



FORMATION PRESSURE WORKSHEET

Well Name : 35/11-9

Rig : West Delta

Date : 21- 97-04-22

Pressure Units : Bars

RKB-MSL : 29m m. MSL-SBed: 357 m.

Witnessed by : Andereen/Hinderaker/Rokke

Run No/ Test No.	Depth		Initial Hydrostatic Pressure		Formation Pressure		Final Hydrostatic Pressure		Time		Formation Pressure sg EMD	Test Temp degC	Good Data? Y/N	Sample Information			Remarks
	mMD RKB	mTVD RKB	Strain	Quartz	Strain	Quartz	Strain	Quartz	Set	Retract				Main Fluid Type	HC Gravity g/cc	Sample Vol, cc	
19	2717	2715.2	335,96	335,94	272,08	272,06	336,01	335,95	22:14	22:16	1,02	88,7	Y				138,9mD
20	2723,5	2721,7	336,74	336,75	272,67	272,68	336,72	336,75	22:23	22:26	1,02	88,9	Y				38,7mD
21	2731	2729,1	337,62	337,63	273,41	273,39	337,58	337,65	22:31	22:34	1,02	89,3	Y				136,1mD
22	2725	2723,2	336,90	336,90	272,83	272,82	336,90	336,91	22:45	22:47	1,02	89,7	Y				104,1mD
23	2728	2726,2	337,16	337,18	273,02	273,00	337,14	337,15	23:30	23:33	1,02	88,8	Y				117,9mD
24	2714	2712,3	335,32	335,30	271,67	271,66	335,38	335,37	23:40	23:43	1,02	89,1	Y				128,0mD
25	2708	2706,3	334,65	334,63	271,09	271,08	334,63	334,62	23:47	23:50	1,02	89,3	Y				213,6mD
26	2706	2704,2	334,50	334,50	271,03	270,93	334,48	334,49	00:25	14:00	1,02	97,0	Y	WATER		10ML ± 2 X 450	Flow control used
27	2677,4	2675,9	332,70	332,71	268,35	268,38			14:20	14:40	1,02		N	OIL			Plugged
28	2679,9	2678,4							14:50	15:00			N	OIL			Tight
29	2677,5	2676	332,86	332,81	268,51	268,45	330,50	330,52	15:10	22:30	1,02	96,5	Y	OIL		4x450cc	Large area probe
30	2565	2564,6	316,72	316,77					22:50	23:00			N				Tight
31	2565,3	2564,9	316,85	316,77	259,43	259,35	316,82	316,72	23:10	23:20	1,03	89,4	Y				2.4 Darcies(Not full Drawdown)

NB: Fmtn Press sg calculated from RKB

Page : 2 of : 2



FORMATION PRESSURE WORKSHEET

Well Name : 35/11-9 Rig : West Delta Date : 21- 97-04-22

Pressure Units : Bars RKB-MSL : 29m m. MSL-SBed: 357 m. Witnessed by : Andersen/Hinderaker/Rokke

Run No/ Test No.	Depth		Initial Hydrostatic Pressure		Formation Pressure		Final Hydrostatic Pressure		Time		Formation Pressure sg EMD	Test Temp degC	Good Data? Y/N	Sample Information			Remarks
	mMD RKB	mTVD RKB	Strain	Quartz	Strain	Quartz	Strain	Quartz	Set	Retract				Main Fluid Type	HC Gravity g/cc	Sample Vol, cc	
1	2654	2652.6	328,40	328,31	-	-	-	-	19:54	19:56	-	81,5	N			NO SEAL	
2	2653.8	2652.4	328,19	328,20	266,90	266,91	328,20	328,05	20:01	20:03	1,03	81,7	Y			30,5mD	
3	2660	2658.6	329,00	329,01	267,29	267,30	329,03	329,00	20:07	20:09	1,06	82,3	Y			320,2mD	
4	2665	2663.5	329,61	329,64	267,61	267,63	329,60	329,58	20:14	20:16	1,02	82,9	Y			479,1mD	
5	2670	2668.5	330,18	330,29	267,98	267,97	330,20	330,20	20:21	20:23	1,02	83,5	Y			556,0mD	
6	2674	2672.5	330,73	330,76	-	-	330,77	330,78	20:29	20:31	-	84,1	N			TIGHT	
7	2673.5	2672	330,69	330,73	268,17	268,20	330,70	330,71	20:39	20:42	1,02	84,6	Y			18,3mD	
8	2677	2675.5	331,08	331,08	268,44	268,43	331,07	331,07	20:46	20:48	1,02	85,1	Y			400,2mD	
9	2680	2678.5	331,49	331,50	268,64	268,62	331,50	331,51	20:54	20:56	1,02	85,4	Y			486,8mD	
10	2682	2680.4	331,68	331,70	268,79	268,78	331,70	331,71	21:00	21:02	1,02	85,8	Y			111,7mD	
11	2684.5	2682.9	332,02	332,04	268,93	268,92	331,99	332,01	21:07	21:10	1,02	86,0	Y			300,8mD	
12	2687	2685.4	332,31	332,28	269,12	269,11	332,33	332,30	21:15	21:18	1,02	86,4	Y			124,4mD	
13	2689.5	2687.9	332,60	332,60	269,33	269,33	332,81	332,59	21:27	21:29	1,02	86,8	Y			152,7mD	
14	2692.5	2690.9	332,98	332,97	-	-	333,05	333,03	21:34	21:36	-	87,0	N			TIGHT	
15	2692	2690.4	332,90	332,89	269,61	269,58	332,95	332,92	21:41	21:44	1,02	87,3	Y			320,4mD	
16	2699.4	2697.7	333,86	333,81	270,41	270,39	333,89	333,83	21:48	21:51	1,02	87,6	Y			79,9mD	
17	2706	2704.3	334,66	334,63	271,01	271,03	334,67	334,65	21:56	21:59	1,02	87,9	Y			266,6mD	
18	2710.5	2708.8	335,18	335,16	271,47	271,44	335,16	335,11	22:06	22:09	1,02	88,3	Y			109,0mD	

NB: Fmtn Press sg calculated from RKB

DAILY MUD PROPERTIES : RHEOLOGY PARAMETERS FOR WELL 35/11-9

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]
02-mar-1997 23:59	397	397	SPUD MUD	100.0	1.06	0.0									0.0	0.0	0.0	0.0	0.0
03-mar-1997 23:59	420	420	SPUD MUD	100.0	1.06	0.0									0.0	0.0	0.0	0.0	0.0
04-mar-1997 23:59	447	447	SPUD MUD	100.0	1.06	0.0									0.0	0.0	0.0	0.0	0.0
05-mar-1997 23:59	447	447	SPUD MUD	100.0	1.06	0.0									0.0	0.0	0.0	0.0	0.0
06-mar-1997 23:59	447	447	SPUD MUD	100.0	1.06	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]
20-mar-1997 23:59	1250	1250	SEA WATER	100.0	1.06	0.0									0.0	0.0	0.0	0.0	0.0
21-mar-1997 23:59	1250	1250	SEA WATER	100.0	1.06	0.0									0.0	0.0	0.0	0.0	0.0
30-mar-1997 23:00	1250	1250	SEA WATER	100.0	1.06	0.0									0.0	0.0	0.0	0.0	0.0

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]
02-apr-1997 22:59	1250	1250	SEA WATER	0.0	1.03	0.0									0.0	0.0	0.0	0.0	0.0
03-apr-1997 22:59	1250	1250	SEA WATER	0.0	1.03	0.0									0.0	0.0	0.0	0.0	0.0
04-apr-1997 23:59	1250	1250	SEA WATER	0.0	1.03	0.0									0.0	0.0	0.0	0.0	0.0
05-apr-1997 23:59	1250	1250	ANCO 2000	0.0	1.25	0.0	67	49	41	31			13	11	50.0	18.0	15.5	6.0	8.0
06-apr-1997 11:30	1250	1250	ANCO 2000	0.0	1.25	0.0	72	54	44	34			13	11	50.0	18.0	18.0	6.0	8.0
07-apr-1997 20:20	1515	1515	ANCO 2000	0.0	1.25	0.0	67	49	41	31			13	11	50.0	18.0	15.5	6.0	10.0
08-apr-1997 20:30	1890	1890	ANCO 2000	77.0	1.25	0.0	76	55	46	35			13	11	50.0	21.0	17.0	6.0	10.0
09-apr-1997 22:00	2220	2220	ANCO 2000	70.0	1.26	0.0	64	47	41	31			13	10	50.0	17.0	15.0	5.5	8.0

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

DAILY MUD PROPERTIES : RHEOLOGY PARAMETERS FOR WELL 35/11-9

Hole section: 12 1/4"

WATER BASED SYSTEM

Date	Depth		Mud Type	Funnel	Dens	Mudtmp	Fann Readings						Rheo	PV	YP	Gel10	Gel10		
	[m]			Visc		Out							Test						
	MD	TVD		[sec]	[sg]	[DegC]	600	300	200	100	60	30	6	3	[DegC]	[mPas]	[Pa]	[Pa]	[Pa]
10-apr-1997 23:59	2325	2325	ANCO 2000	70.0	1.20	0.0	65	47	41	31			13	10	50.0	18.0	14.5	5.5	8.0

Hole section: 8 1/2"

WATER BASED SYSTEM

Date	Depth		Mud Type	Funnel	Dens	Mudtmp	Fann Readings						Rheo	PV	YP	Gel10	Gel10		
	[m]			Visc		Out								Test					
	MD	TVD		[sec]	[sg]	[DegC]	600	300	200	100	60	30	6	3	[DegC]	[mPas]	[Pa]	[Pa]	[Pa]
11-apr-1997 23:00	2325	2325	ANCO 2000	56.0	1.20	0.0	62	45	38	28			10	9	50.0	17.0	14.0	5.5	8.0
12-apr-1997 23:00	2450	2450	ANCO 2000	73.0	1.20	0.0	59	44	35	26			10	9	50.0	15.0	14.5	5.0	8.0
13-apr-1997 23:00	2565	2564	ANCO 2000	80.0	1.20	0.0	58	43	35	26			10	9	50.0	15.0	14.0	5.0	10.0
14-apr-1997 23:59	2638	2637	ANCO 2000	90.0	1.20	0.0	70	52	45	34			15	13	50.0	18.0	17.0	6.5	12.0
15-apr-1997 23:00	2666	2665	ANCO 2000	98.0	1.21	0.0	77	56	47	35			15	13	50.0	21.0	17.5	6.5	13.0
16-apr-1997 23:00	2743	2741	ANCO 2000	100.0	1.21	0.0	77	57	47	34			15	13	50.0	20.0	18.5	7.0	14.0
17-apr-1997 23:00	2754	2752	ANCO 2000	80.0	1.21	0.0	65	46	39	31			12	10	50.0	19.0	13.5	6.5	13.0
18-apr-1997 23:00	2754	2752	ANCO 2000	80.0	1.21	0.0	64	47	39	31			12	10	50.0	19.0	13.5	6.5	13.0
19-apr-1997 23:00	2754	2752	ANCO 2000	80.0	1.21	0.0	64	47	39	31			12	10	50.0	19.0	13.5	6.5	13.0
20-apr-1997 23:00	2754	2752	ANCO 2000	80.0	1.21	0.0	64	47	39	30			12	10	50.0	19.0	13.5	6.5	13.0
21-apr-1997 15:00	2830	2828	ANCO 2000	79.0	1.25	0.0	61	45	39	29			11	10	50.0	16.0	14.5	5.0	9.0
22-apr-1997 23:00	2830	2828	ANCO 2000	84.0	1.25	0.0	62	46	39	29			11	10	50.0	16.0	15.0	5.0	9.0
23-apr-1997 15:00	2830	2828	ANCO 2000	84.0	1.25	0.0	62	46	39	29			11	10	50.0	16.0	15.0	5.0	9.0
24-apr-1997 14:00	2830	2828	ANCO 2000	83.0	1.29	0.0	83	59	49	35			12	10	50.0	24.0	17.5	5.0	13.0
25-apr-1997 17:00	2400	2400	ANCO 2000	76.0	1.28	0.0	85	60	50	37			12	10	50.0	25.0	17.5	5.0	13.0
26-apr-1997 17:00	1000	1000	ANCO 2000	84.0	1.28	0.0	84	59	49	36			12	10	50.0	25.0	17.0	5.0	12.0
27-apr-1997 15:00	0		ANCO 2000	87.0	1.27	0.0									50.0	24.0	17.0	5.0	11.0

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

DAILY MUD PROPERTIES : OTHER PARAMETERS FOR WELL 35/11-9

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+ [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	HPHT	API	HPHT			Pm	Pf	Mf							Oil	Sand					
02-mar-1997 23:59	397	397	SPUD MUD	1.06	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	0.0	0
03-mar-1997 23:59	420	420	SPUD MUD	1.06	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	0.0	0
04-mar-1997 23:59	447	447	SPUD MUD	1.06	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	0.0	0
05-mar-1997 23:59	447	447	SPUD MUD	1.06	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	0.0	0
06-mar-1997 23:59	447	447	SPUD MUD	1.06	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	0.0	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+ [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	HPHT	API	HPHT			Pm	Pf	Mf							Oil	Sand					
20-mar-1997 23:59	1250	1250	SEA WATER	1.06	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	0.0	0
21-mar-1997 23:59	1250	1250	SEA WATER	1.06	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	0.0	0
30-mar-1997 23:00	1250	1250	SEA WATER	1.06	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	0.0	0

