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

Applied Petroleum Technology AS
P. O. Box 123
2027 Kjeller
Norway

Volume 1 of 1

Address: **Applied Petroleum Technology AS**
P.O.Box 123
2027 Kjeller
Telephone: **+47 63 80 60 00**
Telefax: **+47 63 81 55 53**

Report number APT01-068	**Classification** Confidential
Report Title Petroleum Geochemistry Report - NOCS Wells 7228/7-1A, -1S and -1ST3	**Submitted**
Client Statoil	**Service Order**
Client Reference apt2001-01	**Number of pages** 179
Distribution Statoil (5) APT (1)	

Authors
Nigel Mills
Kristine Aasgard
Harald Johansen
Ingar Johansen
Per Erling Johansen
Sylviane Siegle
Kjell Urdal

	Name	Date	Signature
Reviewed by	Nigel Mills	18.07.01	
Approved by	Tore Haaland	18.07.01	

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.

Deasphaltening
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 access (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 deasphaltened 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 eluation 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.

d4-27ααR 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 CO_2 and H_2O 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 $\delta^{13}C$ 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 CO_2 and H_2O 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 10^{th} sample. The $\delta^{13}C$ 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
Aliqouts 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 µl/ml, for CO_2 0.05 µl/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 (m MD RKB)	Lower Depth (m MD RKB)	Sample Type	%	Lithology	Attributes
7228/7-1S	11050		520	DC	70	clst	dk
					30	clst	lt, calc
	11051		610	DC	100	clst	dk gy
	11052		710	DC	95	clst	gy, sl calc
					5	clst	br
	11053		810	DC	100	clst	gy
					tr	pyr	
	11054		910	DC	100	clst	gy
					tr	pyr	
	11055		1010	DC	90	clst	gy, sl calc
					10	clst	br
	11056		1110	DC	100	clst	gy, sl calc
					tr	clst	lt br
	11057		1210	DC	100	clst	gy, sl calc
					tr	clst	lt br
	11058		1308	DC	100	clst	gy, sl calc
					tr	clst	lt br
	11059		1314	DC	100	clst	gy, sl calc
					tr	clst	lt br
7228/7-1 A	11032		1347	DC	50	clst	dk gy
					50	clst	lt gy, calc
	11033		1419	DC	95	sst	m wh
					4	clst	dk gy, calc
					1	coal	frag
	11034		1434	DC	40	clst	dk gy
					40	clst	ly gy
					20	sst	m wh
					tr	coal	
	11035		1566	DC	60	clst	lt gy, calc
					30	clst	gy, calc
					10	sst	m wh
					tr	pyr	
	11036		1647	DC	70	sst	f wh
					20	clst	dk gy
					10	clst	lt gy
					tr	coal	
	11037		1653	DC	80	sst	f-m wh
					15	clst	dk gy
					5	clst	lt gy
					tr	coal	
	11038		1755	DC	60	clst	dk gy, calc
					30	clst	ly gy, calc
					10	sst	f-m wh

Well	APT no	Upper Depth (m MD RKB)	Lower Depth (m MD RKB)	Sample Type	%	Lithology	Attributes
	11039		1899	DC	80	sst	f-m wh
					10	clst	lt gy
					10	clst	br
					tr	pyr	
	11040		1935	DC	80	sst	f-m wh
					10	clst	lt gy, sl calc
					10	clst	br, sl calc
					tr	pyr	
					tr	coal	
	11041		1977	DC	70	sst	f-m wh
					15	clst	lt gy, calc
					15	clst	br, calc
					tr	pyr	
					tr	coal	
	11042		2031	DC	40	clst	lt gy, sl calc
					40	clst	br, sl calc
					20	sst	f wh
					tr	pyr	
	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	clst	dk gy
					20	clst	lt gy
					10	sst	f wh
					5	clst	br
	11044		2229	DC	95	clst	dk gy, sl calc
					5	clst	lt gy, sl calc
	11045		2376	DC	75	clst	dk gy, sl calc
					20	clst	lt gy, sl calc
					5	sst	f wh
					tr	coal	
	11022	2455 49	2455 52	COCH	100	clst	dk gy-blk, sl slty
					tr	coal	
	11023	2457 32	2457 34	COCH	100	clst	dk gy-blk, sl slty
					tr	coal	
	11046		2511	DC	75	clst	dk gy, sl calc
					20	clst	lt gy, sl calc
					5	sst	f wh
					tr	coal	
	11047		2670	DC	80	clst	dk, sl calc
					20	clst	lt, calc
					tr	sst	
	11048		2742	DC	80	clst	dk, sl calc
					20	clst	lt, calc
					tr	sst	
	11049		2781	DC	80	clst	dk, sl calc
					20	clst	lt, calc
					tr	sst	
	11024	2833 00	2833 02	COCH	100	sst	slt-f gy, calc
					tr	coal	lam
	11025	2842 25	2842 27	COCH	100	sltst	gy, mica
					tr	coal	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 slty, lam
	11027	2860 26	2860 28	COCH	100	sltst	dk gy, lam
7228/7-1ST3	11060		1575	DC	60	sst	f wh
					20	clst	dk gy
					20	clst	lt gy
					tr	pyr	
					tr	coal	
	11061		1677	DC	40	clst	lt gy, calc
					35	clst	dk gy, calc
					20	sst	f wh
					5	pyr	
	11062		1710	DC	40	clst	lt gy, calc
					35	clst	dk gy, calc
					20	sst	f wh
					5	pyr	
	11063		1794	DC	90	clst	dk gy
					10	clst	lt gy
	11064		1836	DC	90	clst	dk gy
					10	clst	lt gy
	11065		1872	DC	80	clst	dk gy
					20	clst	lt gy
	11066		1947	DC	80	clst	dk gy
					20	clst	lt gy
	11067		2049	DC	80	clst	dk gy
					20	clst	lt gy
	11068		2082	DC	70	clst	dk gy
					30	clst	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)	PP (mg/g)	PI (wt ratio)	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-C5	%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	Wetness	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	$\delta^{13}C$ C1	δ DC1	$\delta^{13}C$ C2	$\delta^{13}C$ C3	$\delta^{13}C$ IC4	$\delta^{13}C$ nC4	$\delta^{13}C$ CO2	δ^{18O} 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, $\delta^{13}C$ ($^{0}/_{00}$ PDB)

Well	Sample name	APT no	Topped oil	SAT	ARO	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 = Pr/n-C17	B = Ph/n-C18	A/B	Pr/Ph	n-C17/(n-C17+n-C27)
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 Tolu/nC7	X m+pXyl/n-C8	W Benz*10/CyC6	G (n-C6+n-C7)/(CyC6+MCyC6)	I (2-MC6+3-MC6)/(c1,3-DMCyC6+t1,3-DMCyC6+t1,2-DMCyC6)	F n-C7/MCyC6	H n-C7*100/(CyC6+2-MC6+3-MC6+c1,3-DMCyC6 +t1,3-DMCyC6+t1,2-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	%29TS	%20S	%BB	27dBS/(27dBS+27AAA)	% C 27 Steranes	% C29 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= (C_{20}TA + C_{21}TA)/(C_{20}TA + C_{21}TA + SC_{26}TA + RC_{26}TA + SC_{27}TA + SC_{28}TA + RC_{27}TA + RC_{28}TA).

MA2= (C_{21}MA + C_{22}MA)/(C_{21}MA + C_{22}MA + βSC_{27}MA + βSC_{27}DMA + βRC_{27}DMA + βRC_{27}MA + βSC_{28}DMA + αSC_{27}DMA + αRC_{27}MA + αSC_{28}MA + βRC_{28}MA + βRC_{28}DMA + βSC_{29}MA + βSC_{29}DMA + αSC_{29}MA + αRC_{28}MA + βRC_{29}MA + βRC_{29}DMA + αRC_{29}MA.

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	APT no	Lower Depth (m MD RKB)	%Ro	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 (m MD RKB)	FA (%)	HA (%)	AL (%)	HE (%)	WD (%)	CD (%)	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	i-C4	n-C4	i-C5	n-C5	2,2-DMC4	CyC6	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	CyC6	2-MC6	2,3-DMC5	1,1-DMCyC5	3-MC6	c-1,3-DMCyC5	t-1,3-DMCyC5	3-EC5	t-1,2-DMCyC5	n-C7	c-1,2-DMCyC5	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	c,t-1,2,4-TMCyC5	3,3-DMC6	t,c-1,2,3-TMCyC6	2,3,4-TMC5	Tol	2,3-DMC6	2-MC7	4-MC7	3-MC7	c-1,3-DMCyC6	t-1,4-DMCyC6	1,1-DMCyC6	t-1,2-DMCyC6	n-C8	E-CyC6	i-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	i-C10	n-C10	i-C11	n-C11	n-C12	i-C13	n-C14	n-C13	i-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	i-C19	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	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	i-C4	n-C4	i-C5	n-C5	2,2-DMC4	CyC5	2,3-DMC4	2-MC5	3-MC5	n-C6	2,2-DMC5	MCyC5	2,4-DMC5	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	2,3-DMC5	1,1-DMCyC5	3-MC6	c-1,3-DMCyC5	t-1,3-DMCyC5	3-EC5	t-1,2-DMCyC5	n-C7	c-1,2-DMCyC5	MCyC6	1,1,3-TMCyC5	ECyC5	2,5-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,t-1,2,4-TMCyC5	3,3-DMC6	t,c-1,2,3-TMCyC5	2,3,4-TMC5	Tol	2,3-DMC6	2-MC7	4-MC7	3-MC7	c-1,3-DMCyC6	t-1,4-DMCyC6	1,1-DMCyC6	t-1,2-DMCyC6	n-C8	E-CyC6	i-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-MC8	2-MC8	3-MC8	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-C18	n-C17	i-C19	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-Heptene	Toluene	n-Octene	(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	
Well	Sample type	Sample Name	Lower Depth (m)	APT no	28nor28ab	25nor30ab
7228/7-1 A	Oil	MDT1B	2091 10	10 998	5 42E+5	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	6 15E+4	0 00E+0
7228/7-1 A	COCH		2833 02	11 024	9 04E+5	0 00E+0
7228/7-1 ST3	COCH		1367 40	11 309	1 06E+6	5 41E+5
7228/7-1 ST3	DC		1794 00	11 063	0 00E+0	0 00E+0

m/z 191.1800														
20/3	21/3	22/3	24/3	25/3R	25/23	24/4	26/3R	26/23	28/3R	28/3S	29/23R	29/3S	27Ts
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
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
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
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
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
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	27Tm	30/3R	30/3S	28αβ	28nor30αβ	29αβ	29Ts	30αβ	29βα	30Ω	30αβ	30βα	31αβS	31αβR	30Ξ	32αβS	32αβR
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					
Well	Sample type	Sample Name	Lower Depth (m)	APT no	33αβS	33αβR	34αβS	34αβR	35αβS	35αβR
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
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
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
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
7228/7-1 ST3	COCH		1367 40	11 309	1 16E+6	8 70E+5	6 42E+5	5 03E+5	5 89E+5	4 93E+5
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

m/z 217.1956										
21αα	21ββ	22αα	22ββ	27αβS	27αβR	27βαR	27Ts	28αβS#1	28αβS#2
1 32E+6	8 80E+5	9 60E+5	2 46E+5	3 64E+6	2 03E+6	7 85E+5	1 02E+6	1 45E+6	1 66E+6
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
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
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
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
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	28dβR#1	28dβR#2	28dαR	27αααS	27αββR+ 29dβS	27αββS	28dαS	27αααR	29dβR	29dαR	28αααS	29dαS	28αββR	28αββS	28αααR	29αααS	29αββR
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 26E+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	29αββS	29αααR	30αααS	30αββR	30αββS	30αααR
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

27αββR	27αββS	28αββR	28αββS	29αββR	29αββS	30αββR	30αββS
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	25nor28ab	26nor28ab
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													
23/3	21/3	23/3	24/2	25/3R	26/3S	24/4	25/3R	22R/3S	24R/3R	28/2S	29/3R	29/3S	27Ts
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	27Tm	30/3R	30/3S	28αβ	25nor29αβ	29αβ	29Ts	30αβ	29βα	30βO	30αβ	30βα	31αβS	31αβR	30G	32αβS	32αβR
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							m/z 217.1956								
Well	Sample type	Sample Name	Lower Depth (m)	APT no	33αβS	33αβR	34αβS	34αβR	35αβS	35αβR	21αα	21ββ	22αα	22ββ	27αβS	27αβR	27dαR	27dαS	28αβS#1	28αβS#2
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	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
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	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
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	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
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	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
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	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
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	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	28dβR+ 29dβS	28dβR#2	28dαR	27αααS	27βββR+ 29dβS	27βββS	28dαS	27αααR	29dβR	28dαR	28αααS	29dαS	28βββR	28βββS	26αααR	25αααS	25βββR
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 46E+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	29βββS	29αααR	30αααS	30βββR	30βββS	30αααR
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

27βββR	27βββS	28βββR	28βββS	29βββR	29βββS	30βββR	30βββS
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	
Well	Sample type	Sample Name	Lower Depth (m)	APT no	2-MN	1-MN
7228/7-1 A	Oil	MDT1B	2091 10	10 998	9 91E+8	5 94E+8
7228/7-1 A	DC		2229 00	11 044	3 16E+8	1 71E+8
7228/7-1 A	DC		2742 00	11 048	1 89E+8	1 09E+8
7228/7-1 A	COCH		2833 02	11 024	7 73E+6	5 82E+6
7228/7-1 ST3	COCH		1367 40	11 309	6 63E+7	4 14E+7
7228/7-1 ST3	DC		1794 00	11 063	9 70E+7	5 07E+7

m/z 156.0939													
2-EN	1-EN	2,6-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	1,3,6-TMN	1,3,5- + 1,4,5-TMN	2,3,6-TMN
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
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
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
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
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
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			
Well	Sample type	Sample Name	Lower Depth (m)	APT no	1,3,7-TMN	1,6,7 + 1,2,6-TMN	1,2,4-TMN	1,2,5-TMN
7228/7-1 A	Oil	MDT1B	2091 10	10 998	3 25E+7	1 06E+8	1 58E+7	4 81E+7
7228/7-1 A	DC		2229 00	11 044	8 48E+6	3 31E+7	3 49E+6	4 30E+7
7228/7-1 A	DC		2742 00	11 048	3 43E+6	1 11E+7	1 53E+6	7 38E+6
7228/7-1 A	COCH		2833 02	11 024	6 98E+5	1 82E+6	3 68E+5	7 19E+5
7228/7-1 ST3	COCH		1367 40	11 309	1 66E+6	3 93E+6	1 21E+6	5 16E+6
7228/7-1 ST3	DC		1794 00	11 063	3 86E+6	9 30E+6	2 26E+6	6 60E+6

m/z 178.0783
p
1 24E+8
1 21E+8
7 14E+7
3 38E+6
2 70E+7
5 68E+7

m/z 192.0939			
3-MP	2-MP	9-MP	1-MP
5 13E+7	5 24E+7	7 66E+7	4 93E+7
3 06E+7	3 24E+7	3 58E+7	3 00E+7
2 27E+7	2 69E+7	2 88E+7	2 49E+7
1 80E+6	1 74E+6	2 40E+6	1 78E+6
4 61E+6	5 81E+6	1 16E+7	6 36E+6
2 75E+7	3 02E+7	3 97E+7	2 74E+7

m/z 206.1096				
2-EP+9-EP+3,6-DMP	1-EP	2,6- + 2,7- + 3,5-DMP	1,3- + 2,10- + 3,9- +3,10-DMP	1,8- + 2,5- + 2,9-DMP
1 26E+7	1 88E+7	1 00E+7	6 31E+7	2 72E+7
4 75E+6	6 00E+6	3 21E+6	1 75E+7	8 58E+6
3 51E+6	5 45E+6	3 63E+6	1 55E+7	7 95E+6
3 48E+5	5 51E+5	3 27E+5	2 07E+6	9 07E+5
9 11E+5	9 77E+5	4 95E+5	3 09E+6	1 52E+6
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				
Well	Sample type	Sample Name	Lower Depth (m)	APT no	1,7-DMP	2,3-DMP	1,5- + 4,9- + 4,10-DMP	1,4-DMP	1,2-DMP
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
7228/7-1 A	DC		2229 00	11 044	1 26E+7	6 63E+6	5 47E+6	4 35E+6	4 71E+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
7228/7-1 A	COCH		2833 02	11 024	9 34E+5	4 34E+5	6 70E+5	3 04E+5	1 91E+5
7228/7-1 ST3	COCH		1367 40	11 309	1 27E+6	8 23E+5	1 23E+6	4 79E+5	7 04E+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

m/z 219.1174
Retene
8 71E+6
3 64E+6
1 72E+6
3 00E+4
4 06E+6
2 48E+6

m/z 184.0347
DBT
1 32E+7
5 87E+6
4 80E+6
1 30E+5
3 28E+6
5 49E+6

m/z 198.0503		
4-MDBT	(3+2)-MDBT	1-MDBT
1 07E+7	4 83E+6	2 22E+6
2 60E+6	2 09E+6	1 28E+6
3 22E+6	2 02E+6	1 04E+6
1 44E+5	4 88E+4	1 54E+4
2 32E+6	1 16E+6	8 36E+5
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	C26TA	C27TA	βC26TA	RC26TA+ βC27TA	βC28TA	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

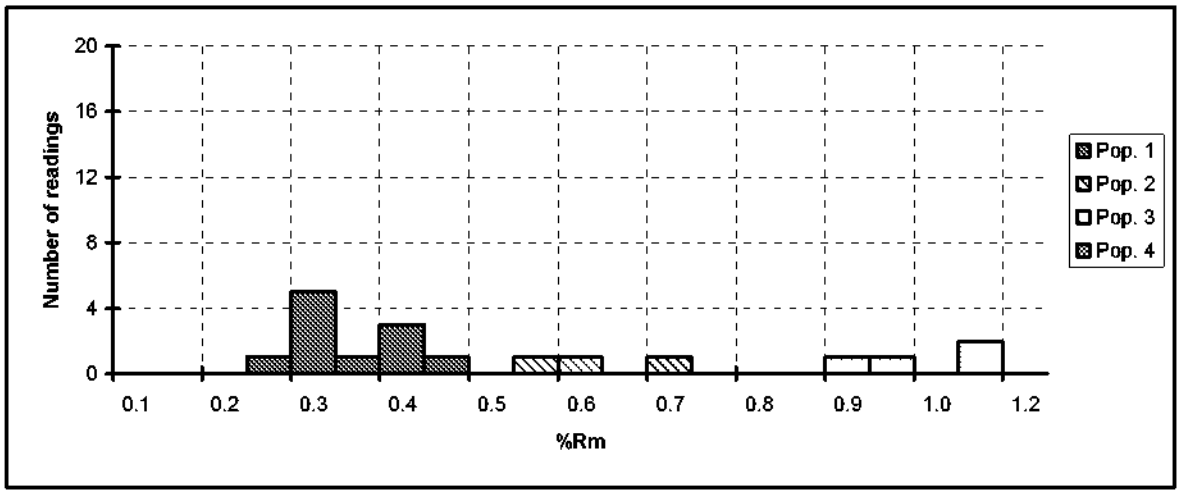
C21MA	C22MA	βC27MA	βC27DMA	βRC27MA+ βRC27DMA	αSC27MA	βSC28MA+ βSC28DMA+ αRC27DMA	αSC27DMA	αRC27MA
2 60E+5	1 23E+5	2 45E+5	5 74E+5	1 38E+6	2 54E+5	9 64E+5	1 75E+5	1 88E+6
4 85E+4	2 25E+4	2 95E+4	1 22E+5	3 27E+5	3 88E+4	1 94E+5	3 16E+4	1 60E+6
2 35E+4	1 43E+4	3 15E+4	1 06E+5	3 60E+5	3 57E+4	2 28E+5	2 22E+4	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	αSC28MA	βRC28MA+ βRC29DMA	βSC29DMA+ βSC28DMA	αSC29MA	αRC28MA+ βRC29MA+ βRC29DMA	αRC29MA
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



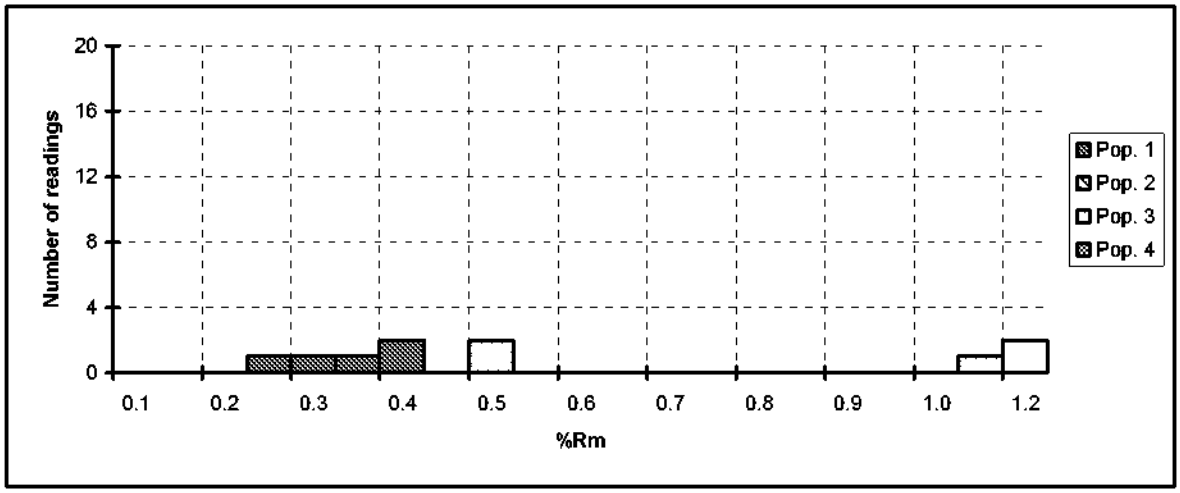
APT no.	**11050**
Well	7228/7-1S
Depth(mRKB)	520
Sample type	DC
Lithology	clyst/sst
Preparation	bulk
Date of analysis	15.04.2001

Quality rating	
Abundance of vitrinite	-
Identification of vitrinite	±
Type of vitrinite	O
Particle size	-
Particle surface quality	O
Abundance of pyrite	O
Average sample quality	P

Legend to quality rating	
No effect on the readings	O
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A

Comments

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.37±0.07	0.63±0.08	1.04±0.12	
Individual	0.26	0.57	0.90	
measurements	0.30	0.60	0.98	
3	0.31	0.71	1.12	
4	0.34		1.16	
5	0.34			
6	0.34			
7	0.37			
8	0.40			
9	0.41			
10	0.43			
11	0.46			
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				



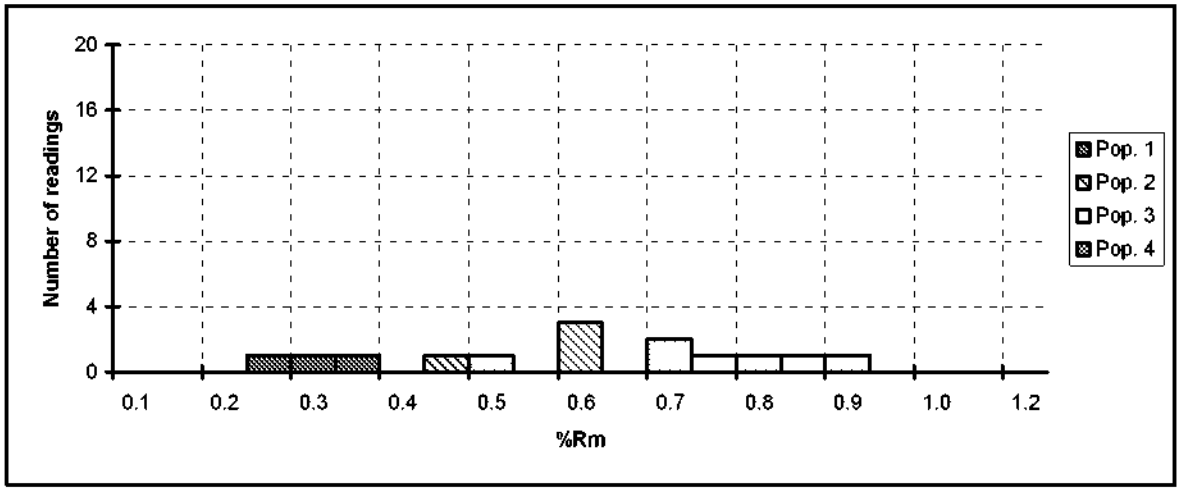
APT no.	**11051**
Well	7228/7-1S
Depth(mRKB)	610
Sample type	DC
Lithology	clyst/sst
Preparation	bulk
Date of analysis	15.04.2001

Quality rating	
Abundance of vitrinite	-
Identification of vitrinite	±
Type of vitrinite	O
Particle size	-
Particle surface quality	O
Abundance of pyrite	O
Average sample quality	P

Legend to quality rating	
No effect on the readings	O
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A

Comments

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.37±0.07	0.53±0.02	1.23±0.06	
Individual	0.27	0.51	1.19	
measurements	0.33	0.54	1.20	
3	0.36		1.29	
4	0.41			
5	0.44			
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				



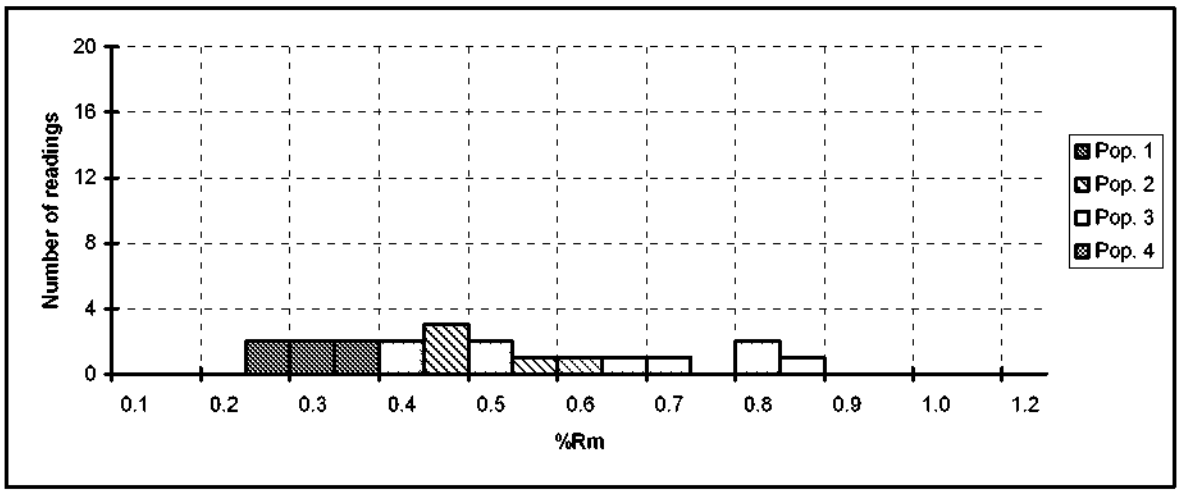
APT no.	**11052**
Well	7228/7-1S
Depth(mRKB)	710
Sample type	DC
Lithology	clyst/sst
Preparation	bulk
Date of analysis	15.04.2001

Quality rating	
Abundance of vitrinite	-
Identification of vitrinite	±
Type of vitrinite	O
Particle size	-
Particle surface quality	O
Abundance of pyrite	O
Average sample quality	P

Legend to quality rating	
No effect on the readings	O
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A

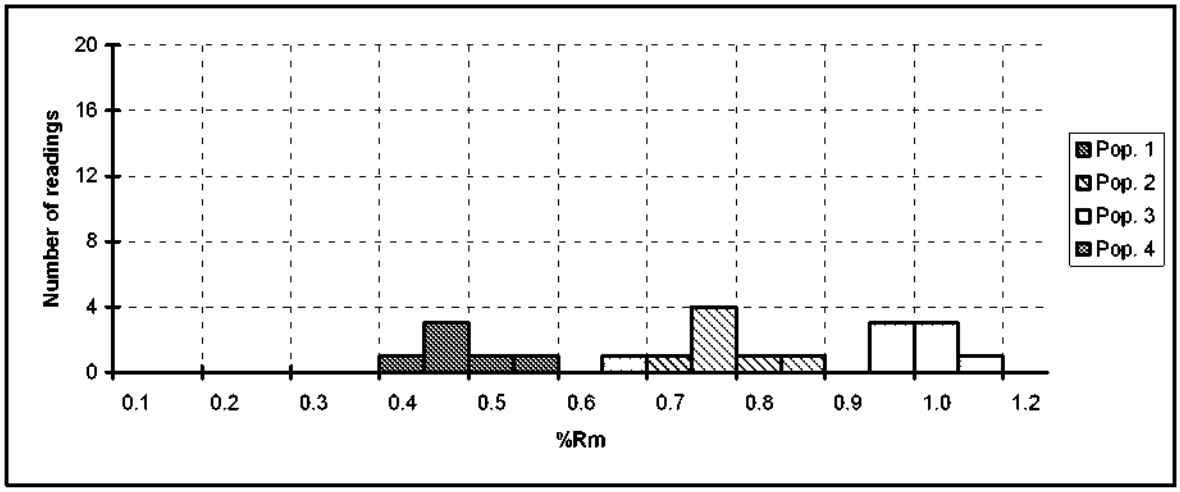
Comments

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.32±0.03	0.57±0.08	0.82±0.09	
Individual	0.29	0.46	0.71	
measurements	0.31	0.52	0.73	
3	0.35	0.61	0.79	
4		0.62	0.84	
5		0.64	0.86	
6			0.94	
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				



APT no.	**11053**
Well	7228/7-1S
Depth(mRKB)	810
Sample type	DC
Lithology	clyst/sst
Preparation	bulk
Date of analysis	15.04.2001
Quality rating	
Abundance of vitrinite	-
Identification of vitrinite	±
Type of vitrinite	0
Particle size	-
Particle surface quality	0
Abundance of pyrite	0
Average sample quality	P
Legend to quality rating	
No effect on the readings	0
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A
Comments	

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.33±0.04	0.51±0.07	0.77±0.08	
Individual	0.27	0.41	0.66	
measurements	0.29	0.42	0.72	
3	0.34	0.45	0.80	
4	0.34	0.47	0.80	
5	0.36	0.48	0.87	
6	0.37	0.52		
7		0.54		
8		0.58		
9		0.64		
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				



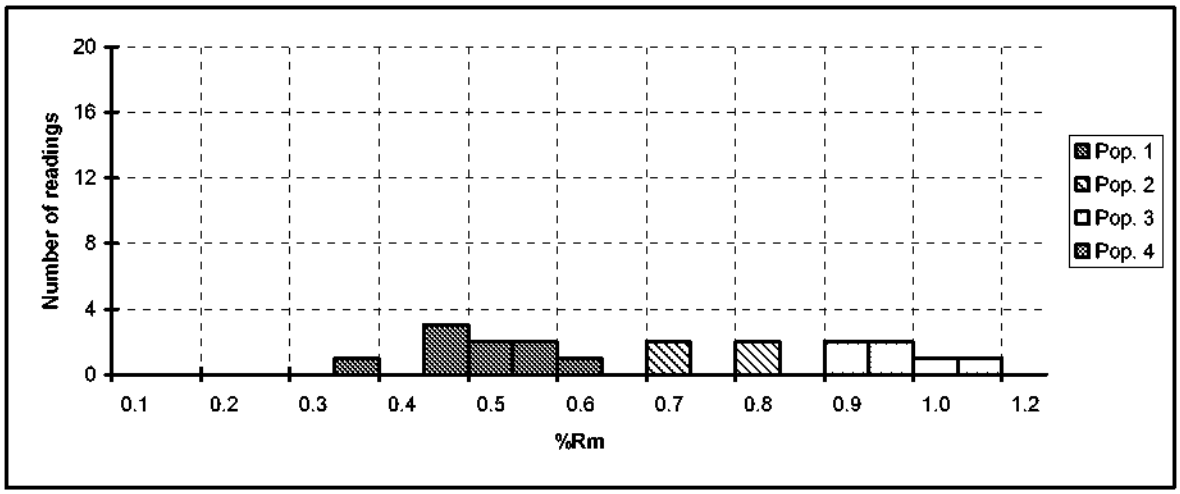
APT no.	**11054**
Well	7228/7-1S
Depth(mRKB)	910
Sample type	DC
Lithology	clyst
Preparation	bulk
Date of analysis	15.04.2001

Quality rating	
Abundance of vitrinite	-
Identification of vitrinite	±
Type of vitrinite	O
Particle size	-
Particle surface quality	-
Abundance of pyrite	O
Average sample quality	P

Legend to quality rating	
No effect on the readings	O
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A

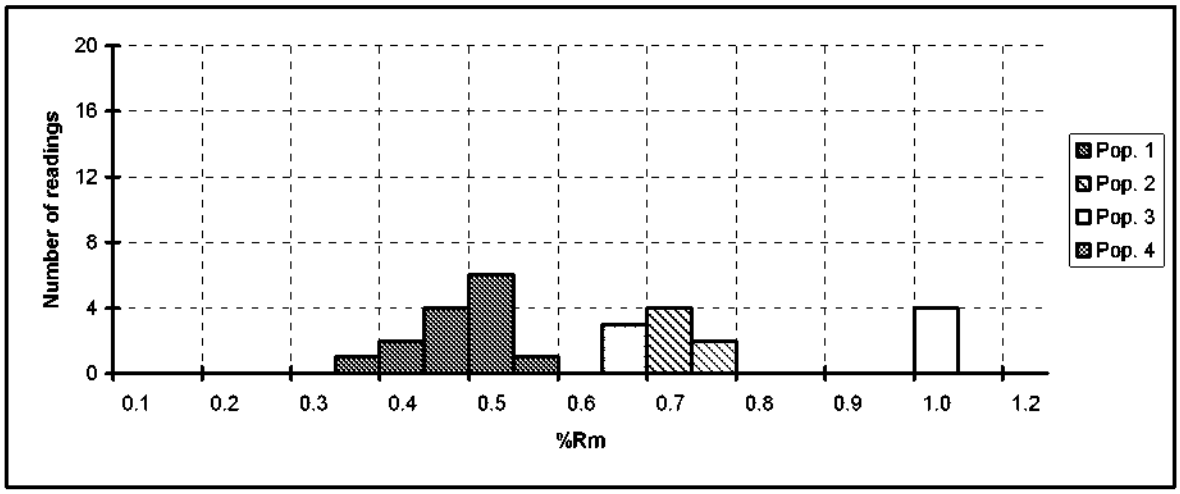
Comments

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.50±0.05	0.78±0.06	1.06±0.07	
Individual	0.44	0.68	0.98	
measurements	0.46	0.72	0.99	
3	0.46	0.76	0.99	
4	0.48	0.77	1.07	
5	0.53	0.78	1.08	
6	0.58	0.78	1.09	
7		0.84	1.18	
8		0.86		
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				



APT no.	**11055**
Well	7228/7-1S
Depth(mRKB)	1010
Sample type	DC
Lithology	clyst
Preparation	bulk
Date of analysis	21.04.2001
Quality rating	
Abundance of vitrinite	-
Identification of vitrinite	0
Type of vitrinite	0
Particle size	-
Particle surface quality	-
Abundance of pyrite	0
Average sample quality	**P**
Legend to quality rating	
No effect on the readings	0
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A
Comments	

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.52±0.08	0.78±0.07	1.01±0.10	
Individual	0.36	0.70	0.92	
measurements	0.47	0.71	0.93	
3	0.47	0.84	0.96	
4	0.49	0.84	0.97	
5	0.52		1.07	
6	0.53		1.18	
7	0.57			
8	0.59			
9	0.62			
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				



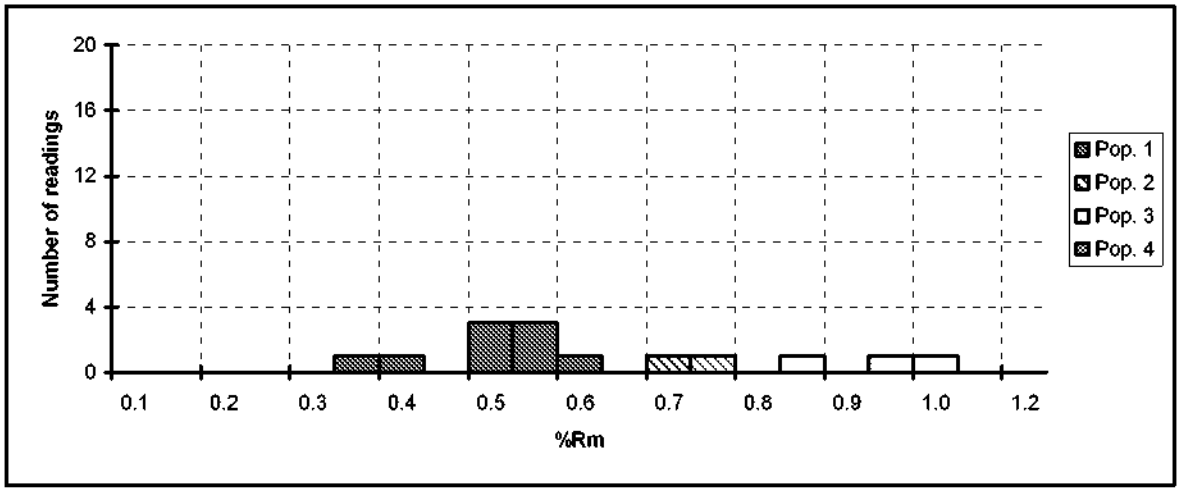
APT no.	**11056**
Well	7228/7-1S
Depth(mRKB)	1110
Sample type	DC
Lithology	clyst
Preparation	bulk
Date of analysis	21.04.2001

Quality rating	
Abundance of vitrinite	-
Identification of vitrinite	O
Type of vitrinite	O
Particle size	-
Particle surface quality	O
Abundance of pyrite	O
Average sample quality	M

Legend to quality rating	
No effect on the readings	O
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A

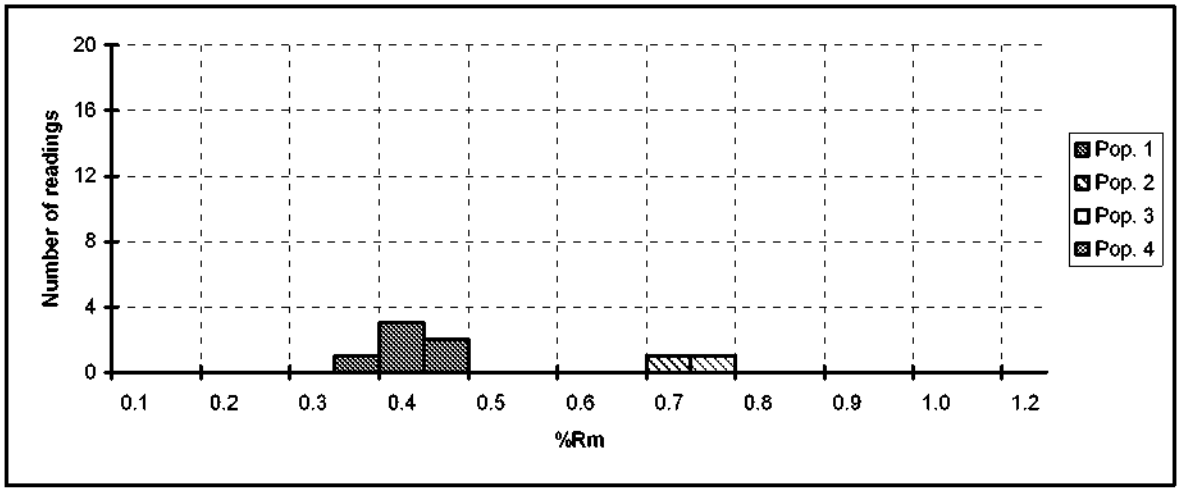
Comments

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.50±0.05	0.72±0.04	1.06±0.07	
Individual	0.39	0.66	1.01	
measurements	0.43	0.68	1.01	
3	0.44	0.68	1.04	
4	0.46	0.70	1.06	
5	0.47	0.71		
6	0.48	0.72		
7	0.49	0.73		
8	0.50	0.77		
9	0.51	0.79		
10	0.52			
11	0.53			
12	0.54			
13	0.54			
14	0.59			
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				



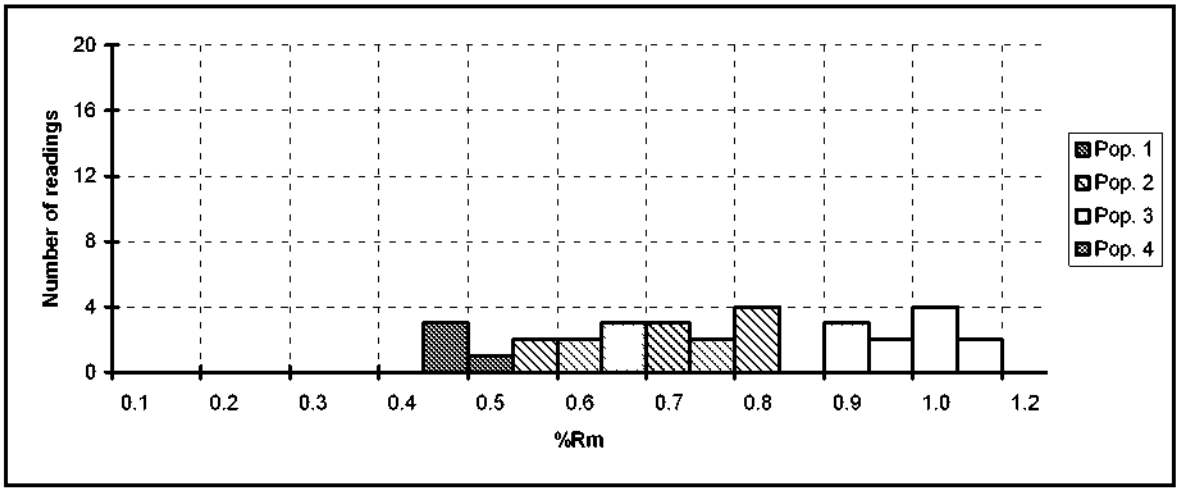
APT no.	**11057**
Well	7228/7-1S
Depth(mRKB)	1210
Sample type	DC
Lithology	clyst
Preparation	bulk
Date of analysis	21.04.2001
Quality rating	
Abundance of vitrinite	-
Identification of vitrinite	±
Type of vitrinite	0
Particle size	-
Particle surface quality	-
Abundance of pyrite	0
Average sample quality	P
Legend to quality rating	
No effect on the readings	0
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A
Comments	

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.53±0.08	0.73±0.04	0.96±0.09	
Individual	0.38	0.70	0.86	
measurements	0.40	0.75	0.99	
3	0.53		1.02	
4	0.54			
5	0.54			
6	0.56			
7	0.58			
8	0.59			
9	0.64			
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				



APT no.	**11058**
Well	7228/7-1S
Depth(mRKB)	1308
Sample type	DC
Lithology	clyst
Preparation	bulk
Date of analysis	21.04.2001
Quality rating	
Abundance of vitrinite	-
Identification of vitrinite	0
Type of vitrinite	0
Particle size	-
Particle surface quality	-
Abundance of pyrite	0
Average sample quality	P
Legend to quality rating	
No effect on the readings	0
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A
Comments	

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.45±0.05	0.74±0.02		
Individual	0.37	0.72		
measurements	0.41	0.75		
3	0.44			
4	0.44			
5	0.49			
6	0.49			
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				



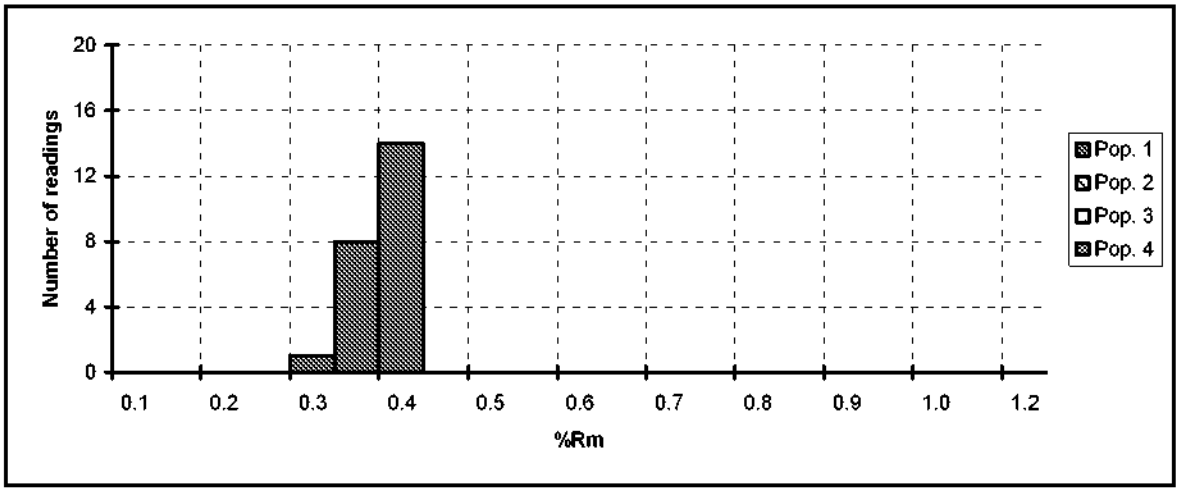
APT no.	**11059**
Well	7228/7-1S
Depth(mRKB)	1314
Sample type	DC
Lithology	clyst/sst
Preparation	bulk
Date of analysis	21.04.2001

Quality rating	
Abundance of vitrinite	-
Identification of vitrinite	O
Type of vitrinite	O
Particle size	-
Particle surface quality	O
Abundance of pyrite	O
Average sample quality	P

Legend to quality rating	
No effect on the readings	O
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A

Comments

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.49±0.04	0.73±0.08	1.02±0.09	
Individual	0.46	0.57	0.91	
measurements	0.47	0.59	0.92	
3	0.49	0.60	0.92	
4	0.54	0.63	0.96	
5		0.65	0.97	
6		0.65	1.00	
7		0.65	1.05	
8		0.71	1.07	
9		0.71	1.09	
10		0.72	1.12	
11		0.75	1.18	
12		0.75		
13		0.80		
14		0.81		
15		0.82		
16		0.84		
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				



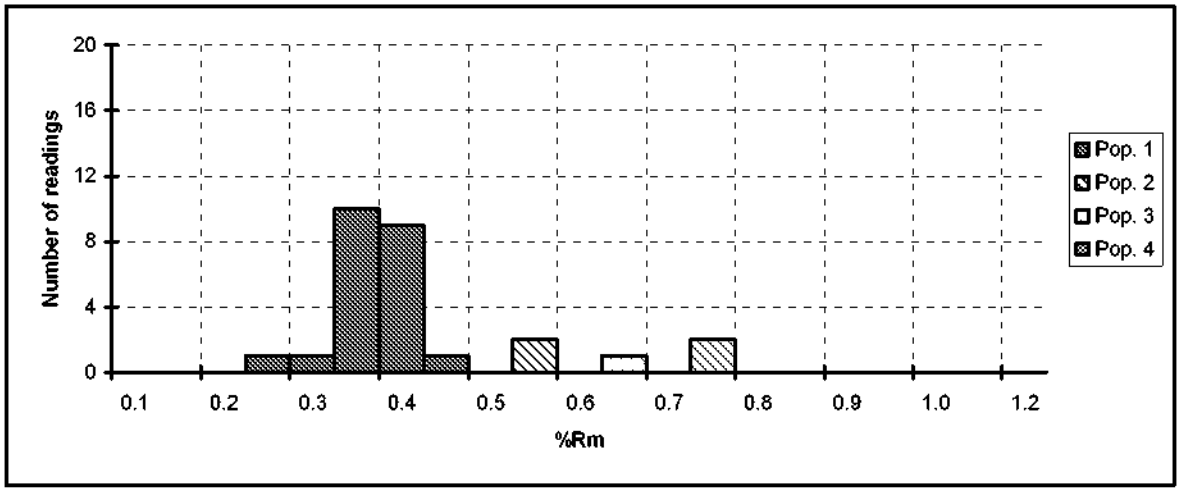
APT no.	**11032**
Well	7228/7-1A
Depth(mRKB)	1347
Sample type	DC
Lithology	clyst
Preparation	bulk
Date of analysis	17.04.2001

Quality rating	
Abundance of vitrinite	0
Identification of vitrinite	0
Type of vitrinite	0
Particle size	0
Particle surface quality	-
Abundance of pyrite	0
Average sample quality	M/G

Legend to quality rating	
No effect on the readings	0
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A

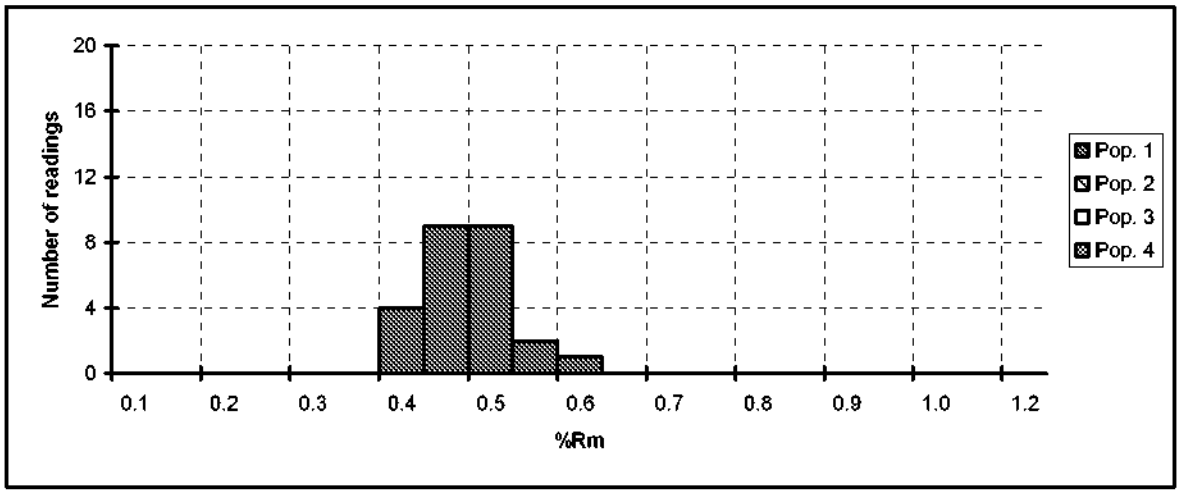
Comments

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.40±0.03			
Individual	0.30			
measurements	0.35			
3	0.35			
4	0.35			
5	0.36			
6	0.38			
7	0.39			
8	0.39			
9	0.39			
10	0.40			
11	0.40			
12	0.40			
13	0.40			
14	0.40			
15	0.41			
16	0.41			
17	0.41			
18	0.42			
19	0.42			
20	0.43			
21	0.43			
22	0.44			
23	0.44			
24				
25				
26				
27				
28				
29				
30				



APT no.	**11034**
Well	7228/7-1A
Depth(mRKB)	1434
Sample type	DC
Lithology	clyst
Preparation	bulk
Date of analysis	17.04.2001
Quality rating	
Abundance of vitrinite	0
Identification of vitrinite	0
Type of vitrinite	0
Particle size	0
Particle surface quality	0
Abundance of pyrite	0
Average sample quality	G
Legend to quality rating	
No effect on the readings	0
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A
Comments	

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.40±0.04	0.66±0.09		
Individual	0.26	0.56		
measurements	0.33	0.58		
3	0.35	0.65		
4	0.36	0.75		
5	0.37	0.76		
6	0.37			
7	0.38			
8	0.38			
9	0.38			
10	0.39			
11	0.39			
12	0.39			
13	0.40			
14	0.40			
15	0.40			
16	0.42			
17	0.42			
18	0.43			
19	0.43			
20	0.44			
21	0.44			
22	0.46			
23				
24				
25				
26				
27				
28				
29				
30				



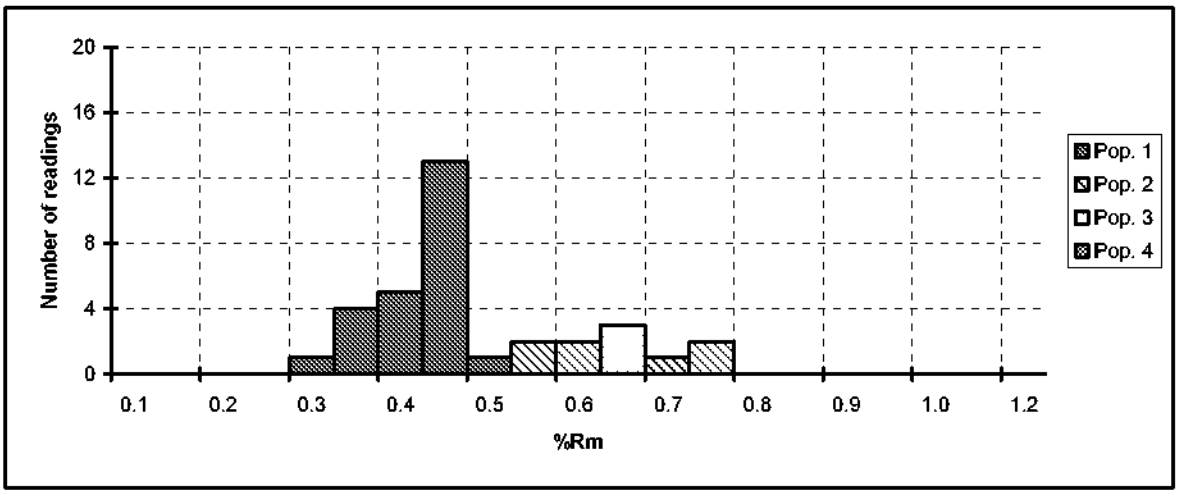
APT no.	**11035**
Well	7228/7-1A
Depth(mRKB)	1566
Sample type	DC
Lithology	clyst
Preparation	bulk
Date of analysis	17.04.2001

Quality rating	
Abundance of vitrinite	0
Identification of vitrinite	0
Type of vitrinite	0
Particle size	0
Particle surface quality	0
Abundance of pyrite	0
Average sample quality	G

Legend to quality rating	
No effect on the readings	0
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A

Comments

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.50±0.05			
Individual	0.43			
measurements	0.43			
3	0.43			
4	0.44			
5	0.45			
6	0.46			
7	0.46			
8	0.46			
9	0.46			
10	0.47			
11	0.48			
12	0.48			
13	0.49			
14	0.50			
15	0.51			
16	0.51			
17	0.51			
18	0.52			
19	0.52			
20	0.52			
21	0.53			
22	0.54			
23	0.56			
24	0.59			
25	0.62			
26				
27				
28				
29				
30				



APT no.	**11036**
Well	7228/7-1A
Depth(mRKB)	1647
Sample type	DC
Lithology	clyst
Preparation	bulk
Date of analysis	17.04.2001

Quality rating	
Abundance of vitrinite	0
Identification of vitrinite	0
Type of vitrinite	0
Particle size	0
Particle surface quality	-
Abundance of pyrite	0
Average sample quality	M/G

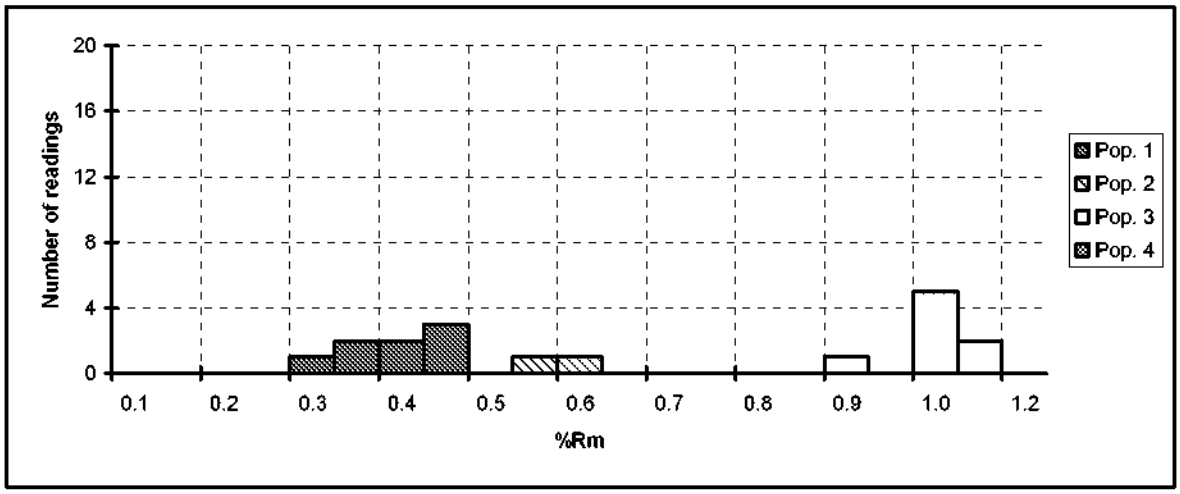
Legend to quality rating	
No effect on the readings	0
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A

Comments

0.45%Ro is lowest population in sample.

