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HYDRO

FORMATION FLUID SAMPLING

Well : 34/8-9S

Rig : West Delta

Pretest No. : 1		Sample Depth : 2926.3m MD 2892.6m TVD		Witnesses : Holter / Holsen	
Run No. :3C	Sample No. : 1	1st Chamber	2nd Chamber	3rd Chamber	
Chamber volume (gals/litres)		6 gal / 22.7 l	1 gal / 3.785		
Chamber No.		-	190070331439/ *		
Filling time (mins.)		5	5		
Shut in press. (bar)/T deg C		423.2 / 90	423.2 / 90	/	
Chamber press. (surf bar)/T		151.4 / 8	27.5 / 8	/	
Gas volume (SCF/Sm3)		29.9 / 0.84			
Oil volume (litres)		11.5			
Oil gravity (API/gm/cc)		34/0.855			
Water / Filtrate (litres)		2.6			
Water / Filtrate PPM CL-		87000 mg/l			
Water filtrate pH/pF/Ca++		8.0/0/800 mg/l	/ /	/ /	
Mud filtrate PPM CL-		105000 mg/l			
Mud filtrate pH/pF/Ca++		9.2/0.05/600mg/l	/ /	/ /	
Gas composition %	C1	73.11			
	C2	4.04			
	C3	2.22			
	IC4	0.34			
	NC4	0.89			
	C5	0.24			
	CO2				

Remarks :

\*) Also marked on chamber: ST024.

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NDRO

FORMATION FLUID SAMPLING

Well : 34/8-9S

Rig : West Delta

Pretest No. : 12		Sample Depth : 3156.0 m 3079.6 m TVD		Witnesses : Henderson/Anderson Waldum as petrophysics observer	
Run No. :4D	Sample No. : 1	1st Chamber	2nd Chamber	3rd Chamber	
Chamber volume (gals/litres)		6 gal	1 gal		
Chamber No.		1900ZB331444	1900ZC331438		
Filling time (mins.)		5 min	1 min		
Shut in press. (bar)/T deg C		458.23 / 99°C	458.22 / 99°C	/	
Chamber press. (surf bar)/T		51.68 / 5°C	/	/	
Gas volume (SCF/Sm3)		1.1 cu ft			
Oil volume (litres)		-			
Oil gravity (API/gm/cc)		-			
Water / Filtrate (litres)		19.8			
Water / Filtrate PPM CL-		87000			
Water filtrate pH/pF/Ca++		6.1 / 0.0 / 1080	/ /	/ /	
Mud filtrate PPM CL-		109000			
Mud filtrate pH/pF/Ca++		8.7 / 0.05 / 240	/ /	/ /	
Gas composition %	C1	1.8476 / 13.3099			
	C2	0.2888 / 1.4645			
	C3	0.2125 / 1.0345			
	IC4	0.0317 / 0.0977			
	NC4	0.0580 / 0.2638			
	C5	0.0020 / 0.0127			
	H2S	0 / 0			
	CO2	- -			

Remarks : 250 psi measured/bled off from line to 1 gal chamber indicating that it is pressured.

Provisional analysis of tritium content of water from 6 gal. ch. indicates sample composition is 57.6 % mud filtrate.

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FORMATION PRESSURE WORKSHEET

Well No. : 34/8-9S

Rig : West Delta

Date : 04.12.92

Pressure Units : Bars

RKB-MSL : 29m

Witnessed by : Anderson/Holsen

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	
1	2926	2892.6	470.32	472.61	421.86	424.51	468.94	472.28	23:54	23:57	
2	2929	2895.2	468.25	470.78	422.54	424.62	467.55	470.66	00:07	00:10	
3	2932	2897.7	468.25	471.56	422.54	424.75	468.24	471.32	00:15	00:18	
4	2937	2902.0	468.93	472.48	425.16	424.62	468.23	472.18	00:24	00:27	
5	2956	2917.5	471.67	476.01	422.52	425.96	471.46	475.80	00:37	00:41	
6	2971	2930.4	477.18	478.29	426.65	427.87	475.05	477.87	00:51	00:57	
7	2973	2932.1	475.12	477.92	425.82	427.71	475.05	477.54	01:06	01:09	
8	2965	2925.3	469.53	476.36	427.20	426.80	475.05	476.09	01:41	01:45	Strain gauge erratic
9	2958	2919.2	-----	480.64	-----	426.14	-----	480.99	01:58	02:02	
10	2943	2907.2	-----	471.39	-----	425.76	-----	471.63	02:09	02:12	

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FORMATION PRESSURE WORKSHEET

Well No. : 34/8-9S

Rig : West Delta

Date : 05.12.92

Pressure Units : Bar

RKB-MSL : 29m.