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+ [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	HPHT	API	HPHT			Pm	Pf	Mf							Oil	Sand					
02-apr-1997 22:59	1250	1250	SEA WATER	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	0.0	0
03-apr-1997 22:59	1250	1250	SEA WATER	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	0.0	0
04-apr-1997 23:59	1250	1250	SEA WATER	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	0.0	0
05-apr-1997 23:59	1250	1250	ANCO 2000	1.25	3.0	0.0	0	0	0/0	9.5	0.0	0.0	0.0	170	0	0	0	0	0	0.0	0.0	0.0	0.0	0	0.0	0
06-apr-1997 11:30	1250	1250	ANCO 2000	1.25	0.0	0.0	0	0	0/0	9.4	0.0	0.0	0.0	179	0	90000	0	0	0	9.7	0.0	0.0	0.0	0	0.0	2
07-apr-1997 20:20	1515	1515	ANCO 2000	1.25	3.0	0.0	1	0	0/0	8.7	0.0	0.0	0.0	0	0	80000	0	0	0	10.0	0.0	0.0	0.0	0	0.0	21
08-apr-1997 20:30	1890	1890	ANCO 2000	1.25	3.8	0.0	1	0	0/0	8.6	0.0	0.0	0.0	170	0	68000	240	0	0	11.5	0.0	0.0	0.0	22	0.0	96
09-apr-1997 22:00	2220	2220	ANCO 2000	1.26	3.7	0.0	1	0	0/0	8.1	0.0	0.0	0.0	130	0	87000	290	0	0	11.6	0.0	0.0	0.0	21	0.0	79
10-apr-1997 23:59	2325	2325	ANCO 2000	1.20	3.7	0.0	1	0	0/0	8.1	0.0	0.0	0.0	130	0	87000	290	0	0	10.8	0.0	0.0	0.0	21	0.0	146

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+ [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	HPHT	API	HPHT			Pm	Pf	Mf							Oil	Sand					
11-apr-1997 23:00	2325	2325	ANCO 2000	1.20	3.7	0.0	1	0	0/0	8.0	0.0	0.0	0.0	146	0	70000	280	0	0	8.0	0.0	0.0	0.0	0	0.0	0
12-apr-1997 23:00	2450	2450	ANCO 2000	1.20	3.7	0.0	1	0	0/0	8.2	0.0	0.0	0.0	140	0	59000	170	335	0	8.0	0.0	0.0	0.0	13	0.0	10
13-apr-1997 23:00	2565	2564	ANCO 2000	1.20	3.7	0.0	1	0	0/0	8.1	0.0	0.0	0.0	140	0	610000	170	322	0	9.0	0.0	0.0	0.0	25	0.0	63
14-apr-1997 23:59	2638	2637	ANCO 2000	1.20	3.8	0.0	1	0	0/0	8.1	0.0	0.0	0.0	143	0	710000	160	0	325	9.0	0.0	0.0	0.0	30	0.0	56
15-apr-1997 23:00	2666	2665	ANCO 2000	1.21	3.8	0.0	1	0	0/0	8.5	0.0	0.0	0.0	143	0	700000	140	0	320	9.0	0.0	0.0	0.0	28	0.0	44
16-apr-1997 23:00	2743	2741	ANCO 2000	1.21	3.8	0.0	1	0	0/0	8.1	0.0	0.0	0.0	145	0	72000	130	0	310	9.0	0.0	0.0	0.0	28	0.0	41
17-apr-1997 23:00	2754	2752	ANCO 2000	1.21	3.5	0.0	1	0	0/0	8.3	0.0	0.0	0.0	145	0	70000	200	0	320	10.0	0.0	0.0	0.0	28	0.0	97
18-apr-1997 23:00	2754	2752	ANCO 2000	1.21	3.5	0.0	1	0	0/0	8.3	0.0	0.0	0.0	145	0	70000	200	0	320	10.0	0.0	0.0	0.0	28	0.0	97
19-apr-1997 23:00	2754	2752	ANCO 2000	1.21	3.5	0.0	1	0	0/0	8.3	0.0	0.0	0.0	145	0	70000	200	0	320	10.0	0.0	0.0	0.0	28	0.0	97

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

DAILY MUD PROPERTIES : OTHER PARAMETERS FOR WELL 35/11-9

Hole section: 8 1/2"

WATER BASED SYSTEM

Date	Depth		Mud Type	Dens [sg]	Filtrate			Filt.cake [mm]	HPHT [psi/DegC]	pH	Alcalinity			Inhib [Kg/m3]	K+	CL-	Ca++	Mg++	Tot [mg]	Percentage				CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
	MD	TVD			API [ml]	HPHT [ml]	API [mm]				Pm	Pf	Mf							hard	Solid	Oil	Sand			
20-apr-1997 23:00	2754	2752	ANCO 2000	1.21	3.5	0.0	1	0	0/0	8.3	0.0	0.0	0.0	145	0	70000	200	0	320	10.0	0.0	0.0	28	0.0	97	
21-apr-1997 15:00	2830	2828	ANCO 2000	1.25	3.3	0.0	1	0	0/0	8.0	0.0	0.0	0.0	142	0	71000	120	0	260	12.0	0.0	0.0	32	0.0	136	
22-apr-1997 23:00	2830	2828	ANCO 2000	1.25	3.3	0.0	1	0	0/0	8.0	0.0	0.0	0.0	143	0	71000	120	0	260	12.0	0.0	0.0	33	0.0	136	
23-apr-1997 15:00	2830	2828	ANCO 2000	1.25	3.3	0.0	1	0	0/0	8.0	0.0	0.0	0.0	143	0	71000	120	0	260	12.0	0.0	0.0	33	0.0	136	
24-apr-1997 14:00	2830	2828	ANCO 2000	1.29	3.1	0.0	1	0	0/0	9.1	0.0	0.0	0.0	142	0	71000	120	0	220	13.0	0.0	0.0	34	0.0	141	
25-apr-1997 17:00	2400	2400	ANCO 2000	1.28	3.2	0.0	1	0	0/0	8.7	0.0	0.0	0.0	140	0	71000	120	0	180	13.0	0.0	0.0	35	0.0	141	
26-apr-1997 17:00	1000	1000	ANCO 2000	1.28	3.2	0.0	1	0	0/0	9.1	0.0	0.0	0.0	139	0	71000	160	0	260	13.0	0.0	0.0	35	0.0	141	
27-apr-1997 15:00	0		ANCO 2000	1.27	3.4	0.0	1	0	0/0	9.1	0.0	0.0	0.0	132	0	71000	160	0	260	13.0	0.0	0.0	34	0.0	157	

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

TOTAL CONSUMPTION OF MUD ADDITIVES ON WELL 35/11-9

Section Size	Product/Additive	Total Amount Planned	Total Amount Used	Unit	Difference		Difference in cost	
					Amount	%	%	[kNOK]
36"	ANCO BAR		132000.0	kg				
	BENTONITE		72000.0	kg				
	LIME		280.0	kg				
	SODA ASH		475.0	kg				
17 1/2"	ANCO BAR		128000.0	kg				
	BENTONITE		57000.0	kg				
	KCL BRINE		59000.0	l				
	LAMPAC EXLO		1000.0	kg				
	LIME		185.0	kg				
	POTASSIUM BICARBONATE		50.0	kg				
	RHODOPOL 23P		625.0	kg				
	SODA ASH		825.0	kg				
12 1/4"	ANCO 208		18300.0	l				
	ANCO BAR		82000.0	kg				
	ANCO NOFOAM		150.0	l				
	BENTONITE		1000.0	kg				
	KCL		70000.0	kg				
	KCL BRINE		240000.0	l				
	LAMPAC EXLO		7725.0	kg				
	LIME		20.0	kg				
	POTASSIUM BICARBONATE		575.0	kg				
	RHODOPOL 23P		3925.0	kg				
	SODA ASH		50.0	kg				
8 1/2"	ANCO 208		20900.0	l				
	ANCO BAR		188000.0	kg				
	BICARBONATE		200.0	kg				
	CITRIC ACID		425.0	kg				
	FLOWZAN 71006		4025.0	kg				
	KCL		104000.0	kg				
	LAMPAC EXLO		10275.0	kg				
POT. CARBONATE		500.0	kg					



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Keywords
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SUMMARY

A petroleum geochemical study on well 35/11-9 is reported below. In addition a comparison with two fluid samples from well 35/11-8S (DST1B and DST2) has been carried out. Ten core samples (2682.3m to 2728.9m), one fluid sample (MDT-BA65, 2677.5m) and one mud sample (Anco 2000, 2650m) were analyzed.

A list of all analysed samples is given in Table 1.2. The analytical and preparative methods employed in this study comprised geochemical screening and sample characterization. Screening consisted of Rock Eval pyrolysis. Sample characterization included solvent extraction followed by asphaltene precipitation, preparative group type separation by MPLC² and TLC-FID³ (Iatroscan). Selected core samples and fluid sample were analysed for saturated hydrocarbons by Gas Chromatography Flame

¹ All depths in this report are in mRKB unless otherwise stated. Core samples are related to drillers depth and fluid samples are related to loggers depth. The shift (loggers to drillers depth) for the cores are 2.2m.
² Medium Pressure/Performance Liquid Chromatography
³ Thin Layer Chromatography with Flame Ionisation Detection

ionization (GC-FID). The saturated hydrocarbon biomarkers and aromatic hydrocarbons were analysed by gas chromatography-mass spectrometry (GC-MSD⁴). Stable carbon isotopes were measured on the saturated and aromatic hydrocarbon fractions. The fluid sample was analysed for light hydrocarbons (nC₅-nC₂₀).

All analyse techniques are in accordance to The Norwegian Industry Guide to Organic Geochemical Analyses (NIGOGA⁵).

The similarity of the analyzed samples are analysed using a multivariate statistical approach (PCA, principal component analysis). The compound quantities of saturated hydrocarbons, saturated hydrocarbon biomarkers and aromatic hydrocarbons are analysed separately. Each set of data are block normalized and log transformed prior to analysis. Reported similarity (groups) of samples are presented as score plots, including the significance of each principal component. Related loading plots document the significance of each compound. The results from reference samples (nso02, nso20, etc.) indicate the analytical variation in the dataset.

Stable carbon isotope analyses of extract fractions was performed by Geolab Nor, Trondheim, Norway. All other analytical and interpretative work was carried out at the Norsk Hydro E&P Research Centre in Bergen, Norway.

The results from the two fluid samples in well 35/11-8S (DST1B and DST2) are reported in "Petroleum Geochemistry of well 35/11-8S, and hydrocarbon correlation with the Fram discovery" - R-074757, 1996.

4

Mass-Selective Detector

5

The Norwegian Industry Guide to Organic Geochemical Analyses, 3rd edition, 1993

Table 1.1 Stratigraphy of well 35/11-9

STRATIGRAPHY, WELL NOR : 35/11-9



TOP (m)	BOTTOM (m)	Simple Mean							Weighted Mean				
		S1 (kg/t)	S2 (kg/t)	TOC (%)	HI	PI	Tmax	VRo	S1 (kg/t)	S2 (kg/t)	TOC (%)	HI	
2638.00	2651.20	10.3	0.8	1.5	52	0.9	403						
2651.20	2730.90	5.4	0.9	0.6	141	0.8	300						
2730.90	2740.50									1.7	0.3	0.2	124

Table 1.2 List of samples analysed

ANALYSIS PROGRAMME, WELL NOR : 35/11-9

Petroleum Geochemistry Group

Research Centre Bergen

29-Aug-1997 10:19



Depth (m)	Group/Fm.	Lithology	Type	RockEval	RE/EXT	Extr	MPLC	Iatr	SatHC	Pyrolyse	Isot	Sat-biom	c5-20hc	Aro-hc	Vitr
2650.00			MUD	1		1		1	1		1	1			1
2677.50			OIL			1		1	1		1	1	1		1
2682.30			COCH	1		1		1	1		1	1			1
2683.20			COCH	1		1		1	1		1	1			1
2685.50			COCH	1		1		1	1		1	1			1
2686.40			COCH	1		1		1	1		1	1			1
2687.70			COCH	1		1		1	1		1	1			1
2689.60			COCH	1		1		1	1		1	1			1
2695.10			COCH	1		1		1	1		1	1			1
2699.50			COCH	1		1		1	1		1	1			1
2707.10			COCH	1		1		1	1		1	1			1
2728.90			COCH	1		1		1	1		1	1			1

MPLC = Separation

SatGC = Saturated HC

Isot = Isotope data

Vitr = VR0 (ave) %

Extr = Extraction

Iatr = Iatrosan

Sat-biom = Biomarker data

RE/EXT = Rock Eval on extracted Sediment



ROCK EVAL SCREENING DATA

Well	Depth (m)	Lithology	Type	Tmax (C)	S1(kg/t)	S2 (kg/t)	TOC (%)	HI	PI	Analysing Company
NOR : 35/11-9	2650.00		MUD	403	10.3	0.8	1.5	52	0.93	NORSK HYDRO
NOR : 35/11-9	2682.30		COCH	297	12.0	2.1	1.3	160	0.85	NORSK HYDRO
NOR : 35/11-9	2683.20		COCH	294	10.6	1.8	1.1	159	0.85	NORSK HYDRO
NOR : 35/11-9	2685.50		COCH	272	7.3	1.1	0.8	135	0.87	NORSK HYDRO
NOR : 35/11-9	2686.40		COCH	272	6.9	1.2	0.8	148	0.85	NORSK HYDRO
NOR : 35/11-9	2687.70		COCH	293	7.3	1.2	0.8	144	0.86	NORSK HYDRO
NOR : 35/11-9	2689.60		COCH	271	8.9	1.0	1.0	107	0.90	NORSK HYDRO
NOR : 35/11-9	2695.10		COCH	332	0.2	0.1	0.1	220	0.67	NORSK HYDRO
NOR : 35/11-9	2699.50		COCH	319	0.3	0.1	0.1	133	0.76	NORSK HYDRO
NOR : 35/11-9	2707.10		COCH	321	0.2	0.1	0.1	83	0.76	NORSK HYDRO
NOR : 35/11-9	2728.90		COCH	326	0.1	0.1	0.0	125	0.71	NORSK HYDRO



EXTRACTION/DESPHALTING DATA (SEDIMENTS)