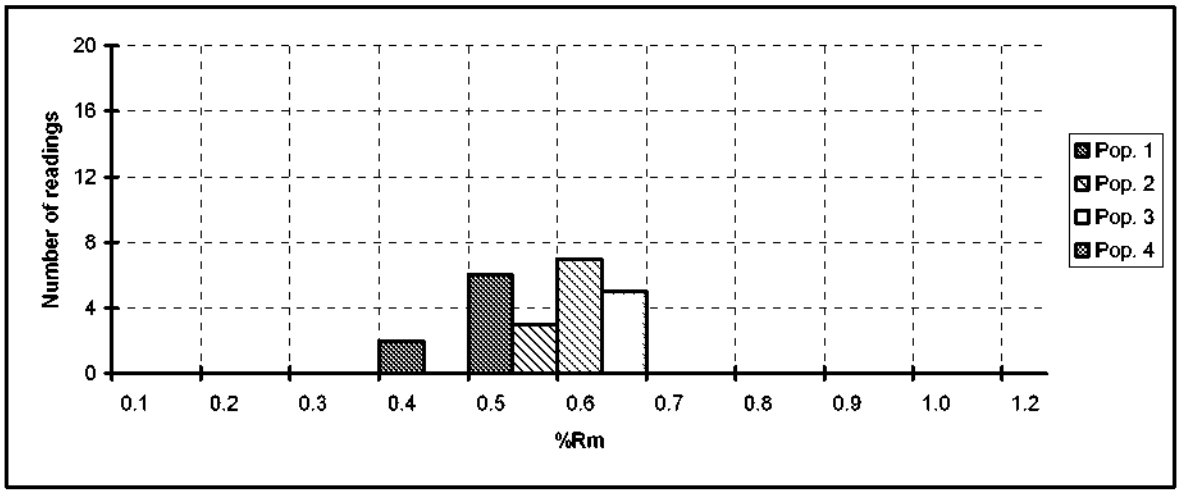
0.67%Ro is probably reworked vitrinite.

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.45±0.05	0.67±0.08		
Individual	0.33	0.56		
measurements	0.36	0.57		
3	0.38	0.60		
4	0.39	0.63		
5	0.39	0.66		
6	0.40	0.67		
7	0.40	0.68		
8	0.40	0.71		
9	0.42	0.76		
10	0.44	0.78		
11	0.45			
12	0.45			
13	0.47			
14	0.47			
15	0.47			
16	0.47			
17	0.48			
18	0.48			
19	0.48			
20	0.48			
21	0.49			
22	0.49			
23	0.49			
24	0.50			
25				
26				
27				
28				
29				
30				



APT no.	**11038**
Well	7228/7-1A
Depth(mRKB)	1755
Sample type	DC
Lithology	clyst
Preparation	bulk
Date of analysis	17.04.2001
Quality rating	
Abundance of vitrinite	-
Identification of vitrinite	0
Type of vitrinite	0
Particle size	-
Particle surface quality	-
Abundance of pyrite	0
Average sample quality	P
Legend to quality rating	
No effect on the readings	0
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A
Comments	

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.42±0.05	0.60±0.05	1.05±0.07	
Individual	0.34	0.56	0.94	
measurements	0.38	0.63	1.00	
3	0.39		1.01	
4	0.40		1.02	
5	0.44		1.07	
6	0.45		1.08	
7	0.46		1.13	
8	0.49		1.13	
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				



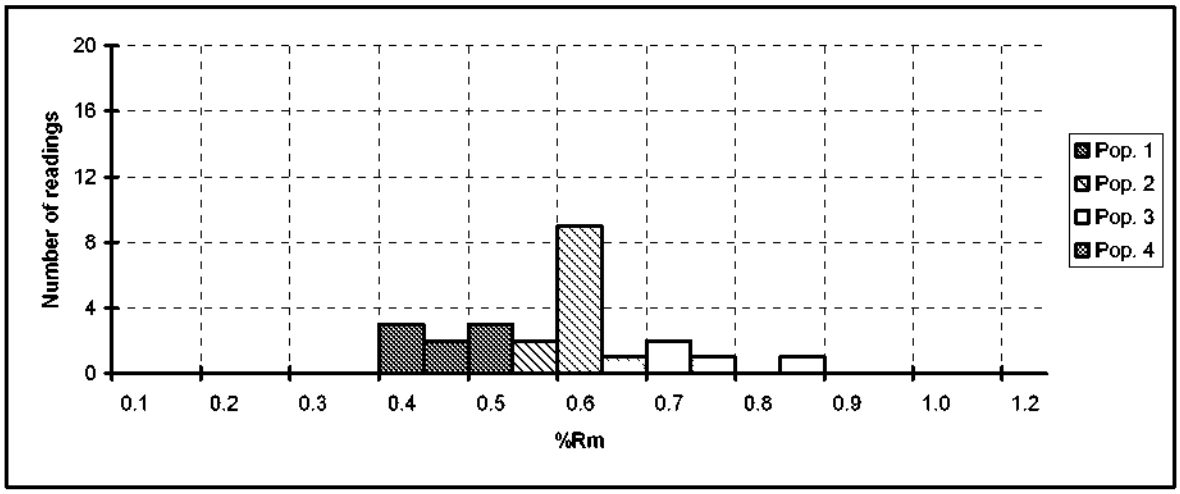
APT no.	**11039**
Well	7228/7-1A
Depth(mRKB)	1899
Sample type	DC
Lithology	clyst/sst
Preparation	bulk
Date of analysis	17.04.2001

Quality rating	
Abundance of vitrinite	-
Identification of vitrinite	±
Type of vitrinite	O
Particle size	-
Particle surface quality	-
Abundance of pyrite	O
Average sample quality	P

Legend to quality rating	
No effect on the readings	O
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A

Comments

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.50±0.05	0.64±0.04		
Individual	0.40	0.58		
measurements	0.43	0.58		
3	0.50	0.59		
4	0.51	0.60		
5	0.53	0.60		
6	0.53	0.60		
7	0.54	0.63		
8	0.54	0.64		
9		0.64		
10		0.64		
11		0.65		
12		0.66		
13		0.68		
14		0.68		
15		0.69		
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				



APT no.	**11040**
Well	7228/7-1A
Depth(mRKB)	1935
Sample type	DC
Lithology	clyst/sst
Preparation	bulk
Date of analysis	17.04.2001

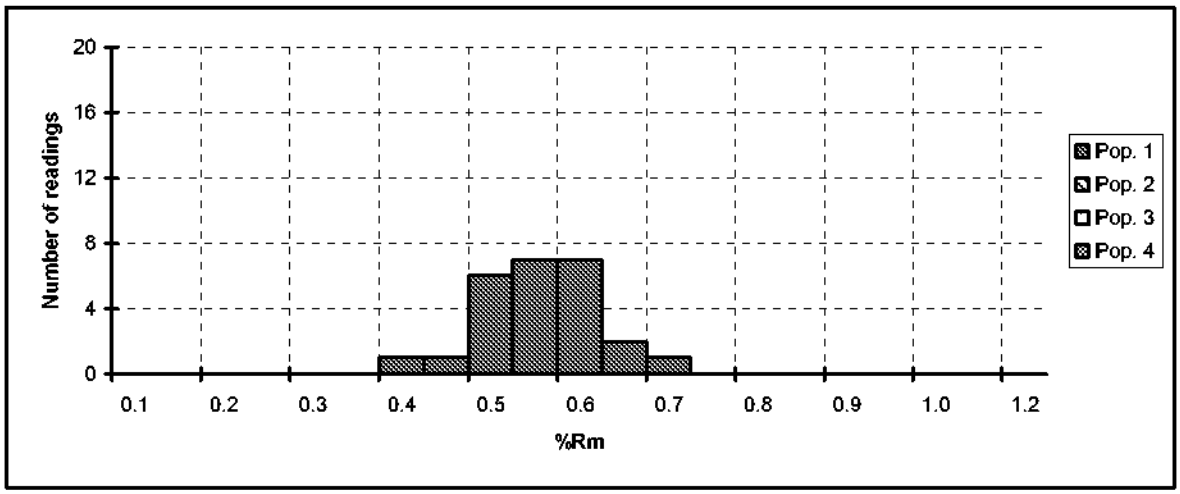
Quality rating	
Abundance of vitrinite	-
Identification of vitrinite	±
Type of vitrinite	O
Particle size	-
Particle surface quality	-
Abundance of pyrite	O
Average sample quality	P

Legend to quality rating	
No effect on the readings	O
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A

Comments

0.62%Ro probably reworked vitrinite.

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.47±0.05	0.62±0.03	0.77±0.07	
Individual	0.42	0.56	0.70	
measurements	0.43	0.58	0.73	
3	0.43	0.60	0.78	
4	0.45	0.61	0.85	
5	0.45	0.61		
6	0.51	0.61		
7	0.52	0.62		
8	0.54	0.62		
9		0.63		
10		0.64		
11		0.64		
12		0.67		
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				



APT no.	**11041**
Well	7228/7-1A
Depth(mRKB)	1977
Sample type	DC
Lithology	clyst/sst
Preparation	bulk
Date of analysis	17.04.2001

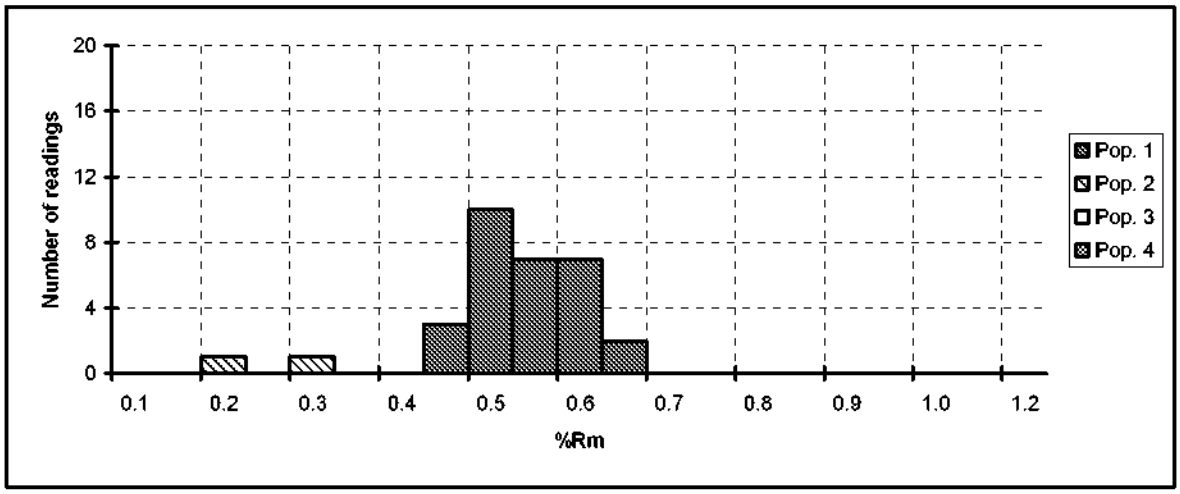
Quality rating	
Abundance of vitrinite	0
Identification of vitrinite	0
Type of vitrinite	0
Particle size	0
Particle surface quality	0
Abundance of pyrite	0
Average sample quality	G

Legend to quality rating	
No effect on the readings	0
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A

Comments

0.58%Ro good vitrinite population, but may be reworked?

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.58±0.07			
Individual	0.40			
measurements	0.49			
3	0.51			
4	0.51			
5	0.53			
6	0.53			
7	0.53			
8	0.53			
9	0.55			
10	0.55			
11	0.56			
12	0.57			
13	0.57			
14	0.58			
15	0.59			
16	0.61			
17	0.61			
18	0.61			
19	0.62			
20	0.62			
21	0.62			
22	0.64			
23	0.66			
24	0.67			
25	0.74			
26				
27				
28				
29				
30				



APT no.	**11042**
Well	7228/7-1A
Depth(mRKB)	2031
Sample type	DC
Lithology	clyst/sst
Preparation	bulk
Date of analysis	17.04.2001

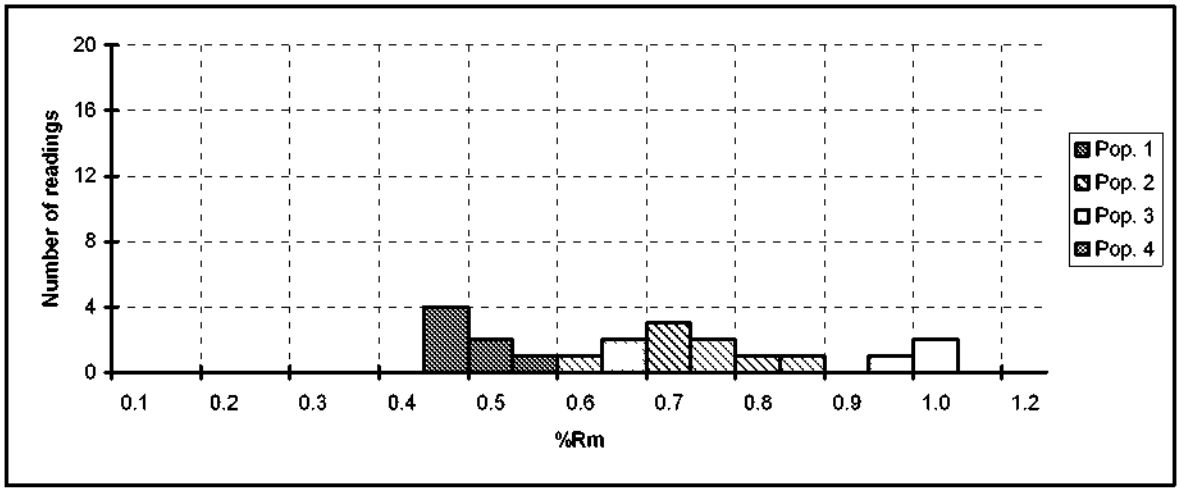
Quality rating	
Abundance of vitrinite	0
Identification of vitrinite	0
Type of vitrinite	0
Particle size	0
Particle surface quality	0
Abundance of pyrite	0
Average sample quality	G

Legend to quality rating	
No effect on the readings	0
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A

Comments

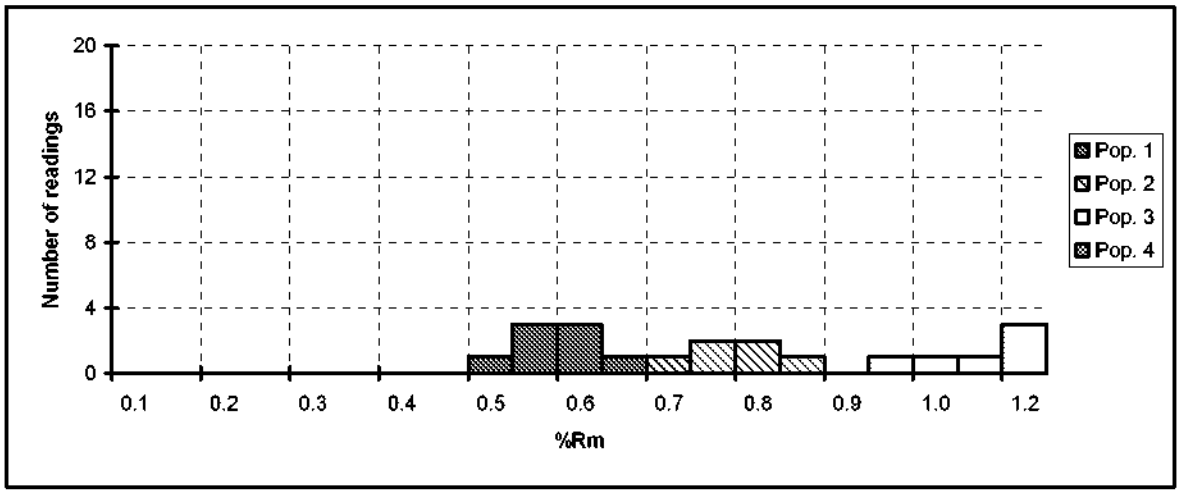
0.57%Ro good vitrinite population, but may be reworked?

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.57±0.06	0.27±0.06		
Individual	0.46	0.22		
measurements	0.46	0.31		
3	0.49			
4	0.50			
5	0.51			
6	0.51			
7	0.51			
8	0.52			
9	0.52			
10	0.52			
11	0.53			
12	0.54			
13	0.54			
14	0.55			
15	0.56			
16	0.57			
17	0.57			
18	0.57			
19	0.57			
20	0.58			
21	0.60			
22	0.61			
23	0.61			
24	0.62			
25	0.63			
26	0.64			
27	0.64			
28	0.66			
29	0.69			
30				



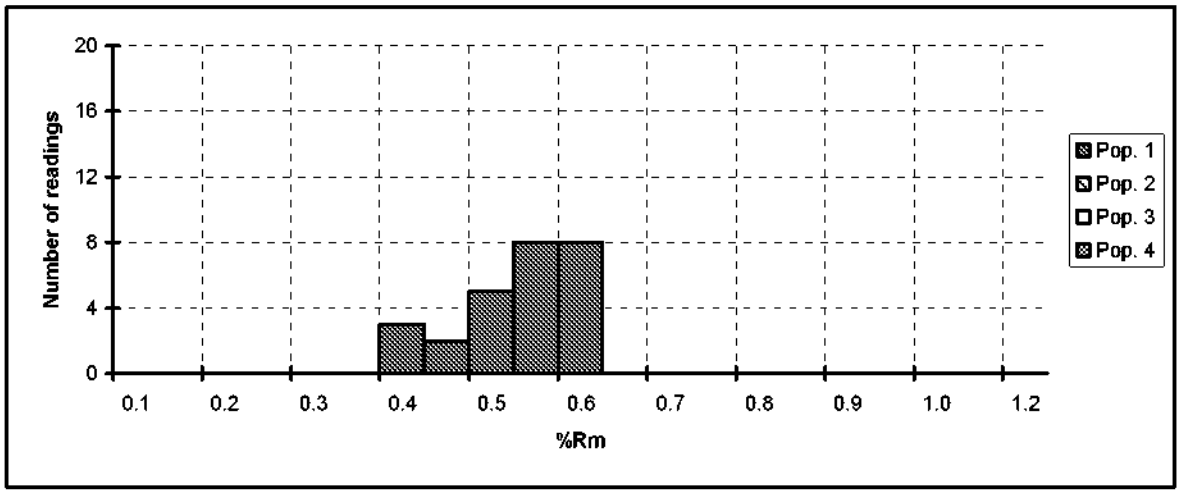
APT no.	**11043**
Well	7228/7-1A
Depth(mRKB)	2103
Sample type	DC
Lithology	clyst/sst
Preparation	bulk
Date of analysis	17.04.2001
Quality rating	
Abundance of vitrinite	-
Identification of vitrinite	0
Type of vitrinite	0
Particle size	-
Particle surface quality	0
Abundance of pyrite	0
Average sample quality	P
Legend to quality rating	
No effect on the readings	0
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A
Comments	

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.50±0.04	0.74±0.08	1.05±0.07	
Individual	0.45	0.61	0.96	
measurements	0.46	0.66	1.08	
3	0.49	0.69	1.09	
4	0.49	0.72		
5	0.51	0.73		
6	0.54	0.73		
7	0.55	0.75		
8		0.76		
9		0.81		
10		0.89		
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				



APT no.	**11044**
Well	7228/7-1A
Depth(mRKB)	2229
Sample type	DC
Lithology	clyst
Preparation	bulk
Date of analysis	18.04.2001
Quality rating	
Abundance of vitrinite	-
Identification of vitrinite	0
Type of vitrinite	0
Particle size	-
Particle surface quality	-
Abundance of pyrite	0
Average sample quality	P
Legend to quality rating	
No effect on the readings	0
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A
Comments	

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.59±0.04	0.80±0.05	1.01±0.03	
Individual	0.51	0.73	0.98	
measurements	0.56	0.78	1.02	
3	0.57	0.79	1.17	
4	0.57	0.80	1.20	
5	0.60	0.81	1.22	
6	0.60	0.88	1.26	
7	0.63			
8	0.65			
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				



APT no.	**11045**
Well	7228/7-1A
Depth(mRKB)	2376
Sample type	DC
Lithology	clyst
Preparation	bulk
Date of analysis	18.04.2001

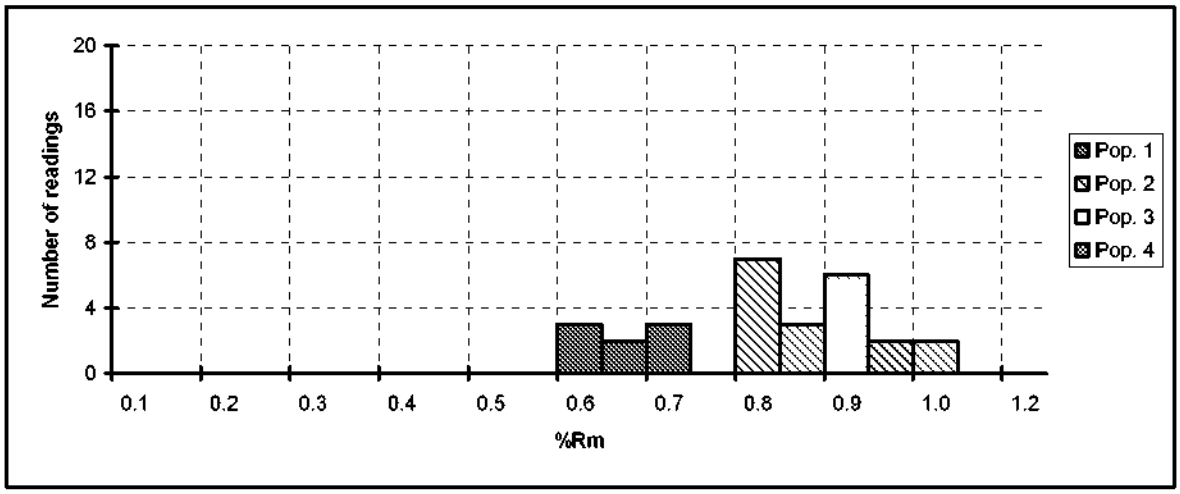
Quality rating	
Abundance of vitrinite	O
Identification of vitrinite	O
Type of vitrinite	O
Particle size	O
Particle surface quality	O
Abundance of pyrite	O
Average sample quality	G

Legend to quality rating	
No effect on the readings	O
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A

Comments

0.55%Ro lowest population in sample.

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.55±0.06			
Individual	0.41			
measurements	0.42			
3	0.44			
4	0.45			
5	0.45			
6	0.51			
7	0.53			
8	0.54			
9	0.54			
10	0.54			
11	0.55			
12	0.56			
13	0.56			
14	0.56			
15	0.57			
16	0.57			
17	0.57			
18	0.58			
19	0.60			
20	0.60			
21	0.60			
22	0.60			
23	0.61			
24	0.61			
25	0.62			
26	0.64			
27				
28				
29				
30				



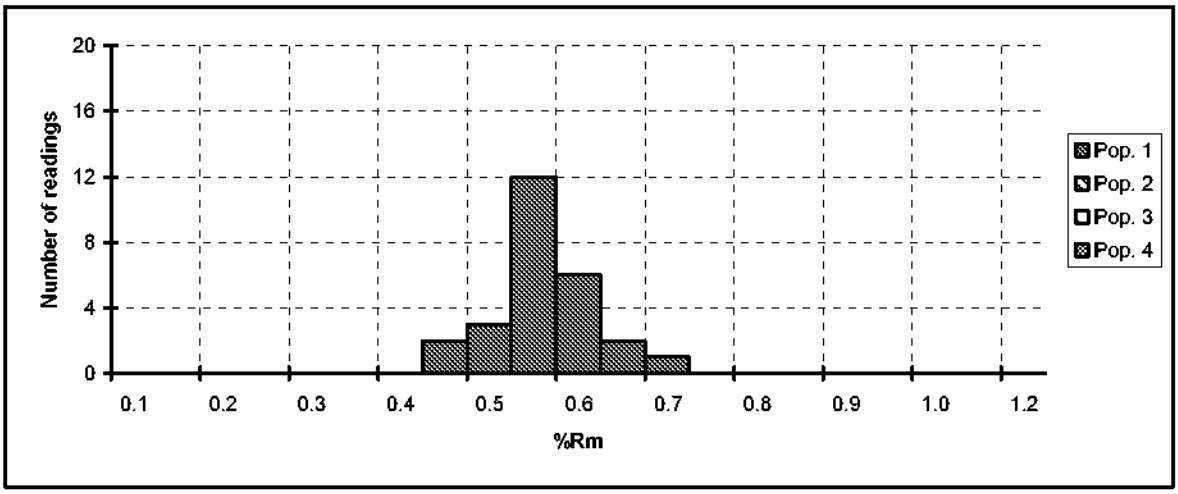
APT no.	**11022**
Well	7228/7-1A
Depth(mRKB)	2455.49-52
Sample type	COCH
Lithology	clyst
Preparation	bulk
Date of analysis	21.04.2001

Quality rating	
Abundance of vitrinite	-
Identification of vitrinite	±
Type of vitrinite	+
Particle size	-
Particle surface quality	-
Abundance of pyrite	0
Average sample quality	P

Legend to quality rating	
No effect on the readings	0
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A

Comments

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.69±0.05	0.89±0.07		
Individual	0.62	0.80		
measurements	0.62	0.80		
3	0.64	0.81		
4	0.68	0.81		
5	0.68	0.81		
6	0.73	0.83		
7	0.74	0.84		
8	0.74	0.86		
9		0.87		
10		0.87		
11		0.90		
12		0.91		
13		0.92		
14		0.93		
15		0.93		
16		0.94		
17		0.97		
18		0.98		
19		1.04		
20		1.08		
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				



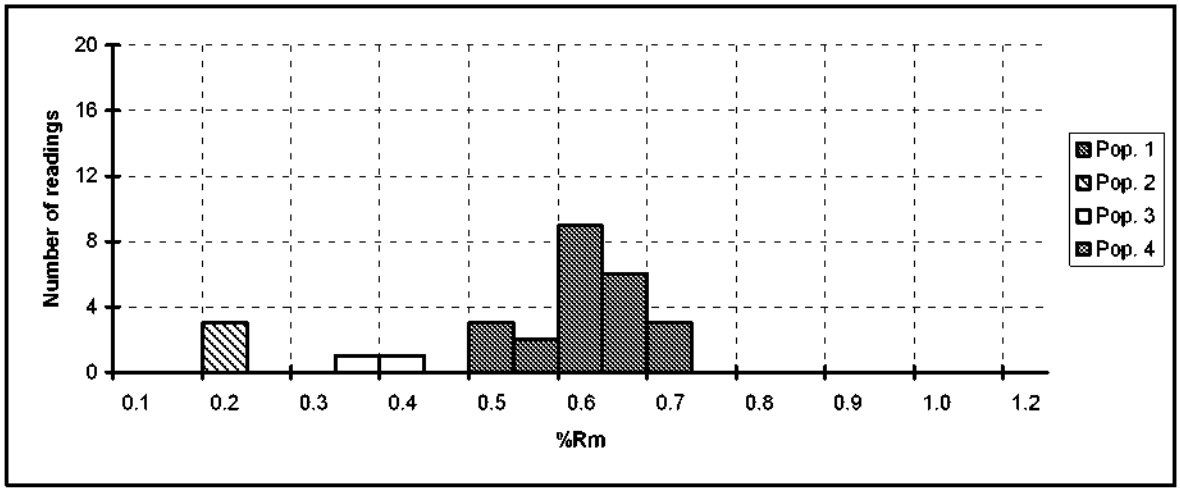
APT no.	**11023**
Well	7228/7-1A
Depth(mRKB)	2457.32-34
Sample type	COCH
Lithology	clyst
Preparation	bulk
Date of analysis	21.04.2001

Quality rating	
Abundance of vitrinite	0
Identification of vitrinite	0
Type of vitrinite	0
Particle size	0
Particle surface quality	-
Abundance of pyrite	0
Average sample quality	G

Legend to quality rating	
No effect on the readings	0
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A

Comments

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.59±0.06			
Individual	0.47			
measurements	0.49			
3	0.52			
4	0.53			
5	0.53			
6	0.55			
7	0.56			
8	0.57			
9	0.57			
10	0.58			
11	0.58			
12	0.58			
13	0.59			
14	0.59			
15	0.59			
16	0.59			
17	0.59			
18	0.61			
19	0.61			
20	0.62			
21	0.62			
22	0.64			
23	0.64			
24	0.66			
25	0.68			
26	0.74			
27				
28				
29				
30				



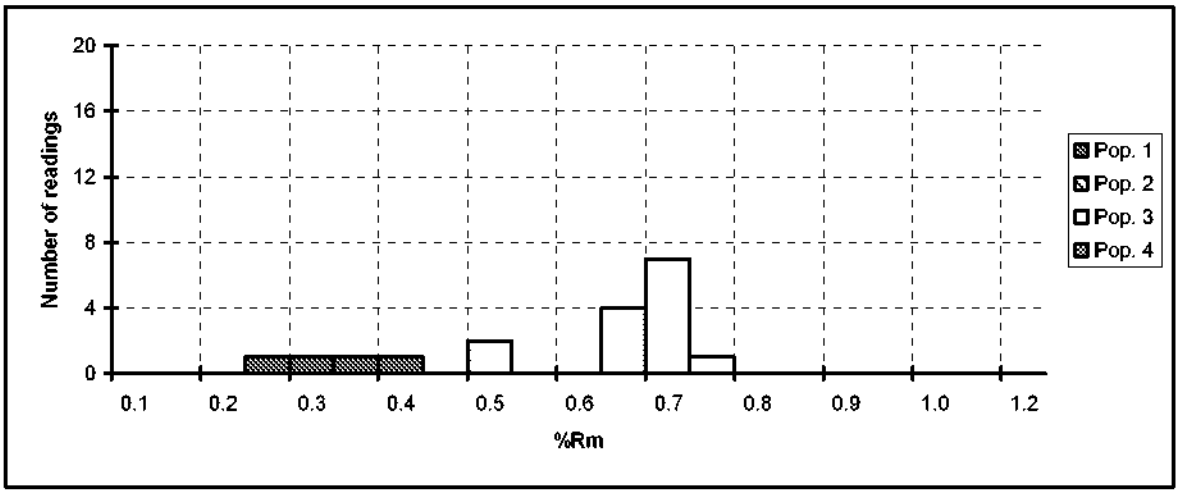
APT no.	**11046**
Well	7228/7-1A
Depth(mRKB)	2511
Sample type	DC
Lithology	clyst/sst
Preparation	bulk
Date of analysis	21.04.2001

Quality rating	
Abundance of vitrinite	0
Identification of vitrinite	0
Type of vitrinite	0
Particle size	-
Particle surface quality	0
Abundance of pyrite	+
Average sample quality	M

Legend to quality rating	
No effect on the readings	0
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A

Comments

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.63±0.06	0.22±0.01	0.41±0.01	
Individual	0.52	0.22	0.39	
measurements	0.52	0.22	0.41	
3	0.54	0.22		
4	0.55			
5	0.55			
6	0.60			
7	0.60			
8	0.62			
9	0.62			
10	0.63			
11	0.63			
12	0.63			
13	0.64			
14	0.64			
15	0.65			
16	0.66			
17	0.66			
18	0.68			
19	0.68			
20	0.69			
21	0.70			
22	0.71			
23	0.72			
24				
25				
26				
27				
28				
29				
30				



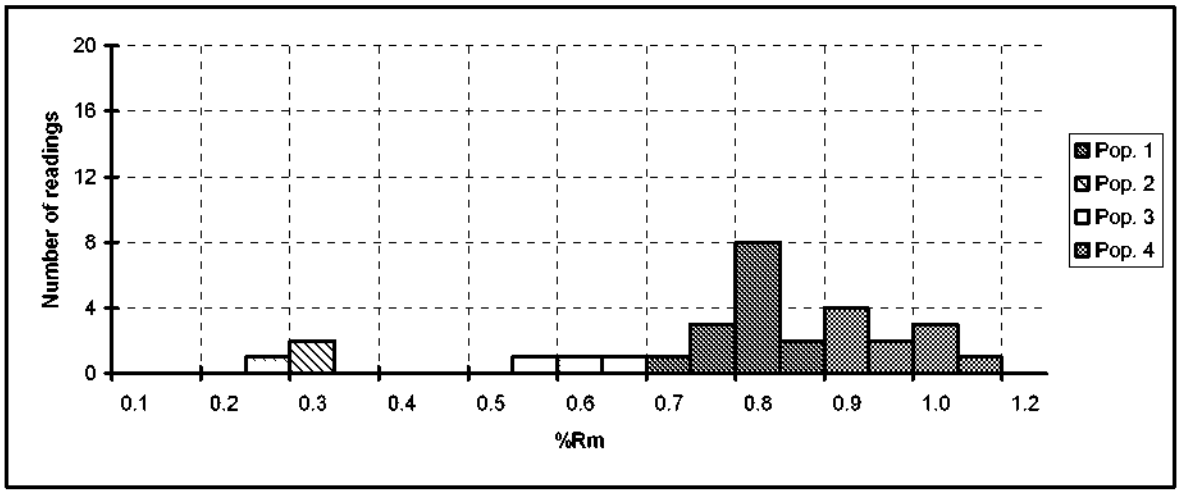
APT no.	**11047**
Well	7228/7-1A
Depth(mRKB)	2670
Sample type	DC
Lithology	clyst/sst
Preparation	bulk
Date of analysis	18.04.2001

Quality rating	
Abundance of vitrinite	-
Identification of vitrinite	±
Type of vitrinite	-
Particle size	-
Particle surface quality	O
Abundance of pyrite	O
Average sample quality	P

Legend to quality rating	
No effect on the readings	O
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A

Comments
Not sure of vitrinite population.

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.35±0.05	0.52±0.01	0.71±0.04	
Individual	0.29	0.51	0.65	
measurements	0.30	0.52	0.65	
3	0.38		0.66	
4	0.40		0.69	
5			0.70	
6			0.72	
7			0.72	
8			0.73	
9			0.74	
10			0.74	
11			0.74	
12			0.75	
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				



APT no.	**11048**
Well	7228/7-1A
Depth(mRKB)	2742
Sample type	DC
Lithology	clyst/sst
Preparation	bulk
Date of analysis	18.04.2001

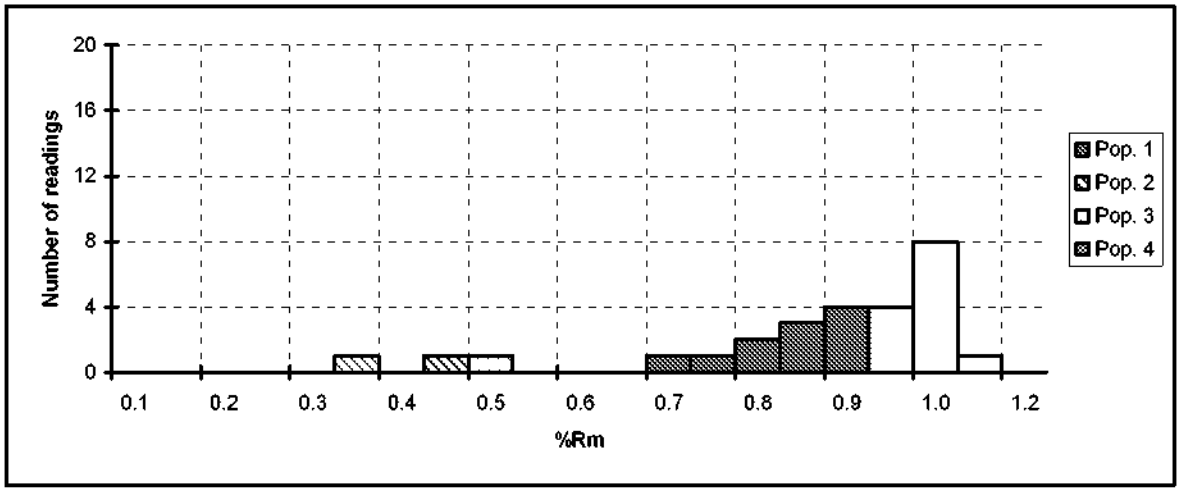
Quality rating	
Abundance of vitrinite	0
Identification of vitrinite	±
Type of vitrinite	0
Particle size	0
Particle surface quality	0
Abundance of pyrite	0
Average sample quality	P/G

Legend to quality rating	
No effect on the readings	0
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A

Comments

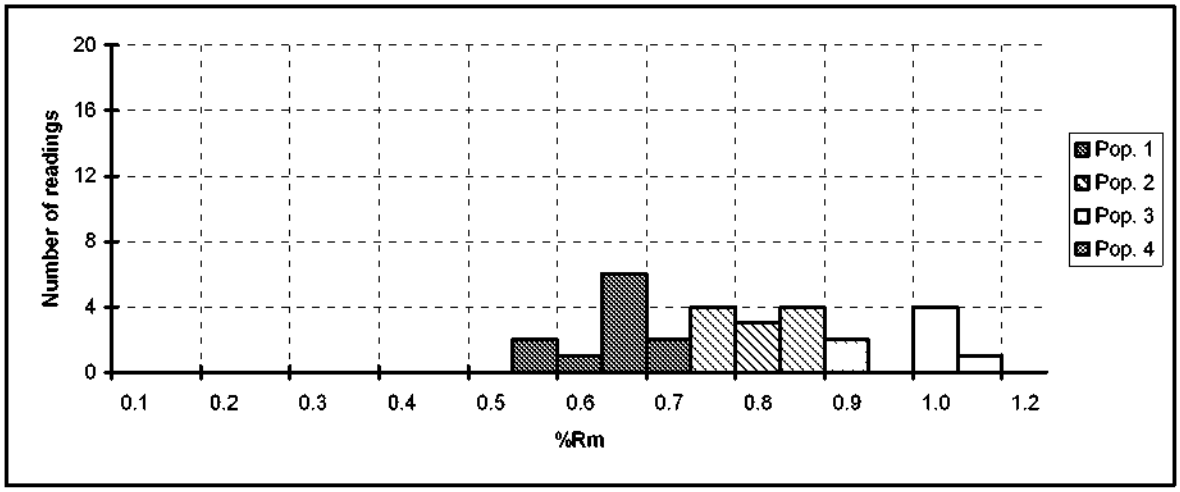
Not sure of vitrinite population.

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.81±0.04	0.32±0.02	0.65±0.05	0.98±0.08
Individual	0.70	0.29	0.59	0.90
measurements	0.76	0.32	0.64	0.91
3	0.77	0.33	0.69	0.92
4	0.79			0.93
5	0.80			0.96
6	0.80			0.96
7	0.81			1.00
8	0.81			1.03
9	0.82			1.08
10	0.83			1.12
11	0.83			
12	0.84			
13	0.85			
14	0.86			
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				



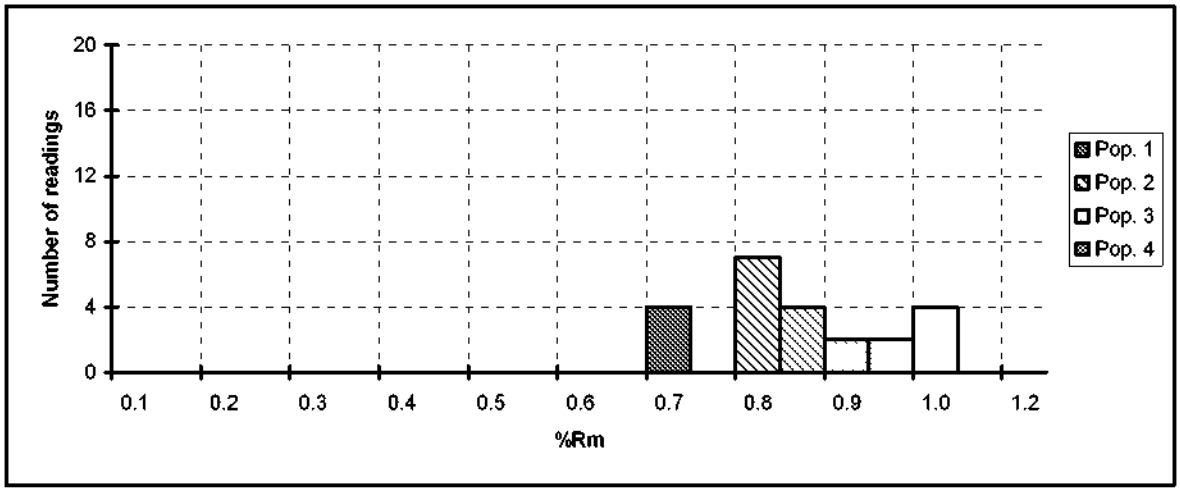
APT no.	**11049**
Well	7228/7-1A
Depth(mRKB)	2781
Sample type	DC
Lithology	clyst/sst
Preparation	bulk
Date of analysis	18.04.2001
Quality rating	
Abundance of vitrinite	-
Identification of vitrinite	±
Type of vitrinite	0
Particle size	-
Particle surface quality	0
Abundance of pyrite	0
Average sample quality	M
Legend to quality rating	
No effect on the readings	0
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A
Comments	
Not sure of vitrinite population.	

