



Title: WELL 15/12-12
FINAL WELL REPORT
PL 038

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8.4.2 Formation Pressure

Test	Depth	Depth	Formation Pressure	Initial Hydrostatic Pressure	Final Hydrostatic Pressure	Mob	Remarks
No.	m MD RKB	mTVD MSL	Bar	Bar	Bar	mD/CP	
1	2859,50	2826,58	307,377	387,400	387,950	43.7	Medium permeability
2	2862,50	2829,30	307,388	388,700	388,300	235.9	Poor seal, good perm after re-set
3	2867,50	2833,83	307,531	388,700	n/a	1490	Excellent perm - decided to SAMPLE
4	2866,00	3832,48	307,487	388,950	388,900	1722	Excellent permeability
5	2873,00	2838,82	307,784	390,220	390,130	1709	Excellent permeability
9	2886,00	2850,58	307,957	391,450	391,190	3671	Excellent permeability
10	2891,50	2855,55	308,005	393,850	393,350	2867	Excellent permeability
11	2896,00	2859,61	308,141	394,330	393,010	2220	Excellent permeability
13	2901,80	2864,60	308,227	392,260	392,390	2737	Excellent permeability
14	2907,40	2869,99	308,436	393,070	393,110	20.9	Medium permeability
16	2911,80	2873,60	308,466	393,580	393,540	44	Poor seal, med. perm. after re-set
17	2917,00	2878,56	308,569	394,320	394,120	1040	Excellent permeability
18	2923,00	2883,97	308,697	396,390	395,660	1582	Excellent permeability
19	2930,00	2890,27	308,840	396,140	395,650	2182	Poor seal then excellent perm. after re-set
20	2937,00	2896,57	309,016	396,770	396,640	561	Excellent permeability

Table 8.2 Valid pressure points from MDT run 1A



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Test	Depth	Depth	Formation Pressure	Initial Hydrostatic Pressure	Final Hydrostatic Pressure	Mob	Remarks
No.	m MD RKB	m TVD MSL	Bar	Bar	Bar	mD/CP	
1	2907,40	2869,99	308,274	388,360	388,360	43.2	Good perm
2	2929,00	2889,37	308,739	388,540	391,710	1717	Excellent perm
3	2937,00	2896,57	308,920	393,370	393,120	601	Bad seal. Retract set.
4	2942,30	2901,52	309,021	394,330	394,030	27	Medium perm
6	2947,50	2906,01	309,125	396,240	395,390	90	Lost seal . Reset.
8	2949,60	2907,81	309,172	396,680	395,600	903	Good test
9	2958,50	2815,90	309,560	396,240	395,530	53	Good perm
10	2961,50	2918,60	309,760	398,450	396,470	74	Good perm
13	2964,00	2920,84	309,972	398,710	387,490	19.7	Medium perm
34	2961,00	2918,15	309,652	396,700	404,440	514	Good perm - OIL SAMPLE
35	2895,00	2858,71	307,823	388,370	n/a	2170	Excellent perm - GAS SAMPLE

Table 8.3 Valid pressure points from MDT run 1B

Test	Depth	Depth	Formation Pressure	Initial Hydrostatic Pressure	Final Hydrostatic Pressure	Mob	Remarks
No.	m MD RKB	m TVD MSL	Bar	Bar	Bar	mD/CP	
2	2964,20	2920,85	309,650	398,700	n/a	31.1	OIL SAMPLING after a number of resets
7	2972,50	2928,48	310,560	399,240	n/a	15.5	Low permeability, SAMPLING

Table 8.4 Valid pressure points from MDT run 1C

DAILY MUD PROPERTIES:RHEOLOGY PARAMETERS FOR WELL 15/12-12 PO: 1

Unofficial Data

Hole section : 0.0		WATER BASED SYSTEM																
Date	Depth [m]		Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings							Rheo Test [DegC]	PV [mPas]	YP [Pa]	Gel0 [Pa]	Gel10 [Pa]
	MD	TVD					600	300	200	100	60	30	6					
2000-12-19	185	185	SPUD MUD	0,0	1,09					0	0							
2000-12-20	185	185	SPUD MUD	0,0	1,09					0	0							
2000-12-21	185	185	SPUD MUD	0,0	1,09					0	0							
2000-12-22	185	185	SPUD MUD	0,0	1,09					0	0							
2000-12-23	185	185	SPUD MUD	0,0	1,09					0	0							
2000-12-24	185	185	SPUD MUD	0,0	1,09					0	0							
2000-12-25	185	185	SPUD MUD	0,0	1,09					0	0							

Hole section : 36"		WATER BASED SYSTEM																
Date	Depth [m]		Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings							Rheo Test [DegC]	PV [mPas]	YP [Pa]	Gel0 [Pa]	Gel10 [Pa]
	MD	TVD					600	300	200	100	60	30	6					
2000-12-26	185	185	SPUD MUD	0,0	1,09					0	0							
2000-12-27	456	456	SPUD MUD	0,0	1,09					0	0							

Hole section : 26"		WATER BASED SYSTEM																
Date	Depth [m]		Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings							Rheo Test [DegC]	PV [mPas]	YP [Pa]	Gel0 [Pa]	Gel10 [Pa]
	MD	TVD					600	300	200	100	60	30	6					
2000-12-28	605	605	SPUD MUD	0,0	1,09					0	0							
2000-12-29	605	605	SPUD MUD	0,0	1,09					0	0							
2000-12-30	605	605	SPUD MUD	0,0	1,09					0	0							
2000-12-31	605	605	SPUD MUD	0,0	1,09					0	0							

Hole section : 17 1/2"		WATER BASED SYSTEM																
Date	Depth [m]		Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings							Rheo Test [DegC]	PV [mPas]	YP [Pa]	Gel0 [Pa]	Gel10 [Pa]
	MD	TVD					600	300	200	100	60	30	6					
2001-01-01	970	970	SPUD MUD	0,0	1,09					0	0							
2001-01-02	1384	1384	SPUD MUD	0,0	1,09					0	0							
2001-01-03	1384	1384	SPUD MUD	0,0	1,40					0	0							
2001-01-04	1384	1384	SPUD MUD	0,0	1,40					0	0							
2001-01-05	1384	1384	SPUD MUD	0,0	1,40					0	0							

DAILY MUD PROPERTIES:RHEOLOGY PARAMETERS FOR WELL 15/12-12 PO: 1

Unofficial Data

Hole section : 12 1/4"			WATER BASED SYSTEM																
Date	Depth [m]		Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings								Rheo Test [DegC]	PV [mPas]	YP [Pa]	Gel0 [Pa]	Gel10 [Pa]
	MD	TVD					600	300	200	100	60	30	6	3					
2001-01-06	2110	2110	KCL/POLYMER	85,0	1,35		80	60	50	39	0	0	15	13	50,0	20,0	20,0	7,0	11,0
2001-01-07	2645	2644	KCL/POLYMER	79,0	1,35		90	65	56	42	0	0	14	12	50,0	25,0	20,0	6,0	12,0
2001-01-09	2733	2732	KCL/POLYMER	82,0	1,40		86	63	56	43	0	0	15	13	50,0	23,0	20,0	7,0	12,0
2001-01-11	2836	2831	KCL/POLYMER	80,0	1,40	40,0	88	68	57	44	0	0	18	14	50,0	20,0	24,0	7,0	14,0
2001-01-12	2836	2831	KCL/POLYMER	80,0	1,40		95	70	60	45	0	0	16		50,0	25,0	22,5	13,0	7,0
2001-01-13	2836	2831	KCL/POLYMER	80,0	1,40	24,0	95	70	60	45	0	0	16	13	50,0	25,0	22,5	7,0	13,0
2001-01-14	2841	2836	KCL/POLYMER	74,0	1,35		90	67	56	42	0	0	15	12	50,0	23,0	22,0	6,0	9,0
Hole section : 8 1/2"			WATER BASED SYSTEM																
Date	Depth [m]		Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings								Rheo Test [DegC]	PV [mPas]	YP [Pa]	Gel0 [Pa]	Gel10 [Pa]
	MD	TVD					600	300	200	100	60	30	6	3					
2001-01-15	2864	2857	KCL/POLYMER	70,0	1,35	24,0	80	58	48	36	0	0	12	9	50,0	22,0	18,0	5,0	12,0
2001-01-16	2920	2907	KCL/POLYMER	70,0	1,35	24,0	75	52	42	31	0	0	11	9	50,0	23,0	14,5	5,0	9,0
2001-01-17	2948	2932	KCL/POLYMER	71,0	1,35	24,0	76	56	47	35	0	0	13	10	50,0	20,0	18,0	7,0	12,0
2001-01-18	2986	2967	KCL/POLYMER	75,0	1,35	32,0	85	61	52	38	0	0	14	9	50,0	24,0	18,5	6,0	9,0
2001-01-19	2999	2978	KCL/POLYMER	75,0	1,36	30,0	79	58	49	37	0	0	13	11	50,0	21,0	18,5	6,0	8,0
2001-01-20	3085	3056	KCL/POLYMER	57,0	1,36	52,0	77	57	50	39	0	0	13	10	50,0	20,0	18,5	6,0	9,0
2001-01-21	3085	3056	KCL/POLYMER	75,0	1,36	24,0	77	57	48	36	0	0	13	10	50,0	20,0	18,5	6,0	8,0
2001-01-22	3085	3056	KCL/POLYMER	77,0	1,36	15,0	77	57	47	36	0	0	12	10	50,0	20,0	18,5	5,0	8,0
2001-01-23	3085	3056	KCL/POLYMER	76,0	1,36	15,0	77	56	47	36	0	0	12	9	50,0	21,0	17,5	5,0	8,0
2001-01-24	3085	3056	KCL/POLYMER	74,0	1,36	18,0	78	58	49	37	0	0	14	10	50,0	20,0	19,0	6,0	8,0
2001-01-25	3085	3056	KCL/POLYMER	75,0	1,36		75	56	47	36	0	0	13	10	50,0	19,0	18,5	6,0	9,0
2001-01-26	3085	3056	KCL/POLYMER	76,0	1,36	1,4	79	59	49	38	0	0	13	11	50,0	20,0	19,5	6,0	9,5
2001-01-27	3085	3056	KCL/POLYMER	77,0	1,36	25,0	75	57	49	37	0	0	13	11	50,0	18,0	19,5	6,0	9,0
2001-01-28	3085	3056	KCL/POLYMER	76,0	1,36	27,0	77	58	51	39	0	0	14	12	50,0	19,0	19,5	6,0	9,0
2001-01-29	3085	3056	KCL/POLYMER	77,0	1,36	27,0	77	57	48	39	0	0	13	10	50,0	20,0	18,5	7,0	10,0
2001-01-30	3088	3058	KCL/POLYMER	78,0	1,36	22,0	76	57	47	37	0	0	13	11	50,0	19,0	19,0	6,0	8,0
2001-01-31	3085	3056	KCL/POLYMER	77,0	1,36	26,0	76	57	50	38	0	0	14	12	50,0	19,0	19,0	6,0	9,0
2001-02-01	3085	3056	KCL/POLYMER	78,0	1,36	26,0	77	57	49	38	0	0	14	12	50,0	20,0	18,5	6,0	9,0
2001-02-02	3085	3056	KCL/POLYMER	77,0	1,36	26,0	75	57	48	38	0	0	14	12	50,0	18,0	19,5	7,0	10,0
2001-02-03	3085	3056	KCL/POLYMER	77,0	1,36	26,0	73	56	48	37	0	0	14	11	50,0	17,0	19,5	6,0	9,0
2001-02-04	3085	3056	KCL/POLYMER	77,0	1,36	26,0	74	56	48	38	0	0	14	11	50,0	18,0	19,0	6,0	9,0
2001-02-05	3085	3056	KCL/POLYMER	77,0	1,36	26,0	72	54	48	38	0	0	14	11	50,0	18,0	18,0	6,0	9,0
2001-02-06	3085	3056	KCL/POLYMER	79,0	1,36	27,0	71	52	43	32	0	0	13	10	50,0	19,0	16,5	5,5	9,0

DAILY MUD PROPERTIES:RHEOLOGY PARAMETERS FOR WELL 15/12-12 PO: 1

Unofficial Data

Hole section : 8 1/2"			WATER BASED SYSTEM																
Date	Depth [m]		Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings								Rheo Test [DegC]	PV [mPas]	YP [Pa]	Gel0 [Pa]	Gel10 [Pa]
	MD	TVD					600	300	200	100	60	30	6	3					
2001-02-07	3085	3056	KCL/POLYMER	76,0	1,37	27,0	68	48	38	29	0	0	11	9	50,0	20,0	14,0	5,0	8,5
2001-02-08	3085	3056	KCL/POLYMER	78,0	1,37	25,0	72	54	48	35	0	0	13	11	50,0	18,0	18,0	6,0	9,0

DAILY MUD PROPERTIES : OTHER PARAMETERS FOR WELL 15/12-12 PO: 1

Hole section : 12 1/4"		WATER BASED SYSTEM																							
Date	Depth [m]		Mud Type	Dens [sg]	Filtrate		Filtcake		HPHT	pH	Alcalinity			Inhib Chem	K+	CL-	Ca++	Mg++	Tot hard	Percentage Solid Oil Sand			CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
	MD	TVD			API [ml]	HPHT [ml]	API [mm]	HPHT [mm]	Press/Temp [bar/DegC]		Pm [ml]	Pf [ml]	Mf [ml]							[%]	[%]	[%]			
2001-01-06	2110	2110	KCL/POLYMER	1,35	3,8		1	/		8,4	0,1	0,5		80000	80000				15,0			36	5,0	168	
2001-01-07	2645	2644	KCL/POLYMER	1,35	2,6		1	/		8,3	0,1	0,5		89000	91000	480		480	19,0	0,0		42	5,0	160	
2001-01-09	2733	2732	KCL/POLYMER	1,40	2,4		1	/		8,3	0,1	0,6		89000	92000	540		540	21,0			42	5,5	171	
2001-01-11	2836	2831	KCL/POLYMER	1,40			1	/		8,3	0,1	0,6		89000	93000	485		485	19,0	0,0		36	5,5	170	
2001-01-12	2836	2831	KCL/POLYMER	1,40	1,8		1	/		8,2	0,8	0,0	0,9	89000	92000	620		620	21,0			45	5,5	171	
2001-01-13	2836	2831	KCL/POLYMER	1,40	1,8		1	21	/	8,2	0,8	0,0	0,9	89000	92000	620		620	0,0			45	5,5	171	
2001-01-14	2841	2836	KCL/POLYMER	1,35	2,0	11,0	1	2	/	8,3		0,0	0,5	82000	73000	420		420	15,0	0,0		14	5,5	153	
Hole section : 8 1/2"		WATER BASED SYSTEM																							
Date	Depth [m]		Mud Type	Dens [sg]	Filtrate		Filtcake		HPHT	pH	Alcalinity			Inhib Chem	K+	CL-	Ca++	Mg++	Tot hard	Percentage Solid Oil Sand			CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
	MD	TVD			API [ml]	HPHT [ml]	API [mm]	HPHT [mm]	Press/Temp [bar/DegC]		Pm [ml]	Pf [ml]	Mf [ml]							[%]	[%]	[%]			
2001-01-15	2864	2857	KCL/POLYMER	1,35	1,8		1	/		8,5	0,1	0,9		82000	72000	148		148				20	5,5	153	
2001-01-16	2920	2907	KCL/POLYMER	1,35	2,0	12,0	1	2	/	8,2	0,0	0,9		86400	72000	520		520	15,0	0,5		0	3,9	44	
2001-01-17	2948	2932	KCL/POLYMER	1,35	2,0	12,0	1	2	/	8,0	0,0	0,9		86400	66000	520		520	15,0	0,5		0	3,9	46	
2001-01-18	2986	2967	KCL/POLYMER	1,35	2,4	12,0	1	2	/	8,0	0,1	1,1		72798	66000	520		520	15,0	0,8		14	3,7	68	
2001-01-19	2999	2978	KCL/POLYMER	1,36	2,0	10,0	1	2	500/	8,0	0,0	1,2		76107	69000	610		610	15,0	0,0		18	3,9	54	
2001-01-20	3085	3056	KCL/POLYMER	1,36	2,1	10,0	1	1	500/ 121	8,2	0,0	1,1		79416	72000	250		250	15,0	0,0		13	3,9	47	
2001-01-21	3085	3056	KCL/POLYMER	1,36	2,1	10,0	1	1	500/ 121	8,3	0,0	1,1		81622	74000	250		250	15,0	0,0		12	3,9	43	
2001-01-22	3085	3056	KCL/POLYMER	1,36	2,0	10,0	1	1	500/	8,3	0,0	1,2		81622	74000	300		300	16,0	0,0		12	3,7	90	
2001-01-23	3085	3056	KCL/POLYMER	1,36	2,0	10,0	1	1	500/ 121	8,3	0,0	1,0		79416	72000	300		300	15,0	0,6		13	3,9	46	
2001-01-24	3085	3056	KCL/POLYMER	1,36	2,0	10,0	1	1	500/ 121	8,3	0,0	1,0		79416	72000	300		300	15,0	0,0		11	3,9	46	
2001-01-25	3085	3056	KCL/POLYMER	1,36	2,2	10,0	1	1	500/ 121	8,4	0,0	1,0		78313	71000	320		320	15,0	0,0		10	3,9	48	
2001-01-26	3085	3056	KCL/POLYMER	1,36	2,0	10,0	1	1	500/ 121	8,2	0,0	1,0		76107	69000	300		300	15,0	0,0		9	3,9	53	
2001-01-27	3085	3056	KCL/POLYMER	1,36	2,0	9,0	1	1	500/ 121	8,2	0,0	1,0		73901	67000	280		280	15,0	0,0		10	3,9	57	
2001-01-28	3085	3056	KCL/POLYMER	1,36	2,0	10,0	1	1	500/ 121	8,1	0,0	0,0		75004	68000	300		300	15,0	0,0		9	3,9	55	
2001-01-29	3085	3056	KCL/POLYMER	1,36	2,0	9,0	1	1	500/ 121	8,1	0,0	1,0		75004	69000	280		280	15,0	0,0		9	3,9	54	
2001-01-30	3088	3058	KCL/POLYMER	1,36	2,0	10,0	1	1	500/ 121	8,0	0,0	1,0		73901	67000	160		160	15,0	0,0			3,9	57	
2001-01-31	3085	3056	KCL/POLYMER	1,36	2,0	10,0	1	1	500/ 121	8,2	0,0	0,9		76107	69000	160		160	15,0	0,0		8	3,9	53	
2001-02-01	3085	3056	KCL/POLYMER	1,36	2,0	10,0	1	1	500/ 121	8,1	0,0	0,9		76107	69000	175		175	15,0	0,0		8	3,9	53	
2001-02-02	3085	3056	KCL/POLYMER	1,36	2,0	10,0	1	1	500/ 121	8,1	0,0	1,0		76107	67500	175		175	15,0	0,0		8	3,9	53	
2001-02-03	3085	3056	KCL/POLYMER	1,36	2,0	10,0	1	1	500/ 121	7,8	0,0	2,0		76107	69000	120		120	15,0	0,0		8	3,9	53	
2001-02-04	3085	3056	KCL/POLYMER	1,36	2,0	10,0	1	1	500/ 121	7,4	0,0	1,9		76107	68000	90		90	15,0	0,0		8	3,9	53	
2001-02-05	3085	3056	KCL/POLYMER	1,36	2,0	10,0	1	1	500/ 121	8,7	0,0	1,6		76107	68000	120		120	15,0	0,0		8	3,9	53	

DAILY MUD PROPERTIES : OTHER PARAMETERS FOR WELL 15/12-12 PO: 1

Hole section : 8 1/2"

WATER BASED SYSTEM

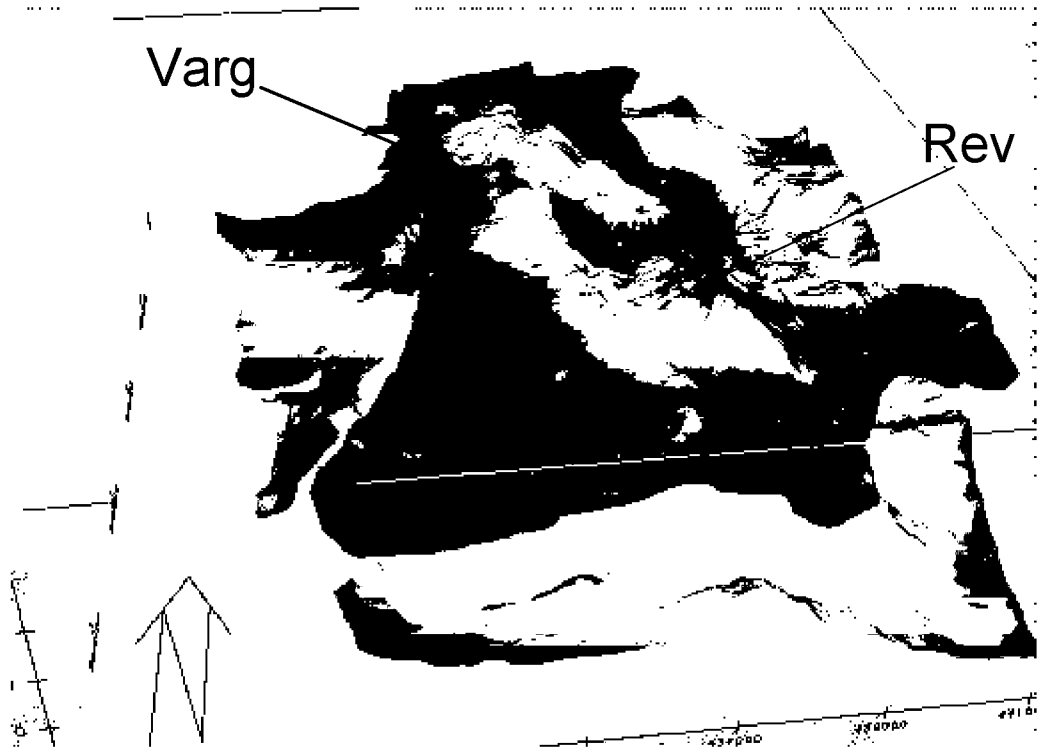
Date	Depth [m]		Mud Type	Dens [sg]	Filtrate		Filtcake		HPHT		pH	Alcalinity			Inhib Chem	K+ [mg/l]	CL- [mg/l]	Ca++ [mg/l]	Mg++ [mg/l]	Tot hard [mg/l]	Percentage			CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
	MD	TVD			API [ml]	HPHT [ml]	API [mm]	HPHT [mm]	Press [bar]	Temp [DegC]		Pm [ml]	Pf [ml]	Mf [ml]							Oil [%]	Solid [%]	Sand [%]			
2001-02-06	3085	3056	KCL/POLYMER	1,36	2,0	10,0	1	1	500/	121	9,0	0,9	4,1		76107	67500	600		600	15,0	0,0	8	3,9	53		
2001-02-07	3085	3056	KCL/POLYMER	1,37	2,0	10,0	1	1	500/	121	10,0	1,2	4,8		76107	67000	720		720	16,0	0,0	8	3,7	87		
2001-02-08	3085	3056	KCL/POLYMER	1,37	2,0	12,0	1	1	500/	121	9,5	0,5	2,0		76107	66000	180		180	15,0	0,0	7	4,0	40		

TOTAL CONSUMPTION OF MUD ADDITIVES ON WELL 15/12-12 Unofficial Data

Section	Product/ Additive	Unit	Total Amount Used
36"	BARITE	kg	80000,00
	BENTONITE	kg	24000,00
	CMC EHV	kg	175,00
	SAFE SOLV OE	L	500,00
	SODA ASH	kg	800,00
26"	BARITE	kg	186000,00
	BENTONITE	kg	39000,00
	CMC EHV	kg	3200,00
	MICA COARSE	kg	400,00
	SODA ASH	kg	1050,00
17 1/2"	BARITE	kg	127000,00
	BENTONITE	kg	58000,00
	CMC EHV	kg	900,00
	SODA ASH	kg	575,00
12 1/4"	BARITE	kg	256000,00
	CELPOL ESL	kg	12000,00
	DUOTEC NS	kg	3050,00
	GLYDRIL MC	l	13614,00
	KCL BRINE	l	387000,00
	KCL POWDER	kg	29000,00
	KD-40	l	400,00
	LIME	kg	1000,00
SODA ASH	kg	900,00	
8 1/2"	BARITE	kg	229000,00
	CELPOL ESL	kg	2650,00
	CITRIC ACID	kg	625,00
	DUOTEC NS	kg	1175,00
	GLUTE-10	l	200,00
	GLYDRIL MC	l	5700,00
	KD-40	l	1000,00
	LIME	kg	30,00
	POTASSIUM CARBONATE	kg	400,00
	SODA ASH	kg	25,00
SODIUM BICARBONATE	kg	1200,00	
8 3/8"	BARITE	kg	157000,00
0.0	SODIUM BICARBONATE	kg	100,00



Geochemistry well 15/12-12



*E&P
Research Centre Bergen*

2001-09-25



REPORT

Title: GEOCHEMISTRY WELL 15/12-12

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ID code	Type	Start- depth,		End- depth,		Rock Eval	Iatro Extr.	d13C scan	C5-20 isotope HC's	SAT HC's	SAT biom.	ARO HC's
		MD	RKB	MD	RKB							
	GASB	2320.00	2320.00						1			
	GASB	2380.00	2380.00						1			
	GASB	2420.00	2420.00						1			
	GASB	2500.00	2500.00						1			
	GASB	2520.00	2520.00						1			
	GASB	2540.00	2540.00						1			
	GASB	2580.00	2580.00						1			
	GASB	2620.00	2620.00						1			
	GASB	2640.00	2640.00						1			
	GASB	2660.00	2660.00						1			
	GASB	2680.00	2680.00						1			
	GASB	2720.00	2720.00						1			
	GASB	2760.00	2760.00						1			
	GASB	2800.00	2800.00						1			
	GASB	2840.00	2840.00						1			
	GASB	2860.00	2860.00						1			
O2864,1	COCH	2864.10	2864.10			1						
O2870,15	COCH	2870.15	2870.15			1						
mdt2895	OIL/GAS	2895.00	2895.00				1	1	1	1	1	1
O2895,1	COCH	2895.10	2895.10			1						
O2899,75	COCH	2899.75	2899.75			1						
	GASB	2892.00	2920.00					1				
O2929	COCH	2929.00	2929.00			1						
	GASB	2940.00	2940.00					1				
O2948,1	COCH	2948.10	2948.10			1	1	1				
O2949,04	COCH	2949.04	2949.04			1	1	1				
O2950,01	COCH	2950.01	2950.01			1	1	1				
O2951,01	COCH	2951.01	2951.01			1	1	1				
O2952,01	COCH	2952.01	2952.01			1	1	1				
O2952,7	COCH	2952.70	2952.70			1						
O2953,01	COCH	2953.01	2953.01			1	1	1				
O2954,01	COCH	2954.01	2954.01			1	1	1				
O2955,4	COCH	2955.40	2955.40			1	1	1				
O2956,01	COCH	2956.01	2956.01			1	1	1				
	GASB	2960.00	2960.00					1				
mdt2961,5	OIL/GAS	2961.50	2961.50				1	1	1	1	1	1
	GASB	2980.00	2980.00					1				
S2983,5	COCH	2983.50	2983.50			1						
S2986,8	COCH	2986.80	2986.80			1						
S2989,9	COCH	2989.90	2989.90			1	1	1		1	1	1
S2993,5	COCH	2993.50	2993.50			1	1	1		1	1	1
	GASB	2999.00	2999.00					1				
	GASB	3040.00	3040.00					1				
	GASB	3080.00	3080.00					1				
Well 15/12-9 S, converted to production well 15/12-A-11												
oil_9S	OIL/GAS						1	1	1	1	1	1
oil_A11	OIL/GAS						1	1	1	1	1	1

Table 2.1: Sample list, annotation codes and analytical plan, wells 15/12-12 and 15/12-9 S (15/12-A-11)
The liquid hydrocarbons from the gas column in the Rev Intra Heather Sand reservoir are dropping out of the gas sample when depressurized and cooled to surface conditions.



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3 Experimental

The analytical and preparative methods employed in this study comprise geochemical characterization of sediment extracts and depressurized fluids.

The analytical program involves:

- ✓ Rock Eval screening
- ✓ Asphaltene precipitation
- ✓ Preparative group type separation by MPLC¹
- ✓ Group type distribution by TLC-FID² (Iatroscan)
- ✓ Gas chromatography (GC-FID) of saturated C₁₅₊ hydrocarbons
- ✓ Gas chromatography-mass spectrometry (GC-MSD³) of the saturated (SAT) and aromatic (ARO) C₁₅₊ hydrocarbon fractions
- ✓ Mass spectrometry of stable carbon isotopes in fluids, SAT and ARO fractions
- ✓ Gas chromatography (GC-FID) of C₅₋₂₀ hydrocarbons of depressurized fluids.

