <sub>i</sub>											
29/11	2400	2045	1.36	75	38	7	1.5/8	11	9.8	15.0	200	2	4.0	6/1.5	55000	180	.3	14		86	15	45000	273	98	Work on BOP.
30/11	2400	2045	1.36	78	38	6	1.5/7	11	10.4	15.0	200	2	4.0	6/1.5	55000	180	.3	14		86	15	45000	273	98	Work on BOP.
1/12	2400	2045	1.36	74	40	5	1.5/7	11	12.0	15.0	200	2	3.8	5/1.3	55000	300	.3	14		86	15	45000	273	98	Work on BOP.
2/12	2400	2045	1.36	85	46	6	1.5/9	11.5	14.0	16.0	200	2	3.6	5/1.3	55000	300	.3	14		86	15	45000	273	98	Run BOP. RTH to cut csg.
3/12	2400	1791	1.36	83	38	11	2/8	11.8	11.5	16.0	200	2	4.0	4/1.0	53000	300	.3	15		85	14	43000	276	44	Milling.
4/12	2400	1797.5	1.36	85	35	13	3/8	12	10.5	15.0	200	2	1.8	1/1.3	53000	600	.3	15		85	14	43000	272	76	Milling through csg cut.
5/12	2400	1798	1.36	80	34	15	3/8	12	9.5	15.0	200	2	1.3	1/3	52000	500	.4	16		84	15	43000	280	45	Milling with 13 3/8 mill
6/12	2400	1799.8	1.36	80	37	17	2.5/8	12	9.0	18.0	200	2	1.2	15/3	56000	320	.4	14.5		85.5	14	43500	266	45	"
7/12	2400	1803	1.36	82	35	18	2.5/6	11.9	8.8	17.5	200	1	1.2	1/3	53000	330	.4	15		85	14	43000	275	76	"
8/12	2400	1718	1.36	75	36	16	2/6	11.6	7.5	17	200	1	0.9	1/3	52000	480	.4	15		85	14	43000	239	50	Reamed-cement plug.
9/12	2400	1718	1.36	70	28	16	2/4	11.5	7.8	17	200	1	0.8	15/25	53000	500	.5	14		86	14	43000	306	50	Pull BOP. Working on BOP
10/12	2400	1718	1.36	70	28	16	2/4	11.5	7.8	17	200	1	0.8	15/25	53000	500	.5	14		86	14	43000	306	50	Pull BOP. Working on BOP
11/12	2400	1718	1.36	57	26	15	2/4	11.5	7.0	17	200	1	0.8	1/2	53000	360	.5	14		86	14	43000	299	50	Run BOP & test.
12/12	2400	1786	1.36	51	25	5	2/4	11.5	10.0	17	200	1	1.3	1/2	55000	600	.5	13		87	14	43000	271	82	Drilling 12 1/4 sidetrack
13/12	2400	1824	1.36	55	28	12.5	2/4	11.7	12.0	17	200	1	1.3	1/2	55000	440	.5	14		86	14	44000	319	100	Drig/Leak off test-159sg
14/12	2400	1882	1.36	59	26	10	2/4	11.5	9.0	20	200	1	0.8	05/1	55000	300	.5	13		87	12	44000	300	93	Drilling.
15/12	2400	2025	1.36	60	30	12	3/7	11	7.8	17	200	1	0.8	08/1.5	57000	600	.5	13		87	12	46000	292	93	"
16/12	2400	2026	1.36	57	28	10	3/7	11	8.0	17	200	1	0.5	06/1	55000	440	.5	13		87	12	46000	304	80	"
17/12	2400	2109	1.36	55	26	11.5	3/8	11.5	7.2	21	200	1	2.0	15/6	55000	560	.5	13		87	12	45000	300	70	"
18/12	2400	2207	1.36	61	23	10	4/8	10.5	9.0	20	200	1	1.0	15/5	55000	560	.5	14		86	15	42000	318	60	"
19/12	2400	2214	1.36	56	28	8	3/7	10.5	9.0	21	200	1	0.9	1/5	55000	600	.5	14		86	15	43000	314	58	" BOP test OK. RTH
20/12	2400	2262	1.36	50	22	8	3/7	9.5	9.0	21	200	1	0.5	3/4	55000	540	TR	13		87	15	45500	310	40	Drilling.
21/12	2400	2284	1.36	55	24	10	4/9	9.0	8.8	21	200	1	0.5	1/3	55000	200	.3	13		87	15	45000	312	37	"
22/12	2400	2284	1.36	52	23	9	4/9	9.0	8.8	22	200	1	0.4	2/6	55000	200	.3	13.5		86.5	15	43000	245	57	Drilling after RTH.
23/12	2400	2337	1.36	53	23	10.5	4/8	8.8	8.4	20	200	1	0.4	1/4	56000	350	.25	13.5		86.5	15	43000	253	45	Work on rotary table.
24/12	2400	2387	1.36	56	21	9	4/9	8.5	9.0	21	200	1	0.4	1/4	56000	425	.2	13.5		86.5	15	49000	253	46	Drilling.
25/12	2400	2448	1.36	54	19	7	4/10	8.8	8.7	21	200	1	0.4	1/3	55000	300	.2	14		86	15	45000	278	46	Drilling.
26/12	2400	2467	1.36	60	22	7	3/6	8.5	7.4	16	200	1	0.4	1/3	55000	340	.2	14		86	14	48000	304	46	Drilling then coring.

