



FORMATION PRESSURE WORKSHEET

Well No.: 30/9-16

Rig : West Vanguard

Date : 05.07.94

Pressure Units :bar

RKB-MSL : 22 m

Witnessed by :Gahlla/Klemp

Run No. 3A	Depth (MD)	Depth TVD (RKB)	Initial Hydrostatic Press		Formation Pressure		Final Hydrostatic Press		Time		Remarks	
			Strain	HP	Strain	HP	Strain	HP	Set	Retract	Mobility (md/cp)	Perm.
3A/1	2688,5		298,83	298,55	282,25	281,89	298,27	298,56	13:30	13:35	105	Good
3A/2	2693,5		299,33	299,05	282,77	282,57	299,34	299,17	13:37	13:44	0,7	Tight/sup.charge
3A/3	2697,5		299,76	299,57	283,60	283,41	299,76	299,52	13:49	14:00	0,3	Tight/sup.charge
3A/4	2702,5		300,30	300,11	282,52	282,26	300,29	300,10	14:06	14:10	38	Good
3A/5	2709,5		301,02	300,83	283,14	282,97	301,02	300,84	14:15	14:25	0,4	Tight/sup.charge
3A/6	2699,8		299,97	299,84	-	-	-	-	-	-		Tight
3A/7	2703,5		300,38	300,23	-	-	-	-	-	-		Tight
3A/8	2711,5		301,26	301,11	282,90	282,77	301,23	301,15	14:40	14:45	5,7	Good
3A/9	2722,5		302,43	302,27	283,53	282,21	302,43	302,19	14:50	15:02	266,6	Good
3A/10	2725,5		302,75	302,51	283,69	283,41	302,76	302,54	15:06	15:09	200,4	Good
3A/11	2734,5		303,74	303,54	284,28	284,05	303,75	303,58	15:13	15:16	77,8	Good
3A/12	2740,0		304,34	304,13	284,61	284,28	304,35	304,10	15:20	15:30	413,0	V good
3A/13	2747,5		305,15	304,92	285,06	284,78	305,16	304,96	15:37	15:40	890	V good



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Witnessed by :Gahlla/Klemp

Run No. 3A	Depth (MD)	Depth TVD (RKB)	Initial Hydrostatic Press		Formation Pressure		Final Hydrostatic Press		Time		Remarks	
			Strain	HP	Strain	HP	Strain	HP	Set	Retract	Mobility (md/cp)	Perm.
3A/14	2759,5		306,48	306,26	285,83	285,61	306,47	306,31	15:43	15:46	124	Good
3A/15	2766,5		307,22	307,04	286,31	286,12	307,24	307,10	15:50	15:55	4,2	Tight ?
3A/16	2771,5		307,77	307,61	286,66	286,46	307,77	307,66	16:00	16:02	665	V good
3A/17	2777,5		308,43	308,30	287,25	287,04	308,45	308,31	16:06	16:09	1241,1	V good
3A/18	2781,5		308,85	308,70	287,65	287,43	308,87	308,74	16:17	16:20	351	Good
3A/19	2847,0		316,00	315,91	294,42	294,19	316,04	315,83	16:30	16:41	1,2	Tight
3A/20	2894,5		321,25	321,20	298,46	298,23	321,27	321,12	16:55	17:02	63,9	Good
3A/21	2925,5		324,70	324,51	301,46	301,25	324,72	324,57	17:15	17:23	107,5	Good
3A/22	2944,5		326,77	326,72	305,56	305,44	326,79	326,68	17:32	17:35	6,8	Tight
3A/23	2959,5		328,45	328,14	306,55	306,24	328,50	328,20	17:45	17:50	102	Good
3A/24	2963,5		328,85	328,65	306,91	306,72	328,84	328,74	17:55	18:02	43	Good
3A/25	2978,0		330,47	330,37	308,43	308,28	330,45	330,38	18:08	18:17	42,7	Good
3A/26	2990,5		331,74	331,71	309,57	309,46	331,73	331,71	18:25	18:33	80	Good



FORMATION PRESSURE WORKSHEET

Well No.: 30/9-16 Rig : West Vanguard Date : 05.07.94
 Pressure Units : Bar RKB-MSL : 22 m Witnessed by : Swanberg/Klemp

Run No. 3A	Depth (MD)	Depth TVD (RKB)	Initial Hydrostatic Press		Formation Pressure		Final Hydrostatic Press		Time		Remarks
			Strain	HP	Strain	HP	Strain	HP	Set	Retract	
3A/27	2727		302,98	302,87					19:02		Sample
					283,83	283,66			19:05		Open 2 3/4 gal
					279,04	278,98					Lowest sampling pressure
					283,73	283,63				19:20	Shut in pressure
					283,73	283,63			19:20		Open 1 gal
					92,57	185,81					Lowest sampling pressure
					283,73	283,62	302,95	302,85		19:25	Shut in pressure