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.85±0.07	0.45±0.08	1.03±0.05	
Individual	0.72	0.36	0.96	
measurements	0.77	0.46	0.96	
3	0.80	0.52	0.98	
4	0.81		0.99	
5	0.85		1.00	
6	0.86		1.02	
7	0.87		1.03	
8	0.90		1.04	
9	0.92		1.05	
10	0.92		1.06	
11	0.94		1.08	
12			1.09	
13			1.11	
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				



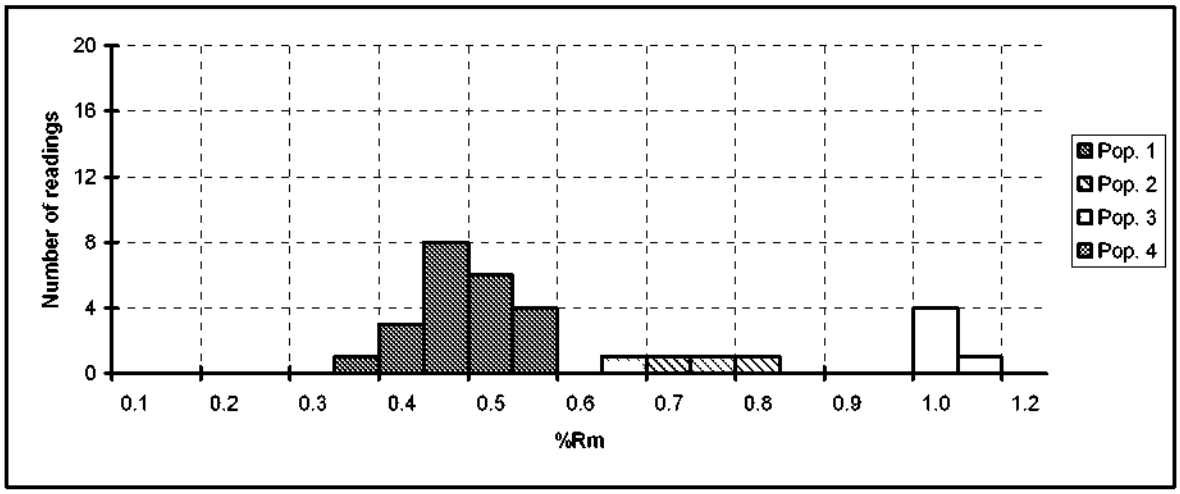
APT no.	**11025**
Well	7228/7-1A
Depth(mRKB)	2842.25-27
Sample type	COCH
Lithology	clyst
Preparation	bulk
Date of analysis	21.04.2001
Quality rating	
Abundance of vitrinite	-
Identification of vitrinite	0
Type of vitrinite	0
Particle size	-
Particle surface quality	0
Abundance of pyrite	0
Average sample quality	M
Legend to quality rating	
No effect on the readings	0
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A
Comments	

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.66±0.05	0.84±0.06	1.07±0.04	
Individual	0.55	0.75	1.00	
measurements	0.58	0.76	1.06	
3	0.62	0.79	1.07	
4	0.65	0.79	1.09	
5	0.65	0.82	1.10	
6	0.66	0.82		
7	0.66	0.83		
8	0.66	0.86		
9	0.69	0.86		
10	0.71	0.88		
11	0.73	0.89		
12		0.92		
13		0.94		
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				



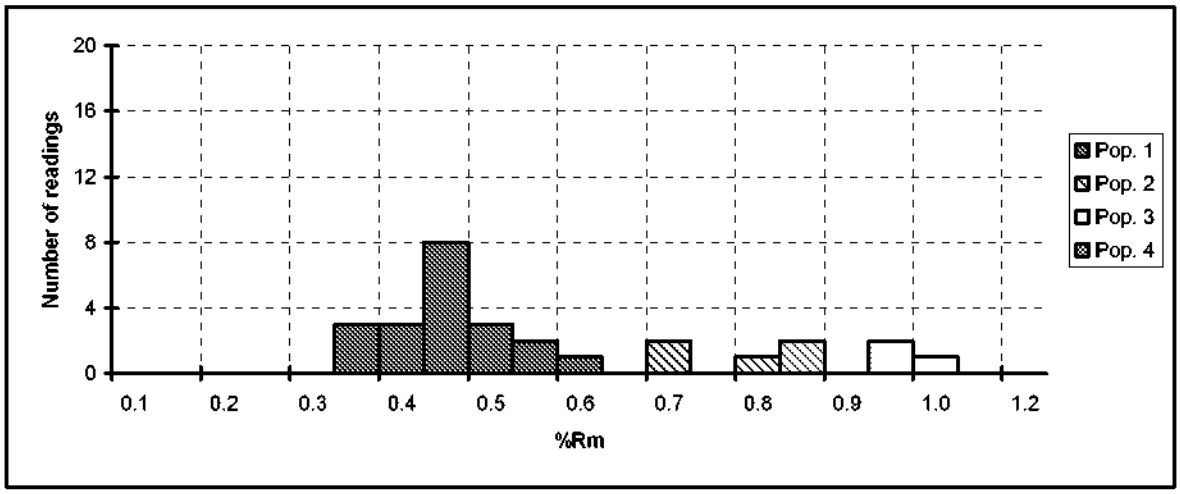
APT no.	**11027**
Well	7228/7-1A
Depth(mRKB)	2860.26-28
Sample type	COCH
Lithology	clyst
Preparation	bulk
Date of analysis	21.04.2001
Quality rating	
Abundance of vitrinite	-
Identification of vitrinite	0
Type of vitrinite	0
Particle size	-
Particle surface quality	0
Abundance of pyrite	0
Average sample quality	M
Legend to quality rating	
No effect on the readings	0
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A
Comments	

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.72±0.01	0.85±0.04	1.01±0.04	
Individual	0.71	0.80	0.96	
measurements	0.72	0.81	0.96	
3	0.73	0.81	1.03	
4	0.73	0.82	1.04	
5		0.83	1.04	
6		0.83	1.05	
7		0.83		
8		0.86		
9		0.88		
10		0.88		
11		0.88		
12		0.90		
13		0.91		
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				



APT no.	**11060**
Well	7228/7-1ST3
Depth(mRKB)	1575
Sample type	DC
Lithology	clyst/sst
Preparation	bulk
Date of analysis	26.04.2001
Quality rating	
Abundance of vitrinite	0
Identification of vitrinite	0
Type of vitrinite	0
Particle size	-
Particle surface quality	0
Abundance of pyrite	0
Average sample quality	M/G
Legend to quality rating	
No effect on the readings	0
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A
Comments	

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.49±0.05	0.74±0.06	1.08±0.07	
Individual	0.39	0.66	1.01	
measurements	0.43	0.73	1.03	
3	0.43	0.77	1.04	
4	0.44	0.80	1.09	
5	0.45		1.18	
6	0.45			
7	0.45			
8	0.47			
9	0.47			
10	0.47			
11	0.48			
12	0.48			
13	0.50			
14	0.50			
15	0.50			
16	0.51			
17	0.52			
18	0.54			
19	0.56			
20	0.56			
21	0.56			
22	0.56			
23				
24				
25				
26				
27				
28				
29				
30				



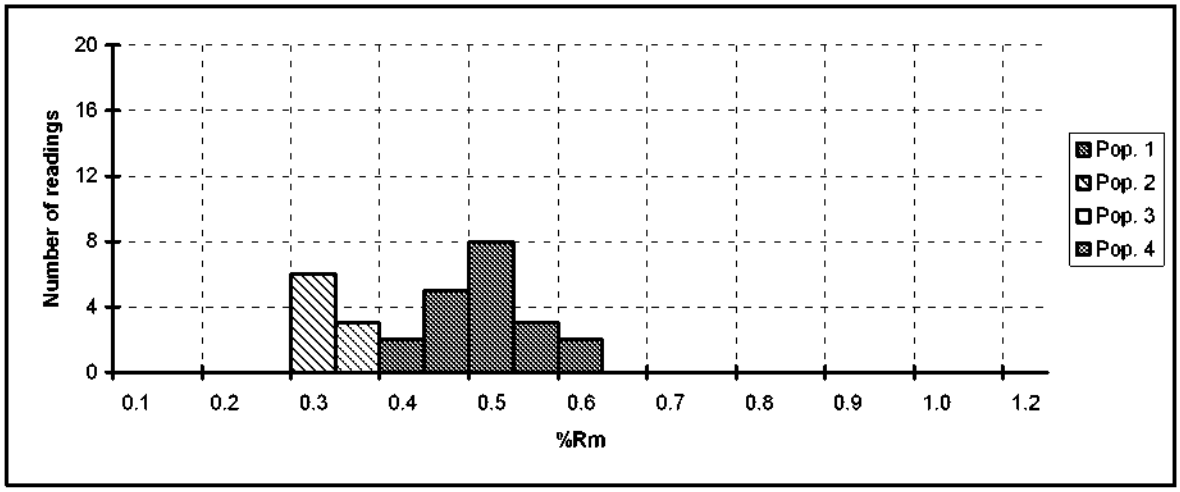
APT no.	**11061**
Well	7228/7-1ST3
Depth(mRKB)	1677
Sample type	DC
Lithology	clyst/sst
Preparation	bulk
Date of analysis	26.04.2001

Quality rating	
Abundance of vitrinite	0
Identification of vitrinite	0
Type of vitrinite	0
Particle size	-
Particle surface quality	-
Abundance of pyrite	+
Average sample quality	M

Legend to quality rating	
No effect on the readings	0
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A

Comments

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.48±0.07	0.81±0.07	0.99±0.04	
Individual	0.38	0.73	0.95	
measurements	0.38	0.73	0.98	
3	0.39	0.83	1.02	
4	0.40	0.86		
5	0.40	0.87		
6	0.43			
7	0.45			
8	0.45			
9	0.45			
10	0.45			
11	0.45			
12	0.46			
13	0.48			
14	0.48			
15	0.52			
16	0.53			
17	0.53			
18	0.58			
19	0.59			
20	0.63			
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				



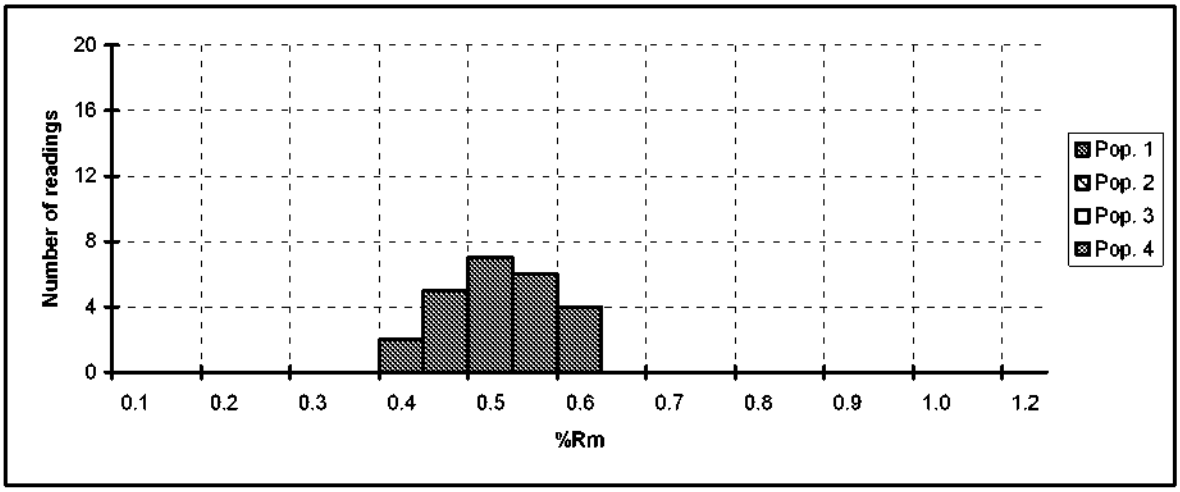
APT no.	**11062**
Well	7228/7-1ST3
Depth(mRKB)	1710
Sample type	DC
Lithology	clyst/sst
Preparation	bulk
Date of analysis	26.04.2001

Quality rating	
Abundance of vitrinite	o
Identification of vitrinite	±
Type of vitrinite	o
Particle size	-
Particle surface quality	-
Abundance of pyrite	+
Average sample quality	P

Legend to quality rating	
No effect on the readings	o
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A

Comments

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.52±0.06	0.33±0.03		
Individual	0.41	0.30		
measurements	0.41	0.30		
3	0.45	0.31		
4	0.47	0.31		
5	0.48	0.31		
6	0.48	0.32		
7	0.48	0.35		
8	0.50	0.36		
9	0.51	0.37		
10	0.52			
11	0.53			
12	0.53			
13	0.54			
14	0.54			
15	0.54			
16	0.55			
17	0.55			
18	0.57			
19	0.63			
20	0.64			
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				



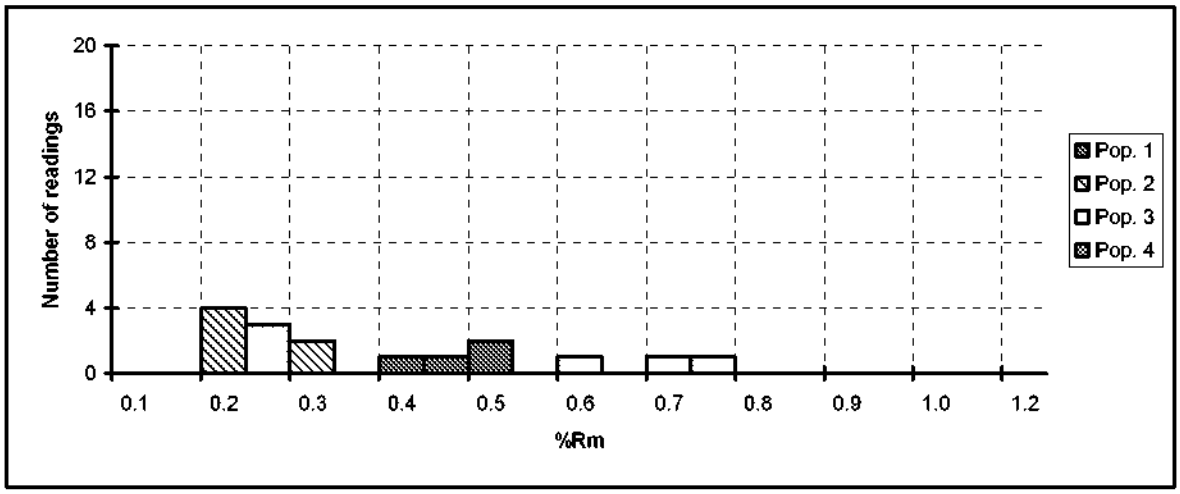
APT no.	**11063**
Well	7228/7-1ST3
Depth(mRKB)	1794
Sample type	DC
Lithology	clyst/sst
Preparation	bulk
Date of analysis	26.04.2001

Quality rating	
Abundance of vitrinite	O
Identification of vitrinite	O
Type of vitrinite	O
Particle size	O
Particle surface quality	O
Abundance of pyrite	+
Average sample quality	G

Legend to quality rating	
No effect on the readings	O
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A

Comments

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.54±0.06			
Individual	0.41			
measurements	0.42			
3	0.46			
4	0.46			
5	0.48			
6	0.49			
7	0.49			
8	0.50			
9	0.51			
10	0.51			
11	0.52			
12	0.54			
13	0.54			
14	0.54			
15	0.56			
16	0.57			
17	0.57			
18	0.58			
19	0.58			
20	0.59			
21	0.60			
22	0.61			
23	0.61			
24	0.62			
25				
26				
27				
28				
29				
30				



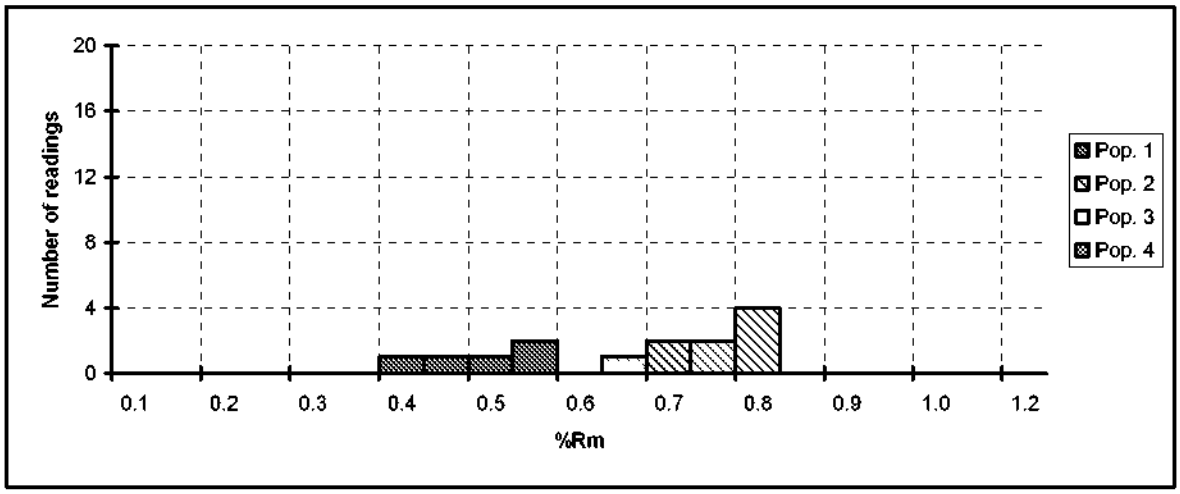
APT no.	**11064**
Well	7228/7-1ST3
Depth(mRKB)	1836
Sample type	DC
Lithology	clyst/sst
Preparation	bulk
Date of analysis	26.04.2001

Quality rating	
Abundance of vitrinite	-
Identification of vitrinite	±
Type of vitrinite	±
Particle size	0
Particle surface quality	0
Abundance of pyrite	+
Average sample quality	P

Legend to quality rating	
No effect on the readings	0
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A

Comments

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.50±0.04	0.27±0.04	0.71±0.08	
Individual	0.44	0.20	0.62	
measurements	0.49	0.23	0.74	
3	0.51	0.24	0.76	
4	0.53	0.24		
5		0.25		
6		0.25		
7		0.29		
8		0.32		
9		0.32		
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				



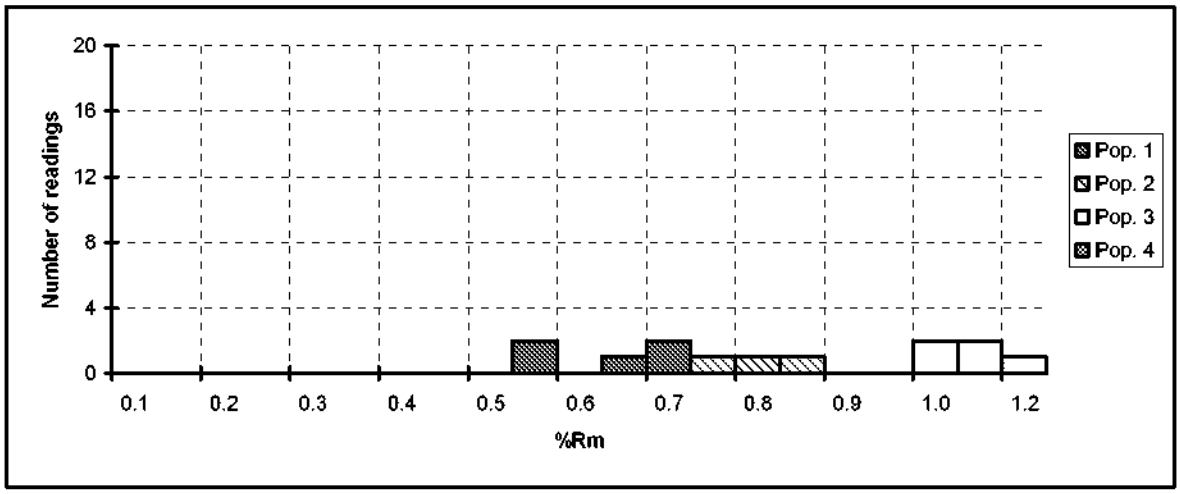
APT no.	**11065**
Well	7228/7-1ST3
Depth(mRKB)	1872
Sample type	DC
Lithology	clyst/sst
Preparation	bulk
Date of analysis	26.04.2001

Quality rating	
Abundance of vitrinite	-
Identification of vitrinite	0
Type of vitrinite	0
Particle size	-
Particle surface quality	-
Abundance of pyrite	+
Average sample quality	P

Legend to quality rating	
No effect on the readings	0
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A

Comments

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.52±0.06	0.77±0.06		
Individual	0.43	0.66		
measurements	0.49	0.72		
3	0.52	0.74		
4	0.55	0.75		
5	0.57	0.75		
6		0.80		
7		0.81		
8		0.84		
9		0.84		
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				



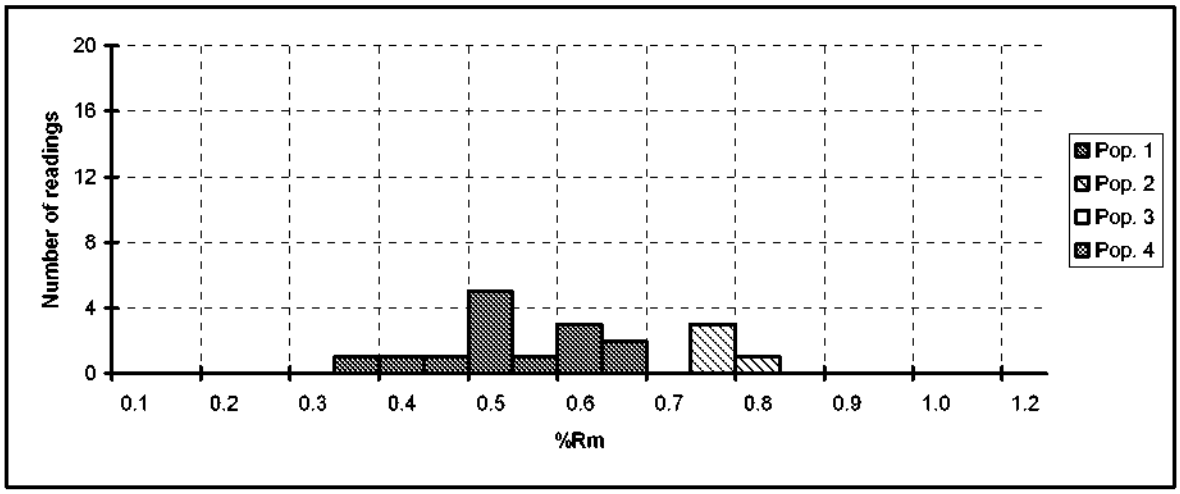
APT no.	**11066**
Well	7228/7-1ST3
Depth(mRKB)	1947
Sample type	DC
Lithology	clyst/sst
Preparation	bulk
Date of analysis	26.04.2001

Quality rating	
Abundance of vitrinite	-
Identification of vitrinite	±
Type of vitrinite	-
Particle size	-
Particle surface quality	-
Abundance of pyrite	0
Average sample quality	P

Legend to quality rating	
No effect on the readings	0
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A

Comments

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.65±0.07	0.82±0.03	1.11±0.07	
Individual	0.56	0.79	1.02	
measurements	0.59	0.81	1.07	
3	0.69	0.85	1.10	
4	0.70		1.11	
5	0.70		1.21	
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				



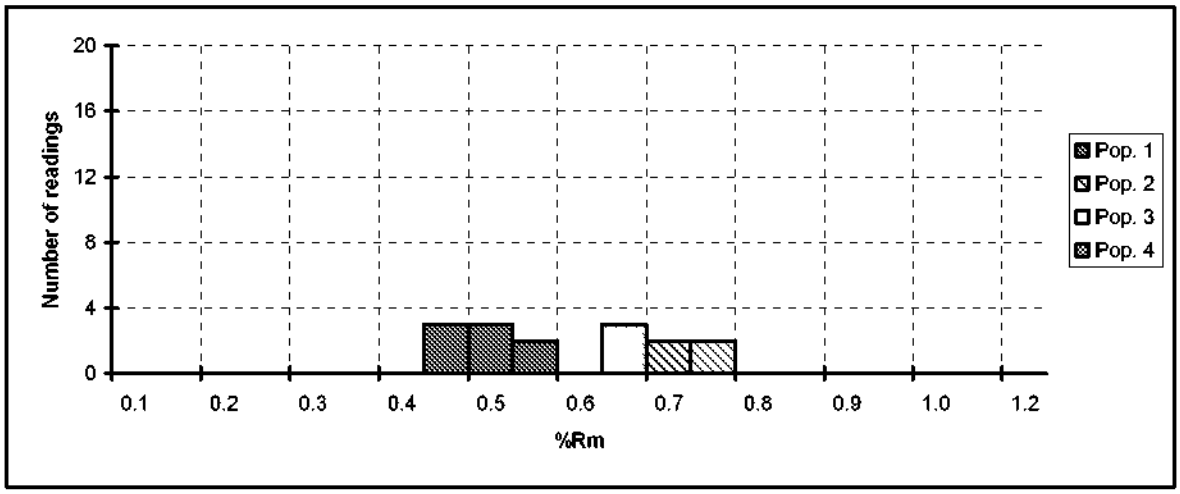
APT no.	**11067**
Well	7228/7-1ST3
Depth(mRKB)	2049
Sample type	DC
Lithology	clyst/sst
Preparation	bulk
Date of analysis	28.04.2001

Quality rating	
Abundance of vitrinite	-
Identification of vitrinite	±
Type of vitrinite	±
Particle size	-
Particle surface quality	-
Abundance of pyrite	0
Average sample quality	P

Legend to quality rating	
No effect on the readings	0
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A

Comments

%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.55±0.09	0.80±0.02		
Individual	0.38	0.77		
measurements	0.44	0.79		
3	0.48	0.79		
4	0.50	0.82		
5	0.51			
6	0.52			
7	0.52			
8	0.52			
9	0.55			
10	0.60			
11	0.63			
12	0.63			
13	0.66			
14	0.68			
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				



APT no.	**11068**
Well	7228/7-1ST3
Depth(mRKB)	2082
Sample type	DC
Lithology	clyst/sst
Preparation	bulk
Date of analysis	28.04.2001

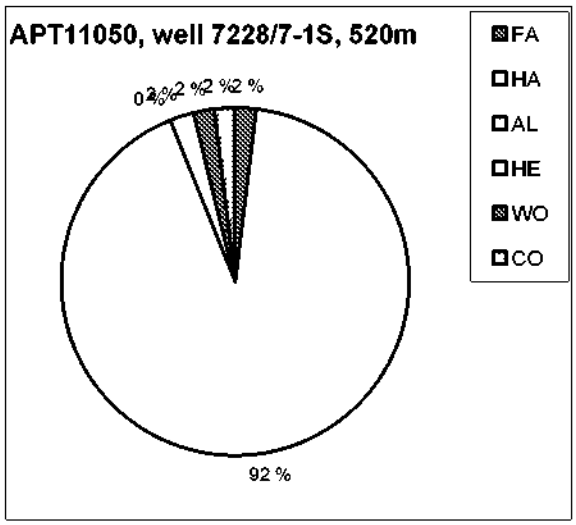
Quality rating	
Abundance of vitrinite	-
Identification of vitrinite	0
Type of vitrinite	0
Particle size	-
Particle surface quality	0
Abundance of pyrite	0
Average sample quality	M

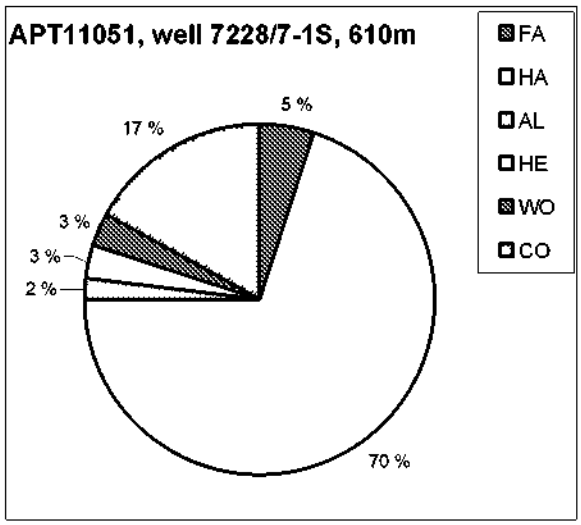
Legend to quality rating	
No effect on the readings	0
Possibly too low readings	-
Possibly too high readings	+
Good quality	G
Moderate quality	M
Poor quality	P
Not vitrinite	X
Mud additive	A

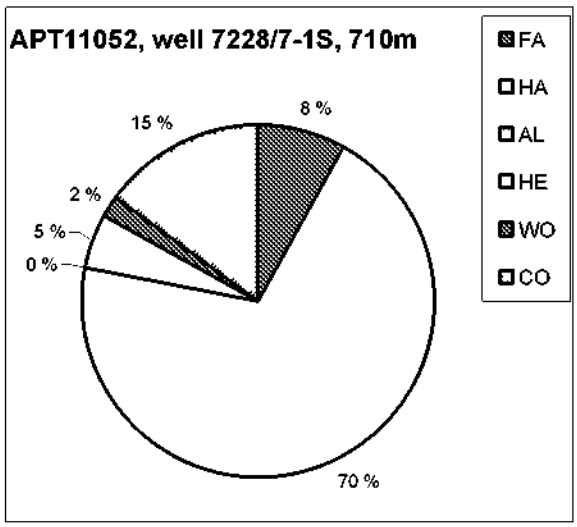
Comments

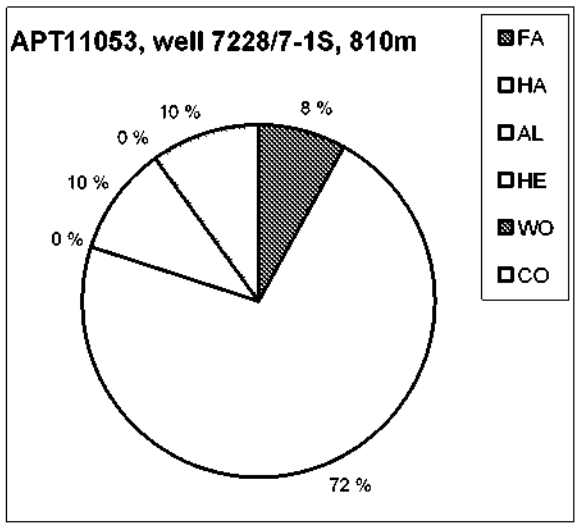
%Rm readings	Pop. 1	Pop. 2	Pop. 3	Pop. 4
Mean±std.dev.	0.55±0.05	0.72±0.03		
Individual	0.46	0.68		
measurements	0.48	0.69		
3	0.49	0.69		
4	0.51	0.72		
5	0.53	0.73		
6	0.54	0.75		
7	0.55	0.77		
8	0.56			
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