Well	Depth (m)	Lithology	Type	Rock (g)	EOM (mg)	ASP (mg)	EOM (%)	ASP (%)	EOM (ppm)	TOC (%)	EOM/TOC (%)	Analysing comp
NOR : 35/11-9	2650.00		MUD	3.7	66.0	2.7	1.76	2.7	17,600			Norsk Hydro
NOR : 35/11-9	2682.30		COCH	7.5	107.0	1.3	1.43	1.3	14,300			Norsk Hydro
NOR : 35/11-9	2683.20		COCH	7.5	94.0	2.1	1.25	2.5	12,500			Norsk Hydro
NOR : 35/11-9	2685.50		COCH	7.5	66.0	1.2	0.88	2.0	8,800			Norsk Hydro
NOR : 35/11-9	2686.40		COCH	7.6	67.0	0.8	0.88	1.3	8,800			Norsk Hydro
NOR : 35/11-9	2687.70		COCH	7.5	67.0	0.9	0.89	1.5	8,900			Norsk Hydro
NOR : 35/11-9	2689.60		COCH	7.6	81.0	1.1	1.07	1.5	10,700			Norsk Hydro
NOR : 35/11-9	2695.10		COCH	20.4	11.0	1.3	0.05	13.1	500			Norsk Hydro
NOR : 35/11-9	2699.50		COCH	22.6	28.0	2.3	0.12	9.1	1,200			Norsk Hydro
NOR : 35/11-9	2707.10		COCH	22.8	20.0	2.0	0.09	11.1	900			Norsk Hydro
NOR : 35/11-9	2728.90		COCH	21.7	18.0	1.5	0.08	9.3	800			Norsk Hydro



DEASPHALTING DATA (OILS)

Well	St.Depth (m)	En.Depth (m)	Name	OIL (mg)	ASP (mg)	ASP (%)	Analysing Company
NOR/35/11-9	2677.50	2677.50	MDT-BA	109.00	0.4	0.4	NORSK HYDRO

IATROSCAN - Calculated Weight% / SARA

Petroleum Geochemistry Group
Research Centre Bergen



18-Aug-1997

COMPOSITION OF EXTRACTS/OILS WELL

Well	St.Depth (m)	En.Depth (m)	Type	Lithology	Name	Calculated Weight %			HC TOTA	ASPH	Non-HC TOTAL	TOT HC /Non-HC	Analysing Company
						SAT	ARO	NSO					
NOR 35/11-9	2650.00	2650.00	MUD			5.3	0.0	92.0	5.3	2.7	94.7	0.1	NORSK HYDRO
NOR 35/11-9	2677.50	2677.50	OIL		MDT-BA65	75.7	19.5	4.4	95.2	0.4	4.8	20.0	NORSK HYDRO
NOR 35/11-9	2682.30	2682.30	COCH			74.1	18.8	5.8	92.8	1.3	7.2	12.9	NORSK HYDRO
NOR 35/11-9	2683.20	2683.20	COCH			71.8	20.7	5.1	92.4	2.5	7.6	12.2	NORSK HYDRO
NOR 35/11-9	2685.50	2685.50	COCH			75.8	16.5	5.7	92.3	2.0	7.7	12.0	NORSK HYDRO
NOR 35/11-9	2686.40	2686.40	COCH			70.6	19.1	8.9	89.8	1.3	10.2	8.8	NORSK HYDRO
NOR 35/11-9	2687.70	2687.70	COCH			69.7	19.8	8.9	89.6	1.5	10.4	8.6	NORSK HYDRO
NOR 35/11-9	2689.60	2689.60	COCH			70.0	22.5	6.0	92.5	1.5	7.5	12.3	NORSK HYDRO
NOR 35/11-9	2695.10	2695.10	COCH			17.2	4.2	65.5	21.4	13.1	78.6	0.3	NORSK HYDRO
NOR 35/11-9	2699.50	2699.50	COCH			4.4	2.3	84.2	6.7	9.1	93.3	0.1	NORSK HYDRO
NOR 35/11-9	2707.10	2707.10	COCH			8.4	0.0	80.5	8.4	11.1	91.6	0.1	NORSK HYDRO
NOR 35/11-9	2728.90	2728.90	COCH			10.0	0.0	80.8	10.0	9.3	90.0	0.1	NORSK HYDRO

Table 2.4 Composition of deasphalted extracts (Iatroscan)



Table 3.1 Absolute amounts of saturated hydrocarbons

Amounts

S-Depth (m)	E-Depth (m)	Well	Type	Lithology	Name	Orgid	Project	Seq.#	File name	File path	Instrument	Setup	Method
2650.00	2650.00	35/11-9	MUD			626661	97017	10	kv1516_2	XCHROM	HP5890II	GC-FID-SAT	FID_SAT3
2677.50	2677.50	35/11-9	OIL		MDT-BA65	626397	97017	18	kv1516_1	XCHROM	HP5890II	GC-FID-SAT	FID_SAT3
2682.30	2682.30	35/11-9	COCH			626231	97017	12		35_11_9S	HP5890II	GC-FID-SAT	FID_SAT3
2683.20	2683.20	35/11-9	COCH			626232	97017	13		35_11_9S	HP5890II	GC-FID-SAT	FID_SAT3
2685.50	2685.50	35/11-9	COCH			626233	97017	14		35_11_9S	HP5890II	GC-FID-SAT	FID_SAT3
2686.40	2686.40	35/11-9	COCH			626234	97017	15		35_11_9S	HP5890II	GC-FID-SAT	FID_SAT3
2687.70	2687.70	35/11-9	COCH			626235	97017	16		35_11_9S	HP5890II	GC-FID-SAT	FID_SAT3
2689.60	2689.60	35/11-9	COCH			626236	97017	17		35_11_9S	HP5890II	GC-FID-SAT	FID_SAT3
2695.10	2695.10	35/11-9	COCH			626237	97017	18		35_11_9S	HP5890II	GC-FID-SAT	FID_SAT3
2699.50	2699.50	35/11-9	COCH			626238	97017	19		35_11_9S	HP5890II	GC-FID-SAT	FID_SAT3
2707.10	2707.10	35/11-9	COCH			626239	97017	20		35_11_9S	HP5890II	GC-FID-SAT	FID_SAT3
2728.90	2728.90	35/11-9	COCH			626240	97017	21		35_11_9S	HP5890II	GC-FID-SAT	FID_SAT3

Table 3.1 Absolute amounts of saturated hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	Operator	Company	Aquired date	Misc.info.	Country	Status	nC11	nC12	nC13	nC14	iC16
2650.00	Linda	NORSK HYDRO	12-08-1997		NOR	WEAK	0	0	0	0	0
2677.50	Linda	NORSK HYDRO	12-08-1997		NOR	OK	0	0	0	0	3
2682.30	Reidun	NORSK HYDRO	04-08-1997		NOR	OK	0	0	0	0	3
2683.20	Reidun	NORSK HYDRO	04-08-1997		NOR	OK	0	0	0	0	3
2685.50	Reidun	NORSK HYDRO	04-08-1997		NOR	OK	0	0	0	0	3
2686.40	Reidun	NORSK HYDRO	04-08-1997		NOR	OK	0	0	0	0	3
2687.70	Reidun	NORSK HYDRO	04-08-1997		NOR	OK	0	0	0	0	3
2689.60	Reidun	NORSK HYDRO	04-08-1997		NOR	OK	0	0	0	0	3
2695.10	Reidun	NORSK HYDRO	04-08-1997		NOR	OK	0	0	0	0	0
2699.50	Reidun	NORSK HYDRO	04-08-1997		NOR	WEAK	0	0	0	0	0
2707.10	Reidun	NORSK HYDRO	04-08-1997		NOR	WEAK	0	0	0	0	0
2728.90	Reidun	NORSK HYDRO	04-08-1997		NOR	WEAK	0	0	0	0	0

Table 3.1 Absolute amounts of saturated hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	nC15	nC16	iC18	nC17	Pristane	nC18	Phytane	nC19	nC20	nC21	nC22
2650.00	0	0	0	0	0	0	0	0	0	0	0
2677.50	9	9	3	7	4	6	2	6	6	5	5
2682.30	10	10	3	8	5	7	3	7	7	6	6
2683.20	9	10	3	9	5	8	3	7	7	6	6
2685.50	10	11	3	8	4	7	3	7	6	6	7
2686.40	8	9	3	8	4	7	3	7	6	6	6
2687.70	10	11	3	9	5	8	3	8	7	7	6
2689.60	10	10	3	8	4	7	3	7	6	6	6
2695.10	2	2	1	2	1	2	1	1	1	1	1
2699.50	0	0	0	0	0	0	0	0	0	0	0
2707.10	0	0	0	0	0	0	0	0	0	0	0
2728.90	0	0	0	0	0	0	0	0	0	0	0

Table 3.1 Absolute amounts of saturated hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	nC23	nC24	nC25	nC26	nC27	nC28	nC29	nC30	nC31	nC32	nC33
2650.00	0	0	0	0	0	0	0	0	0	0	0
2677.50	5	5	5	4	4	3	3	2	2	2	1
2682.30	6	6	5	5	4	4	3	3	2	2	1
2683.20	6	6	6	5	4	4	4	3	2	2	2
2685.50	6	6	6	5	5	4	4	3	3	2	2
2686.40	6	5	5	4	4	4	3	3	2	2	1
2687.70	6	6	5	5	4	4	4	3	2	2	1
2689.60	6	6	5	5	4	4	3	3	2	2	1
2695.10	1	1	1	1	0	0	0	0	0	0	0
2699.50	0	0	0	0	0	0	0	0	0	0	0
2707.10	0	0	0	0	0	0	0	0	0	0	0
2728.90	0	0	0	0	0	0	0	0	0	0	0

Table 3.1 Absolute amounts of saturated hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	nC34	nC35	C12D26	C16D34	C20D42	C24D50	C30D62	IntStdOld
2650.00	0	0	3	3	3	3	2	
2677.50	1	1	4	4	4	4	2	
2682.30	2	1	4	4	4	4	2	
2683.20	2	1	4	4	4	4	2	
2685.50	2	1	3	3	3	3	2	
2686.40	2	1	3	3	3	3	2	
2687.70	2	1	3	3	3	3	2	
2689.60	2	1	4	4	4	4	2	
2695.10	0	0	4	4	4	4	2	
2699.50	0	0	4	4	4	4	2	
2707.10	0	0	5	5	5	5	3	
2728.90	0	0	6	6	6	6	3	

Table 3.1 Absolute amounts of saturated hydrocarbons

Table 3.2 Molecular ratios, saturated hydrocarbons



sat-hc ord. samples - Amount

S-Depth (m)	E-Depth (m)	Well	Type	Lithology	Name	Orgid	Project	Seq.#	File name	File path	Instrument	Setup	Method
2650.00	2650.00	35/11-9	MUD			626661	97017	10	kv1516_2	XCHROM	HP5890II	GC-FID-SAT	FID_SAT3
2677.50	2677.50	35/11-9	OIL		MDT-BA65	626397	97017	18	kv1516_1	XCHROM	HP5890II	GC-FID-SAT	FID_SAT3
2682.30	2682.30	35/11-9	COCH			626231	97017	12		35_11_9S	HP5890II	GC-FID-SAT	FID_SAT3
2683.20	2683.20	35/11-9	COCH			626232	97017	13		35_11_9S	HP5890II	GC-FID-SAT	FID_SAT3
2685.50	2685.50	35/11-9	COCH			626233	97017	14		35_11_9S	HP5890II	GC-FID-SAT	FID_SAT3
2686.40	2686.40	35/11-9	COCH			626234	97017	15		35_11_9S	HP5890II	GC-FID-SAT	FID_SAT3
2687.70	2687.70	35/11-9	COCH			626235	97017	16		35_11_9S	HP5890II	GC-FID-SAT	FID_SAT3
2689.60	2689.60	35/11-9	COCH			626236	97017	17		35_11_9S	HP5890II	GC-FID-SAT	FID_SAT3
2695.10	2695.10	35/11-9	COCH			626237	97017	18		35_11_9S	HP5890II	GC-FID-SAT	FID_SAT3
2699.50	2699.50	35/11-9	COCH			626238	97017	19		35_11_9S	HP5890II	GC-FID-SAT	FID_SAT3
2707.10	2707.10	35/11-9	COCH			626239	97017	20		35_11_9S	HP5890II	GC-FID-SAT	FID_SAT3
2728.90	2728.90	35/11-9	COCH			626240	97017	21		35_11_9S	HP5890II	GC-FID-SAT	FID_SAT3



Ratios - amounts:

E-Depth (m)	Operator	Company	Aquired date	Misc.info.	Country	Status	Data Type	Pr Nc17	Ph Nc18	Prn17 Phn18	Pr Ph	Nc17 Nc17c27
2650.00	Linda	NORSK HYDRO	12-08-1997		NOR	WEAK	AM	0.50	0.50	1.00	1.00	0.67
2677.50	Linda	NORSK HYDRO	12-08-1997		NOR	OK	AM	0.56	0.38	1.45	1.70	0.67
2682.30	Reidun	NORSK HYDRO	04-08-1997		NOR	OK	AM	0.56	0.40	1.40	1.58	0.67
2683.20	Reidun	NORSK HYDRO	04-08-1997		NOR	OK	AM	0.56	0.38	1.47	1.67	0.67
2685.50	Reidun	NORSK HYDRO	04-08-1997		NOR	OK	AM	0.55	0.39	1.43	1.59	0.64
2686.40	Reidun	NORSK HYDRO	04-08-1997		NOR	OK	AM	0.55	0.38	1.44	1.60	0.66
2687.70	Reidun	NORSK HYDRO	04-08-1997		NOR	OK	AM	0.56	0.39	1.44	1.61	0.68
2689.60	Reidun	NORSK HYDRO	04-08-1997		NOR	OK	AM	0.55	0.37	1.47	1.62	0.66
2695.10	Reidun	NORSK HYDRO	04-08-1997		NOR	OK	AM	0.57	0.37	1.52	1.75	0.80
2699.50	Reidun	NORSK HYDRO	04-08-1997		NOR	WEAK	AM	0.67	0.50	1.33	1.50	0.69
2707.10	Reidun	NORSK HYDRO	04-08-1997		NOR	WEAK	AM	0.63	0.38	1.66	1.50	0.61
2728.90	Reidun	NORSK HYDRO	04-08-1997		NOR	WEAK	AM	0.57	0.38	1.52	1.33	0.50