FORMATION FLUID SAMPLING

Well : 30/9-16

Rig : West Vanguard

Pretest No.: 27		Sample Depth : 2727 m		Witnesses : Swanberg/Klemp	
Run No. : 3A	Sample No.:	1st Chamber	2nd Chamber	3rd Chamber	
Chamber volume (gals/litres)		2 3/4 gal	1 gal		
Chamber No.		RFS-BC 12	RFS-AC 1051		
Filling time (mins.)		15 min	5 min		
Shut in press. (bar) / deg C		283,63 / 97	283,62 / 97	/	
Chamber press. (surf bar) / T		160 / 18	/	/	
Gas volume (SCF/Sm3)		210 scf			
Oil volume (litres)		4 l			
Oil gravity (API / gm / cc)		?			
Water / Filtrate (litres)		4 l			
Water / Filtrate PPM CL-					
Water filtrate pH / pF / Ca++					
Mud filtrate PPM CL-					
Mud filtrate pH / pF / Ca++					
Gas composition ppm	C1	88864			
	C2	29093			
	C3	15761			
	iC4	2186			
	nC4	3764			
	C5	1176			
	CO ₂				

Remarks : 1 gal chamber sent to town.



FORMATION PRESSURE WORKSHEET

Well No.: 30/9-16

Rig : West Vanguard

Date : 09.07.94

Pressure Units : bar

RKB-MSL : 22m

Witnessed by : Swanberg/Klemp

Run No. 4B	Depth (MD)	Depth TVD (RKB)	Initial Hydrostatic Press		Formation Pressure		Final Hydrostatic Press		Time		Remarks	
			Strain	HP	Strain	HP	Strain	HP	Set	Retract	Mobility (md/cp)	Perm.
4B/ 1	3185		409.35	409.35	-	-	409.36	409.72	19:31	19:34		Tight
4B/ 2	3458		443.72	443.74	405.76	405.73	443.74	443.76	19:55	20:09	0.5md/cp	(not stable) Tight
4B/ 3	3465		444.66	444.68	-	-	444.69	445.01	20:11	20:15		Tight
4B/ 4	3472.5		445.66	445.77	407.69	407.64	445.63	445.67	20:19	20:23	0.9md/cp	(not stable) Tight
4B/ 5	3477		446.21	446.28	402.50	402.40	446.21	446.30	20:28	20:30	5.3md/cp	(stable) V poor
4B/ 6	3500		449.14	449.37	405.87	405.77	449.13	449.21	20:40	20:47	2.4md/cp	(stable) V poor
4B/ 7	3517		451.32	451.32	-	-	451.36	451.86	20:50	20:55		Tight
4B/ 8	3519		451.62	451.63	-	-	451.61	451.95	21:00	21:03		Tight
4B/ 9	3505		449.84	449.76	407.24	407.22	449.82	449.94	21:05	21:12	1.6md/cp	(stable) V poor
4B/10	3511.5		450.66	450.58	-	-	450.66	459.71	21:23	21:28	0.5md/cp	(not stable) Tight
4B/11	3497.0		448.84	448.76	405.68	405.55	448.83	448.88	21:37	21:40	2.3md/cp	(stable) V poor
4B/12	3470		445.41	445.48	-	-	445.41	445.52	21:50	21:55	0.8md/cp	supercharge Tight
4B/13	3461		444.28	444.30	-	-	444.28	444.28	22:02	22:05		Tight
4B/14	3463		444.51	444.51	400.60	400.55	444.52	444.60	22:10	22:15	2.7md/cp	(stable) V poor

Well Test Results, Well 30/9-16

TEST NO.	1	2
Perforated Interval (m MD RKB)	2722.0 - 2753.0	2685.1 - 2694.1
Choke Size (1/64 inch)	72	64
Oil/Cond. Flow Rate (Sm ³ /d)	1600	238
Gas Flow Rate (Sm ³ /d)	264000	722000
Water Flow Rate (Sm ³ /d)	0	0
GLR (Sm ³ /Sm ³)	165	3030
Oil/Cond. Gravity (g/cc @ 15 °C)	0.835	0.75
Gas Gravity (air = 1)	0.733	0.71
FWHP (bar)	83.7	97.5
SIWHP (bar)	130.6	202.0
FWHT (°C)	69.5	54.1
FBHT (°C)	106.6	95.5
FBHP (bar)	268.4	175.0
SIBHP (bar)	279.1	280.8
BS&W (%)	0	0
CO ₂ (% max)	2.1	1.5
H ₂ S (ppm max)	1.5	0.2
k, (mD)	1070	31
Net Pay, (m)	38.1	8.23
Skin	19	7.5
PI (Sm ³ /d/bar)	159	na
Depth of BH measurements (m MD RKB)	2656.3	2648.5
Fracture gradient (r.d.)	2.14	2.29

REMARKS:

Preliminary Test Results

TOTAL CONSUMPTION OF MUD ADDITIVES ON WELL 30/9-16

Section Size	Product/Additive	Total	Total	Unit	Difference		Difference in cost	
		Amount Planned	Amount Used		Amount	%	%	[kNOK]
36"	BARITE		31000.0	kg				
	BENTONITE		22000.0	kg				
	LIME		250.0	kg				
	SODA ASH		250.0	kg				
17 1/2"	BARITE		188000.0	kg				
	BENTONITE		71000.0	kg				
	CMC EHV		1525.0	kg				
	LIME		650.0	kg				
	SODA ASH		650.0	kg				
12 1/4"	ANCO 208		15500.0	l				
	BARITE		149000.0	kg				
	CELPOL LV		1125.0	kg				
	CELPOL REG		100.0	kg				
	KCL BRINE		335000.0	l				
	KCL POWDER		8000.0	kg				
	PAC; PREMPAC EX		3125.0	kg				
	PACSEAL LV		125.0	kg				
	RHODOTOL 23		1975.0	kg				
	SHALETROL		250.0	kg				
	SODA ASH		875.0	kg				
SODIUM BICARBONATE		600.0	kg					
8 1/2"	ANCO DEFOAMER		175.0	l				
	ANCOCID		175.0	l				
	BARITE		234000.0	kg				
	CELPOL LV		2400.0	kg				
	CELPOL REG		675.0	kg				
	CITRIC ACID		525.0	kg				
	KCL BRINE		560000.0	l				
	KCL POWDER		37000.0	kg				
	LAMPAC LV		1000.0	kg				
	LAMPAC XLO		175.0	kg				
	PAC; PREMPAC EX		2250.0	kg				
PACSEAL LV		6025.0	kg					

TOTAL CONSUMPTION OF MUD ADDITIVES ON WELL 30/9-16

Section Size	Product/Additive	Total Amount Planned	Total Amount Used	Unit	Difference		Difference in cost	
					Amount	%	%	[kNOK]
8 1/2"	RHODOTOL 23		3700.0	kg				
	SHALETROL		2700.0	kg				
	SODIUM BICARBONATE		2650.0	kg				

Norsk Hydro

DAILY MUD PROPERTIES : RHEOLOGY PARAMETERS FOR WELL 30/9-16

Hole section: 36"

WATER BASED SYSTEM

Date	Depth		Mud Type	Funnel	Dens	Mudtmp	Fann Readings						Rheo	PV	YP	Gel0	Gel10		
	[m]			Visc	Out	Test													
	MD	TVD		[sec]	[sg]	[DegC]	600	300	200	100	60	30	6	3	[DegC]	[mPas]	[Pa]	[Pa]	[Pa]
13-jun-1994 23:59	123	123	SPUD MUD	150.0	1.05	0.0									0.0	0.0	0.0	0.0	0.0
14-jun-1994 23:59	208	208	SPUD MUD	150.0	1.05	0.0									0.0	0.0	0.0	0.0	0.0

Hole section: 17 1/2"

WATER BASED SYSTEM

Date	Depth		Mud Type	Funnel	Dens	Mudtmp	Fann Readings						Rheo	PV	YP	Gel0	Gel10		
	[m]			Visc	Out	Test													
	MD	TVD		[sec]	[sg]	[DegC]	600	300	200	100	60	30	6	3	[DegC]	[mPas]	[Pa]	[Pa]	[Pa]
15-jun-1994 23:59	488	488	SPUD MUD	150.0	1.05	0.0									0.0	0.0	0.0	0.0	0.0
16-jun-1994 23:59	1155	1155	SPUD MUD	150.0	1.05	0.0									0.0	0.0	0.0	0.0	0.0
17-jun-1994 23:59	1588	1588	SPUD MUD	165.0	1.20	0.0									0.0	0.0	0.0	0.0	0.0
18-jun-1994 23:59	1588	1588	SPUD MUD	165.0	1.20	0.0									0.0	0.0	0.0	0.0	0.0
19-jun-1994 23:59	1588	1588	SPUD MUD	0.0	1.20	0.0									0.0	0.0	0.0	0.0	0.0
20-jun-1994 23:59	1578	1578	ANCO 2000	0.0	1.45	0.0	78	50	40	26			6	5	0.0	28.0	11.0	6.0	12.0

Hole section: 12 1/4"

WATER BASED SYSTEM

Date	Depth		Mud Type	Funnel	Dens	Mudtmp	Fann Readings						Rheo	PV	YP	Gel0	Gel10		
	[m]			Visc	Out	Test													
	MD	TVD		[sec]	[sg]	[DegC]	600	300	200	100	60	30	6	3	[DegC]	[mPas]	[Pa]	[Pa]	[Pa]
21-jun-1994 23:59	1578	1578	ANCO 2000	0.0	1.45	0.0	78	50	40	26			6	5	50.0	28.0	11.0	6.0	12.0
22-jun-1994 23:30	1905	1905	ANCO 2000	70.0	1.43	0.0	86	56	44	29			9	7	50.0	30.0	13.0	4.0	11.0
22-jun-1994 23:59	1578	1578	ANCO 2000	0.0	1.45	0.0									50.0	28.0	11.0	6.0	12.0
23-jun-1994 23:59	2271	2271	ANCO 2000	70.0	1.43	0.0	92	63	49	33			9	7	50.0	29.0	17.0	4.0	12.0
24-jun-1994 23:59	2379	2379	ANCO 2000	61.0	1.43	0.0	91	62	51	36			10	8	50.0	29.0	16.5	4.0	12.0
25-jun-1994 23:59	2522	2521	ANCO 2000	55.0	1.43	0.0	87	59	48	34			10	8	50.0	28.0	15.5	4.0	12.0
26-jun-1994 23:59	2668	2667	ANCO 2000	52.0	1.43	0.0	82	56	47	33			9	7	50.0	26.0	15.0	3.5	11.0