All chromatographic data are based on quantitative measurements.

The isotope and gas volumetric measurements were carried out by IFE, Kjeller. All other analytical and interpretative works were carried out at the Norsk Hydro O&E Research Centre in Bergen, Norway.

The analytical methods are based on the guidelines in the Norwegian Industry Guide to Organic Geochemical Analyses (NIGOGA⁴). Major deviations from this guide are:

- Extract and asphaltene workup by centrifugation.
- Internal standard mixture added for quality control and quantitative measurements.
- GC analysis of SAT and ARO fractions by 5% phenyl methyl-silicone stationary phase.
- GC-MSD detection of the aromatic hydrocarbons (not FID).
- Report of a restricted number of compounds relative to the NIGOGA guide, due to known co-elutions or disputable identities.

The data quality control is according to defined laboratory procedures, available on request.

Samples which are annotated "nso..." or "s..." represent the internal North Sea reference oil (NSO1) and reflect the analytical repeatability.

¹ Medium Pressure/Performance Liquid Chromatography
² Thin layer chromatography with Flame Ionisation Detection
³ Gas Chromatography - Mass Selective Detector
⁴ The Norwegian Industry Guide to Organic Geochemical Analyses, edition 4.0, 2000

Appendix 1

Bulk data

Rock Eval and EOM data

Name	End-depth, m	EOM, mg/g rock	RockEval, S1	S2	HI	TOC
O2864,1	2864.10		2.3	0.8	219	0.4
O2870,15	2870.15		4.9	0.7	118	0.6
O2895,1	2895.10		7.9	0.5	61	0.8
O2899,75	2899.75		2.8	0.5	136	0.4
O2929	2929.00		1.8	0.6	214	0.3
mdt2895	2895.00					
O2948,1	2948.10	8.8	6.3	0.6	80	0.7
O2949,04	2949.04	14.4	10.6	0.9	80	1.1
O2950,01	2950.01	19.9	16.5	1.1	67	1.6
O2951,01	2951.01	39.5	23.0	4.9	196	2.5
O2952,01	2952.01	24.5	18.1	1.1	64	1.7
O2952,7	2952.70		2.8	0.9	204	0.5
O2953,01	2953.01	9.1	6.7	0.6	86	0.7
O2954,01	2954.01	19.1	14.8	2.9	175	1.7
O2955,4	2955.40	16.0	8.5	2.3	212	1.1
O2956,01	2956.01	14.1	7.8	2.8	260	1.1
mdt2961,5	2961.50					
S2983,5	2983.50		3.3	1.8	340	0.5
S2986,8	2986.80		2.7	1.7	319	0.5
S2989,9	2989.90	5.3	1.5	0.7	236	0.3
S2993,5	2993.50	7.3	2.1	1.0	283	0.4

Group type distribution

Name	End-depth, m	EOM, mg/g rock	SAT, wt.%	ARO, wt.%	NSO, wt.%	Asph. wt.%
mdt2895	2895.00		84.2	10.0	5.5	0.3
O2948,1	2948.10	8.8	82.0	1.5	5.1	11.4
O2949,04	2949.04	14.4	86.3	4.5	7.1	2.1
O2950,01	2950.01	19.9	89.0	1.6	4.9	4.5
O2951,01	2951.01	39.5	73.2	13.6	8.2	5.0
O2952,01	2952.01	24.5	91.0	1.0	3.6	4.4
O2953,01	2953.01	9.1	87.2	2.6	3.6	6.7
O2954,01	2954.01	19.1	84.9	4.7	3.7	6.7
O2955,4	2955.40	16.0	60.1	23.6	12.2	4.1
O2956,01	2956.01	14.1	59.3	23.0	9.4	8.4
mdt2961,5	2961.50		64.6	28.4	6.3	0.7
S2989,9	2989.90	5.3	45.3	19.2	8.8	26.8
S2993,5	2993.50	7.3	42.1	14.0	4.7	39.3
oil_A11			63.4	29.8	5.5	1.3
oil_9S			64.7	27.9	5.4	2.1

Gas in MDT-fluids, isotope and volume data

Well	End-depth, m	dC13 C1	dD C1	dC13 C2	dC13 C3	dC13 iC4	dC13 nC4	dc13 iC5	dc13 nC5	dC13 CO2	dO18CO2
'15/12-12	2895.0	-36.2	-173	-27.6	-27.5	-26.2	-28.5			-11.7	-13.4
'15/12-12	2961.5	-36.3	-183	-27.7	-27.1	-26.1	-28.7			-12.2	-11.4
'15/12-A-11		-38.2	-207	-28.8	-27.8	-25.9	-29.1			-12.0	-11.9
'15/12-9 S		-37.8	-202	-28.7	-27.7	-26.3	-28.7			-13.0	-10.9

Well	End-depth, m	C1 %	C2 %	C3 %	iC4 %	nC4 %	iC5 %	nC5 %	CO2 %	C1-C5	Wetness	iC4/nC4
'15/12-12	2895.0	84.3	8.0	3.7	0.5	1.2	0.3	0.3	1.7	98.3	0.14	0.42
'15/12-12	2961.5	82.2	9.6	4.3	0.5	1.2	0.2	0.3	1.7	98.3	0.16	0.42
'15/12-A-11		80.0	11.0	5.1	0.5	1.0	0.2	0.2	2.0	98.0	0.18	0.52
'15/12-9 S		80.3	10.2	5.3	0.6	1.2	0.2	0.3	1.9	98.1	0.18	0.5

Gas in gasbags, well 15/12-12, isotope and volume data

End-depth, m	dC13 C1	dC13 C2	dC13 C3	dC13 iC4	dC13 nC4	dc13 iC5	dc13 nC5	dC13 CO2	C1 %	C2 %	C3 %	iC4 %	nC4 %	iC5 %	nC5 %	CO2 %	C1-C5	Wetness	iC4/nC4
2320.0	-37.7	-27.7	-28.9	-29.2	-30.2			-14.9	78.1	5.7	2.3	0.2	0.6	0.2	0.2	12.7	87.3	0.10	0.33
2380.0	-34.5	-26.4	-27.6	-28.2	-29.3			-15.2	82.4	4.7	1.9	0.2	0.5	0.2	0.2	9.9	90.1	0.08	0.40
2420.0	-37.1	-27.4	-28.3	-29.0	-29.9			-14.2	78.8	4.8	2.0	0.3	0.6	0.2	0.2	13.0	86.9	0.09	0.50
2500.0	-29.7	-26.0	-27.8	-28.2	-29.6			-14.2	64.3	7.7	5.2	0.7	2.0	0.7	0.9	18.6	81.5	0.20	0.35
2520.0	-35.9	-27.1	-28.1	-29.4	-29.2			-14.9	66.0	6.0	3.8	0.6	1.6	0.6	0.9	20.4	79.5	0.15	0.37
2540.0	-38.9	-28.9	-27.7	-27.8	-26.9			-17.2	20.4	2.7	3.9	1.2	3.8	2.5	3.7	61.9	38.2	0.36	0.32
2580.0	-37.5	-27.3	-28.2	-29.2	-30.1			-15.5	66.9	4.3	2.6	0.5	1.5	0.7	1.0	22.5	77.5	0.12	0.33
2620.0	-36.0	-27.0	-29.1					-15.4	65.0	4.4	2.2	0.4	1.2	0.7	1.0	25.1	74.9	0.11	0.33
2640.0	-36.5	-28.2	-29.1		-31.5			-15.1	68.3	4.4	2.0	0.4	1.0	0.6	0.8	22.4	77.5	0.10	0.40
2660.0	-35.3	-38.6	-28.6	-25.8	-28.5		-26.0	-18.8	81.9	6.9	3.4	0.4	1.1	0.5	0.6	5.2	94.8	0.13	0.36
2680.0	-35.4	-28.0	-28.6	-26.9	-29.3			-15.9	66.2	6.5	4.6	0.9	2.3	1.2	1.6	16.8	83.3	0.18	0.39
2720.0	-39.5	-28.9	-28.8		-30.5			-16.9	45.2	3.1	2.0	0.6	1.9	1.9	3.0	42.3	57.7	0.14	0.32
2760.0									26.2	2.1	1.4	0.4	1.0	1.1	1.8	66.1	34.0	0.16	0.40
2800.0	-35.1	-29.2	-32.3	-32.0	-32.3	-29.8	-32.4	-16.2	74.0	6.9	3.2	0.3	1.2	0.7	1.2	12.6	87.5	0.14	0.25
2840.0	-35.2	-28.7	-31.6		-33.6			-17.4	67.1	6.0	2.5	0.4	1.3	0.8	0.9	21.2	79.0	0.13	0.31
2860.0	-34.1	-28.5	-29.0	-24.7	-28.3	-27.9	-24.4	-19.5	77.7	7.3	3.5	0.5	1.6	0.8	1.2	7.3	92.6	0.14	0.31
2920.0	-33.0	-27.8	-27.7	-27.8	-29.1	-30.2	-31.3	-24.2	86.9	6.2	2.9	0.4	1.1	0.4	0.6	1.5	98.5	0.11	0.36
2940.0	-34.1	-27.7	-28.4	-28.3	-29.3	-30.3	-32.2	-16.7	77.6	6.4	2.9	0.4	1.1	0.4	0.6	10.5	89.4	0.12	0.36
2960.0	-35.3	-28.6	-29.0	-29.4	-29.9	-28.0	-30.6	-30.2	53.6	6.7	4.0	0.8	2.6	1.8	2.9	27.6	72.4	0.21	0.31
2980.0	-34.6	-28.6	-30.6	-27.3	-30.6	-29.2	-30.1	-28.2	50.1	6.0	3.5	0.7	2.4	1.7	2.9	32.7	67.3	0.20	0.29
2999.0									30.9	4.8	3.3	0.7	2.2	1.4	2.2	54.5	45.5	0.26	0.32
3040.0	-35.5	-31.1						-23.3	64.3	2.1	0.5	0.0	0.2	0.1	0.2	32.6	67.4	0.04	0.00
3080.0									19.6	0.8	0.3	0.0	0.1	0.1	0.2	78.9	21.1	0.06	0.00

Appendix 2

Summary sheets

Country, well/location: NOR 15/12-12
 Sample type, depth (m): OIL, 2895-2895 m
 Stratigraphy (Gr./Fm.):

Fluid sample



E&P Reserach Centre,
 Bergen, Norway

Remarks:

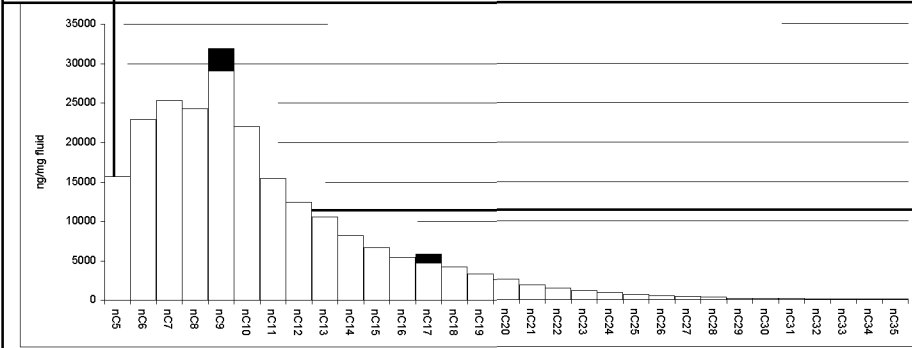
OrgID: 2122522, PlanID: 470088

Bulk data, latroscan	Bulk PVT	δ13C isotope	ISTD-mix.(ng/mg EOM):														
	GOR, Sm ³ /m ³ B ₀ 1/B _g Density, kg/m ³ API ⁰	Sat. -29.8 Aro. -28.5 NSO AspH. Total Kerogen	<table border="1"> <tr><td>C12D26</td><td>3960</td></tr> <tr><td>C16D34</td><td>3960</td></tr> <tr><td>24αββ</td><td>24</td></tr> <tr><td>d8N</td><td>47</td></tr> <tr><td>d10BP</td><td>42</td></tr> <tr><td>d10P</td><td>47</td></tr> <tr><td>d12C</td><td>47</td></tr> </table>	C12D26	3960	C16D34	3960	24αββ	24	d8N	47	d10BP	42	d10P	47	d12C	47
C12D26	3960																
C16D34	3960																
24αββ	24																
d8N	47																
d10BP	42																
d10P	47																
d12C	47																

GC/FID, depressurized fluid, C6-9 hydrocarbons:

GC/FID	Area	ng/mgEOM
Hep.value	23.95	23.95
Isohep.val.	1.50	1.50
Paraffinicity	0.84	0.84
Aromaticity	0.67	1.03
nC ₈ /Benz.	1.46	0.95
nC ₇ /Tolu.	0.89	0.58

Alkane distribution, combined data from fluid and C15+ fraction:



GC/FID, C15+ fraction hydrocarbons:

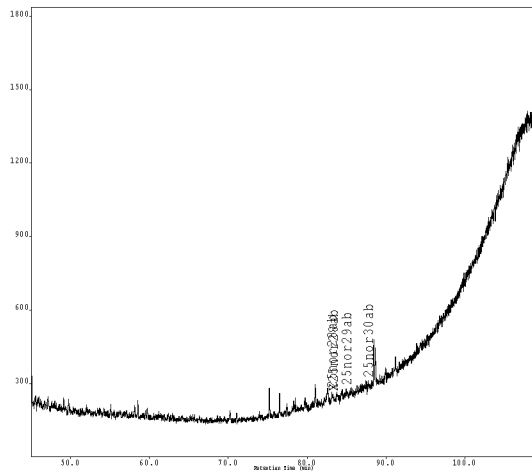
GC/FID	Area	ng/mgEOM
Pr/nC ₁₇	0.62	0.62
Ph/nC ₁₈	0.54	0.54
Pr/Ph	1.58	1.59
nC ₁₇ /(C ₁₇ +C ₂₇)	0.93	0.93
nC ₁₇		5
Pristane		3
ΣC ₁₅₋₃₅		45

Country, well/location: NOR 15/12-12
Sample type, depth (m): OIL, 2895-2895 m

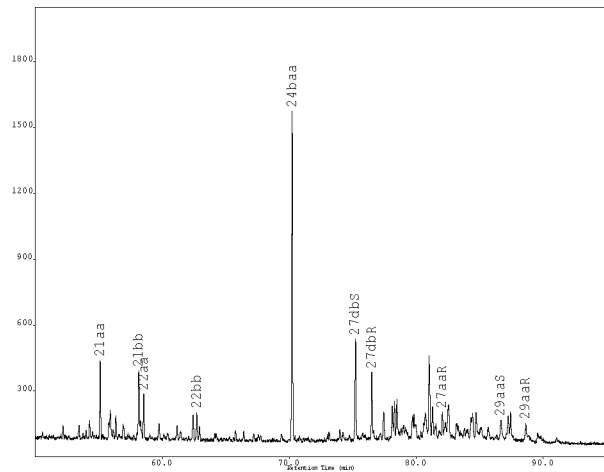
Fluid
sample



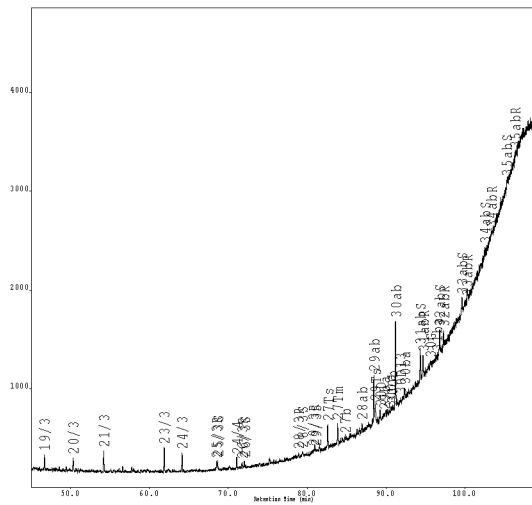
Saturated HC biomarkers, m/z 177



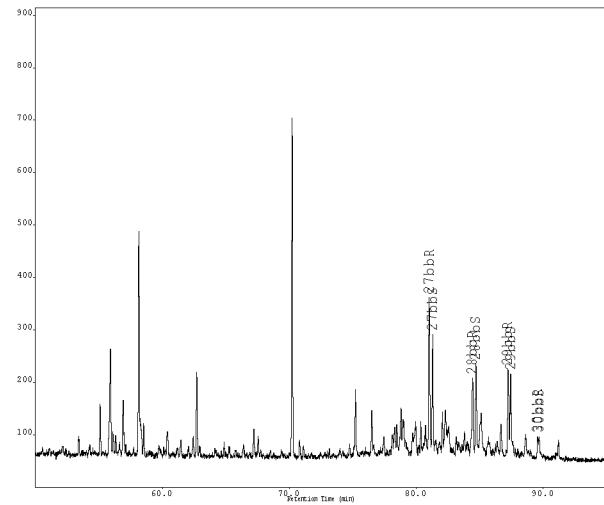
Saturated HC biomarkers, m/z 217



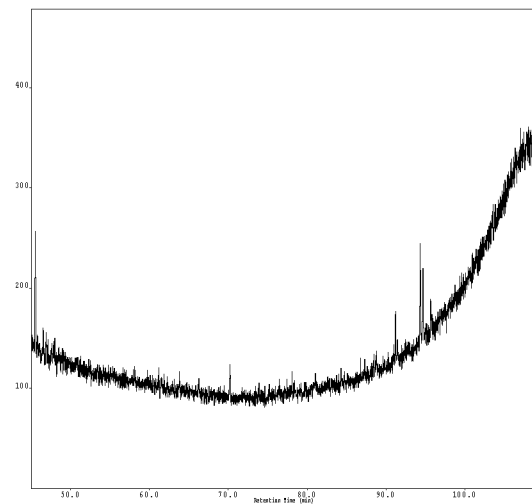
Saturated HC biomarkers, m/z 191



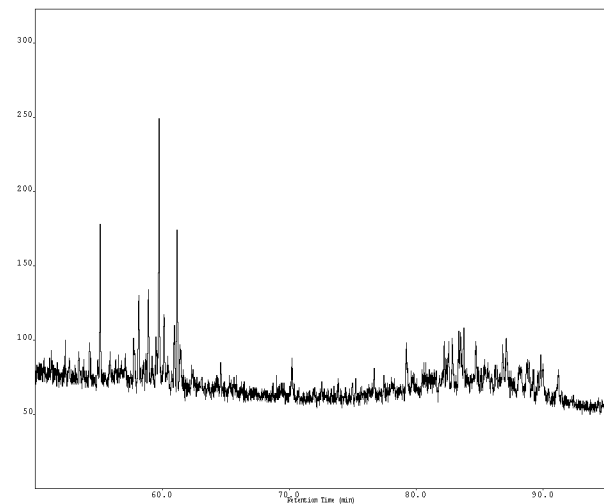
Saturated HC biomarkers, m/z 218



Saturated HC biomarkers, m/z 205



Saturated HC biomarkers, m/z 231

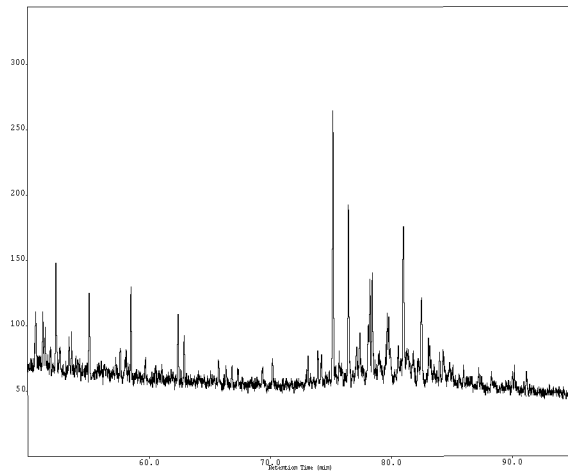


Country, well/location: NOR 15/12-12
Sample type, depth (m): OIL, 2895-2895 m

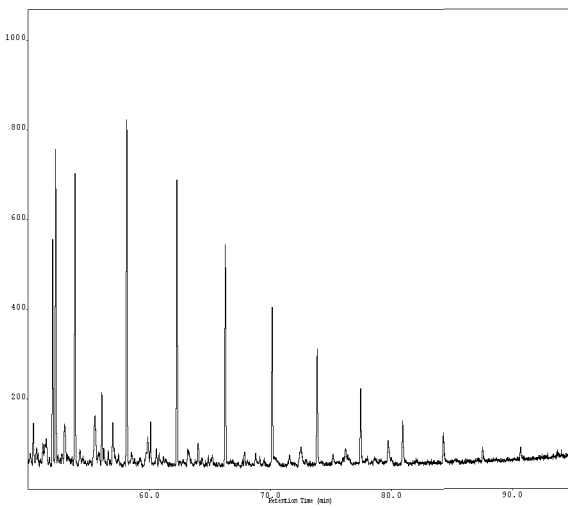
Fluid
sample



Saturated HC biomarkers, m/z 259



QC, monoaromatic steroids in SAT-fraction, m/z 253

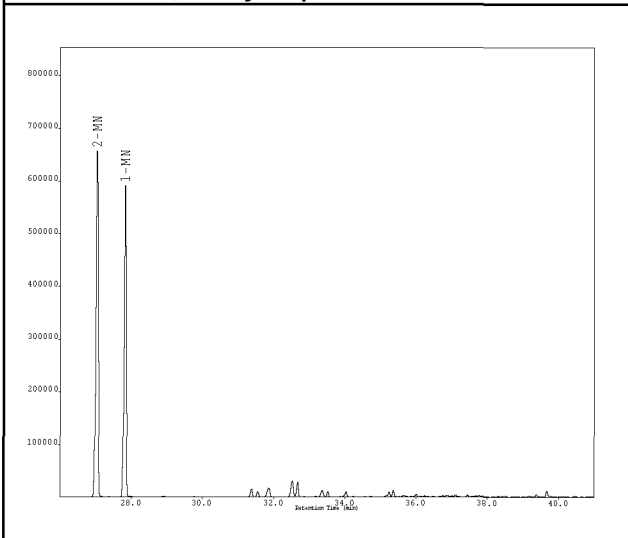


Country, well/location: NOR 15/12-12
 Sample type, depth (m): OIL, 2895-2895 m

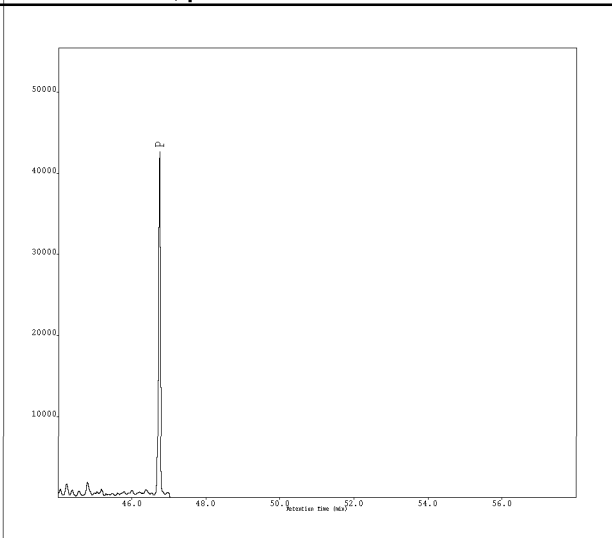
Fluid
 sample



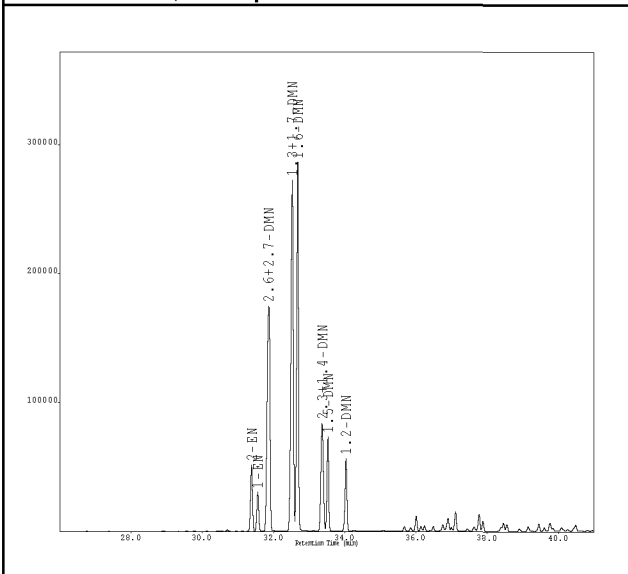
Aromatic HC's, methyl-naphthalenes m/z 142



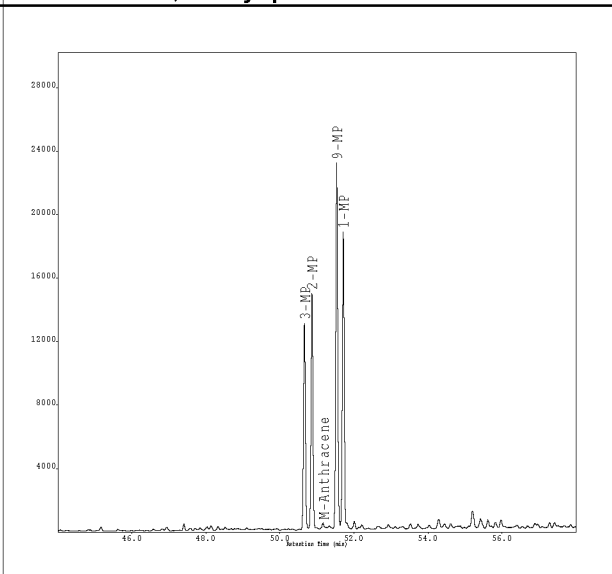
Aromatic HC's, phenanthrene m/z 178



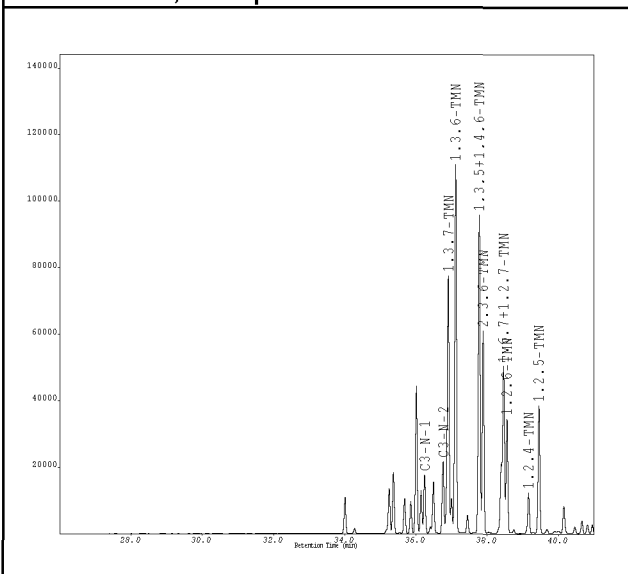
Aromatic HC's, C2-naphthalenes m/z 156



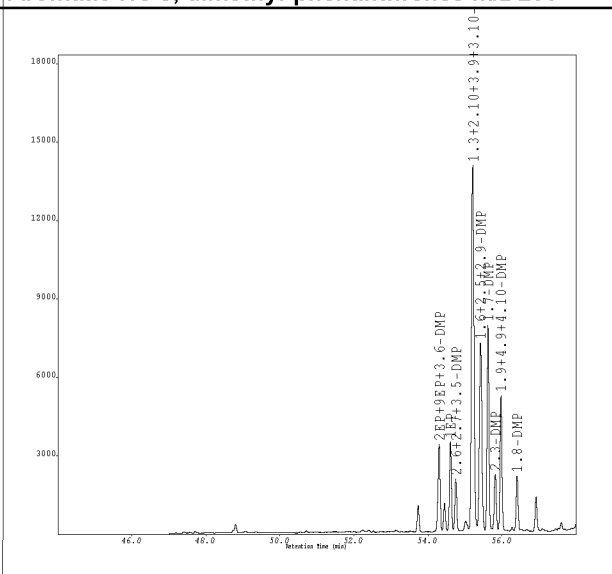
Aromatic HC's, methyl-phenanthrenes m/z 192



