

# FMT PRESSURE RESULTS

## CRETACEOUS AND BRENT GROUP

# WELL 30/9-3A

RUN NO/ TEST NO	DEPTH MRKB, MD	PHI PSIA	PF PSIH	PHA PSIA	REMARKS	
1/1	2438.5	4971	-	4969	TIGHT	
1/2	2442.5	4976	-	4974	TIGHT	
1/3	2446	4982	-	4981	TIGHT	
1/4	2880.5	5734	-	5733	TIGHT	
1/5	2881	5735	-	5734	TIGHT	
1/6	2881.5	5731	4252	5729	LOW	PERM.
1/7	2884.5	5736	4255	5735	LOW	PERM.
1/8	2886	5737	4249	5736	GOOD	PERM.
1/9	2899	5760	4256	5758	GOOD	PERM.
1/10	2902	5767	4260	5767	GOOD	PERM.
1/11	2910.6	5782	4270	5780	FAIR	PERM.
1/12	2914.2	5787	4272	5787	GOOD	PERM.
1/13	2915.5	5789	4273	5789	GOOD	PERM.
1/14	2927.5	5810	-	5809	TIGHT	
1/15	2974.4	5901	-	5900	TIGHT	
1/16	2977.5	5905	-	5905	TIGHT	
2/1	2881	5732	4258	5733	LOW	PERM.
2/2	2885	5740	4252	5740	GOOD	PERM.
2/3	2886	5742	4252	5742	GOOD	PERM.
2/4	2899	5766	4260	5766	GOOD	PERM.
2/5	2900.5	5768	4261	5767	GOOD	PERM.
2/6	2901.8	5769	4262	5770	GOOD	PERM.
2/7	2910.6	5786	4272	5785	FAIR	PERM.
2/8	2912.5	5788	4270	5787	GOOD	PERM.
3/1	2885.5	5772	4247	5772	SAMPLE NO 1, LOST SEAL	
3/2	2885.7	5789	4248	5770	SAMPLE NO 1, 1 GAL.	
4/1	2915.5	5803	4273	5803	SEG. SAMPLE NO 2	
5/1	2910.6	5784	4280	5784	FAIR	PERM.
5/2	2912.5	5787	4276	5786	GOOD	PERM.
5/3	2901.8	5267	4289	5267	GOOD	PERM.
5/4	2914	5790	4279	5789	GOOD	PERM.
5/5	2915.5	5792	4281	5792	GOOD	PERM.
5/6	2927	5814	4294	5813	GOOD	PERM.
5/7	2977.4	5901	-	5900	TIGHT	
5/8	2998.9	5939	-	5939	TIGHT	
5/9	3018.5	5974	4536	5974	GOOD	PERM.
5/10	3038	6010	4559	6009	GOOD	PERM.
5/11	3040	6011	4561	6011	GOOD	PERM.
5/12	3042	6014	4564	6013	GOOD	PERM.
5/13	3051.5	6031	4576	6030	GOOD	PERM.
5/14	3071.5	6065	4603	6064	GOOD	PERM.
5/15	3079	6078	4609	6077	GOOD	PERM.
5/16	3086	6091	4618	6090	GOOD	PERM.
5/17	3091	6100	4624	6098	GOOD	PERM.
5/18	3103	6120	4639	6119	GOOD	PERM.
5/19	3109.9	6132	4648	6131	GOOD	
5/20	3125.5	6158	4686	6157	GOOD	
5/21	3128.9	6167	4692	6166	LOW	
5/22	2980.9	5899	4454	5898	LOW	
5/23	2977.5	5894	-	5893	TIGHT	
6/1	3086	6092	4615	6093	SEG. SAMPLE NO 3	
7/1	2885.7	5750	4262	5752	SEG. SAMPLE NO 4	

**NOTES:**

1. ALL PRESSURE READINGS ARE FROM STRAIN GAUGE. THE FORMATION PRESSURES ARE CORRECTED FOR TEMPERATURE EFFECTS. HYDROSTATIC PRESSURES ARE NOT CORRECTED.