See also the report 'DAILY MUD PROPERTIES : OTHER PARAMETERS'

Norsk Hydro

DAILY MUD PROPERTIES : RHEOLOGY PARAMETERS FOR WELL 30/9-16

Hole section: 12 1/4"

WATER BASED SYSTEM

Date	Depth		Mud Type	Funnel	Dens	Mudtmp	Fann Readings						Rheo	PV	YP	Gel10	Gel110		
	[m]			Visc	[sg]	Out	600	300	200	100	60	30	6	3	[DegC]	[mPas]	[Pa]	[Pa]	[Pa]
	MD	TVD		[sec]		[DegC]													
27-jun-1994 21:00	2668	2667	ANCO 2000	57.0	1.43	0.0	83	56	47	32			8	6	50.0	27.0	14.5	3.0	10.0
27-jun-1994 23:59	2668	2667	ANCO 2000	52.0	1.43	0.0							8	6	50.0	27.0	14.5	3.0	9.0
28-jun-1994 23:59	2668	2667	ANCO 2000	52.0	1.43	0.0	83	56	47	32			8	6	50.0	27.0	14.5	3.0	9.0
29-jun-1994 23:59	2668	2667	ANCO 2000	52.0	1.43	0.0	83	56	47	32			8	6	50.0	27.0	14.5	3.0	10.0

Hole section: 8 1/2"

WATER BASED SYSTEM

Date	Depth		Mud Type	Funnel	Dens	Mudtmp	Fann Readings						Rheo	PV	YP	Gel10	Gel110		
	[m]			Visc	[sg]	Out	600	300	200	100	60	30	6	3	[DegC]	[mPas]	[Pa]	[Pa]	[Pa]
	MD	TVD		[sec]		[DegC]													
30-jun-1994 23:59	2668	2667	ANCO 2000	64.0	1.45	0.0	80	56	44	31			10	8	50.0	24.0	16.0	6.0	13.0
01-jul-1994 23:59	2694	2693	KCL/POLYME	58.0	1.12	0.0	65	45	35	25			8	5	50.0	20.0	12.5	3.0	4.0
02-jul-1994 17:00	2759	2758	KCL/POLYME	57.0	1.14	0.0	52	36	29	20			6	4	50.0	16.0	10.0	2.0	3.0
03-jul-1994 23:59	2803	2802	KCL/POLYME	58.0	1.12	0.0	53	38	29	20			5	4	50.0	15.0	11.5	2.0	3.0
04-jul-1994 21:00	3040	3039	KCL/POLYME	58.0	1.12	0.0	60	41	34	24			6	4	50.0	19.0	11.0	2.0	3.0
05-jul-1994 21:00	3040	3039	KCL/POLYME	58.0	1.12	0.0	60	41	34	24			6	4	50.0	19.0	11.0	2.0	3.0
06-jul-1994 23:59	3445	3444	KCL/POLYME	66.0	1.30	0.0	77	55	46	33			9	7	50.0	22.0	16.5	3.5	5.5
07-jul-1994 23:59	3486	3485	KCL/POLYME	70.0	1.30	0.0	90	66	55	41			13	10	50.0	24.0	21.0	5.0	7.0
08-jul-1994 23:59	3550	3549	KCL/POLYME	70.0	1.30	0.0	90	66	55	41			13	10	50.0	24.0	21.0	5.0	7.0
09-jul-1994 23:59	3550	3549	KCL/POLYME	64.0	1.30	0.0	88	65	53	40			13	10	50.0	23.0	21.0	5.0	7.0
10-jul-1994 23:59	3265	3264	KCL/POLYME	64.0	1.30	0.0	88	65	53	40			13	10	50.0	23.0	21.0	5.0	7.0
11-jul-1994 18:00	2977	2976	KCL/POLYME	64.0	1.23	0.0	76	55	45	32			8	6	50.0	21.0	17.0	3.0	6.5
12-jul-1994 22:00	2977	2976	KCL/POLYME	66.0	1.23	0.0	62	42	34	24			7	5	50.0	20.0	11.0	3.0	5.0
13-jul-1994 22:00	2958	2957	KCL/POLYME	64.0	1.13	0.0	53	41	34	26			10	8	50.0	12.0	14.5	5.0	6.0
14-jul-1994 22:00	2958	2957	KCL/POLYME	72.0	1.13	0.0	75	54	45	34			11	9	50.0	21.0	16.5	5.5	6.5
15-jul-1994 22:30	2958	2957	KCL/POLYME	64.0	1.13	0.0	55	41	36	26			9	7	50.0	14.0	13.5	5.0	6.0
16-jul-1994 22:30	2958	2957	KCL/POLYME	64.0	1.13	0.0	55	41	36	26			9	7	50.0	14.0	13.5	5.0	6.0
17-jul-1994 22:30	2958	2957	KCL/POLYME	77.0	1.13	0.0	56	42	37	26			10	7	50.0	14.0	14.0	5.0	6.0

See also the report 'DAILY MUD PROPERTIES : OTHER PARAMETERS'