Aromatic HC's, C3-naphthalenes m/z 170



Aromatic HC's, dimethyl-phenanthrenes m/z 206

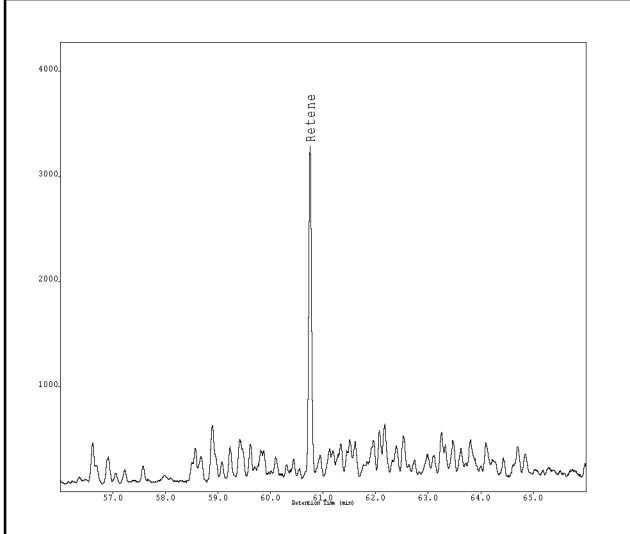


Country, well/location: NOR 15/12-12
 Sample type, depth (m): OIL, 2895-2895 m

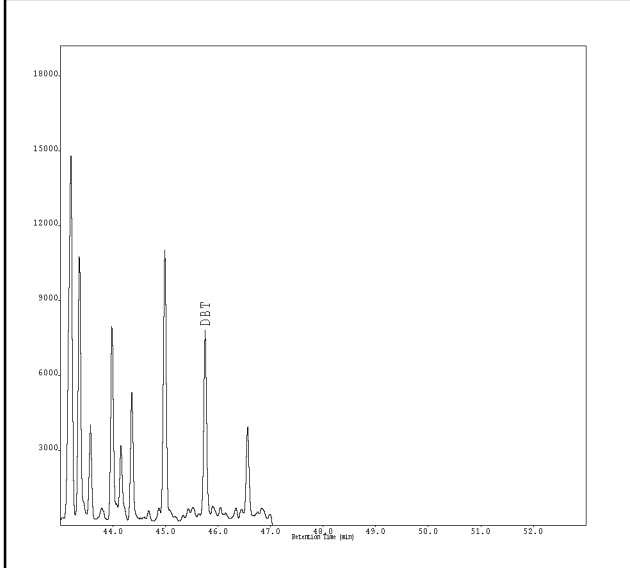
Fluid
 sample



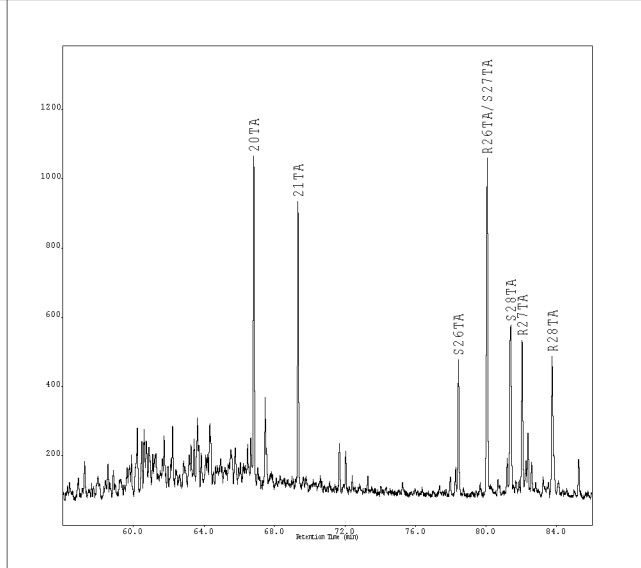
Retene m/z 219



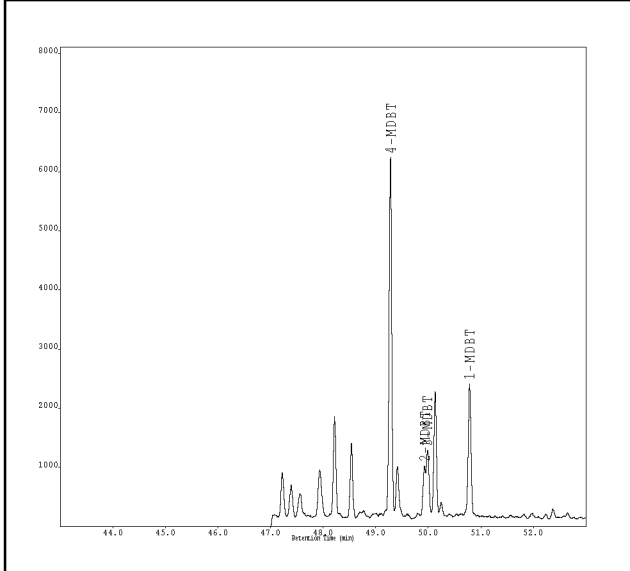
Aromatic HC's, dibenzothiophene m/z 184



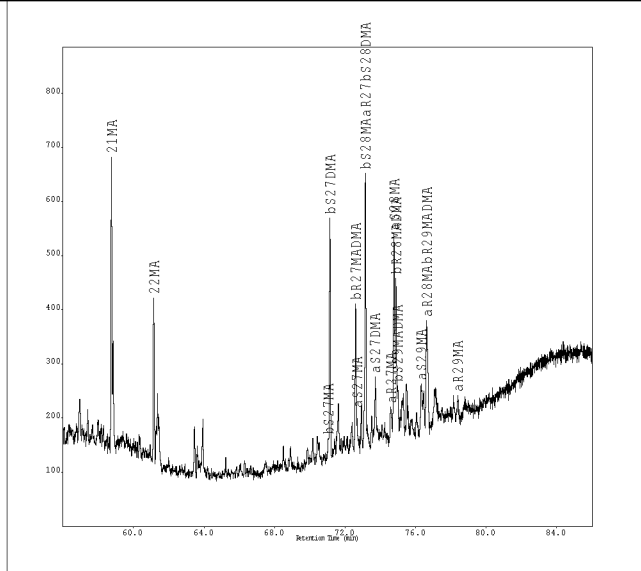
Aromatic HC's, triaromatic steroids m/z 231



Aromatic HC's, methyl-dibenzothiophenes m/z 198



Aromatic HC's, monoaromatic steroids m/z 253



Country, well/location: **NOR 15/12-12**
 Sample type, depth (m): **OIL, 2895-2895 m**
 Stratigraphy (Gr./Fm.):
 Remarks:
 OrgID: , PlanID:

**Fluid
sample**



E&P Reserach Centre,
Bergen, Norway

Saturated HC's, GC/FID			cont...	Height	ng/mgEOM	cont...	Height	ng/mgEOM	
	Area	ng/mgEOM							
nC11	1261156	0	25nor28ab	41	0	2314DMN	83581	134	
nC12	1147247	0	28ab	89	1	15DMN	73027	117	
nC13	1000706	0	25nor29ab	43	1	12DMN	56127	90	
nC14	865990	0	29ab	498	6	C3N1	17505	29	
iC16	331863	2900	29ba	60	1	C3N2	21647	35	
nC15	758260	6630	29Ts	206	2	137TMN	77344	126	
nC16	670422	5860	25nor30ab	36	0	136TMN	110648	181	
iC18	282025	2470	30ab	921	7	135146TMN	95546	156	
nC17	604455	5290	30ba	126	1	236TMN	60739	99	
Prinstane	376933	3300	30D	131	2	167127TMN	50244	82	
nC18	441735	3860	30G	97	1	126TMN	34453	56	
Phytane	238266	2080	30O	0	0	124TMN	12190	20	
nC19	346935	3030	30D13	67	1	125TMN	38367	63	
nC20	272958	2390	31abS	369	4	BP	154090	174	
nC21	199385	1740	31abR	219	3	3MBP	113489	128	
nC22	153789	1350	31ba	99	1	4MBP	35039	39	
nC23	120897	1060	32abS	290	3	23XDMBP	4833	8	
nC24	90976	800	32abR	178	2	25DMBP	2160	4	
nC25	67810	590	33abS	158	2	2424XDMBP	4153	7	
nC26	51063	450	33abR	111	1	23DMBP	8234	13	
nC27	42590	370	34abS	133	2	3EBP	7133	12	
nC28	31577	280	34abR	122	1	35DMBP	11148	18	
nC29	20075	180	35abS	172	2	33XDMBP	30488	50	
nC30	16420	140	35abR	144	2	4EBP	2571	4	
nC31	15565	140	21aa	361	6	34XDMBP	23465	38	
nC32	12007	110	21bb	298	5	44XDMBP	3855	6	
nC33	7050	60	22aa	207	4	34DMBP	9788	16	
nC34	8271	70	22bb	127	2	DBF	20367	23	
nC35	4563	40	27dbS	463	8	DBF1	15818	26	
			27dbR	296	5	MDBF2	8652	14	
			27bbR	280	5	MDBF3	8750	14	
			27bbS	222	4	F	11612	16	
			27aaR	114	2	C1F1	3909	5	
			28bbR	130	2	C1F2	19731	27	
			28bbS	170	3	1MF	2273	3	
			29aaS	87	2	DBT	7493	4	
			29bbR	154	3	4MDBT	6068	3	
			29bbS	137	2	2MDBT	870	1	
			29aaR	74	1	3MDBT	1139	1	
			30bbR	44	1	1MDBT	2240	1	
			30bbS	34	1	P	42370	70	
			Aromatic HC's, GC/MS						
				Height	ng/mgEOM				
			N	541468	1464	3MP	12979	25	
			2MN	656106	1125	2MP	14830	29	
			1MN	591016	1013	9MP	23048	45	
			2EN	51516	83	1MP	18719	36	
			1EN	30232	49	2EP9EP36DMP	3368	6	
			2627DMN	174656	281	1EP	3423	6	
			1317DMN	272436	438	262735DMP	1996	4	
			16DMN	285800	459	13210393DMP	13897	26	
						162529DMP	7141	13	
						17DMP	7830	15	

Country, well/location: NOR 15/12-12
Sample type, depth (m): OIL, 2895-2895 m
Stratigraphy (Gr./Fm.):
Remarks:
OrgID: , PlanID:

Fluid
sample



E&P Research Centre,
Bergen, Norway

Aromatic HC's, GC/MS cont...		
	Height	ng/mgEOM
23DMP	2134	4
194941DMP	5147	10
18DMP	2089	4
RETENE	3161	5
20TA	952	1
21TA	821	1
S26TA	390	0
R26TAS27TA	976	1
S28TA	476	0
R27TA	440	0
R28TA	409	0

C5-20 HC's, GC/FID		
	Area	ng/mgEOM
IC5	76894036	8860
NC5	149203225	17200
22DMC4	3779141	440
CYC5	26382845	3040
23DMC4	12194866	1410
2MC5	99042104	11410
3MC5	59271137	6830
NC6	218137562	25140
3MCYC5ENE	23010	0
22DMC5	4260297	490
MCYC5	111677228	12870
24DMC5	10216766	1180
223TMC4	988102	110
BENZENE	149538595	26510
33DMC5	2950333	340
CYC6	157153738	18110
2MC6	68671745	7910
23DMC5	23066986	2660
11DMCYC5	14933887	1720
3MC6	77123926	8890
1C3DMCYC5	24689956	2850
1T3DMCYC5	22659988	2610
3EC5	6343423	730
1T2DMCYC5	43436733	5010
IC8	78019066	8990
NC7	241229631	27800
1C2DMCYC5	6120790	710
MCYC6	287570963	33140
113TMCYC5	15917583	1830
ECYC5	18341045	2110
25DMC6	10077471	1160
223TMC524DMC6	13134319	1510
1C2T4TMCYC5	13637542	1570
33DMC6	3383152	390
1T2C3TMCYC5	14113787	1630
234TMC5	2987508	340

cont...	Area	ng/mgEOM
TOLUENE	271824437	48200
23DMC6	14918032	1720
2MC7	85499655	9850
4MC7	26405732	3040
3MC7	67288729	7760
1C3DMCYC6	50764685	5850
1T4DMCYC6	25024728	2880
11DMCYC6	14969837	1730
1T2DMCYC6	29749622	3430
NC8	231099621	26640
ECYC6	75288594	8680
IC9	22854752	4050
EBENZENE	34615849	6140
MXYLENE	122285895	21680
PXYLENE	32441589	5750
4MC8	26397594	4680
2MC8	34568461	6130
3MC8	36915114	6550
OXYLENE	61009463	10820
NC9	197461377	35010
IC10	30978800	5490
NC10	136182518	24150
IC11	26275749	4660
NC11	95507148	16930
NC12	76789649	13620
IC13	16071584	2850
PHC6	50714489	8990
IC14	23265958	4130
NC13	65578971	11630
IC15	13093990	2320
NC14	50909186	9030
IC16	20203760	3580
NC15	41268182	7320
NC16	33697892	5970
IC18	10820289	1920
NC17	26519937	4700
PRISTANE	16623595	2950
NC18	18774193	3330
PHYTANE	10740704	1900
NC19	13926902	2470
NC20	12614867	2240

Country, well/location: NOR 15/12-12
 Sample type, depth (m): OIL, 2961,5-2961,5 m
 Stratigraphy (Gr./Fm.):

Fluid sample



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 Bergen, Norway

Remarks:

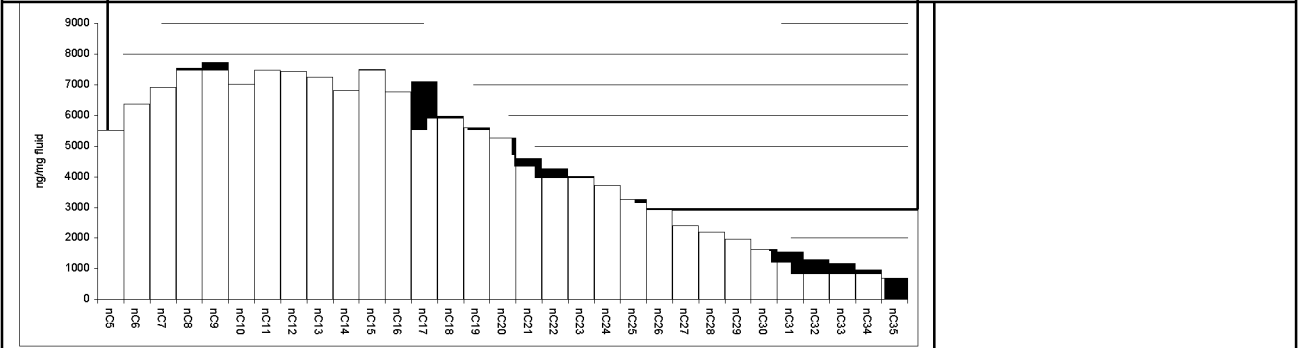
OrgID: 2122484, PlanID: 470089

Bulk data, Iatroscan	Bulk PVT	δ13C isotope	ISTD-mix.(ng/mg EOM):														
	GOR, Sm ³ /m ³ B ₀ 1/B _g Density, kg/m ³ API ⁰	Sat. -29.7 Aro. NSO Asp. Total Kerogen	<table border="1"> <tr><td>C12D26</td><td>3800</td></tr> <tr><td>C16D34</td><td>3800</td></tr> <tr><td>24αββ</td><td>23</td></tr> <tr><td>d8N</td><td>46</td></tr> <tr><td>d10BP</td><td>41</td></tr> <tr><td>d10P</td><td>46</td></tr> <tr><td>d12C</td><td>46</td></tr> </table>	C12D26	3800	C16D34	3800	24αββ	23	d8N	46	d10BP	41	d10P	46	d12C	46
C12D26	3800																
C16D34	3800																
24αββ	23																
d8N	46																
d10BP	41																
d10P	46																
d12C	46																

GC/FID, depressurized fluid, C6+9 hydrocarbons:

GC/FID	Area	ng/mgEOM
Hep.value	21.08	21.10
Isohep.val.	1.25	1.25
Paraffinicity	0.67	0.67
Aromaticity	1.01	1.02
nC ₈ /Benz.	1.04	1.03
nC ₇ /Tolu.	0.61	0.61

Alkane distribution, combined data from fluid and C15+ fraction:



GC/FID, C15+ fraction hydrocarbons:

GC/FID	Area	ng/mgEOM
Pr/nC ₁₇	0.56	0.56
Ph/nC ₁₈	0.49	0.49
Pr/Ph	1.37	1.37
nC ₁₇ /(C ₁₇ +C ₂₇)	0.75	0.75
nC ₁₇		7
Pristane		4
ΣC ₁₅₋₃₅		80

Country, well/location: **NOR 15/12-12**
 Sample type, depth (m): **OIL, 2961,5-2961,5 m**
 Stratigraphy (Gr./Fm.):

Fluid sample

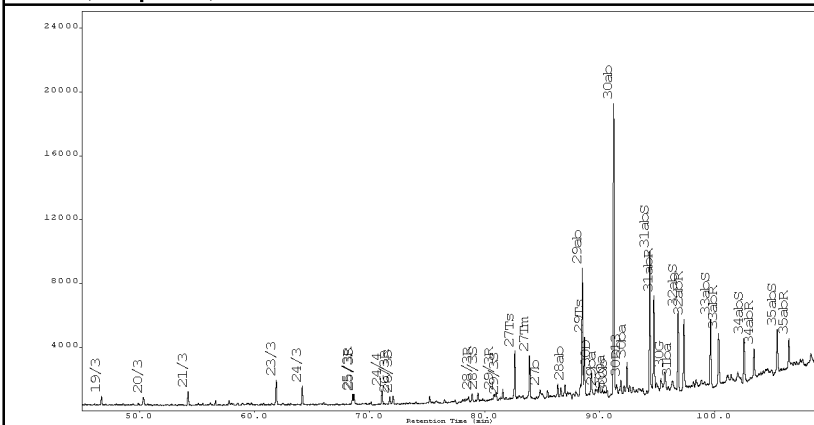


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 Bergen, Norway

Remarks:

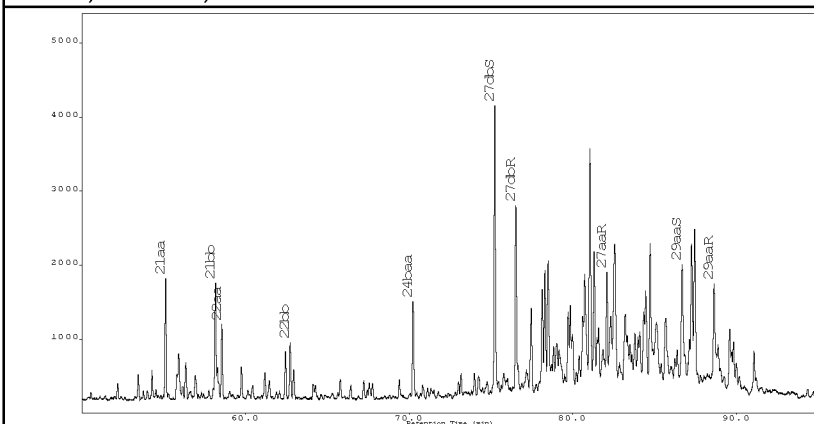
OrgID: 2122484, PlanID: 470089

GC/MS, Terpanes, m/z 191:



GC/MS	Height	ng/mgEOM
%Tri	7	8
%20/3	9	9
%23/3	47	47
%24/4	25	25
C26/C25	0.8	0.8
%27Ts	54	54
%28αβ	4	6
%29Ts	32	32
%25nor30αβ	1	1
%29αβ	29	39
%30βα	9	9
%30D	8	11
%30G	5	8
%32αβS	53	53
%35αβ	0	0

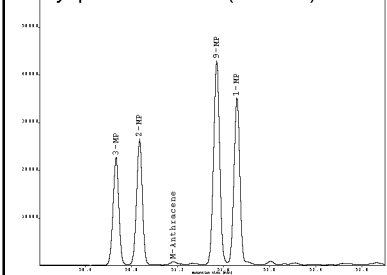
GC/MS, Steranes, m/z 217:



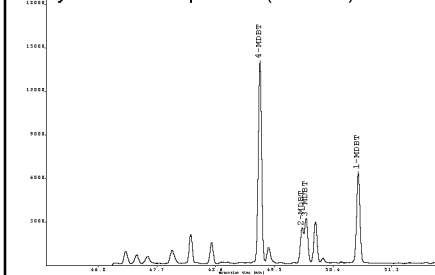
30αβ		158
25nor30αβ		1
Σterpanes		1145
%Preg.	12	12
%29ααS	55	55
%29ββ	66	66
%27dia	54	54
%27ster.	33	33
%28ster.	25	25
%29ster.	33	33
%30ster.	9	9
29ααS		30
29ααR		24
Σsteranes		623

Aromatic hydrocarbons, GC/MS:

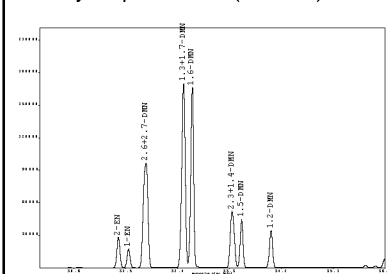
Methyl-phenanthrenes (m/z 192):



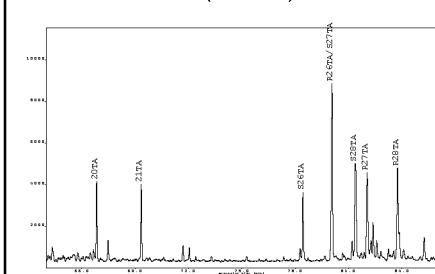
Methyl-dibenzothiophenes (m/z 198):



Dimethyl-naphthalenes (m/z 156):



Triaromatic steroids (m/z 231):



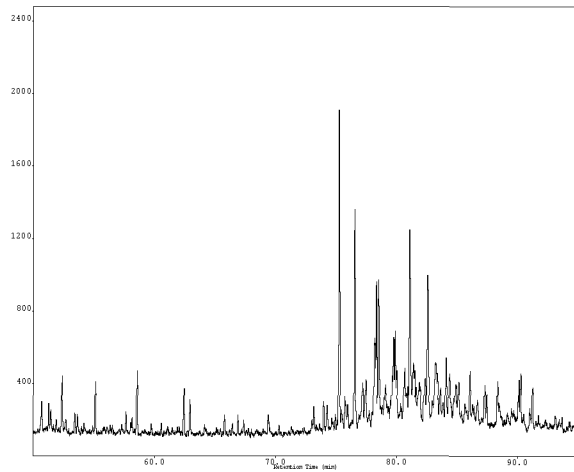
GC/MS	Height	ng/mgEOM
Naphth	219955	1274
C1-naph.	660735	2437
C2-naph.	563143	1956
C3-naph.	382308	1350
DNR	2.2	2.2
2/1MN	1.1	1.1
2/1EN	1.6	1.6
Phen.	60849	206
C1-phen.	126319	501
C2-phen.	99751	378
MPI1	0.53	0.57
F1	0.39	0.39
F2	0.21	0.21
%TAS'n	30	30
DBT/P	0.24	0.08
F/P	0.16	0.14
BP/1.6DMN	0.50	0.35
4/1MDBT	2.21	2.21
3MP/R	2.8	3.3

Country, well/location: NOR 15/12-12
Sample type, depth (m): OIL, 2961,5-2961,5 m

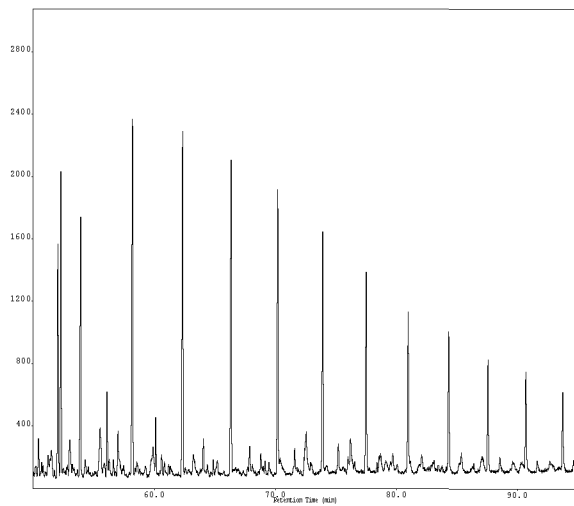
Fluid
sample



Saturated HC biomarkers, m/z 259



QC, monoaromatic steroids in SAT-fraction , m/z 253

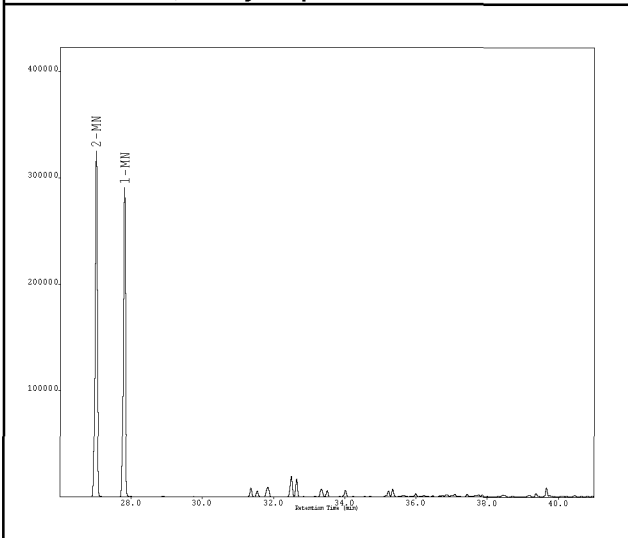


Country, well/location: NOR 15/12-12
 Sample type, depth (m): OIL, 2961,5-2961,5 m

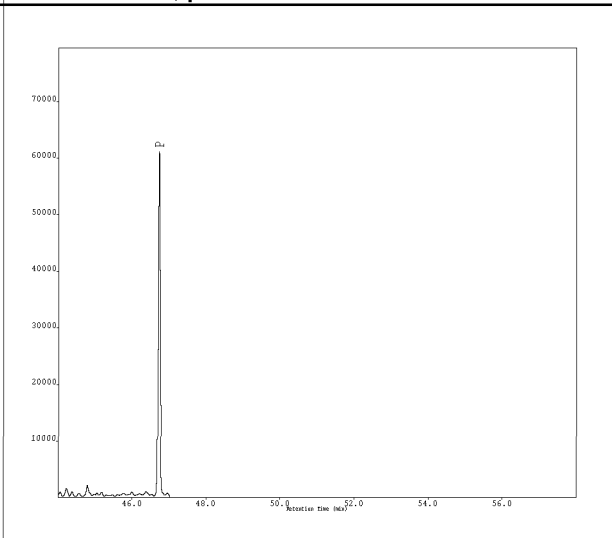
Fluid
 sample



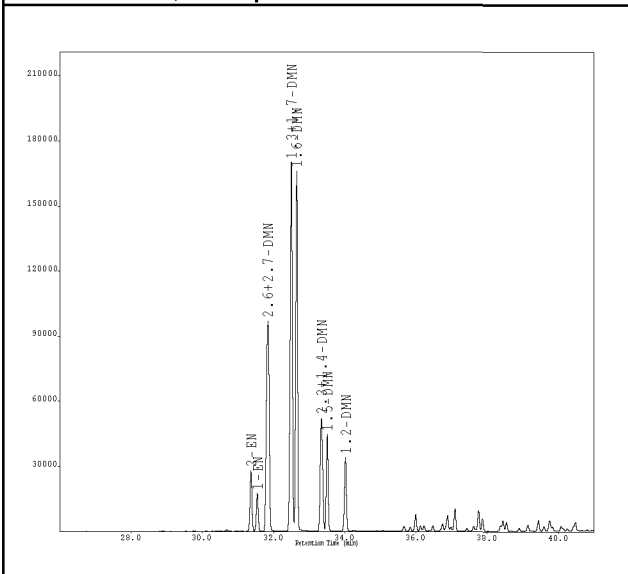
Aromatic HC's, methyl-naphthalenes m/z 142