2. PHI = INITIAL HYDROSTATIC PRESSURE  
 PF = FORMATION PRESSURE  
 PHA = HYDROSTATIC PRESSURE AFTER TEST

# FMT PRESSURE RESULTS WELL 30/9-3A

## STATFJORD FORMATION AND TRIASSIC

RUN NO/ TEST NO	DEPTH MRKB	PHI PSIA	PF PSIA	PHA PSIA	REMARKS	
8/1	3705.5	6189.	6036.	6188.	FAIR	PERM.
8/2	3712.5	6205.	6043.	6205.	FAIR	PERM.
8/3	3712.5	6201.	6042.	6200.	FAIR	PERM.
8/4	3761.5	6285.	6105.	6282.	FAIR	PERM.
8/5	3785.0	6324.	6143.	6321.	FAIR	PERM.
8/6	3810.5	6365.	6178.	6362.	FAIR	PERM.
8/7	3852.	6436.	6230.	6437.	FAIR	PERM.
8/8	3948.	6585.	6368.	6584.	FAIR	PERM.
9/1	3692.	6145.	5984.	6139.	SEG SAMPLE NO 5	
9/2	3852.	6413.	6200.	6411.	FAIR	PERM.
9/3	3948.	6570.	6340.	6568.	FAIR	PERM.
9/4	3969.5	6605.	6379.	6602.	FAIR	PERM.
9/5	3999.	6653.	6414.	6648.	LOW	PERM.
9/6	4052.5	6736.	6571.	6734.	LOW	PERM.
9/7	4113.	6844.	6672.	6842.	LOW	PERM.
9/8	4130.	6874.	6711.	6869.	LOW	PERM.
9/9	4198.	6987.	6810.	6984.	GOOD	PERM.

**NOTES:**

1. ALL PRESSURE READINGS ARE FROM STRAIN GAUGE, AND ARE TEMPERATURE CORRECTED.
2. PHI = INITIAL HYDROSTATIC PRESSURE  
 PF = FORMATION PRESSURE  
 PHA = HYDROSTATIC PRESSURE AFTER TEST

### TEMPERATURES FMT

**MAX RECORDED DOWNHOLE TEMPERATURES:**

RUN NO 1: 210 D.F. (98.8°C)  
 RUN NO 2: 210 D.F. (98.8°C)  
 RUN NO 3: 194 D.F. (89.9°C)  
 RUN NO 4: 190 D.F. (87.7°C)  
 RUN NO 5: 198 D.F. (92.1°C)  
 RUN NO 6: 187 D.F. (86.0°C)  
 RUN NO 7: 188 D.F. (86.6°C)  
 RUN NO 8: 262 D.F. (127.6°C)  
 RUN NO 9: 279 D.F. (137.1°C)

**FMT PRESSURE RESULTS    WELL 30/9-3A**  
**RECORDED WITH SDP QUARTS GAUGES ATTACHED TO FMT TOOL**

RUN NO/ TEST NO	DEPTH MRKB	PF PSIA
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GAUGE NO 82819 SDP MODE, 5 SEC.

1/6	2881.5	4253.7
1/7	2884.5	4254.7
1/8	2886.	4249.3
1/9	2899.	4257.7
1/10	2902.	4258.5
1/11	2910.6	4269.5
1/12	2914.2	4269.1
1/13	2915.5	4269.7

GAUGE NO 82818 SSSR MODE, 10 SEC.

1/6	2881.5	4253.7
1/7	2884.5	4254.5
1/8	2886.	4249.2
1/9	2899.	4257.7
1/10	2902.	4258.4
1/11	2910.6	4269.3
1/12	2914.2	4268.8
1/13	2915.5	4269.4

GAUGE NO 82818 SSSR MODE, 10 SEC.

2/1	2881.	4254.
2/2	2885.	4247.9
2/3	2886.	4248.1
2/4	2899.	4257.
2/5	2900.5	4257.9
2/6	2901.8	4258.8
2/7	2910.6	4269.8
2/8	2912.5	4268.5

GAUGE NO 82818 SSSR MODE, 10 SEC.