Promud a/s \_\_\_\_\_ Technical Representative Pawson/Hutchings/McRenzle/Schmitt/F. Stumper/SOLA. District North Sea. Region Norway. PAGE 3 OF 6



# DRILLING MUD RECAP

Contractor WILHELMSEN OPERATOR NORSK HYDRO A/S LEGAL DESCRIPTION \_\_\_\_\_  
 Rlg No. TREASURE SCOUT Well Name And No. 30/6-10 A Field BERGEN COUNTRY NORWAY  
 Promud a/s Warehouse CCB BERGEN Spud Date 4/10/82 No. Drilling Days To T.D. 102 DATE T.D. REACHED 13/1/83 TOTAL DEPTH 2665 m TOTAL COST \$ 694,573.11

DATE 82 (1983)	TIME	DEPTH meters	WT (ppg)	PV		YIELD POINT (lb/100ft <sup>2</sup> )	GELS (lb/100ft <sup>2</sup> ) 0/10	pH	FILTRATE (ml/30 min)			Cone (30ml in)	Alkalinity		Chloride (ppm)	Calcium (ppm)	Sand (% by Vol.)	Solids (% by Vol.)	Oil (% by Vol.)	Water (% by Vol.)	Methy. Blue (me/ml mud)	K+ (ppm)	Circ. Volume (bbl)	REMARKS	
				API	HT-HP				%F	P <sub>m</sub>	P <sub>1</sub> /M <sub>1</sub>														
27/12	2400	2474	1.36	56	24	11	3/7	8.6	6.0	14	200	1	0.4	08/4	56000	300	.2	14		86	14	49000	298	20	Coring.
28/12	2400	2492	1.36	58	24	9.5	4/7	8.8	6.0	14	200	1	0.4	05/2	56000	340	.25	15		85	15	49000	303	40	"
29/12	2400	2514	1.36	50	20	7.5	4/8	8.6	6.0	13.5	200	1	0.35	05/2	55000	240	.2	15		85	15	45000	300	40	"
30/12	2400	2515	1.36	50	20	5.5	4/7	8.5	6.3	14	200	1	0.4	04/2	55000	250	.2	15		85	15	45000	300	40	"
31/12	2400	2434	1.37	56	20	8	6/10	8.5	6.5	13.5	200	1	0.3	04/19	55000	260	.2	15		85	14	45000	322	40	"
1/1	2400	2546	1.36	55	20	6.5	5/9	8.6	5.9	13	200	1	0.2	03/9	55000	240	.2	14		82	14	45000	319	40	"
2/1	2400	2566	1.36	54	20	6.5	6/10	8.5	5.6	13.5	200	1	0.3	03/7	55000	270	.2	15		82	14	45000	328	24	"
3/1	2400	2566	1.37	53	20	6	5/9	8.5	6.0	13.5	200	1	0.3	03/75	55000	260	.2	15		82	14	55000	328	15	"
4/1	2400	2577	1.37	55	20	6	6/11	8.5	6.7	14	200	1	0.2	01/4	56000	300	.2	15		82	14	45000	358	20	"
5/1	2400	2588	1.36	53	20	7.5	5/11	8.8	6.3	14	200	1	0.5	03/4	55000	300	2	15		82	14	45000	328	20	"
