ANCHOR DRILLING FLUIDS A/S

MATERIALS COST AND CONSUMPTION

OPERATOR:	STATOIL	RIG:	DEEPSEA BERGEN
WELL:	33/9-18A	AREA:	NORTH SEA
SECTION:	12 1/4"		

PRODUCTS	UNIT SIZE	UNIT PRICE NOK	USAGE	EST. USAGE	COST DEV. NOK	TOT. COST NOK
Barite	mt	629,05	613	368	154 117,25	385 607,65
KCL	kg	2,03	3000		6 090,00	6 090,00
KCL Brine	m3	492,08	379	393	-6 889,12	186 498,32
Lampac LV	kg	28,41	12100	10230	53 126,70	343 761,00
Sodium Bicarb	kg	2,34	1575		3 685,50	3 685,50
Rhodopol 23P	kg	75,59	2150	2046	7 861,36	162 518,50
Kopluss	ltr	30,18	10000		301 800,00	301 800,00
Anco Defoam WB	kg	15,78	20		315,60	315,60
Soda Ash	kg	2,34	1375	341	2 419,56	3 217,50
Nut Fine	kg	3,80	900		3 420,00	3 420,00
Lime	kg	2,33	60		139,80	139,80
Anco Free Pipe W	ltr	35,51	1456		51 702,56	51 702,56
Citric Acid	kg	13,19	1175		15 498,25	15 498,25
Mud From Previous Sec.	m3	300,00	325		97 500,00	97 500,00
Transfered to next well	m3	-300,00	265		-79 500,00	-79 500,00

					EST. COST	ACTUAL COST
SECTION COST					870 967,22	1 482 254,68
COST DEVIATION					611 287,46	
SECTION DAYS					29	35
COST PER DAY					30 033,35	42 350,13
SECTION LENGTH					1690	1646
COST PER METRE					515,37	900,52
VOLUME MIXED					682	1 048
COST PER m3					1277,08	1414,37
RATIO , m3 MIXED PER METRE DRILLED					0,40	0,64

STATOIL

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SECTOR FOR GEOTECHNOLOGY

Geochemistry Department

Grading Fortrolig

Title		
A GEOCHEMICAL EVALUATION OF WELL 33/9-18. PL 037		
Requested by Jørgen Windelstad Hansen, LTEK-PE	**Project**	
Date 20.04.95	**No. of pages**	**No. of enclosures**

Key words
geochemistry, source rocks, maturity, migrated hydrocarbons, correlation, well 33/9-18, North Sea

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2 Introduction.

This report presents the results of a geochemical evaluation of well 33/9-18 in the east Statfjord area, offshore Norway. The well was drilled down to 3225 m RKB and the well was classified as dry.

The aims of the study were to identify and characterise potential source rock intervals, to establish a maturity trend through the well and to correlate source rocks with fluids from the Statfjord Field.

A total of 88 sediment samples, 29 sidewall cores, 8 core samples and 51 cuttings from well 33/9-18 and one oil sample from well 33/9-C32, were analysed according to following analytical programme:

Analyses	Number of samples			
	swc	core	cuttings	oil
TOC	29	2	13	
THA	34	2	13	
Vitrinite reflectance			38	
Solvent extraction	7	1	2	
Mini extraction		11		
Topping				1
Iatroscan separation	7	1	2	1
MPLC separation	5	1	2	1
GC whole oil/EOM	2	6		1
GC saturates	5	1	2	1
GC aromatics	5	1	2	1
GC-MS saturates	5	1	2	1
GC-MS aromatics	5	1	2	1
GC-MS EOM	2			
$\delta^{13}C$ of whole oil/fractions	27	5	10	5

The analytical work was performed in accordance with the guidelines given in "The Norwegian Industry Guide to Organic Geochemical Analyses (1992)".
The project was carried out at Statoil's Department of Geochemistry with subcontracts to IFE (vitrinite reflectance measurements and carbon isotopes of oils and extracts).

Tables

TABLE 1. LITHOLOGY DESCRIPTIONS AND TOC, WELL 33/9-18.

