I.8 WIRELINE FORMATION TESTS

The Schlumberger Repeat Formation Tester (RFT) tool was run over the interval 3450-3750 m BDF to record formation pressures and attempt sample recovery from prospective zones. The pressure data are summarised in Table I.8.1 and plotted as a function of depth in Figure I.8.1.

The static pressure data give evidence of a pressure discontinuity in the section between 3600 and 3660 m BDF. The limited number of data points precludes the accurate assessment of pressure gradients but a clear shift of some 300 psi in gradient line is indicated in Figure I.8.1.

Samples recovered form the RFT chambers from two zones, 3454 m BDF and 3667 m BDF showed only water with a trace of hydrocarbons (refer GECO's water analysis, appendix).

Permeability estimates are derived from the pretest flow pressures. The values are generally low throughout the section confirming the poor reservoir quality as determined from the petrophysical evaluation.

WELL 30/11-3 : SUMMARY OF RFT PRESSURE MEASUREMENTS

Depth	Flowing Pressure Pretest (1)	Flowing Pressure Pretest (2)	Flowing Pressure Sample	Static Pressure	Permeability Estimate	Remarks
m bdf	psig	psig	psig	psig	mD	
3454	5478	5443		5496	50	Pretest
3454			5316	5496	-	Sample
3524	5640	5635		5645	200	Pretest
3598	5590	5444		5731	7	Pretest
3667	5200	4941		5839	2	Pretest; slow build-up - supercharge?
3668	5206	4782		5535	3	Pretest
3668	5260	4801		5532	3	Pretest, repeat
3667.5	5358	5150		5534	6	Pretest
3692	4198	2270		5581	0.7	Pretest
3754	40	40		-	Tight	Pretest
3667	5238	4820		5552	3	Pretest
3667			1700	5554	-	Sample

Note

1. Permeabilities are derived from the Schlumberger formula (RFT - Essentials of Pressure Test Interpretation) using both pretest flowing pressures.
2. Permeability values represent an estimate of the conditions in the filtrate invaded zone.
3. Data source: RFT no. 1, 29.01.1983.

Table I.8.1

OPERATOR A/S NORSKE SHELL

WELL NO. 30/11-3

MATERIAL CONSUMPTION & COST ANALYSIS

36" HOLE DRILLED TO 248 Meters ~~Feet~~ 30" CASING SET AT 237 Meters ~~Feet~~

ACTUAL AMOUNT OF HOLE DRILLED 111 Meters ~~Feet~~ DAYS ON INTERVAL 6

DRILLING FLUID SYSTEM SPUD MUD (PRE-HYDRATED GEL)

MATERIAL	UNIT SIZE	PROG.	USED	VARIANCE ±	US$ COST
BENTONITE	M/T	17	48	+ 31	18,240.00
SASH ASH	50 KG	6	26	+ 20	520.00
CAUSTIC	25 KG	18	26	+ 8	520.00
LIME	40 KG	6	2	- 4	12.00
MICA FINE	25 KG	0	1	+ 1	19.30

COST/DAY US$ 3,218.55 TOTAL COST FOR INTERVAL US$ 19,311.30

COST/Mt. ~~or Ft.~~ $ 173.98 PROG. COST FOR INTERVAL US$ 6,976.00

ENGR. COST COST VARIANCE FOR INTERVAL $ + 12,335.30

OPERATOR A/S NORSKE SHELL

WELL NO. 30/11-3

MATERIAL CONSUMPTION & COST ANALYSIS

(14 3/4" PILOT HOLE)

26" HOLE DRILLED TO 640 Meters ~~Feet~~ 20" CASING SET AT 627.5 Meters ~~Feet~~

ACTUAL AMOUNT OF HOLE DRILLED 392 Meters ~~Feet~~ DAYS ON INTERVAL 5

DRILLING FLUID SYSTEM GEL/SEAWATER AND HIVIS GEL PILLS

MATERIAL	UNIT SIZE	PROG.	USED	VARIANCE ±	US$ COST
BENTONITE	M/T	79	11	- 68	4,180.00
BARITE	M/T	0	87	+ 87	11,919.00
CAUSTIC	25 KG	101	39	- 62	780.00
SODA ASH	50 KG	36	26	- 10	520.00
LF-5	25 KG	36	0	- 36	0
MICA FINE	25 KG	0	19	+ 19	366.70
WALNUT FINE	25 KG	0	12	+ 12	231.60

COST/DAY US$ 3,599.46

TOTAL COST FOR INTERVAL US$ 17,997.30

COST/Mt. ~~or Ft.~~ $ 45.91

PROG. COST FOR INTERVAL US$ 34,632.00

ENGR. COST

COST VARIANCE FOR INTERVAL $ -16,634.70

OPERATOR A/S NORSKE SHELL

WELL NO. 30/11-3

MATERIAL CONSUMPTION & COST ANALYSIS

(12 1/4" PILOT HOLE)

17 1/2" HOLE DRILLED TO 2023 Meters ~~Feet~~ 13 3/8" CASING SET AT 1994 Meters ~~Feet~~

ACTUAL AMOUNT OF HOLE DRILLED 1383 Meters ~~Feet~~ DAYS ON INTERVAL 11

DRILLING FLUID SYSTEM KCl - POLYMER

MATERIAL	UNIT SIZE	PROG.	USED	VARIANCE ±	US$ COST
BARITE	M/T	150	63	- 87	8,631.00
DRISPAC REGULAR	50 LBS	128	162	+ 34	24,948.00
CMC LOVIS	25 KG	128	174	+ 46	11,310.00
CAUSTIC SODA	25 KG	85	138	+ 53	2,760.00
SODA ASH	50 KG	32	77	+ 45	1,540.00
LF-5	25 KG	255	338	+ 83	17,576.00
ALUMINIUM STEARATE	25 KG	0	1	+ 1	86.00
KCl BRINE	BBL	0	2340		43,534.40
KCl SACKS	50 KG	1275	279	- 996	5,496.30
ANCOPOL	25 KG/DRUM	128	74	- 54	10.952.00
DRILLING DETEGENT	20 L/DRUM	15	0	- 15	0

COST/DAY US$ 11,530.34 TOTAL COST FOR INTERVAL US$ 126,833.70

COST/Mt ~~or Ft~~ US$ 91,71 PROG. COST FOR INTERVAL US$ 121,942.00

ENGR. COST COST VARIANCE FOR INTERVAL $ + 1,891.70

OPERATOR A/S NORSKE SHELL

WELL NO. 30/11-3

MATERIAL CONSUMPTION & COST ANALYSIS

12 1/4" HOLE DRILLED TO 3053 Meters ~~XXX Feet~~ 9 5/8" CASING SET AT 3041 Meters ~~XXX Feet~~