Witnessed by : Holter / Holsen

3B Run No.	Depth (MD)	Depth TVD(RKB)	Initial Hydrostatic Press		Formation Pressure		Final Hydrostatic Press		Time		Remarks
			Strain	HP	Strain	HP	Strain	HP	Set	Retract	
1	2923	2890.0	-----	470.81	-----	426.44	-----	470.36	06:31	06:37	Possible seal failure
2	2924	2890.9	-----	-----	-	-	-----	-			Seal failure?
3	2922	2889.1	-----	469.73	-----	424.48	-----	-----	06:46	06:51	Strain gauge erratic ?
4	2926.5	2893.0	-----	469.70	-----	424.44	-----	469.73	07:09	07:12	"
5	2938	2902.9	464.0	471.50	418.9	425.25	464.0	471.19	07:24	07:27	"
6	2949	2912.4	466.8	473.48	-----	426.18	-----	473.10	07:46	07:49	"
7	3154	3078.0	493.5	500.41	451.8	458.36	492.8	499.94	08:57	09:00	"
8	3157	3079.6	492.1	500.28	451.2	458.46	-----	499.89	09:10	09:13	"
9	3160	3082.1	492.2	500.70	451.1	458.68	491.5	500.25	09:22	09:24	"
10	3175	3094.3	494.2	503.42	451.8	460.10	493.5	502.85	09:33	09:36	"
11	3181	3099.1	494.9	503.34	453.9	461.04	494.9	502.92	09:56	09:59	"
12	3183	3100.8	494.9	503.26	452.2	460.71	494.2	502.85	10:06	10:09	"
13	3185.5	3102.8	494.8	503.33	452.2	460.75	494.8	503.01	10:16	10:18	"
14	3189	3105.6	495.5	503.73	453.9	461.02	494.8	503.40	10:25	10:28	"

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FORMATION PRESSURE WORKSHEET

Well No. : 34/8-9S

Rig : West Delta

Date : 05.12.92

Pressure Units : Bar

RKB-MSL : 29m.

Witnessed by : Holter / Holsen

3B Run No.	Depth (MD)	Depth TVD (RKB)	Initial Hydrostatic Press		Formation Pressure		Final Hydrostatic Press		Time		Remarks
			Strain	HP	Strain	HP	Strain	HP	Set	Retract	
15	3192	3108.1	496.2	501.19	453.2	-----	-----	-----	10:33	10:35	Supercharged
16	3109	3041.9	488.0	493.89	-----	-----	-----	-----	11:02	11:06	Supercharged
17	3110	3042.7	485.9	493.48	446.2	453.01	485.2	493.15	11:11	11:15	
18	3054	2998.0	479.0	486.20	-----	-----	478.4	485.98	11:33	11:36	Not permeable
19	3036	2983.8	476.3	483.85	-----	-----	476.3	483.83	11:45	11:47	Low permeability



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FORMATION PRESSURE WORKSHEET

Well No. : 34/8-9S

Rig : West Delta

Date : 11.12.92

Pressure Units : Bar

RKB-MSL : 29m.

Observer: Waldum Witnessed by: Anderson/Henderson

4D Run No.	Depth (MD)	Depth TVD(RKB)	Initial Hydrostatic Press		Formation Pressure		Final Hydrostatic Press		Time		Remarks	
			Strain	HP	Strain	HP	Strain	HP	Set	Retract	°C	mD
1	2921.0	2888.3	474.8	471.85	427.3	424.25	474.1	471.46	15:00	15:03	88.9	0.41
2	2922.2	2889.3	474.8	471.68	427.3	424.30	474.1	471.56	15:12	15:15	89.0	1.08
3	2925.0	2891.7	474.8	472.10	427.3	424.45	474.9	471.91	15:22	15:25	89.1	85.51
4	3155.0	3078.8	506.9	503.86	461.5	458.36	506.3	503.27	15:53	15:57	93.9	9.09
5	3182.0	3099.9	510.4	507.90	463.6	460.45	510.4	507.31	16:06	16:09	94.7	2.06
6	3222.5	3132.3	516.1	513.35	467.2	464.38	515.4	512.90	16:41	16:44	97.7	3.55
7	3218.0	3128.6	514.1	511.51	467.3	464.06	514.1	511.02	16:54	16:56	98.5	4.69
8	3228.0	3136.9	515.5	512.87	467.9	464.75	514.8	512.07	17:05	17:09	98.9	1.73
9	3240.0	3146.0	516.9	514.10	468.7	465.67	516.2	513.53	17:14	17:18	99.2	3.59
10	3288.0	3185.2	524.5	521.97	474.2	470.86	523.8	521.32	17:35	17:38	99.5	1.22
11	3290.0	3186.9	525.2	522.60	474.3	471.05	524.6	521.39	18:03	18:07	99.8	0.33
12	3156.0	3079.6	506.5	503.25	462.5	458.44	505.8	502.88	19:34	19:36	99.0	47.65
					461.7	458.23			19:36	19:41	Fill 6 gal chamber	
					461.7	458.22			19:41	19:42	Fill 1 gal chamber	

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FORMATION PRESSURE WORKSHEET

Well No. : 34/8-9S

Rig : West Delta

Date : 12.12.92

Pressure Units : Bar

RKB-MSL : 29m.