Depth m RKB	Sample no.	Type	TOC	Lithology
1939.00	S8842	cutt.	0.4	sltst: varicol, sl gry rd, olv gry, med dk gry, dk gn gry, arg, sdy, mod calc, sft-frm, micromic, tr glau
2000.00	S8843	cutt.	0.6	sltst/clst: olv gry-lt olv gry, slty-v slty grading to sltst, mod-v calc, sft-frm, amor-blky, micromic, stky
2160.00	S8844	cutt.	0.6	sltst: olv gry-lt olv gry, slty-v slty grading to sltst, mod-v calc, sft-frm, amor-blky, stky-v stky, micromic
2260.00	S8845	cutt.	0.5	sltst/clst: bec arg, sl-mod calc, lt-med olv, minor dk olv gry, blky, frm, embly
2430.00	S8846	cutt.	0.5	sltst: pred olv gry-med dk gry, also occ dk gn-dk gn gry, tr lt olv gry, med gry, brn gry, arg, amor-blky, frm, sl-mod calc, micropyr, mic, occ glau, occ carb, sdy-v sdy grad to v fn sst
2660.00	S8847	cutt.	0.6	clst/sltst: olv gry-med dk gry, dk gn-dk gn gry, tr brn gry, arg, amor-blky, sft-frm, sl-mod calc, i/p micropyr lam (dk shades), musc mic, loc sdy
2781.00	S8848	swc	1.0	clst: olv blk, mod hd, slty, sl sdy, pyr, mic, mod calc
2832.00	S8849	swc	1.0	clst: olv blk, mod hd, sl slty, v calc
2842.00	S8850	cutt.	0.6	clst: pred med dk gry-dk gn gry, amor-blky, sft-frm, loc slty, grdg sltst mod calc, i/p micropyr lam (dk shades), musc mic, occ sdy
2849.00	S8851	swc	5.6	clst: brn blk, mod hd-hd, sl slty, pyr, mic, non-sl calc
2852.00	S8852	swc	6.0	clst: olv blk, brit-mod hd, slty, pyr, mic, sbfiss, non calc
2860.00	S8853	swc	7.1	clst: olv gry, mod hd, slty, i/p sdy, pyr, v mic, i/p carb, sl calc
2872.00	S8854	swc	10.7	clst: brn blk, brit-mod hd, sl slty, sl sdy, pyr, mic, non calc
2878.00	S8855	swc	9.8	clst: brn blk, brit-mod hd, sl slty, sl sdy, pyr, mic, non calc
2883.00	S8856	swc	12.8	clst: brn blk, brit-mod hd, sl slty, sl sdy, pyr, mic, non calc
2900.00	S8857	swc	8.3	clst: brn blk, brit-mod hd, sl slty, sl sdy, pyr, mic, non calc
2926.00	S8858	swc	6.5	clst: brn blk, mod hd, sl slty, pyr, non calc
2933.00	S8859	swc	8.7	clst: brn blk, hd, sl slty, sl sdy, pyr, mic, sl calc

Depth m RKB	Sample no.	Type	TOC	Lithology
2940.00	S8860	swc	8.6	clst: brn blk, brit-mod hd, sl slty, sl sdy, pyr, mic, sl calc
2946.00	S8861	cutt.	8.7	clst/sh: pred olv blk, also some dsky brn-dsky yel brn, fiss, frm, microlam mic, v earthy txt, carb/lign lam & spks, v abun micropyr & micromic loc sdy lam, non-sl calc
2955.00	S8862	swc	0.4	clst: olv gry, mod hd, slty, sl sdy, mic, mod calc
2960.00	S8863	swc	8.9	clst: brn gry, mod hd-hd, slty, sdy, pyr, mic, non calc
2971.00	S8864	core	8.2	clst: blk-dk gry, hd, slty,
2972.00	S8865	core	3.0	clst: gry, hd, slty, sdy, pyr, mic, sl calc
2980.00	S8866	swc	6.2	clst: brn gry, mod hd-hd, slty, sdy, pyr, mic, sl calc
2988.00	S8867	swc	4.4	clst: brn blk, brit-mod hd, slty, sl sdy, pyr, non-sl calc
2993.00	S8868	swc	6.5	clst: gry blk, sft, slty, non calc
3001.00	S8869	swc	1.5	clst: dk gry, sft-frm, slty, i/p sl sdy, micromic, non calc
3004.00	S8870	swc	1.3	clst: med dk gry, v slty grad clyly sltst, occ sdy, sft-frm, tr coal, tr v crs rnd qtz grns, micromic, non calc
3012.00	S8871	swc	1.0	sst/clst: lt gry, f, w srt, calc mtx/cmt, sft, mic, clst lam
3019.00	S8872	cutt.	1.2	sh: slty-v slty, calc, olv blk, blku, frm-hrd,
3030.00	S8873	swc	1.7	clst: dk gry-gry blk, slty-sdy, sft-frm, v sl calc, mic
3075.00	S8874	swc	1.8	clst: dk gry, slty, sft, tr micromic, tr micropyr
3081.00	S8875	swc	1.8	clst: dk gry, slty, sft, tr micromic, tr micropyr
3093.00	S8876	swc	1.1	clst: dk gry, slty, occ v sdy grad arg sst, sft, tr micromic, tr micropyr
3104.00	S8877	swc	3.3	clst: dk gry, slty, not sdy, homogen, v sl calc
3126.00	S8878	swc	1.2	sst/clst: med dk gry-olv blk, v f, mod srt, abd arg mtx, sft, tr mic pr vis por
3149.00	S8879	swc	1.3	clst: mod gry, v slty grad sltst, sft, sl calc, micromic
3168.00	S8880	swc	1.3	clst: med gry, i/p v slty, i/p v sdy, sft, sl calc, micromic