ACTUAL AMOUNT OF HOLE DRILLED 1030 Meters ~~XXXX Feet~~ DAYS ON INTERVAL 26

DRILLING FLUID SYSTEM KCl - POLYMER

MATERIAL	UNIT SIZE	PROG.	USED	VARIANCE ±	US$ COST
BARITE	M/T	0	125	+ 125	17,125.00
BENTONITE	M/T	25		- 25	0
DRISPAC REGULAR	50 LBS	0	102	+ 102	15,708.00
XC-POLYMER	50 LBS	15	0	- 15	0
CMC LOVIS	25 KG	31	198	+ 167	12,870.00
LF-5	25 KG	0	122	+ 122	6,344.00
CAUSTIC SODA	25 KG	54	139	+ 85	2,780.00
SODA ASH	50 KG	12	61	- 49	1,220.00
KCl BRINE	BBL	0	160	+ 160	3,299.20
KCl SACKS	50 KG	0	900	+ 900	17,730.00
ANCO RESIN	25 KG	73	0	- 73	0
LIGNO	25 KG	184	0	- 184	0
DRILLING DETERGENT	200 L	10	0	- 10	0
BENTONITE	50 KG	0	22	+ 22	396.00
ANCOPOL	50 LBS	0	13	+ 13	1,820.00

COST/DAY US$ 3,049.70

TOTAL COST FOR INTERVAL US$ 79,292.20

COST/Mt. ~~or Ft.~~ $ 76.98

PROG. COST FOR INTERVAL US$ 31,773.25

ENGR. COST

COST VARIANCE FOR INTERVAL $ +47,518.95

OPERATOR A/S NORSKE SHELL

WELL NO. 30/11-3

MATERIAL CONSUMPTION & COST ANALYSIS

8 1/2" HOLE DRILLED TO 4662 Meters ~~Feet~~ CASING SET AT Meters Feet

ACTUAL AMOUNT OF HOLE DRILLED 1609 Meters ~~Feet~~ DAYS ON INTERVAL 70

DRILLING FLUID SYSTEM DRISPAC/LIGNO - GEL/RESINEX

MATERIAL	UNIT SIZE	PROG.	USED	VARIANCE ±	US$ COST
BARITE	M/T	603	548	- 55	75.076.00
BENTONITE	M/T	14	26	+ 12	9,880.00
BENTONITE (SXS)	50 KG	0	73	+ 73	1,314.00
CAUSTIC	25 KG	111	403	+ 292	8,060.00
SODA ASH	50 KG	3	22	+ 19	440.00
SPERCELL C (LIGNO)	25 KG	71	451	+ 380	8,118.00
CHROME LIGNITE	25 KG	185	142	- 43	4,544.00
CMC LOVIS	25 KG	0	314	+ 314	20,410.00
DMS	200 L	23	4	- 19	2,508.00
LF-5	25 KG	0	0	0	0
DRISPAC REGULAR	50 LBS	0	46	+ 46	7,084.00
BICARBONATE	50 KG	0	1	+ 1	21.00
DEFOAMER (DR)	200 L	0	3	+ 3	2,100.00
DRISPAC SUPERLO	50 LBS	0	17	+ 17	2,805.00
DESCO	25 LBS	0	211	+ 211	8,018.00
DEFOAMER (CAN)	20 L	0	18	+ 18	1,260.00
ANCO-RESIN	25 KG	235	377	+ 142	36,286.25

COST/DAY US$ 2,684.63

TOTAL COST FOR INTERVAL US$ 187,924.25

COST/Mt. ~~or Ft.~~ ~~xxx~~$ 116.80

PROG. COST FOR INTERVAL US$ 134,448.75

ENGR. COST

COST VARIANCE FOR INTERVAL $ + 53,475.50

OPERATOR A/S NORSKE SHELL

WELL NO. 30/11-3

TOTAL CONSUMPTION & COST ANALYSIS

TOTAL DEPTH 4662 Meters ~~Feet~~

TOTAL HOLE DRILLED 4525 Meters ~~Feet~~

TOTAL DAYS 120

MATERIAL	UNIT SIZE	PROG.	USED	VARIANCE ±	US$ COST
BENTONITE	M/T	135	85	- 50	32,300.00
BENTONITE SXS	50 KG	0	95	+ 95	1,710.00
BARITE	M/T	753	823	+ 70	112,751.00
SODA ASH + BICARB.	50 KG	89	213	+ 124	4,261.00
CAUSTIC	25 KG	369	745	+ 385	14,900.00
LIME	40 KG	6	2	- 4	12.00
LF-5	25 KG	291	460	+ 169	23,920.00
DRISPAC REGULAR	50 LBS	128	310	+ 182	47,740.00
DRISPAC SUPERLO	50 LBS	0	17	+ 17	2,805.00
CMC LOVIS	25 KG	159	686	+ 527	44,590.00
SPERCELL C	25 KG	255	451	+ 196	8,118.00
CHROME LIGNITE	25 KG	185	142	- 43	4,544.00
ANCO-RESIN	25 KG	308	377	+ 69	36,286.25
DESCO	25 LBS	0	211	+ 211	8,018.00
DMS	200 L	23	4	- 19	2,508.00
ANCOPOL	50 LBS	176	87	- 89	12,876.00
DEFOAMER (CAN+DRUM+SXS)		0	22	+ 22	3,446.00
KCl BRINE	BBL		2500		46,729.60
KCl SACKS	50 KG	368	1179	+ 811	23,226.30
MICA FINE	25 KG	0	20	+ 20	386.00
WALNUT FINE	25 KG	0	12	+ 12	231.60

COST/DAY US$ 3,594.66

TOTAL COST FOR INTERVAL US$ 431,358.75

COST/Mt. ~~Ft~~ US$ 95.33

PROG. COST FOR INTERVAL US$ 329,772.00

ENGR. COST

COST VARIANCE FOR INTERVAL US$ +101,586.75

ANCHOR DRILLING FLUIDS AS

OSLO — STAVANGER

WELL NAME 30/11-3 AREA NORTH SEA, NORWAY

OPERATOR NORSKE SHELL RIG BORGNY DOLPHIN

ENGINEERS ATKINSON/BLANCHARD

Drilling Fluid & Material Consumption Report

MUD SYSTEM SPUD MUD / GEL / SEAWATER

Day No	DATE 1982	ESTIMATED DAILY MUD VOLUMES: LOSSES SUB SURFACE	LOSSES SURFACE BBLS	VOLUME MUD BUILT	BULK MATERIALS: BARITE MT	BENTONITE MT	BENTONITE SXS	MATERIALS ADDED TO CONTROL PROPERTIES: CAUSTIC	SODA ASH	SOD. BICARB.	LIME	DRISPAC REG.	DRISPAC SUPERLO.	XC POLYMER	CMC LOVIS	LF-5	DESCO	AL. STEARATE	LIGNO-DEFOAMER drms	DEFOAMER cans	WALNUT F	MICA F	KCl BRINE	KCl SXS	ANCO FREE PIPE	ANCOPOL	DMS	LIGNITE	ANCO RESIN	CaCl2
1	14.11																													
2	15.11			1210		12			8	8																				
3	16.11					2																								
4	17.11		500	550		8			4	4		2																		
5	18.11		905	1180		16			8	8																				35
6	19.11																													
7	20.11		1085	790		10			6	6												1								
8	21.11			235	12				8	4																				
9	22.11	334	60	800	8	7			14	6																				
0	23.11	435	80	800					10	9											12	19								
1	24.11	856	755	680	38	4			7	7																				
2	25.11		1355		29																									25
3	26.11			1350	18				16	16			35			39	78		1					630						
4	27.11			140					3	3															45					
FORWARD																														
ESTIMATED TOTALS		1625	4740	7735	105	59			84	71		2	35			39	78		1			12	20	630	45					65