Observer: Waldum Witnessed by: Anderson/Henderson

4E Run No.	Depth (MD)	Depth TVD(RKB)	Initial Hydrostatic Press		Formation Pressure		Final Hydrostatic Press		Time		Remarks	
			Strain	HP	Strain	HP	Strain	HP	Set	Retract	°C	mD
1	2931.0	2896.9	475.7	471.17	428.9	424.46	475.0	470.89	14:05	14:09	94.1	8.02
2	2937.0	2902.0	475.1	471.65	429.0	425.04	475.1	471.60	14:20	14:24	94.7	55.51
3	3402.5	3277.5	538.1	535.78	-	-	-	-	15:07	15:09	Tight	
4	3402.0	3277.1	537.4	534.25	-	-	-	-	15:11	15:12	Tight	
5	3424.0	3295.1	542.1	539.41	-	-	-	-	16:03	16:08	No seal	
6	3423.5	3294.6	-	538.20	-	-	-	-	16:10	16:15	111.0	Supercharged
7	3424.5	3295.5	540.3	537.80	-	-	-	-	16:19	16:20	Tight	
8	3430.0	3300.0	541.0	538.51	-	-	-	-	16:27	16:30	No seal	
9	3429.5	3299.6	540.3	537.88	-	-	-	-	16:32	16:34	Tight	
10	3450.0	3315.6	543.6	540.90	493.5	490.25	542.5	539.87	16:50	17:00	113.0	0.16(Supchg?)
11	3468.0	3330.5	547.4	544.25	-	-	-	-	17:13	17:14	Tight	
12	3467.5	3330.1	545.0	543.16	-	-	-	-	17:20	17:21	Tight	
13	3474.0	3335.4	546.7	544.21	490.2	486.95	546.7	543.84	17:25	17:28	114.2	0.73
14	3486.8	3316.9	549.5	546.60	-	-	-	-	17:54	17:56	115.1	Tight





Table B-10 DAILY MUD PROPERTIES FOR WELL 34/8-9S

Hole section: 36"

WATER BASED SYSTEM

Date	Depth [m]		Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings								Rheo Test [DegC]	PV [mPas]	YP [Pa]	Gel0 [Pa]	Gel10 [Pa]
	MD	TVD					600	300	200	100	60	30	6	3					
25-oct-1992 23:59	0	0	SPUD MUD	100.0	1.03	0.0								0.0	0.0	50.0	0.0	0.0	
26-oct-1992	0	0	SPUD MUD	100.0	1.03	0.0								0.0	0.0	50.0	0.0	0.0	
27-oct-1992 23:59	0	0	SPUD MUD	100.0	1.03	0.0								0.0	0.0	0.0	0.0	0.0	

Hole section: 17 1/2"

WATER BASED SYSTEM

Date	Depth [m]		Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings								Rheo Test [DegC]	PV [mPas]	YP [Pa]	Gel0 [Pa]	Gel10 [Pa]
	MD	TVD					600	300	200	100	60	30	6	3					
28-oct-1992 23:59	0	0	SPUD MUD	100.0	1.03	0.0								0.0	0.0	0.0	0.0	0.0	
29-oct-1992 23:55	1109	1109	SPUD MUD	0.0	1.20	0.0								0.0	0.0	0.0	0.0	0.0	
30-oct-1992 23:59	1350	1350	SPUD MUD	0.0	1.20	0.0								0.0	0.0	0.0	0.0	0.0	
31-oct-1992 23:59	1360	1360	SPUD MUD	0.0	1.20	0.0								0.0	0.0	0.0	0.0	0.0	
01-nov-1992 23:59	1360	1360	SPUD MUD	0.0	1.20	0.0								0.0	0.0	0.0	0.0	0.0	
02-nov-1992 23:59	1360	1360	SPUD MUD	0.0	1.20	0.0								0.0	0.0	0.0	0.0	0.0	
03-nov-1992 23:59	1360	1360	SPUD MUD	0.0	1.05	0.0								0.0	24.0	2.9	2.0	3.0	
04-nov-1992 19:00	1360	1360	SPUD MUD	45.0	1.05	0.0	44	26	19	11				0.0	18.0	3.8	1.0	2.0	

Hole section: 12 1/4"