5/1	2910.6	4271.8
5/2	2912.5	4270.3
5/3	2901.8	4262.6

**NOTES:**

1. ALL PRESSURE READINGS ARE FROM QUARTZ GAUGE, i.e. TEMP. CORRECTED
2. A CORRECTION OF -4.0 PSIA HAS BEEN APPLIED TO CORRECT FOR DISTANCE BETWEEN THE FMT DEPTHS AND SDP DEPTHS
3. PF = FORMATION PRESSURE

# FMT RESULTS SAMPLES

## WELL 30/9-3A

SAMPLES ARE TAKEN IN THE BRENT GROUP AND IN THE STATFJORD FM.

	1ST CHAMBER	2ND CHAMBER
<sup>3</sup> / <sub>1,2</sub>		
Segregated sample no 1,	2¾ GAL	1 GAL
2885.5/2885.7 m MD RKB	0.5	7.5
Filling time, min:	—	2400
Pressure chamber, PSIG:	4	—
Gas vol., SCF:	0	—
Oil vol., litre:	5	—
Oil filtrate, litre:	0	—
Water, litre:		
Remarks:	Lost seal after 30 sek. Drained on rig floor	Sent to lab. Sample taken at 2885.7 m

<sup>4</sup>/<sub>1</sub>  
Segregated sample no 2, 2915.5 m

Filling time, min.:	7,5	4
Press. chamber, PSIG:	2250	1950
Gas vol., SCF:	38.6	—
Oil vol., litre:	7.4	—
Oil gravity, API	N/A	—
Oil filtrate, litre:	N/A	—
Water, litre:	0	—
Remarks:	Drained on rig floor	Sent to lab.

<sup>6</sup>/<sub>1</sub>  
Segregated sample no 3, 3086.0 m

Filling time, min.:	10	5
Press. chamber, PSIG:	0	0
Gas vol., SCF:	1	—
Oil vol., litre:	0	—
Oil gravity, API:	N/A	—
Oil filtrate, litre:	3.8	—
Water, litre:	5.7	—
Remarks:	Drained on rig floor	Sent to lab.

FMT RESULTS

SAMPLES

WELL 30/9-3A

7/1

1ST CHAMBER  
2<sup>3</sup>/<sub>4</sub> GAL

2ND CHAMBER  
1 GAL

Segregated sample no 4: 2885.7 m

Filling time, min.:	6.5	4
Press. chamber, PSIG:	2200	2250
Gas vol., SCF:	30	—
Oil vol., litre:	1	—
Oil gravity, API:	N/A	—
Oil filtrate, litre:	0	—
Water, litre:	0	—

Remarks:

Drained on rig floor.  
Gas leak when measuring  
gas volume

Sent to lab.

9/1

Segregated sample no 5: 3692 m

Filling time, min.:	26	18
Press. chamber, PSIG:	0	100
Gas vol., SCF:	0	0.15
Oil vol., litre:	0	0
Oil filtrate, litre:	0	0
Water, litre:	8.8	3.4

Remarks:

Both chambers drained on rig floor.  
Samples taken for ion and resistivity  
measurements.

# DST RESULTS

## WELL 30/9-3A

### DST NO 1.

Perforated interval: 2910-2916 m MD RKB

	Second flow periode	Third flow periode
Choke size, mm (inch):	11.1 (28/64)	38.1 (1½)
Oil rate STM <sup>3</sup> /DAY:	455	800
STB/DAY:	~ 2860	~ 5030
Gasrate STD <sup>3</sup> /DAY:	63 × 10 <sup>3</sup>	108 × 10 <sup>3</sup>
SCF/DAY:	2.23 × 10 <sup>6</sup>	3.81 × 10 <sup>6</sup>
GOR STD <sup>3</sup> /STM <sup>3</sup> :	139	135
SCF/BBLS:	778	758
WHT °C (°F):	59.5 (139.1)	73.3 (163.9)
BHT °C (°F):	106.5 (223.7)	107.3 (225.1)
WHP BARG(PSIG):	74 (1073.3)	30.5 (442.4)
Oil gravity G/cm <sup>3</sup> (API):	0.851 (34.2)	0.854 (34.3)
Gas gravity (AIR = 1):	0.718	0.710
Max recorded BHT °C (°F):	107.5 (225.5)	109.6 (229.28)