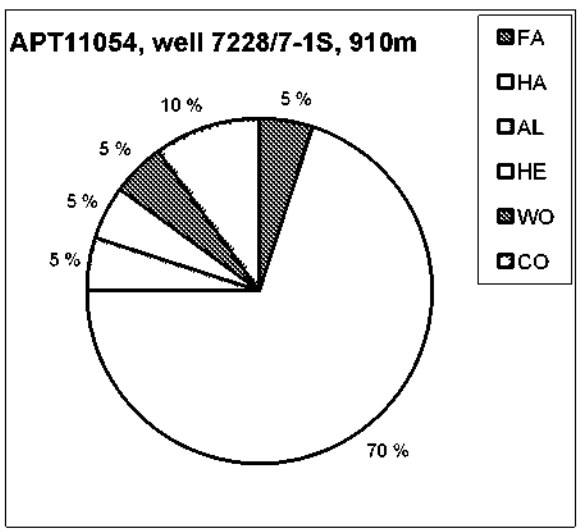
Visual Kerogen, Pie diagrams

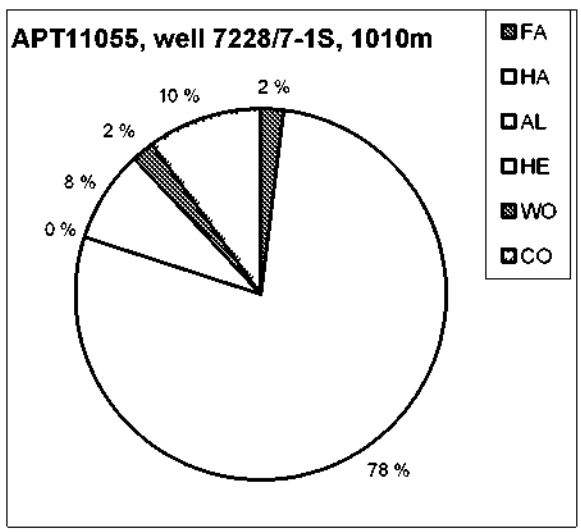


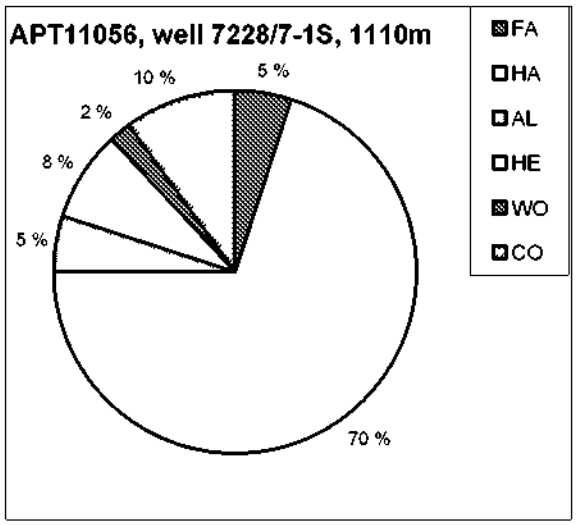


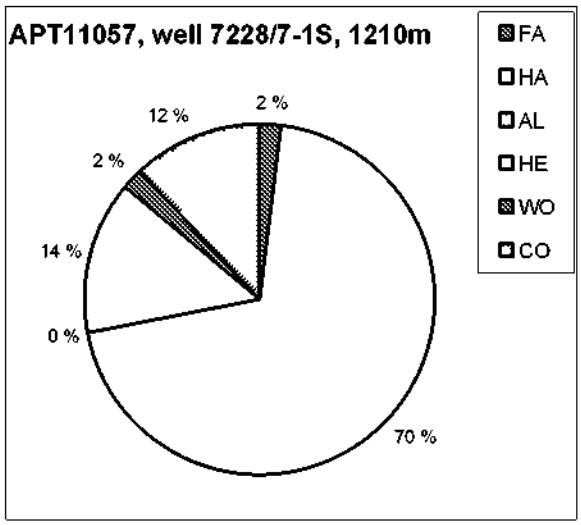


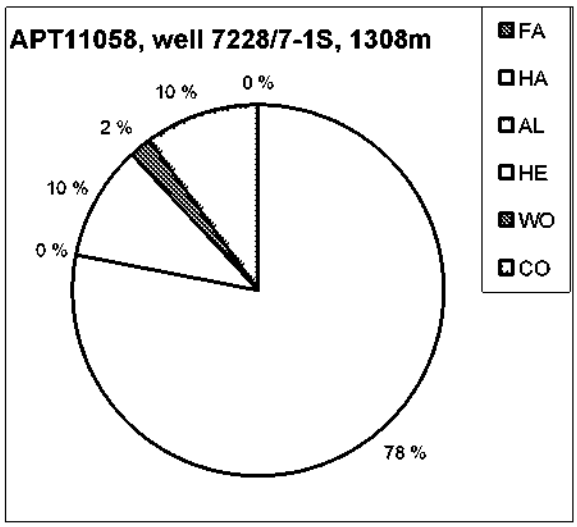


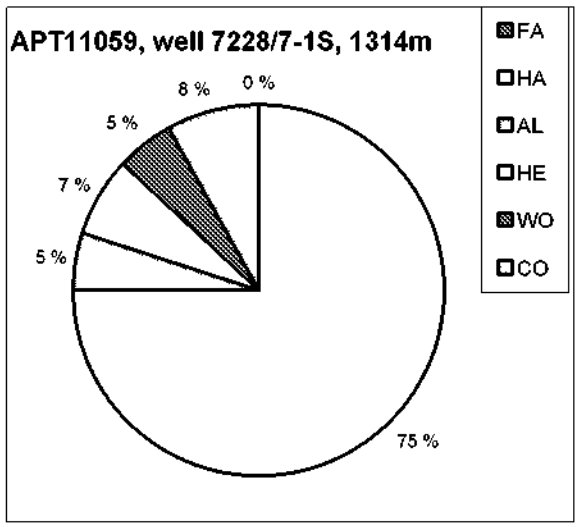


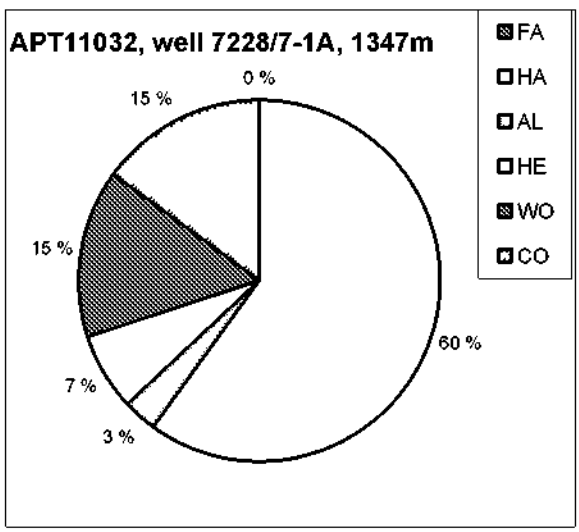


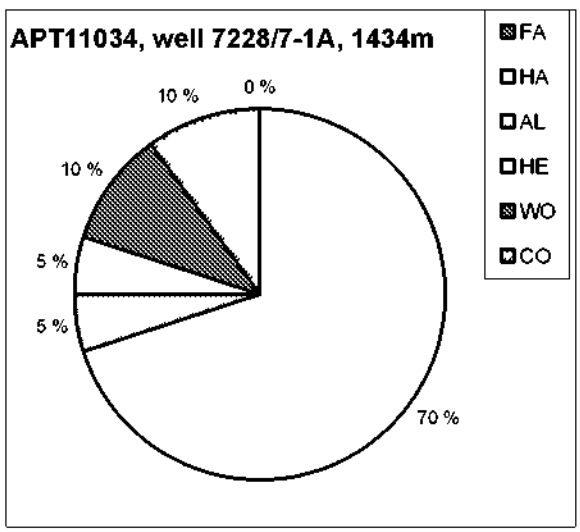

APT11056, well 7228/7-1S, 1110m
10 %
5 %
2 %
8 %
5 %
70 %
FA
HA
AL
HE
WO
CO

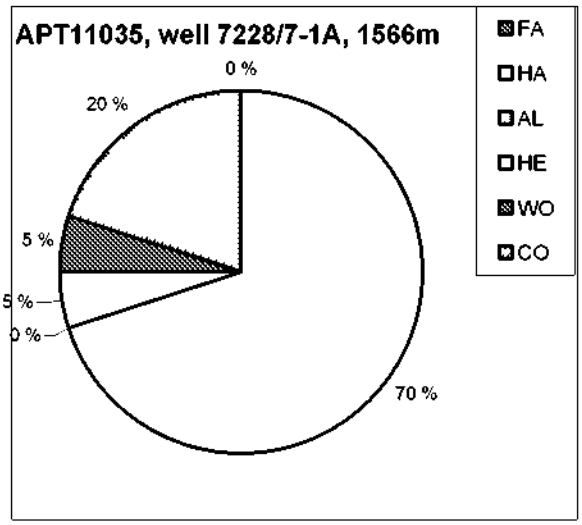

APT11057, well 7228/7-1S, 1210m
12 %
2 %
2 %
14 %
0 %
70 %
FA
HA
AL
HE
WO
CO

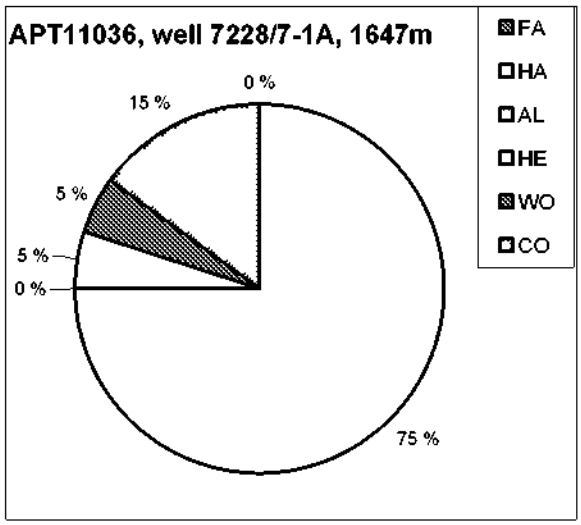

APT11058, well 7228/7-1S, 1308m
10 %
0 %
2 %
10 %
0 %
78 %
FA
HA
AL
HE
WO
CO

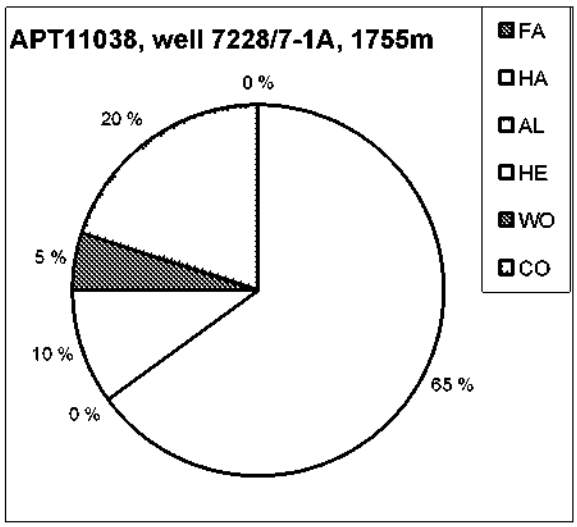

APT11059, well 7228/7-1S, 1314m
8 %
0 %
5 %
7 %
5 %
75 %
FA
HA
AL
HE
WO
CO

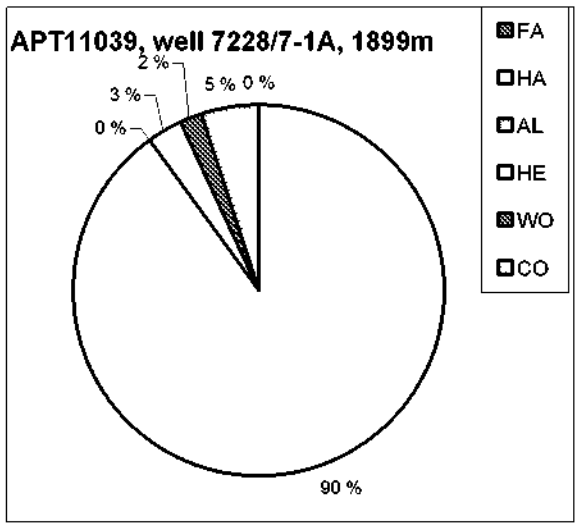

APT11032, well 7228/7-1A, 1347m
0 %
15 %
15 %
60 %
7 %
3 %
FA
HA
AL
HE
WO
CO

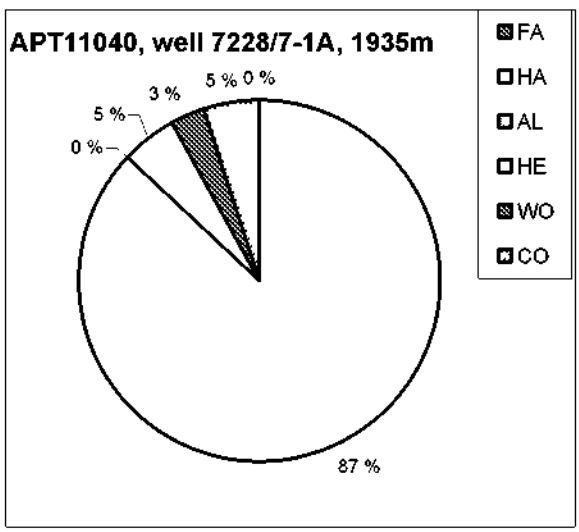

APT11034, well 7228/7-1A, 1434m
10 %
0 %
10 %
5 %
5 %
70 %
FA
HA
AL
HE
WO
CO

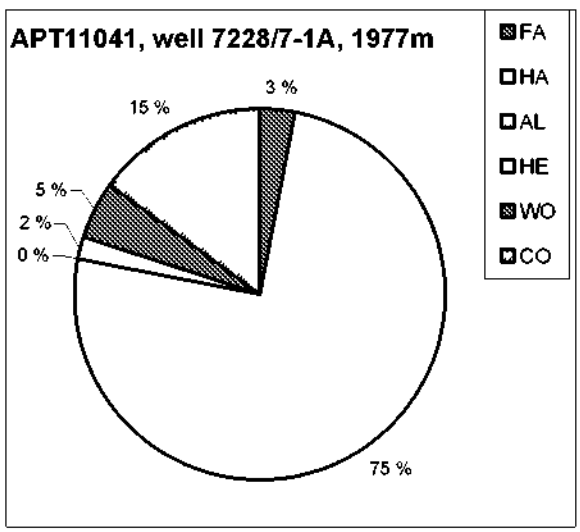

APT11035, well 7228/7-1A, 1566m
FA
HA
AL
HE
WO
CO
0 %
20 %
5 %
5 %
0 %
70 %

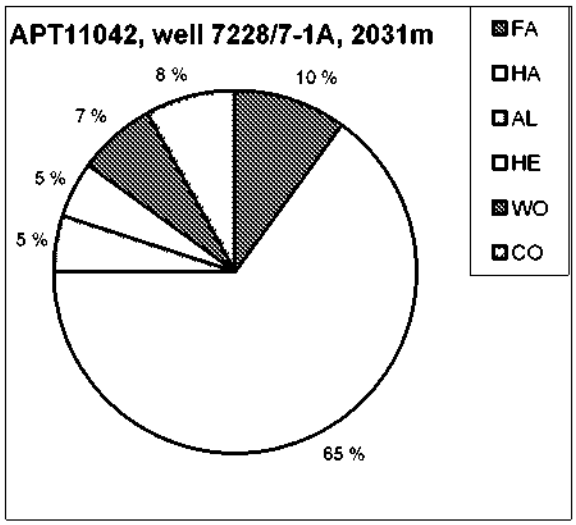

APT11036, well 7228/7-1A, 1647m
FA
HA
AL
HE
WO
CO
0 %
15 %
5 %
5 %
0 %
75 %

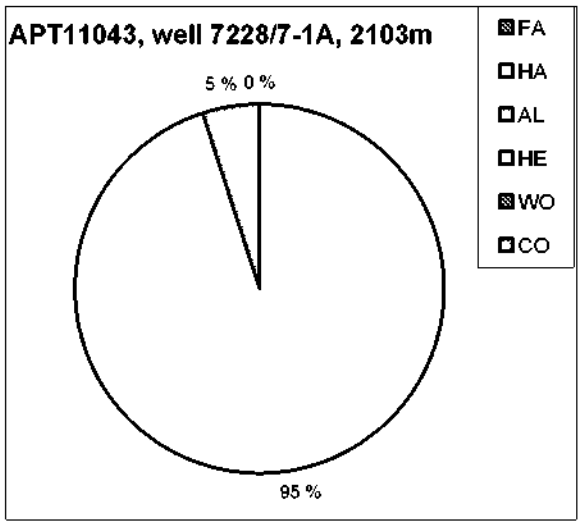

APT11038, well 7228/7-1A, 1755m
FA
HA
AL
HE
WO
CO
0 %
20 %
5 %
10 %
0 %
65 %

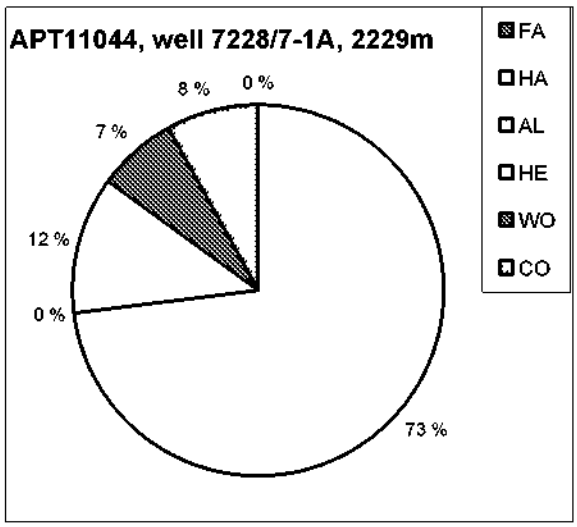

APT11039, well 7228/7-1A, 1899m
FA
HA
AL
HE
WO
CO
2 %
3 %
0 %
5 % 0 %
90 %

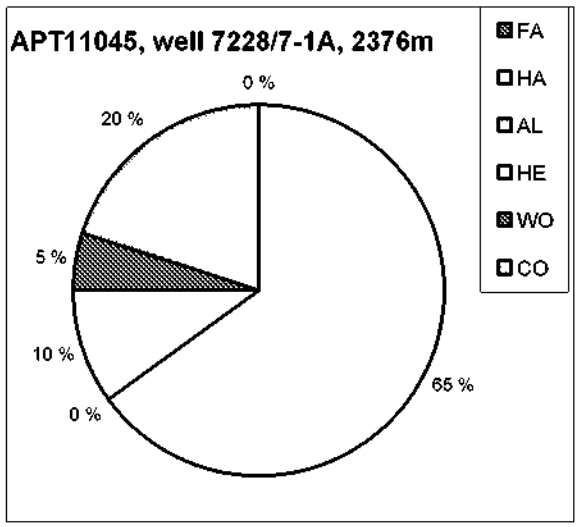

APT11040, well 7228/7-1A, 1935m
FA
HA
AL
HE
WO
CO
3 %
5 % 0 %
5 %
0 %
87 %

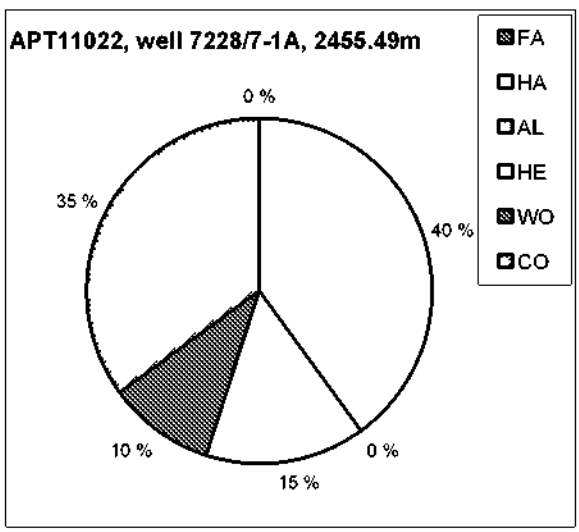

APT11041, well 7228/7-1A, 1977m
FA
HA
AL
HE
WO
CO
3 %
15 %
5 %
2 %
0 %
75 %

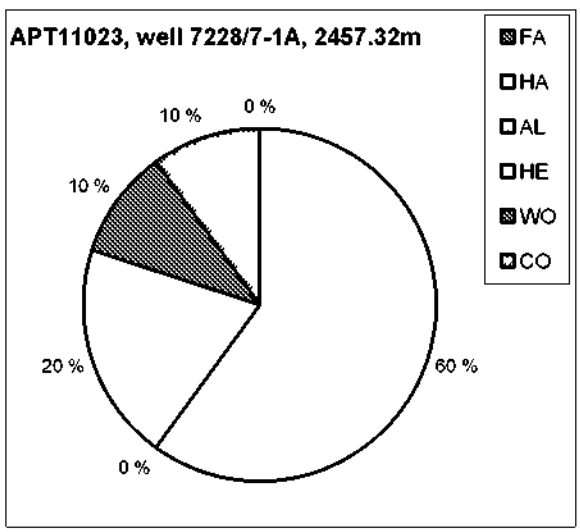

APT11042, well 7228/7-1A, 2031m
8 %
10 %
7 %
5 %
5 %
65 %
FA
HA
AL
HE
WO
CO

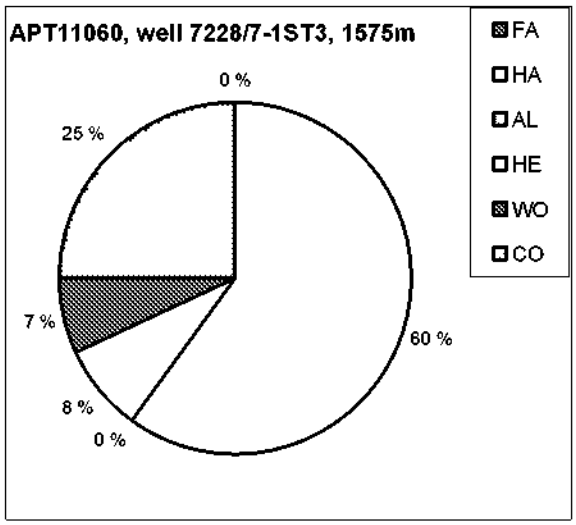

APT11043, well 7228/7-1A, 2103m
5 %
0 %
95 %
FA
HA
AL
HE
WO
CO

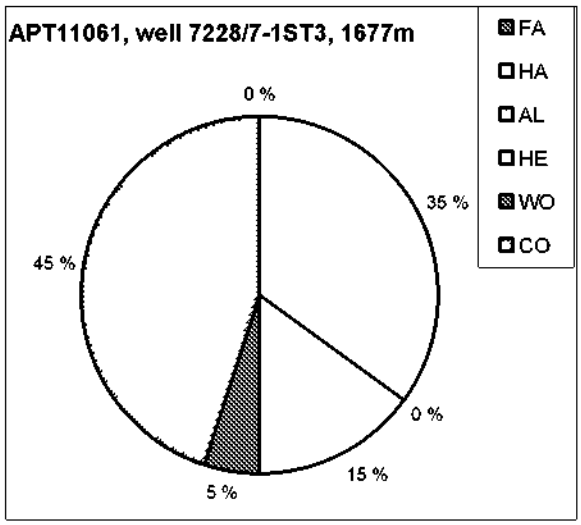

APT11044, well 7228/7-1A, 2229m
8 %
0 %
7 %
12 %
0 %
73 %
FA
HA
AL
HE
WO
CO

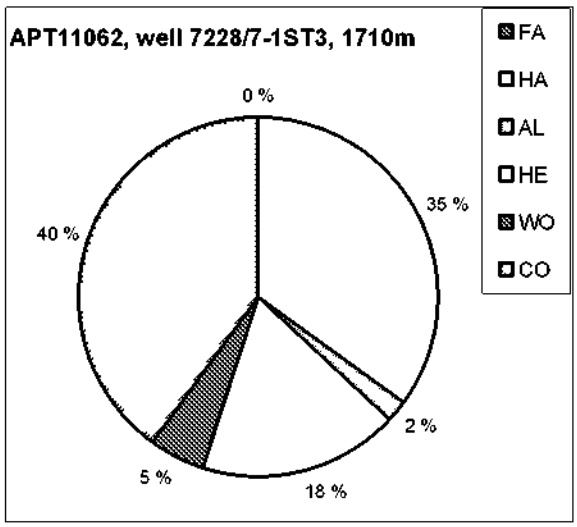

APT11045, well 7228/7-1A, 2376m
0 %
20 %
5 %
10 %
0 %
65 %
FA
HA
AL
HE
WO
CO

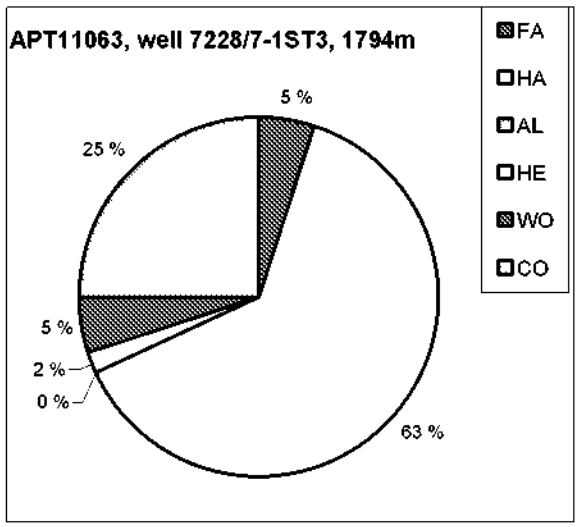

APT11022, well 7228/7-1A, 2455.49m
0 %
35 %
40 %
10 %
0 %
15 %
FA
HA
AL
HE
WO
CO

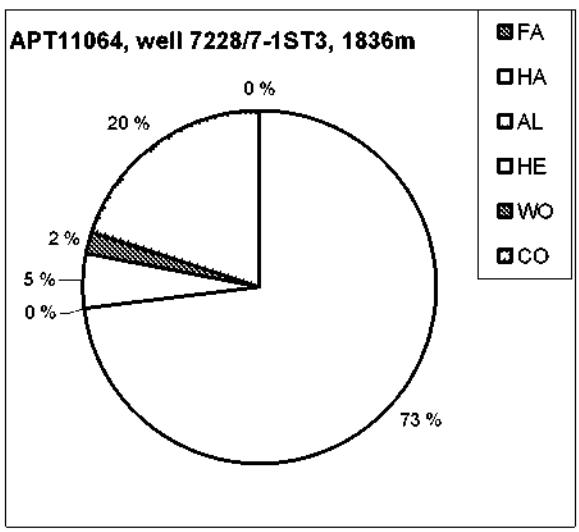

APT11023, well 7228/7-1A, 2457.32m
10 %
0 %
10 %
20 %
60 %
0 %
FA
HA
AL
HE
WO
CO

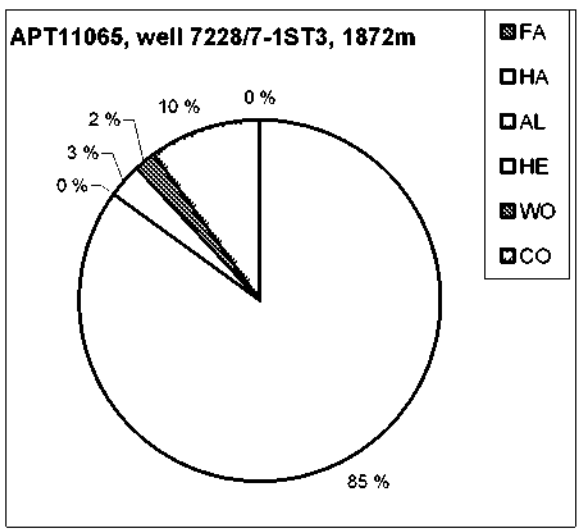

APT11060, well 7228/7-1ST3, 1575m
FA
HA
AL
HE
WO
CO
0 %
25 %
7 %
60 %
8 %
0 %

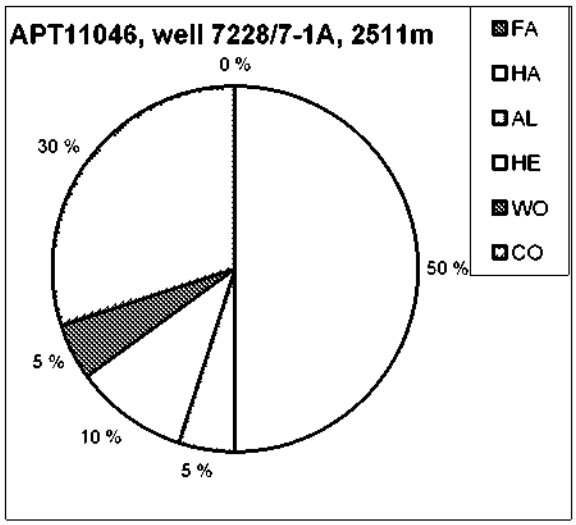

APT11061, well 7228/7-1ST3, 1677m
FA
HA
AL
HE
WO
CO
0 %
35 %
45 %
0 %
15 %
5 %

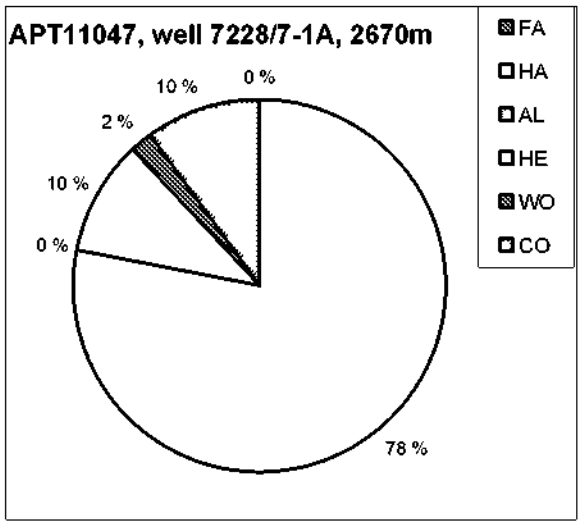

APT11062, well 7228/7-1ST3, 1710m
FA
HA
AL
HE
WO
CO
0 %
35 %
40 %
2 %
5 %
18 %

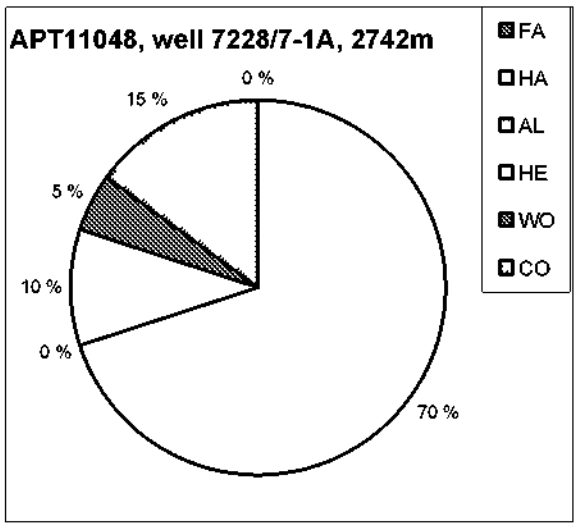

APT11063, well 7228/7-1ST3, 1794m
FA
HA
AL
HE
WO
CO
5 %
25 %
5 %
2 %
0 %
63 %

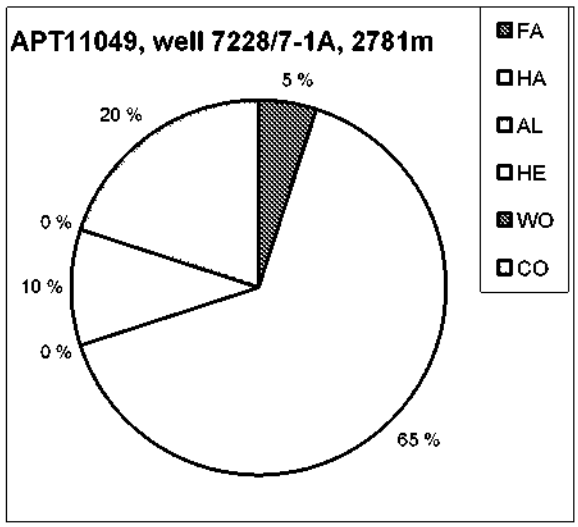

APT11064, well 7228/7-1ST3, 1836m
FA
HA
AL
HE
WO
CO
0 %
20 %
2 %
5 %
0 %
73 %

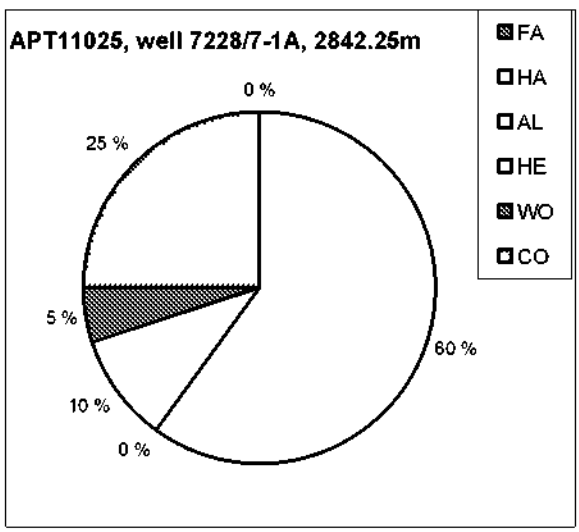

APT11065, well 7228/7-1ST3, 1872m
FA
HA
AL
HE
WO
CO
10 %
0 %
2 %
3 %
0 %
85 %

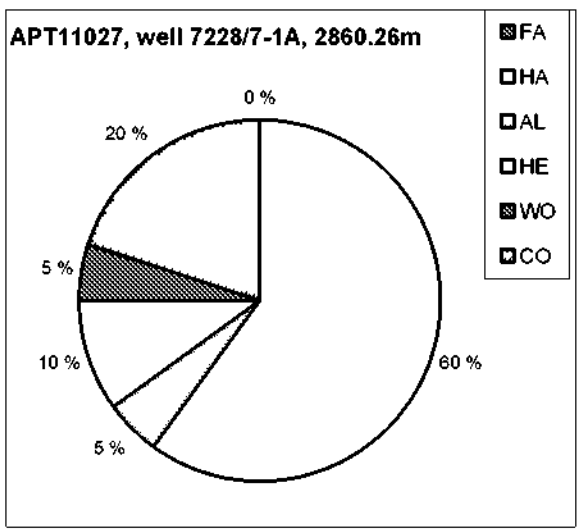

APT11046, well 7228/7-1A, 2511m
FA
HA
AL
HE
WO
CO
0 %
30 %
50 %
5 %
10 %
5 %

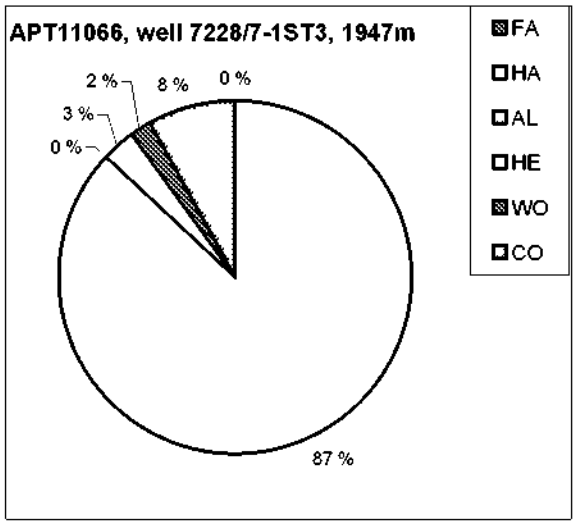

APT11047, well 7228/7-1A, 2670m
FA
HA
AL
HE
WO
CO
10 %
0 %
2 %
10 %
0 %
78 %

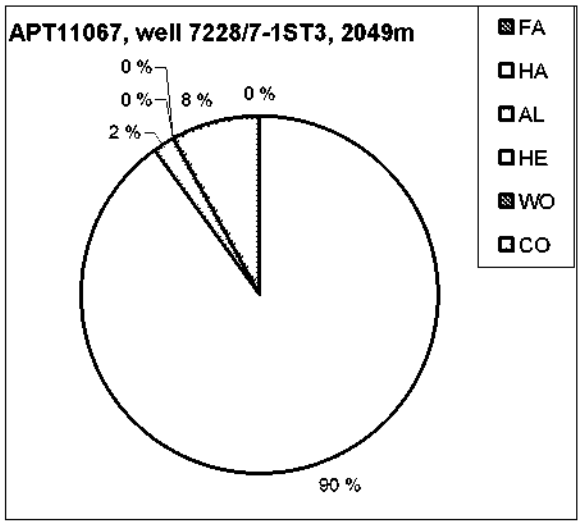

APT11048, well 7228/7-1A, 2742m
FA
HA
AL
HE
WO
CO
0 %
15 %
5 %
10 %
0 %
70 %

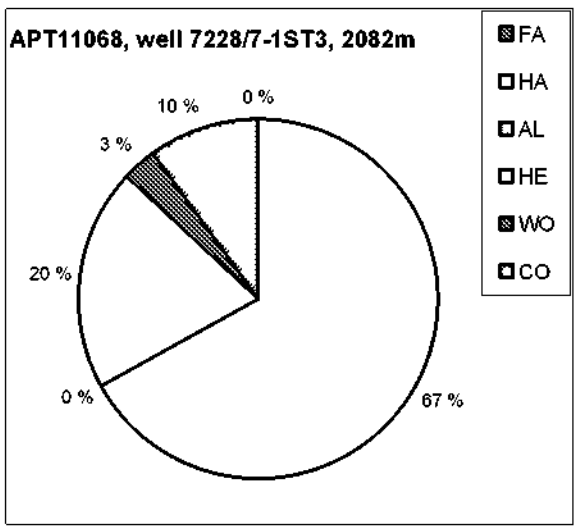

APT11049, well 7228/7-1A, 2781m
FA
HA
AL
HE
WO
CO
5 %
20 %
0 %
10 %
0 %
65 %


APT11025, well 7228/7-1A, 2842.25m
FA
HA
AL
HE
WO
CO
0 %
25 %
5 %
10 %
0 %
60 %

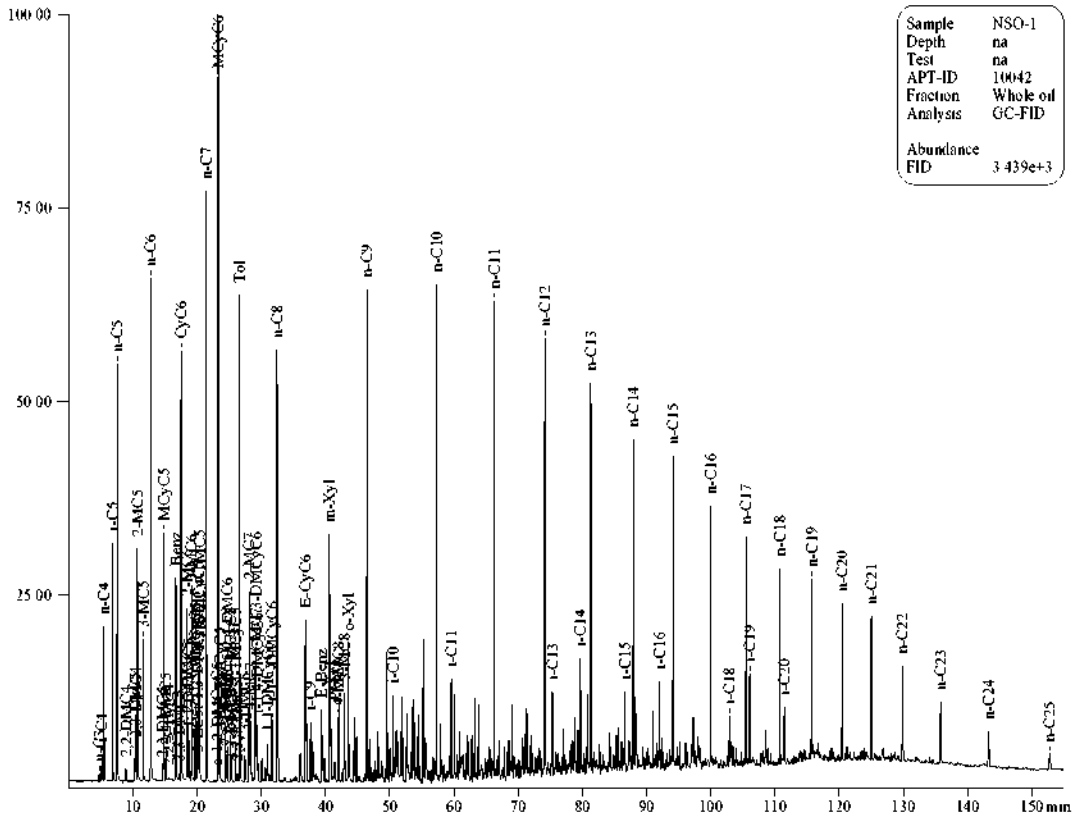

APT11027, well 7228/7-1A, 2860.26m
FA
HA
AL
HE
WO
CO
0 %
20 %
5 %
10 %
5 %
60 %

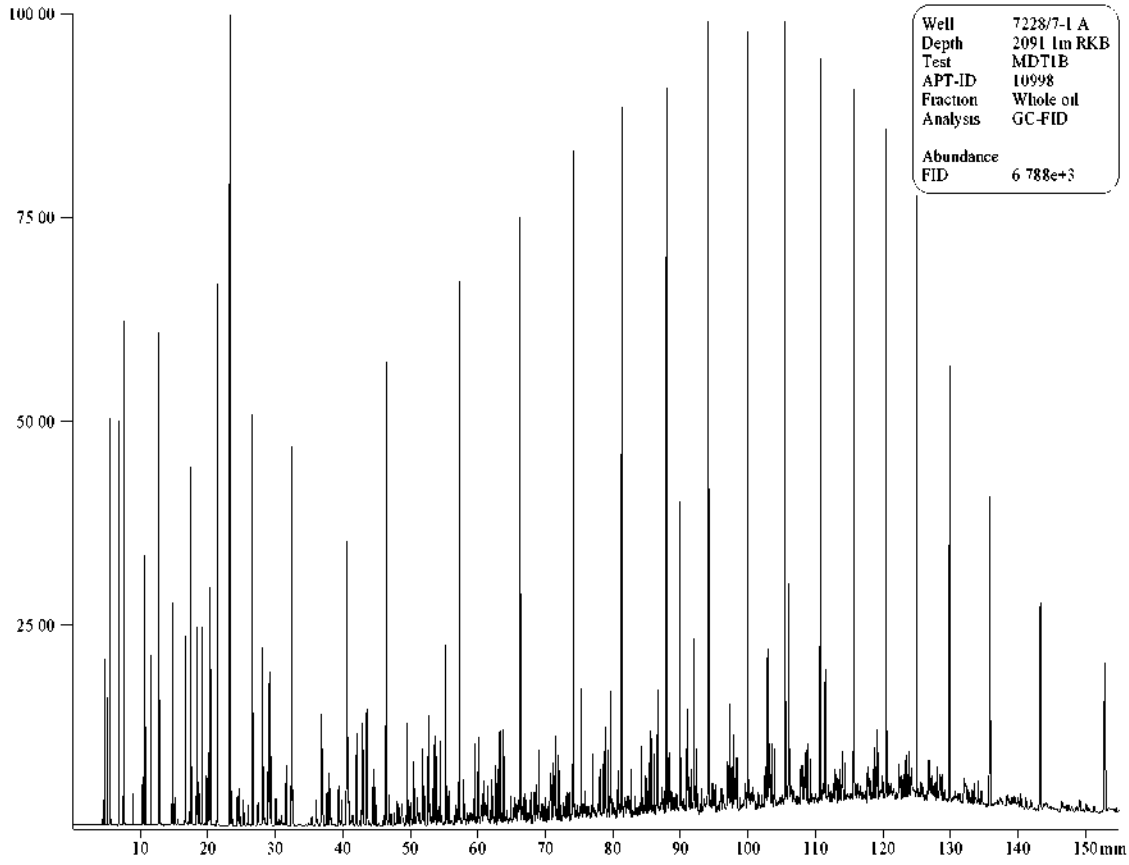

APT11066, well 7228/7-1ST3, 1947m
2 %
8 %
0 %
3 %
0 %
87 %
FA
HA
AL
HE
WO
CO

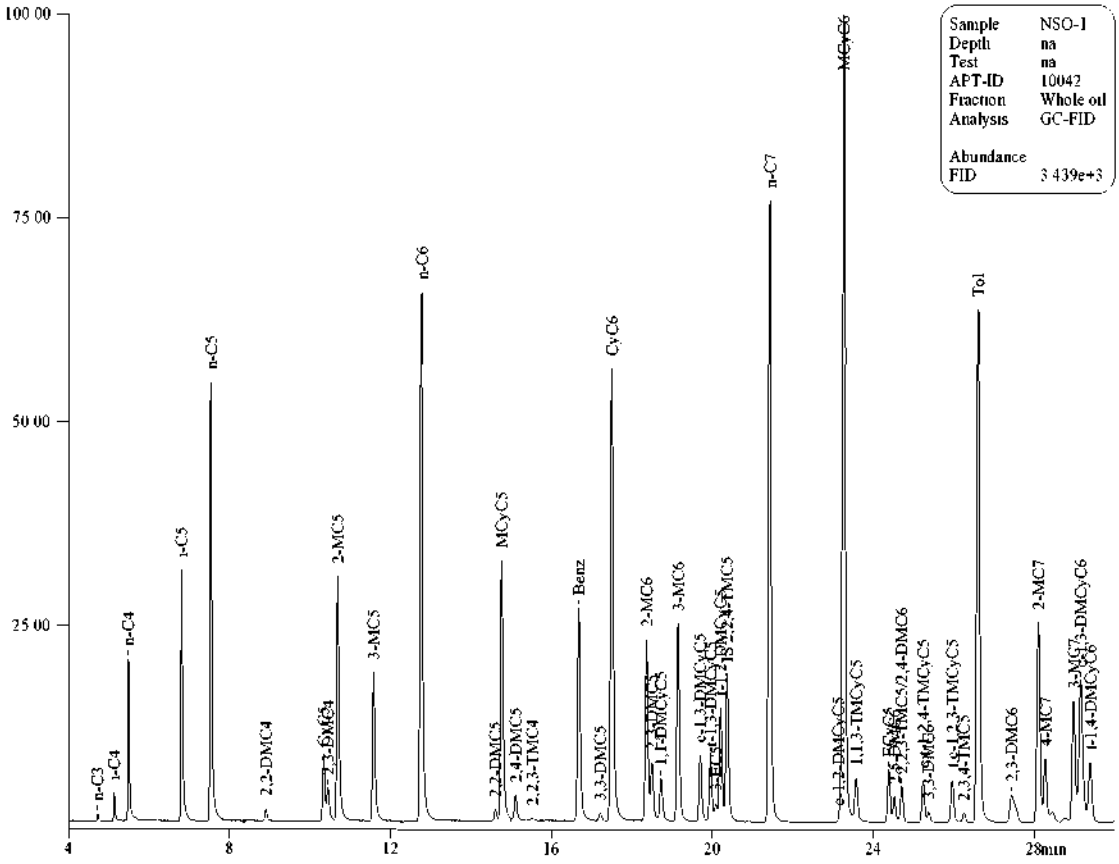

APT11067, well 7228/7-1ST3, 2049m
0 %
0 %
8 %
0 %
2 %
90 %
FA
HA
AL
HE
WO
CO

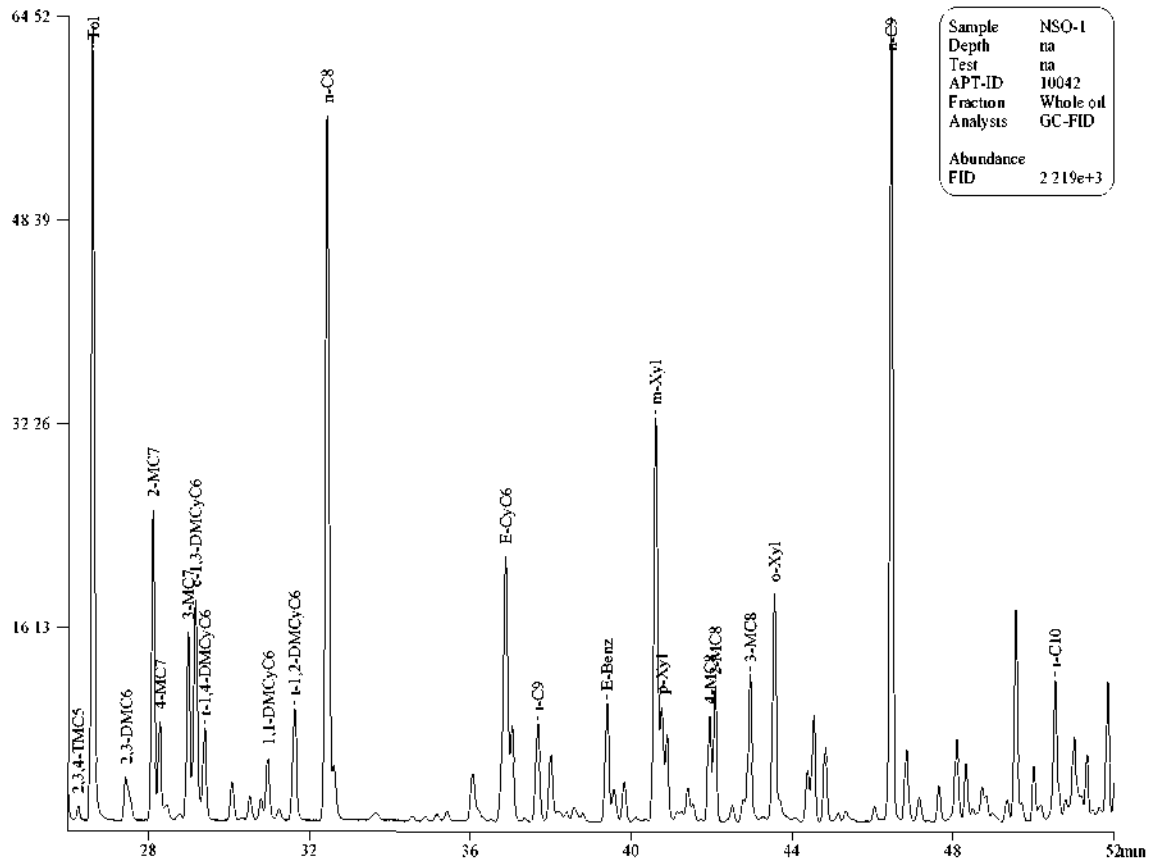

APT11068, well 7228/7-1ST3, 2082m
10 %
0 %
3 %
20 %
0 %
67 %
FA
HA
AL
HE
WO
CO

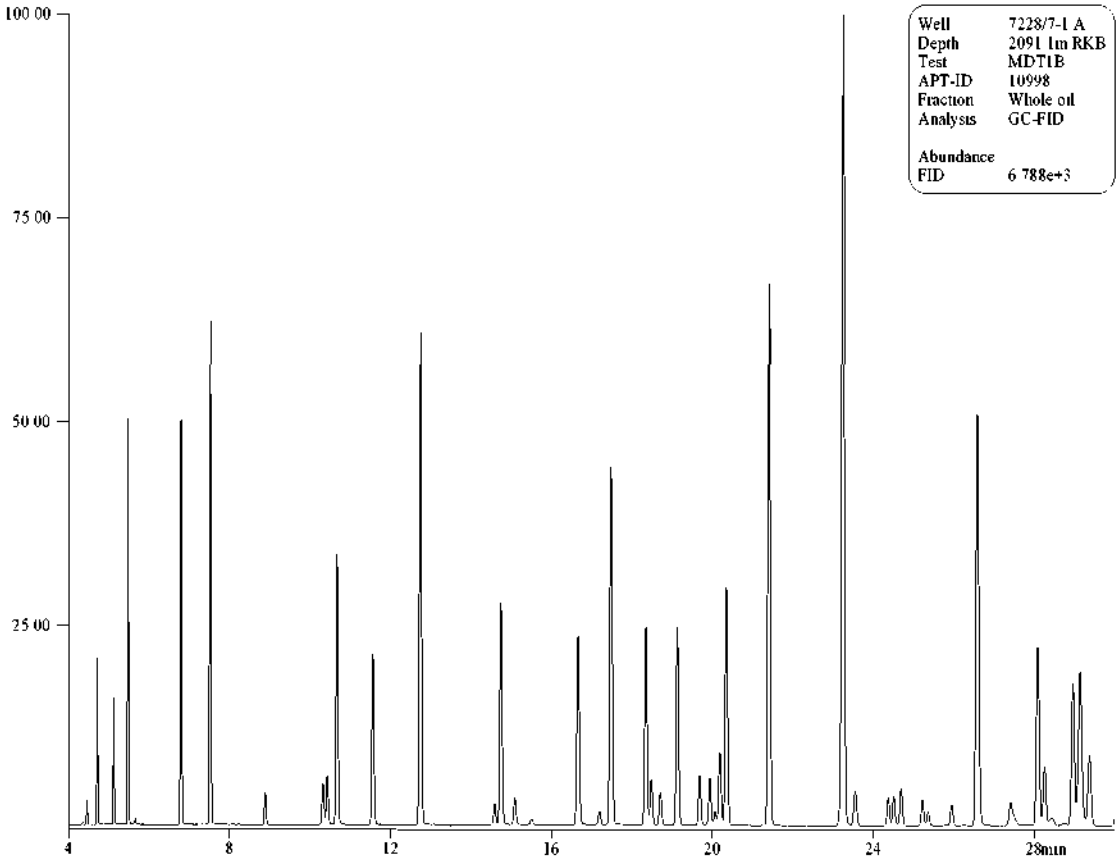
GC chromatograms of whole oil

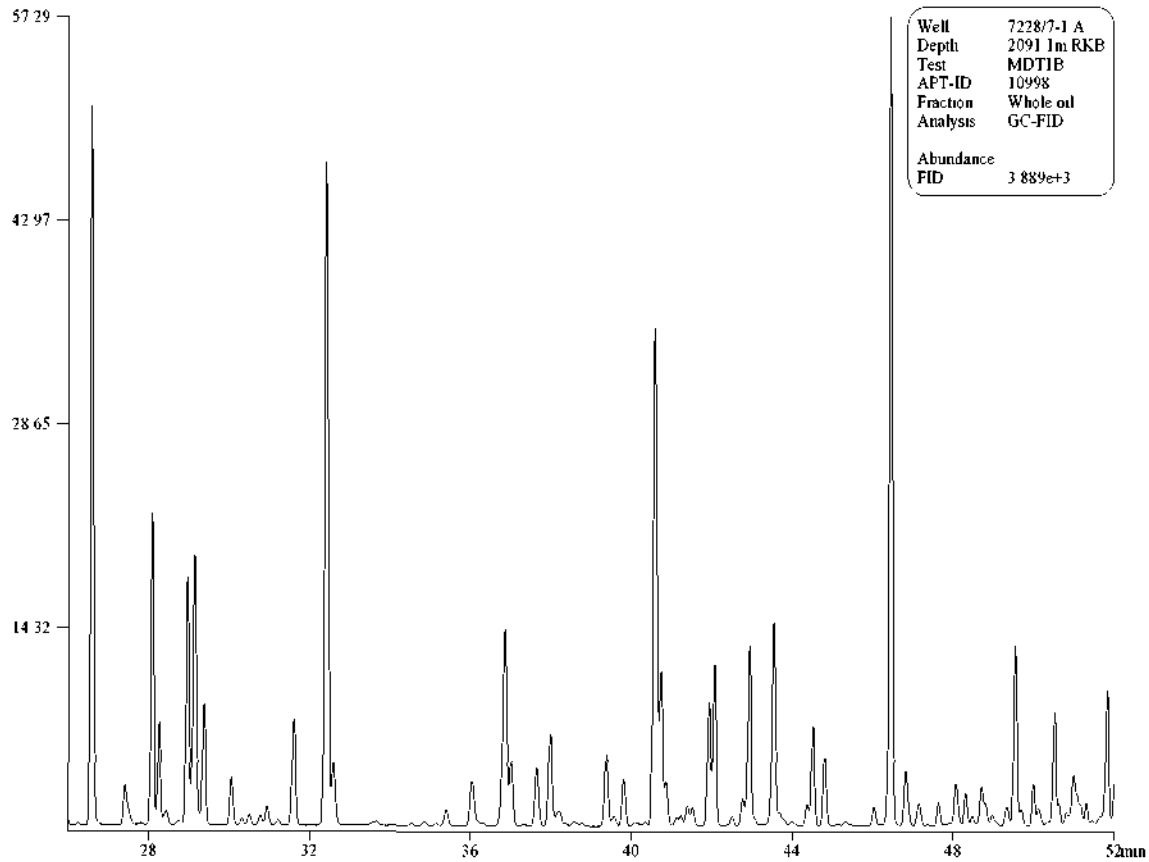

Sample NSO-1
Depth na
Test na
APT-ID 10042
Fraction Whole oil
Analysis GC-FID
Abundance
FID 3 439e+3
100 00
75 00
50 00
25 00
10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 mn


Well 7228/7-1 A
Depth 2091 1m RKB
Test MDT1B
APT-ID 10998
Fraction Whole oil
Analysis GC-FID
Abundance
FID 6 788e+3
100 00
75 00
50 00
25 00
10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 mn

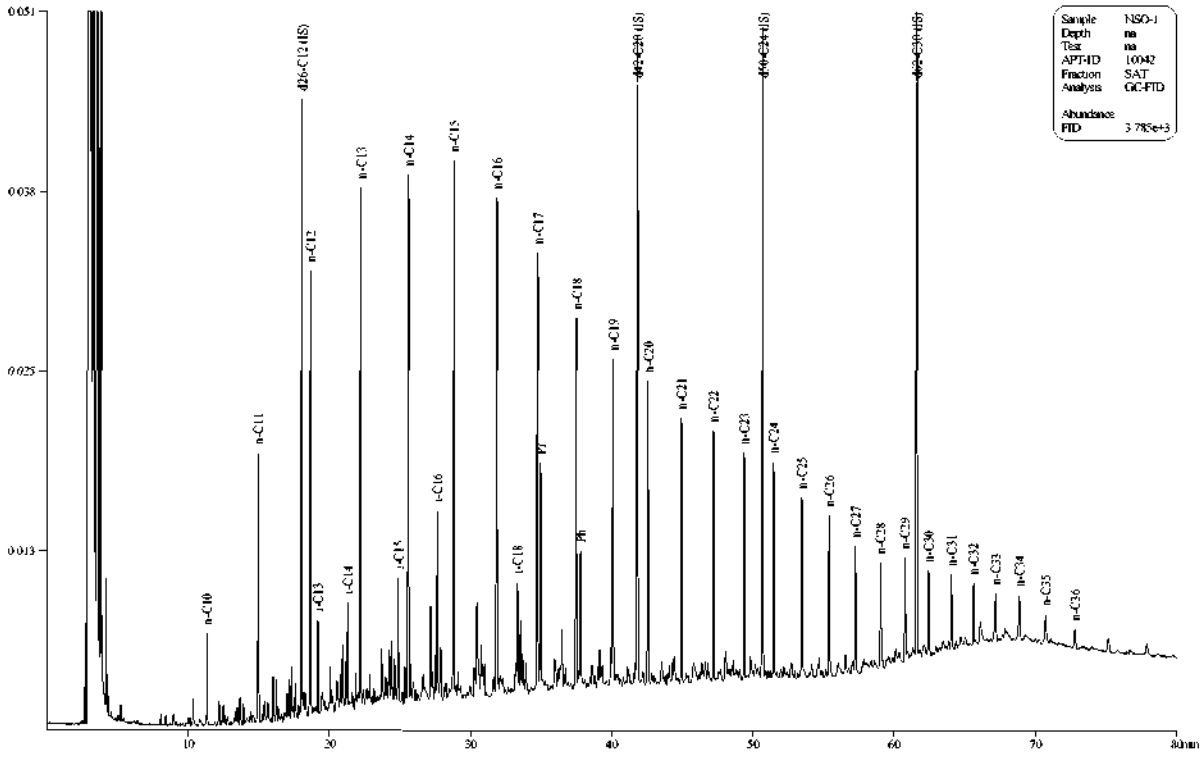

Sample NSO-1
Depth na
Test na
APT-ID 10042
Fraction Whole oil
Analysis GC-FID
Abundance
FID 3 439e+3
100 00
75 00
50 00
25 00
4
8
12
16
20
24
28min
n-C3
i-C4
n-C4
i-C5
n-C5
2,2-DMC4
2,3-DMC4
2-MC5
3-MC5
n-C6
2,2-DMC5
MCyC5
2,4-DMC5
2,2,3-TMC4
Benz
3,3-DMC5
CyC6
2-MC6
1,1-DMCyC5
3-MC6
c-1,3-DMCyC5
t-1,3-DMCyC5
t-1,2-DMCyC5
2,3,4-TMC5
n-C7
c-1,2-DMCyC5
1,1,3-TMCyC5
MCyC6
2,2,4-TMC5
2,4,4-TMC5
2,4-DMC6
2,2,4-TMCyC5
3,3-DMC6
t-1,2,3-TMCyC5
2,3,4-TMC5
Tol
2,3-DMC6
2-MC7
4-MC7
3-MC7
3-EtC5
t-1,4-DMCyC6

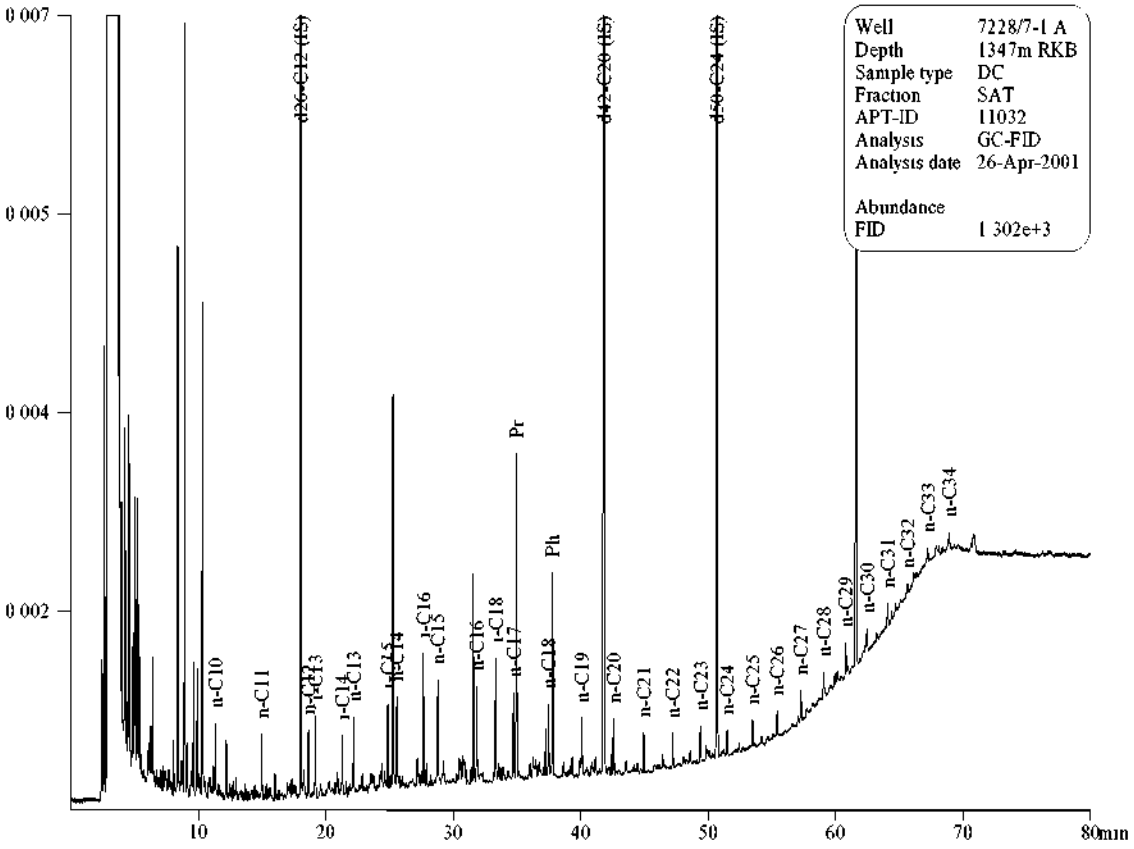

Sample NSO-1
Depth na
Test na
APT-ID 10042
Fraction Whole oil
Analysis GC-FID
Abundance
FID 2 219e+3
64 52
48 39
32 26
16 13
28
32
36
40
44
48
52min
2,3,4-TMC5
Tol
2,3-DMC6
2-MC7
4-MC7
3-MC7
t-1,4-DMCyC6
c-1,3-DMCyC6
1,1-DMCyC6
t-1,2-DMCyC6
n-C8
E-CyC6
i-C9
E-Benz
m-Xyl
p-Xyl
4-MC8
3-MC8
o-Xyl
n-C9
i-C10

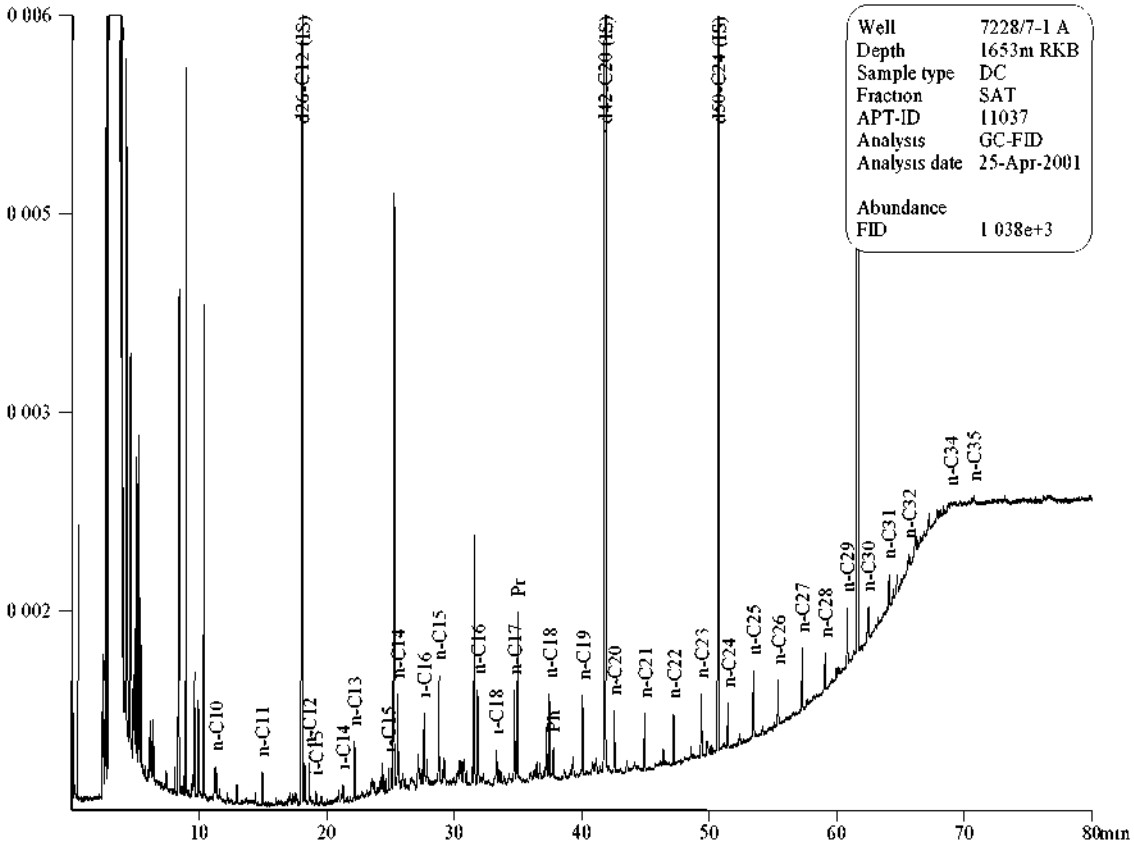

100 00
75 00
50 00
25 00
4
8
12
16
20
24
28min
Well 7228/7-1 A
Depth 2091 1m RKB
Test MDT1B
APT-ID 10998
Fraction Whole oil
Analysis GC-FID
Abundance
FID 6 788e+3

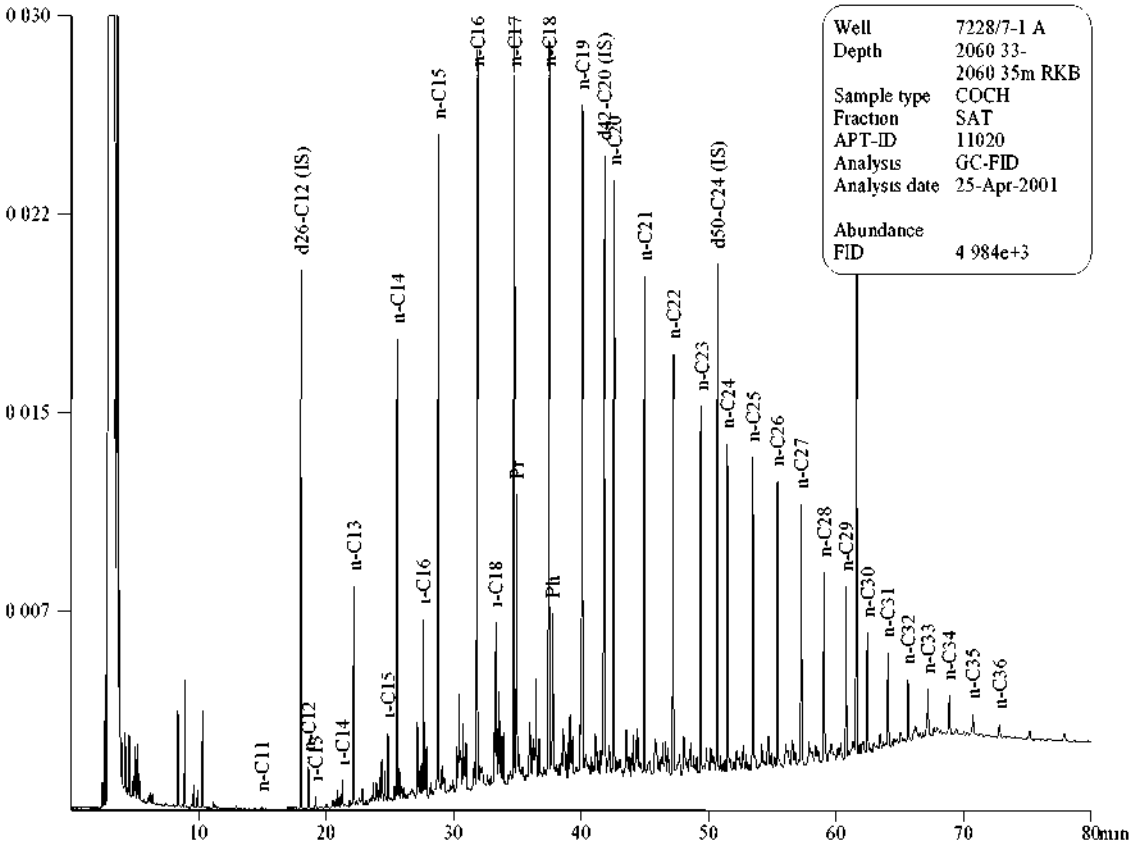

57 29
42 97
28 65
14 32
28
32
36
40
44
48
52min
Well 7228/7-1 A
Depth 2091 1m RKB
Test MDT1B
APT-ID 10998
Fraction Whole oil
Analysis GC-FID
Abundance
FID 3 889e+3

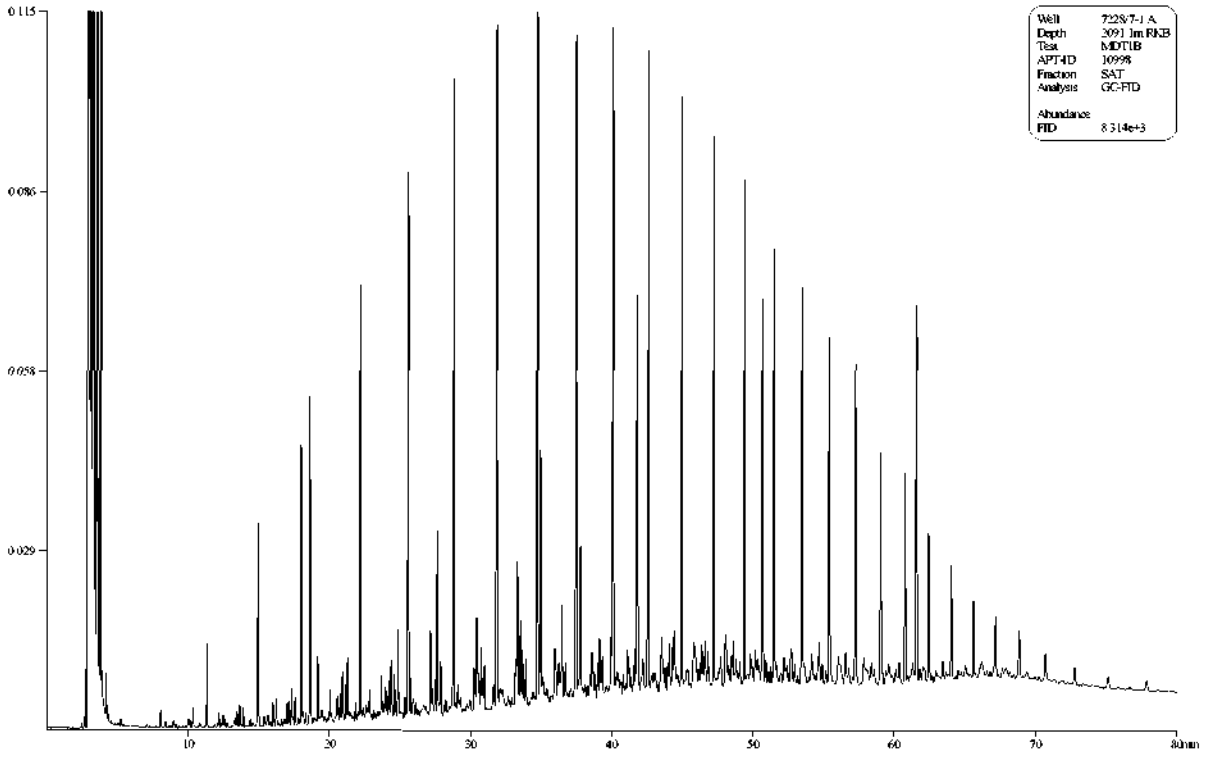
GC chromatograms of Saturated fraction

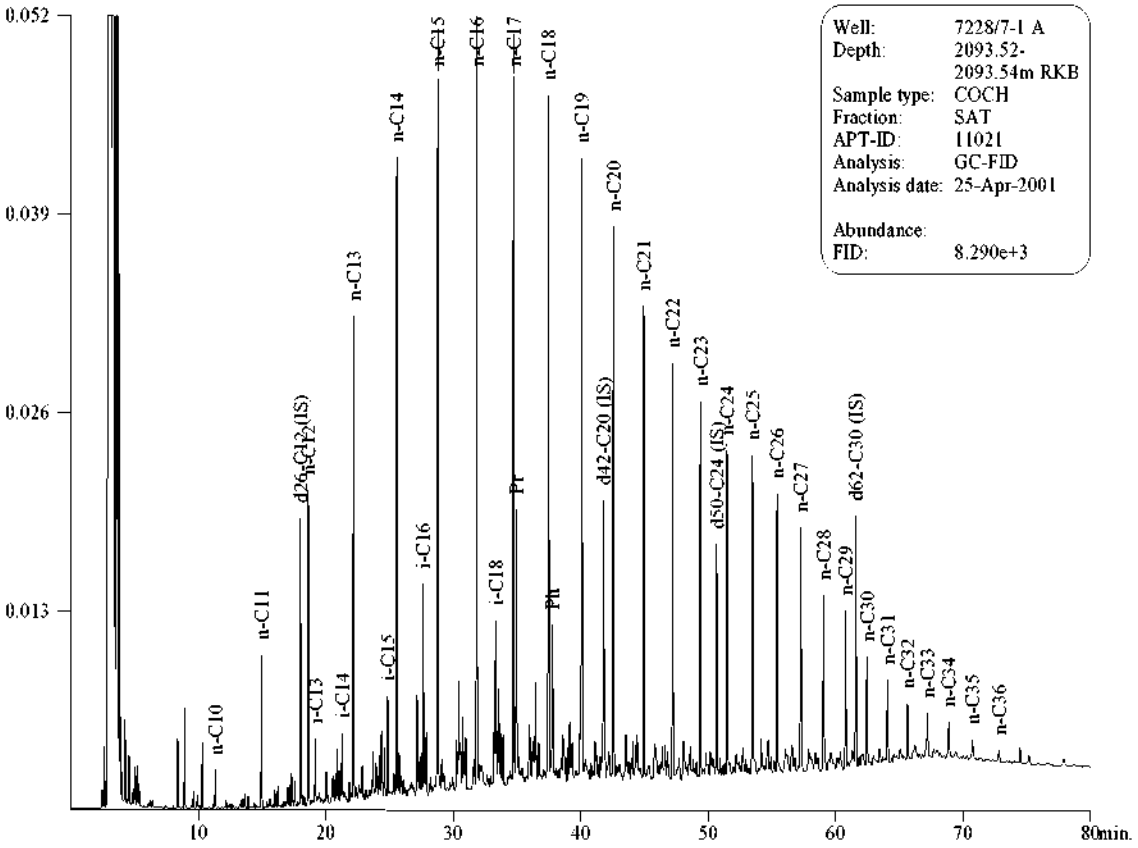

Sample NSO-1
Depth na
Test na
APT-ID 10042
Fraction SAT
Analysis GC-FID
Abundance
FID 3.785e+3
n-C10
n-C11
n-C12
n-C13
n-C14
n-C15
n-C16
n-C17
n-C18
n-C19
n-C20
n-C21
n-C22
n-C23
n-C24
n-C25
n-C26
n-C27
n-C28
n-C29
n-C30
n-C31
n-C32
n-C33
n-C34
n-C35
n-C36
Pr
Ph
10
20
30
40
50
60
70
80mn