Depth m RKB	Sample no.	Type	TOC	Lithology
3177.00	S8881	swc	1.1	sst/clst: med gry, vf-f, mod srt, subrnd-subang, calc mtx/cmt frm, pr-fair vis por
3187.00	S8882	cutt.	1.1	sltst/clst: grdg clst, olv-olv gry, frm, non calc,
3202.00	S8883	cutt.	1.2	slts: lt gry-olv gry, blky, occ fiss, frm-mod hd, pred v abn micropyr, non calc
3211.00	S8884	cutt.	1.4	slts: lt gry-olv gry, blky, occ fiss, frm-mod hd, pred v abn micropyr, non calc
3217.00	S8885	cutt.	1.3	slts: lt gry-olv gry, blky, occ fiss grad sh, occ sdy grad arg sst, frm-mod hd, occ abd micropyr, non calc

TABLE 2 TOC AND THA DATA FOR WELL 33/9-18.

Depth m RKB	S. no	S1 < mg HC / g rock >	S2	TOC wt %	HI mg HC/g TOC	PP mg HC/ g rock	PI	Tmax oC
1939.00	S8842	0.02	0.13	0.4	30	0.15	0.13	407
2000.00	S8843	0.03	0.06	0.6	10	0.09	0.33	416
2160.00	S8844	0.01	0.18	0.6	29	0.19	0.05	416
2260.00	S8845	0.02	0.14	0.5	26	0.16	0.13	415
2430.00	S8846	0.18	0.25	0.5	53	0.43	0.42	418
2660.00	S8847	0.02	0.23	0.6	37	0.25	0.08	434
2781.00	S8848	0.13	0.53	1.0	54	0.66	0.20	420
2832.00	S8849	0.10	0.54	1.0	56	0.64	0.16	426
2842.00	S8850	0.04	0.28	0.6	44	0.32	0.13	417
2849.00	S8851	2.2	37.4	5.6	666	39.6	0.05	419
2852.00	S8852	2.5	39.5	6.0	663	42.0	0.06	418
2860.00	S8853	2.9	62.2	7.1	879	65.0	0.04	421
2872.00	S8854	5.9	87.4	10.7	817	93.3	0.06	424
2872.00	S8854A	0.7	75.4	10.7	705	76.1	0.01	424
2878.00	S8855	6.6	79.7	9.8	815	86.3	0.08	418
2883.00	S8856	9.5	84.4	12.8	662	94.0	0.10	415
2883.00	S8856A	0.7	58.5	12.8	459	59.2	0.01	416
2900.00	S8857	5.9	58.5	8.3	702	64.4	0.09	411
2900.00	S8857A	1.4	36.5	8.3	438	37.9	0.04	422
2926.00	S8858	3.7	34.2	6.5	526	37.9	0.10	417
2933.00	S8859	4.5	52.7	8.7	603	57.1	0.08	414
2933.00	S8859A	1.1	33.9	8.7	388	35.0	0.03	424
2940.00	S8860	3.8	57.0	8.6	666	60.8	0.06	418
2946.00	S8861	5.3	58.6	8.7	672	63.9	0.08	390
2946.00	S8861A	1.1	53.5	8.7	613	54.6	0.02	425
2955.00	S8862	0.04	0.07	0.4	16	0.11	0.36	n.d.
2960.00	S8863	4.0	39.9	8.9	450	44.0	0.09	409
2971.00	S8864	4.0	60.9	8.2	747	64.9	0.06	422
2972.00	S8865	1.2	11.7	3.0	395	12.9	0.09	427
2980.00	S8866	2.7	33.0	6.2	530	35.8	0.08	422
2988.00	S8867	1.7	8.4	4.4	190	10.1	0.17	417
2993.00	S8868	3.1	29.5	6.5	456	32.6	0.10	418
3001.00	S8869	0.39	3.4	1.5	223	3.8	0.10	434
3004.00	S8870	0.34	1.6	1.3	126	2.0	0.17	433
3012.00	S8871	0.57	0.56	1.0	58	1.1	0.50	431
3019.00	S8872	0.19	2.0	1.2	169	2.2	0.09	436
3030.00	S8873	0.72	1.9	1.7	107	2.6	0.28	421
3075.00	S8874	0.39	4.0	1.8	218	4.3	0.09	429
3081.00	S8875	0.36	2.9	1.8	165	3.3	0.11	433
3093.00	S8876	0.30	1.4	1.1	127	1.7	0.18	431
3104.00	S8877	1.1	19.6	3.3	589	20.7	0.05	423
3126.00	S8878	0.48	2.6	1.2	215	3.1	0.16	432
3149.00	S8879	0.28	2.8	1.3	218	3.1	0.09	437
3168.00	S8880	0.29	2.0	1.3	155	2.3	0.12	436
3177.00	S8881	0.31	1.4	1.1	121	1.7	0.18	433
3187.00	S8882	0.09	1.8	1.1	154	1.9	0.05	435
3202.00	S8883	0.12	1.7	1.2	144	1.8	0.07	435
3211.00	S8884	0.13	2.6	1.4	184	2.7	0.05	437
3217.00	S8885	0.15	1.5	1.3	116	1.7	0.09	433