WATER BASED SYSTEM

Date	Depth [m]		Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings								Rheo Test [DegC]	PV [mPas]	YP [Pa]	Gel0 [Pa]	Gel10 [Pa]	
	MD	TVD					600	300	200	100	60	30	6	3						
05-nov-1992 22:00	1698	1698	SPUD MUD	40.0	1.30	13.7	40	23	17	10				2	1	0.0	17.0	2.9	1.0	2.0
06-nov-1992 22:00	1703	1703	HF-PLUS	40.0	1.30	0.0	48	30	21	12				3	2	0.0	18.0	5.8	1.0	2.0
07-nov-1992 23:59	1940	1940	HF-PLUS	46.0	1.37	16.9	48	29	21	12				3	2	0.0	19.0	4.8	1.0	1.0
08-nov-1992 20:00	2102	2102	HF-PLUS	49.0	1.42	22.1	62	39	30	19				5	4	0.0	23.0	7.7	2.0	6.0
09-nov-1992 08:00	2210	2210	HF-PLUS	44.0	1.42	16.9	53	34	26	17				5	4	50.0	19.0	7.2	3.0	7.0
10-nov-1992 23:59	2467	2467	HF-PLUS	49.0	1.44	22.0	60	39	29	19				7	6	50.0	21.0	8.6	6.0	15.0
11-nov-1992 23:59	2467	2467	HF-PLUS	48.0	1.44	27.0	59	38	28	18				7	6	50.0	21.0	8.2	5.0	14.0
12-nov-1992	2467	2467	HF-PLUS	48.0	1.44	0.0	59	38	28	18				7	6	50.0	21.0	8.2	5.0	14.0
12-nov-1992 23:59	2467	2467	HF-PLUS	48.0	1.44	0.0	59	38	28	18				7	6	50.0	21.0	8.2	5.0	14.0
13-nov-1992 23:59	2467	2467	HF-PLUS	48.0	1.44	0.0	59	38	28	18				7	6	50.0	21.0	8.2	5.0	14.0
14-nov-1992	2467	2467	HF-PLUS	49.0	1.51	0.0	46	32	25	20				7	6	50.0	14.0	8.6	5.0	14.0
14-nov-1992 23:59	2467	2467	HF-PLUS	49.0	1.51	0.0	46	32	25	20				7	6	50.0	14.0	8.6	5.0	14.0

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

Hole section: 12 1/4"