REMARKS

ANCHOR DRILLING FLUIDS AS

OSLO — STAVANGER

Drilling Fluid & Material Consumption Report

MUD SYSTEM: KCl / POLYMER

WELL NAME: 30/11-3 AREA: NORTH SEA, NORWAY

OPERATOR: NORSKE SHELL RIG: BORGNY DOLPHIN

ENGINEERS: ATKINSON/BLANCHARD

Day No	DATE 1982	ESTIMATED DAILY MUD VOLUMES: LOSSES SUB SURFACE	LOSSES SURFACE BBLS	VOLUME MUD BUILT	BULK MATERIALS: BARITE MT	BENTONITE	BENTONITE SXS	MATERIALS ADDED TO CONTROL PROPERTIES: CAUSTIC	SODA ASH	SOD. BICARB.	LIME	DRISPAC REG.	DRISPAC SUPERLO.	XC POLYMER	CMC	LOVIS	LF-5	DESCO	AL. STEARATE	LIGNO.	DEFOAMER	DEFOAMER	WALNUT F.	MICA F.	KCl BRINE	KCl SXS	ANCO FREE PIPE	ANCOPOL	DMS	LIGNITE	ANCO RESIN	CaCl2
15	28.11		53		20				6			6			5	10									650							
16	29.11	273	100	650	6			12	12			18			30	55										18						
17	30.11	425	100	650				8	4			16			10	15									80			9				
18	1.12	400	169	700	7			11	8			18			20	40									500	2		3				
19	2.12	400	169	1050				16	12			28			30	60										52		20				
20	3.12	61	100	350				18	4			12			10	20										72		14				
21	4.12	300	283	700				31	8			20			20	40									480	40		18				
22	5.12			354				21	4			9			10	20										50		10				
23	6.12		75		12			2																								
24	7.12							9																								
25	8.12	400	481	350				4	4			9			10	20												3				
26	9.12		175		10																											
27	10.12		190																													
28	11.12			350	11			3	7			9			10	20									160							
FORWARD		1625	4740	7735	105	59		84	71		2	35			39	78		1				12	20		630	45						65
ESTIMATED TOTALS		3884	6635	12889	171	59		219	140		2	180			194	378		1				12	20		2500	279	77					65

REMARKS

ANCHOR DRILLING FLUIDS AS

OSLO — STAVANGER

Drilling Fluid & Material Consumption Report

MUD SYSTEM: KCl/POLYMER

WELL NAME: 30/11-3 | AREA: NORTH SEA, NORWAY

OPERATOR: NORSKE SHELL | RIG: BORGNY DOLPHIN

ENGINEERS: ATKINSON/BLANCHARD

Day No	DATE 1982	ESTIMATED DAILY MUD VOLUMES: LOSSES SUB SURFACE	LOSSES SURFACE BBLS	VOLUME MUD BUILT	BULK MATERIALS: BARITE MT	BENTONITE	BENTONITE SXS	MATERIALS ADDED TO CONTROL PROPERTIES: CAUSTIC	SODA ASH	SOD. BICARB.	LIME	DRISPAC REG.	DRISPAC SUPERLO.	XC POLYMER	CMC	LOVIS LF-5	DESCO	AL. STEARATE	LIGNO.	DEFOAMER	DEFOAMER	WALNUT F	MICA F	KCl BRINE	KCl SXS	ANCO FREE PIPE	ANCOPOL	DMS	LIGNITE	ANCO RESIN	CaCl2
29	12.12																														
30	13.12		45		8							5																			
31	14.12		120	40	30				9			4			18																
32	15.12		50	350	8			9	4			9			10	20								120		8					
33	16.12		25					8	2			9			18																
34	17.12		212	320				18	7			9			10	36								120		4					
35	18.12		88		7																										
36	19.12		30	135	8			10	3			4			10	6								50		2					
37	20.12																														
38	21.12		65																												
39	22.12		58		3																										
40	23.12			36				13	7			9			26									110							
41	24.12		116	150	10			14	3			15			15									60							
42	25.12		89	150				13	3			9			15									60							
FORWARD		3884	6635	12889	171	59		219	140		2	180			194	378		1			12	20	2500	279		77				65
ESTIMATED TOTALS		3884	7533	14070	245	59		304	178		2	253			316	440		1			12	20	2500	799		91				65

REMARKS

ANCHOR DRILLING FLUIDS AS

OSLO — STAVANGER

Drilling Fluid & Material Consumption Report

MUD SYSTEM: KCl/POLYMER - DRISPAC/LIGNO

WELL NAME: 30/11-3 AREA: NORTH SEA, NORWAY

OPERATOR: NORSKE SHELL RIG: BORGNY DOLPHIN

ENGINEERS: ATKINSON/BLANCHARD

Day No	DATE 1982/1983	ESTIMATED DAILY MUD VOLUMES: LOSSES SUB SURFACE	LOSSES SURFACE BBLS	VOLUME MUD BUILT	BULK MATERIALS: BARITE MT	BENTONITE	BENTONITE SXS		MATERIALS ADDED TO CONTROL PROPERTIES: CAUSTIC	SODA ASH	SOD. BICARB.	LIME	DRISPAC REG.	DRISPAC SUPERLO.	XC POLYMER	CMC	LOVIS LF-5	DESCO	AL. STEARATE	LIGNO.	DEFOAMER drms	DEFOAMER cans	WALNUT F	MICA F	KCl BRINE	KCl SXS	ANCO FREE PIPE	ANCOPOL	DMS	LIGNITE	ANCO RESIN	CaCl2
43	26.12		381	300	7				11	6			10			30										120						
44	27.12			175	4				6	3			5			10	10									200*						
45	28.12		104	150	11				17	3			4			10	10									60						
46	29.12		123		8				2																							
47	30.12								1																							
48	31.12		150																													
49	1.1						22		1							6																
50	2.1	486	200																													
51	3.1			490	51				12	10			9			10	35		45													
52	4.1									3																						
53	5.1		367		15						1																					
54	6.1		50																													
55	7.1		40																													
56	8.1		67	320	25	1	12		10	7			4			25			14													
FORWARD		3884	7533	14070	245	59			304	178		2	253			316	440	1			12	20	2500	799		91				65	
ESTIMATED TOTALS		4370	9015	15505	366	60	34		364	210	1	2	286			407	495	159			12	20	2500	1179		91				65	