A= miniextracted and reanalysed samples

Table 3 Vitrinite reflectance data

Well
33/9-18

IFE no.	Depth, mRKB	Sample type	Lithology	%Rm	Std. dev.	N	Quality	Preparation
ST 1791	800	cut	clst	0.29	0.04	22	M	HF
ST 1792	920	cut	clst	0.31	0.05	23	M	HF
ST 1793	1030	cut	clst	0.31	0.06	26	M	HF
ST 1794	1130	cut	clst	0.32	0.06	25	M	HF
ST 1795	1250	cut	clst	0.32	0.04	17	M	HF
ST 1796	1350	cut	clst	0.34	0.05	22	P	HF
ST 1797	1450	cut	clst	0.36	0.05	23	P	HF
ST 1798	1550	cut	clst	0.38	0.05	21	M	HF
ST 1799	1650	cut	clst	0.40	0.05	20	M	HF
ST 1800	1771	cut	clst	0.46	0.08	18	M	HF
ST 1801	1855	cut	clst	0.44	0.04	8	M	HF
ST 1802	1950	cut	clst	0.48	0.07	16	P	HF
ST 1803	2050	cut	clst	0.41	0.06	12	M-st	HF
ST 1804	2150	cut	clst	0.45	0.04	22	M-st	HF
ST 1805	2250	cut	clst	0.47	0.05	19	M-st	HF
ST 1806	2350	cut	clst	0.58	0.08	18	P-st	HF
ST 1807	2400	cut	clst	0.41	0.04	4	P-st	HF
ST 1808	2450	cut	clst	0.49	0.07	25	P-st	HF
ST 1809	2490	cut	clst	0.48	0.07	11	P-st	HF
ST 1810	2560	cut	clst	0.57	0.06	27	M-st	HF
ST 1811	2600	cut	clst	0.55	0.05	20	M	HF
ST 1812	2650	cut	clst	0.57	0.04	21	M-st	HF
ST 1813	2700	cut	clst	0.61	0.05	7	P-st	HF
ST 1814	2750	cut	clst	0.54	0.04	20	M-st	HF
ST 1815	2800	cut	clst	0.59	0.05	22	M-st	HF
ST 1816	2851	cut	clst	0.57	0.07	14	M-st	HF
ST 1817	2902	cut	clst	0.58	0.04	8	P-st	HF
ST 1818	2950	cut	clst	0.68	0.06	16	P-st	HF
ST 1819	2965	cut	clst/sst	0.53	0.06	11	M	HF
ST 1820	2998	cut	clst/sst	0.64	0.04	16	M-st	HF
ST 1821	3013	cut	clst/sst	0.63	0.02	6	M	HF
ST 1822	3037	cut	clst/sst	0.68	0.06	11	P-st	HF
ST 1823	3082	cut	clst/sst	0.45	0.03	5	P-st	HF
ST 1824	3100	cut	clst				barren	HF
ST 1825	3124	cut	clst	0.67	0.07	5	P-st	HF
ST 1826	3148	cut	clst	0.63	0.04	10	M-st	HF
ST 1827	3175	cut	clst	0.68	0.04	7	P-st	HF
ST 1828	3199	cut	clst	0.79	0.04	9	P-st	HF

