RFT PRESSURE SURVEY RESULTS

WELL 30/6-22

RUN/ TEST	MD mRKB	TVD mMSL	HYDROSTATIC INI.(HP, psia)	HYDROSTATIC FIN. (HP, psia)	FORM. PRESS. (HP, psia)	FORM. PRESS. (SG, psia)	REMARKS
3A/1	2881.0	2852.7	5190.9	5190.1	4691.4	4693.0	Poor Perm
3A/2	2885.5	2857.2	5198.0	5204.3			Tight
3A/3	2886.0	2857.7	5200.1	5205.3			Tight
3A/4	2902.5	2874.2	5228.7	5228.8	4691.0	4691.5	Poor Perm
3A/48	2910.0	2881.7	5216.9	5244.0			Sample
3A/5	2910.0	2881.7	5243.4	5243.1	4683.9	4684.3	Good Perm
3A/6	2912.0	2883.7	5245.8	5245.7	4685.0	4686.1	Good Perm
3A/7	2918.0	2889.7	5257.6	5257.5		4715.0	Supercharge
3A/9	2918.2	2889.9	5256.7	5257.5			Seal Failur
3A/8	2918.2	2889.9	5256.5	5257.4	4715.1	4715.1	Seal Failur
3A/12	2919.0	2890.7	5259.3	5263.5			Tight
3A/10	2921.0	2892.7	5262.6	5264.8			Tight
3A/11	2921.1	2892.8	5262.1	5262.4	4732.8	4732.0	Tight
3A/13	2925.0	2896.7	5269.5	5269.2	4701.1	4700.7	Poor Perm
3A/14	2930.0	2901.7	5277.8	5278.1	4702.9	4703.0	Good Perm
3A/15	2935.0	2906.7	5285.8	5286.4	4709.4	4709.6	Good Perm
3A/16	2939.0	2910.7	5293.6	5293.6	4732.5	4731.5	Supercharge
3A/17	2939.1	2910.8	5293.1	5294.0	4732.0	4730.9	Supercharge
3A/19	2943.7	2915.4	5302.2	5303.1	4726.8	4726.6	Mod Perm
3A/18	2943.8	2915.5	5302.4	5306.9			Tight
3A/21	2945.7	2917.4	5306.3	5306.7	4736.0	4735.0	Mod Perm
3A/20	2945.8	2917.5	5306.8	5310.6			Tight
3A/22	2946.0	2917.7	5306.1	5307.2	4736.0	4735.0	Mod Perm
3A/23	2948.8	2920.5	5312.4	5312.9	4736.1	4735.4	Mod Perm
3A/25	2950.8	2922.5	5315.1	5316.3	4733.5	4732.6	Mod Perm
3A/24	2951.0	2922.7	5316.1	5316.5	4733.7	4733.3	Mod Perm
3A/26	2957.2	2928.9	5328.4	5329.2	4740.6	4739.3	Mod Perm
3A/27	2962.5	2934.2	5336.6	5337.4	4746.6	4745.9	Good Perm
3A/28	2967.5	2939.2	5345.9	5346.7	4753.1	4752.8	Good Perm
3A/29	2974.0	2945.7	5358.0	5357.8	4761.7	4761.7	Good Perm
3A/30	2980.0	2951.7	5368.7	5368.6	4770.3	4770.1	Good Perm
3A/31	2992.1	2963.8	5391.0	5390.3	4787.6	4787.1	Good Perm
3A/32	3122.2	3093.7	5619.4	5618.9			Seal Failur
3A/33	3122.3	3093.8	5616.4	5617.1			Seal Failur
3A/34	3122.5	3094.0	5616.2	5620.0	5008.0	5003.5	Supercharge
3A/35	3122.7	3094.2	5615.9	5617.9			Supercharge
3A/37	3124.0	3095.5	5618.0	5622.2		5005.0	Tight
3A/36	3124.8	3096.3	5624.5	5623.8			Tight
3A/39	3127.5	3099.0	5624.0	5631.4			Tight
3A/38	3127.5	3099.0	5625.4	5629.2			Tight
3A/41	3271.2	3242.7	5873.8	5873.8	5058.3	5059.9	Good Perm
3A/40	3271.2	3242.7	5889.6	5880.7		5059.9	Not Stable
3A/42	3291.0	3262.5	5931.9	5922.0			Supercharge
3A/47	3302.5	3274.0	5929.5	5929.9			Seal Failur
3A/43	3306.5	3278.0	6963.7	5953.1		5117.1	Fair Perm
3A/46	3309.5	3281.0	5943.4	5944.1			Seal Failur
3A/45	3310.0	3281.5	5943.2	5945.1			Seal Failur
3A/44	3310.0	3281.5	5952.5	5949.5			Seal Failur