Ratios - amounts:

E-Depth (m)	Cpi 1	Cpi 2
2650.00	1.10	0.67
2677.50	1.03	0.94
2682.30	1.03	0.94
2683.20	1.04	0.95
2685.50	1.04	0.96
2686.40	1.04	0.95
2687.70	1.05	0.94
2689.60	1.04	0.94
2695.10	1.06	0.92
2699.50	1.22	1.00
2707.10	1.07	0.96
2728.90	1.07	1.00



Table 3.3 Absolute amounts of biomarkers, saturated hydrocarbons

Amounts

S-Depth (m)	E-Depth (m)	Well	Type	Lithology	Name	Orgid	Project	Seq.#	File name	File path	Instrument	Setup	Method
2650.00	2650.00	35/11-9	MUD			626661	97017	10	MUD.D	KV1516_2	HP5971A	GC-MSD-SA	MSD_S_C
2677.50	2677.50	35/11-9	OIL		MDT-BA65	626397	97017	18	35119.D	KV1516B	HP5971A	GC-MSD-SA	MSD_S_C
2682.30	2682.30	35/11-9	COCH			626231	97017	12	2682_30.D	35_11_9S	HP5971A	GC-MSD-SA	MSD_S_C
2683.20	2683.20	35/11-9	COCH			626232	97017	13	2683_20.D	35_11_9S	HP5971A	GC-MSD-SA	MSD_S_C
2685.50	2685.50	35/11-9	COCH			626233	97017	14	2685_50.D	35_11_9S	HP5971A	GC-MSD-SA	MSD_S_C
2686.40	2686.40	35/11-9	COCH			626234	97017	15	2686_40.D	35_11_9S	HP5971A	GC-MSD-SA	MSD_S_C
2687.70	2687.70	35/11-9	COCH			626235	97017	16	2687_70.D	35_11_9S	HP5971A	GC-MSD-SA	MSD_S_C
2689.60	2689.60	35/11-9	COCH			626236	97017	17	2689_60.D	35_11_9S	HP5971A	GC-MSD-SA	MSD_S_C
2695.10	2695.10	35/11-9	COCH			626237	97017	18	2695_10.D	35_11_9S	HP5971A	GC-MSD-SA	MSD_S_C
2699.50	2699.50	35/11-9	COCH			626238	97017	19	2699_50.D	35_11_9S	HP5971A	GC-MSD-SA	MSD_S_C
2707.10	2707.10	35/11-9	COCH			626239	97017	20	2707_10.D	35_11_9S	HP5971A	GC-MSD-SA	MSD_S_C
2728.90	2728.90	35/11-9	COCH			626240	97017	21	2782_90.D	35_11_9S	HP5971A	GC-MSD-SA	MSD_S_C

Table 3.3 Absolute amounts of biomarkers, saturated hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	Operator	Company	Aquired date	Misc.info.	Country	Status	19/3	20/3	21/3	23/3	24/3
2650.00	Reidun	NORSK HYDRO	26-07-1997		NOR	OK	0	0	0	0	0
2677.50	Reidun	NORSK HYDRO	27-06-1997		NOR	OK	7	4	5	8	6
2682.30	Reidun	NORSK HYDRO	09-07-1997		NOR	OK	9	5	6	9	6
2683.20	Reidun	NORSK HYDRO	09-07-1997		NOR	OK	9	5	6	9	7
2685.50	Reidun	NORSK HYDRO	09-07-1997		NOR	OK	9	5	6	9	6
2686.40	Reidun	NORSK HYDRO	09-07-1997		NOR	OK	8	5	6	10	7
2687.70	Reidun	NORSK HYDRO	09-07-1997		NOR	OK	9	5	6	9	6
2689.60	Reidun	NORSK HYDRO	09-07-1997		NOR	OK	10	5	6	9	7
2695.10	Reidun	NORSK HYDRO	09-07-1997		NOR	OK	2	1	1	1	1
2699.50	Reidun	NORSK HYDRO	09-07-1997		NOR	OK	0	0	0	0	0
2707.10	Reidun	NORSK HYDRO	09-07-1997		NOR	OK	1	0	0	0	0
2728.90	Reidun	NORSK HYDRO	09-07-1997		NOR	OK	0	0	0	0	0

Table 3.3 Absolute amounts of biomarkers, saturated hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	25/3	26/3R	26/3S	28/3R	28/3S	29/3R	29/3S	30/3R	30/3S	24/4	27Ts
2650.00	0	0	0	0	0	0	0			0	0
2677.50	3	2	3	3	3	6	6			7	26
2682.30	4	3	3	5	3	7	4			9	33
2683.20	3	3	3	5	4	7	4			8	33
2685.50	3	2	3	4	3	7	4			7	27
2686.40	3	3	3	5	4	6	5			8	30
2687.70	3	3	3	4	4	6	4			8	31
2689.60	3	2	3	4	4	7	5			8	35
2695.10	0	0	0	1	0	1	0			1	3
2699.50	0	0	0	0	0	0	0			0	0
2707.10	0	0	0	0	0	0	0			0	1
2728.90	0	0	0	0	0	0	0			0	1

Table 3.3 Absolute amounts of biomarkers, saturated hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	27Tm	27b	25nor28ab	28ab	25nor29ab	29ab	29ba	29Ts	25nor30ab	30ab	30ba
2650.00	0	0	0	0	0	0	0	0	0	1	0
2677.50	10	4	7	13	1	30	3	23	1	63	7
2682.30	12	5	9	17	7	40	6	30	4	82	8
2683.20	13	5	9	16	8	40	3	29	4	79	8
2685.50	11	1	9	15	4	38	6	27	2	75	8
2686.40	11	1	9	15	6	40	4	28	2	78	8
2687.70	12	4	9	16	5	39	6	28	2	78	8
2689.60	13	5	9	16	7	40	2	29	3	80	7
2695.10	1	1	3	2	0	4	1	3	0	7	1
2699.50	0	0	0	0	0	1	0	0	0	1	0
2707.10	0	1	0	1	0	2	0	1	0	3	1
2728.90	0	0	0	1	0	2	0	1	0	2	0

Table 3.3 Absolute amounts of biomarkers, saturated hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	30bb	30D	30G	30O	30D13	31abS	31abR	31ba	30nor32ab	32abS	32abR
2650.00		0	0		0	0	0	0		0	0
2677.50		26	7		7	36	27	4		27	19
2682.30		33	9		9	47	38	4		40	25
2683.20		33	8		9	46	35	4		35	23
2685.50		29	10		10	44	33	6		31	23
2686.40		32	9		7	42	32	5		33	23
2687.70		30	10		10	42	32	4		33	24
2689.60		32	8		8	50	34	5		36	24
2695.10		3	1		1	4	3	1		3	2
2699.50		0	0		0	1	1	0		1	0
2707.10		1	0		1	2	2	0		2	1
2728.90		1	0		0	2	1	0		1	1

Table 3.3 Absolute amounts of biomarkers, saturated hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	33abS	33abR	34abS	34abR	35abS	35abR	21aa	21bb	22aa	22bb	23aa
2650.00	0	0	0	0	0	0	0	0	0	0	0
2677.50	21	14	14	9	8	5	13	14	12	7	
2682.30	28	19	18	11	11	7	15	17	15	9	
2683.20	25	17	16	10	11	7	15	16	15	8	
2685.50	23	15	15	9	10	7	13	15	14	8	
2686.40	23	19	17	10	10	7	15	17	14	8	
2687.70	22	17	15	10	11	7	16	16	14	9	
2689.60	26	17	17	9	11	7	15	19	15	9	
2695.10	3	2	2	1	1	1	2	2	2	1	
2699.50	0	0	0	0	0	0	0	0	0	0	
2707.10	1	1	1	0	1	0	1	1	0	0	
2728.90	1	0	1	0	0	0	0	0	0	0	

Table 3.3 Absolute amounts of biomarkers, saturated hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	23bb	27dbS	27dbR	27daR	27daS	27aaS	27bbR	27bbS	27aaR	28dbSA	28dbSB
2650.00		0	0				0	0	0		
2677.50		39	24				26	17	9		
2682.30		50	29				33	22	13		
2683.20		47	27				34	20	12		
2685.50		49	26				34	18	11		
2686.40		46	27				32	19	11		
2687.70		46	28				34	19	11		
2689.60		50	29				33	21	13		
2695.10		5	3				3	2	1		
2699.50		1	0				0	0	0		
2707.10		1	1				1	1	0		
2728.90		1	1				1	0	0		

Table 3.3 Absolute amounts of biomarkers, saturated hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	28dbRA	28dbRB	28daR	28daS	28aaS	28bbR	28bbS	28aaR	29dbS	29dbR	29daR
2650.00						0	0				
2677.50						13	17				
2682.30						18	21				
2683.20						17	23				
2685.50						15	20				
2686.40						17	21				
2687.70						18	21				
2689.60						18	22				
2695.10						2	2				
2699.50						0	0				
2707.10						0	1				
2728.90						0	0				

Table 3.3 Absolute amounts of biomarkers, saturated hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	29daS	29aaS	29bbR	29bbS	29aaR	30dbS	30dbR	30daR	30daS	30aaS	30bbR
2650.00		0	0	0	0						0
2677.50		11	22	22	10						6
2682.30		14	28	29	14						9
2683.20		14	29	27	14						8
2685.50		13	25	23	12						8
2686.40		13	26	25	15						7
2687.70		14	27	25	12						8
2689.60		13	28	27	15						8
2695.10		1	3	3	1						1
2699.50		0	0	0	0						0
2707.10		1	1	1	1						0
2728.90		0	1	1	0						0

Table 3.3 Absolute amounts of biomarkers, saturated hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	30bbS	30aaR	24baa	4D21a	2D29ba	4D27aaR
2650.00	0		22			
2677.50	6		26			
2682.30	8		27			
2683.20	7		31			
2685.50	7		22			
2686.40	7		22			
2687.70	7		22			
2689.60	7		27			
2695.10	1		26			
2699.50	0		26			
2707.10	0		36			
2728.90	0		40			

Table 3.3 Absolute amounts of biomarkers, saturated hydrocarbons

Table 3.4 Biomarker ratios, saturated hydrocarbons



sat-biom ord. samples - Amount

S-Depth (m)	E-Depth (m)	Well	Type	Lithology	Name	Orgid	Project	Seq.#	File name	File path	Instrument	Setup	Method
2650.00	2650.00	35/11-9	MUD			626661	97017	10	MUD.D	KV1516_2	HP5971A	GC-MSD-SA	MSD_S_C
2677.50	2677.50	35/11-9	OIL		MDT-BA65	626397	97017	18	35119.D	KV1516B	HP5971A	GC-MSD-SA	MSD_S_C
2682.30	2682.30	35/11-9	COCH			626231	97017	12	2682_30.D	35_11_9S	HP5971A	GC-MSD-SA	MSD_S_C
2683.20	2683.20	35/11-9	COCH			626232	97017	13	2683_20.D	35_11_9S	HP5971A	GC-MSD-SA	MSD_S_C
2685.50	2685.50	35/11-9	COCH			626233	97017	14	2685_50.D	35_11_9S	HP5971A	GC-MSD-SA	MSD_S_C
2686.40	2686.40	35/11-9	COCH			626234	97017	15	2686_40.D	35_11_9S	HP5971A	GC-MSD-SA	MSD_S_C
2687.70	2687.70	35/11-9	COCH			626235	97017	16	2687_70.D	35_11_9S	HP5971A	GC-MSD-SA	MSD_S_C
2689.60	2689.60	35/11-9	COCH			626236	97017	17	2689_60.D	35_11_9S	HP5971A	GC-MSD-SA	MSD_S_C
2695.10	2695.10	35/11-9	COCH			626237	97017	18	2695_10.D	35_11_9S	HP5971A	GC-MSD-SA	MSD_S_C
2699.50	2699.50	35/11-9	COCH			626238	97017	19	2699_50.D	35_11_9S	HP5971A	GC-MSD-SA	MSD_S_C
2707.10	2707.10	35/11-9	COCH			626239	97017	20	2707_10.D	35_11_9S	HP5971A	GC-MSD-SA	MSD_S_C
2728.90	2728.90	35/11-9	COCH			626240	97017	21	2782_90.D	35_11_9S	HP5971A	GC-MSD-SA	MSD_S_C



Ratios - amounts:

E-Depth (m)	Operator	Company	Aquired date	Misc.info.	Country	Status	Data Type	%29aas	%29bb	%27ster	%28ster	%29ster
2650.00	Reidun	NORSK HYDRO	26-07-1997		NOR	OK	AM	45.20	62.37	37.26	24.84	30.62
2677.50	Reidun	NORSK HYDRO	27-06-1997		NOR	OK	AM	52.07	66.79	32.95	23.38	33.99
2682.30	Reidun	NORSK HYDRO	09-07-1997		NOR	OK	AM	50.73	67.63	32.84	23.22	34.21
2683.20	Reidun	NORSK HYDRO	09-07-1997		NOR	OK	AM	50.74	67.01	32.77	23.99	33.68
2685.50	Reidun	NORSK HYDRO	09-07-1997		NOR	OK	AM	51.69	65.86	34.91	23.25	32.27
2686.40	Reidun	NORSK HYDRO	09-07-1997		NOR	OK	AM	47.00	64.96	33.11	24.38	33.35
2687.70	Reidun	NORSK HYDRO	09-07-1997		NOR	OK	AM	52.19	66.54	33.54	24.68	32.58
2689.60	Reidun	NORSK HYDRO	09-07-1997		NOR	OK	AM	47.81	66.25	32.98	24.27	33.26
2695.10	Reidun	NORSK HYDRO	09-07-1997		NOR	OK	AM	49.09	65.89	32.72	23.57	34.21
2699.50	Reidun	NORSK HYDRO	09-07-1997		NOR	OK	AM	43.67	58.58	33.25	24.07	33.75
2707.10	Reidun	NORSK HYDRO	09-07-1997		NOR	OK	AM	41.02	54.03	36.05	22.26	33.23
2728.90	Reidun	NORSK HYDRO	09-07-1997		NOR	OK	AM	43.64	59.42	33.93	24.04	33.93



