

**Petroleum Geochemistry Report -
NOCS Wells 7228/7-1A,-1S and -1ST3**



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2 Introduction

The objective of this project (Statoil ref: apt2001-01) was to provide routine petroleum geochemistry data and interpretation on a variety of sample types from wells 7228/7-1A, -1S and -1ST3.

An overview of types and numbers of samples and analyses performed is given in table 1.

All of the analyses and the specific samples/lithologies for analysis were chosen by Statoil.

The Statoil contacts throughout the project have been Ann Elin Gilje (Stavanger) and Turid Heide (Harstad). Communication has been by email and telephone. The APT contacts for this project have been Per Erling Johansen and Nigel Mills.

No work performed in this project has been subcontracted.

The following information has been provided by Statoil:

- Sample depths are in metres, as measured depth relative to Rotary Kelly Bushing (MDmRKB).
- The following mud systems have been used:
 - 7228/7-1A: KCl with glycol
 - 7228/7-1S: 312m – 709m NaCl; 709m – 1362m seawater
 - 7228/7-1ST3: KCl with glycol
- Lithostratigraphy information shown in figures 1 and 2.

Six mud samples were extracted and whole EOM gas chromatography performed to evaluate potential contamination of the samples. The chromatograms are provided in the appendix.

Table 1 shows the numbers and types of analyses performed on different sample types in this project.

Table 1: Sample and analysis summary for this study

Analysis	Cuttings	SWC	Core	Oil/Cond.	Mud	Gas	Total
Lithology Descriptions	37		8				45
Gas Composition						2	2
Gas Isotopes						2	2
TOC	13		3				16
Rock Eval	13		3				16
Visual Kerogen (inc. SCI)	35		4				39
Vitrinite Reflectance	35		4				39
Thermal Extraction GC							
Pyrolysis GC	5						5
Fluid Density				1			1
Topping				1			1
Solvent Extraction	6		4		6		16
Asphaltene Precipitation				1			1
Iatroscan	3		2	1			6
Carbon Isotopes				1			1
Whole Oil GC				1	6		7
Saturates GC	6		4	1	1		12
Aromatics GC	6		4	1			11
Saturates GCMS	3		2	1			6
Aromatics GCMS	3		2	1			6

6 Experimental Procedures

All procedures follow NIGOGA, 4th Edition. Below are brief descriptions of procedures/analytical conditions.

Sample preparation

Cuttings samples are washed in water to remove mud. When oil based mud is used, soap (Zalo) is added to the sample and the sample is washed thoroughly in warm water to remove mud and soap.

Extraction

A Soxtec Tecator instrument is used. Thimbles are pre extracted in dichloromethane with 7% (vol/vol) methanol, 10 min boiling and 20 min rinsing. The crushed sample is weighed accurately in the pre extracted thimbles and boiled for 1 hour and rinsed for 2 hours in approximately 80 cc of dichloromethane with 7% (vol/vol) methanol. Copper blades activated in concentrated hydrochloric acid are added to the extraction cups to cause free sulphur to react with the copper. An aliquot of 10% of the extract is transferred to a pre weighed bottle and evaporated to dryness. The amount of extractable organic matter is calculated from the weight of this 10% aliquot.

Deasphalting

The extract is evaporated almost to dryness before a small amount of dichloromethane (3 times the amount of EOM) is added. Then pentane is added in excess (40 times the volume of EOM and dichloromethane). The solution is stored for at least 12 hours in a dark place before the solution is filtered or centrifuged and the weight of the asphaltenes measured.

MPLC

The MPLC is constructed as described by Radke et al. (1980). The system includes two HPLC pumps, sample injector, sample collector, RI-detector, UV-detector and two packed columns. The pre column is filled with Kieselgel 100, which is heated at 600 °C for 2 hours to deactivate it. The main column is a LiChroprep Si60, which is heated at 120 °C for 2 hours to make it water free.

Approximately 30 mg of deasphalted oil or EOM diluted in 1 ml hexane is injected and separated into a saturated, an aromatic and a polar fraction.

TOC and Rock-Eval

A Rock-Eval 6 instrument is used. The analysis is performed in two steps, pyrolysis and oxidation, when TOC is measured. Jet-Rock 1 was run as every tenth sample and checked against the acceptable range given in NIGOGA.

Temperature programme

Pyrolysis: 300 °C (3 min.) - 25 °C/min. - 650 °C (0 min.)

Oxidation: 400 °C (3 min.) - 25 °C/min. - 850 °C (5 min.)

Iatroscan

An Iatroscan MK-5 (TLC/FID Analyser) instrument is used. 2 µl of extract or diluted oil is spotted on Chromarod S-III rods before elution in hexane (25 min), toluene (8 min) and dichloromethane with 7 % methanol (vol/vol). The solvent is allowed to evaporate before the rods are placed into the next elution chamber. Before running the rods in the analyser, the rods are heated for 90 sec. in a heating chamber at 60 °C.

GC of whole oil

A HP5890 II instrument is used. The column is a HP PONA, length 50 m, i.d. 0.2 mm, film thickness 0.5 µm. 2,2,4-tri-methane-pentane is used as an internal standard.

Temperature programme

30 °C (10 min.) - 2 °C/min. - 60 °C (10 min.) - 2 °C/min - 240 °C (60 min.)

GC of saturated fraction

A HP5890 II instrument is used. The column is a CP-Sil-5 CB-MS, length 25 m, i.d. 0.25 mm, film thickness 0.25 µm. C12D26, C20D42, C24D50 and C30D62 are used as internal standards.

Temperature programme

50 °C (1 min.) - 4 °C/min. - 310 °C (25 min.)

GC of aromatic fraction

A HP5890 instrument is used. The column is a CP-Sil-8 CB, length 50 m, i.d. 0.25 mm, film thickness 0.25 µm.

Temperature programme

50 °C (1 min.) - 4 °C/min. - 310 °C (25 min.)

PyGC

A HP5890 II instrument with a MSSV injector and a FID is used. The column is a CP-Sil-5 CB-MS, length 25 m, i.d. 0.25 mm, film thickness 0.25 µm.

During the run the pyrolysis oven starts at 330 °C. The tube is then broken and the temperature increased to 600 °C at a rate of 25 °C/min. The pyrolysis products are collected in the cold trap for fourteen minutes.

Temperature programme

30 °C (15 min.) - 5 °C/min. - 310 °C (23 min.)

GCMS of saturated and aromatic fractions

A Micromass ProSpec high resolution instrument is used. The instrument is tuned to a resolution of 3000 and data is acquired in Selected Ion Recording (SIR) mode. The column used is a 60 m CP-Sil-5 CB-MS with an i.d. of 0.25 mm and a film thickness 0.25 µm.

d4-27 α R is used as internal standard when quantitative results are requested for the saturated compounds. The aromatic and aliphatic fractions may be analysed together or separately.

Temperature programme

50 °C (1 min.) - 20 °C/min. - 120 °C - 2 °C/min - 320 °C (20 min.)

Stable isotope analysis of gas compounds

5-10 ml of the gas is sampled with a syringe and then separated into the different gas components by a Carlo Erba 4200 gas chromatograph. The hydrocarbon gas components are oxidised in separate CuO-ovens in order to prevent cross contamination. The combustion products CO₂ and H₂O are frozen into collection vessels and separated.

The combustion water is reduced with zinc metal in sealed quartz tubes to prepare hydrogen for isotopic analysis. The isotopic measurements are performed on a Finnigan MAT 251 and a Finnigan Delta mass spectrometer.

The value for the NBS 22 standard is -29.77 ± 0.06 ‰ PDB. The analytical procedures are tested with a laboratory gas standard mixture. Based on repeated analysis of the gas standard, the reproducibility in the $\delta^{13}\text{C}$ value is better than 0.5 ‰ PDB for all components. The reproducibility in the δD value is likewise better than 10 ‰.

Stable carbon isotope analysis of oil, EOM and kerogen

The samples are dissolved in a known amount of dichloromethane, and 1-2 mg of the sample (or as much as possible) is then transferred to a glass container. The solvent is evaporated in an oven at 50 °C. CuO and some silver wires are added to the containers, which are then sealed by melting in a vacuum. The samples are then combusted in an oven at 550 °C for 1 hour (Sofer, 1980). The combustion products CO₂ and H₂O are separated at -80°C before the isotopic ratio is determined on a Finnigan MAT 251 mass spectrometer.

A standard (NGS NSO-1, topped oil) is analysed for each 10th sample. The $\delta^{13}\text{C}$ value obtained for this standard is -28.73 ‰ PDB. The variation in the isotopic values for the standard by repeated analysis over a period of four years is ± 0.16 ‰.

GC analysis of gas components

Aliquots of 0.2 ml are sampled with a syringe for analysis on a Porabond Q column on a Carlo Erba HRGC 5300 equipped with a flame ionisation (FID) and a thermal conductivity (TCD) detector. The detection limit for the hydrocarbon gas components is 0.001 $\mu\text{l/ml}$, for CO₂ 0.05 $\mu\text{l/ml}$.

Vitrinite reflectance analysis

The samples are prepared either as “whole rock” or are treated with hydrochloric and hydrofluoric acid prior to further preparation. The aim of the acid treatment is to avoid soft and expanding mineral phases in order to ensure good polishing quality. The whole rock or the kerogen resulting from the acid treatment is embedded in an epoxy resin to make

briquettes, ground flat and polished using 0.25 micron diamond paste and magnesium oxide as the two final steps.

The analytical equipment used is a Zeiss MPM 03 photometer microscope equipped with an Epiplan-Neofluar 40/0.90 oil objective. The sensitive measuring spot is kept constant for all measurements at about 2.5 micron in diameter. The measurements are made through a green band pass filter (546 nm) and in oil immersion (refractive index 1.515 at 18 °C). The readings are made without a polarizer and using a stationary stage. This procedure is called measurement of random reflectance (%Rm). The photometer is calibrated daily against a standard of known reflectance (%Rm = 0.588) and routinely (daily) checked against two other standards of significant different reflectances (%Rm = 0.879 and 1.696). A deviation from these values of less than ± 0.01 and ± 0.02 respectively is considered acceptable. The calibration is routinely checked during the course of measurements at least every hour, and a deviation of less than ± 0.005 is considered acceptable.

For each sample at least 20 points are measured if possible, and quality ratings are given to various important aspects, which may affect the measurements. These aspects are abundance of vitrinite, uncertainties in the identification of indigenous vitrinite, type of vitrinite, particle size, particle surface quality and abundance of pyrite.

7 Tables

Table 2: Lithology Descriptions

Well	APT no	Upper Depth (in MD RKB)	Lower Depth (in MD RKB)	Sample Type	%	Lithology	Attributes
7228/7-1S	11050		520	DC	70 30	clst clst	dk lt, calc
	11051		610	DC	100	clst	dk gy
	11052		710	DC	95 5	clst clst	gy, sl calc br
	11053		810	DC	100	clst tr pyr	gy
	11054		910	DC	100	clst tr pyr	gy
	11055		1010	DC	90 10	clst clst	gy, sl calc br
	11056		1110	DC	100	clst tr clst	gy, sl calc lt br
	11057		1210	DC	100	clst tr clst	gy, sl calc lt br
	11058		1308	DC	100	clst tr clst	gy, sl calc lt br
	11059		1314	DC	100	clst tr clst	gy, sl calc lt br
	7228/7-1 A	11032		1347	DC	50 50	clst clst
11033			1419	DC	95 4 1	sst clst coal	m wh dk gy, calc frag
11034			1434	DC	40 40 20 tr	clst clst sst coal	dk gy ly gy m wh
11035			1566	DC	60 30 10 tr	clst clst sst pyr	lt gy, calc gy, calc m wh
11036			1647	DC	70 20 10 tr	sst clst clst coal	f wh dk gy lt gy
11037			1653	DC	80 15 5 tr	sst clst clst coal	f-m wh dk gy lt gy
11038			1755	DC	60 30 10	clst clst sst	dk gy, calc ly gy, calc f-m wh

Well	APT no	Upper Depth (m MD RKB)	Lower Depth (m MD RKB)	Sample Type	%	Lithology	Attributes
	11039		1899	DC	80 10 10 tr	sst clst clst pyr	f-m wh lt gy br
	11040		1935	DC	80 10 10 tr tr	sst clst clst pyr coal	f-m wh lt gy, sl calc br, sl calc
	11041		1977	DC	70 15 15 tr tr	sst clst clst pyr coal	f-m wh lt gy, calc br, calc
	11042		2031	DC	40 40 20 tr	clst clst sst pyr	lt gy, sl calc br, sl calc f wh
	11020	2060 33	2060 35	COCH	100	sst	f-m gy, sl calc
	11021	2093 52	2093 54	COCH	100	sst	m gr-gy
	11043		2103	DC	65 20 10 5	clst clst sst clst	dk gy lt gy f wh br
	11044		2229	DC	95 5	clst clst	dk gy, sl calc lt gy, sl calc
	11045		2376	DC	75 20 5 tr	clst clst sst coal	dk gy, sl calc lt gy, sl calc f wh
	11022	2455 49	2455 52	COCH	100	clst tr coal	dk gy-blk, sl slty
	11023	2457 32	2457 34	COCH	100	clst tr coal	dk gy-blk, sl slty
	11046		2511	DC	75 20 5 tr	clst clst sst coal	dk gy, sl calc lt gy, sl calc f wh
	11047		2670	DC	80 20 tr	clst clst sst	dk, sl calc lt, calc
	11048		2742	DC	80 20 tr	clst clst sst	dk, sl calc lt, calc
	11049		2781	DC	80 20 tr	clst clst sst	dk, sl calc lt, calc
	11024	2833 00	2833 02	COCH	100	sst tr coal	silt-f gy, calc lam
	11025	2842 25	2842 27	COCH	100	siltst tr coal	gy, mica lam

Well	APT no	Upper Depth (m MD RKB)	Lower Depth (m MD RKB)	Sample Type	%	Lithology	Attributes
	11026	2848 25	2848 26	COCH	100	clst	dk gy silty, lam
	11027	2860 26	2860 28	COCH	100	siltst	dk gy, lam

7228/7-1ST3	APT no	Upper Depth (m MD RKB)	Lower Depth (m MD RKB)	Sample Type	%	Lithology	Attributes
	11060		1575	DC	60 20 20 tr tr	sst clst clst pyr coal	f wh dk gy lt gy
	11061		1677	DC	40 35 20 5	clst clst sst pyr	lt gy, calc dk gy, calc f wh
	11062		1710	DC	40 35 20 5	clst clst sst pyr	lt gy, calc dk gy, calc f wh
	11063		1794	DC	90 10	clst clst	dk gy lt gy
	11064		1836	DC	90 10	clst clst	dk gy lt gy
	11065		1872	DC	80 20	clst clst	dk gy lt gy
	11066		1947	DC	80 20	clst clst	dk gy lt gy
	11067		2049	DC	80 20	clst clst	dk gy lt gy
	11068		2082	DC	70 30	clst clst	dk gy lt gy

Table 3: TOC & Rock Eval

Well	Sample name	APT no	Upper Depth (M MD RKB)	Lower Depth (M MD RKB)	Lithology	S1 (mg/g)	S2 (mg/g)	Tmax (°C)	PI (mg/g)	PI (wt %)	HI (mgHC/gTOC)	TOC (%)
7228/7-1 S	DC	11059		1314	clst	0.05	0.28	424	0.33	0.15	20	1.42
7228/7-1 A	DC	11032		1347	clst	4.62	53.26	410	57.87	0.08	326	16.35
7228/7-1 A	DC	11039		1899	sst	0.38	1.22	329	1.60	0.24	170	0.72
7228/7-1 A	DC	11040		1935	sst	0.31	1.03	337	1.34	0.23	448	0.23
7228/7-1 A	DC	11041		1977	sst	0.28	1.11	338	1.39	0.20	793	0.14
7228/7-1 A	DC	11042		2031	clst	0.73	5.62	442	6.35	0.11	228	2.46
7228/7-1 A	COCH	11020	2060.33	2060.35	sst	1.59	0.52	320	2.11	0.75	180	0.29
7228/7-1 A	DC	11043		2103	clst	1.03	7.48	441	8.52	0.12	138	5.43
7228/7-1 A	DC	11044		2229	clst	0.85	4.91	342	5.76	0.15	237	2.07
7228/7-1 A	COCH	11022	2455.49	2455.52	clst	0.12	0.72	447	0.84	0.14	85	0.85
7228/7-1 A	DC	11047		2670	clst	0.34	1.92	337	2.26	0.15	221	0.87
7228/7-1 A	DC	11048		2742	clst	0.46	6.04	426	6.50	0.07	177	3.42
7228/7-1 A	DC	11049		2781	clst	0.56	4.70	432	5.25	0.11	242	1.94
7228/7-1 A	COCH	11026	2848.25	2848.26	clst	0.04	0.41	447	0.45	0.09	97	0.42
7228/7-1 ST3	DC	11063		1794	clst	0.41	3.36	446	3.77	0.11	133	2.53
7228/7-1 ST3	DC	11065		1872	clst	0.24	1.74	360	1.98	0.12	89	1.96

Table 4: Pyrolysis Gas Chromatography, area percentages

APT no	Well	Upper depth	Lower depth	Sample type	%C1	%C2-C6	%C6-C14 including UCM	%C15+ including UCM	%C1	%C2-C5	%C6-C14	%C15+
11032	7228/7-1 A	1347 00	1347 00	DC	5.9	13.5	40.7	39.9	11.1	25.7	54.4	8.8
11043	7228/7-1 A	2103 00	2103 00	DC	3.9	32.9	51.2	12.0	4.9	41.2	51.2	2.8
11044	7228/7-1 A	2229 00	2229 00	DC	5.8	20.9	49.8	23.5	7.8	28.3	53.6	10.2
11048	7228/7-1 A	2742 00	2742 00	DC	3.7	37.0	53.5	5.8	4.3	43.1	51.3	1.3
11063	7228/7-1 ST3	1794 00	1794 00	DC	6.8	15.6	45.1	32.5	10.9	24.7	52.8	11.6

Table 5: Extraction, Asphaltene precipitation and Iatroscan data

Well	Sample type	Sample name	APT no	Upper Depth	Lower Depth	Weight of extracted rock, g	Weight of EOM, mg	EOM/rock, mg/kg rock	SAT, wt% of EOM/oil	ARO, wt% of EOM/oil	POL, wt% of EOM/oil	ASP, wt% of EOM/oil	HC, wt% of EOM/oil	Comment
7228/7-1 A	DC		11032		1347	5.31	104	19576				34		
7228/7-1 A	DC		11037		1653	9.08	41	4514				18		
7228/7-1 A	COCH		11020	2060 33	2060 35	17.62	57	3236				6		
7228/7-1 A	OIL	MDT 1 B	10998		2091 10				89	9	2	0.4	98	
7228/7-1 A	COCH		11021	2093 52	2093 54	17.98	258	14349				1		
7228/7-1 A	DC		11043		2103	8.51	44	5172				5		
7228/7-1 A	DC		11044		2229	11.07	21	1898	11	6	68	15	17	Polar fraction contaminated with glycol mud
7228/7-1 A	DC		11048		2742	13.6	30	2207	13	1	83	3	14	Polar fraction contaminated with glycol mud
7228/7-1 A	COCH		11024	2833 00	2833 02	8.73	92	10535	95	0	1	3	95	
7228/7-1 ST3	COCH		11309	1367 38	1367 40	12.51	30	2398	76	1	13	10	77	Polar fraction contaminated with glycol mud
7228/7-1 ST3	DC		11063		1794	8.38	31	3697	14	31	37	17	46	Polar fraction contaminated with glycol mud

Table 6: Oil density

Well	Sample name	APT no	Density, g/cm ³	API gravity
7228/7-1 A	MDT 1 B	10998	0.815	42.1

Table 7: Topping

Well	Sample name	APT no	wt% of whole oil
7228/7-1 A	MDT 1 B	10998	80.0

Table 8: Gas Compositions

Well	Sample name	APT no	C1 (%)	C2 (%)	C3 (%)	iC4 (%)	nC4 (%)	iC5 (%)	nC5 (%)	CO2 (%)	Sum C1-C5	Water	iC4+nC4
7228/7-1 A	MDT 1 B	10996	88.00	5.70	2.90	0.60	1.20	0.61	0.68	0.20	99.80	0.12	0.45
7228/7-1 A	MDT 1 B	10997	78.80	8.90	6.30	1.30	2.70	0.95	0.85	0.17	99.80	0.21	0.47

Table 9: Gas Isotopes

Well	Sample name	APT no	$\delta^{13}\text{C}_{\text{C1}}$	δDC1	$\delta^{13}\text{C}_{\text{C2}}$	$\delta^{13}\text{C}_{\text{C3}}$	$\delta^{13}\text{C}_{\text{HC4}}$	$\delta^{13}\text{C}_{\text{HC4}}$	$\delta^{13}\text{C}_{\text{CO2}}$	$\delta^{16\text{O}}_{\text{CO2}}$
7228/7-1 A	MDT 1 B	10996	-40.2	-174.0	-31.5	-29.5	-26.8	-28.2	-21.5	-9.6
7228/7-1 A	MDT 1 B	10997	-40.1	-178.0	-31.5	-29.6	-27.6	-28.6	-27.4	-12.1

Table 10: Isotopes of fractions, $\delta^{13}\text{C}$ (‰ PDB)

Well	Sample name	APT no	Topped oil	BAT	ARD	NSO	ASP
7228/7-1 A	MDT 1 B	10998	-29.2	-29.4	-28.4	-28.8	-29.5

Table 11: GC sat, selected parameters

Well	Sample name	APT no	Lower Depth	Lithology	A = P _n /C ₁₇	B = P _n /C ₁₈	A/B	P _n /P _n	n-C ₁₇ (n-C ₁₇)/C ₁₇
7228/7-1 A	DC	11032	1347	clst	3.96	3.13	1.27	1.50	0.73
7228/7-1 A	DC	11037	1653	sst	2.07	0.44	4.69	4.83	0.57
7228/7-1 A	COCH	11020	2060-35	sst	0.46	0.31	1.50	1.54	0.72
7228/7-1 A	Oil	10998	2091-10		0.45	0.26	1.69	1.70	0.65
7228/7-1 A	COCH	11021	2093-54	sst	0.45	0.30	1.49	1.59	0.73
7228/7-1 A	DC	11043	2103	clst	0.67	0.34	1.96	2.44	0.69
7228/7-1 A	DC	11044	2229	clst	0.65	0.23	2.89	3.06	0.51
7228/7-1 A	DC	11048	2742	clst	0.41	0.23	1.77	2.54	0.83
7228/7-1 A	COCH	11024	2833-02	sst	0.50	0.57	0.87	0.67	1.00
7228/7-1 ST3	COCH	11309	1367-40	sst	0.53	0.63	0.85	0.75	1.00
7228/7-1 ST3	DC	11063	1794	clst	0.74	0.42	1.77	1.82	0.64

Table 12: GC Whole Oil, selected parameters

Well	Sample Name	APT no	A Benz/n-C6	B Toluene	X m+PAH/n-C8	W Benz*10/CyC6	C (n-C6+n-C7)/(CyC6+MCyC6)	E (2-MC6+3-MC6)/(c1,3-DMCyC6+n1,3-DMCyC6)	F n-C7/MCyC6	H n-C7+100/(CyC6+2-MC6+3-MC6+c1,3-DMCyC6+n1,3-DMCyC6+n-C7+MCyC6)	U CyC6/MCyC6	R nC7/2-MC6	S n-C6/2,2-DMC4
7228/7-1 A	MDT 1 B	10998	0.46	0.91	1.01	5.25	0.77	2.23	0.61	22.75	1.73	2.77	17.72

Table 13: GCMS saturates, selected parameters

Well	Sample Type	Sample name	APT no	Lower Depth	Lithology	{23/3}(23+30AB)	28AB/28AB+30AB	30D/30D+30AB	TS/TS+TM	%22S	%28TS	%20S	%BB	27DBS(27DBS+27AAA)	% C 27 Steranes	% C 29 Steranes
7228/7-1 A		MDT 1 B	10998	2091.1		0.20	0.06	0.12	0.32	61.21	18.36	51.18	45.04	0.86	27.08	62.18
7228/7-1 A	DC		11044	2229	clst	0.05	0.01	0.07	0.17	60.07	11.79	52.08	36.84	0.64	31.87	55.80
7228/7-1 A	DC		11048	2742	clst	0.29	0.20	0.10	0.30	57.56	16.85	51.25	43.93	0.76	31.92	55.77
7228/7-1 A	COCH		11024	2833.02	sst	0.64	0.11	0.07	0.75	57.66	22.10	60.68	61.01	0.84	55.11	31.97
7228/7-1ST3	COCH		11309	1367.4	sst	0.62	0.10	0.08	0.72	56.86	25.24	53.39	56.82	0.83	56.91	31.96
7228/7-1ST3	DC		11063	1794	clst	0.15	0.02	0.16	0.23	58.69	24.91	55.85	56.97	0.81	41.43	49.74

Table 14: GCMS aromatics, selected parameters

Well	Sample Type	Sample name	APT no	Lower Depth	Lithology	MA1	MA2	MA3	MA4	MA5	MA6	MA7	MA8	MA9
7228/7-1 A	Oil	MDT 1 B	10998	2091 1		0.36	0.16	4.82	0.45	1.67	7.06	0.81	0.11	5.89
7228/7-1 A	DC		11044	2229	clst	0.23	0.10	2.03	0.49	1.85	5.75	0.44	0.05	8.40
7228/7-1 A	DC		11048	2742	clst	0.40	0.07	3.10	0.48	1.73	6.18	0.67	0.07	13.20
7228/7-1 A	COCH		11024	2833 02	sst	1.00	0.00	9.30	0.46	1.33	3.95	1.11	0.04	60.09
7228/7-1ST3	COCH		11309	1367 4	sst	0.29	0.19	2.77	0.37	1.60	2.54	0.71	0.12	1.14
7228/7-1ST3	DC		11063	1794	clst	0.68	0.30	2.80	0.46	1.91	5.66	0.96	0.10	11.06

MA1= (C₂₀TA + C₂₁TA)/(C₂₀TA + C₂₁TA + SC₂₆TA + RC₂₆TA + SC₂₇TA + SC₂₈TA + RC₂₇TA + RC₂₈TA).

MA2= (C₂₁MA + C₂₂MA)/(C₂₁MA + C₂₂MA + βSC₂₇MA + βSC₂₇DMA + βRC₂₇DMA + βRC₂₇MA + βSC₂₈DMA + αSC₂₇DMA + αRC₂₇MA + αSC₂₈MA + βRC₂₈MA + βRC₂₈DMA + βSC₂₉MA + βSC₂₉DMA + αSC₂₉MA + αRC₂₈MA + βRC₂₉MA + βRC₂₉DMA + αRC₂₉MA).

MA3= 4-MDBT/1-MDBT.

MA4= (2-MP + 3-MP)/(1-MP + 2-MP + 3-MP + 9-MP).

MA5= 2-MN/1-MN.

MA6= (2,6-DMN + 2,7-DMN)/(1,5-DMN).

MA7= 4-MDBT/DBT.

MA8= DBT/P.

MA9= 3MP/ Retene.

Table 15: Vitrinite Reflectance

Well	Sample Type	API no	Lower Depth (in MD RKB)	%Rb	SD	Number of Measurements	Sample Quality
7228/7-1S	DC	11050	520	0.37	0.07	11	P
7228/7-1S	DC	11051	610	0.37	0.07	5	P
7228/7-1S	DC	11052	710	0.32	0.03	3	P
7228/7-1S	DC	11053	810	0.33	0.04	6	P
			alt pop	0.51	0.07	9	
7228/7-1S	DC	11054	910	0.50	0.05	6	P
7228/7-1S	DC	11055	1010	0.52	0.08	9	P
7228/7-1S	DC	11056	1110	0.50	0.05	14	M
7228/7-1S	DC	11057	1210	0.53	0.08	9	P
7228/7-1S	DC	11058	1308	0.45	0.05	6	P
7228/7-1S	DC	11059	1314	0.49	0.04	4	P
7228/7-1A	DC	11032	1347	0.40	0.03	23	M/G
7228/7-1A	DC	11034	1434	0.40	0.04	22	G
7228/7-1A	DC	11035	1566	0.50	0.05	25	G
7228/7-1A	DC	11036	1647	0.45	0.05	24	M/G
7228/7-1A	DC	11038	1755	0.42	0.05	8	P
7228/7-1A	DC	11039	1899	0.50	0.05	8	P
7228/7-1A	DC	11040	1935	0.47	0.05	8	P
7228/7-1A	DC	11041	1977	0.58	0.07	25	G
7228/7-1A	DC	11042	2031	0.57	0.06	29	G
7228/7-1A	DC	11043	2103	0.50	0.04	7	P
7228/7-1A	DC	11044	2229	0.59	0.04	8	P
7228/7-1A	DC	11045	2376	0.55	0.06	26	G
7228/7-1A	COCH	11022	2455.52	0.69	0.05	8	P
7228/7-1A	COCH	11023	2457.34	0.59	0.06	26	G
7228/7-1A	DC	11046	2511	0.63	0.06	23	M
7228/7-1A	DC	11047	2670	0.52	0.01	2	P
			alt pop	0.71	0.04	12	
7228/7-1A	DC	11048	2742	0.65	0.05	3	P
			alt pop	0.81	0.04	14	
7228/7-1A	DC	11049	2781	0.45	0.08	3	P
			alt pop	0.85	0.07	11	
7228/7-1A	COCH	11025	2842.27	0.66	0.05	11	M
7228/7-1A	COCH	11027	2860.28	0.72	0.01	4	M
			alt pop	0.85	0.04	13	
7228/7-1ST3	DC	11060	1575	0.49	0.05	22	M/G
7228/7-1ST3	DC	11061	1677	0.48	0.07	20	M
7228/7-1ST3	DC	11062	1710	0.52	0.06	20	P
			alt pop	0.33	0.03	9	
7228/7-1ST3	DC	11063	1794	0.54	0.06	24	G
7228/7-1ST3	DC	11064	1836	0.50	0.04	4	P
7228/7-1ST3	DC	11065	1872	0.52	0.06	5	P
7228/7-1ST3	DC	11066	1947	0.65	0.07	5	P
7228/7-1ST3	DC	11067	2049	0.55	0.09	14	P
7228/7-1ST3	DC	11068	2082	0.55	0.05	8	M

Table 16: Visual Kerogen Description

Well	Sample Type	APT no	Lower Depth (in MD RKE)	FA (%)	HA (%)	AL (%)	HE (%)	WC (%)	CO (%)	SC-1	SC-2
7228/7-1S	DC	11050	520	2	92	0	2	2	2		9-10
7228/7-1S	DC	11051	610	5	70	2	3	3	17		9-10
7228/7-1S	DC	11052	710	8	70	0	5	2	15	6	9-10
7228/7-1S	DC	11053	810	8	72	0	10	0	10		9-10
7228/7-1S	DC	11054	910	5	70	5	5	5	10		9-10
7228/7-1S	DC	11055	1010	2	78	0	8	2	10		9-10
7228/7-1S	DC	11056	1110	5	70	5	8	2	10		9-10
7228/7-1S	DC	11057	1210	2	70	0	14	2	12		9-10
7228/7-1S	DC	11058	1308	0	78	0	10	2	10		9-10
7228/7-1S	DC	11059	1314	0	75	5	7	5	8		9-10
7228/7-1A	DC	11032	1347	0	60	3	7	15	15	5	9-10
7228/7-1A	DC	11034	1434	0	70	5	5	10	10	5	9-10
7228/7-1A	DC	11035	1566	0	70	0	5	5	20	5	9-10
7228/7-1A	DC	11036	1647	0	75	0	5	5	15		9-10
7228/7-1A	DC	11038	1755	0	65	0	10	5	20		9-10
7228/7-1A	DC	11039	1899	0	90	0	3	2	5		9-10
7228/7-1A	DC	11040	1935	0	87	0	5	3	5		9-10
7228/7-1A	DC	11041	1977	3	75	0	2	5	15		9-10
7228/7-1A	DC	11042	2031	10	65	5	5	7	8		9-10
7228/7-1A	DC	11043	2103	0	95	5	0	0	0		9-10
7228/7-1A	DC	11044	2229	0	73	0	12	7	8	5	9-10
7228/7-1A	DC	11045	2376	0	65	0	10	5	20		9-10
7228/7-1A	COCH	11022	2455 52	0	40	0	15	10	35		9-10
7228/7-1A	COCH	11023	2457 34	0	60	0	20	10	10		9-10
7228/7-1A	DC	11046	2511	0	50	5	10	5	30		9-10
7228/7-1A	DC	11047	2670	0	78	0	10	2	10	6	9-10
7228/7-1A	DC	11048	2742	0	70	0	10	5	15		9-10
7228/7-1A	DC	11049	2781	5	65	0	10	0	20		9-10
7228/7-1A	COCH	11025	2842 27	0	60	0	10	5	25		9-10
7228/7-1A	COCH	11027	2860 28	0	60	5	10	5	20		9-10
7228/7-1ST3	DC	11060	1575	0	60	0	8	7	25		9-10
7228/7-1ST3	DC	11061	1677	0	35	0	15	5	45		9-10
7228/7-1ST3	DC	11062	1710	0	35	2	18	5	40		9-10
7228/7-1ST3	DC	11063	1794	5	63	0	2	5	25		9-10
7228/7-1ST3	DC	11064	1836	0	73	0	5	2	20		9-10
7228/7-1ST3	DC	11065	1872	0	85	0	3	2	10		9-10
7228/7-1ST3	DC	11066	1947	0	87	0	3	2	8		9-10
7228/7-1ST3	DC	11067	2049	0	90	2	0	0	8		9-10
7228/7-1ST3	DC	11068	2082	0	67	0	20	3	10		9-10



Appendix



GC whole oil, area of individual compounds

Well	Sample name	APT no	IS 2,2,4-TMC5	n-C3	n-C4	n-C4	n-C5	n-C5	2,2-DMC4	Cyc8	2,3-DMC4	2-MC5	3-MC5	n-C6	2,2-DMC6	MCyc5	2,4-DMC5	2,2,3-TMC4	Benz
7228/7-1 A	MDT1B	10 998	4 26E+4	1 17E+4	9 38E+3	3 16E+4	3 87E+4	5 22E+4	4 21E+3	6 03E+3	7 12E+3	3 84E+4	2 53E+4	7 45E+4	3 44E+3	3 76E+4	4 54E+3	1 05E+3	3 41E+4

GC whole oil, area of individual compounds, continued

Well	Sample name	APT no	3,3-DMC5	Cyc8	2-MC6	2,3-DMC6	1,1-DMCyc5	3-MC6	1,1,3-DMCyc6	1,1,3-DMCyc6	3-EC6	1,1,2-DMCyc5	n-C7	1,1,2-DMCyc6	MCyc6	1,1,3-TMCyc5	ECyc5	2,5-DMC6	2,2,3-TMC5+ 2,4-DMC6
7228/7-1 A	MDT1B	10 998	2 28E+3	6 49E+4	3 36E+4	7 98E+3	5 83E+3	3 42E+4	8 81E+3	8 27E+3	2 39E+3	1 33E+4	9 33E+4	0 00E+0	1 54E+5	7 49E+3	5 31E+3	5 44E+3	6 82E+3

GC whole oil, area of individual compounds, continued

Well	Sample name	APT no	1,1,2,4-TMCyc5	3,3-DMC6	1,1,2,3-TMCyc6	2,2,4-TMC6	Tol	2,3-DMC6	2-MC7	4-MC7	2-MC7	1,1,3-DMCyc6	1,1,4-DMCyc6	1,1-DMCyc6	1,1,2-DMCyc6	n-C8	E-Cyc6	n-C9	E-Benz
7228/7-1 A	MDT1B	10 998	4 88E+3	2 48E+3	4 08E+3	3 03E+2	8 52E+4	5 51E+3	3 71E+4	1 27E+4	3 13E+4	3 96E+4	1 62E+4	2 67E+3	1 57E+4	9 82E+4	3 44E+4	9 35E+3	1 10E+4

GC whole oil, area of individual compounds, continued

Well	Sample name	APT no	m-Xyl	p-Xyl	4-MC8	2-MC8	3-MC8	o-Xyl	n-C9	n-C10	n-C10	n-C11	n-C11	n-C12	n-C13	n-C14	n-C13	n-C15	n-C14
7228/7-1 A	MDT1B	10 998	7 70E+4	2 24E+4	1 70E+4	2 22E+4	2 59E+4	3 07E+4	1 05E+5	1 45E+4	1 08E+5	1 61E+4	1 16E+5	1 26E+5	2 59E+4	3 56E+4	1 29E+5	2 43E+4	1 37E+5



GC whole oil, area of individual compounds, continued

Well	Sample name	APT no	n-C16	n-C15	n-C16	n-C18	n-C17	n-C19	n-C18	n-C20	n-C19	n-C20	n-C21	n-C22	n-C23	n-C24	n-C25
7228/7-1 A	MDT1B	10 998	5 05E+4	1 49E+5	1 50E+5	4 09E+4	1 47E+5	5 90E+4	1 40E+5	3 51E+4	1 38E+5	1 28E+5	1 18E+5	1 08E+5	9 75E+4	8 45E+4	7 69E+4

GC whole oil, amount of individual compounds in ng/g

Well	Sample name	APT no	IS 2,2,4-TMC5	n-C3	n-C4	n-C4	n-C5	n-C5	2,2-DMC4	Cyc5	2,2-DMC4	2-MC5	3-MC5	n-C6	2,2-DMC6	MCyc5	2,4-DMC6	2,2,3-TMC4	Benz
7228/7-1 A	MDT1B	10 998	6 41E+6	1 81E+6	1 43E+6	4 83E+6	5 88E+6	7 93E+6	6 36E+5	8 90E+5	1 08E+6	5 80E+6	3 82E+6	1 13E+7	5 18E+5	5 55E+6	6 83E+5	1 58E+5	4 67E+6

GC whole oil, amount of individual compounds in ng/g, continued

Well	Sample name	APT no	3,3-DMC5	Cyc6	2-MC6	2,2-DMC6	1,1-DMCyc5	3-MC6	c-1,3-DMCyc5	1,1,3-DMCyc6	3-EC6	c-1,3-DMCyc6	n-C7	c-1,2-DMCyc6	MCyc6	1,1,3-TMCyc5	ECyc6	2,6-DMC6	2,2,3-TMC5+ 2,4-DMC6
7228/7-1 A	MDT1B	10 998	3 44E+5	9 58E+6	5 06E+6	1 20E+6	8 60E+5	5 16E+6	1 30E+6	1 22E+6	3 59E+5	1 96E+6	1 40E+7	0 00E+0	2 27E+7	1 11E+6	7 85E+5	8 18E+5	1 03E+6

GC whole oil, amount of individual compounds in ng/g, continued

Well	Sample name	APT no	c-1,2,4-TMCyc5	3,3-DMC6	c-1,2,3-TMCyc6	2,3,4-TMC6	Tol	2,3-DMC6	2-MC7	4-MC7	3-MC7	c-1,3-DMCyc6	c-1,4-DMCyc6	1,1-DMCyc6	c-1,2-DMCyc6	n-C8	E-Cyc6	n-C9	E-Benz
7228/7-1 A	MDT1B	10 998	7 21E+5	3 73E+5	6 03E+5	4 55E+4	1 18E+7	8 28E+5	5 58E+6	1 90E+6	4 70E+6	5 85E+6	2 40E+6	3 95E+5	2 32E+6	1 48E+7	5 08E+6	1 40E+6	1 54E+6



GC whole oil, amount of individual compounds in ng/g, continued

Well	Sample name	APT no	m-Xyl	p-Xyl	4-MC#	2-MC#	3-MC#	o-Xyl	n-C9	i-C10	n-C10	i-C11	n-C11	n-C12	i-C13	i-C14	n-C13	i-C15	n-C14
7228/7-1 A	MDT1B	10 998	1 08E+7	3 14E+6	2 54E+6	3 33E+6	3 88E+6	4 30E+6	1 57E+7	2 17E+6	1 62E+7	2 41E+6	1 74E+7	1 88E+7	3 86E+6	5 32E+6	1 92E+7	3 62E+6	2 04E+7

GC whole oil, amount of individual compounds in ng/g, continued

Well	Sample name	APT no	i-C16	n-C15	n-C16	i-C16	n-C17	i-C18	n-C18	i-C20	n-C19	n-C20	n-C21	n-C22	n-C23	n-C24	n-C25
7228/7-1 A	MDT1B	10 998	7 52E+6	2 22E+7	2 23E+7	6 09E+6	2 20E+7	8 78E+6	2 08E+7	5 22E+6	2 05E+7	1 91E+7	1 75E+7	1 60E+7	1 45E+7	1 26E+7	1 14E+7



GC sat, areas of individual compounds

APT no	Well	Upper depth	Lower depth	Sample type	n-C10	n-C11	n-C12	i-C13	i-C14	n-C13	i-C15	n-C14	i-C16	n-C15	n-C16	i-C18	n-C17	Pr	n-C18
11032	7228/7-1 A	1347 00	1347 00	DC	2 54E+3	2 15E+3	2 29E+3	2 65E+3	1 99E+3	2 68E+3	2 74E+3	3 15E+3	4 55E+3	3 71E+3	3 59E+3	5 25E+3	3 23E+3	1 28E+4	2 73E+3
11037	7228/7-1 A	1653 00	1653 00	DC	9 43E+2	8 22E+2	1 11E+3	3 37E+2	4 01E+2	1 53E+3	5 72E+2	2 65E+3	2 04E+3	3 04E+3	2 70E+3	1 30E+3	2 69E+3	5 55E+3	2 61E+3
11020	7228/7-1 A	2060 33	2060 33	COCH	0 00E+0	3 69E+2	4 85E+3	1 59E+3	3 14E+3	2 66E+4	8 54E+3	5 66E+4	2 30E+4	8 53E+4	9 53E+4	3 31E+4	1 00E+5	4 61E+4	9 73E+4
10998	7228/7-1 A	2091 1	2091 1	Oil	1 58E+4	4 16E+4	7 15E+4	1 50E+4	1 31E+4	9 53E+4	1 88E+4	1 23E+5	4 17E+4	1 51E+5	1 57E+5	4 99E+4	1 60E+5	7 14E+4	1 60E+5
11021	7228/7-1 A	2093 52	2093 54	COCH	6 98E+3	2 80E+4	6 14E+4	1 42E+4	1 34E+4	9 70E+4	2 12E+4	1 33E+5	4 68E+4	1 64E+5	1 66E+5	5 49E+4	1 65E+5	7 41E+4	1 55E+5
11043	7228/7-1 A	2103 00	2103 00	DC	1 95E+3	3 73E+3	7 81E+3	1 69E+3	1 44E+3	1 00E+4	1 70E+3	9 69E+3	2 72E+3	7 40E+3	4 71E+3	1 66E+3	3 52E+3	2 35E+3	2 84E+3
11044	7228/7-1 A	2229 00	2229 00	DC	5 50E+3	6 30E+3	7 60E+3	1 84E+3	2 09E+3	8 04E+3	1 93E+3	8 87E+3	4 22E+3	1 02E+4	1 07E+4	3 24E+3	1 22E+4	7 94E+3	1 15E+4
11048	7228/7-1 A	2742 00	2742 00	DC	3 63E+3	1 04E+4	2 02E+4	3 95E+3	3 04E+3	1 86E+4	2 70E+3	1 56E+4	4 68E+3	1 45E+4	1 17E+4	3 41E+3	1 15E+4	4 70E+3	8 01E+3
11024	7228/7-1 A	2833 00	2833 02	COCH	5 00E+2	4 58E+2	8 86E+2	2 09E+2	1 92E+2	1 77E+3	3 99E+2	2 79E+3	1 41E+3	6 41E+3	1 10E+4	5 03E+3	1 43E+4	7 16E+3	1 88E+4
11309	7228/7-1 ST3	1367 38	1367 40	COCH	3 05E+2	8 12E+2	1 24E+3	2 48E+2	2 73E+2	2 33E+3	9 82E+2	7 29E+3	4 13E+3	1 48E+4	2 22E+4	9 01E+3	2 36E+4	1 26E+4	2 65E+4
11063	7228/7-1 ST3	1794 00	1794 00	DC	3 41E+3	3 30E+3	5 45E+3	2 02E+3	3 50E+3	8 51E+3	5 15E+3	1 31E+4	1 09E+4	1 92E+4	2 03E+4	1 08E+4	2 11E+4	1 56E+4	2 05E+4
10639	JR-1				2 56E+4	4 67E+4	6 25E+4	2 07E+4	1 37E+4	7 14E+4	2 34E+4	7 69E+4	3 38E+4	8 83E+4	8 43E+4	4 03E+4	7 97E+4	9 03E+4	5 69E+4

GC sat, areas of individual compounds, continued

APT no	Ph	n-C19	n-C20	n-C21	n-C22	n-C23	n-C24	n-C25	n-C26	n-C27	n-C28	n-C29	n-C30	n-C31	n-C32	n-C33	n-C34	n-C35	n-C36
11032	8 53E+3	2 08E+3	2 11E+3	1 42E+3	1 30E+3	1 54E+3	9 85E+2	9 59E+2	8 96E+2	1 19E+3	9 63E+2	1 28E+3	8 65E+2	4 65E+2	3 67E+2	3 85E+2	3 68E+2	0 00E+0	0 00E+0
11037	1 15E+3	2 30E+3	1 86E+3	1 70E+3	1 57E+3	1 93E+3	1 41E+3	1 99E+3	1 33E+3	2 05E+3	1 14E+3	1 79E+3	1 48E+3	1 05E+3	3 52E+2	0 00E+0	0 00E+0	0 00E+0	0 00E+0
11020	2 99E+4	8 89E+4	7 94E+4	6 68E+4	5 80E+4	5 18E+4	4 64E+4	4 72E+4	4 04E+4	3 89E+4	2 86E+4	2 61E+4	1 93E+4	1 50E+4	9 54E+3	8 86E+3	8 58E+3	5 05E+3	2 88E+3
10998	4 21E+4	1 57E+5	1 58E+5	1 44E+5	1 38E+5	1 28E+5	1 13E+5	1 07E+5	9 03E+4	8 73E+4	6 28E+4	5 73E+4	4 09E+4	3 12E+4	2 15E+4	1 82E+4	1 77E+4	1 04E+4	7 25E+3
11021	4 67E+4	1 43E+5	1 27E+5	1 08E+5	9 50E+4	8 63E+4	7 85E+4	7 88E+4	6 66E+4	6 18E+4	4 38E+4	3 92E+4	2 81E+4	2 19E+4	1 44E+4	1 32E+4	1 40E+4	7 57E+3	4 80E+3
11043	9 61E+2	2 33E+3	1 75E+3	1 58E+3	1 32E+3	1 76E+3	1 10E+3	1 38E+3	1 16E+3	1 56E+3	8 71E+2	1 04E+3	5 21E+2	5 82E+2	1 87E+2	0 00E+0	0 00E+0	0 00E+0	0 00E+0
11044	2 60E+3	1 20E+4	1 08E+4	1 06E+4	9 35E+3	9 90E+3	8 41E+3	1 01E+4	8 62E+3	1 16E+4	7 24E+3	8 42E+3	5 25E+3	4 89E+3	2 29E+3	2 00E+3	1 03E+3	6 82E+2	3 92E+2
11048	1 85E+3	5 72E+3	5 16E+3	4 00E+3	3 70E+3	3 14E+3	2 36E+3	2 77E+3	2 37E+3	2 28E+3	1 81E+3	1 94E+3	1 21E+3	1 22E+3	6 84E+2	5 54E+2	3 54E+2	0 00E+0	0 00E+0
11024	1 08E+4	2 41E+4	3 24E+4	2 70E+4	2 07E+4	9 59E+3	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0
11309	1 66E+4	2 78E+4	3 14E+4	2 42E+4	1 80E+4	1 12E+4	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0
11063	8 57E+3	2 00E+4	1 76E+4	1 53E+4	1 41E+4	1 30E+4	1 20E+4	1 30E+4	1 21E+4	1 19E+4	1 02E+4	1 04E+4	7 22E+3	6 16E+3	3 88E+3	3 28E+3	2 78E+3	8 30E+2	6 44E+2
10639	6 32E+4	4 52E+4	3 79E+4	3 00E+4	2 41E+4	2 21E+4	1 88E+4	1 84E+4	1 69E+4	1 34E+4	1 22E+4	1 18E+4	1 01E+4	9 75E+3	8 26E+3	5 92E+3	3 82E+3	3 25E+3	1 43E+3



GC sat, amount of individual compounds, ng/g EOM

APT no	Well	Upper depth	Lower depth	Sample type	n-C10	n-C11	n-C12	i-C13	i-C14	n-C13	i-C15	n-C14	i-C16	n-C15	n-C16	i-C16	n-C17	Pr	n-C18
11032	7228/7-1 A	1347 00	1347 00	DC	1 22E+5	1 03E+5	1 10E+5	1 27E+5	9 54E+4	1 28E+5	1 31E+5	1 51E+5	2 18E+5	1 77E+5	1 72E+5	2 51E+5	1 55E+5	6 12E+5	1 31E+5
11037	7228/7-1 A	1653 00	1653 00	DC	5 55E+4	4 84E+4	6 54E+4	1 98E+4	2 36E+4	9 04E+4	3 37E+4	1 56E+5	1 20E+5	1 79E+5	1 59E+5	7 67E+4	1 58E+5	3 27E+5	1 54E+5
11020	7228/7-1 A	2060 33	2060 35	COCH	0 00E+0	2 04E+4	2 68E+5	8 81E+4	1 73E+5	1 47E+6	4 72E+5	3 13E+6	1 27E+6	4 71E+6	5 26E+6	1 83E+6	5 52E+6	2 55E+6	5 37E+6
10998	7228/7-1 A	2091 1	2091 1	Oil	1 27E+6	3 37E+6	5 79E+6	1 21E+6	1 06E+6	7 71E+6	1 52E+6	9 95E+6	3 37E+6	1 22E+7	1 27E+7	4 04E+6	1 30E+7	5 78E+6	1 29E+7
11021	7228/7-1 A	2093 52	2093 54	COCH	5 99E+5	2 40E+6	5 27E+6	1 22E+6	1 15E+6	8 33E+6	1 82E+6	1 14E+7	4 02E+6	1 41E+7	1 43E+7	4 71E+6	1 42E+7	6 36E+6	1 33E+7
11043	7228/7-1 A	2103 00	2103 00	DC	7 95E+4	1 52E+5	3 19E+5	6 88E+4	5 89E+4	4 08E+5	6 95E+4	3 96E+5	1 11E+5	3 02E+5	1 92E+5	6 77E+4	1 44E+5	9 57E+4	1 16E+5
11044	7228/7-1 A	2229 00	2229 00	DC	4 54E+5	5 20E+5	6 28E+5	1 52E+5	1 73E+5	6 64E+5	1 59E+5	7 32E+5	3 49E+5	8 46E+5	8 81E+5	2 68E+5	1 00E+6	6 56E+5	9 49E+5
11048	7228/7-1 A	2742 00	2742 00	DC	1 62E+5	4 63E+5	9 02E+5	1 77E+5	1 36E+5	8 32E+5	1 21E+5	6 98E+5	2 09E+5	6 48E+5	5 23E+5	1 52E+5	5 14E+5	2 10E+5	3 58E+5
11024	7228/7-1 A	2833 00	2833 02	COCH	5 18E+4	4 75E+4	9 18E+4	2 16E+4	1 99E+4	1 83E+5	4 13E+4	2 89E+5	1 46E+5	6 63E+5	1 14E+6	5 21E+5	1 48E+6	7 41E+5	1 94E+6
11309	7228/7-1 ST3	1367 38	1367 40	COCH	9 21E+3	2 45E+4	3 75E+4	7 48E+3	8 25E+3	7 02E+4	2 97E+4	2 20E+5	1 25E+5	4 48E+5	6 71E+5	2 72E+5	7 12E+5	3 80E+5	8 00E+5
11063	7228/7-1 ST3	1794 00	1794 00	DC	1 39E+5	1 35E+5	2 23E+5	8 25E+4	1 43E+5	3 48E+5	2 10E+5	5 34E+5	4 46E+5	7 83E+5	8 31E+5	4 40E+5	8 61E+5	6 36E+5	8 39E+5
10639	JR-1				1 16E+6	2 11E+6	2 83E+6	9 36E+5	6 19E+5	3 23E+6	1 06E+6	3 48E+6	1 53E+6	3 99E+6	3 81E+6	1 82E+6	3 61E+6	4 08E+6	2 58E+6

GC sat, amount of individual compounds, ng/g EOM, continued

APT no	Ph	n-C19	n-C20	n-C21	n-C22	n-C23	n-C24	n-C25	n-C26	n-C27	n-C28	n-C29	n-C30	n-C31	n-C32	n-C33	n-C34	n-C35	n-C36
11032	4 08E+5	9 96E+4	1 01E+5	6 81E+4	6 22E+4	7 35E+4	4 72E+4	4 59E+4	4 29E+4	5 69E+4	4 61E+4	6 12E+4	4 14E+4	2 23E+4	1 75E+4	1 84E+4	1 76E+4	0 00E+0	0 00E+0
11037	6 77E+4	1 35E+5	1 10E+5	1 00E+5	9 25E+4	1 14E+5	8 31E+4	1 17E+5	7 84E+4	1 21E+5	6 69E+4	1 06E+5	8 74E+4	6 21E+4	2 07E+4	0 00E+0	6 00E+0	1 80E+1	0 00E+0
11020	1 65E+6	4 91E+6	4 39E+6	3 69E+6	3 21E+6	2 86E+6	2 56E+6	2 61E+6	2 23E+6	2 15E+6	1 58E+6	1 44E+6	1 06E+6	8 30E+5	5 27E+5	4 89E+5	4 74E+5	2 79E+5	1 59E+5
10998	3 41E+6	1 27E+7	1 27E+7	1 17E+7	1 11E+7	1 03E+7	9 12E+6	8 63E+6	7 31E+6	7 06E+6	5 08E+6	4 64E+6	3 31E+6	2 52E+6	1 74E+6	1 47E+6	1 43E+6	8 41E+5	5 86E+5
11021	4 01E+6	1 22E+7	1 09E+7	9 23E+6	8 15E+6	7 41E+6	6 74E+6	6 76E+6	5 71E+6	5 31E+6	3 76E+6	3 36E+6	2 41E+6	1 88E+6	1 23E+6	1 13E+6	1 20E+6	6 50E+5	4 12E+5
11043	3 92E+4	9 49E+4	7 15E+4	6 43E+4	5 38E+4	7 19E+4	4 48E+4	5 63E+4	4 75E+4	6 36E+4	3 56E+4	4 23E+4	2 13E+4	2 38E+4	7 63E+3	0 00E+0	0 00E+0	0 00E+0	0 00E+0
11044	2 14E+5	9 93E+5	8 90E+5	8 76E+5	7 72E+5	8 18E+5	6 94E+5	8 36E+5	7 12E+5	9 55E+5	5 98E+5	6 96E+5	4 34E+5	4 04E+5	1 89E+5	1 65E+5	8 50E+4	5 63E+4	3 24E+4
11048	8 26E+4	2 56E+5	2 30E+5	1 79E+5	1 65E+5	1 40E+5	1 05E+5	1 24E+5	1 06E+5	1 02E+5	8 07E+4	8 68E+4	5 41E+4	5 45E+4	3 05E+4	2 48E+4	1 58E+4	0 00E+0	0 00E+0
11024	1 11E+6	2 49E+6	3 35E+6	2 80E+6	2 14E+6	9 92E+5	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0
11309	5 03E+5	8 39E+5	9 48E+5	7 31E+5	5 44E+5	3 39E+5	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0
11063	3 50E+5	8 15E+5	7 20E+5	6 24E+5	5 76E+5	5 33E+5	4 88E+5	5 33E+5	4 93E+5	4 86E+5	4 16E+5	4 26E+5	2 95E+5	2 52E+5	1 58E+5	1 34E+5	1 14E+5	3 39E+4	2 63E+4
10639	2 86E+6	2 05E+6	1 72E+6	1 36E+6	1 09E+6	1 00E+6	8 51E+5	8 34E+5	7 64E+5	6 07E+5	5 51E+5	5 34E+5	4 58E+5	4 41E+5	3 74E+5	2 68E+5	1 73E+5	1 47E+5	6 48E+4



GC aro, areas of individual compounds

APT no	Well	Upper depth	Lower depth	Sample type	2-MN	1-MN	Phen	3-MP	2-MP	9-MP	1-MP
11032	7228/7-1 A	1347 00	1347 00	DC	1 24E+5	8 48E+4	2 60E+4	1 33E+4	1 35E+4	2 49E+4	2 00E+4
11037	7228/7-1 A	1653 00	1653 00	DC	6 48E+4	4 68E+4	2 87E+4	9 44E+3	1 07E+4	2 07E+4	1 02E+4
11020	7228/7-1 A	2060 33	2060 33	COCH	1 19E+4	1 09E+4	9 60E+3	6 99E+3	7 36E+3	1 10E+4	9 40E+3
10998	7228/7-1 A	2091 10	2091 10	Oil	3 68e+5	2 73e+5	6 23e+4	2 22e+4	4 29e+4	5 73e+4	5 62e+4
11021	7228/7-1 A	2093 52	2093 54	COCH	4 70E+4	3 81E+4	1 08E+4	8 40E+3	1 20E+4	1 25E+4	1 21E+4
11043	7228/7-1 A	2103 00	2103 00	DC	2 62E+4	1 88E+4	7 32E+3	2 38E+3	3 02E+3	5 42E+3	3 47E+3
11044	7228/7-1 A	2229 00	2229 00	DC	1 17E+5	7 38E+4	3 77E+4	1 73E+4	1 91E+4	2 20E+4	1 70E+4
11048	7228/7-1 A	2742 00	2742 00	DC	4 27E+4	2 97E+4	1 28E+4	5 46E+3	6 83E+3	8 08E+3	6 16E+3
11024	7228/7-1 A	2833 00	2833 02	COCH	3 07E+3	3 42E+3	8 83E+2	6 85E+2	8 82E+2	1 51E+3	9 80E+2
11309	7228/7-1 ST3	1367 38	1367 40	COCH	1 94E+4	1 41E+4	5 59E+3	1 69E+3	1 91E+3	4 21E+3	2 05E+3
11063	7228/7-1 ST3	1794 00	1794 00	DC	2 39E+4	1 68E+4	1 42E+4	0 00E+0	0 00E+0	1 84E+4	1 82E+4
10639	JR-1				2 06E+5	2 06E+5	9 89E+4	5 84E+4	4 86E+4	6 55E+4	7 02E+4

PyGC, areas

APT no	Well	Upper depth	Lower depth	Sample type	n-Heptane	Toluene	n-Octane	(m+p)-Xylene	C1	C2-C5	C6-C14 with UCM	C15+ with UCM	C6-C14	C15+
11032	7228/7-1 A	1347 00	1347 00	DC	7 62E+5	1 24E+6	6 24E+5	1 59E+6	1 21E+7	2 79E+7	8 40E+7	8 23E+7	5 91E+7	9 62E+6
11043	7228/7-1 A	2103 00	2103 00	DC	4 17E+4	1 40E+5	3 83E+4	7 48E+4	5 24E+5	4 40E+6	6 84E+6	1 60E+6	5 47E+6	2 97E+5
11044	7228/7-1 A	2229 00	2229 00	DC	1 35E+5	2 02E+5	1 14E+5	1 24E+5	1 05E+6	3 80E+6	9 07E+6	4 29E+6	7 19E+6	1 37E+6
11048	7228/7-1 A	2742 00	2742 00	DC	2 37E+4	7 76E+4	1 97E+4	3 77E+4	2 14E+5	2 12E+6	3 07E+6	3 33E+5	2 53E+6	6 50E+4
11063	7228/7-1 ST3	1794 00	1794 00	DC	1 37E+5	1 86E+5	1 23E+5	1 32E+5	1 38E+6	3 14E+6	9 10E+6	6 56E+6	6 70E+6	1 47E+6
10639	JR-1				1 02E+6	8 05E+5	8 04E+5	9 50E+5	4 87E+6	1 95E+7	7 89E+7	9 84E+7	5 16E+7	1 07E+7



GCMS SIR, peak heights from saturated fraction

m/z 177.1643							m/z 191.1800													
Well	Sample type	Sample Name	Lower Depth (m)	APT no	25nor25ab	25nor30ab	20/3	21/3	22/2	24/3	25/3R	25/2S	24/4	26/3R	26/2S	28/3R	28/2S	29/2R	28/3S	27/4
7228/7-1 A	Oil	MDT1B	2091 10	10 998	5 42E+5	0 00E+0	2 22E+6	4 00E+6	6 52E+6	4 53E+6	1 93E+6	2 06E+6	1 72E+6	2 33E+6	2 15E+6	2 51E+6	2 63E+6	2 54E+6	2 30E+6	3 65E+6
7228/7-1 A	DC		2229 00	11 044	0 00E+0	0 00E+0	3 82E+5	3 68E+5	4 20E+5	3 09E+5	6 80E+4	5 40E+4	6 34E+5	6 93E+4	5 95E+4	5 95E+4	2 65E+4	3 05E+4	3 19E+4	7 06E+5
7228/7-1 A	DC		2742 00	11 048	6 15E+4	0 00E+0	2 10E+5	2 03E+5	4 50E+5	3 97E+5	7 88E+4	7 90E+4	3 08E+5	5 57E+4	5 27E+4	4 09E+4	4 07E+4	3 42E+4	2 44E+4	2 09E+5
7228/7-1 A	COCH		2833 02	11 024	9 04E+5	0 00E+0	2 63E+6	5 68E+6	2 28E+7	1 20E+7	5 08E+6	4 62E+6	1 29E+7	3 02E+6	2 91E+6	1 82E+6	1 64E+6	1 61E+6	1 54E+6	1 02E+7
7228/7-1 ST3	COCH		1367 40	11 309	1 06E+6	5 41E+5	2 68E+6	4 40E+6	1 92E+7	9 72E+6	4 48E+6	3 90E+6	1 63E+7	2 95E+6	2 85E+6	2 03E+6	1 82E+6	1 61E+6	1 58E+6	1 22E+7
7228/7-1 ST3	DC		1794 00	11 063	0 00E+0	0 00E+0	4 13E+5	6 73E+5	7 37E+5	5 90E+5	1 40E+5	1 16E+5	7 75E+5	1 14E+5	1 11E+5	1 16E+5	1 07E+5	8 52E+4	8 34E+4	4 78E+5

GCMS SIR, peak heights from saturated fraction, continued

m/z 191.1800																					
Well	Sample type	Sample Name	Lower Depth (m)	APT no	27/1n	30/3R	30/3S	28/3R	28nor30ab	28/3S	28/1s	30/4	28/3a	30/3a	30/3	30nor30	30/3S	30nor30	30/3S	30nor30	
7228/7-1 A	Oil	MDT1B	2091 10	10 998	7 69E+6	1 84E+6	1 85E+6	1 53E+6	0 00E+0	2 02E+7	4 54E+6	3 43E+6	3 78E+6	0 00E+0	2 59E+7	6 20E+6	1 18E+7	7 49E+6	1 08E+6	6 98E+6	4 88E+6
7228/7-1 A	DC		2229 00	11 044	3 51E+6	0 00E+0	0 00E+0	1 00E+5	0 00E+0	8 39E+6	1 12E+6	6 23E+5	1 74E+6	0 00E+0	8 17E+6	2 43E+6	3 84E+6	2 55E+6	3 43E+5	1 68E+6	1 12E+6
7228/7-1 A	DC		2742 00	11 048	4 76E+5	0 00E+0	0 00E+0	2 77E+5	0 00E+0	1 14E+6	2 32E+5	1 26E+5	2 51E+5	0 00E+0	1 12E+6	1 98E+5	4 51E+5	3 32E+5	8 85E+4	2 43E+5	1 75E+5
7228/7-1 A	COCH		2833 02	11 024	3 40E+6	1 05E+6	1 00E+6	1 58E+6	0 00E+0	1 82E+7	5 17E+6	9 63E+5	1 39E+6	0 00E+0	1 31E+7	9 42E+5	5 61E+6	4 12E+6	6 22E+5	2 67E+6	1 89E+6
7228/7-1 ST3	COCH		1367 40	11 309	4 63E+6	9 11E+5	1 18E+6	1 27E+6	7 69E+5	1 43E+7	4 81E+6	1 03E+6	1 48E+6	0 00E+0	1 19E+7	1 32E+6	4 65E+6	3 53E+6	5 03E+5	2 11E+6	1 71E+6
7228/7-1 ST3	DC		1794 00	11 063	1 56E+6	7 75E+4	1 38E+5	9 06E+4	0 00E+0	2 16E+6	7 16E+5	8 08E+5	3 25E+5	0 00E+0	4 25E+6	6 67E+5	2 09E+6	1 47E+6	2 91E+5	1 39E+6	9 85E+5

GCMS SIR, peak heights from saturated fraction, continued

m/z 191.1800											m/z 217.1956										
Well	Sample type	Sample Name	Lower Depth (m)	APT no	32/3S	33/3R	34/3S	34/3R	35/3S	35/3R	37/3a	37/3b	37/3c	37/3d	37/3e	37/3f	37/3g	37/3h	37/3i	37/3j	
7228/7-1 A	Oil	MDT1B	2091 10	10 998	3 71E+6	2 52E+6	2 42E+6	1 72E+6	1 18E+6	8 42E+5	1 32E+6	8 80E+5	9 60E+5	2 48E+5	3 64E+6	2 03E+6	7 85E+5	1 02E+6	1 45E+6	1 66E+6	
7228/7-1 A	DC		2229 00	11 044	7 89E+5	5 20E+5	4 34E+5	3 07E+5	1 80E+5	1 16E+5	7 10E+4	1 07E+5	5 56E+4	6 18E+4	2 35E+5	1 44E+5	5 88E+4	7 83E+4	8 70E+4	8 78E+4	
7228/7-1 A	DC		2742 00	11 048	1 26E+5	8 60E+4	7 35E+4	5 04E+4	5 89E+4	3 81E+4	8 49E+4	1 27E+5	5 99E+4	7 09E+4	1 35E+5	8 96E+4	3 31E+4	4 23E+4	4 83E+4	4 90E+4	
7228/7-1 A	COCH		2833 02	11 024	1 38E+6	9 33E+5	6 89E+5	4 42E+5	5 22E+5	3 37E+5	5 28E+6	7 27E+6	4 52E+6	4 08E+6	9 61E+6	6 00E+6	2 14E+6	2 64E+6	3 13E+6	3 02E+6	
7228/7-1 ST3	COCH		1367 40	11 309	1 18E+6	8 70E+5	6 42E+5	5 03E+5	5 89E+5	4 93E+5	3 46E+6	4 57E+6	2 75E+6	2 70E+6	9 53E+6	5 79E+6	2 32E+6	2 90E+6	2 89E+6	2 73E+6	
7228/7-1 ST3	DC		1794 00	11 063	6 74E+5	4 72E+5	4 39E+5	3 09E+5	2 46E+5	1 85E+5	1 16E+5	1 41E+5	9 76E+4	8 28E+4	5 47E+5	3 33E+5	1 47E+5	1 75E+5	1 07E+5	1 23E+5	



GCMS SIR, peak heights from saturated fraction, continued

m/z 217.1956

Well	Sample type	Sample Name	Lower Depth (m)	APT no	26:01R	26:02R	26:03R	26:04R	26:05R	26:06R	26:07R	26:08R	26:09R	26:10R	26:11R	26:12R	26:13R	26:14R	26:15R	26:16R	26:17R	26:18R	
7228/7-1 A	Oil	MDT1B	2091 10	10 998	9 66E+5	1 05E+6	5 52E+5	5 92E+5	3 37E+6	6 79E+5	5 37E+5	7 65E+5	2 11E+6	1 37E+6	2 35E+5	1 21E+6	6 70E+5	9 23E+5	5 19E+5	1 36E+6	1 17E+6		
7228/7-1 A	DC		2229 00	11 044	5 28E+4	7 30E+4	4 01E+4	1 34E+5	2 51E+5	7 05E+4	4 45E+4	1 91E+5	1 63E+5	1 15E+5	5 19E+4	1 04E+5	1 16E+5	6 38E+4	8 99E+4	2 35E+5	1 34E+5		
7228/7-1 A	DC		2742 00	11 048	3 10E+4	3 81E+4	2 22E+4	4 18E+4	7 28E+4	4 26E+4	2 10E+4	7 57E+4	6 03E+4	3 97E+4	1 61E+4	4 59E+4	3 54E+4	3 61E+4	4 54E+4	7 30E+4	5 89E+4		
7228/7-1 A	COCH		2833 02	11 024	1 78E+6	2 03E+6	1 22E+6	1 87E+6	3 30E+6	2 37E+6	9 28E+5	1 74E+6	2 28E+6	1 61E+6	4 37E+5	1 02E+6	1 16E+6	1 51E+6	6 10E+5	1 08E+6	1 43E+6		
7228/7-1 ST3	COCH		1367 40	11 309	1 66E+6	1 98E+6	1 28E+6	2 02E+6	3 35E+6	2 46E+6	9 90E+5	2 20E+6	2 49E+6	1 87E+6	3 94E+5	1 23E+6	1 14E+6	1 47E+6	6 99E+5	1 13E+6	1 44E+6		
7228/7-1 ST3	DC		1794 00	11 063	6 51E+4	8 60E+4	4 46E+4	1 25E+5	3 51E+5	1 47E+5	6 52E+4	1 57E+5	2 47E+5	1 51E+5	2 66E+4	1 32E+5	8 07E+4	7 44E+4	6 87E+4	1 50E+5	1 84E+5		

GCMS SIR, peak heights from saturated fraction, continued

m/z 217.1956

Well	Sample type	Sample Name	Lower Depth (m)	APT no	26:01S	26:02R	26:03S	26:04R	26:05S	26:06R
7228/7-1 A	Oil	MDT1B	2091 10	10 998	1 00E+6	1 30E+6	5 13E+5	2 46E+5	2 15E+5	1 37E+5
7228/7-1 A	DC		2229 00	11 044	1 29E+5	2 16E+5	1 56E+5	3 37E+4	2 65E+4	3 04E+4
7228/7-1 A	DC		2742 00	11 048	5 27E+4	6 94E+4	2 38E+4	1 64E+4	1 14E+4	8 59E+3
7228/7-1 A	COCH		2833 02	11 024	1 36E+6	7 01E+5	3 24E+5	3 44E+5	1 94E+5	1 52E+5
7228/7-1 ST3	COCH		1367 40	11 309	1 35E+6	9 89E+5	3 35E+5	3 31E+5	1 74E+5	1 83E+5
7228/7-1 ST3	DC		1794 00	11 063	1 70E+5	1 18E+5	3 82E+4	4 05E+4	2 58E+4	1 63E+4

m/z 218.2035

27:01R	27:02S	27:03R	27:04S	27:05R	27:06S	27:07R	27:08S
1 24E+6	1 01E+6	8 64E+5	1 13E+6	2 00E+6	1 89E+6	3 11E+5	3 11E+5
1 42E+5	1 22E+5	9 29E+4	8 40E+4	2 25E+5	2 07E+5	3 44E+4	3 41E+4
8 14E+4	7 05E+4	4 36E+4	5 46E+4	1 07E+5	7 34E+4	1 57E+4	1 29E+4
4 62E+6	3 68E+6	1 85E+6	2 10E+6	2 44E+6	2 29E+6	3 82E+5	3 15E+5
4 50E+6	3 88E+6	1 70E+6	2 01E+6	2 46E+6	2 27E+6	3 34E+5	2 83E+5
2 61E+5	2 23E+5	8 02E+4	9 24E+4	2 97E+5	2 71E+5	4 12E+4	3 65E+4



GCMS SIR, amounts in ng/g in saturated fraction

m/z 177.1643

Well	Sample type	Sample Name	Lower Depth (m)	APT no	22nov28ab	22nov30ab
7228/7-1 A	Oil	MDT1B	2091 10	10 998	1 59E+3	0 00E+0
7228/7-1 A	DC		2229 00	11 044	0 00E+0	0 00E+0
7228/7-1 A	DC		2742 00	11 048	2 28E+2	0 00E+0
7228/7-1 A	COCH		2833 02	11 024	6 53E+2	0 00E+0
7228/7-1 ST3	COCH		1367 40	11 309	2 60E+3	1 33E+3
7228/7-1 ST3	DC		1794 00	11 063	0 00E+0	0 00E+0

m/z 191.1800

20/2	21/2	22/2S	24/2	25/2R	26/2S	24/4	25/2R	26/2S	26/3R	26/2S	26/3R	26/2S	26/3R	26/2S	27/2
6 53E+3	1 18E+4	1 92E+4	1 33E+4	5 69E+3	6 05E+3	5 05E+3	6 85E+3	6 32E+3	7 37E+3	7 73E+3	7 46E+3	6 78E+3	1 08E+4		
1 85E+3	1 78E+3	2 03E+3	1 50E+3	3 29E+2	2 62E+2	3 07E+3	3 36E+2	2 88E+2	2 88E+2	1 28E+2	1 47E+2	1 54E+2	3 42E+3		
7 78E+2	7 49E+2	1 66E+3	1 47E+3	2 91E+2	2 92E+2	1 14E+3	2 06E+2	1 95E+2	1 51E+2	1 51E+2	1 26E+2	9 00E+1	7 72E+2		
1 90E+3	4 10E+3	1 65E+4	8 65E+3	3 67E+3	3 33E+3	9 32E+3	2 18E+3	2 10E+3	1 31E+3	1 18E+3	1 16E+3	1 11E+3	7 39E+3		
6 58E+3	1 08E+4	4 72E+4	2 38E+4	1 10E+4	9 57E+3	4 01E+4	7 25E+3	6 98E+3	4 98E+3	4 45E+3	3 96E+3	3 88E+3	2 99E+4		
1 41E+3	2 29E+3	2 51E+3	2 01E+3	4 78E+2	3 95E+2	2 64E+3	3 87E+2	3 78E+2	3 97E+2	3 65E+2	2 91E+2	2 84E+2	1 63E+3		

GCMS SIR, amounts in ng/g in saturated fraction, continued

m/z 191.1800

Well	Sample type	Sample Name	Lower Depth (m)	APT no	27/2	30/2R	30/2S	28/2	25nov20ab	28/2	27/2	30/1	29/2	30/0	30/2	30/2	31/2S	31/2R	30/2	32/2S	32/2R
7228/7-1 A	Oil	MDT1B	2091 10	10 998	2 26E+4	5 42E+3	5 44E+3	4 50E+3	0 00E+0	5 95E+4	1 34E+4	1 01E+4	1 11E+4	0 00E+0	7 61E+4	1 83E+4	3 48E+4	2 20E+4	3 19E+3	2 05E+4	1 44E+4
7228/7-1 A	DC		2229 00	11 044	1 70E+4	0 00E+0	0 00E+0	4 86E+2	0 00E+0	4 06E+4	5 43E+3	3 02E+3	8 43E+3	0 00E+0	3 95E+4	1 18E+4	1 86E+4	1 24E+4	1 66E+3	8 13E+3	5 42E+3
7228/7-1 A	DC		2742 00	11 048	1 76E+3	0 00E+0	0 00E+0	1 03E+3	0 00E+0	4 23E+3	8 58E+2	4 68E+2	9 29E+2	0 00E+0	4 13E+3	7 31E+2	1 67E+3	1 23E+3	3 27E+2	8 98E+2	6 49E+2
7228/7-1 A	COCH		2833 02	11 024	2 45E+3	7 54E+2	7 23E+2	1 14E+3	0 00E+0	1 32E+4	3 73E+3	6 95E+2	1 00E+3	0 00E+0	9 46E+3	6 80E+2	4 05E+3	2 98E+3	4 49E+2	1 93E+3	1 36E+3
7228/7-1 ST3	COCH		1367 40	11 309	1 14E+4	2 24E+3	2 89E+3	3 10E+3	1 89E+3	3 50E+4	1 18E+4	2 52E+3	3 63E+3	0 00E+0	2 91E+4	3 24E+3	1 14E+4	8 65E+3	1 23E+3	5 18E+3	4 20E+3
7228/7-1 ST3	DC		1794 00	11 063	5 31E+3	2 64E+2	4 69E+2	3 09E+2	0 00E+0	7 36E+3	2 44E+3	2 75E+3	1 11E+3	0 00E+0	1 45E+4	2 28E+3	7 13E+3	5 02E+3	9 91E+2	4 75E+3	3 36E+3

GCMS SIR, amounts in ng/g in saturated fraction, continued

m/z 191.1800

Well	Sample type	Sample Name	Lower Depth (m)	APT no	33/2S	33/2R	34/2S	34/2R	35/2S	35/2R
7228/7-1 A	Oil	MDT1B	2091 10	10 998	1 09E+4	7 42E+3	7 11E+3	5 07E+3	3 46E+3	2 48E+3
7228/7-1 A	DC		2229 00	11 044	3 82E+3	2 52E+3	2 10E+3	1 49E+3	8 71E+2	5 62E+2
7228/7-1 A	DC		2742 00	11 048	4 65E+2	3 18E+2	2 72E+2	1 86E+2	2 18E+2	1 41E+2
7228/7-1 A	COCH		2833 02	11 024	9 98E+2	6 74E+2	4 97E+2	3 19E+2	3 77E+2	2 43E+2
7228/7-1 ST3	COCH		1367 40	11 309	2 83E+3	2 13E+3	1 58E+3	1 23E+3	1 45E+3	1 21E+3
7228/7-1 ST3	DC		1794 00	11 063	2 30E+3	1 61E+3	1 50E+3	1 05E+3	8 38E+2	6 29E+2

m/z 217.1956

21/2	21/2	22/2	22/2	27/2R	27/2R	27/2R	27/2S	28/2S#1	28/2S#2
3 90E+3	2 59E+3	2 83E+3	7 24E+2	1 07E+4	5 98E+3	2 31E+3	3 01E+3	4 28E+3	4 88E+3
3 44E+2	5 17E+2	2 69E+2	2 99E+2	1 14E+3	6 96E+2	2 85E+2	3 79E+2	4 21E+2	4 25E+2
3 14E+2	4 71E+2	2 22E+2	2 62E+2	5 01E+2	3 31E+2	1 23E+2	1 56E+2	1 79E+2	1 81E+2
3 81E+3	5 25E+3	3 26E+3	2 94E+3	6 93E+3	4 33E+3	1 55E+3	1 91E+3	2 26E+3	2 18E+3
8 48E+3	1 12E+4	6 74E+3	6 63E+3	2 34E+4	1 42E+4	5 69E+3	7 11E+3	7 08E+3	6 70E+3
3 97E+2	4 82E+2	3 33E+2	2 82E+2	1 87E+3	1 13E+3	5 00E+2	5 96E+2	3 66E+2	4 19E+2



GCMS SIR, amounts in ng/g in saturated fraction, continued

m/z 217.1956

Well	Sample type	Sample Name	Lower Depth (m)	APT no	26-pp#1	28-pp#2	28-ozR	27-ozS	27-pp#+	26-ppS	27-ppS	28-ozS	27-ozR	28-ppR	28-ozR	28-ozS	28-ppR	28-ppS	28-ozR	28-ozS	28-ppR
7228/7-1 A	Oil	MDT1B	2091 10	10 998	2 84E+3	3 09E+3	1 62E+3	1 74E+3	9 92E+3	2 00E+3	1 58E+3	2 25E+3	6 22E+3	4 02E+3	6 91E+2	3 56E+3	1 97E+3	2 72E+3	1 53E+3	4 00E+3	3 45E+3
7228/7-1 A	DC		2229 00	11 044	2 54E+2	3 54E+2	1 94E+2	6 49E+2	1 22E+3	3 41E+2	2 15E+2	9 26E+2	7 90E+2	5 59E+2	2 51E+2	5 02E+2	5 63E+2	3 09E+2	4 35E+2	1 14E+3	6 51E+2
7228/7-1 A	DC		2742 00	11 048	1 15E+2	1 41E+2	8 20E+1	1 54E+2	2 69E+2	1 57E+2	7 80E+1	2 80E+2	2 23E+2	1 47E+2	6 00E+1	1 70E+2	1 31E+2	1 34E+2	1 68E+2	2 70E+2	2 18E+2
7228/7-1 A	COCH		2833 02	11 024	1 28E+3	1 48E+3	8 83E+2	1 35E+3	2 38E+3	1 71E+3	6 70E+2	1 26E+3	1 64E+3	1 16E+3	3 16E+2	7 37E+2	8 39E+2	1 09E+3	4 40E+2	7 81E+2	1 03E+3
7228/7-1 ST3	COCH		1367 40	11 309	4 08E+3	4 86E+3	3 14E+3	4 95E+3	8 23E+3	6 03E+3	2 43E+3	5 40E+3	6 11E+3	4 59E+3	9 67E+2	3 02E+3	2 79E+3	3 61E+3	1 71E+3	2 78E+3	3 54E+3
7228/7-1 ST3	DC		1794 00	11 063	2 22E+2	2 93E+2	1 52E+2	4 25E+2	1 20E+3	5 01E+2	2 22E+2	5 37E+2	8 41E+2	5 14E+2	9 10E+1	4 50E+2	2 75E+2	2 54E+2	2 34E+2	5 10E+2	6 28E+2