Norsk Hydro

DAILY MUD PROPERTIES : RHEOLOGY PARAMETERS FOR WELL 30/9-16

Date		Depth		Mud Type	Funnel	Dens	Mudtmp	Fann Readings							Rheo	PV	YP	Gel10	Gel10	
		[m]			Visc		Out	600	300	200	100	60	30	6	3	Test				
		MD	TVD		[sec]	[sg]	[DegC]									[DegC]	[mPas]	[Pa]	[Pa]	[Pa]
18-jul-1994	20:00	2958	2957	KCL/POLYME	77.0	1.13	0.0	53	40	34	24			9	7	50.0	13.0	13.5	5.0	6.0
19-jul-1994	20:00	2958	2957	KCL/POLYME	77.0	1.13	0.0	53	40	34	24			9	7	50.0	13.0	13.5	5.0	6.0
20-jul-1994	23:59	2958	2957	KCL/POLYME	58.0	1.14	0.0	51	36	28	19			8	6	50.0	15.0	10.5	4.0	5.0
21-jul-1994	23:59	2958	2957	KCL/POLYME	58.0	1.14	0.0	51	36	28	19			8	6	50.0	15.0	10.5	4.0	5.0
22-jul-1994	23:59	2958	2957	KCL/POLYME	51.0	1.13	0.0	44	33	24	20			8	6	50.0	11.0	11.0	3.0	4.0
23-jul-1994	23:59	2958	2957	KCL/POLYME	66.0	1.13	0.0	64	44	38	28			9	6	50.0	20.0	12.0	4.0	5.0
24-jul-1994	23:59	2958	2957	KCL/POLYME	66.0	1.13	0.0	64	44	38	28			9	6	50.0	20.0	12.0	4.0	5.0
25-jul-1994	23:59	2958	2957	KCL/POLYME	66.0	1.13	0.0	64	44	38	28			9	6	50.0	20.0	12.0	4.0	5.0
26-jul-1994	23:59	2958	2957	KCL/POLYME	66.0	1.13	0.0	64	44	38	28			9	6	50.0	20.0	12.0	4.0	5.0
27-jul-1994	23:59	2958	2957	KCL/POLYME	66.0	1.13	0.0	64	94	38	28			9	6	50.0	20.0	12.0	4.0	5.0
28-jul-1994	23:59	2958	2957	KCL/POLYME	64.0	1.13	0.0	62	44	35	26			10	6	50.0	18.0	13.0	4.0	5.0
29-jul-1994	23:59	2958	2957	KCL/POLYME	60.0	1.13	0.0	55	40	31	23			8	6	50.0	15.0	12.5	3.0	4.0
30-jul-1994	23:59	2958	2957	KCL/POLYME	55.0	1.14	0.0	53	38	30	21			8	6	50.0	15.0	11.5	3.0	4.0
31-jul-1994	23:59	2958	2957	KCL/POLYME	53.0	1.14	0.0	51	38	29	19			8	6	50.0	13.0	12.5	3.0	4.0
01-aug-1994	23:59	2958	2957	KCL/POLYME	51.0	1.13	0.0	48	35	29	19			8	6	50.0	13.0	11.0	3.0	4.0
02-aug-1994	23:59	2958	2957	KCL/POLYME	53.0	1.13	0.0	49	36	30	20			8	6	50.0	13.0	11.5	3.0	4.0
03-aug-1994	23:59	2958	2957	KCL/POLYME	49.0	1.13	0.0	43	31	28	17			5	4	50.0	12.0	9.5	2.0	3.5
04-aug-1994	23:59	2958	2957	KCL/POLYME	49.0	1.13	0.0	43	31	28	17			5	4	50.0	12.0	9.5	2.0	3.5
05-aug-1994	20:00	2958	2957	KCL/POLYME	47.0	1.43	0.0	48	34	30	20			5	4	50.0	14.0	10.0	2.0	3.5
06-aug-1994	23:00	1350	1350	KCL/POLYME	46.0	1.43	0.0	47	32	28	19			4	3	50.0	15.0	8.5	2.0	3.0
07-aug-1994	23:59	0		KCL/POLYME	0.0	1.43	0.0									50.0	0.0	0.0	0.0	0.0

See also the report 'DAILY MUD PROPERTIES : OTHER PARAMETERS'

Norsk Hydro

DAILY MUD PROPERTIES : OTHER PARAMETERS FOR WELL 30/9-16

Hole section: 36"

WATER BASED SYSTEM

Date	Depth		Mud Type	Dens [sg]	Filtrate		Filt.cake		HPHT Press/Temp [psi/DegC]	pH	Alcalinity			Inhib Chem [Kg/m3]	K+	CL-	Ca++	Mg++	Tot hard [mg]	Percentage			CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
	[m]	TVD			[API [sg]	[HPHT [ml]	[API [ml]	[HPHT [mm]			Pm	Pf	Mf							Oil	Sand				
13-jun-1994 23:59	123	123	SPUD MUD	1.05	0.0	0.0	0	0	0/0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0.0	0.0	0.0	0	0.0	0
14-jun-1994 23:59	208	208	SPUD MUD	1.05	0.0	0.0	0	0	0/0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0.0	0.0	0.0	0	0.0	0

Hole section: 17 1/2"