WATER BASED SYSTEM

Date	Depth [m]		Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings								Rheo Test [DegC]	PV [mPas]	YP [Pa]	Gel0 [Pa]	Gel10 [Pa]
	MD	TVD					600	300	200	100	60	30	6	3					
15-nov-1992 23:59	2470	2470	HF-PLUS	53.0	1.51	19.5	46	31	21	18			6	5	50.0	15.0	7.7	3.0	15.0
16-nov-1992 21:30	2531	2531	HF-PLUS	74.0	1.51	22.0	61	39	27	16			4	3	50.0	22.0	8.2	3.0	18.0
17-nov-1992 21:30	2559	2559	HF-PLUS	64.0	1.51	23.0	60	39	27	17			4	3	50.0	21.0	8.6	3.0	14.0
18-nov-1992 21:30	2665	2662	HF-PLUS	67.0	1.51	23.0	61	39	28	17			4	2	50.0	22.0	8.2	3.0	20.0
19-nov-1992 21:30	2707	2701	HF-PLUS	65.0	1.51	26.0	63	40	28	18			3	2	50.0	23.0	8.2	2.0	9.0
20-nov-1992 23:00	2749	2739	HF-PLUS	66.0	1.51	22.0	65	44	30	19			4	3	50.0	24.0	8.2	2.0	9.0
21-nov-1992 23:00	2869	2845	HF-PLUS	63.0	1.60	23.0	73	45	34	22			4	3	50.0	28.0	8.2	2.0	15.0
22-nov-1992 21:30	2899	2870	HF-PLUS	64.0	1.63	0.0	72	45	34	22			5	3	50.0	27.0	8.6	2.0	19.0
23-nov-1992 21:30	2924	2891	HF-PLUS	67.0	1.65	0.0	75	46	36	23			4	3	50.0	29.0	8.2	2.0	18.0
24-nov-1992 22:30	2949	2912	HF-PLUS	73.0	1.65	0.0	79	48	35	22			4	3	50.0	31.0	8.2	2.0	15.0
25-nov-1992 23:59	2969	2928	HF-PLUS	71.0	1.67	26.0	78	48	38	23			5	4	50.0	30.0	8.6	2.0	14.0
26-nov-1992 21:00	3015	2966	HF-PLUS	75.0	1.65	29.0	86	52	38	24			5	4	50.0	34.0	8.6	2.0	12.0
27-nov-1992 22:00	3135	3062	HF-PLUS	69.0	1.65	30.0	78	48	37	23			4	3	50.0	30.0	8.6	2.0	14.0
28-nov-1992 23:00	3162	3084	HF-PLUS	72.0	1.65	0.0	82	50	39	23			5	4	50.0	32.0	8.6	2.0	15.0
29-nov-1992 21:00	3171	3091	HF-PLUS	85.0	1.66	0.0	81	99	37	23			5	3	50.0	32.0	8.2	3.0	19.0
30-nov-1992 23:59	3190	3106	HF-PLUS	90.0	1.65	18.0	80	49	38	23			5	3	50.0	31.0	8.6	2.0	18.0
01-dec-1992 22:30	3243	3148	HF-PLUS	67.0	1.65	21.0	69	43	33	21			4	3	50.0	26.0	8.2	2.0	18.0
02-dec-1992 21:00	3285	3182	HF-PLUS	96.0	1.65	0.0	78	48	36	22			5	4	50.0	30.0	8.6	2.0	16.0
03-dec-1992 21:00	3285	3182	HF-PLUS	98.0	1.65	0.0	78	48	36	22			5	4	50.0	30.0	8.6	2.0	16.0
04-dec-1992 16:00	3285	3182	HF-PLUS	98.0	1.65	21.0	90	54	42	24			8	6	50.0	36.0	8.6	3.0	20.0
05-dec-1992 21:00	3285	3182	HF-PLUS	95.0	1.65	0.0	90	54	42	24			8	6	50.0	36.0	8.6	3.0	20.0
06-dec-1992 20:00	3332	3220	HF-PLUS	99.0	1.65	22.0	100	60	47	29			6	5	50.0	40.0	9.6	3.0	22.0
07-dec-1992 22:00	3417	3289	HF-PLUS	85.0	1.65	22.0	95	58	44	27			7	5	50.0	37.0	10.1	4.0	19.0
08-dec-1992 22:00	3435	3303	HF-PLUS	87.0	1.65	22.0	88	54	40	24			6	5	50.0	34.0	9.6	3.0	18.0
09-dec-1992 20:00	3530	3380	HF-PLUS	75.0	1.68	24.0	82	50	38	24			6	5	50.0	32.0	8.6	3.0	19.0
10-dec-1992 23:59	3530	3380	HF-PLUS	75.0	1.65	0.0	84	52	39	24			6	5	30.0	32.0	9.6	4.0	15.0
11-dec-1992 23:59	3530	3380	HF-PLUS	78.0	1.68	0.0	86	52	39	24			6	5	50.0	34.0	8.6	4.0	15.0
12-dec-1992 23:59	3530	3380	HF-PLUS	78.0	1.68	0.0	86	52	39	24			6	5	50.0	34.0	8.6	4.0	15.0
13-dec-1992 23:59	3530	3380	HF-PLUS	78.0	1.68	0.0	86	52	39	24			6	5	50.0	34.0	8.6	4.0	15.0
14-dec-1992 23:59	3530	3380	HF-PLUS	92.0	1.68	0.0	95	58	44	28			6	5	50.0	37.0	10.1	3.0	19.0
15-dec-1992 23:59	3530	3380	HF-PLUS	94.0	1.68	0.0	96	59	45	28			6	5	50.0	37.0	10.6	3.0	21.0
16-dec-1992 23:59	3530	3380	HF-PLUS	96.0	1.68	0.0									50.0	42.0	11.5	3.0	19.0
17-dec-1992 23:59	3530	3380	HF-PLUS	93.0	1.70	0.0									50.0	37.0	10.6	3.0	19.0
18-dec-1992 23:59	3530	3380	HF-PLUS	99.0	1.70	0.0									50.0	36.0	15.4	6.0	27.0
19-dec-1992 23:59	3530	3380	HF-PLUS	60.0	1.45	0.0	46	28	21	12			3	2	50.0	18.0	4.8	2.0	4.0
20-dec-1992 23:59	3530	3380	HF-PLUS	60.0	1.45	0.0	46	28	21	12			3	2	50.0	18.0	5.0	2.0	4.0
21-dec-1992 23:59	3530	3380	HF-PLUS	60.0	1.45	0.0	46	28	21	12			3	2	50.0	18.0	4.8	2.0	4.0

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

Hole section: 8 1/2"

## WATER BASED SYSTEM

Date	Depth [m]		Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings								Rheo Test [DegC]	FV [mPas]	YP [Pa]	Gel10 [Pa]	Gel10 [Pa]		
	MD	TVD					600	300	200	100	60	30	6	3							
22-dec-1992 23:59	3530	3380	HF-PLUS	60.0	1.45	0.0	46	28	21	12					3	2	50.0	18.0	4.8	2.0	4.0
23-dec-1992 23:59	3530	3380	HF-PLUS	60.0	1.45	0.0	46	28	21	12					3	2	50.0	18.0	4.8	2.0	4.0
24-dec-1992 23:59	3530	3380	HF-PLUS	60.0	1.45	0.0											50.0	18.0	4.8	2.0	4.0
25-dec-1992 23:59	3530	3380	HF-PLUS	60.0	1.45	0.0											50.0	18.0	4.8	2.0	4.0
26-dec-1992 23:59	3530	3380	HF-PLUS	60.0	1.45	0.0											50.0	18.0	4.8	2.0	4.0

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

Table B-10 DAILY MUD PROPERTIES FOR WELL 34/8-9S

Hole section: 36"