GCMS SIR, amounts in ng/g in saturated fraction, continued

m/z 217.1956

Well	Sample type	Sample Name	Lower Depth (m)	APT no	29-ppS	29-ozR	30-ozS	30-ppR	30-ppS	30-ozR
7228/7-1 A	Oil	MDT1B	2091 10	10 998	2 95E+3	3 82E+3	1 51E+3	7 24E+2	6 33E+2	4 03E+2
7228/7-1 A	DC		2229 00	11 044	6 22E+2	1 05E+3	7 56E+2	1 63E+2	1 29E+2	1 47E+2
7228/7-1 A	DC		2742 00	11 048	1 95E+2	2 57E+2	8 80E+1	6 10E+1	4 20E+1	3 20E+1
7228/7-1 A	COCH		2833 02	11 024	9 82E+2	5 06E+2	2 34E+2	2 48E+2	1 40E+2	1 09E+2
7228/7-1 ST3	COCH		1367 40	11 309	3 31E+3	2 43E+3	8 21E+2	8 12E+2	4 26E+2	4 48E+2
7228/7-1 ST3	DC		1794 00	11 063	5 80E+2	4 03E+2	1 30E+2	1 38E+2	8 80E+1	5 60E+1

m/z 218.2035

27-ppR	27-ppS	28-ppR	28-ppS	28-ppR	29-ppS	30-ppR	30-ppS
3 64E+3	2 99E+3	2 54E+3	3 31E+3	5 89E+3	5 56E+3	9 15E+2	9 17E+2
6 88E+2	5 89E+2	4 50E+2	4 07E+2	1 09E+3	1 00E+3	1 67E+2	1 65E+2
3 01E+2	2 61E+2	1 61E+2	2 02E+2	3 94E+2	2 71E+2	5 80E+1	4 80E+1
3 34E+3	2 66E+3	1 33E+3	1 51E+3	1 76E+3	1 65E+3	2 76E+2	2 28E+2
1 10E+4	9 53E+3	4 16E+3	4 92E+3	6 03E+3	5 56E+3	8 18E+2	6 95E+2
8 91E+2	7 60E+2	2 73E+2	3 15E+2	1 01E+3	9 24E+2	1 40E+2	1 25E+2



GCMS SIR, peak heights from aromatic fraction

m/z 142.0783							m/z 156.0939													
Well	Sample type	Sample Name	Lower Depth (m)	APT no	2-MN	1-MN	2-EN	1-EN	2,5-DMN	2,7-DMN	1,3- + 1,7-DMN	1,6-DMN	2,3- + 1,4-DMN	1,5-DMN	1,2-DMN	1,8-DMN	1,3,7-TMN	1,3,5-TMN	1,3,5- + 1,4,5-TMN	2,3,6-TMN
7228/7-1 A	Oil	MDT1B	2091 10	10 998	9 91E+8	5 94E+8	6 20E+7	3 36E+7	2 31E+8	2 39E+8	5 19E+8	3 14E+8	1 58E+8	6 65E+7	5 91E+7	1 41E+6	1 82E+8	2 16E+8	1 48E+8	1 44E+8
7228/7-1 A	DC		2229 00	11 044	3 16E+8	1 71E+8	1 59E+7	8 11E+6	4 05E+7	3 82E+7	8 52E+7	8 38E+7	4 26E+7	1 37E+7	2 20E+7	2 01E+5	1 67E+7	2 40E+7	1 87E+7	2 33E+7
7228/7-1 A	DC		2742 00	11 048	1 89E+8	1 09E+8	8 91E+6	4 72E+6	3 04E+7	2 89E+7	6 46E+7	4 56E+7	2 37E+7	9 60E+6	8 62E+6	1 10E+5	1 43E+7	1 84E+7	1 31E+7	1 44E+7
7228/7-1 A	COCH		2833 02	11 024	7 73E+6	5 82E+6	6 31E+5	4 09E+5	2 30E+6	2 39E+6	6 74E+6	3 96E+6	1 89E+6	1 19E+6	9 31E+5	1 21E+4	2 55E+6	3 00E+6	2 49E+6	1 92E+6
7228/7-1 ST3	COCH		1367 40	11 309	6 63E+7	4 14E+7	5 40E+6	3 35E+6	5 53E+6	5 94E+6	1 93E+7	1 65E+7	1 66E+7	4 52E+6	5 34E+6	2 61E+5	2 81E+6	4 26E+6	4 15E+6	3 32E+6
7228/7-1 ST3	DC		1794 00	11 063	9 70E+7	5 07E+7	8 73E+6	4 14E+6	2 06E+7	2 03E+7	4 58E+7	2 72E+7	1 63E+7	7 23E+6	7 96E+6	1 13E+5	1 36E+7	1 60E+7	1 34E+7	1 27E+7

GCMS SIR, peak heights from aromatic fraction, continued

m/z 170.1096									m/z 178.0783	m/z 192.0939				m/z 206.1096				
Well	Sample type	Sample Name	Lower Depth (m)	APT no	1,2,7-TMN	1,6,7 + 1,2,6-TMN	1,2,4-TMN	1,2,5-TMN	P	2-MP	2-MP	3-MP	3-MP	2-EP + 3,5-DMP	3-EP	2,6- + 2,7- + 3,5-DMP	1,3- + 2,3,6- + 3,8- + 3,10-DMP	1,6- + 2,5- + 2,9-DMP
7228/7-1 A	Oil	MDT1B	2091 10	10 998	3 25E+7	1 06E+8	1 58E+7	4 81E+7	1 24E+8	5 13E+7	5 24E+7	7 66E+7	4 93E+7	1 26E+7	1 88E+7	1 00E+7	6 31E+7	2 72E+7
7228/7-1 A	DC		2229 00	11 044	8 48E+6	3 31E+7	3 49E+6	4 30E+7	1 21E+8	3 06E+7	3 24E+7	3 58E+7	3 00E+7	4 75E+6	6 00E+6	3 21E+6	1 75E+7	8 58E+6
7228/7-1 A	DC		2742 00	11 048	3 43E+6	1 11E+7	1 53E+6	7 38E+6	7 14E+7	2 27E+7	2 69E+7	2 88E+7	2 49E+7	3 51E+6	5 45E+6	3 63E+6	1 55E+7	7 95E+6
7228/7-1 A	COCH		2833 02	11 024	6 98E+5	1 82E+6	3 68E+5	7 19E+5	3 38E+6	1 80E+6	1 74E+6	2 40E+6	1 78E+6	3 48E+5	5 51E+5	3 27E+5	2 07E+6	9 07E+5
7228/7-1 ST3	COCH		1367 40	11 309	1 66E+6	3 93E+6	1 21E+6	5 16E+6	2 70E+7	4 61E+6	5 81E+6	1 16E+7	6 36E+6	9 11E+5	9 77E+5	4 95E+5	3 09E+6	1 52E+6
7228/7-1 ST3	DC		1794 00	11 063	3 86E+6	9 30E+6	2 26E+6	6 60E+6	5 68E+7	2 75E+7	3 02E+7	3 97E+7	2 74E+7	7 32E+6	1 01E+7	6 32E+6	3 68E+7	1 51E+7

GCMS SIR, peak heights from aromatic fraction, continued

m/z 206.1096									m/z 219.1174	m/z 184.0347	m/z 198.0503			
Well	Sample type	Sample Name	Lower Depth (m)	APT no	1,7-DMP	2,3-DMP	1,5- + 1,9- + 1,10-DMP	1,4-DMP	1,2-DMP	acetate	DET	1-MDBT	1,3,2-MDBT	1-MDBT
7228/7-1 A	Oil	MDT1B	2091 10	10 998	2 24E+7	1 27E+7	1 79E+7	6 68E+6	4 45E+6	8 71E+6	1 32E+7	1 07E+7	4 83E+6	2 22E+6
7228/7-1 A	DC		2229 00	11 044	1 26E+7	6 63E+6	5 47E+6	4 35E+6	4 71E+6	3 64E+6	5 87E+6	2 60E+6	2 09E+6	1 28E+6
7228/7-1 A	DC		2742 00	11 048	9 51E+6	5 11E+6	4 89E+6	2 91E+6	2 41E+6	1 72E+6	4 80E+6	3 22E+6	2 02E+6	1 04E+6
7228/7-1 A	COCH		2833 02	11 024	9 34E+5	4 34E+5	6 70E+5	3 04E+5	1 91E+5	3 00E+4	1 30E+5	1 44E+5	4 88E+4	1 54E+4
7228/7-1 ST3	COCH		1367 40	11 309	1 27E+6	8 23E+5	1 23E+6	4 79E+5	7 04E+5	4 06E+6	3 28E+6	2 32E+6	1 16E+6	8 36E+5
7228/7-1 ST3	DC		1794 00	11 063	1 30E+7	7 97E+6	1 02E+7	5 08E+6	4 77E+6	2 48E+6	5 49E+6	5 26E+6	4 04E+6	1 88E+6



GCMS SIR, peak heights from aromatic fraction, continued

m/z 231.1174

Well	Sample type	Sample Name	Lower Depth (m)	APT no	C20TA	C21TA	C26TA	RC26TA+	SC27TA	SC28TA	RC27TA	RC28TA
7228/7-1 A	Oil	MDT1B	2091 10	10 998	6 53E+5	5 09E+5	1 21E+5	5 84E+5	4 01E+5	2 06E+5	9 13E+5	
7228/7-1 A	DC		2229 00	11 044	8 33E+4	6 79E+4	2 42E+4	1 63E+5	1 21E+5	2 79E+4	2 14E+5	
7228/7-1 A	DC		2742 00	11 048	5 11E+4	4 25E+4	2 38E+4	1 27E+5	1 13E+5	1 61E+4	1 84E+5	
7228/7-1 A	COCH		2833 02	11 024	0 00E+0	0 00E+0	0 00E+0	3 24E+3	0 00E+0	0 00E+0	4 12E+3	
7228/7-1 ST3	COCH		1367 40	11 309	2 62E+5	1 43E+5	5 76E+4	2 39E+5	2 26E+5	4 52E+4	3 49E+5	
7228/7-1 ST3	DC		1794 00	11 063	1 64E+5	3 47E+5	3 52E+4	1 80E+5	1 48E+5	3 93E+4	1 57E+5	

m/z 253.1956

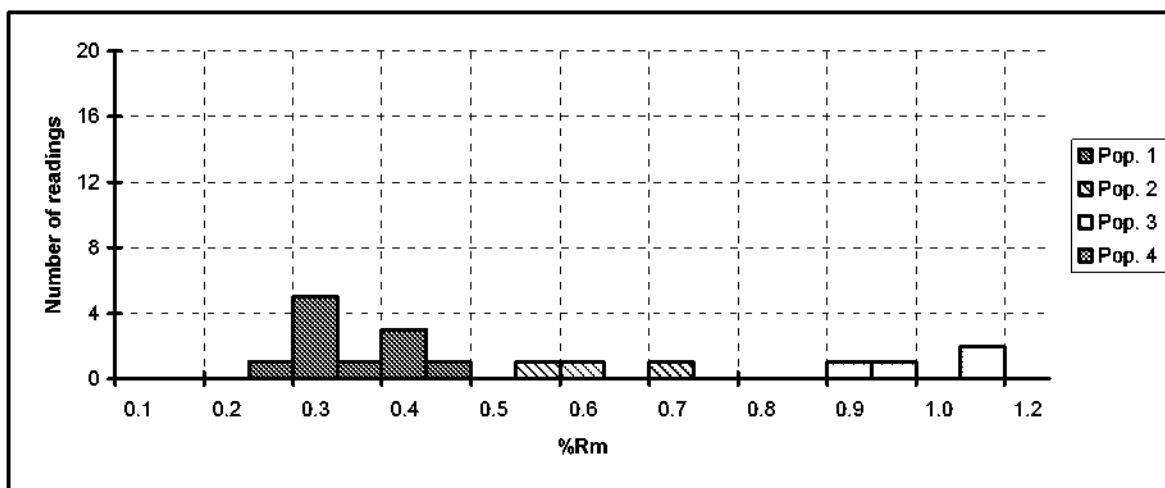
C21MA	C22MA	RC27MA	SC27DMA	RC27MA+	RC27DMA	SC27MA	SC28MA+	SC28DMA+	RC27DMA	SC27DMA	RC27MA
2 60E+5	1 23E+5	2 45E+5	5 74E+5	1 38E+6	2 54E+5	9 64E+5	1 75E+5	1 88E+6			
4 85E+4	2 25E+4	2 95E+4	1 22E+5	3 27E+5	3 88E+4	1 94E+5	3 16E+4	1 60E+6			
2 35E+4	1 43E+4	3 15E+4	1 06E+5	3 60E+5	3 57E+4	2 28E+5	2 22E+4	3 13E+5			
0 00E+0	0 00E+0	0 00E+0	3 35E+3	3 78E+3	0 00E+0	0 00E+0	0 00E+0	1 25E+4			
4 52E+4	3 32E+4	6 31E+4	1 98E+5	2 21E+5	3 73E+4	1 58E+5	2 97E+4	1 13E+5			
3 39E+4	2 29E+4	1 69E+4	6 91E+4	2 52E+5	3 36E+4	1 56E+5	2 32E+4	5 07E+6			

GCMS SIR, peak heights from aromatic fraction, continued

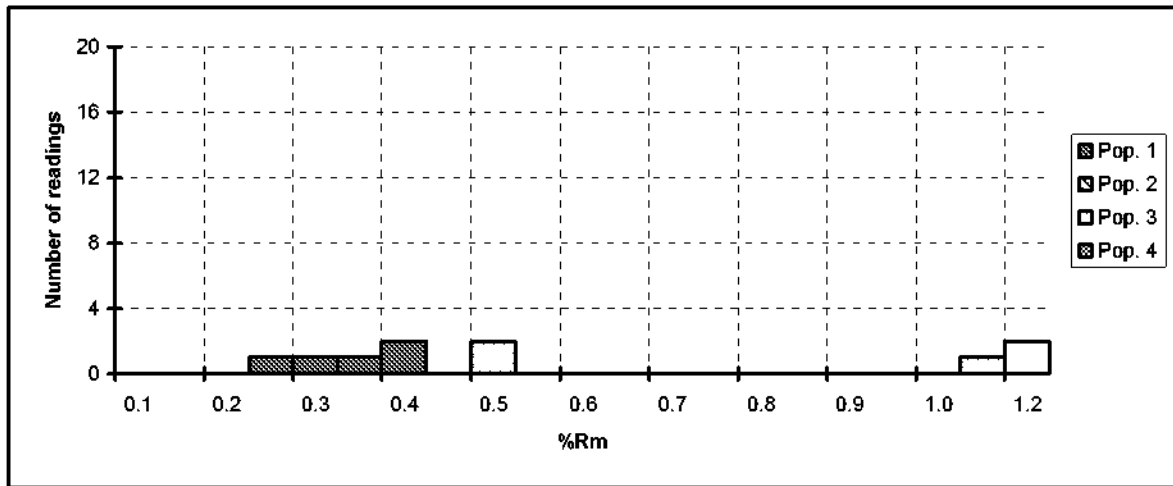
m/z 253.1956

Well	Sample type	Sample Name	Lower Depth (m)	APT no	RC28MA	RC28MA+	RC28DMA	SC29MA+	SC29DMA	SC29MA	RC28MA+	RC29MA+	RC29DMA	RC29MA
7228/7-1 A	Oil	MDT1B	2091 10	10 998	9 92E+5	5 71E+5	1 38E+6	1 32E+6	5 08E+5	1 27E+6				
7228/7-1 A	DC		2229 00	11 044	1 02E+6	1 42E+6	2 89E+6	1 68E+6	1 07E+6	1 76E+6				
7228/7-1 A	DC		2742 00	11 048	1 73E+5	9 41E+4	2 16E+5	1 58E+5	6 98E+4	1 89E+5				
7228/7-1 A	COCH		2833 02	11 024	6 05E+3	0 00E+0	0 00E+0	0 00E+0	0 00E+0	0 00E+0				
7228/7-1 ST3	COCH		1367 40	11 309	7 59E+4	8 16E+4	1 89E+5	6 77E+4	5 52E+4	7 73E+4				
7228/7-1 ST3	DC		1794 00	11 063	3 83E+6	6 76E+5	1 16E+6	8 98E+5	4 82E+5	1 02E+6				

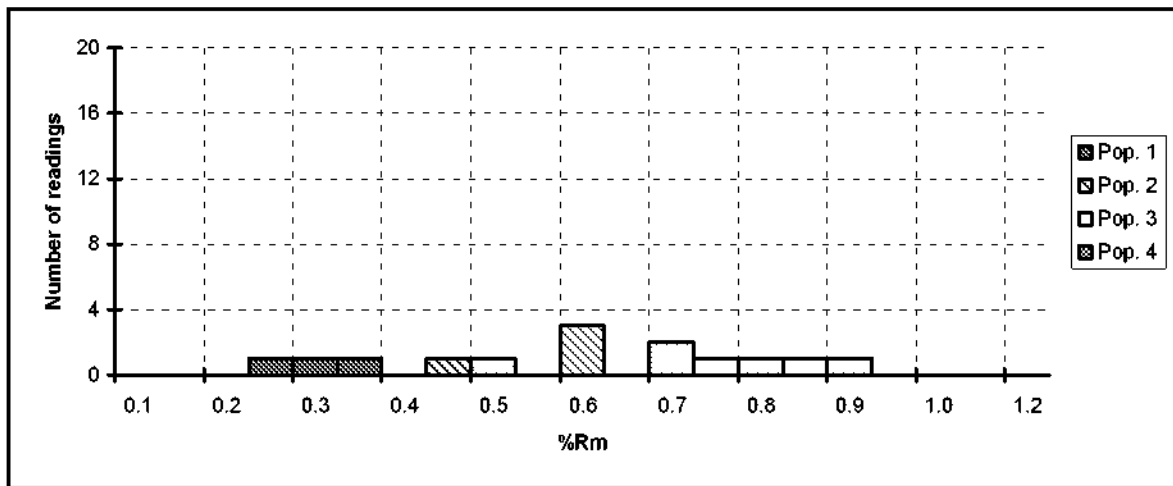
Vitrinite Reflectance Sample Data Sheets



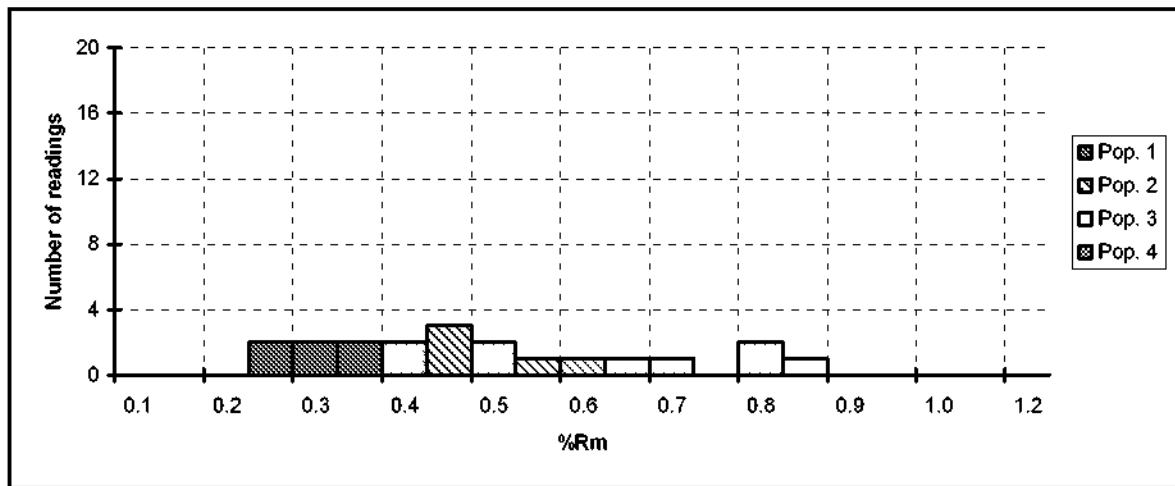
APT no. 11050		%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1S	Mean±std.dev.	0.37±0.07	0.63±0.08	1.04±0.12	
Depth(mRKB)	520	Individual	0.26	0.57	0.90	
Sample type	DC	measurements	0.30	0.60	0.98	
Lithology	clyst/sst	3	0.31	0.71	1.12	
Preparation	bulk	4	0.34		1.16	
Date of analysis	15.04.2001	5	0.34			
		6	0.34			
Quality rating		7	0.37			
Abundance of vitrinite	-	8	0.40			
Identification of vitrinite	±	9	0.41			
Type of vitrinite	O	10	0.43			
Particle size	-	11	0.46			
Particle surface quality	O	12				
Abundance of pyrite	O	13				
Average sample quality	P	14				
		15				
Legend to quality rating		16				
No effect on the readings	O	17				
Possibly too low readings	-	18				
Possibly too high readings	+	19				
Good quality	G	20				
Moderate quality	M	21				
Poor quality	P	22				
Not vitrinite	X	23				
Mud additive	A	24				
		25				
Comments		26				
		27				
		28				
		29				
		30				



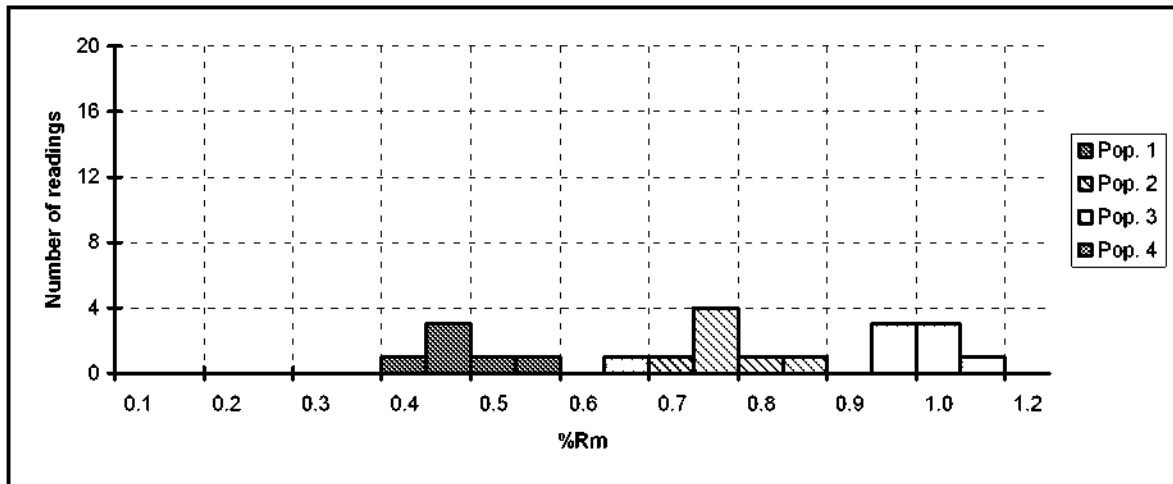
APT no.	11051	%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1S	Mean±std.dev.	0.37±0.07	0.53±0.02	1.23±0.06	
Depth(mRKB)	610	Individual	0.27	0.51	1.19	
Sample type	DC	measurements	0.33	0.54	1.20	
Lithology	clyst/sst	3	0.36		1.29	
Preparation	bulk	4	0.41			
Date of analysis	15.04.2001	5	0.44			
		6				
Quality rating		7				
Abundance of vitrinite	-	8				
Identification of vitrinite	±	9				
Type of vitrinite	0	10				
Particle size	-	11				
Particle surface quality	0	12				
Abundance of pyrite	0	13				
Average sample quality	P	14				
		15				
Legend to quality rating		16				
No effect on the readings	0	17				
Possibly too low readings	-	18				
Possibly too high readings	+	19				
Good quality	G	20				
Moderate quality	M	21				
Poor quality	P	22				
Not vitrinite	X	23				
Mud additive	A	24				
		25				
Comments		26				
		27				
		28				
		29				
		30				



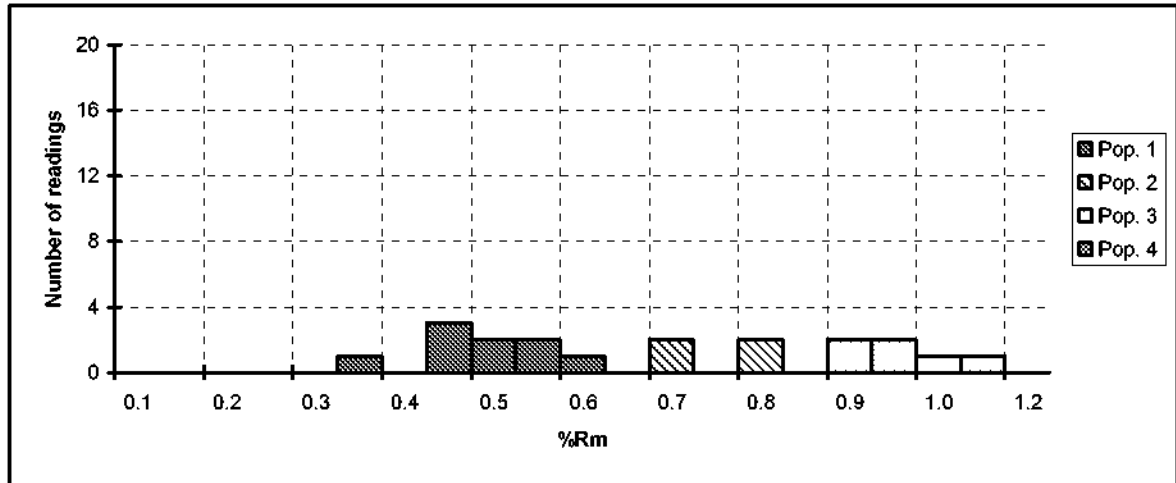
APT no. 11052		%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1S	Mean±std.dev.	0.32±0.03	0.57±0.08	0.82±0.09	
Depth(mRKB)	710	Individual	0.29	0.46	0.71	
Sample type	DC	measurements	0.31	0.52	0.73	
Lithology	clyst/ssl	3	0.35	0.61	0.79	
Preparation	bulk	4		0.62	0.84	
Date of analysis	15.04.2001	5		0.64	0.86	
		6			0.94	
		7				
Quality rating		8				
Abundance of vitrinite	-	9				
Identification of vitrinite	±	10				
Type of vitrinite	O	11				
Particle size	-	12				
Particle surface quality	O	13				
Abundance of pyrite	O	14				
Average sample quality	P	15				
		16				
Legend to quality rating		17				
No effect on the readings	O	18				
Possibly too low readings	-	19				
Possibly too high readings	+	20				
Good quality	G	21				
Moderate quality	M	22				
Poor quality	P	23				
Not vitrinite	X	24				
Mud additive	A	25				
		26				
Comments		27				
		28				
		29				
		30				



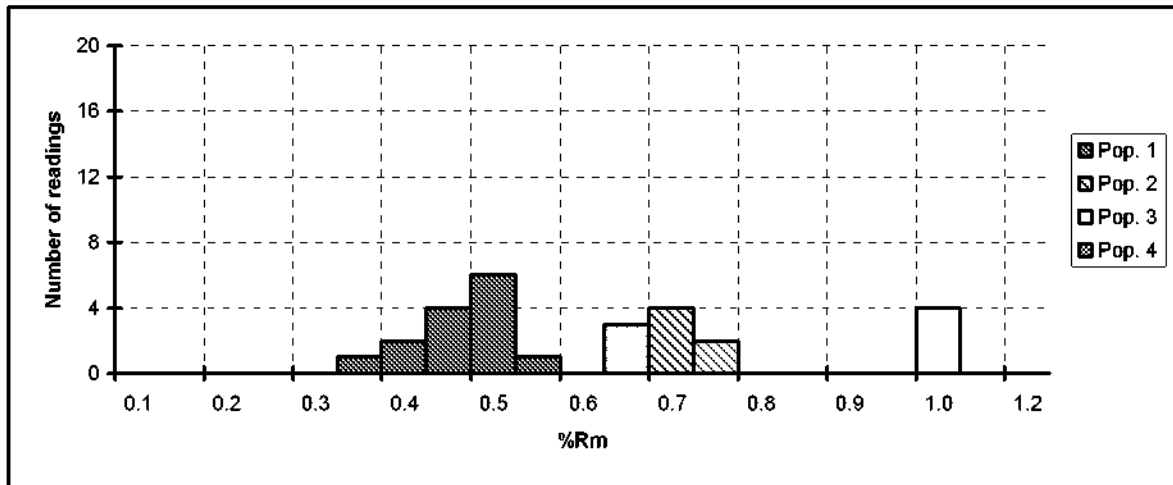
APT no.	11053	%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1S	Mean±std.dev.	0.33±0.04	0.51±0.07	0.77±0.08	
Depth(mRKB)	810	Individual	0.27	0.41	0.66	
Sample type	DC	measurements	0.29	0.42	0.72	
Lithology	clyst/sst	3	0.34	0.45	0.80	
Preparation	bulk	4	0.34	0.47	0.80	
Date of analysis	15.04.2001	5	0.36	0.48	0.87	
		6	0.37	0.52		
Quality rating		7		0.54		
Abundance of vitrinite	-	8		0.58		
Identification of vitrinite	±	9		0.64		
Type of vitrinite	0	10				
Particle size	-	11				
Particle surface quality	0	12				
Abundance of pyrite	0	13				
Average sample quality	P	14				
		15				
Legend to quality rating		16				
No effect on the readings	0	17				
Possibly too low readings	-	18				
Possibly too high readings	+	19				
Good quality	G	20				
Moderate quality	M	21				
Poor quality	P	22				
Not vitrinite	X	23				
Mud additive	A	24				
		25				
Comments		26				
		27				
		28				
		29				
		30				



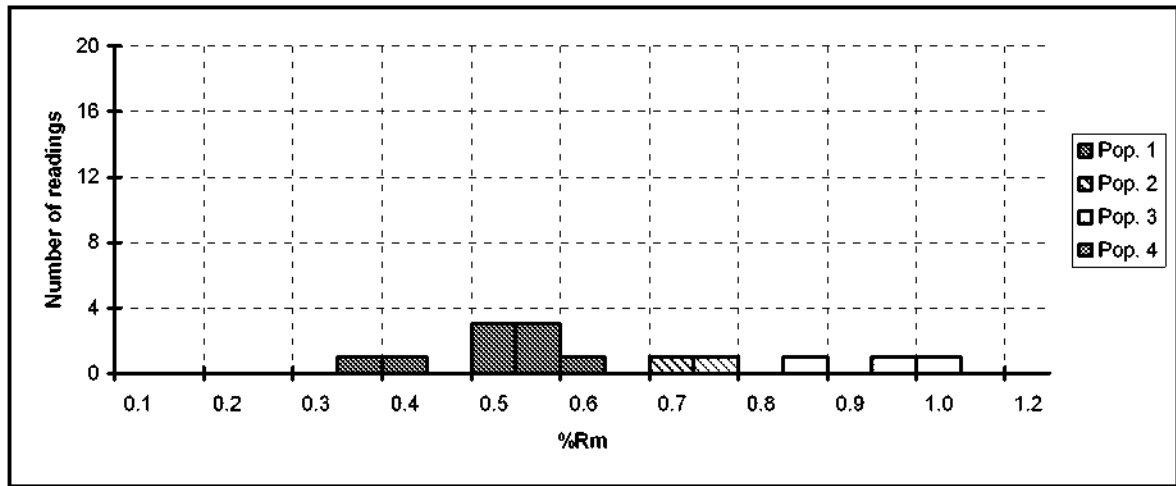
APT no.	11054	%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1S	Mean±std.dev.	0.50±0.05	0.78±0.06	1.06±0.07	
Depth(mRKB)	910	Individual	0.44	0.68	0.98	
Sample type	DC	measurements	0.46	0.72	0.99	
Lithology	clyst	3	0.46	0.76	0.99	
Preparation	bulk	4	0.48	0.77	1.07	
Date of analysis	15.04.2001	5	0.53	0.78	1.08	
		6	0.58	0.78	1.09	
Quality rating		7		0.84	1.18	
Abundance of vitrinite	-	8		0.86		
Identification of vitrinite	±	9				
Type of vitrinite	0	10				
Particle size	-	11				
Particle surface quality	-	12				
Abundance of pyrite	0	13				
Average sample quality	P	14				
		15				
Legend to quality rating		16				
No effect on the readings	0	17				
Possibly too low readings	-	18				
Possibly too high readings	+	19				
Good quality	G	20				
Moderate quality	M	21				
Poor quality	P	22				
Not vitrinite	X	23				
Mud additive	A	24				
		25				
Comments		26				
		27				
		28				
		29				
		30				



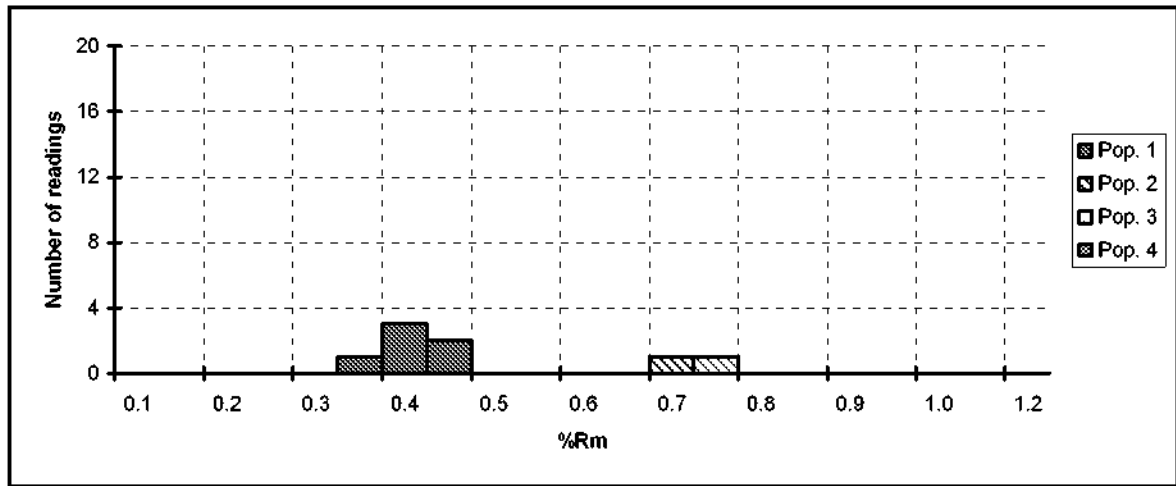
APT no. 11055		%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1S	Mean±std.dev.	0.52±0.08	0.78±0.07	1.01±0.10	
Depth(mRKB)	1010	Individual	0.36	0.70	0.92	
Sample type	DC	measurements	0.47	0.71	0.93	
Lithology	clst	3	0.47	0.84	0.96	
Preparation	bulk	4	0.49	0.84	0.97	
Date of analysis	21.04.2001	5	0.52		1.07	
		6	0.53		1.18	
Quality rating		7	0.57			
Abundance of vitrinite	-	8	0.59			
Identification of vitrinite	0	9	0.62			
Type of vitrinite	0	10				
Particle size	-	11				
Particle surface quality	-	12				
Abundance of pyrite	0	13				
Average sample quality	P	14				
		15				
Legend to quality rating		16				
No effect on the readings	0	17				
Possibly too low readings	-	18				
Possibly too high readings	+	19				
Good quality	G	20				
Moderate quality	M	21				
Poor quality	P	22				
Not vitrinite	X	23				
Mud additive	A	24				
		25				
Comments		26				
		27				
		28				
		29				
		30				



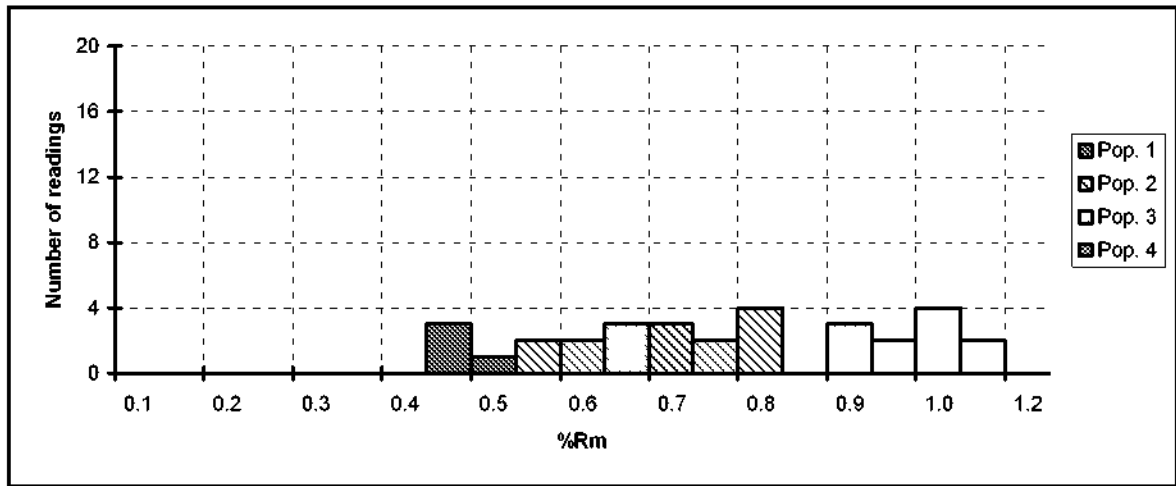
APT no. 11056		%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1S	Mean±std.dev.	0.50±0.05	0.72±0.04	1.06±0.07	
Depth(mRKB)	1110	Individual	0.39	0.66	1.01	
Sample type	DC	measurements	0.43	0.68	1.01	
Lithology	clyst	3	0.44	0.68	1.04	
Preparation	bulk	4	0.46	0.70	1.06	
Date of analysis	21.04.2001	5	0.47	0.71		
		6	0.48	0.72		
Quality rating		7	0.49	0.73		
Abundance of vitrinite	-	8	0.50	0.77		
Identification of vitrinite	O	9	0.51	0.79		
Type of vitrinite	O	10	0.52			
Particle size	-	11	0.53			
Particle surface quality	O	12	0.54			
Abundance of pyrite	O	13	0.54			
Average sample quality	M	14	0.59			
		15				
Legend to quality rating		16				
No effect on the readings	O	17				
Possibly too low readings	-	18				
Possibly too high readings	+	19				
Good quality	G	20				
Moderate quality	M	21				
Poor quality	P	22				
Not vitrinite	X	23				
Mud additive	A	24				
		25				
Comments		26				
		27				
		28				
		29				
		30				



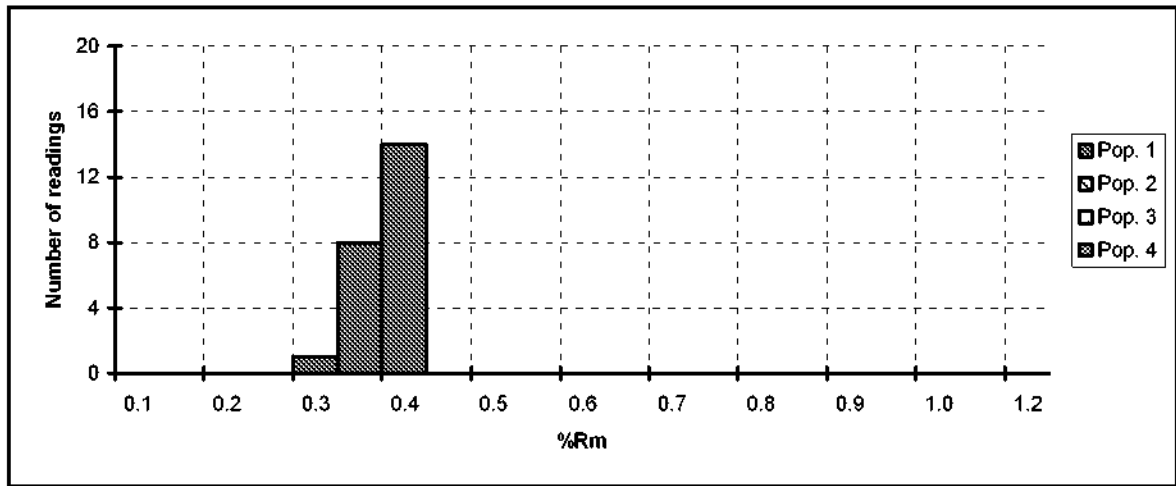
APT no. 11057		%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1S	Mean±std.dev.	0.53±0.08	0.73±0.04	0.96±0.09	
Depth(mRKB)	1210	Individual	0.38	0.70	0.86	
Sample type	DC	measurements	0.40	0.75	0.99	
Lithology	clyst	3	0.53		1.02	
Preparation	bulk	4	0.54			
Date of analysis	21.04.2001	5	0.54			
		6	0.56			
Quality rating		7	0.58			
Abundance of vitrinite	-	8	0.59			
Identification of vitrinite	±	9	0.64			
Type of vitrinite	0	10				
Particle size	-	11				
Particle surface quality	-	12				
Abundance of pyrite	0	13				
Average sample quality	P	14				
		15				
Legend to quality rating		16				
No effect on the readings	0	17				
Possibly too low readings	-	18				
Possibly too high readings	+	19				
Good quality	G	20				
Moderate quality	M	21				
Poor quality	P	22				
Not vitrinite	X	23				
Mud additive	A	24				
		25				
Comments		26				
		27				
		28				
		29				
		30				



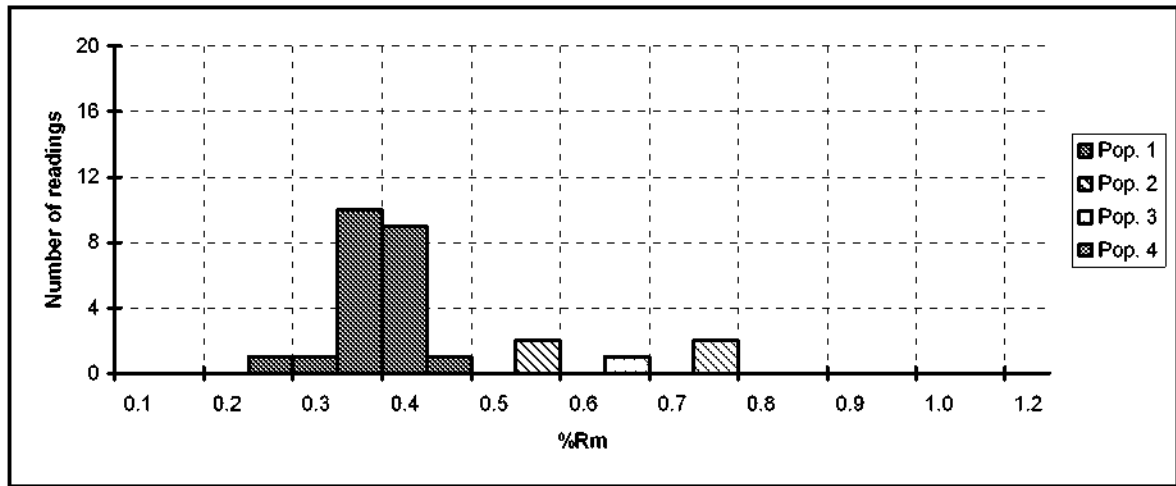
APT no. 11058		%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1S	Mean±std.dev.	0.45±0.05	0.74±0.02		
Depth(mRKB)	1308	Individual	0.37	0.72		
Sample type	DC	measurements	0.41	0.75		
Lithology	clyst	3	0.44			
Preparation	bulk	4	0.44			
Date of analysis	21.04.2001	5	0.49			
		6	0.49			
Quality rating		7				
Abundance of vitrinite	-	8				
Identification of vitrinite	0	9				
Type of vitrinite	0	10				
Particle size	-	11				
Particle surface quality	-	12				
Abundance of pyrite	0	13				
Average sample quality	P	14				
		15				
Legend to quality rating		16				
No effect on the readings	0	17				
Possibly too low readings	-	18				
Possibly too high readings	+	19				
Good quality	G	20				
Moderate quality	M	21				
Poor quality	P	22				
Not vitrinite	X	23				
Mud additive	A	24				
		25				
Comments		26				
		27				
		28				
		29				
		30				



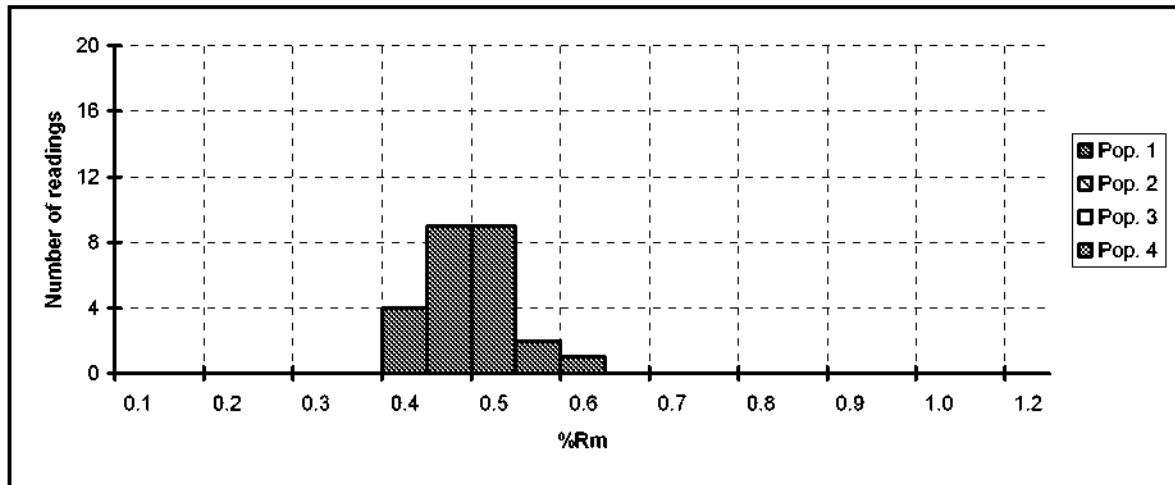
APT no. 11059		%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1S	Mean±std.dev.	0.49±0.04	0.73±0.08	1.02±0.09	
Depth(mRKB)	1314	Individual	0.46	0.57	0.91	
Sample type	DC	measurements	0.47	0.59	0.92	
Lithology	clyst/sst	3	0.49	0.60	0.92	
Preparation	bulk	4	0.54	0.63	0.96	
Date of analysis	21.04.2001	5		0.65	0.97	
		6		0.65	1.00	
Quality rating		7		0.65	1.05	
Abundance of vitrinite	-	8		0.71	1.07	
Identification of vitrinite	0	9		0.71	1.09	
Type of vitrinite	0	10		0.72	1.12	
Particle size	-	11		0.75	1.18	
Particle surface quality	0	12		0.75		
Abundance of pyrite	0	13		0.80		
Average sample quality	P	14		0.81		
		15		0.82		
		16		0.84		
Legend to quality rating		17				
No effect on the readings	0	18				
Possibly too low readings	-	19				
Possibly too high readings	+	20				
Good quality	G	21				
Moderate quality	M	22				
Poor quality	P	23				
Not vitrinite	X	24				
Mud additive	A	25				
		26				
Comments		27				
		28				
		29				
		30				



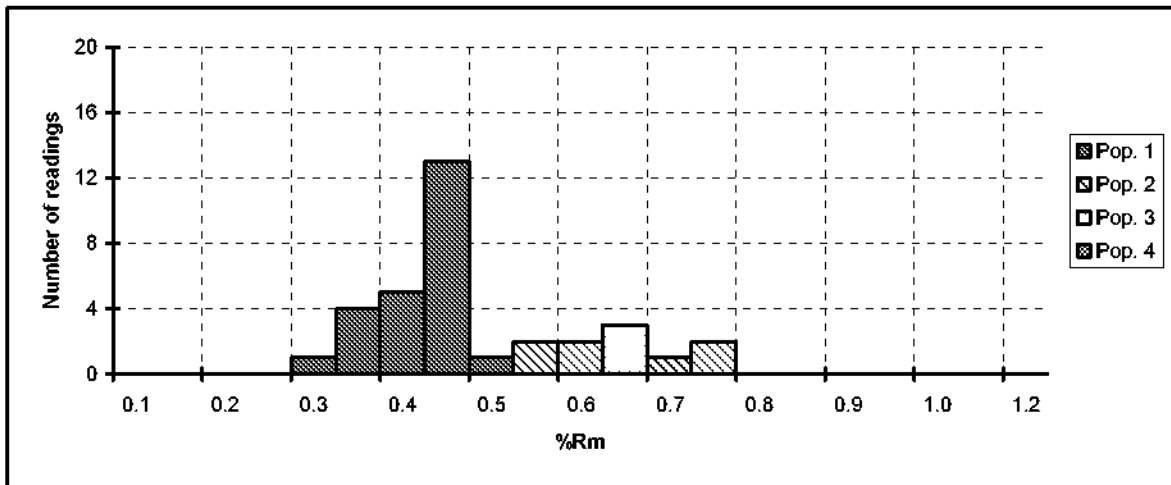
APT no. 11032		%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1A	Mean±std.dev.	0.40±0.03			
Depth(mRKB)	1347	Individual	0.30			
Sample type	DC	measurements	0.35			
Lithology	clyst	3	0.35			
Preparation	bulk	4	0.35			
Date of analysis	17.04.2001	5	0.36			
		6	0.38			
Quality rating		7	0.39			
Abundance of vitrinite	0	8	0.39			
Identification of vitrinite	0	9	0.39			
Type of vitrinite	0	10	0.40			
Particle size	0	11	0.40			
Particle surface quality	-	12	0.40			
Abundance of pyrite	0	13	0.40			
Average sample quality	M/G	14	0.40			
		15	0.41			
Legend to quality rating		16	0.41			
No effect on the readings	0	17	0.41			
Possibly too low readings	-	18	0.42			
Possibly too high readings	+	19	0.42			
Good quality	G	20	0.43			
Moderate quality	M	21	0.43			
Poor quality	P	22	0.44			
Not vitrinite	X	23	0.44			
Mud additive	A	24				
		25				
Comments		26				
		27				
		28				
		29				
		30				



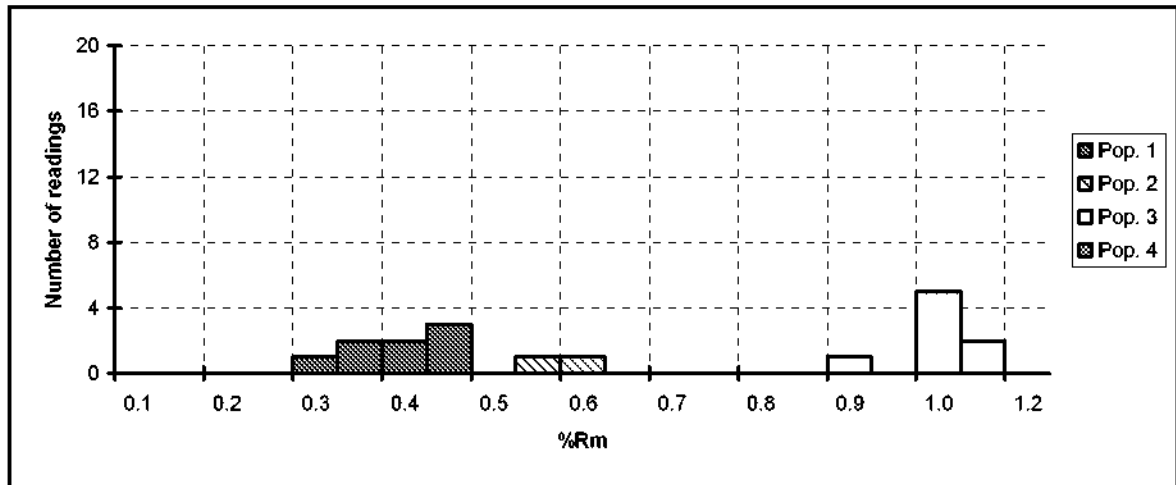
APT no. 11034		%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1A	Mean±std.dev.	0.40±0.04	0.66±0.09		
Depth(mRKB)	1434	Individual	0.26	0.56		
Sample type	DC	measurements	0.33	0.58		
Lithology	clst	3	0.35	0.65		
Preparation	bulk	4	0.36	0.75		
Date of analysis	17.04.2001	5	0.37	0.76		
		6	0.37			
Quality rating		7	0.38			
Abundance of vitrinite	0	8	0.38			
Identification of vitrinite	0	9	0.38			
Type of vitrinite	0	10	0.39			
Particle size	0	11	0.39			
Particle surface quality	0	12	0.39			
Abundance of pyrite	0	13	0.40			
Average sample quality	G	14	0.40			
		15	0.40			
Legend to quality rating		16	0.42			
No effect on the readings	0	17	0.42			
Possibly too low readings	-	18	0.43			
Possibly too high readings	+	19	0.43			
Good quality	G	20	0.44			
Moderate quality	M	21	0.44			
Poor quality	P	22	0.46			
Not vitrinite	X	23				
Mud additive	A	24				
		25				
Comments		26				
		27				
		28				
		29				
		30				



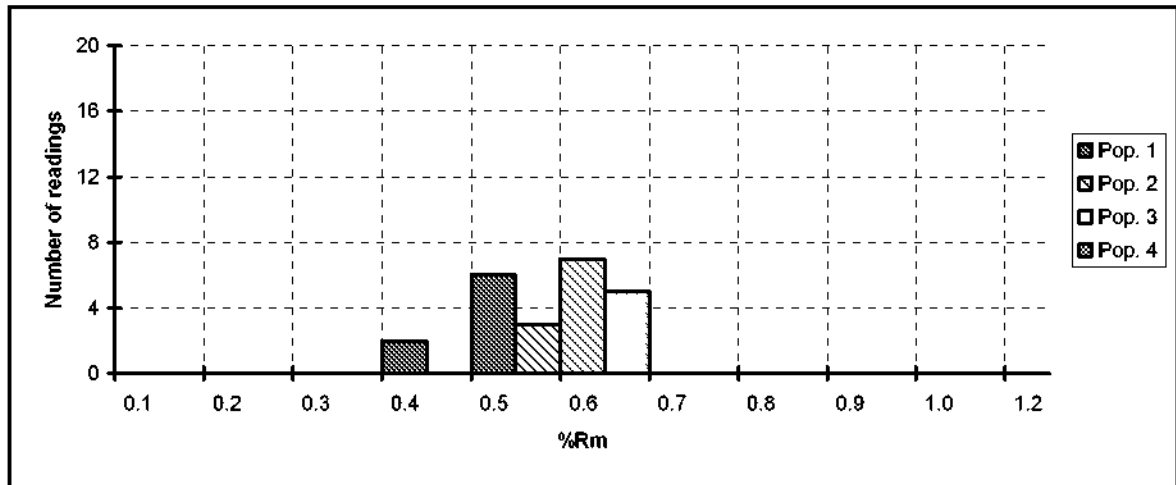
APT no. 11035		%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1A	Mean±std.dev.	0.50±0.05			
Depth(mRKB)	1566	Individual	0.43			
Sample type	DC	measurements	0.43			
Lithology	clyst	3	0.43			
Preparation	bulk	4	0.44			
Date of analysis	17.04.2001	5	0.45			
		6	0.46			
		7	0.46			
Quality rating		8	0.46			
Abundance of vitrinite	O	9	0.46			
Identification of vitrinite	O	10	0.47			
Type of vitrinite	O	11	0.48			
Particle size	O	12	0.48			
Particle surface quality	O	13	0.49			
Abundance of pyrite	O	14	0.50			
Average sample quality	G	15	0.51			
		16	0.51			
Legend to quality rating		17	0.51			
No effect on the readings	O	18	0.52			
Possibly too low readings	-	19	0.52			
Possibly too high readings	+	20	0.52			
Good quality	G	21	0.53			
Moderate quality	M	22	0.54			
Poor quality	P	23	0.56			
Not vitrinite	X	24	0.59			
Mud additive	A	25	0.62			
		26				
Comments		27				
		28				
		29				
		30				



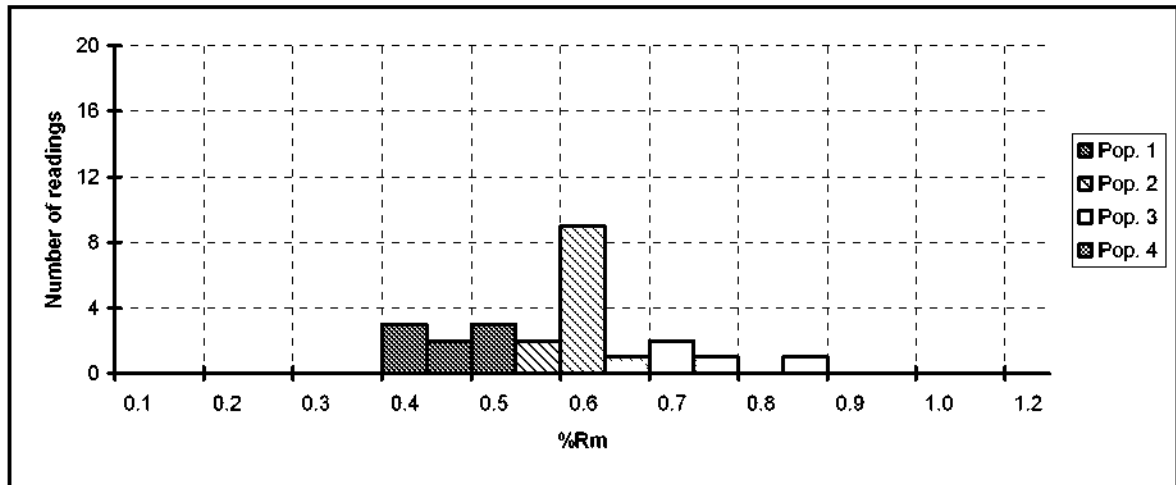
APT no. 11036		%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1A	Mean±std.dev.	0.45±0.05	0.67±0.08		
Depth(mRKB)	1647	Individual	0.33	0.56		
Sample type	DC	measurements	0.36	0.57		
Lithology	clst	3	0.38	0.60		
Preparation	bulk	4	0.39	0.63		
Date of analysis	17.04.2001	5	0.39	0.66		
		6	0.40	0.67		
Quality rating		7	0.40	0.68		
Abundance of vitrinite	0	8	0.40	0.71		
Identification of vitrinite	0	9	0.42	0.76		
Type of vitrinite	0	10	0.44	0.78		
Particle size	0	11	0.45			
Particle surface quality	-	12	0.45			
Abundance of pyrite	0	13	0.47			
Average sample quality	M/G	14	0.47			
		15	0.47			
Legend to quality rating		16	0.47			
No effect on the readings	0	17	0.48			
Possibly too low readings	-	18	0.48			
Possibly too high readings	+	19	0.48			
Good quality	G	20	0.48			
Moderate quality	M	21	0.49			
Poor quality	P	22	0.49			
Not vitrinite	X	23	0.49			
Mud additive	A	24	0.50			
		25				
Comments		26				
0.45%Ro is lowest population in sample.		27				
0.67%Ro is probably reworked vitrinite.		28				
		29				
		30				



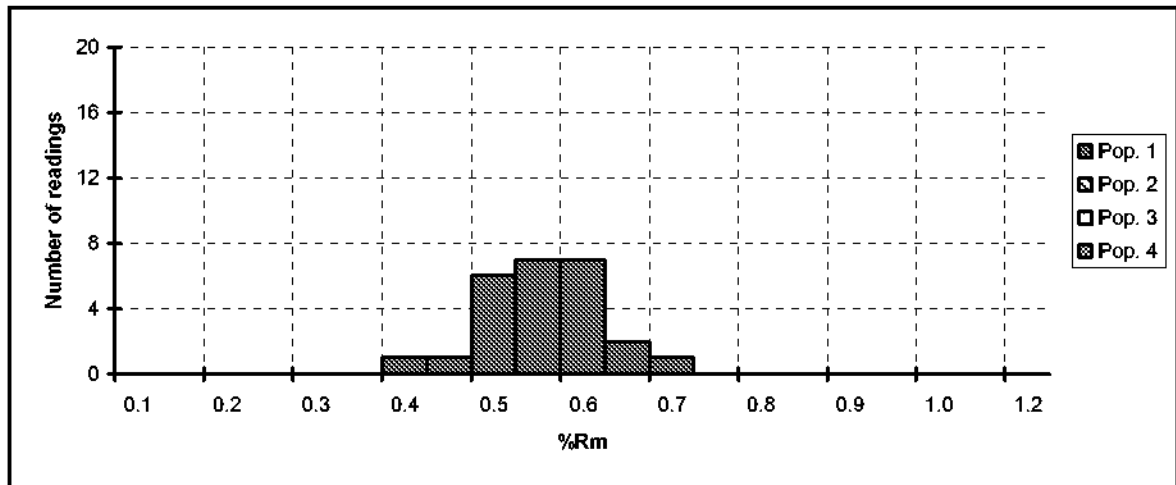
APT no.	11038	%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1A	Mean±std.dev.	0.42±0.05	0.60±0.05	1.05±0.07	
Depth(mRKB)	1755	Individual	0.34	0.56	0.94	
Sample type	DC	measurements	0.38	0.63	1.00	
Lithology	clst	3	0.39		1.01	
Preparation	bulk	4	0.40		1.02	
Date of analysis	17.04.2001	5	0.44		1.07	
		6	0.45		1.08	
Quality rating		7	0.46		1.13	
Abundance of vitrinite	-	8	0.49		1.13	
Identification of vitrinite	O	9				
Type of vitrinite	O	10				
Particle size	-	11				
Particle surface quality	-	12				
Abundance of pyrite	O	13				
Average sample quality	P	14				
		15				
Legend to quality rating		16				
No effect on the readings	O	17				
Possibly too low readings	-	18				
Possibly too high readings	+	19				
Good quality	G	20				
Moderate quality	M	21				
Poor quality	P	22				
Not vitrinite	X	23				
Mud additive	A	24				
		25				
Comments		26				
		27				
		28				
		29				
		30				



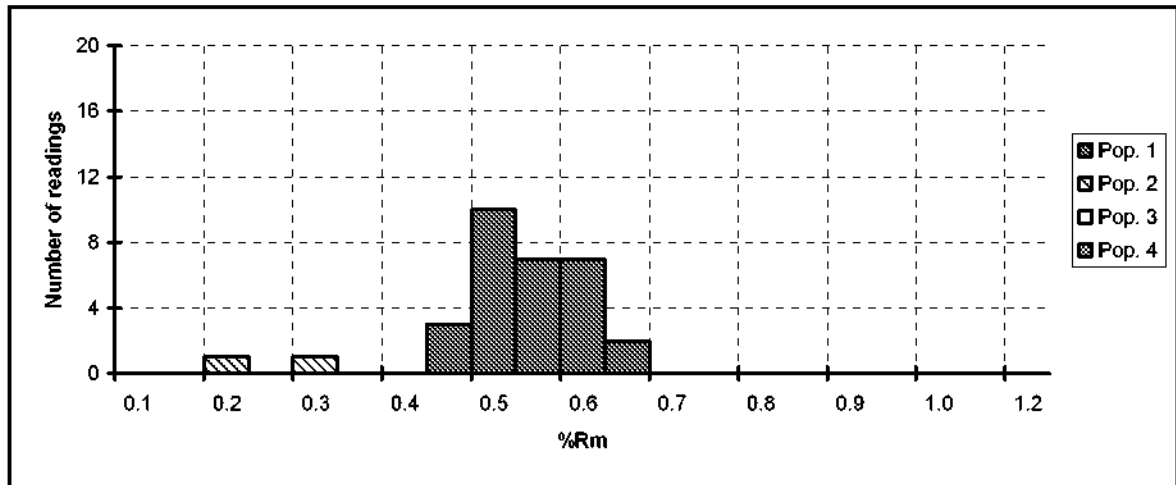
APT no. 11039		%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1A	Mean±std.dev.	0.50±0.05	0.64±0.04		
Depth(mRKB)	1899	Individual	0.40	0.58		
Sample type	DC	measurements	0.43	0.58		
Lithology	clyst/sst	3	0.50	0.59		
Preparation	bulk	4	0.51	0.60		
Date of analysis	17.04.2001	5	0.53	0.60		
		6	0.53	0.60		
Quality rating		7	0.54	0.63		
Abundance of vitrinite	-	8	0.54	0.64		
Identification of vitrinite	±	9		0.64		
Type of vitrinite	0	10		0.64		
Particle size	-	11		0.65		
Particle surface quality	-	12		0.66		
Abundance of pyrite	0	13		0.66		
Average sample quality	P	14		0.66		
		15		0.69		
Legend to quality rating		16				
No effect on the readings	0	17				
Possibly too low readings	-	18				
Possibly too high readings	+	19				
Good quality	G	20				
Moderate quality	M	21				
Poor quality	P	22				
Not vitrinite	X	23				
Mud additive	A	24				
		25				
Comments		26				
		27				
		28				
		29				
		30				



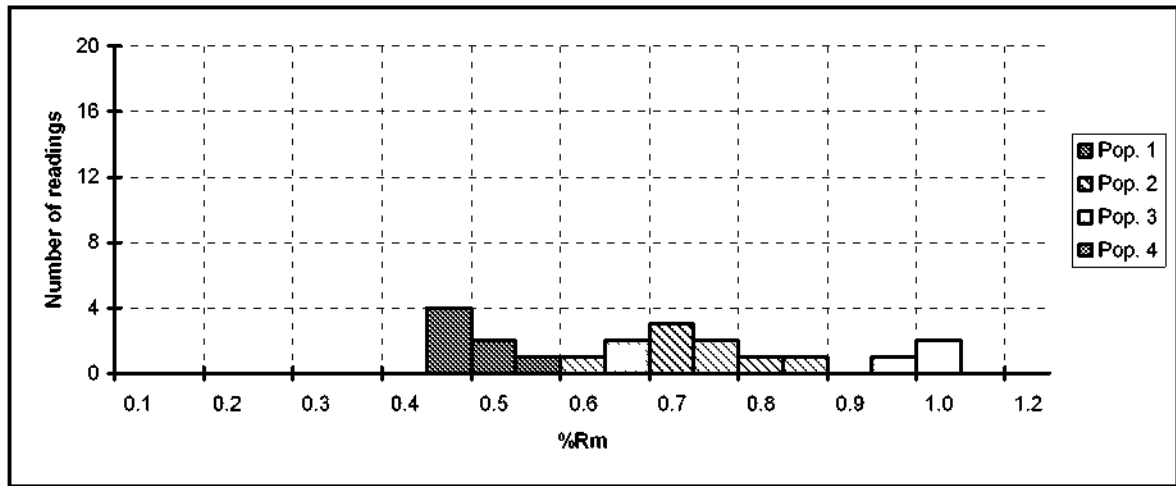
APT no. 11040		%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1A	Mean±std.dev.	0.47±0.05	0.62±0.03	0.77±0.07	
Depth(mRKB)	1935	Individual	0.42	0.56	0.70	
Sample type	DC	measurements	0.43	0.58	0.73	
Lithology	clyst/sst	3	0.43	0.60	0.78	
Preparation	bulk	4	0.45	0.61	0.85	
Date of analysis	17.04.2001	5	0.45	0.61		
		6	0.51	0.61		
Quality rating		7	0.52	0.62		
Abundance of vitrinite	-	8	0.54	0.62		
Identification of vitrinite	±	9		0.63		
Type of vitrinite	0	10		0.64		
Particle size	-	11		0.64		
Particle surface quality	-	12		0.67		
Abundance of pyrite	0	13				
Average sample quality	P	14				
		15				
Legend to quality rating		16				
No effect on the readings	0	17				
Possibly too low readings	-	18				
Possibly too high readings	+	19				
Good quality	G	20				
Moderate quality	M	21				
Poor quality	P	22				
Not vitrinite	X	23				
Mud additive	A	24				
		25				
Comments		26				
0.62%Ro probably reworked vitrinite.		27				
		28				
		29				
		30				



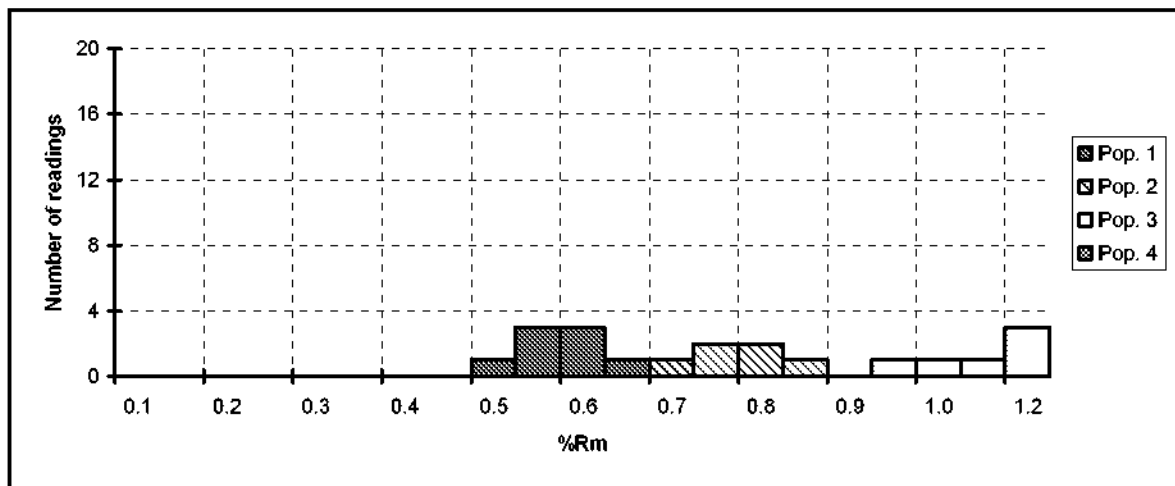
APT no. 11041		%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1A	Mean±std.dev.	0.58±0.07			
Depth(mRKB)	1977	Individual	0.40			
Sample type	DC	measurements	0.49			
Lithology	clyst/sst	3	0.51			
Preparation	bulk	4	0.51			
Date of analysis	17.04.2001	5	0.53			
		6	0.53			
Quality rating		7	0.53			
Abundance of vitrinite	0	8	0.53			
Identification of vitrinite	0	9	0.55			
Type of vitrinite	0	10	0.55			
Particle size	0	11	0.56			
Particle surface quality	0	12	0.57			
Abundance of pyrite	0	13	0.57			
Average sample quality	G	14	0.58			
		15	0.59			
Legend to quality rating		16	0.61			
No effect on the readings	0	17	0.61			
Possibly too low readings	-	18	0.61			
Possibly too high readings	+	19	0.62			
Good quality	G	20	0.62			
Moderate quality	M	21	0.62			
Poor quality	P	22	0.64			
Not vitrinite	X	23	0.66			
Mud additive	A	24	0.67			
		25	0.74			
Comments		26				
0.58%Ro good vitrinite population, but may be reworked?		27				
		28				
		29				
		30				



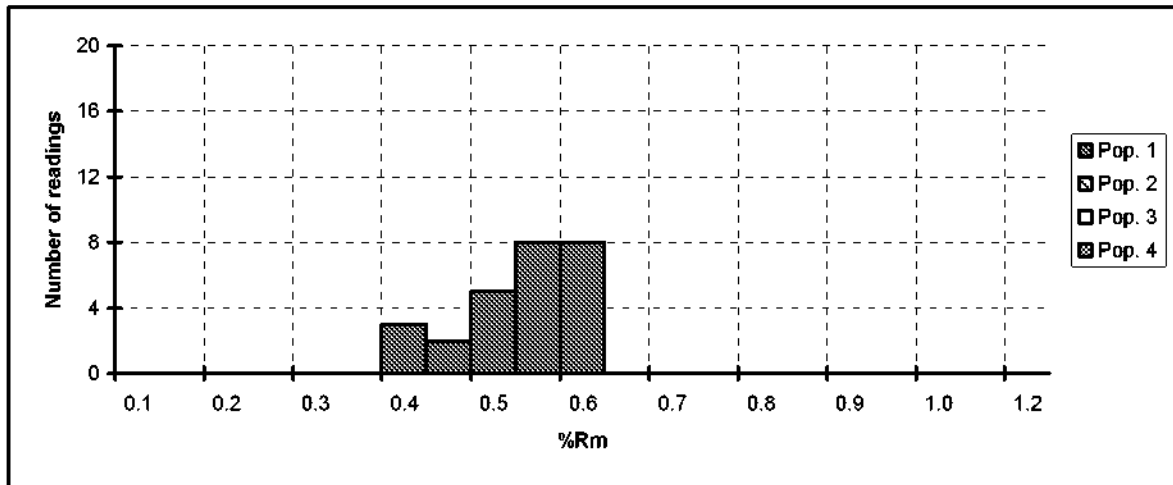
APT no.	11042	%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1A	Mean±std.dev.	0.57±0.06	0.27±0.06		
Depth(mRKB)	2031	Individual	0.46	0.22		
Sample type	DC	measurements	0.46	0.31		
Lithology	clyst/sst	3	0.49			
Preparation	bulk	4	0.50			
Date of analysis	17.04.2001	5	0.51			
		6	0.51			
Quality rating		7	0.51			
Abundance of vitrinite	O	8	0.52			
Identification of vitrinite	O	9	0.52			
Type of vitrinite	O	10	0.52			
Particle size	O	11	0.53			
Particle surface quality	O	12	0.54			
Abundance of pyrite	O	13	0.54			
Average sample quality	G	14	0.55			
		15	0.56			
Legend to quality rating		16	0.57			
No effect on the readings	O	17	0.57			
Possibly too low readings	-	18	0.57			
Possibly too high readings	+	19	0.57			
Good quality	G	20	0.58			
Moderate quality	M	21	0.60			
Poor quality	P	22	0.61			
Not vitrinite	X	23	0.61			
Mud additive	A	24	0.62			
		25	0.63			
Comments		26	0.64			
0.57%Ro good vitrinite population, but may be reworked?		27	0.64			
		28	0.66			
		29	0.69			
		30				



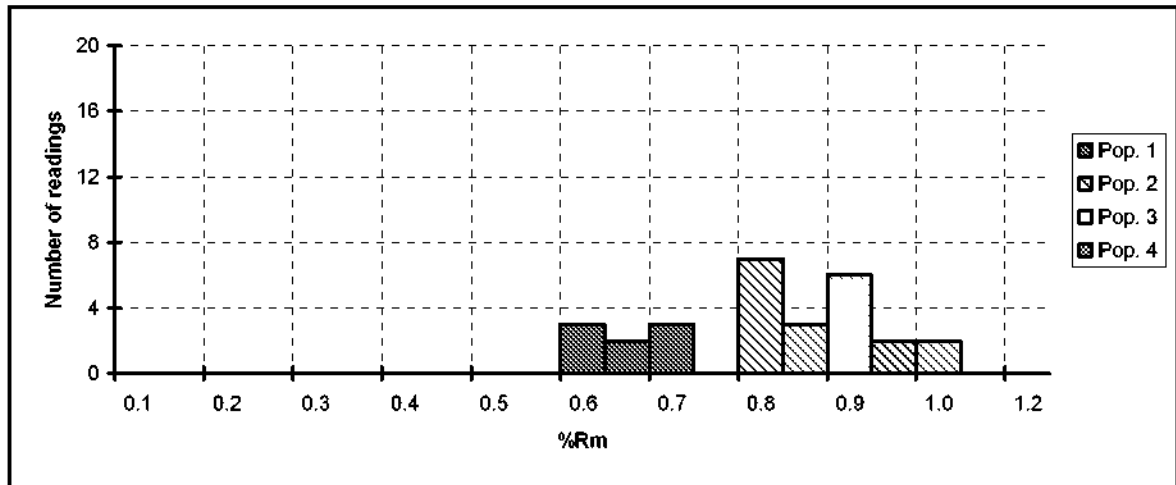
		%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
APT no.	11043	Mean±std.dev.	0.50±0.04	0.74±0.08	1.05±0.07	
Well	7228/7-1A	Individual	0.45	0.61	0.96	
Depth(mRKB)	2103	measurements	0.46	0.66	1.08	
Sample type	DC	3	0.49	0.69	1.09	
Lithology	clyst/sst	4	0.49	0.72		
Preparation	bulk	5	0.51	0.73		
Date of analysis	17.04.2001	6	0.54	0.73		
		7	0.55	0.75		
Quality rating		8		0.76		
Abundance of vitrinite	-	9		0.81		
Identification of vitrinite	0	10		0.89		
Type of vitrinite	0	11				
Particle size	-	12				
Particle surface quality	0	13				
Abundance of pyrite	0	14				
Average sample quality	P	15				
		16				
Legend to quality rating		17				
No effect on the readings	0	18				
Possibly too low readings	-	19				
Possibly too high readings	+	20				
Good quality	G	21				
Moderate quality	M	22				
Poor quality	P	23				
Not vitrinite	X	24				
Mud additive	A	25				
		26				
Comments		27				
		28				
		29				
		30				



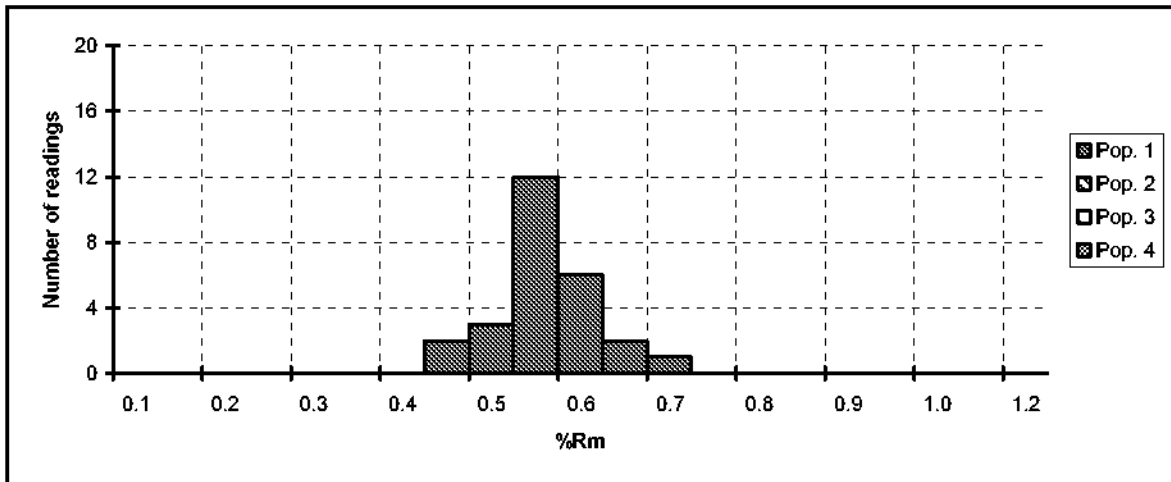
APT no. 11044		%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1A	Mean±std.dev.	0.59±0.04	0.80±0.05	1.01±0.03	
Depth(mRKB)	2229	Individual	0.51	0.73	0.98	
Sample type	DC	measurements	0.56	0.78	1.02	
Lithology	clyst	3	0.57	0.79	1.17	
Preparation	bulk	4	0.57	0.80	1.20	
Date of analysis	18.04.2001	5	0.60	0.81	1.22	
		6	0.60	0.88	1.26	
Quality rating		7	0.63			
Abundance of vitrinite	-	8	0.65			
Identification of vitrinite	O	9				
Type of vitrinite	O	10				
Particle size	-	11				
Particle surface quality	-	12				
Abundance of pyrite	O	13				
Average sample quality	P	14				
		15				
Legend to quality rating		16				
No effect on the readings	O	17				
Possibly too low readings	-	18				
Possibly too high readings	+	19				
Good quality	G	20				
Moderate quality	M	21				
Poor quality	P	22				
Not vitrinite	X	23				
Mud additive	A	24				
		25				
Comments		26				
		27				
		28				
		29				
		30				