Initial flow periode:	0.057 hours
Initial pressure build up:	0.932 hours
Second flow periode:	11.542 hours
Second pressure build up:	12.094 hours
Third flow periode:	24.008 hours
Third pressure build up:	36.050 hours

During second flow period 3 sets of separator recombination samples were taken. After the second flow-period additional 6 sets of bottomhole fluid samples were obtained.

6.3 Mud report

12 1/4" hole 1538 m - 3268 m: 1730 m drilled, 9 5/8" casing  
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A cement plug was set and drilled down to 1660 m before a window was cut through the casing from 1539 m to 1562 m. The hole was then cemented up to 1500 m. This plug was dressed off down to 1538 m before a "navy drill" was run in hole.

At 1552 m a formation integrity test was performed to 1.65 rd equivalent mud weight.

The 12 1/4" hole was drilled down to 1795 m with a navy drill and bent sub. At this depth a core was taken down to 1804.5 m.

New hole was then drilled down to 2853 m. Seven cores were taken down to 2951 m before intermediate logs were run. At 3036 m core no. 13 was pulled and a rockbit run in hole. 12 1/4" hole was then drilled down to 3084 m before the core barrel was run in hole. Core no. 14 was taken from 3084 m to 3102 m. When running back in hole, tight spots were seen from 3091 m to 3102 m. During drilling down to 3102 m the bit stalled out several times. 445 kN overpull was seen when pulling out the first stands. When running back in hole, no problems were seen.

12 1/4" hole was then drilled to 3268 m before the hole was logged.

<u>MUD MATERIALS</u>	<u>KG/SX</u>	<u>Amount ACTUAL</u>
Barite	MT	204
IL 2832	m <sup>3</sup>	198
Invermul	55 gal Dr.	22
EZ-Mul	55 gal Dr.	38
Lime	40 Kg SX	298
Geltone	50 lb SX	153
Duratone	50 lb SX	208
CaCl <sub>2</sub>	50 kg SX	435
Drilltreat	50 gal Dr.	3
OMC	55 gal Dr.	3

8 3/8" hole 3251 m - 4300 m: 1049 m drilled  
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The 9 5/8" casing was drilled out using a Stratapax bit and turbine.

During drilling the mudweight was reduced from 1.48 rd to 1.30 rd. A formation integrity test was performed to 1.70 rd equivalent mud weight.

New hole was then drilled from 3271 m to 3882 m before the turbine and stratapax bit was pulled. A rock bit was run in hole and new hole drilled to 3950 m. The bit was pulled. Tight hole was seen back to 3830 m.

When running back in hole 2 m fill was found. Drilling continued to 4147 m. The next bit was drilled to 4237 m before it got stuck.

After reducing the mudweight from 1.31 rd to 1.24 rd the string was jared loose.

The bit was pulled. When running back in hole to 4144 m tight hole was seen. After reaming from 4144 m to 4180 m new hole was drilled to 4300 m before a wipertrip prior to logging was made.

<u>MUD MATERIALS</u>	<u>KG/SX</u>	<u>Amount</u> <u>ACTUAL</u>
Barite	MT	37
IL 2832	m <sup>3</sup>	98
Invermul	55 gal Dr.	3
EZ-Mul	55 gal Dr.	4
Lime	40 Kg SX	72
Geltone	50 lb SX	23
Duratone	50 lb SX	108
CaCl <sub>2</sub>	50 kg SX	135
EZ-spot	55 gal D <sub>2</sub>	1
Bentonite	MT	1



8 3/8" hole 3251 m - 4300 m: 1049 m drilled  
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The 9 5/8" casing was drilled out using a Stratapax bit and turbine.