WATER BASED SYSTEM

Date	Depth		Mud Type	Dens [sg]	Filtrate		Filt.cake		HPHT Press/Temp [psi/DegC]	pH	Alcalinity			Inhib Chem [Kg/m3]	K+	CL-	Ca++	Mg++	Tot hard [mg]	Percentage			CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
	[m]	TVD			[API [sg]	[HPHT [ml]	[API [ml]	[HPHT [mm]			Pm	Pf	Mf							Oil	Sand				
15-jun-1994 23:59	488	488	SPUD MUD	1.05	0.0	0.0	0	0	0/0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0.0	0.0	0.0	0	0.0	0
16-jun-1994 23:59	1155	1155	SPUD MUD	1.05	0.0	0.0	0	0	0/0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0.0	0.0	0.0	0	0.0	0
17-jun-1994 23:59	1588	1588	SPUD MUD	1.20	0.0	0.0	0	0	0/0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0.0	0.0	0.0	0	0.0	0
18-jun-1994 23:59	1588	1588	SPUD MUD	1.20	0.0	0.0	0	0	0/0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0.0	0.0	0.0	0	0.0	0
19-jun-1994 23:59	1588	1588	SPUD MUD	1.20	0.0	0.0	0	0	0/0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0.0	0.0	0.0	0	0.0	0
20-jun-1994 23:59	1578	1578	ANCO 2000	1.45	3.5	12.6	0	0	0/0	8.4	0.0	0.0	0.4	0	0	48000	600	0	0	18.8	0.0	0.0	0	0.0	149

Hole section: 12 1/4"

WATER BASED SYSTEM

Date	Depth		Mud Type	Dens [sg]	Filtrate		Filt.cake		HPHT Press/Temp [psi/DegC]	pH	Alcalinity			Inhib Chem [Kg/m3]	K+	CL-	Ca++	Mg++	Tot hard [mg]	Percentage			CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
	[m]	TVD			[API [sg]	[HPHT [ml]	[API [ml]	[HPHT [mm]			Pm	Pf	Mf							Oil	Sand				
21-jun-1994 23:59	1578	1578	ANCO 2000	1.45	3.5	12.6	1	1	35/100	8.4	0.0	0.0	0.4	88	0	48000	600	0	640	18.8	0.0	0.0	50	0.0	149
22-jun-1994 23:30	1905	1905	ANCO 2000	1.43	3.2	12.2	1	2	35/100	8.3	0.0	0.0	0.5	104	0	53000	580	0	620	18.0	0.0	0.5	55	0.0	0
22-jun-1994 23:59	1578	1578	ANCO 2000	1.45	3.5	12.6	1	1	35/100	8.4	0.0	0.0	0.4	88	0	48000	600	0	640	18.8	0.0	0.0	50	0.0	128
23-jun-1994 23:59	2271	2271	ANCO 2000	1.43	3.3	12.6	1	2	35/100	8.4	0.0	0.0	0.5	106	55438	53000	880	0	1120	18.0	0.0	0.5	50	0.0	117
24-jun-1994 23:59	2379	2379	ANCO 2000	1.43	3.3	13.0	1	2	35/100	8.2	0.0	0.0	0.5	106	55438	53000	680	0	1200	18.5	0.0	0.5	58	0.0	135
25-jun-1994 23:59	2522	2521	ANCO 2000	1.43	3.5	14.0	1	2	35/120	7.5	0.0	0.0	0.5	118	61174	65000	540	0	680	18.8	0.0	0.5	62	0.0	144
26-jun-1994 23:59	2668	2667	ANCO 2000	1.43	3.3	14.4	1	2	35/120	8.1	0.0	0.0	0.5	118	61174	64000	320	0	640	18.8	0.0	0.5	60	0.0	147
27-jun-1994 21:00	2668	2667	ANCO 2000	1.43	3.2	14.0	1	2	35/120	8.1	0.0	0.0	0.5	112	58576	64000	320	0	640	18.8	0.0	0.5	58	0.0	147
27-jun-1994 23:59	2668	2667	ANCO 2000	1.43	3.2	14.0	1	2	35/120	8.1	0.0	0.0	0.5	115	0	64000	360	0	660	18.8	0.0	0.5	60	0.0	147
28-jun-1994 23:59	2668	2667	ANCO 2000	1.43	3.2	14.0	1	2	35/120	8.1	0.0	0.0	0.5	115	0	64000	360	0	660	18.8	0.0	0.5	60	0.0	147
29-jun-1994 23:59	2668	2667	ANCO 2000	1.43	3.2	14.0	1	2	35/120	8.1	0.0	0.0	0.5	118	61714	64000	320	0	640	18.8	0.0	0.5	60	0.0	147

Hole section: 8 1/2"