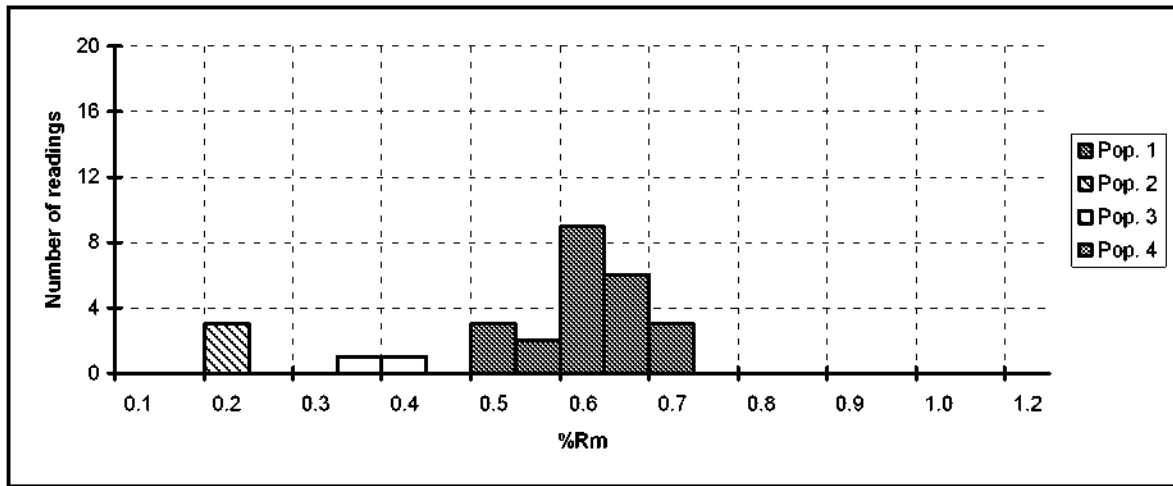
APT no. 11045		%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1A	Mean±std.dev.	0.55±0.06			
Depth(mRKB)	2376	Individual	0.41			
Sample type	DC	measurements	0.42			
Lithology	clyst	3	0.44			
Preparation	bulk	4	0.45			
Date of analysis	18.04.2001	5	0.45			
		6	0.51			
Quality rating		7	0.53			
Abundance of vitrinite	O	8	0.54			
Identification of vitrinite	O	9	0.54			
Type of vitrinite	O	10	0.54			
Particle size	O	11	0.55			
Particle surface quality	O	12	0.56			
Abundance of pyrite	O	13	0.56			
Average sample quality	G	14	0.56			
		15	0.57			
Legend to quality rating		16	0.57			
No effect on the readings	O	17	0.57			
Possibly too low readings	-	18	0.58			
Possibly too high readings	+	19	0.60			
Good quality	G	20	0.60			
Moderate quality	M	21	0.60			
Poor quality	P	22	0.60			
Not vitrinite	X	23	0.61			
Mud additive	A	24	0.61			
		25	0.62			
Comments		26	0.64			
0.55%Ro lowest population in sample.		27				
		28				
		29				
		30				



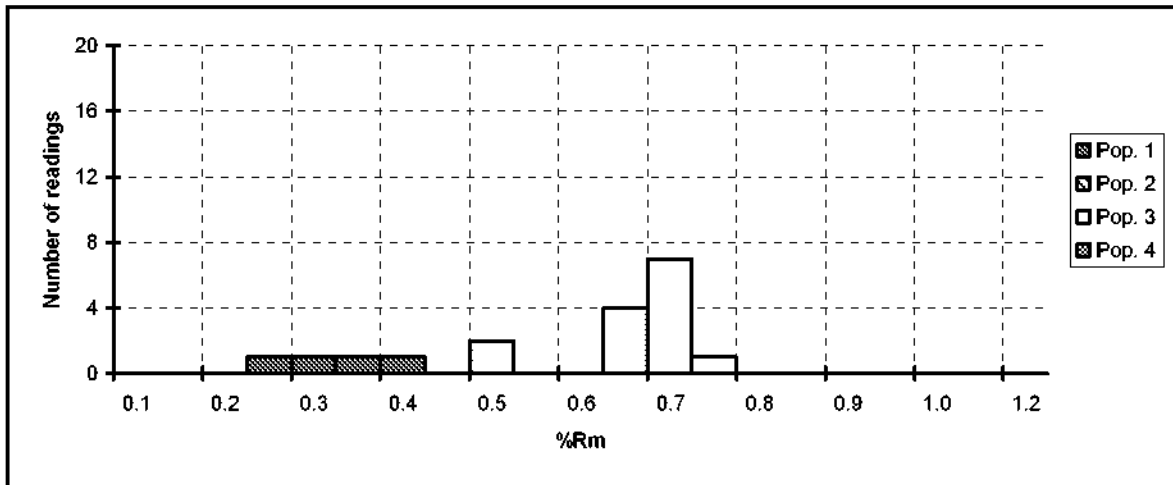
APT no. 11022		%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1A	Mean±std.dev.	0.69±0.05	0.89±0.07		
Depth(mRKB)	2455.49-52	Individual	0.62	0.80		
Sample type	COCH	measurements	0.62	0.80		
Lithology	clst	3	0.64	0.81		
Preparation	bulk	4	0.68	0.81		
Date of analysis	21.04.2001	5	0.68	0.81		
		6	0.73	0.83		
Quality rating		7	0.74	0.84		
Abundance of vitrinite	-	8	0.74	0.86		
Identification of vitrinite	±	9		0.87		
Type of vitrinite	+	10		0.87		
Particle size	-	11		0.90		
Particle surface quality	-	12		0.91		
Abundance of pyrite	O	13		0.92		
Average sample quality	P	14		0.93		
		15		0.93		
Legend to quality rating		16		0.94		
No effect on the readings	O	17		0.97		
Possibly too low readings	-	18		0.98		
Possibly too high readings	+	19		1.04		
Good quality	G	20		1.08		
Moderate quality	M	21				
Poor quality	P	22				
Not vitrinite	X	23				
Mud additive	A	24				
		25				
Comments		26				
		27				
		28				
		29				
		30				



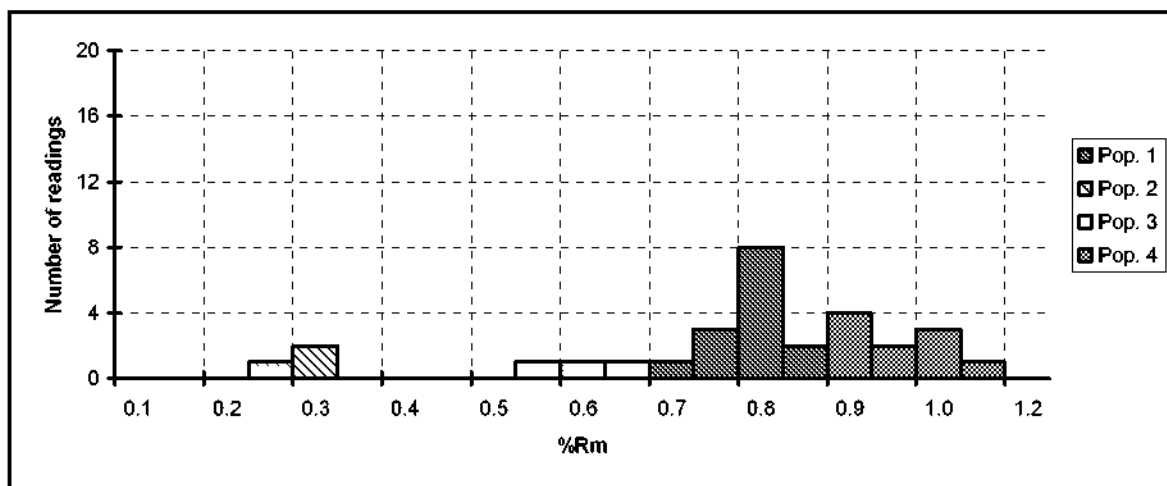
APT no. 11023		%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1A	Mean±std.dev.	0.59±0.06			
Depth(mRKB)	2457.32-34	Individual	0.47			
Sample type	COCH	measurements	0.49			
Lithology	clyst	3	0.52			
Preparation	bulk	4	0.53			
Date of analysis	21.04.2001	5	0.53			
		6	0.55			
		7	0.56			
Quality rating		8	0.57			
Abundance of vitrinite	0	9	0.57			
Identification of vitrinite	0	10	0.58			
Type of vitrinite	0	11	0.58			
Particle size	0	12	0.58			
Particle surface quality	-	13	0.59			
Abundance of pyrite	0	14	0.59			
Average sample quality	G	15	0.59			
		16	0.59			
Legend to quality rating		17	0.59			
No effect on the readings	0	18	0.61			
Possibly too low readings	-	19	0.61			
Possibly too high readings	+	20	0.62			
Good quality	G	21	0.62			
Moderate quality	M	22	0.64			
Poor quality	P	23	0.64			
Not vitrinite	X	24	0.66			
Mud additive	A	25	0.68			
		26	0.74			
Comments		27				
		28				
		29				
		30				



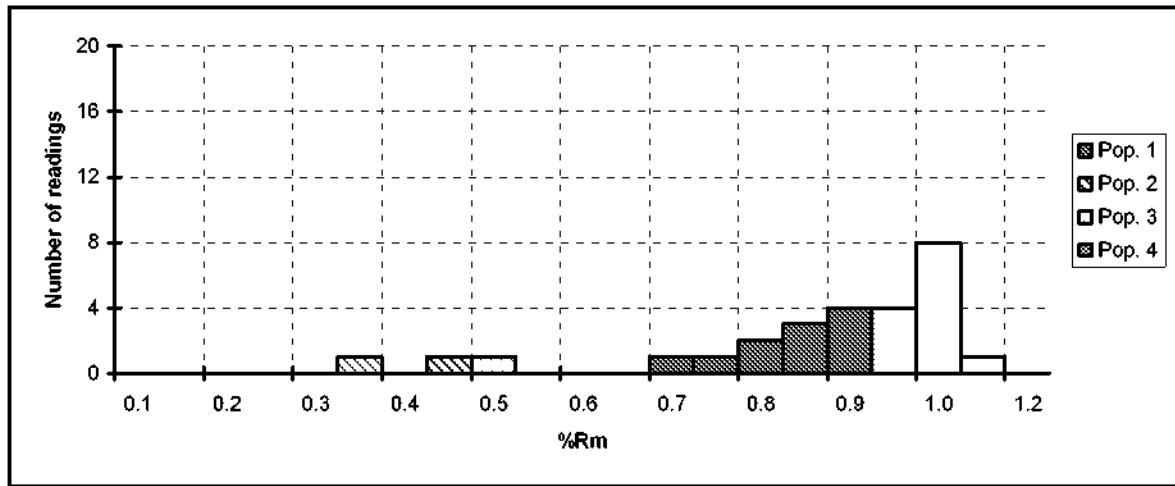
APT no. 11046		%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1A	Mean±std.dev.	0.63±0.06	0.22±0.01	0.41±0.01	
Depth(mRKB)	2511	Individual	0.52	0.22	0.39	
Sample type	DC	measurements	0.52	0.22	0.41	
Lithology	clyst/ssl	3	0.54	0.22		
Preparation	bulk	4	0.55			
Date of analysis	21.04.2001	5	0.55			
		6	0.60			
Quality rating		7	0.60			
Abundance of vitrinite	O	8	0.62			
Identification of vitrinite	O	9	0.62			
Type of vitrinite	O	10	0.63			
Particle size	-	11	0.63			
Particle surface quality	O	12	0.63			
Abundance of pyrite	+	13	0.64			
Average sample quality	M	14	0.64			
		15	0.65			
Legend to quality rating		16	0.66			
No effect on the readings	O	17	0.66			
Possibly too low readings	-	18	0.68			
Possibly too high readings	+	19	0.68			
Good quality	G	20	0.69			
Moderate quality	M	21	0.70			
Poor quality	P	22	0.71			
Not vitrinite	X	23	0.72			
Mud additive	A	24				
		25				
Comments		26				
		27				
		28				
		29				
		30				



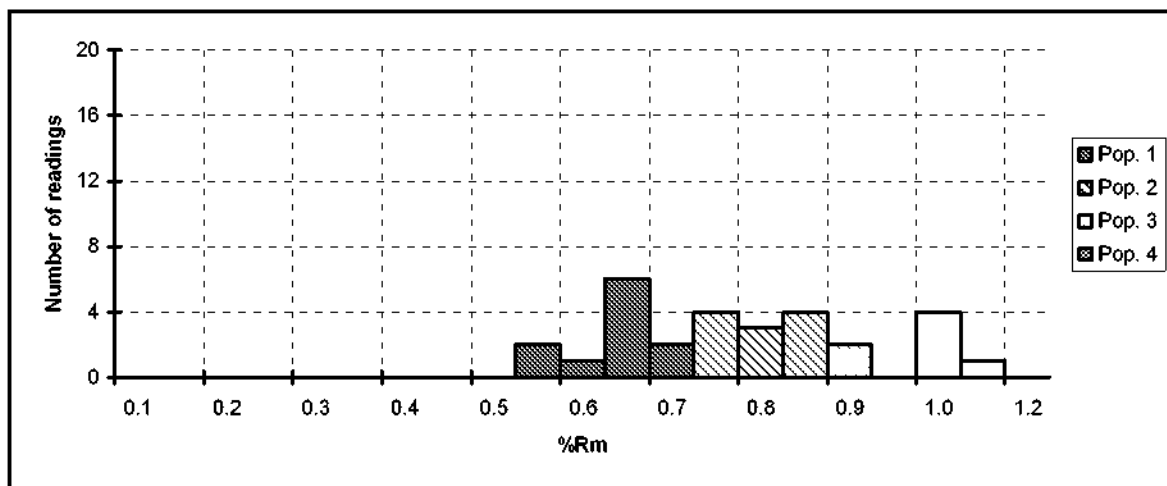
APT no.	11047	%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1A	Mean±std.dev.	0.35±0.05	0.52±0.01	0.71±0.04	
Depth(mRKB)	2670	Individual	0.29	0.51	0.65	
Sample type	DC	measurements	0.30	0.52	0.65	
Lithology	clyst/sst	3	0.38		0.66	
Preparation	bulk	4	0.40		0.69	
Date of analysis	18.04.2001	5			0.70	
		6			0.72	
Quality rating		7			0.72	
Abundance of vitrinite	-	8			0.73	
Identification of vitrinite	±	9			0.74	
Type of vitrinite	-	10			0.74	
Particle size	-	11			0.74	
Particle surface quality	0	12			0.75	
Abundance of pyrite	0	13				
Average sample quality	P	14				
		15				
Legend to quality rating		16				
No effect on the readings	0	17				
Possibly too low readings	-	18				
Possibly too high readings	+	19				
Good quality	G	20				
Moderate quality	M	21				
Poor quality	P	22				
Not vitrinite	X	23				
Mud additive	A	24				
		25				
Comments		26				
Not sure of vitrinite population.		27				
		28				
		29				
		30				



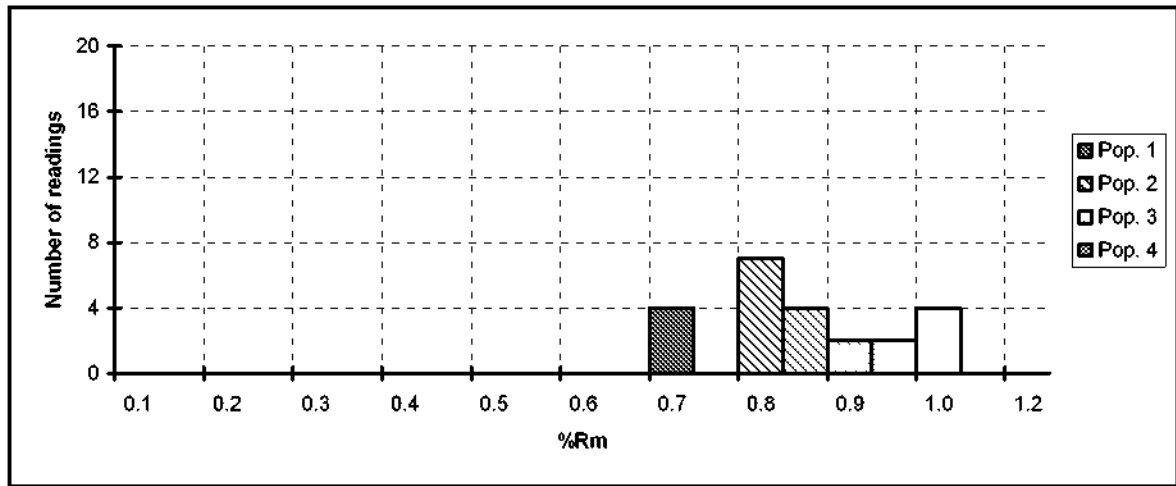
APT no.	11048	%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1A	Mean±std.dev.	0.81±0.04	0.32±0.02	0.65±0.05	0.98±0.08
Depth(mRKB)	2742	Individual	0.70	0.29	0.59	0.90
Sample type	DC	measurements	0.76	0.32	0.64	0.91
Lithology	clyst/sst	3	0.77	0.33	0.69	0.92
Preparation	bulk	4	0.79			0.93
Date of analysis	18.04.2001	5	0.80			0.96
		6	0.80			0.96
Quality rating		7	0.81			1.00
Abundance of vitrinite	0	8	0.81			1.03
Identification of vitrinite	±	9	0.82			1.08
Type of vitrinite	0	10	0.83			1.12
Particle size	0	11	0.83			
Particle surface quality	0	12	0.84			
Abundance of pyrite	0	13	0.85			
Average sample quality	P/G	14	0.86			
		15				
Legend to quality rating		16				
No effect on the readings	0	17				
Possibly too low readings	-	18				
Possibly too high readings	+	19				
Good quality	G	20				
Moderate quality	M	21				
Poor quality	P	22				
Not vitrinite	X	23				
Mud additive	A	24				
		25				
Comments		26				
Not sure of vitrinite population.		27				
		28				
		29				
		30				



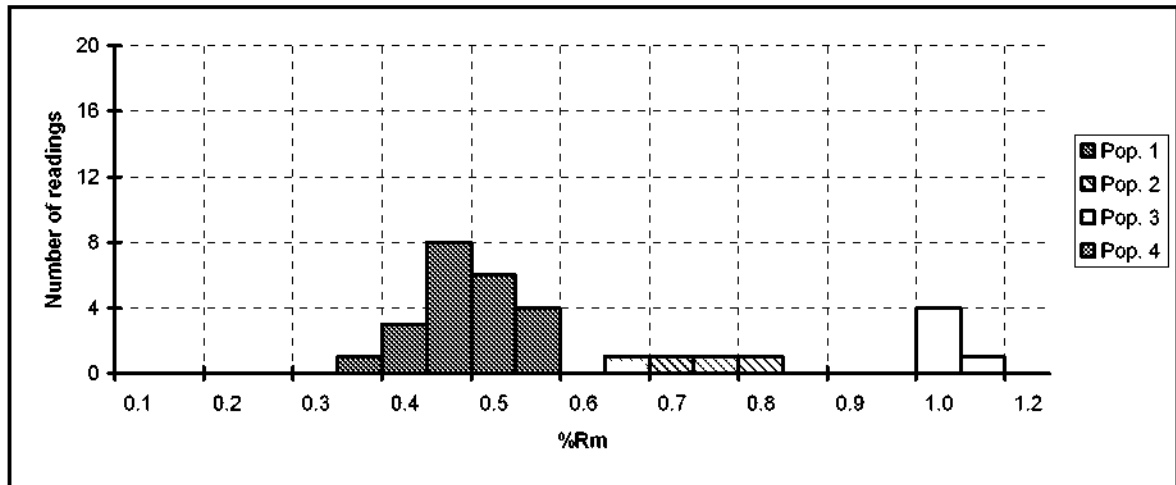
APT no. 11049		%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1A	Mean±std.dev.	0.85±0.07	0.45±0.08	1.03±0.05	
Depth(mRKB)	2781	Individual	0.72	0.36	0.96	
Sample type	DC	measurements	0.77	0.46	0.96	
Lithology	clyst/sst	3	0.80	0.52	0.98	
Preparation	bulk	4	0.81		0.99	
Date of analysis	18.04.2001	5	0.85		1.00	
		6	0.86		1.02	
Quality rating		7	0.87		1.03	
Abundance of vitrinite	-	8	0.90		1.04	
Identification of vitrinite	±	9	0.92		1.05	
Type of vitrinite	0	10	0.92		1.06	
Particle size	-	11	0.94		1.08	
Particle surface quality	0	12			1.09	
Abundance of pyrite	0	13			1.11	
Average sample quality	M	14				
		15				
Legend to quality rating		16				
No effect on the readings	0	17				
Possibly too low readings	-	18				
Possibly too high readings	+	19				
Good quality	G	20				
Moderate quality	M	21				
Poor quality	P	22				
Not vitrinite	X	23				
Mud additive	A	24				
		25				
Comments		26				
Not sure of vitrinite population.		27				
		28				
		29				
		30				



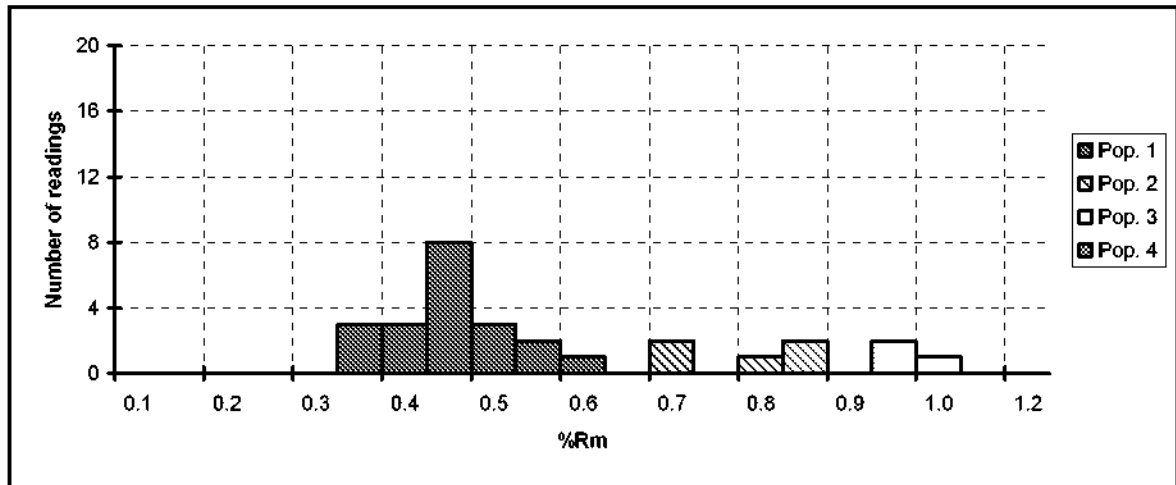
APT no. 11025		%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1A	Mean±std.dev.	0.66±0.05	0.84±0.06	1.07±0.04	
Depth(mRKB)	2842.25-27	Individual	0.55	0.75	1.00	
Sample type	COCH	measurements	0.58	0.76	1.06	
Lithology	clst	3	0.62	0.79	1.07	
Preparation	bulk	4	0.65	0.79	1.09	
Date of analysis	21.04.2001	5	0.65	0.82	1.10	
		6	0.66	0.82		
Quality rating		7	0.66	0.83		
Abundance of vitrinite	-	8	0.66	0.86		
Identification of vitrinite	0	9	0.69	0.86		
Type of vitrinite	0	10	0.71	0.88		
Particle size	-	11	0.73	0.89		
Particle surface quality	0	12		0.92		
Abundance of pyrite	0	13		0.94		
Average sample quality	M	14				
		15				
Legend to quality rating		16				
No effect on the readings	0	17				
Possibly too low readings	-	18				
Possibly too high readings	+	19				
Good quality	G	20				
Moderate quality	M	21				
Poor quality	P	22				
Not vitrinite	X	23				
Mud additive	A	24				
		25				
Comments		26				
		27				
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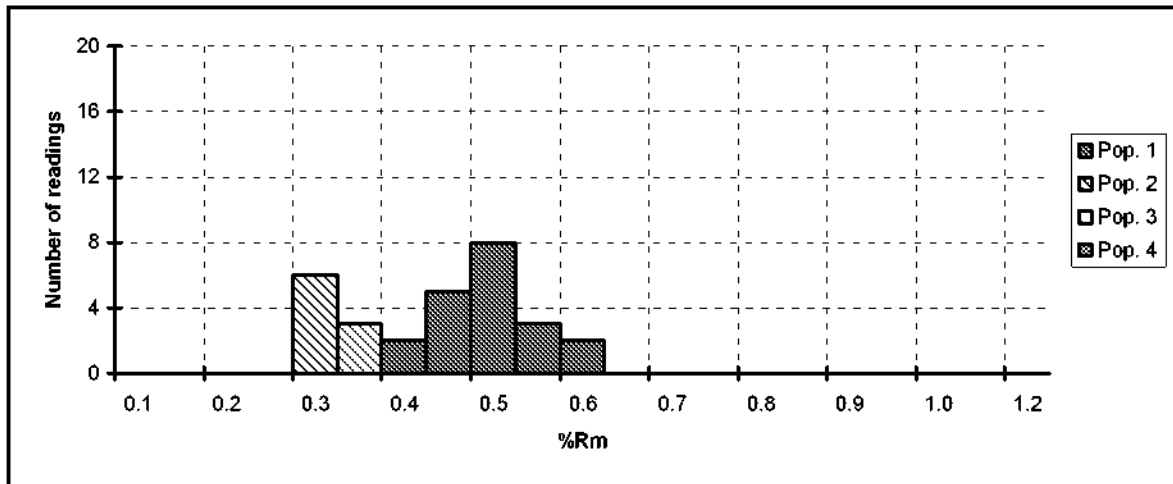
APT no. 11027		%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1A	Mean±std.dev.	0.72±0.01	0.85±0.04	1.01±0.04	
Depth(mRKB)	2860.26-28	Individual	0.71	0.80	0.96	
Sample type	COCH	measurements	0.72	0.81	0.96	
Lithology	clyst	3	0.73	0.81	1.03	
Preparation	bulk	4	0.73	0.82	1.04	
Date of analysis	21.04.2001	5		0.83	1.04	
		6		0.83	1.05	
Quality rating		7		0.83		
Abundance of vitrinite	-	8		0.86		
Identification of vitrinite	0	9		0.86		
Type of vitrinite	0	10		0.86		
Particle size	-	11		0.86		
Particle surface quality	0	12		0.90		
Abundance of pyrite	0	13		0.91		
Average sample quality	M	14				
		15				
Legend to quality rating		16				
No effect on the readings	0	17				
Possibly too low readings	-	18				
Possibly too high readings	+	19				
Good quality	G	20				
Moderate quality	M	21				
Poor quality	P	22				
Not vitrinite	X	23				
Mud additive	A	24				
		25				
Comments		26				
		27				
		28				
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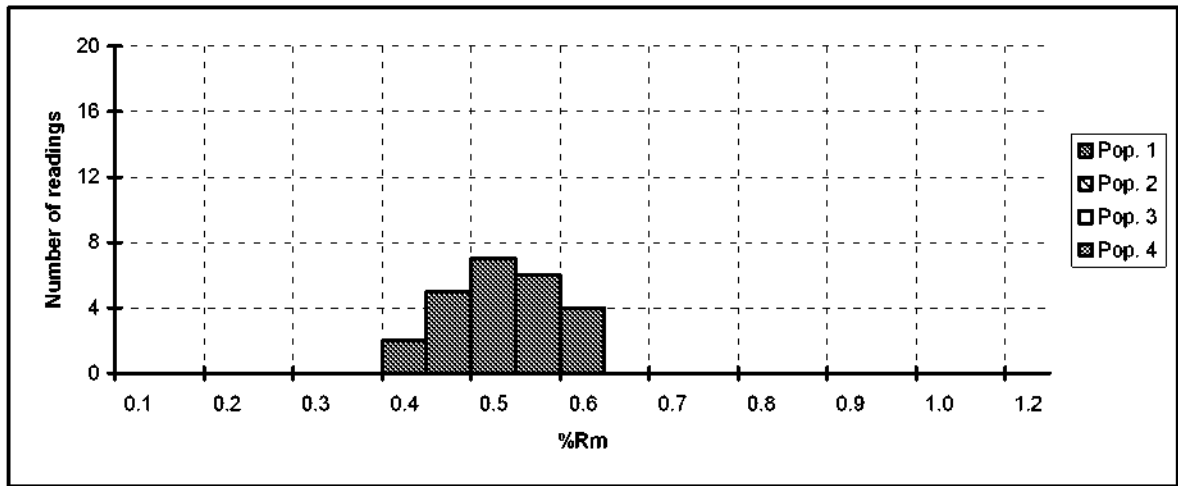
APT no.	11060	%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1ST3	Mean±std.dev.	0.49±0.05	0.74±0.06	1.08±0.07	
Depth(mRKB)	1575	Individual	0.39	0.66	1.01	
Sample type	DC	measurements	0.43	0.73	1.03	
Lithology	clyst/sst	3	0.43	0.77	1.04	
Preparation	bulk	4	0.44	0.80	1.09	
Date of analysis	26.04.2001	5	0.45		1.18	
		6	0.45			
Quality rating		7	0.45			
Abundance of vitrinite	0	8	0.47			
Identification of vitrinite	0	9	0.47			
Type of vitrinite	0	10	0.47			
Particle size	-	11	0.48			
Particle surface quality	0	12	0.48			
Abundance of pyrite	0	13	0.50			
Average sample quality	M/G	14	0.50			
		15	0.50			
Legend to quality rating		16	0.51			
No effect on the readings	0	17	0.52			
Possibly too low readings	-	18	0.54			
Possibly too high readings	+	19	0.56			
Good quality	G	20	0.56			
Moderate quality	M	21	0.56			
Poor quality	P	22	0.56			
Not vitrinite	X	23				
Mud additive	A	24				
		25				
Comments		26				
		27				
		28				
		29				
		30				



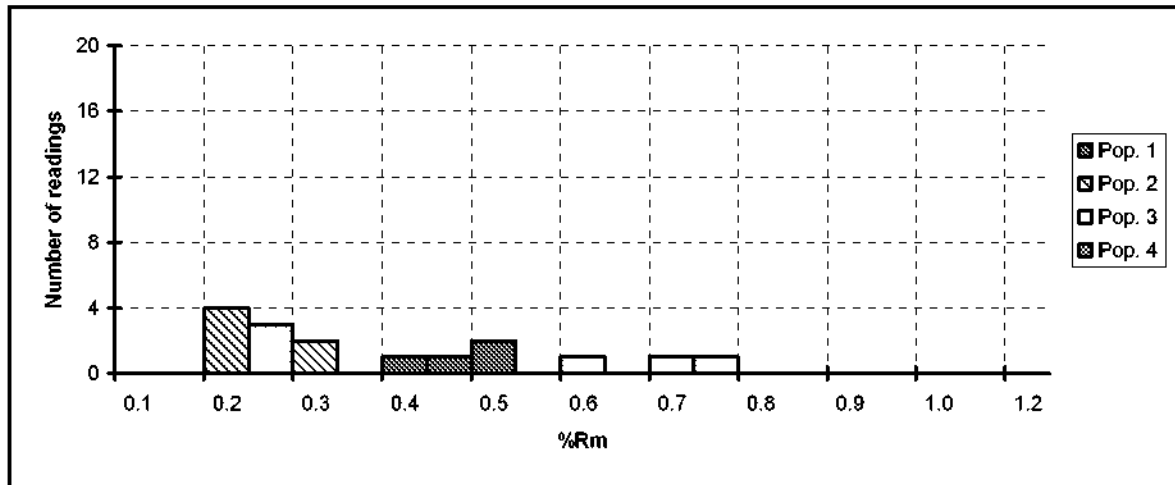
APT no. 11061		%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1ST3	Mean±std.dev.	0.48±0.07	0.81±0.07	0.99±0.04	
Depth(mRKB)	1677	Individual	0.38	0.73	0.95	
Sample type	DC	measurements	0.38	0.73	0.98	
Lithology	clyst/sst	3	0.39	0.83	1.02	
Preparation	bulk	4	0.40	0.86		
Date of analysis	26.04.2001	5	0.40	0.87		
		6	0.43			
		7	0.45			
Quality rating		8	0.45			
Abundance of vitrinite	0	9	0.45			
Identification of vitrinite	0	10	0.45			
Type of vitrinite	0	11	0.45			
Particle size	-	12	0.46			
Particle surface quality	-	13	0.48			
Abundance of pyrite	+	14	0.48			
Average sample quality	M	15	0.52			
		16	0.53			
Legend to quality rating		17	0.53			
No effect on the readings	0	18	0.58			
Possibly too low readings	-	19	0.59			
Possibly too high readings	+	20	0.63			
Good quality	G	21				
Moderate quality	M	22				
Poor quality	P	23				
Not vitrinite	X	24				
Mud additive	A	25				
		26				
Comments		27				
		28				
		29				
		30				



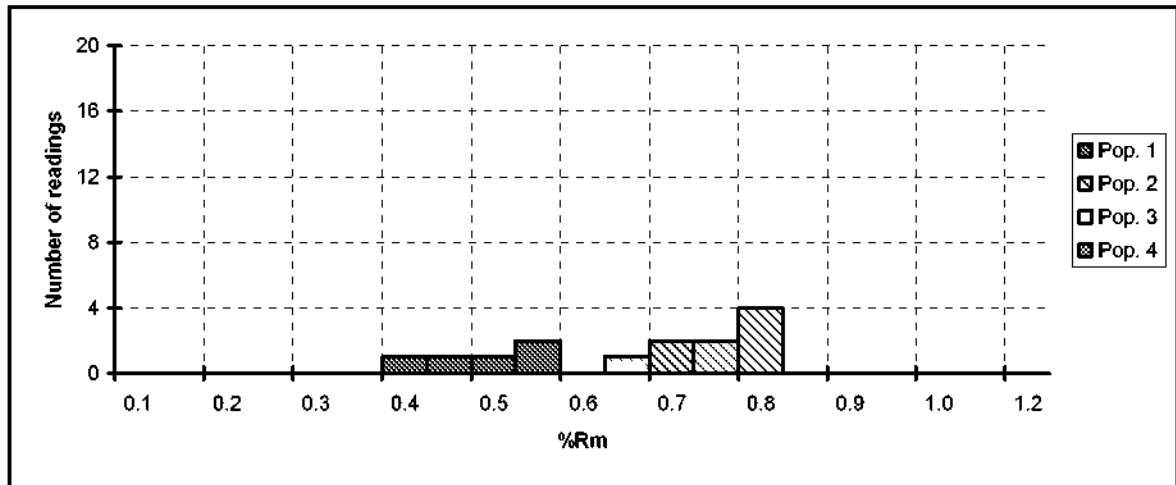
APT no. 11062		%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1ST3	Mean±std.dev.	0.52±0.06	0.33±0.03		
Depth(mRKB)	1710	Individual	0.41	0.30		
Sample type	DC	measurements	0.41	0.30		
Lithology	clyst/ssl	3	0.45	0.31		
Preparation	bulk	4	0.47	0.31		
Date of analysis	26.04.2001	5	0.48	0.31		
		6	0.48	0.32		
Quality rating		7	0.48	0.35		
Abundance of vitrinite	0	8	0.50	0.36		
Identification of vitrinite	±	9	0.51	0.37		
Type of vitrinite	0	10	0.52			
Particle size	-	11	0.53			
Particle surface quality	-	12	0.53			
Abundance of pyrite	+	13	0.54			
Average sample quality	P	14	0.54			
		15	0.54			
Legend to quality rating		16	0.55			
No effect on the readings	0	17	0.55			
Possibly too low readings	-	18	0.57			
Possibly too high readings	+	19	0.63			
Good quality	G	20	0.64			
Moderate quality	M	21				
Poor quality	P	22				
Not vitrinite	X	23				
Mud additive	A	24				
		25				
Comments		26				
		27				
		28				
		29				
		30				



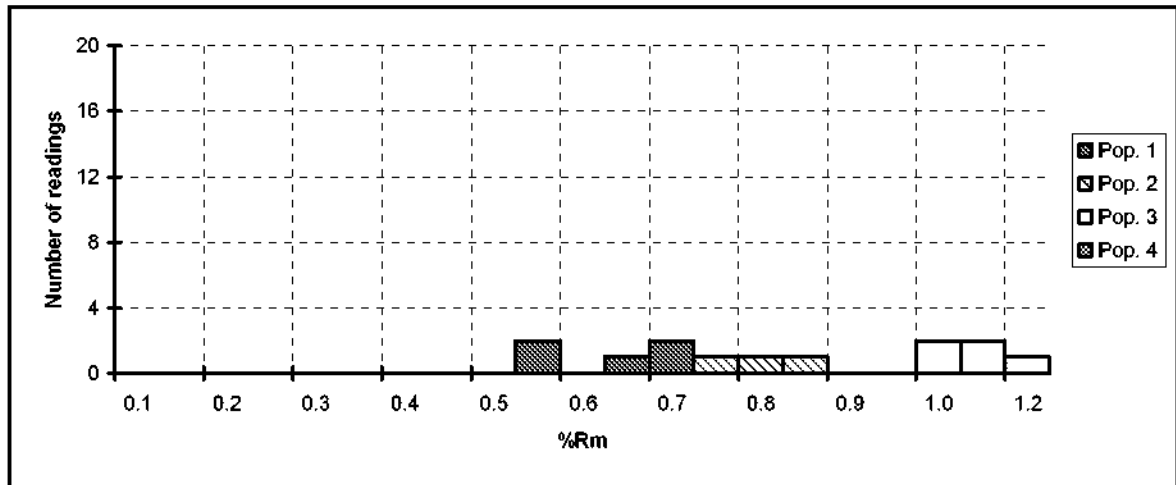
		%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
APT no.	11063	Mean±std.dev.	0.54±0.06			
Well	7228/7-1ST3	Individual	0.41			
Depth(mRKB)	1794	measurements	0.42			
Sample type	DC	3	0.46			
Lithology	clyst/sst	4	0.46			
Preparation	bulk	5	0.48			
Date of analysis	26.04.2001	6	0.49			
Quality rating		7	0.49			
Abundance of vitrinite	O	8	0.50			
Identification of vitrinite	O	9	0.51			
Type of vitrinite	O	10	0.51			
Particle size	O	11	0.52			
Particle surface quality	O	12	0.54			
Abundance of pyrite	+	13	0.54			
Average sample quality	G	14	0.54			
		15	0.56			
Legend to quality rating		16	0.57			
No effect on the readings	O	17	0.57			
Possibly too low readings	-	18	0.58			
Possibly too high readings	+	19	0.58			
Good quality	G	20	0.59			
Moderate quality	M	21	0.60			
Poor quality	P	22	0.61			
Not vitrinite	X	23	0.61			
Mud additive	A	24	0.62			
		25				
Comments		26				
		27				
		28				
		29				
		30				



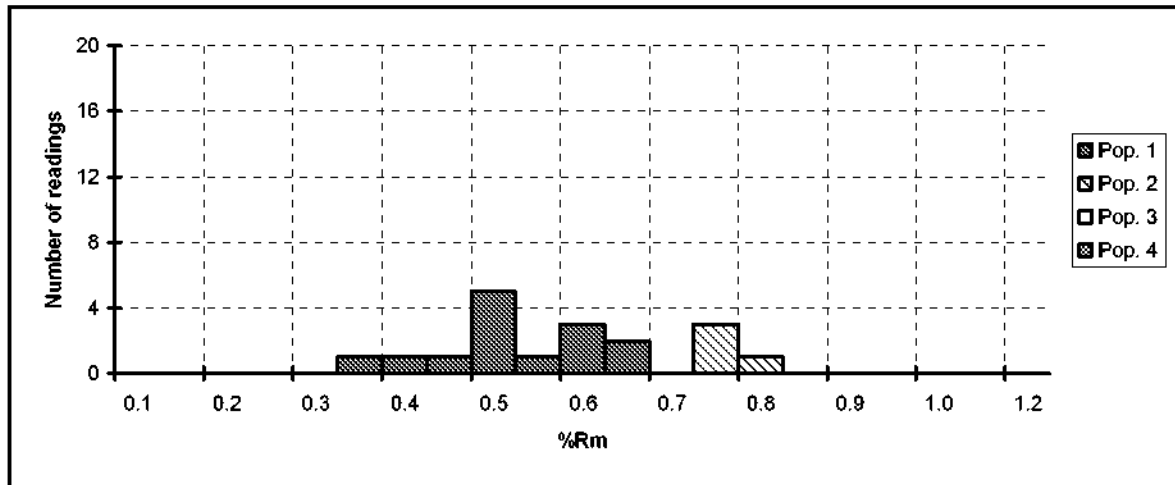
APT no.	11064	%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1ST3	Mean±std.dev.	0.50±0.04	0.27±0.04	0.71±0.08	
Depth(mRKB)	1836	Individual	0.44	0.20	0.62	
Sample type	DC	measurements	0.49	0.23	0.74	
Lithology	clyst/sst	3	0.51	0.24	0.76	
Preparation	bulk	4	0.53	0.24		
Date of analysis	26.04.2001	5		0.25		
		6		0.25		
Quality rating		7		0.29		
Abundance of vitrinite	-	8		0.32		
Identification of vitrinite	±	9		0.32		
Type of vitrinite	±	10				
Particle size	0	11				
Particle surface quality	0	12				
Abundance of pyrite	+	13				
Average sample quality	P	14				
		15				
Legend to quality rating		16				
No effect on the readings	0	17				
Possibly too low readings	-	18				
Possibly too high readings	+	19				
Good quality	G	20				
Moderate quality	M	21				
Poor quality	P	22				
Not vitrinite	X	23				
Mud additive	A	24				
		25				
Comments		26				
		27				
		28				
		29				
		30				



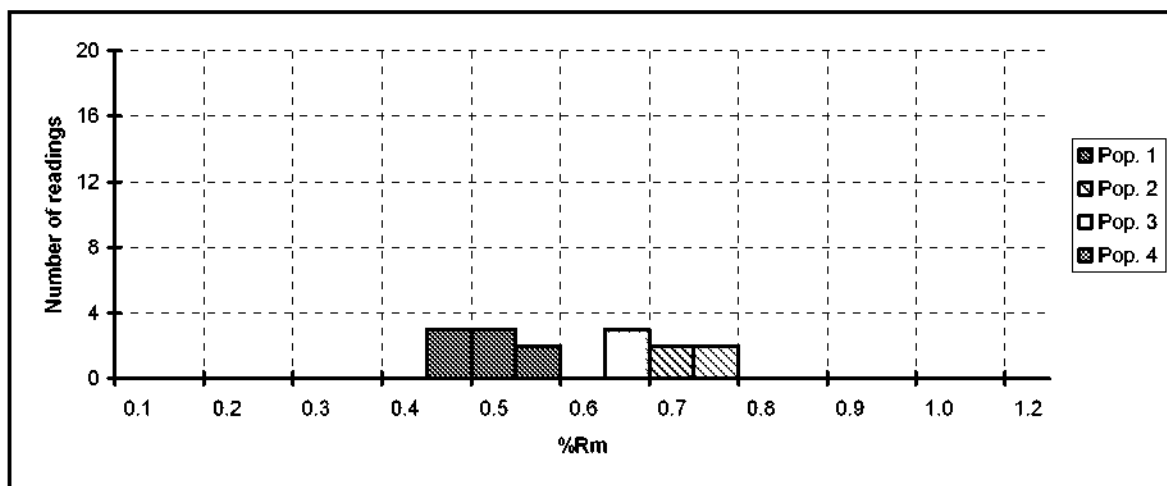
APT no. 11065		%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1ST3	Mean±std.dev.	0.52±0.06	0.77±0.06		
Depth(mRKB)	1872	Individual	0.43	0.66		
Sample type	DC	measurements	0.49	0.72		
Lithology	clyst/sst	3	0.52	0.74		
Preparation	bulk	4	0.55	0.75		
Date of analysis	26.04.2001	5	0.57	0.75		
		6		0.80		
Quality rating		7		0.81		
Abundance of vitrinite	-	8		0.84		
Identification of vitrinite	0	9		0.84		
Type of vitrinite	0	10				
Particle size	-	11				
Particle surface quality	-	12				
Abundance of pyrite	+	13				
Average sample quality	P	14				
		15				
Legend to quality rating		16				
No effect on the readings	0	17				
Possibly too low readings	-	18				
Possibly too high readings	+	19				
Good quality	G	20				
Moderate quality	M	21				
Poor quality	P	22				
Not vitrinite	X	23				
Mud additive	A	24				
		25				
Comments		26				
		27				
		28				
		29				
		30				



APT no.	11066	%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1ST3	Mean±std.dev.	0.65±0.07	0.82±0.03	1.11±0.07	
Depth(mRKB)	1947	Individual	0.56	0.79	1.02	
Sample type	DC	measurements	0.59	0.81	1.07	
Lithology	clyst/sst	3	0.69	0.85	1.10	
Preparation	bulk	4	0.70		1.11	
Date of analysis	26.04.2001	5	0.70		1.21	
		6				
Quality rating		7				
Abundance of vitrinite	-	8				
Identification of vitrinite	±	9				
Type of vitrinite	-	10				
Particle size	-	11				
Particle surface quality	-	12				
Abundance of pyrite	O	13				
Average sample quality	P	14				
		15				
Legend to quality rating		16				
No effect on the readings	O	17				
Possibly too low readings	-	18				
Possibly too high readings	+	19				
Good quality	G	20				
Moderate quality	M	21				
Poor quality	P	22				
Not vitrinite	X	23				
Mud additive	A	24				
		25				
Comments		26				
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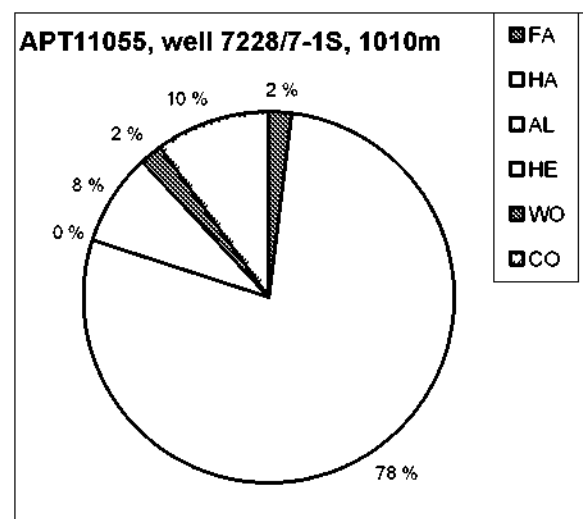
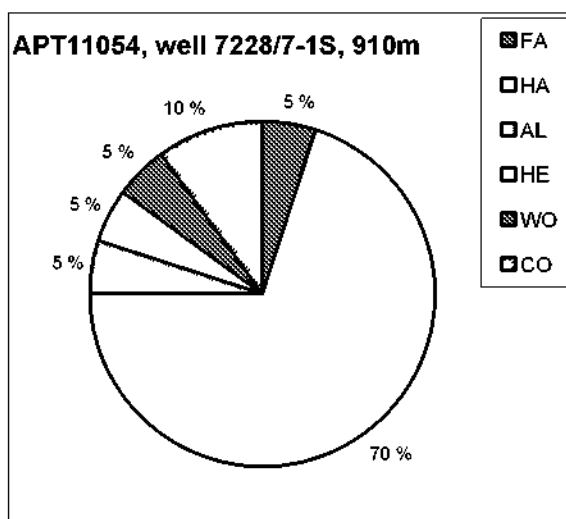
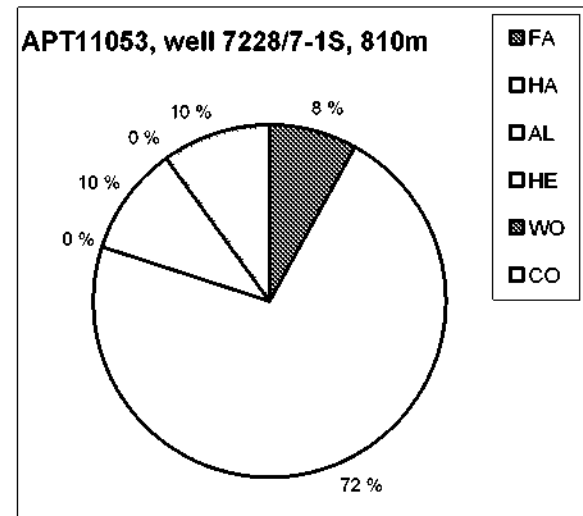
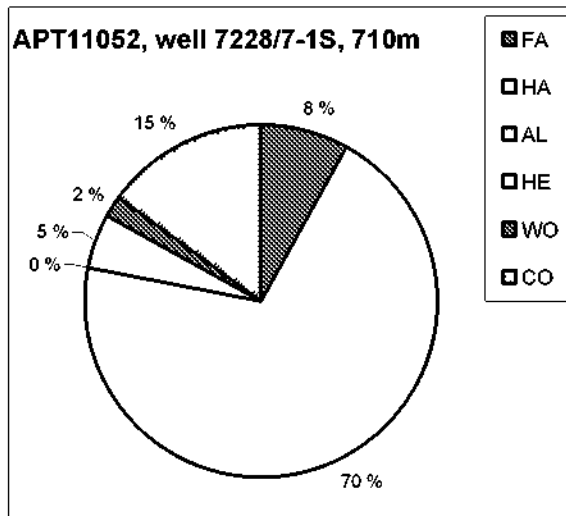
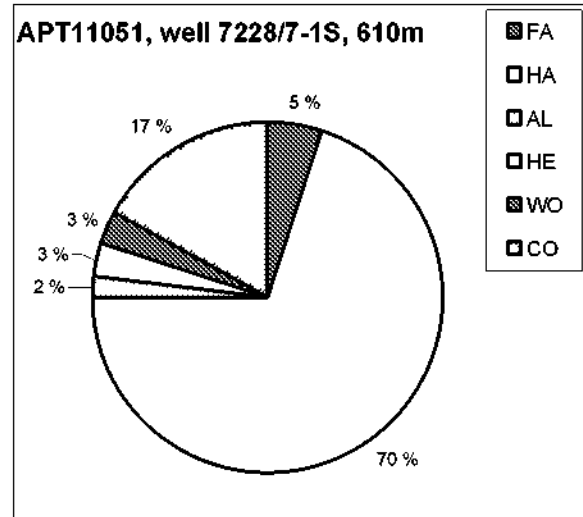
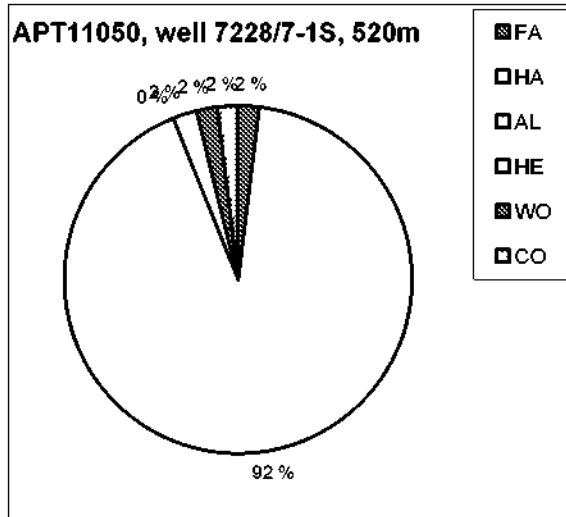


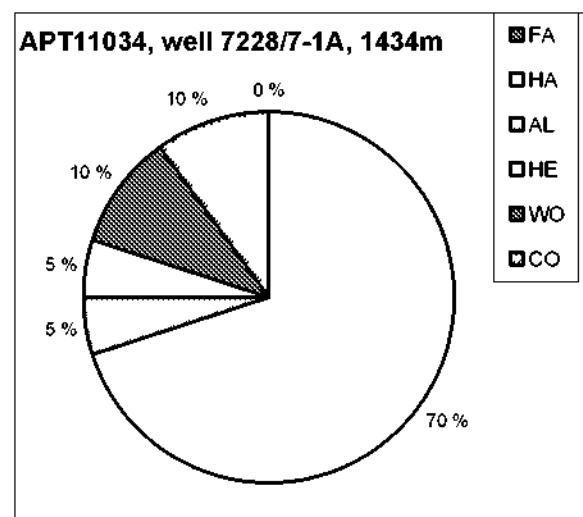
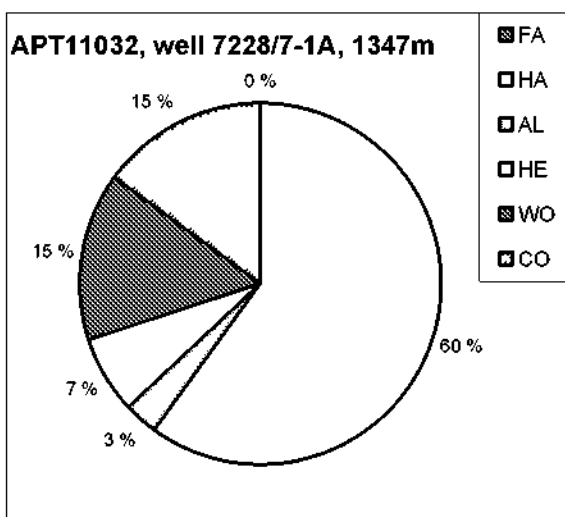
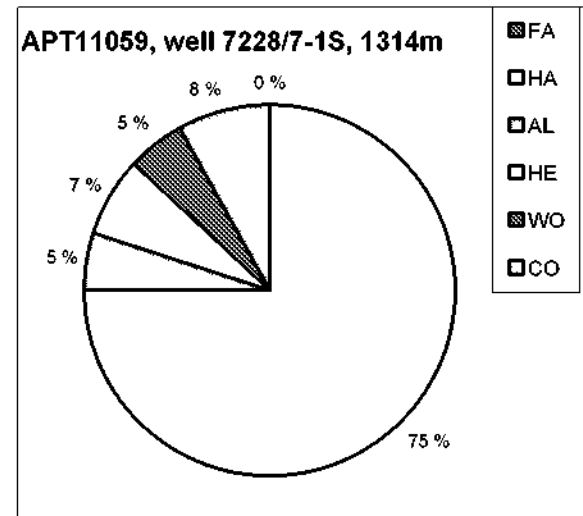
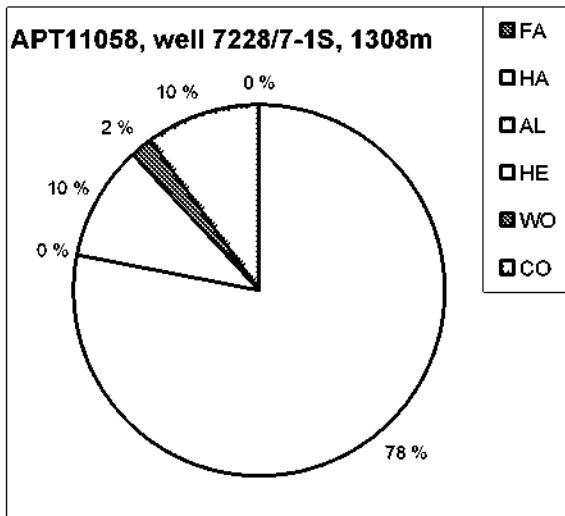
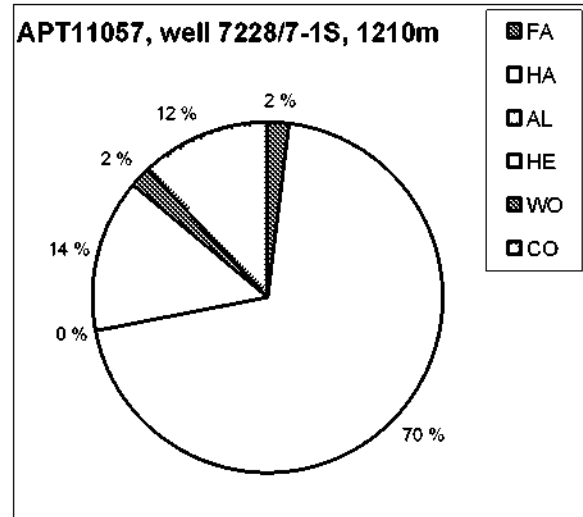
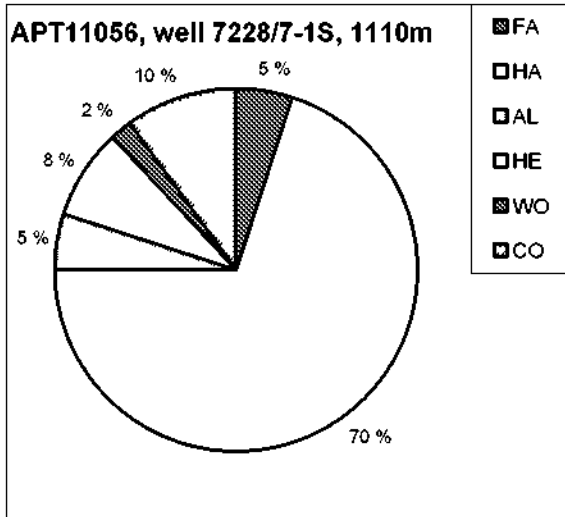
APT no.	11067	%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1ST3	Mean±std.dev.	0.55±0.09	0.80±0.02		
Depth(mRKB)	2049	Individual	0.38	0.77		
Sample type	DC	measurements	0.44	0.79		
Lithology	clyst/sst	3	0.48	0.79		
Preparation	bulk	4	0.50	0.82		
Date of analysis	28.04.2001	5	0.51			
		6	0.52			
Quality rating		7	0.52			
Abundance of vitrinite	-	8	0.52			
Identification of vitrinite	±	9	0.55			
Type of vitrinite	±	10	0.60			
Particle size	-	11	0.63			
Particle surface quality	-	12	0.63			
Abundance of pyrite	O	13	0.66			
Average sample quality	P	14	0.68			
		15				
Legend to quality rating		16				
No effect on the readings	O	17				
Possibly too low readings	-	18				
Possibly too high readings	+	19				
Good quality	G	20				
Moderate quality	M	21				
Poor quality	P	22				
Not vitrinite	X	23				
Mud additive	A	24				
		25				
Comments		26				
		27				
		28				
		29				
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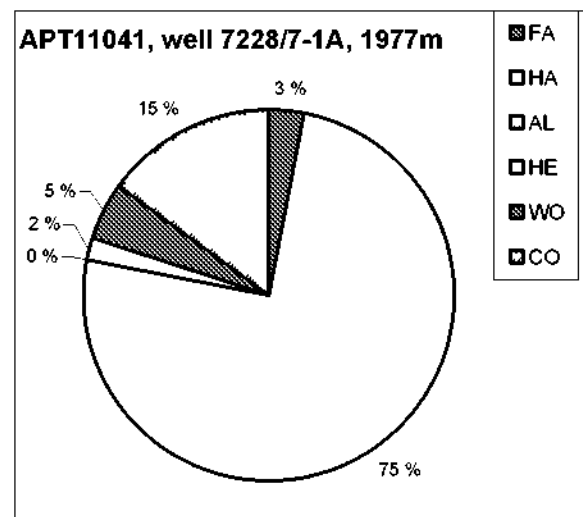
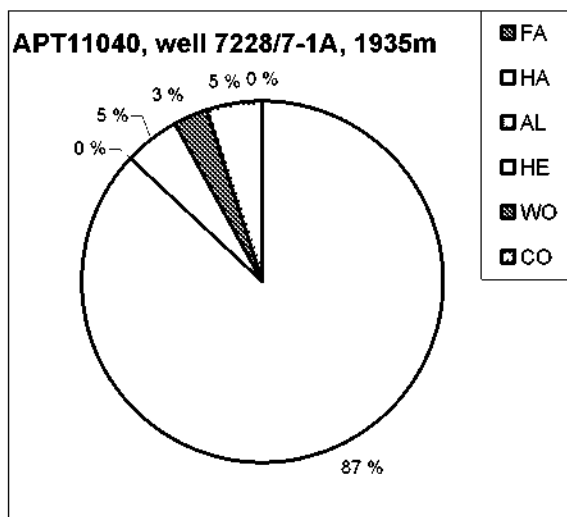
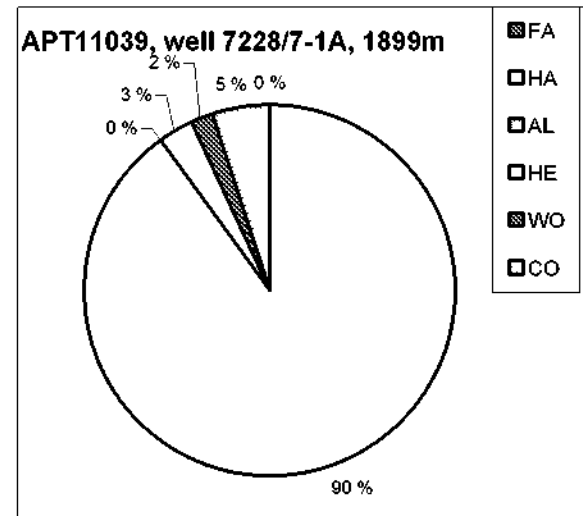
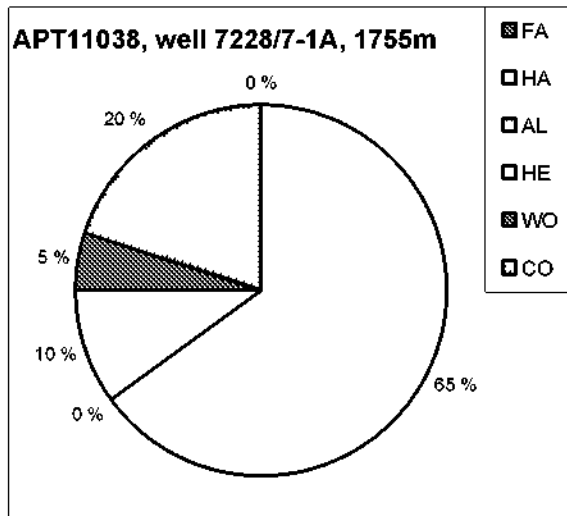
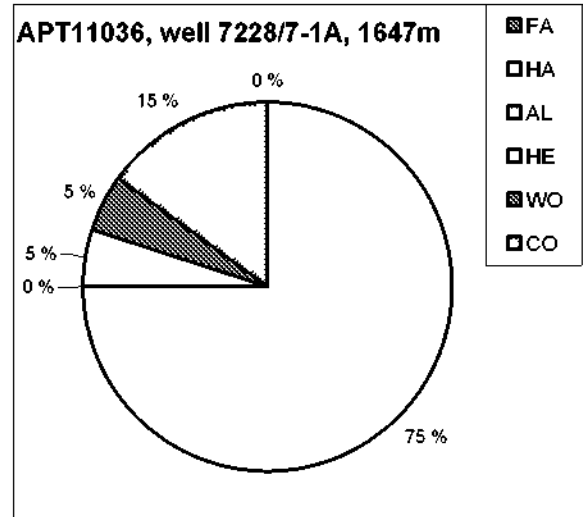
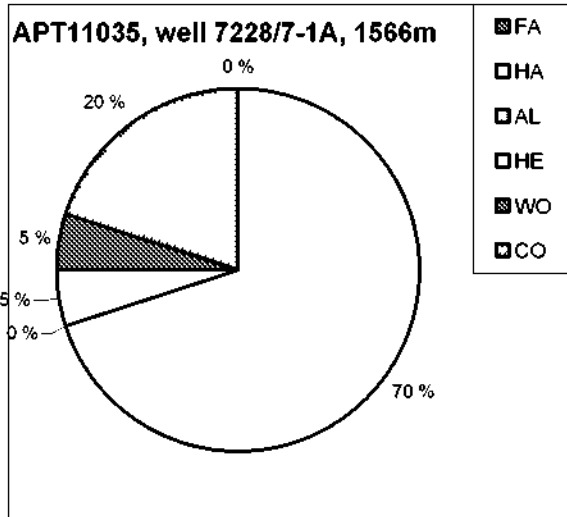


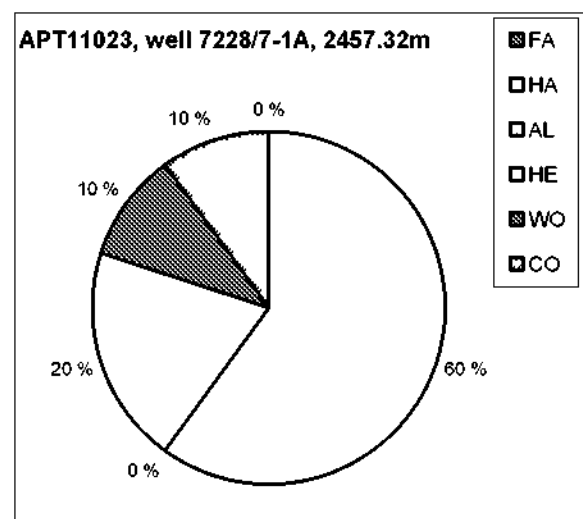
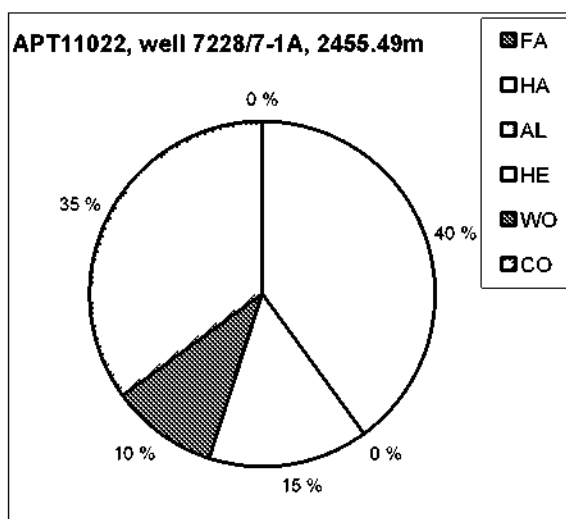
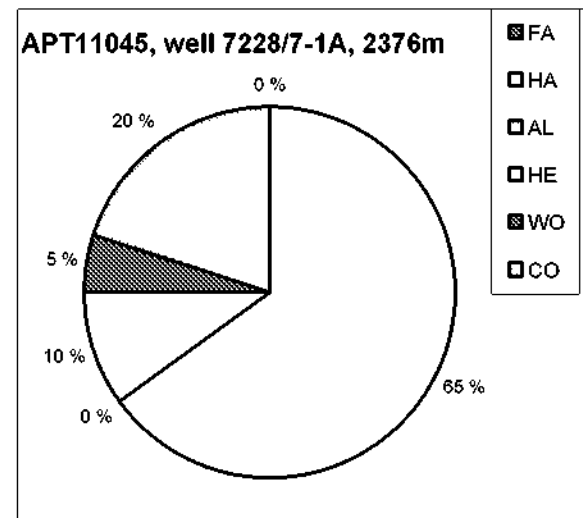
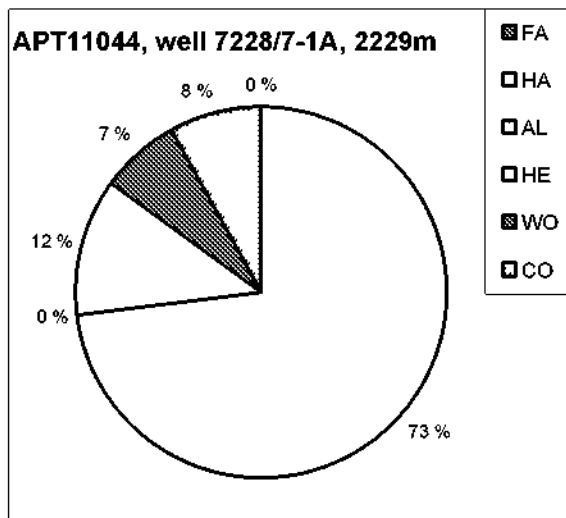
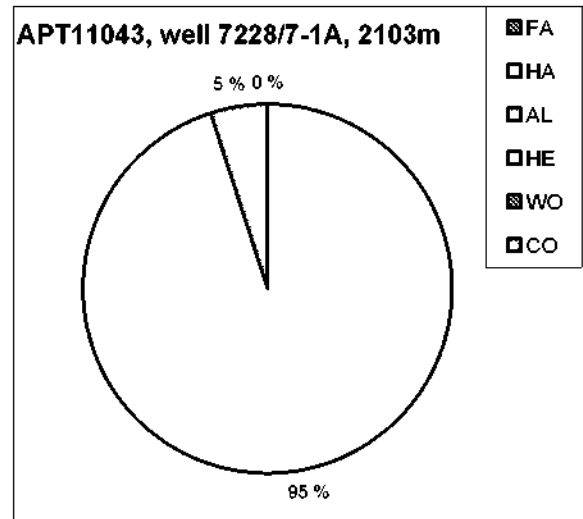
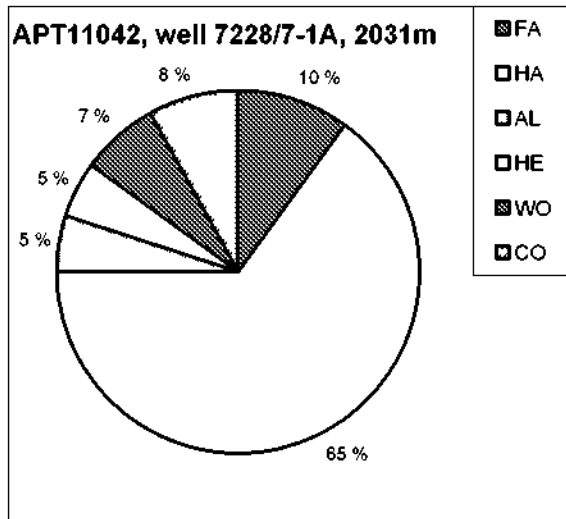
APT no.	11068	%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Well	7228/7-1ST3	Mean±std.dev.	0.55±0.05	0.72±0.03		
Depth(mRKB)	2082	Individual	0.46	0.68		
Sample type	DC	measurements	0.48	0.69		
Lithology	clyst/sst	3	0.49	0.69		
Preparation	bulk	4	0.51	0.72		
Date of analysis	28.04.2001	5	0.53	0.73		
		6	0.54	0.75		
Quality rating		7	0.55	0.77		
Abundance of vitrinite	-	8	0.56			
Identification of vitrinite	0	9				
Type of vitrinite	0	10				
Particle size	-	11				
Particle surface quality	0	12				
Abundance of pyrite	0	13				
Average sample quality	M	14				
		15				
Legend to quality rating		16				
No effect on the readings	0	17				
Possibly too low readings	-	18				
Possibly too high readings	+	19				
Good quality	G	20				
Moderate quality	M	21				
Poor quality	P	22				
Not vitrinite	X	23				
Mud additive	A	24				
		25				
Comments		26				
		27				
		28				
		29				
		30				

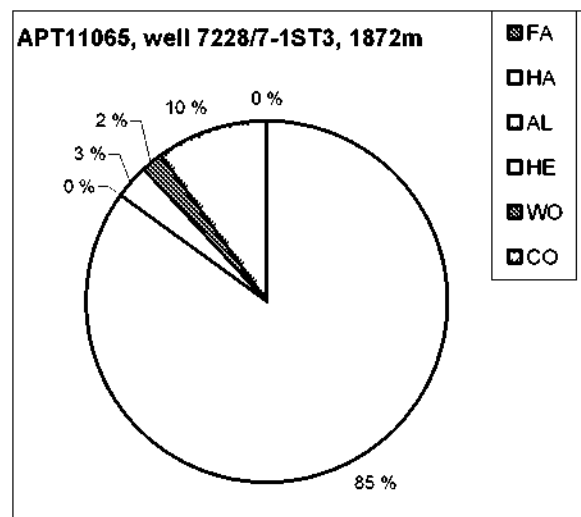
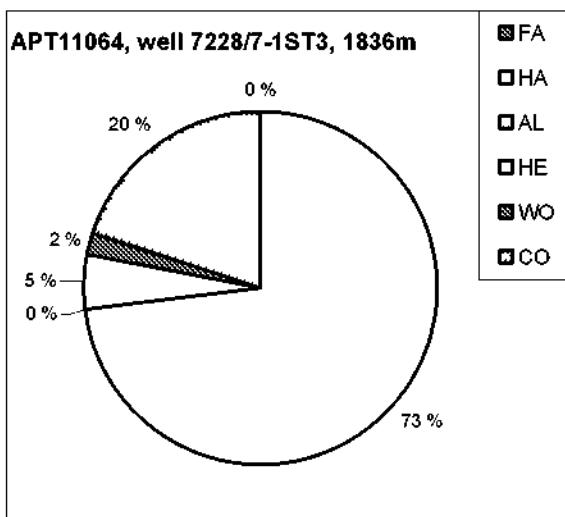
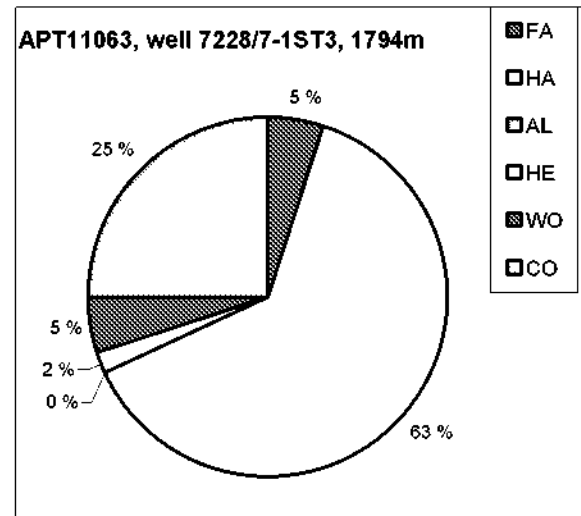
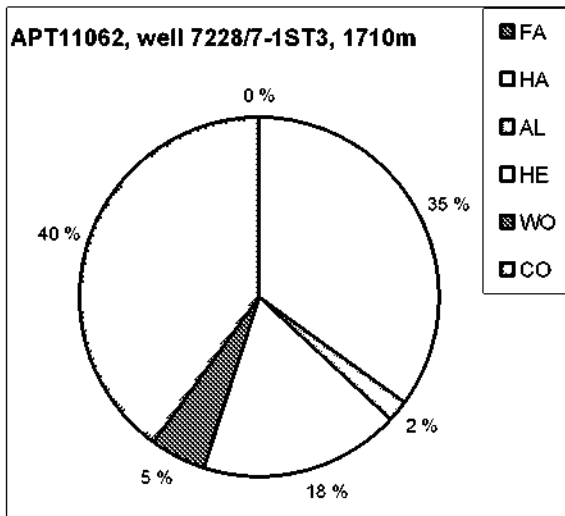
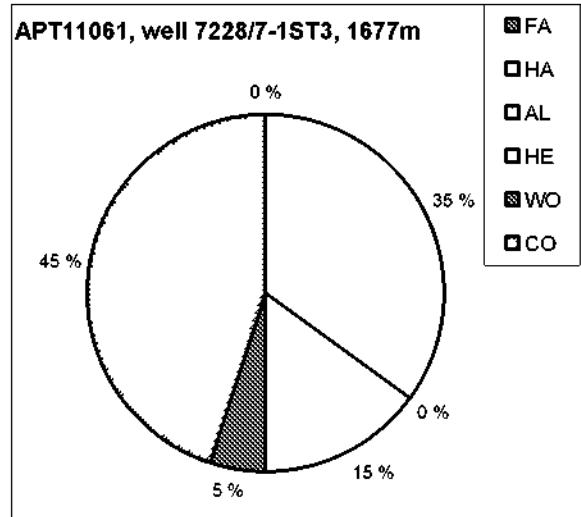
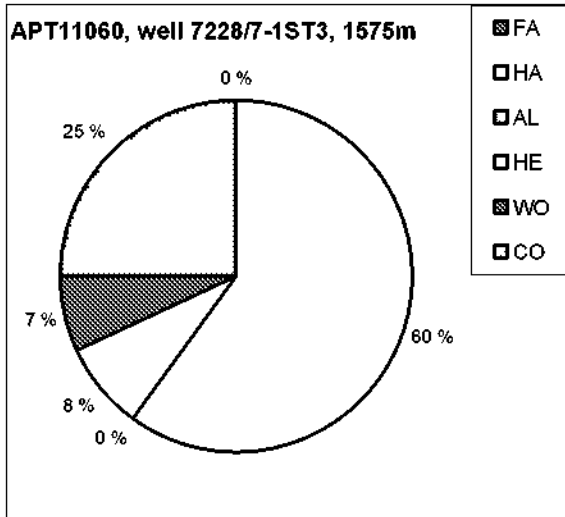
Visual Kerogen, Pie diagrams

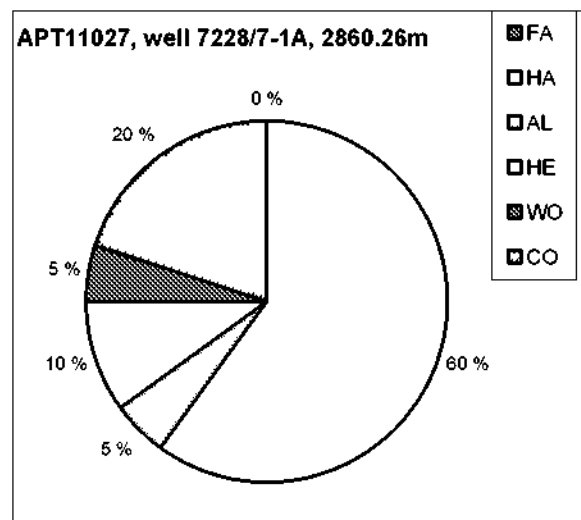
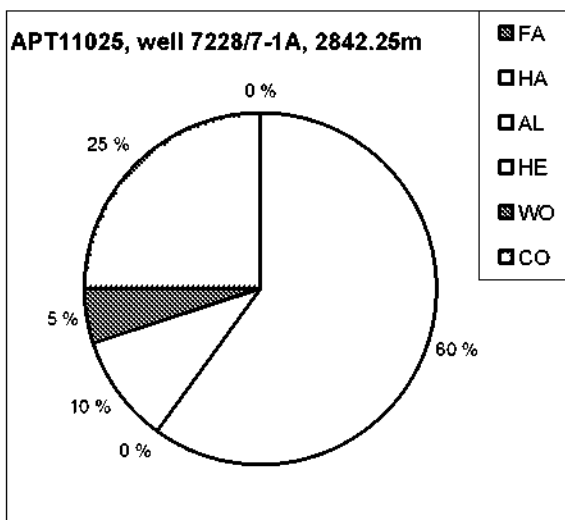
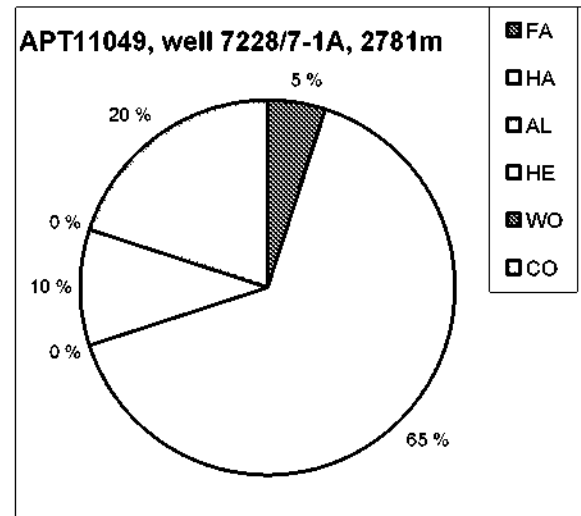
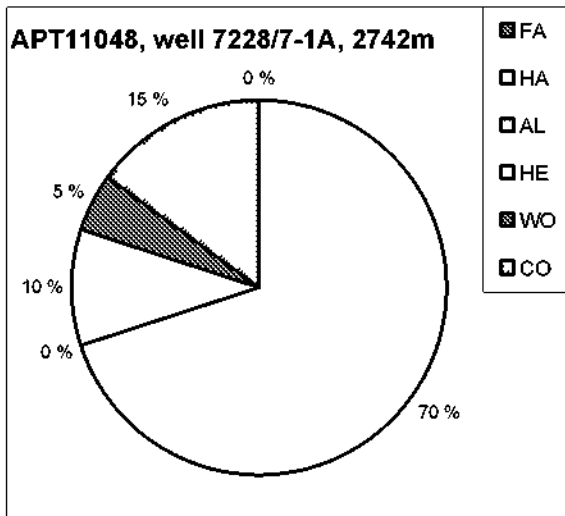
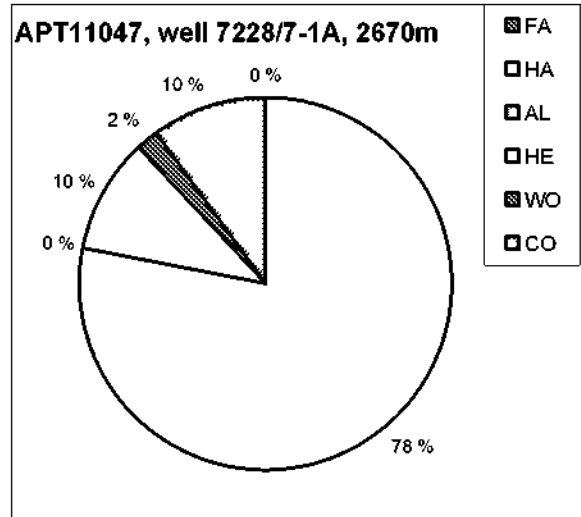
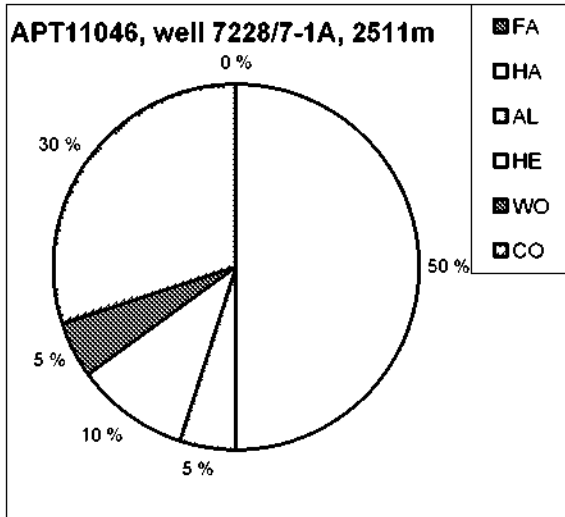