WATER BASED SYSTEM

Date	Depth (m)		Mud Type	Dens [sg]	Filtrate		Filt. cake	HPHT	pH	Alcalinity			Inhib Chem	K+	CL-	Ca++	Mg++	Tot hard	Percentage			CEC	ASG	LGS
	MD	TVD			API [ml]	HPHT [ml]				API [mm]	HPHT [mm]	Pn [ml]							Pf [ml]	Mf [ml]	Solid [%]			
25-oct-1992	23:59	0	0	1.03	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
26-oct-1992	23:59	0	0	1.03	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
27-oct-1992	23:59	0	0	1.03	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 (m)		Mud Type	Dens [sg]	Filtrate		Filt. cake	HPHT	pH	Alcalinity			Inhib Chem	K+	CL-	Ca++	Mg++	Tot hard	Percentage			CEC	ASG	LGS
	MD	TVD			API [ml]	HPHT [ml]				API [mm]	HPHT [mm]	Pn [ml]							Pf [ml]	Mf [ml]	Solid [%]			
28-oct-1992	23:59	0	0	1.03	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
29-oct-1992	23:55	1109	1109	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
30-oct-1992	23:55	1150	1150	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
31-oct-1992	23:55	1360	1360	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
01-nov-1992	23:59	1360	1360	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
02-nov-1992	23:59	1360	1360	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
03-nov-1992	23:59	1360	1360	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
04-nov-1992	19:00	1360	1360	1.05	2.6	0.0	1	0/0	9.5	0.4	0.1	1.4	130	0	58000	160	384	0	13.0	0.0	0.0	0	0.0	0

Hole section: 12 1/4"

WATER BASED SYSTEM

Date	Depth (m)		Mud Type	Dens [sg]	Filtrate		Filt. cake	HPHT	pH	Alcalinity			Inhib Chem	K+	CL-	Ca++	Mg++	Tot hard	Percentage			CEC	ASG	LGS
	MD	TVD			API [ml]	HPHT [ml]				API [mm]	HPHT [mm]	Pn [ml]							Pf [ml]	Mf [ml]	Solid [%]			
05-nov-1992	22:00	1698	1698	1.30	2.0	0.0	1	0/0	9.3	0.3	0.1	0.9	120	0	62000	160	384	800	13.0	0.0	0.0	11	0.0	0
06-nov-1992	22:00	1703	1703	1.30	2.0	0.0	1	0/0	9.3	0.3	0.1	0.9	125	65000	50000	120	388	1200	13.0	0.0	0.0	11	0.0	0
07-nov-1992	23:59	1940	1940	1.37	2.0	0.0	1	0/0	9.3	0.3	0.1	0.9	130	65000	77000	560	488	100	16.0	7.0	0.0	11	0.0	0
08-nov-1992	20:00	2102	2102	1.42	3.8	0.0	1	0/0	9.0	0.1	0.1	0.8	130	65000	58000	800	480	1600	17.0	7.0	0.0	11	0.0	0
09-nov-1992	08:00	2210	2210	1.42	3.3	0.0	1	0/0	9.0	0.2	0.0	1.4	130	68500	77000	720	480	1920	20.0	7.0	0.0	11	0.0	0
10-nov-1992	23:59	2467	2467	1.44	4.7	0.0	1	0/0	8.5	0.1	0.1	1.4	125	65880	62000	720	768	2000	20.0	7.0	0.0	50	0.0	0
11-nov-1992	23:59	2467	2467	1.44	4.5	0.0	1	0/0	8.3	0.1	0.0	1.4	100	62700	52000	960	864	2400	20.0	6.0	0.0	50	0.0	0
12-nov-1992	23:59	2467	2467	1.44	4.0	0.0	1	0/0	8.3	0.1	0.0	1.4	130	62510	67000	960	864	2400	20.0	7.0	0.0	50	0.0	0
13-nov-1992	23:59	2467	2467	1.44	3.5	0.0	1	0/0	8.2	0.1	0.0	1.4	130	62510	67000	960	864	2400	20.0	7.0	0.0	50	0.0	0
14-nov-1992	23:59	2467	2467	1.51	3.5	0.0	1	0/0	8.2	0.1	0.0	5.3	150	79050	75000	1280	624	2320	21.0	7.0	0.0	60	0.0	0

Hole section: 8 1/2"