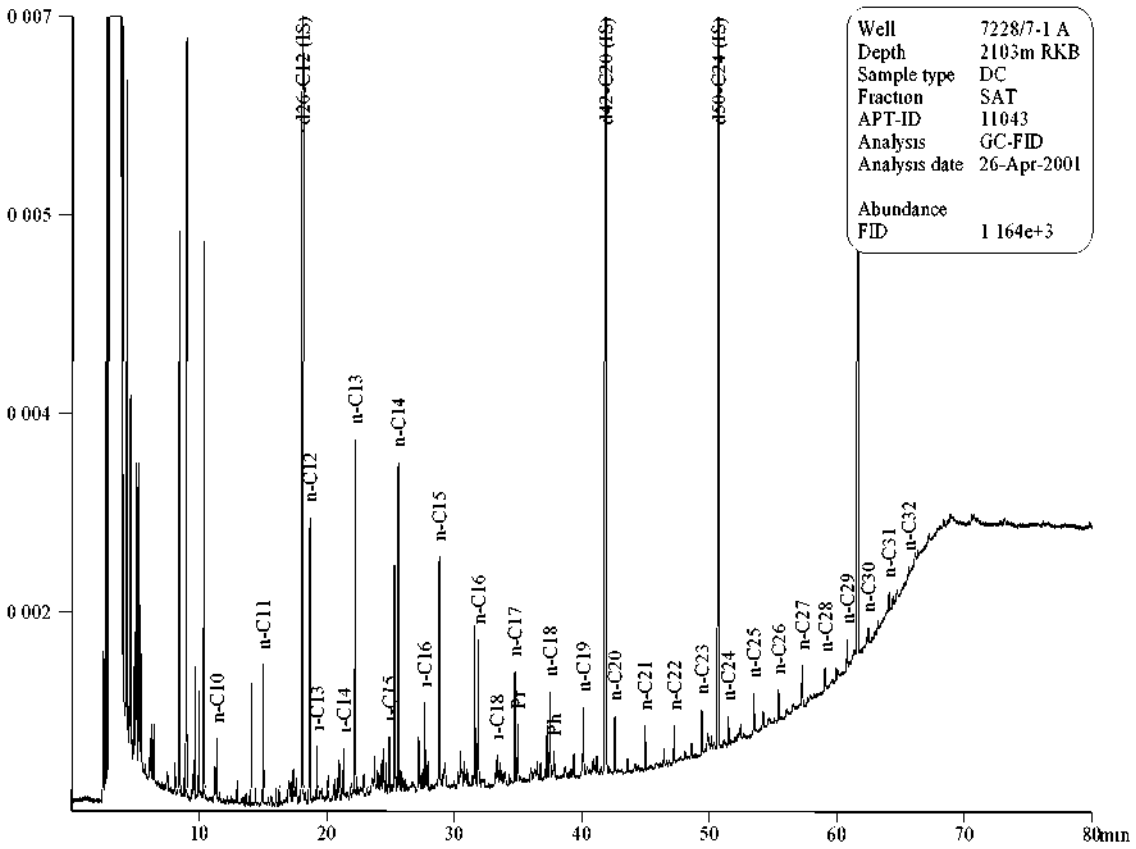

Well 7228/7-1 A
Depth 1347m RKB
Sample type DC
Fraction SAT
APT-ID 11032
Analysis GC-FID
Analysis date 26-Apr-2001
Abundance
FID 1.302e+3
0.007
0.005
0.004
0.002
n-C10
n-C11
n-C12
n-C13
i-C14
n-C14
i-C15
n-C15
i-C16
n-C16
i-C18
n-C17
Pr
n-C18
Ph
n-C19
n-C20
n-C21
n-C22
n-C23
n-C24
n-C25
n-C26
n-C27
n-C28
n-C29
n-C30
n-C31
n-C32
n-C33
n-C34
10
20
30
40
50
60
70
80mn

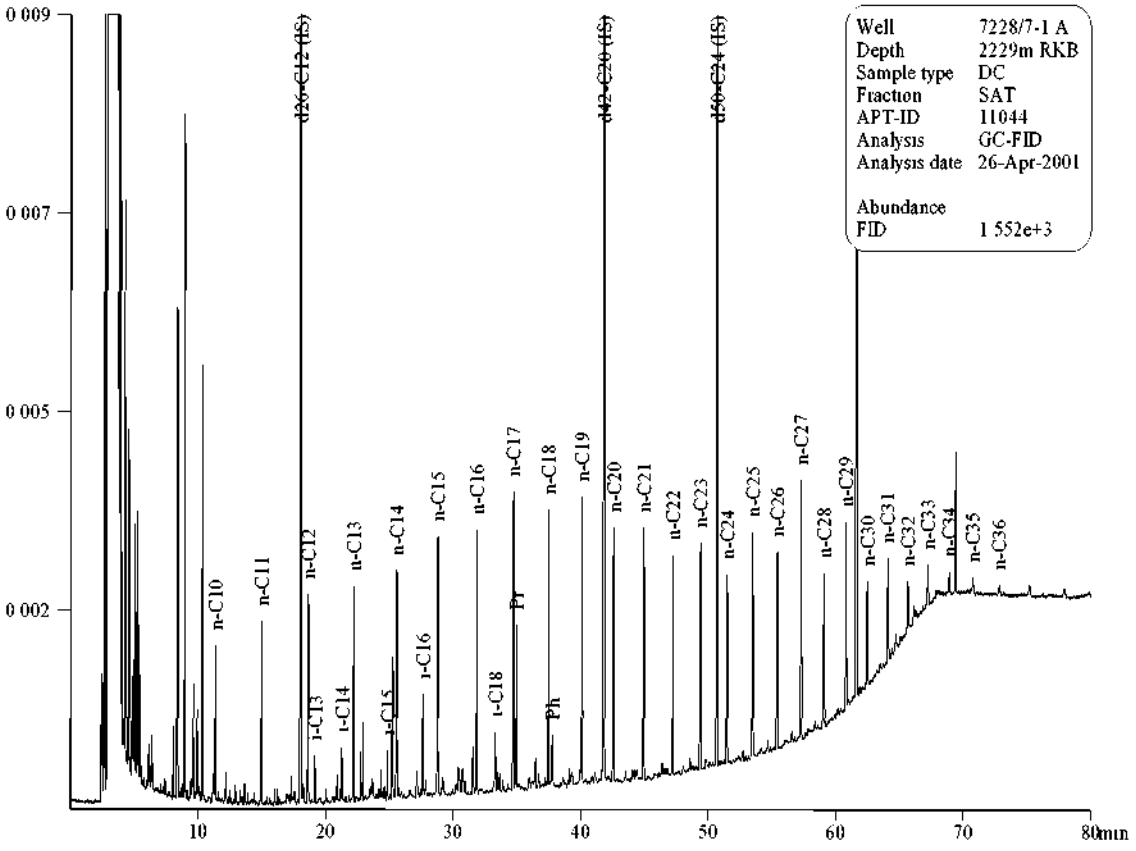

Well 7228/7-1 A
Depth 1653m RKB
Sample type DC
Fraction SAT
APT-ID 11037
Analysis GC-FID
Analysis date 25-Apr-2001
Abundance
FID 1 038e+3
0 006
0 005
0 003
0 002
n-C10
n-C11
n-C12
i-C15
i-C14
n-C13
i-C15
n-C14
i-C16
n-C15
n-C16
i-C18
n-C17
Pr
n-C18
Ph
n-C19
n-C20
n-C21
n-C22
n-C23
n-C24
n-C25
n-C26
n-C27
n-C28
n-C29
n-C30
n-C31
n-C32
n-C34
n-C35
10
20
30
40
50
60
70
80mn

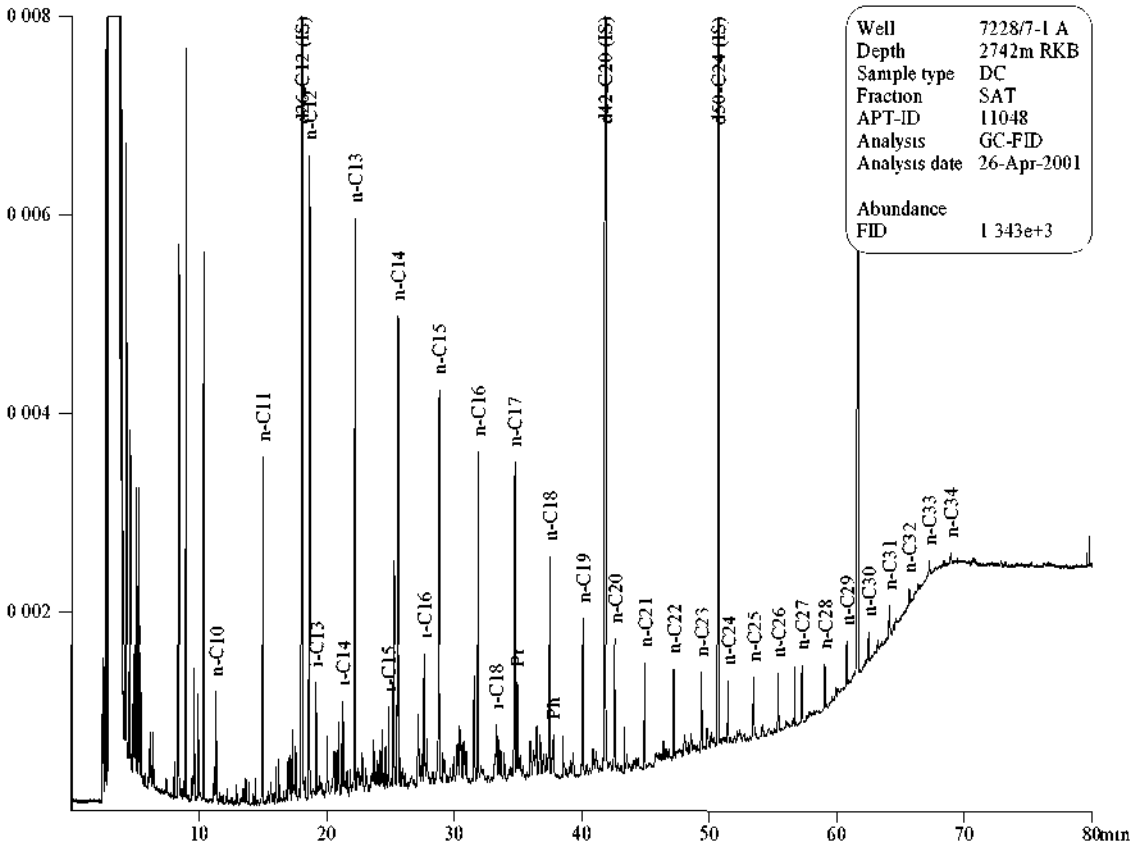

Well 7228/7-1 A
Depth 2060 33-
2060 35m RKB
Sample type COCH
Fraction SAT
APT-ID 11020
Analysis GC-FID
Analysis date 25-Apr-2001
Abundance
FID 4 984e+3
0 030
0 022
0 015
0 007
d26-C12 (IS)
n-C11
i-C15
n-C12
i-C14
n-C13
i-C15
n-C14
i-C16
n-C15
n-C16
i-C18
n-C17
Pr
n-C18
Ph
n-C19
n-C20
n-C21
n-C22
n-C23
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
d50-C24 (IS)
10
20
30
40
50
60
70
80mn

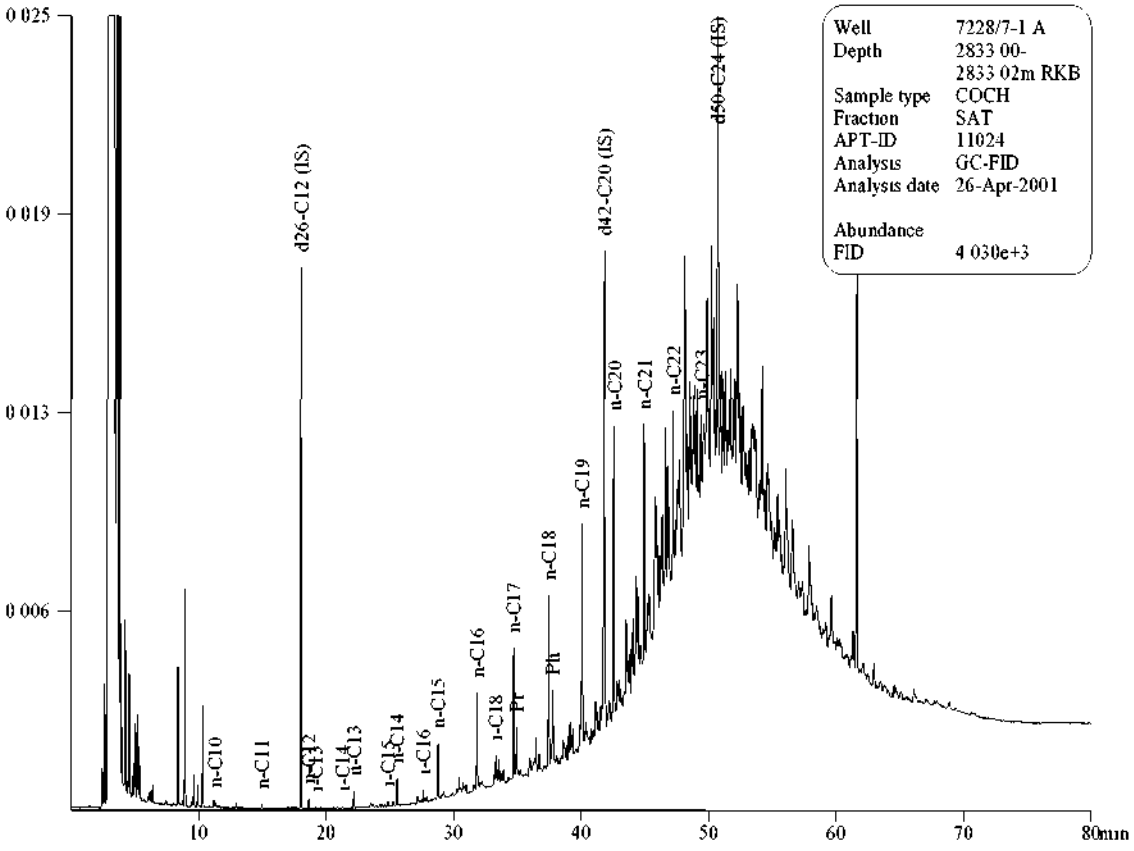

Well 7228/7-1 A
Depth 2091.1m RKB
Test MDT1B
APT-ID 10998
Fraction SAT
Analysis GC-FID
Abundance
FID 8.314e+3
0.115
0.086
0.058
0.029
10
20
30
40
50
60
70
80min

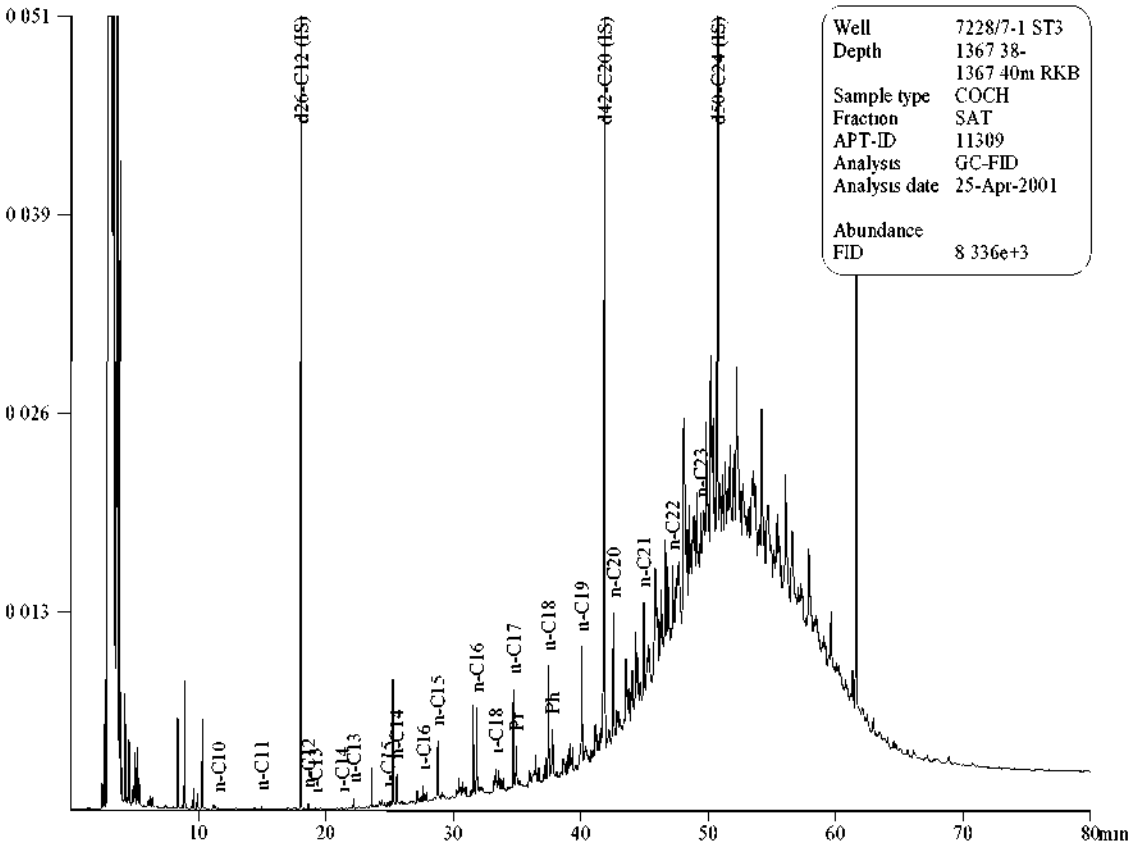

Well: 7228/7-1 A
Depth: 2093.52-2093.54m RKB
Sample type: COCH
Fraction: SAT
APT-ID: 11021
Analysis: GC-FID
Analysis date: 25-Apr-2001
Abundance
FID: 8.290e+3
0.052
0.039
0.026
0.013
n-C10
n-C11
i-C13
n-C13
d26-C12 (IS)
i-C14
n-C14
i-C15
n-C15
i-C16
n-C16
i-C18
n-C17
Pr
Ph
n-C18
n-C19
d42-C20 (IS)
n-C20
n-C21
n-C22
n-C23
d50-C24 (IS)
n-C24
n-C25
n-C26
n-C27
n-C28
n-C29
d62-C30 (IS)
n-C30
n-C31
n-C32
n-C33
n-C34
n-C35
n-C36
10
20
30
40
50
60
70
80min.

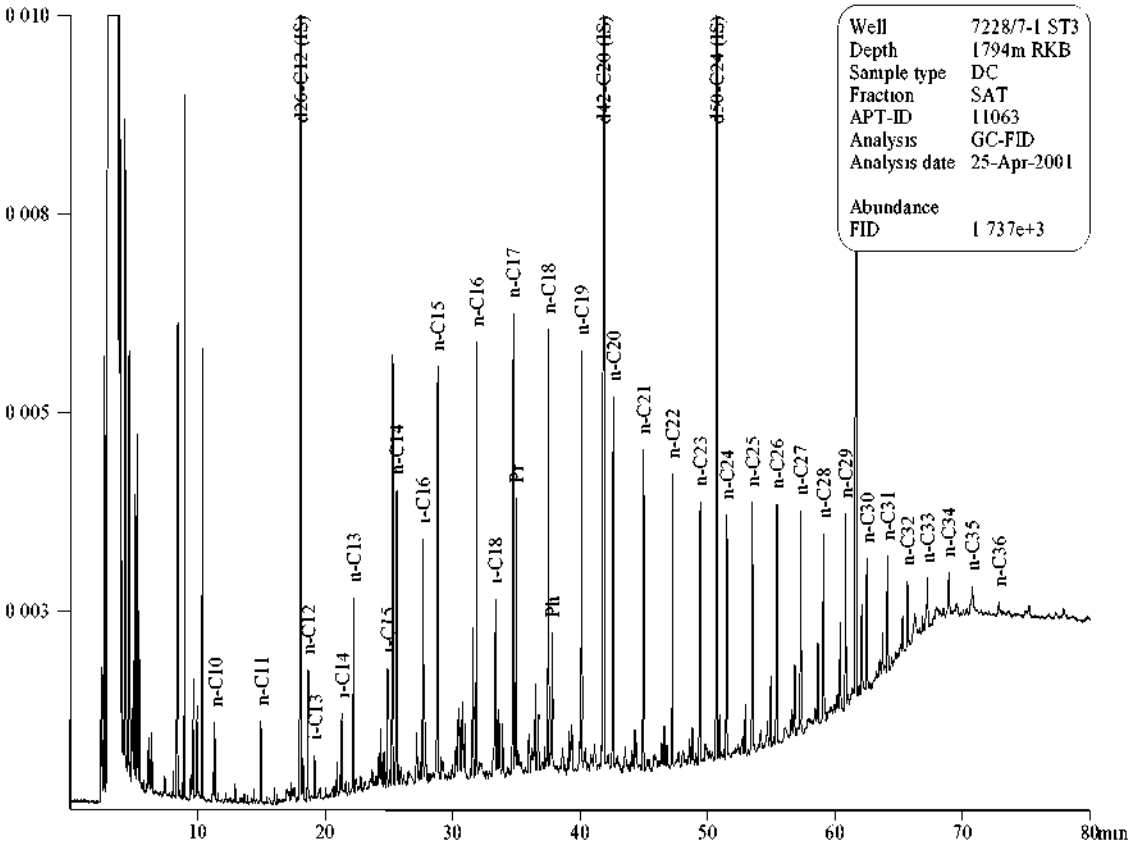

Well 7228/7-1 A
Depth 2103m RKB
Sample type DC
Fraction SAT
APT-ID 11043
Analysis GC-FID
Analysis date 26-Apr-2001
Abundance
FID 1 164e+3
0 007
0 005
0 004
0 002
d26-C12 (IS)
d42-C20 (IS)
d50-C24 (IS)
n-C10
n-C11
n-C12
n-C13
n-C14
n-C15
n-C16
n-C17
n-C18
n-C19
n-C20
n-C21
n-C22
n-C23
n-C24
n-C25
n-C26
n-C27
n-C28
n-C29
n-C30
n-C31
n-C32
i-C13
i-C14
i-C15
i-C16
i-C18
Pr
Ph
10
20
30
40
50
60
70
80min


Well 7228/7-1 A
Depth 2229m RKB
Sample type DC
Fraction SAT
APT-ID 11044
Analysis GC-FID
Analysis date 26-Apr-2001
Abundance
FID 1 552e+3
0 009
0 007
0 005
0 002
d26-C12 (IS)
d42-C20 (IS)
d50-C24 (IS)
n-C10
n-C11
n-C12
n-C13
n-C14
n-C15
n-C16
n-C17
n-C18
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
i-C13
i-C14
i-C15
i-C16
i-C18
Pr
Ph
10
20
30
40
50
60
70
80min

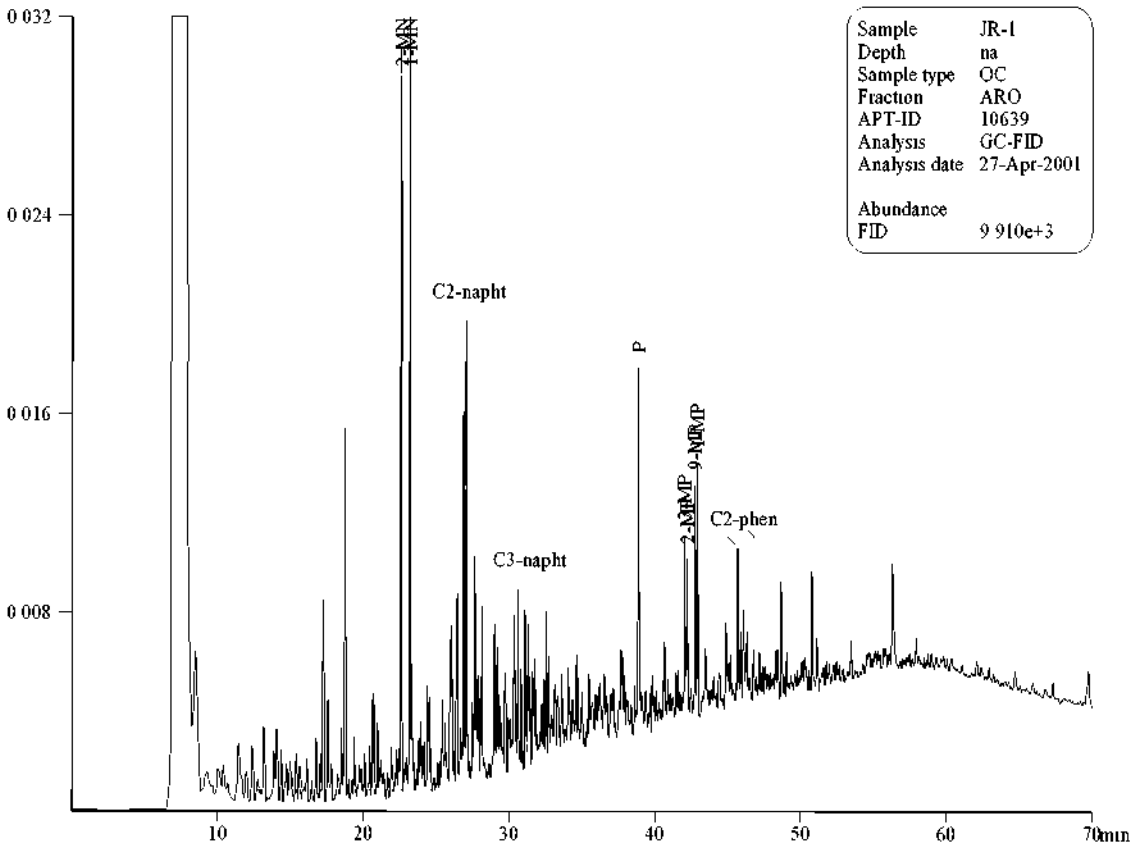

Well 7228/7-1 A
Depth 2742m RKB
Sample type DC
Fraction SAT
APT-ID 11048
Analysis GC-FID
Analysis date 26-Apr-2001
Abundance
FID 1 343e+3
0 008
0 006
0 004
0 002
n-C10
n-C11
n-C13
n-C14
n-C15
n-C16
n-C17
n-C18
n-C19
n-C20
n-C21
n-C22
n-C23
n-C24
n-C25
n-C26
n-C27
n-C28
n-C29
n-C30
n-C31
n-C32
n-C33
n-C34
i-C13
i-C14
i-C16
i-C18
Pr
Ph
10
20
30
40
50
60
70
80min

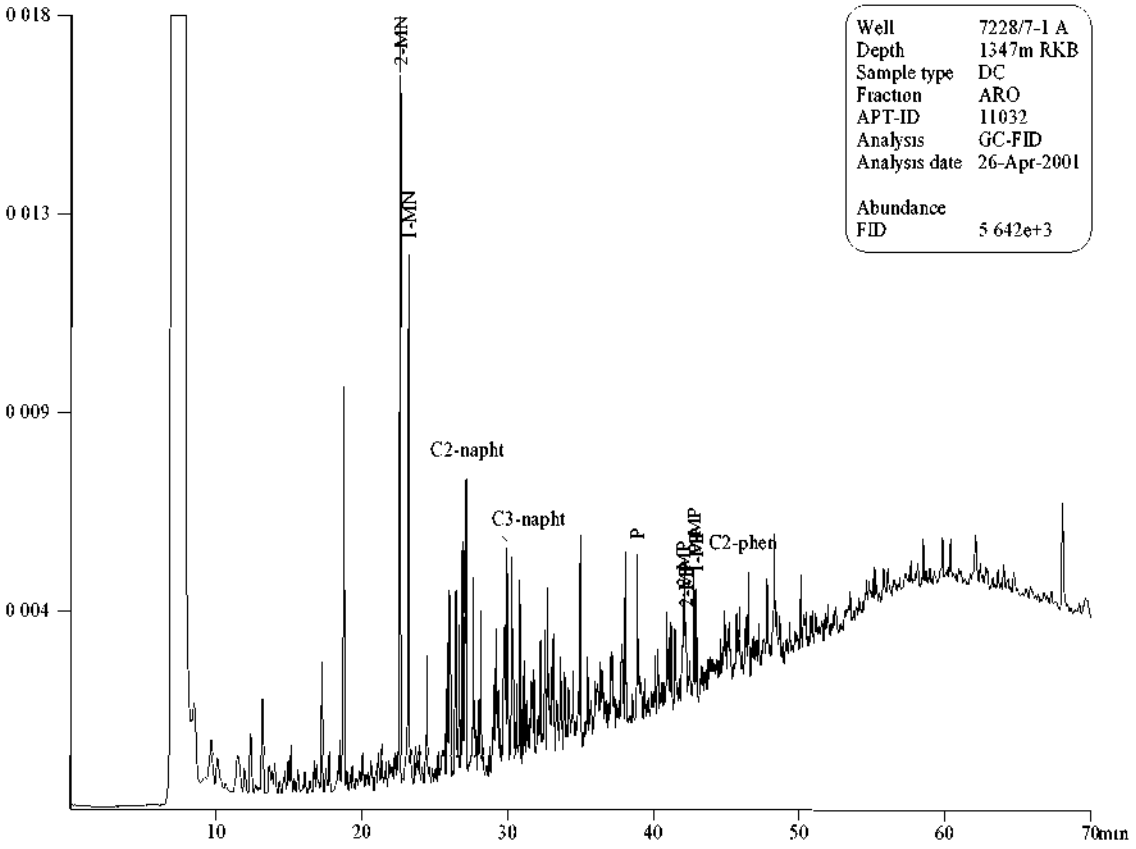

Well 7228/7-1 A
Depth 2833 00-
2833 02m RKB
Sample type COCH
Fraction SAT
APT-ID 11024
Analysis GC-FID
Analysis date 26-Apr-2001
Abundance
FID 4 030e+3
0 025
0 019
0 013
0 006
d26-C12 (IS)
d42-C20 (IS)
d50-C24 (IS)
n-C10
n-C11
n-C13
n-C15
n-C16
n-C17
n-C18
n-C19
n-C20
n-C21
n-C22
n-C23
i-C16
i-C18
Pr
Ph
10
20
30
40
50
60
70
80min

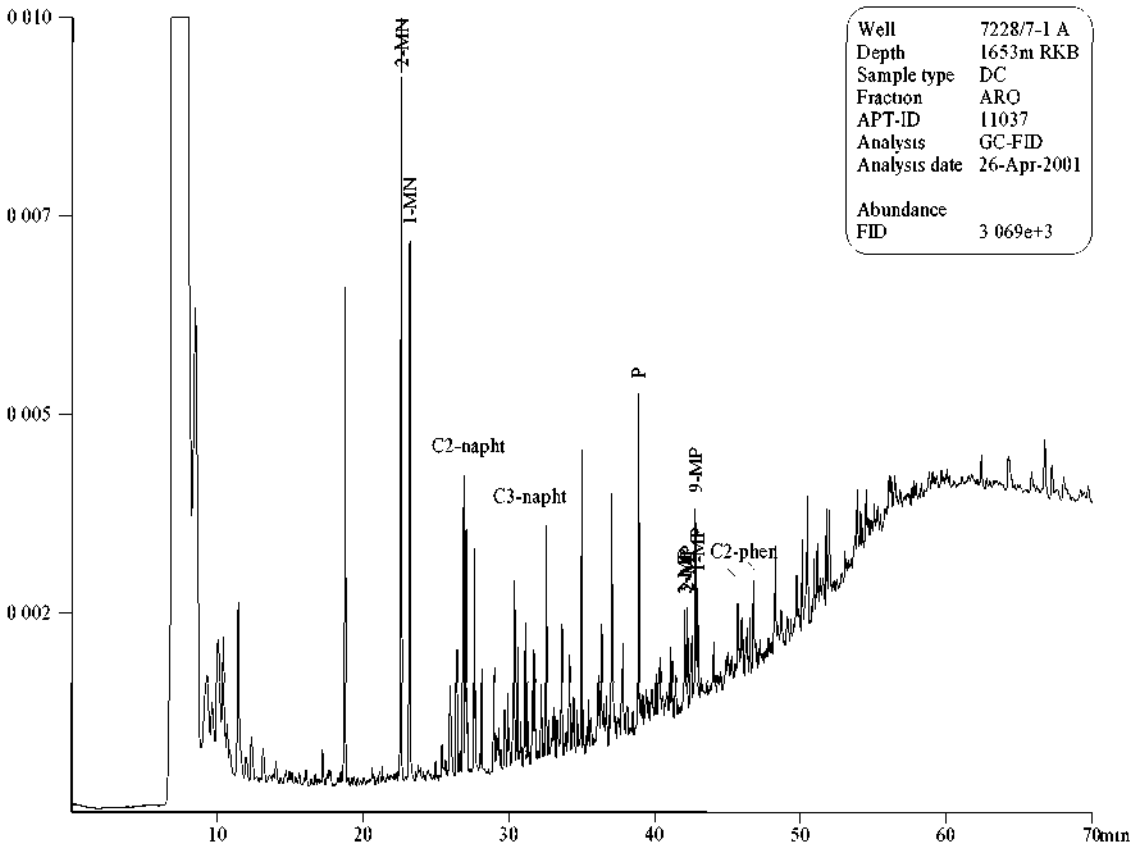

Well 7228/7-1 ST3
Depth 1367 38-1367 40m RKB
Sample type COCH
Fraction SAT
APT-ID 11309
Analysis GC-FID
Analysis date 25-Apr-2001
Abundance
FID 8 336e+3
0 051
0 039
0 026
0 013
d26-C12 (IS)
d42-C20 (IS)
d50-C24 (IS)
n-C10
n-C11
n-C12
i-C13
n-C13
i-C14
n-C14
i-C15
n-C15
i-C16
n-C16
i-C18
n-C17
Pr
Ph
n-C18
n-C19
n-C20
n-C21
n-C22
n-C23
10
20
30
40
50
60
70
80min

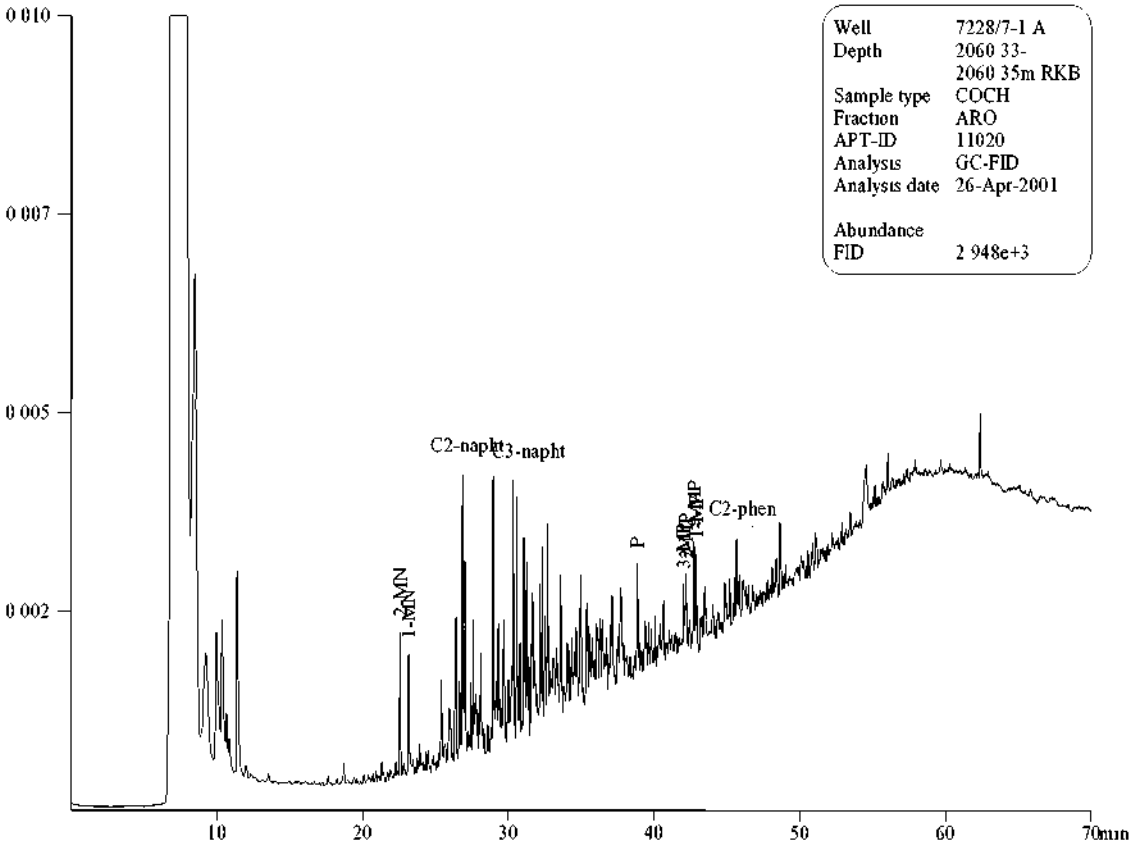

Well 7228/7-1 ST3
Depth 1794m RKB
Sample type DC
Fraction SAT
APT-ID 11063
Analysis GC-FID
Analysis date 25-Apr-2001
Abundance
FID 1 737e+3
0 010
0 008
0 005
0 003
d26-C12 (IS)
d42-C20 (IS)
d50-C24 (IS)
n-C10
n-C11
n-C12
i-C13
n-C13
i-C14
n-C14
i-C15
n-C15
i-C16
n-C16
i-C18
n-C17
Pr
Ph
n-C18
n-C19
n-C20
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
10
20
30
40
50
60
70
80min

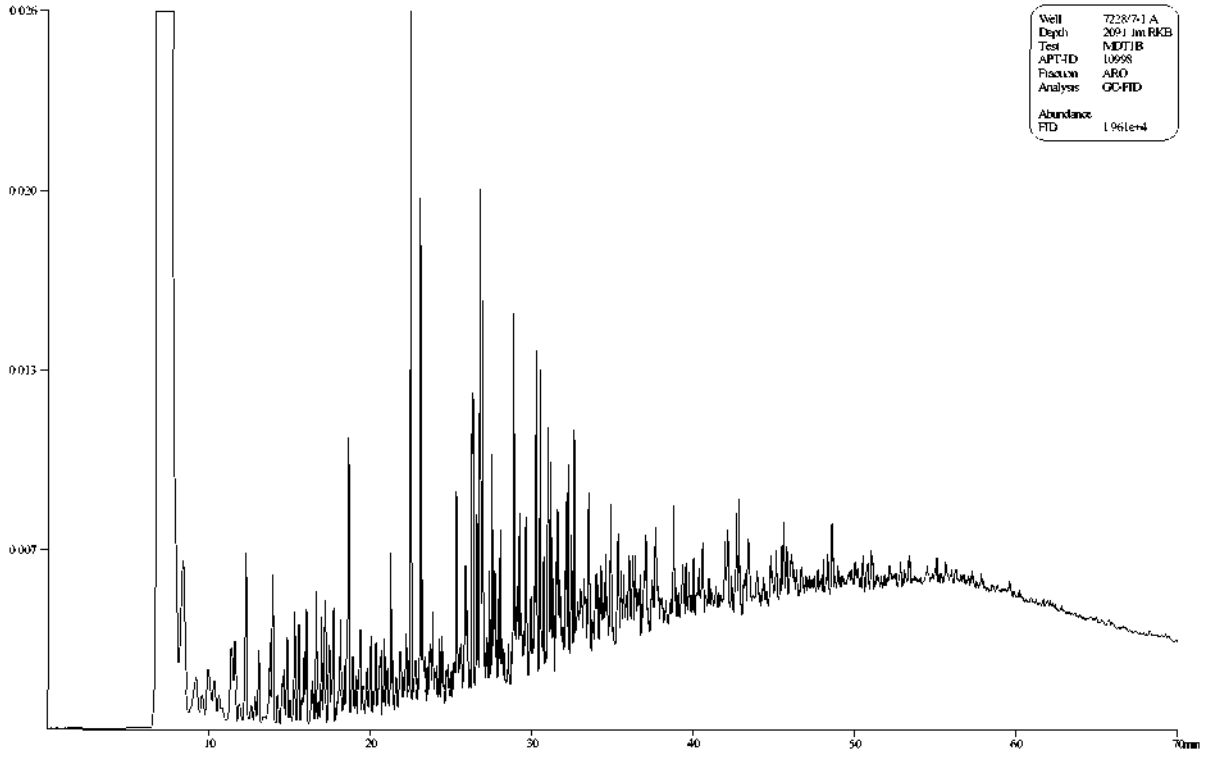
GC chromatograms of Aromatic fraction

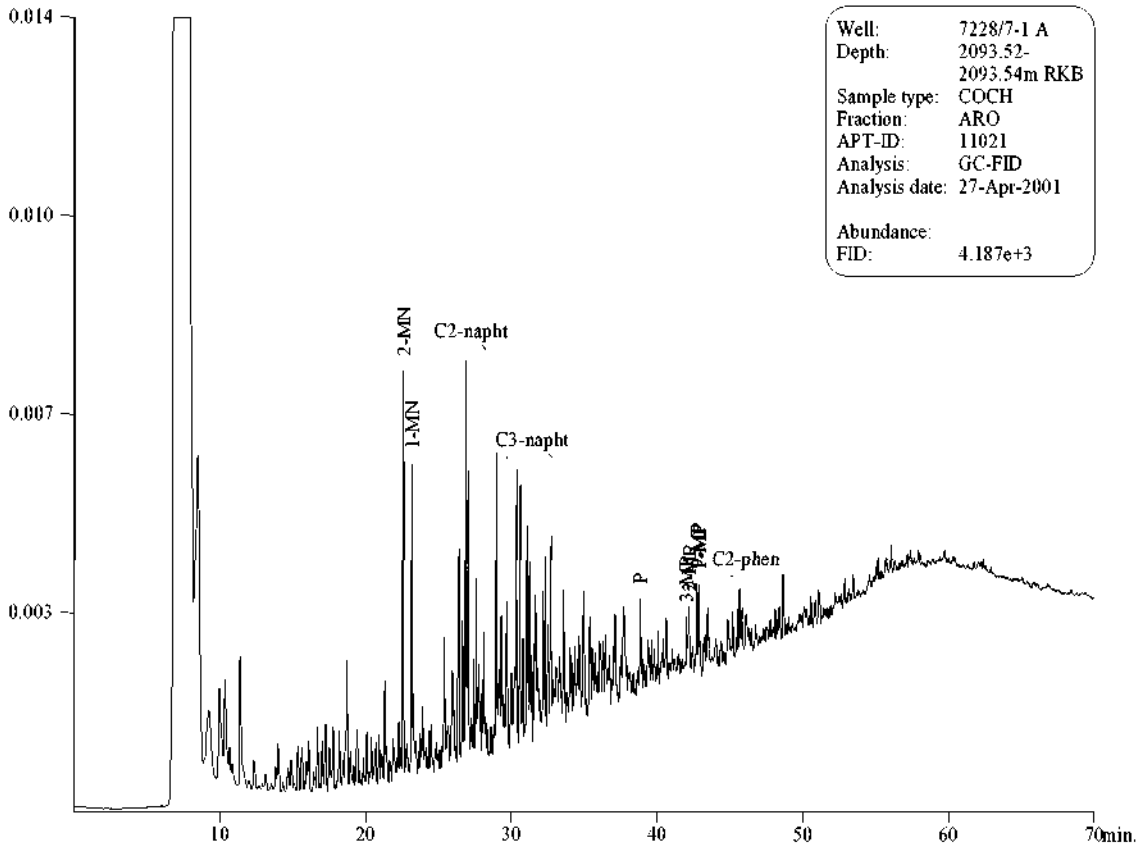

0 032
0 024
0 016
0 008
2-MN
1-MN
C2-napht
C3-napht
P
C2-phen
Sample JR-1
Depth na
Sample type OC
Fraction ARO
APT-ID 10639
Analysis GC-FID
Analysis date 27-Apr-2001
Abundance
FID 9 910e+3
10
20
30
40
50
60
70min

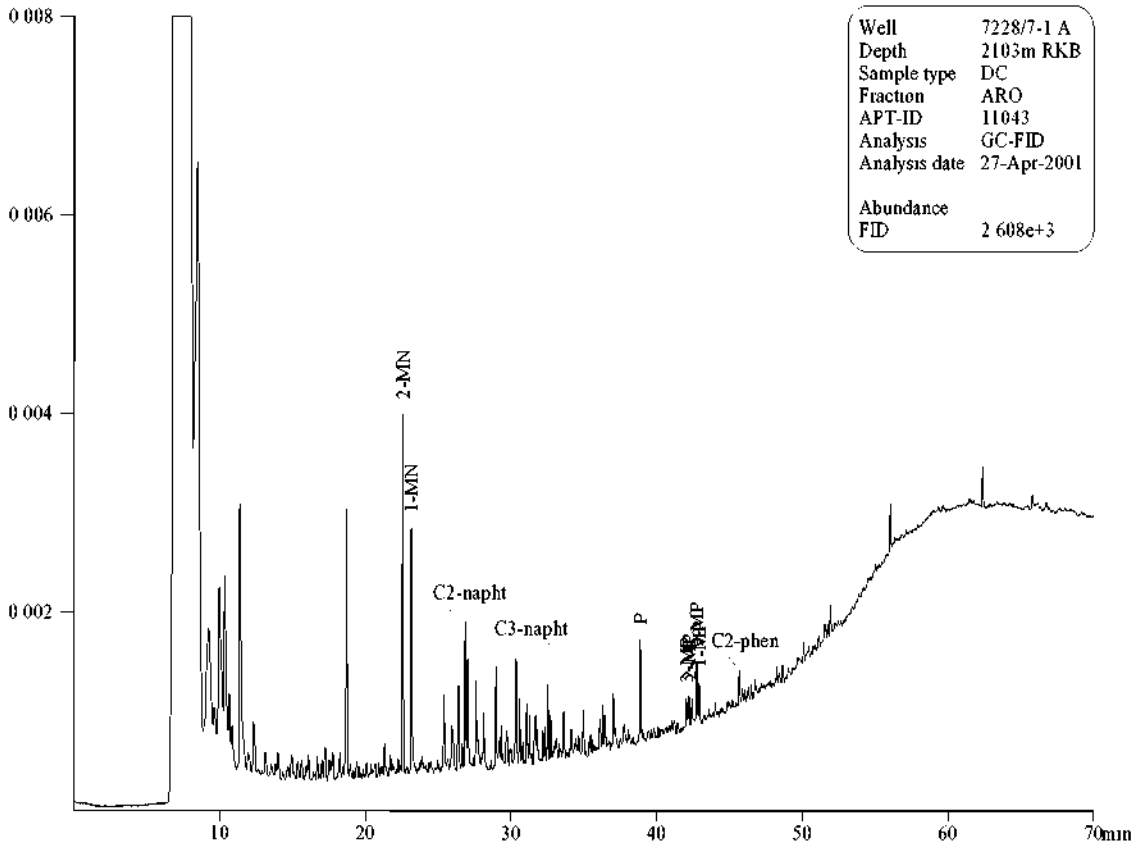

0 018
0 013
0 009
0 004
2-MN
1-MN
C2-napht
C3-napht
P
C2-phen
Well 7228/7-1 A
Depth 1347m RKB
Sample type DC
Fraction ARO
APT-ID 11032
Analysis GC-FID
Analysis date 26-Apr-2001
Abundance
FID 5 642e+3
10
20
30
40
50
60
70min

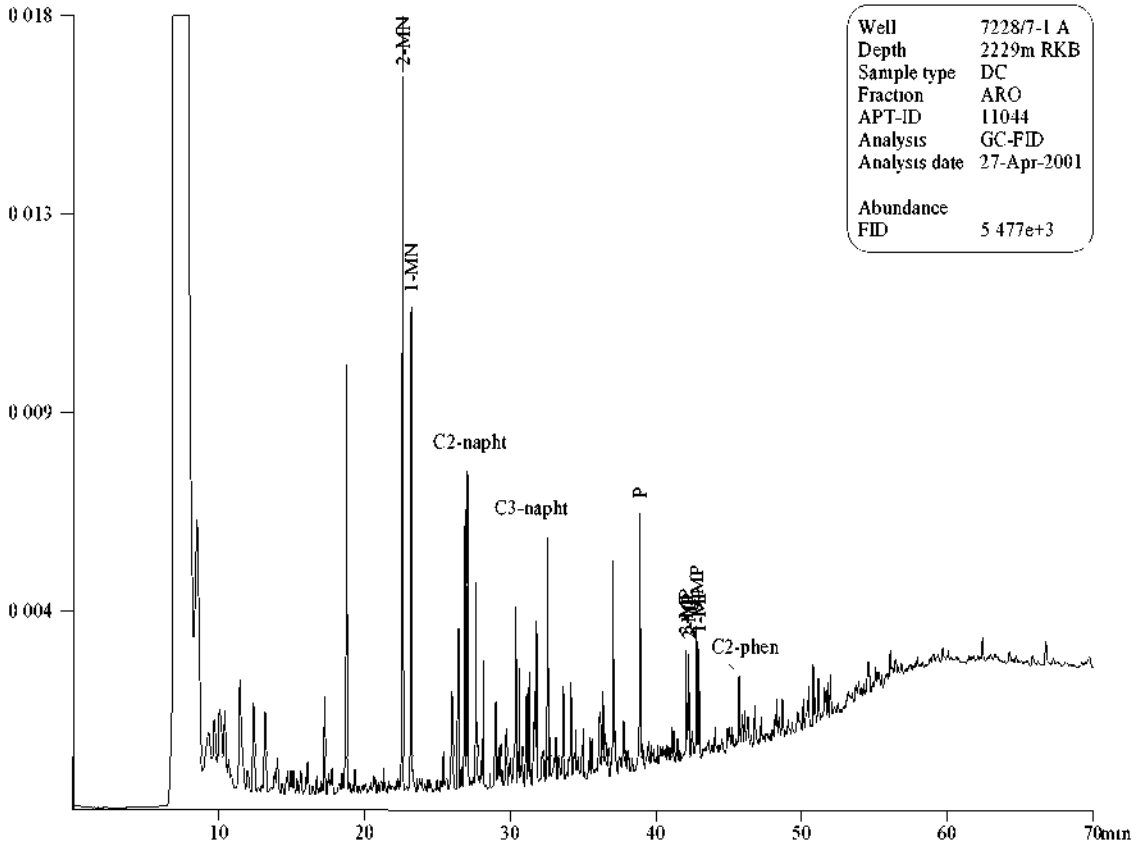

0 010
0 007
0 005
0 002
2-MN
1-MN
P
C2-napht
C3-napht
9-MP
C2-phen
10
20
30
40
50
60
70min
Well 7228/7-1 A
Depth 1653m RKB
Sample type DC
Fraction ARO
APT-ID 11037
Analysis GC-FID
Analysis date 26-Apr-2001
Abundance
FID 3 069e+3