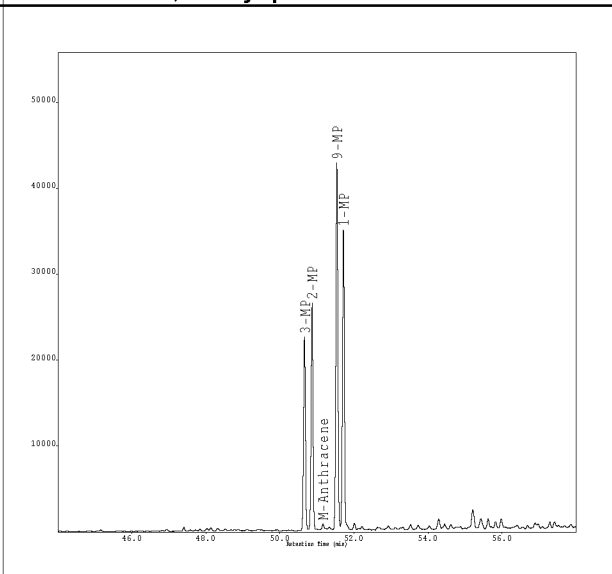
Aromatic HC's, phenanthrene m/z 178



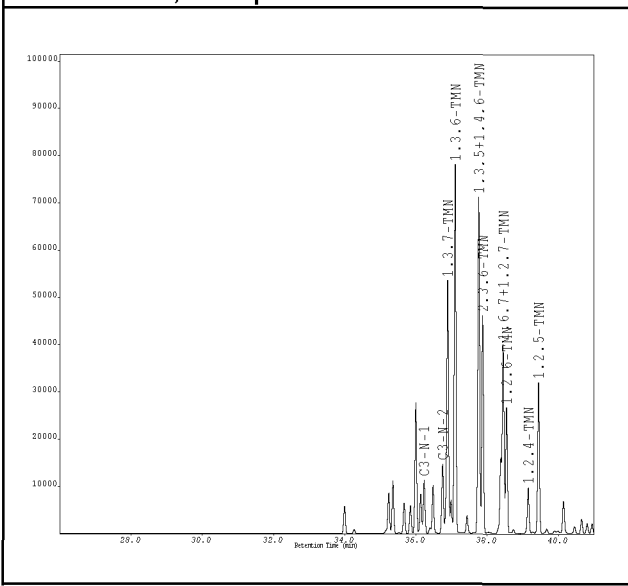
Aromatic HC's, C2-naphthalenes m/z 156



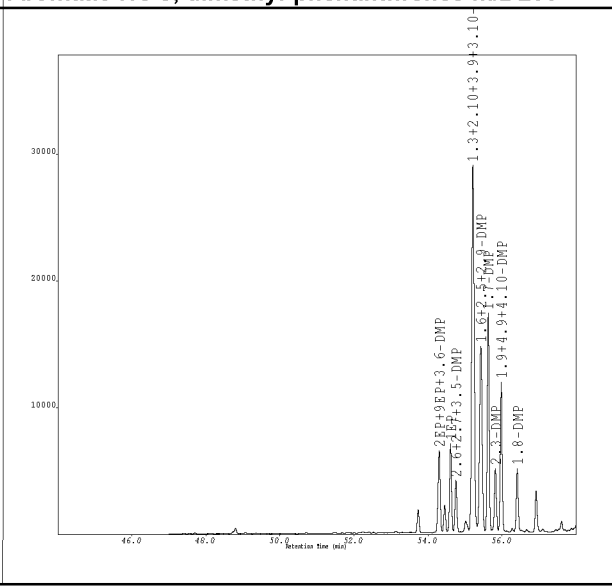
Aromatic HC's, methyl-phenanthrenes m/z 192



Aromatic HC's, C3-naphthalenes m/z 170



Aromatic HC's, dimethyl-phenanthrenes m/z 206

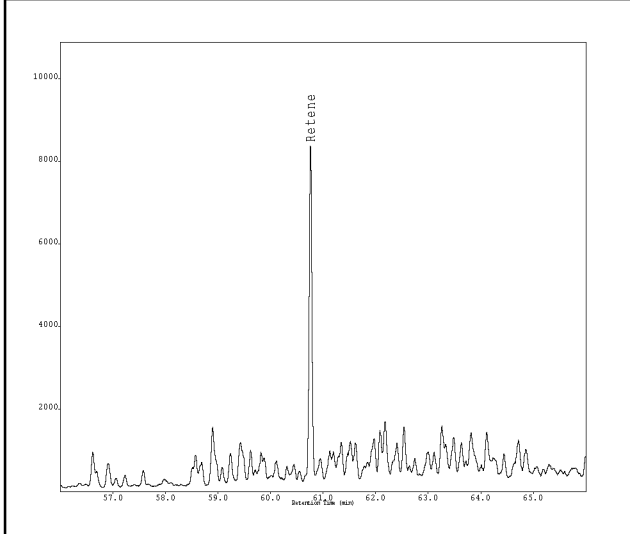


Country, well/location: NOR 15/12-12
 Sample type, depth (m): OIL, 2961,5-2961,5 m

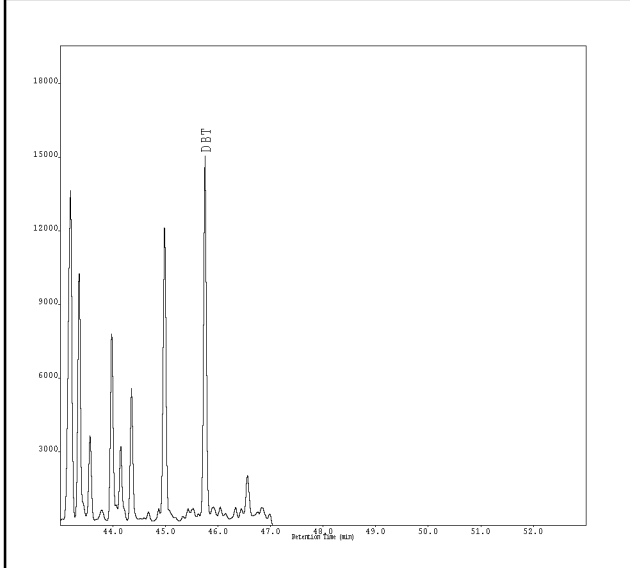
Fluid
 sample



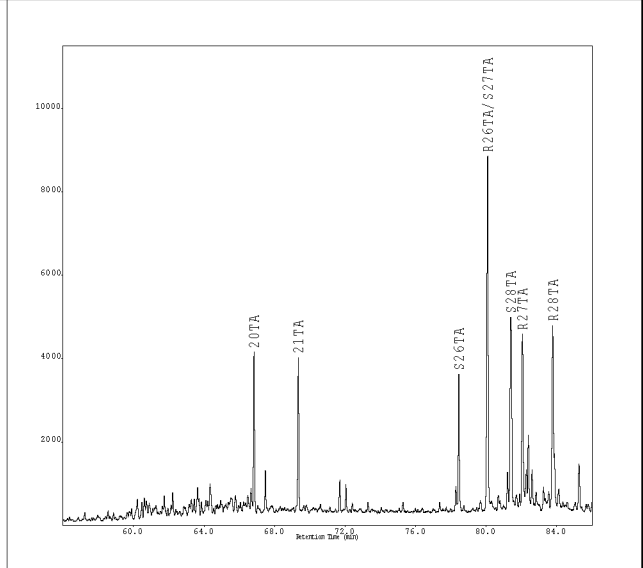
Retene m/z 219



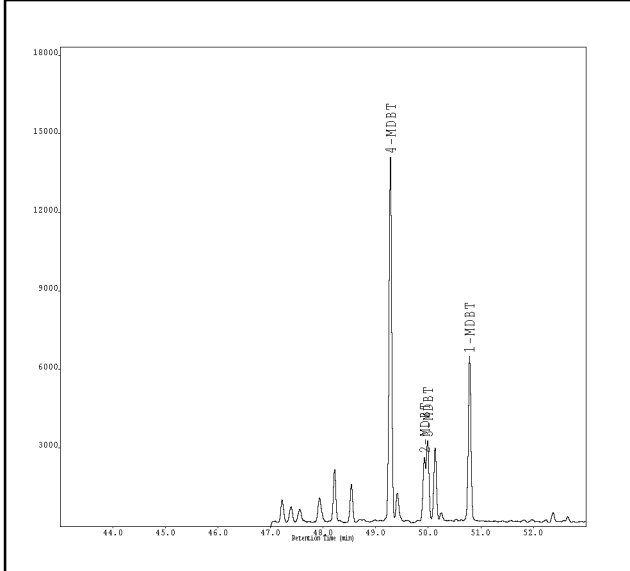
Aromatic HC's, dibenzothiophene m/z 184



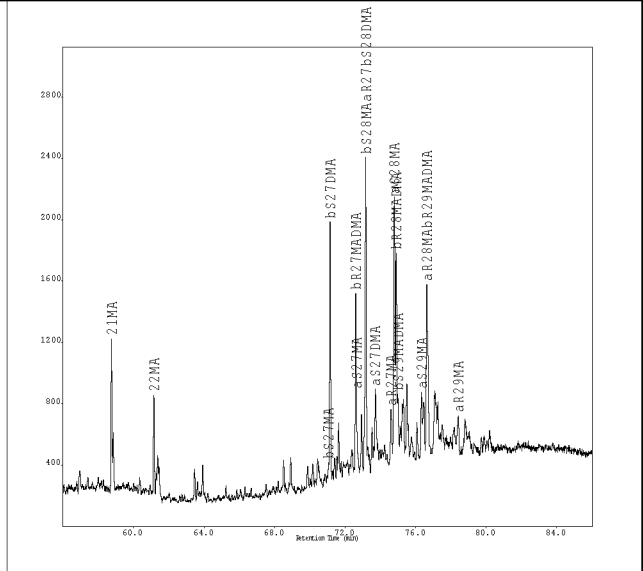
Aromatic HC's, triaromatic steroids m/z 231



Aromatic HC's, methyl-dibenzothiophenes m/z 198



Aromatic HC's, monoaromatic steroids m/z 253



Country, well/location: **NOR 15/12-12**
Sample type, depth (m): **OIL, 2961,5-2961,5 m**
Stratigraphy (Gr./Fm.):
Remarks:
OrgID: , PlanID:

**Fluid
sample**



E&P Reserach Centre,
Bergen, Norway

Saturated HC's, GC/FID			cont...	Height	ng/mgEOM	cont...	Height	ng/mgEOM	
	Area	ng/mgEOM							
nC11	744086	0	25nor28ab	212	3	2314DMN	52047	181	
nC12	847307	0	28ab	766	10	15DMN	44472	154	
nC13	901382	0	25nor29ab	174	2	12DMN	33874	118	
nC14	955192	0	29ab	7453	101	C3N1	11268	40	
iC16	395414	2470	29ba	247	3	C3N2	14687	52	
nC15	988619	6190	29Ts	3585	48	137TMN	53366	189	
nC16	1000652	6260	25nor30ab	93	1	136TMN	77856	275	
iC18	435766	2730	30ab	18255	158	135146TMN	71092	251	
nC17	1049999	6570	30ba	1875	16	236TMN	45880	162	
Prinstane	589943	3690	30D	1494	20	167127TMN	40088	142	
nC18	883000	5530	30G	1041	14	126TMN	26551	94	
Phytane	432100	2700	30O	0	0	124TMN	9680	34	
nC19	826066	5170	30D13	845	11	125TMN	31840	112	
nC20	778000	4870	31abS	8845	119	BP	83015	202	
nC21	681394	4260	31abR	5857	79	3MBP	70331	171	
nC22	630647	3950	31ba	485	7	4MBP	21929	53	
nC23	593316	3710	32abS	5034	68	23XDMBP	2735	10	
nC24	551653	3450	32abR	4468	60	25DMBP	1167	4	
nC25	480707	3010	33abS	4246	57	2424XDMBP	2426	9	
nC26	433617	2710	33abR	3270	44	23DMBP	5058	18	
nC27	357133	2230	34abS	2810	38	3EBP	4977	18	
nC28	324559	2030	34abR	1825	25	35DMBP	8515	30	
nC29	289109	1810	35abS	2646	36	33XDMBP	22308	79	
nC30	241072	1510	35abR	1838	25	4EBP	1988	7	
nC31	229489	1440	21aa	1611	31	34XDMBP	17303	61	
nC32	193277	1210	21bb	1473	29	44XDMBP	3273	12	
nC33	171852	1080	22aa	1008	20	34DMBP	8459	30	
nC34	144146	900	22bb	775	15	DBF	15207	37	
nC35	103891	650	27dbS	3838	75	DBF1	14339	51	
			27dbR	2480	48	MDBF2	7862	28	
			27bbR	3001	58	MDBF3	8621	30	
			27bbS	2436	47	F	9928	29	
			27aaR	1320	26	C1F1	3971	12	
			28bbR	1715	33	C1F2	22958	68	
			28bbS	2534	49	1MF	2605	8	
			29aaS	1529	30	DBT	14738	17	
			29bbR	2792	54	4MDBT	13893	16	
			29bbS	2647	52	2MDBT	2464	3	
			29aaR	1241	24	3MDBT	3084	4	
			30bbR	850	17	1MDBT	6299	7	
			30bbS	719	14	P	60849	206	
			Aromatic HC's, GC/MS						
				Height	ng/mgEOM				
			N	219955	1274	3MP	22480	89	
			2MN	324820	1203	2MP	26342	105	
			1MN	290518	1076	9MP	42638	169	
			2EN	28020	97	1MP	34859	138	
			1EN	17377	60	2EP9EP36DMP	6511	25	
			2627DMN	96849	336	1EP	6986	27	
			1317DMN	170001	591	262735DMP	4068	15	
			16DMN	165900	576	13210393DMP	28770	109	
						162529DMP	14566	55	
						17DMP	17174	65	

Country, well/location: NOR 15/12-12
 Sample type, depth (m): OIL, 2961,5-2961,5 m
 Stratigraphy (Gr./Fm.):
 Remarks:
 OrgID: , PlanID:

Fluid
sample



E&P Research Centre,
Bergen, Norway

Aromatic HC's, GC/MS cont...	Height	ng/mgEOM
23DMP	4957	19
194941DMP	11758	45
18DMP	4961	19
RETENE	8115	27
20TA	3865	6
21TA	3679	6
S26TA	3282	5
R26TAS27TA	8506	13
S28TA	4482	7
R27TA	4132	6
R28TA	4391	7

C5-20 HC's, GC/FID	Area	ng/mgEOM
IC5	17701795	3370
NC5	31192779	5940
22DMC4	680552	130
CYC5	6036717	1150
23DMC4	2105473	400
2MC5	16663132	3170
3MC5	10138780	1930
NC6	35945046	6850
3MCYC5ENE	3718	0
22DMC5	668945	130
MCYC5	21523261	4100
24DMC5	1608051	310
223TMC4	173733	30
BENZENE	34717931	6660
33DMC5	510976	100
CYC6	32250883	6140
2MC6	10715190	2040
23DMC5	4002925	760
11DMCYC5	2934770	560
3MC6	12351857	2350
1C3DMCYC5	4462756	850
1T3DMCYC5	4143280	790
3EC5	1015407	190
1T2DMCYC5	7886937	1500
IC8	48964561	9330
NC7	39081549	7450
1C2DMCYC5	1977812	380
MCYC6	58028003	11050
113TMCYC5	2887542	550
ECYC5	3625200	690
25DMC6	1629675	310
223TMC524DMC6	2137933	410
1C2T4TMCYC5	2504245	480
33DMC6	585791	110
1T2C3TMCYC5	2635679	500
234TMC5	534614	100

cont...	Area	ng/mgEOM
TOLUENE	64162146	12300
23DMC6	2814159	540
2MC7	14447185	2750
4MC7	4717307	900
3MC7	9824824	1870
1C3DMCYC6	12298595	2340
1T4DMCYC6	5440676	1040
11DMCYC6	3137355	600
1T2DMCYC6	6714362	1280
NC8	42560739	8110
ECYC6	18226994	3470
IC9	5311184	1020
EBENZENE	9168963	1760
MXYLENE	34192997	6560
PXYLENE	8928396	1710
4MC8	5338717	1020
2MC8	7310971	1400
3MC8	7817190	1500
OXYLENE	18951133	3630
NC9	43399228	8320
IC10	7894900	1510
NC10	39445521	7560
IC11	7530639	1440
NC11	41944220	8040
NC12	41736356	8000
IC13	8305712	1590
PHC6	48648752	9330
IC14	17615641	3380
NC13	40717862	7810
IC15	10294123	1970
NC14	38211503	7330
IC16	18069272	3460
NC15	42021214	8060
NC16	37987154	7280
IC18	11208984	2150
NC17	36727428	7040
PRISTANE	23443484	4500
NC18	30173659	5790
PHYTANE	16021659	3070
NC19	27472731	5270
NC20	39131519	7500

Country, well/location: NOR 15/12-12
 Sample type, depth (m): COCH, 2989,9-2989,9m
 Stratigraphy (Gr./Fm.):

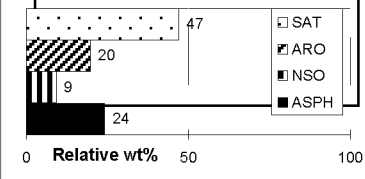
**Sediment
sample**



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Bergen, Norway

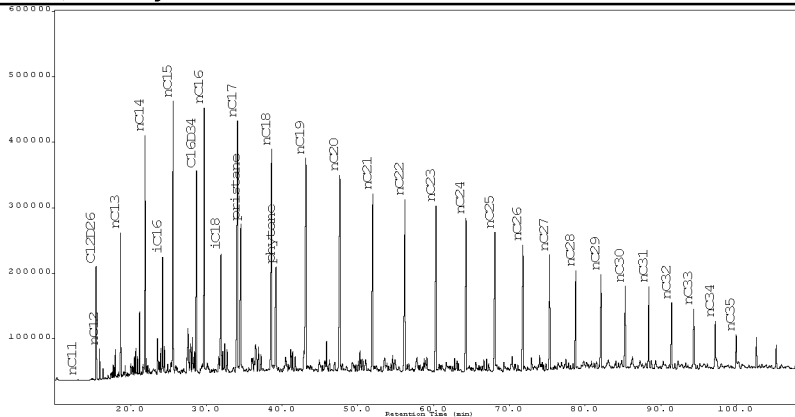
Remarks:

OrgID: 2121338, PlanID: 469952

Bulk data, Iatroscan and EOM		Rock Eval		δ13C isotope		ISTD-mix.(ng/mg EOM):		
	EOM, mg	83.0	S1, kg/t	1.5	Sat.	-29.6	C12D26	3600
	EOM, %	0.5	S2, kg/t	0.7	Aro.	-28.8	C16D34	3600
	EOM/TOC	296.4	PI	0.7	NSO		24αββ	22
	HC/nonHC	2.0	TOC, %	0.3	Asph.		d8N	43
			HI	236	Total		d10BP	38
			Tmax		Kerogen		d10P	43
							d12C	43

PyGC:

GC/FID, C15+ hydrocarbons:



GC/FID	Area	ng/mgEOM
Pr/nC ₁₇	0.6	0.6
Ph/nC ₁₈	0.5	0.5
Pr/Ph	1.4	1.4
nC ₁₇ /(C ₁₇ +C ₂₇)	0.7	0.7
nC ₁₇		5300
Pristane		3300
ΣC ₁₅₋₃₅		70290

Country, well/location: NOR 15/12-12
 Sample type, depth (m): COCH, 2989,9-2989,9m
 Stratigraphy (Gr./Fm.):

**Sediment
sample**

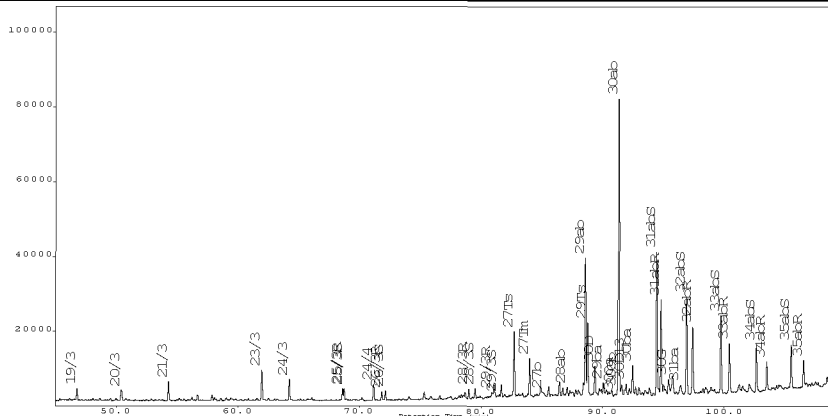


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Bergen, Norway

Remarks:

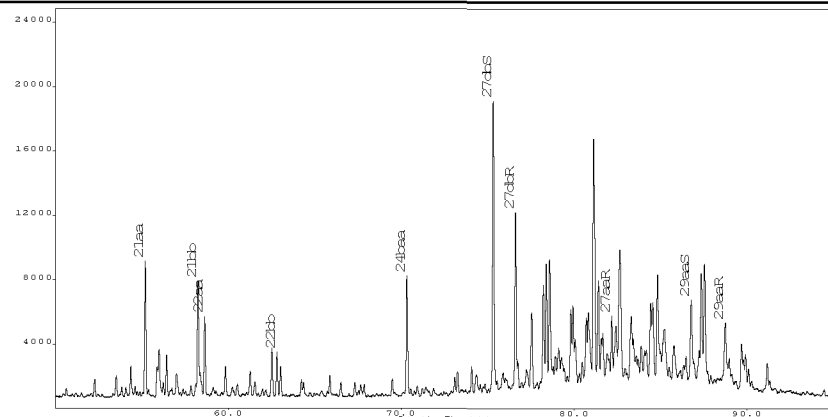
OrgID: 2121338, PlanID: 469952

GC/MS, Steranes, m/z 217:



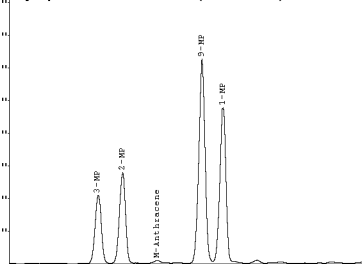
GC/MS	Height	ng/mgEOM
%Tri	8	9
%20/3	9	9
%23/3	48	48
%24/4	24	24
C26/C25	0.8	0.8
%27Ts	63	63
%28αβ	2	4
%29Ts	34	34
%25nor30αβ	0.3	0.4
%29αβ	31	41
%30βα	9	9
%30D	9	13
%30G	5	7
%32αβS	60	60
%35αβ	48	48
30αβ		113
25nor30αβ		0
Σterpanes		864
%29ααS	60	60
%29ββ	71	71
%27dia	58	58
%27ster.	33	33
%28ster.	26	26
%29ster.	32	32
%30ster.	9	9
29ααS		16
29ααR		11
Σsteranes		409

GC/MS, Steranes, m/z 217:

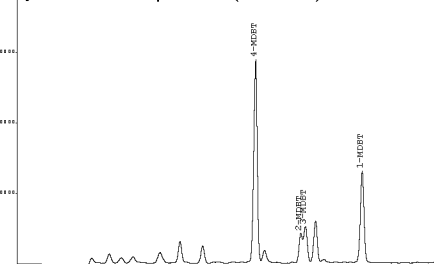


Aromatic hydrocarbons, GC/MS:

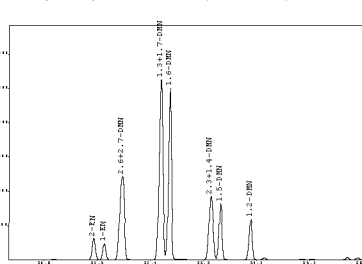
Methyl-phenanthrenes (m/z 192):



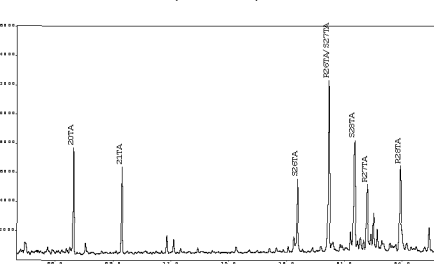
Methyl-dibenzothiophenes (m/z 198):



Dimethyl-naphthalenes (m/z 156):



Triaromatic steroids (m/z 231):



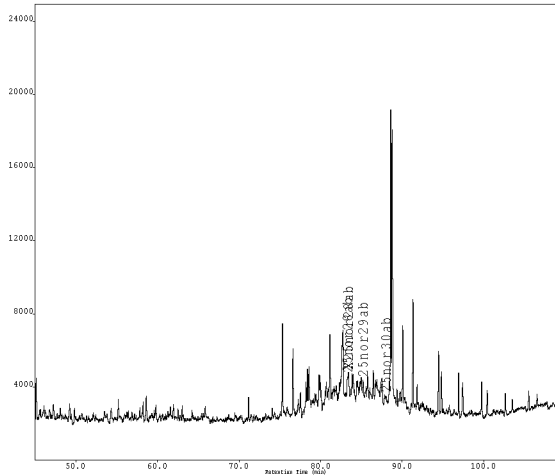
GC/MS	Height	ng/mgEOM
Naphth	44058	142
C1-naph.	346943	631
C2-naph.	520552	893
C3-naph.	419109	731
DNR	1.5	1.5
2/1MN	0.8	0.8
2/1EN	1.3	1.3
Phen.	94848	159
C1phen.	158697	311
C2-phen.	118546	222
MPI1	0.36	0.38
F1	0.31	0.31
F2	0.18	0.18
%TAS'n	35.7	35.7
DBT/P	0.36	0.12
F/P	0.06	0.05
BP/1.6DMN	0.78	0.55
4/1MDBT	2.21	2.21
3MP/R	2.5	2.9

Country, well/location: NOR 15/12-12
 Sample type, depth (m): COCH, 2989,9-2989,9m

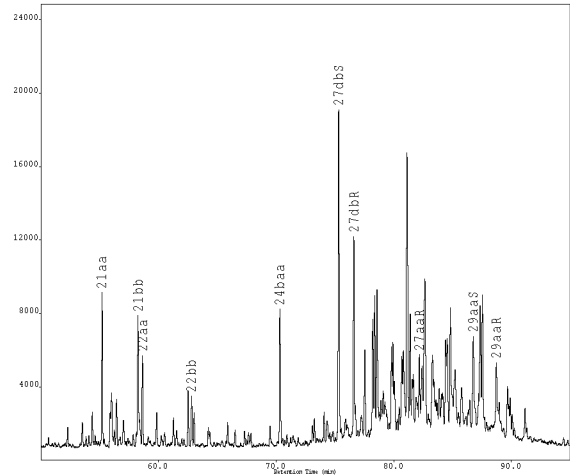
Sediment
 sample



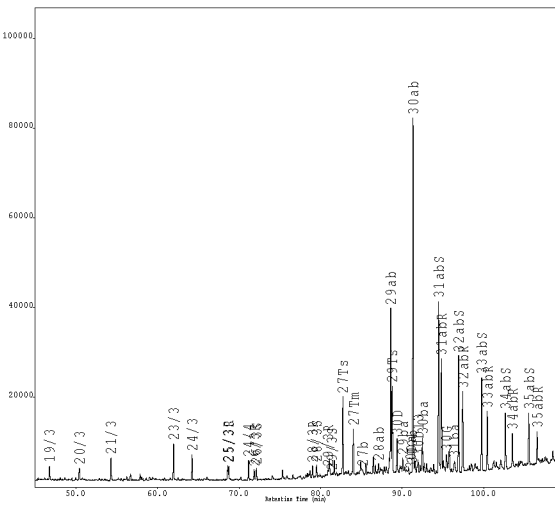
Saturated HC biomarkers, m/z 177



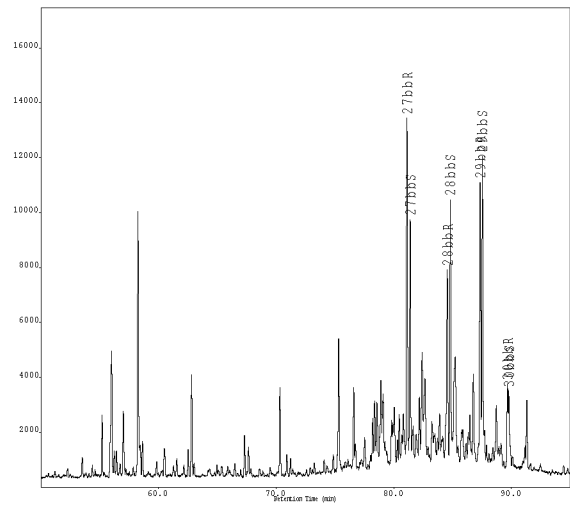
Saturated HC biomarkers, m/z 217



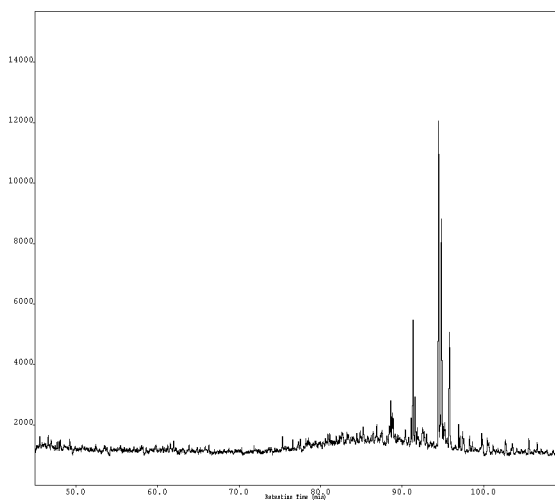
Saturated HC biomarkers, m/z 191



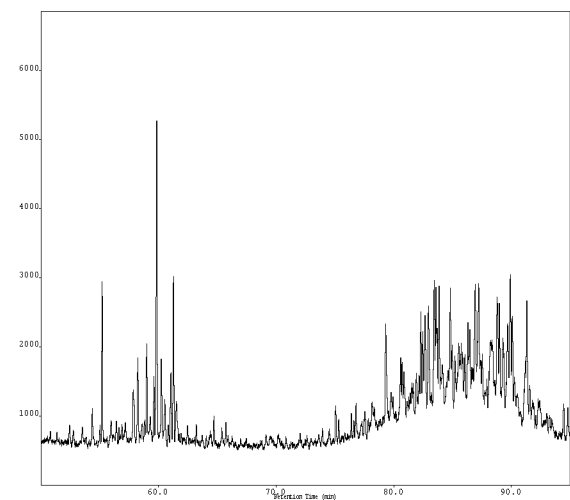
Saturated HC biomarkers, m/z 218



Saturated HC biomarkers, m/z 205



Saturated HC biomarkers, m/z 231

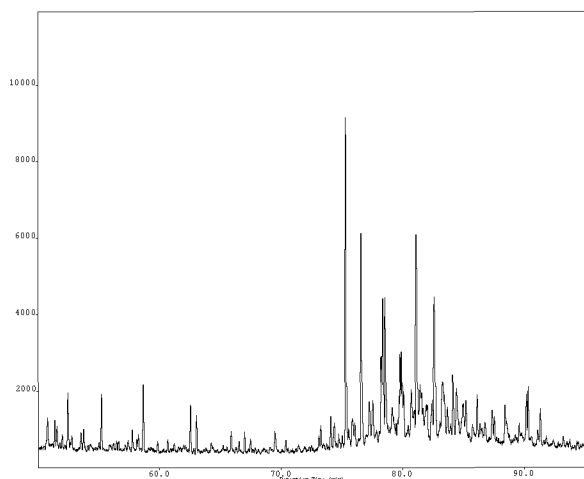


Country, well/location: NOR 15/12-12
Sample type, depth (m): COCH, 2989,9-2989,9m