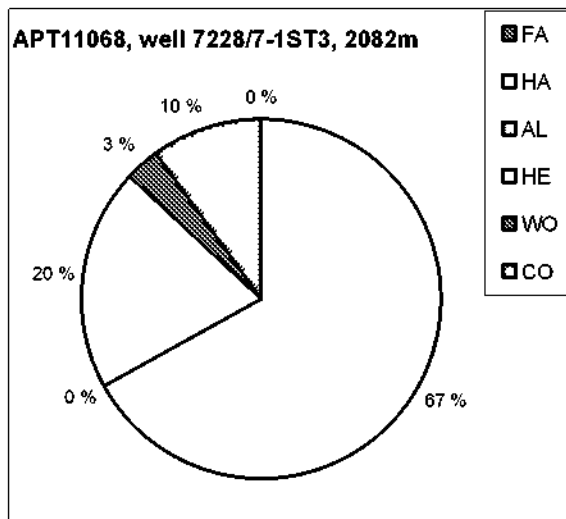
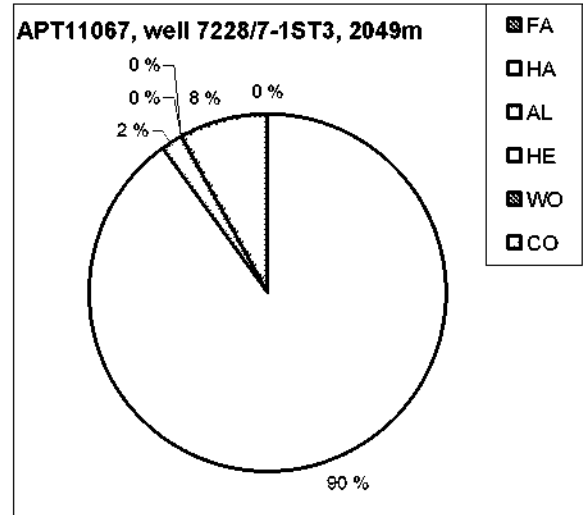
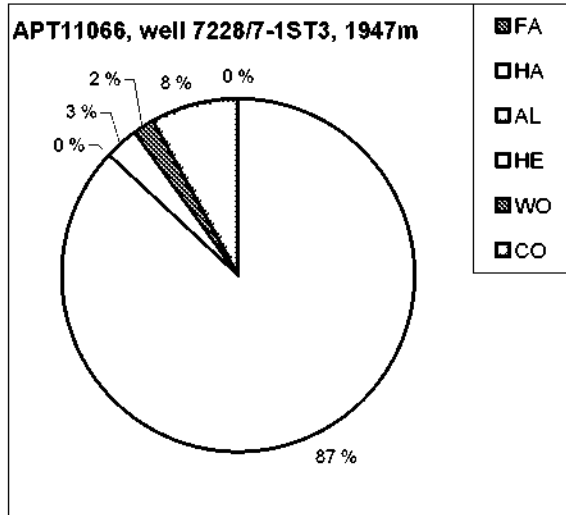




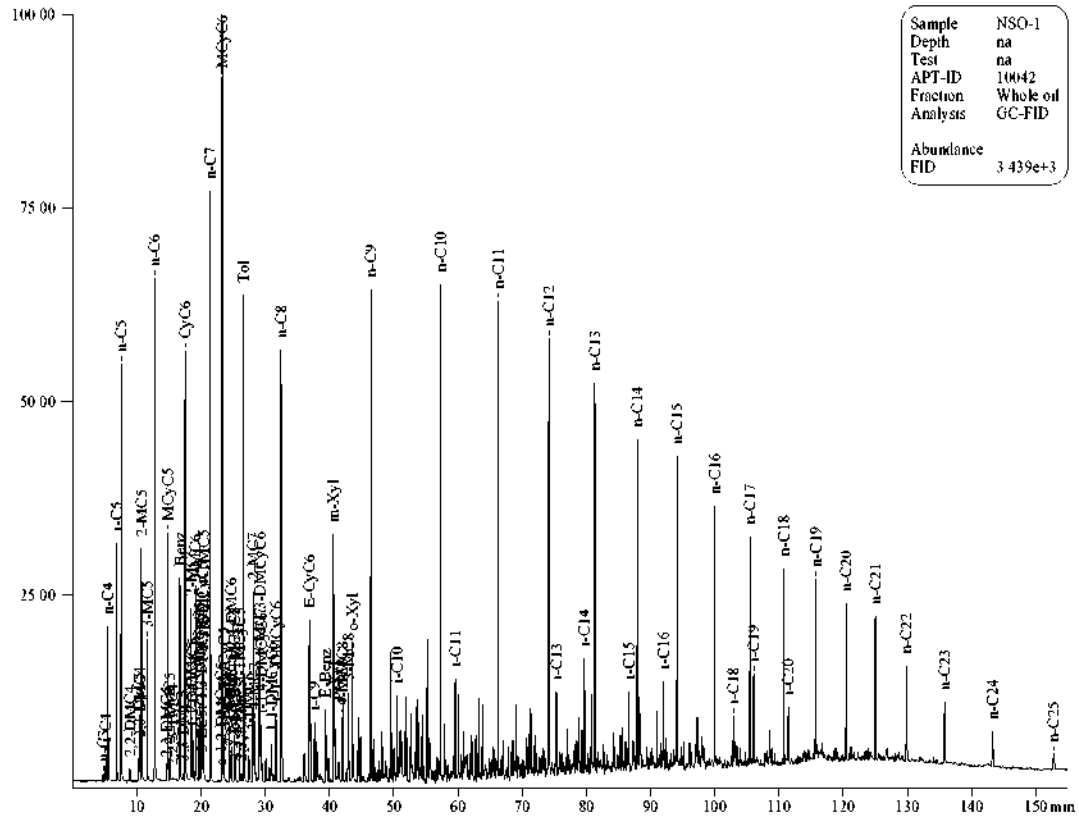




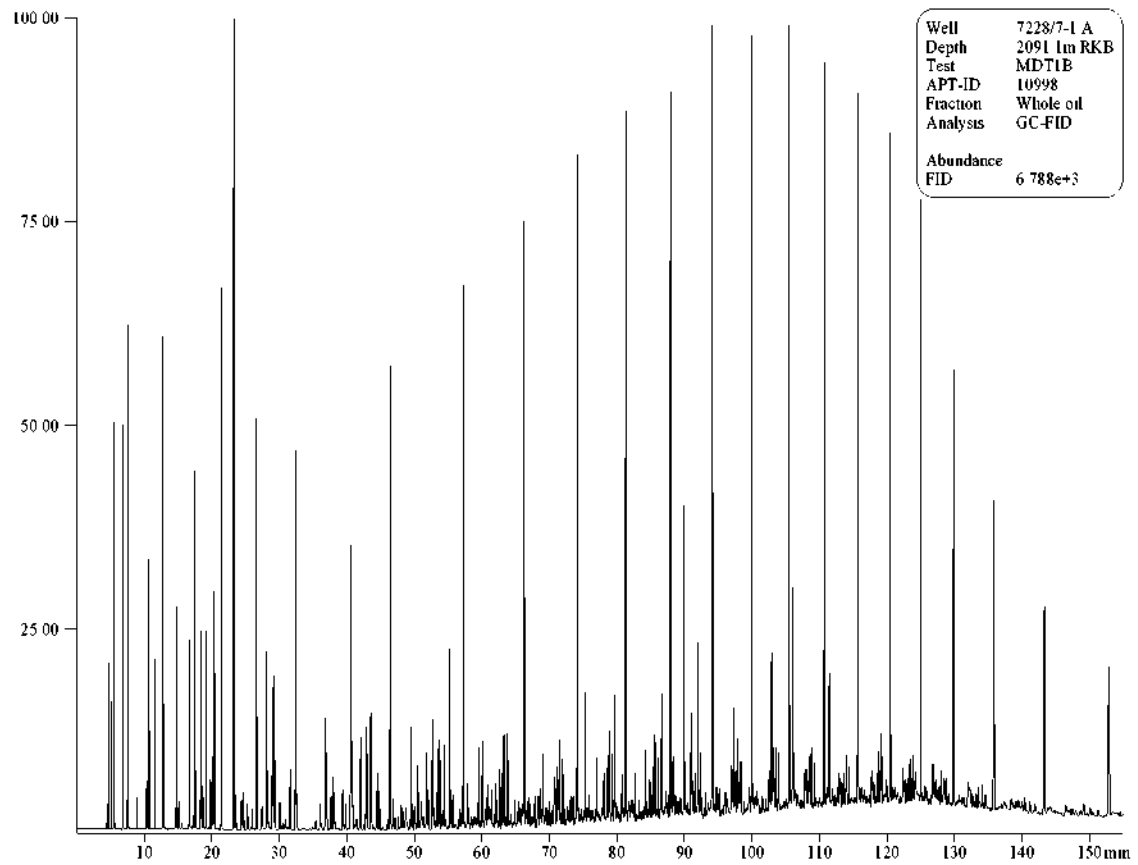




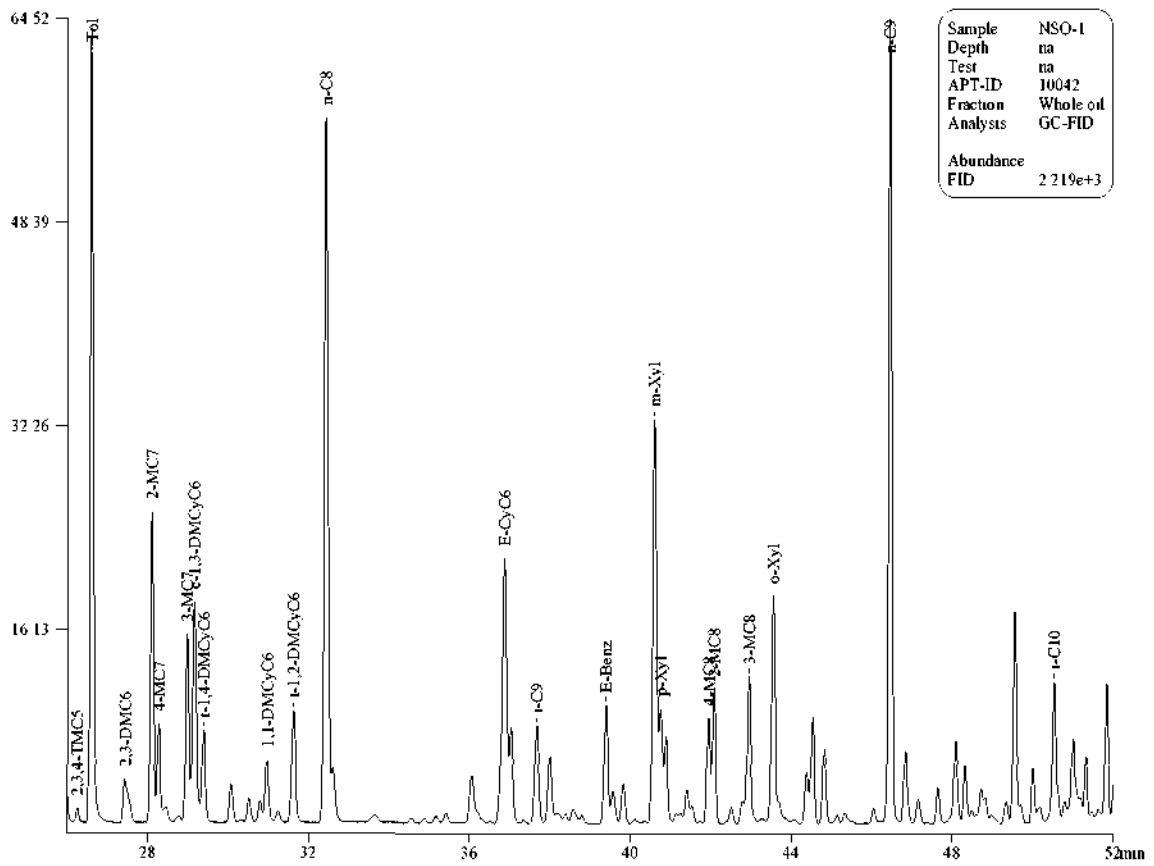
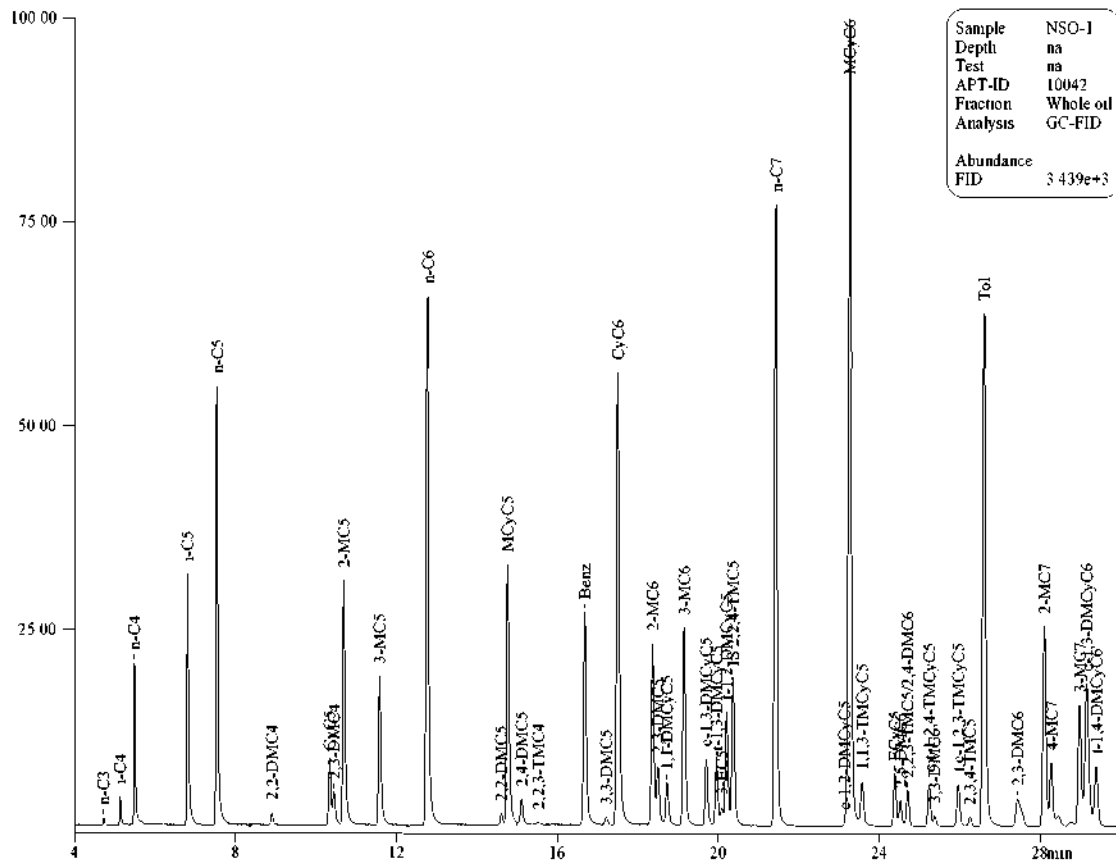
GC chromatograms of whole oil

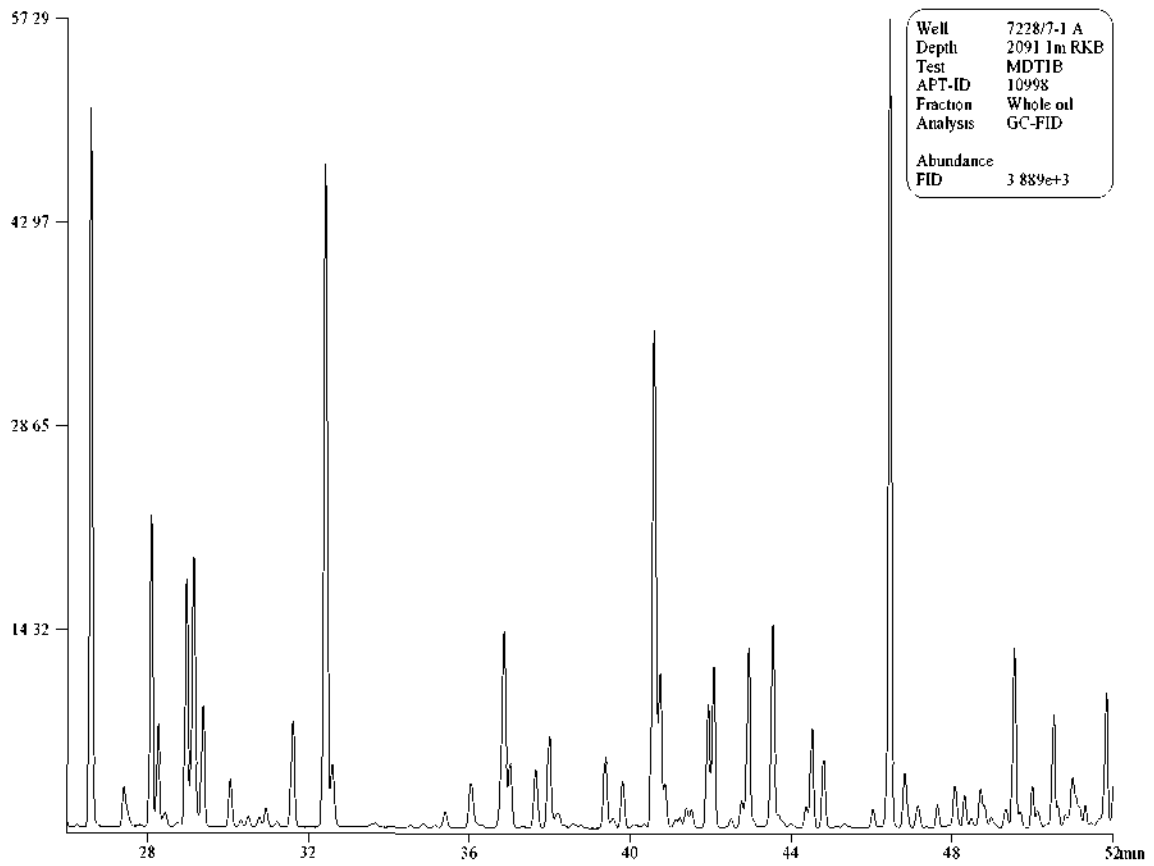
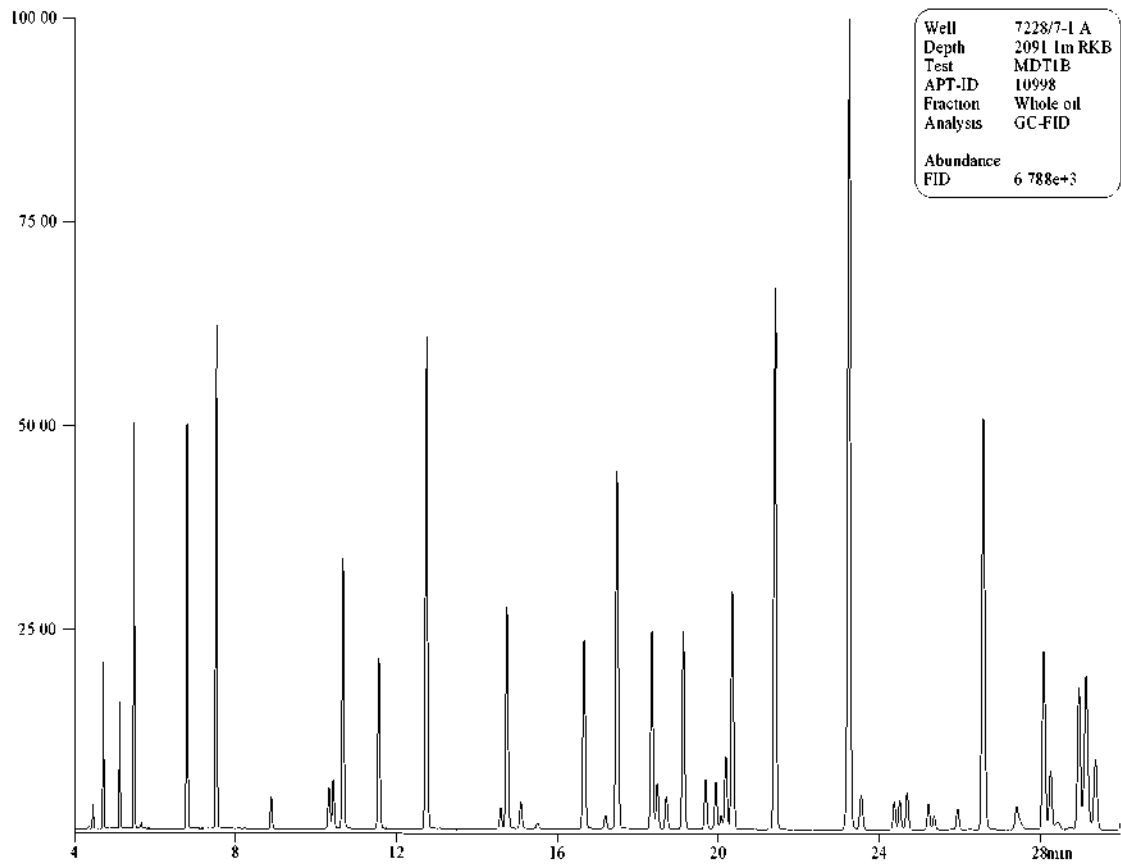


Sample	NSO-1
Depth	na
Test	na
APT-ID	10042
Fraction	Whole oil
Analysis	GC-FID
Abundance	
FID	3.439e+3

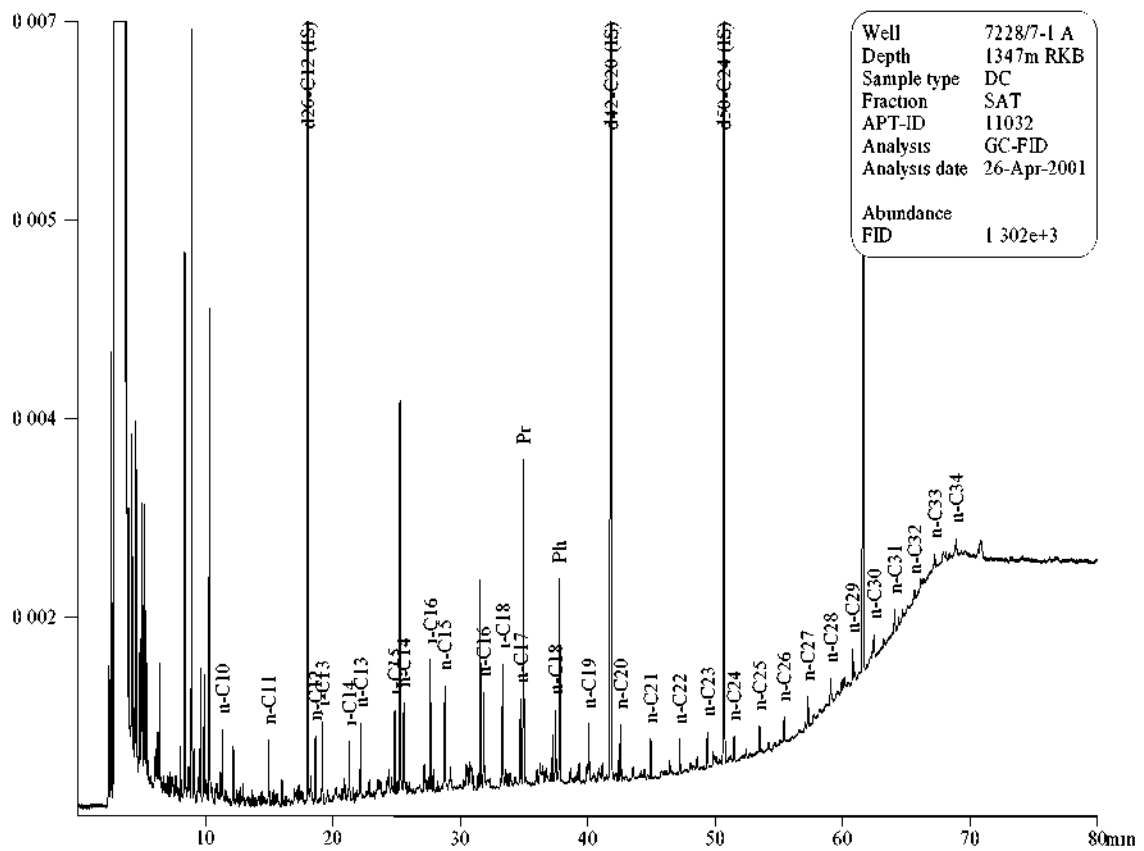
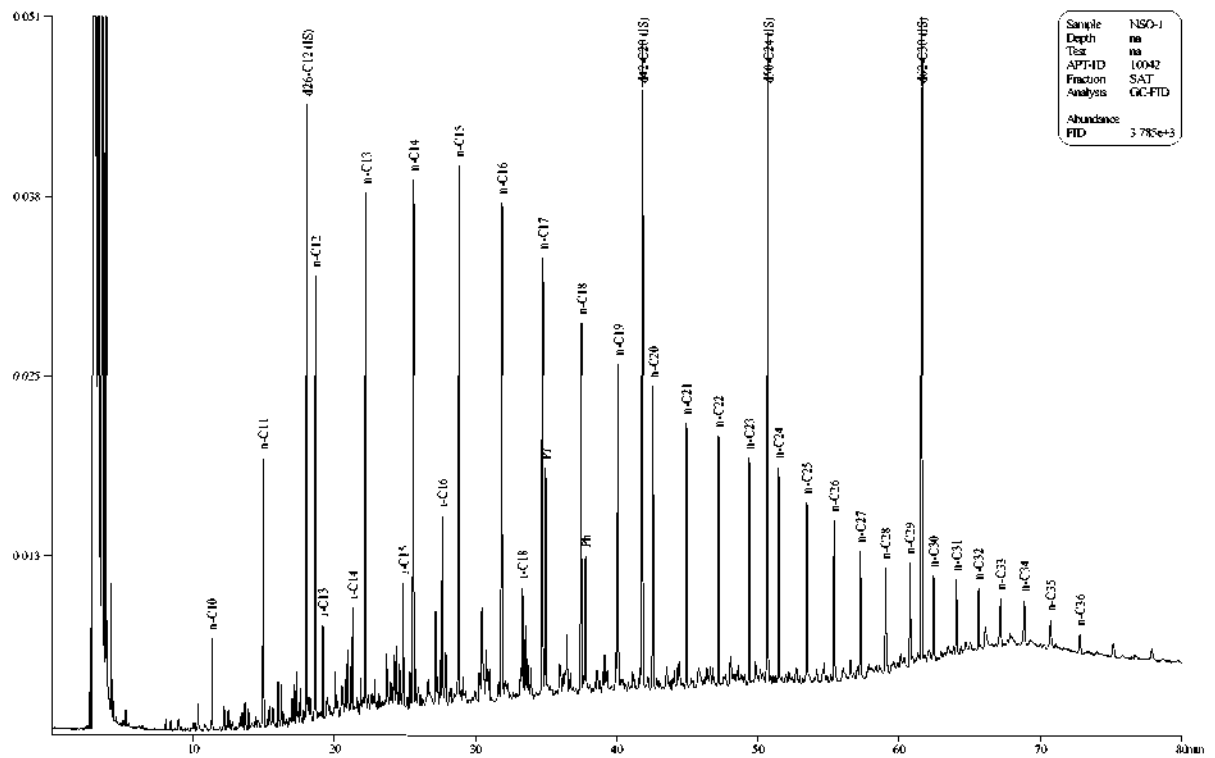


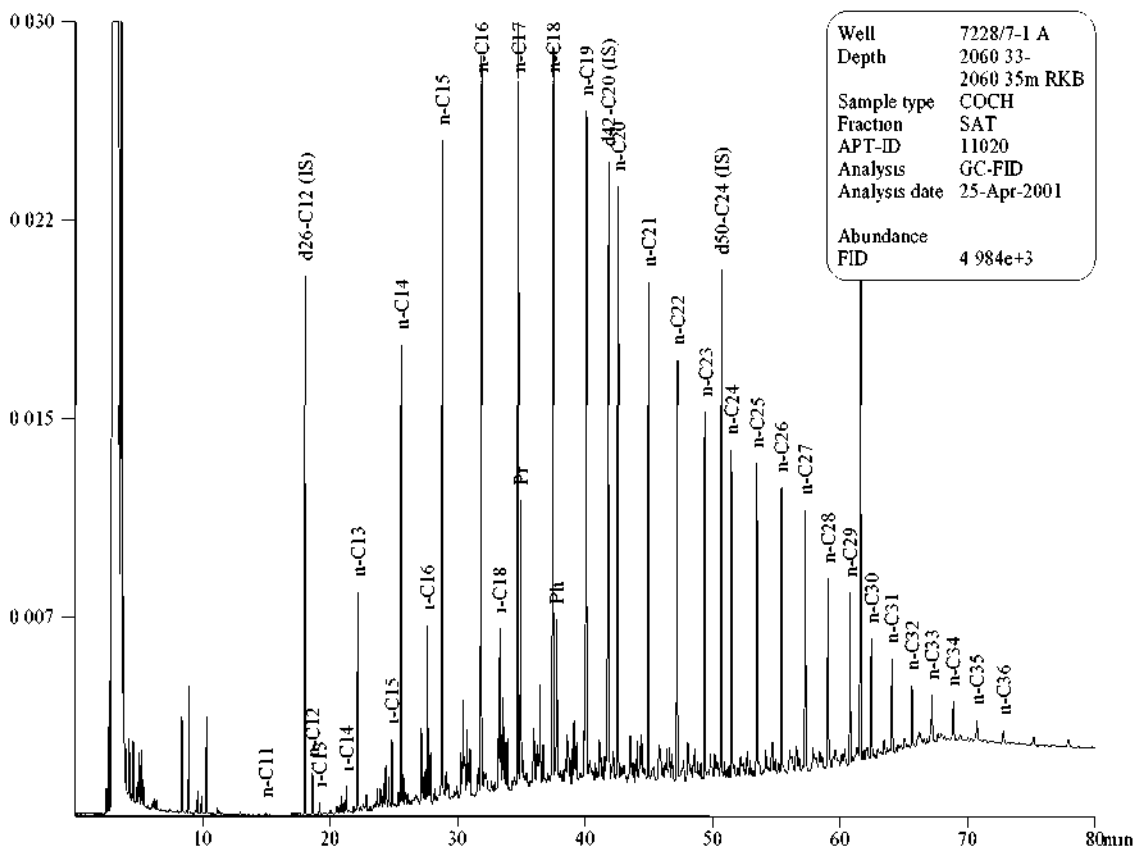
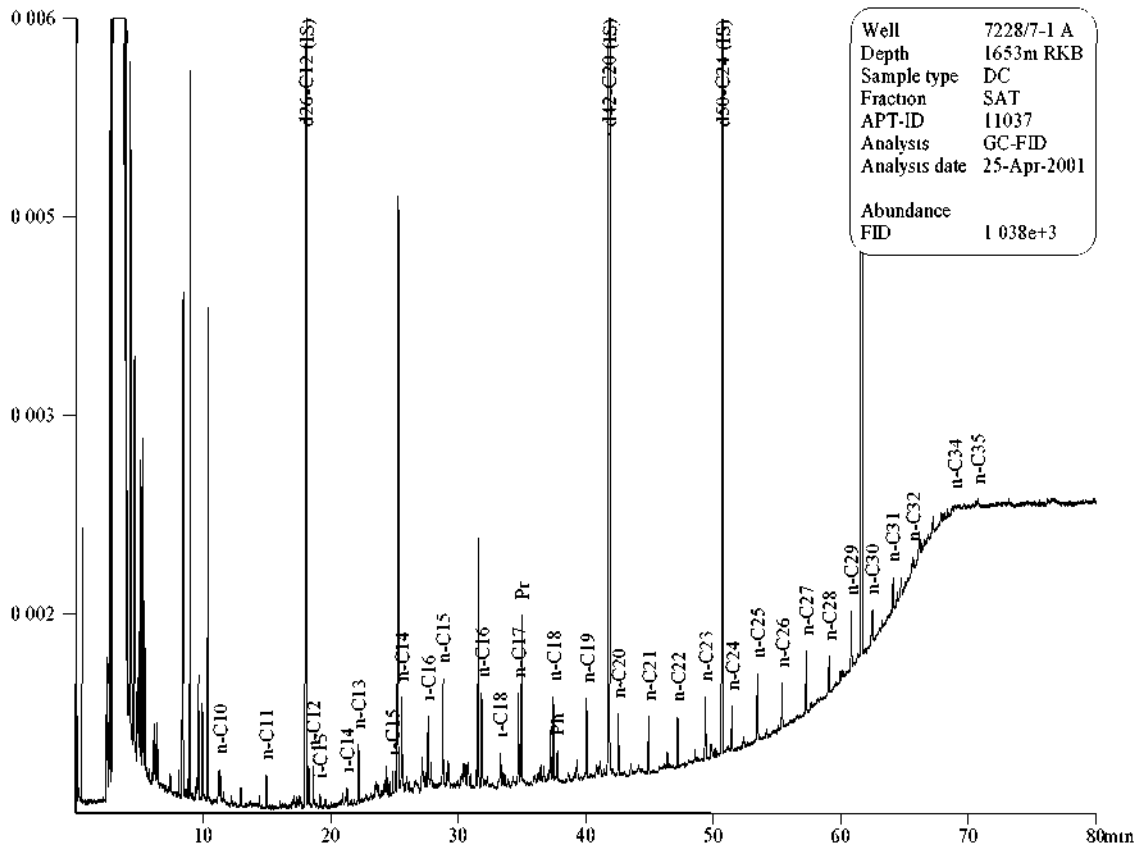
Well	7228/7-1 A
Depth	2091 tm RKB
Test	MDT1B
APT-ID	10998
Fraction	Whole oil
Analysis	GC-FID
Abundance	
FID	6.788e+3

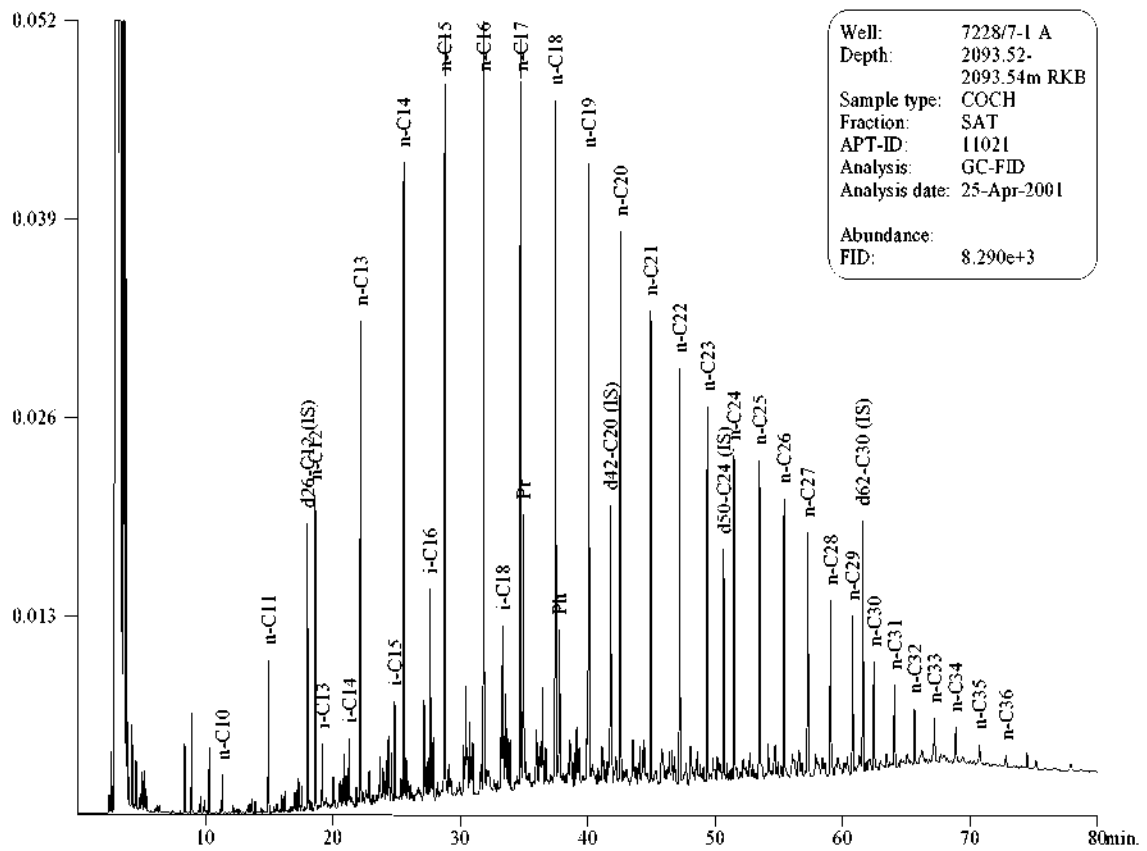
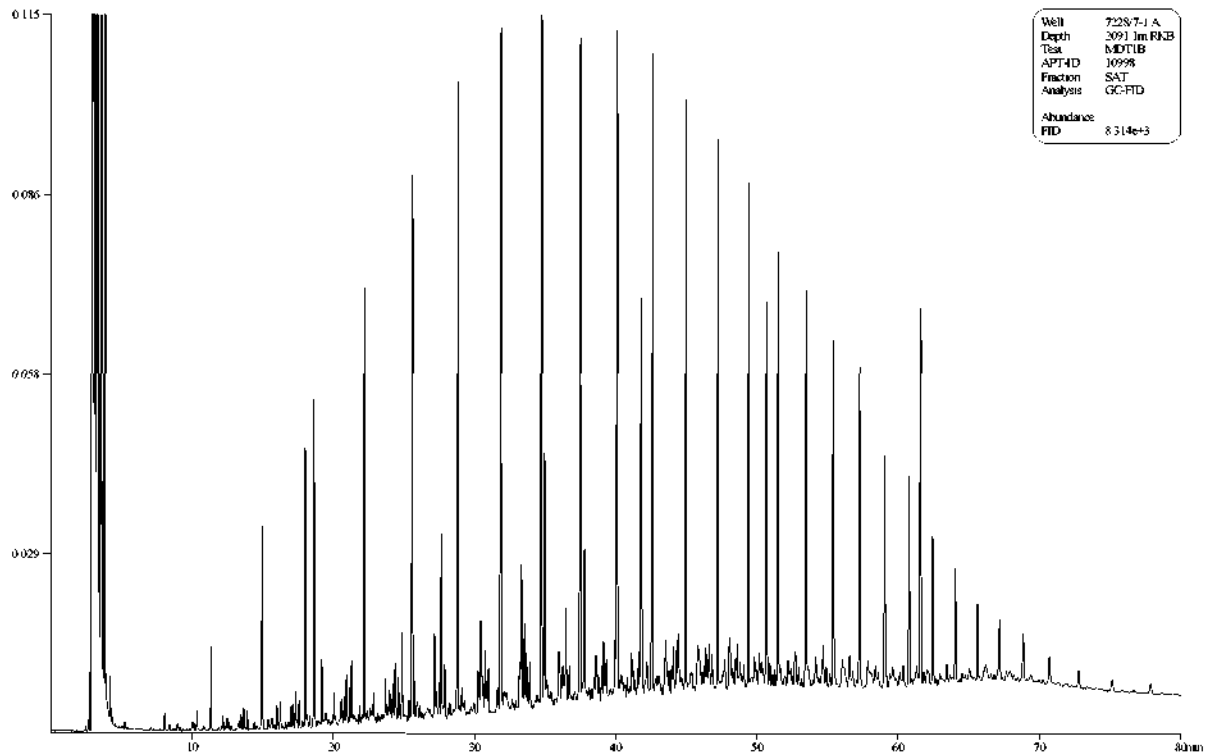


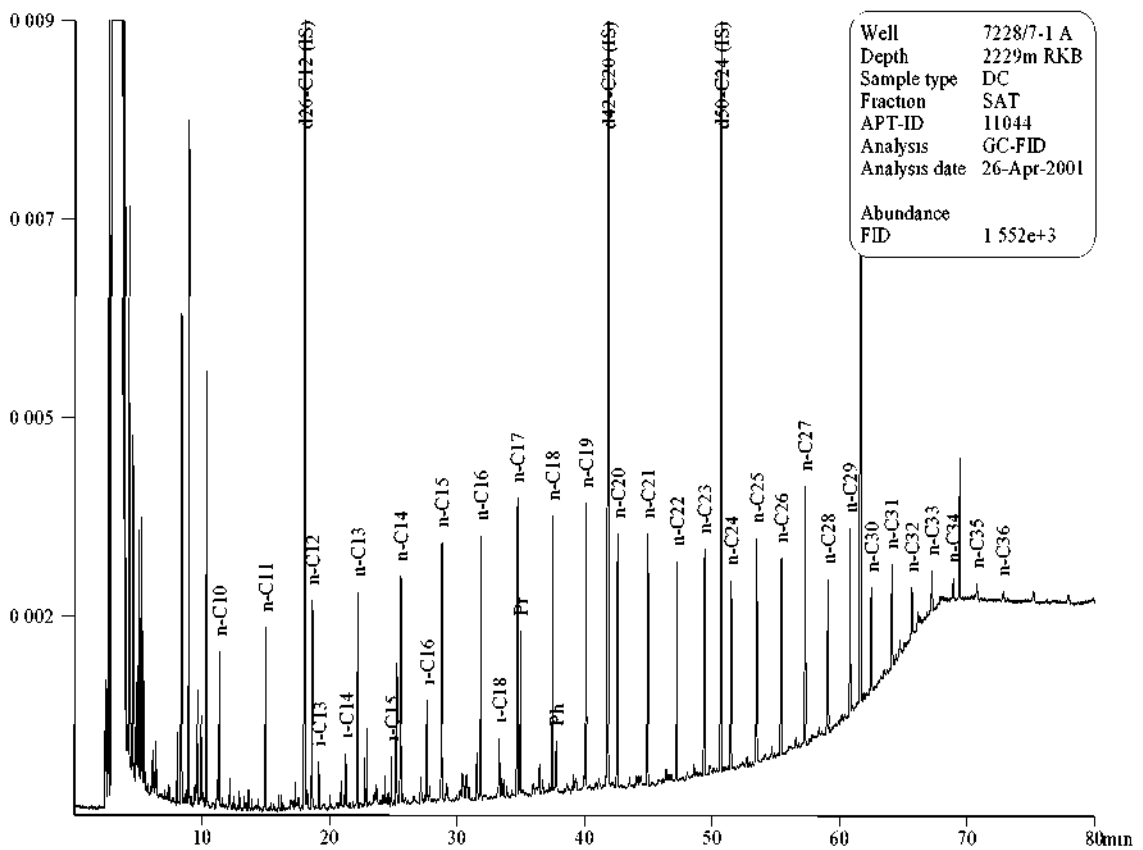
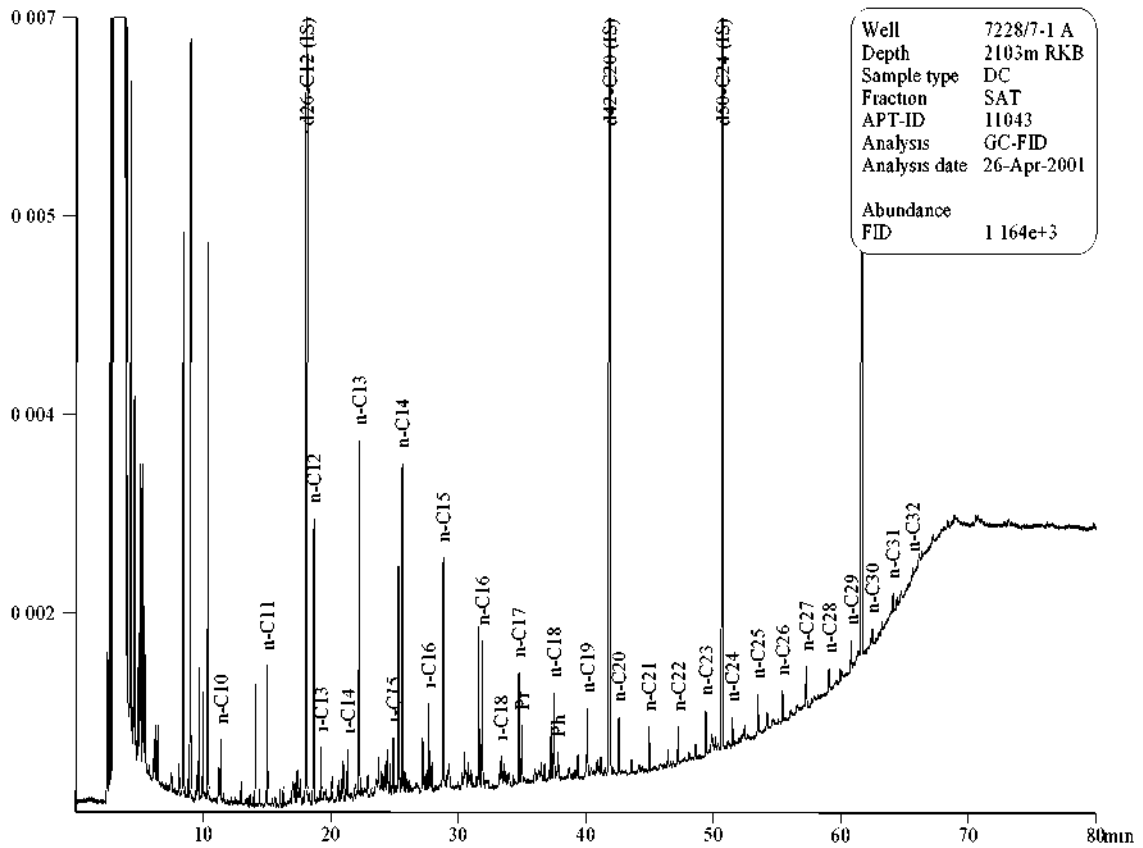


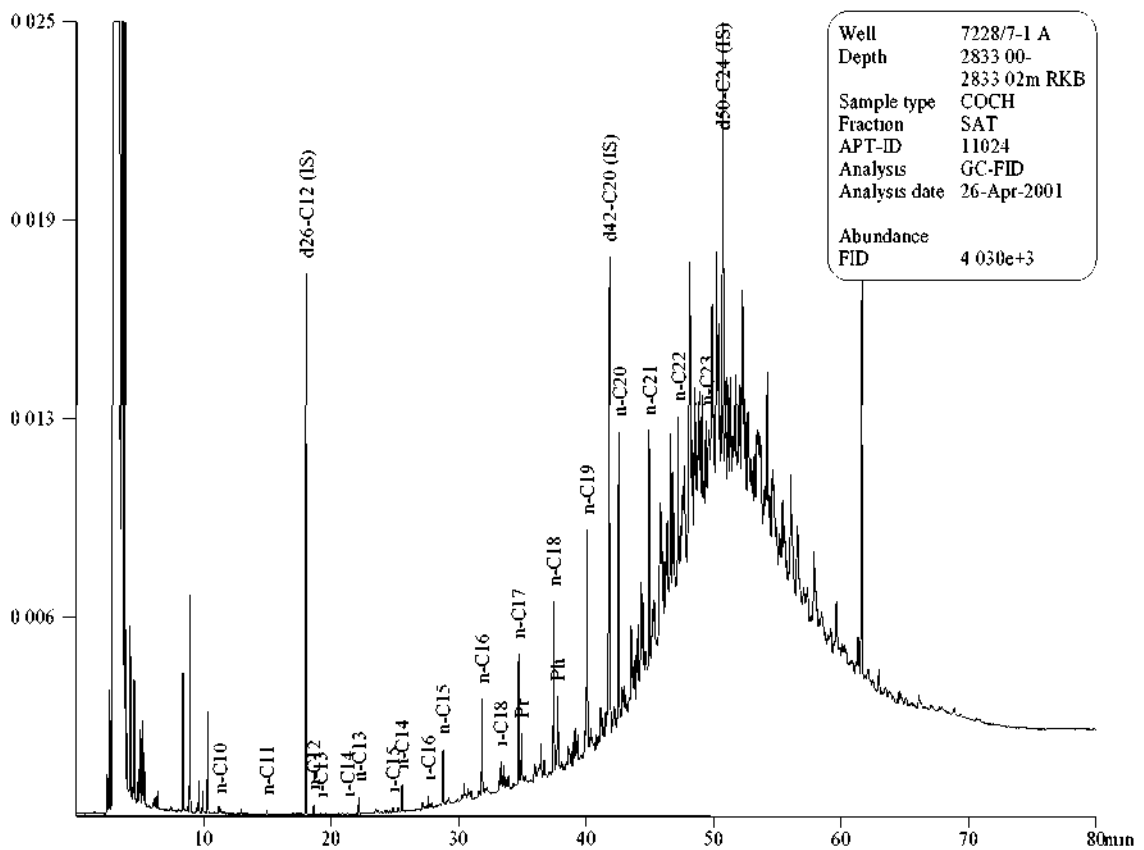
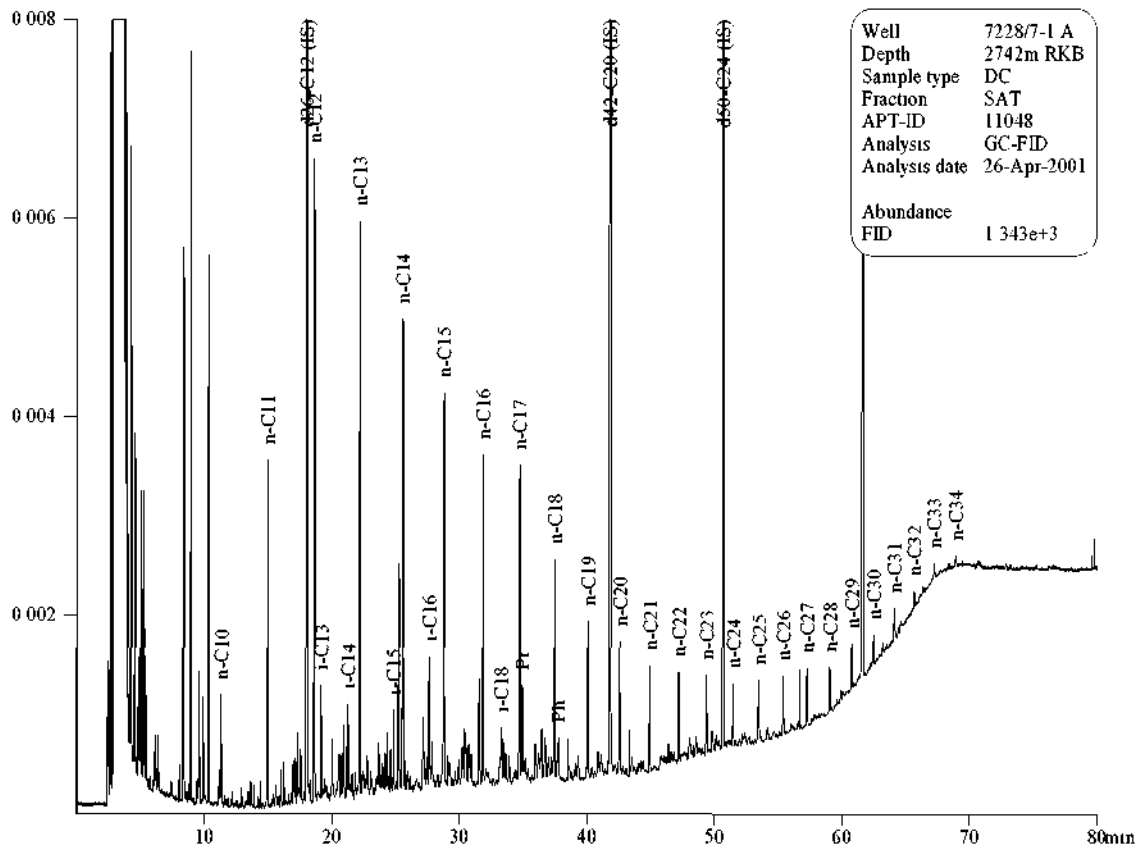
GC chromatograms of Saturated fraction

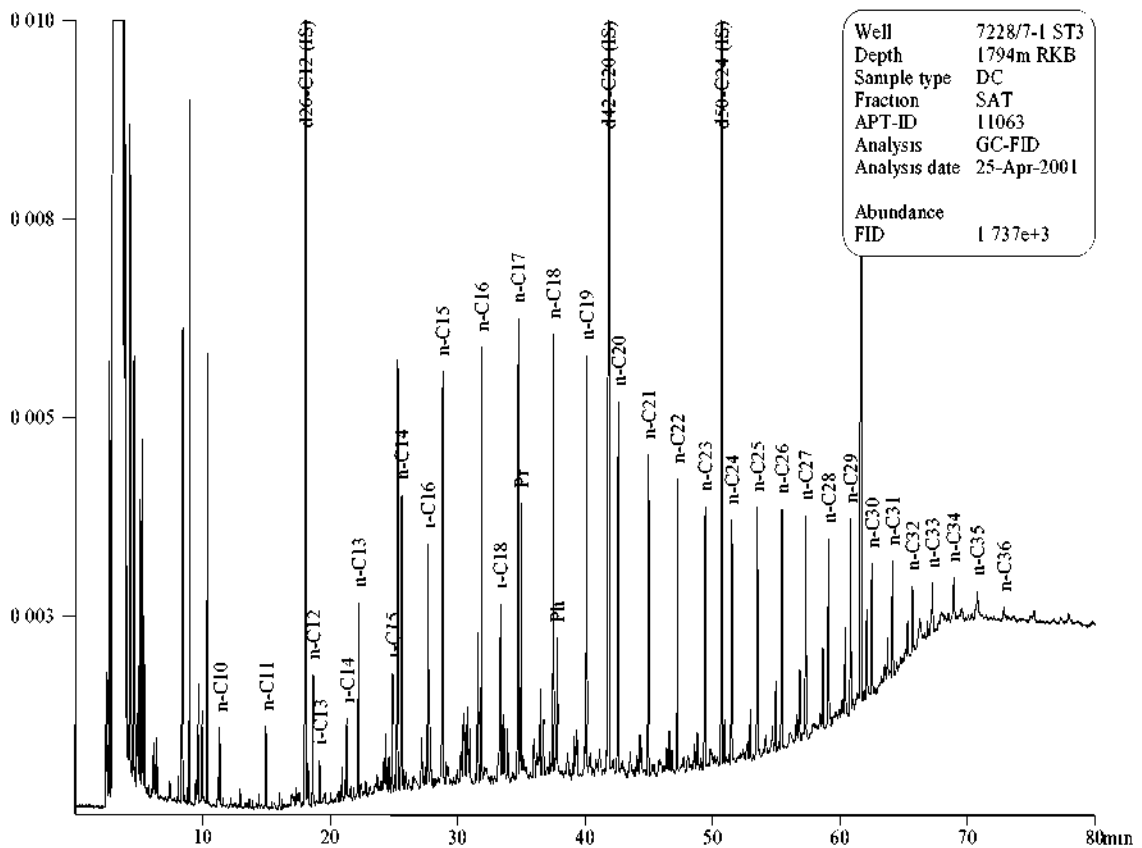
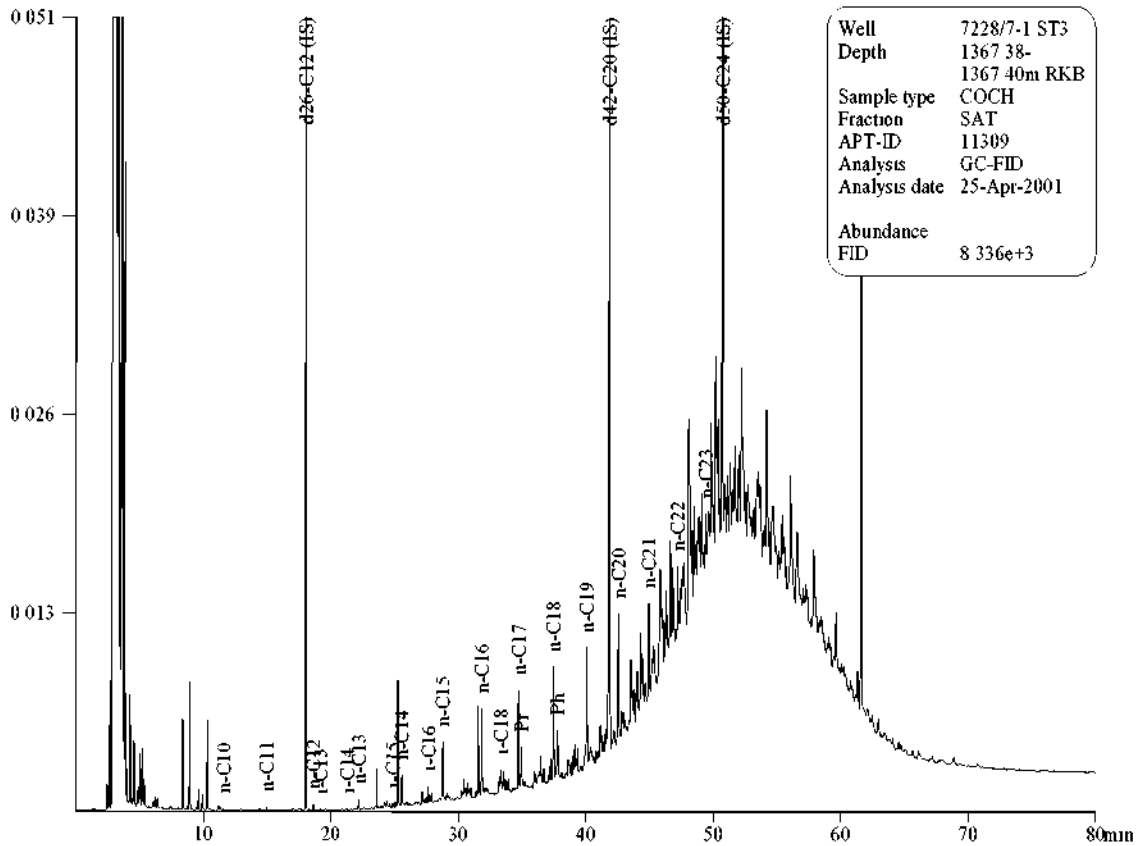




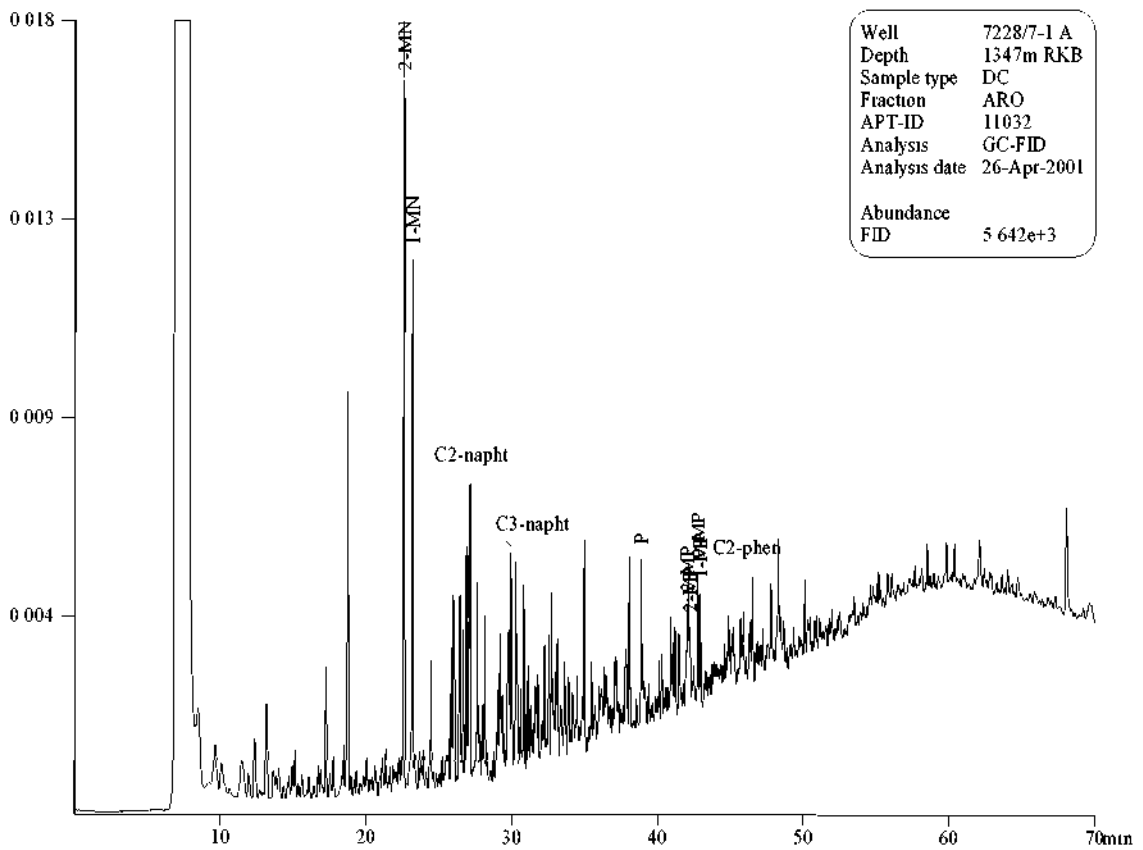
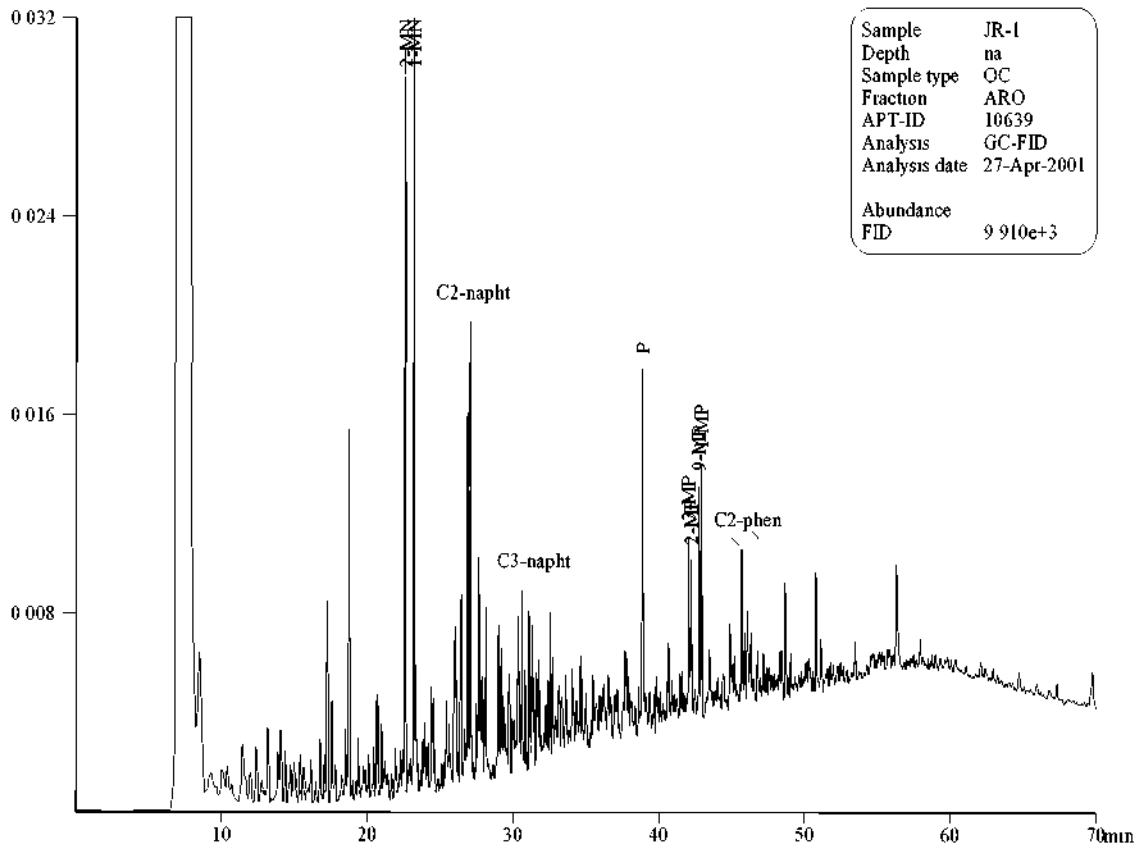


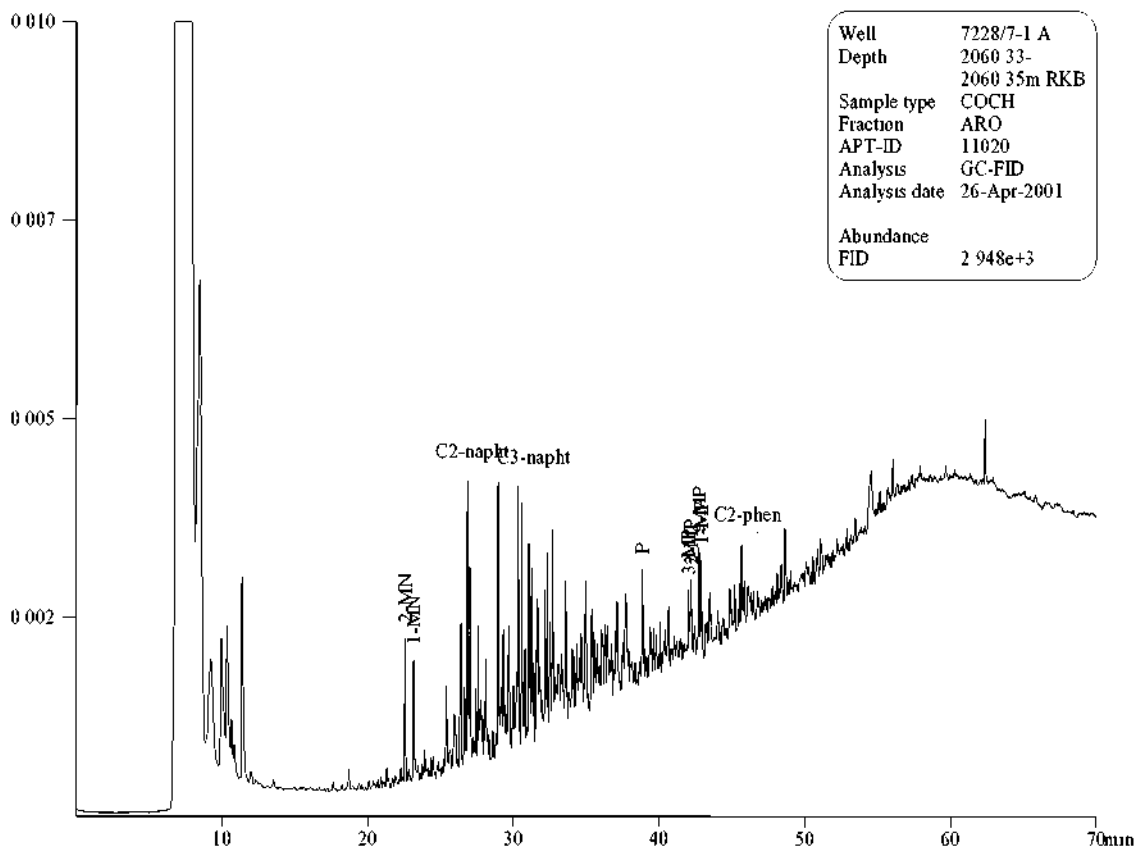
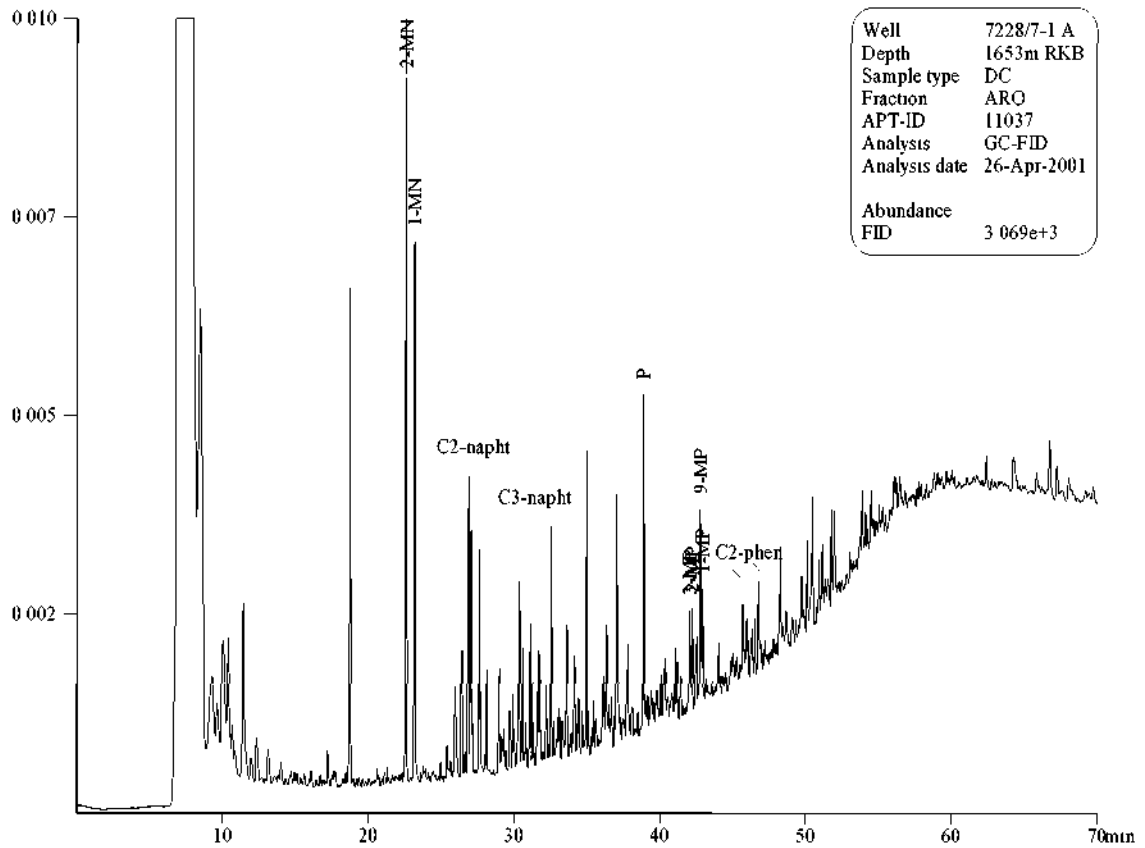


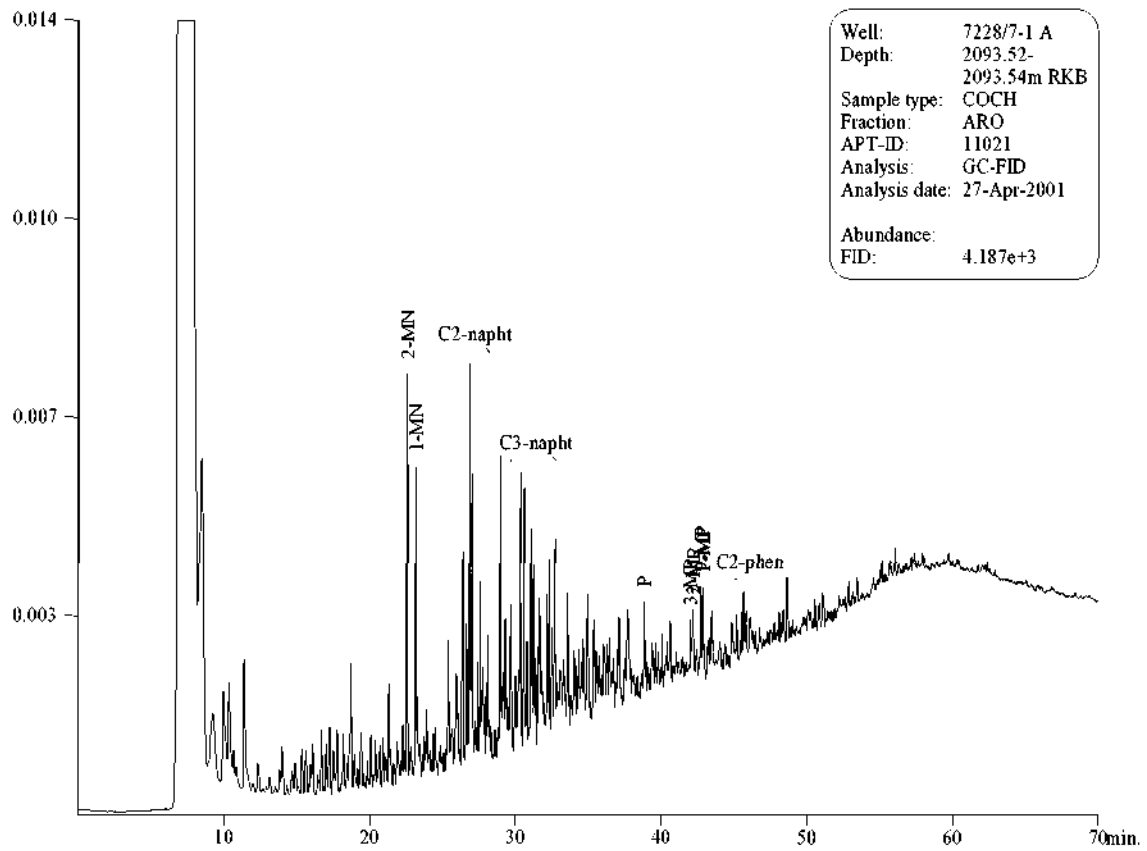
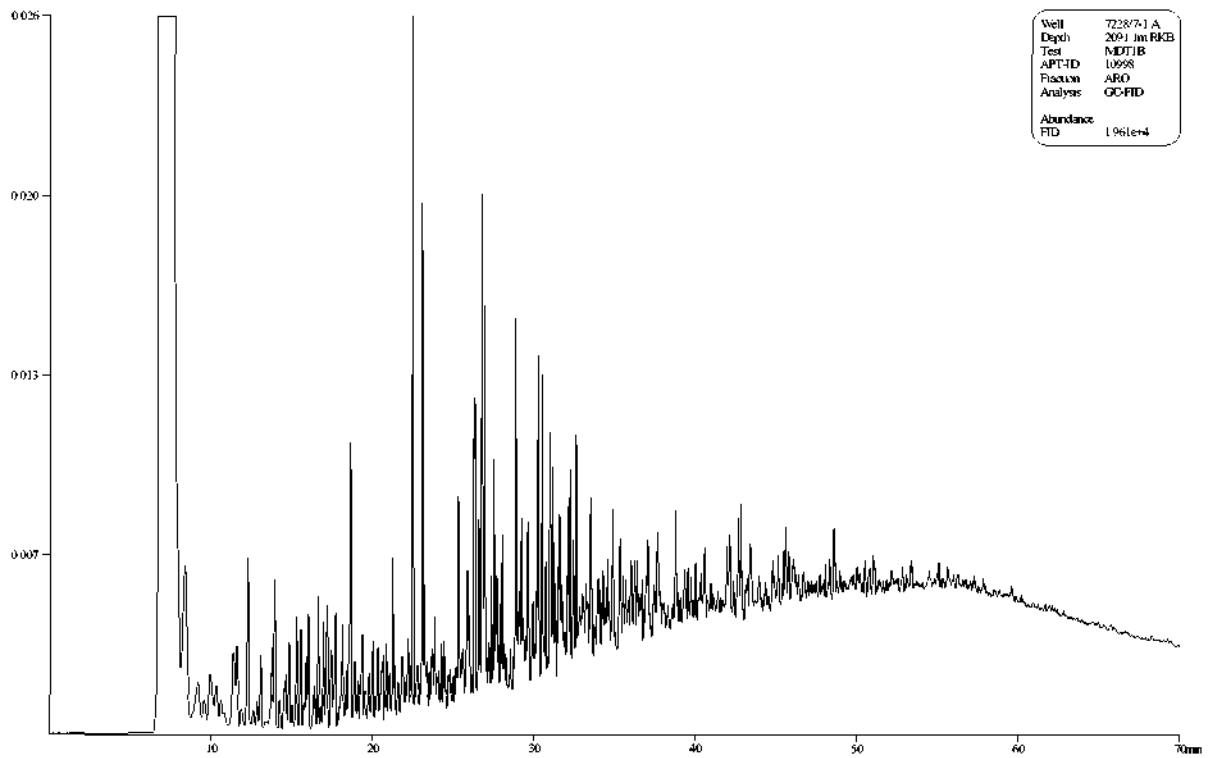


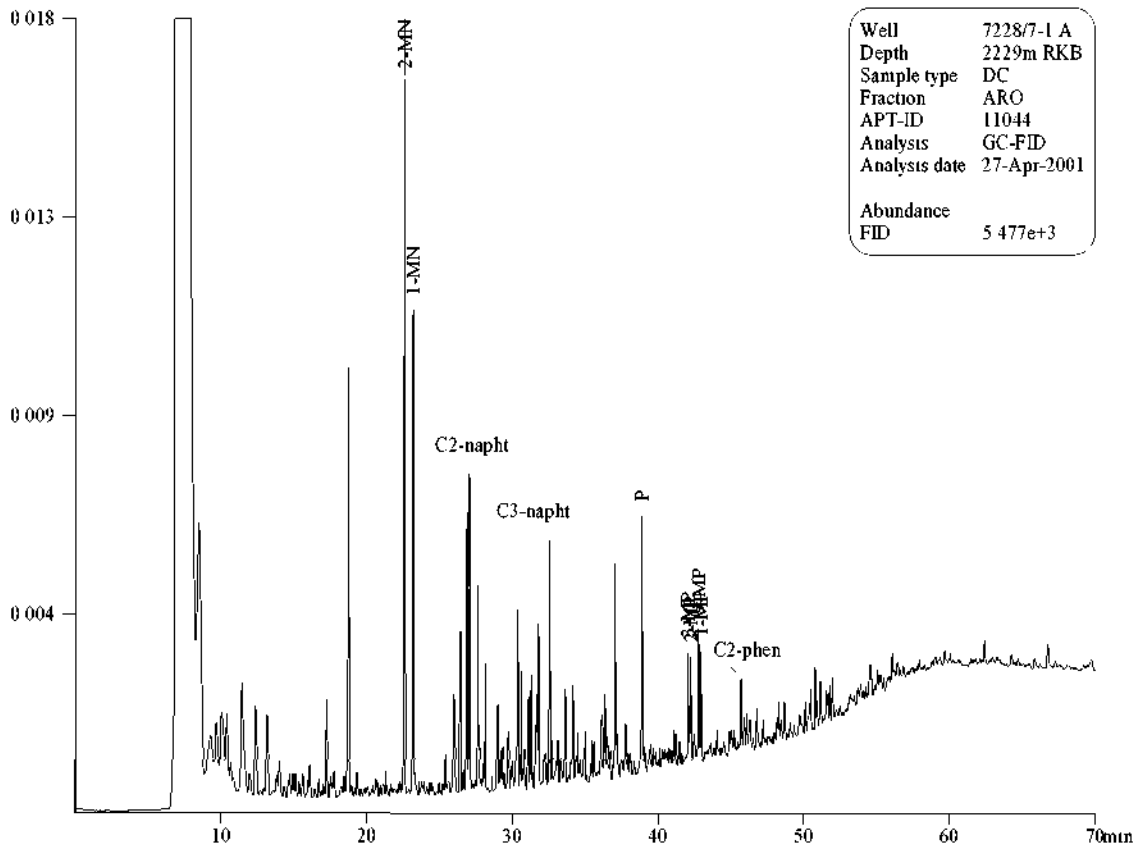
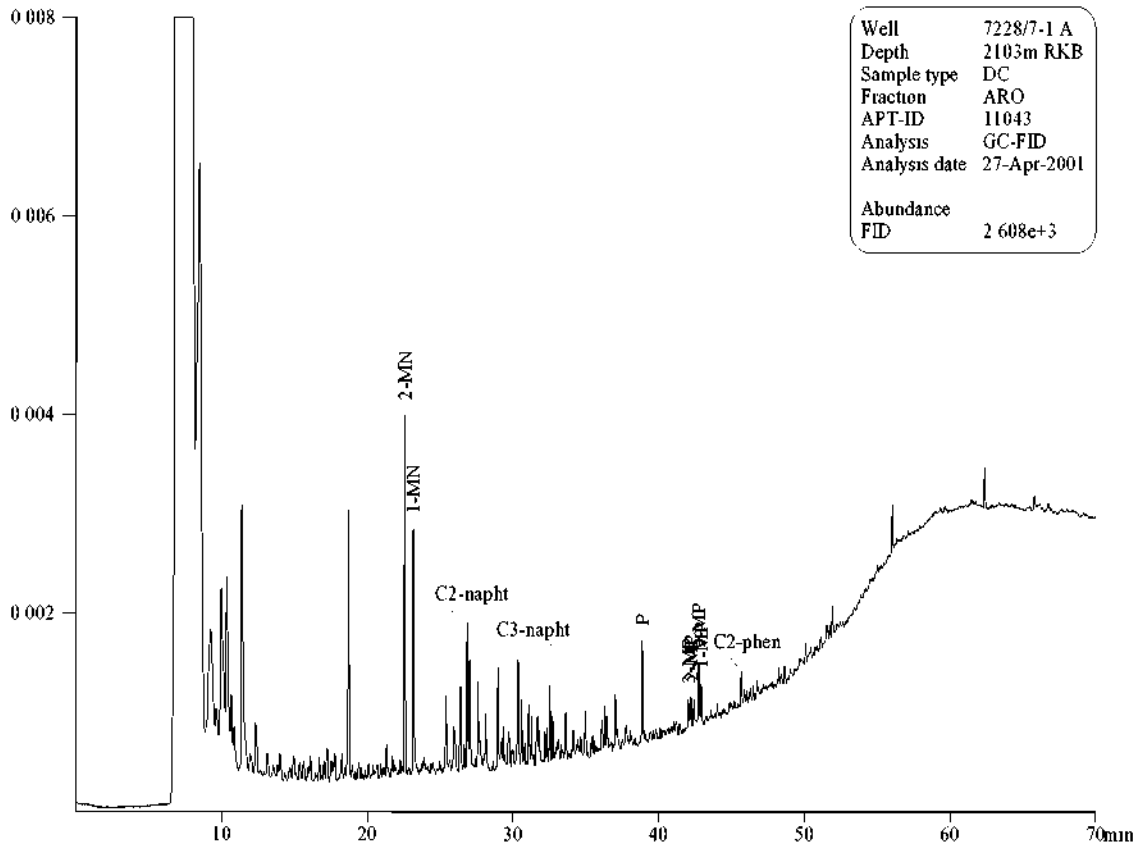