WATER BASED SYSTEM

Date	Depth		Mud Type	Dens [sg]	Filtrate		Filt.cake		HPHT Press/Temp [psi/DegC]	pH	Alcalinity			Inhib Chem [Kg/m3]	K+	CL-	Ca++	Mg++	Tot hard [mg]	Percentage			CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
	[m]	TVD			[API [sg]	[HPHT [ml]	[API [ml]	[HPHT [mm]			Pm	Pf	Mf							Oil	Sand				
30-jun-1994 23:59	2668	2667	ANCO 2000	1.45	6.6	14.0	1	2	500/120	11.3	0.0	0.3	0.5	111	58053	55000	600	0	650	18.8	0.0	0.5	58	0.0	134
01-jul-1994 23:59	2694	2693	KCL/POLYME	1.12	3.5	13.0	1	2	500/120	8.5	0.0	0.0	0.5	85	44455	44000	350	0	650	6.0	0.0	0.5	18	0.0	14
02-jul-1994 17:00	2759	2758	KCL/POLYME	1.14	3.7	14.8	1	2	500/120	8.3	0.0	0.0	0.4	91	47593	44000	160	0	420	7.0	0.0	0.5	18	0.0	35
03-jul-1994 23:59	2803	2802	KCL/POLYME	1.12	3.8	14.8	1	2	500/120	8.0	0.0	0.0	0.4	85	44455	41000	240	0	480	7.0	0.0	0.5	18	0.0	74
04-jul-1994 21:00	3040	3039	KCL/POLYME	1.12	3.5	14.3	1	2	120/120	8.0	0.0	0.0	0.4	80	41840	38000	180	0	350	7.0	0.0	0.5	18	0.0	81

See also the report 'DAILY MUD PROPERTIES : RHEOLOGY PARAMETERS'