During drilling the mudweight was reduced from 1.48 rd to 1.30 rd. A formation integrity test was performed to 1.70 rd equivalent mud weight.

New hole was then drilled from 3271 m to 3882 m before the turbine and stratapax bit was pulled. A rock bit was run in hole and new hole drilled to 3950 m. The bit was pulled. Tight hole was seen back to 3830 m.

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Barite	MT	37
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Lime	40 Kg SX	72
Geltone	50 lb SX	23
Duratone	50 lb SX	108
CaCl <sub>2</sub>	50 kg SX	135
EZ-spot	55 gal D <sub>2</sub>	1
Bentonite	MT	1

**NORSK PETROLEUM SERVICES A/S**

P.O. Box 143, 4056 Tananger, Norway. Telephone 04-69 65 24. Telex 40792

**WELL NAME:** NORSK HYDRO A/S  
30/9-3 A

**MUD PROPERTY RECAP**

DATE	DEPTH metres	DENSITY SG	VISC- OSITY secs	FILTRATE		HYMP fill		pH	RHEOLOGY				FILTRATE ANALYSIS					RETORT ANALYSIS			OTHER					
				El. Stab	Cake 1"/32mm	°500psi			Alk	PV cp	YP Pascals	10" 10'	10' 10'	Cl mg/litre	Tot. Sol Salt	Lime ppb	Mf	Sand %	Oil %	Water %	Corr. Solids %	Barite	ASG	ppb	LGS	O/W
						ccs	1"/32mm																			
26/02	1660	1.43	120	800		5.3	1		37	18	10	10	133	14.0	5.3		.5	56	26	18	215	3.9	33	68/32		
27/02	1660	1.43	84	900		4.6	1		34	16	9	9	133	13.0	5.2		TR	58	24	18	216	3.9	32	70/30		
28/02	1660	1.44	84	980		4.6	1	5.0	34	17	9	10	132	12.3	6.5		TR	58	23	19	212	3.8	44	71/29		
29/02	1660	1.44	87	960		4.6	1	5.9	33	17	11	11	144	13.0	7.7		.5	60	22	18	240	3.95	18	73/27		
01/03	1475	1.45	88	960		4.5	1	5.7	33	17	10	10	144	13.0	7.4		TR	60	22	18	240	3.9	20	73/27		
02/03	1517	1.45	122	920		4.8	1	5.4	33	17	9	9	141	13.0	7.0		TR	59	22	19	238	3.9	24	73/27		
03/03	1517	1.45	138	920		4.8	1	5.4	33	17	9	9	141	13.0	7.0		TR	59	22	19	238	3.9	24	73/27		
04/03	1517	1.45	138	920		4.8	1	5.4	33	17	9	9	141	13.0	7.0		TR	59	22	19	238	3.9	24	73/27		
05/03	1517	1.45	138	920		4.8	1	5.4	33	17	9	9	141	13.0	7.0		TR	59	22	19	238	3.9	24	73/27		
06/03	1555	1.44	90	960		4.6	1	5.0	31	15+	9	9	137	12.8	6.5		TR	59	23	18	288	3.9	25	72/28		
07/03	1661	1.44	90	970		4.5	1	4.6	30	14+	8	9	140	12.8	5.98		TR	58	24	18	228	3.9	25	71/29		
08/03	1795	1.44	82	1006		4.2	1	5.0	33	13	7	8	140	13.0	6.5		TR	59	23	18	218	3.89	31	72/28		
09/03	1916	1.44	80	940		4.4	1	5.1	29	16	8	9	159	15.9	6.6		<TR	58	24	18	226	3.93	26	71/29		
10/03	2090	1.44	76	960		4.2	1	4.6	30	16	9	10	157	15.5	5.9		1/4	59	23	18	229	3.95	24	72/28		
11/03	2200	1.44	85	940		4.1	1	4.6	30	16	10	10	158	15.6	5.9		1/4	59	23	18	229	3.9	24	72/28		
12/03	2308	1.44	82	870		4.0	1	4.3	34	16	10	10	156	15.6	5.6		1/4	58	24	18	226	3.93	26	71/29		
13/03	2416	1.44	82	940		4.0	1	4.3	34	16	10	10	154	15.4	5.6		1/2	58	24	18	226	3.93	26	71/29		