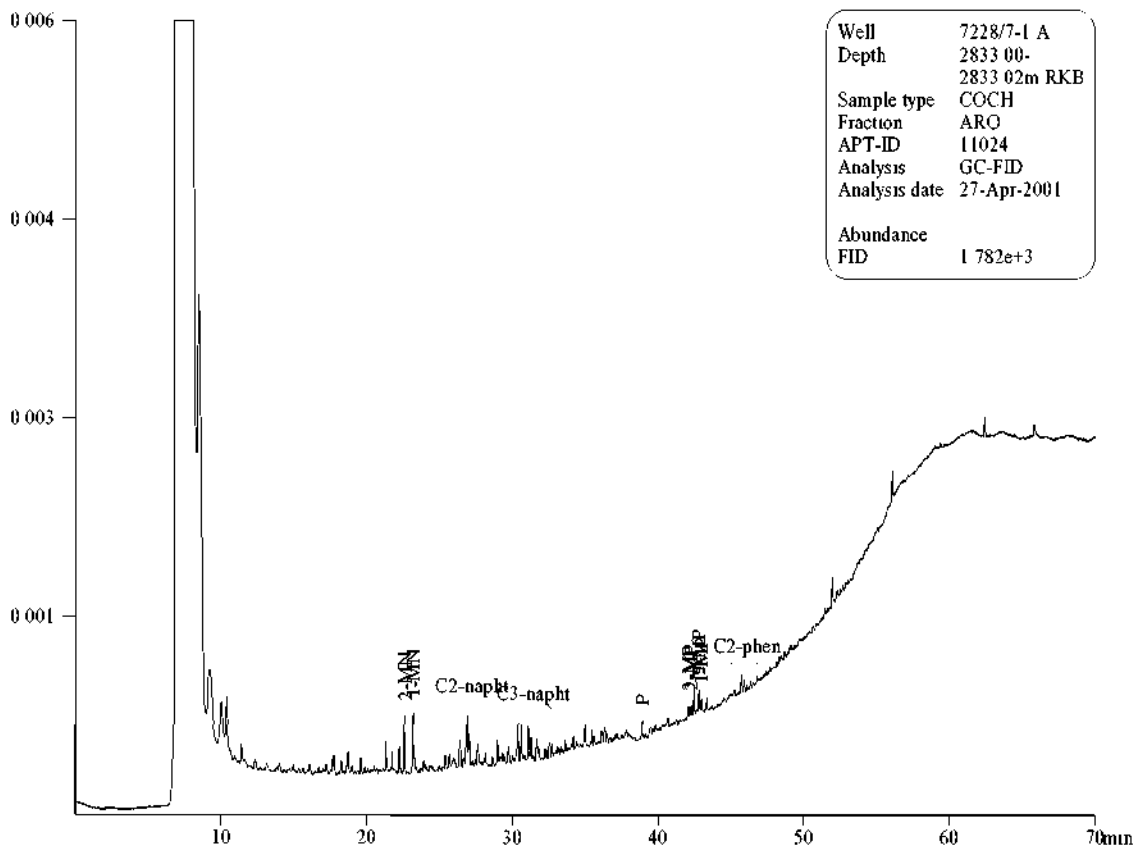
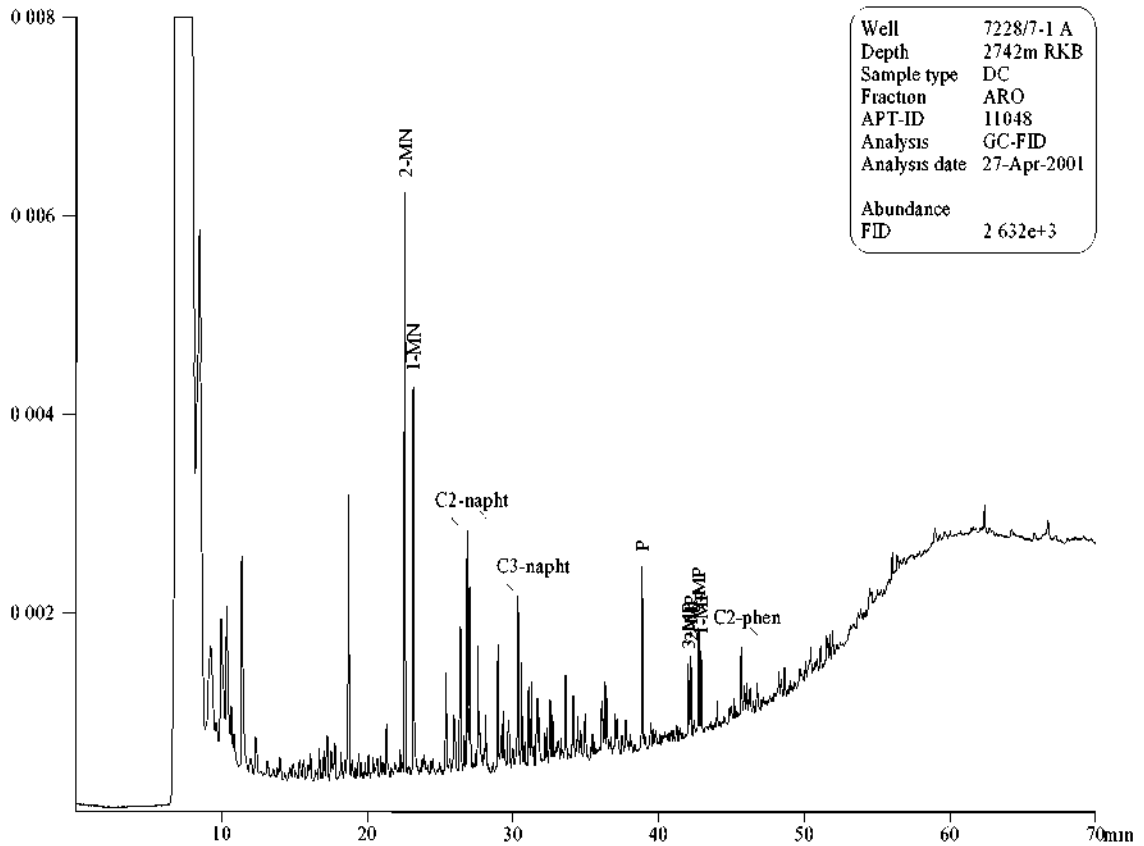
GC chromatograms of Aromatic fraction

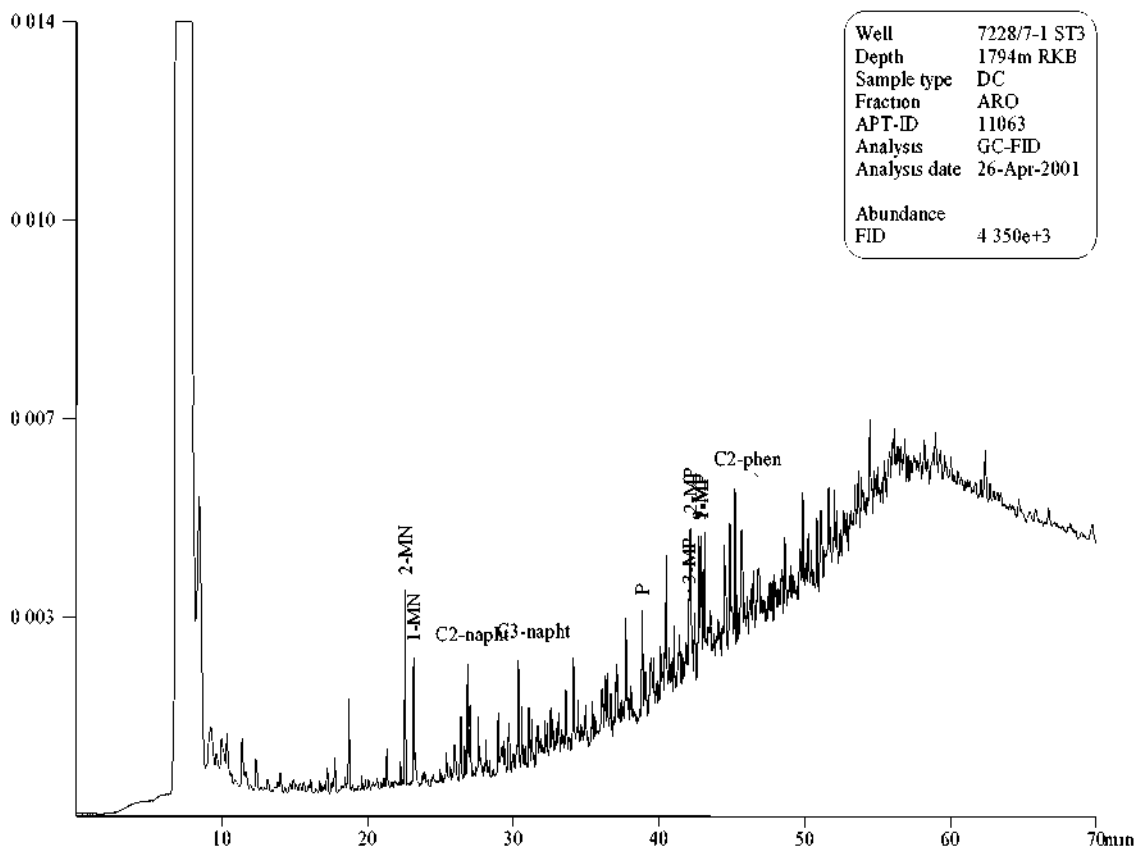
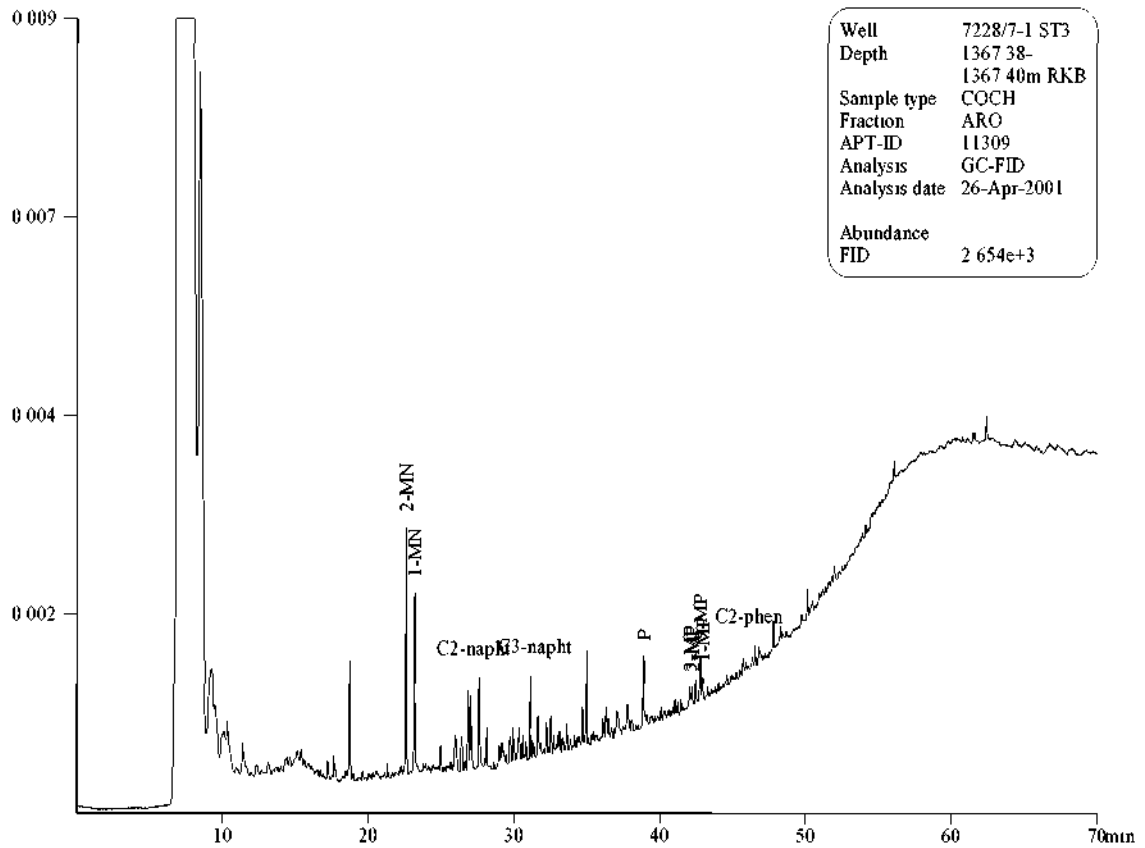






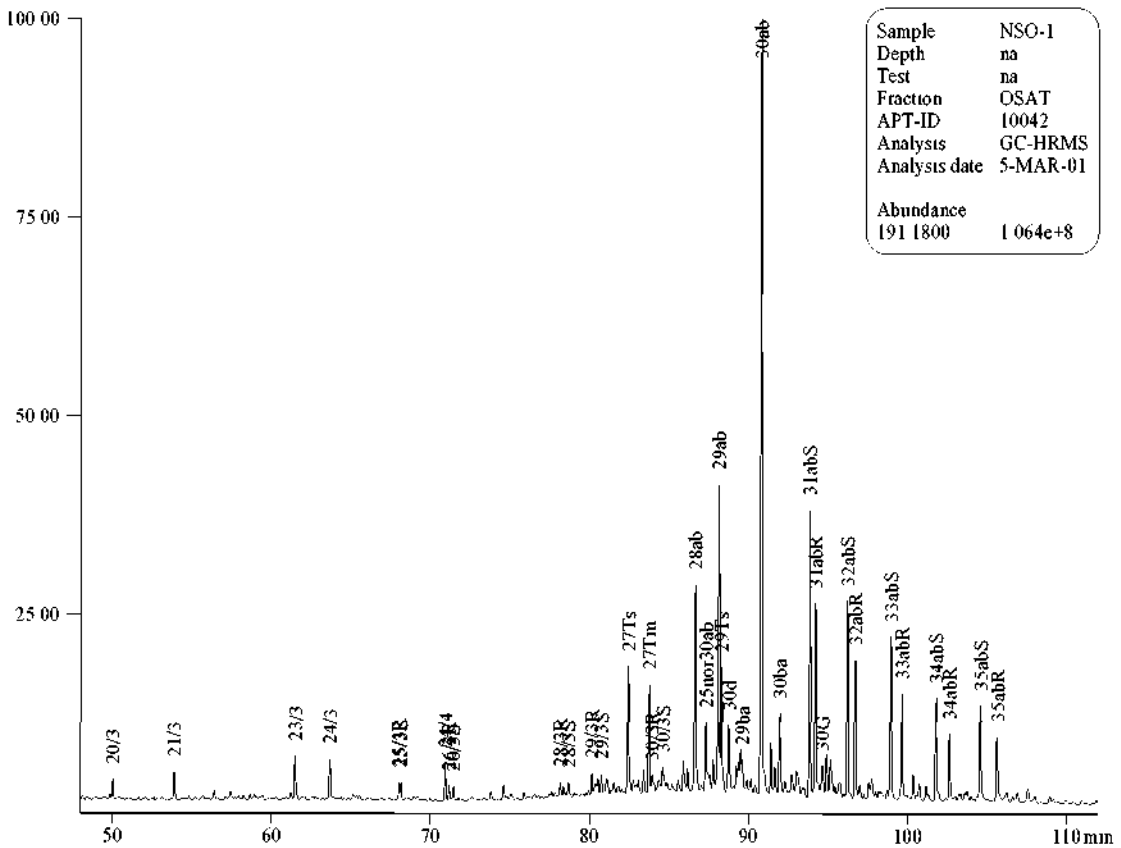
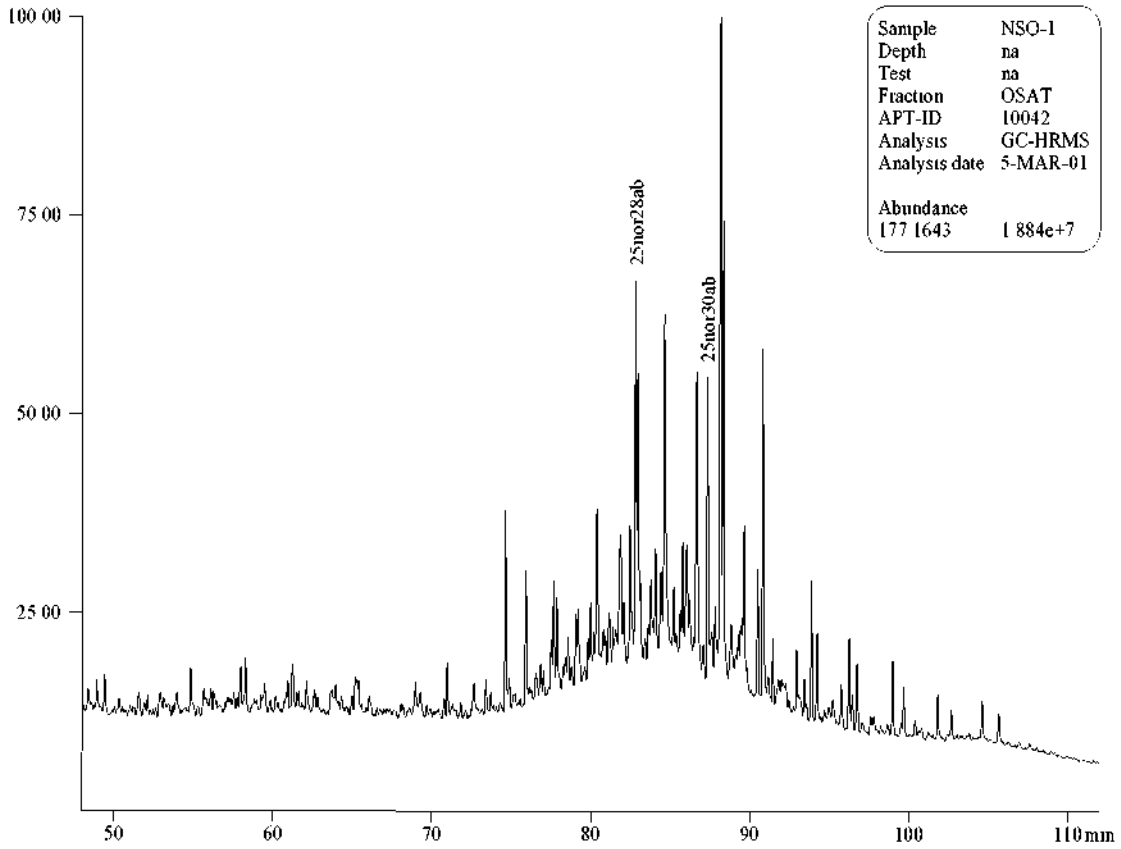


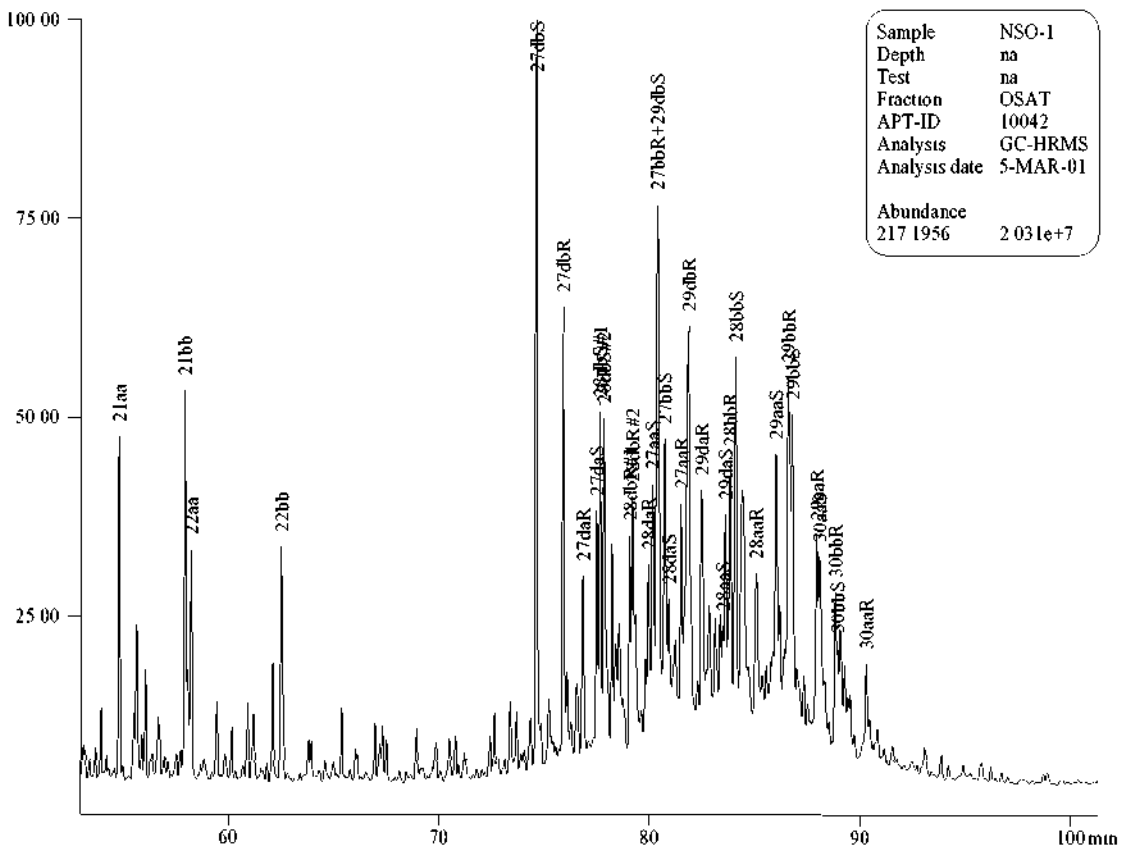
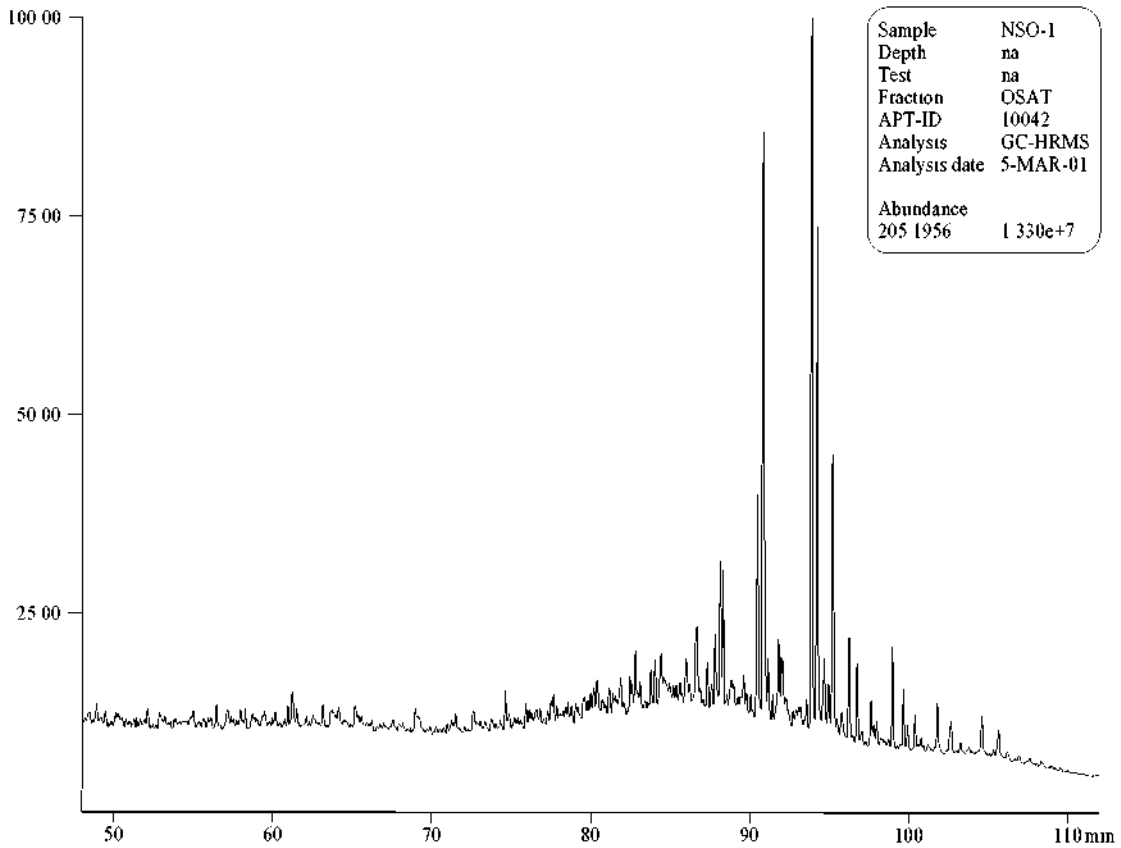


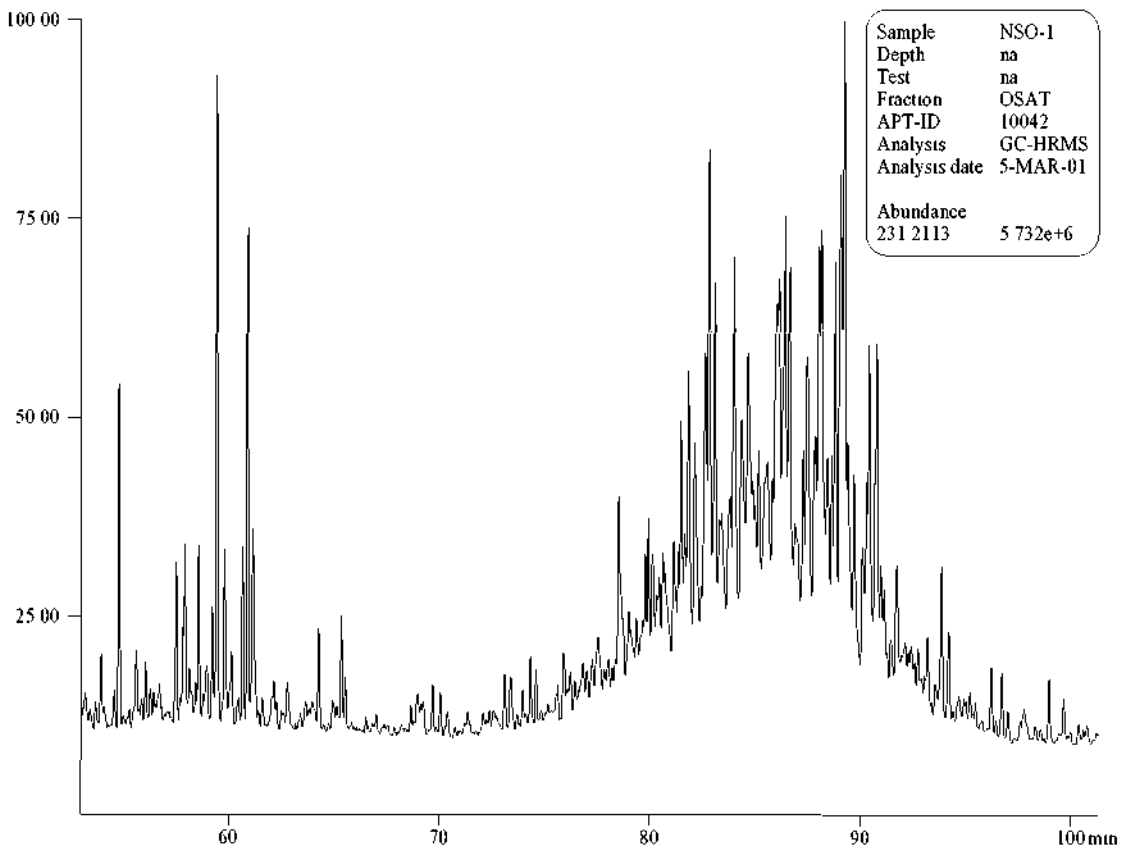
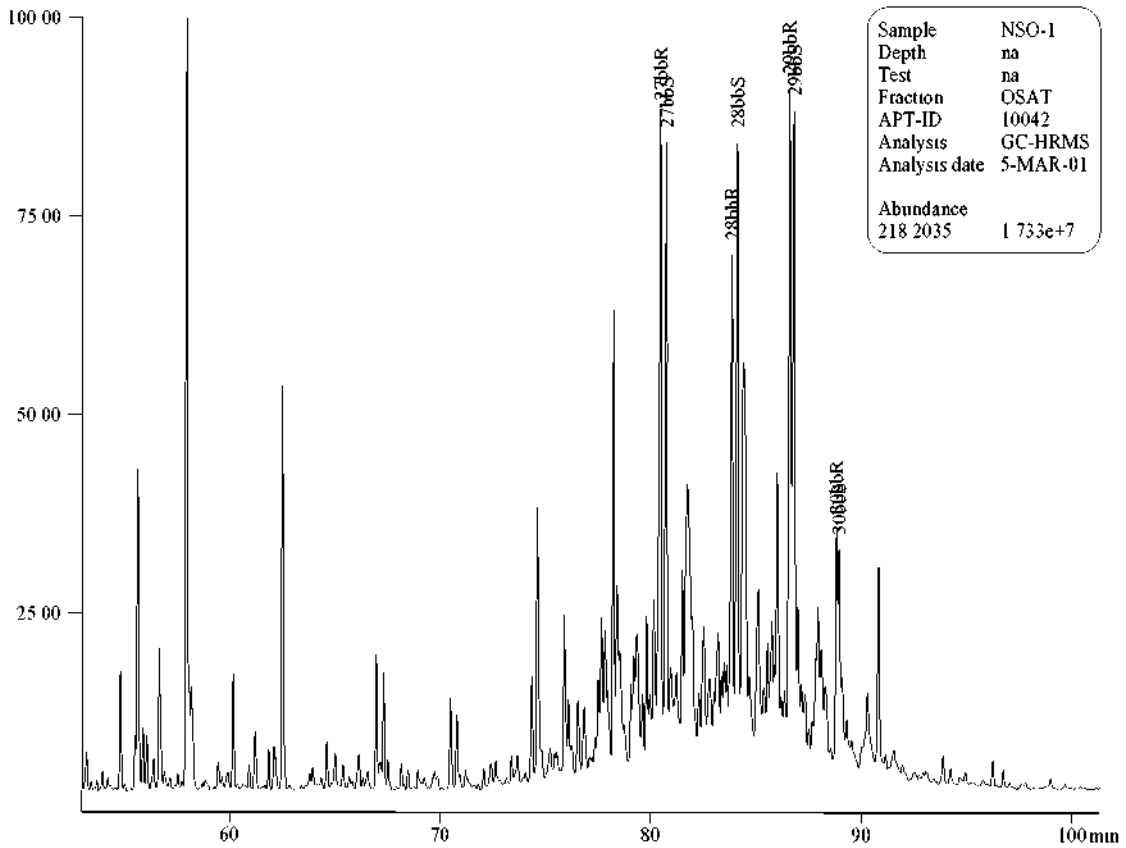


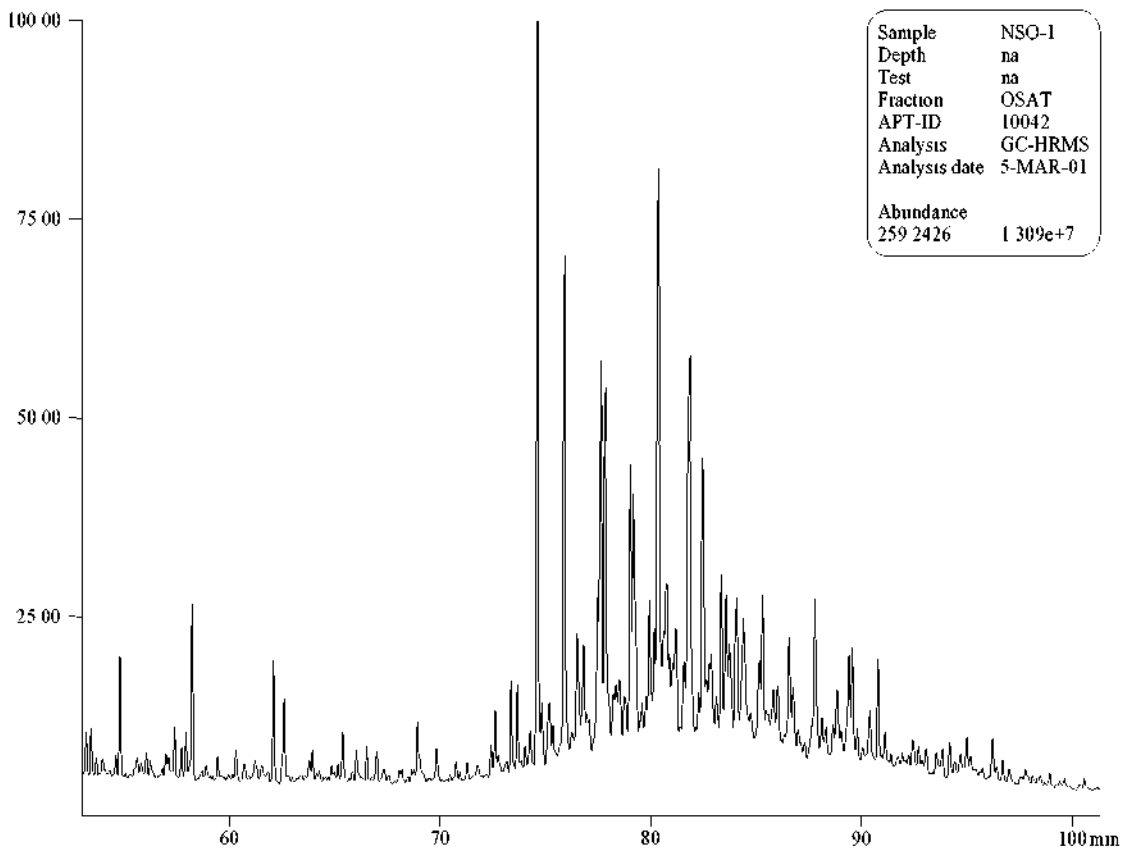
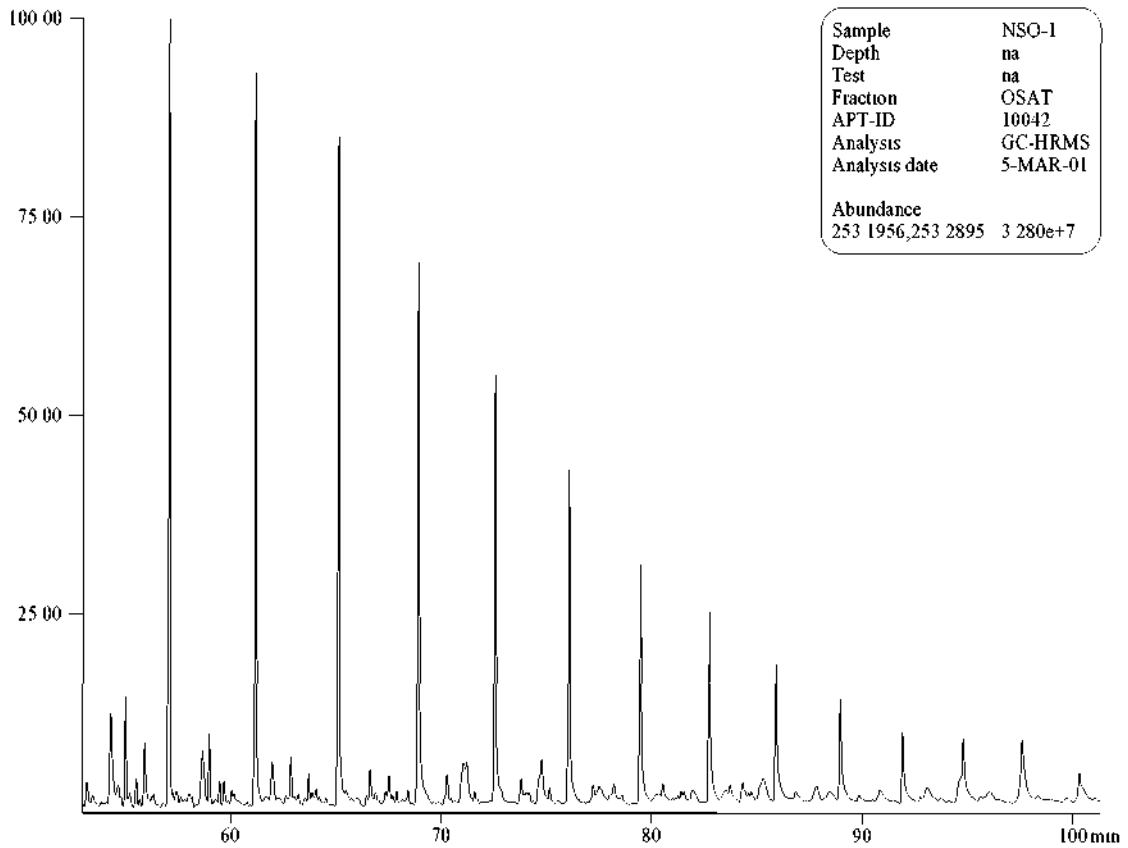


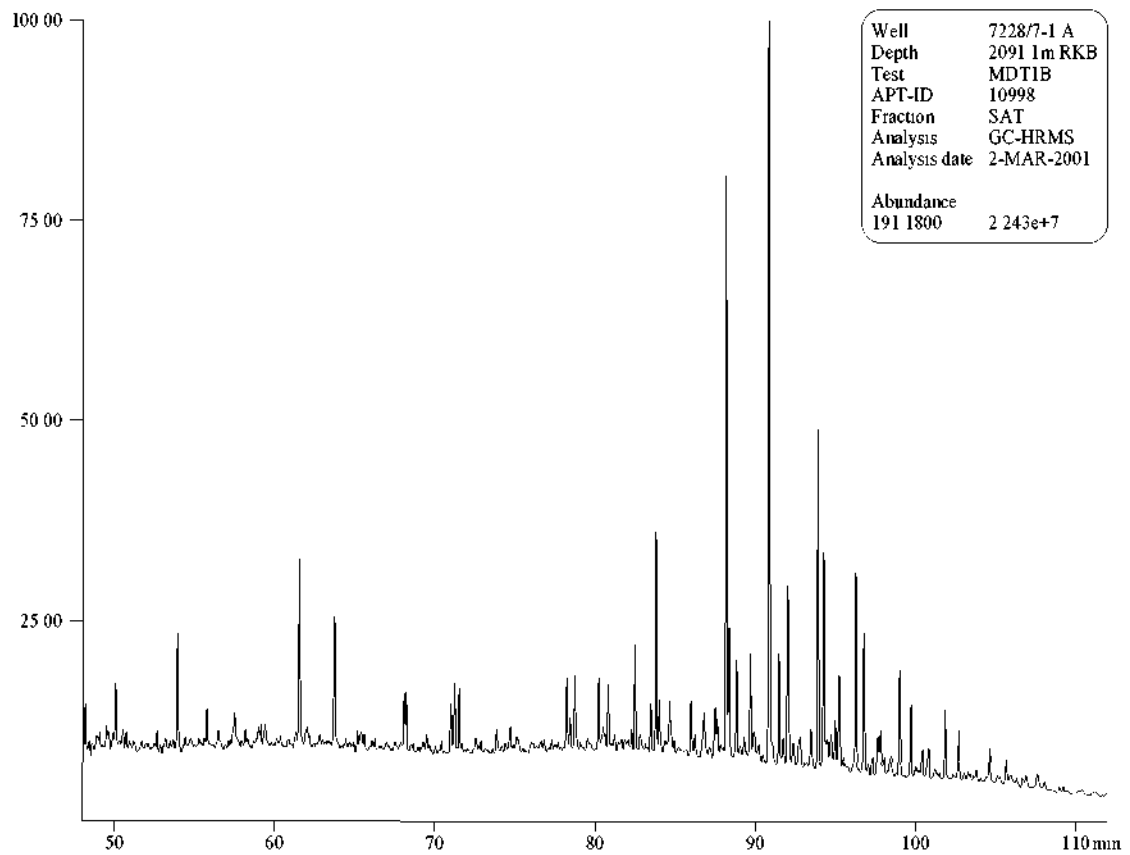
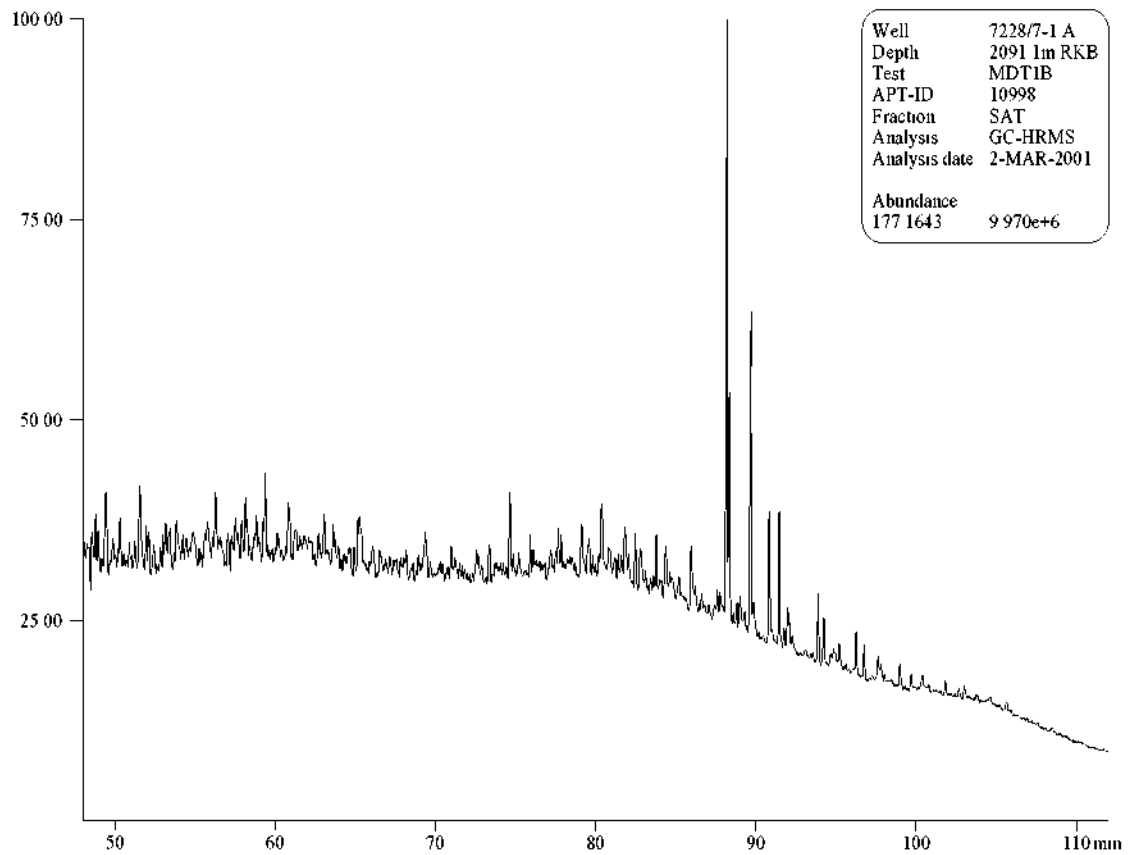
GC-MS Chromatograms of Saturated Hydrocarbons

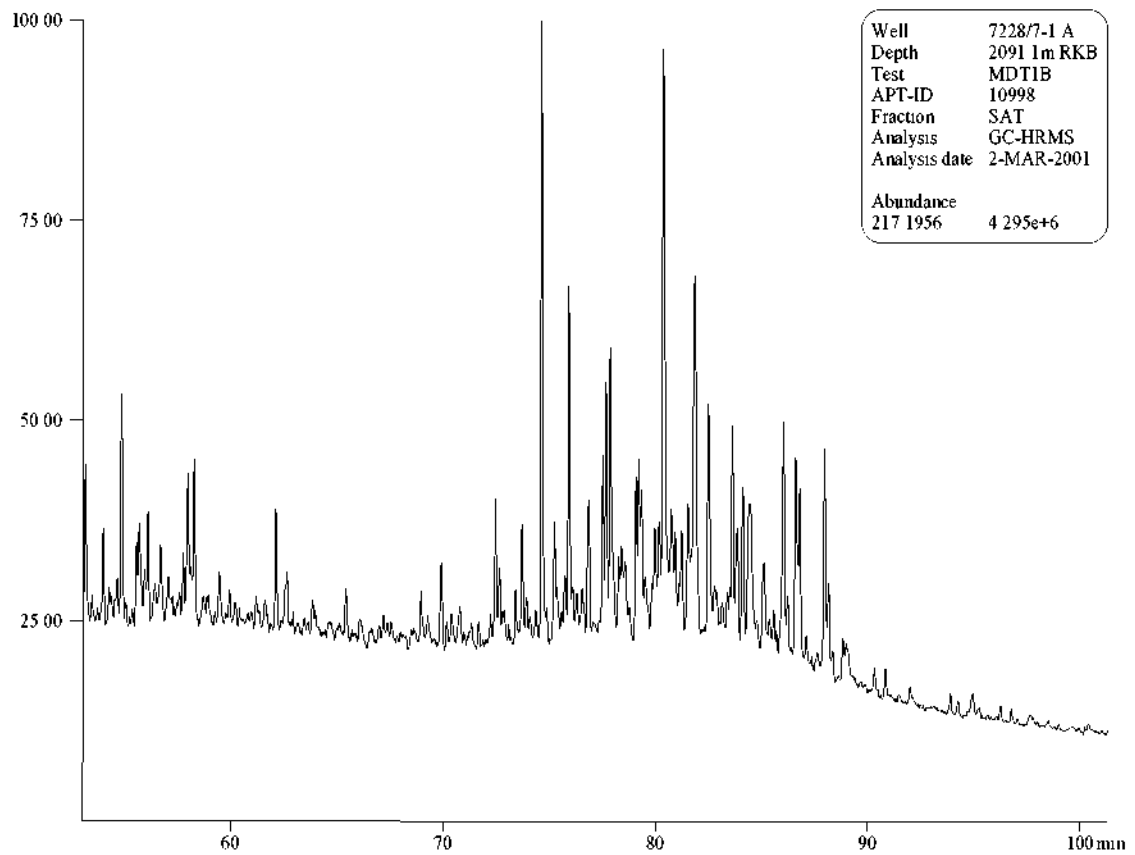
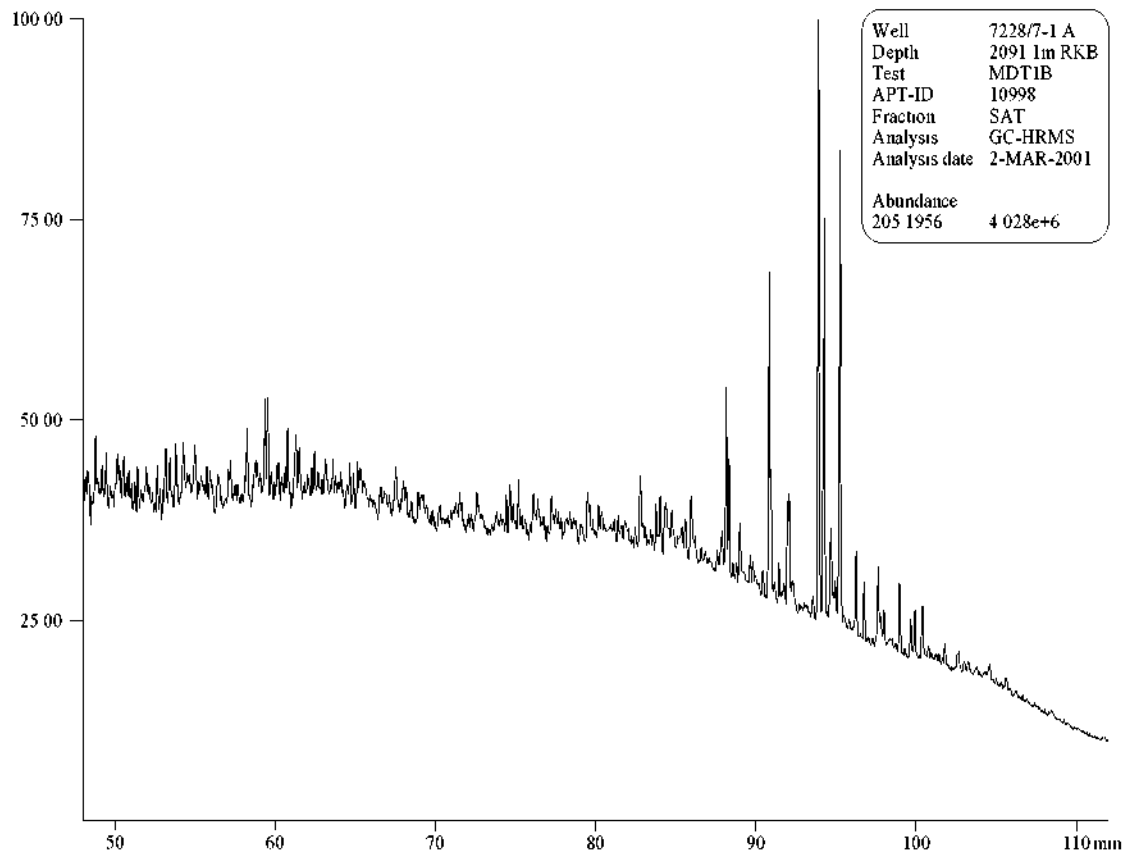


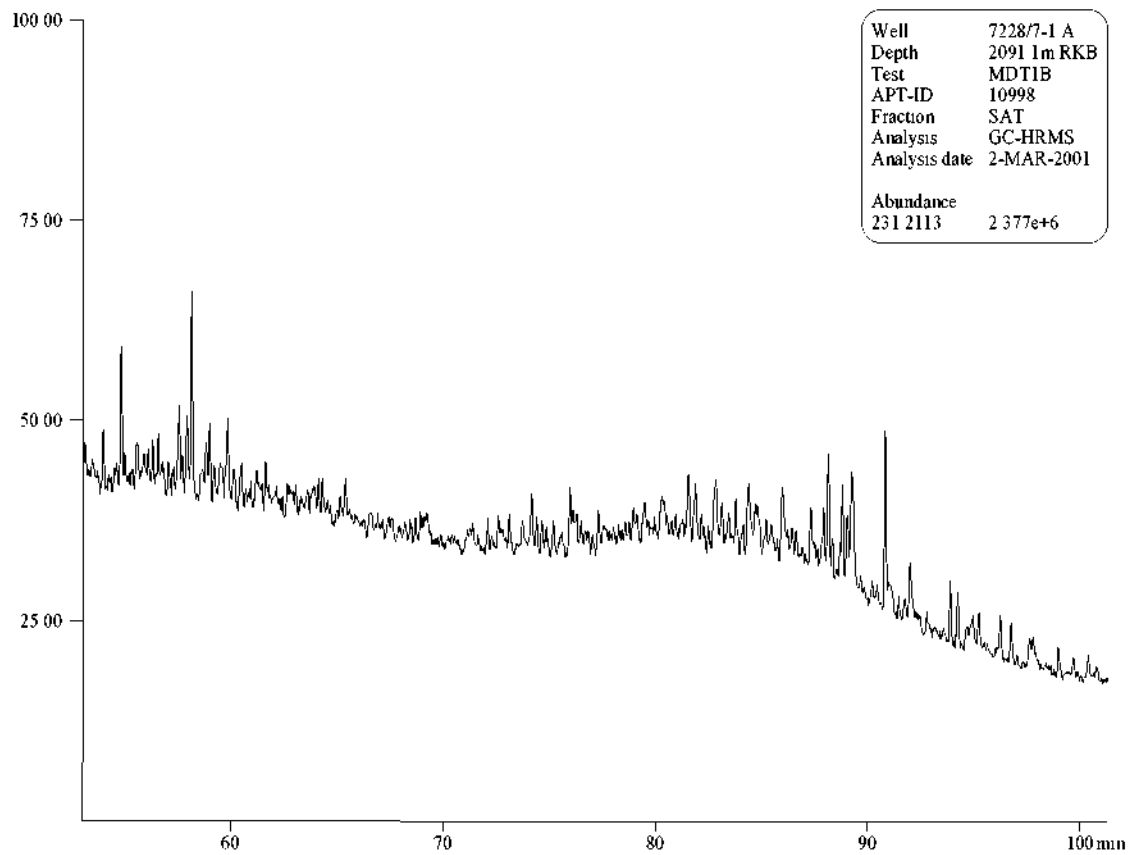
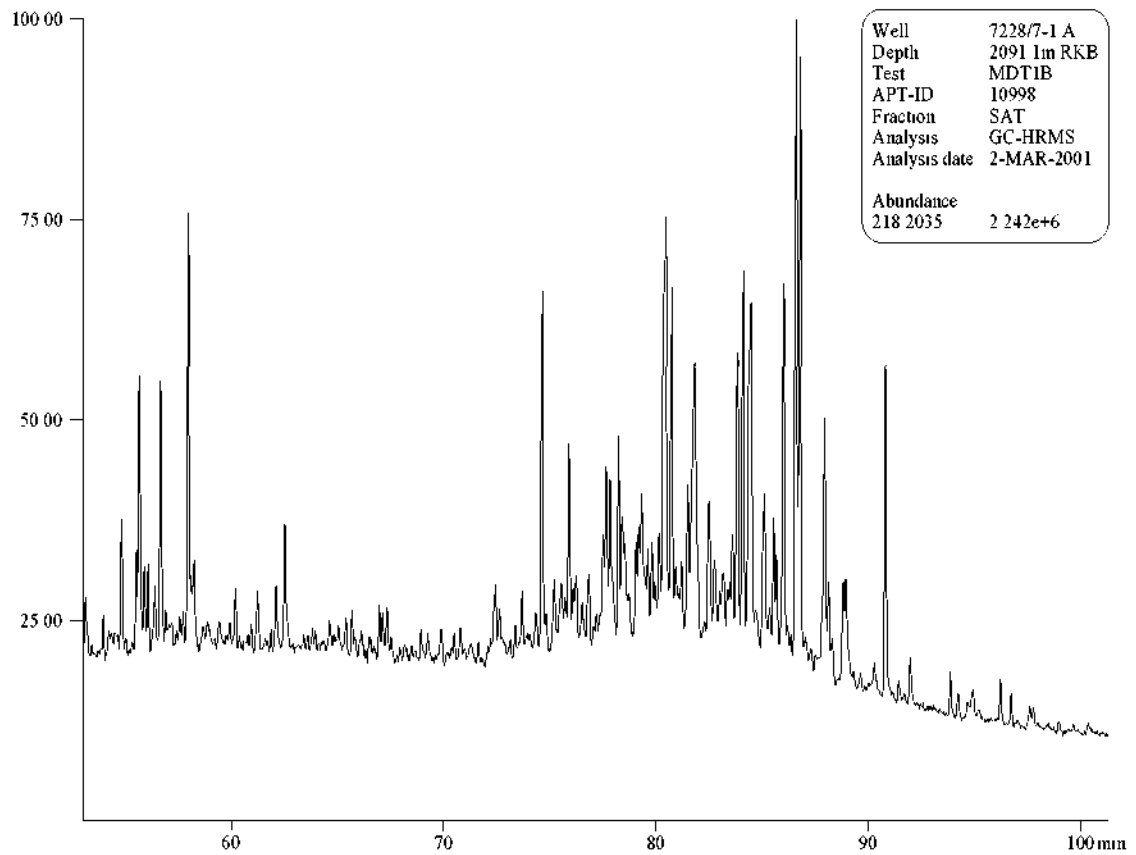


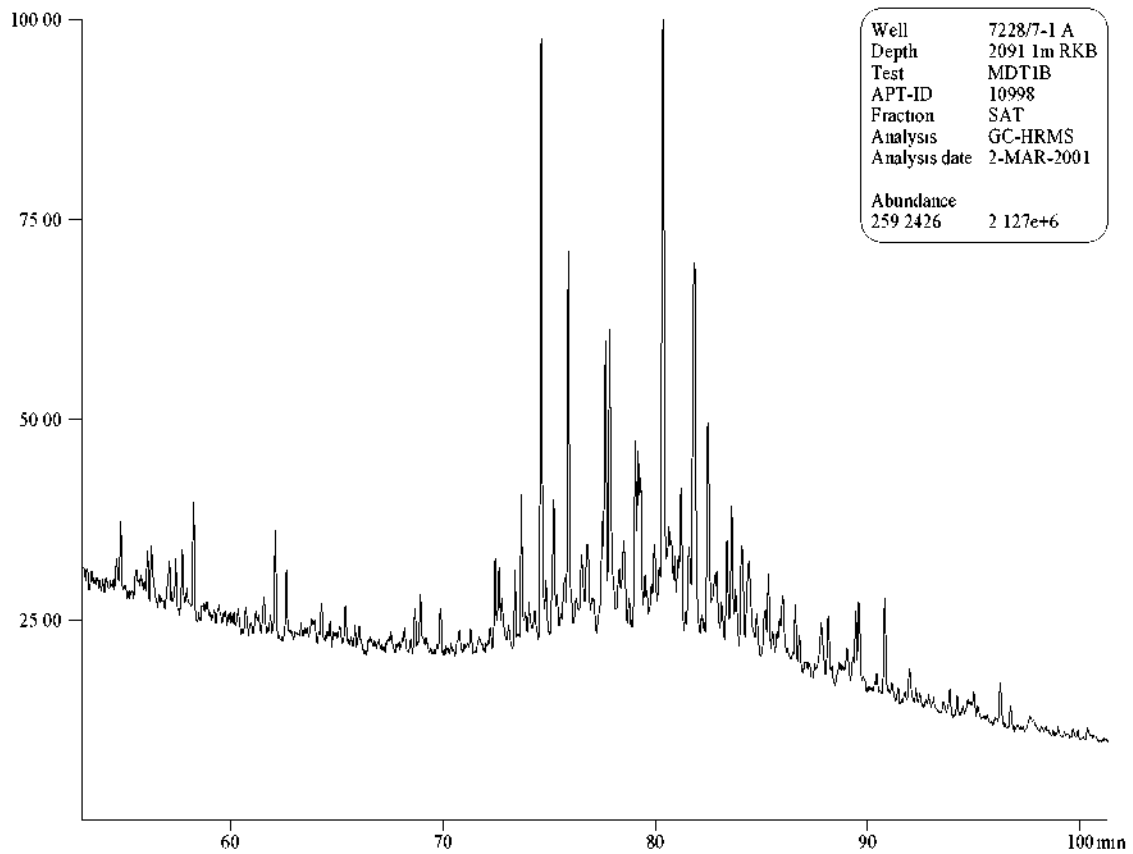
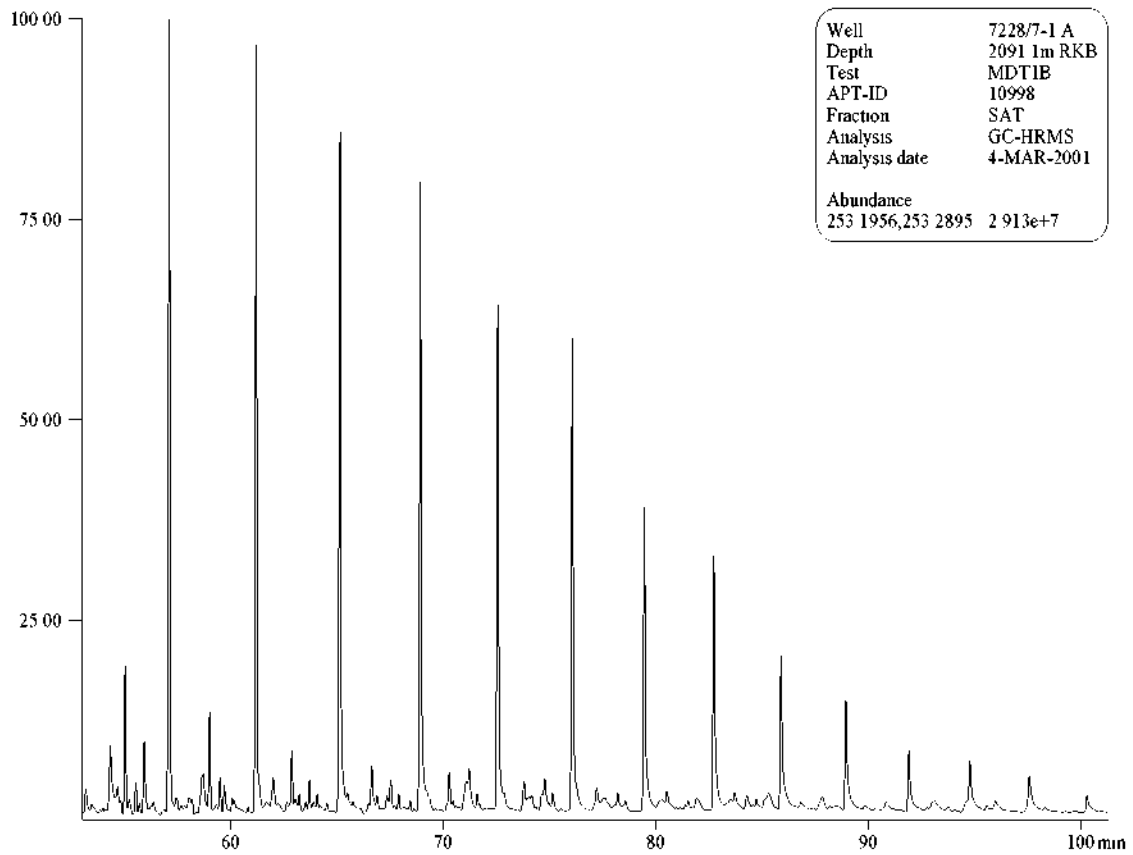


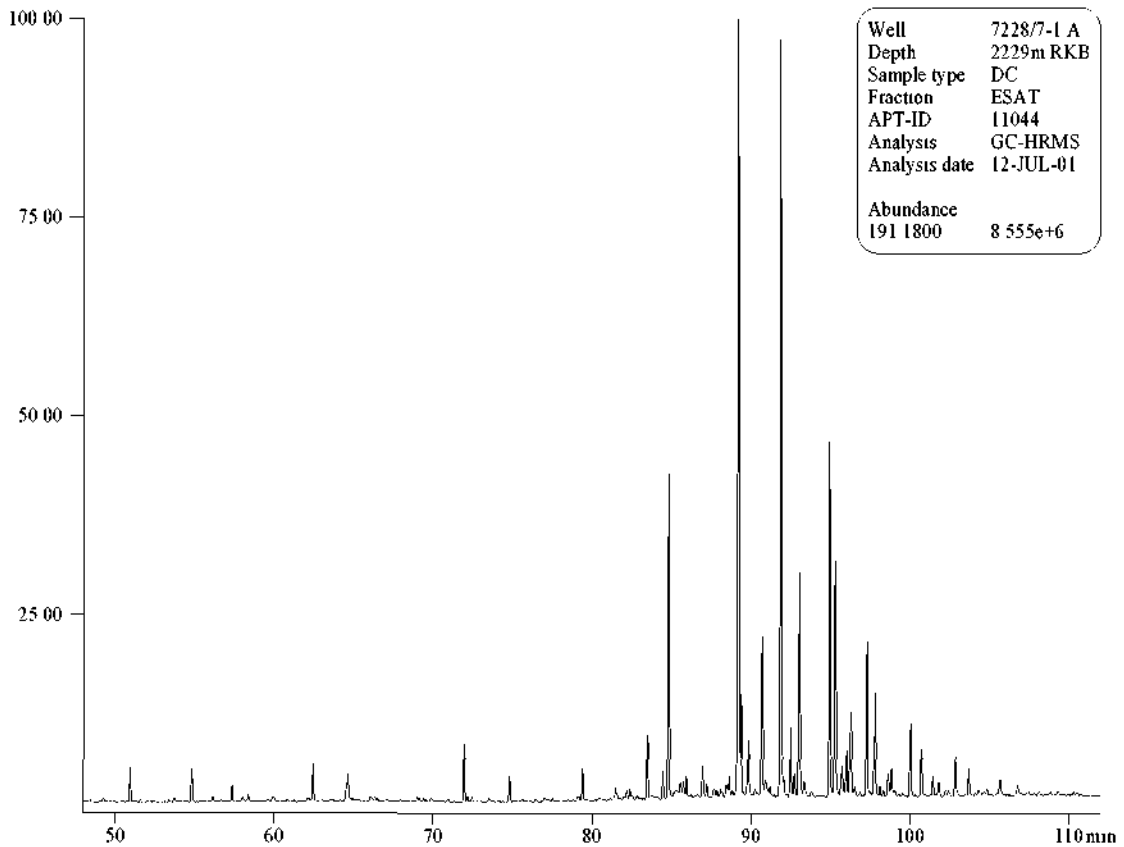
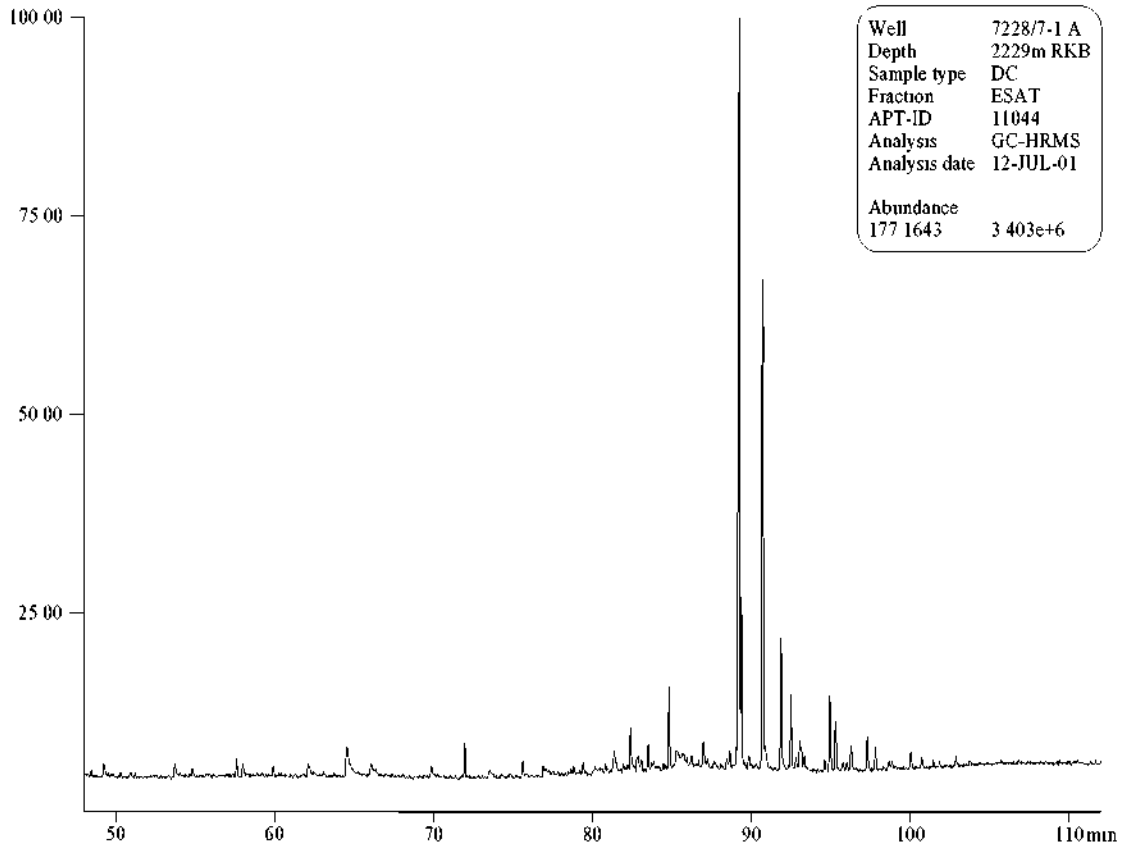


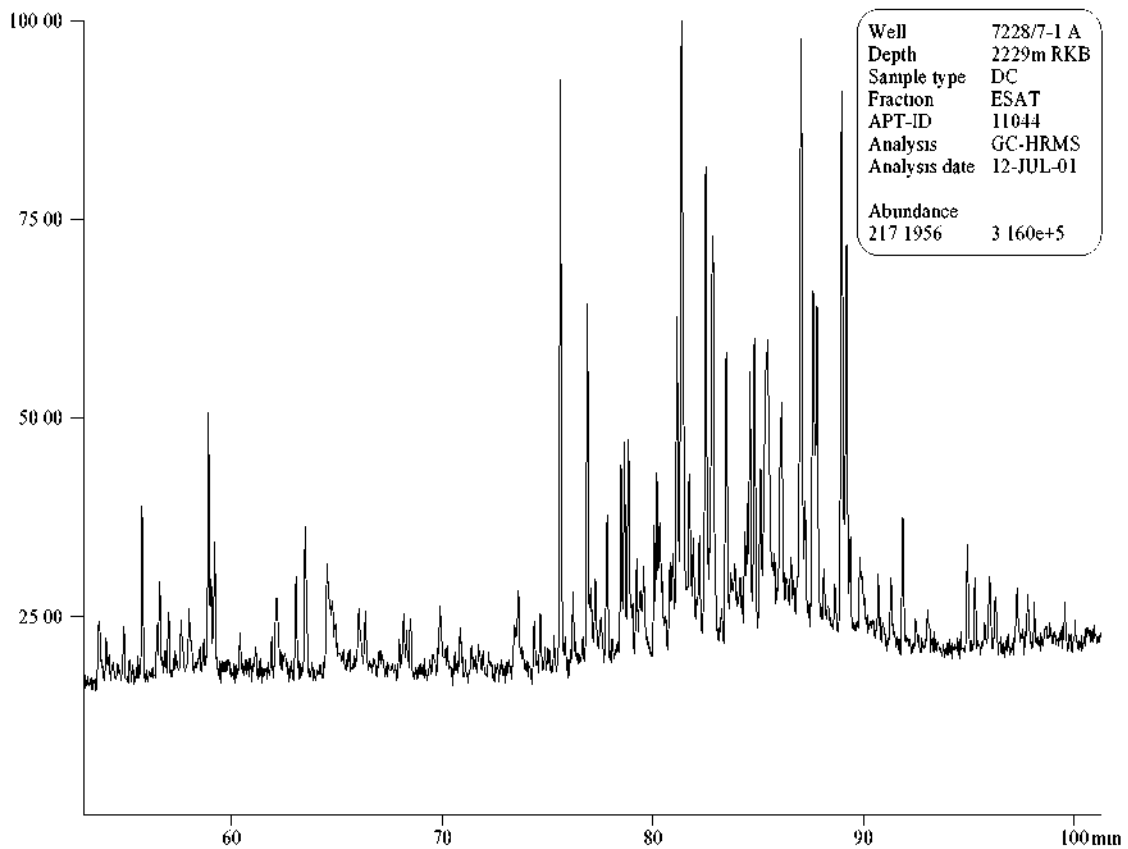
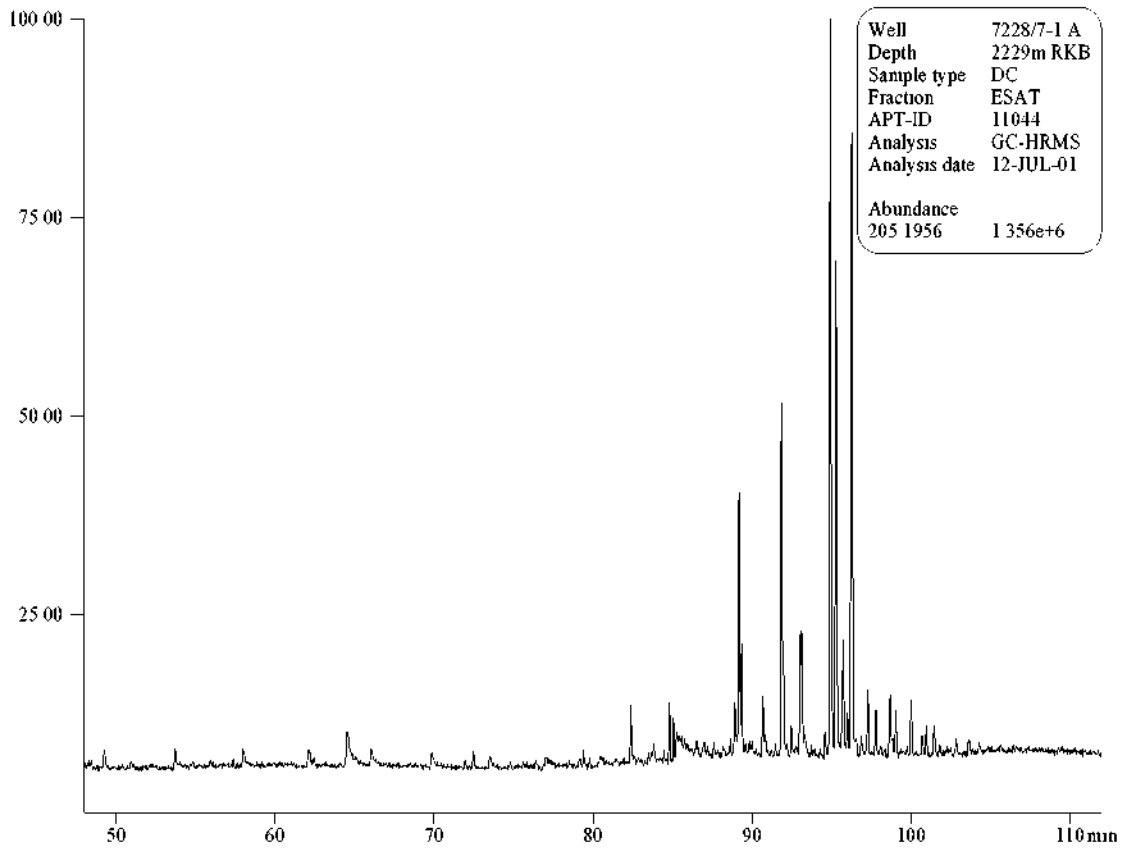


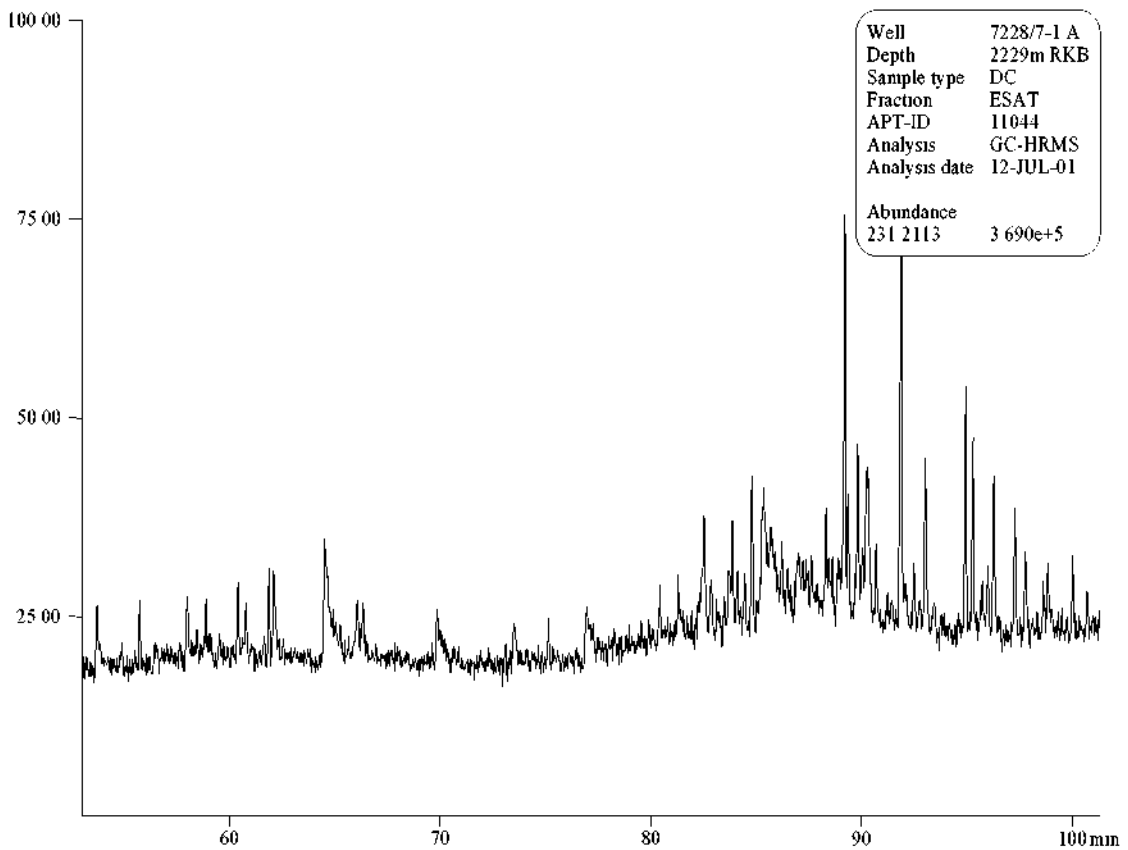
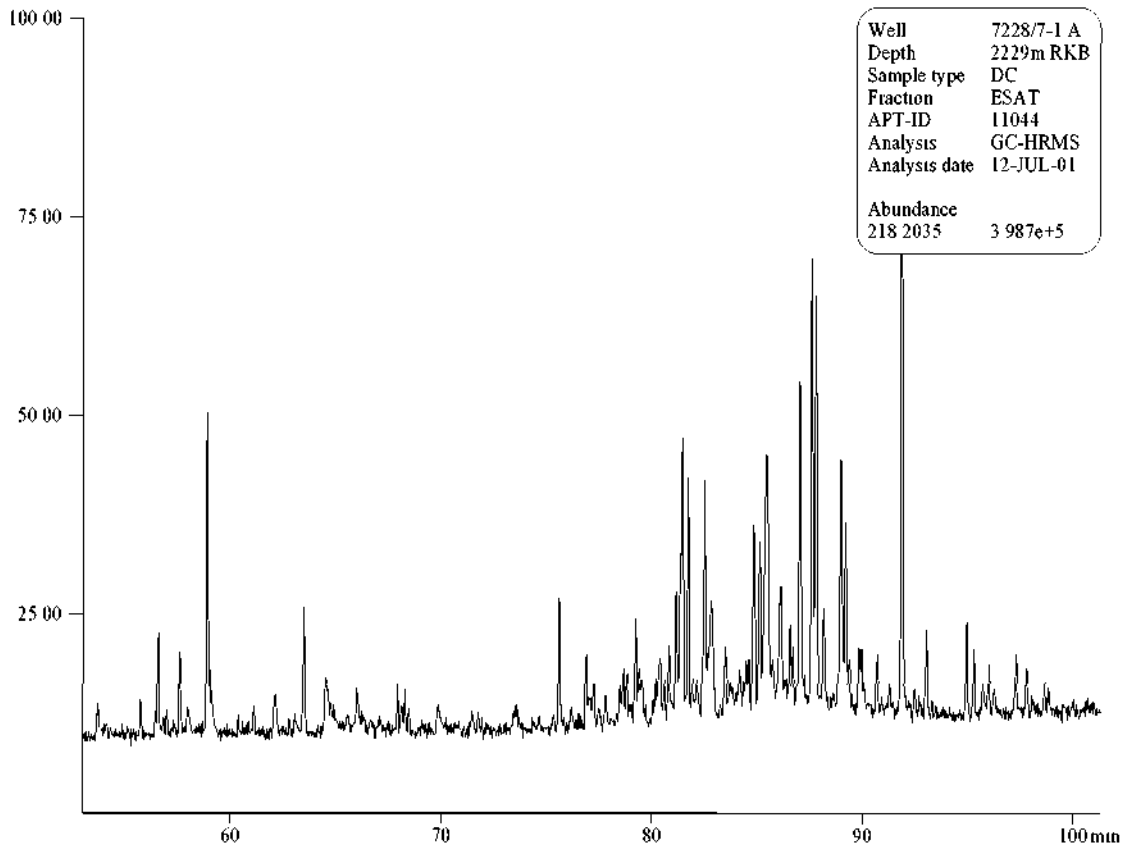