Norsk Hydro

DAILY MUD PROPERTIES : OTHER PARAMETERS FOR WELL 30/9-16

Date		Depth		Mud Type	Dens	Filtrate	Filt.cake	HPHT	pH	Alcalinity			Inhib	K+	CL-	Ca++	Mg++	Tot	Percentage			CEC	ASG	LGS		
		[m]	[m]		[sg]	[API]	[HPHT]	[API]	[HPHT]	Press/Temp	Pm	Pf	Mf	Chem	[mg/l]	[mg/l]	[mg/l]	[mg/l]	[mg]	[Solid]	[Oil]	[Sand]	[Kg/m3]	[sg]	[Kg/m3]	
		MD	TVD			[ml]	[ml]	[mm]	[mm]	[psi/DegC]	[ml]	[ml]	[ml]	[Kg/m3]	[mg/l]	[mg/l]	[mg/l]	[mg/l]	[mg]	[%]	[%]	[%]	[Kg/m3]	[sg]	[Kg/m3]	
05-jul-1994	21:00	3040	3039	KCL/POLYME	1.12	3.5	14.3	1	2	500/120	8.0	0.0	0.0	0.4	85	44455	38000	180	0	480	7.0	0.0	0.5	18	0.0	81
06-jul-1994	23:59	3445	3444	KCL/POLYME	1.30	3.7	14.3	1	2	14/120	8.0	0.0	0.0	0.4	88	46024	42000	220	0	380	15.2	0.0	0.5	20	0.0	215
07-jul-1994	23:59	3486	3485	KCL/POLYME	1.30	3.7	14.2	1	2	120/14	8.0	0.3	0.0	0.3	88	46024	44000	240	0	380	13.8	0.0	0.4	21	0.0	136
08-jul-1994	23:59	3550	3549	KCL/POLYME	1.30	3.7	14.2	4	1	120/14	8.0	0.0	0.0	0.4	88	46024	44000	240	0	380	13.8	0.0	0.5	21	0.0	136
09-jul-1994	23:59	3550	3549	KCL/POLYME	1.30	3.7	14.2	4	1	120/14	9.6	0.0	0.1	0.5	88	46024	44000	320	0	380	13.8	0.0	0.5	21	0.0	136
10-jul-1994	23:59	3265	3264	KCL/POLYME	1.30	3.7	14.2	4	1	120/14	9.6	0.0	0.1	0.5	85	44455	44000	320	0	460	13.8	0.0	0.5	21	0.0	136
11-jul-1994	18:00	2977	2976	KCL/POLYME	1.23	3.5	14.2	1	0	120/14	10.5	0.0	0.2	0.4	91	47593	44000	400	0	510	11.2	0.0	0.3	18	0.0	112
12-jul-1994	22:00	2977	2976	KCL/POLYME	1.23	3.7	14.3	1	2	120/14	8.2	0.0	0.1	0.4	89	46547	46000	520	0	620	11.0	0.0	0.3	19	0.0	96
13-jul-1994	22:00	2958	2957	KCL/POLYME	1.13	4.6	16.2	1	2	120/14	8.1	0.0	0.1	0.6	38	19874	21000	400	0	360	6.2	0.0	0.1	9	0.0	60
14-jul-1994	22:00	2958	2957	KCL/POLYME	1.13	3.7	15.4	1	2	120/15	8.1	0.0	0.1	0.6	38	19874	21000	400	0	360	6.2	0.0	0.1	9	0.0	60
15-jul-1994	22:30	2958	2957	KCL/POLYME	1.13	3.6	14.8	1	2	120/15	9.3	0.0	0.2	0.7	38	19874	21000	400	0	520	6.2	0.0	0.1	9	0.0	60
16-jul-1994	22:30	2958	2957	KCL/POLYME	1.13	3.6	14.8	1	2	120/15	9.3	0.0	0.2	0.7	38	19874	21000	400	0	520	6.2	0.0	0.1	9	0.0	60
17-jul-1994	22:30	2958	2957	KCL/POLYME	1.13	3.6	14.6	1	2	120/15	8.7	0.0	0.2	0.7	38	19874	21000	400	0	520	6.2	0.0	0.1	9	0.0	60
18-jul-1994	20:00	2958	2957	KCL/POLYME	1.13	3.9	14.6	1	2	120/15	8.7	0.0	0.1	0.9	36	18828	21000	400	0	520	6.2	0.0	0.1	9	0.0	60
19-jul-1994	20:00	2958	2957	KCL/POLYME	1.13	3.9	14.6	1	2	120/15	8.7	0.0	0.1	0.9	36	18828	21000	400	0	520	6.2	0.0	0.1	9	0.0	60
20-jul-1994	23:59	2958	2957	KCL/POLYME	1.14	4.0	14.6	1	2	120/15	8.5	0.0	0.1	0.8	35	18305	20000	350	0	480	6.4	0.0	0.1	9	0.0	56
21-jul-1994	23:59	2958	2957	KCL/POLYME	1.14	4.0	14.6	1	2	120/15	8.5	0.0	0.1	0.8	35	18305	20000	350	0	480	6.4	0.0	0.1	9	0.0	56
22-jul-1994	23:59	2958	2957	KCL/POLYME	1.13	4.4	14.6	1	2	120/15	8.3	0.0	0.1	1.3	38	19874	21000	600	0	640	6.4	0.0	0.1	9	0.0	70
23-jul-1994	23:59	2958	2957	KCL/POLYME	1.13	3.8	14.6	1	2	500/120	8.0	0.0	0.0	1.3	38	0	21000	600	0	640	6.4	0.0	0.1	9	0.0	70
24-jul-1994	23:59	2958	2957	KCL/POLYME	1.13	3.8	14.6	1	2	120/15	8.0	0.0	0.0	1.3	38	19874	21000	600	0	640	6.4	0.0	0.1	9	0.0	70
25-jul-1994	23:59	2958	2957	KCL/POLYME	1.13	3.8	14.6	1	2	120/15	8.0	0.0	0.0	1.3	38	19874	21000	600	0	640	6.4	0.0	0.1	9	0.0	70
26-jul-1994	23:59	2958	2957	KCL/POLYME	1.13	3.8	14.6	1	2	120/15	8.0	0.0	0.0	1.3	38	19874	21000	600	0	640	6.4	0.0	0.1	9	0.0	70
27-jul-1994	23:59	2958	2957	KCL/POLYME	1.13	3.8	14.6	1	2	120/15	8.0	0.0	0.0	1.3	38	19874	21000	600	0	640	6.4	0.0	0.1	9	0.0	70
28-jul-1994	23:59	2958	2957	KCL/POLYME	1.13	4.0	14.6	1	2	35/120	8.0	0.0	0.0	1.2	38	19874	21000	800	0	840	6.5	0.0	0.1	9	0.0	76
29-jul-1994	23:59	2958	2957	KCL/POLYME	1.13	3.8	14.6	1	2	35/120	8.0	0.0	0.0	1.2	38	19874	21000	800	0	840	6.5	0.0	0.1	9	0.0	76
30-jul-1994	23:59	2958	2957	KCL/POLYME	1.14	3.8	14.6	1	2	35/120	8.0	0.0	0.0	1.2	38	19874	21000	800	0	840	6.6	0.0	0.1	9	0.0	65
31-jul-1994	23:59	2958	2957	KCL/POLYME	1.14	4.0	14.6	1	2	35/120	8.0	0.0	0.0	1.2	35	18305	20000	800	0	850	6.6	0.5	0.1	9	0.0	67
01-aug-1994	23:59	2958	2957	KCL/POLYME	1.13	4.0	14.6	1	2	35/120	8.0	0.0	0.0	1.2	35	18305	20000	800	0	850	6.6	0.5	0.1	9	0.0	83
02-aug-1994	23:59	2958	2957	KCL/POLYME	1.13	4.1	15.0	1	0	35/120	7.9	0.0	0.0	1.0	35	18305	20000	780	0	880	6.6	0.0	0.1	9	0.0	83
03-aug-1994	23:59	2958	2957	KCL/POLYME	1.13	4.5	15.5	1	0	35/120	7.8	0.0	0.0	1.0	35	18305	18000	780	0	880	6.5	0.0	0.1	8	0.0	82
04-aug-1994	23:59	2958	2957	KCL/POLYME	1.13	4.5	15.5	1	0	35/120	7.8	0.0	0.0	1.0	35	18305	18000	780	0	880	6.5	0.0	0.1	8	0.0	82
05-aug-1994	20:00	2958	2957	KCL/POLYME	1.43	4.2	0.0	1	0	35/120	8.4	0.0	0.0	1.2	35	18305	38000	520	0	640	17.0	0.0	0.1	8	0.0	107
06-aug-1994	23:00	1350	1350	KCL/POLYME	1.43	4.4	0.0	1	0	35/120	8.7	0.0	0.0	1.0	0	0	39000	520	0	680	17.0	0.0	0.1	8	0.0	105
07-aug-1994	23:59	0		KCL/POLYME	1.43	0.0	0.0	0	0	35/120	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0.0	0.0	0.1	0	0.0	0

See also the report 'DAILY MUD PROPERTIES : RHEOLOGY PARAMETERS'