6/1	2400	2595	1.35	60	21	9	7/13	8.8	6.0	13	200	1	0.4	04/4	55000	250	2	15		82	14	45000	335	20	Coring - WOW.
7/1	2400	2606	1.35	61	21	9.5	7/14	8.5	6.0	13	200	1	0.3	02/2	55000	250	2	15		82	14	45000	335	20	WOW. RIH to drill.
8/1	2400	2646	1.32	53	20	7	5/9	8.5	6.1	13	200	1	0.4	02/3	56000	260	2	16		84	14	46000	334	56	Drilling.
9/1	2400	2657	1.32	56	20	8	5/11	8.5	6.2	12	200	1	0.5	04/4	55000	280	1	16		84	14	45000	334	56	WOW.
10/1	2400	2657	1.32	57	20	8.5	6/12	8.5	6.2	12.5	200	1	0.4	04/3	55000	280	1	16		84	14	45000	334	56	WOW.
11/1	2400	2657	1.32	53	20	6.5	5/9	8.5	6.6	13.5	200	1	0.4	01/2	55000	280	1	16		84	14	45000	334	56	WOW.
12/1	2400	2657	1.32	53	20	6.5	5/9	8.5	6.6	13.5	200	1	0.4	01/2	55000	280	1	16		84	14	45000	334	56	WOW.
13/1	2400	2665	1.32	50	18	8	5/8	8.5	6.4	14	200	1	0.3	01/2	52000	250	1	16		84	14	42000	373	-	Drilling then pipe stuck.
14/1	2400	2665	1.32	56	20	8	4/9	8.5	7.5	14	200	1	0.3	01/3	50000	260	1	14		84	14	41000	331	34	Pipe free - POOH.
15/1	2400	2665	1.28	53	22	6.5	2/5	8.5	5.0	13	200	1	0.4	02/3	50000	350	1	12		88	14	41000	366	26	RIH. Ream and wash.
16/1	2400	2665	1.28	50	20	5	3/4	8.5	5.0	13	200	1	0.3	01/02	50000	290	1	10		90	14	41000	360	26	Logging.
17/1	2400	2665	1.28	53	20	7	2/4	8.5	3.0	10.5	200	1	0.4	01/3	58000	280	1	10		90	14	46000	360	26	"
18/1	2400	2665	1.28	52	20	6.5	2/4	8.7	5.0	11.5	200	1	0.4	02/3	54000	350	1	11		89	14	44000	360	26	"
19/1	2400	2665	1.28	52	20	6.5	2/4	8.8	6.0	13.5	200	1	0.6	02/6	53000	540	1	11		89	14	42000	360	26	Circ. Condition mud for casing.
20/1	2400	2665	1.28	53	20	7	2/4	8.5	5.0	12	200	1	0.6	02/6	54000	400	1	11		89	15	43000	360	26	WOW.
21/1	2400	2665	1.28	53	20	7	2/4	8.4	5.2	11.4	200	1	0.4	02/4	53000	600	.25	11		89	15	42000	330	-	Circ. condition mud.
22/1	2400	2652	1.28	54	20	7	2/4	8.5	5.3	11.5	200	1	0.4	02/4	53000	600	.25	12		88	15	42000	310	-	Run 9 5/8 csg. Set at 2652m
23/1	2400	2652	1.28	54	20	7	2/4	8.5	5.5	11.6	200	1	0.4	02/4	53000	600	.25	12		88	15	42000	305	-	Ont csg. Displ. riser to seawater.