SP0047AM88

HYDRO

RFT PRESSURE SURVEY RESULTS

WELL 30/6-22

RUN/ TEST	MD mRKB	TVD mMSL	HYDROSTATIC INI.(HP, psia)	HYDROSTATIC FIN. (HP, psia)	FORM. PRESS. (HP, psia)	FORM. PRESS. (SG, psia)	REMARKS
3B/2	2902.3	2874.0	5234.3	5238.9			Tight
3B/1	2902.5	2874.2	5231.6	5231.1			Supercharge
3B/4	2903.7	2875.4	5233.6	5234.3			Supercharge
3B/3	2903.8	2875.5	5234.7	5234.6			Supercharge
3B/5	2910.0	2881.7	5245.9	5246.3			Good Perm
3B/6	2912.0	2883.7	5249.5	5248.8			Good Perm
3B/7	2914.6	2886.3	5255.5	5260.7			Tight
3B/8	2917.2	2888.9	5257.1	5257.6			Supercharge
3B/9	2917.5	2889.2	5258.6	5259.3	4720.7	4718.3	Supercharge
3B/10	2918.0	2889.7	5260.8	5261.0			Supercharge
3B/11	2919.0	2890.7	5261.8	5264.4			Tight
3B/12	2920.8	2892.5	5263.5	5263.9			Supercharge
3B/13	2923.2	2894.9	5268.4	5267.7			Supercharge
3B/14	2927.0	2898.7	5277.3	5276.0	4703.8	4703.9	Supercharge
3B/15	2929.5	2901.2	5280.3	5280.8	4703.6	4703.1	Supercharge
3B/16	2934.0	2905.7	5288.9	5289.1		4707.1	Supercharge
3C/1	2930.0	2901.7	5278.6	5277.4		4701.9	Low Perm
3C/2	2934.0	2905.7					Sample
3C/3	2943.7	2915.4	5298.8	5298.6			Tight
3C/4	2943.8	2915.5	5298.8	5298.7			Tight
3C/6	2945.8	2917.5	5302.6	5302.6	4735.6	4731.9	Poor Perm
3C/5	2946.0	2917.7	5302.8	5302.8			Tight
3C/7	2948.8	2920.5	5307.6	5307.9		4737.0	Poor Perm
3C/8	2949.5	2921.2	5308.9	5310.6		4739.0	Poor Perm

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HYDRO

2.3 Testing

Two Production tests were performed in the Brent Group, one in the Etive Formation and one in the Ness Formation. The results from the tests are listed below.

Test No. 1 Etive Formation

Perforated interval:	2917.2-2936.2 m RKB
Oil Production rate:	294 Sm^3/Day (max.)
Gas Production rate:	19430 Sm^3Sm^3
GOR :	67 Sm^3/Sm^3
Choke size :	12.7 mm (32/64")
Well head pressure :	43.9 Bar
Bottom hole pressure:	221.4 Bar
Gravity, oil :	0.829 g/cc
Gravity, gas :	0.76 (rel. air)
Main flow :	18 hours
Main build up :	28 hours

Test No. 2 Ness Formation

Perforated interval:	2908.75-2912.25 m RKB
Oil Production rate:	480 Sm^3/Day (max.)
Gas Production rate:	31680 Sm^3Sm^3
GOR :	66 Sm^3/Sm^3
Choke size :	12.7 mm (32/64")
Well head pressure :	76.4 Bar
Bottom hole pressure:	264 Bar
Gravity, oil :	0.823 g/cc
Gravity, gas :	0.765 (rel. air)
Main flow :	12 hours
Main build up :	22 hours