**NORSK PETROLEUM SERVICES A/S**

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**WELL NAME:** NORSK HYDRO A/S  
30/9-3A

**MUD PROPERTY RECAP**

DATE	DEPTH metres	DENSITY SG	VISC- OSITY secs	FILTRATE			pH Alk	RHEOLOGY				FILTRATE ANALYSIS				RETORT ANALYSIS			OTHER					
				El. Stab.	Cake 1"/32mm	°500psi ccs		PV cp	YP Pascals	10" 10'	10' 10'	TSS mg/litre	Lf ppb	Mf %	Sand %	Oil %	Water %	Corr. Solids %	Barite	ASG	LGS	O/W		
																							32/mm	1"/32mm
14/03	2469	1.45	75	920		4.2	1	4.2	37	15	9	10	179	18.4	5.5		1/4	58	24	18	227	3.94	25	71/29
15/03	2509	1.45	92	980		4.0	1	5.2	38	15	9	10	178	18.2	6.8		1/4	58	24	18	227	3.9	25	71/29
16/03	2586	1.45	75	950		4.0	1	5.2	33	15	10	11	178	18.2	6.8		.25	58	24	18	227	3.94	25	71/29
17/03	2608	1.45	78	960		4.0	1	5.2	33	15	9	10	178	18.2	6.8		.25	58	24	18	227	3.94	25	71/29
18/03	2689	1.46	76	960		4.0	1	5.1	37	19	10	11	180	18.4	6.6		.25	57	24	19	234	3.90	30	70/30
19/03	2761	1.46	82	1020		4.0	1	4.6	36	18	9	10	180	17.9	6.0		.25	58	23	19	230	3.88	35	71/29
20/03	2852	1.46	72	980		3.9	1	4.5	35	17	9	10	179	17.6	5.8		.25	58	23	19	230	3.88	32	72/28
21/03	2861	1.45	75	1000		4.1	1	5.2	37	16	8	10	185	18.5	6.8		TR	59	22	19	222	3.83	38	73/27
22/03	2873	1.45	77	900		3.9	1	5.5	39	16	9	10	183	18.2	7.2		TR	58	23	19	218	3.81	40	72/28
23/03	2891	1.46	96	940		4.2	1	5.5	38	16	8	10	185	18.4	7.2		TR	57	23	20	214	3.72	51	71/29
24/03	2928	1.45	85	920		4.1	1	5.4	37	15	8	9	183	18.6	7.0		TR	57	24	19	219	3.82	39	71/29
25/03	2951	1.45	77	890		3.9	1	4.8	36	15	7	9	184	18.4	6.2		TR	57	23	20	206	3.70	56	71/29
26/03	2968	1.45	79	870		3.6	1	4.5	36	14	7	9	185	18.4	5.8		TR	57	23	20	205	3.67	57	71/29
27/03	2982	1.45	94	820		3.6	1	4.9	39	15	7	10	186	18.6	6.4		TR	57	23	20	210	3.69	54	71/29
28/03	3018	1.45	80	820		4.2	1	3.9	37	16	8	9	195	19.6	5.1		TR	57	23	20	208	3.68	55	71/29
29/03	3036	1.46	78	760		4.2	1	3.9	38	16	8	10	195	19.6	5.1		TR	57	23	20	220	3.74	40	71/29
30/03	3084	1.46	73	700		3.8	1	4.1	41	16	9	10	200	21.0	5.3		TR	56	24	20	217	3.74	49	70/30
31/03	3102	1.46	83	700		4.0	1	4.1	38	16	8	10	195	19.6	5.3		TR	56	24	20	215	3.7	50	70/30
01/04	3128	1.46	72	740		4.1	1	3.9	40	17	9	11	199	20.2	5.1		TR	56	23	21	210	3.64	62	71/29