G	Good quality	**P**	Poor quality	**st**	HC-staining	**HF**	HF-treated
M	Moderate quality	**X**	Not vitrinite	**Barren**	Barren of vitrinite	**Bulk**	Bulk rock

TABLE 4a NORMALISED COMPONENT GROUP COMPOSITION (wt%) OF EXTRACTED ORGANIC MATTER (C15+), WELL 33/9-18.

Depth m RKB	Type	Sample no.	Rock (g)	EOM (mg)	EOM (ppm)	Sat (%)	Aro (%)	Pol (%)	Asph (%)	HC (%)	nonHC (%)
2878.00	swc	S8855	3.37	34.8	10326	8	14	49	29	22	78
2926.00	swc	S8858	2.45	37.9	15469	5	5	17	73	11	89
2960.00	swc	S8863	1.38	10.4	7536	13	11	41	35	24	76
2971.00	core	S8864	4.44	26.6	5991	13	16	42	28	30	70
2993.00	swc	S8868	1.64	14.8	9024	11	12	34	43	23	77
3001.00	swc	S8869	4.90	15.0	3061	12	8	25	54	21	79
3019.00	cutt	S8872	14.42	27.4	1900	14	11	55	20	25	75
3104.00	swc	S8877	4.50	31.4	6978	15	22	31	32	37	63
3168.00	swc	S8880	2.84	9.0	3169	19	5	43	33	24	76
3211.00	cutt	S8884	12.33	8.1	657	19	11	31	40	29	71
Miniextracetd samples:											
2967.65	core 1	S8908	10.05	0.6	60						
3045.10	core 2	S8909	10.62	3.6	339						
3051.25	core 2	S8910	10.39	1.2	115						
3233.15	core 3	S8911	10.39	0.8	77						
3236.20	core 3	S8912	12.35	1.8	146						
3238.30	core 3	S8913	10.08	8.2	813						

TABLE 4b NORMALISED GROUP COMPOSITION (wt%) OF OILS, WELL 33/9-C32.

Depth m RKB	Type	Sample no.	C15+	Sat (%)	Aro (%)	Pol (%)	Asph (%)	HC (%)	nonHC (%)
	oil PT	S8396	69	70	19	10	1	89	11

TABLE 4c COMPONENT GROUP COMPOSITION (CONCENTRATIONS) OF EXTRACTED ORGANIC MATTER (C15+), WELL 33/9-18.

Depth m RKB	Type	Sample no.	TOC (%)	EOM	Sat	Aro	Pol	Asph	Sat/Aro	HC/non HC
				<----------		mg/g TOC		---------->		
2878,00	swc	S8855	9,8	105,4	8,0	14,8	51,7	30,9	0,54	0,28
2926,00	swc	S8858	6,5	238,0	12,9	12,4	39,5	173,3	1,04	0,12
2960,00	swc	S8863	8,9	84,7	11,3	9,4	34,6	29,3	1,21	0,32
2971,00	core	S8864	8,2	73,1	9,7	12,0	31,0	20,3	0,81	0,42
2993,00	swc	S8868	6,5	138,8	15,2	17,0	46,7	60,0	0,90	0,30
3001,00	swc	S8869	1,5	204,1	25,4	16,6	51,9	110,2	1,53	0,26
3019,00	cutt	S8872	1,2	158,3	22,1	17,8	87,3	31,2	1,24	0,34
3104,00	swc	S8877	3,3	211,4	32,2	45,5	65,7	68,1	0,71	0,58
3168,00	swc	S8880	1,3	243,8	46,0	11,4	105,1	81,2	4,03	0,31
3211,00	cutt	S8884	1,4	46,9	8,7	5,1	14,6	18,5	1,73	0,42

TABLE 5 ISOTOPIC COMPOSITION OF OILS AND EXTRACTS FROM WELL 33/9-18.