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Norsk Hydro

Daily mud properties — Date 14/12-1988

System : BORE

Well: 30/6-22
Mud Contractor: M-I
Data: "Mid depth" from table 3, otherwise from table 14. 4

Date 14/12-1988
14. 4

Date	Mid. depth m,MD	Mud Dens. (SG)	PV cp	YP Pa	GEL 0 Pa	GEL 10 Pa	pH	100 psi (cc)	HP/HT (cc)	Cl- inn/out mg/l	Alkalinity Pf	Alkalinity Pm	Alkalinity Mf	Ca++ inn/out mg/l	Oil %	Sol %	H2O %	V.G. meter at 115 gr. F 600 rpm	300 rpm	200 rpm	100 rpm	6 rpm	3 rpm	Mud Type
880518	0	0.00	0	0																				SPUD
880519	0	0.00	0	0																				SPUD
880520	0	1.05	9	5																				SPUD
880521	292	1.05	9	5																				SPUD
880522	292	1.05	9	5																				SPUD
880523	662	1.05	9	5																				SPUD
880524	963	1.05	9	5																				SPUD
880525	963	1.05	9	5																				SPUD
880526	963	1.05	9	5																				SPUD
880527	1310	1.40	24	12	2	3	8.4	7.8		100/91			0.50			12		72	48	38	24	2	1	KCL/POLYMER
880528	1936	1.43	27	9	2	3	8.3	6.8		108/100						19		72	45	32	19	2	2	KCL/POLYMER
880529	2180	1.43	28	9	2	3	8.4	5.6		49000/49000			0.35			18		66	38	30	18	3	2	KCL/POLYMER
880530	2429	1.43	29	9	2	4	8.2	5.1		50000/50000			0.30			19		77	48	36	21	3	2	KCL/POLYMER
880531	2532	1.45	28	9	3	12	8.0	4.8		50000/50000			0.35			20		74	46	36	24	4	3	KCL/POLYMER
880601	2638	1.45	26	9	2	15	7.8	4.2		55000/55000	0.00	0.00	0.40			20		70	44	34	22	5	4	KCL/POLYMER
880602	2758	1.45	27	10	4	26	7.4	5.0		50000/50000	0.00	0.00	0.40			20		74	47	37	25	9	8	KCL/POLYMER
880603	2798	1.45	20	10	5	30	7.4	6.2		50000/50000	0.00	0.00	0.40			20		60	40	32	23	9	8	KCL/POLYMER
880604	2798	1.45	21	10	4	30	7.4	6.0		50000/50000	0.00	0.00	0.40			20		62	41	34	23	7	6	KCL/POLYMER
880605	2798	1.45	21	10	4	30	7.4	6.0		50000/50000	0.00	0.00	0.40			20		62	41	34	23	7	6	KCL/POLYMER
880606	2798	1.45	21	10	4	30	7.4	6.0		50000/50000	0.00	0.00	0.40			20		62	41	34	23	7	6	KCL/POLYMER