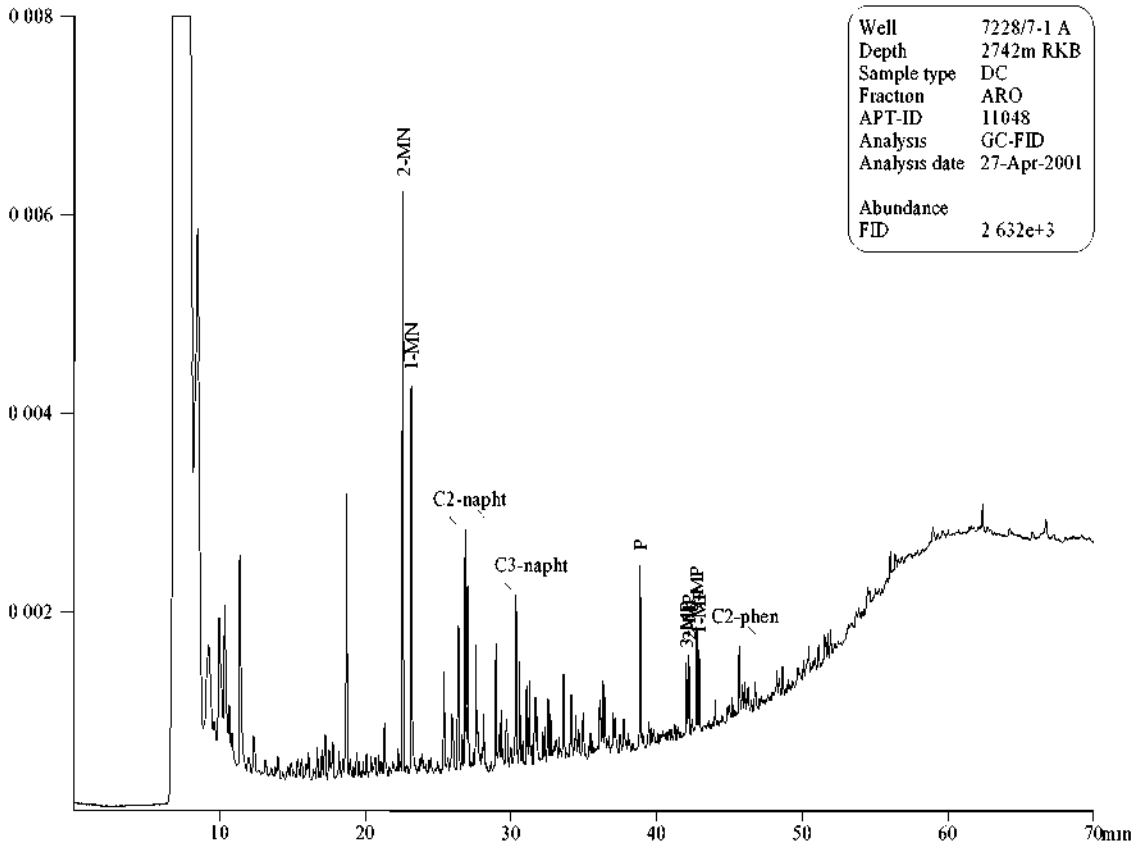

0 010
0 007
0 005
0 002
C2-napht
C3-napht
P
C2-phen
10
20
30
40
50
60
70min
Well 7228/7-1 A
Depth 2060 33-
2060 35m RKB
Sample type COCH
Fraction ARO
APT-ID 11020
Analysis GC-FID
Analysis date 26-Apr-2001
Abundance
FID 2 948e+3

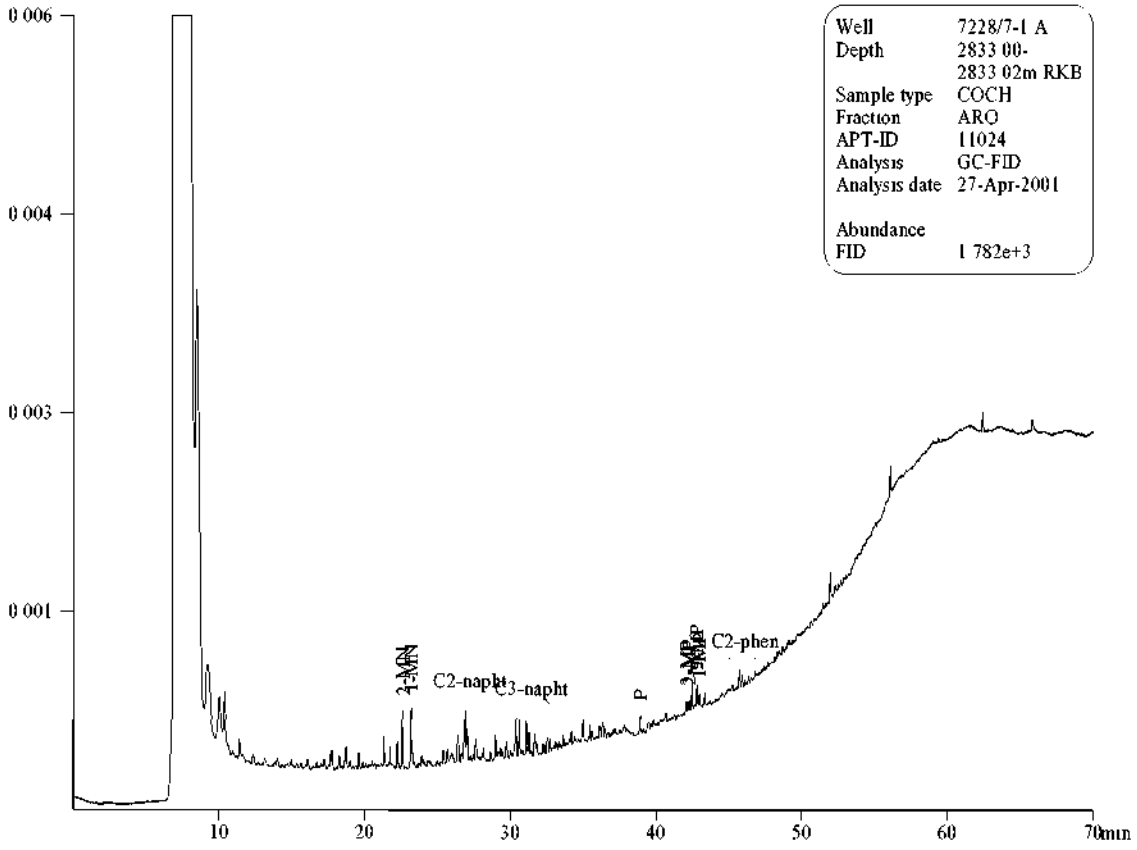

Well 7228/7-1 A
Depth 2093.52-2093.54m RKB
Test MDT1B
APT-ID 10998
Fraction ARO
Analysis GC-FID
Abundance
FID 1.961e+4
0.026
0.020
0.013
0.007
10
20
30
40
50
60
70min

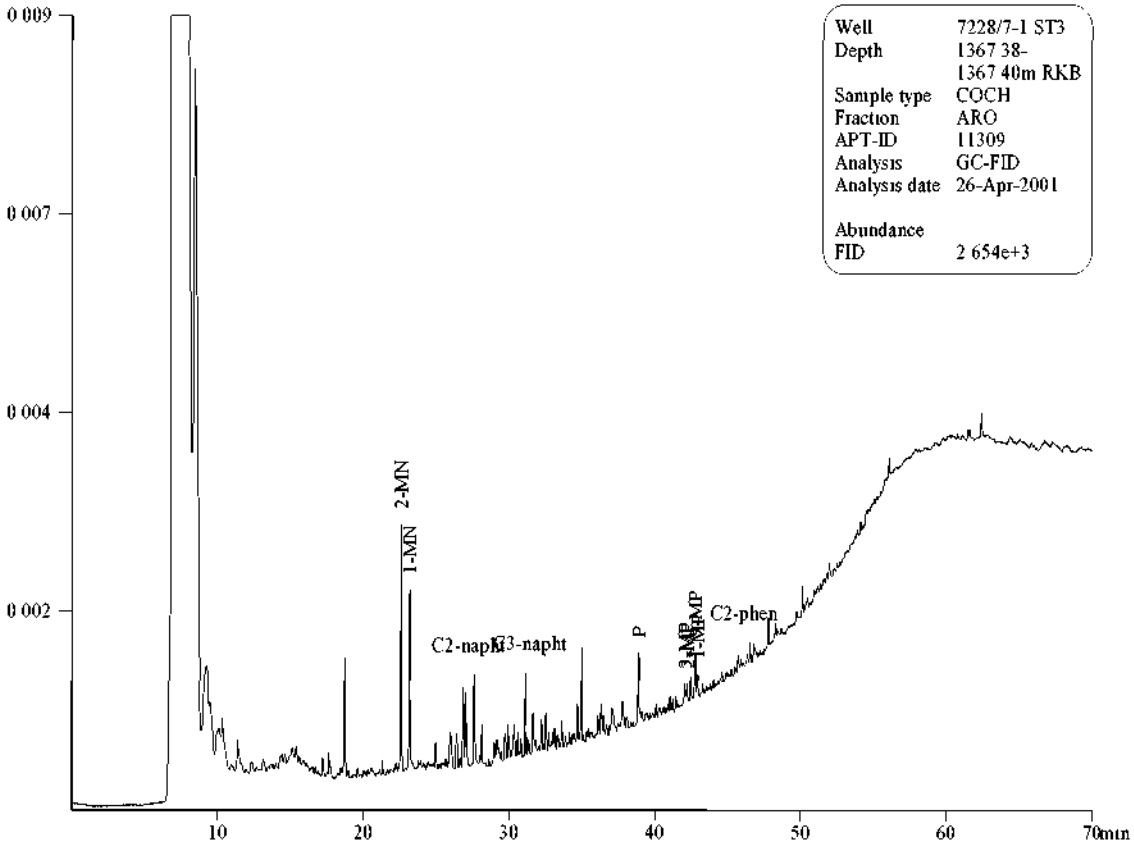

Well: 7228/7-1 A
Depth: 2093.52-2093.54m RKB
Sample type: COCH
Fraction: ARO
APT-ID: 11021
Analysis: GC-FID
Analysis date: 27-Apr-2001
Abundance:
FID: 4.187e+3
0.014
0.010
0.007
0.003
2-MN
1-MN
C2-napht
C3-napht
P
C2-phen
10
20
30
40
50
60
70min.

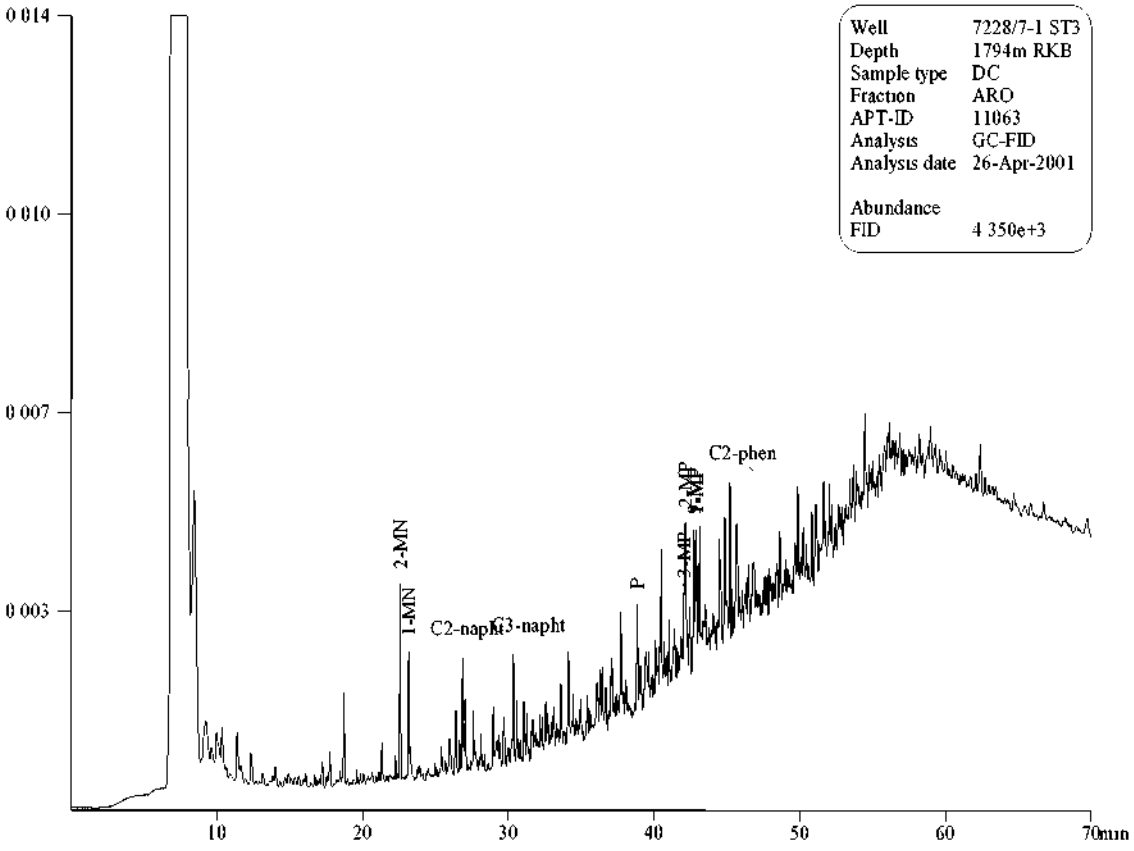

0 008
0 006
0 004
0 002
Well 7228/7-1 A
Depth 2103m RKB
Sample type DC
Fraction ARO
APT-ID 11043
Analysis GC-FID
Analysis date 27-Apr-2001
Abundance
FID 2 608e+3
2-MN
1-MN
C2-napht
C3-napht
P
C2-phen
10
20
30
40
50
60
70min


0 018
0 013
0 009
0 004
Well 7228/7-1 A
Depth 2229m RKB
Sample type DC
Fraction ARO
APT-ID 11044
Analysis GC-FID
Analysis date 27-Apr-2001
Abundance
FID 5 477e+3
2-MN
1-MN
C2-napht
C3-napht
P
C2-phen
10
20
30
40
50
60
70min

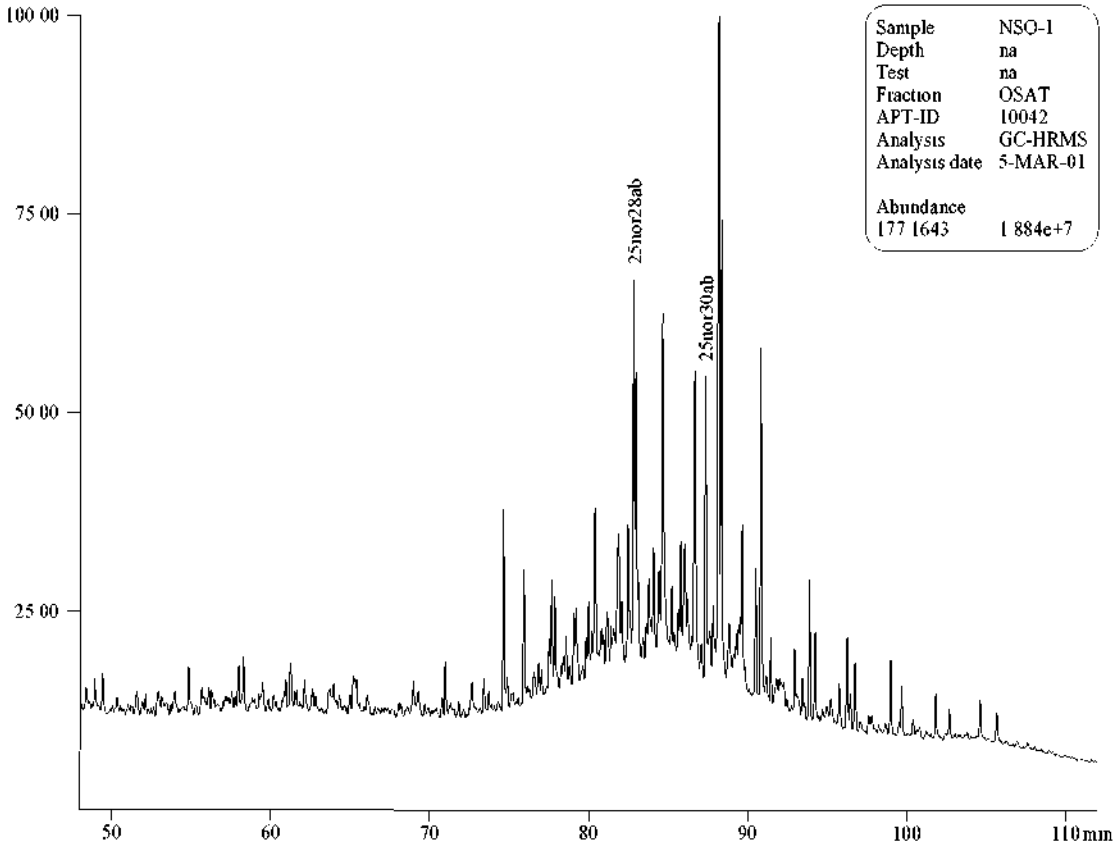

Well 7228/7-1 A
Depth 2742m RKB
Sample type DC
Fraction ARO
APT-ID 11048
Analysis GC-FID
Analysis date 27-Apr-2001
Abundance
FID 2 632e+3
0 008
0 006
0 004
0 002
2-MN
1-MN
C2-napht
C3-napht
P
C2-phen
10
20
30
40
50
60
70min

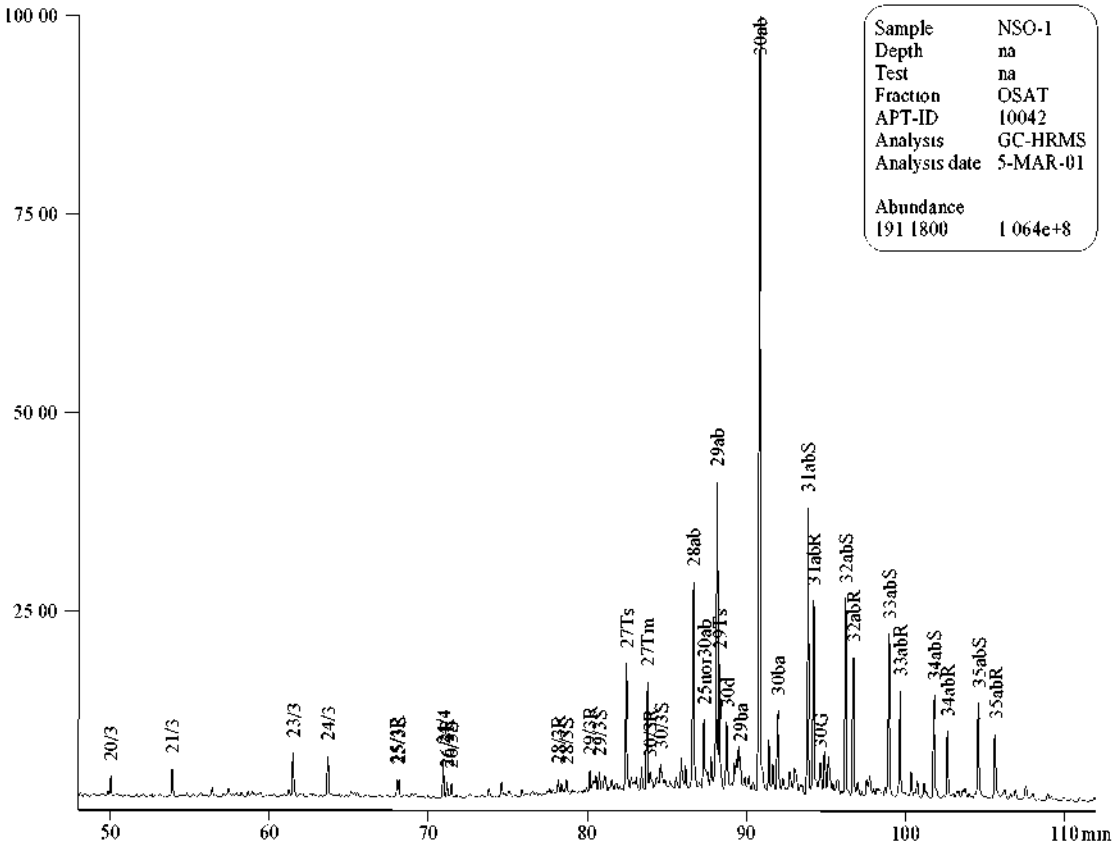

Well 7228/7-1 A
Depth 2833 00-
2833 02m RKB
Sample type COCH
Fraction ARO
APT-ID 11024
Analysis GC-FID
Analysis date 27-Apr-2001
Abundance
FID 1 782e+3
0 006
0 004
0 003
0 001
2-MN
C2-napht
C3-napht
P
C2-phen
10
20
30
40
50
60
70min

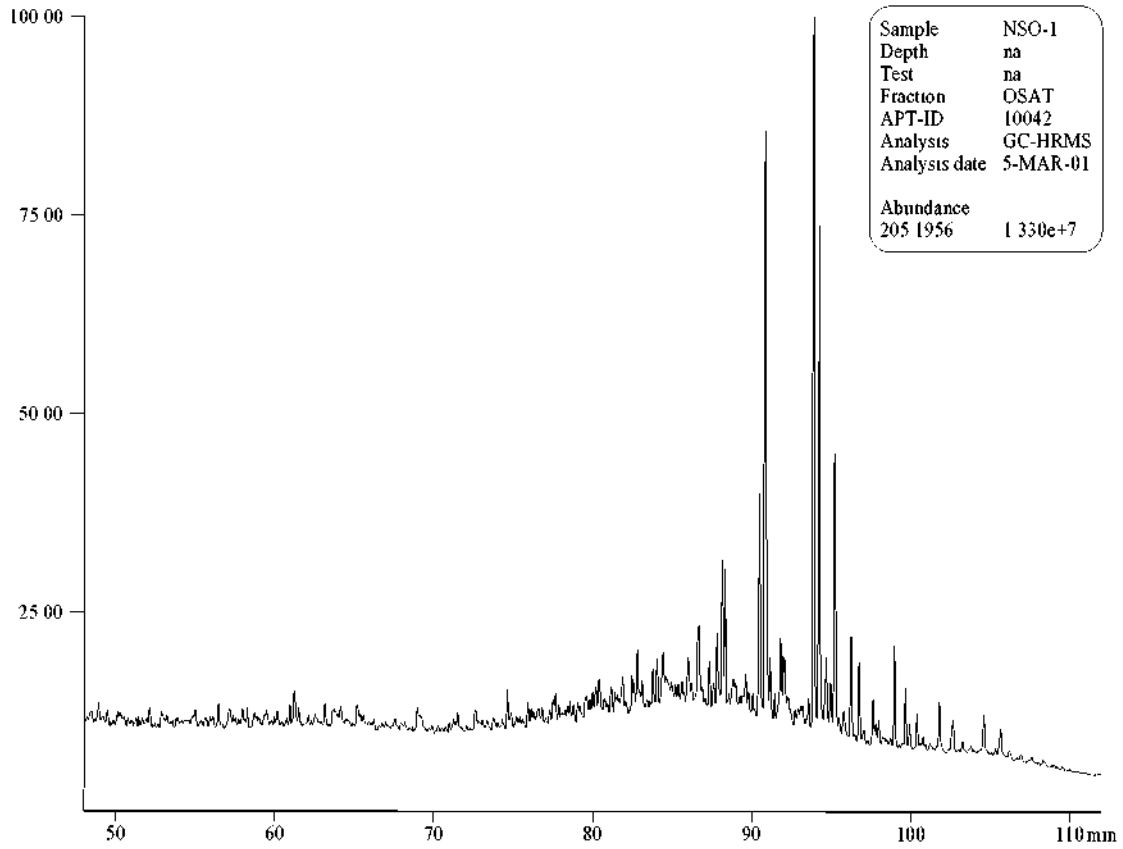

Well 7228/7-1 ST3
Depth 1367 38-1367 40m RKB
Sample type COCH
Fraction ARO
APT-ID 11309
Analysis GC-FID
Analysis date 26-Apr-2001
Abundance
FID 2 654e+3
0 009
0 007
0 004
0 002
2-MN
1-MN
C2-napht
C3-napht
P
C2-phen
10
20
30
40
50
60
70min

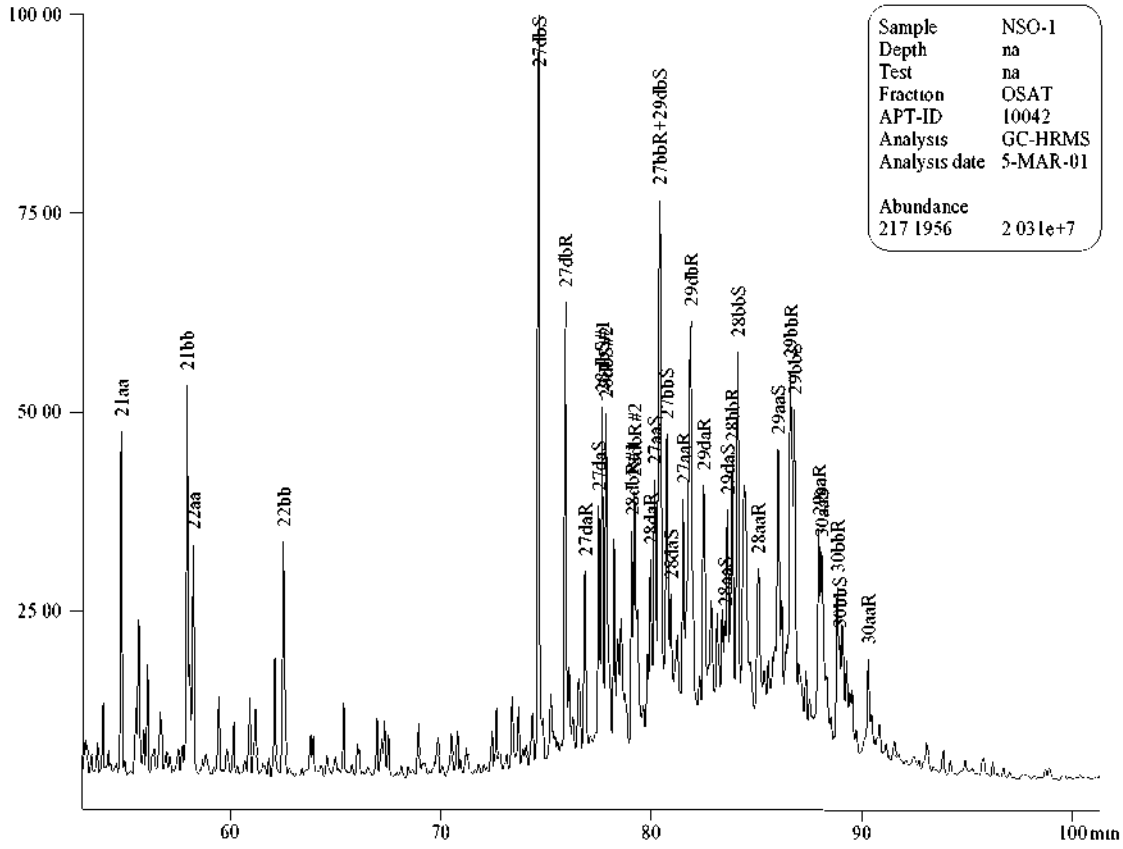

Well 7228/7-1 ST3
Depth 1794m RKB
Sample type DC
Fraction ARO
APT-ID 11063
Analysis GC-FID
Analysis date 26-Apr-2001
Abundance
FID 4 350e+3
0 014
0 010
0 007
0 003
2-MN
1-MN
C2-napht
C3-napht
P
C2-phen
10
20
30
40
50
60
70min

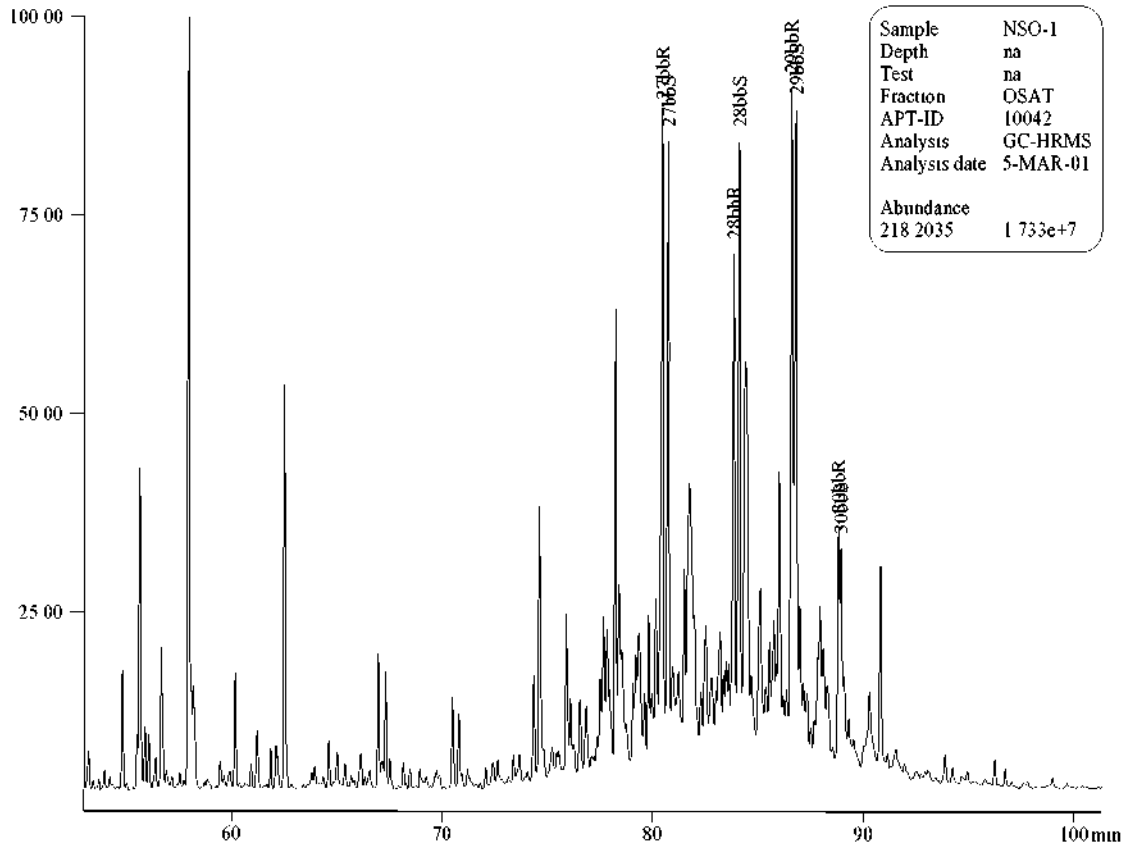
GC-MS Chromatograms of Saturated Hydrocarbons

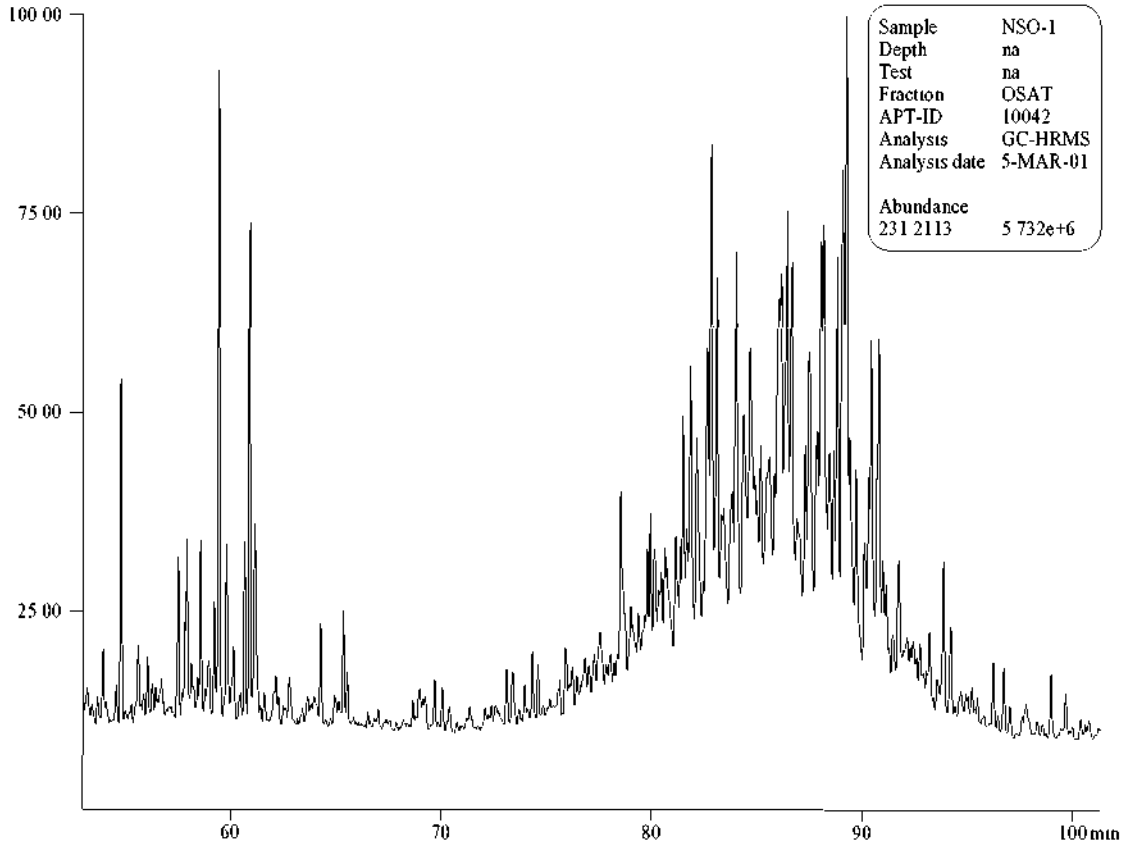

Sample NSO-1
Depth na
Test na
Fraction OSAT
APT-ID 10042
Analysis GC-HRMS
Analysis date 5-MAR-01
Abundance
177 1643 1 884e+7
25nor28ab
25nor30ab
100 00
75 00
50 00
25 00
50
60
70
80
90
100
110 min

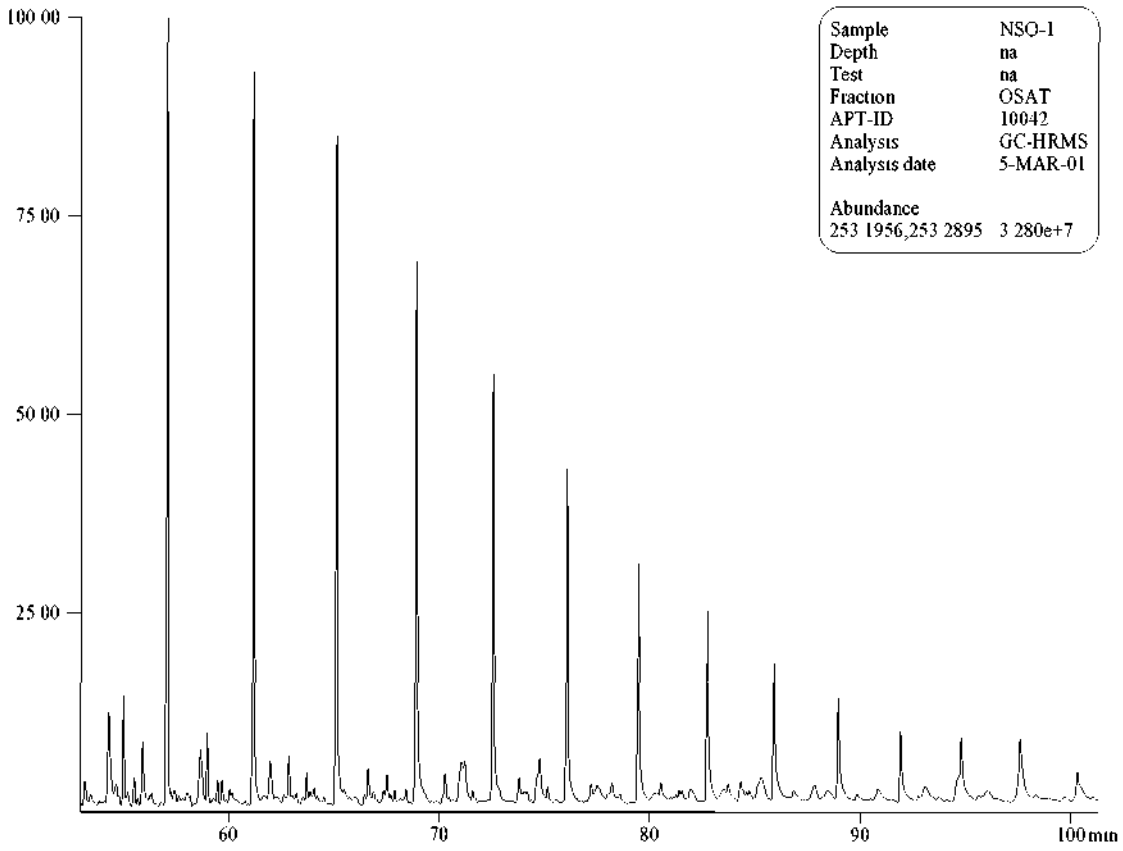

Sample NSO-1
Depth na
Test na
Fraction OSAT
APT-ID 10042
Analysis GC-HRMS
Analysis date 5-MAR-01
Abundance
191 1800 1 064e+8
30ab
29ab
31abS
31abR
32abS
32abR
33abS
33abR
34abS
34abR
35abS
35abR
28ab
25nor30ab
27Ts
27Tm
29Ts
30d
29ba
30ba
20/3
21/3
23/3
24/3
100 00
75 00
50 00
25 00
50
60
70
80
90
100
110 min

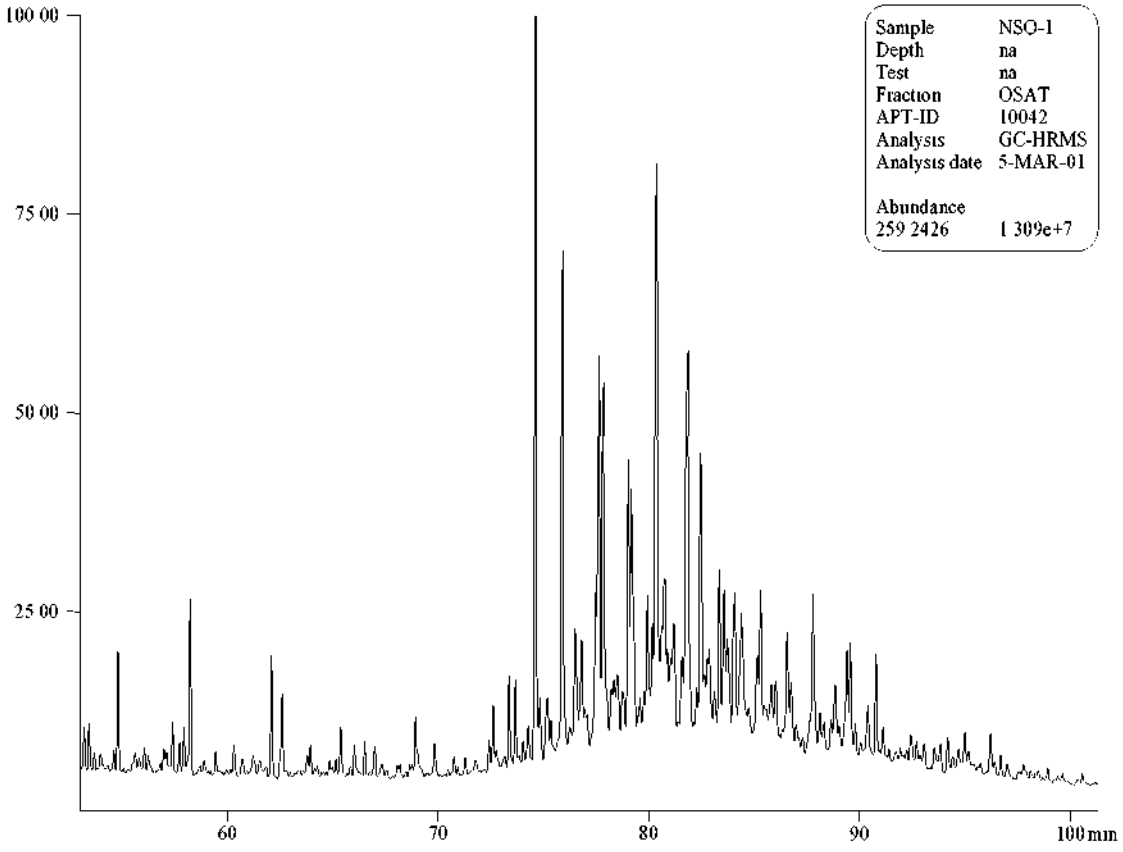

100 00
75 00
50 00
25 00
50
60
70
80
90
100
110 min
Sample NSO-1
Depth na
Test na
Fraction OSAT
APT-ID 10042
Analysis GC-HRMS
Analysis date 5-MAR-01
Abundance
205 1956 1 330e+7

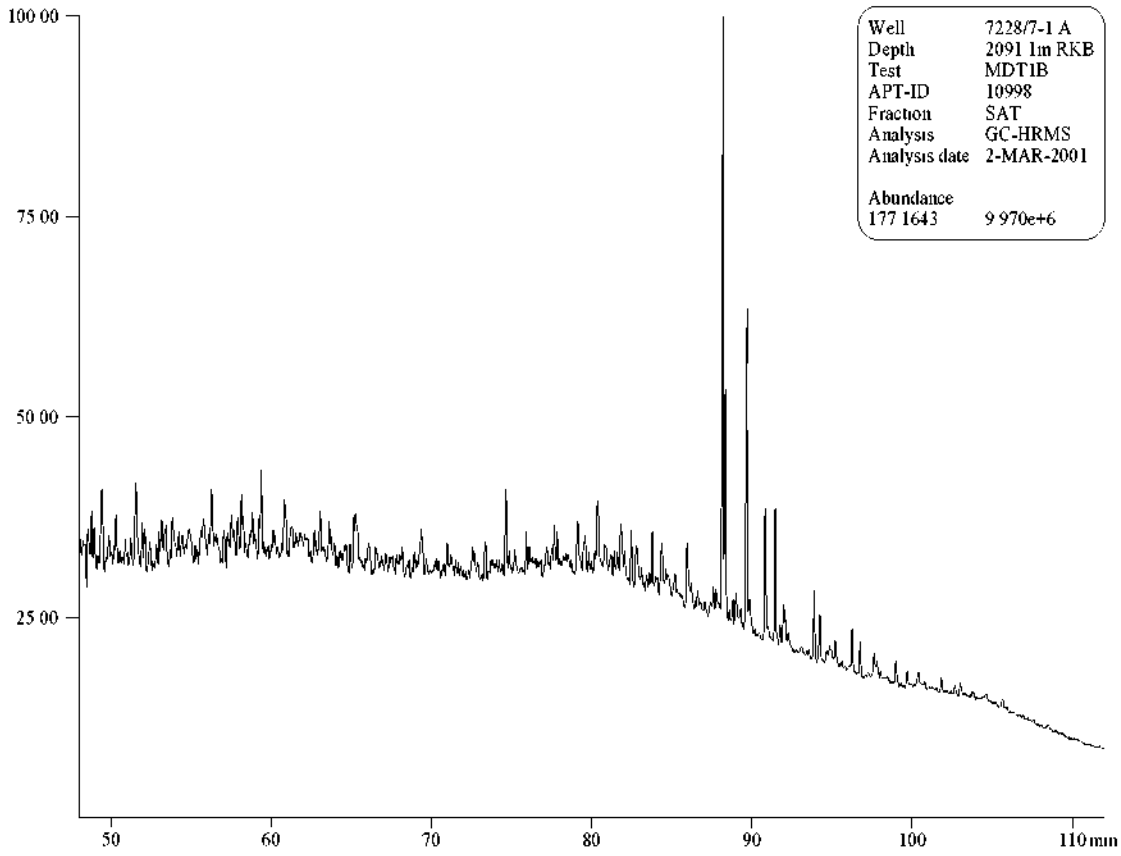

100 00
75 00
50 00
25 00
60
70
80
90
100 min
Sample NSO-1
Depth na
Test na
Fraction OSAT
APT-ID 10042
Analysis GC-HRMS
Analysis date 5-MAR-01
Abundance
217 1956 2 031e+7
21aa
21bb
22aa
22bb
27dbS
27dbR
27daR
27daS
27bbR+29dbS
27bbS
27aaR
29dbR
29daR
28bbS
28bbR
28aaR
29aaS
29bbR
30aaR
30bbR
30aaR

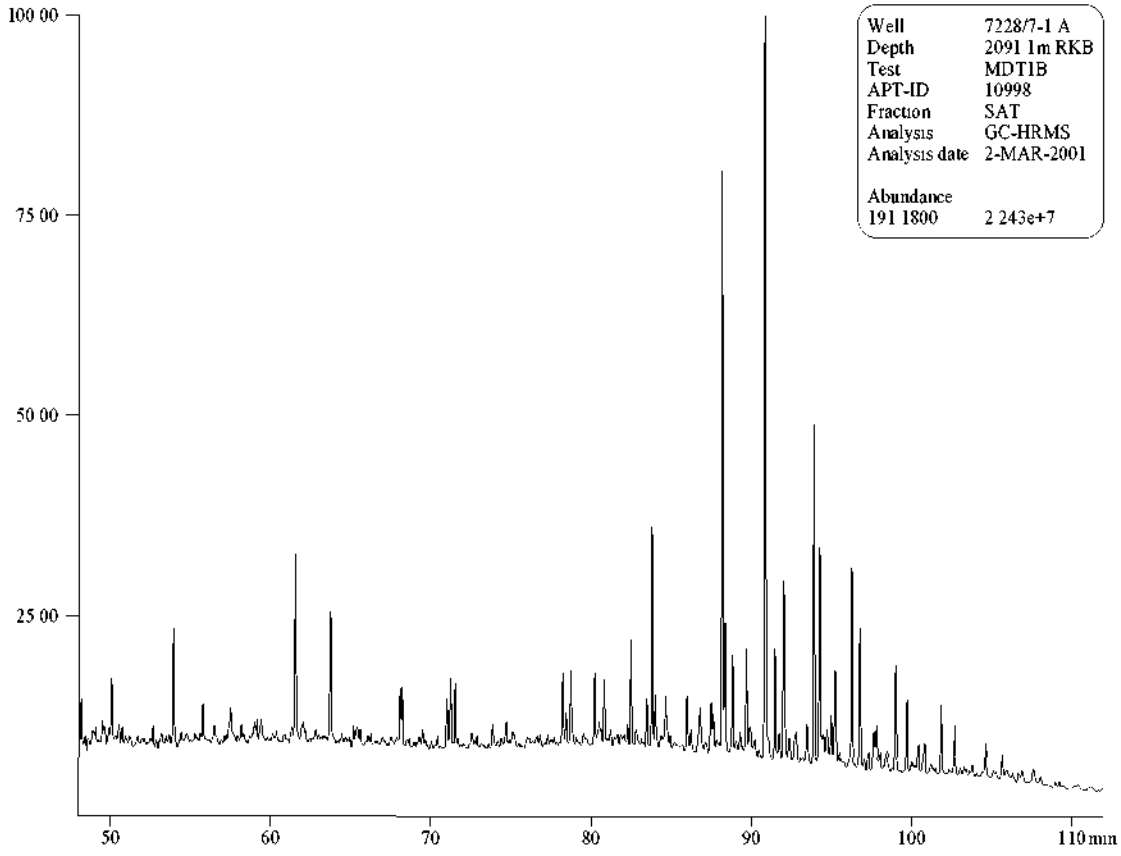

100 00
75 00
50 00
25 00
60
70
80
90
100 min
Sample NSO-1
Depth na
Test na
Fraction OSAT
APT-ID 10042
Analysis GC-HRMS
Analysis date 5-MAR-01
Abundance
218 2035 1 733e+7

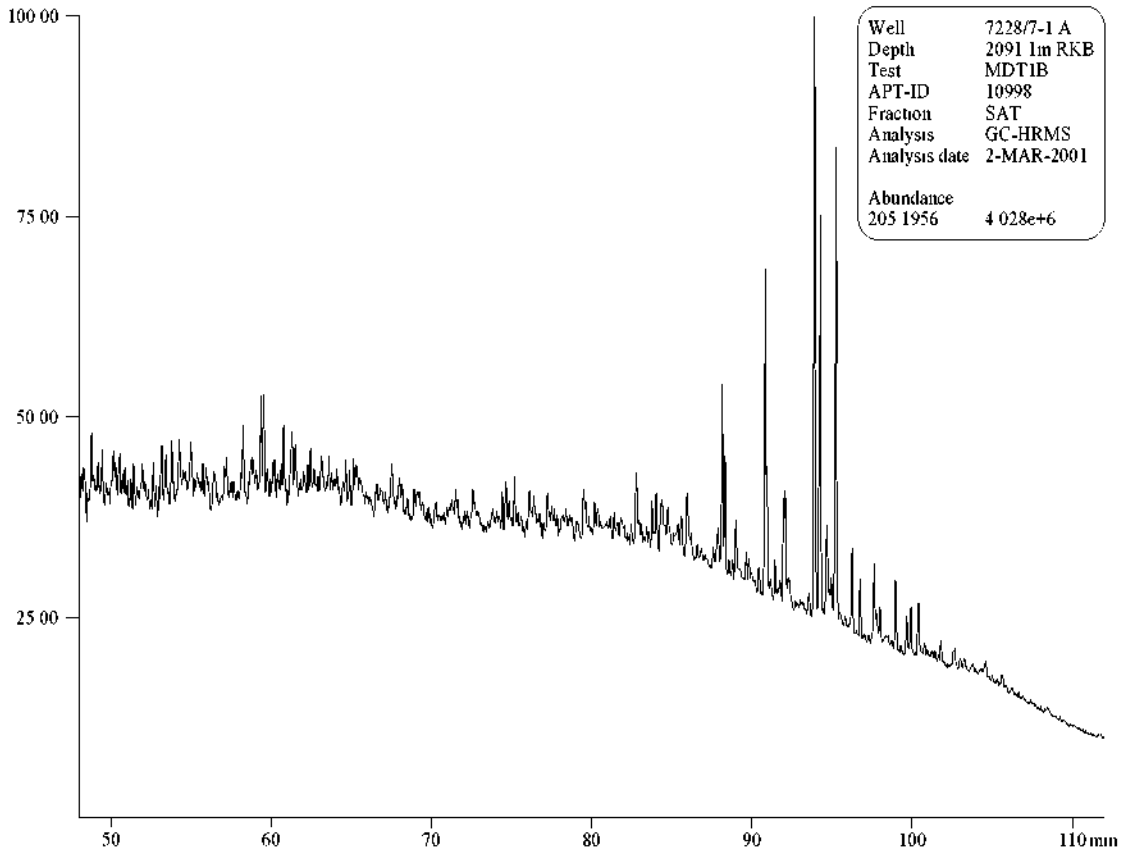

100 00
75 00
50 00
25 00
60
70
80
90
100 min
Sample NSO-1
Depth na
Test na
Fraction OSAT
APT-ID 10042
Analysis GC-HRMS
Analysis date 5-MAR-01
Abundance
231 2113 5 732e+6

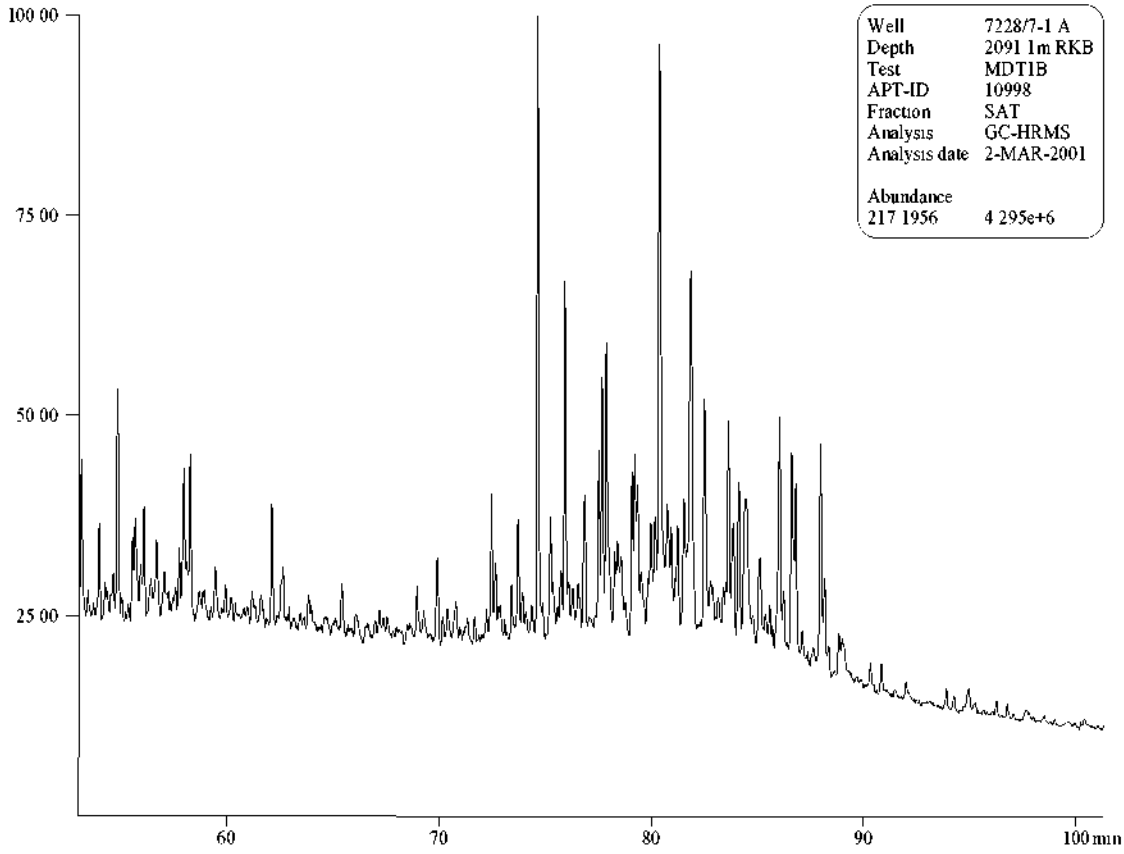

100 00
75 00
50 00
25 00
60
70
80
90
100 min
Sample NSO-1
Depth na
Test na
Fraction OSAT
APT-ID 10042
Analysis GC-HRMS
Analysis date 5-MAR-01
Abundance
253 1956,253 2895 3 280e+7