Ratios - amounts:

E-Depth (m)	%30ster	%preg	%20/3	%23/3	%24/4	%tri	%27ts	%28ab	%29ts	%25nor30ab	%29ab
2650.00	7.28	13.68	6.10	52.26	35.65	18.36	76.15	16.49	30.03	11.51	47.91
2677.50	9.68	13.86	13.82	46.78	43.96	8.52	72.68	17.35	43.21	0.89	32.00
2682.30	9.72	13.08	15.01	47.71	48.77	7.47	72.75	17.23	42.81	4.64	32.54
2683.20	9.56	12.79	14.24	48.81	43.84	7.96	71.19	17.02	42.20	5.32	33.53
2685.50	9.57	13.25	14.48	51.00	45.19	7.93	70.98	16.75	41.80	2.42	33.47
2686.40	9.16	13.88	13.90	49.17	43.50	8.38	73.88	16.27	41.17	3.05	33.52
2687.70	9.21	13.31	14.64	49.25	44.31	8.12	72.45	16.68	41.95	2.80	33.34
2689.60	9.49	14.48	13.60	47.21	44.38	7.72	73.05	16.72	42.07	3.07	33.18
2695.10	9.50	17.16	16.67	51.12	44.23	11.00	63.97	21.64	39.51	2.85	36.54
2699.50	8.93	16.56	10.34	50.00	40.00	8.59	39.17	29.38	29.73	3.57	41.89
2707.10	8.46	14.48	14.29	53.25	43.75	9.01	86.84	17.74	30.40	6.45	42.86
2728.90	8.09	16.67	12.31	52.38	48.45	8.83	88.79	23.61	30.55	4.27	41.74



Ratios - amounts:

E-Depth (m)	%30ba	%30d	%30g	%32abs	%35ab	%27hop	%28hop	%29hop	%30hop	%31hop	%32hop
2650.00	10.86	16.17	10.45	61.95	37.04	9.96	4.02	21.94	22.85	18.74	10.33
2677.50	9.88	28.76	10.18	58.43	37.39	10.81	4.00	9.78	21.16	19.00	14.01
2682.30	8.57	28.77	9.60	61.15	38.41	10.29	3.87	10.36	20.33	19.19	14.77
2683.20	8.74	29.23	9.42	59.91	41.34	10.96	3.90	10.28	20.82	19.41	13.96
2685.50	9.88	28.10	11.48	56.99	40.70	9.80	3.88	11.17	21.43	19.70	13.97
2686.40	9.51	29.05	10.37	58.54	38.39	10.19	3.79	10.79	21.54	18.49	13.86
2687.70	9.31	27.64	11.01	58.55	41.17	10.72	3.88	11.12	21.35	18.49	14.12
2689.60	8.30	28.75	9.44	60.61	40.43	11.24	3.80	9.92	20.65	19.79	14.18
2695.10	11.58	27.95	12.96	56.78	41.56	10.20	4.84	11.91	19.83	18.75	13.67
2699.50	13.86	21.33	10.97	55.56	39.91	10.04	6.25	12.82	17.44	19.81	14.16
2707.10	15.48	20.82	12.12	58.80	43.64	5.38	3.54	14.57	19.41	20.94	15.28
2728.90	14.66	22.02	11.80	57.86	39.20	5.32	5.17	14.26	19.59	21.67	14.86



Ratios - amounts:

E-Depth (m)	%33hop	%34hop	%35hop	Ho/St1	Ho/St2
2650.00	7.22	3.11	1.83	1.39	1.87
2677.50	10.53	6.70	4.00	2.07	2.57
2682.30	10.73	6.44	4.02	2.12	2.63
2683.20	9.97	6.28	4.42	2.03	2.52
2685.50	9.73	6.12	4.20	2.09	2.60
2686.40	10.39	6.75	4.21	2.10	2.63
2687.70	9.65	6.28	4.40	2.07	2.55
2689.60	10.06	6.17	4.19	2.07	2.58
2695.10	10.23	6.18	4.40	2.10	2.66
2699.50	9.16	6.20	4.12	3.21	4.28
2707.10	9.20	6.58	5.09	2.56	3.53
2728.90	9.24	6.01	3.88	2.70	3.61

Table 3.5 Absolute amounts of aromatic hydrocarbons



Amounts

S-Depth (m)	E-Depth (m)	Well	Type	Lithology	Name	Orgid	Project	Seq.#	File name	File path	Instrument	Setup	Method
2650.00	2650.00	35/11-9	MUD			626661	97017	19	MUDA.D	KV1516_2	HP5971A	GC-MSD-AR	MSD_A_C
2677.50	2677.50	35/11-9	OIL		MDT-BA65	626397	97017	36	35119A.D	KV1516B	HP5971A	GC-MSD-AR	MSD_A_C
2682.30	2682.30	35/11-9	COCH			626231	97017	12	2682.D	354_3511	HP5971A	GC-MSD-AR	MSD_A_C
2683.20	2683.20	35/11-9	COCH			626232	97017	13	2683.D	354_3511	HP5971A	GC-MSD-AR	MSD_A_C
2685.50	2685.50	35/11-9	COCH			626233	97017	14	2685.D	354_3511	HP5971A	GC-MSD-AR	MSD_A_C
2686.40	2686.40	35/11-9	COCH			626234	97017	15	2686.D	354_3511	HP5971A	GC-MSD-AR	MSD_A_C
2687.70	2687.70	35/11-9	COCH			626235	97017	16	2687.D	354_3511	HP5971A	GC-MSD-AR	MSD_A_C
2689.60	2689.60	35/11-9	COCH			626236	97017	17	2689.D	354_3511	HP5971A	GC-MSD-AR	MSD_A_C
2695.10	2695.10	35/11-9	COCH			626237	97017	18	2695.D	354_3511	HP5971A	GC-MSD-AR	MSD_A_C
2699.50	2699.50	35/11-9	COCH			626238	97017	19	2699.D	354_3511	HP5971A	GC-MSD-AR	MSD_A_C
2707.10	2707.10	35/11-9	COCH			626239	97017	20	2707.D	354_3511	HP5971A	GC-MSD-AR	MSD_A_C
2728.90	2728.90	35/11-9	COCH			626240	97017	21	2728.D	354_3511	HP5971A	GC-MSD-AR	MSD_A_C

Table 3.5 Absolute amounts of aromatic hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	Operator	Company	Aquired date	Misc.info.	Country	Status	C13AI	C14AI	C15AI	C16AI	C17AI
2650.00	LINDA	NORSK HYDRO	26-07-1997		NOR	OK	0	0	0	0	0
2677.50	LINDA	NORSK HYDRO	28-06-1997		NOR	OK	0	0	0	0	0
2682.30	LINDA	NORSK HYDRO	15-07-1997		NOR	OK	0	0	0	0	0
2683.20	LINDA	NORSK HYDRO	15-07-1997		NOR	OK	0	0	0	0	0
2685.50	LINDA	NORSK HYDRO	15-07-1997		NOR	OK	0	0	0	0	0
2686.40	LINDA	NORSK HYDRO	15-07-1997		NOR	OK	0	0	0	0	0
2687.70	LINDA	NORSK HYDRO	15-07-1997		NOR	OK	0	0	0	0	0
2689.60	LINDA	NORSK HYDRO	15-07-1997		NOR	OK	0	0	0	0	0
2695.10	LINDA	NORSK HYDRO	15-07-1997		NOR	OK	0	0	0	0	0
2699.50	LINDA	NORSK HYDRO	15-07-1997		NOR	OK	0	0	0	0	0
2707.10	LINDA	NORSK HYDRO	15-07-1997		NOR	OK	0	0	0	0	0
2728.90	LINDA	NORSK HYDRO	15-07-1997		NOR	OK	0	0	0	0	0

Table 3.5 Absolute amounts of aromatic hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	C18AI	C19AI	C20AI	C21AI	C22AI	C23AI	C30AI	C31AI	N	2-MN	1-MN
2650.00	0	0	0	0	0	0	0	0	9	15	11
2677.50	0	0	0	0	0	0	0	0	1363	2217	1627
2682.30	0	0	0	0	0	0	0	0	445	1458	1056
2683.20	0	0	0	0	0	0	0	0	390	1272	927
2685.50	0	0	0	0	0	0	0	0	366	1517	1132
2686.40	0	0	0	0	0	0	0	0	272	1219	908
2687.70	0	0	0	0	0	0	0	0	284	1240	944
2689.60	0	0	0	0	0	0	0	0	322	1339	986
2695.10	0	0	0	0	0	0	0	0	39	70	50
2699.50	0	0	0	0	0	0	0	0	26	38	26
2707.10	0	0	0	0	0	0	0	0	70	106	71
2728.90	0	0	0	0	0	0	0	0	43	66	43

Table 3.5 Absolute amounts of aromatic hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	2-EN	1-EN	2.6+2.7-DMN	1.3+1.7-DMN	1.6-DMN	2.3+1.4-DMN	1.5-DMN	1.2-DMN	C3-N-1	C3-N-2	1.3.7-TMN
2650.00	1	1	4	8	6	3	1	1	0	0	2
2677.50	213	93	985	1114	1207	535	346	218	108	126	485
2682.30	182	77	829	1092	1133	468	286	202	93	123	425
2683.20	174	68	788	1092	1061	426	238	182	95	118	433
2685.50	192	80	851	1274	1169	493	266	201	97	126	428
2686.40	169	67	735	1142	1015	436	238	176	82	108	415
2687.70	183	75	863	1180	1125	458	264	197	96	121	426
2689.60	171	70	764	960	1007	424	270	194	84	113	382
2695.10	12	5	70	117	98	50	23	20	13	19	75
2699.50	3	2	16	28	22	11	6	5	2	2	9
2707.10	8	4	39	65	53	26	12	11	3	5	20
2728.90	5	2	24	39	32	16	7	6	2	3	11

Table 3.5 Absolute amounts of aromatic hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	1.3.6-TMN	1.3.5+1.4.6-TMN	2.3.6-TMN	1.6.7+1.2.7-TMN	1.2.6-TMN	1.2.4-TMN	1.2.5-TMN	BP	3-MBP	4-MBP	2.3'-DMBP
2650.00	2	2	1	1	1	0	1	3	3	1	0
2677.50	653	524	488	363	244	60	212	516	617	250	21
2682.30	620	479	496	347	228	53	218	396	519	229	21
2683.20	636	502	499	365	230	56	221	348	542	213	19
2685.50	653	540	488	365	244	57	226	412	579	229	21
2686.40	632	490	401	329	200	46	183	341	522	202	18
2687.70	659	541	484	377	233	55	214	374	576	222	19
2689.60	610	453	456	326	222	52	198	360	496	208	19
2695.10	116	96	85	68	43	11	42	31	85	34	3
2699.50	15	12	10	9	5	2	6	12	15	6	0
2707.10	30	25	21	19	11	3	13	30	32	13	1
2728.90	19	16	13	11	6	2	8	20	20	8	1

Table 3.5 Absolute amounts of aromatic hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	2.5-DMBP	2.4+2.4'-DMBP	2.3-DMBP	3-EBP	3.5-DMBP	3.3'-DMBP	4-EBP	3.4'-DMBP	4.4'-DMBP	3.4-DMBP	DBF
2650.00	0	0	0	0	0	1	0	1	0	0	1
2677.50	12	25	59	78	141	348	33	292	61	136	121
2682.30	12	22	57	78	133	336	31	279	64	144	105
2683.20	10	22	50	73	138	362	32	277	61	137	94
2685.50	11	22	53	78	142	376	31	269	60	150	107
2686.40	9	18	48	72	122	313	26	243	57	126	92
2687.70	11	23	52	77	134	363	30	260	57	147	106
2689.60	11	20	52	74	123	319	29	258	58	142	99
2695.10	1	3	9	14	29	74	6	54	13	31	20
2699.50	0	0	1	2	3	8	1	6	1	4	5
2707.10	1	1	3	4	8	19	2	14	3	9	12
2728.90	0	1	2	2	5	11	1	8	2	5	8

Table 3.5 Absolute amounts of aromatic hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	MDBF-1	MDBF-2	MDBF-3	F	C1-F-1	C1-F-2	1-MF	DBT	4-MDBT	3+2-MDBT	1-MDBT
2650.00	1	1	1	1	0	1	0	0	0	0	0
2677.50	203	167	142	509	145	434	97	15	20	6	3
2682.30	211	170	129	464	147	429	96	18	25	8	4
2683.20	196	178	141	447	154	427	95	16	21	7	3
2685.50	213	173	143	465	157	451	102	15	21	6	3
2686.40	186	155	122	430	127	402	81	14	20	7	3
2687.70	195	168	141	463	153	450	97	17	23	7	4
2689.60	190	159	124	418	135	373	88	18	23	7	4
2695.10	49	44	35	99	36	114	20	4	4	1	1
2699.50	9	7	6	18	4	15	2	1	1	0	0
2707.10	19	17	13	40	10	40	6	3	2	1	0
2728.90	11	10	8	25	6	24	3	2	2	0	0

Table 3.5 Absolute amounts of aromatic hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	P	3-MP	2-MP	9-MP	1-MP	2EP+9EP+3.6-DMP	1EP	2.6+2.7+3.5-DMP	1.3+2.10+3.9+3.10-DMP	1.6+2.5+2.9-DMP	1.7-DMP
2650.00	5	1	1	2	1	0	0	0	1	0	0
2677.50	399	188	224	259	222	41	60	38	190	123	112
2682.30	510	227	282	317	259	48	68	41	229	134	133
2683.20	532	243	300	300	275	47	68	43	225	135	132
2685.50	490	223	268	331	262	45	64	39	220	132	127
2686.40	478	225	247	321	266	43	62	36	215	132	124
2687.70	536	230	270	336	278	46	70	41	236	140	138
2689.60	462	213	260	296	252	44	62	39	204	123	119
2695.10	171	58	64	87	66	9	12	6	45	26	22
2699.50	40	9	10	16	11	1	1	1	5	3	2
2707.10	105	29	34	47	36	4	4	2	19	10	9
2728.90	65	19	22	31	24	3	3	1	13	7	6