MUD PROPERTY RECAP

DATE	DEPTH	DENSITY	VISC-OSITY	FILTRATE			HT/HP fill		pH	RHEOLOGY				FILTRATE ANALYSIS				RETORT ANALYSIS				OTHER		
				El. Stab.	Cake	°500psi		Alk		PV	YP	10"	10'	TSS	Line	Mf	Sand	Oil	Water	Corr. Solids	Barite	ASG	LGS	O/W
						1"/32mm	1"/32mm																	
02/04	3147	1.46	68	730		4.1	1	4.0	36	16	8	10	198	19.9	5.2		1/4	56	23	21	205	3.6	65	71/29
03/04	3166	1.46	68	700		4.1	1	3.8	37	16	9	10	197	19.8	4.9		1/4	57	23	20	208	3.68	55	71/29
04/04	3265	1.46	60	760		4.0	1	4.0	40	15	8	9	196	19.6	5.2		1/4	56	23	21	199	3.57	69	71/29
05/04	3265	1.47	100	720		4.1	1	4.0	38	16	9	10	199	20.2	5.2		1/4	56	23	21	206	3.60	60	71/29
06/04	3268	1.46	65	690		4.3	1	5.1	37	14	8	9	197	18.9	6.6		1/4	56	23	21	200	3.58	69	71/29
07/04	3268	1.46	67	680		4.4	1	4.2	39	14	8	9	197	18.8	5.5		1/4	57	22	21	206	3.62	65	72/28
08/04	3268	1.47	95	680		4.4	1	4.1	40	15	8	9	198	18.9	5.3		1/4	57	22	21	207	3.60	66	72/28
09/04	3268	1.47+	115	730		4.4	1	4.2	38	16	8	9	197	18.8	5.5		1/4	57	22	21	211	3.63	63	72/28
10/04	3268	1.47+	98	720		4.5	1	4.2	39	14	8	9	198	18.9	5.5		TR	57	22	21	211	3.62	63	72/28
11/04		NO CHECK MIX AND CENTRIFUGE MUD TO REDUCE WEIGHT TO 1.3																						
12/04		NO CHECK																						
13/04	3268	1.32	95	780		7.0	1	4	27	9	5	6	192	19.9	5.2		TR	61	24	15	166	3.74	36	72/28
14/04	3278	1.30	70	800		4.0	1	3.7	24	15	7	8	170	17.2	4.8		TR	60	25	15	142	3.56	51	71/29
15/04	3356	1.30	61	800		4.0	1	4.1	30	10	7	8	198	19.9	5.3		TR	63	23	14	165	3.82	27	73/27
16/04	3467	1.30	63	800		4.0	1	4.1	29	12	8	9	199	21.0	5.3		TR	61	25	14	162	3.80	29	71/29
17/04	3573	1.31	62	810		4.0	1	4.6	29	10	7	8	197	21.4	6.0		TR	60	25	15	155	3.65	42	71/29
18/04	3678	1.30	63	860		3.9	1	5.1	30	9	5	6	200	20.8	6.6		TR	62	23	15	149	3.60	46	73/27
19/04	3735	1.31-	71	800		4.2	1	4.7	34	9	5	7	209	22	6.1		TR	61	24	15	154	3.64	43	72/28
20/04	3760	1.30	70	810		4.2	1	5.0	33	10	5	6	206	21	6.5		TR	61	23	<16	148	3.50	50	73/27