880607	2854	1.25	14	5	1	2	9.6	5.4		35000/35000	0.10	0.70	0.40			10		38	24	16	10	2	1	KCL/POLYMER
880608	2888	1.25	15	5	1	2	10.6	4.7		36000/36000	0.10	0.60	0.40			11		40	25	17	11	2	1	KCL/POLYMER
880609	2922	1.25	14	5	1	2	10.0	4.5		35000/35000	0.10	0.50	0.50			12		38	24	17	11	2	1	KCL/POLYMER
880610	2980	1.25	21	7	2	9	11.4	5.1		34000/34000	0.30	0.60	0.60			14		56	35	28	18	4	2	KCL/POLYMER
880611	3010	1.25	20	7	2	5	10.0	4.6		33000/33000	0.20	0.60	0.60			12		53	33	25	15	3	2	KCL/POLYMER
880612	3089	1.25	19	7	2	6	10.0	4.9		32000/32000	0.20	0.50	0.70			12		51	32	25	15	3	2	KCL/POLYMER
880613	3150	1.25	19	6	1	4	10.9	5.0		28000/28000	0.20	0.50	0.20			14		50	31	21	12	2	1	KCL/POLYMER
880614	3235	1.25	17	7	1	5	9.9	4.8		27000/27000	0.20	0.40	0.70			14		48	31	24	15	3	2	KCL/POLYMER
880615	3336	1.25	21	7	1	7	9.5	5.2		27000/27000	0.10	0.30	0.80			12		56	35	27	17	3	2	KCL/POLYMER
880616	3336	1.25	16	6	1	4	9.2	5.0		28000/28000	0.10	0.20	0.80			12		43	27	19	11	2	1	KCL/POLYMER
880617	3336	1.25	16	5	1	4	9.1	5.0		28000/28000	0.10	0.20	0.80			12		43	27	19	11	2	1	KCL/POLYMER
880618	3336	1.25	16	6	1	4	9.1	5.0		28000/28000	0.10	0.20	0.80			12		43	27	19	11	2	1	KCL/POLYMER
880619	3336	1.25	19	6	1	6	9.0	5.0		27000/27000	0.10	0.10	0.80			12		51	32	23	14	3	1	KCL/POLYMER
880620	3333	1.25	16	6	1	5	8.6	4.9		27000/27000	0.10	0.10	1.00			13		43	27	18	11	1	1	KCL/POLYMER
880621	3254	1.25	15	5	1	5	11.7	5.1		26000/26000	0.30		0.40			13		40	25	18	11	2	1	KCL/POLYMER
880622	3254	1.25	15	5	1	4	11.7	5.1		26000/26000	0.30		0.90			13		40	25	18	11	2	1	KCL/POLYMER
880623	3254	1.25	16	5	1	5	11.9	5.2		26000/26000	0.40		0.90			13		43	27	19	11	2	1	KCL/POLYMER
880624	3033	1.25	16	5	1	5	11.9	5.2		26000/26000	0.40		0.90			13		43	27	19	11	2	1	KCL/POLYMER
880625	3033	1.25	15	5	1	5	11.9	5.2		26000/26000	0.40		0.90			13		40	25	18	11	1	1	KCL/POLYMER