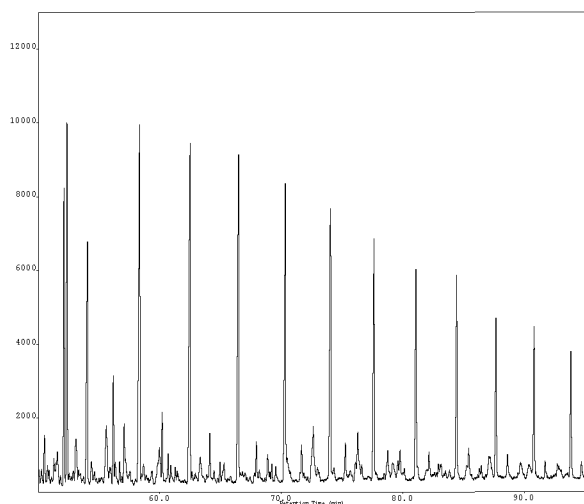
Sediment
sample



Saturated HC biomarkers, m/z 259



QC, monoaromatic steroids in SAT-fraction, m/z 253

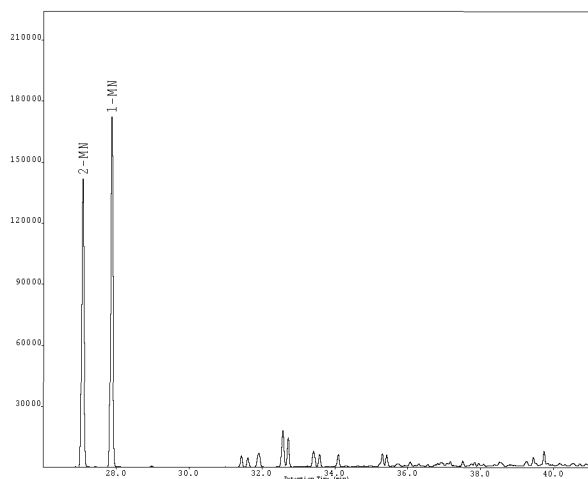


Country, well/location: NOR 15/12-12
 Sample type, depth (m): COCH, 2989,9-2989,9m

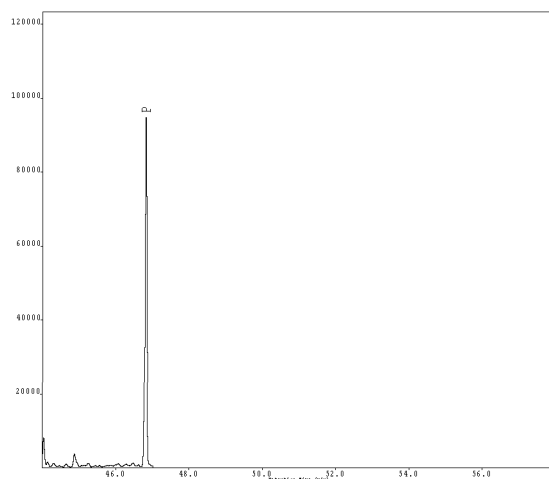
Sediment
 sample



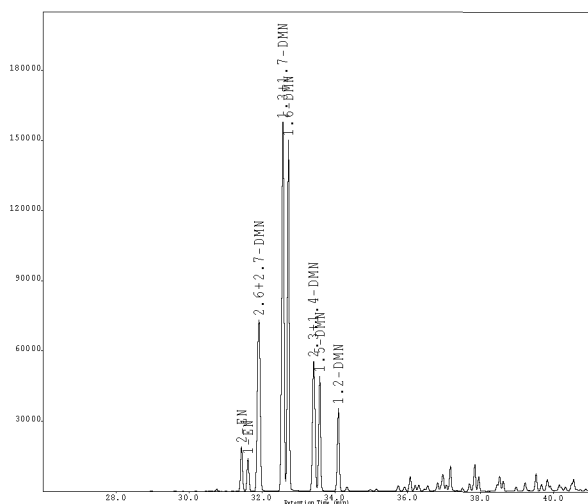
Aromatic HC's, methyl-naphthalenes m/z 142



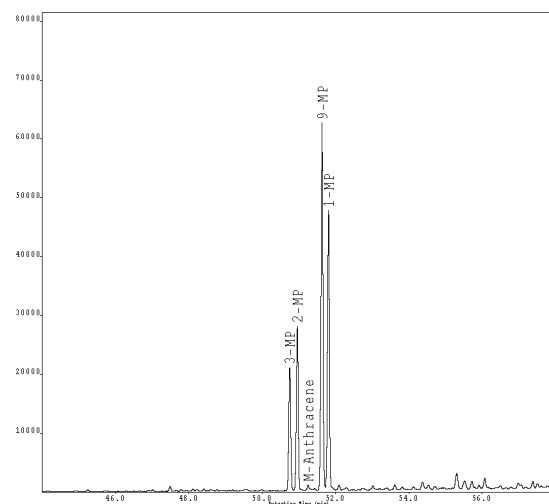
Aromatic HC's, phenanthrene m/z 178



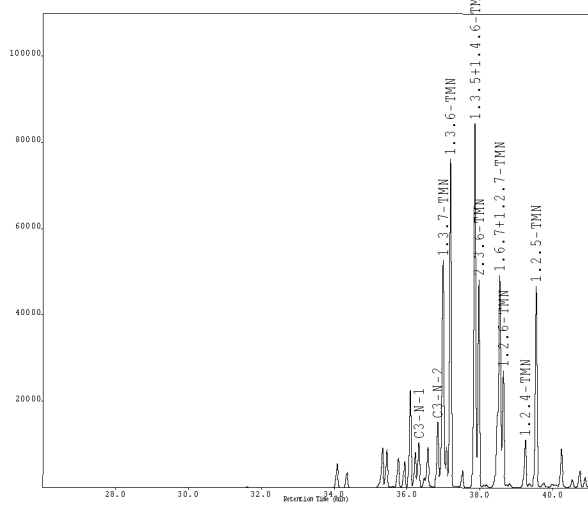
Aromatic HC's, C2-naphthalenes m/z 156



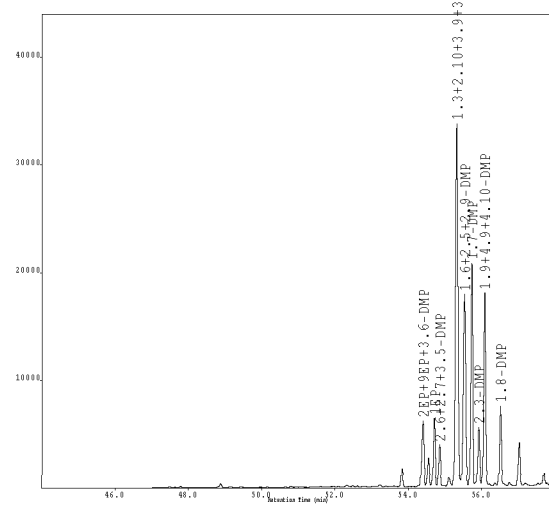
Aromatic HC's, methyl-phenanthrenes m/z 192



Aromatic HC's, C3-naphthalenes m/z 170



Aromatic HC's, dimethyl-phenanthrenes m/z 206



Country, well/location: NOR 15/12-12
Sample type, depth (m): COCH, 2989,9-2989,9m
Stratigraphy (Gr./Fm.):
Remarks:
 OrgID: , PlanID:

**Sediment
sample**



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Bergen, Norway

Saturated HC's, GC/FID			cont...	Height	ng/mgEOM	cont...	Height	ng/mgEOM
	Area	ng/mgEOM						
nC11	8575	0	25nor28ab	1255	3	2314DMN	55343	95
nC12	186330	0	28ab	1963	4	15DMN	49027	84
nC13	736540	0	25nor29ab	898	2	12DMN	35381	61
nC14	1472827	0	29ab	34878	78	C3N1	10340	18
iC16	827351	1700	29ba	3295	7	C3N2	15061	26
nC15	1977393	4060	29Ts	18131	41	137TMN	52477	92
nC16	2277777	4680	25nor30ab	212	0	136TMN	75863	132
iC18	1071362	2200	30ab	78292	113	135146TMN	84271	147
nC17	2576946	5300	30ba	7569	11	236TMN	47931	84
Prinstane	1603747	3300	30D	7555	17	167127TMN	49063	86
nC18	2270308	4670	30G	4079	9	126TMN	26590	46
Phytane	1143711	2350	30O	0	0	124TMN	10914	19
nC19	2226987	4580	30D13	3718	8	125TMN	46599	81
nC20	2162345	4440	31abS	37986	85	BP	117040	141
nC21	1951954	4010	31abR	25158	56	3MBP	97402	117
nC22	1824672	3750	31ba	2604	6	4MBP	29010	35
nC23	1738650	3570	32abS	25743	58	23XDMBP	3683	6
nC24	1631934	3350	32abR	17502	39	25DMBP	1418	2
nC25	1446410	2970	33abS	20772	47	2424XDMBP	3089	5
nC26	1300295	2670	33abR	13118	29	23DMBP	7930	14
nC27	1063553	2190	34abS	12724	29	3EBP	8339	15
nC28	953594	1960	34abR	7612	17	35DMBP	12928	23
nC29	873728	1800	35abS	11528	26	33XDMBP	36307	63
nC30	739227	1520	35abR	7288	16	4EBP	3286	6
nC31	687989	1410	21aa	8335	27	34XDMBP	24650	43
nC32	607195	1250	21bb	6759	22	44XDMBP	4363	8
nC33	511903	1050	22aa	4992	16	34DMBP	14248	25
nC34	427494	880	22bb	2792	9	DBF	27094	33
nC35	304495	630	27dbS	17743	57	DBF1	21550	38
			27dbR	10829	35	MDBF2	9805	17
			27bbR	12349	40	MDBF3	14003	24
			27bbS	8755	28	F	5335	8
			27aaR	3736	12	C1F1	2293	3
			28bbR	6792	22	C1F2	26344	38
			28bbS	9416	30	1MF	1267	2
			29aaS	5003	16	DBT	33824	20
			29bbR	9598	31	4MDBT	28768	17
			29bbS	10376	34	2MDBT	4225	2
			29aaR	3290	11	3MDBT	5150	3
			30bbR	3067	10	1MDBT	13019	8
			30bbS	2737	9	P	94848	159
			Aromatic HC's, GC/MS			3MP	20872	41
				Height	ng/mgEOM	2MP	27840	55
			N	44058	142	9MP	62450	122
			2MN	141691	259	1MP	47535	93
			1MN	172199	315	2EP9EP36DMP	6121	11
			2EN	18938	33	1EP	6304	12
			1EN	14115	24	262735DMP	3810	7
			2627DMN	73116	125	13210393DMP	33581	63
			1317DMN	157584	270	162529DMP	17703	33
			16DMN	150101	258	17DMP	20583	39

Saturated HC biomarkers, GC/MS		
	Height	ng/mgEOM
19/3	3184	7
20/3	2816	6
21/3	5116	11
23/3	8042	18
24/3	5663	13
25/3R	3093	7
25/3S	3036	7
26/3R	2368	5
26/3S	2683	6
28/3R	2739	6
28/3S	2731	6
29/3R	1244	3
29/3S	865	2
24/4	4407	10
27Ts	17166	38
27Tm	9943	22
27b	620	1

Country, well/location: **NOR 15/12-12**
Sample type, depth (m): **COCH, 2989,9-2989,9m**
Stratigraphy (Gr./Fm.):
Remarks:
OrgID: , PlanID:

**Sediment
sample**



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Bergen, Norway

Aromatic HC's, GC/MS cont...	Height	ng/mgEOM
23DMP	5347	10
194941DMP	17770	33
18DMP	7327	14
RETENE	8440	14
20TA	7292	5
21TA	5955	4
S26TA	4971	3
R26TAS27TA	11701	8
S28TA	7338	5
R27TA	4441	3
R28TA	5805	4

Country, well/location: **NOR 15/12-12**
 Sample type, depth (m): **COCH, 2993,5-2993,5m**
 Stratigraphy (Gr./Fm.):

**Sediment
sample**

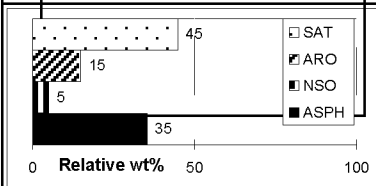


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Bergen, Norway

Remarks:

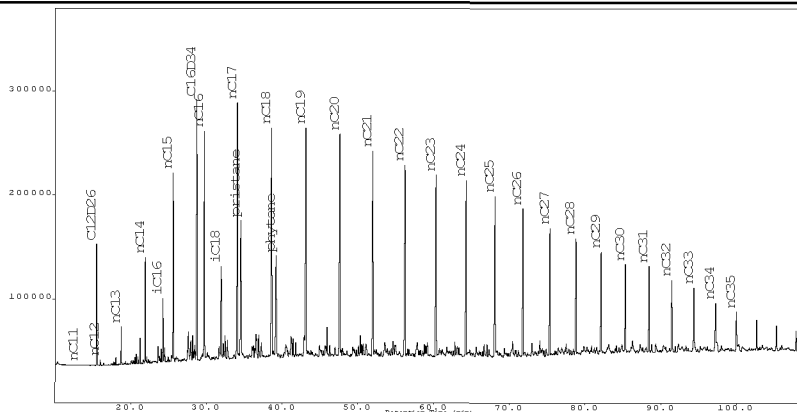
OrgID: 2121337, PlanID: 469953

Bulk data, Introscan and EOM		Rock Eval		δ13C isotope		ISTD-mix.(ng/mg EOM):	
EOM, mg	84.0	S1, kg/t	2.1	Sat.	-29.7	C12D26	3570
EOM, %	0.7	S2, kg/t	1.0	Aro.	-28.8	C16D34	3570
EOM/TOC	240.0	PI	0.7	NSO		24αββ	21
HC/nonHC	1.5	TOC, %	0.4	Asph.		d8N	43
		HI	283	Total		d10BP	38
		Tmax		Kerogen		d10P	43
						d12C	43



PyGC:

GC/FID, C15+ hydrocarbons:



GC/FID Area ng/mgEOM

Pr/nC ₁₇	0.6	0.6
Ph/nC ₁₈	0.5	0.5
Pr/Ph	1.3	1.3
nC ₁₇ /(C ₁₇ +C ₂₇)	0.7	0.7
nC ₁₇		3600
Pristane		2270
ΣC ₁₅₋₃₅		52070

Country, well/location: NOR 15/12-12
 Sample type, depth (m): COCH, 2993,5-2993,5m
 Stratigraphy (Gr./Fm.):

**Sediment
sample**

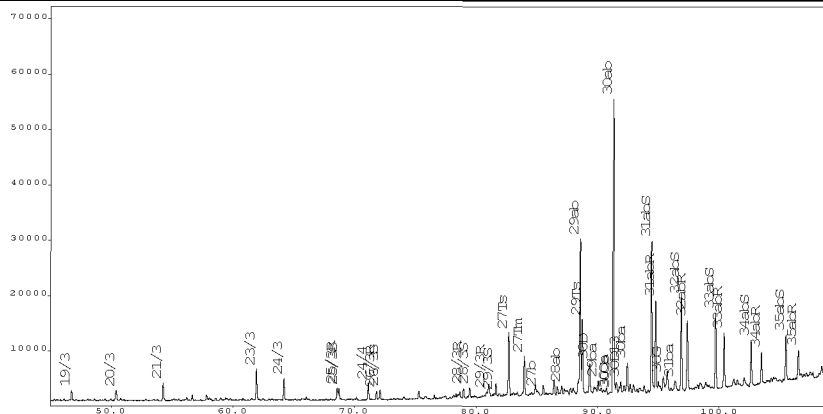


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Remarks:

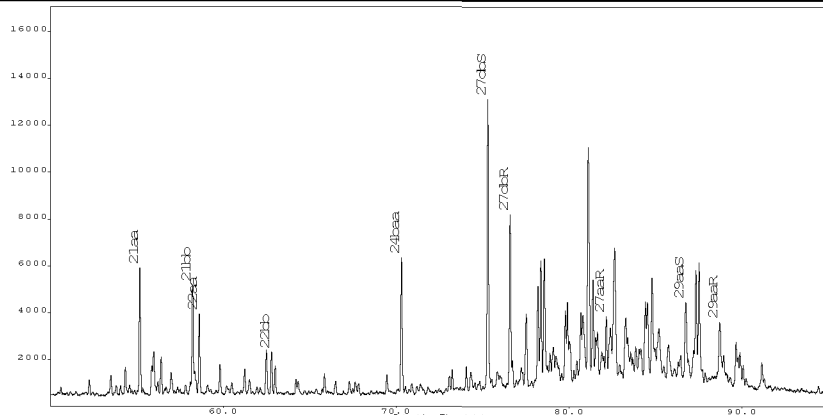
OrgID: 2121337, PlanID: 469953

GC/MS, Steranes, m/z 217:



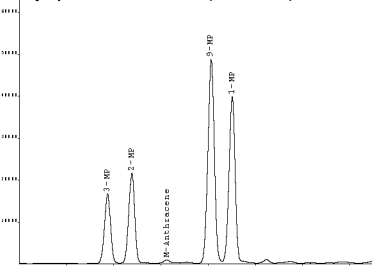
GC/MS	Height	ng/mgEOM
%Tri	8	9
%20/3	9	9
%23/3	48	48
%24/4	25	25
C26/C25	0.9	0.9
%27Ts	62	62
%28αβ	3	4
%29Ts	32	32
%25nor30αβ	0.8	1.3
%29αβ	34	44
%30βα	9	9
%30D	9	13
%30G	4	7
%32αβS	57	57
%35αβ	48	49
30αβ		97
25nor30αβ		1
Σterpanes		759
%29ααS	59	59
%29ββ	71	71
%27dia	58	58
%27ster.	33	33
%28ster.	26	26
%29ster.	32	32
%30ster.	9	9
29ααS		13
29ααR		9
Σsteranes		350

GC/MS, Steranes, m/z 217:

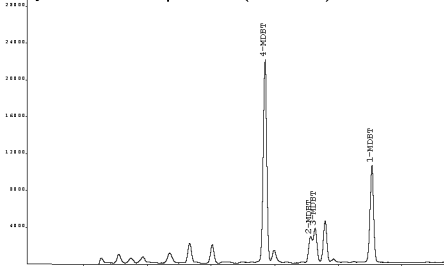


Aromatic hydrocarbons, GC/MS:

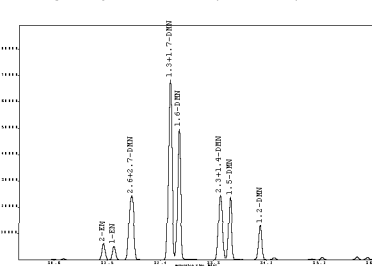
Methyl-phenanthrenes (m/z 192):



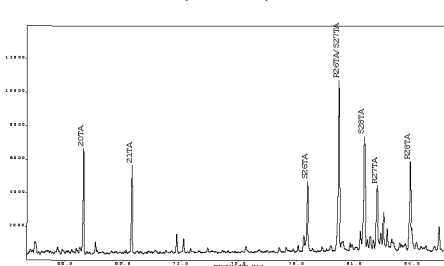
Methyl-dibenzothiophenes (m/z 198):



Dimethyl-naphthalenes (m/z 156):



Triaromatic steroids (m/z 231):



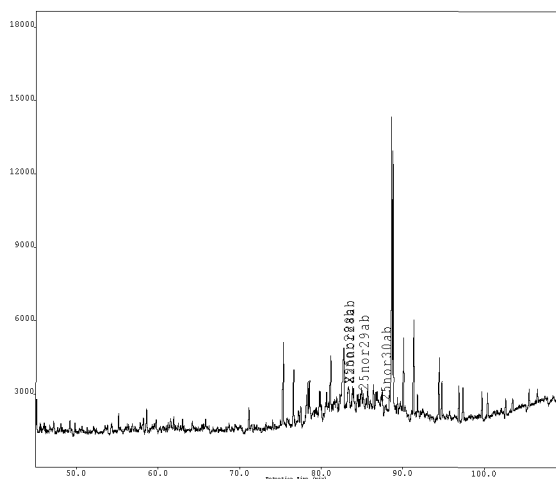
GC/MS	Height	ng/mgEOM
Naphth	6502	21
C1-naph.	82967	129
C2-naph.	203599	300
C3-naph.	232834	349
DNR	1.0	1.0
2/1MN	0.6	0.6
2/1EN	1.2	1.2
Phen.	76657	117
C1phen.	126501	226
C2-phen.	96808	166
MPI1	0.35	0.37
F1	0.30	0.30
F2	0.17	0.17
%TAS'n	34.6	34.6
DBT/P	0.32	0.11
F/P	0.04	0.04
BP/1.6DMN	1.02	0.71
4/1MDBT	2.09	2.09
3MP/R	2.4	2.9

Country, well/location: NOR 15/12-12
 Sample type, depth (m): COCH, 2993,5-2993,5m

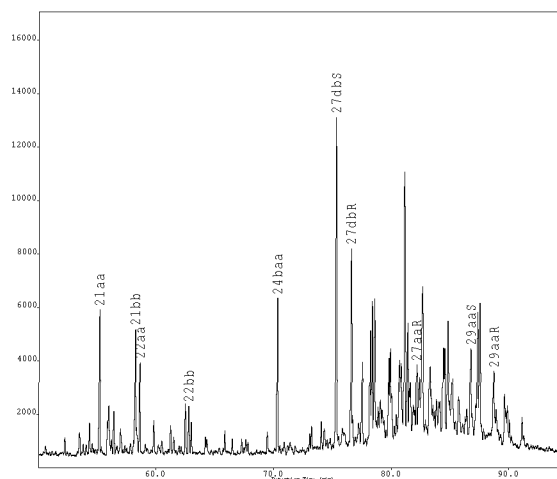
Sediment
 sample



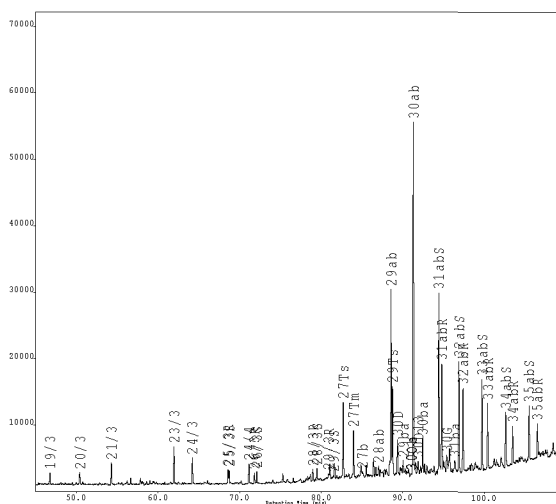
Saturated HC biomarkers, m/z 177



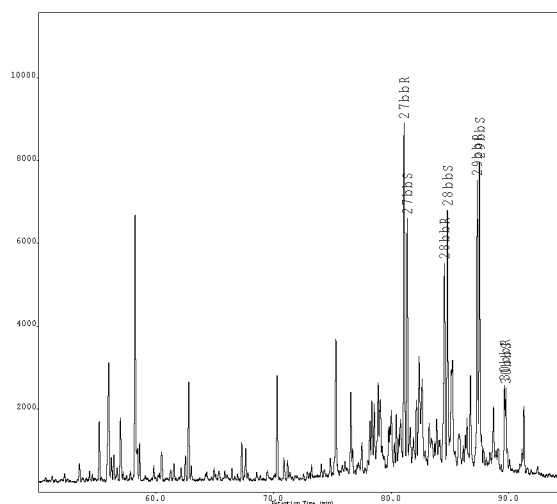
Saturated HC biomarkers, m/z 217



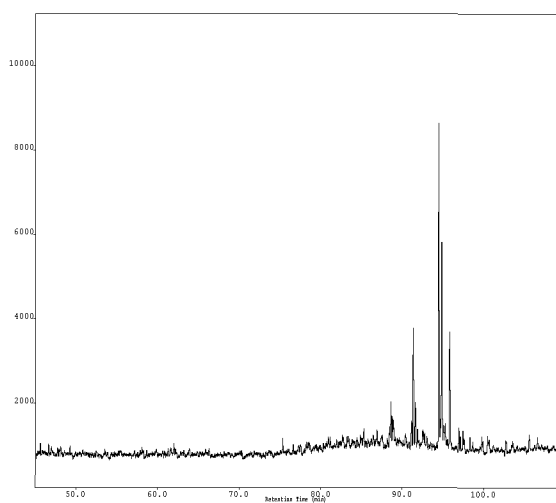
Saturated HC biomarkers, m/z 191



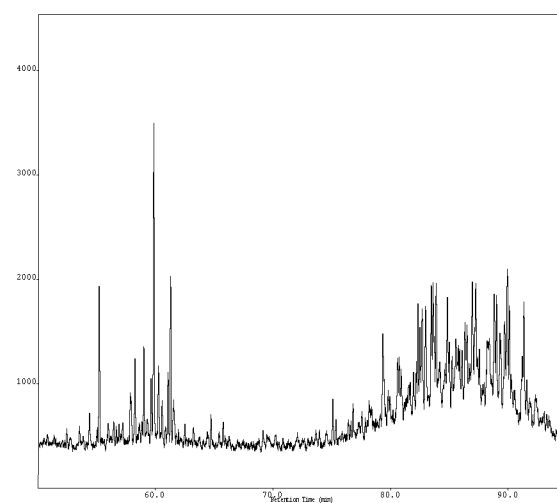
Saturated HC biomarkers, m/z 218



Saturated HC biomarkers, m/z 205



Saturated HC biomarkers, m/z 231

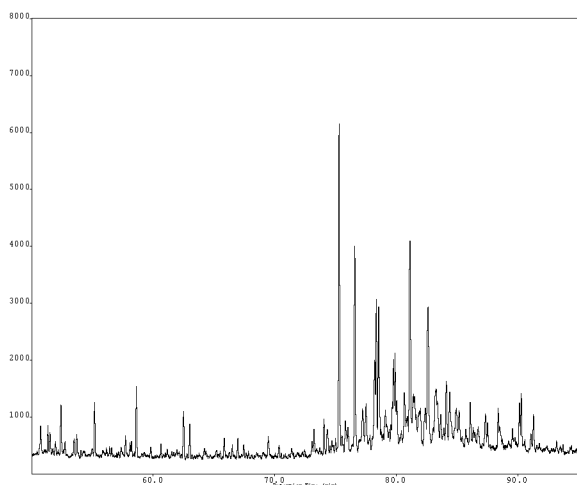


Country, well/location: NOR 15/12-12
Sample type, depth (m): COCH, 2993,5-2993,5m