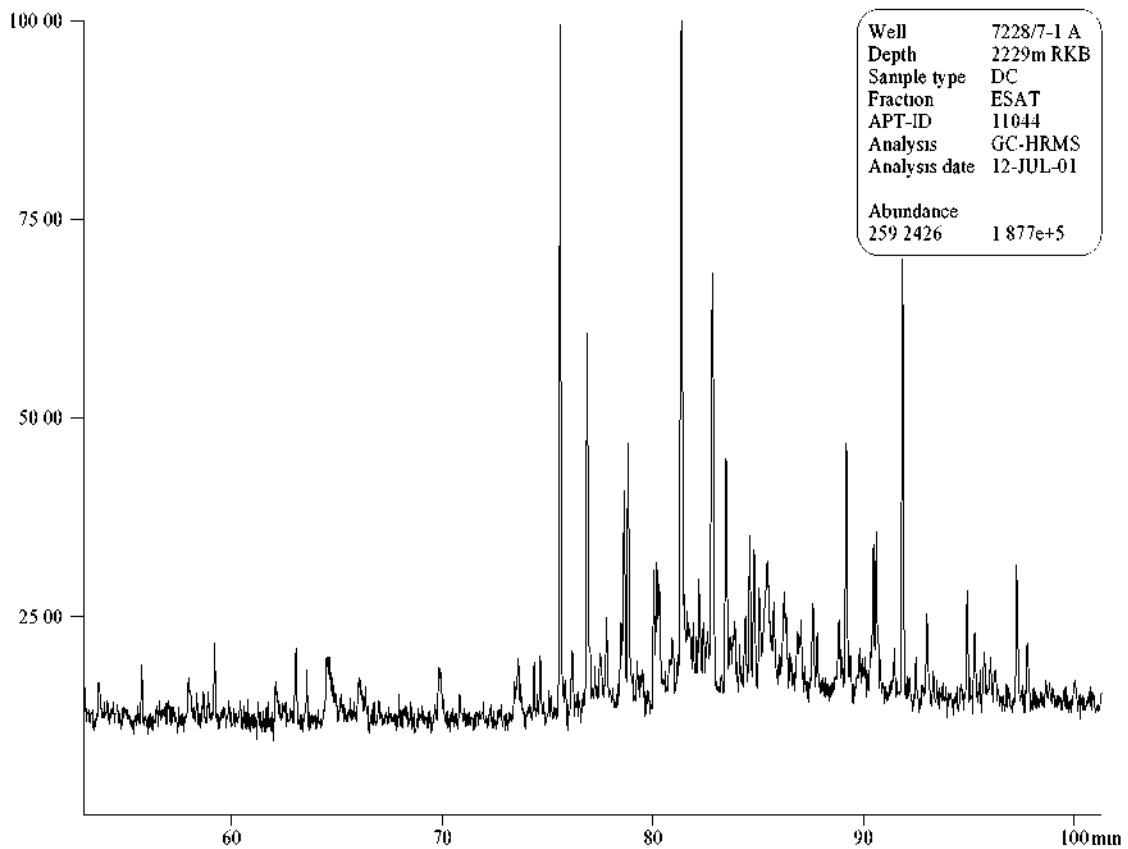
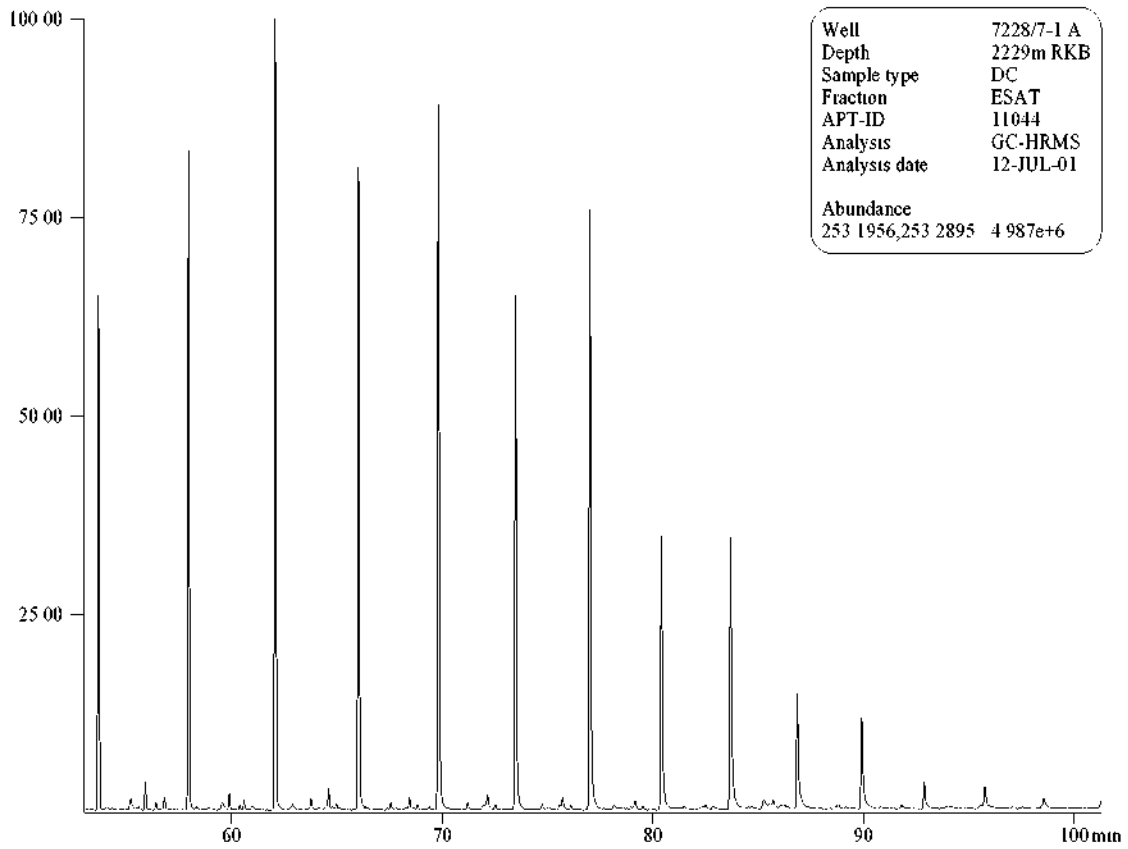


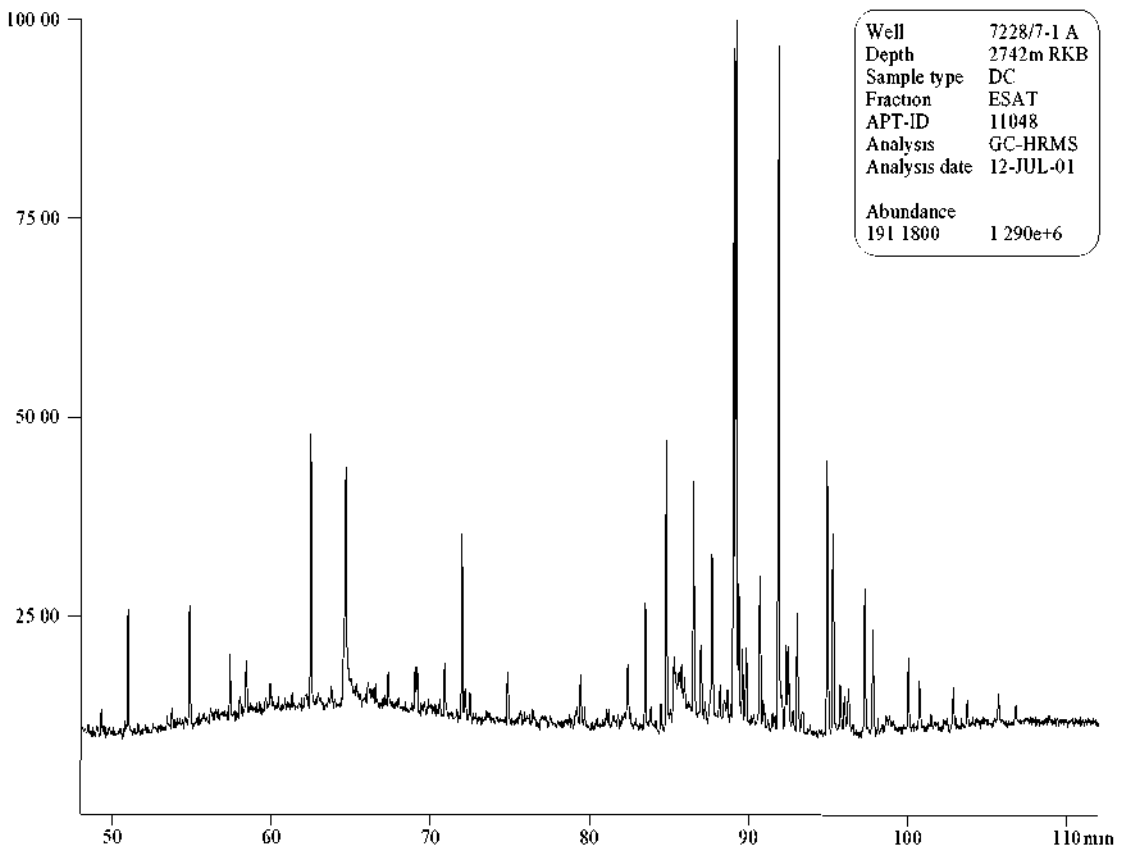
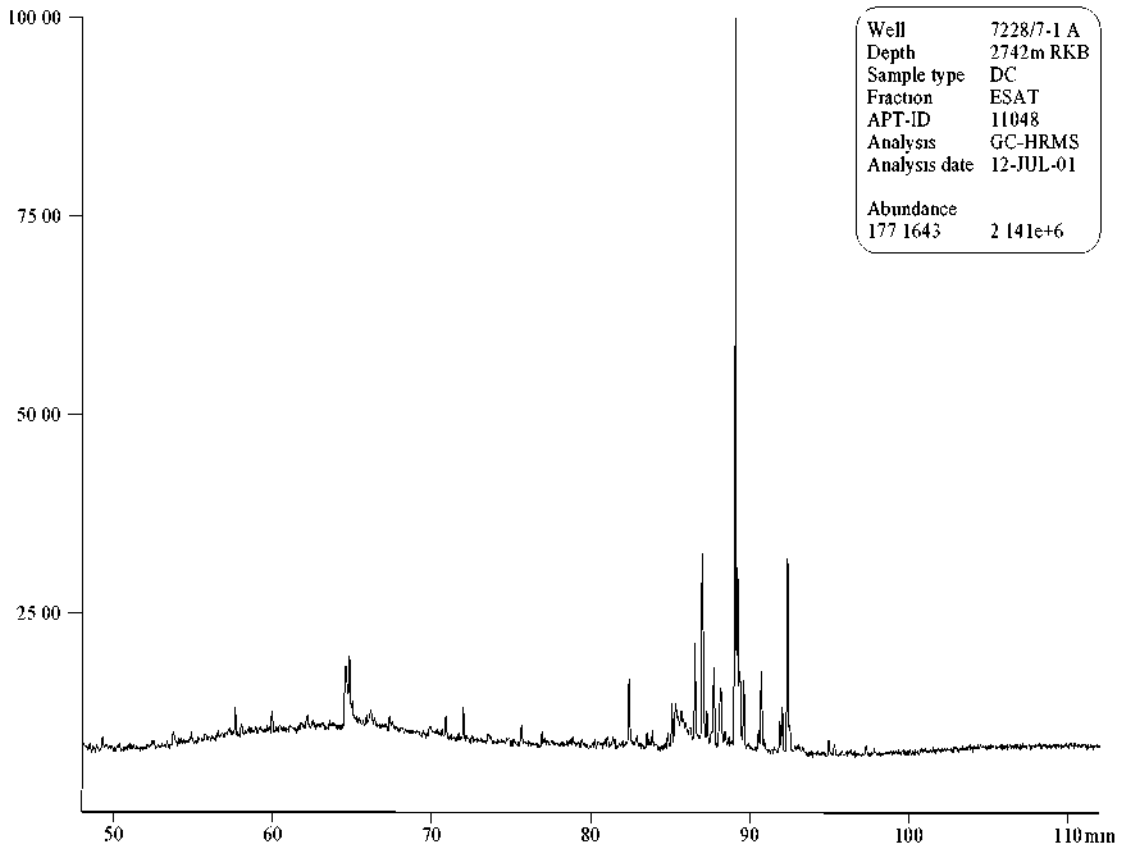


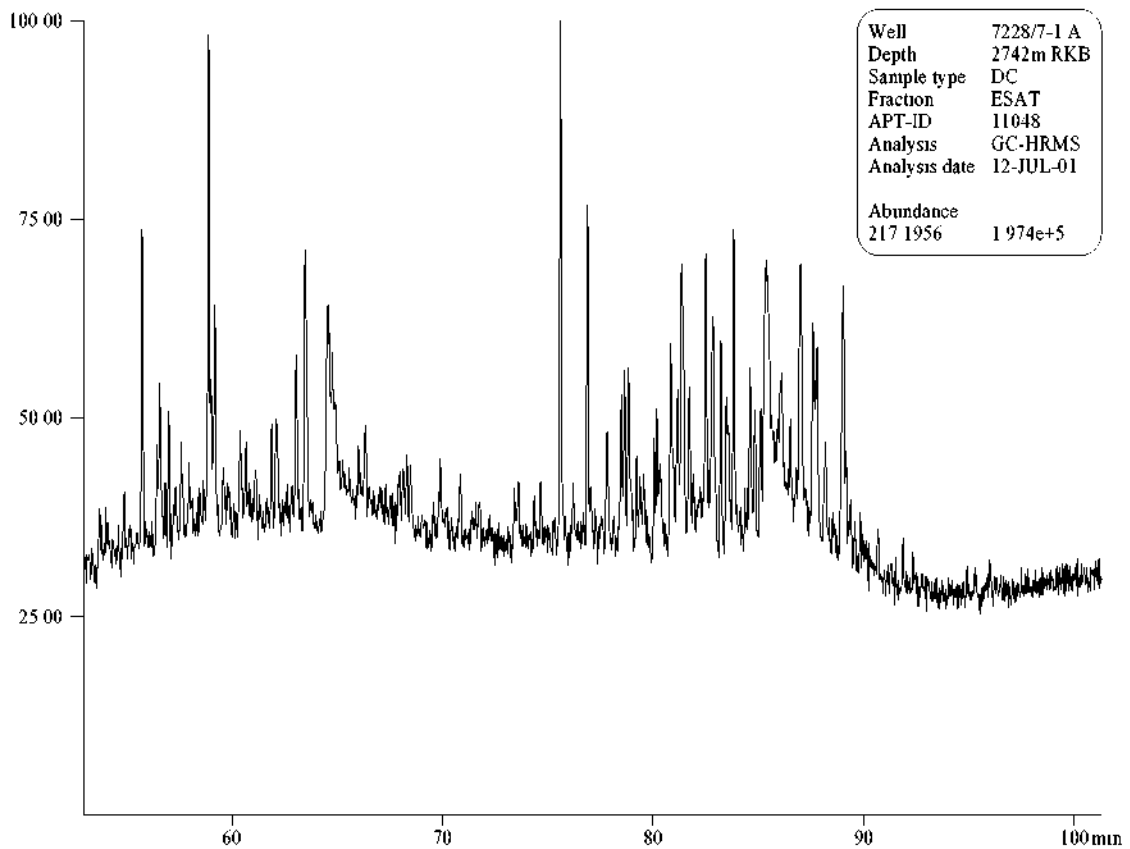
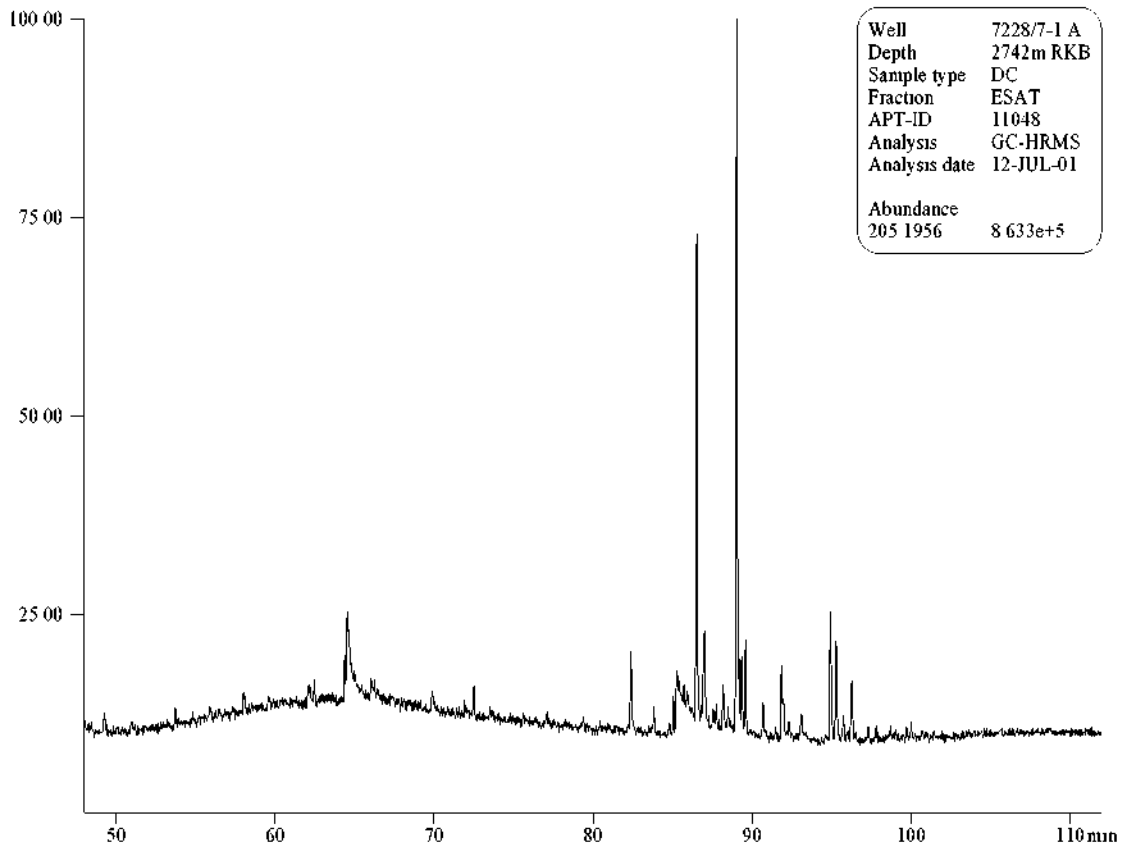


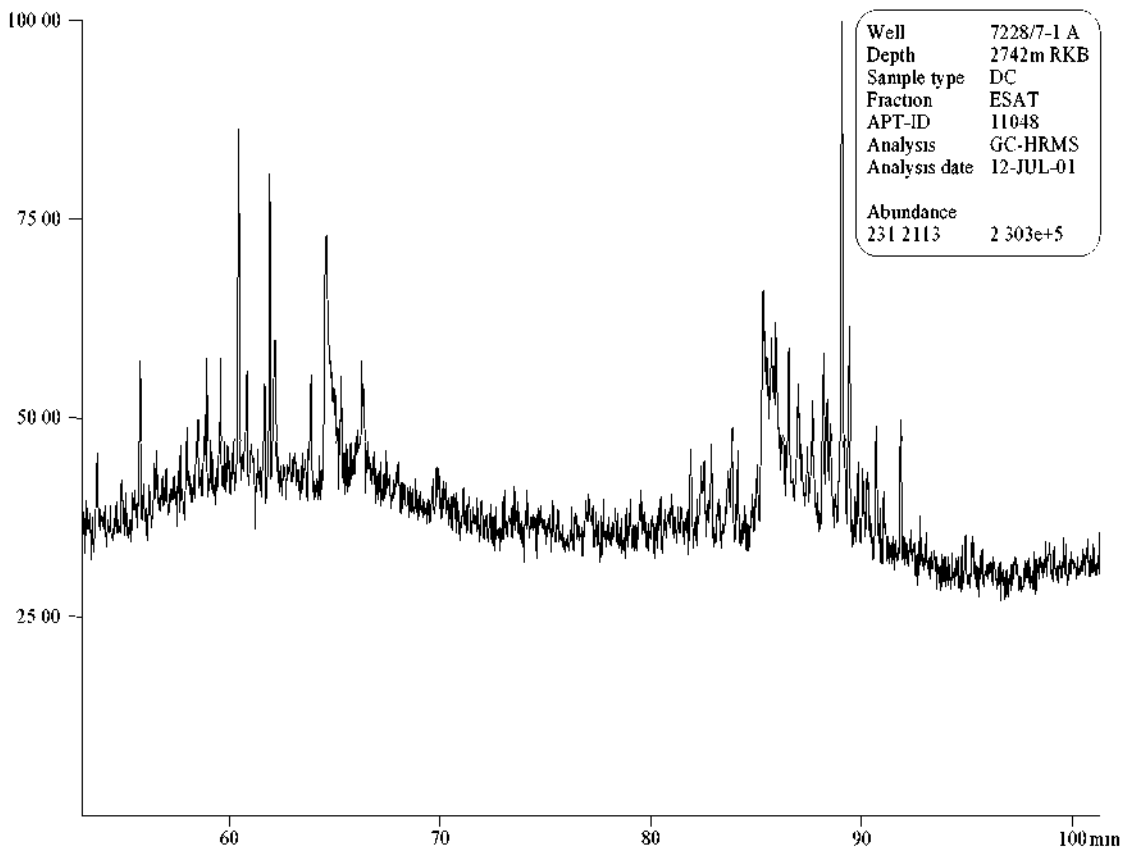
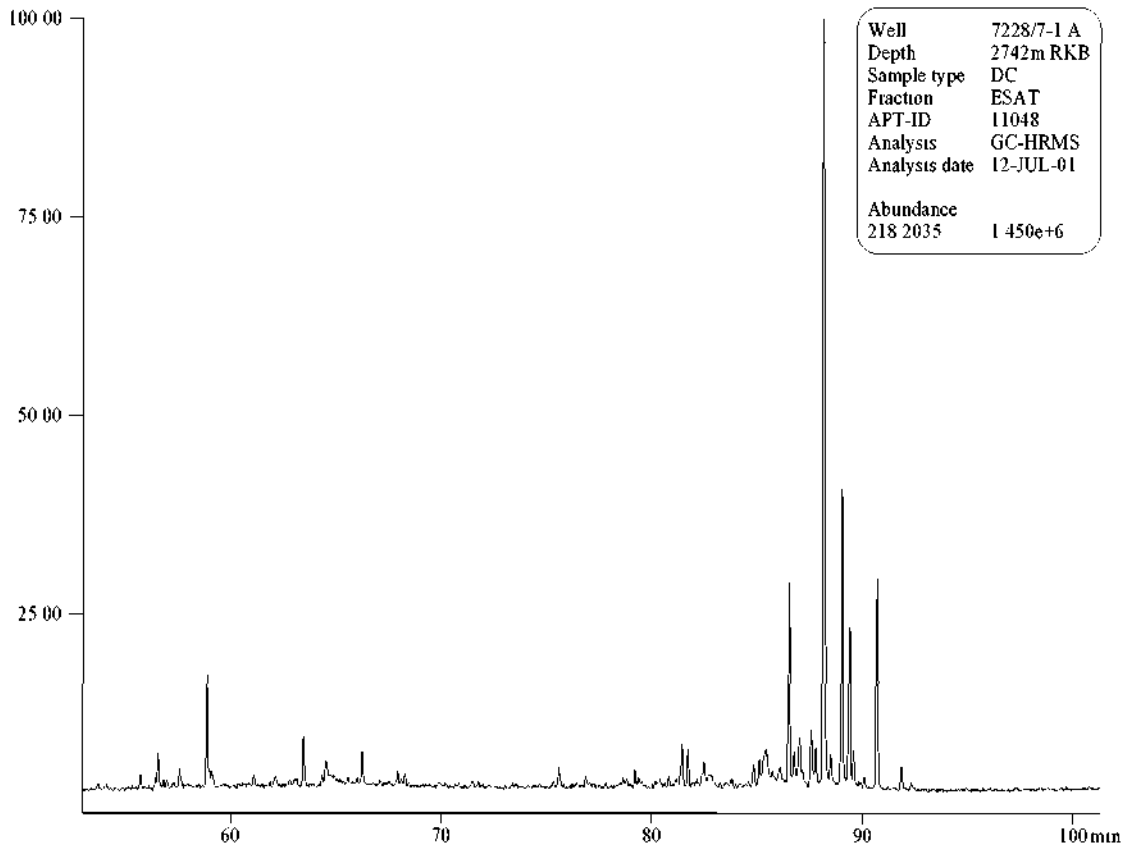


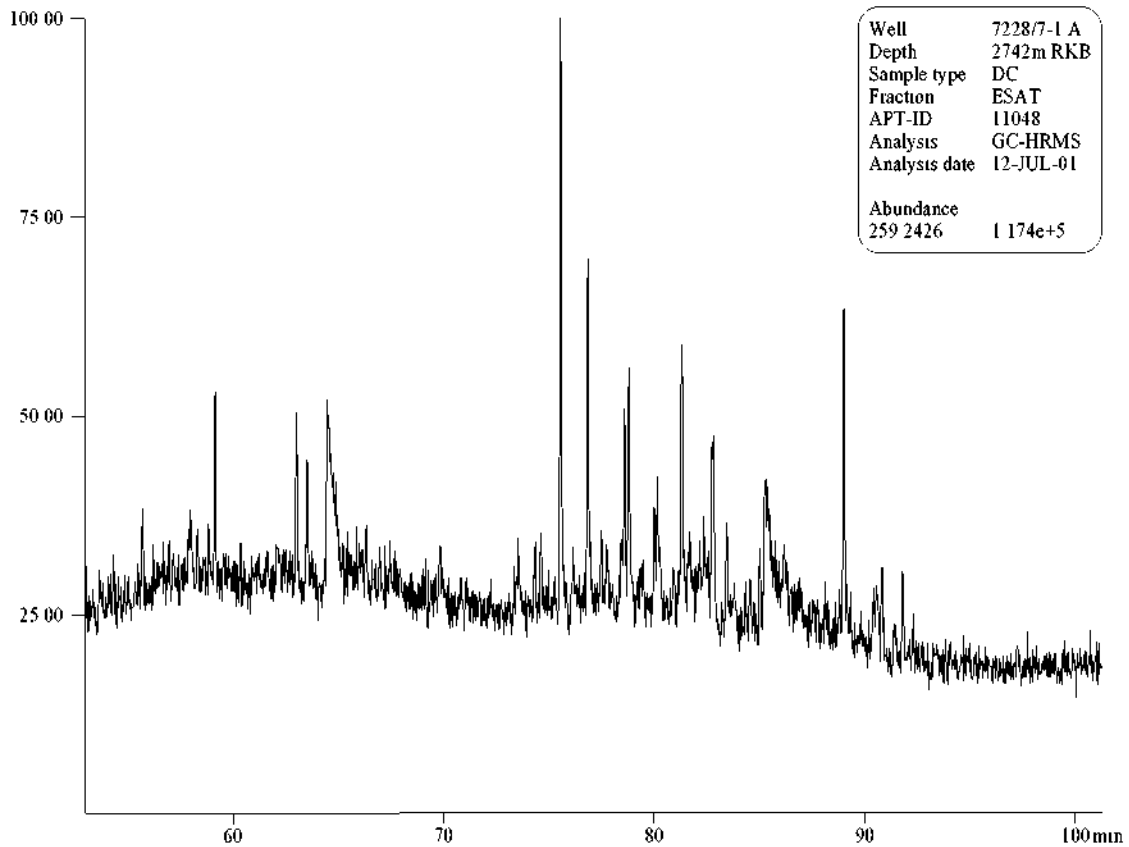
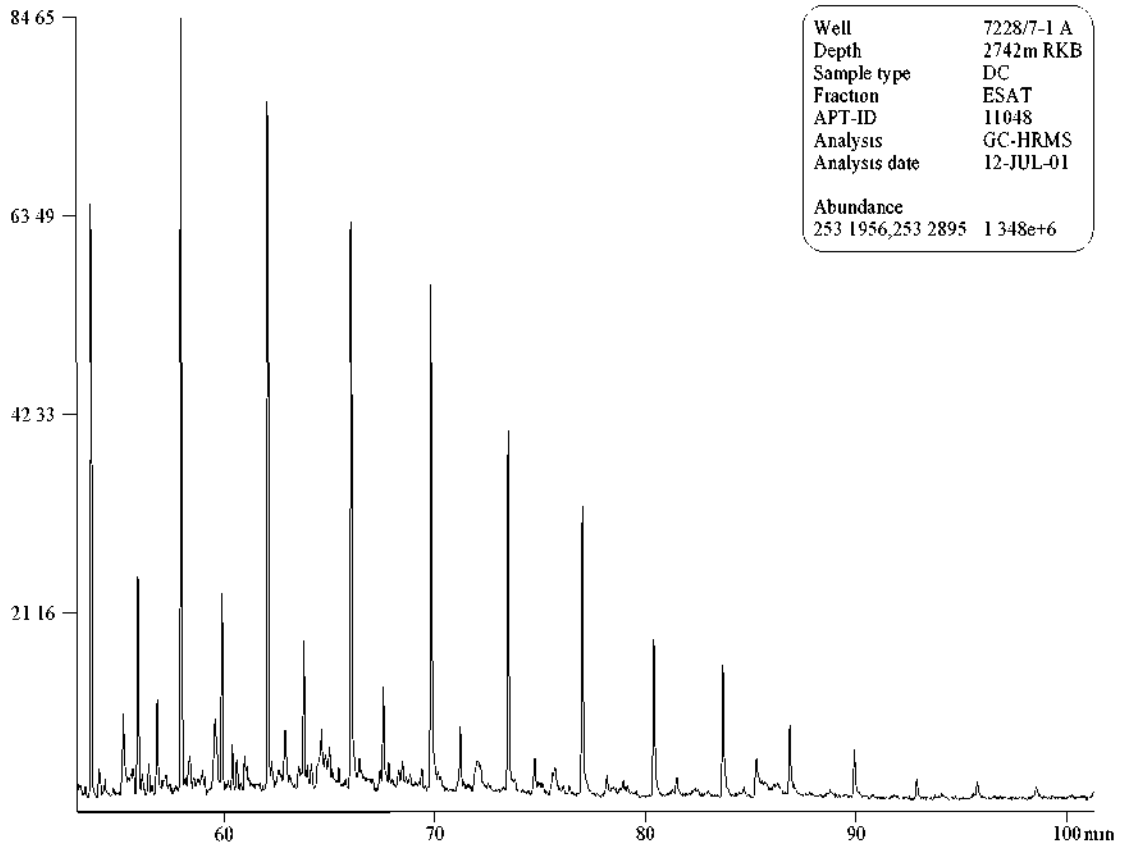


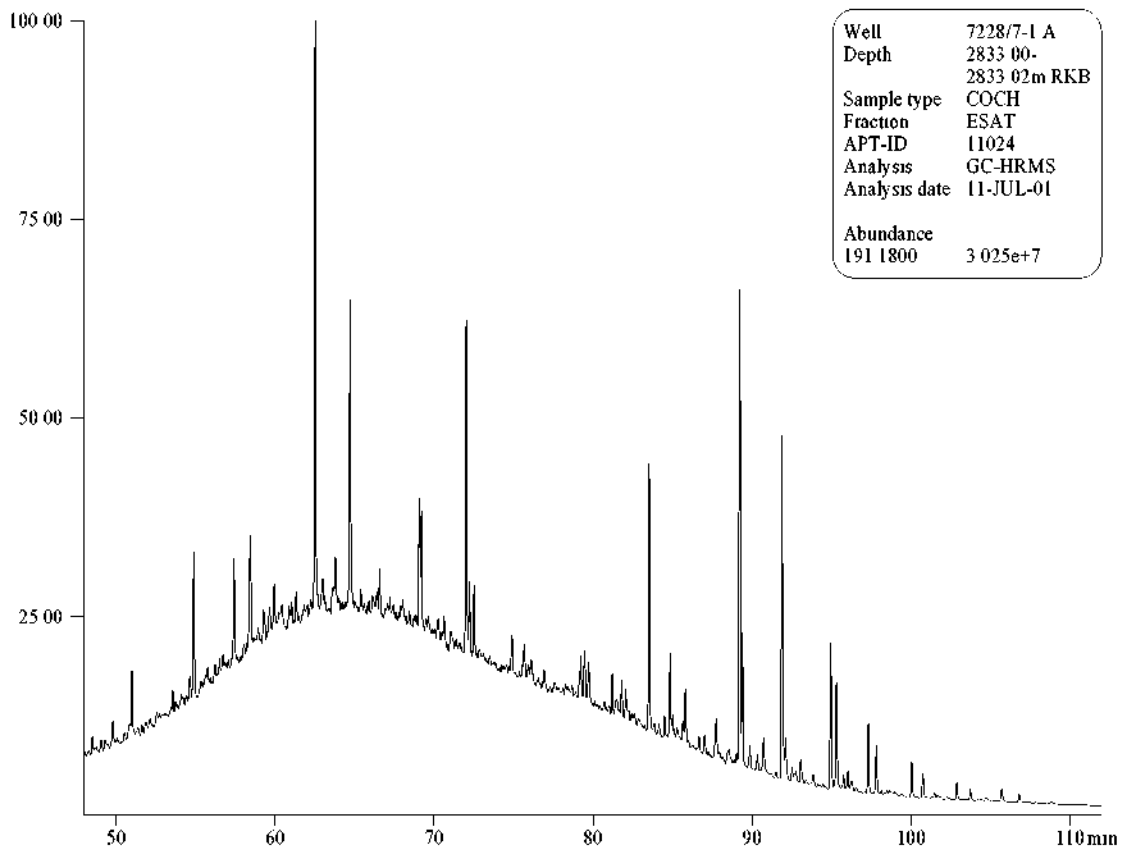
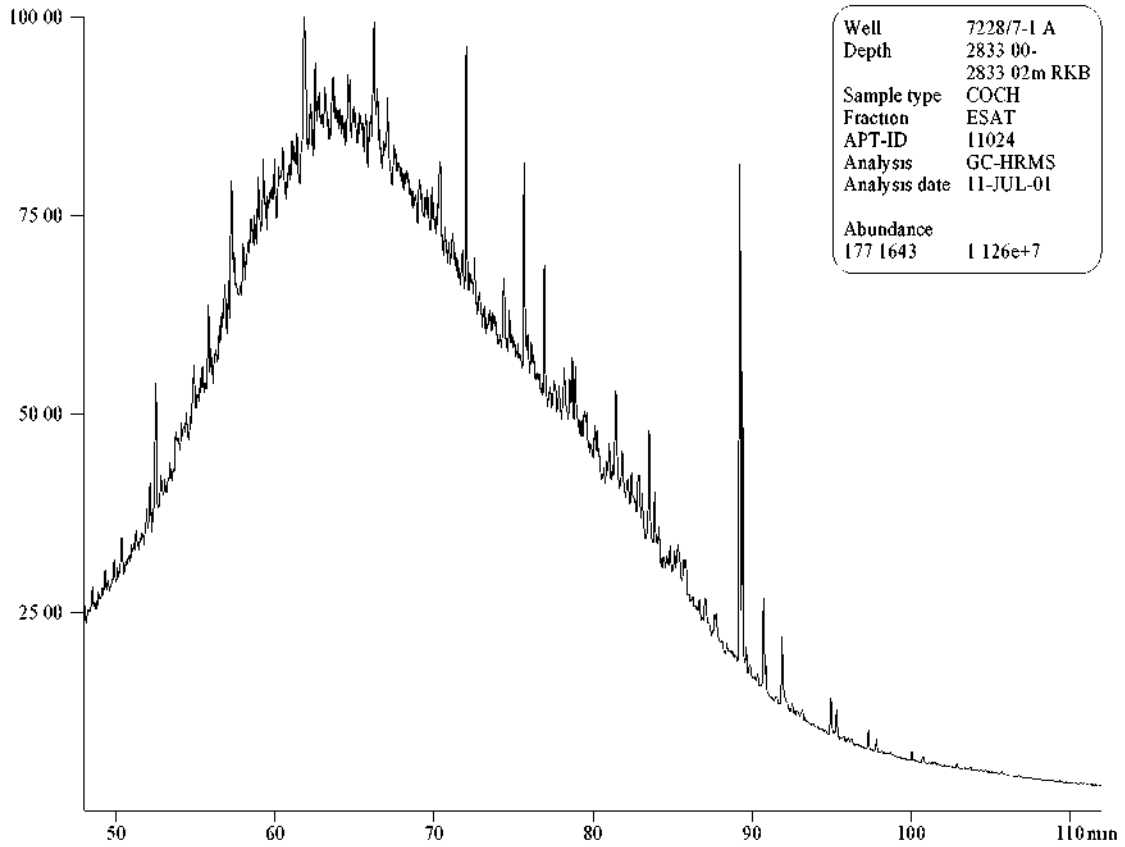


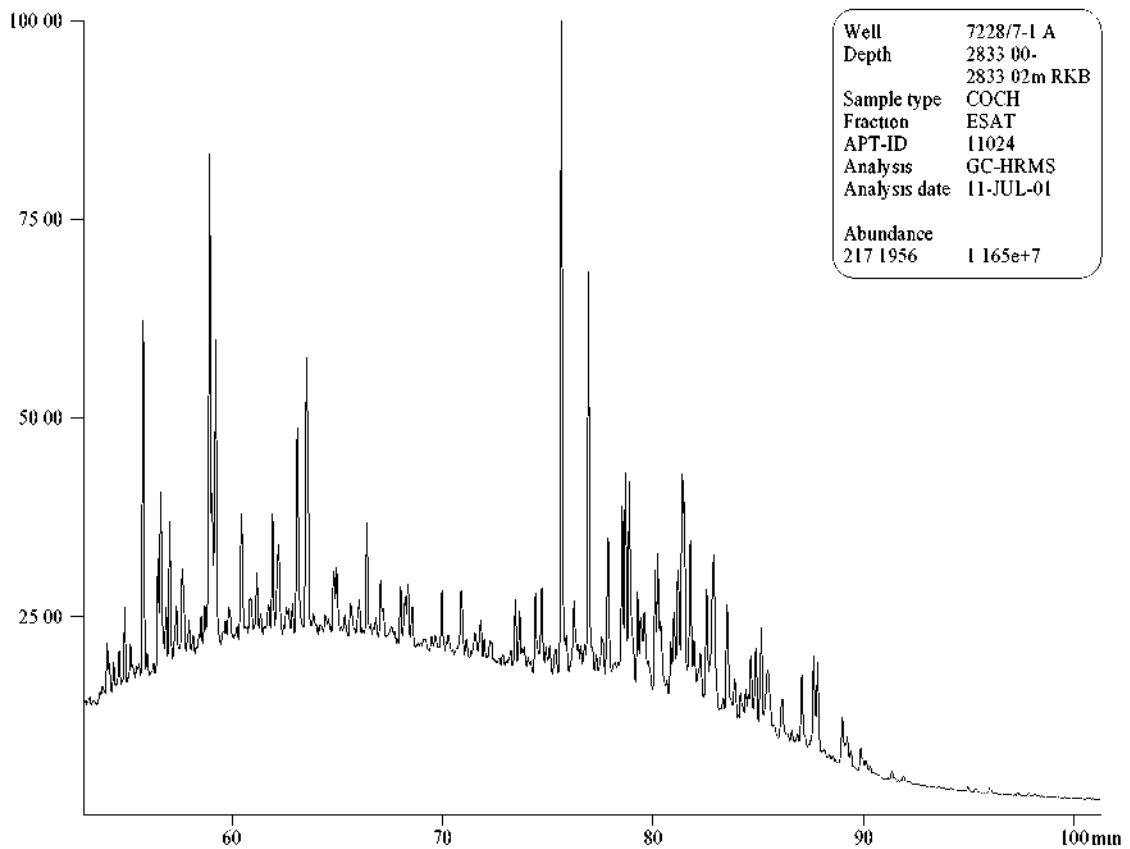
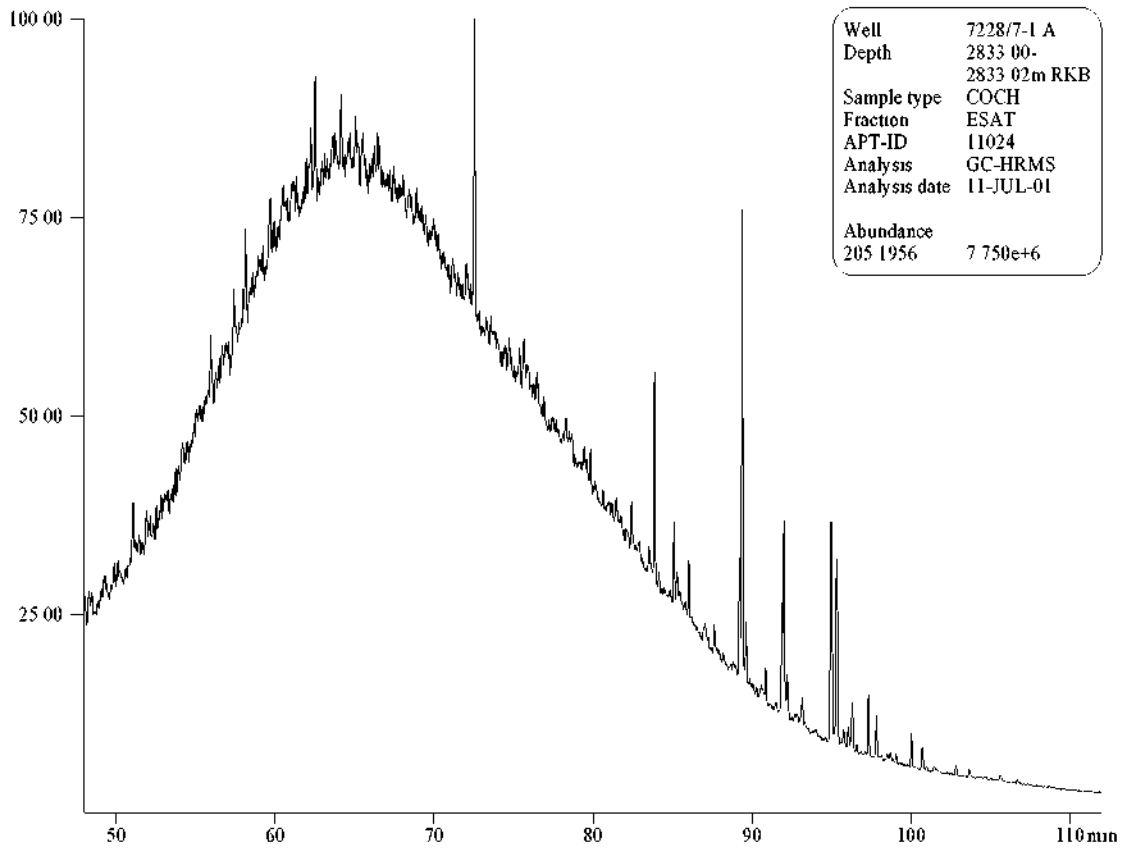


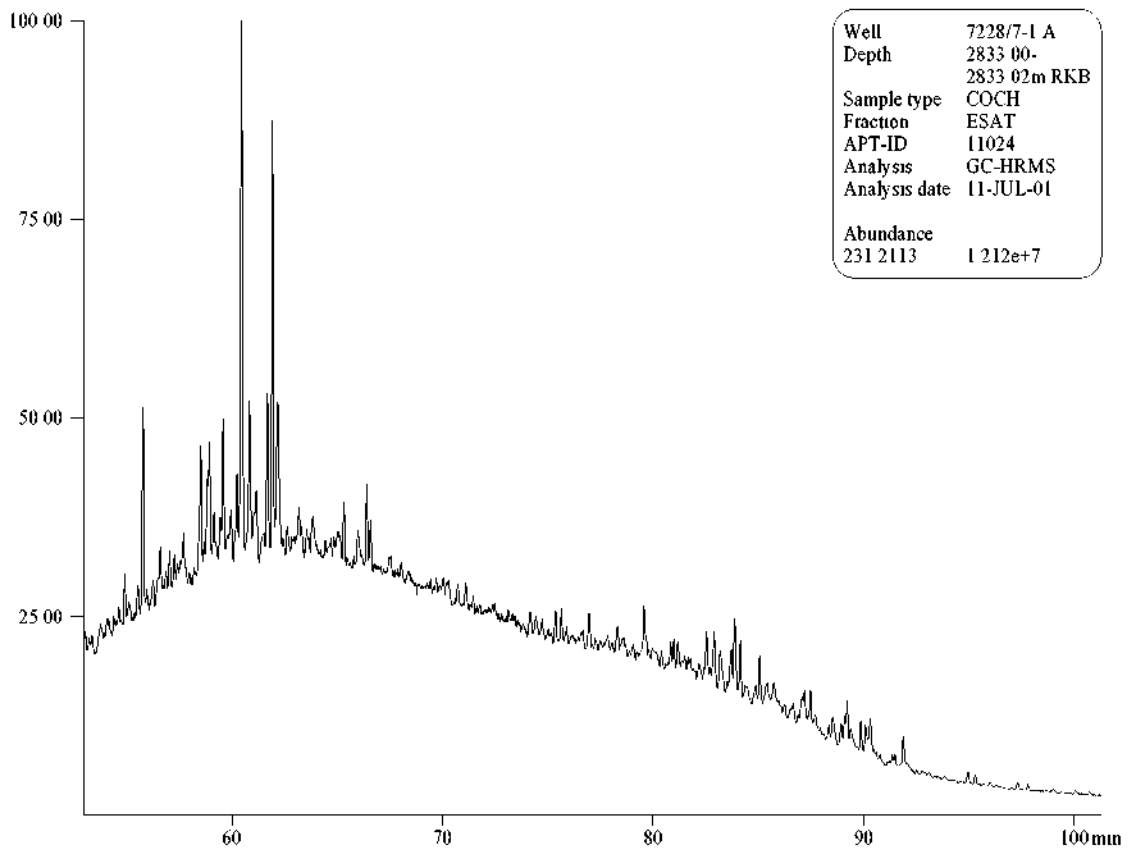
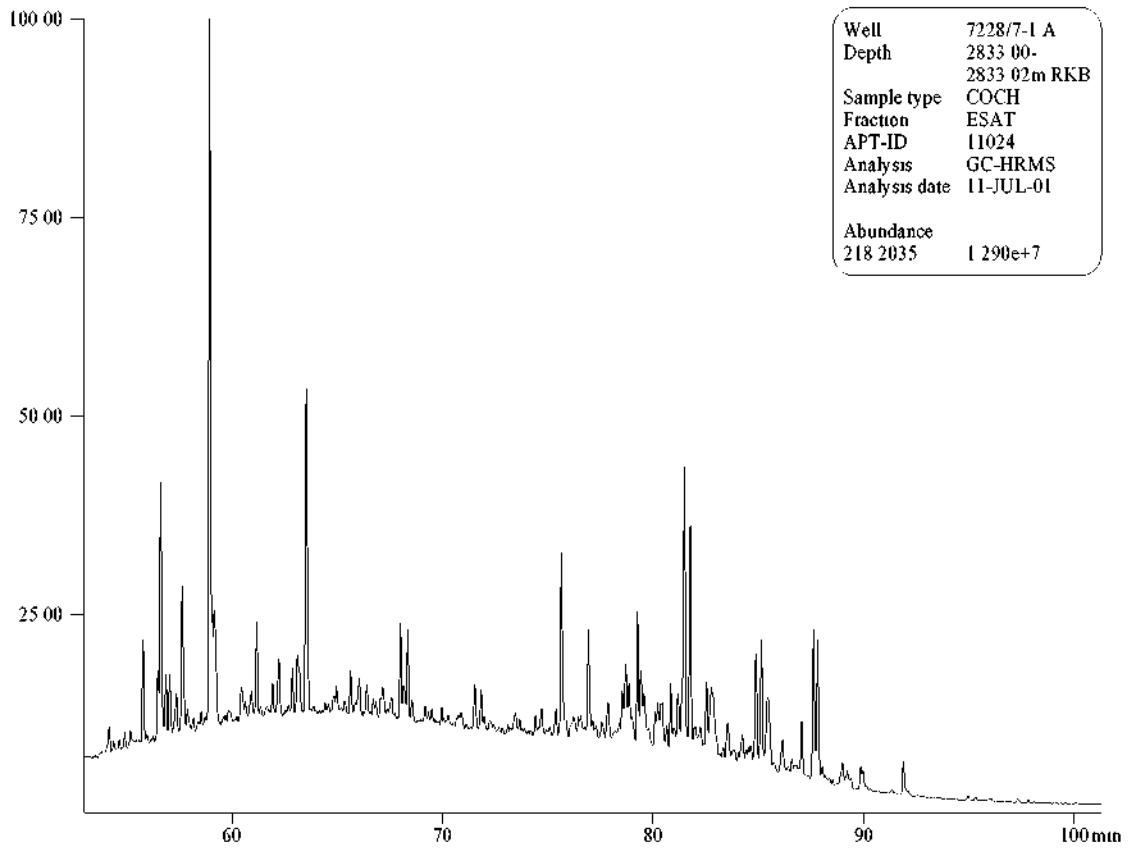


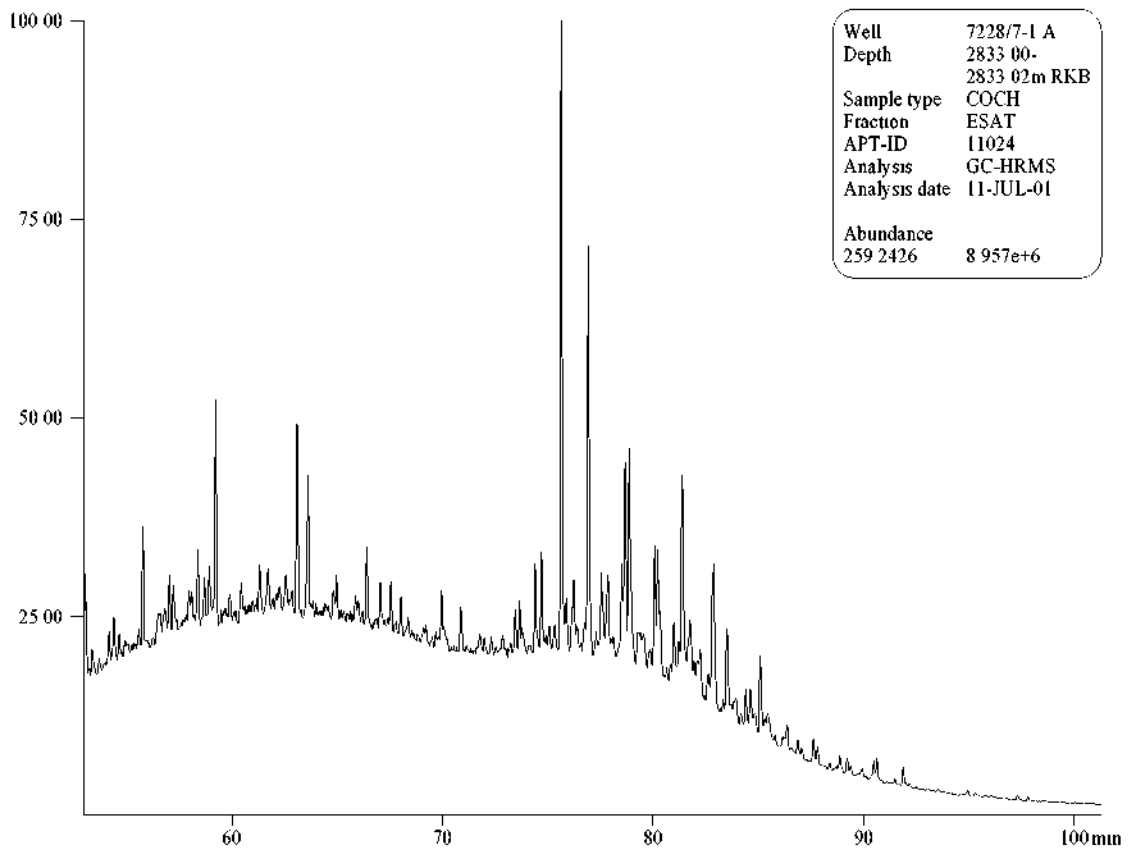
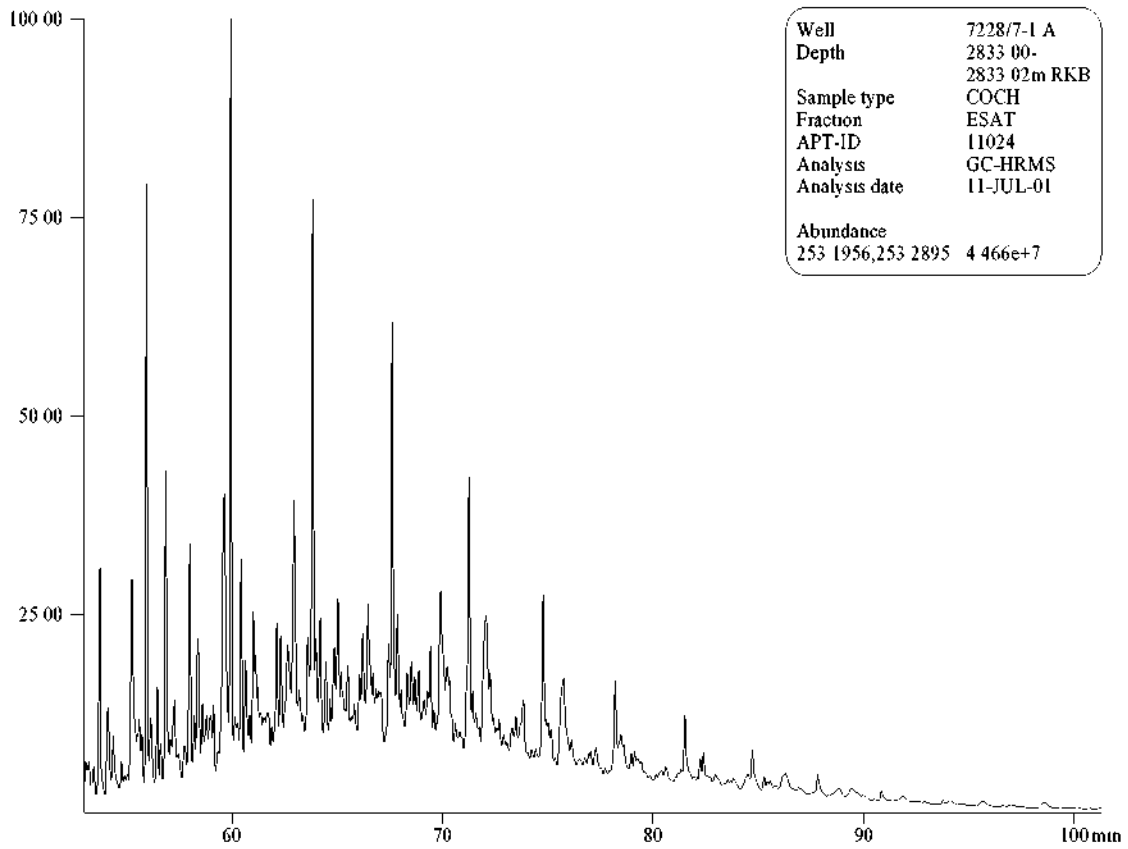


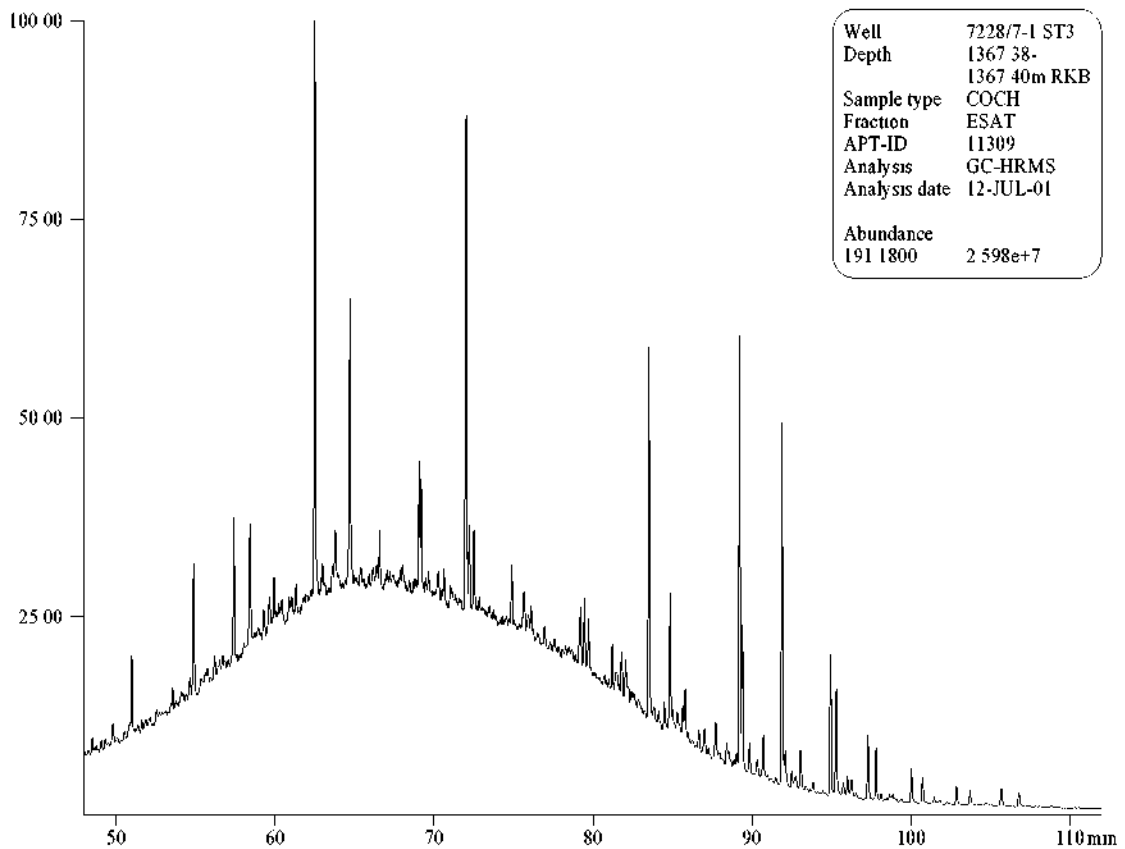
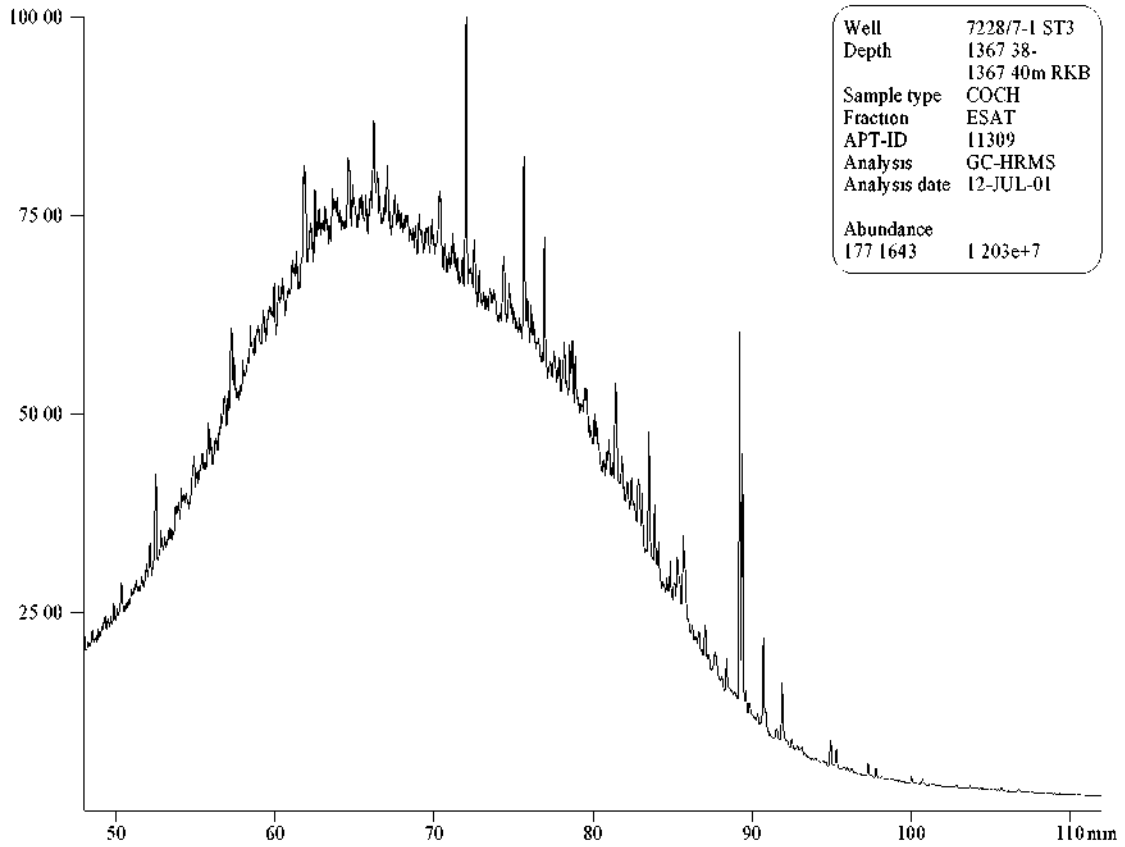


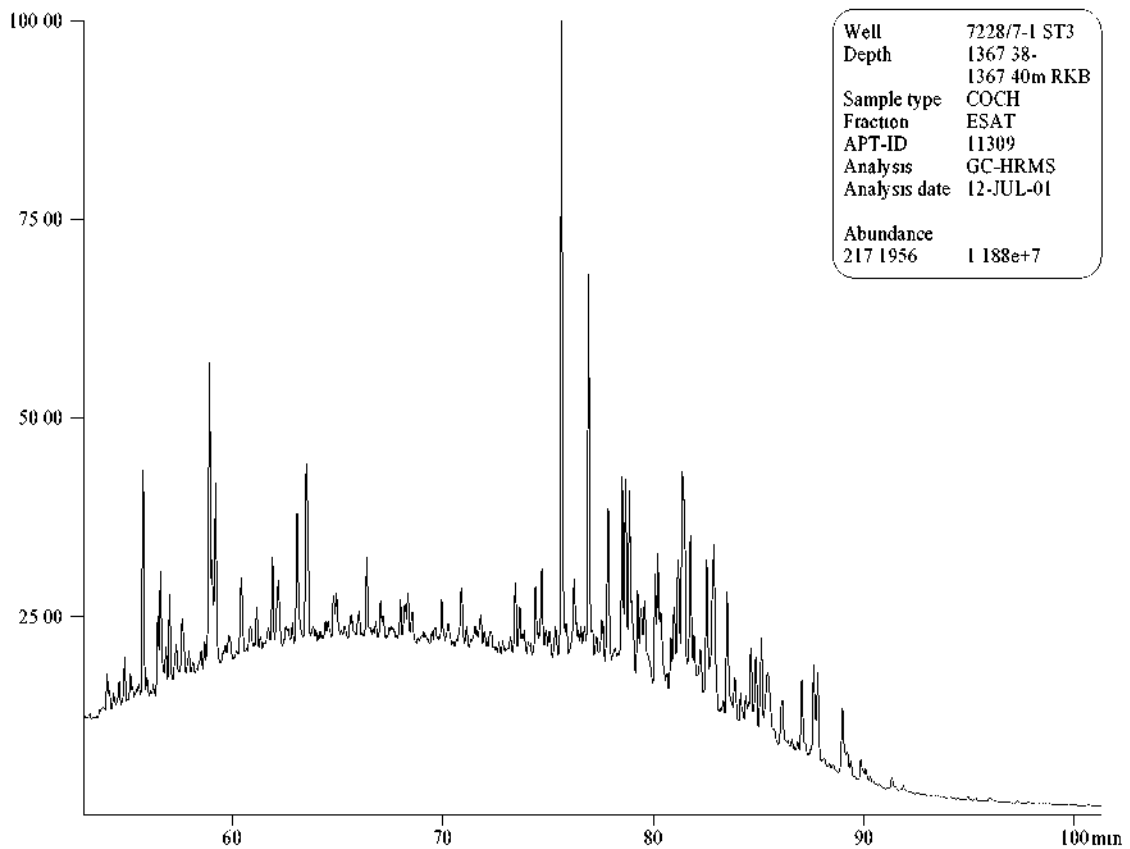
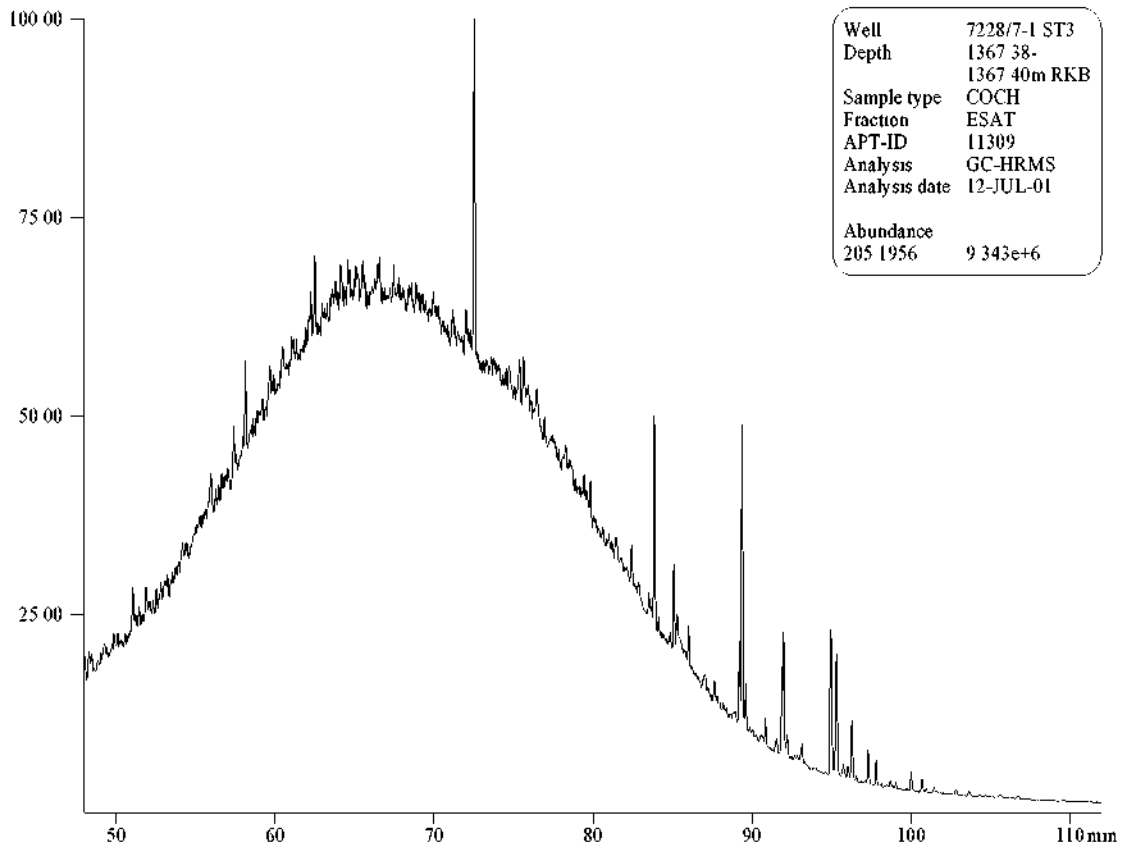


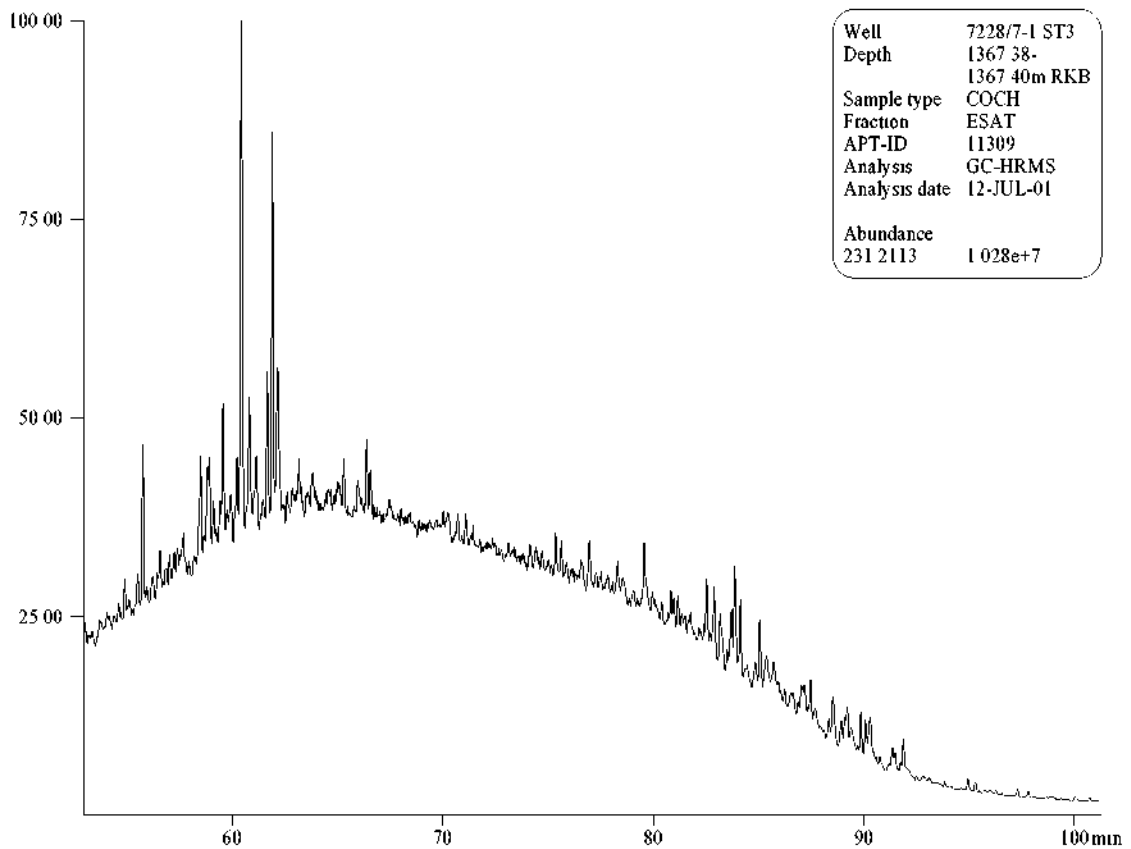
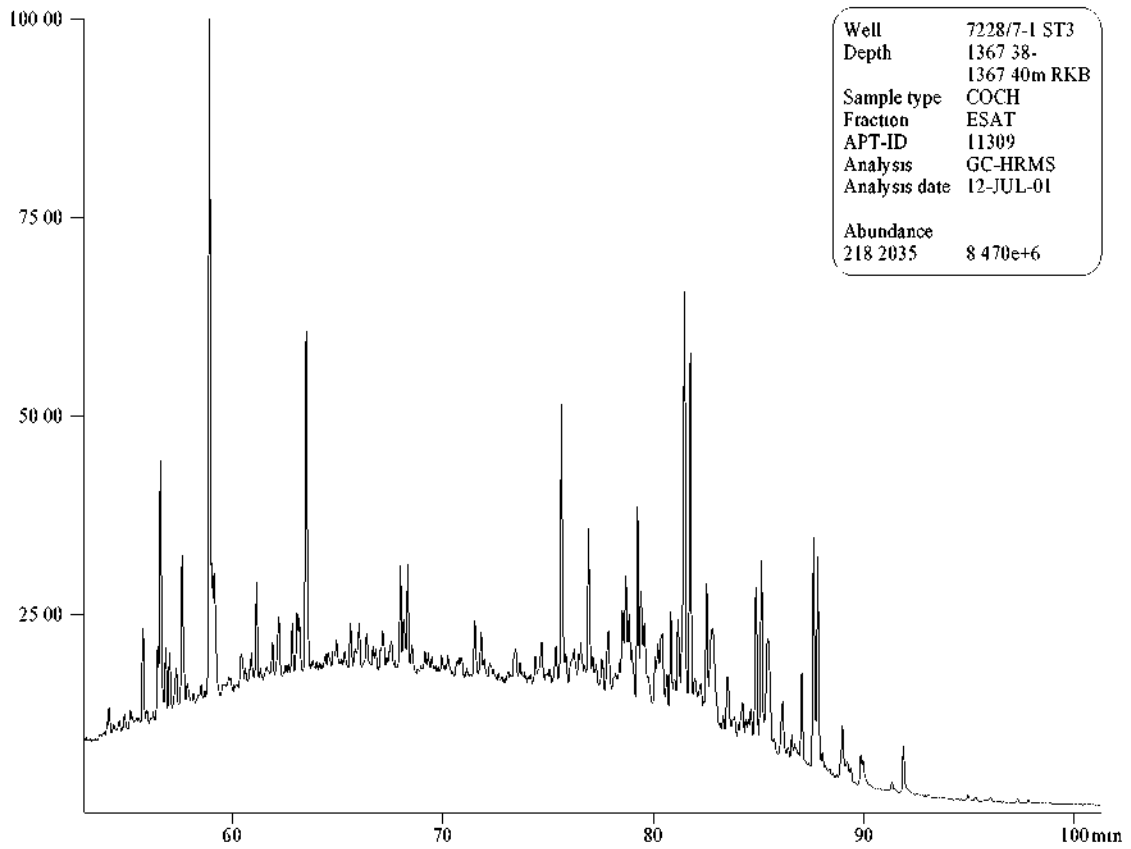


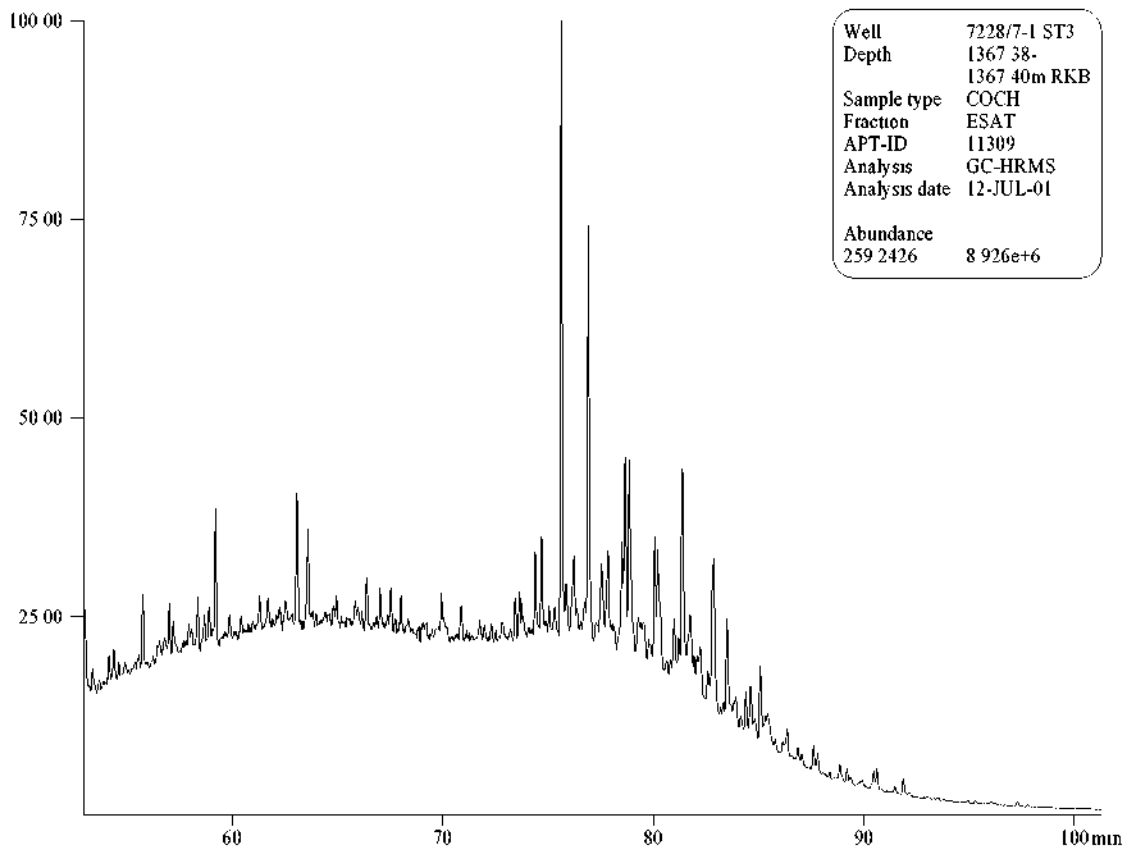
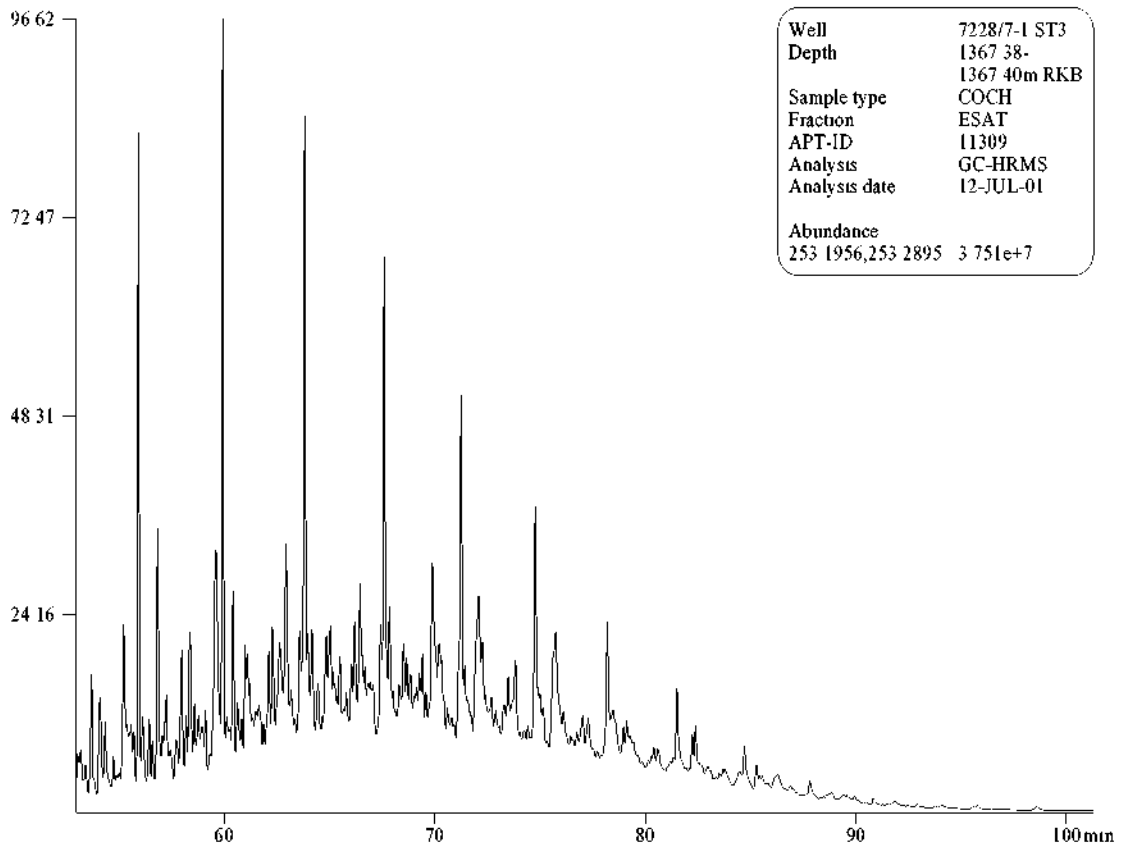