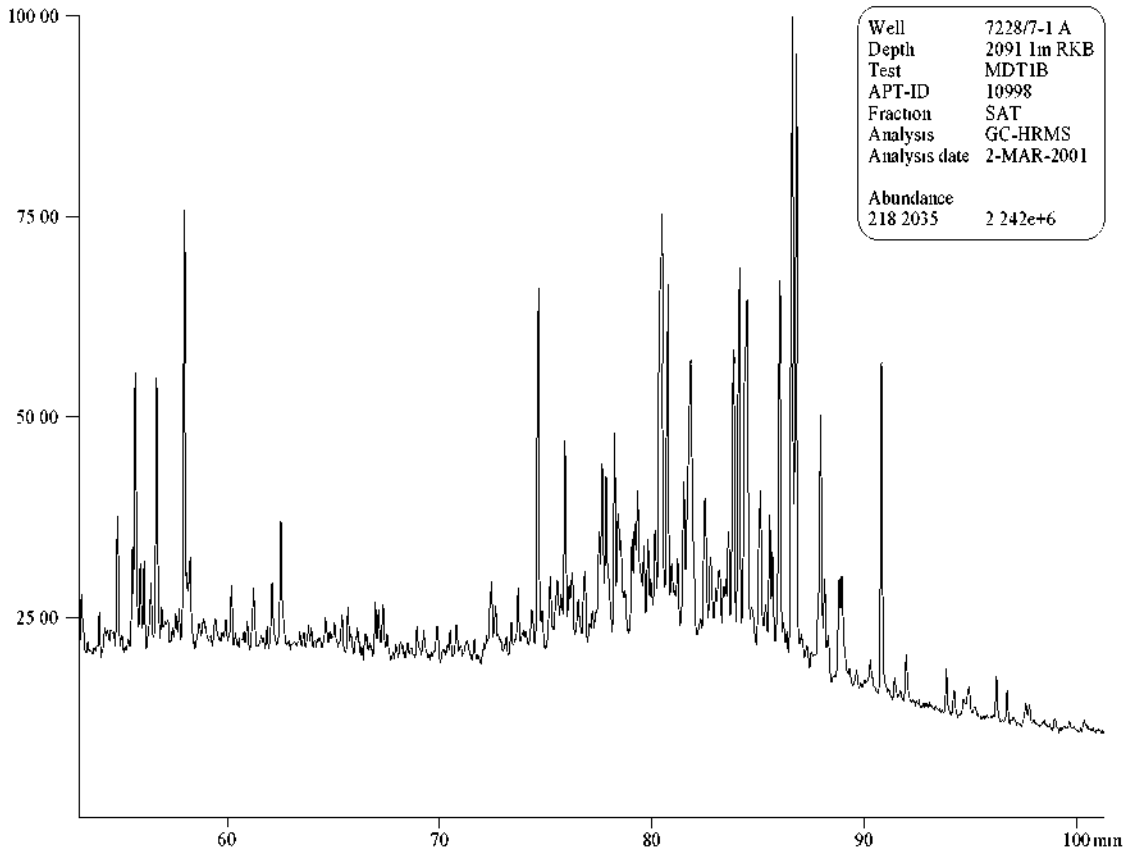

100 00
75 00
50 00
25 00
60
70
80
90
100 min
Sample NSO-1
Depth na
Test na
Fraction OSAT
APT-ID 10042
Analysis GC-HRMS
Analysis date 5-MAR-01
Abundance
259 2426 1 309e+7

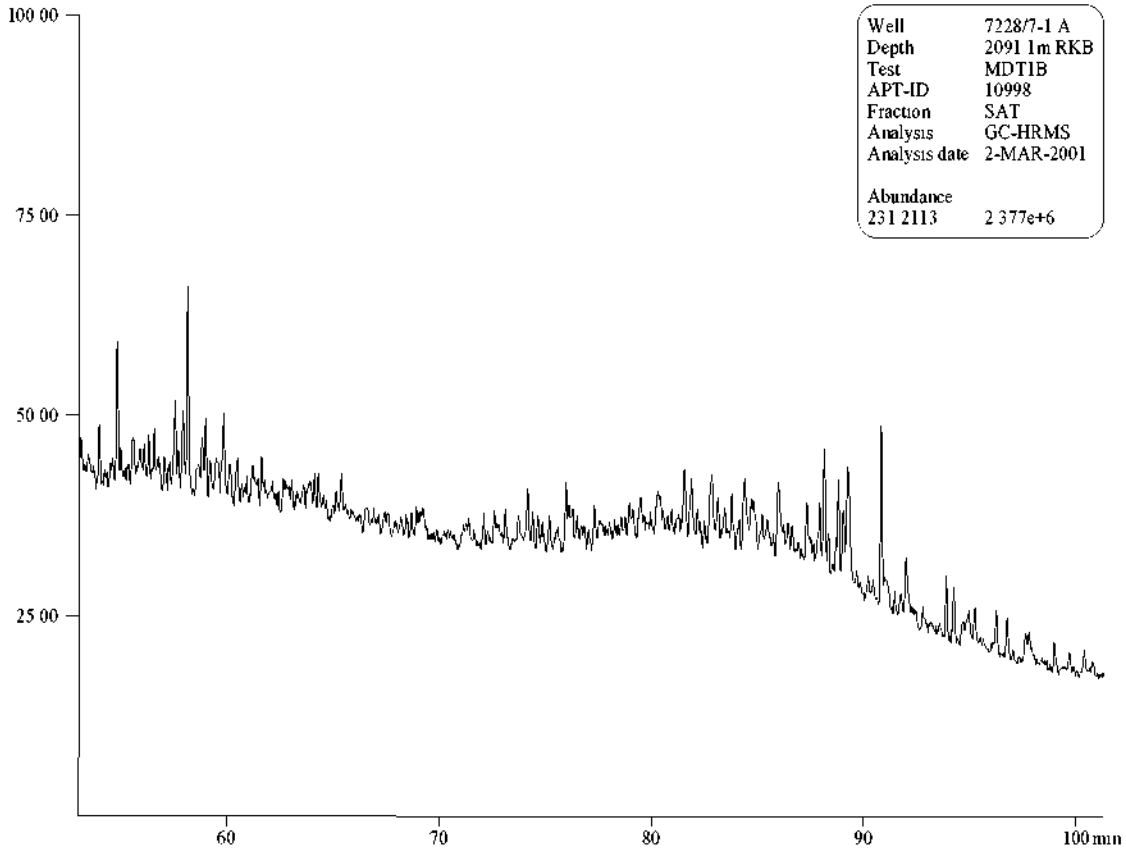

100 00
75 00
50 00
25 00
50
60
70
80
90
100
110 mn
Well 7228/7-1 A
Depth 2091 1m RKB
Test MDT1B
APT-ID 10998
Fraction SAT
Analysis GC-HRMS
Analysis date 2-MAR-2001
Abundance
177 1643 9 970e+6

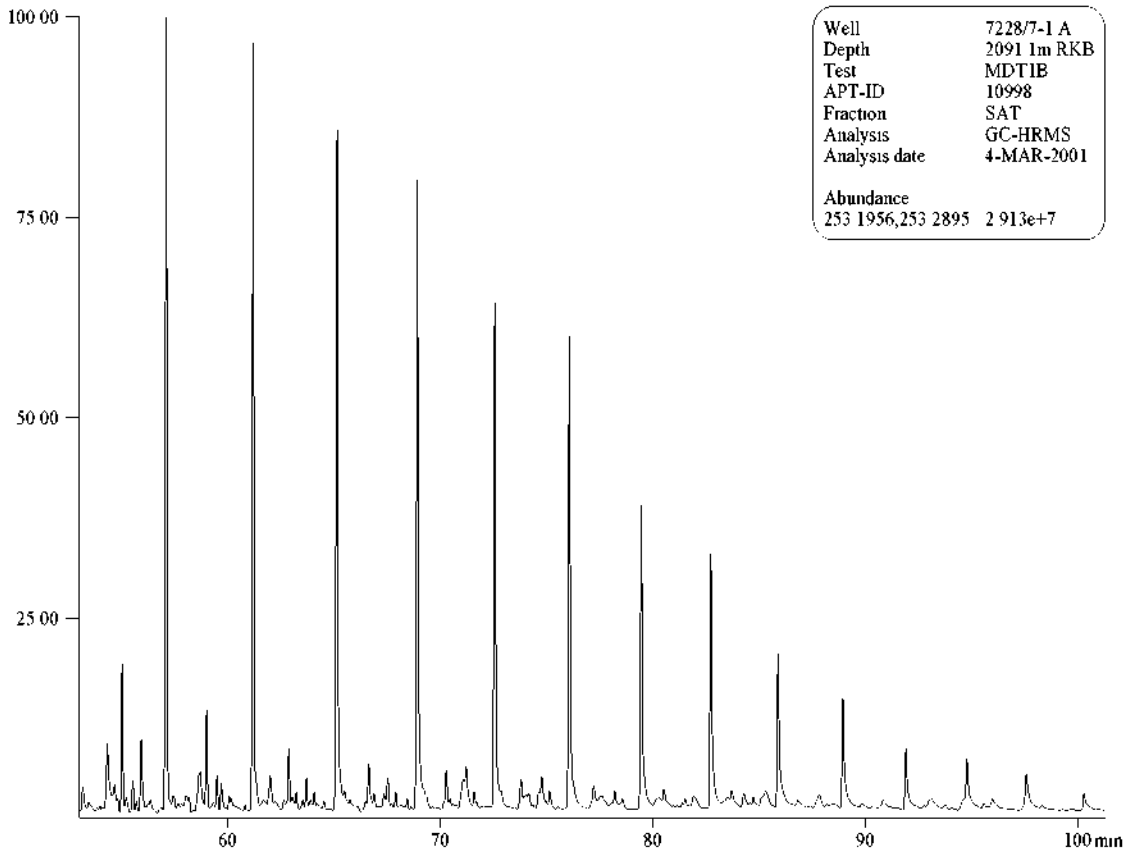

100 00
75 00
50 00
25 00
50
60
70
80
90
100
110 mn
Well 7228/7-1 A
Depth 2091 1m RKB
Test MDT1B
APT-ID 10998
Fraction SAT
Analysis GC-HRMS
Analysis date 2-MAR-2001
Abundance
191 1800 2 243e+7

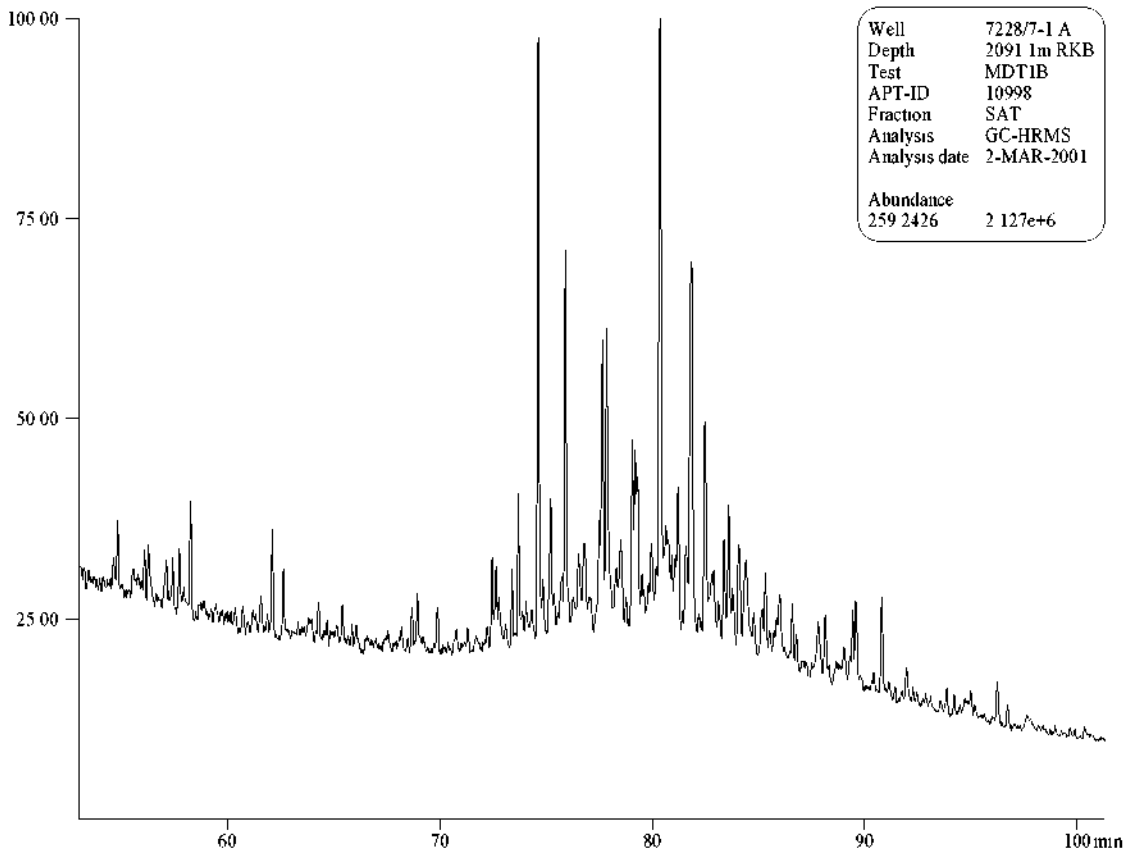

100 00
75 00
50 00
25 00
50
60
70
80
90
100
110 mn
Well 7228/7-1 A
Depth 2091 1m RKB
Test MDT1B
APT-ID 10998
Fraction SAT
Analysis GC-HRMS
Analysis date 2-MAR-2001
Abundance
205 1956 4 028e+6

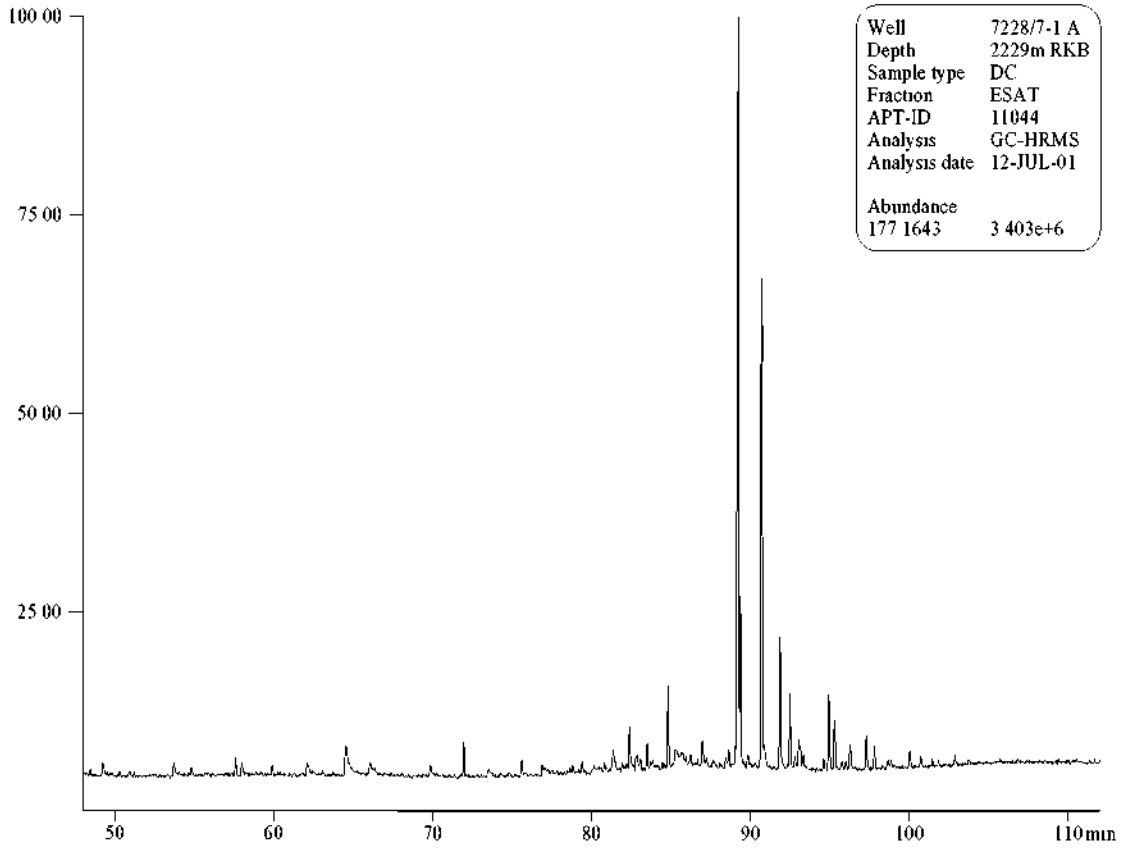

100 00
75 00
50 00
25 00
60
70
80
90
100 mn
Well 7228/7-1 A
Depth 2091 1m RKB
Test MDT1B
APT-ID 10998
Fraction SAT
Analysis GC-HRMS
Analysis date 2-MAR-2001
Abundance
217 1956 4 295e+6

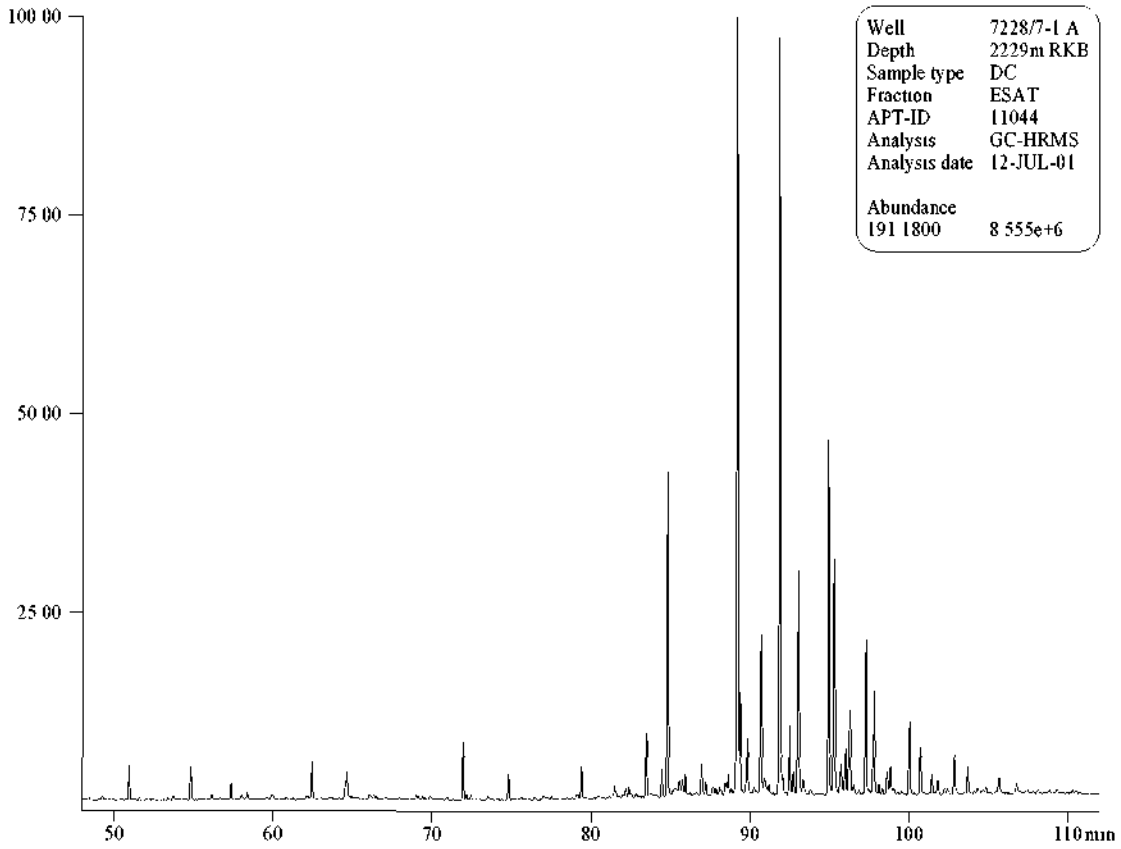

100 00
75 00
50 00
25 00
60
70
80
90
100 mn
Well 7228/7-1 A
Depth 2091 1m RKB
Test MDT1B
APT-ID 10998
Fraction SAT
Analysis GC-HRMS
Analysis date 2-MAR-2001
Abundance
218 2035 2 242e+6

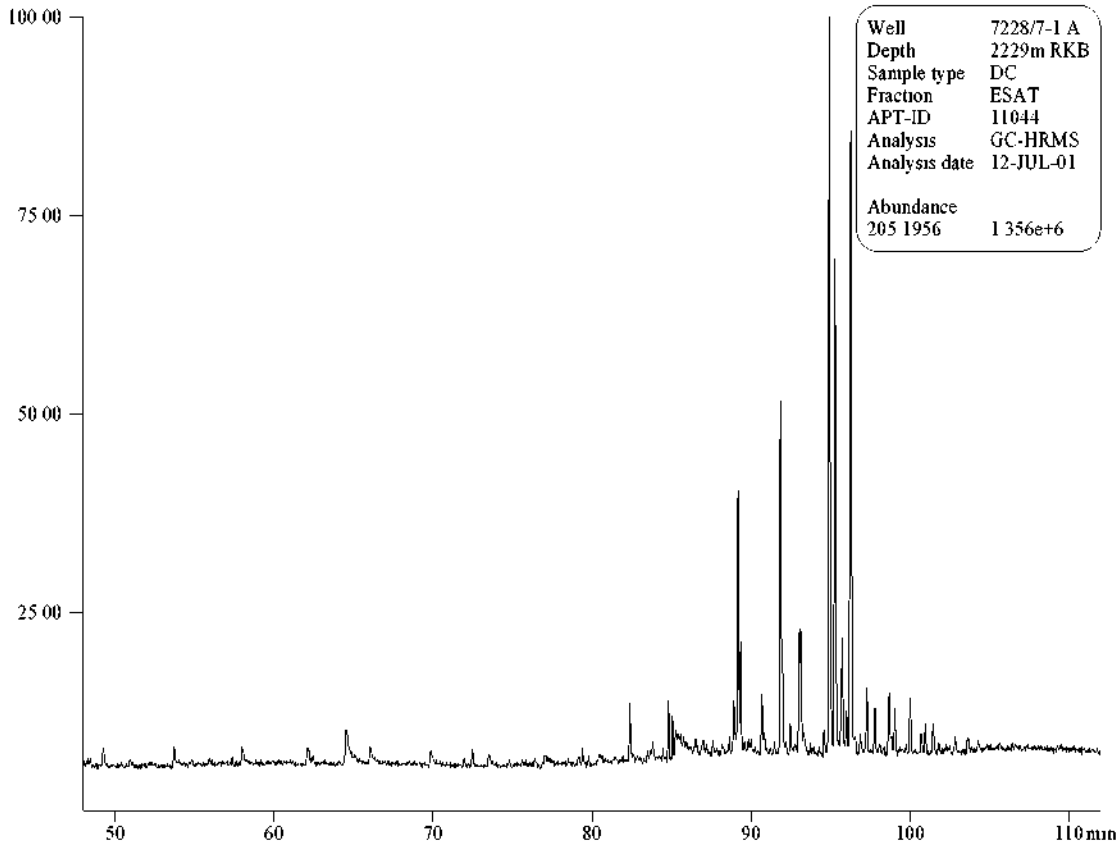

100 00
75 00
50 00
25 00
60
70
80
90
100 mn
Well 7228/7-1 A
Depth 2091 1m RKB
Test MDT1B
APT-ID 10998
Fraction SAT
Analysis GC-HRMS
Analysis date 2-MAR-2001
Abundance
231 2113 2 377e+6

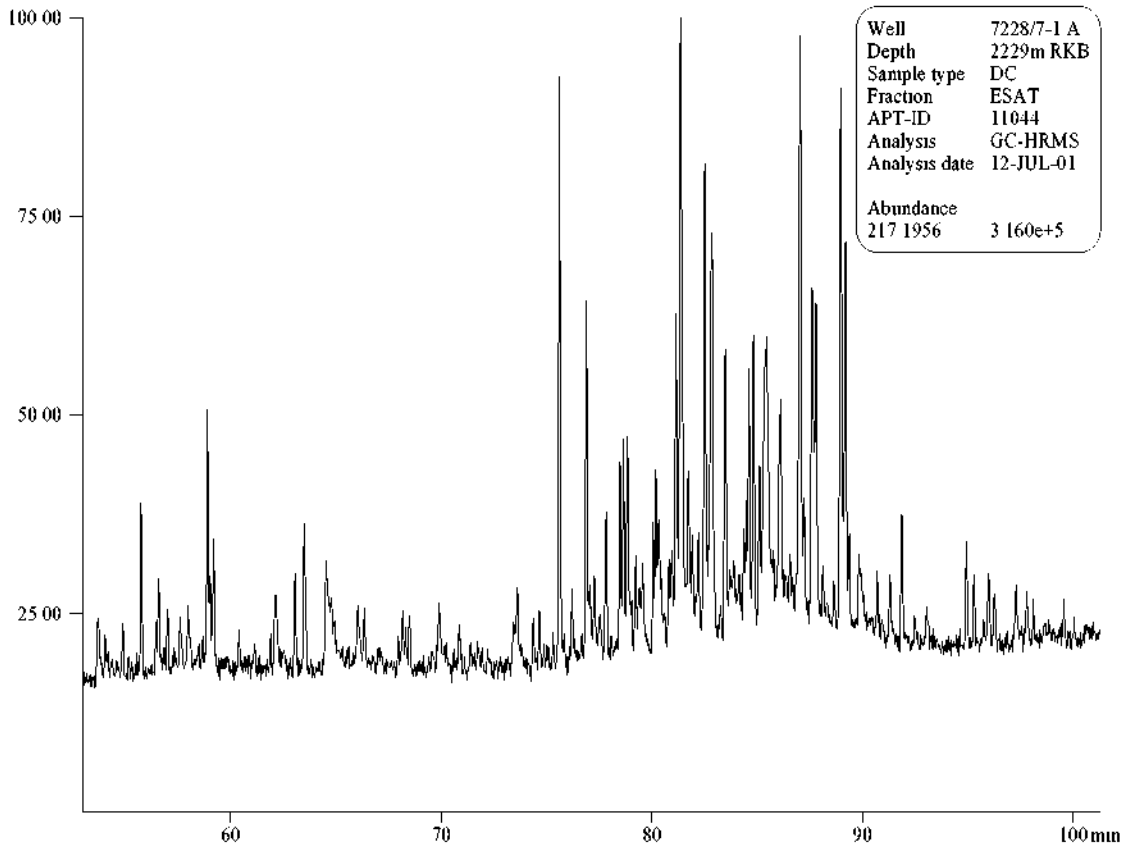

100 00
75 00
50 00
25 00
60
70
80
90
100 min
Well 7228/7-1 A
Depth 2091 1m RKB
Test MDT1B
APT-ID 10998
Fraction SAT
Analysis GC-HRMS
Analysis date 4-MAR-2001
Abundance
253 1956,253 2895 2 913e+7

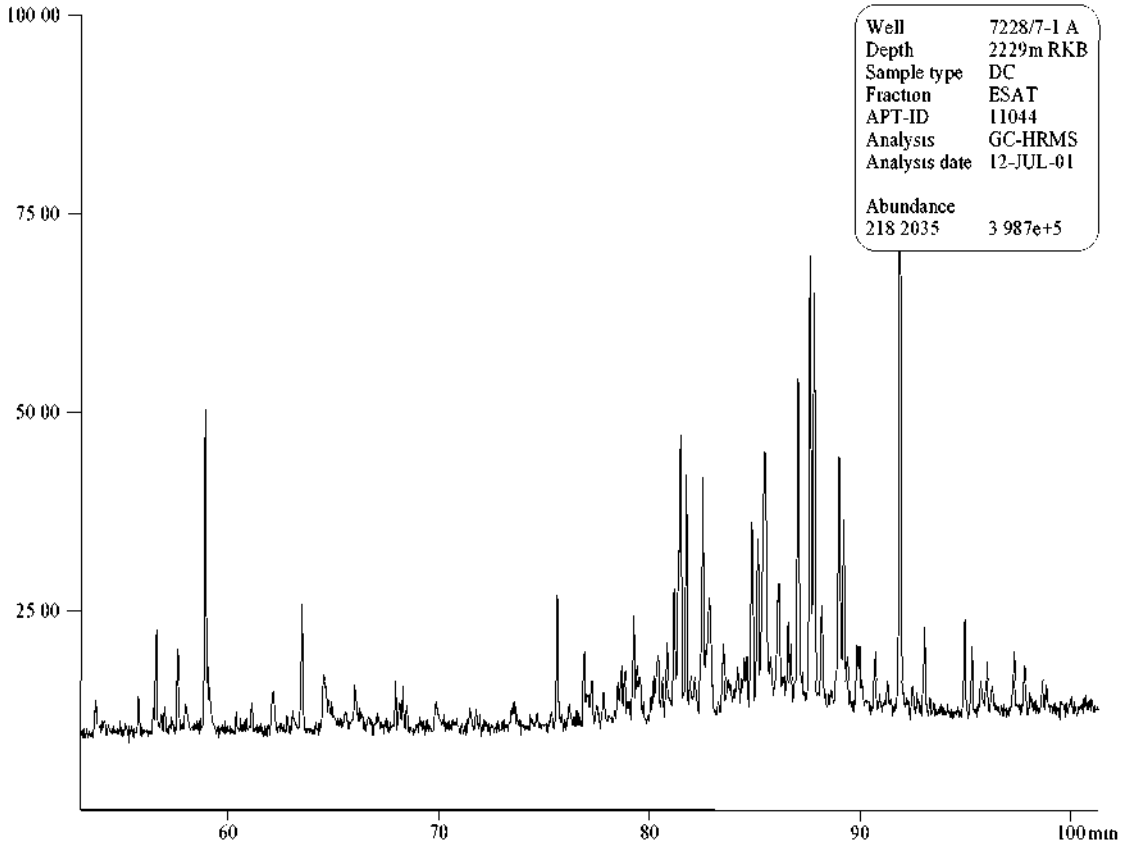

100 00
75 00
50 00
25 00
60
70
80
90
100 min
Well 7228/7-1 A
Depth 2091 1m RKB
Test MDT1B
APT-ID 10998
Fraction SAT
Analysis GC-HRMS
Analysis date 2-MAR-2001
Abundance
259 2426 2 127e+6

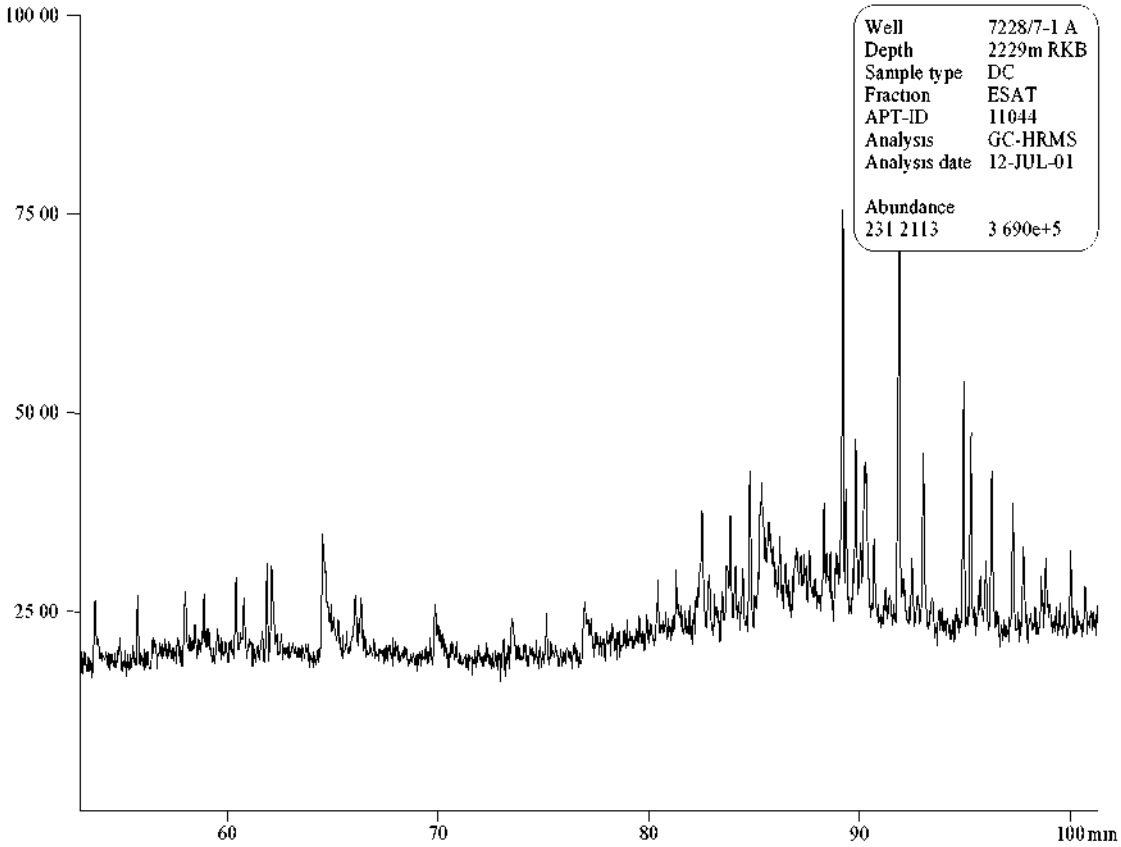

100 00
75 00
50 00
25 00
50
60
70
80
90
100
110 min
Well 7228/7-1 A
Depth 2229m RKB
Sample type DC
Fraction ESAT
APT-ID 11044
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
177 1643 3 403e+6

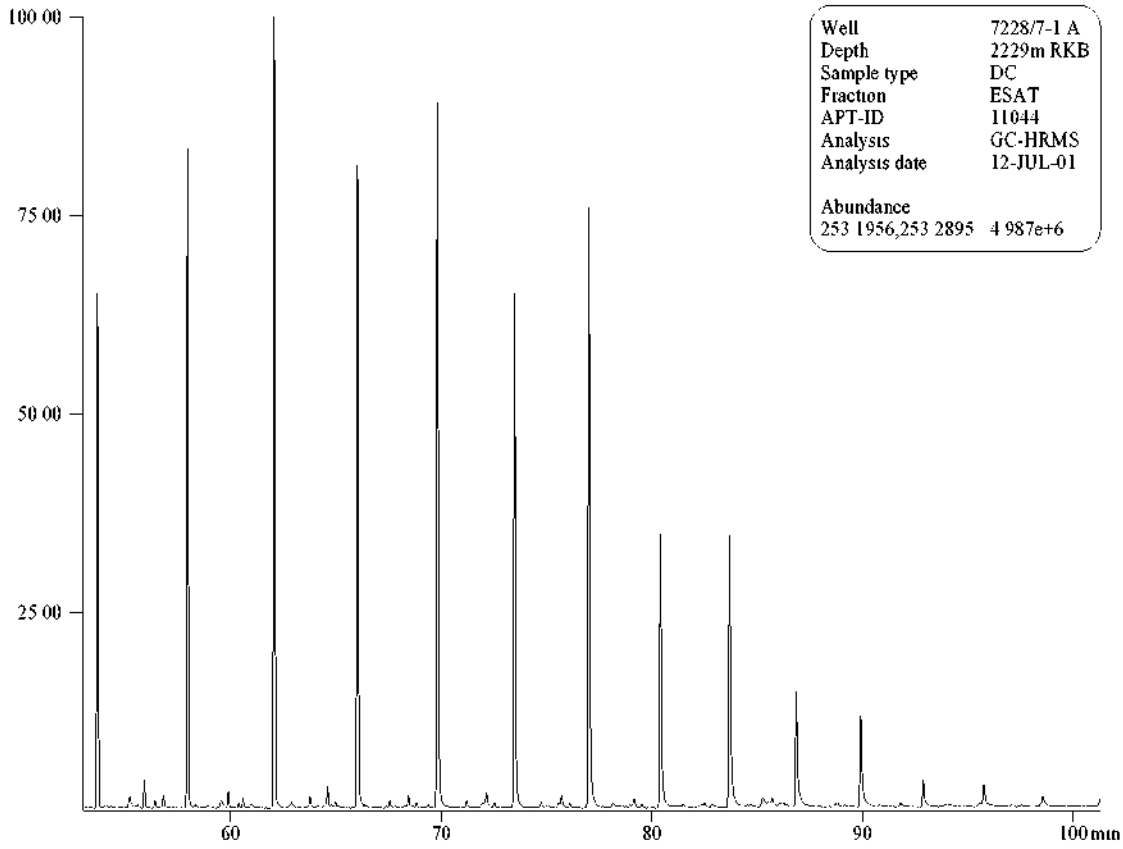

100 00
75 00
50 00
25 00
50
60
70
80
90
100
110 min
Well 7228/7-1 A
Depth 2229m RKB
Sample type DC
Fraction ESAT
APT-ID 11044
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
191 1800 8 555e+6

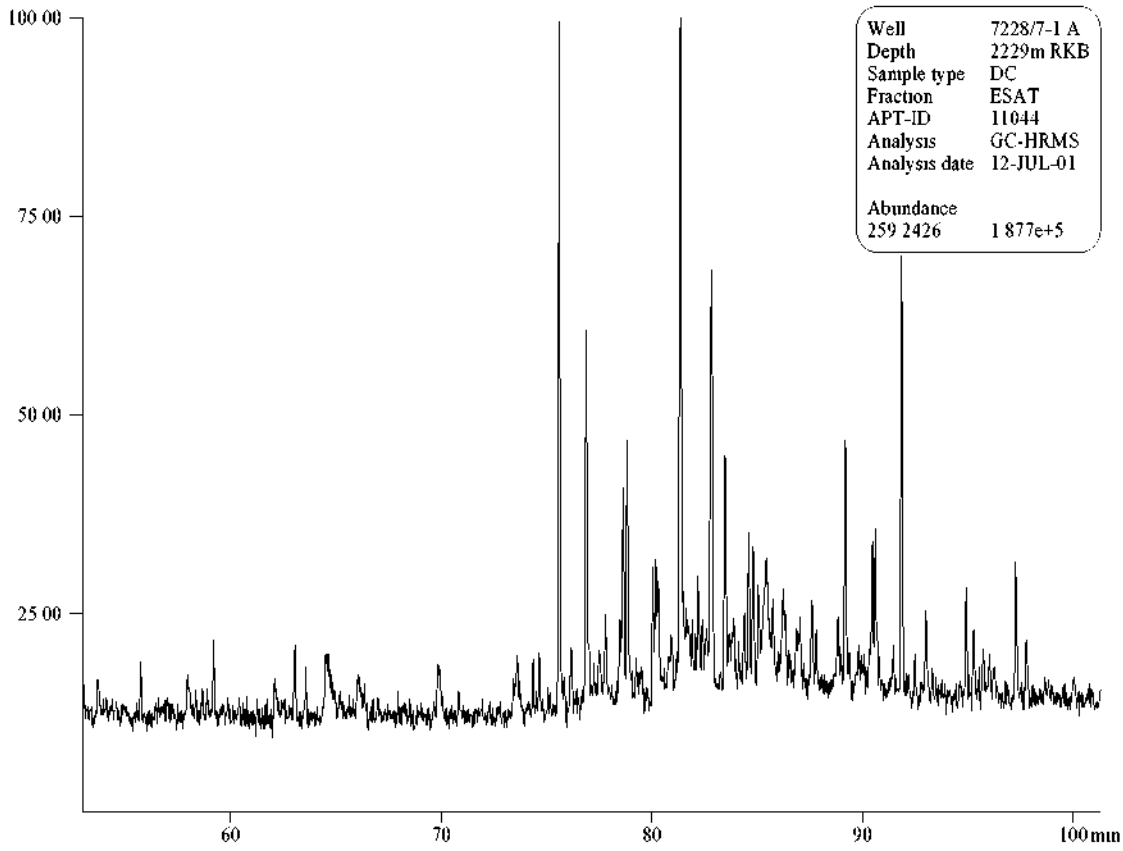

100 00
75 00
50 00
25 00
50
60
70
80
90
100
110 min
Well 7228/7-1 A
Depth 2229m RKB
Sample type DC
Fraction ESAT
APT-ID 11044
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
205 1956 1 356e+6

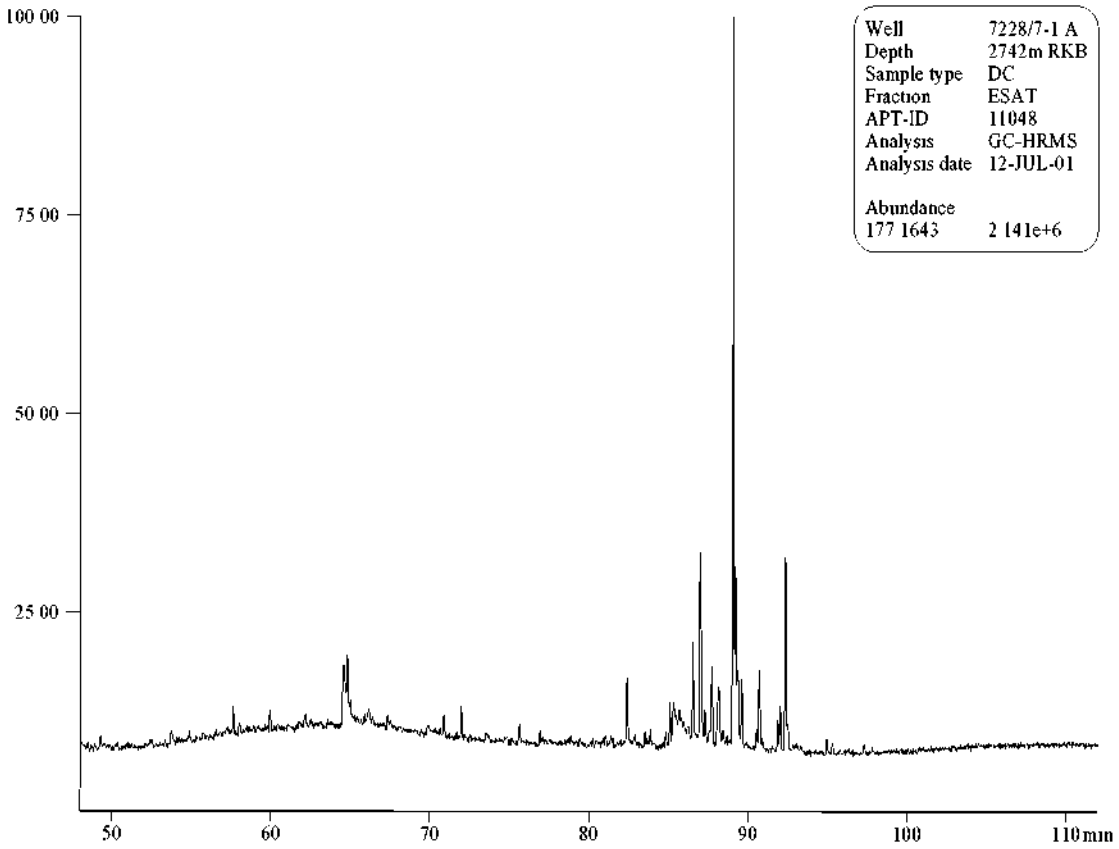

100 00
75 00
50 00
25 00
60
70
80
90
100 min
Well 7228/7-1 A
Depth 2229m RKB
Sample type DC
Fraction ESAT
APT-ID 11044
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
217 1956 3 160e+5

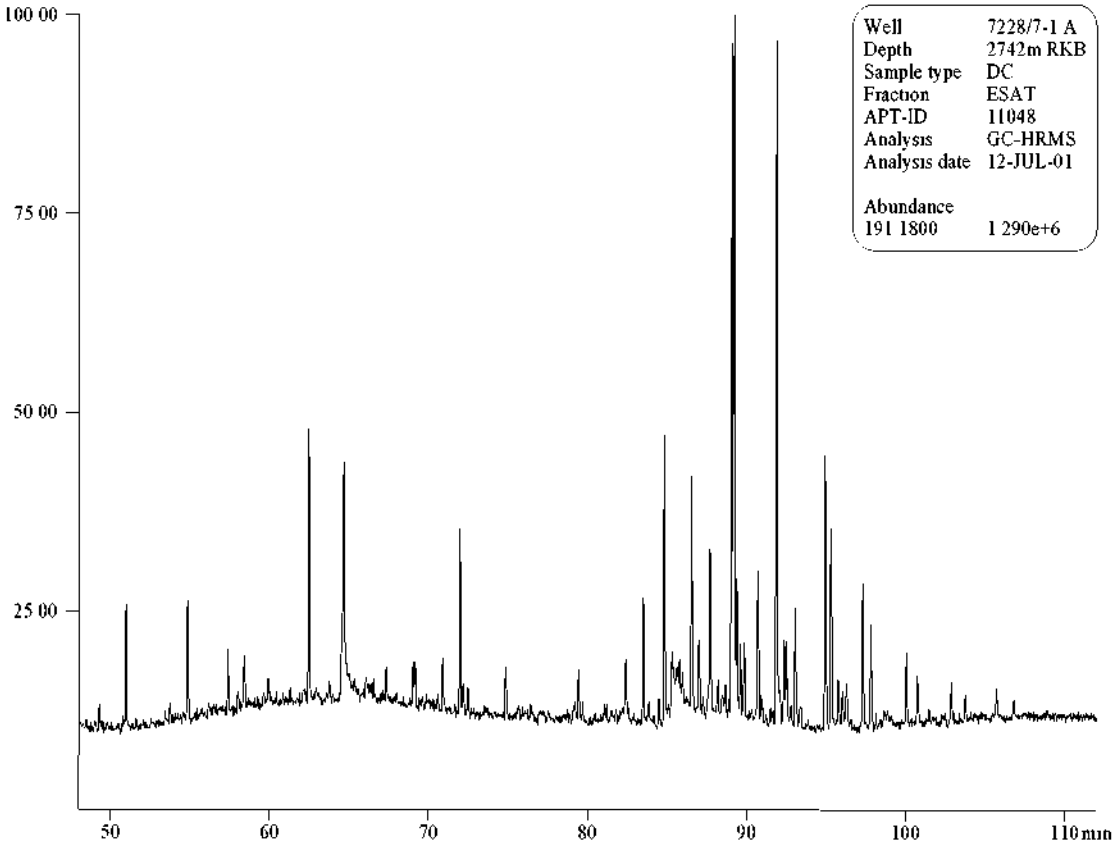

100 00
75 00
50 00
25 00
60
70
80
90
100 min
Well 7228/7-1 A
Depth 2229m RKB
Sample type DC
Fraction ESAT
APT-ID 11044
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
218 2035 3 987e+5

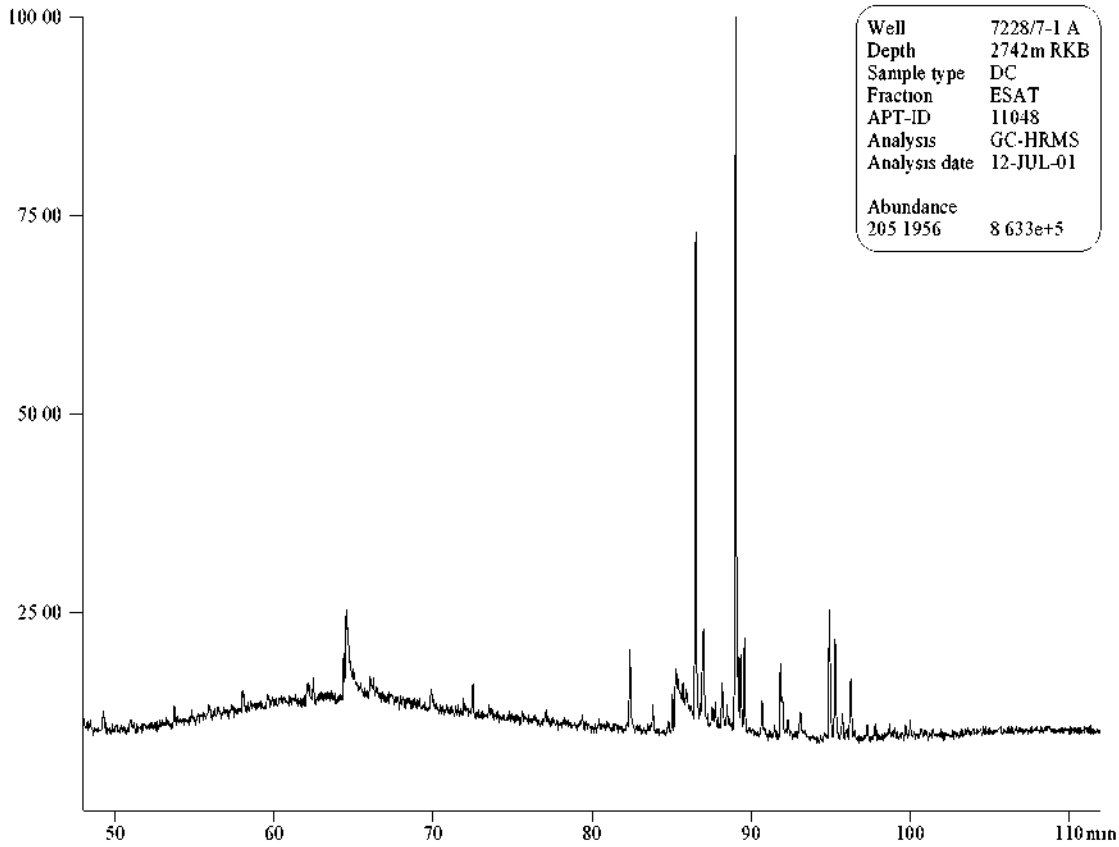

100 00
75 00
50 00
25 00
60
70
80
90
100 min
Well 7228/7-1 A
Depth 2229m RKB
Sample type DC
Fraction ESAT
APT-ID 11044
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
231 2113 3 690e+5