Table 3.5 Absolute amounts of aromatic hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	2.3-DMP	1.9+4.9+4.10- DMP	1.8-DMP	Retene	20TA	21TA	S26TA	R26TA/S27T A	S28TA	R27TA	R28TA
2650.00	0	0	0	0	0	0	0	0	0	0	0
2677.50	39	39	27	50	2	1	1	2	1	1	1
2682.30	42	76	30	52	2	2	1	2	1	1	1
2683.20	41	79	31	57	2	2	1	2	1	1	1
2685.50	41	71	30	51	2	1	1	2	1	1	1
2686.40	40	67	28	52	2	1	0	1	1	1	1
2687.70	45	71	31	52	2	2	0	2	1	1	1
2689.60	38	72	29	55	2	2	0	2	1	1	1
2695.10	7	13	5	20	0	0	0	0	0	0	0
2699.50	1	2	1	7	0	0	0	0	0	0	0
2707.10	3	6	2	18	0	0	0	0	0	0	0
2728.90	2	5	2	10	0	0	0	0	0	0	0

Table 3.5 Absolute amounts of aromatic hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	d8N	d10BP	d10P	d12C
2650.00	26	27	26	26
2677.50	31	32	31	31
2682.30	32	33	32	32
2683.20	36	37	36	36
2685.50	26	27	26	26
2686.40	25	26	25	25
2687.70	25	26	25	25
2689.60	32	32	32	32
2695.10	31	32	31	31
2699.50	30	31	30	30
2707.10	43	44	43	43
2728.90	47	49	47	47

Table 3.5 Absolute amounts of aromatic hydrocarbons

Table 3.6 Aromatic hydrocarbon ratios



aro-hc ord. samples - Amount

S-Depth (m)	E-Depth (m)	Well	Type	Lithology	Name	Orgid	Project	Seq.#	File name	File path	Instrument	Setup	Method
2650.00	2650.00	35/11-9	MUD			626661	97017	19	MUDA.D	KV1516_2	HP5971A	GC-MSD-AR	MSD_A_C
2677.50	2677.50	35/11-9	OIL		MDT-BA65	626397	97017	36	35119A.D	KV1516B	HP5971A	GC-MSD-AR	MSD_A_C
2682.30	2682.30	35/11-9	COCH			626231	97017	12	2682.D	354_3511	HP5971A	GC-MSD-AR	MSD_A_C
2683.20	2683.20	35/11-9	COCH			626232	97017	13	2683.D	354_3511	HP5971A	GC-MSD-AR	MSD_A_C
2685.50	2685.50	35/11-9	COCH			626233	97017	14	2685.D	354_3511	HP5971A	GC-MSD-AR	MSD_A_C
2686.40	2686.40	35/11-9	COCH			626234	97017	15	2686.D	354_3511	HP5971A	GC-MSD-AR	MSD_A_C
2687.70	2687.70	35/11-9	COCH			626235	97017	16	2687.D	354_3511	HP5971A	GC-MSD-AR	MSD_A_C
2689.60	2689.60	35/11-9	COCH			626236	97017	17	2689.D	354_3511	HP5971A	GC-MSD-AR	MSD_A_C
2695.10	2695.10	35/11-9	COCH			626237	97017	18	2695.D	354_3511	HP5971A	GC-MSD-AR	MSD_A_C
2699.50	2699.50	35/11-9	COCH			626238	97017	19	2699.D	354_3511	HP5971A	GC-MSD-AR	MSD_A_C
2707.10	2707.10	35/11-9	COCH			626239	97017	20	2707.D	354_3511	HP5971A	GC-MSD-AR	MSD_A_C
2728.90	2728.90	35/11-9	COCH			626240	97017	21	2728.D	354_3511	HP5971A	GC-MSD-AR	MSD_A_C



Ratios - amounts:

E-Depth (m)	Operator	Company	Aquired date	Misc.info.	Country	Status	Data Type	Naphtalene	C1 Naph	C2 Naph	C3 Naph	Phen
2650.00	LINDA	NORSK HYDRO	26-07-1997		NOR	OK	AM	9	26	25	12	5
2677.50	LINDA	NORSK HYDRO	28-06-1997		NOR	OK	AM	1363	3843	4712	3263	399
2682.30	LINDA	NORSK HYDRO	15-07-1997		NOR	OK	AM	445	2513	4269	3081	510
2683.20	LINDA	NORSK HYDRO	15-07-1997		NOR	OK	AM	390	2199	4028	3157	532
2685.50	LINDA	NORSK HYDRO	15-07-1997		NOR	OK	AM	366	2649	4526	3225	490
2686.40	LINDA	NORSK HYDRO	15-07-1997		NOR	OK	AM	272	2127	3978	2886	478
2687.70	LINDA	NORSK HYDRO	15-07-1997		NOR	OK	AM	284	2185	4346	3206	536
2689.60	LINDA	NORSK HYDRO	15-07-1997		NOR	OK	AM	322	2324	3860	2897	462
2695.10	LINDA	NORSK HYDRO	15-07-1997		NOR	OK	AM	39	120	395	567	171
2699.50	LINDA	NORSK HYDRO	15-07-1997		NOR	OK	AM	26	65	93	73	40
2707.10	LINDA	NORSK HYDRO	15-07-1997		NOR	OK	AM	70	177	219	152	105
2728.90	LINDA	NORSK HYDRO	15-07-1997		NOR	OK	AM	43	110	131	91	65



Ratios - amounts:

E-Depth (m)	C2 Phen	C1 Phen	Mpi1	F1	F2	Dnr	%tas	Dbt P	F P	Bp 16dmn	2mn 1mn
2650.00	2	6	0.46	0.43	0.23	2.99	43.48	0.02	0.25	0.51	1.39
2677.50	669	893	0.70	0.46	0.25	2.85	42.59	0.04	1.28	0.43	1.36
2682.30	802	1085	0.70	0.47	0.26	2.90	43.77	0.03	0.91	0.35	1.38
2683.20	801	1117	0.74	0.49	0.27	3.31	42.69	0.03	0.84	0.33	1.37
2685.50	769	1084	0.68	0.45	0.25	3.20	44.35	0.03	0.95	0.35	1.34
2686.40	748	1059	0.67	0.45	0.23	3.09	43.52	0.03	0.90	0.34	1.34
2687.70	817	1115	0.65	0.45	0.24	3.27	43.92	0.03	0.86	0.33	1.31
2689.60	730	1020	0.70	0.46	0.25	2.83	46.17	0.04	0.90	0.36	1.36
2695.10	145	275	0.57	0.44	0.23	3.04	37.79	0.02	0.58	0.31	1.40
2699.50	17	47	0.43	0.42	0.22	2.96	29.20	0.03	0.46	0.55	1.47
2707.10	61	145	0.50	0.43	0.23	3.24	37.57	0.02	0.38	0.57	1.48
2728.90	41	96	0.51	0.43	0.23	3.24	34.08	0.03	0.38	0.62	1.53



Ratios - amounts:

E-Depth (m)	2en 1en	4 1 Mdbt
2650.00	1.91	3.04
2677.50	2.30	5.95
2682.30	2.36	6.27
2683.20	2.54	6.72
2685.50	2.41	6.51
2686.40	2.52	6.58
2687.70	2.42	5.91
2689.60	2.47	6.42
2695.10	2.51	6.19
2699.50	2.20	4.95
2707.10	2.18	5.77
2728.90	2.36	5.79

ISOTOPE ANALYSIS RESULTS (SEDIMENT SAMPLES)

Well	St.Depth (m)	En.Depth (m)	Name	Lithology	Type	d13C EXTR	d13C SAT	d13C ARO	d13C POL	d13C ASP	d13C KERO	Analysing Compa
NOR 35/11-9	2650.00	2650.00			MUD		-28.98					NORSK HYDRO
NOR 35/11-9	2682.30	2682.30			COCH		-28.67	-27.10				NORSK HYDRO
NOR 35/11-9	2683.20	2683.20			COCH		-28.65	-27.15				NORSK HYDRO
NOR 35/11-9	2685.50	2685.50			COCH		-28.56	-27.11				NORSK HYDRO
NOR 35/11-9	2686.40	2686.40			COCH		-28.68	-27.18				NORSK HYDRO
NOR 35/11-9	2687.70	2687.70			COCH		-28.66	-27.16				NORSK HYDRO
NOR 35/11-9	2689.60	2689.60			COCH		-28.62	-27.07				NORSK HYDRO
NOR 35/11-9	2695.10	2695.10			COCH		-28.82	-27.23				NORSK HYDRO
NOR 35/11-9	2699.50	2699.50			COCH		-29.47	-26.93				NORSK HYDRO
NOR 35/11-9	2707.10	2707.10			COCH		-28.78	-26.63				NORSK HYDRO
NOR 35/11-9	2728.90	2728.90			COCH							NORSK HYDRO
NOR 35/11-9	2677.50	2677.50	MDT-BA65		OIL		-28.60	-27.18				NORSK HYDRO



DEASPHALTING DATA (OILS)

Well	St.Depth (m)	En.Depth (m)	Name	OIL (mg)	ASP (mg)	ASP (%)	Analysing Company
NOR/35/11-8 S	2887.00	2902.00	DST2	62.90	0.6	1.0	NORSK HYDRO
NOR/35/11-8 S	2911.00	2932.00	DST1B	61.30	0.2	0.3	NORSK HYDRO
NOR/35/11-9	2677.50	2677.50	MDT-BA	109.00	0.4	0.4	NORSK HYDRO

IATROSCAN - Calculated Weight% / SARA

Petroleum Geochemistry Group

Research Centre Bergen

02-Sep-1997



COMPOSITION OF EXTRACTS/OILS WELL

Well	St.Depth (m)	En.Depth (m)	Type	Lithology	Name	Calculated Weight %			HC TOTA	ASPH	Non-HC TOTAL	TOT HC /Non-HC	Analysing Company
						SAT	ARO	NSO					
NOR 35/11-8 S	2887.00	2902.00	OIL		DST2	70.6	24.0	4.5	94.5	1.0	5.5	17.3	NORSK HYDRO
NOR 35/11-8 S	2911.00	2932.00	OIL		DST1B	72.3	23.6	3.8	95.9	0.3	4.1	23.4	NORSK HYDRO
NOR 35/11-9	2677.50	2677.50	OIL		MDT-BA65	75.7	19.5	4.4	95.2	0.4	4.8	20.0	NORSK HYDRO



Table 4.3 Absolute amounts of saturated hydrocarbons

Amounts

S-Depth (m)	E-Depth (m)	Well	Type	Lithology	Name	Orgid	Project	Seq.#	File name	File path	Instrument	Setup	Method
2887.00	2902.00	35/11-8 S	OIL		DST2	608311	36090	8	351108s2		HP5890II	GC-FID-SAT	FID_SAT3
2911.00	2932.00	35/11-8 S	OIL		DST1B	608885	36090	7	351108s2		HP5890II	GC-FID-SAT	FID_SAT3
2677.50	2677.50	35/11-9	OIL		MDT-BA65	626397	97017	18	kv1516_1	XCHROM	HP5890II	GC-FID-SAT	FID_SAT3

Table 4.3 Absolute amounts of saturated hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	Operator	Company	Aquired date	Misc.info.	Country	Status	nC11	nC12	nC13	nC14	iC16
2902.00	Arne	NORSK HYDRO	01-01-1901		NOR	OK	0	0	0	0	3
2932.00	Arne	NORSK HYDRO	01-01-1901		NOR	OK	0	0	0	0	3
2677.50	Linda	NORSK HYDRO	12-08-1997		NOR	OK	0	0	0	0	3

Table 4.3 Absolute amounts of saturated hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	nC15	nC16	iC18	nC17	Pristane	nC18	Phytane	nC19	nC20	nC21	nC22
2902.00	9	10	3	7	4	6	3	6	5	5	5
2932.00	9	9	3	7	4	6	2	6	6	5	5
2677.50	9	9	3	7	4	6	2	6	6	5	5

Table 4.3 Absolute amounts of saturated hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	nC23	nC24	nC25	nC26	nC27	nC28	nC29	nC30	nC31	nC32	nC33
2902.00	5	5	4	4	4	3	3	2	2	1	1
2932.00	5	5	5	4	4	3	3	2	2	1	1
2677.50	5	5	5	4	4	3	3	2	2	2	1

Table 4.3 Absolute amounts of saturated hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	nC34	nC35	C12D26	C16D34	C20D42	C24D50	C30D62	IntStdOld
2902.00	1	1	3	3	3	3	2	
2932.00	1	1	3	3	3	3	2	
2677.50	1	1	4	4	4	4	2	

Table 4.3 Absolute amounts of saturated hydrocarbons

Table 4.4 Molecular ratios, saturated hydrocarbons



sat-hc ord. samples - Amount

S-Depth (m)	E-Depth (m)	Well	Type	Lithology	Name	Orgid	Project	Seq.#	File name	File path	Instrument	Setup	Method
2887.00	2902.00	35/11-8 S	OIL		DST2	608311	36090	8	351108s2		HP5890II	GC-FID-SAT	FID_SAT3
2911.00	2932.00	35/11-8 S	OIL		DST1B	608885	36090	7	351108s2		HP5890II	GC-FID-SAT	FID_SAT3
2677.50	2677.50	35/11-9	OIL		MDT-BA65	626397	97017	18	kv1516_1	XCHROM	HP5890II	GC-FID-SAT	FID_SAT3



Ratios - amounts:

E-Depth (m)	Operator	Company	Aquired date	Misc.info.	Country	Status	Data Type	Pr Nc17	Ph Nc18	Prn17 Phn18	Pr Ph	Nc17 Nc17c27
2902.00	Arne	NORSK HYDRO	01-01-1901		NOR	OK	AM	0.57	0.39	1.45	1.58	0.66
2932.00	Arne	NORSK HYDRO	01-01-1901		NOR	OK	AM	0.56	0.40	1.39	1.52	0.65
2677.50	Linda	NORSK HYDRO	12-08-1997		NOR	OK	AM	0.56	0.38	1.45	1.70	0.67



Ratios - amounts:

E-Depth (m)	Cpi 1	Cpi 2
2902.00	1.05	0.96
2932.00	1.06	0.96
2677.50	1.03	0.94

Table 4.5 Absolute amounts of biomarkers, saturated hydrocarbons



Amounts

S-Depth (m)	E-Depth (m)	Well	Type	Lithology	Name	Orgid	Project	Seq.#	File name	File path	Instrument	Setup	Method
2887.00	2902.00	35/11-8 S	OIL		DST2	608311	36090	29	2902S.D	351108S1	HP5971A	GC-MSD-SA	MSD_S_C
2887.00	2902.00	35/11-8 S	OIL		DST2	608311	36090	12	MQS1240796	Archive	AUTOSPEC-	GC-MSMS-S	MQS1_C
2911.00	2932.00	35/11-8 S	OIL		DST1B	608885	36090	28	2932S.D	351108S1	HP5971A	GC-MSD-SA	MSD_S_C
2911.00	2932.00	35/11-8 S	OIL		DST1B	608885	36090	11	MQS1240796	Archive	AUTOSPEC-	GC-MSMS-S	MQS1_C
2677.50	2677.50	35/11-9	OIL		MDT-BA65	626397	97017	18	35119.D	KV1516B	HP5971A	GC-MSD-SA	MSD_S_C

Table 4.5 Absolute amounts of biomarkers, saturated hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	Operator	Company	Aquired date	Misc.info.	Country	Status	19/3	20/3	21/3	23/3	24/3
2902.00	JKB	NORSK HYDRO	12-07-1996		NOR	OK	7	4	5	7	5
2902.00	Arne	NORSK HYDRO	31-07-1996		NOR	ok					
2932.00	JKB	NORSK HYDRO	12-07-1996		NOR	OK	4	4	4	7	5
2932.00	Arne	NORSK HYDRO	31-07-1996		NOR	ok					
2677.50	Reidun	NORSK HYDRO	27-06-1997		NOR	OK	7	4	5	8	6

Table 4.5 Absolute amounts of biomarkers, saturated hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	25/3	26/3R	26/3S	28/3R	28/3S	29/3R	29/3S	30/3R	30/3S	24/4	27Ts
2902.00	3	2	2	3	2	4	4			6	24
2902.00											
2932.00	3	2	2	3	3	4	4			6	29
2932.00											
2677.50	3	2	3	3	3	6	6			7	26

Table 4.5 Absolute amounts of biomarkers, saturated hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	27Tm	27b	25nor28ab	28ab	25nor29ab	29ab	29ba	29Ts	25nor30ab	30ab	30ba
2902.00	9	3	7	9	2	25	3	20	2	52	5
2902.00											
2932.00	10	5	7	13	2	34	6	27	2	68	7
2932.00											
2677.50	10	4	7	13	1	30	3	23	1	63	7

Table 4.5 Absolute amounts of biomarkers, saturated hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	30bb	30D	30G	30O	30D13	31abS	31abR	31ba	30nor32ab	32abS	32abR
2902.00		21	5		6	30	22	3		22	16
2902.00											
2932.00		29	8		7	41	29	4		31	22
2932.00											
2677.50		26	7		7	36	27	4		27	19

Table 4.5 Absolute amounts of biomarkers, saturated hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	33abS	33abR	34abS	34abR	35abS	35abR	21aa	21bb	22aa	22bb	23aa
2902.00	16	10	11	7	7	4	14	16	13	8	
2902.00											
2932.00	21	14	14	8	9	5	9	11	11	7	
2932.00											
2677.50	21	14	14	9	8	5	13	14	12	7	

Table 4.5 Absolute amounts of biomarkers, saturated hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	23bb	27dbS	27dbR	27daR	27daS	27aaS	27bbR	27bbS	27aaR	28dbSA	28dbSB
2902.00		43	25				26	15	10		
2902.00											
2932.00		38	28				31	21	12		
2932.00											
2677.50		39	24				26	17	9		

Table 4.5 Absolute amounts of biomarkers, saturated hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	28dbRA	28dbRB	28daR	28daS	28aaS	28bbR	28bbS	28aaR	29dbS	29dbR	29daR
2902.00						13	18				
2902.00											
2932.00						18	20				
2932.00											
2677.50						13	17				

Table 4.5 Absolute amounts of biomarkers, saturated hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	29daS	29aaS	29bbR	29bbS	29aaR	30dbS	30dbR	30daR	30daS	30aaS	30bbR
2902.00		10	21	20	11						6
2902.00											
2932.00		14	40	26	14						8
2932.00											
2677.50		11	22	22	10						6

Table 4.5 Absolute amounts of biomarkers, saturated hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	30bbS	30aaR	24baa	4D21a	2D29ba	4D27aaR
2902.00	5		23			
2902.00						
2932.00	8		24			
2932.00						
2677.50	6		26			

Table 4.5 Absolute amounts of biomarkers, saturated hydrocarbons

Table 4.6 Biomarker ratios, saturated hydrocarbons



sat-biom ord. samples - Amount

S-Depth (m)	E-Depth (m)	Well	Type	Lithology	Name	Orgid	Project	Seq.#	File name	File path	Instrument	Setup	Method
2887.00	2902.00	35/11-8 S	OIL		DST2	608311	36090	29	2902S.D	351108S1	HP5971A	GC-MSD-SA	MSD_S_C
2911.00	2932.00	35/11-8 S	OIL		DST1B	608885	36090	28	2932S.D	351108S1	HP5971A	GC-MSD-SA	MSD_S_C
2677.50	2677.50	35/11-9	OIL		MDT-BA65	626397	97017	18	35119.D	KV1516B	HP5971A	GC-MSD-SA	MSD_S_C



Ratios - amounts:

E-Depth (m)	Operator	Company	Aquired date	Misc.info.	Country	Status	Data Type	%29aas	%29bb	%27ster	%28ster	%29ster
2902.00	JKB	NORSK HYDRO	12-07-1996		NOR	OK	AM	48.79	66.37	33.25	24.63	33.24
2932.00	JKB	NORSK HYDRO	12-07-1996		NOR	OK	AM	50.39	70.23	30.49	21.97	38.25
2677.50	Reidun	NORSK HYDRO	27-06-1997		NOR	OK	AM	52.07	66.79	32.95	23.38	33.99



Ratios - amounts:

E-Depth (m)	%30ster	%preg	%20/3	%23/3	%24/4	%tri	%27ts	%28ab	%29ts	%25nor30ab	%29ab
2902.00	8.88	16.34	14.91	47.88	43.83	9.45	73.33	15.17	43.98	3.73	32.44
2932.00	9.28	9.37	14.53	47.32	42.79	6.53	73.83	15.97	44.14	3.54	33.44
2677.50	9.68	13.86	13.82	46.78	43.96	8.52	72.68	17.35	43.21	0.89	32.00



Ratios - amounts:

E-Depth (m)	%30ba	%30d	%30g	%32abs	%35ab	%27hop	%28hop	%29hop	%30hop	%31hop	%32hop
2902.00	8.79	28.52	8.78	58.38	39.10	11.88	3.45	10.48	21.13	19.14	14.04
2932.00	8.90	30.24	10.63	58.82	38.56	10.81	3.59	11.05	20.74	19.37	14.78
2677.50	9.88	28.76	10.18	58.43	37.39	10.81	4.00	9.78	21.16	19.00	14.01



Ratios - amounts:

E-Depth (m)	%33hop	%34hop	%35hop	Ho/St1	Ho/St2
2902.00	9.45	6.36	4.08	1.76	2.20
2932.00	9.67	6.14	3.85	1.69	2.08
2677.50	10.53	6.70	4.00	2.07	2.57

Table 4.7 Absolute amounts of aromatic hydrocarbons



Amounts

S-Depth (m)	E-Depth (m)	Well	Type	Lithology	Name	Orgid	Project	Seq.#	File name	File path	Instrument	Setup	Method
2887.00	2902.00	35/11-8 S	OIL		DST2	608311	36090	58	2902A.D	351108S1	HP5971A	GC-MSD-AR	MSD_A_C
2911.00	2932.00	35/11-8 S	OIL		DST1B	608885	36090	57	2932A.D	351108S1	HP5971A	GC-MSD-AR	MSD_A_C
2677.50	2677.50	35/11-9	OIL		MDT-BA65	626397	97017	36	35119A.D	KV1516B	HP5971A	GC-MSD-AR	MSD_A_C

Table 4.7 Absolute amounts of aromatic hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	Operator	Company	Aquired date	Misc.info.	Country	Status	C13AI	C14AI	C15AI	C16AI	C17AI
2902.00	JKB	NORSK HYDRO	16-07-1996		NOR	ok	0	0	0	0	0
2932.00	JKB	NORSK HYDRO	16-07-1996		NOR	ok	0	0	0	0	0
2677.50	LINDA	NORSK HYDRO	28-06-1997		NOR	OK	0	0	0	0	0

Table 4.7 Absolute amounts of aromatic hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	C18AI	C19AI	C20AI	C21AI	C22AI	C23AI	C30AI	C31AI	N	2-MN	1-MN
2902.00	0	0	0	0	0	0	0	0	1662	2588	1821
2932.00	0	0	0	0	0	0	0	0	1615	2511	1781
2677.50	0	0	0	0	0	0	0	0	1363	2217	1627

Table 4.7 Absolute amounts of aromatic hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	2-EN	1-EN	2.6+2.7-DMN	1.3+1.7-DMN	1.6-DMN	2.3+1.4-DMN	1.5-DMN	1.2-DMN	C3-N-1	C3-N-2	1.3.7-TMN
2902.00	242	101	1047	1221	1250	556	341	222	92	120	444
2932.00	237	93	1041	1137	1250	541	319	231	94	116	453
2677.50	213	93	985	1114	1207	535	346	218	108	126	485

Table 4.7 Absolute amounts of aromatic hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	1.3.6-TMN	1.3.5+1.4.6-TMN	2.3.6-TMN	1.6.7+1.2.7-TMN	1.2.6-TMN	1.2.4-TMN	1.2.5-TMN	BP	3-MBP	4-MBP	2.3'-DMBP
2902.00	629	467	460	321	206	48	187	616	656	271	23
2932.00	640	493	454	344	227	52	197	567	614	255	21
2677.50	653	524	488	363	244	60	212	516	617	250	21

Table 4.7 Absolute amounts of aromatic hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	2.5-DMBP	2.4+2.4'- DMBP	2.3-DMBP	3-EBP	3.5-DMBP	3.3'-DMBP	4-EBP	3.4'-DMBP	4.4'-DMBP	3.4-DMBP	DBF
2902.00	11	23	56	67	121	323	28	223	48	180	119
2932.00	12	22	58	74	114	305	29	267	58	123	119
2677.50	12	25	59	78	141	348	33	292	61	136	121

Table 4.7 Absolute amounts of aromatic hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	MDBF-1	MDBF-2	MDBF-3	F	C1-F-1	C1-F-2	1-MF	DBT	4-MDBT	3+2-MDBT	1-MDBT
2902.00	183	147	115	423	126	366	75	20	25	9	4
2932.00	197	156	117	480	127	372	76	19	26	9	5
2677.50	203	167	142	509	145	434	97	15	20	6	3

Table 4.7 Absolute amounts of aromatic hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	P	3-MP	2-MP	9-MP	1-MP	2EP+9EP+3. 6-DMP	1EP	2.6+2.7+3.5- DMP	1.3+2.10+3.9 +3.10-DMP	1.6+2.5+2.9- DMP	1.7-DMP
2902.00	517	203	247	297	247	40	59	34	210	121	113
2932.00	547	217	281	297	247	45	63	41	217	127	124
2677.50	399	188	224	259	222	41	60	38	190	123	112

Table 4.7 Absolute amounts of aromatic hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	2.3-DMP	1.9+4.9+4.10- DMP	1.8-DMP	Retene	20TA	21TA	S26TA	R26TA/S27T A	S28TA	R27TA	R28TA
2902.00	35	60	24	47	2	1	0	1	1	0	1
2932.00	41	67	27	49	1	1	0	1	1	1	1
2677.50	39	39	27	50	2	1	1	2	1	1	1

Table 4.7 Absolute amounts of aromatic hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	d8N	d10BP	d10P	d12C
2902.00	27	28	27	27
2932.00	28	29	28	28
2677.50	31	32	31	31

Table 4.7 Absolute amounts of aromatic hydrocarbons

Table 4.8 Aromatic hydrocarbon ratios



aro-hc ord. samples - Amount

S-Depth (m)	E-Depth (m)	Well	Type	Lithology	Name	Orgid	Project	Seq.#	File name	File path	Instrument	Setup	Method
2887.00	2902.00	35/11-8 S	OIL		DST2	608311	36090	58	2902A.D	351108S1	HP5971A	GC-MSD-AR	MSD_A_C
2911.00	2932.00	35/11-8 S	OIL		DST1B	608885	36090	57	2932A.D	351108S1	HP5971A	GC-MSD-AR	MSD_A_C
2677.50	2677.50	35/11-9	OIL		MDT-BA65	626397	97017	36	35119A.D	KV1516B	HP5971A	GC-MSD-AR	MSD_A_C



Ratios - amounts:

E-Depth (m)	Operator	Company	Aquired date	Misc.info.	Country	Status	Data Type	Naphtal ene	C1 Naph	C2 Naph	C3 Naph	Phen
2902.00	JKB	NORSK HYDRO	16-07-1996		NOR	ok	AM	1662	4409	4980	2974	517
2932.00	JKB	NORSK HYDRO	16-07-1996		NOR	ok	AM	1615	4292	4849	3070	547
2677.50	LINDA	NORSK HYDRO	28-06-1997		NOR	OK	AM	1363	3843	4712	3263	399