Date 23/1/83. Promud a/s Technical Representative Paulson/Hutchings/P. Stanger District North Sea. Region Norway. PAGE 4 OF 6  
 Sole Witness.



# DRILLING MUD RECAP

Contractor WILHELMSEN OPERATOR NORSK HYDRO A/S LEGAL DESCRIPTION \_\_\_\_\_

Rig No. TREASURE SCOUT Well Name And No. 30/6-10 A Field BERGEN COUNTRY NORWAY

Promud a/s Warehouse CCB BERGEN Spud Date 4/10/82 No. Drilling Days To T.D. 102 DATE T.D. REACHED 13/1/83 TOTAL DEPTH 2665 m TOTAL COST \$ 694,573.11

DATE (1983)	TIME	DEPTH meters	WT (ppg)	FV API	FV cp @	YIELD POINT (lb/100ft <sup>2</sup> )	GELS (lb/100ft <sup>2</sup> ) 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	%		P <sub>m</sub>	P <sub>i</sub> /M <sub>i</sub>									
24/1	2400	2652	1.23	55	21	7	2/4	8.4	5.5	11.6	200	1	0.4	02/4	45000	720	.25	11	89	15	38000	310	- Working on BOP.
25/1	2400	2652	1.23	55	21	7	2/4	8.4	5.5	11.6	200	1	0.4	02/4	40000	720	.25	12	88	15	38000	310	- WOW. Working on BOP.
26/1	2400	2652	1.23	55	21	7	2/4	8.4	5.5	11.6	200	1	0.1	02/1	40000	720	.25	12	88	15	38000	310	- WOW. BOP tested.
27/1	2400	2652	1.23	55	21	7	2/4	8.4	5.5	11.6	200	1	0.1	02/1	40000	720	.25	12	88	15	38000	310	- WOW.
28/1	2400	2652	1.23	55	21	7	2/4	8.4	5.5	11.6	200	1	0.1	02/1	40000	720	.25	12	88	15	38000	310	- Ran BOP. Rig up schlumberg
29/1	2400	2652	1.23	55	21	6	2/5	8.4	6.5	12.4	200	1	0.1	02/1	40000	800	.25	12	88	15	38000	270	Displ. riser to mud. Cont. mud. Run csg. scraper. Circ. out cnt.
30/1	2400	2652	1.23	55	22	7	2/9	8.4	8.5	15	200	1	0.1	1/3.5	40000	1000	.25	12	88	15	38000	260	- Run schlumberger - cbl.
31/1	2400	2652	1.23	55	20	6.5	2/4	9.5	9.0	18	200	2	0.5	15/1.5	40000	520	.25	12	88	15	38000	255	- Schlumberger-cbl. Ont. squ
1/2	2400	2652	1.23	53	23	6	2/4	9.8	6.5	20	200	1	0.5	15/1.0	40000	400	.25	12	88	15	38000	240	- Cement squeeze. NOW.
2/2	2400	2652	1.23	53	23	6	2/4	9.8	6.5	20	200	1	0.5	15/1.0	40000	400	.25	12	88	15	38000	240	- Pull BOP. Working on BOP.
3/2	2400	2652	1.23	54	21	6.5	2/4	9.8	6.8	20	200	1	0.5	15/1.0	40000	400	.25	12	88	15	38000	240	- Working on BOP. Run BOP.
4/2	2400	2652	1.23	54	21	6.5	2/4	9.8	6.8	20	200	1	0.5	15/1.0	40000	400	.25	12	88	15	39000	230	- WOW.
5/2	2400	2652	1.23	55	22	6.5	1/2	10	6.8	20	200	1	1.0	45/1.0	38000	240	.25	12	88	15	39000	200	- RIH with test string.
6/2	2400	2652	1.26	60	24	7.5	1/2	10	5.8	18	200	1	0.8	37/1.0	38000	320	.25	12	88	12	39000	200	- Gas kick - Circulating.
7/2	2400	2652	1.26	60	24	7.5	1/2	10	5.8	18	200	1	0.8	37/1.0	38000	320	.25	12	88	15	40000	255	30 DST No. 1.
8/2	2400	2652	1.26	58	25	8	2/4	10	5.5	16	200	1	0.5	3/8	39000	320	.25	12	88	15	40000	255	30 DST No. 1.
9/2	2400	2652	1.26	55	24	10	2/4	10.5	5.0	16	200	1	0.9	57/1.5	39000	120	.25	12	88	15	40000	255	Kill well. POOH with test string.
10/2	2400	2608	1.26	58	24	9	2/4	10.5	5.5	16	200	1	0.9	67/7	38000	150	.25	12	88	15	40000	255	- Squeeze perfs.
11/2	2400	2602	1.26	68	27	13	2/4	10.5	5.5	16	200	1	0.9	77/6	39000	200	.25	12	88	15	40000	255	- Squeeze perfs.
12/2	2400	2602	1.26	63	25	11.5	2/4	10.5	5.5	16	200	1	1.0	67/7	39000	200	.25	12	88	15	40000	255	DST No. 2.
13/2	2400	2602	1.26	60	23	11	2/4	10	5.5	16	200	1	1.7	9/2.5	39000	200	.25	12	88	15	40000	255	Kill well.
14/2	2400	2602	1.26	57	23	10.5	2/4	10.5	5.5	15	200	1	1.7	8/2.2	38000	200	.25	12	88	15	40000	250	Squeeze perfs.
15/2	2400	2602	1.26	57	23	10	2/4	10	5.4	15	200	1	1.6	77/4	39000	200	.25	12	88	15	40000	250	Reverse circulate.
16/2	2400	2602	1.26	57	23	10	2/4	10	5.4	15	200	1	1.6	77/4	39000	200	.75	12	88	15	40000	250	DST No. 3.
17/2	2400	2602	1.26	56	22	9.5	2/4	10.5	5.5	16	200	1	1.6	97/9	39000	200	.25	12	88	15	40000	250	DST No. 3.
18/2	2400	2602	1.26	56	22	9.5	2/4	10.5	5.5	16	200	1	1.6	87/7	39000	200	.75	12	88	15	40000	250	DST No. 3.
19/2	2400	2555	1.26	55	24	10	2/4	10.5	5.6	16	200	1	2.0	97/1.8	38000	200	.25	12	88	15	40000	250	Kill well.
20/2	2400	2555	1.26	56	22	10	2/4	10.5	5.6	16	200	1	2.2	10/2.1	38000	200	.25	12	88	15	40000	232	Squeeze job.

Date 20/2/83 Promud a/s Technical Representative Tom Pawson. District North Sea. Region Norway PAGE 5 OF 6