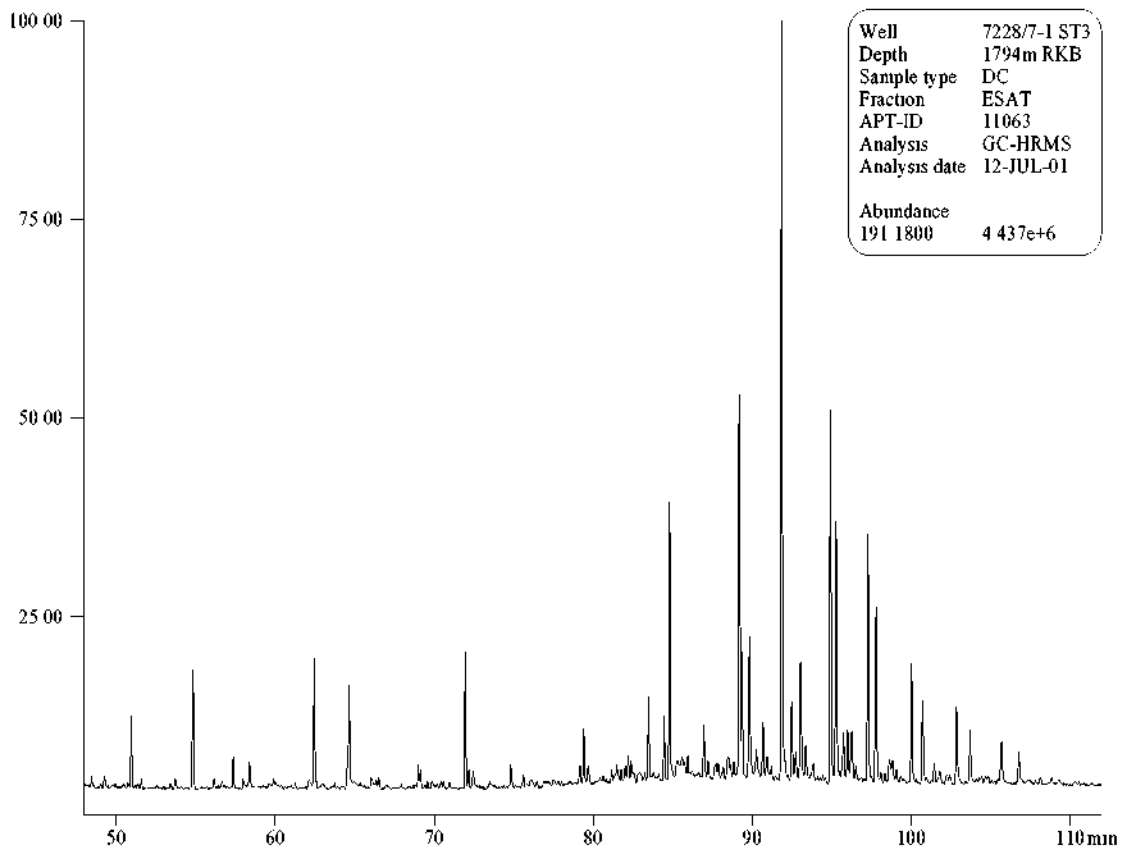
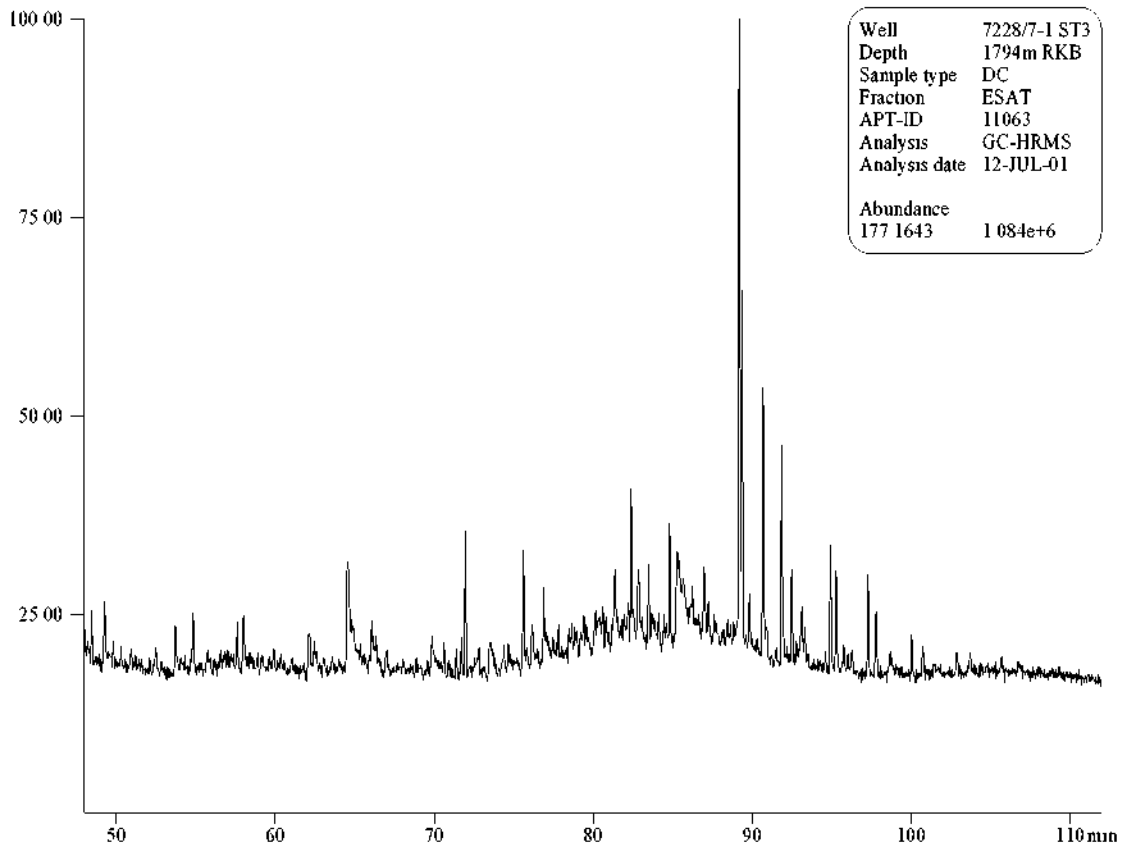


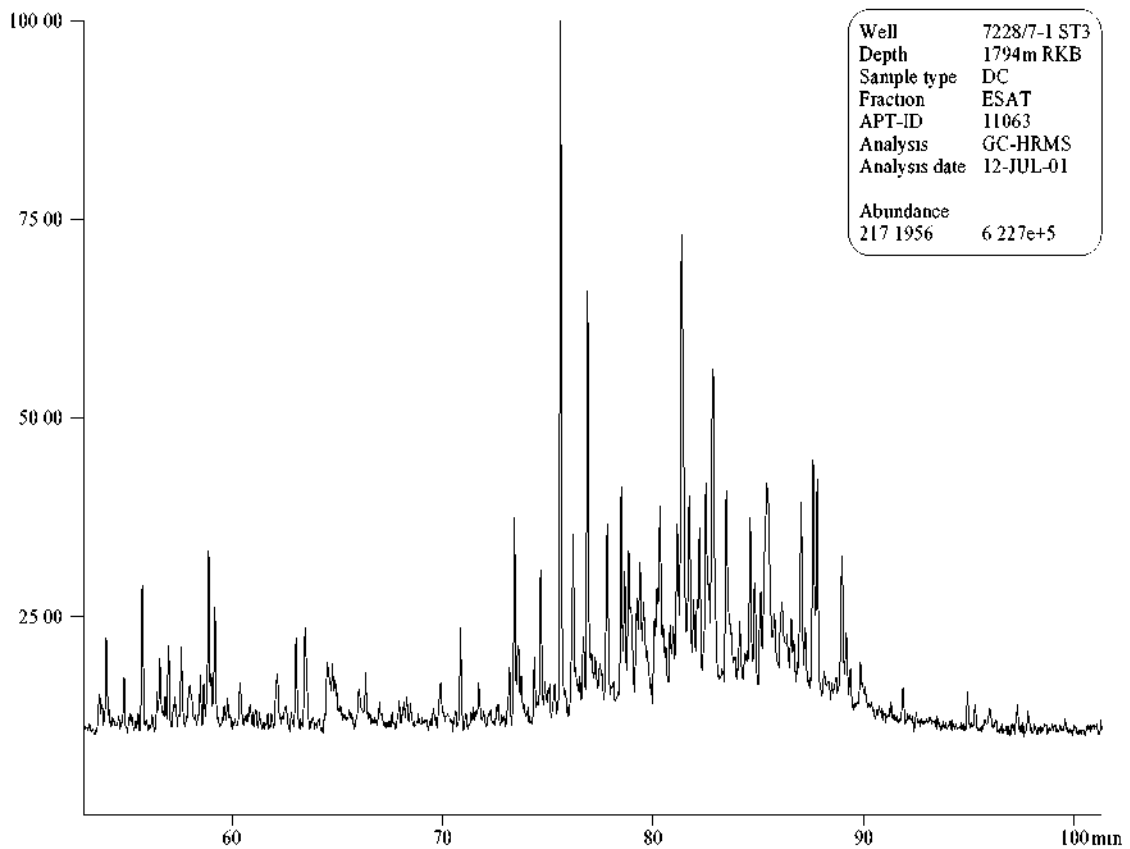
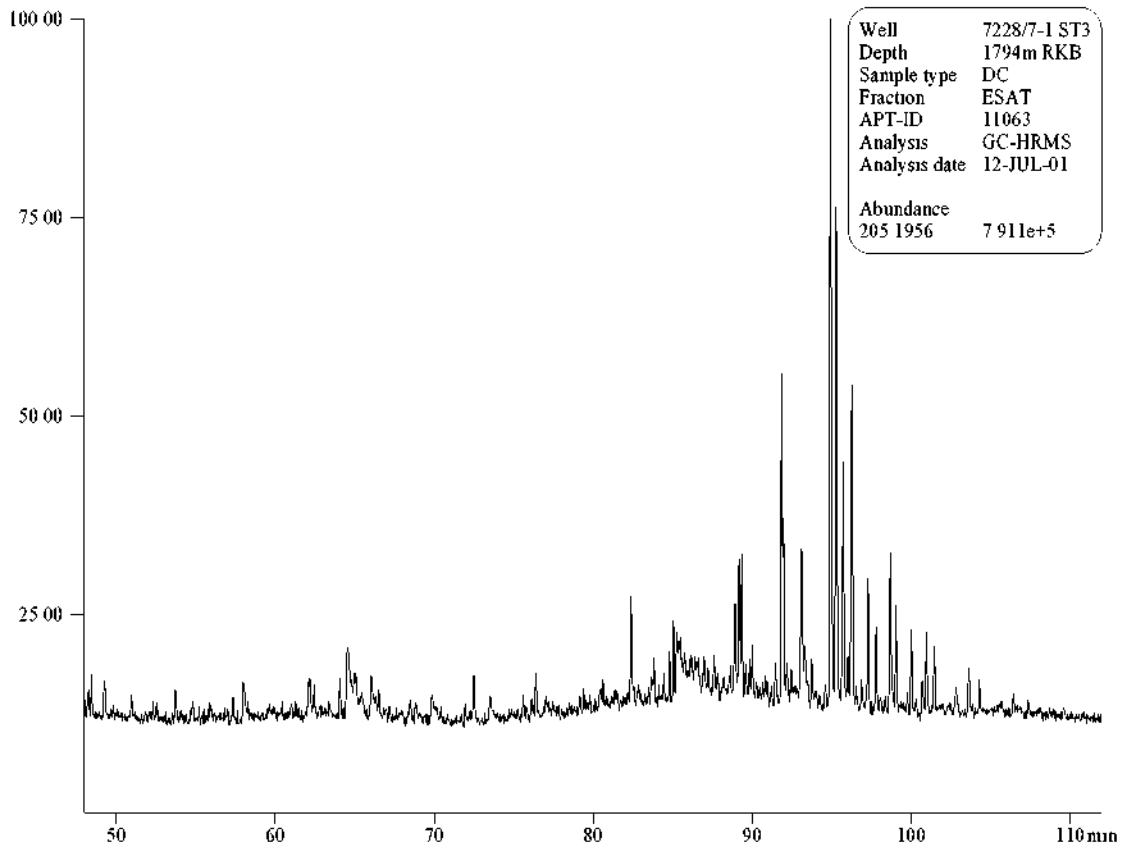


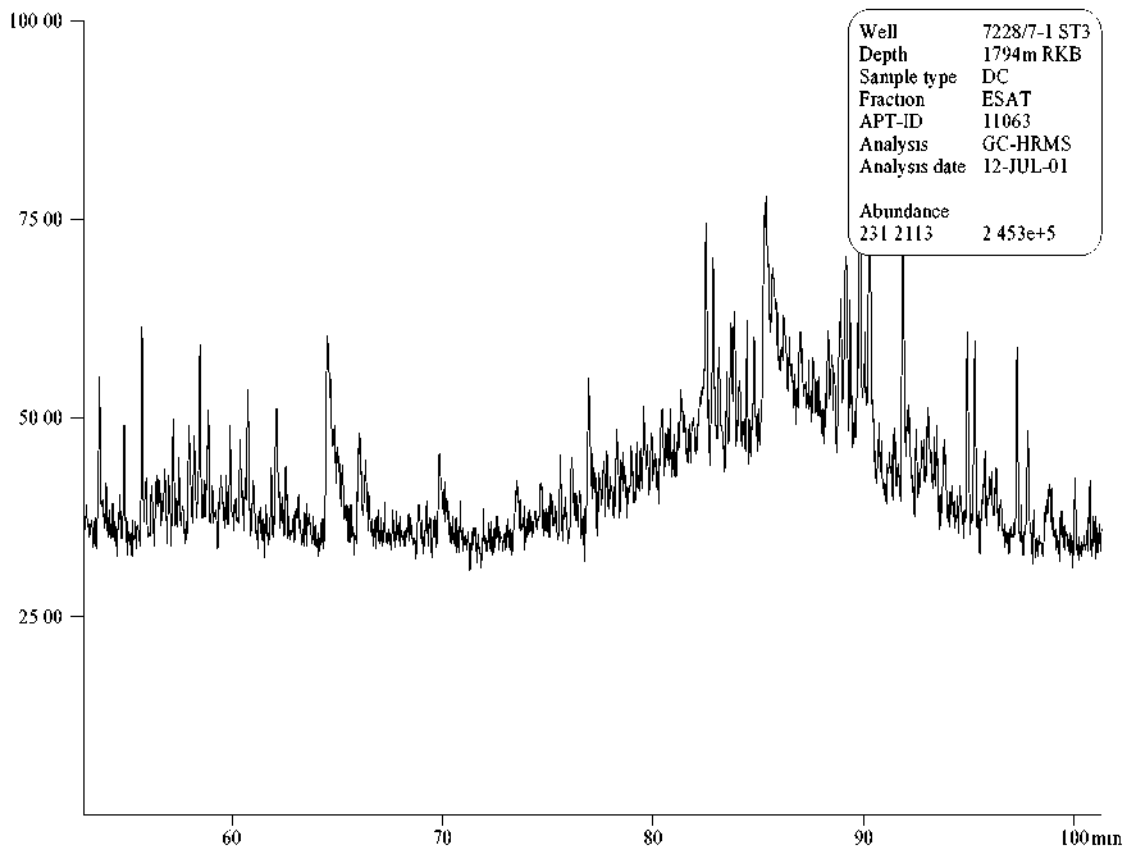
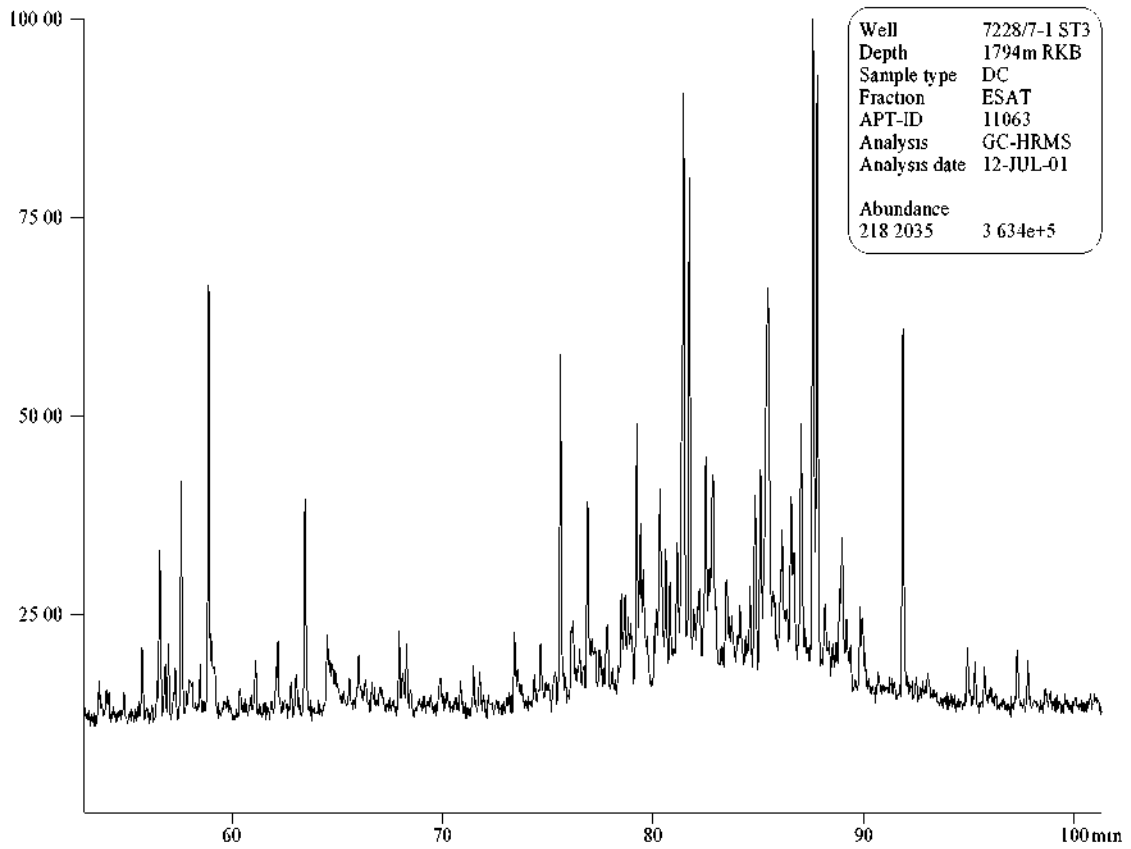


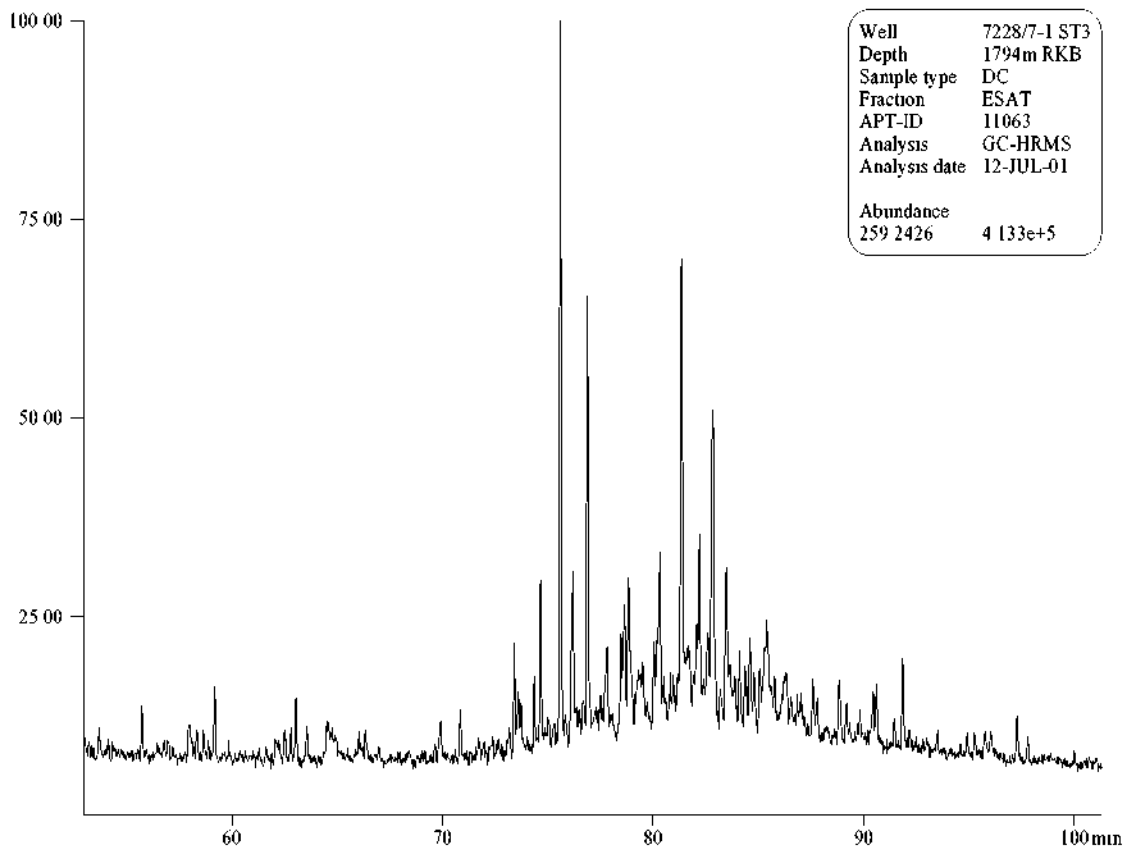
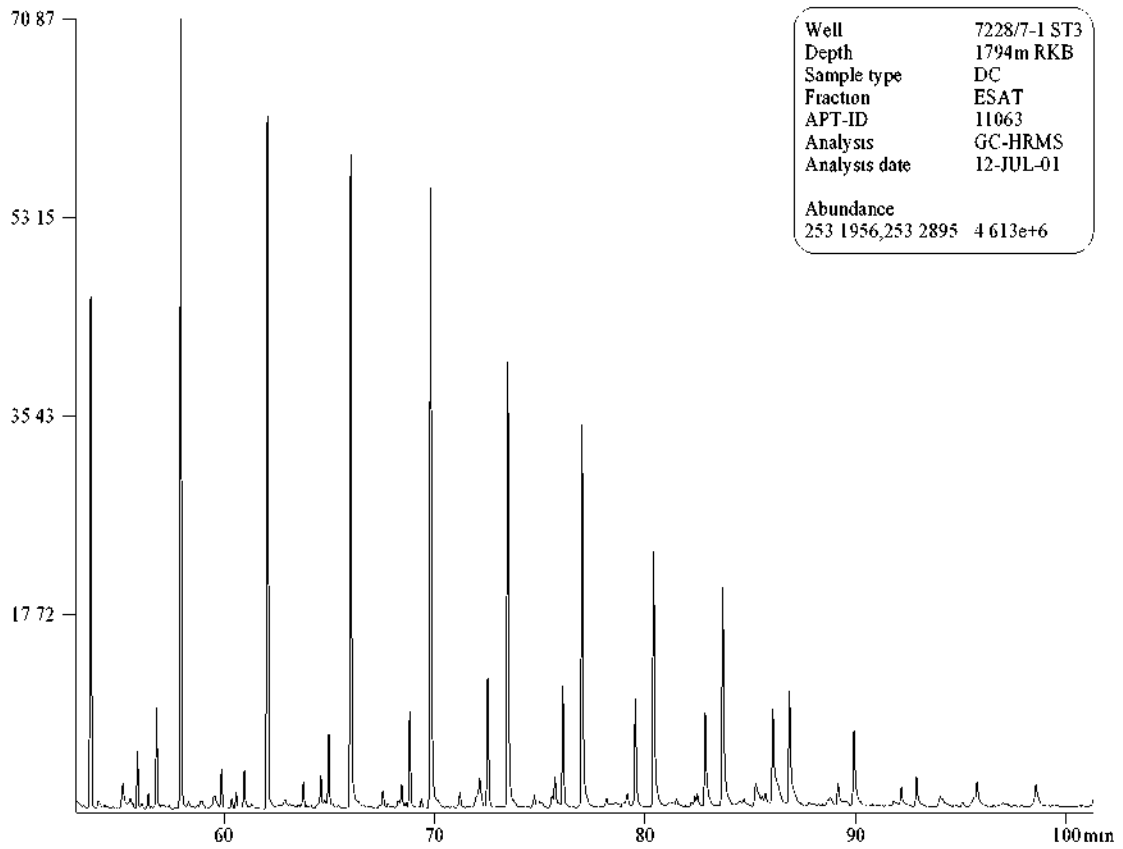






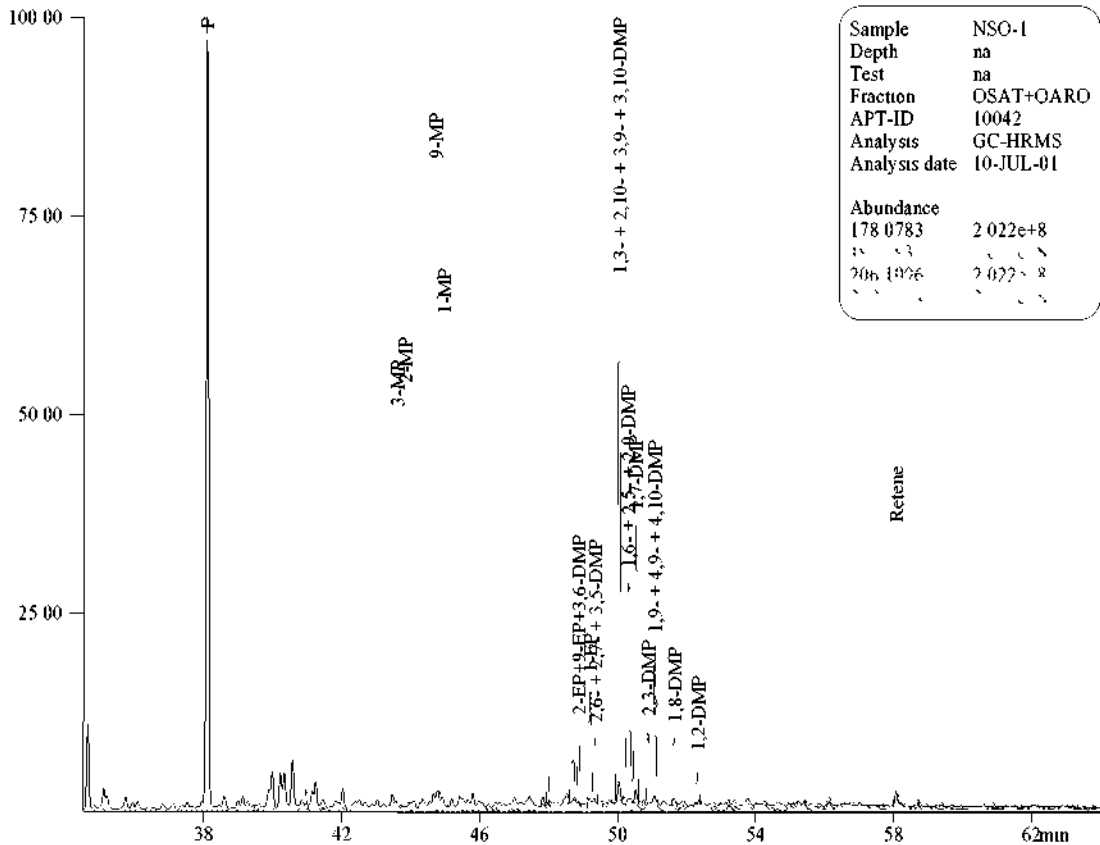
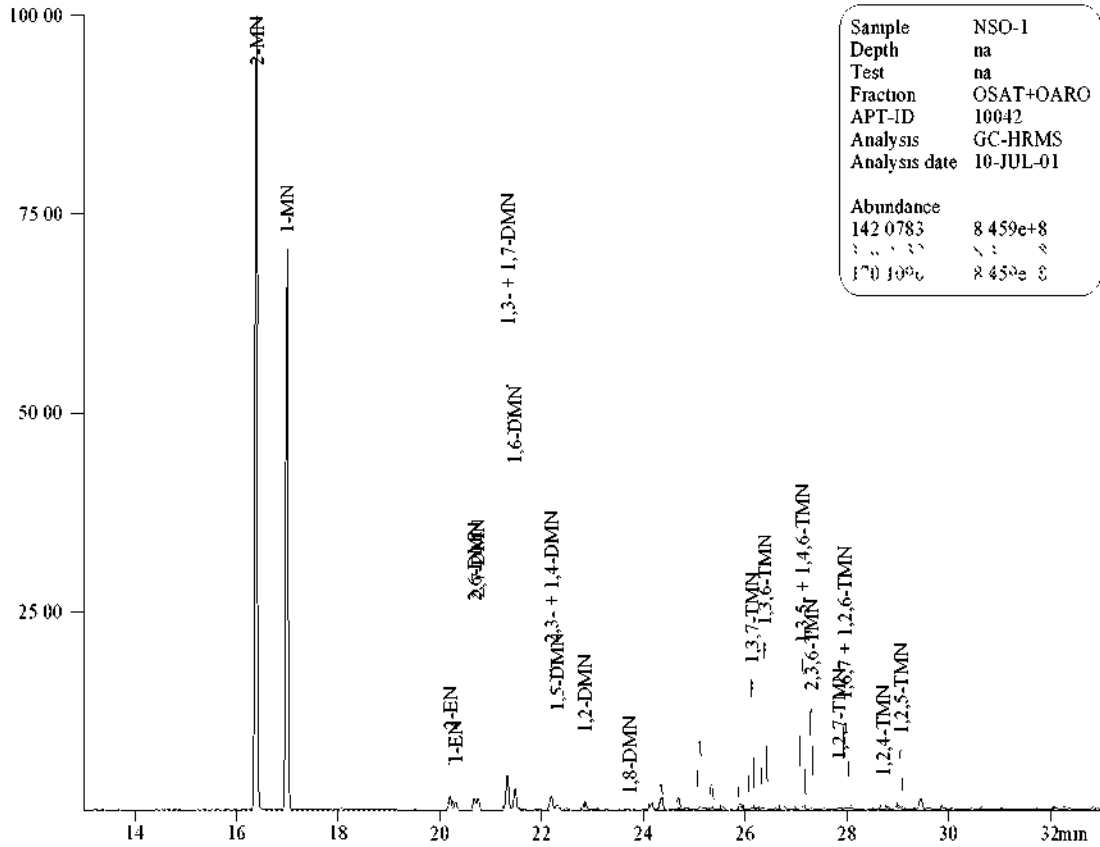


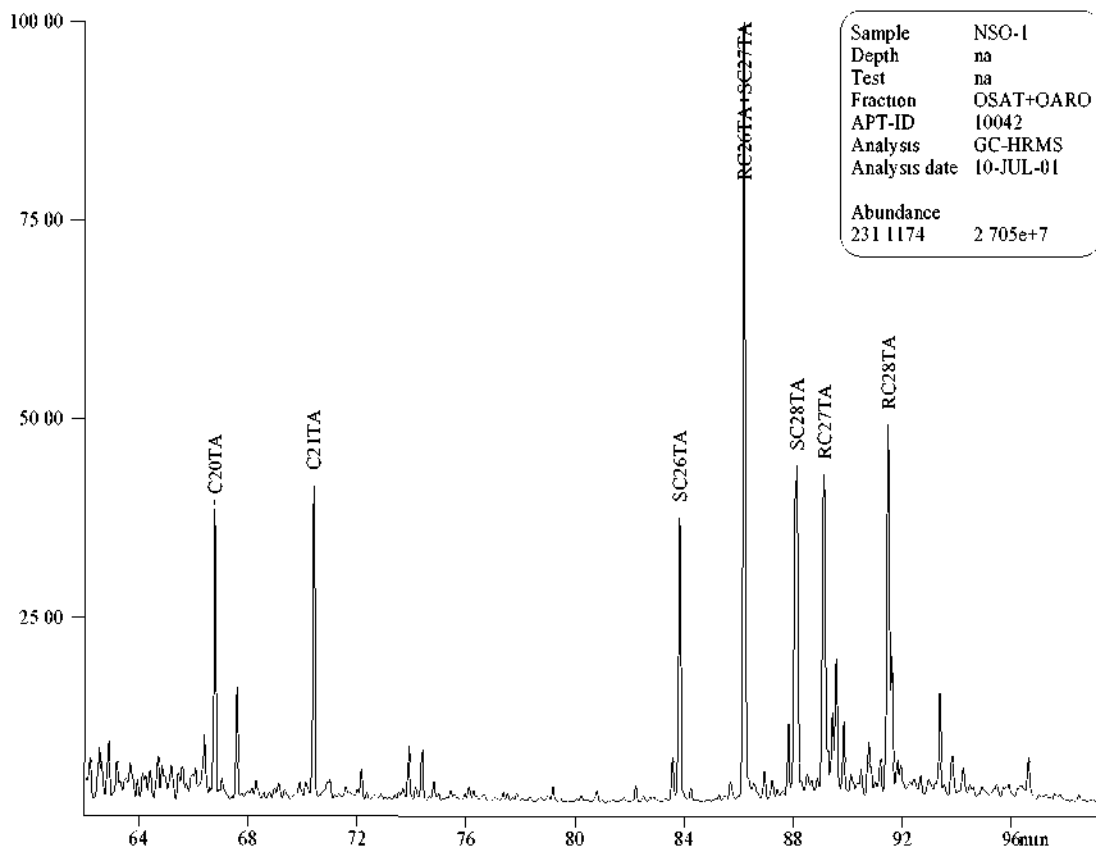
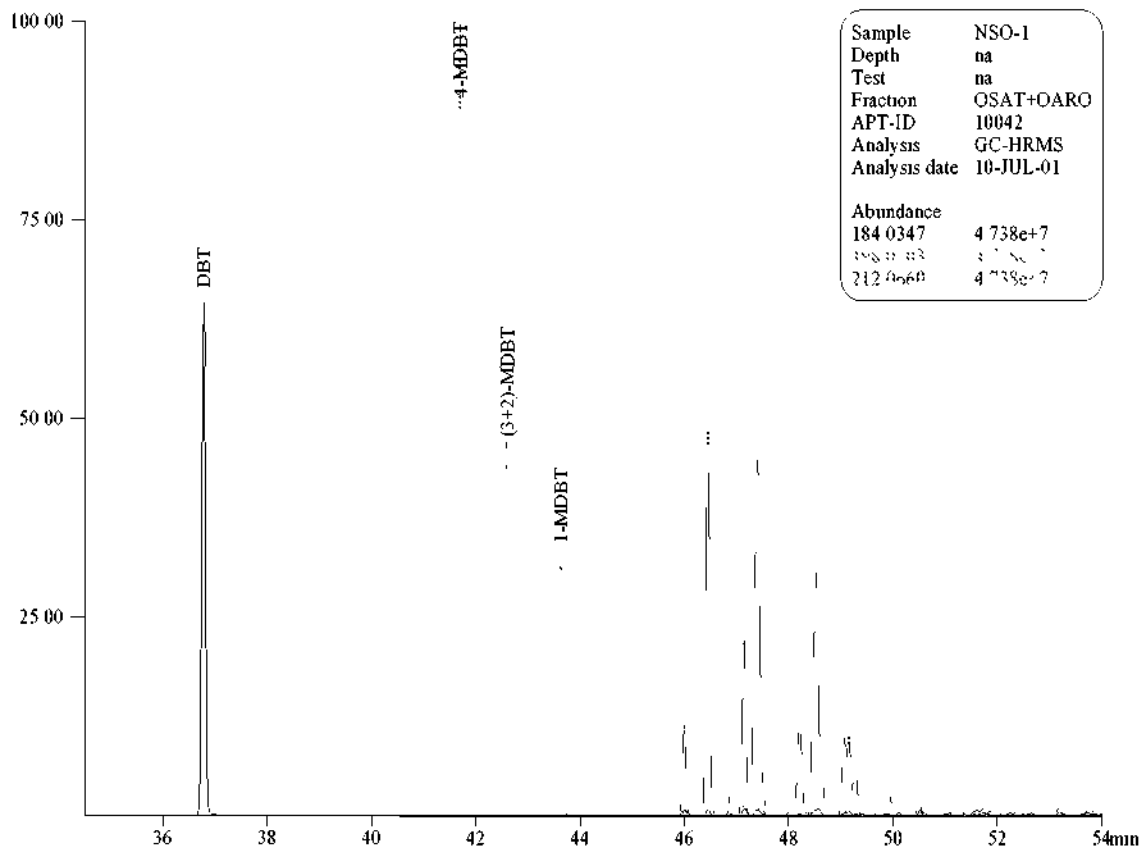


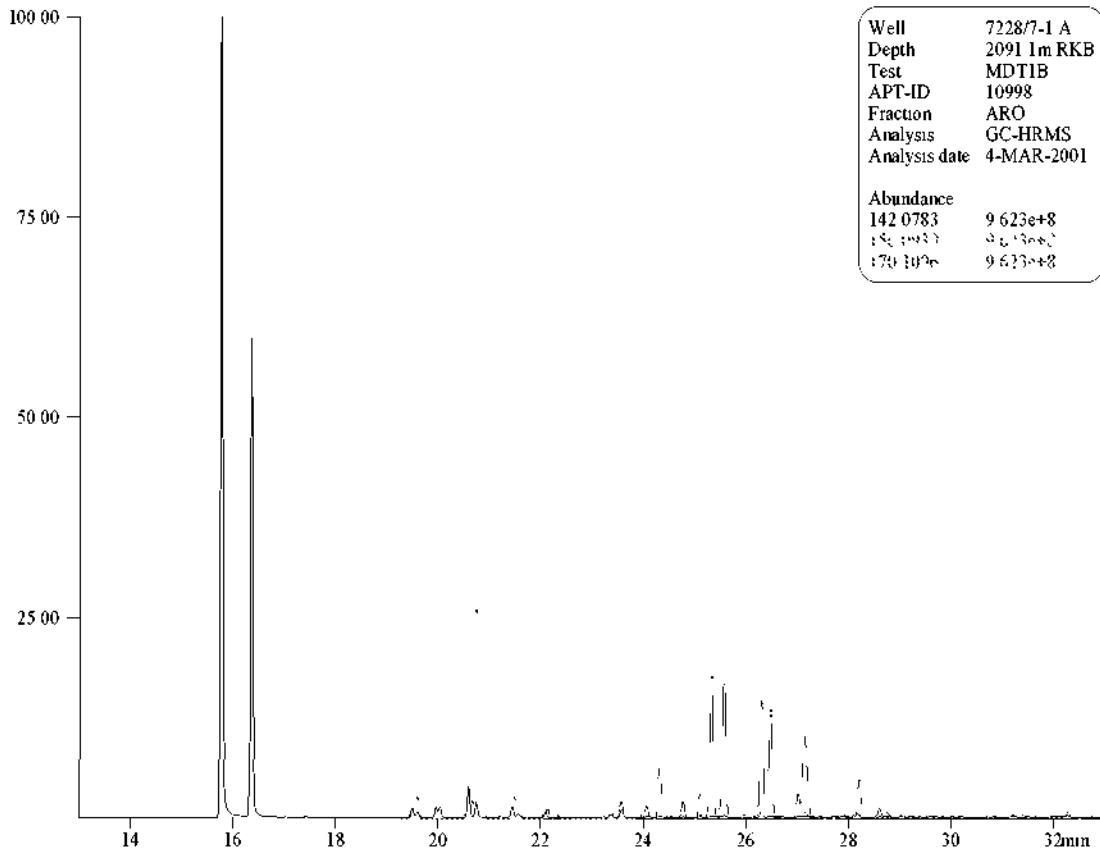
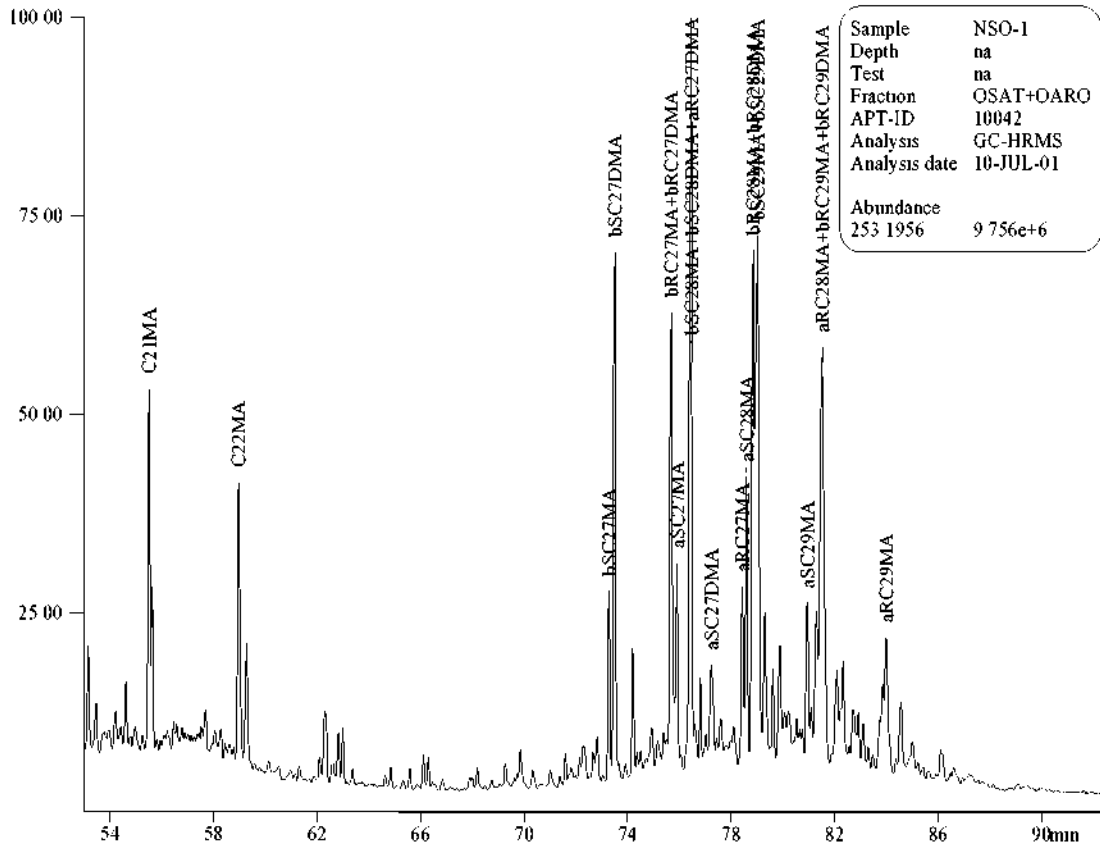


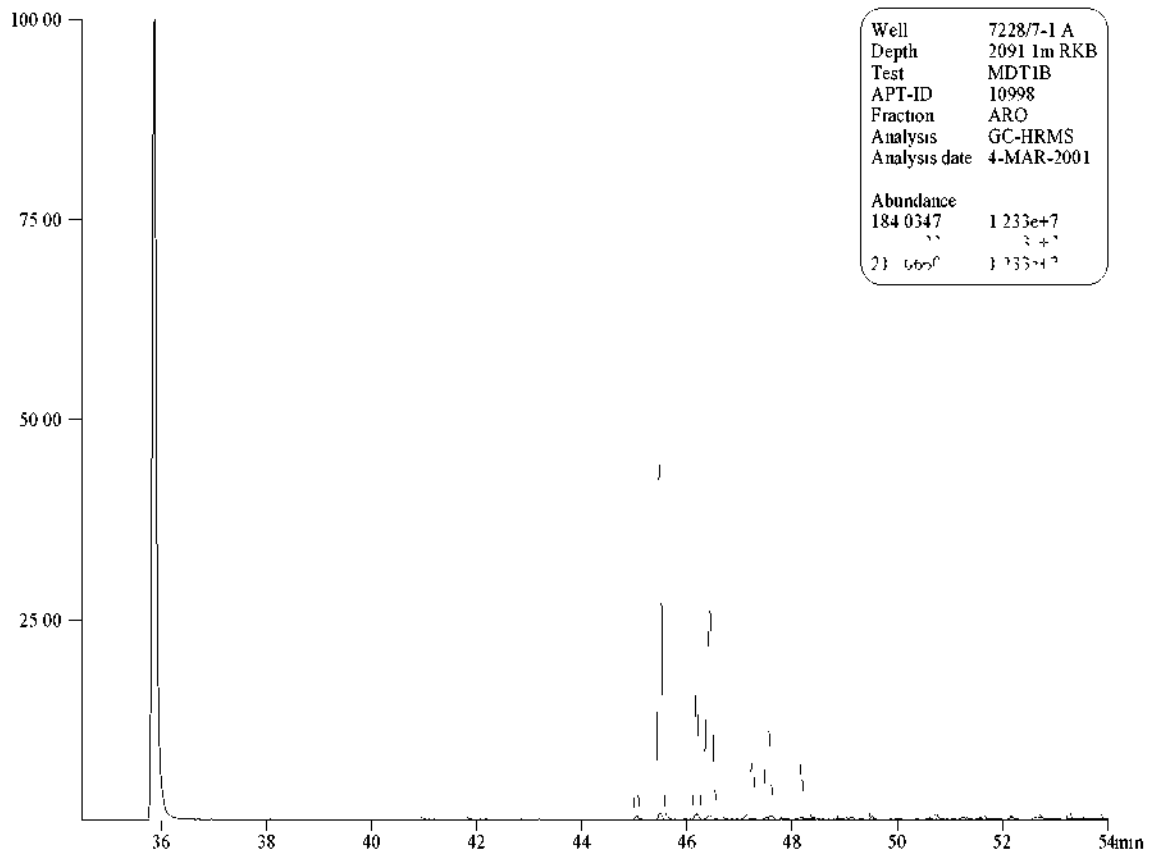
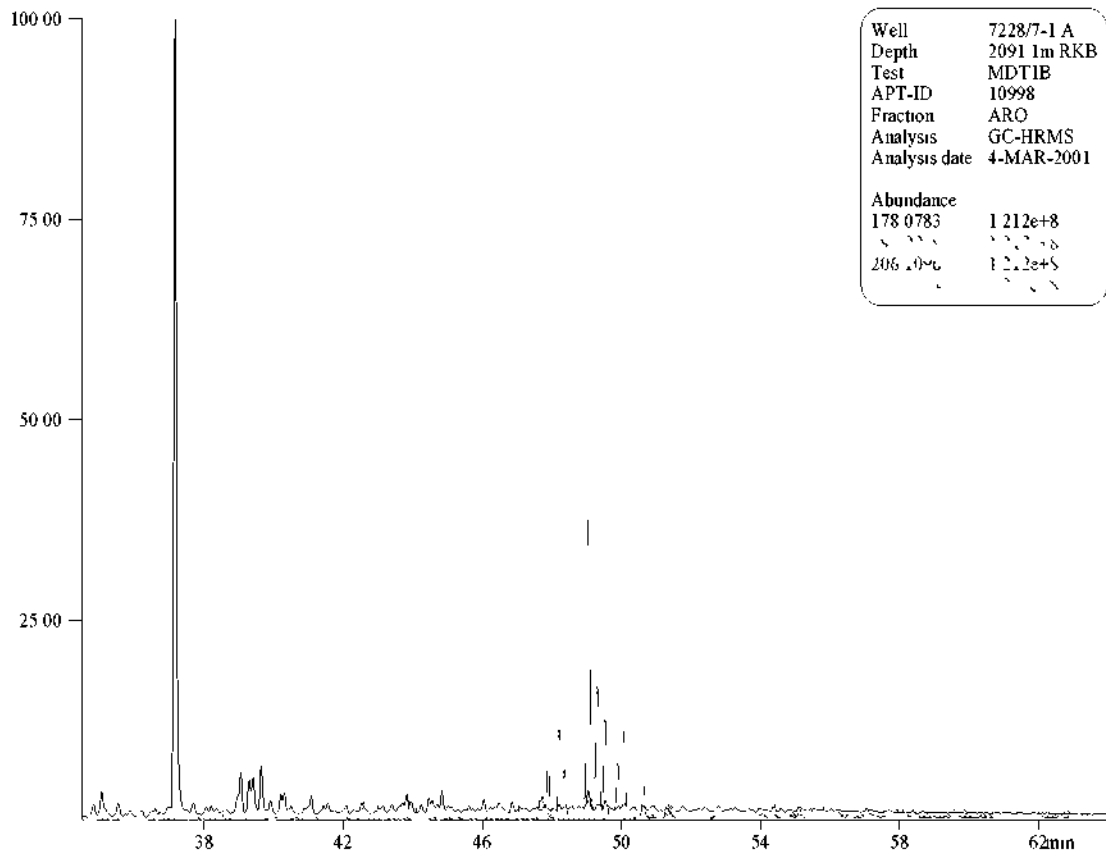


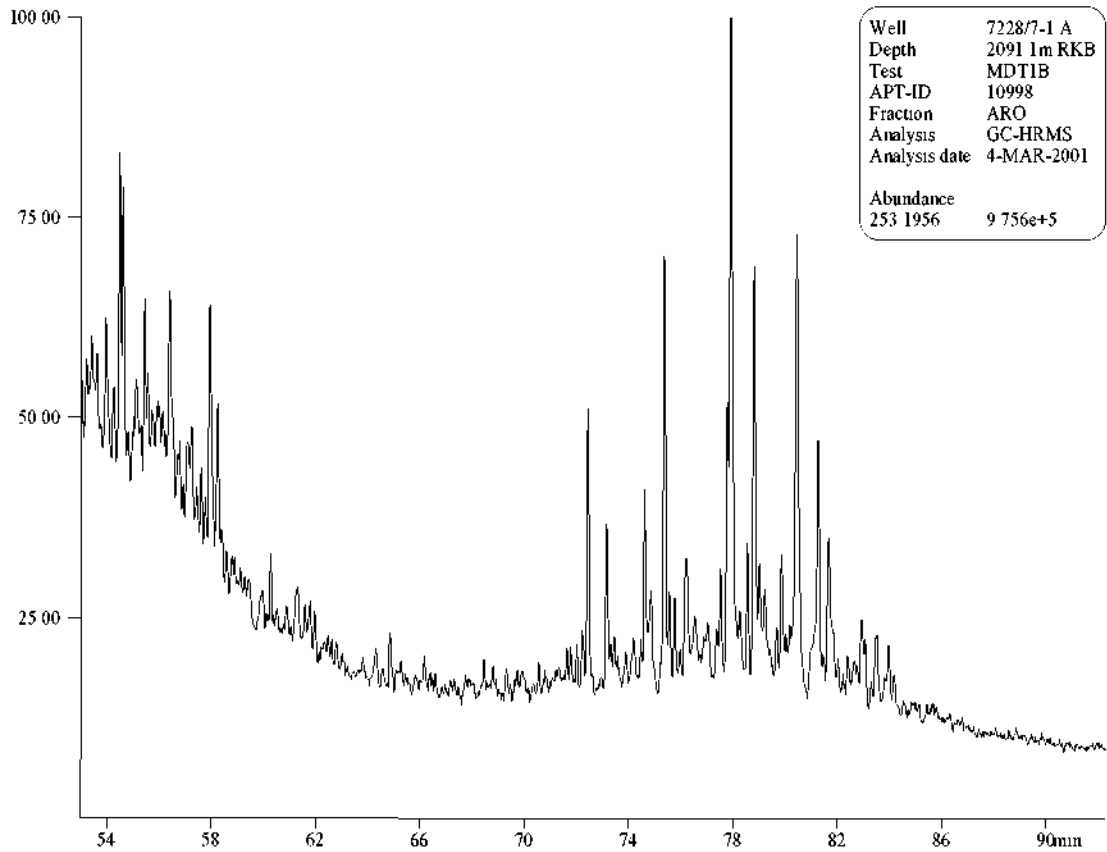
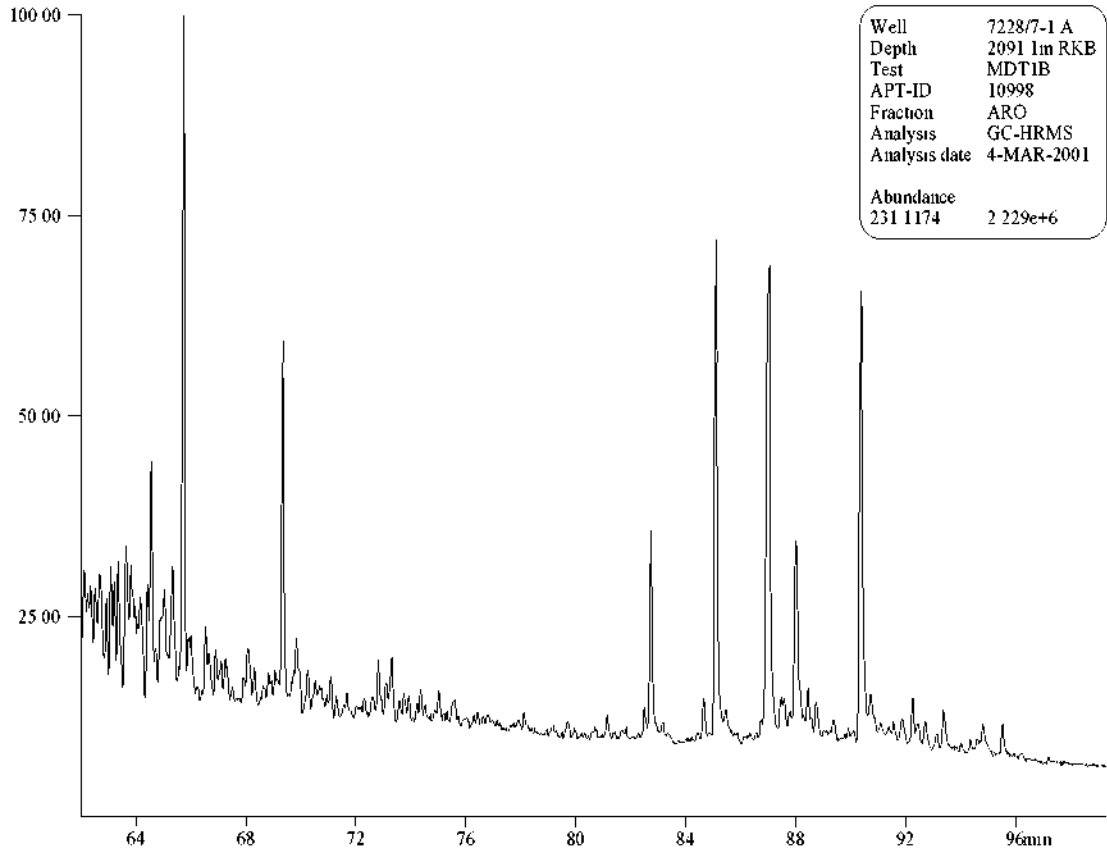
GC-MS Chromatograms of Aromatic Hydrocarbons

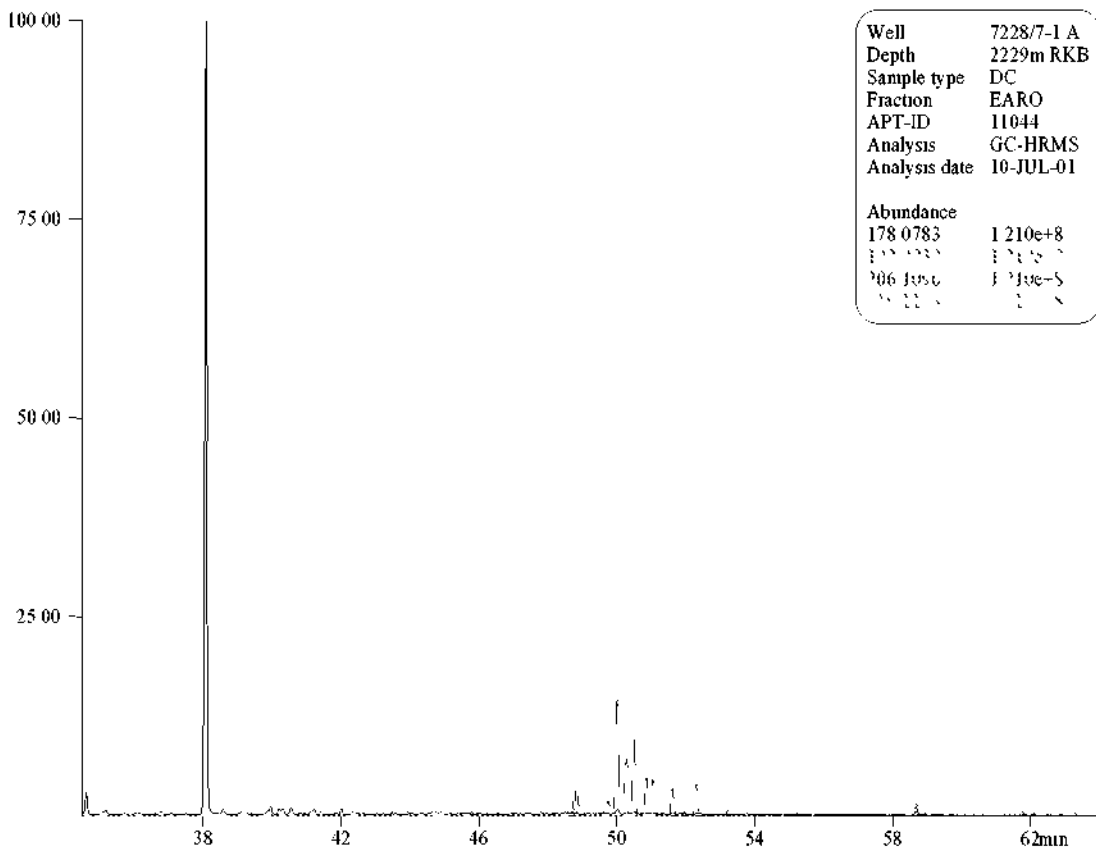
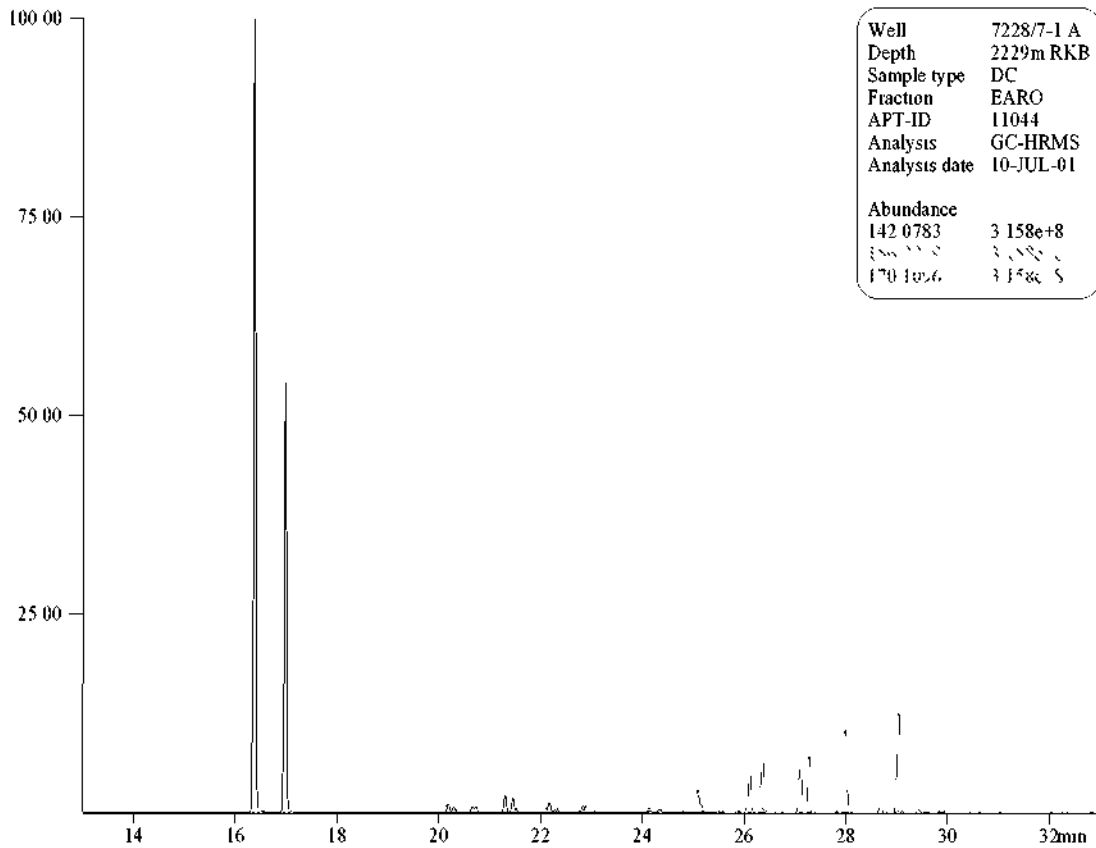


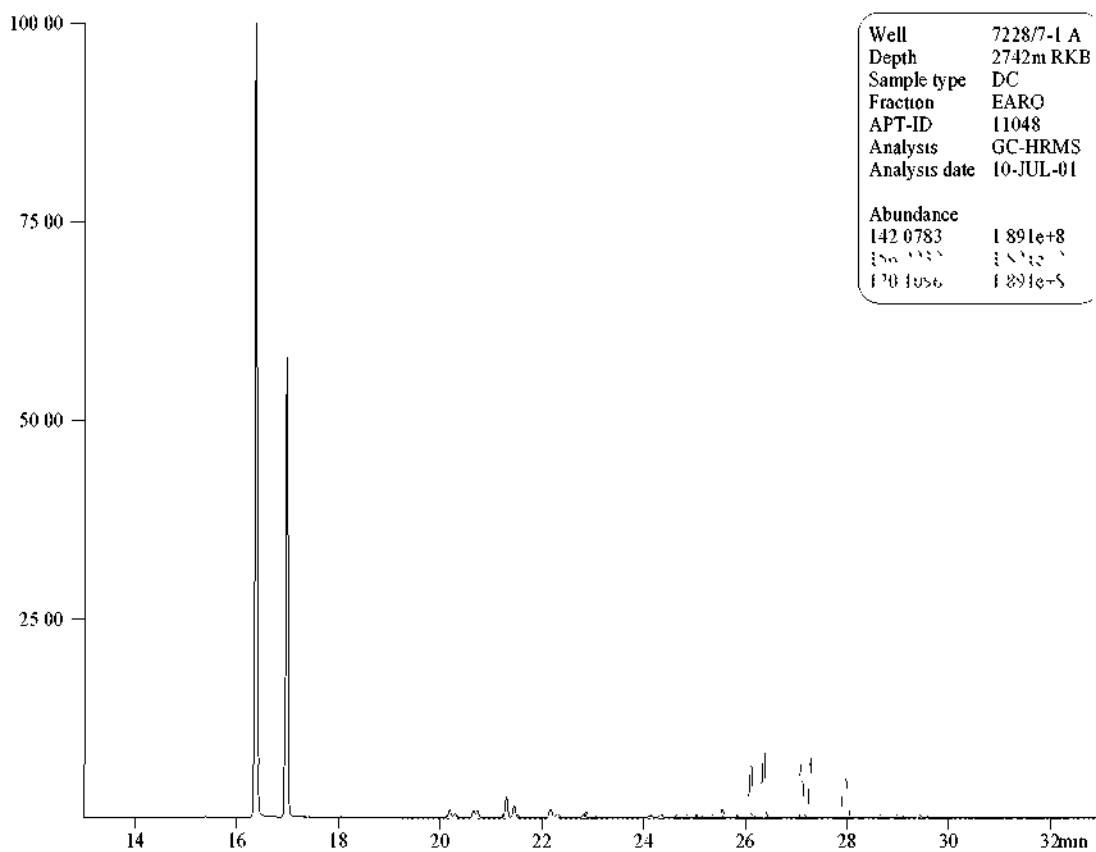
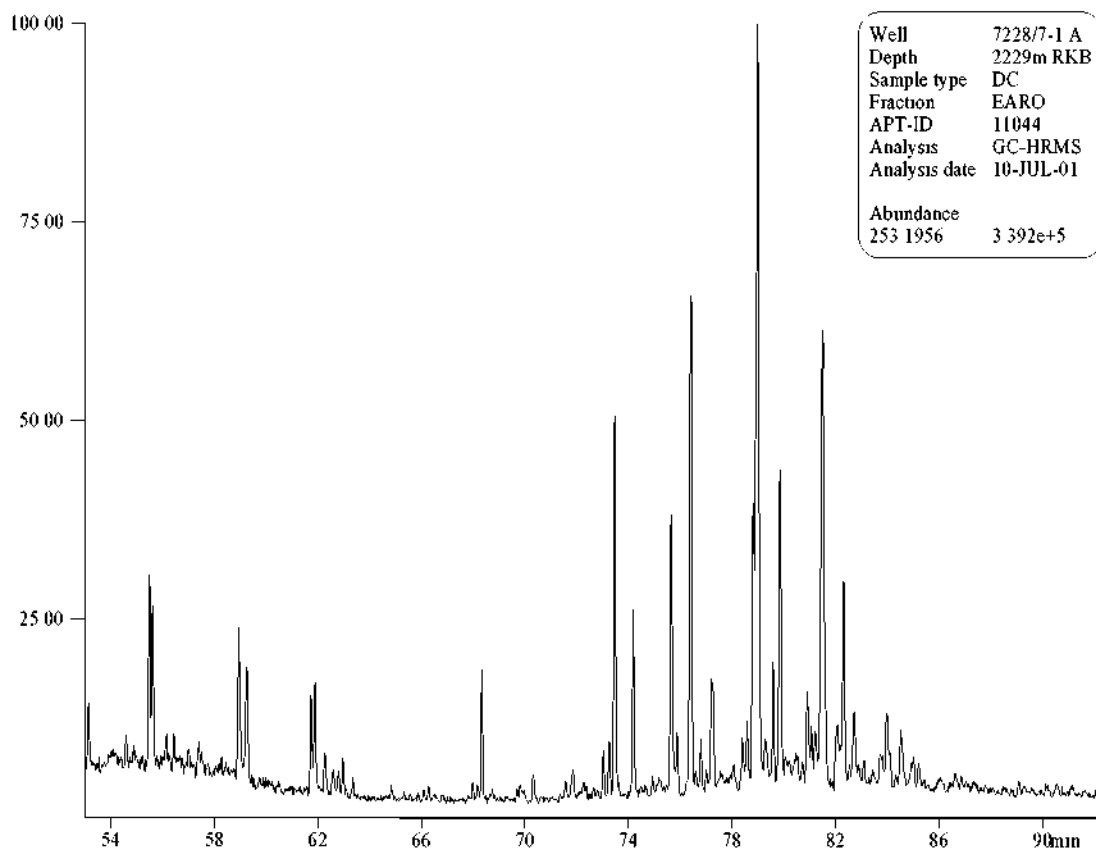


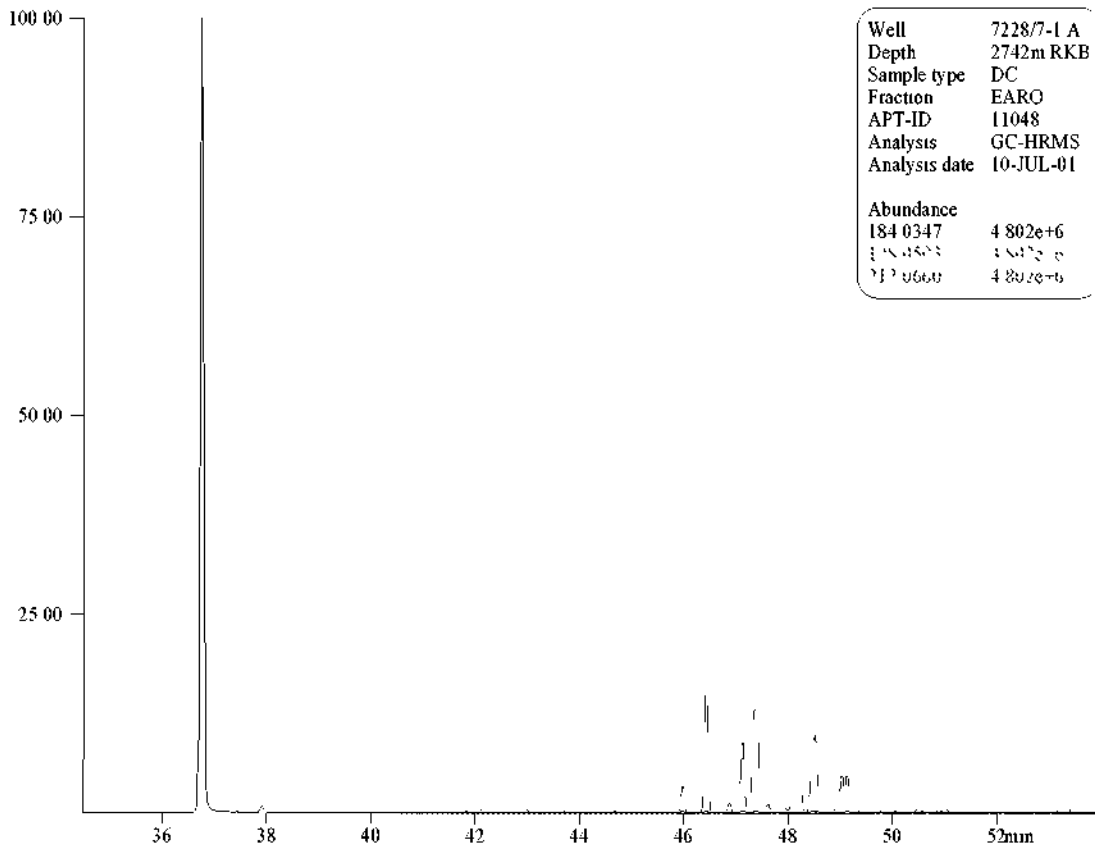
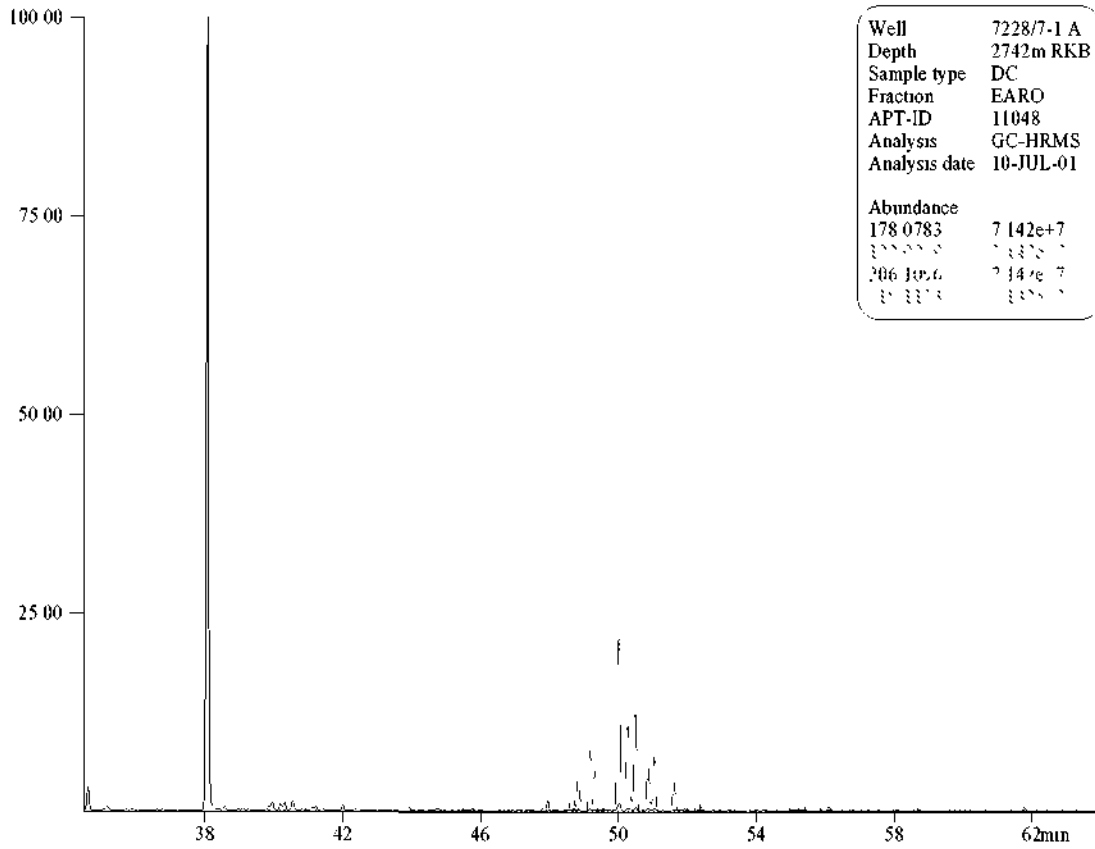


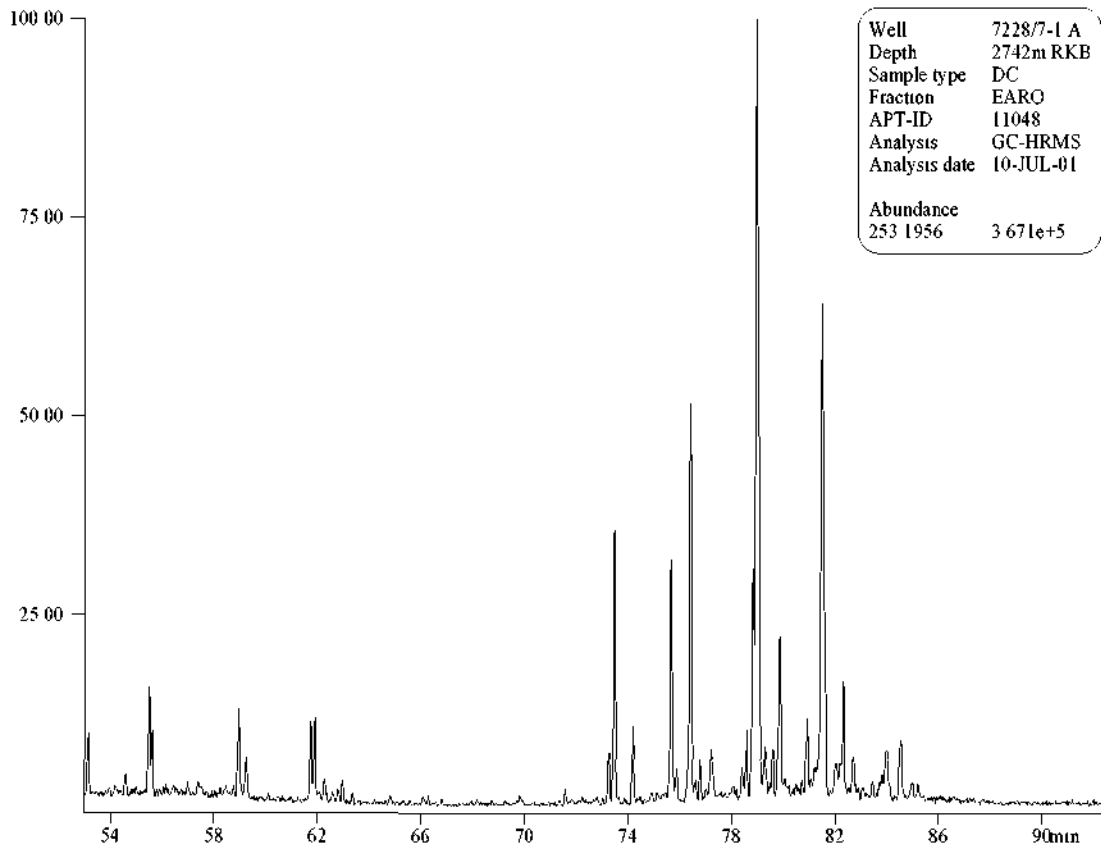
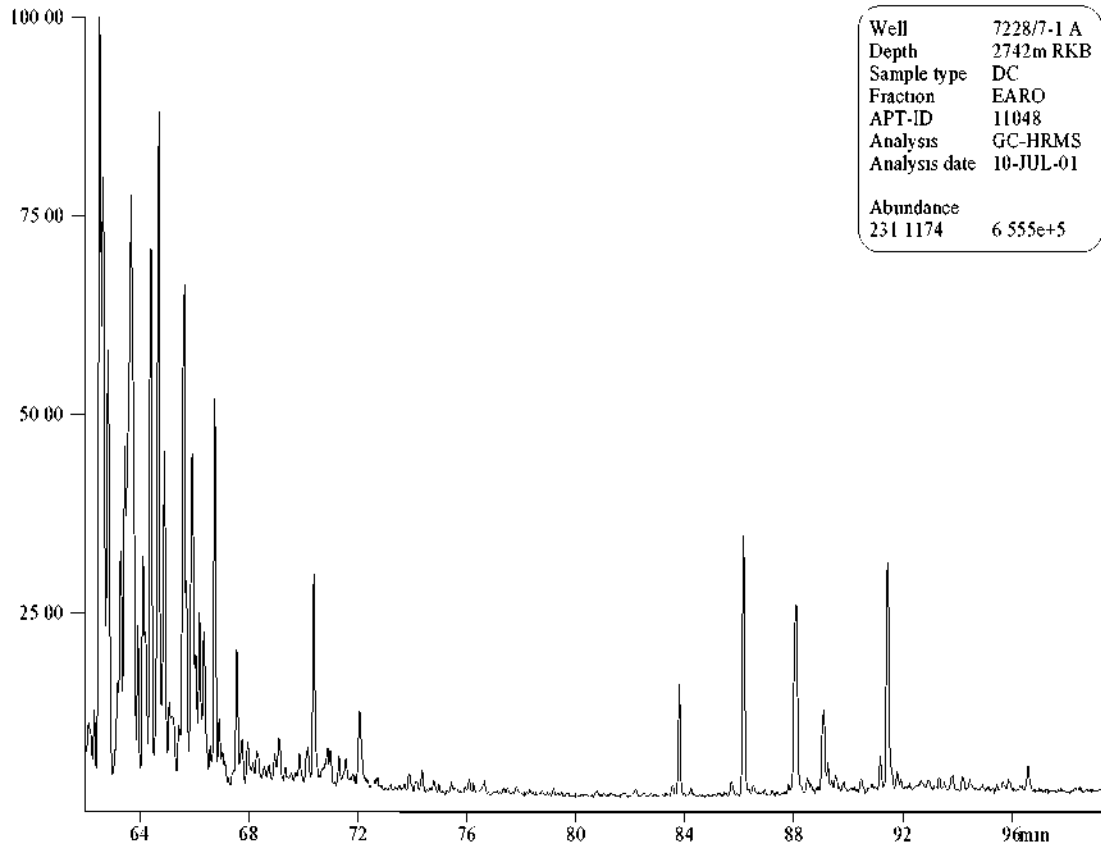


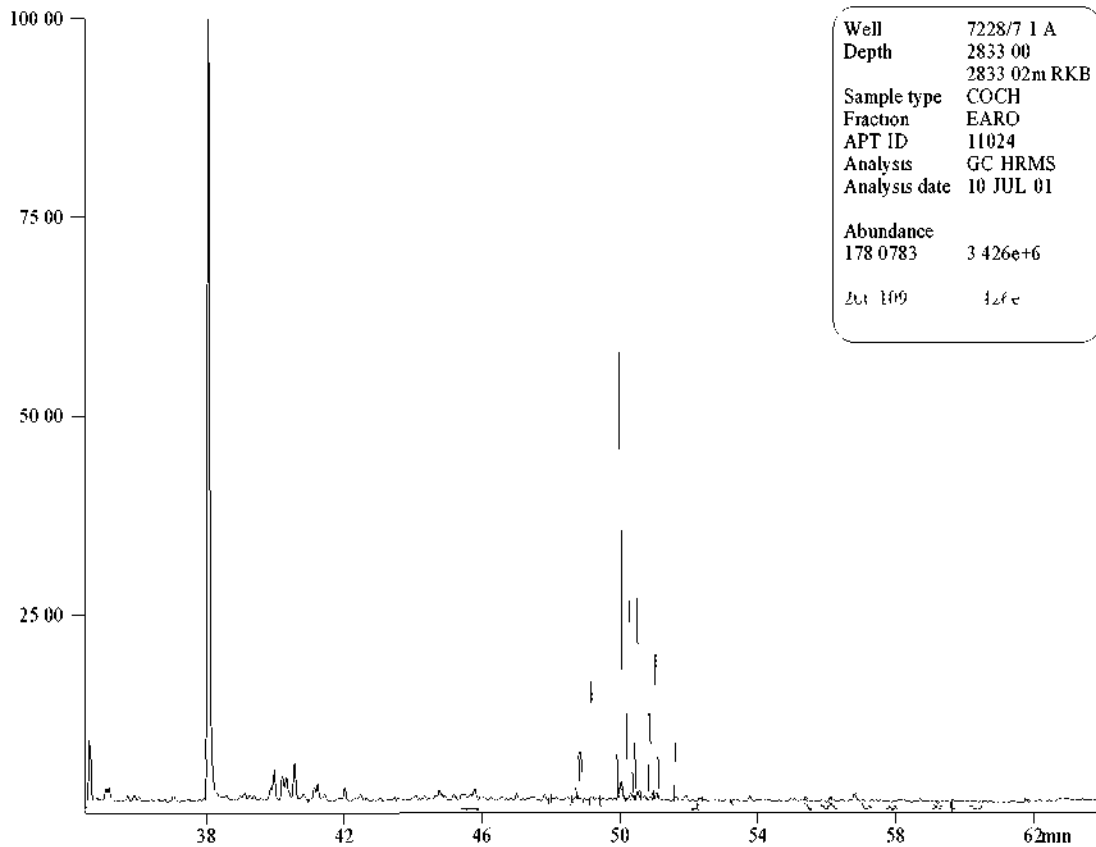
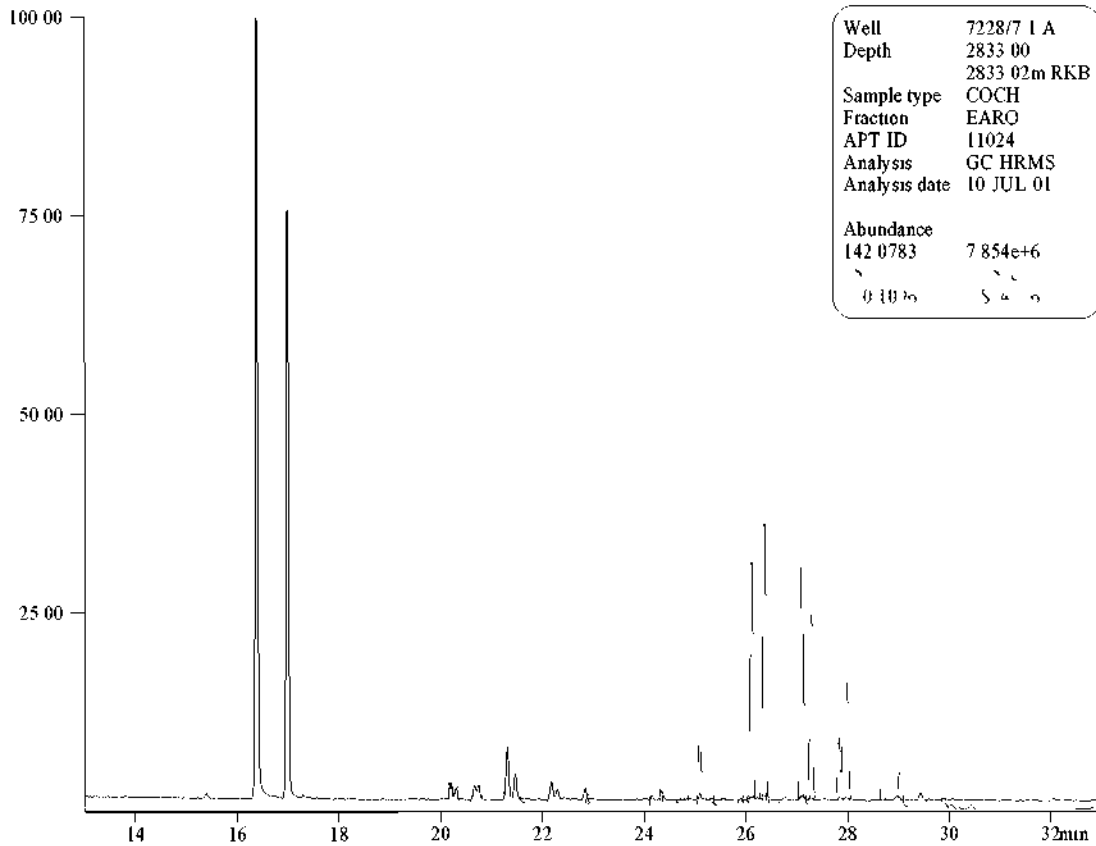