Sample	IFE no.	Oil/EOM $\delta^{13}C$ ‰ PDB	SAT $\delta^{13}C$ ‰ PDB	ARO $\delta^{13}C$ ‰ PDB	NSO $\delta^{13}C$ ‰ PDB	ASPH $\delta^{13}C$ ‰ PDB
S8855, 2878.0	15037	-29.9	-30.9	-30.6	-30.1	-29.2
S8858, 2926.0	15038	-29.6	-30.5	-29.9	-29.6	-28.4
S8863, 2960.0	15039	-28.7	-29.6	-29.1	-28.8	-28.3
S8864, 2971.0	15040	-28.4	-29.4	-28.9	-28.3	-27.7
S8868, 2993.0	15041	-27.6	-29.1	-28.3	-28.3	-27.8
S8869, 3001.0	15042	-27.1	-	-	-	-
S8872, 3019.0	15043	(-27.1)	-28.9	-27.8	-27.7	-26.3
S8877, 3104.0	15044	nd	-30.1	-29.3	-29.3	-28.4
S8880, 3168.0	15045	(-27.6)	-	-	-	-
S8884, 3211.0	15046	-27.6	-28.4	-27.9	-28.2	-26.4
S8396	15047	-30.5	-30.8	nd	-30.0	-30.6

nd - not determined

4 References

Sofer, Z. (1980). Preparation of carbon dioxide for stable isotope analysis of petroleum fractions. *Analytical Chemistry*, **52**, 1389-1391.

TABLE 6 THOMPSON INDICES, WELL 33/9-C32

Type :	Sample no.	A	B	X	W	C	I	F	H	U	R	S
PT	S8396	0,45	1,19	0,87	5,43	0,94	1,51	0,78	22,77	1,35	2,12	69,97

TABLE 7 GAS CHROMATOGRAPHIC DATA, WELL 33/9-18.

Depth m RKB	Type	Sample no.	A Pristane / n-C17	B Phytane / n-C18	A / B	Pri / Phy	nC17 / nC17+nC27	CPI 1	F 1	F 2	MPI 1
2878,00	swc	S8855	1,9	2,6	0,73	0,80	0,76	0,61	0,61	0,15	1,4
2926,00	swc	S8858	1,7	1,7	0,97	0,81	0,56	0,86	0,48	0,19	1,1
2960,00	swc	S8863	1,4	1,1	1,3	1,1	0,57	0,84	0,38	0,21	0,82
2971,00	core	S8864	1,9	1,4	1,3	1,2	0,63	0,88	0,40	0,19	0,59
2993,00	swc	S8868	0,98	0,94	1,0	0,48	0,31	0,94	0,36	0,19	0,58
3001,00	swc	S8869	0,65	0,87	0,75	1,1	0,73	2,1			
3019,00	cutt	S8872	0,87	0,63	1,4	1,7	0,49	1,7	0,40	0,23	0,57
3104,00	swc	S8877	2,1	1,6	1,3	1,6	0,52	1,6	0,43	0,21	0,60
3168,00	swc	S8880	0,44	0,56	0,79	1,4	0,64	1,5			
3211,00	cutt	S8884	0,69	0,52	1,3	1,6	0,45	1,6	0,41	0,22	0,60
Fluids											
33/9-C32	oil PT	S8396	0,77	0,60	1,3	1,5	0,77	1,0	0,35	0,19	0,60

TABLE 8a QUANITIFIED TRITERPANES, WELL 33/9-18.

Prøve nr.	Dybde (m)	<-- m/z191	23/3	24/4	27Ts	27Tm	28ab	nor30	29ab	30d	29ba	30O	30ab	30ba	31abS	31abR	32abS	32abR	33abS	33abR	34abS	34abR	35abS	35abR --> m/z191
		Intens.																						
Extracts																								
S8855	2878,00	86949888	25	20	30	125	1070	0	180	30	40	0	570	90	180	135	105	80	110	85	65	50	85	75
S8858	2926,00	51298304	90	45	60	150	1050	0	270	65	90	0	610	125	220	195	115	110	135	150	80	85	120	150
S8863	2960,00	22990848	60	35	55	150	1050	0	285	70	100	0	670	140	225	170	110	105	100	110	70	80	105	120
S8864	2971,00	42827776	55	60	80	95	1050	0	310	90	125	0	800	150	240	195	115	120	125	140	75	90	115	135
S8868	2993,00	20664320	105	70	100	270	890	35	480	95	170	0	1030	230	480	360	270	250	280	280	190	190	385	410
S8869*	3001,00	137	180	130	145	375	125	80	840	100	270	0	1185	350	920	705	420	535	300	295	220	245	525	225
S8872	3019,00	22859776	80	110	95	390	435	50	680	80	280	40	1040	340	590	440	225	200	120	110	80	70	65	55
S8877	3104,00	40353792	70	60	100	355	55	0	500	140	220	40	1050	305	495	380	215	200	125	130	70	70	45	50
S8880*	3168,00	656	90	65	80	440	45	55	885	85	355	0	1265	490	935	680	345	290	190	155	120	100	150	80
S8884	3211,00	8252416	65	110	120	530	70	100	790	75	340	45	1000	425	655	470	240	180	115	95	60	55	45	40
Fluids																								
S8396		26931200	70	55	160	105	290	0	400	80	110	0	1015	100	380	280	280	190	250	155	145	90	120	95

* Because of small amounts, the EOM 0 fraction is analysed instead of the saturated fraction.