WATER BASED SYSTEM

Date	Depth (m)		Mud Type	Dens [sg]	Filtrate		Filt. cake	HPHT	pH	Alcalinity			Inhib Chem	K+	CL-	Ca++	Mg++	Tot hard	Percentage			CEC	ASG	LGS
	MD	TVD			API [ml]	HPHT [ml]				API [mm]	HPHT [mm]	Pn [ml]							Pf [ml]	Mf [ml]	Solid [%]			
15-nov-1992	23:59	2470	2470	1.51	3.8	0.0	1	0/0	10	1.6	0.0	5.3	145	76420	70000	1680	1980	2200	22.0	7.0	0.0	57	0.0	0
16-nov-1992	23:59	2519	2519	1.51	3.8	0.0	1	0/0	9.9	1.6	0.0	5.3	150	76420	70000	1680	1980	2200	22.0	7.0	0.0	57	0.0	0
17-nov-1992	23:59	2559	2559	1.51	3.8	0.0	1	0/0	9.9	1.6	0.0	5.3	150	79000	70000	1680	1980	2200	22.0	7.0	0.0	57	0.0	0
18-nov-1992	23:59	2599	2599	1.51	3.8	0.0	1	0/0	9.9	1.6	0.0	5.3	150	79000	70000	1680	1980	2200	22.0	7.0	0.0	57	0.0	0
19-nov-1992	21:30	2707	2701	1.51	3.0	0.0	1	0/0	9.9	1.6	0.0	5.3	150	79000	93000	1240	120	1440	22.0	0.0	0.0	52	0.0	0
20-nov-1992	23:00	2749	2739	1.51	3.0	0.0	1	0/0	9.9	1.6	0.0	5.3	150	79000	91000	1440	96	1680	24.0	0.0	0.0	53	0.0	0
21-nov-1992	23:00	2804	2804	1.51	3.0	0.0	1	0/0	9.9	1.6	0.0	5.3	150	79000	91000	1440	96	1680	24.0	0.0	0.0	53	0.0	0
22-nov-1992	23:00	2859	2859	1.51	3.0	0.0	1	0/0	9.9	1.6	0.0	5.3	150	79000	91000	1440	96	1680	24.0	0.0	0.0	53	0.0	0
23-nov-1992	22:30	2943	2913	1.51	3.0	0.0	1	0/0	9.9	1.6	0.0	5.3	147	79000	88000	1480	72	1680	25.0	0.0	0.0	53	0.0	0
24-nov-1992	22:30	2943	2913	1.51	3.0	0.0	1	0/0	9.9	1.6	0.0	5.3	147	79000	88000	1480	72	1680	25.0	0.0	0.0	53	0.0	0
25-nov-1992	23:59	2969	2929	1.51	3.0	0.0	1	0/0	9.9	1.6	0.0	5.3	144	75000	85000	840	216	1200	26.0	0.0	0.0	53	0.0	0
26-nov-1992	23:59	3009	2969	1.51	3.0	0.0	1	0/0	9.9	1.6	0.0	5.3	144	75000	85000	840	216	1200	26.0	0.0	0.0	53	0.0	0
27-nov-1992	23:59	3049	2969	1.51	3.0	0.0	1	0/0	9.9	1.6	0.0	5.3	144	75000	85000	840	216	1200	26.0	0.0	0.0	53	0.0	0
28-nov-1992	23:59	3089	2969	1.51	3.0	0.0	1	0/0	9.9	1.6	0.0	5.3	144	75000	85000	840	216	1200	26.0	0.0	0.0	53	0.0	0
29-nov-1992	21:00	3171	3091	1.51	3.0	0.0	1	0/0	9.9	1.6	0.0	5.3	150	79000	99000	1160	192	1480	26.0	0.0	0.0	53	0.0	0
30-nov-1992	23:59	3191	3091	1.51	3.0	0.0	1	0/0	9.9	1.6	0.0	5.3	150	79000	98000	960	144	1200	26.0	0.0	0.0	53	0.0	0
01-dec-1992	23:59	3240	3182	1.51	3.0	0.0	1	0/0	9.9	1.6	0.0	5.3	150	79000	105000	1040	364	1200	26.0	0.0	0.0	53	0.0	0
02-dec-1992	23:59	3285	3182	1.51	3.0	0.0	1	0/0	9.9	1.6	0.0	5.3	150	79050	105000	600	336	1160	26.0	0.0	0.0	53	0.0	0

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

Hole section: 8 1/2"