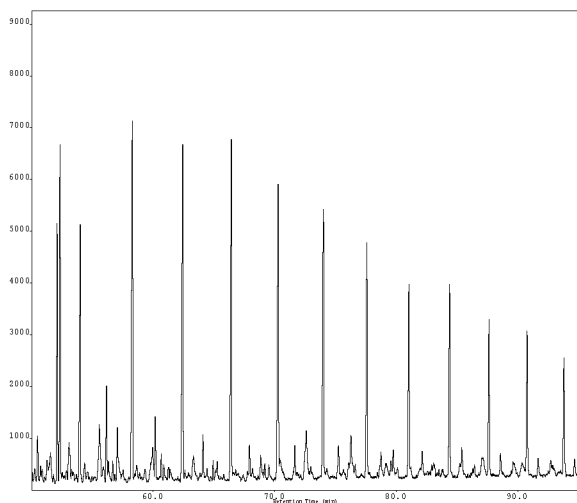
Sediment
sample



Saturated HC biomarkers, m/z 259



QC, monoaromatic steroids in SAT-fraction, m/z 253

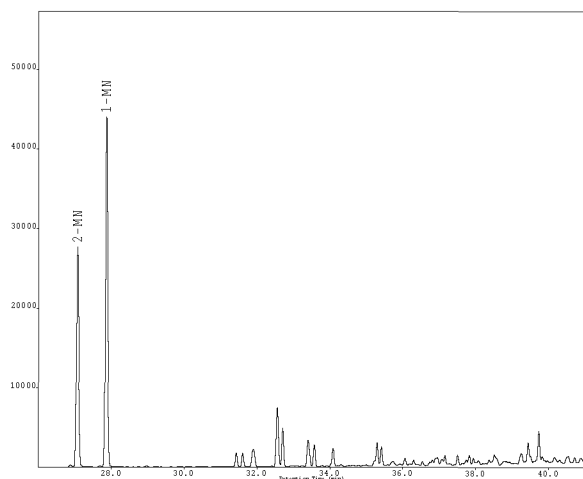


Country, well/location: NOR 15/12-12
 Sample type, depth (m): COCH, 2993,5-2993,5m

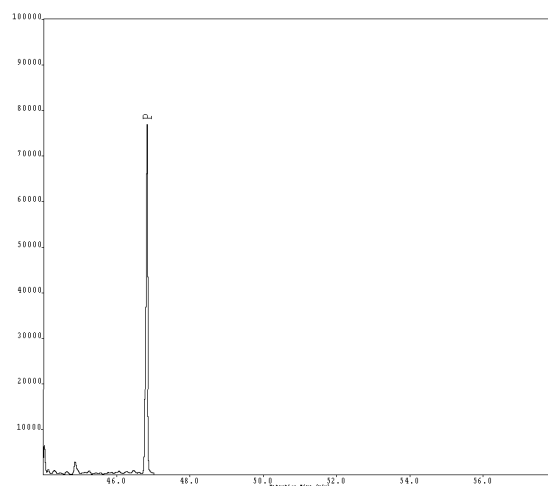
Sediment
 sample



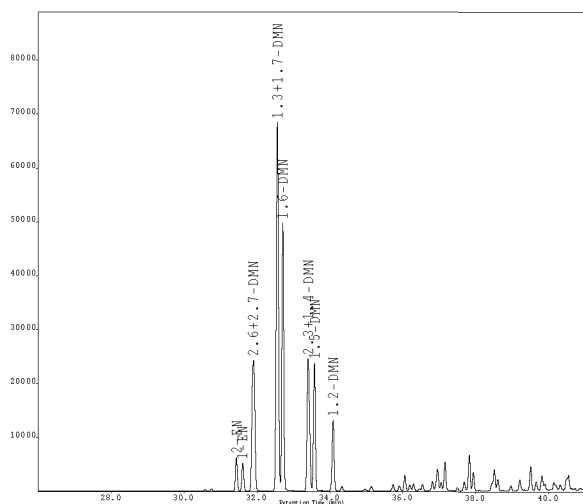
Aromatic HC's, methyl-naphthalenes m/z 142



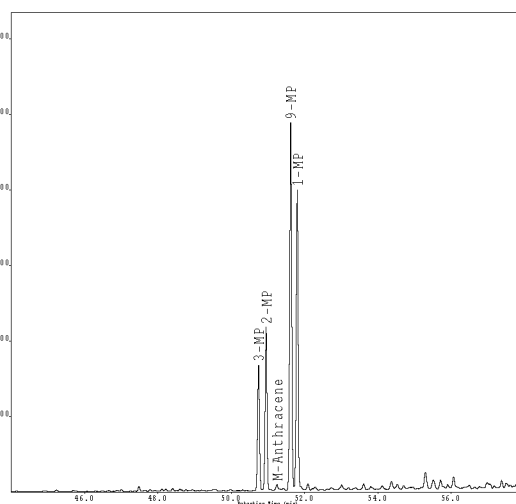
Aromatic HC's, phenanthrene m/z 178



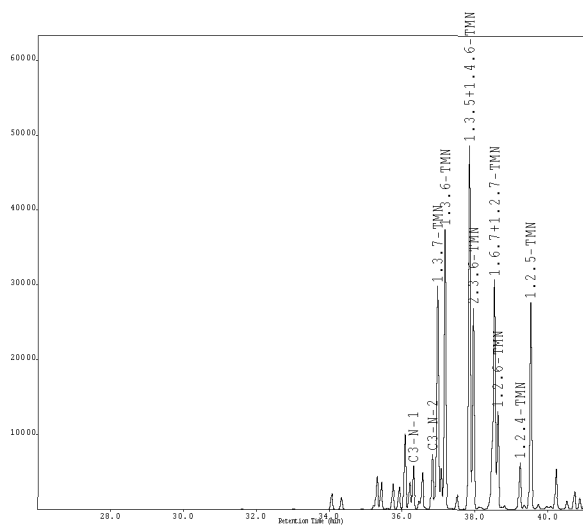
Aromatic HC's, C2-naphthalenes m/z 156



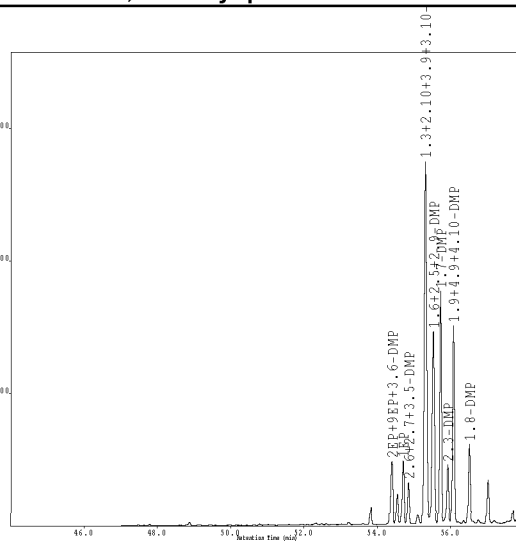
Aromatic HC's, methyl-phenanthrenes m/z 192



Aromatic HC's, C3-naphthalenes m/z 170



Aromatic HC's, dimethyl-phenanthrenes m/z 206

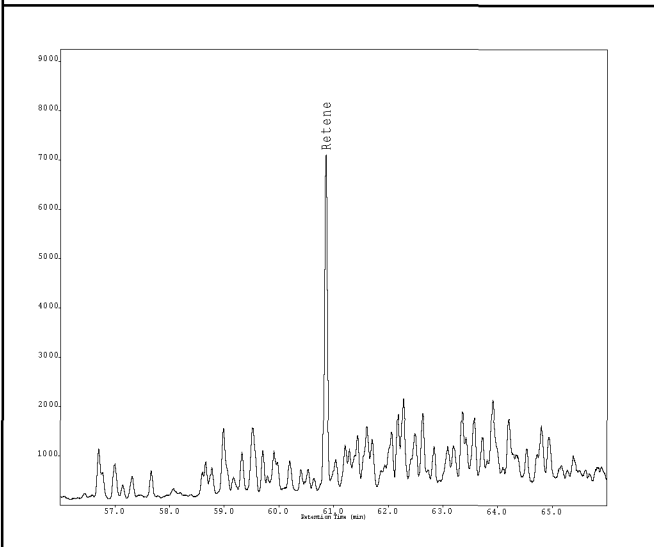


Country, well/location: NOR 15/12-12
 Sample type, depth (m): COCH, 2993,5-2993,5m

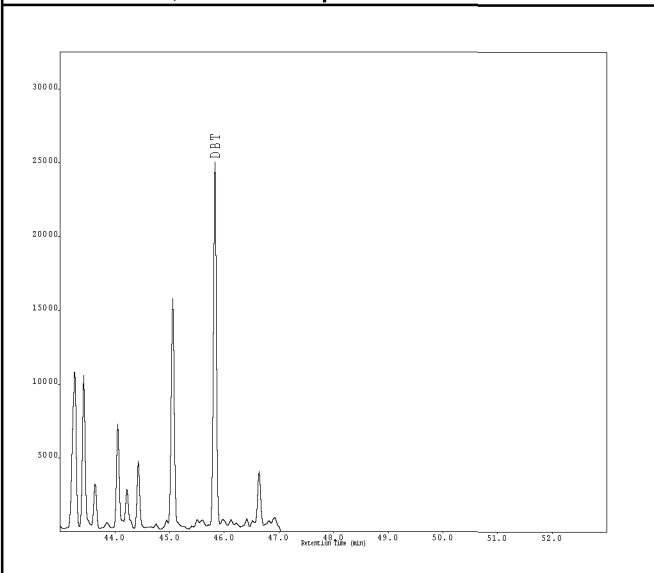
Sediment
 sample



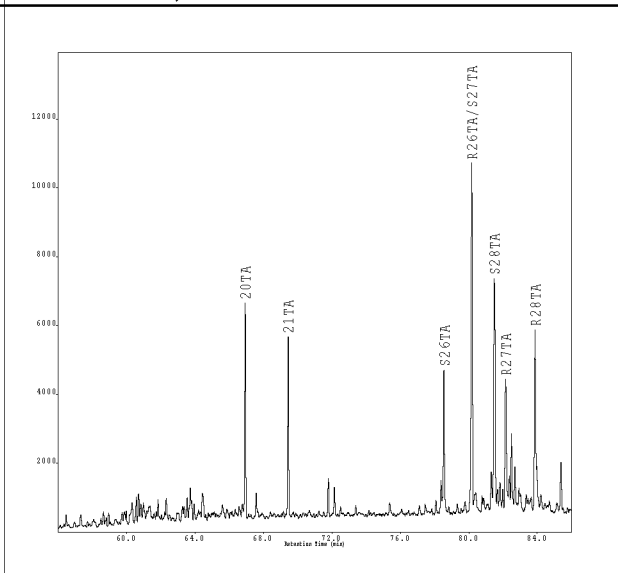
Retene m/z 219



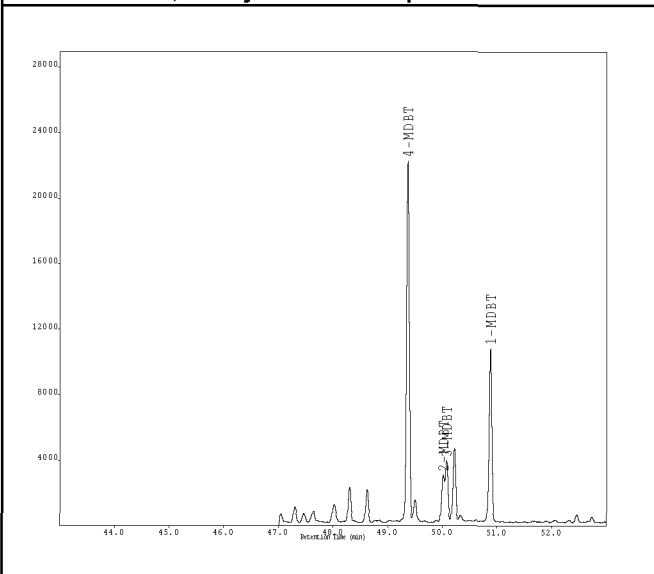
Aromatic HC's, dibenzothiophene m/z 184



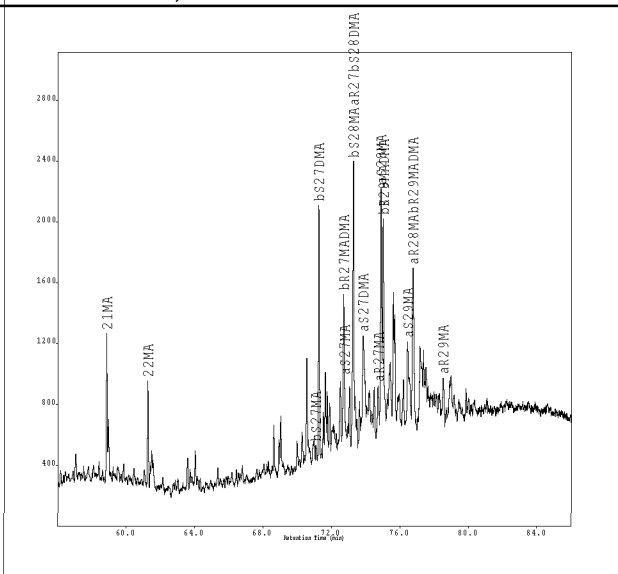
Aromatic HC's, triaromatic steroids m/z 231



Aromatic HC's, methyl-dibenzothiophenes m/z 198



Aromatic HC's, monoaromatic steroids m/z 253



Country, well/location: NOR 15/12-12
Sample type, depth (m): COCH, 2993,5-2993,5m
Stratigraphy (Gr./Fm.):
Remarks:
 OrgID: , PlanID:

**Sediment
sample**



E&P Research Centre,
Bergen, Norway

Saturated HC's, GC/FID			cont...	Height	ng/mgEOM	cont...	Height	ng/mgEOM	
	Area	ng/mgEOM							
nC11	2553	0	25nor28ab	954	3	2314DMN	24518	36	
nC12	24073	0	28ab	1525	4	15DMN	23704	35	
nC13	117636	0	25nor29ab	577	2	12DMN	13031	19	
nC14	368799	0	29ab	26992	77	C3N1	5747	9	
iC16	270110	720	29ba	2356	7	C3N2	7287	11	
nC15	715920	1900	29Ts	12758	36	137TMN	29725	45	
nC16	1035107	2750	25nor30ab	449	1	136TMN	37299	56	
iC18	540882	1440	30ab	53268	97	135146TMN	48611	73	
nC17	1355230	3600	30ba	5118	9	236TMN	26768	40	
Prinstane	851758	2270	30D	5257	15	167127TMN	30645	46	
nC18	1298228	3450	30G	2404	7	126TMN	12914	19	
Phytane	668568	1780	30O	0	0	124TMN	6204	9	
nC19	1327752	3530	30D13	2133	6	125TMN	27634	41	
nC20	1316538	3500	31abS	27040	77	BP	50594	52	
nC21	1196761	3180	31abR	16134	46	3MBP	53317	55	
nC22	1145126	3050	31ba	1419	4	4MBP	16007	17	
nC23	1094709	2910	32abS	16798	48	23XDMBP	1587	2	
nC24	1026931	2730	32abR	12519	36	25DMBP	588	1	
nC25	916419	2440	33abS	13604	39	2424XDMBP	1286	2	
nC26	829149	2210	33abR	9861	28	23DMBP	4442	7	
nC27	682861	1820	34abS	8362	24	3EBP	4344	7	
nC28	616807	1640	34abR	5862	17	35DMBP	7470	11	
nC29	566415	1510	35abS	8189	23	33XDMBP	21948	33	
nC30	482457	1280	35abR	5206	15	4EBP	2164	3	
nC31	442134	1180	21aa	5395	22	34XDMBP	15160	23	
nC32	391661	1040	21bb	4323	18	44XDMBP	2728	4	
nC33	329619	880	22aa	3433	14	34DMBP	10093	15	
nC34	278498	740	22bb	1832	8	DBF	14930	15	
nC35	195661	520	27dbS	12343	51	DBF1	14530	22	
			27dbR	7288	30	MDBF2	6365	10	
			27bbR	8251	34	MDBF3	9107	14	
			27bbS	5948	24	F	3383	4	
			27aaR	2312	10	C1F1	1614	2	
			28bbR	4867	20	C1F2	21177	27	
			28bbS	6034	25	1MF	1000	1	
			29aaS	3260	13	DBT	24660	13	
			29bbR	6587	27	4MDBT	22019	12	
			29bbS	6961	29	2MDBT	2853	2	
			29aaR	2250	9	3MDBT	3744	2	
			30bbR	2054	8	1MDBT	10560	6	
			30bbS	2002	8	P	76657	117	
			Aromatic HC's, GC/MS						
				Height	ng/mgEOM				
			N	6502	21	3MP	16594	30	
			2MN	27680	44	2MP	21533	39	
			1MN	43975	69	9MP	48639	87	
			2EN	6184	9	1MP	39735	71	
			1EN	5128	8	2EP9EP36DMP	4752	8	
			2627DMN	24294	36	1EP	4766	8	
			1317DMN	68387	101	262735DMP	3099	5	
			16DMN	49665	73	13210393DMP	27259	47	
						162529DMP	14399	25	
						17DMP	17453	30	

Saturated HC biomarkers, GC/MS		
	Height	ng/mgEOM
19/3	1830	5
20/3	1800	5
21/3	3276	9
23/3	5569	16
24/3	3933	11
25/3R	2079	6
25/3S	1982	6
26/3R	1624	5
26/3S	1848	5
28/3R	1764	5
28/3S	1891	5
29/3R	828	2
29/3S	524	1
24/4	3094	9
27Ts	11465	33
27Tm	7039	20
27b	483	1

Country, well/location: NOR 15/12-12
Sample type, depth (m): COCH, 2993,5-2993,5m
Stratigraphy (Gr./Fm.):
Remarks:
OrgID: , PlanID:

**Sediment
sample**



E&P Reserach Centre,
Bergen, Norway

Aromatic HC's, GC/MS cont...	Height	ng/mgEOM
23DMP	4328	7
194941DMP	14806	25
18DMP	5946	10
RETENE	6811	10
20TA	6273	4
21TA	5204	3
S26TA	4132	3
R26TAS27TA	10135	7
S28TA	6584	4
R27TA	3746	2
R28TA	5274	3

Country, well/location: NOR 15/12-9 S

Sample type, depth (m): OIL, - m

Stratigraphy (Gr./Fm.):

Fluid sample

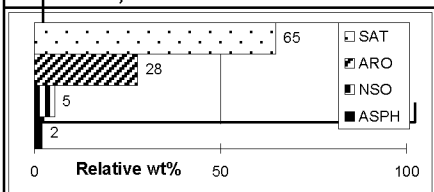


E&P Research Centre, Bergen, Norway

Remarks:

OrgID: 2129052, PlanID: 470520

Bulk data, Iatroscan



Bulk PVT

GOR, Sm³/m³
 B₀
 1/B_g
 Density, kg/m³
 API⁰

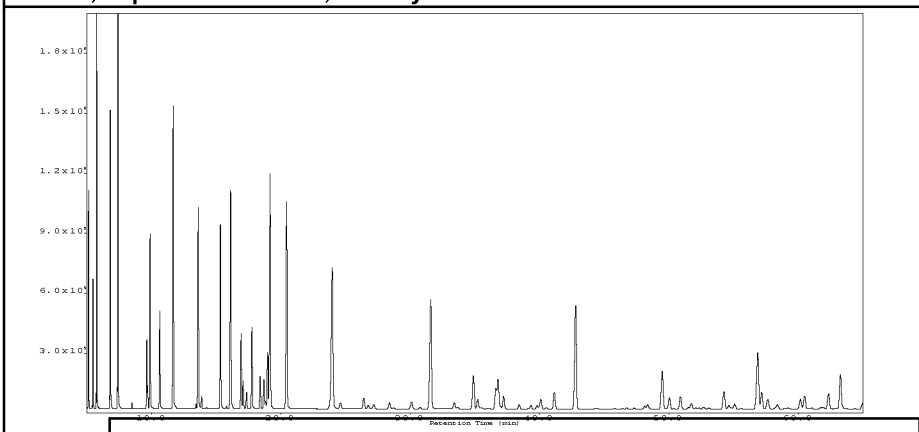
δ13C isotope

Sat. F28
 Aro. F29
 NSO F30
 Asph. F31
 Total F32
 Kerogen F33

ISTD-mix.(ng/mg EOM):

C12D26	3960
C16D34	3960
24αββ	24
d8N	47
d10BP	42
d10P	47
d12C	47

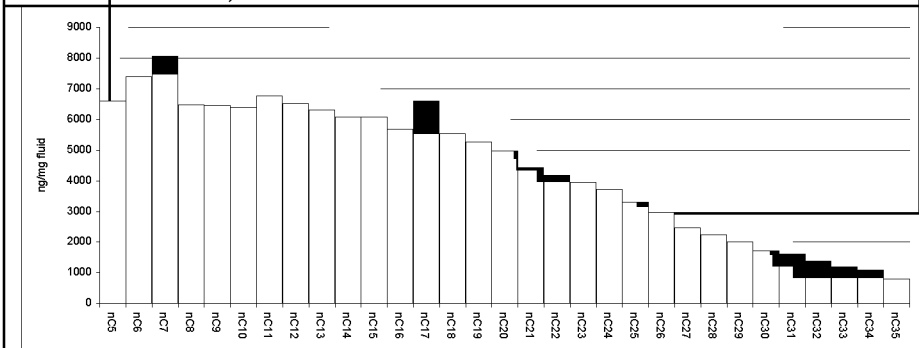
GC/FID, depressurized fluid, C6-9 hydrocarbons:



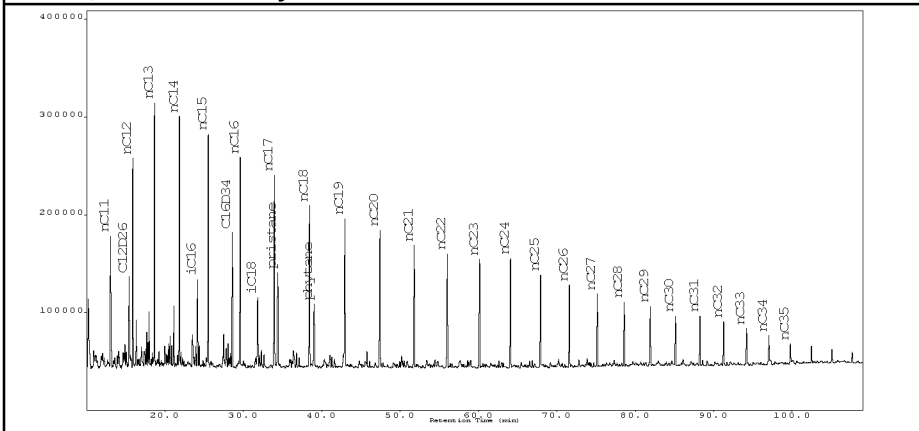
GC/FID Area ng/mgEOM

Hep.value	23.08	23.09
Isohep.val.	1.10	1.11
Paraffinicity	0.95	0.95
Aromaticity	0.89	0.90
nC ₈ /Benz.	1.47	1.46
nC ₇ /Tolu.	1.12	1.11

Alkane distribution, combined data from fluid and C15+ fraction:



GC/FID, C15+ fraction hydrocarbons:



GC/FID Area ng/mgEOM

Pr/nC ₁₇	0.59	0.59
Ph/nC ₁₈	0.50	0.50
Pr/Ph	1.40	1.40
nC ₁₇ /(C ₁₇ +C ₂₇)	0.73	0.73
nC ₁₇		6
Pristane		4
ΣC ₁₅₋₃₅		77

Country, well/location: NOR 15/12-9 S

Sample type, depth (m): OIL, - m

Stratigraphy (Gr./Fm.):

Fluid sample

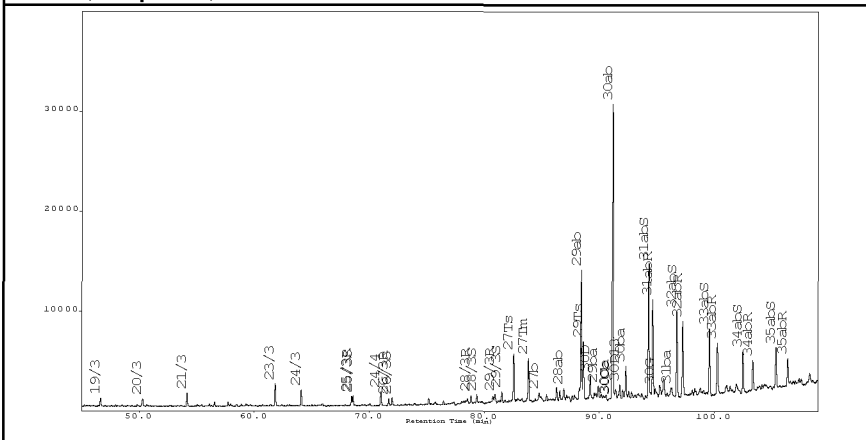


E&P Research Centre, Bergen, Norway

Remarks:

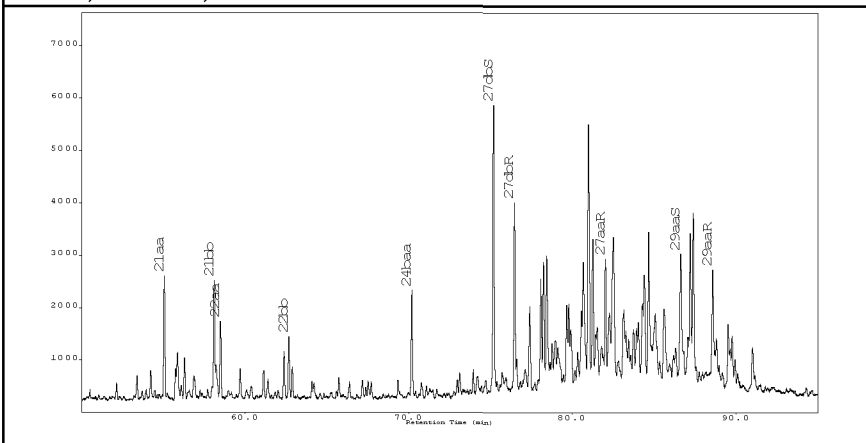
OrgID: 2129052, PlanID: 470520

GC/MS, Terpanes, m/z 191:



GC/MS	Height	ng/mgEOM
%Tri	6	7
%20/3	9	9
%23/3	47	46
%24/4	27	27
C26/C25	0.8	0.8
%27Ts	53	53
%28αβ	4	6
%29Ts	32	32
%25nor30αβ	1	1
%29αβ	29	39
%30βα	10	10
%30D	7	11
%30G	2	3
%32αβS	54	54
%35αβ	0	0

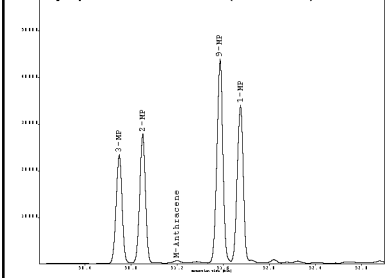
GC/MS, Steranes, m/z 217:



30αβ		167
25nor30αβ		2
Σterpanes		1191
%Preg.	11	11
%29ααS	54	54
%29ββ	66	66
%27dia	51	51
%27ster.	33	33
%28ster.	26	26
%29ster.	32	32
%30ster.	9	9
29ααS		30
29ααR		25
Σsteranes		616

Aromatic hydrocarbons, GC/MS:

Methyl-phenanthrenes (m/z 192):