TABLE 6b QUANITIFIED STERANES, WELL 33/9-18.

Prøve nr.	Dybde (m)	m/z217 Intens	27DbS	27DbR	27aaS	27aaR	29aaS	29bbR	29bbS	29aaR
Extracts										
S8855	2878	18513920	835	605	570	600	960	265	210	615
S8858	2926	32067584	580	470	455	1000	465	155	190	935
S8863	2960	6051840	810	630	460	955	555	220	240	900
S8864	2971	13783040	795	600	465	955	560	210	255	985
S8868	2993	9875456	830	640	485	940	470	250	265	910
S8869*	3001	155	235	160	95	190	90	105	100	190
S8872	3019	4748288	660	500	315	575	450	330	295	960
S8877	3104	21745664	575	430	355	735	255	200	245	1015
S8880*	3168	130	300	190	220	340	310	275	260	650
S8884	3211	1572864	600	410	310	530	360	265	265	875
Fluids										
S8396		9543680	620	540	590	505	655	695	595	770

Prøve nr.	Dybde (m)	m/z218 Intens	27bbR	27bbS	28bbR	28bbS	29bbR	29bbS	30bbR	30bbS
Extracts										
S8855	2878	7567360	905	615	850	725	660	650	190	195
S8858	2926	16076800	380	450	455	325	320	320	90	95
S8863	2960	3065856	560	345	570	385	490	455	105	115
S8864	2971	6939648	575	335	525	395	470	450	120	115
S8868	2993	4904960	630	405	590	485	565	550	145	145
S8869*	3001	334	55	45	50	40	60	60	10	10
S8872	3019	2354176	800	555	545	515	785	720	150	130
S8877	3104	10440704	605	385	310	345	365	350	90	75
S8880*	3168	414	90	75	75	70	120	120	25	20
S8884	3211	815360	685	475	435	445	600	590	145	115
Fluids										
S8396		8634368	950	725	810	810	925	945	330	320

* Because of small amounts, the EOM 0 fraction is analysed instead of the saturated fraction.

TABLE 8c SATURATED BIOMARKER PARAMETERS, WELL 33/9-18.

Prøve nr.	Dybde (m)	20S	bb	22S	Ts/Tm	TtX	30D/H	30ab
Extracts								
S8855	2878	0,61	0,23	0,57	0,24	0,75	0,05	0,86
S8858	2926	0,33	0,20	0,51	0,40	0,72	0,11	0,83
S8863	2960	0,38	0,24	0,51	0,37	0,70	0,10	0,83
S8864	2971	0,36	0,23	0,49	0,84	0,72	0,11	0,84
S8868	2993	0,34	0,27	0,52	0,37	0,56	0,09	0,82
S8869*	3001	0,32	0,42	0,44	0,39	0,37	0,08	0,77
S8872	3019	0,32	0,31	0,53	0,24	0,29	0,08	0,75
S8877	3104	0,20	0,26	0,52	0,28	0,64	0,13	0,77
S8880*	3168	0,32	0,36	0,54	0,18	0,24	0,07	0,72
S8884	3211	0,29	0,30	0,57	0,23	0,22	0,08	0,70
Fluids								
S8396		0,46	0,48	0,60	1,52	0,73	0,08	0,91

Prøve nr.	Dybde (m)	%C27	%C28	%C29	C30/st	Dia/ reg	28ab/H	H/S
Extracts								
S8855	2878	35	36	30	0,09	1,23	1,88	5,23
S8858	2926	37	35	28	0,08	0,72	1,72	3,78
S8863	2960	32	34	34	0,08	1,02	1,57	6,94
S8864	2971	33	33	33	0,09	0,98	1,31	6,53
S8868	2993	32	33	35	0,09	1,03	0,86	7,02
S8869*	3001	32	29	39	0,06	1,39	0,11	10,00
S8872	3019	35	27	38	0,07	1,30	0,42	11,84
S8877	3104	42	28	30	0,07	0,92	0,05	7,06
S8880*	3168	30	26	44	0,08	0,88	0,04	18,90
S8884	3211	36	27	37	0,08	1,20	0,07	16,17
Fluids								
S8396		32	31	36	0,13	1,06	0,29	2,34

* Because of small amounts, the EOM 0 fraction is analysed instead of the saturated fraction.