REMARKS

ANCHOR DRILLING FLUIDS AS

OSLO — STAVANGER

Drilling Fluid & Material Consumption Report

MUD SYSTEM: DRISPAC/ LIGNO

WELL NAME: 30/11-3 AREA: NORTH SEA, NORWAY

OPERATOR: NORSKE SHELL RIG: BORGNY DOLPHIN

ENGINEERS: ATKINSON/BLANCHARD

Day No	DATE 1983	ESTIMATED DAILY MUD VOLUMES: LOSSES SUB SURFACE	LOSSES SURFACE BBLS	VOLUME MUD BUILT	BULK MATERIALS: BARITE MT	BENTONITE MT	BENTONITE SXS		MATERIALS ADDED TO CONTROL PROPERTIES: CAUSTIC	SODA ASH	SOD. BICARB.	LIME	DRISPAC REG.	DRISPAC SUPERLO.	XC POLYMER	CMC LOVIS	LF-5	DESCO	AL. STEARATE	LIGNO.	DEFOAMER dems	DEFOAMER cams	WALNUT F	MICA F	KCl BRINE	KCl SXS	ANCO FREE PIPE	ANCOPOL	DMS	LIGNITE	ANCO RESIN	CaCl2
57	09.01		40		8	1																										
58	10.01		35		10								1																			
59	11.01		11		5				5				4																			
60	12.01		21		8				5				1																			
61	13.01		14		4								2																			
62	14.01								6				1			14																
63	15.01		24			2																										
64	16.01		10	40					4				2			14				8												
65	17.01		40	20						NONE		USED																				
66	18.01									NONE		USED																				
67	19.01									NONE		USED																				
68	20.01		20	45	3				12							16				4												
69	21.01		208	100					3	1			3			21																
70	22.01			56	2				2							12																
FORWARD		4370	9015	15505	366	60	34		364	210	1	2	286			407	495		1	59	12		20	2500	1179		91				65
ESTIMATED TOTALS		4370	9438	15766	406	63	34		401	211	1	2	300			484	495		1	71	12		20	2500	1179		91				65

REMARKS

ANCHOR DRILLING FLUIDS AS

OSLO — STAVANGER

Drilling Fluid & Material Consumption Report

MUD SYSTEM: DRISPAC/ LIGNO

WELL NAME: 30/11-3 | AREA: NORTH SEA, NORWAY

OPERATOR: NORSKE SHELL | RIG: BORGNY DOLPHIN

ENGINEERS: ATKINSON/BLANCHARD

Day No	DATE 1983	ESTIMATED DAILY MUD VOLUMES: LOSSES SUB SURFACE	LOSSES SURFACE BBLS	VOLUME MUD BUILT	BULK MATERIALS: BARITE MT	BENTONITE	BENTONITE SXS	MATERIALS ADDED TO CONTROL PROPERTIES: CAUSTIC	SODA ASH	SOD. BICARB.	LIME	DRISPAC REG.	DRISPAC SUPERLO.	XC POLYMER	CMC	LOVIS LF-5	DESCO	AL. STEARATE	LIGNO.	DEFOAMER drums	DEFOAMER cans	WALNUT F	MICA F	KCl BRINE	KCl SXS	ANCO FREE PIPE	ANCOPOL	DMS	LIGNITE	ANCO RESIN	CaCl2
71	23.01			63				5				3			24																
72	24.01			30	2			10				2			33				40												
73	25.01		18					6											30												
74	26.01			136	2			3				1			6				5												
75	27.01			20				13				3			18																
76	28.01		140		3																										
77	29.01			25				1				1			6																
78	30.01		100	40				1	1			1			4																
79	31.01			100				5				3																			
80	01.02							2																							
81	02.02			9				3						3																	
82	03.02			161	2	7		15				2		1	17				10		1										
83	04.02		35	65				7							14				6												
84	05.02		66	75				7							14				7												
FORWARD		4370	9438	15766	406	63	34	401	211	1	2	300			484	495		71			12	20	25	001179		91				65
ESTIMATED TOTALS		4370	9797	16481	424	70	34	479	212	1	2	316		4	620	495		169			112	20	25	001179		91				65

REMARKS

ANCHOR DRILLING FLUIDS AS

OSLO — STAVANGER

Drilling Fluid & Material Consumption Report

MUD SYSTEM: DRISPAC/ LIGNO

WELL NAME: 30/11-3 | AREA: NORTH SEA, NORWAY

OPERATOR: NORSKE SHELL | RIG: BORGNY DOLPHIN

ENGINEERS: ATKINSON/BLANCHARD

Day No	DATE 1983	ESTIMATED DAILY MUD VOLUMES: LOSSES SUB SURFACE BBLS	LOSSES SURFACE BBLS	VOLUME MUD BUILT BBLS	BULK MATERIALS: BARITE MT	BENTONITE MT	BENTONITE SXS	MATERIALS ADDED TO CONTROL PROPERTIES: CAUSTIC	SODA ASH	SOD. BICARB.	LIME	DRISPAC REG.	DRISPAC SUPERLO.	XC POLYMER	CMC	LOVIS	LF-5	DESCO	AL. STEARATE	LIGNO.	DEFOAMER drms	DEFOAMER cans	WALNUT F	MICA F	KCl BRINE	KCl SXS	ANCO FREE PIPE	ANCOPOL	DMS	LIGNITE	ANCO RESIN	CaCl2
85	06.02		15	30					NONE		USED																					
86	07.02		35	38				8							16				5													
87	08.02		115	60				8							16				8													
88	09.02		30	20					NONE		USED																					
89	10.02		15	35			10	5											10													
90	11.02		23	30					NONE		USED																					
91	12.02		35	50				15							20				10													
92	13.02		45	10	2			4							14				2													
93	14.02		15	35				19			15								5										35			
94	15.02		20	40	2			15																					15			
95	16.02		75	30				11			20																	4	22			
96	17.02		15	60	2			10			20						60												15			
97	18.02		175	150				26			16						40			2									105			
98	19.02		190			3													25													
FORWARD		4370	9797	16481	424	70	34	479	212	1	2	316	4		620	495	1	169	1	1	1220	2500	1179		91						65
ESTIMATED TOTALS		4370	10600	17069	432	73	34	10	600	212	1	73	316	4		686	495	100	1	234	3	1220	2500	1179		91	4	72	120	65	

REMARKS

ANCHOR DRILLING FLUIDS AS

OSLO — STAVANGER

Drilling Fluid & Material Consumption Report

MUD SYSTEM: GEL - RESINEX

WELL NAME: 30/11-3 AREA: NORTH SEA, NORWAY

OPERATOR: NORSKE SHELL RIG: BORGNY DOLPHIN

ENGINEERS: ATKINSON/BLANCHARD

Day No	DATE 1983	ESTIMATED DAILY MUD VOLUMES: LOSSES SUB SURFACE	LOSSES SURFACE BBLS	VOLUME MUD BUILT	BULK MATERIALS: BARITE MT	BENTONITE MT	BENTONITE SXS	MATERIALS ADDED TO CONTROL PROPERTIES: CAUSTIC	SODA ASH	SOD. BICARB.	LIME	DRISPAC REG.	DRISPAC SUPERLO.	XC POLYMER	CMC LOVIS	LF-5	DESCO	AL. STEARATE	LIGNO.	DEFOAMER drms	DEFOAMER cans	WALNUT F	MICA F	KCl BRINE	KCl SXS	ANCO FREE PIPE	ANCOPOL	DMS	LIGNITE	ANCO RESIN	CaCl2
99	20.02		164					8									11	25												37	
00	21.02			290		5		32			10						33			2									70	53	
01	22.02			161		7	60	12			4						15	26		5										40	
02	23.02		6					17			9						33	76		3										72	
03	24.02		100	254	118			11										22												3	
04	25.02			5	50		1	21			3						9	68		3										52	
05	26.02				45			9			2									2											
06	27.02		140		13			5																							
07	28.02			2	10			9																							
08	01.03		45		15			8			2		3				8														
09	02.03		350	300	51			11				1	1												9						
10	03.03		37																	3											
11	04.03	30	6	56	61			2					3				2								4						
12	05.03		27	100				N O N E		U S E D																					
FORWARD		4370	10600	17069	432	73	34	10	600	212	1	73	316	4		686	495	100	1234		12	20	2500	1179		91	4	70	120	65
ESTIMATED TOTALS		4400	11475	18237	795	85	95	17	745	212	1	101	317	4		686	495	211	1451	3	18	12	20	2500	1179	13	91	4	142	377	65