Ratios - amounts:

E-Depth (m)	C2 Phen	C1 Phen	Mpi1	F1	F2	Dnr	%tas	Dbt P	F P	Bp 16dmn	2mn 1mn
2902.00	695	994	0.64	0.45	0.25	3.07	50.94	0.04	0.82	0.49	1.42
2932.00	752	1040	0.68	0.48	0.27	3.27	50.13	0.03	0.88	0.45	1.41
2677.50	669	893	0.70	0.46	0.25	2.85	42.59	0.04	1.28	0.43	1.36



Ratios - amounts:

E-Depth (m)	2en 1en	4 1 Mdbt
2902.00	2.39	6.04
2932.00	2.55	5.80
2677.50	2.30	5.95

Table 4.9 Absolute amounts of components, light hydrocarbons



Amounts

S-Depth (m)	E-Depth (m)	Well	Type	Lithology	Name	Orgid	Project	Seq.#	File name	File path	Instrument	Setup	Method
2887.00	2902.00	35/11-8 S	OIL		DST2	608311	36090	8	o351108b	XCHROM	HP5880	C4_20	C4_20_A
2911.00	2932.00	35/11-8 S	OIL		DST1B	608885	36090	8	o360701d	XCHROM	HP5880	C4_20	C4_20_A
2911.00	2932.00	35/11-8 S	OIL		DST1B	608885	36090	9	o351108b	XCHROM	HP5880	C4_20	C4_20_A
2677.50	2677.50	35/11-9	OIL		MDT-BA65	626397	97017	12	35119MDT.D	3007	AC/HP6890	C5_20	C520D_A.M

Table 4.9 Absolute amounts of components, light hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	Operator	Company	Aquired date	Misc.info.	Country	Status	iC5	nC5	22dm-C4	cyC5	23dm-C4
2902.00	Arne	NORSK HYDRO	28-07-1996		NOR	OK	3	5	0	0	0
2932.00	Arne	NORSK HYDRO	01-08-1996		NOR	OK	3	5	0	0	0
2932.00	Arne	NORSK HYDRO	28-07-1996		NOR	OK	3	5	0	0	0
2677.50	Arne	NORSK HYDRO	25-08-1997		NOR	OK	2	3	0	1	0

Table 4.9 Absolute amounts of components, light hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	2m-C5	3m-C5	nC6	3m-cyC5-ene	22dm-C5	m-cyC5	24dm-C5	223tm-C4	33dm-C5	cyC6	2m-C6
2902.00	3	2	6	0	0	4	0	0	0	9	2
2932.00	2	2	5	0	0	4	0	0	0	8	2
2932.00	3	2	6	0	0	4	0	0	0	8	2
2677.50	2	1	5	0	0	3	0	0	0	8	2

Table 4.9 Absolute amounts of components, light hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	23dm-C5	11dm-cyC5	3m-C6	1c.3dm-cyC5	1t.3dm-cyC5	3e-C5	1t.2dm-cyC5	nC7	1c.2-dm- cyC5	m-cyC6	113tm-cyC5
2902.00	1	1	2	1	1	0	1	7	0	13	1
2932.00	1	0	2	1	1	0	1	7	0	13	1
2932.00	1	1	2	1	1	0	1	7	0	13	1
2677.50	1	1	2	1	1	0	1	7	0	13	1

Table 4.9 Absolute amounts of components, light hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	e-cyC5	25dm-C6	223tm- C5/24dm-C6	1c.2t.4tm- cyC5	33dm-C6	1t.2c.3tm- cyC5	234tm-C5	23dm-C6	2m-C7	4m-C7	3m-C7
2902.00	1	0	0	0	0	0	0	0	2	0	0
2932.00	1	0	0	0	0	0	0	0	2	0	0
2932.00	1	0	0	0	0	0	0	0	2	0	0
2677.50	1	0	0	0	0	0	0	0	2	1	1

Table 4.9 Absolute amounts of components, light hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	1c.3dm-cyC6	1t.4dm-cyC6	11dm-cyC6	1t.2dm-cyC6	nC8	e-cyC6	iC9	4m-C8	2m-C8	3m-C8	nC9
2902.00	3	0	0	1	7	4	1	0	0	0	7
2932.00	3	0	0	1	8	4	1	0	0	0	7
2932.00	3	0	0	1	8	4	1	0	0	0	7
2677.50	3	1	0	1	8	4	1	1	1	1	7

Table 4.9 Absolute amounts of components, light hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	iC10	nC10	iC11	nC11	nC12	iC13	iC14	nC13	iC15	nC14	Ic16
2902.00	1	7	2	8	8	1	2	8	2	8	3
2932.00	1	7	1	7	7	1	2	8	2	8	3
2932.00	1	7	2	8	7	1	1	8	2	8	3
2677.50	0	7	0	7	8	2	4	8	2	8	3

Table 4.9 Absolute amounts of components, light hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	nC15	nC16	iC18	nC17	Pristane	nC18	Phytane	nC19	nC20	Benzene	Toluene/233t m-C5
2902.00	8	8	2	7	4	7	2	6	5	5	12
2932.00	8	8	2	7	4	7	2	6	5	4	11
2932.00	8	8	2	7	4	7	2	7	5	4	11
2677.50	8	8	2	7	4	7	2	8	8	4	11

Table 4.9 Absolute amounts of components, light hydrocarbons



Peak values - amounts: ng/mg EOM

E-Depth (m)	e-benzene	m-xylene	p-xylene	o-xylene	iC8(ISTD)/22 4tm-C5	phC6(ISTD)
2902.00	2	7	2	3	11	11
2932.00	2	6	2	3	10	10
2932.00	2	7	2	3	10	10
2677.50	2	6	2	3	10	10

Table 4.9 Absolute amounts of components, light hydrocarbons

Table 4.10 Molecular ratios, light hydrocarbons



C5-20 hc ord. samples - Amount

S-Depth (m)	E-Depth (m)	Well	Type	Lithology	Name	Orgid	Project	Seq.#	File name	File path	Instrument	Setup	Method
2887.00	2902.00	35/11-8 S	OIL		DST2	608311	36090	8	o351108b	XCHROM	HP5880	C4_20	C4_20_A
2911.00	2932.00	35/11-8 S	OIL		DST1B	608885	36090	8	o360701d	XCHROM	HP5880	C4_20	C4_20_A
2911.00	2932.00	35/11-8 S	OIL		DST1B	608885	36090	9	o351108b	XCHROM	HP5880	C4_20	C4_20_A
2677.50	2677.50	35/11-9	OIL		MDT-BA65	626397	97017	12	35119MDT.D	3007	AC/HP6890	C5_20	C520D_A.M



Ratios - amounts:

E-Depth (m)	Operator	Company	Aquired date	Misc.info.	Country	Status	Data Type	Heptane V	Isoheptane V	Paraffinicit	Pr Nc7	Phy Nc18
2902.00	Arne	NORSK HYDRO	28-07-1996		NOR	OK	AM	18.5	1.3	0.5	0.6	0.3
2932.00	Arne	NORSK HYDRO	01-08-1996		NOR	OK	AM	18.5	1.3	0.5	0.6	0.3
2932.00	Arne	NORSK HYDRO	28-07-1996		NOR	OK	AM	18.4	1.4	0.5	0.6	0.3
2677.50	Arne	NORSK HYDRO	25-08-1997		NOR	OK	AM	18.7	1.4	0.5	0.6	0.3



Ratios - amounts:

E-Depth (m)	Aromaticity	Pr Phy
2902.00	1.67	1.94
2932.00	1.62	1.91
2932.00	1.68	1.90
2677.50	1.63	1.77

Table 4.11 Isotope analysis results

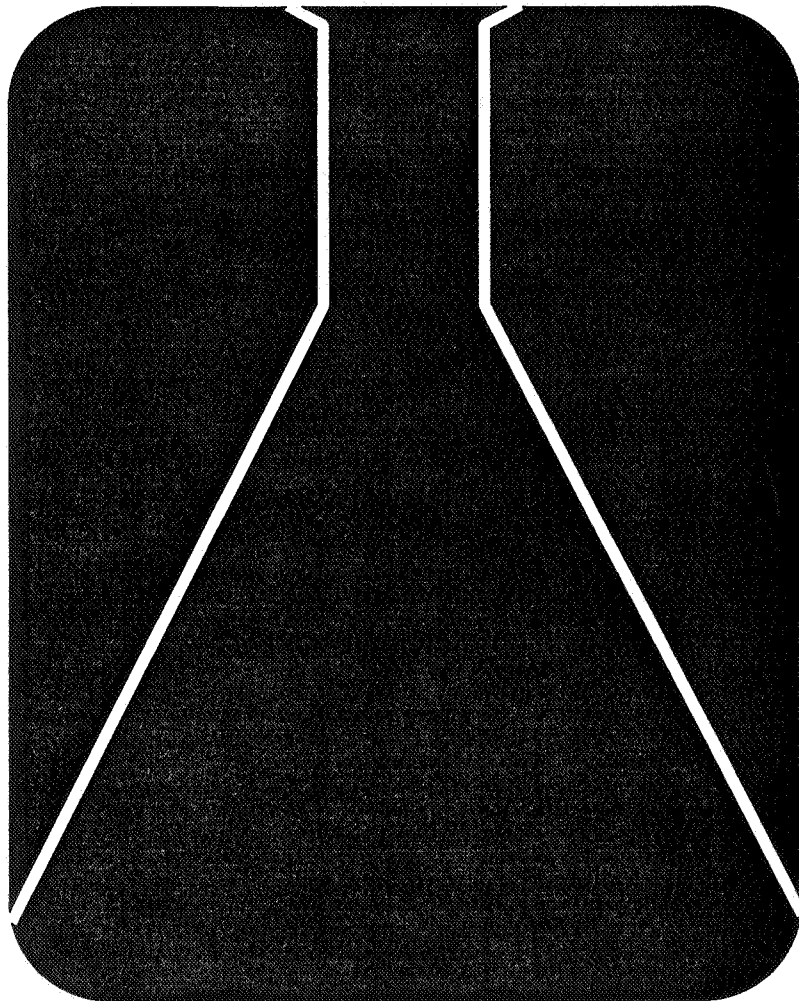


ISOTOPE ANALYSIS RESULTS (OIL SAMPLES) :

10-Sep-1997 09:14

Well	St.Depth (m)	En.Depth (m)	Name	Type	d13C OIL	d13C SAT	d13C ARO	d13C POL	d13C ASP	Analysing Compa
NOR 35/11-9	2677.50	2677.50	MDT-BA65	OIL		-28.60	-27.18			NORSK HYDRO
NOR 35/11-8 S	2887.00	2902.00	DST2	OIL		-28.86	-27.08			GEOLABNOR
NOR 35/11-8 S	2911.00	2932.00	DST1B	OIL		-28.78	-27.09			GEOLABNOR

Data Report
Isotop Analyser 35/11-9



GEOLAB NOR
P.O. Box 5740 Fossegrenda
7002 TRONDHEIM
NORWAY

REPORT:

DATA REPORT
Isotop Analyser
35/11-9

CLIENT:

Norsk Hydro
Att. Reidun A. Myklebust

RESPONSIBLE:

Marianne Sandstad

**RESPONSIBLE
TECHNICIAN:**

Trine Øyås

DATE: 26.08.97

GEOLAB PROJECT: 62383

CLIENTS REF.: FB 97403

Table 1A: Tabulation of carbon isotope data for EOM/EOM - fractions for well NOCS 35/11-9

Depth unit of measure: m

<u>Depth</u>	<u>Typ</u>	<u>Lithology</u>	<u>EOM</u>	<u>Saturated</u>	<u>Aromatic</u>	<u>NSO</u>	<u>Asphaltenes</u>	<u>Kerogen</u>	<u>Sample</u>
2650.00	mud	bulk	-	-28.98	-	-	-	-	0001-0
2677.50	oil	bulk	-	-28.60	-27.18	-	-	-	0002-0
2682.30	ccp	bulk	-	-28.67	-27.10	-	-	-	0003-0
2683.20	ccp	bulk	-	-28.65	-27.15	-	-	-	0004-0
2685.50	ccp	bulk	-	-28.56	-27.11	-	-	-	0005-0
2686.40	ccp	bulk	-	-28.68	-27.18	-	-	-	0006-0
2687.70	ccp	bulk	-	-28.66	-27.16	-	-	-	0007-0
2689.60	ccp	bulk	-	-28.62	-27.07	-	-	-	0008-0
2695.10	ccp	bulk	-	-28.82	-27.23	-	-	-	0009-0
2699.50	ccp	bulk	-	-29.47	-26.93	-	-	-	0010-0
2707.10	ccp	bulk	-	-28.78	-26.63	-	-	-	0011-0
2728.90	ccp	bulk	-	-	-	-	-	-	0012-0

Table 1B: Tabulation of cv values from carbon isotope data for well NOCS 35/11-9

Depth unit of measure: m

<u>Depth</u>	<u>Typ</u>	<u>Lithology</u>	<u>Saturated</u>	<u>Aromatic</u>	<u>cv value</u>	<u>Sample</u>
2650.00	mud	bulk	-28.98	-	-	0001-0
2677.50	oil	bulk	-28.60	-27.18	0.37	0002-0
2682.30	ccp	bulk	-28.67	-27.10	0.72	0003-0
2683.20	ccp	bulk	-28.65	-27.15	0.56	0004-0
2685.50	ccp	bulk	-28.56	-27.11	0.42	0005-0
2686.40	ccp	bulk	-28.68	-27.18	0.57	0006-0
2687.70	ccp	bulk	-28.66	-27.16	0.56	0007-0
2689.60	ccp	bulk	-28.62	-27.07	0.66	0008-0
2695.10	ccp	bulk	-28.82	-27.23	0.81	0009-0
2699.50	ccp	bulk	-29.47	-26.93	3.12	0010-0
2707.10	ccp	bulk	-28.78	-26.63	2.04	0011-0
2728.90	ccp	bulk	-	-	-	0012-0