MUD PROPERTY RECAP

DATE	DEPTH	DENSITY	VISC-O-SITY	FILTRATE			HT/HP fill	pH	RHEOLOGY				FILTRATE ANALYSIS				RETORT ANALYSIS			OTHER				
				El. Stab	Cake	°500psi			PV	YP	10"	10'	TSS	Lime	Mf	Sand	Oil	Water	Corr. Solids	Barite	ASG	LGS	O/W	
																								1"/32"
21/04	3866	1.30	67	800		4.4	1	4.7	32	10	5	6	202	20	6.1		TR	61	23	16	141	3.51	55	73/27
22/04	3882	1.31	95	800		4.4	1	4.6	33	9	5	6	202	20	6.0		TR	61	23	16	141	3.50	60	73/27
23/04	3922	1.30	62	820		5.2	1	4.8	35	9	5	7	207	21	6.2		TR	61	23	16	133	3.42	65	73/27
24/04	3959	1.30	81	830		4.8	1	5.3	36	9	5	7	205	21	6.9		TR	61	23	16	142	3.48	59	73/27
25/04	4088	1.30	62	800		4.8	1	5.0	36	9	5	7	205	21	6.5		TR	61	23	16	145	3.5	57	73/27
26/04	4047	1.31	69	800		4.9	1	5.0	37	9	5	7	205	21	6.5		TR	61	23	16	158	3.55	50	73/27
27/04	4237	1.27	64	740		4.8	1	4.1	37	9	5	7	212	22	5.3		TR	61	24	15	123	4.40	61	73/27
28/04	4300	1.26	63	800		5.2	1	3.8	39	9	5	6	215	22.1	4.94		1/4	61	24	15	112	3.29	69	72/28
29/04	4300	1.25	94	760		4.9	1	4.8	38	9	5	8	215	22.1	6.2		TR	61	24	15	110	3.25	70	72/28
30/04	4300	1.25	110	790		4.9	1	4.6	39	9	5	7	211	22	5.9		TR	61	24	15	111	3.28	69	72/28
01/05	PIT	1.26	125	770		5.0	1	4.5	39	9	6	7	214	22	5.8		TR	61	24	15	113	3.3	65	72/28
02/05	PIT	1.25	129	790		5.0	1	4.5	40	9	6	7	215	22.1	5.8		TR	61	24	15	112	3.29	68	72/28
03/05	3300	1.25	89	760		4.9	1	4.3	40	10	7	8	210	21.9	5.59		TR	60	23	17	110	3.27	69	72/28
04/05	2950	1.26	95	760		5.0	1	4.3	39	9	6	7	214	22	5.59		TR	61	23	16	114	3.31	65	72/28
05/05	PIT	1.26	130	790		5.0	1	4.4	40	9	7	8	215	22.1	5.72		TR	61	24	15	113	3.28	68	72/28
06/05	PIT	1.26	132	770		4.9	1	4.3	40	9	7	8	215	22.1	5.59		TR	61	24	15	113	3.27	68	72/28
07/05	PIT	1.27	135	780		4.9	1	4.3	39	9	7	9	214	22.1	5.59		TR	61	24	15	114	3.29	66	72/28
08/05	PIT	1.27	135	780		4.9	1	4.3	39	9	7	9	214	22.1	5.6		TR	61	24	15	114	3.29	66	72/28
09/05	PIT	1.27	135	780		4.9	1	4.3	39	9	7	9	214	22.1	5.6		TR	61	24	15	114	3.29	66	72/28

NORSK PETROLEUM SERVICES A/S

P.O. Box 143, 4056 Tananger, Norway. Telephone 04-69 65 24. Telex 40792

WELL NAME:

NORSK HYDRO A/S

30/9-3A

MUD PROPERTY RECAP

DATE	DEPTH feet metres	DENSITY PPG/ Spc/ SG	VISC- OSITY secs	FILTRATE		HY/HP fill °500psi ccs 1"/32mm	pH	RHEOLOGY				FILTRATE ANALYSIS					RETORT ANALYSIS			CEC PPB	OTHER						
				Cake 1"/32mm ccs	CP			Yp lbs/100ft <sup>2</sup> -gms/100cm <sup>2</sup>	10" cm	10' cm	Cl mg/litre	Ca ppm	PI	MI	Pm	Oil %	Water %	Corr. Solids %	Bent. Eq.								
10/05	NO	MUD	CHECK			-	LAB													PACKED	AWAY	-	LAB	RIGGED	DOWN		