REMARKS

ANCHOR DRILLING FLUIDS AS

OSLO — STAVANGER

Drilling Fluid & Material Consumption Report

MUD SYSTEM: GEL/ RESINEX

WELL NAME: 30/11-3 AREA: NORTH SEA, NORWAY

OPERATOR: NORSKE SHELL RIG: BORGNY DOLPHIN

ENGINEERS: ATKINSON/BLANCHARD

Day No	DATE 1983	ESTIMATED DAILY MUD VOLUMES: LOSSES SUB SURFACE	LOSSES SURFACE BBLS	VOLUME MUD BUILT	BULK MATERIALS: BARITE MT	BENTONITE MT	BENTONITE SXS	MATERIALS ADDED TO CONTROL PROPERTIES: CAUSTIC	SODA ASH	SOD. BICARB.	LIME	DRISPAC REG.	DRISPAC SUPERLO.	XC POLYMER	CMC	LOVIS	LF-5	DESCO	AL. STEARATE drms	LIGNO.	DEFOAMER drms	DEFOAMER cans	WALNUT F	MICA F	KCl BRINE	KCl SXS	ANCO FREE PIPE	ANCOPOL	DMS	LIGNITE	ANCO RESIN	CaCl2
113	06.03	23	407	150	20																						9					
114	07.03		195					N O N E			U S E D																					
115	08.03		41	20	5																											
116	09.02							N O N E			U S E D																					
117	10.02		36		3																											
118	11.02	27	21					N O N E			U S E D																					
119	12.03	70	30	115	2							2																				24
120	130.3							N O N E			U S E D																					
FORWARD		4400	11475	18237	795	85	95	745	212	1	101	317	17	4	686	495	21	1145	1	3	18	12	20	2500	1179	13	91	4	1	42	377	65
ESTIMATED TOTALS		4520	12205	19872	825	85	95	745	212	1	101	319	17	4	686	495	21	1145	1	3	18	12	20	2500	1179	22	91	4	1	42	377	89

REMARKS

ANCHOR DRILLING FLUIDS AS
OSLO — STAVANGER

Drilling Mud Properties Record

MUD SYSTEM: SPUD MUD/ GEL SEAWATER

WELL NAME: 30/11-3 AREA: NORTH SEA
OPERATOR: NORSKE SHELL RIG: BORGNY DOLPHIN
ENGINEERS: C. ATKINSON/ C. BLANCHARD

Day No	DATE 1982	DEPTH FEET □ METERS ☒	MUD PROPERTIES: DENSITY PPG □ SG ☒	VISCOSITY sec/qt	A.V cps	P.V cps	Y.P. #/100 sq.ft.	GELS 0/10	FLUID LOSS 30 Min cc's	CAKE 32 nds	H.T.H.P. cc's	pH	Cl⁻ ppm x1000	Filtrate Analysis Ca ++ ppm	Pf/Mf	RETORT % OIL	% SOLIDS	% SAND	BENTONITE #/BBL	POTASH #/BBL	POLYMER #/BBL	"N"	"K"	OPERATION REMARKS
1	14.11																							
2	15.11		1.06	+ 100																				
3	16.11		1.06	+ 100																				
4	17.11	155	1.06	+ 100																				
5	18.11	248	1.06	+ 100																				
6	19.11	248	1.06	+ 100																				
7	20.11	248	1.06	+ 100																				
8	21.11	295	+ 1.05	60																				
9	22.11	610	1.13	50																				
10	23.11	640	1.06	+ 100																				
11	24.11	640	1.30	60																				
12	25.11	640																						
13	26.11	640	1.15	56	36	24	24	2/3	4.8	1		11.3	48	300	1.7/3.0		10			32				
14	27.11	640	1.15	54	36	24	24	2/3	4.8	1		11.2	48	200	1.7/3.0		10			32				

REMARKS

ANCHOR DRILLING FLUIDS AS
OSLO — STAVANGER

Drilling Mud Properties Record

MUD SYSTEM KCl - POLYMER

WELL NAME 30/11-3 AREA NORTH SEA
OPERATOR A/S NORSKE SHELL RIG. BORGNY DOLPHIN
ENGINEERS C. BLANCHARD/ C. ATKINSON

Day No.	DATE	DEPTH FEET ☐ METERS ☒	MUD PROPERTIES: DENSITY PPG ☐ SG ☒	VISCOSITY sec/qt	A.V. cps	P.V. cps	Y.P. #/100 sq.ft.	GELS 0/10	FLUID LOSS 30 Min cc's	CAKE 32 nds	H.T.H.P. cc's	pH	Cl⁻ ppm x1000	Filtrate Analysis Ca ++ ppm	Pf/Mf	RETORT % OIL	% SOLIDS	% SAND	BENTONITE #/BBL	POTASH #/BBL	POLYMER #/BBL	"N"	"K"	OPERATION REMARKS
15	28.11	723	1.15	50	31.5	21	21	2/3	4.3	1		11.5	62	80	2/3		10	.25	2	30		.59	1.1	
16	29.11	1122	1.16	50	32.5	21	23	2/3	4.0	1		11.0	55	80	1.1/1.7		12	1	2	30		.56	1.3	
17	30.11	874	+ 1.16	50	37.5	25	25	3/4	4.5	1		11.5	55	80	2.0/2.6		13	1	4	31		.5	1.4	
18	01.12	1201	+ 1.16	54	39.5	25	29	2/3	4.2	1		11.3	55	80	1.6/2.5		12	.75	5	30		.5	1.3	
19	02.12	1458	1.17	49	31	23	16	2/3	4.5	1		11.3	58	240	.7/1.4		12	.5	10	32		.4	.8	
20	03.12	1513	+ 1.17	50	31	23	16	2/5	4.5	1		10	53	180	.5/1.0		12	.5	15	35				
21	04.12	1833	1.18	57	39	29	20	4/2	4.6	1		9.8	60	120	.2/.5		14	.5	22	35		.6	.7	
22	05.12	2023	1.17	53	35.5	27	17	4/12	4.7	1		10.2	58	120	.2/.5		14	.5	24	35				
23	06.12	2023	1.18	51	30.5	25	21	4/10	4.2	1		10.0	54	300	.2/.4		13	.5	24	35				
24	07.12	2023	1.19	49	30.5	25	21	3/6	4.2	1		10.0	54	200	.2/.5		13	.25	25	35				
25	08.12	2023	1.9	49	30.5	25	21	3/6	4.2	1		10	54	200	.2/.5		13	.25	25	35				
26	09.12	2023	1.18	46	28	21	14	2/4	4.5	1		9.0	50	300	1.3/.3		10	.25	25	33				
27	10.12	2023	1.18	48	29.5	22	15	2/5	4.5	1		9.0	50	280	.15/.325		10	.25	24	33				
28	11.12	2023	1.18	48	29.5	22	15	2/5	4.5	1		9.0	50	280	.15/.30		10	.25	24	33				