WATER BASED SYSTEM

Date	Depth (m)		Mud Type	Dens [sg]	Filtrate		Filt cake	HPHT Press/Temp [psi/DegC]	pH	Alkalinity			Inhib Chem [Kg/m3]	K+ [mg/l]	CL- [mg/l]	Ca++ [mg/l]	Mg++ [mg/l]	Tot hard [mg]	Percentage			CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
	MD	TVD			API [ml]	HPHT [ml]				API [mm]	HPHT [mm]	PH							PH	Mf [ml]	Solid [%]			
04-1992 16:00	328	3182	Water based mud	1.65	2.6	12.4	0	500/127	8.3	0.0	0.2	1	150	79050	105000	600	312	1120	26.0	0.0	0.0	52	52.0	0
05-1992 16:00	328	3182	Water based mud	1.65	2.6	12.4	0	500/127	8.3	0.0	0.2	1	150	79050	105000	600	312	1120	26.0	0.0	0.0	52	52.0	0
06-1992 16:00	328	3182	Water based mud	1.65	2.6	12.4	0	500/127	8.3	0.0	0.2	1	150	79050	105000	600	312	1120	26.0	0.0	0.0	52	52.0	0
07-1992 16:00	328	3182	Water based mud	1.65	2.6	12.4	0	500/127	8.3	0.0	0.2	1	150	79050	105000	600	312	1120	26.0	0.0	0.0	52	52.0	0
08-1992 16:00	3435	3303	Water based mud	1.65	2.6	10.0	0	500/137	7.5	0.0	0.1	1	150	79050	99000	400	192	480	26.0	0.0	0.0	57	57.0	0
09-1992 16:00	328	3182	Water based mud	1.65	2.6	12.4	0	500/127	8.3	0.0	0.2	1	150	79050	105000	600	312	1120	26.0	0.0	0.0	52	52.0	0
10-1992 16:00	328	3182	Water based mud	1.65	2.6	12.4	0	500/127	8.3	0.0	0.2	1	150	79050	105000	600	312	1120	26.0	0.0	0.0	52	52.0	0
11-1992 16:00	328	3182	Water based mud	1.65	2.6	12.4	0	500/127	8.3	0.0	0.2	1	150	79050	105000	600	312	1120	26.0	0.0	0.0	52	52.0	0
12-1992 16:00	353	3380	Water based mud	1.68	1.1	9.8	0	500/140	7.9	0.0	0.1	1	150	79050	108000	240	144	480	27.0	0.0	0.0	57	57.0	0
13-1992 16:00	353	3380	Water based mud	1.68	1.1	9.8	0	500/140	7.7	0.0	0.1	1	150	79050	108000	240	144	480	27.0	0.0	0.0	57	57.0	0
14-1992 16:00	353	3380	Water based mud	1.68	1.1	9.8	0	500/140	7.7	0.0	0.1	1	150	79050	108000	240	144	480	27.0	0.0	0.0	57	57.0	0
15-1992 16:00	353	3380	Water based mud	1.68	1.1	9.8	0	500/140	7.7	0.0	0.1	1	150	79050	108000	240	144	480	27.0	0.0	0.0	57	57.0	0
16-1992 16:00	353	3380	Water based mud	1.68	1.1	9.8	0	500/140	7.7	0.0	0.1	1	150	79050	108000	240	144	480	27.0	0.0	0.0	57	57.0	0
17-1992 16:00	353	3380	Water based mud	1.70	1.1	9.8	0	500/141	7.7	0.0	0.1	1	145	76000	95000	320	120	480	28.0	0.0	0.0	58	58.0	0
18-1992 16:00	353	3380	Water based mud	1.70	1.1	9.8	0	500/141	7.7	0.0	0.1	1	145	76000	95000	320	120	480	28.0	0.0	0.0	58	58.0	0
19-1992 16:00	353	3380	Water based mud	1.45	0.0	14.0	0	500/141	8.3	0.1	0.0	0	110	58	72000	240	48	320	19.0	0.0	0.0	0	0.0	0
20-1992 16:00	353	3380	Water based mud	1.45	0.0	14.0	0	500/140	8.3	0.1	0.0	0	110	58	72000	240	48	320	19.0	0.0	0.0	0	0.0	0
21-1992 16:00	353	3380	Water based mud	1.45	0.0	14.0	0	500/140	8.3	0.1	0.0	0	110	58	72000	240	48	320	19.0	0.0	0.0	0	0.0	0
22-1992 16:00	353	3380	Water based mud	1.45	0.0	14.0	0	500/140	8.3	0.1	0.0	0	110	58	72000	240	48	320	19.0	0.0	0.0	0	0.0	0
23-1992 16:00	353	3380	Water based mud	1.45	0.0	14.0	0	500/140	8.3	0.1	0.0	0	110	58	72000	240	48	320	19.0	0.0	0.0	0	0.0	0
24-1992 16:00	353	3380	Water based mud	1.45	0.0	14.0	0	500/140	8.3	0.1	0.0	0	110	58	72000	240	48	320	19.0	0.0	0.0	0	0.0	0
25-1992 16:00	353	3380	Water based mud	1.45	0.0	14.0	0	500/140	8.3	0.1	0.0	0	110	58	72000	240	48	320	19.0	0.0	0.0	0	0.0	0

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

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Summary/Conclusion/Recommendation

Hydrocarbons of Upper Jurassic origin are present in the Brent Group of well 34/8-9S.

The uppermost part of the section (approx. 2925m) might contain live oil, whereas the section from 2932 m to 2978 m is a water bearing zone containing residual migrated hydrocarbons.

The hydrocarbons encountered show no sign of biological degradation.

The oil (RPT 2926.3 m) correlates with the other oils in the Visund area, and show greater affinity to the oils from the A-North Brent Group compared to the Statfjord/Amundsen/Lunde oils in A-South.

Keywords

Petroleum geochemistry, Reservoir geochemistry  
Residual hydrocarbons, Oil correlation.

Pages-appendix 21	Amendment no.	Revision no.	Revision date
Quadrant/Block-well 34/8-8	Project no. 22601	License no. PL120	Date 14.04.93
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