TABLE B-10

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(ooo)
Norsk
Hydro

Daily mud properties

Date 14/12-1988

Date 14/12-1988

System : BORE

Well: 30/6-22
Mud Contractor: M-I
Data: "Mid depth" from table 3, otherwise from table 14.

14. 4

Date	Mid. depth m,MD	Mud Dens. (SG)	PV cp	YP Pa	GEL 0 Pa	GEL 10 Pa	pH	100 psi (cc)	HP/HT (cc)	Cl- inn/out mg/l	Alkalinity Pf	Alkalinity Pm	Alkalinity Mf	Ca++ inn/out mg/l	Oil %	Sol %	H2O %	V.G. meter at 115 gr. F 600 rpm	300 rpm	200 rpm	100 rpm	6 rpm	3 rpm	Mud Type
880626	3030	1.25	16	5	1	6	12.0	5.6		26000/26000	0.40		1.00			13		42	26	18	11	2	1	KCL/POLYMER
880627	3033	1.25	16	5	1	1	12.0	5.8		26000/26000	0.40		0.90			13		43	27	19	12	2	1	KCL/POLYMER
880628	3033	1.25	16	6	1	7	12.0	5.8		26000/26000	0.40		0.90			13		43	27	19	12	2	1	KCL/POLYMER
880629	3033	1.25	16	6	1	7	12.0	5.8		26000/26000	0.40		0.90			13		43	27	19	12	2	1	KCL/POLYMER
880630	3033	1.25	16	6	1	7	12.0	5.8		26000/26000	0.40		0.90			13		43	27	19	12	2	1	KCL/POLYMER
880701	3033	1.25	16	6	1	6	12.0	5.8		26000/26000	0.40		0.90			13		43	27	19	12	2	1	KCL/POLYMER
880702	3033	1.25	16	6	1	7	12.0	5.8		26000/26000	0.40		0.90			13		43	27	19	12	2	1	KCL/POLYMER
880703	3033	1.25	16	6	1	7	12.0	5.8		26000/26000	0.40		0.90			13		43	27	19	12	2	1	KCL/POLYMER
880704	3033	1.25	15	6	1	10	12.0	6.8		24000/24000	0.40		1.00			13		42	27	19	13	3	2	KCL/POLYMER
880705	2916	1.25	17	6	1	12	12.0	6.4		25000/25000	0.50		0.95			13		46	29	20	14	3	2	KCL/POLYMER
880706	2916	1.25	17	6	1	12	12.0	6.4		25000/25000	0.50		0.95			13		46	29	20	14	3	2	KCL/POLYMER
880707	2916	1.25	17	6	1	12	12.0	6.4		25000/25000	0.50		0.95			13								KCL/POLYMER
880708	2916	1.25	17	6	1	12	12.0	6.4		25000/25000	0.50		0.95			13		46	29	20	14	3	2	KCL/POLYMER
880709	2916	1.25	17	6	1	12	12.0	6.4		25000/25000	0.50		0.95			13		46	29	20	14	3	2	KCL/POLYMER
880710	2916	1.25	18	8	1	10	12.1	6.6		24000/24000	0.50		1.00			13		52	32	24	17	5	3	KCL/POLYMER
880711	2560	1.25	18	8	1	10	12.1	6.6		24000/24000	0.50		1.00			13		52	34	24	17	5	3	KCL/POLYMER

((((ooo) ------- Norsk Hydro	Mud consumption System : Boredata Sandnes Well: 30/6-22 Mud company: M-I	Date 22/9-1988 13

Hole size: 36

BENTONITE	(Mt)	20
CAUSTIC SODA	(Kg)	125
SODA ASH	(Kg)	100

Hole size: 17.5

BARITE	(Mt)	5
BENTONITE	(Mt)	29
CAUSTIC SODA	(Kg)	175
SODA ASH	(Kg)	100

Hole size: 12.25

BARITE	(Mt)	253
BENTONITE	(Mt)	2
CAUSTIC SODA	(Kg)	10
POTASSIUM CL. (KCl)	(Kg)	2936
POTASSIUM CL. (KCl) Brine	(m3)	347
PAC POLYMER REG	(Kg)	5713
PAC POLYMER SUPER	(Kg)	3453
XANTAN POLYMER	(Kg)	491
PIPE FREEING AGENT	(l)	1000
PIPE FREEING AGENT	(kg)	1854
Others:		
NEWDRILL	(kg)	1253
DIESEL	(m3)	18
AMMONIUM BISULPHITE	(l)	80
OILEX	(l)	40
CONQOR 404	(l)	60

Hole size: 8.5

BARITE	(Mt)	38
CAUSTIC SODA	(Kg)	450
SODIUM BICARBONATE	(Kg)	373
PAC POLYMER REG	(Kg)	876
PAC POLYMER SUPER	(Kg)	1387
CHROME LIGNOSULFONATE	(Kg)	625
CHROME LIGNITE	(Kg)	2161
XANTAN POLYMER	(Kg)	188
RESINEX	(kg)	2326

Hole size: 1

BARITE	(Mt)	24
BENTONITE	(Mt)	11
POTASSIUM CL. (KCl)	(Kg)	684
SODIUM BICARBONATE	(Kg)	197
PAC POLYMER REG	(Kg)	115
PAC POLYMER SUPER	(Kg)	278

((((ooo) ------- Norsk Hydro	Mud consumption System : Boredata Sandnes Well: 30/6-22 Mud company: M-I	Date 22/9-1988 13

CHROME LIGNOSULFONATE	(Kg)	232
XANTAN POLYMER	(Kg)	237

Hole size: 2

BARITE	(Mt)	7
BENTONITE	(Mt)	2
CAUSTIC SODA	(Kg)	25
Others:		
AMMONIUM BISULPHITE	(l)	208
OILEX	(l)	208
CONQOR 404	(l)	312