REMARKS

ANCHOR DRILLING FLUIDS AS

OSLO — STAVANGER

Drilling Mud Properties Record

MUD SYSTEM: KCl - POLYMER

WELL NAME: 30/11-3 AREA: NORTH SEA

OPERATOR: A/S NORSKE SHELL RIG: BORGNY DOLPHIN

ENGINEERS: C. ATKINSON

Day No.	DATE 1982	DEPTH FEET ☐ METERS ☒	MUD PROPERTIES: DENSITY PPG ☐ SG ☒	VISCOSITY sec/qt	A.V. cps	P.V. cps	Y.P. #/100 sq.ft.	GELS 0/10	FLUID LOSS 30 Min cc's	CAKE 32 nds	H.T.H.P. cc's	pH	Cl⁻ ppm x1000	Filtrate Analysis Ca ++ ppm	Pf/Mf	RETORT % OIL	% SOLIDS	% SAND	BENTONITE #/BBL	POTASH #/BBL	POLYMER #/BBL	"N"	"K"	OPERATION REMARKS
29	12.12	2023	1.18	48	29.5	22	15	2/5	4.5	1		9.0	50	280	.15/.325		10	.25	24	33				
30	13.12	2023	1.17	45	27.5	21	13	1/4	5.0	1		11.0	58	360	.3/.7		10	.25	20	35				
31	14.12	2079	1.20	53	29	21	16	2/4	4.8	1		11.0	59	250	.3/.7		10	.50	20	35		.68	.73	
32	15.12	2194	1.21	52	32.5	24	17	2/4	4.7	1		10.7	58	270	.3/.7		11	.50	22	35		.69	.75	
33	16.12	2204	1.21	53	34	24	20	2/5	4.7	1		10.7	59	240	.3/.8		11	.50	22	35		.65	1.02	
34	17.12	2385	1.23	57	35	25	20	2/6	4.5	1		10.7	60	180	.3/.85		12	.50	20	35		.66	0.99	
35	18.12	2494	1.24	53	33	24	18	2/7	4.4	1		10.5	59	250	.15/.40		12	.50	22	35		.68	.84	
36	19.12	2547	+ 1.24	52	33	24	18	2/7	4.4	1		10.6	58	190	.2/.6		12	.50	22	35		.68	.84	
37	20.12	2547	+ 1.24	52	33	24	18	2/7	4.4	1		10.6	58	190	.2/.6		12	.50	22	35		.68	.84	
38	21.12	2547	+ 1.24	52	33	24	18	2/7	4.4	1		10.6	58	190	.2/.6		12	.50	22	35		.68	.84	
39	22.12	2547	1.25	55	35	25	20	3/9	4.4	1		10.7	58	220	.15/.40		12	.50	21	35		.67	.90	
40	23.12	2608	1.26	55	43.5	32	22	4/8	4.5	1		10.5	62	120	.3/.7		12	.25	21	35		.65	.91	
41	24.12	2678	1.25	52	37.	26	22	3/9	4.5	1		10.5	50	80	.3/.7		12	.25	17	35				
42	25.12	2754	1.25	52	35	25	20	3/8	4.5	1		10.8	52	80	.6/1.2		12	.25	20	35		.64	.82	

REMARKS

ANCHOR DRILLING FLUIDS AS
OSLO — STAVANGER

WELL NAME 30/11-3 AREA NORTH SEA

Drilling Mud Properties Record

OPERATOR A/S NORSKE SHELL RIG. BORGNY DOLPHIN

MUD SYSTEM KCl - POLYMER (DRISPAC/ LIGNO)

ENGINEERS C. BLANCHARD/ C. ATKINSON

Day No	DATE 1983	DEPTH FEET ☐ METERS ☒	MUD PROPERTIES: DENSITY PPG ☐ SG ☒	VISCOSITY sec/qt	A.V. cps	P.V. cps	Y.P. #/100 sq.ft.	GELS 0/10	FLUID LOSS 30 Min cc's	CAKE 32 nds	H.T.H.P cc's	pH	Cl⁻ ppm x1000	Ca. ++ ppm	Pf/Mf	Filtrate Analysis	RETORT % OIL	% SOLIDS	% SAND	BENTONITE #/BBL	POTASH #/BBL	POLYMER #/BBL	"N"	"K"	OPERATION REMARKS
43	26.12	2826	1.26	52	34.5	25	19	3/9	4.5	1		10.7	52	100	.6/.12		12	.25	17	35		.6	.8		
44	27.12	2899	1.25	52	37	26	22	3/9	4.6	1		10.6	60	80	.4/.8		12	.25	17	38		.6	.85		
45	28.12	2996	+ 1.26	51	32.5	24	17	3/9	4.8	1		10.8	59	80	.6/1.2		12	.25	17.5	35		.6	.7		
46	29.12	3035	+ 1.26	53	37	27	20	3/7	4.7	1		10.8	60	40	.6/1.2		13	.25	17	35		.6	1.2		
47	30.12	3053	+ 1.26	55	39.5	29	21	3/7	4.7	1		10.8	59	80	.5/1.0		13	.25	17.5	36					
48	31.12	3053	+ 1.26	57	40	29	22	3/9	4.8	1		10.8	60	80	1.5/1.0		13	.25	17.5	36					
49	01.01	3053	+ 1.26	55	40	29	22	4/9	4.9	1		10.7	60	80	.4/1.0		13	.25	17.5	35					
50	02.01	3053	+ 1.26	59	47	33	28	4/10	4.7	1		10.6	59	80	.4/1.0		13	TR	17	35					
51	03.01	3053	1.40	55	50	35	30	4/10	4.0	1		10.8	39	300	.6/1.2		17	TR	12	23					
52	04.01	3053	1.40	54	50	35	30	4/10	4.0	1		10.8	39	300	.6/1.2		16	TR	12	23					
53	05.01	3039	1.40	53	42.5	30	25	4/9	4.0	1		10.8	50	200	.7/1.4		15	TR	12	25					
64	06.01	3039	1.40	52	42.5	30	25	4/9	4.0	1		10.8	50	200	.7/1.4		15	TR	12	25					
55	07.01	3039	1.40	52	42.5	30	25	4/9	4.0	1		10.8	50	200	.7/1.4		15	TR	12	25					
56	08.01	3066	1.40	48	37	27	20	2/3	4.0	1		10.8	51	200	.65/1.35		15	TR	9	23					