TABLE 8d SATURATED BIOMARKER PARAMETERS, WELL 33/9-18.

Prøve nr.	Dybde (m)	ppmH	ppmS	3R/H	4R/H	35/34H	29/30H	Dem/H	O/H	G/H
Extracts										
S8855	2878	n.d.	n.d.	0,04	0,04	1,39	0,32	0,00	0,00	
S8858	2926	n.d.	n.d.	0,15	0,07	1,64	0,44	0,00	0,00	
S8863	2960	n.d.	n.d.	0,09	0,05	1,50	0,43	0,00	0,00	
S8864	2971	n.d.	n.d.	0,07	0,08	1,52	0,39	0,00	0,00	
S8868	2993	n.d.	n.d.	0,10	0,07	2,09	0,47	0,03	0,00	
S8869*	3001	n.d.	n.d.	0,15	0,11	1,61	0,71	0,07	0,00	
S8872	3019	n.d.	n.d.	0,08	0,11	0,80	0,65	0,05	0,04	
S8877	3104	n.d.	n.d.	0,07	0,06	0,68	0,48	0,00	0,04	
S8880*	3168	n.d.	n.d.	0,07	0,05	1,05	0,70	0,04	0,00	
S8884	3211	n.d.	n.d.	0,07	0,11	0,74	0,79	0,10	0,05	
Fluids										
S8396		n.d.	n.d.	0,07	0,05	0,91	0,39	0,00	0,00	0,02

* Because of small amounts, the EOM 0 fraction is analysed instead of the saturated fractio

TABLE 9a QUANTIFIED MONOAROMATIC AND TRIAROMATIC STEROID HYDROCARBONS, WELL 33/9-18.

Well	Sample no	Depth/DST	m/z 231	triaromatic steroids						m/z 253	monoaromatic steroids								
			a1	b1	c1	d1	e1	f1	g1	A1	B1	C1a	C1b	D1	E1	G1a	G1b	H1a	H1b	I1
Extracts																				
33/9-18	S8855	2878,00	4420	3924	16035	48248	13159	30353	16259	7193	7854	10300	11752	25867	48570	21449	61136	6275	37151	11558
33/9-18	S8858	2926,00	3580	2390	9805	27263	8833	16790	10242	5608	5847	12881	9715	32071	43638	29406	58685	9748	45615	15641
33/9-18	S8863	2960,00	1201	652	2507	7389	3565	4864	4139	1327	1400	1570	2793	5761	8987	5370	14290	2605	11104	3711
33/9-18	S8864	2971,00	899	581	1743	4539	2172	2820	2591	1237	967	1115	1820	4219	5554	3399	9055	1760	7014	2392
33/9-18	S8868	2993,00	277	189	430	1100	518	649	569	324	283	222	420	843	1101	652	1875	324	1462	483
33/9-18	S8872	3019,00	636	329	628	1743	1020	910	1072	692	473	287	718	1200	1943	774	3611	524	2838	1033
33/9-18	S8877	3104,00	1324	751	5071	15130	5328	8031	6722	1602	1170	1221	3697	6273	9847	4290	15490	2004	11157	4204
33/9-18	S8884	3211,00	936	483	1405	3459	2176	2073	2001	648	435	190	944	1217	2287	594	4211	488	3046	886
Fluids																				
33/9-C32	S8396	oil PT	1341	1594	1173	4094	2529	2495	2512	493	407	215	521	898	1228	504	1698	310	1220	396

TABLE 9b AROMATIC BIOMARKER PARAMETERS, WELL

Sample no	Parameters			
	Arom1	Arom2	Crack1	Crack2
Extracts				
S8855	0,52	0,51	0,31	0,13
S8858	0,22	0,23	0,26	0,08
S8863	0,28	0,29	0,22	0,08
S8864	0,28	0,28	0,26	0,10
S8868	0,29	0,32	0,33	0,12
S8872	0,26	0,31	0,37	0,15
S8877	0,39	0,41	0,16	0,05
S8884	0,40	0,46	0,32	0,11
Fluids				
S8396	0,67	0,67	0,35	0,19