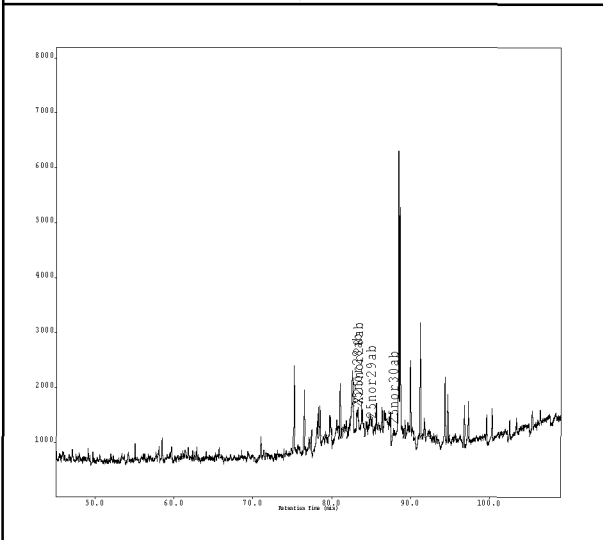
Country, well/location: NOR 15/12-9 S

Sample type, depth (m): OIL, - m

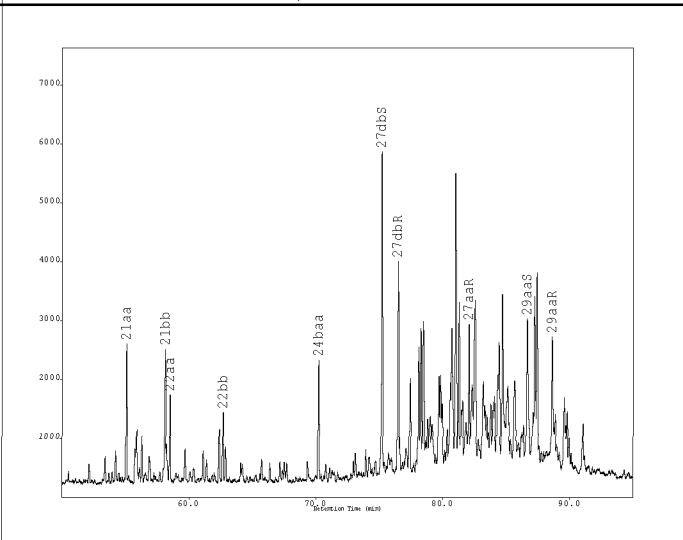
Fluid sample



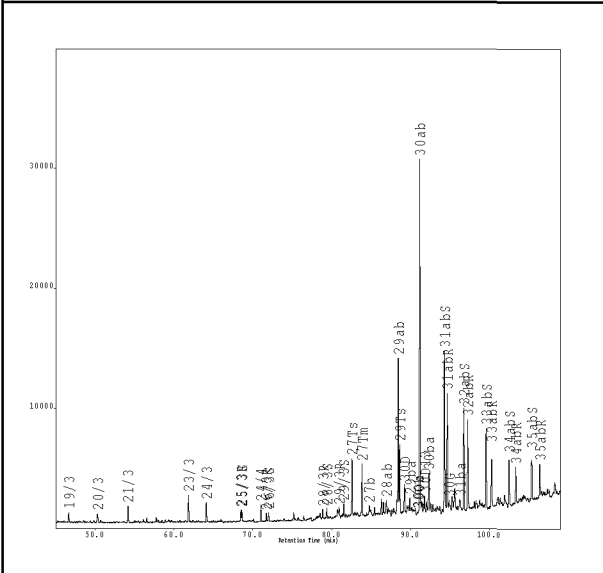
Saturated HC biomarkers, m/z 177



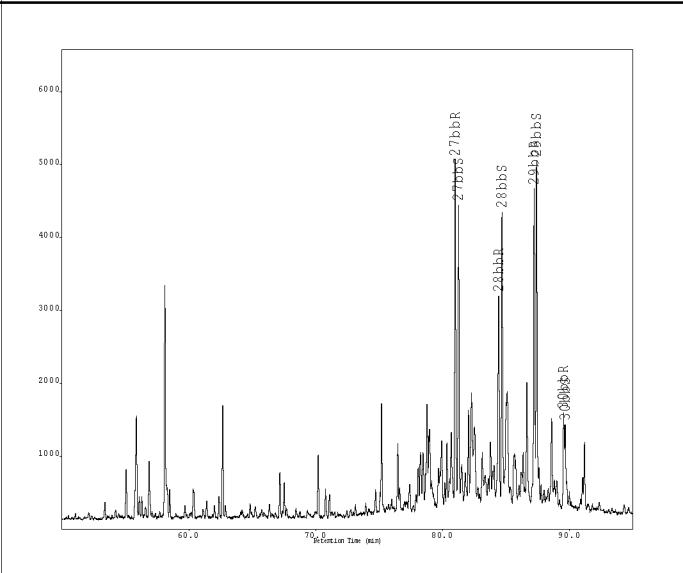
Saturated HC biomarkers, m/z 217



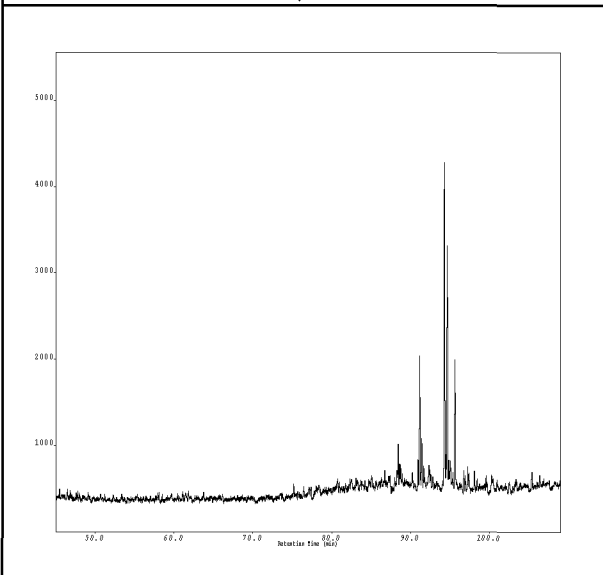
Saturated HC biomarkers, m/z 191



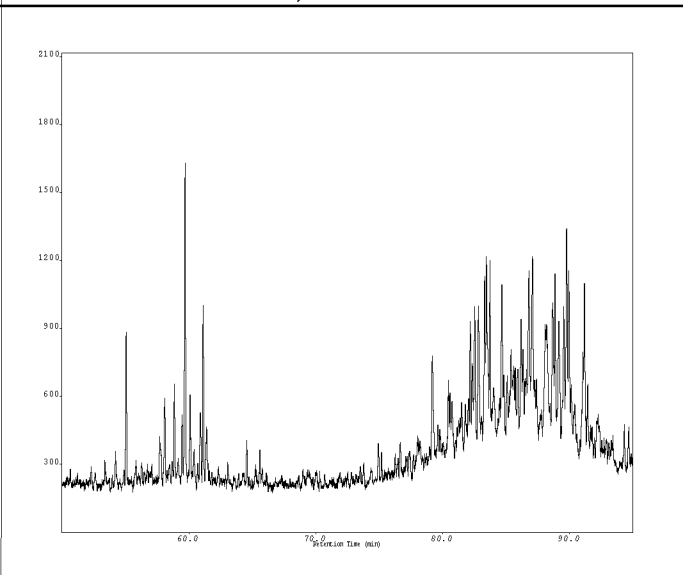
Saturated HC biomarkers, m/z 218



Saturated HC biomarkers, m/z 205



Saturated HC biomarkers, m/z 231



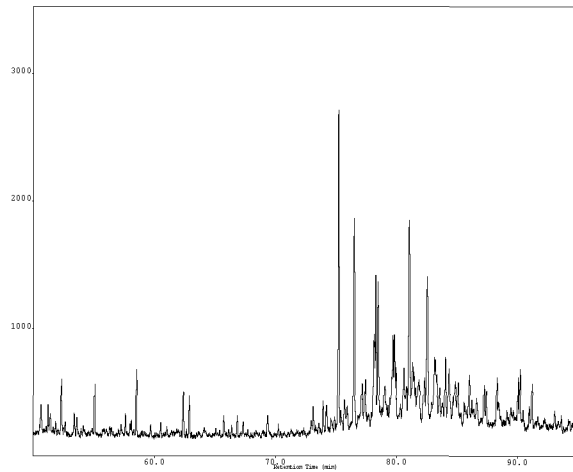
Country, well/location: NOR 15/12-9 S

Sample type, depth (m): OIL, - m

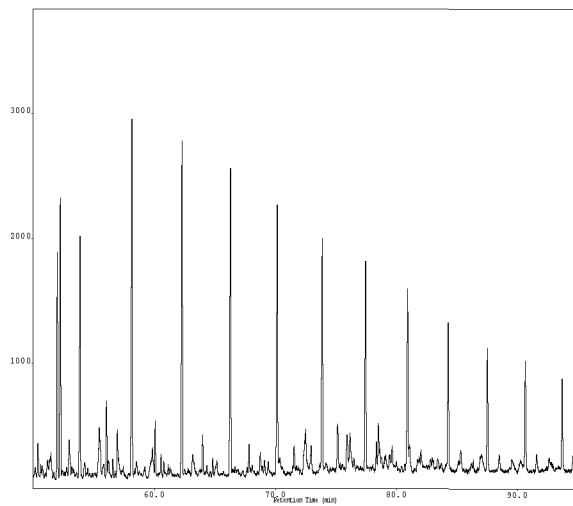
Fluid
sample



Saturated HC biomarkers, m/z 259



QC, monoaromatic steroids in SAT-fraction , m/z 253



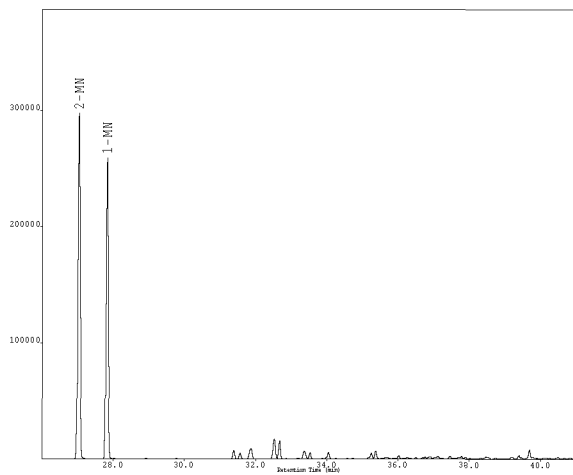
Country, well/location: NOR 15/12-9 S

Sample type, depth (m): OIL, - m

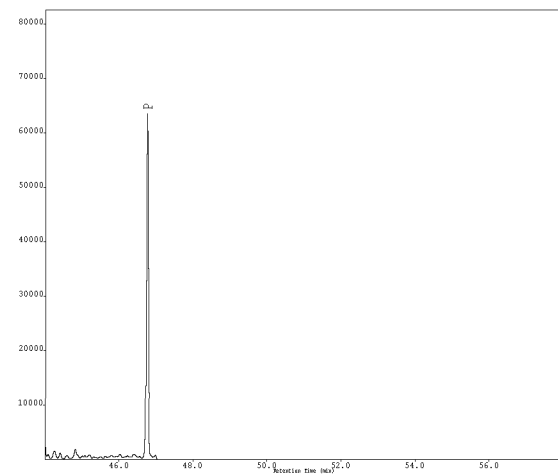
Fluid sample



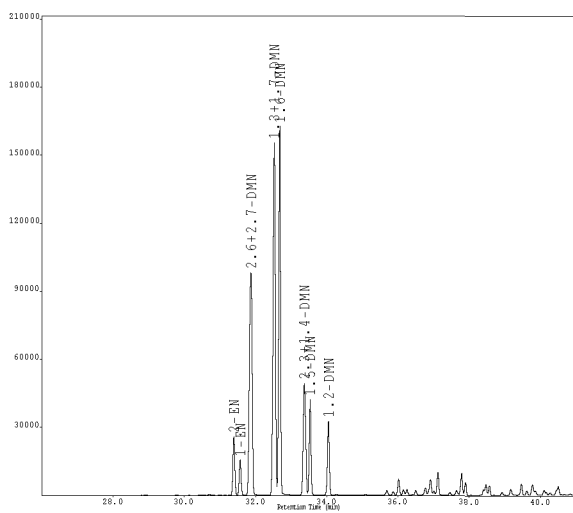
Aromatic HC's, methyl-naphthalenes m/z 142



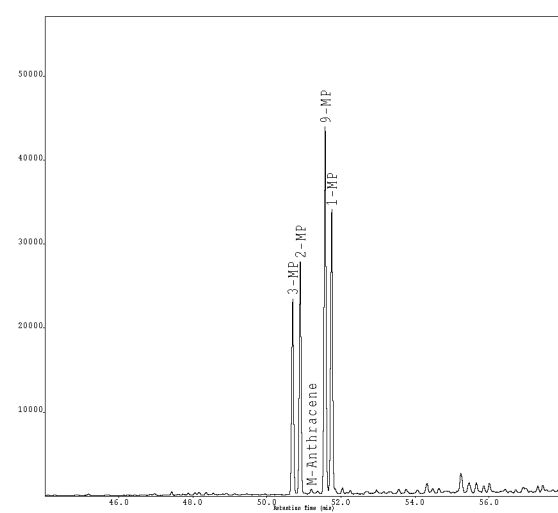
Aromatic HC's, phenanthrene m/z 178



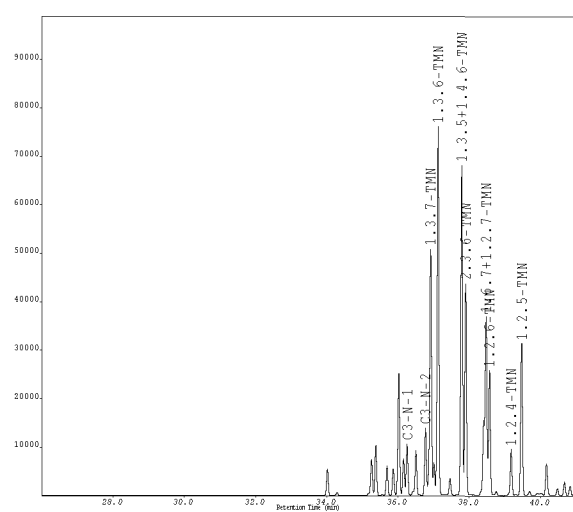
Aromatic HC's, C2-naphthalenes m/z 156



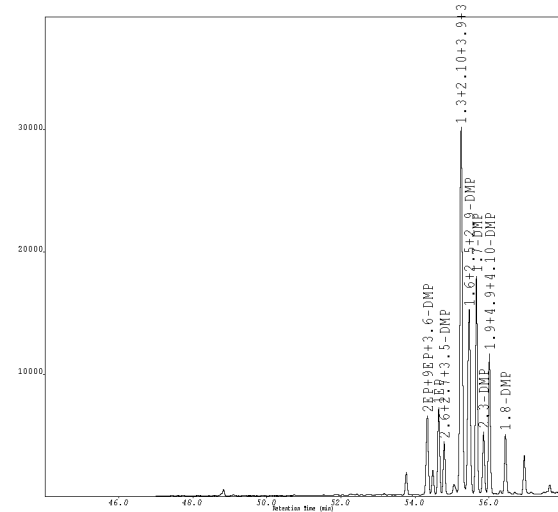
Aromatic HC's, methyl-phenanthrenes m/z 192



Aromatic HC's, C3-naphthalenes m/z 170



Aromatic HC's, dimethyl-phenanthrenes m/z 206



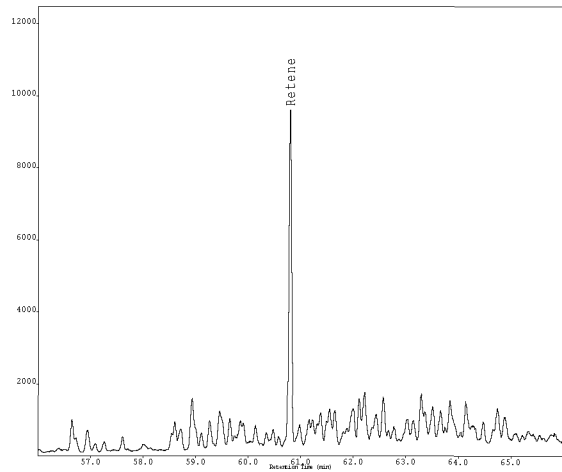
Country, well/location: NOR 15/12-9 S

Sample type, depth (m): OIL, - m

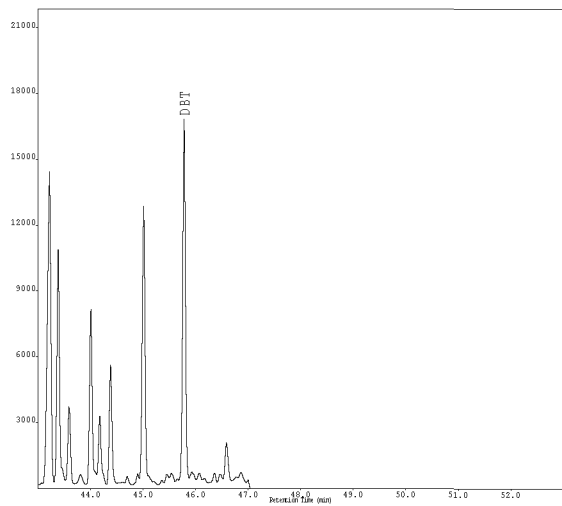
Fluid
sample



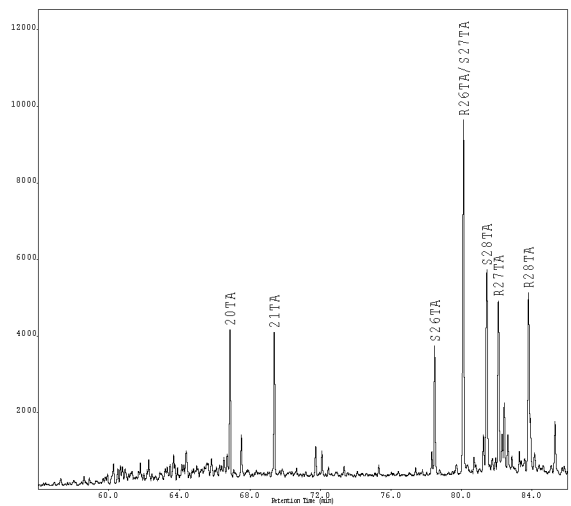
Retene m/z 219



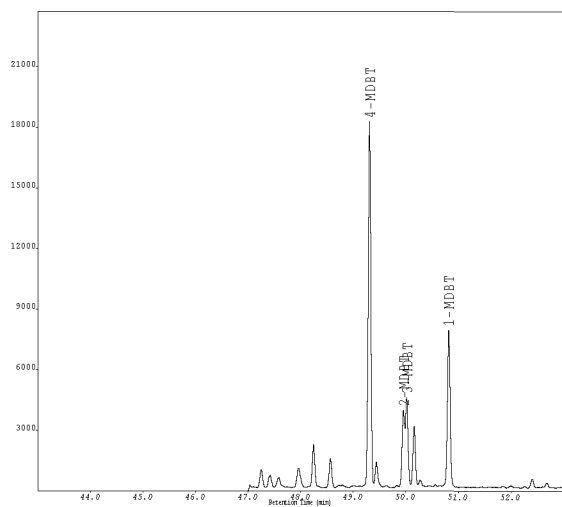
Aromatic HC's, dibenzothiophene m/z 184



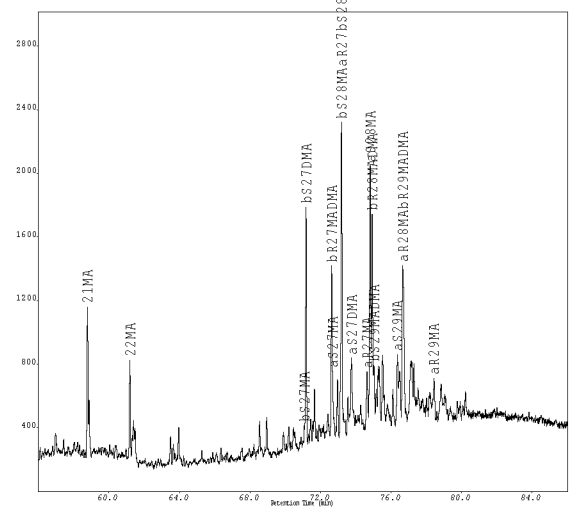
Aromatic HC's, triaromatic steroids m/z 231



Aromatic HC's, methyl-dibenzothiophenes m/z 198



Aromatic HC's, monoaromatic steroids m/z 253



Country, well/location: **NOR 15/12-9 S**
Sample type, depth (m): **OIL, - m**
Stratigraphy (Gr./Fm.):
Remarks:
OrgID: , PlanID:

**Fluid
sample**



E&P Reserach Centre,
Bergen, Norway

Saturated HC's, GC/FID			cont...	Height	ng/mgEOM	cont...	Height	ng/mgEOM
	Area	ng/mgEOM						
nC11	774205	0	28ab	1141	10	2314DMN	49159	189
nC12	843690	0	25nor29ab	106	1	15DMN	42067	162
nC13	886506	0	29ab	12110	107	12DMN	32576	126
nC14	936740	0	29ba	1169	10	C3N1	10609	42
iC16	404767	2370	29Ts	5659	50	C3N2	13857	54
nC15	980767	5740	25nor30ab	242	2	137TMN	50669	199
nC16	985094	5760	30ab	29491	167	136TMN	75960	298
iC18	435034	2540	30ba	3121	18	135146TMN	67936	266
nC17	1027243	6010	30D	2305	20	236TMN	43501	170
Prinstane	602183	3520	30G	635	6	167127TMN	36849	144
nC18	863315	5050	30O	0	0	126TMN	25770	101
Phytane	430051	2520	30D13	1348	12	124TMN	9495	37
nC19	819158	4790	31abS	13474	119	125TMN	31232	122
nC20	775198	4530	31abR	9573	84	BP	58436	158
nC21	689302	4030	31ba	473	4	3MBP	54063	146
nC22	650785	3810	32abS	8566	75	4MBP	18496	50
nC23	613564	3590	32abR	7414	65	23XDMBP	2178	9
nC24	578468	3380	33abS	6668	59	25DMBP	980	4
nC25	514336	3010	33abR	5077	45	2424XDMBP	2057	8
nC26	461205	2700	34abS	4267	38	23DMBP	4349	17
nC27	382177	2240	34abR	3007	26	3EBP	3928	15
nC28	348484	2040	35abS	4067	36	35DMBP	7713	30
nC29	311928	1820	35abR	2734	24	33XDMBP	20657	81
nC30	266492	1560	21aa	2318	29	4EBP	1700	7
nC31	249500	1460	21bb	2076	26	34XDMBP	15743	62
nC32	213784	1250	22aa	1461	19	44XDMBP	2903	11
nC33	187072	1090	22bb	1177	15	34DMBP	7532	30
nC34	168878	990	27dbS	5418	69	DBF	12542	34
nC35	125218	730	27dbR	3565	45	DBF1	13929	55
			27bbR	4650	59	MDBF2	8689	34
			27bbS	3964	50	MDBF3	8530	33
			27aaR	2082	26	F	11676	38
			28bbR	2758	35	C1F1	4667	15
			28bbS	3915	50	C1F2	24658	81
			29aaS	2328	30	1MF	3054	10
			29bbR	4085	52	DBT	16460	20
			29bbS	4376	56	4MDBT	18073	22
			29aaR	1982	25	3MDBT	0	0
			30bbR	1280	16	1MDBT	7751	9
			30bbS	1065	14	P	63291	219
						3MP	23326	95
						2MP	27584	112
						9MP	43692	178
						1MP	33476	136
						2EP9EP36DMP	6494	25
						1EP	7109	28
						262735DMP	4288	17
						13210393DMP	29854	116
						162529DMP	15010	58
						17DMP	17767	69
						23DMP	5050	20
Saturated HC biomarkers, GC/MS			Aromatic HC's, GC/MS					
	Height	ng/mgEOM		Height	ng/mgEOM			
19/3	832	7	N	174419	1116			
20/3	720	6	2MN	297180	1221			
21/3	1386	12	1MN	259043	1065			
23/3	2218	20	2EN	25966	100			
24/3	1648	15	1EN	15497	60			
25/3	878	8	2627DMN	98115	378			
26/3R	688	6	1317DMN	155288	598			
26/3S	755	7	16DMN	162472	626			
28/3R	848	7						
28/3S	875	8						
29/3R	744	7						
29/3S	1013	9						
24/4	1409	12						
27Ts	4821	42						
27Tm	4297	38						
27b	691	6						
25nor28ab	479	4						

Country, well/location: **NOR 15/12-9 S**
 Sample type, depth (m): **OIL, - m**
 Stratigraphy (Gr./Fm.):
 Remarks:
 OrgID: , PlanID:

**Fluid
sample**



E&P Research Centre,
Bergen, Norway

Aromatic HC's, GC/MS cont...			cont...		
	Height	ng/mgEOM		Area	ng/mgEOM
194941DMP	11469	45	2MC7	15315803	2400
18DMP	4840	19	4MC7	4441068	690
RETENE	9336	32	3MC7	8732497	1370
20TA	3862	6	1C3DMCYC6	15094924	2360
21TA	3721	6	1T4DMCYC6	5637376	880
S26TA	3368	5	11DMCYC6	4935774	770
R26TAS27TA	9234	15	1T2DMCYC6	7509429	1170
S28TA	5272	8	NC8	45175350	7070
R27TA	4409	7	ECYC6	19662498	3080
R28TA	4686	7	IC9	6335731	1000
C5-20 HC's, GC/FID			EBENZENE	9495237	1490
	Area	ng/mgEOM	MXYLENE	31632913	4980
IC5	27472102	4300	PXYLENE	8797588	1380
NC5	46045787	7200	4MC8	5449008	860
22DMC4	912920	140	2MC8	7170442	1130
CYC5	9176319	1440	3MC8	8049951	1270
23DMC4	3100861	490	OXYLENE	17113968	2690
2MC5	25178648	3940	NC9	44704640	7030
3MC5	15415014	2410	IC10	8356789	1310
NC6	51593035	8070	NC10	44226814	6960
3MCYC5ENE	27782	0	IC11	10441036	1640
22DMC5	787609	120	NC11	46997752	7390
MCYC5	35121791	5490	NC12	45160279	7100
24DMC5	2424893	380	IC13	11139760	1750
223TMC4	405049	60	PHC6	57856550	9100
BENZENE	35022975	5510	IC14	12146989	1910
33DMC5	749862	120	NC13	43698916	6870
CYC6	43970578	6880	IC15	10261750	1610
2MC6	15382742	2410	NC14	42127568	6630
23DMC5	6058054	950	IC16	17787450	2800
11DMCYC5	3907084	610	NC15	42154693	6630
3MC6	18403547	2880	NC16	39360091	6190
1C3DMCYC5	7563459	1180	IC18	13063453	2060
1T3DMCYC5	6989418	1090	NC17	36091473	5680
3EC5	1736193	270	PRISTANE	22897615	3600
1T2DMCYC5	13785900	2160	NC18	29406290	4630
IC8	58180783	9100	PHYTANE	15450514	2430
NC7	56159927	8790	NC19	41729730	6560
1C2DMCYC5	2254385	350	NC20	78524432	12350
MCYC6	59305230	9280			
113TMCYC5	3025545	470			
ECYC5	4807073	750			
25DMC6	1724935	270			
223TMC524DMC6	2189146	340			
1C2T4TMCYC5	2878198	450			
33DMC6	529919	80			
1T2C3TMCYC5	3342012	520			
234TMC5	705617	110			
TOLUENE	50243696	7900			
23DMC6	3168683	500			

Country, well/location: NOR 15/12-A-11
 Sample type, depth (m): OIL, - m
 Stratigraphy (Gr./Fm.):

**Fluid
sample**



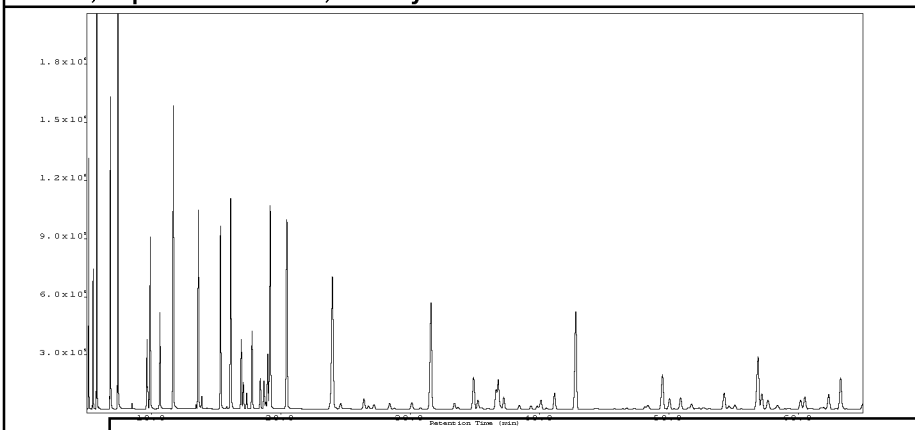
E&P Research Centre,
Bergen, Norway

Remarks:

OrgID: 2129051, PlanID: 470521

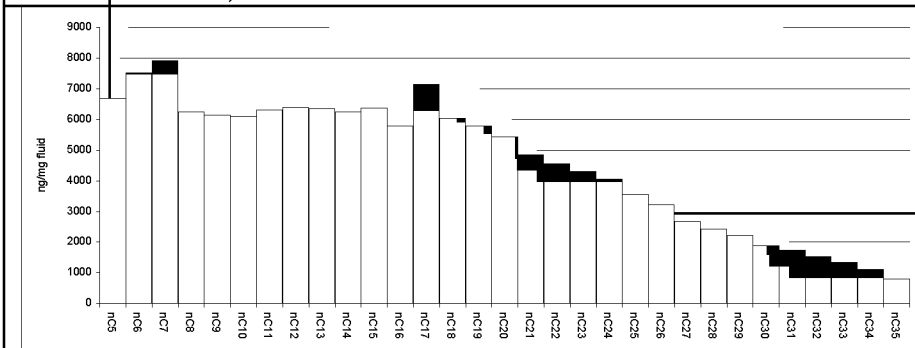
Bulk data, Iatroscan	Bulk PVT	$\delta^{13}C$ isotope	ISTD-mix.(ng/mg EOM):														
	GOR, Sm ³ /m ³ B ₀ 1/B _g Density, kg/m ³ API ⁰	Sat. F28 Aro. F29 NSO F30 Asph. F31 Total F32 Kerogen F33	<table border="1"> <tr><td>C12D26</td><td>3680</td></tr> <tr><td>C16D34</td><td>3680</td></tr> <tr><td>24$\alpha$$\beta$</td><td>22</td></tr> <tr><td>d8N</td><td>44</td></tr> <tr><td>d10BP</td><td>39</td></tr> <tr><td>d10P</td><td>44</td></tr> <tr><td>d12C</td><td>44</td></tr> </table>	C12D26	3680	C16D34	3680	24 α β	22	d8N	44	d10BP	39	d10P	44	d12C	44
C12D26	3680																
C16D34	3680																
24 α β	22																
d8N	44																
d10BP	39																
d10P	44																
d12C	44																

GC/FID, depressurized fluid, C6-9 hydrocarbons:

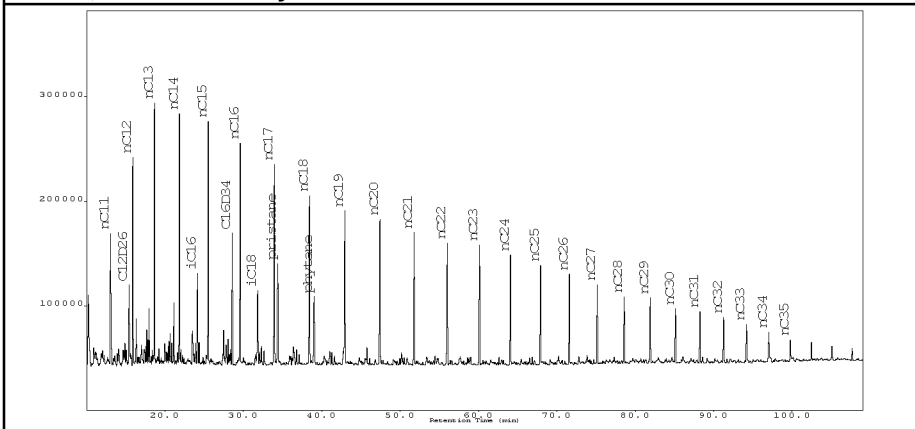


GC/FID	Area	ng/mgEOM
Hep.value	23.05	23.04
Isohep.val.	1.15	1.15
Paraffinicity	0.95	0.95
Aromaticity	0.88	0.88
nC ₈ /Benz.	1.57	1.57
nC ₇ /Tolu.	1.13	1.13

Alkane distribution, combined data from fluid and C15+ fraction:



GC/FID, C15+ fraction hydrocarbons:



GC/FID	Area	ng/mgEOM
Pr/nC ₁₇	0.58	0.58
Ph/nC ₁₈	0.50	0.50
Pr/Ph	1.38	1.38
nC ₁₇ /(C ₁₇ +C ₂₇)	0.73	0.73
nC ₁₇		6
Pristane		4
Σ C ₁₅₋₃₅		80

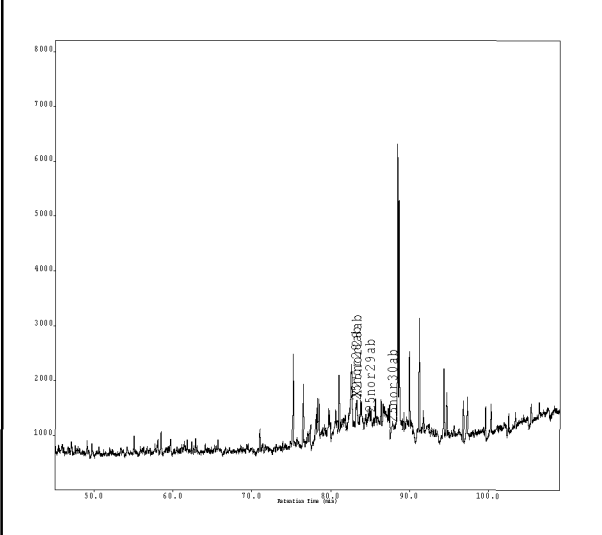
Country, well/location: NOR 15/12-A-11

Sample type, depth (m): OIL, - m

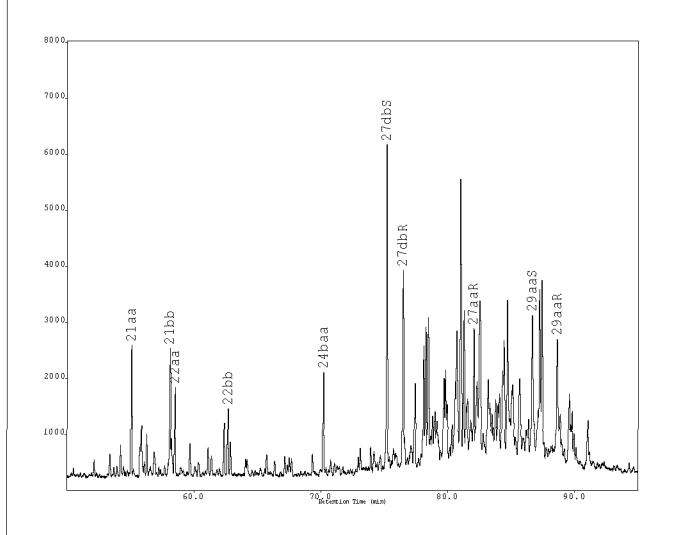
Fluid sample



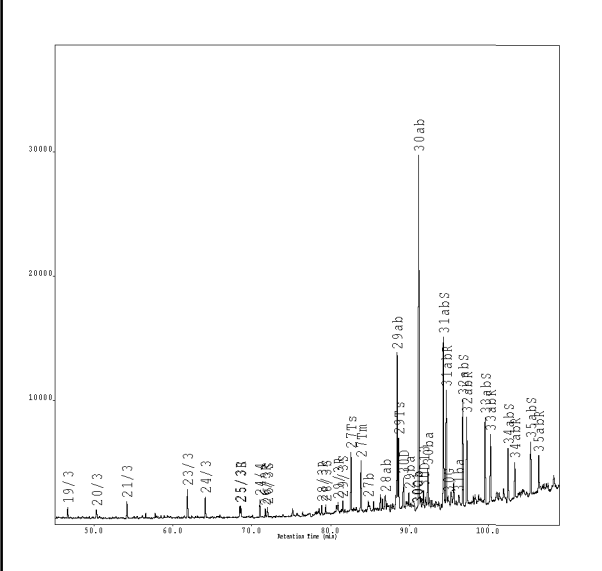
Saturated HC biomarkers, m/z 177



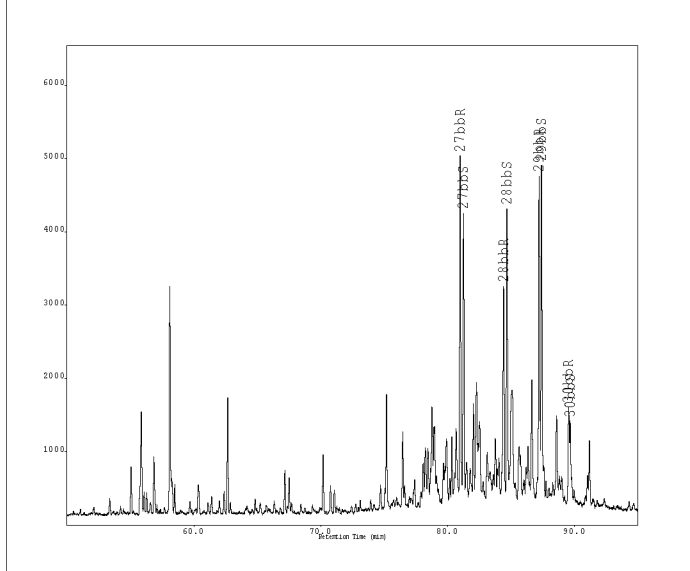
Saturated HC biomarkers, m/z 217



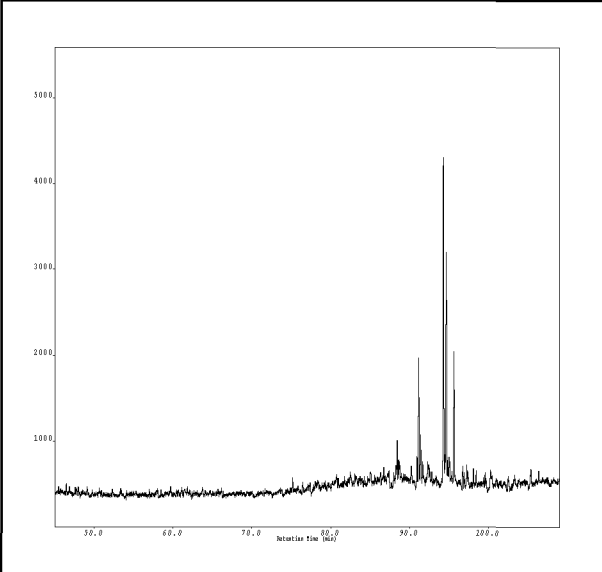
Saturated HC biomarkers, m/z 191



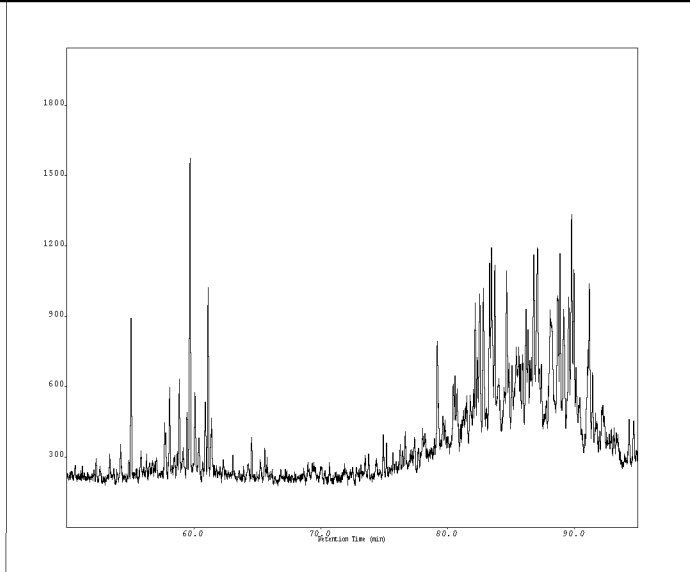
Saturated HC biomarkers, m/z 218



Saturated HC biomarkers, m/z 205



Saturated HC biomarkers, m/z 231



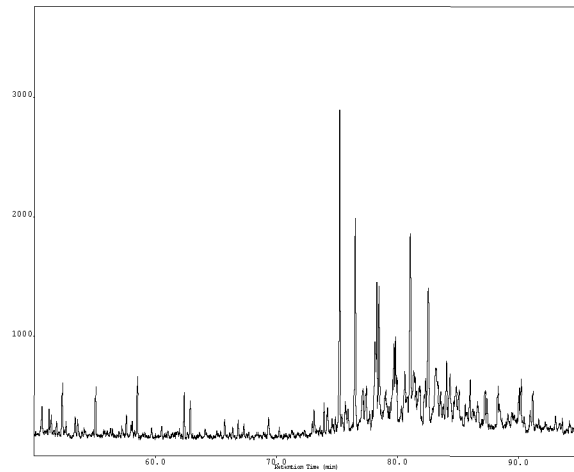
Country, well/location: NOR 15/12-A-11

Sample type, depth (m): OIL, - m

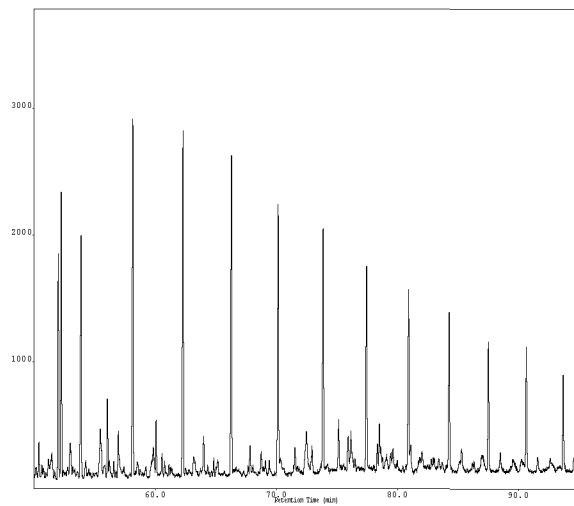
Fluid
sample



Saturated HC biomarkers, m/z 259



QC, monoaromatic steroids in SAT-fraction, m/z 253



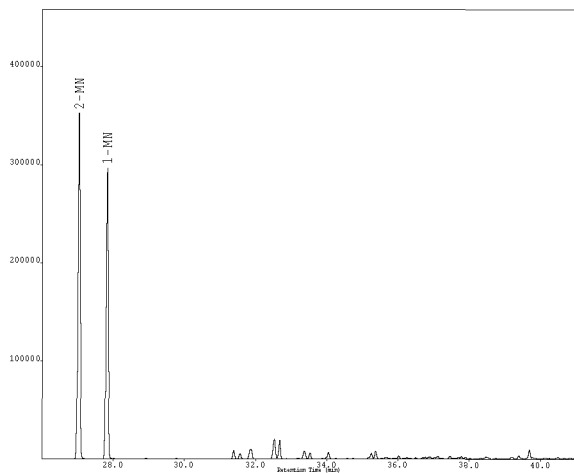
Country, well/location: NOR 15/12-A-11

Sample type, depth (m): OIL, - m

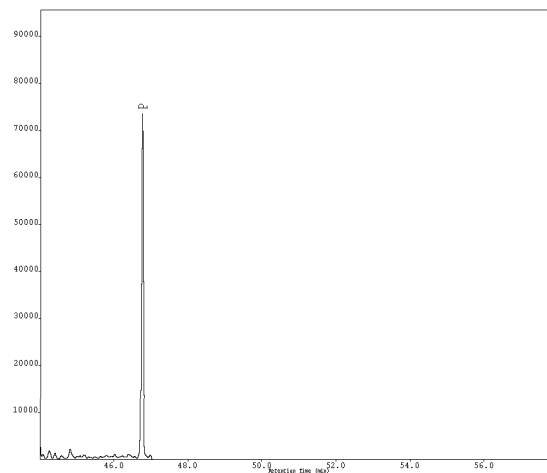
Fluid sample



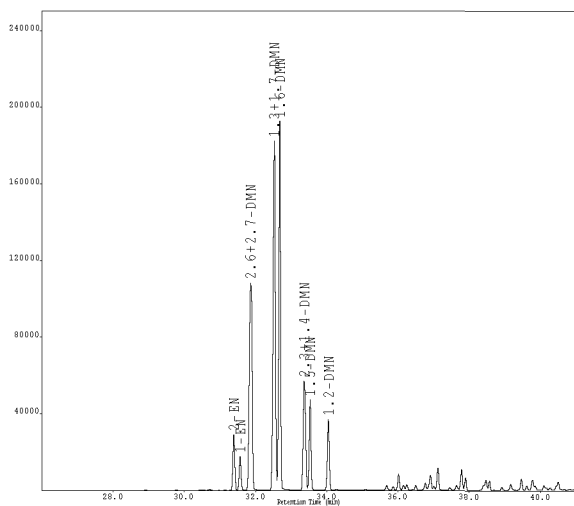
Aromatic HC's, methyl-naphthalenes m/z 142



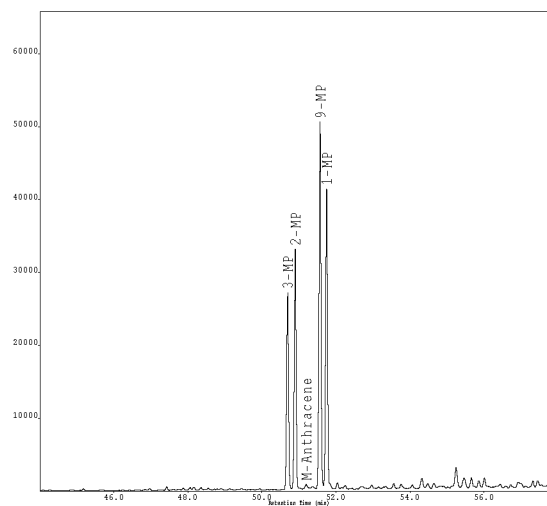
Aromatic HC's, phenanthrene m/z 178



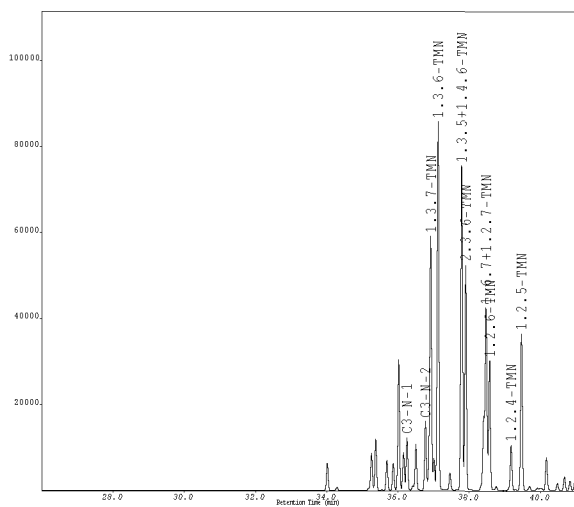
Aromatic HC's, C2-naphthalenes m/z 156



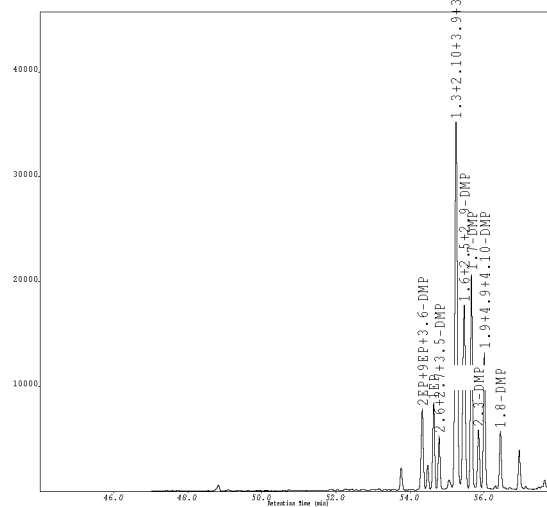
Aromatic HC's, methyl-phenanthrenes m/z 192



Aromatic HC's, C3-naphthalenes m/z 170



Aromatic HC's, dimethyl-phenanthrenes m/z 206



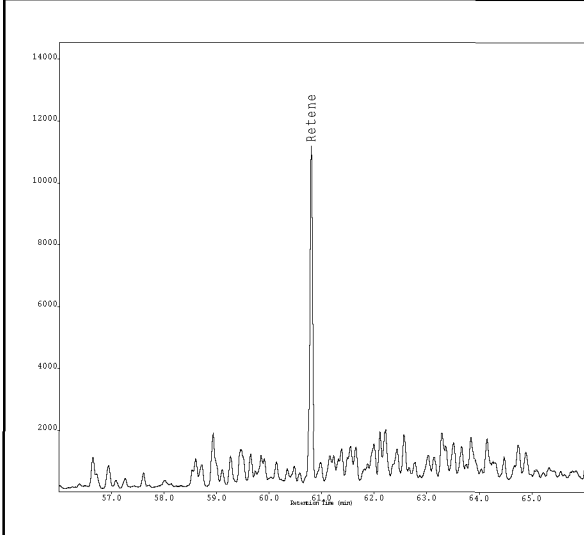
Country, well/location: NOR 15/12-A-11

Sample type, depth (m): OIL, - m

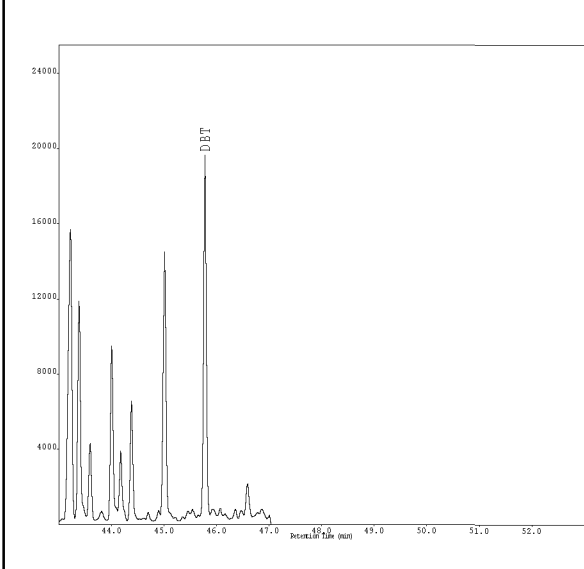
Fluid sample



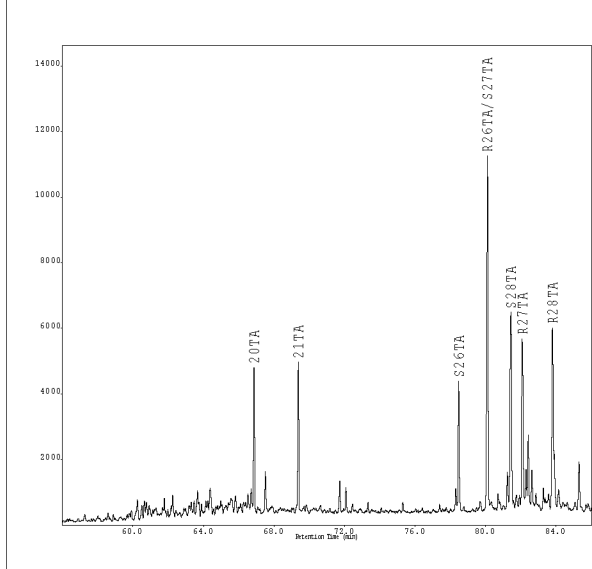
Retene m/z 219



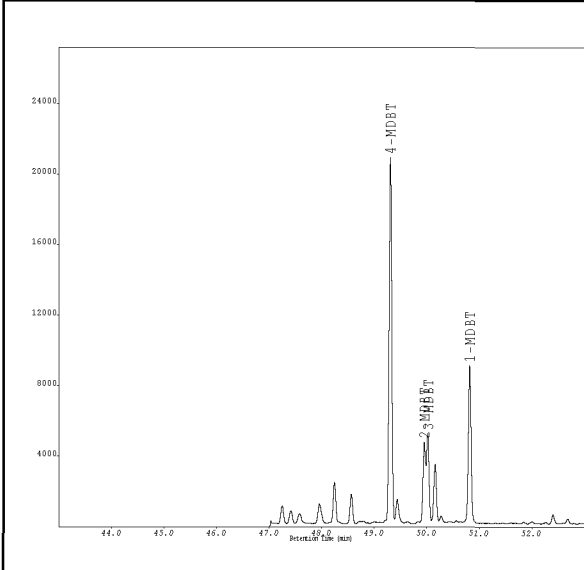
Aromatic HC's, dibenzothiophene m/z 184



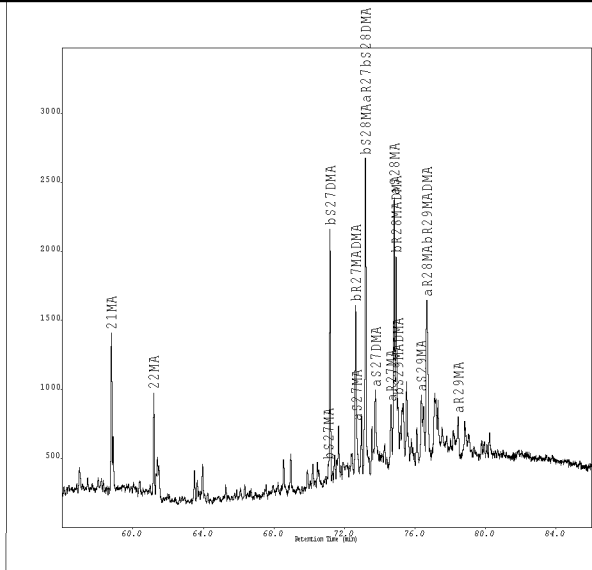
Aromatic HC's, triaromatic steroids m/z 231



Aromatic HC's, methyl-dibenzothiophenes m/z 198



Aromatic HC's, monoaromatic steroids m/z 253



Country, well/location: NOR 15/12-A-11
 Sample type, depth (m): OIL, - m
 Stratigraphy (Gr./Fm.):
 Remarks:
 OrgID: , PlanID:

Fluid
sample



E&P Research Centre,
Bergen, Norway

Aromatic HC's, GC/MS cont...			cont...		
	Height	ng/mgEOM	Area	ng/mgEOM	
194941DMP	12997	48	2MC7	14878504	2400
18DMP	5450	20	4MC7	4065859	660
RETENE	10876	36	3MC7	8272365	1330
20TA	4391	6	1C3DMCYC6	14770029	2380
21TA	4514	6	1T4DMCYC6	5378917	870
S26TA	3952	5	11DMCYC6	4760105	770
R26TAS27TA	10813	15	1T2DMCYC6	7206830	1160
S28TA	5890	8	NC8	43565536	7020
R27TA	5097	7	ECYC6	18797479	3030
R28TA	5532	8	IC9	6010224	970
C5-20 HC's, GC/FID			EBENZENE	8930960	1440
	Area	ng/mgEOM	MXYLENE	29952433	4840
IC5	28003383	4510	PXYLENE	8342075	1350
NC5	46566462	7500	4MC8	5157949	830
22DMC4	705467	110	2MC8	6639414	1070
CYC5	9362836	1510	3MC8	7832192	1270
23DMC4	3218470	520	OXYLENE	16573158	2680
2MC5	25828221	4160	NC9	42625326	6890
3MC5	15674666	2530	IC10	8066373	1300
NC6	52396363	8440	NC10	42324075	6850
3MCYC5ENE	60770	10	IC11	9861969	1600
22DMC5	797395	130	NC11	43773762	7080
MCYC5	35178545	5670	NC12	44481926	7190
24DMC5	2447532	390	IC13	9733148	1570
223TMC4	277686	40	PHC6	51730815	8370
BENZENE	33314270	5390	IC14	11097303	1790
33DMC5	623827	100	NC13	44115023	7140
CYC6	44175667	7120	IC15	10493190	1700
2MC6	15329706	2470	NC14	43310500	7010
23DMC5	6001778	970	IC16	18086909	2930
11DMCYC5	3841057	620	NC15	44353793	7170
3MC6	18234439	2940	NC16	40280117	6510
1C3DMCYC5	7373539	1190	IC18	13330112	2160
1T3DMCYC5	6876298	1110	NC17	34180605	5530
3EC5	1751599	280	PRISTANE	22660696	3670
1T2DMCYC5	13590227	2190	NC18	30076947	4860
IC8	51921800	8370	PHYTANE	15410742	2490
NC7	55173013	8890	NC19	37203837	6020
1C2DMCYC5	1327319	210	NC20	75263915	12170
MCYC6	58150865	9370			
113TMCYC5	2828690	460			
ECYC5	4686602	760			
25DMC6	1662367	270			
223TMC524DMC6	2135829	340			
1C2T4TMCYC5	2796671	450			
33DMC6	500496	80			
1T2C3TMCYC5	3241167	520			
234TMC5	689127	110			
TOLUENE	48637198	7870			
23DMC6	2941638	470			