REMARKS

ANCHOR DRILLING FLUIDS AS

OSLO — STAVANGER

Drilling Mud Properties Record

MUD SYSTEM: DRISPAC/ LIGNO

WELL NAME: 30/11-3 AREA: NORTH SEA

OPERATOR: A/S NORSKE SHELL RIG: BORGNY DOLPHIN

ENGINEERS: C. ATKINSON

Day No	DATE 1983	DEPTH FEET ☐ METERS ☒	MUD PROPERTIES: DENSITY PPG ☐ SG ☒	VISCOSITY sec/qt	A.V. cps	P.V. cps	Y.P #/100 sq.ft.	GELS 0 / 10	FLUID LOSS 30 Min cc's	CAKE 32 nds	H.T.H.P cc's	pH	Cl⁻ ppm x1000	Filtrate Analysis Ca++ ppm	Pf	RETORT % OIL	% SOLIDS	% SAND	BENTONITE #/BBL	POTASH #/BBL	POLYMER #/BBL	"N"	"K"	OPERATION REMARKS
57	09.01	3066	1.40	48	37	27	20	2/3	4.0	1		10.8	51	200	.65/1.35	15	TR	9.0			.68	.94		
58	10.01	3068	1.40	49	35	26	18	2/3	4.0	1		10.8	51	180	.65/1.40	15	.25	10.0			.70	.80		
59	11.01	3107	1.40	50	35.5	26	19	2/4	3.9	1		10.8	51	170	.70/1.45	15	.25	12.0			.68	.88		
60	12.01	3174	+ 1.60	50	37.5	28	19	2/4	3.9	1		10.8	50	180	.65/1.35	15.5	.25	12.5			.70	.84		
61	13.01	3202	+ 1.41	51	39	29	20	2/5	3.9	1		10.8	49	180	.620/1.30	16	TR	13.0			.69	.90		
62	14.01	3260	1.42	54	40.5	30	21	2/6	3.8	1		10.8	49	100	.70/1.40	16	TR	14			.69	.96		
63	15.01	3286	1.42	53	40	30	20	2/6	3.9	1		10.8	48	120	.65/1.35	16	TR	14			.70	.88		
64	16.01	3356	+ 1.41	55	40.5	30	21	2/7	3.8	1		10.8	47	100	.625/1.25	16	TR	15			.69	.96		
65	17.01	3377	+ 1.41	54	41	31	20	2/5	3.9	1		10.7	46	80	.50/1.20	16.5	TR	15			.71	.87		
66	18.01	3377	+ 1.41	54	41	31	20	2/5	3.9	1		10.7	46	80	.50/1.20	16.5	TR	15			.71	.87		
67	19.01	3378	+ 1.41	54	41	31	20	2/5	3.9	1		10.7	46	80	.50/1.20	16.5	TR	15			.71	.87		
68	20.01	3445	1.41	55	42.5	32	21	2/5	3.8	1		10.8	45	60	.85/1.75	16.5	TR	16			.70	.93		
69	21.01	3453	1.35	58	45.5	33	25	2/7	4.0	1		10.9	40	80	.8/1.8	15/14	TR	12			.7	1.0		
70	22.01	3478	+ 1.35	57	34.5	27	15	2/6	3.6	1		10.5	38	120	.6/1.5	15/14	TR	12			.6	.9		

REMARKS

ANCHOR DRILLING FLUIDS AS

OSLO — STAVANGER

Drilling Mud Properties Record

MUD SYSTEM: DRISPAC/ LIGNO

WELL NAME: 30/11-3 AREA: NORTH SEA

OPERATOR: A/S NORSKE SHELL RIG: BORGNY DOLPHIN

ENGINEERS: C. ATKINSON/ C. BLANCHARD

Day No	DATE 1983	DEPTH FEET ☐ METERS ☒	DENSITY PPG ☐ SG ☒	VISCOSITY sec/qt	A.V. cps	P.V. cps	Y.P #/100 sq ft	GELS 0 / 10	FLUID LOSS 30 Min cc's	CAKE 32 nds	H.T.H.P. cc's	pH	Cl⁻ ppm x1000	Filtrate Analysis Ca ++ ppm	Pf/Mf	RETORT % OIL	% SOLIDS	% SAND	BENTONITE #/BBL	POTASH #/BBL	POLYMER #/BBL	"N"	"K"	OPERATION REMARKS
71	23.01	3534	1.35	55	32.5	26	13	3/5	4.0	1		10.9	35	120	.8/1.6	15/14	TR	12			.73	.4		
72	24.01	3641	1.35	54	36	29	14	3/5	3.5	1		10.8	34	120	.8/1.9	16/14	TR	12			.7	.52		
73	25.01	3671	1.35	57	37.5	15	15	3/6	3.8	1		10.7	35	100	.5/1.7	16/14	TR	12			.7	.5		
74	26.01	3718	+ 1.35	57	30	24	12	3/5	3.8	1		10.6	33	160	.5/1.6	15/14	TR	12			.7	.5		
75	27.01	3804	1.35	57	32.5	27	11	3/5	3.5	1		10.7	30	80	.7/1.6	15/14	TR	12			.77	.3		
76	28.01	3804	+ 1.35	56	32.5	27	11	2/4	3.5	1		10.7	30	100	.7/1.7	15/14	TR	12			.77	.3		
77	29.01	3804	+ 1.35	55	32	27	10	3/4	3.5	1		10.6	30	100	.6/1.5	15/14	TR	12			.78	.31		
78	30.01	3804	1.30	53	36	28	16	3/4	3.3	1		10.9	30	250	.5/1.3	14/13	TR	8			.7	.34		
79	31.01	3804	1.30	54	34	27	14	3/4	3.4	1		10.3	30	240	.3/1.0	14/13	TR	8			.7	.45		
80	01.02	3804	1.31	55	40	30	20	3/5	3.0	1		10.5	30	120	.3/1.3	14/13	TR	8						
81	02.02	3804	1.31	53	40	30	20	3/5	3.3	1		10.4	30	120	.3/1.0	14/13	TR	8			.69	.45		
82	03.02	3852	1.30	52	31	24	14	3/11	4.2	1		11.3	27	80	.8/2.2	13/12	TR	14			.7	.5		
83	04.02	3896	+ 1.30	56	29	23	12	2/6	3.7	1		10.5	29	60	.8/2.4	13/12	.25	12			.76	.43		
84	05.02	3962	1.30	57	31	24	14	2/5	3.7	1		10.6	29	60	.65/2.45	13/12	.25	13.5			.74	.54		