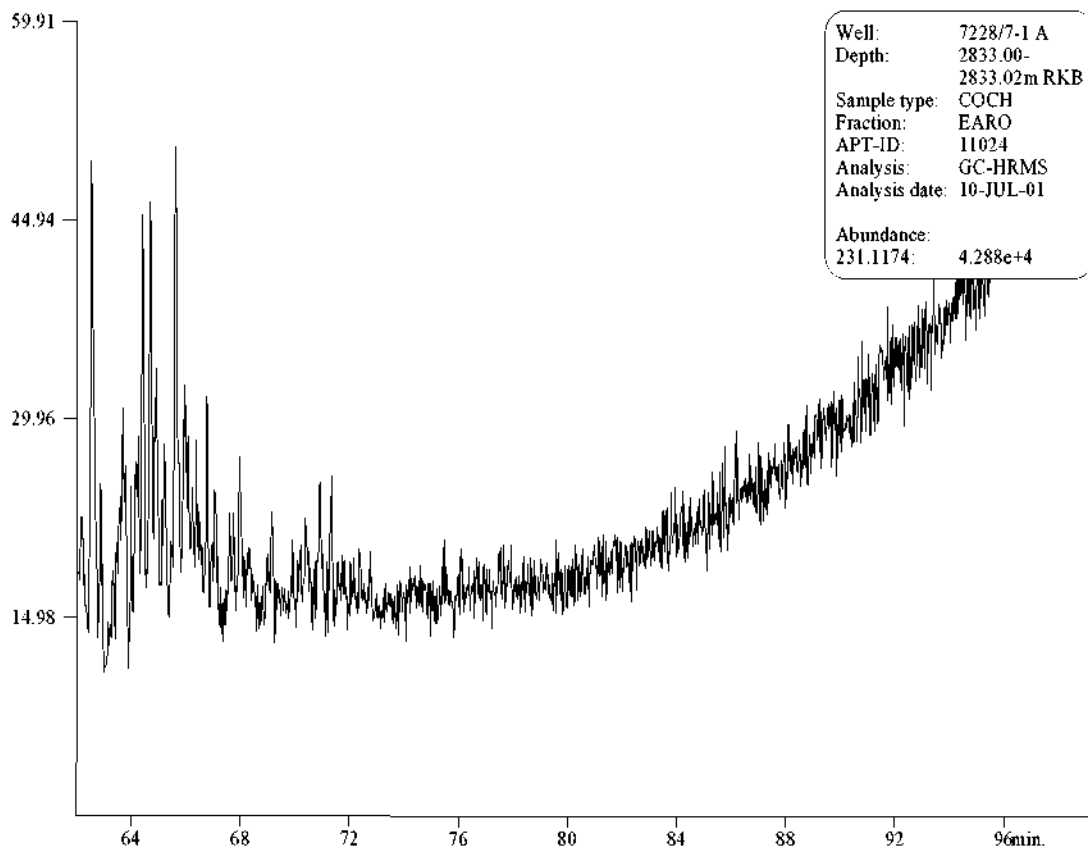
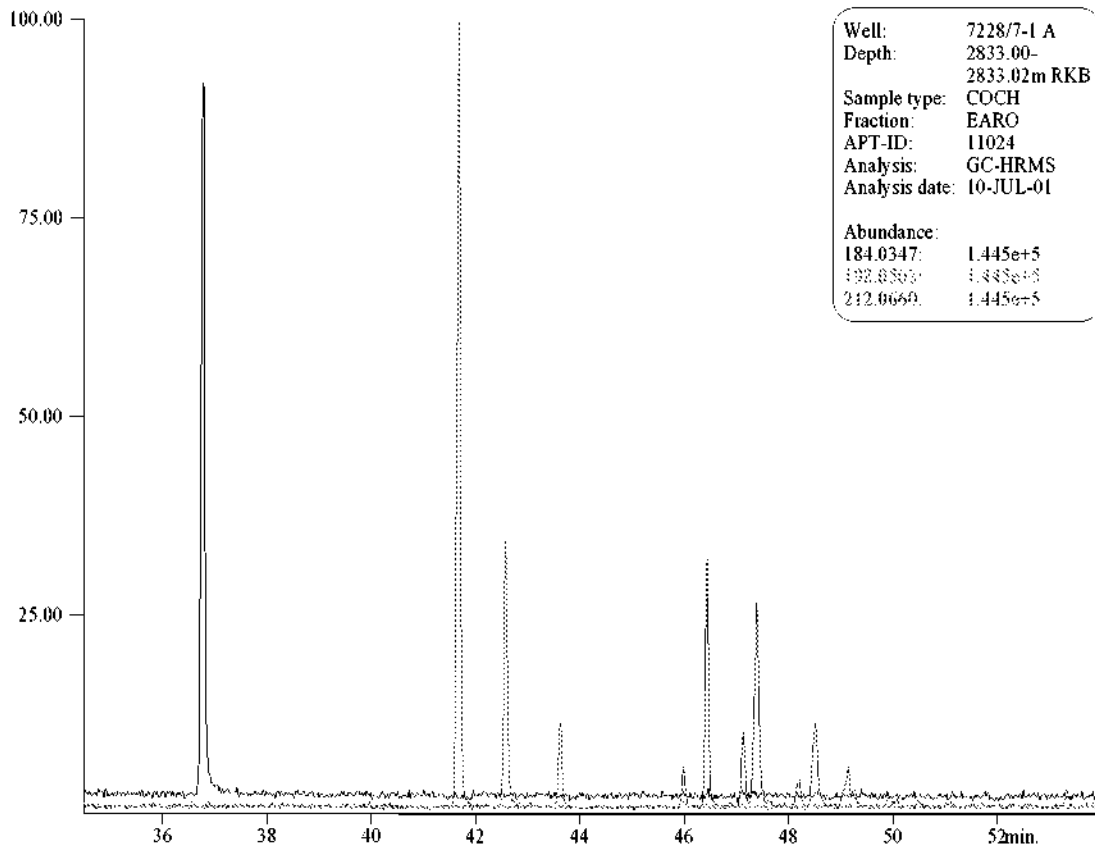


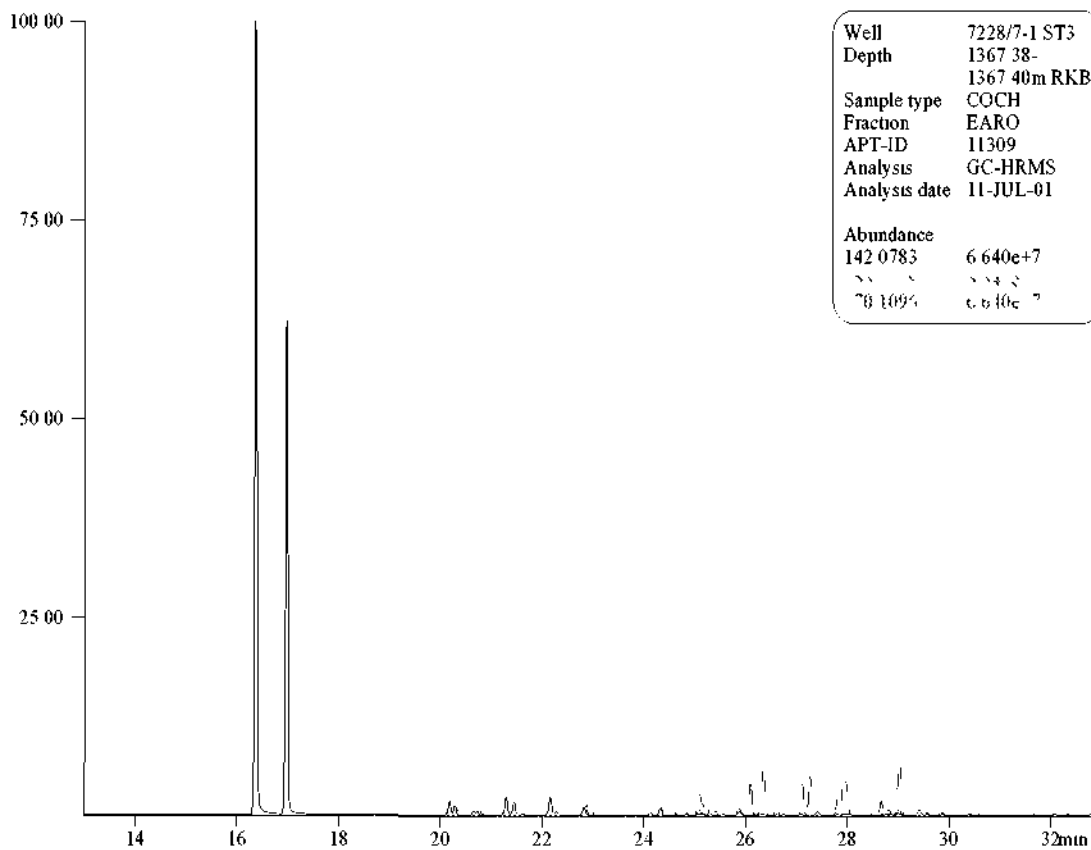
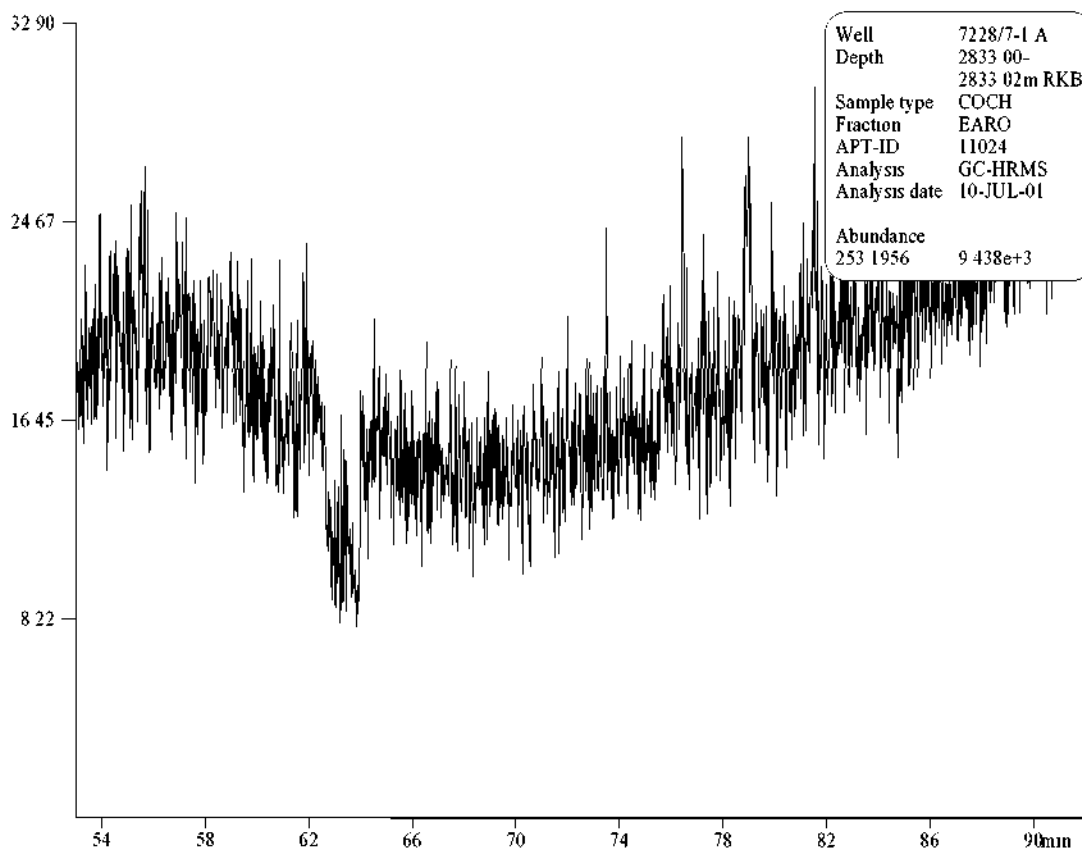


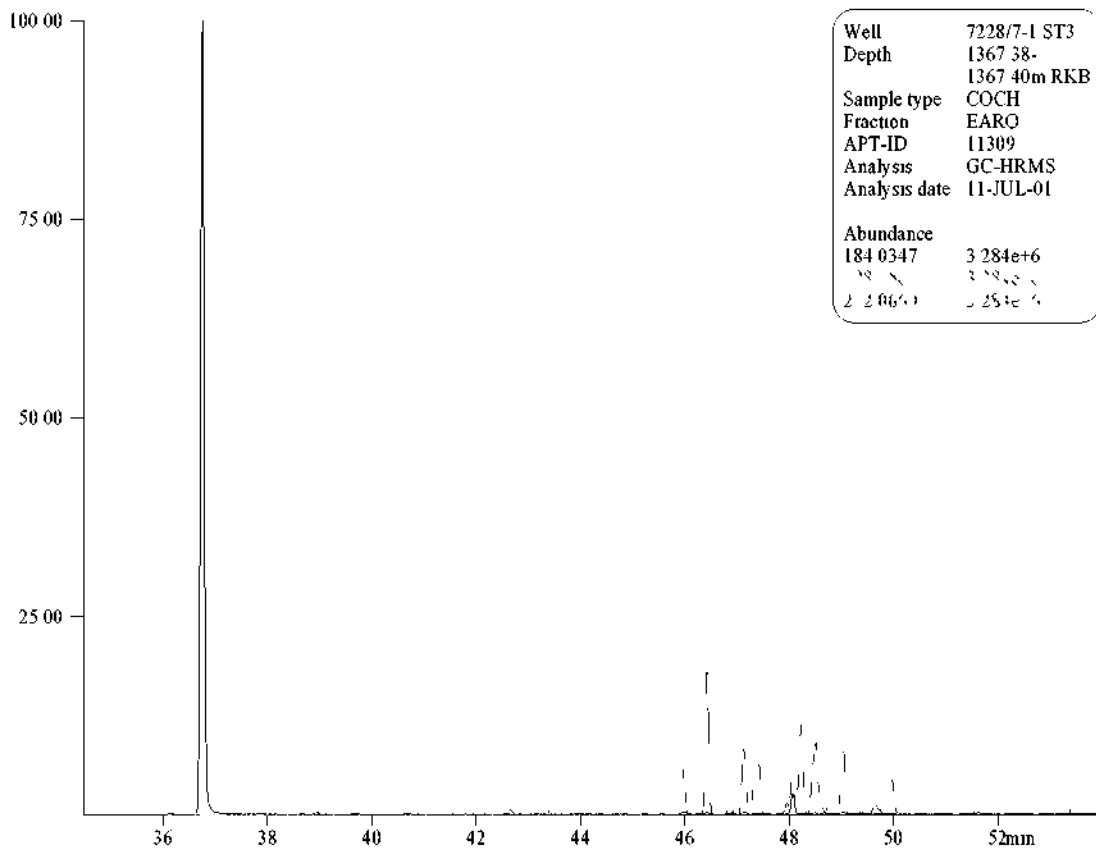
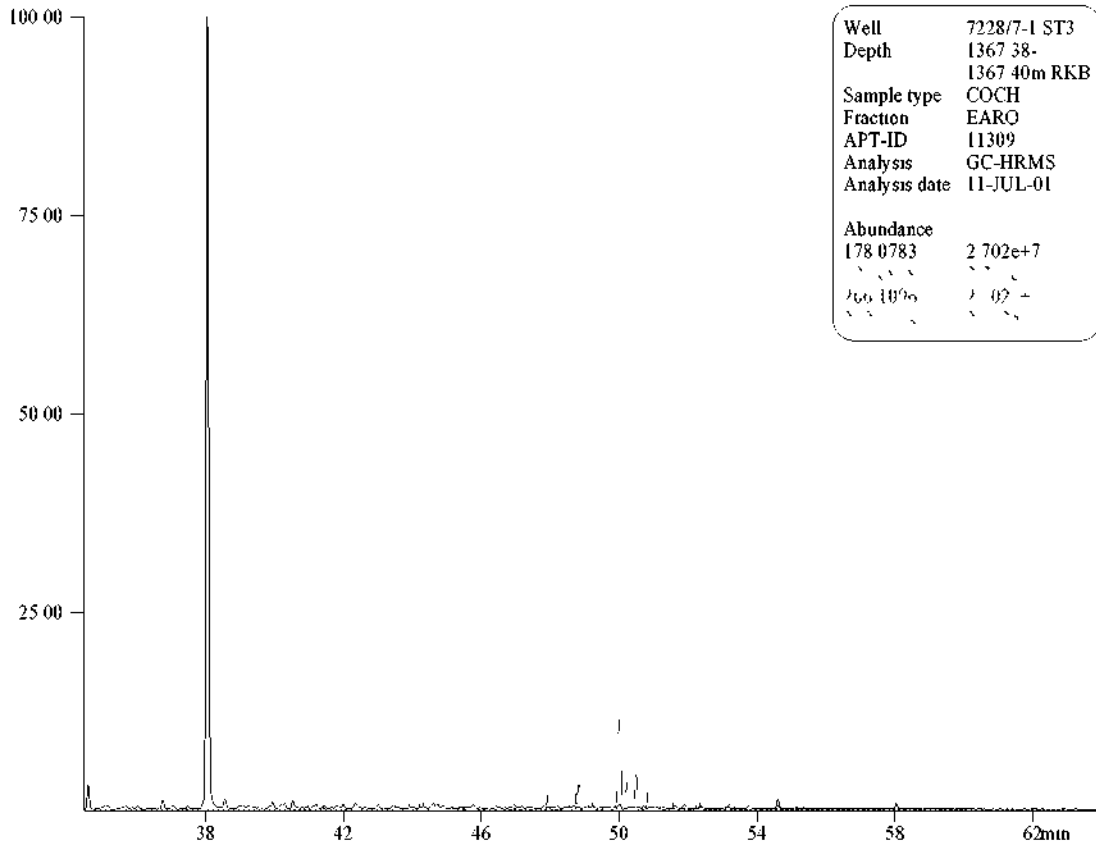


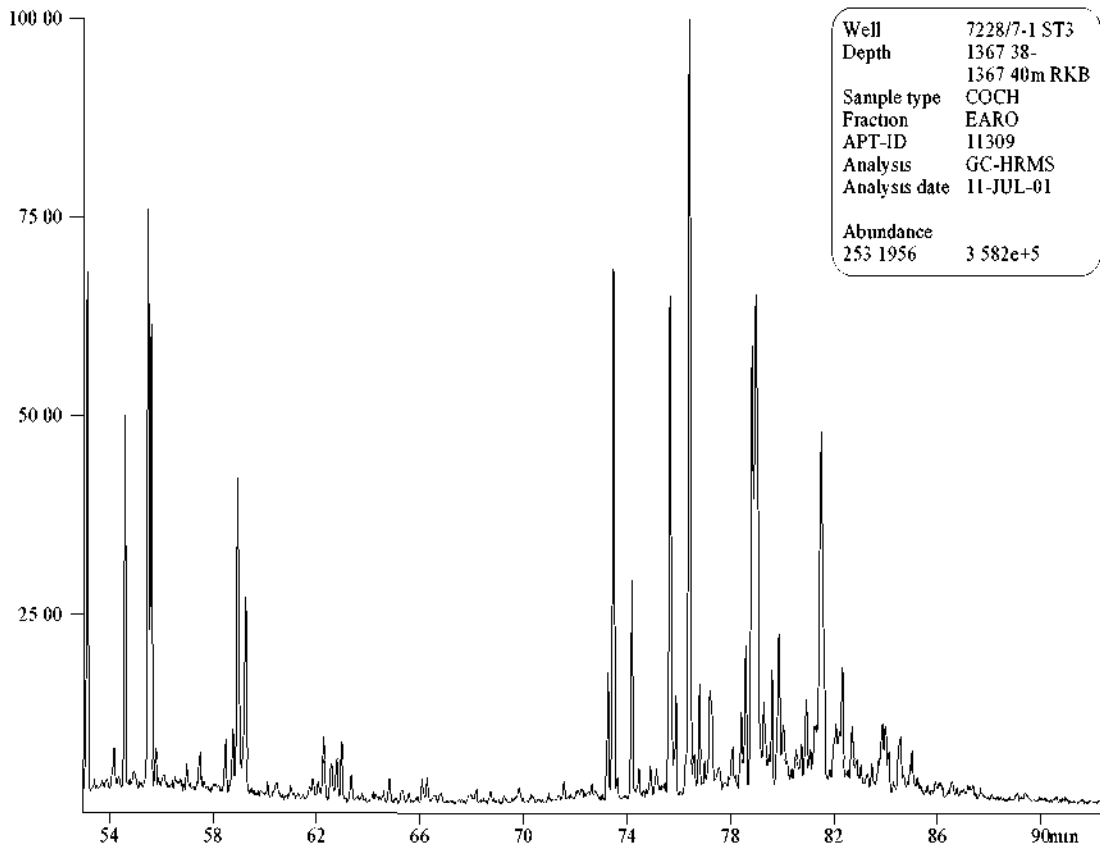
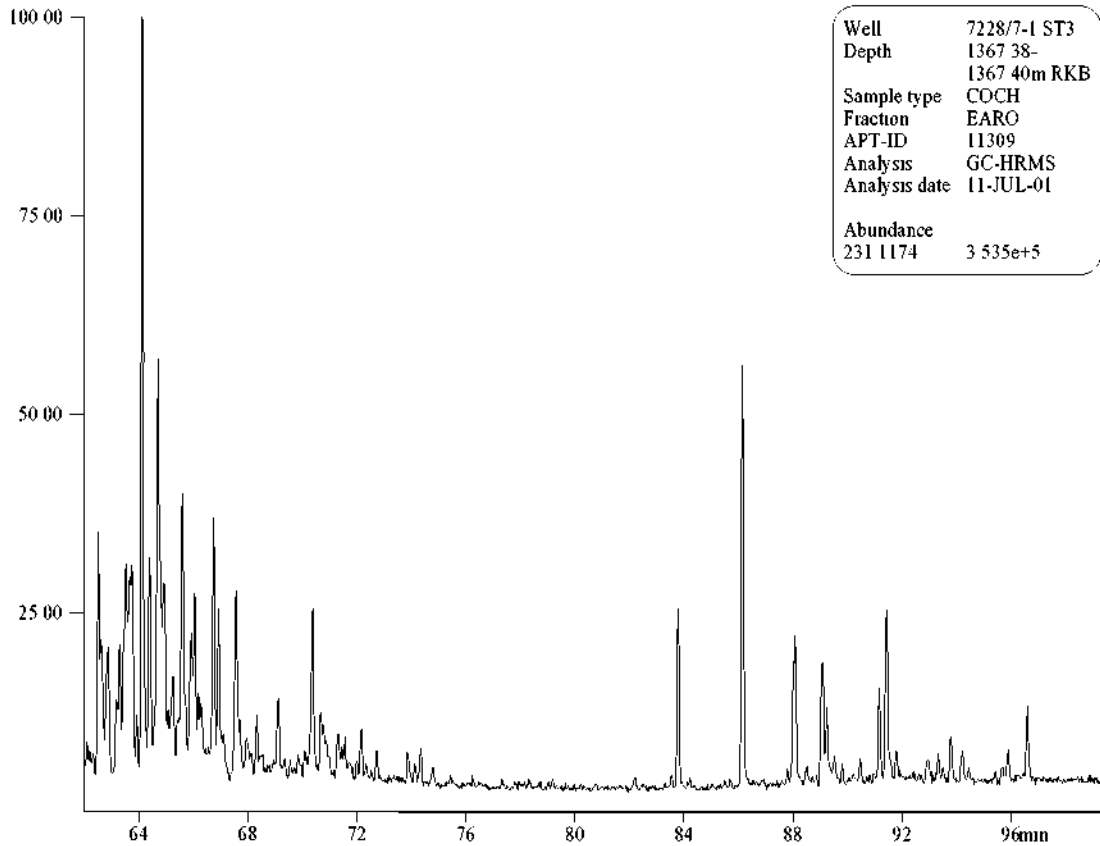


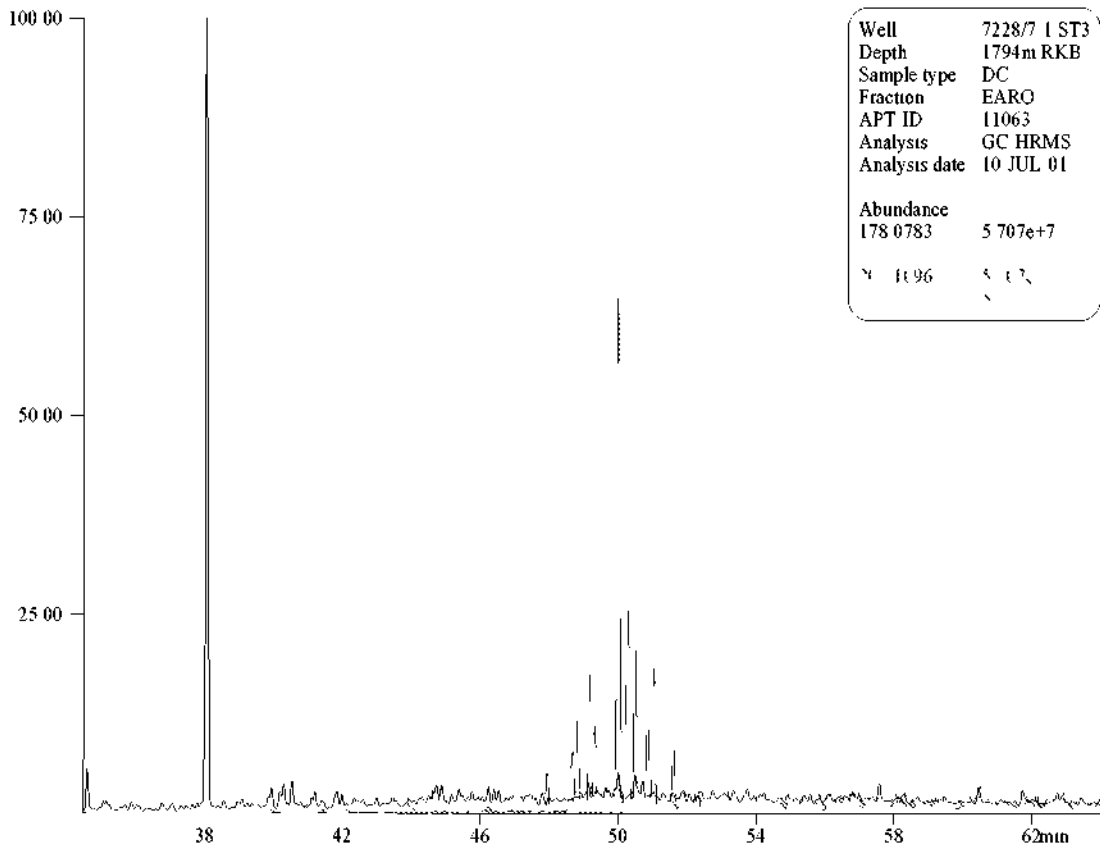
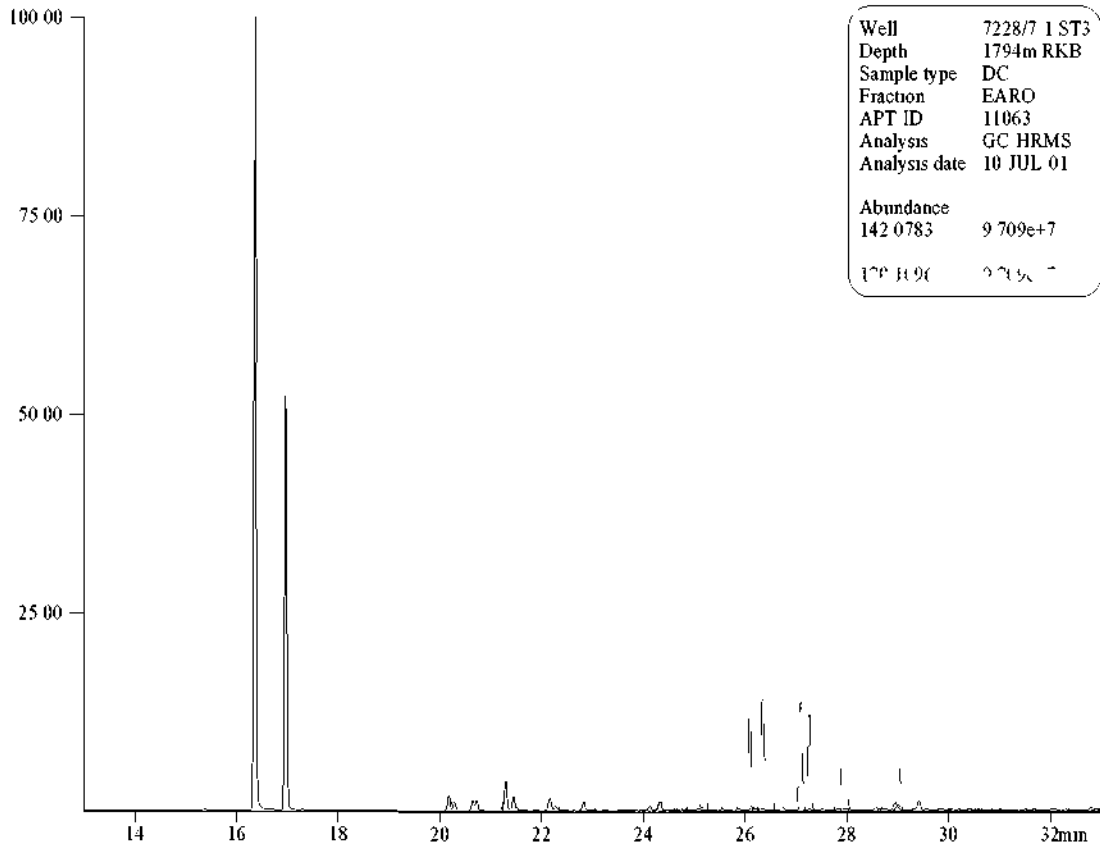


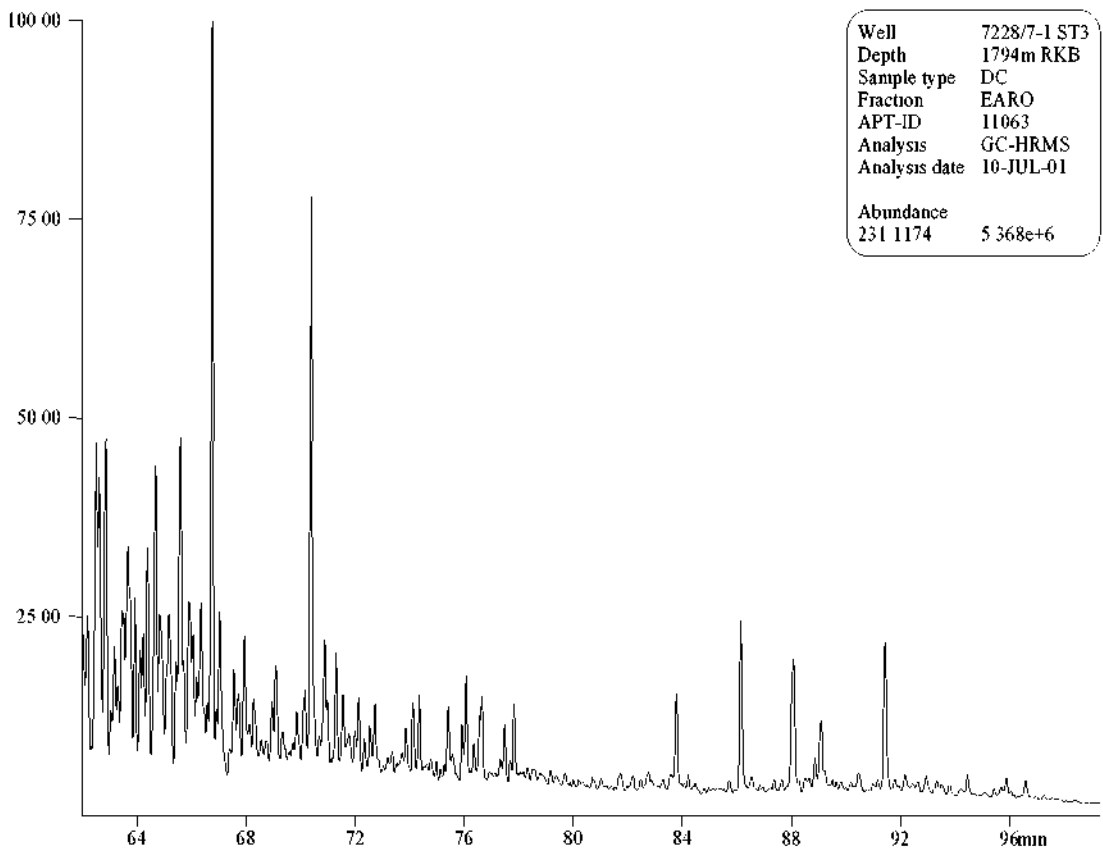
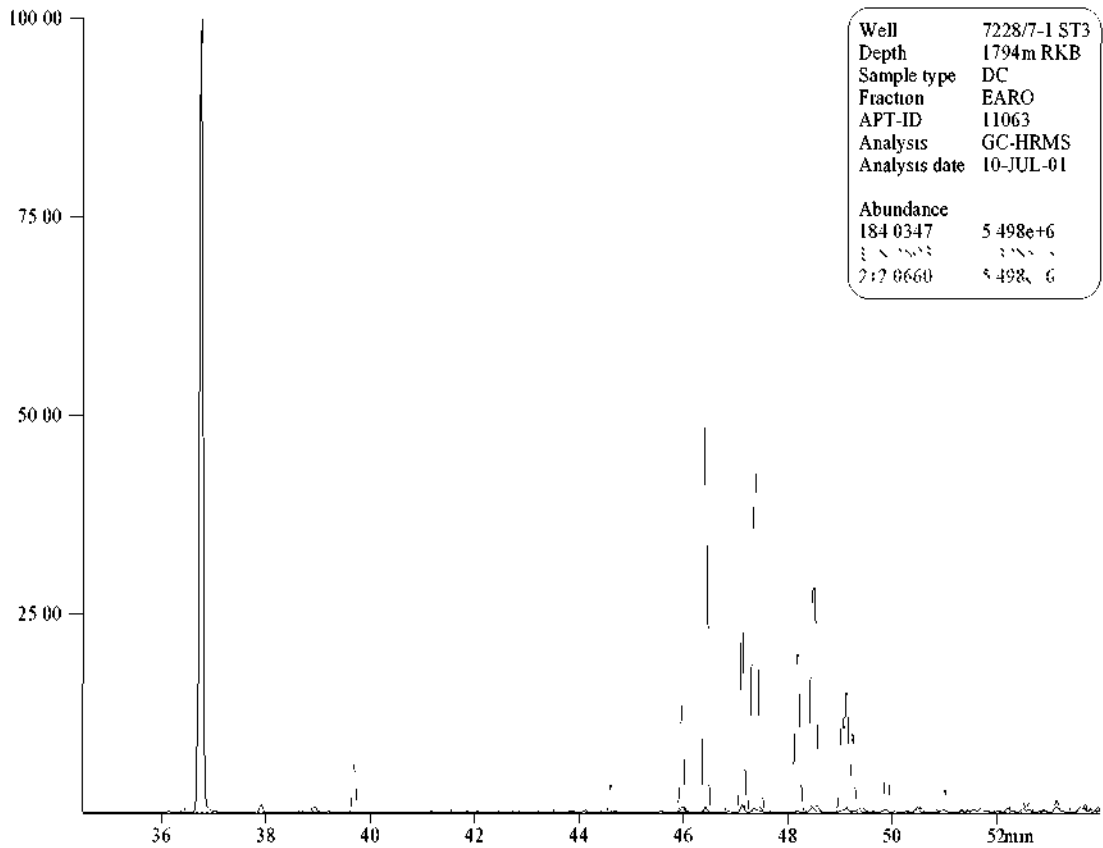


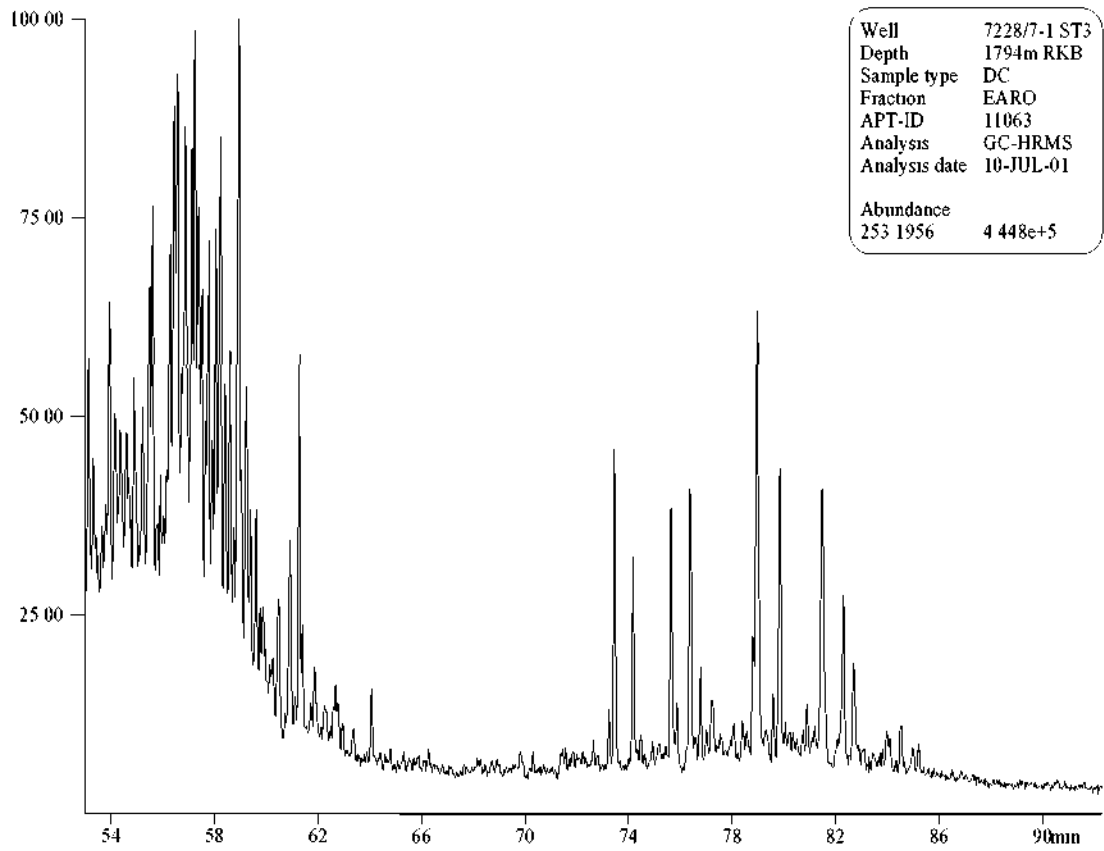






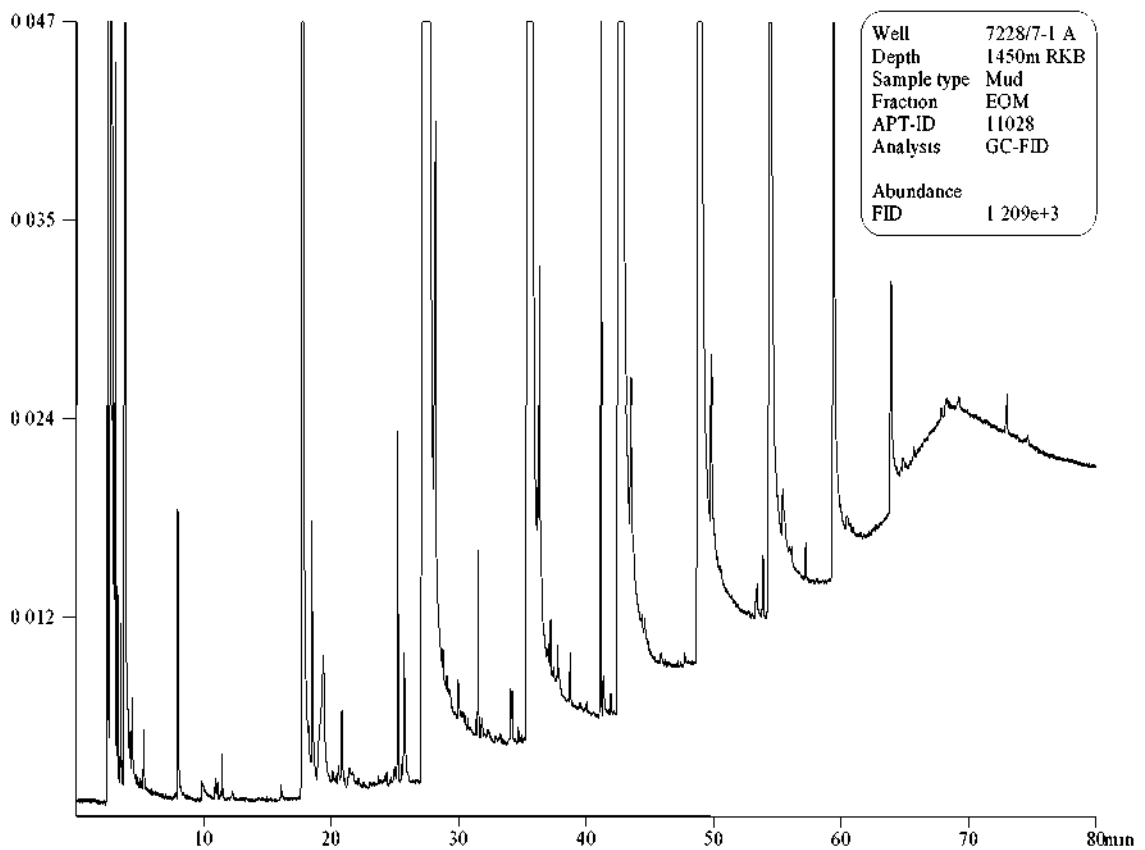
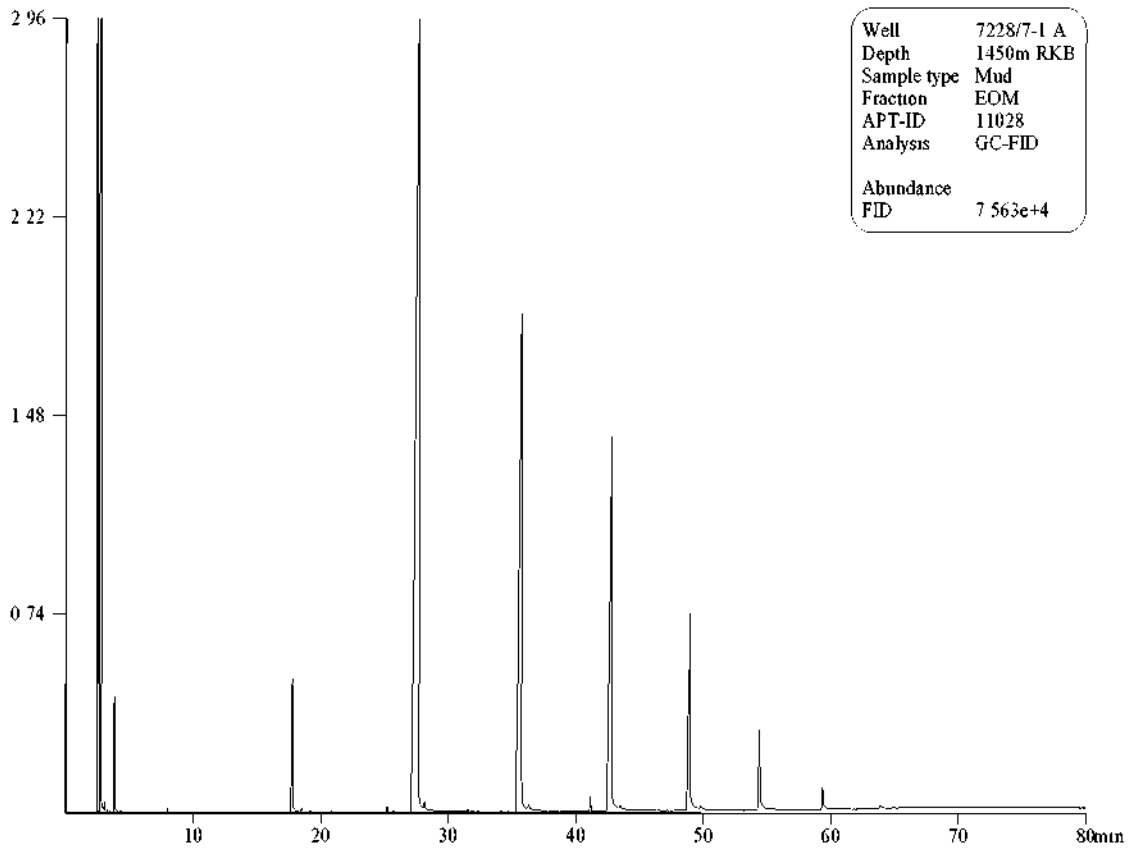


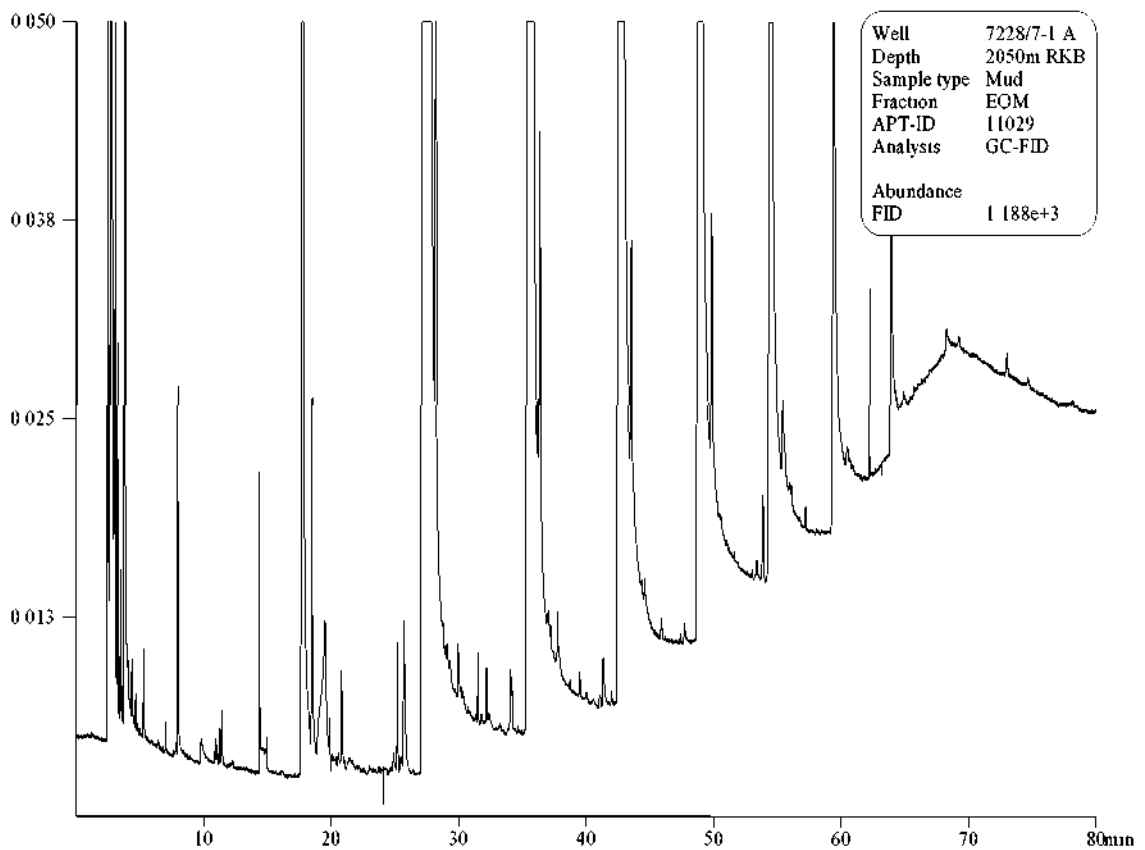
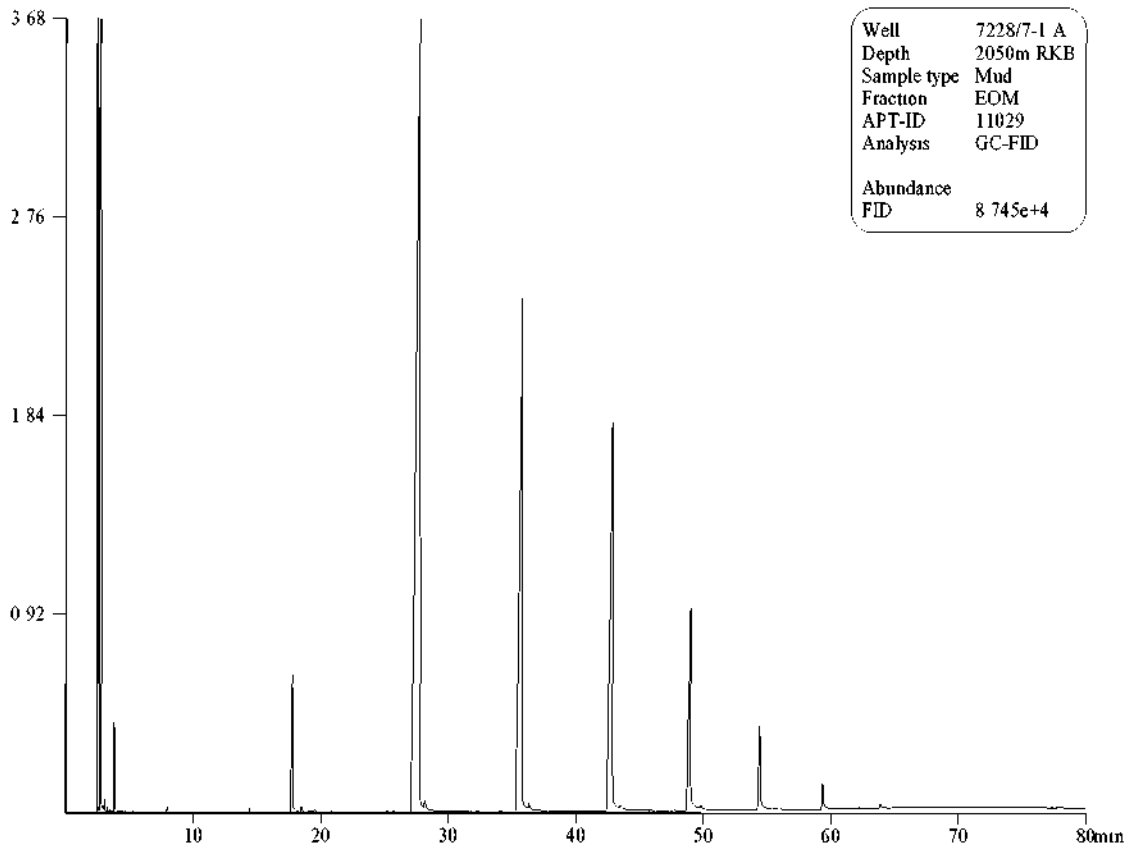


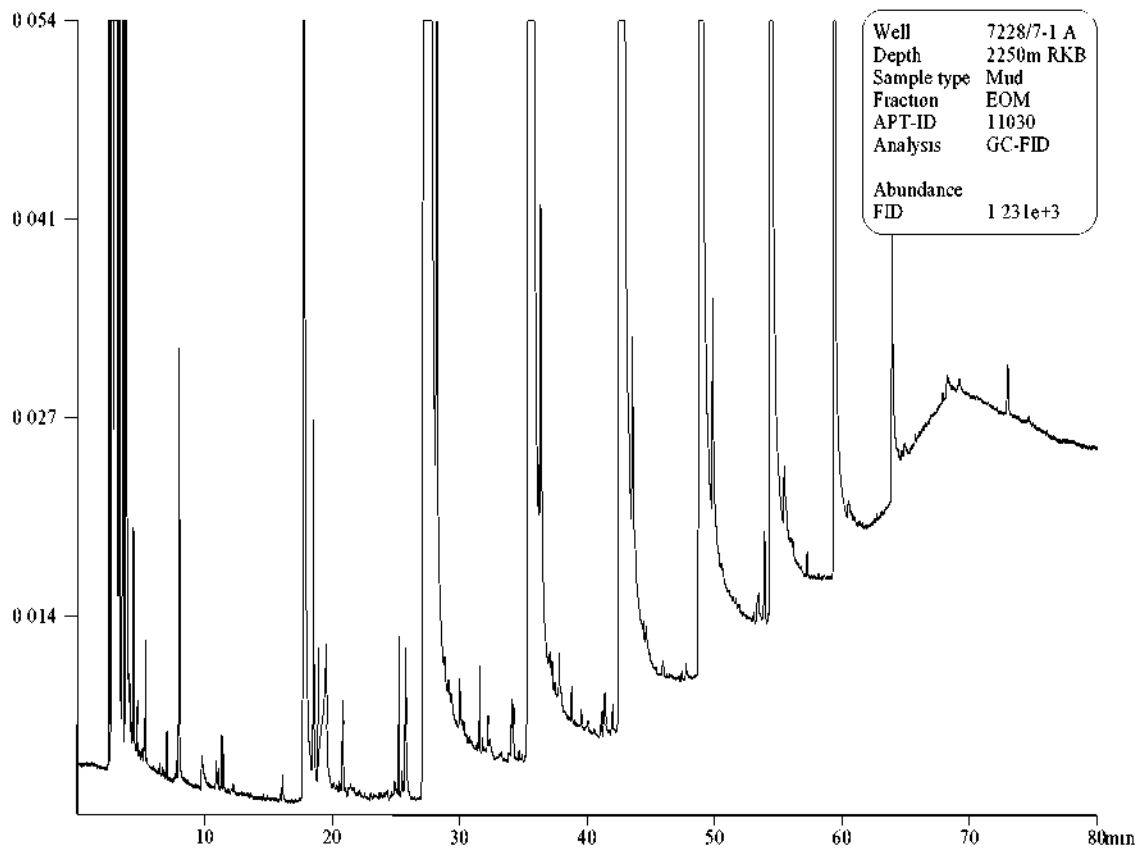
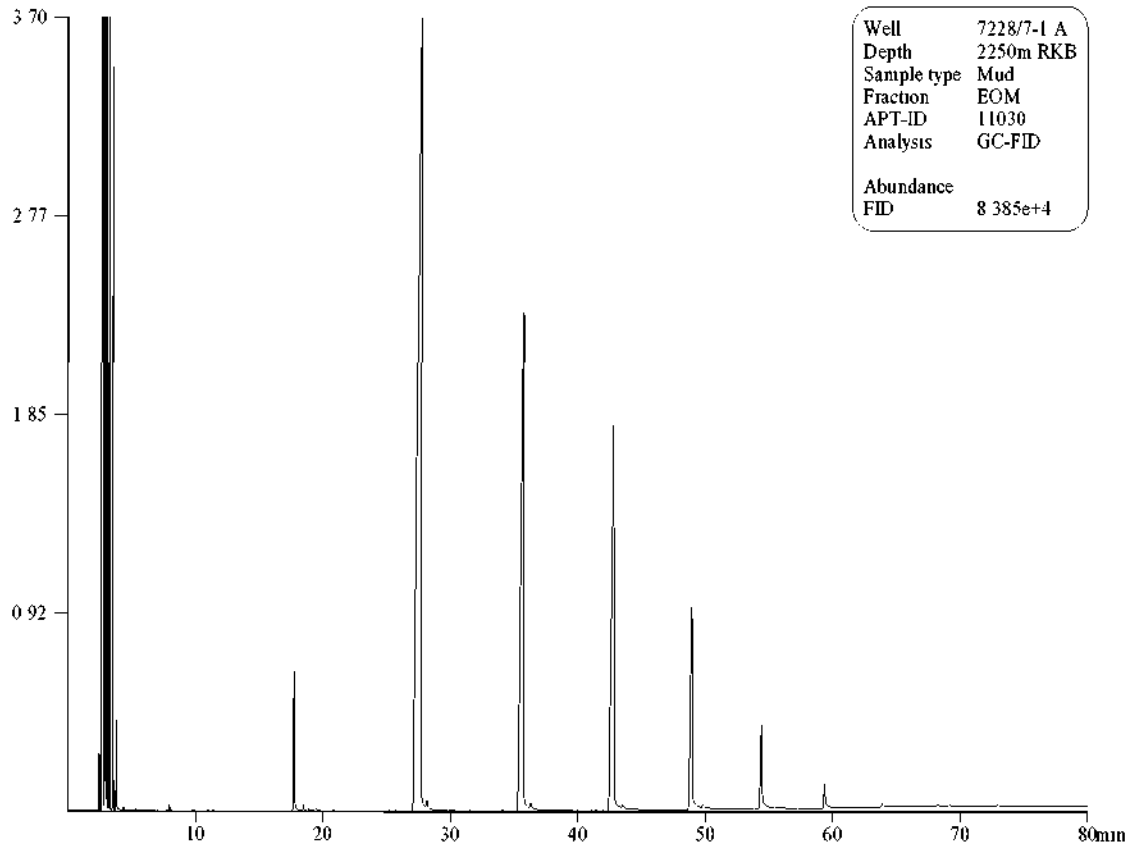


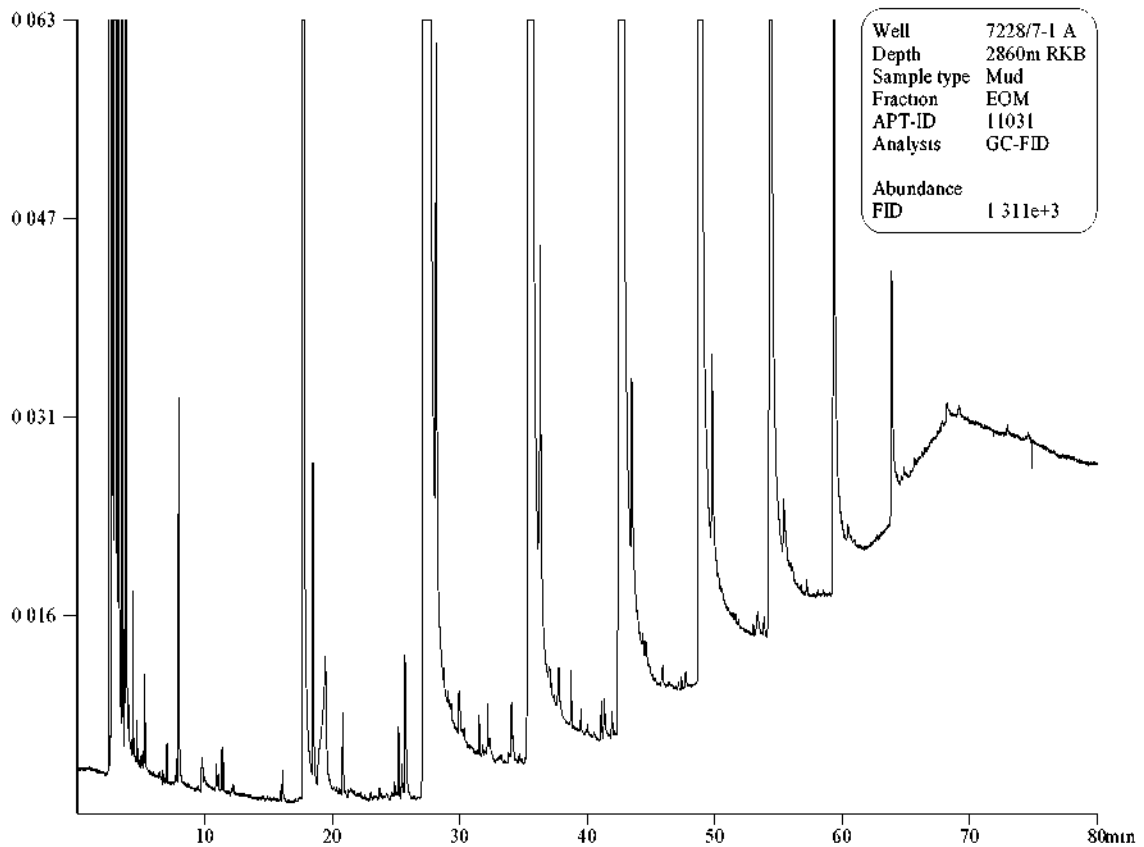
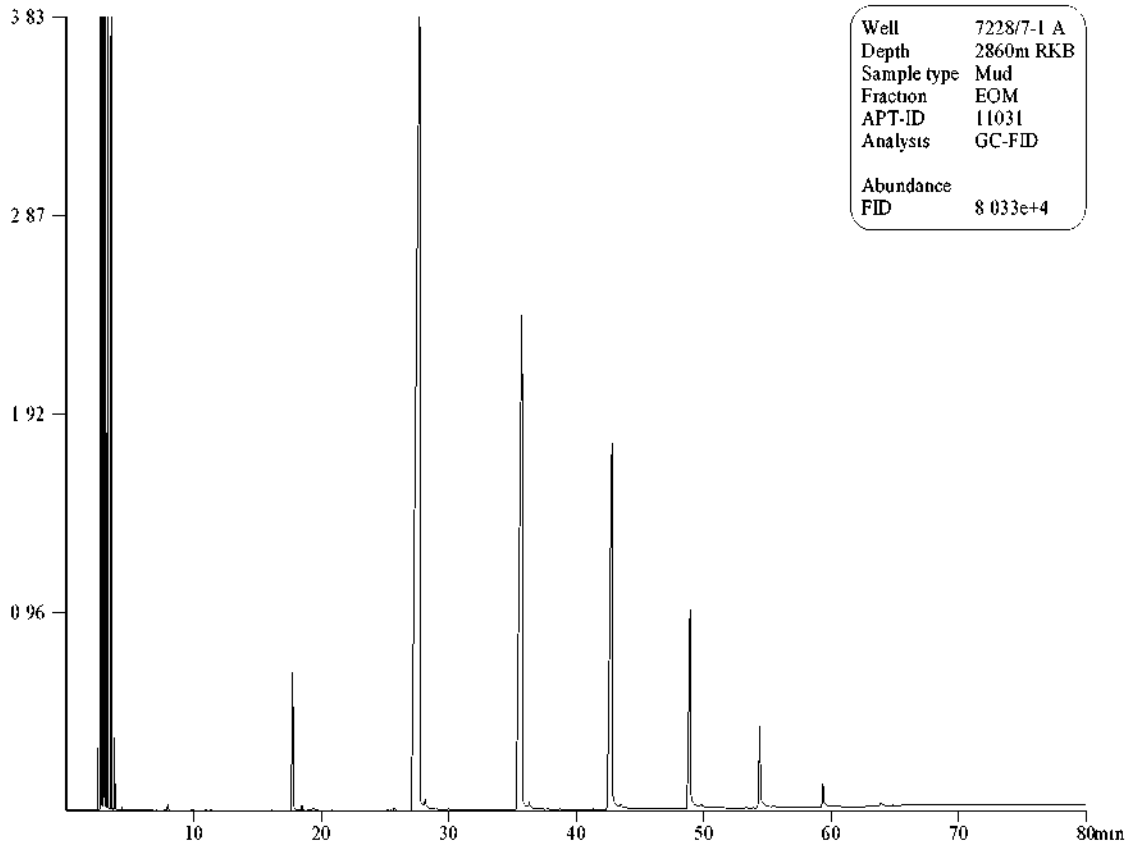


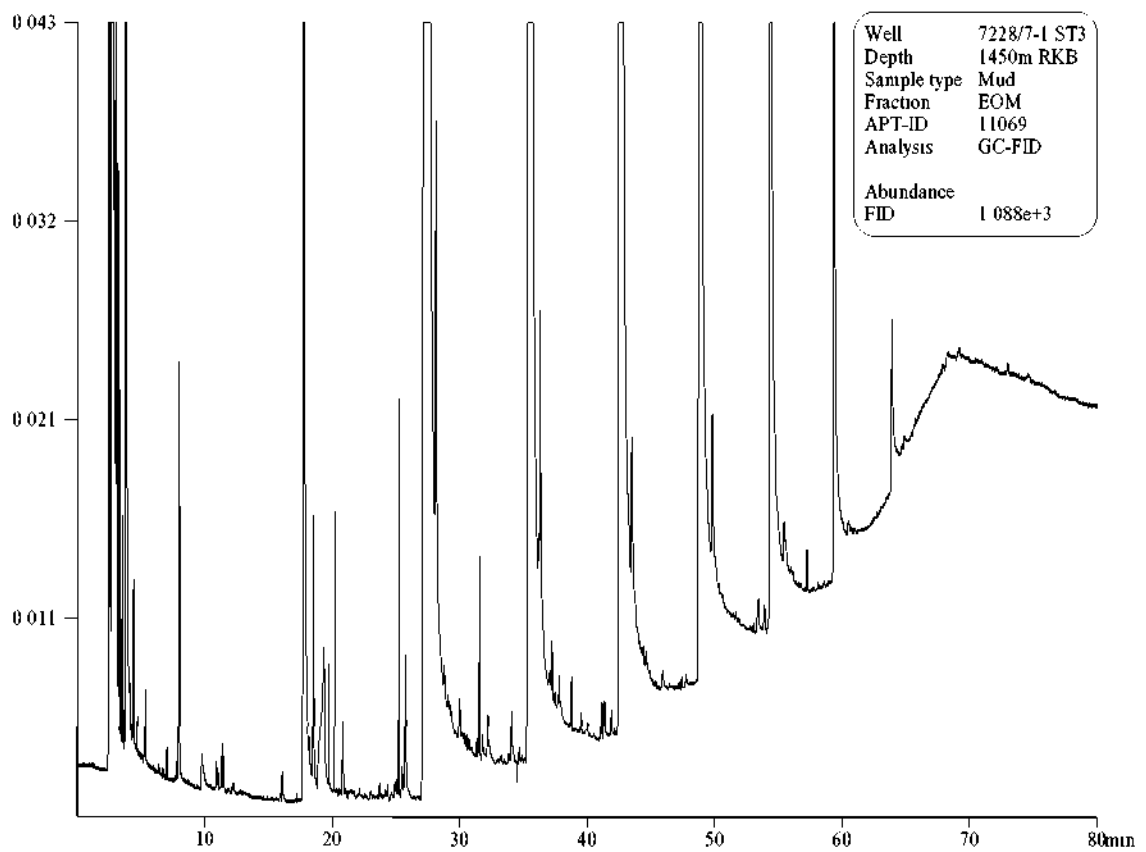
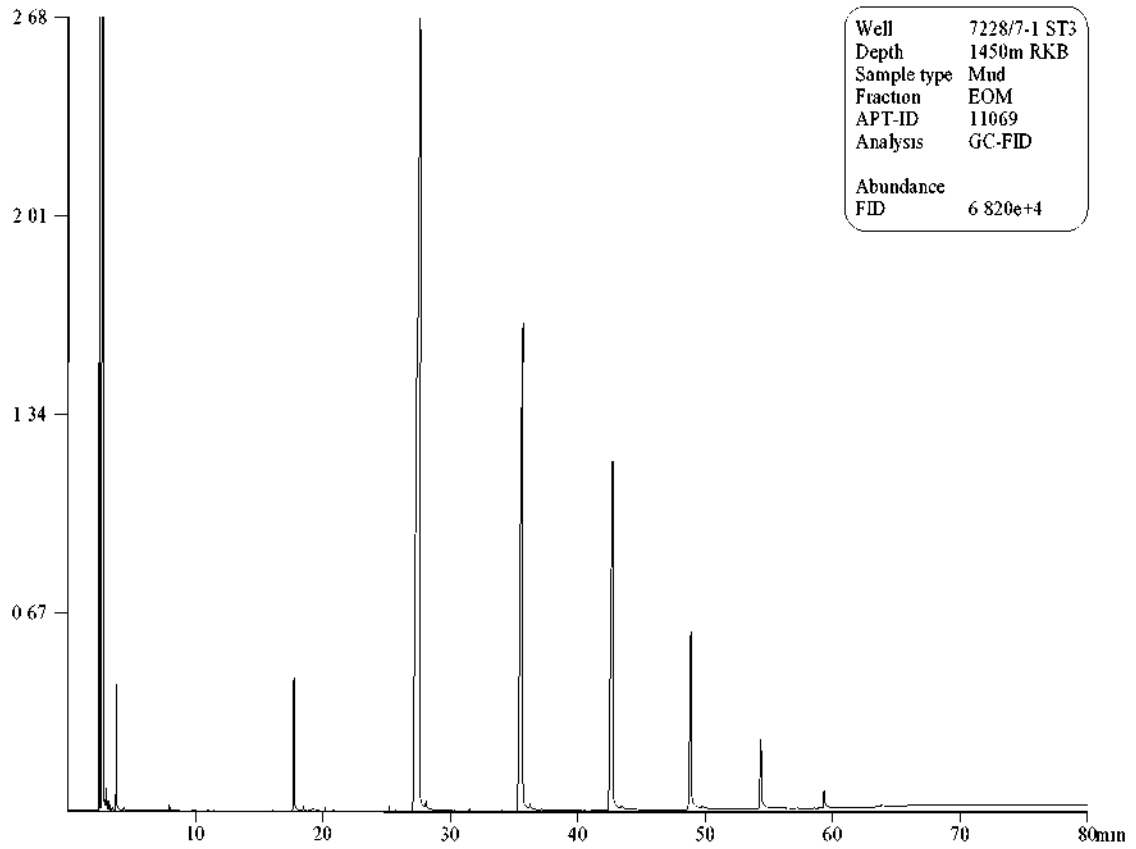
Gas Chromatograms of Mud samples

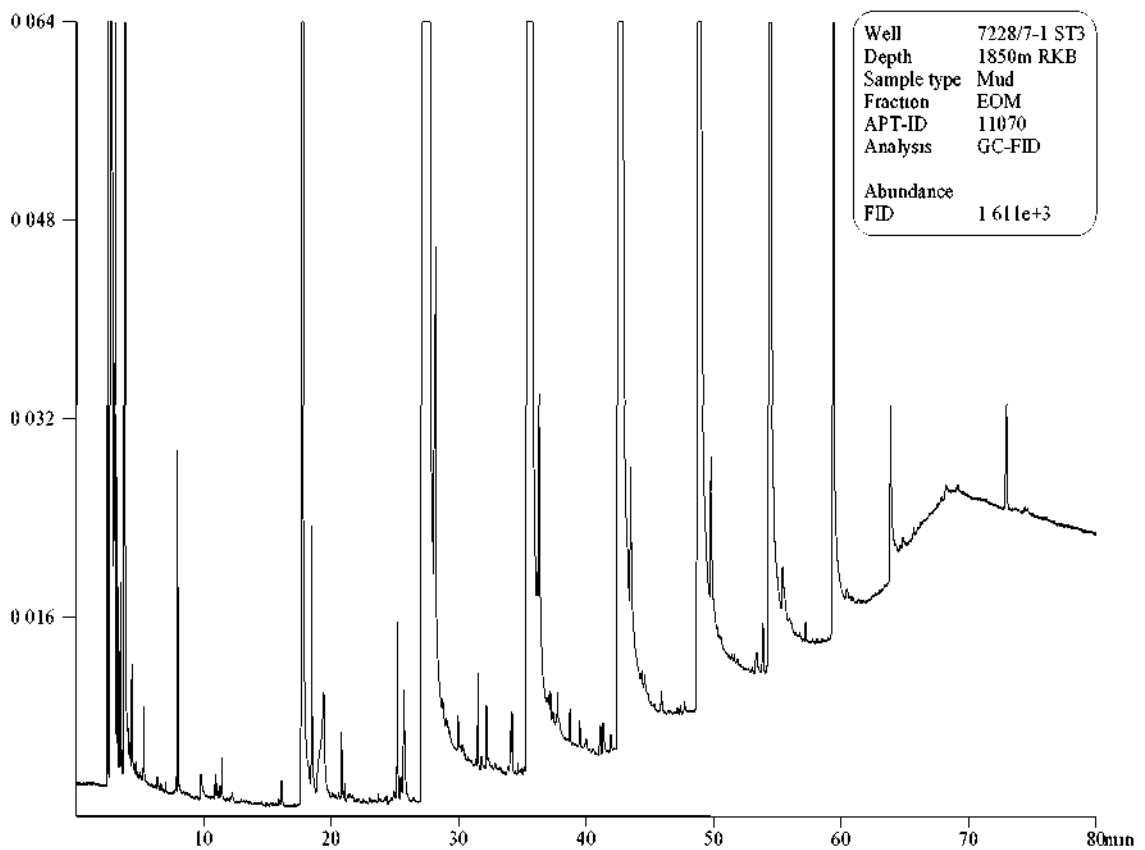
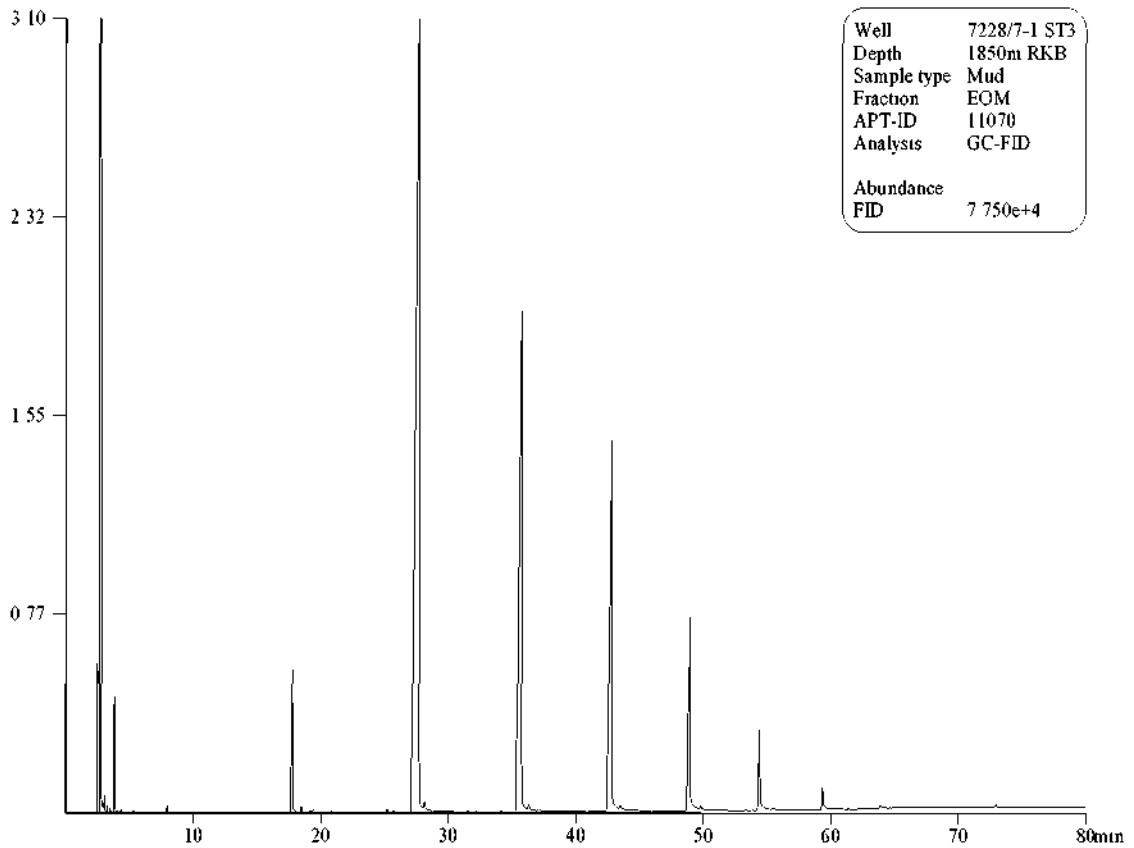


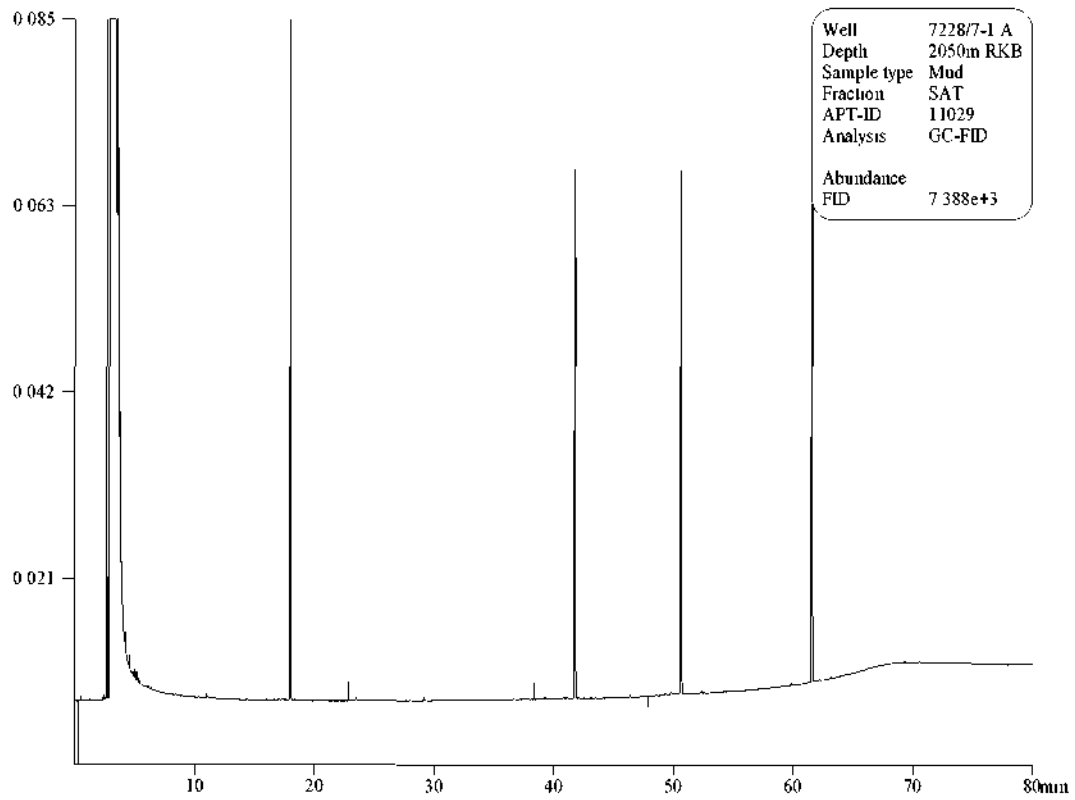












Pyrolysis Gas Chromatograms of extracted sediments