REMARKS

ANCHOR DRILLING FLUIDS AS

OSLO — STAVANGER

Drilling Mud Properties Record

WELL NAME 30/11-3 AREA NORTH SEA

OPERATOR A/S NORSKE SHELL RIG. BORGNY DOLPHIN

MUD SYSTEM DRISPAC/ LIGNO/ DRISPAC/ DISPERSED

ENGINEERS C. ATKINSON

Day No	DATE 1983	DEPTH FEET ☐ METERS ☒	DENSITY PPG ☐ SG ☒	VISCOSITY sec/qt	A.V. cps	P.V. cps	Y.P. #/100 sq.ft.	GELS 0/10	FLUID LOSS 30 Min cc's	CAKE 32 nds	H.T.H.P. cc's	pH	Cl⁻ ppm x1000	Ca ++ ppm	Pf/Mf	% OIL	% SOLIDS	% SAND	BENTONITE #/BBL	POTASH #/BBL	POLYMER #/BBL	"N"	"K"	OPERATION REMARKS
85	06.03	4003	+ 1.30	56	30	23	14	2/5	3.8	1		10.4	29	70	.75/2.30		13	.25	13.5			.73	.55	
86	07.03	4062	1.31	56	32.5	25	15	2/7	3.6	1		10.5	29	60	.85/2.50		13	TR	13.5			.70	.52	
87	08.03	4110	+ 1.30	56	33.5	26	15	2/7	3.8	1		10.5	29	60	.90/2.70		13	TR	15			.74	.58	
88	09.03	4110	+ 1.30	56	33.5	26	15	2/7	3.8	1		10.5	29	60	.90/2.70		13	TR	15			.74	.58	
89	10.03	4124	+ 1.30	65	35	27	16	2/10	3.5	1		10.5	29	60	.80/2.30		13	TR	15.5			.73	.64	
90	11.03	4141	+ 1.30	59	34	26	16	2/9	3.7	1		10.0	29	80	.50/1.90		13	TR	15			.72	.65	
91	12.02	4212	+ 1.30	60	36.5	28	17	3/12	3.7	1		10.3	28	50	.95/3.30		13	TR	15			.74	.63	
92	13.03	4231	+ 1.30	62	37.5	29	17	2/10	3.7	1		10.4	28	40	1.10/3.40		13	TR	15			.73	.68	
93	14.03	4294	+ 1.30	62	52	38	28	4/24	4.7	1		9.8	28	30	0.85/3.40		14	TR	15			.69	1.21	
94	15.03	4343	+ 1.30	75	47	31	32	4/24	5.1	1		10.3	27	TR	1.75/4.80		14.5	TR	12.5			.63	1.60	
95	16.03	4365	+ 1.30	82	45	28	34	7/67	5.6	1		10.7	27	TR	2.25/5.40		14.5	TR	15			.59	1.86	
96	17.03	4427	+ 1.30	74	39	25	28	5/36	6.0	1		10.7	27	TR	2.20/5.50		15	.25	14			.60	1.52	
97	18.03	4475	+ 1.30	62	29	20	18	6/89	6.5	1	1.6	11.0	27	TR	1.7/3.7		15/14	TR	15			.60	0.89	
98	19.03	4475	+ 1.30	60	29	20	18	8/38	6.8	1	1.6	11.0	27	TR	1.7/3.7		16/14	TR	15			.60	0.89	

REMARKS

ANCHOR DRILLING FLUIDS AS
OSLO — STAVANGER

Drilling Mud Properties Record

MUD SYSTEM: GEL/ RESINEX

WELL NAME: 30/11-3 AREA: NORTH SEA
OPERATOR: A/S NORSKE SHELL RIG: BORGNY DOLPHIN
ENGINEERS: C. BLANCHARD/ E. LAURITZEN/ C. ATKINSON

Day No.	DATE 1983	DEPTH FEET ☐ METERS ☒	DENSITY PPG ☐ SG ☒	VISCOSITY sec/qt	A.V. cps	P.V cps	Y.P #/100 sq.ft.	GELS 0/10	FLUID LOSS 30 Min cc's	CAKE 32 nds	H.T.H.P. cc's	pH	Cl⁻ ppm x1000	Ca ++ ppm	Pf /Mf	% OIL	% SOLIDS	% SAND	BENTONITE #/BBL	POTASH #/BBL	POLYMER #/BBL	"N"	"K"	OPERATION REMARKS
99	20.02	4480	+ 1.30	50	37.5	28	19	8/32	6.0	1	16	11.0	27	TR	1.4/3.9		15/14	TR	14			.68	.40	
100	21.02	4546	1.30	50	28	22	12	4/21	5.8	1	16	11.0	25	80	1.5/3.5		15/14	TR	15			.71	.43	
101	22.02	4597	1.30	49	30	23	14	5/20	5.8	1	16	11.0	25	100	1.6/3.8		15/14		15			.70	.40	
102	23.02	4625	1.30	50	30	24	12	5/19	5.8	1	15	11.0	25	100	1.5/4.0		16/14	TR	17			.70	.40	
103	24.02	4643	1.51	50	41	32	18	5/20	6.0	1	17	10.6	24	160	.7/2.3		21/19		16			.71	.37	
104	25.02	4662	1.51	50	29	24	10	3/17	5.9	1	15	10.4	25	100	.9/2.3		20	TR	18					
105	26.02	4662	+ 1.55	47	21.5	17	9	3/17	5.9	1	15	10.8	26	120	1.0/2.6		20		17.5			.70	.35	
106	27.02	4662	+ 1.55	62	25.5	21	9	3/20	5.8	1	16	10.2	23	100	1.0/3.0		20		17					
107	28.02	4662	+ 1.56	50	26	20	12	3/19	6.0	1	16	10.3	24	100	1.0/3.7		20		17			.7	.42	
108	01.03	4662	1.62	52	27.5	22	11	4/19	6.0	1	15	10.2	23	80	1.3/3.6		23/20		17			.72	.38	
109	02.03	4662	1.60	52	45	35	20	5/20	7.0	1	18	10.5	23	100	1.5/4.0		23/21		16			.7	.7	
110	03.03	4292	1.59	50	22.5	16	13	8/25	7.2	1	19	10.8	22	TR	1.5/3.5		23/21		16			.61	.7	
111	04.03	3920	1.60	51	27	20	14	7/24	6.8	1	19	10.7	22	40	1.4/3.3	TR	23/21	TR	16			.80	.28	
112	05.03	3883	1.61	48	29	22	14	4/20	6.2	1	18	10.8	23	20	1.4/3.8	TR	23/21	TR	16			.75	.43	

REMARKS

ANCHOR DRILLING FLUIDS AS
OSLO — STAVANGER

Drilling Mud Properties Record

MUD SYSTEM: GEL/ RESINEX

WELL NAME: 30/11-3 AREA: NORTH SEA
OPERATOR: A/S NORSKE SHELL RIG: BORGNY DOLPHIN
ENGINEERS: C. ATKINSON

Day No.	DATE 1983	DEPTH FEET ☐ METERS ☒	MUD PROPERTIES: DENSITY PPG ☐ SG ☒	VISCOSITY sec/qt	A.V. cps	P.V. cps	Y.P. #/100 sq.ft.	GELS 0 / 10	FLUID LOSS 30 Min cc's	CAKE 32 nds	H.T.H.P cc's	pH	Cl⁻ ppm x1000	Filtrate Analysis Ca. ++ ppm	Pf/Mf	RETORT % OIL	% SOLIDS	% SAND	BENTONITE #/BBL	POTASH #/BBL	POLYMER #/BBL	"N"	"K"	OPERATION REMARKS
113	06.03	3542	1.61	49	29	22	14	4/20	6.2	1	18	10.8	23	20	1.8/3.8	TR	23	TR	16			.75	.43	
114	07.03	3389	1.61	52	29.5	23	13	4/19	6.0	1	18	11.4	22.5	TR	1.4/3.5	2.5	24	TR	16			.78	.37	
115	08.03	3342	1.60	49	28	22	12	4/18	6.0	1	18	11.3	22	TR	1.3/3.4	3	24	TR	16			.79	.32	
116	09.03	3342	1.60	49	28	22	12	4/18	6.0	1	18	11.3	22	TR	1.3/3.4	3	24	TR	16			.79	.32	
117	10.03	2895	1.60	48	28	22	12	4/16	6.0	1		11.3	22	TR	1.3/3.4	3	24	TR	15			.79	.32	
118	11.03	2880	1.60	51	28	22	12	4/17	6.0	1		11.3	22	20	1.3/3.4	3	24	TR	15			.79	.32	
119	12.03	1180	1.53	58	27	20	14	4/20	6.0	1		11.0	22	40	1.6/3.8	3	22	TR	14			.7	.3	
120	13.03	194	1.50	60																				

REMARKS