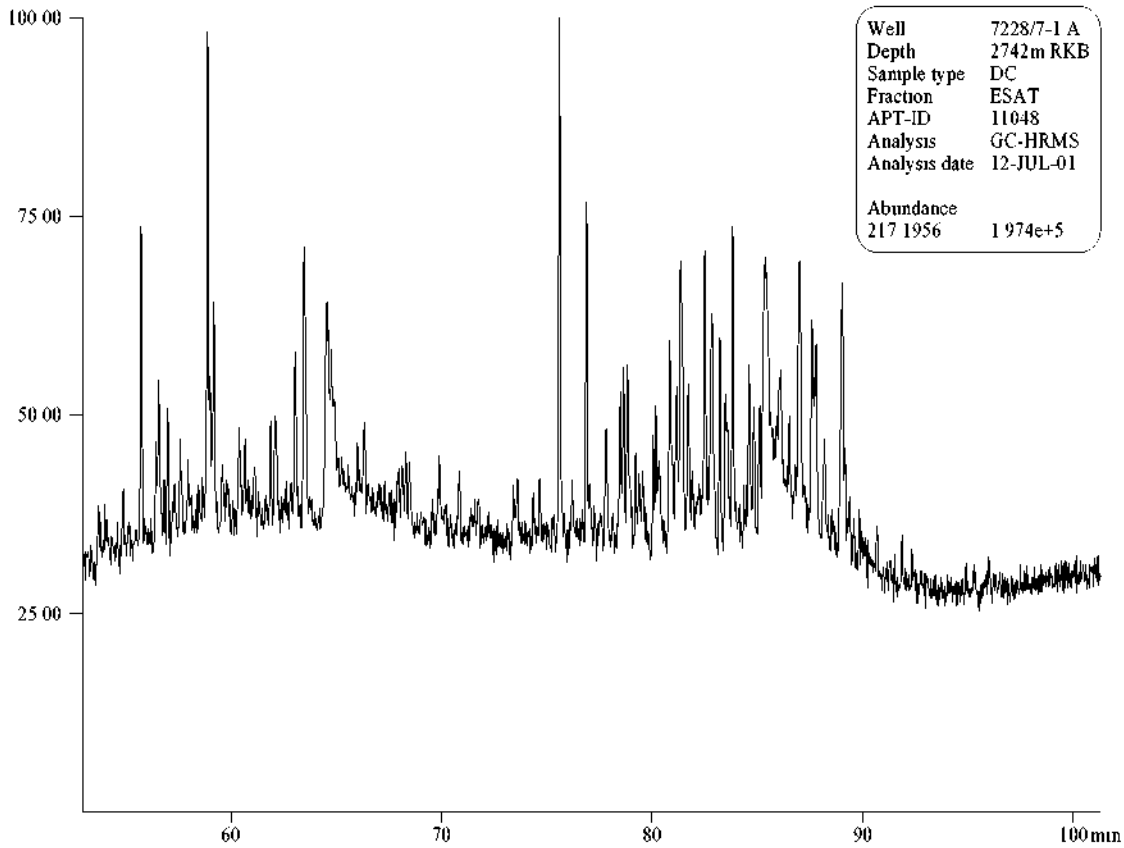

100 00
75 00
50 00
25 00
60
70
80
90
100 min
Well 7228/7-1 A
Depth 2229m RKB
Sample type DC
Fraction ESAT
APT-ID 11044
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
253 1956,253 2895 4 987e+6

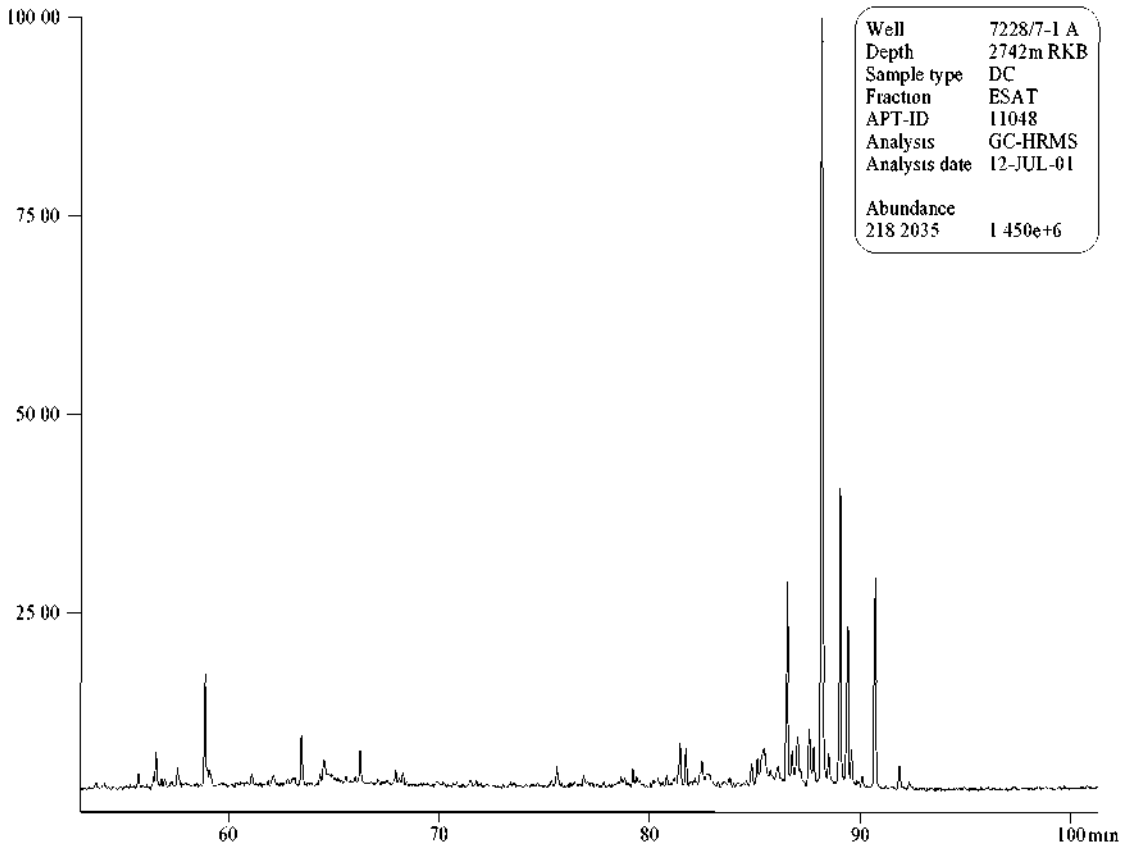

100 00
75 00
50 00
25 00
60
70
80
90
100 min
Well 7228/7-1 A
Depth 2229m RKB
Sample type DC
Fraction ESAT
APT-ID 11044
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
259 2426 1 877e+5

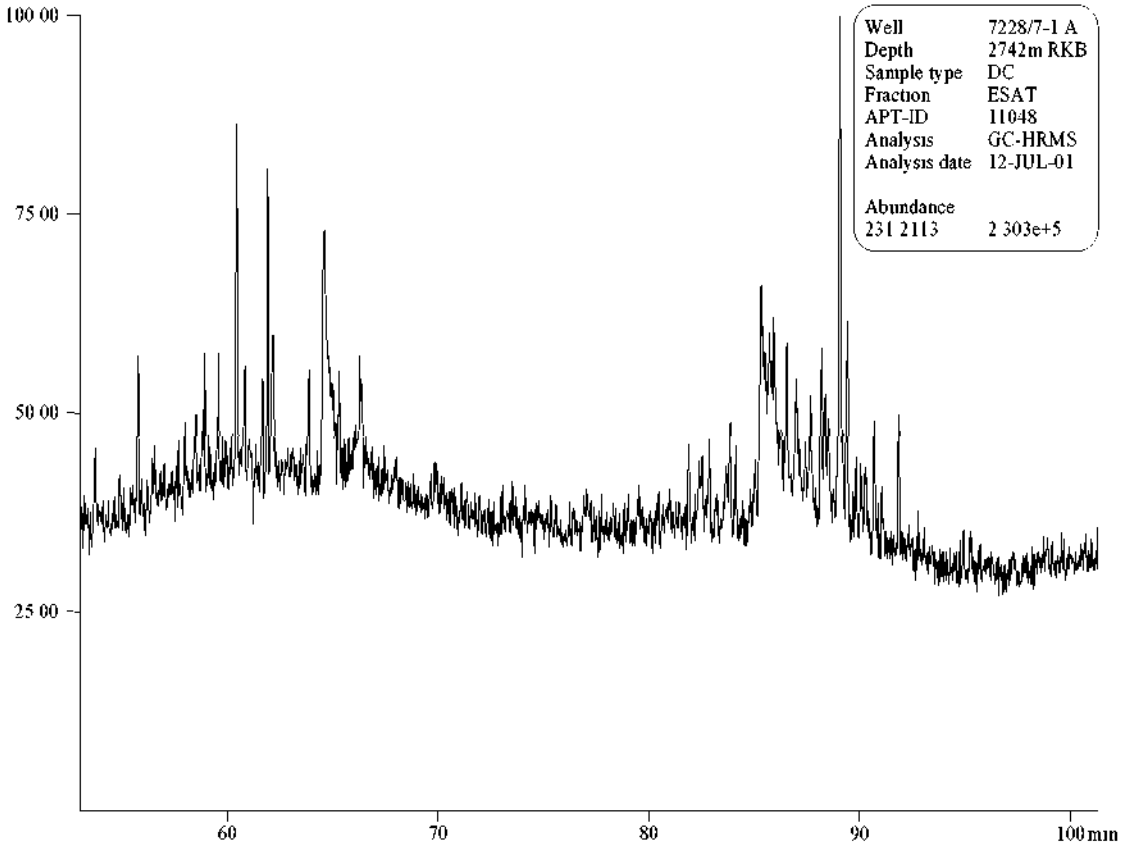

100 00
75 00
50 00
25 00
50
60
70
80
90
100
110 min
Well 7228/7-1 A
Depth 2742m RKB
Sample type DC
Fraction ESAT
APT-ID 11048
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
177 1643 2 141e+6

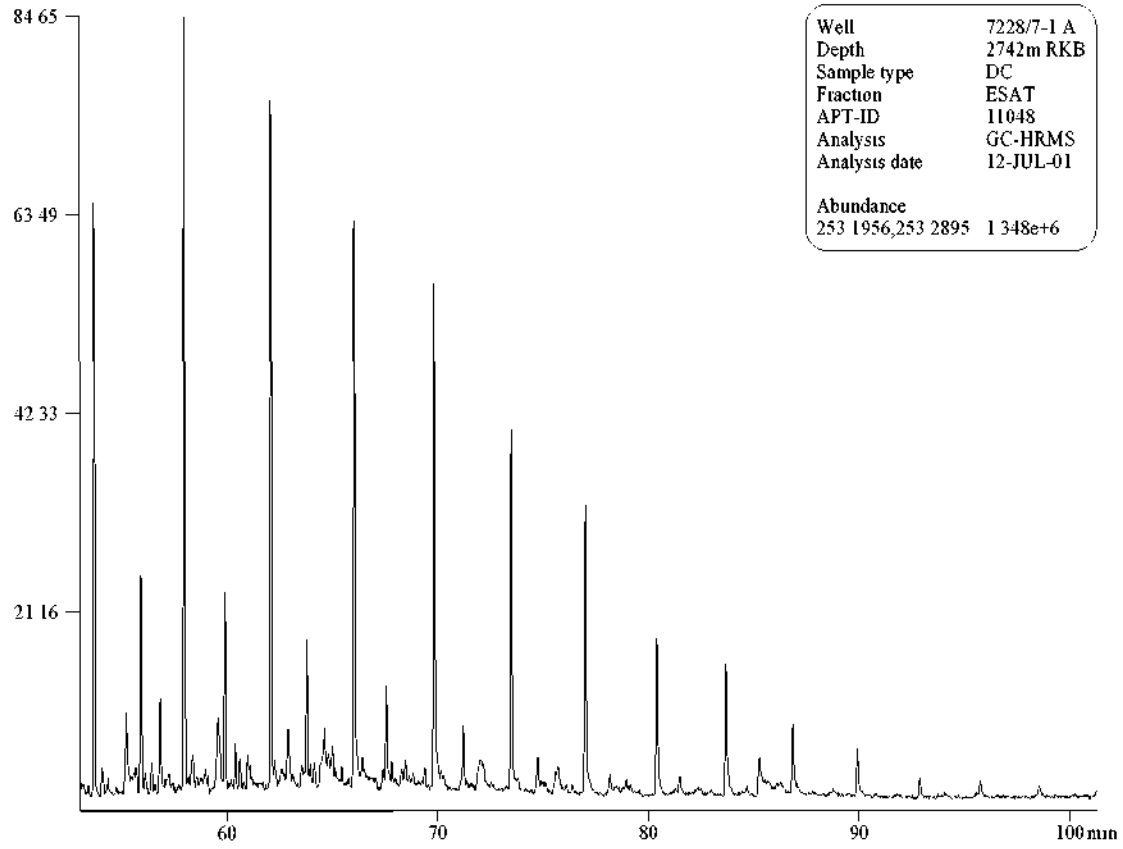

100 00
75 00
50 00
25 00
50
60
70
80
90
100
110 min
Well 7228/7-1 A
Depth 2742m RKB
Sample type DC
Fraction ESAT
APT-ID 11048
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
191 1800 1 290e+6

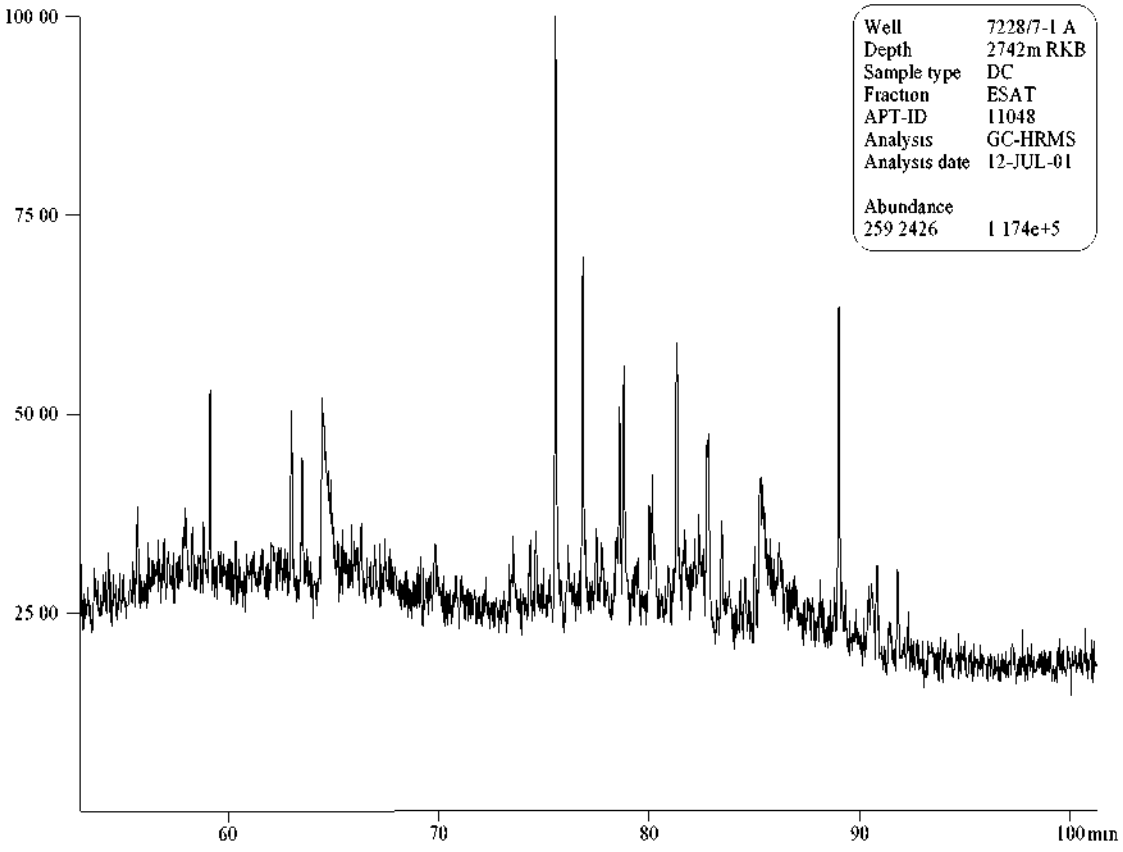

100 00
75 00
50 00
25 00
50
60
70
80
90
100
110 min
Well 7228/7-1 A
Depth 2742m RKB
Sample type DC
Fraction ESAT
APT-ID 11048
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
205 1956 8 633e+5

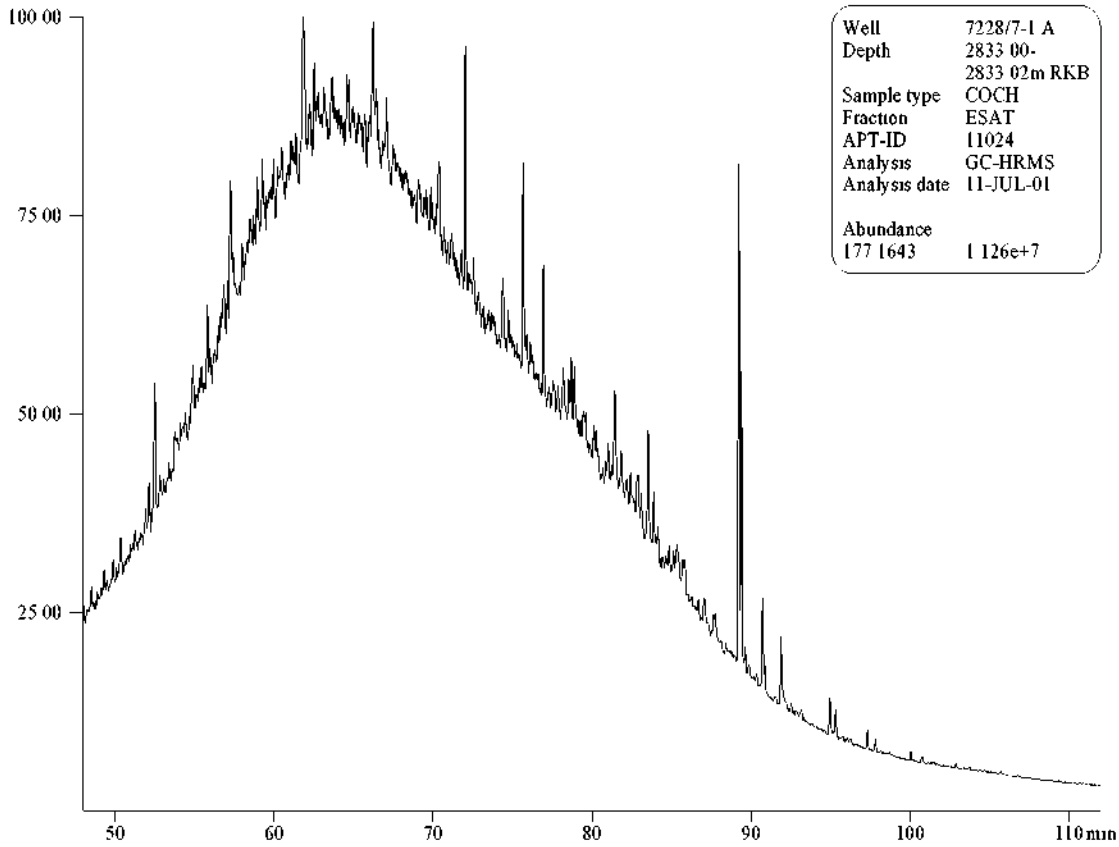

100 00
75 00
50 00
25 00
60
70
80
90
100 min
Well 7228/7-1 A
Depth 2742m RKB
Sample type DC
Fraction ESAT
APT-ID 11048
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
217 1956 1 974e+5

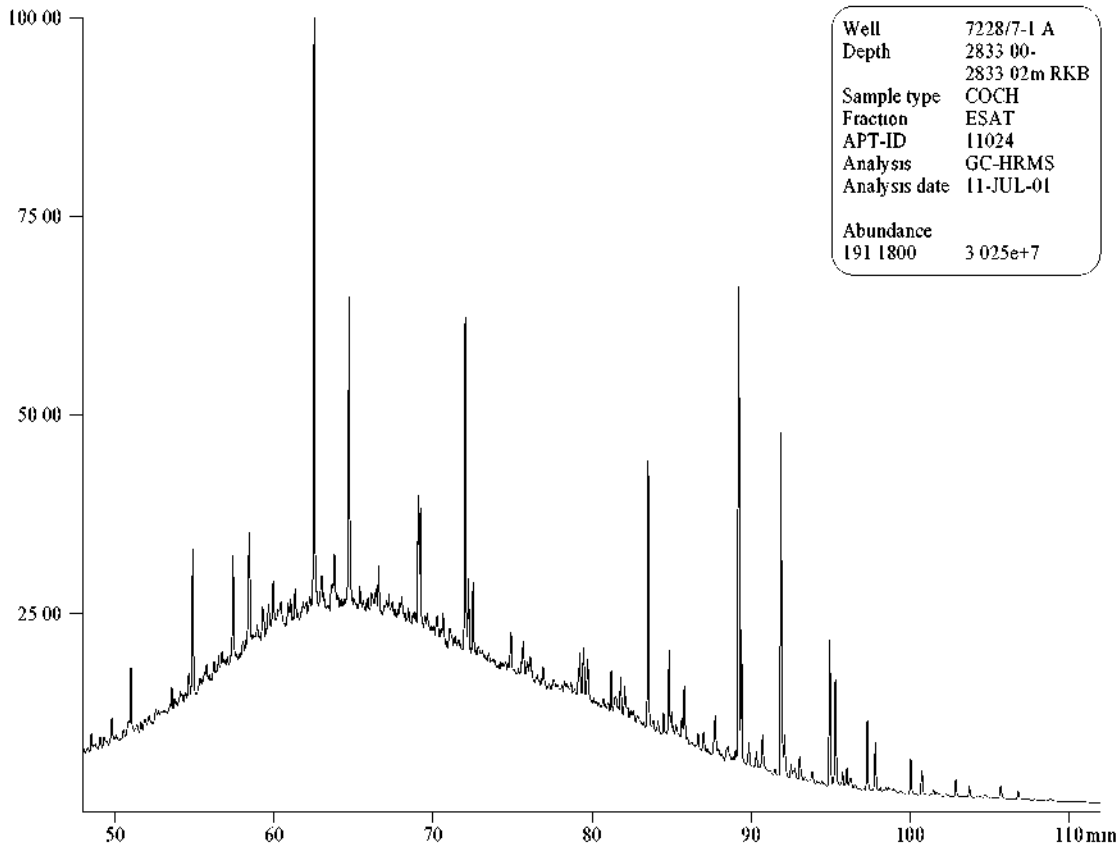

100 00
75 00
50 00
25 00
60
70
80
90
100 min
Well 7228/7-1 A
Depth 2742m RKB
Sample type DC
Fraction ESAT
APT-ID 11048
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
218 2035 1 450e+6

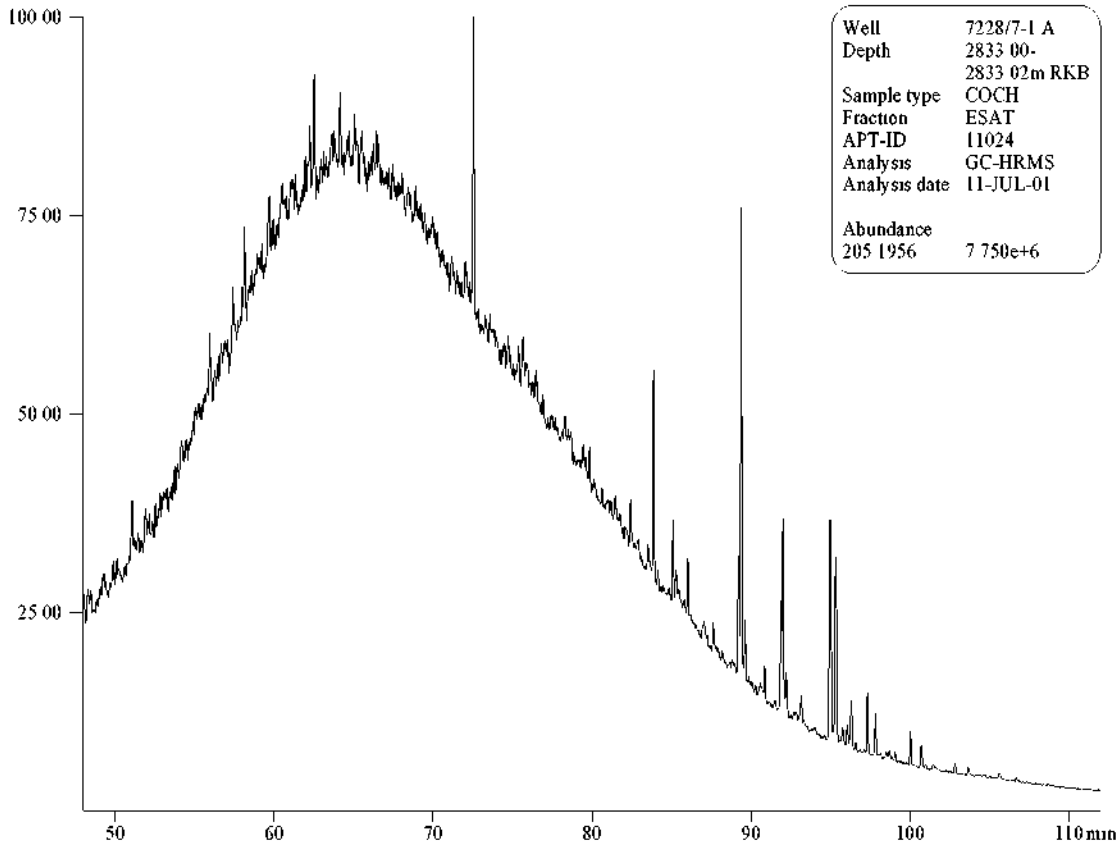

100 00
75 00
50 00
25 00
60
70
80
90
100 min
Well 7228/7-1 A
Depth 2742m RKB
Sample type DC
Fraction ESAT
APT-ID 11048
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
231 2113 2 303e+5

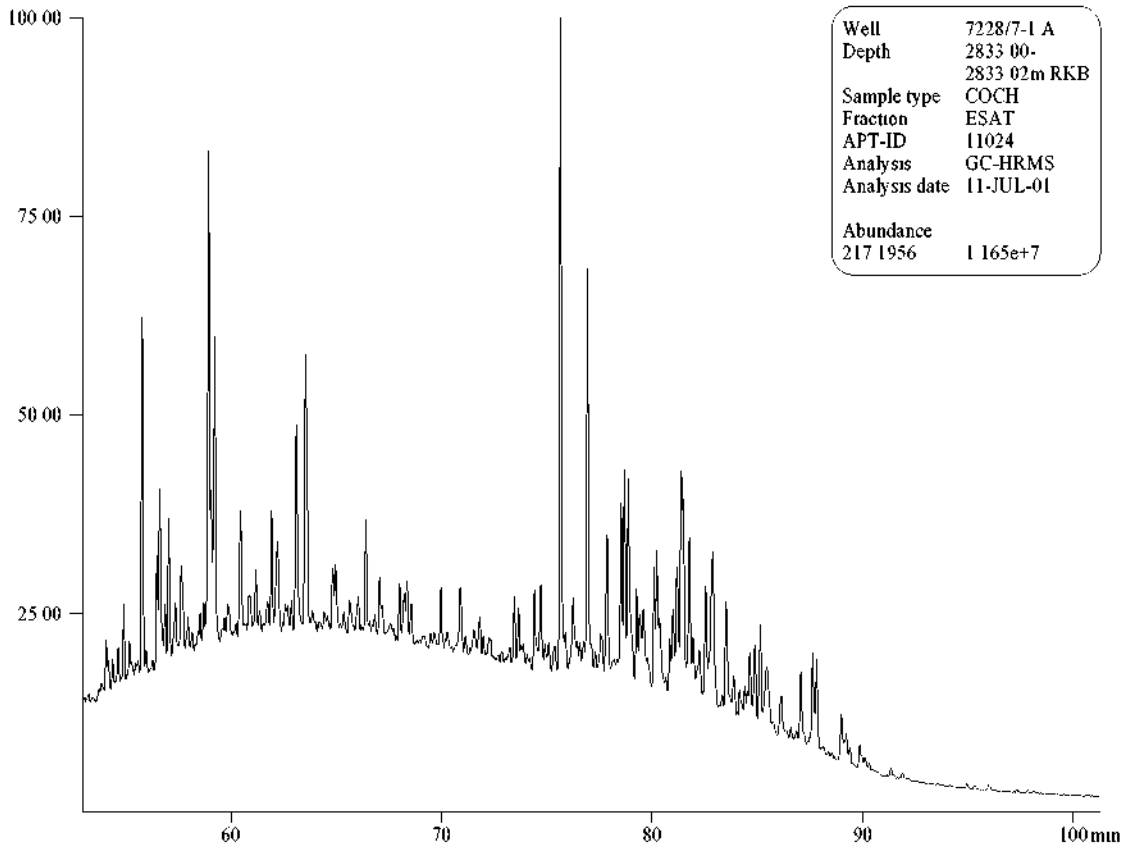

84 65
63 49
42 33
21 16
60
70
80
90
100 min
Well 7228/7-1 A
Depth 2742m RKB
Sample type DC
Fraction ESAT
APT-ID 11048
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
253 1956,253 2895 1 348e+6

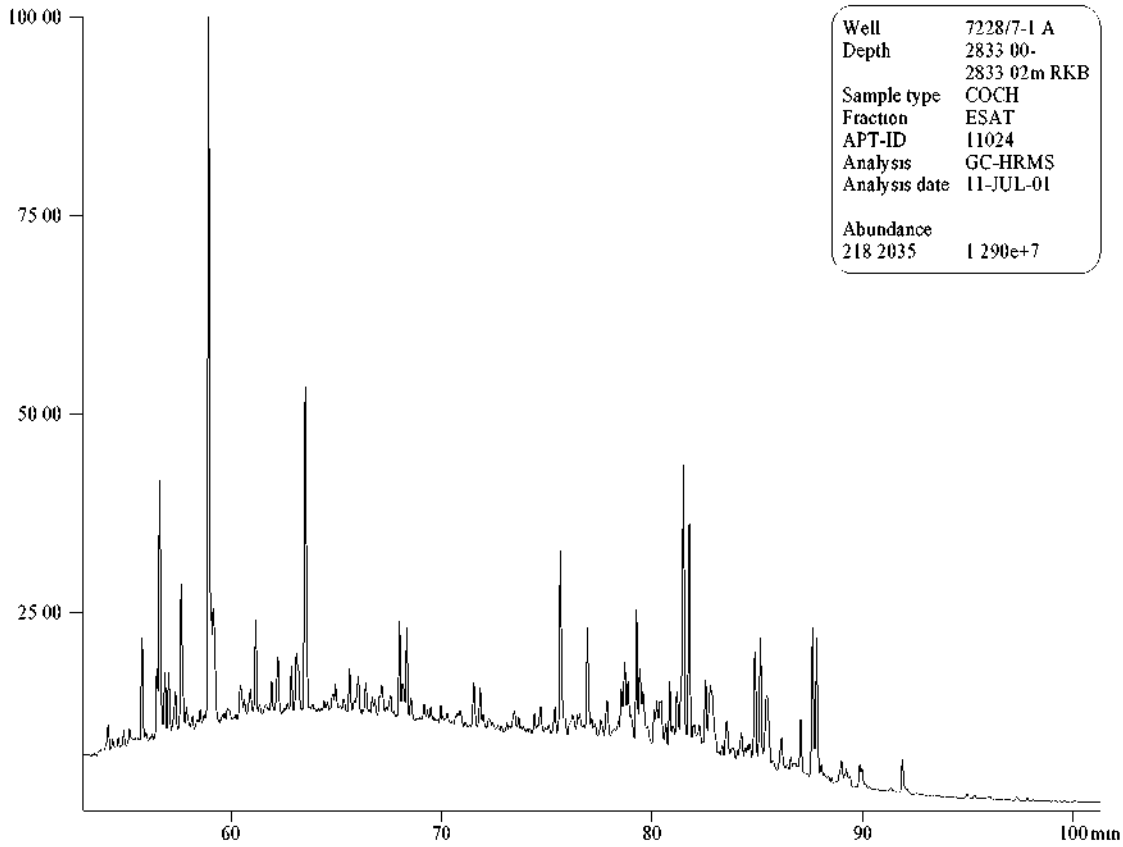

100 00
75 00
50 00
25 00
60
70
80
90
100 min
Well 7228/7-1 A
Depth 2742m RKB
Sample type DC
Fraction ESAT
APT-ID 11048
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
259 2426 1 174e+5

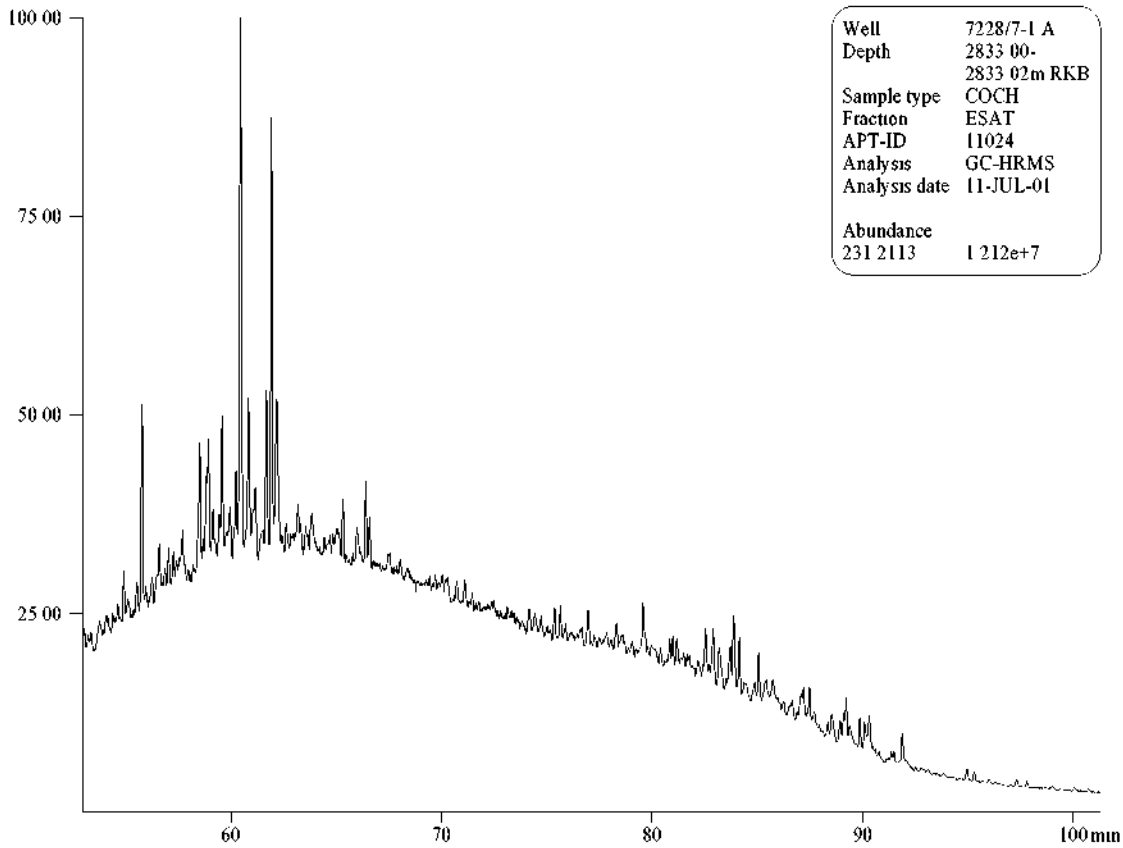

100 00
75 00
50 00
25 00
50
60
70
80
90
100
110 min
Well 7228/7-1 A
Depth 2833 00-
2833 02m RKB
Sample type COCH
Fraction ESAT
APT-ID 11024
Analysis GC-HRMS
Analysis date 11-JUL-01
Abundance
177 1643 1 126e+7

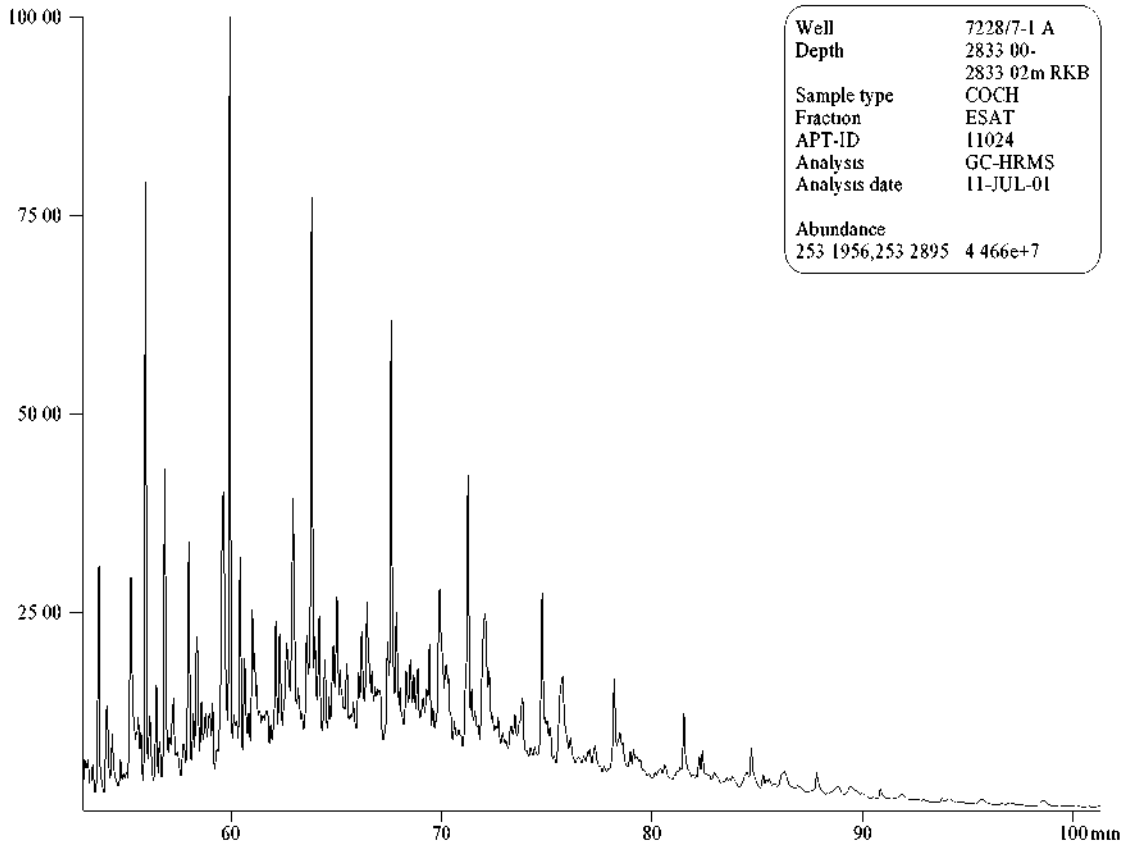

100 00
75 00
50 00
25 00
50
60
70
80
90
100
110 min
Well 7228/7-1 A
Depth 2833 00-
2833 02m RKB
Sample type COCH
Fraction ESAT
APT-ID 11024
Analysis GC-HRMS
Analysis date 11-JUL-01
Abundance
191 1800 3 025e+7

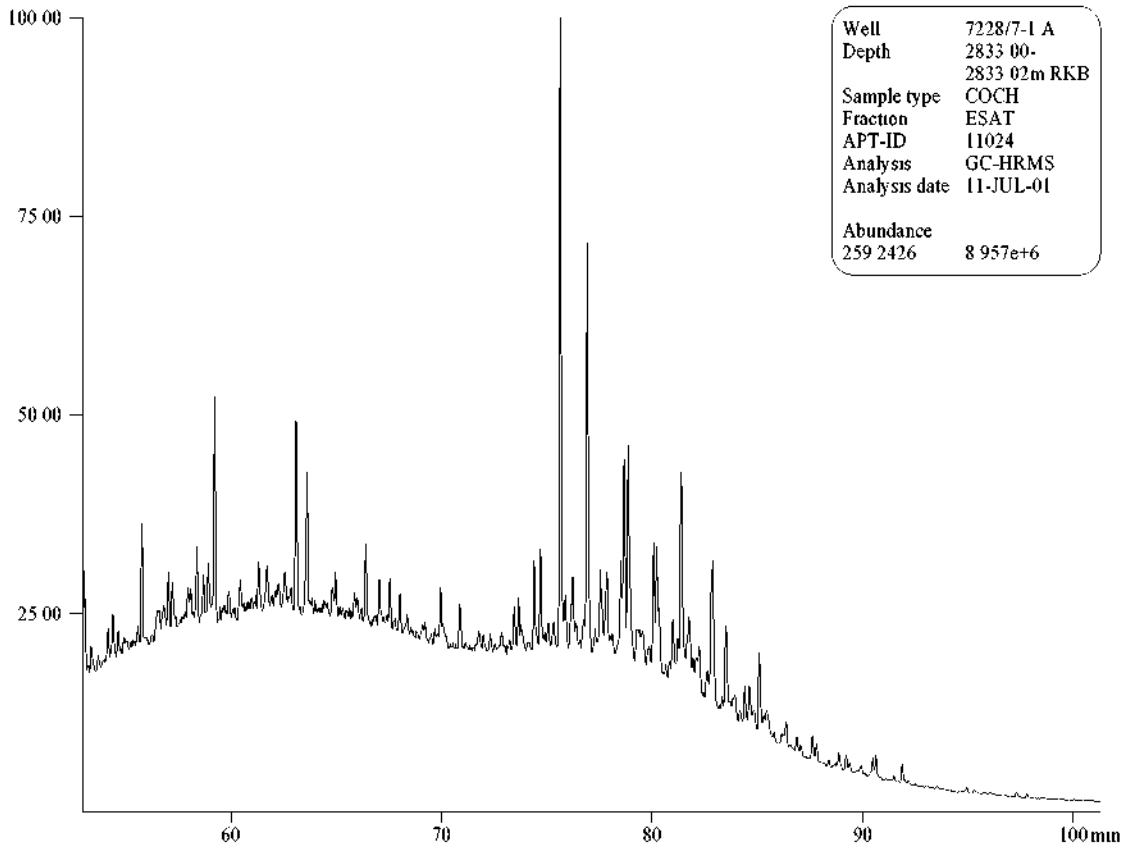

100 00
75 00
50 00
25 00
50
60
70
80
90
100
110 min
Well 7228/7-1 A
Depth 2833 00-
2833 02m RKB
Sample type COCH
Fraction ESAT
APT-ID 11024
Analysis GC-HRMS
Analysis date 11-JUL-01
Abundance
205 1956 7 750e+6

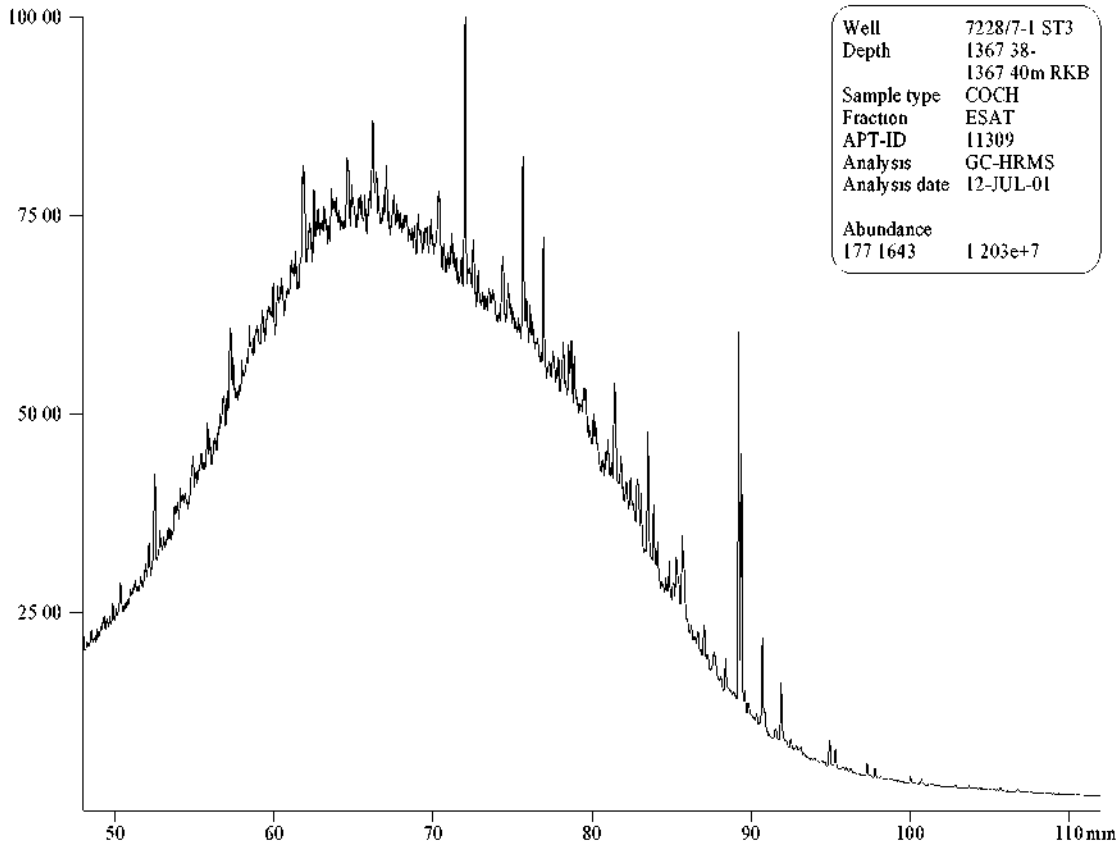

100 00
75 00
50 00
25 00
60
70
80
90
100 min
Well 7228/7-1 A
Depth 2833 00-
2833 02m RKB
Sample type COCH
Fraction ESAT
APT-ID 11024
Analysis GC-HRMS
Analysis date 11-JUL-01
Abundance
217 1956 1 165e+7

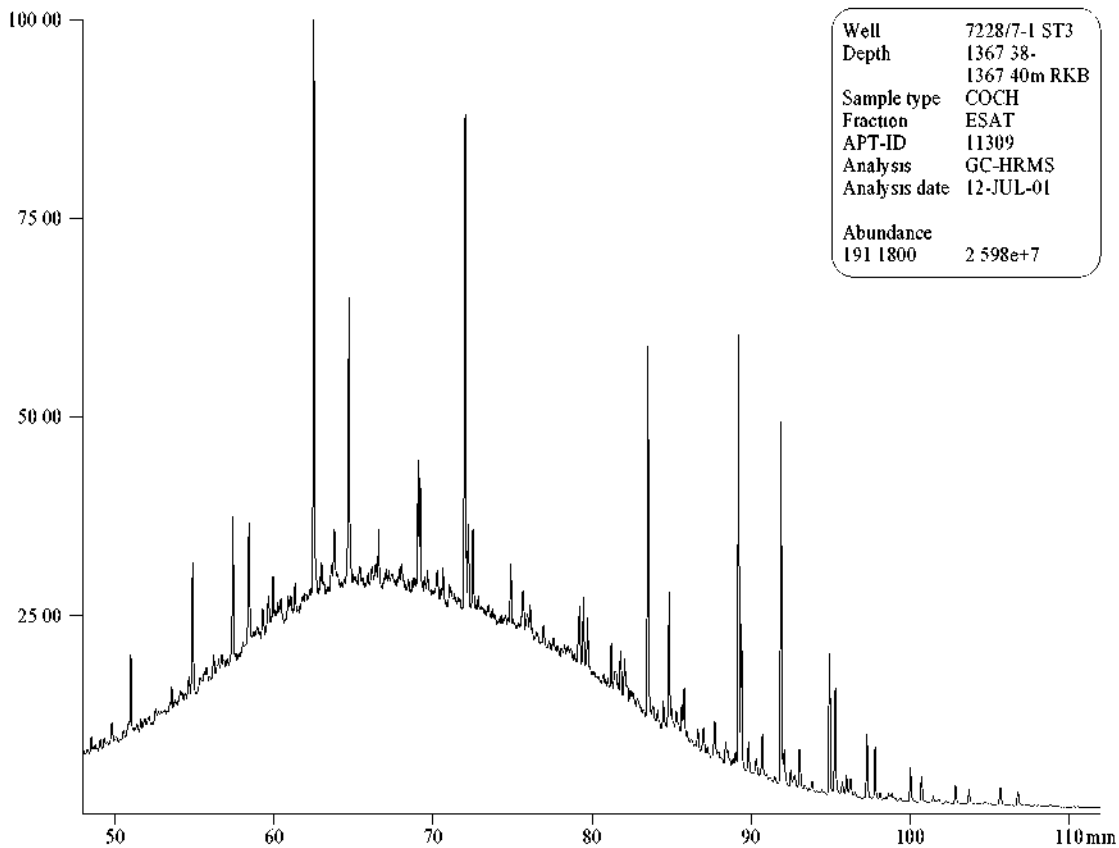

100 00
75 00
50 00
25 00
60
70
80
90
100 min
Well 7228/7-1 A
Depth 2833 00-2833 02m RKB
Sample type COCH
Fraction ESAT
APT-ID 11024
Analysis GC-HRMS
Analysis date 11-JUL-01
Abundance
218 2035 1 290e+7

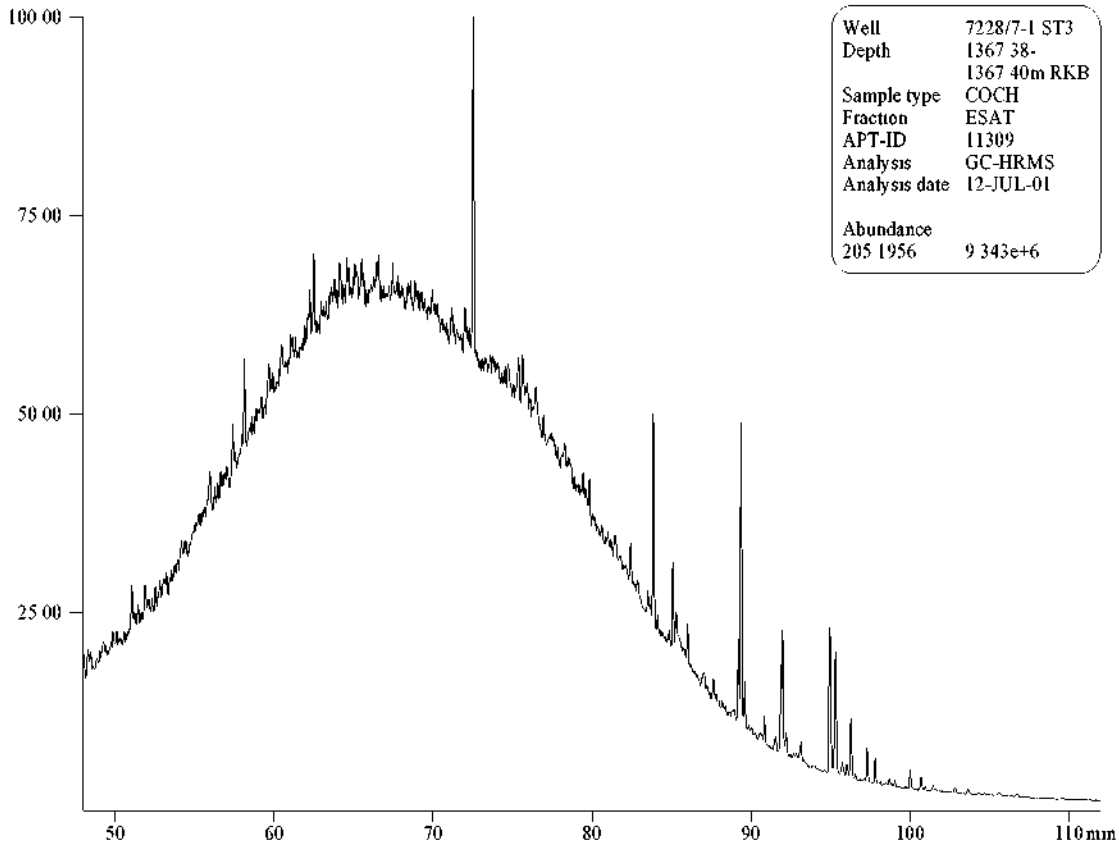

100 00
75 00
50 00
25 00
60
70
80
90
100 min
Well 7228/7-1 A
Depth 2833 00-2833 02m RKB
Sample type COCH
Fraction ESAT
APT-ID 11024
Analysis GC-HRMS
Analysis date 11-JUL-01
Abundance
231 2113 1 212e+7

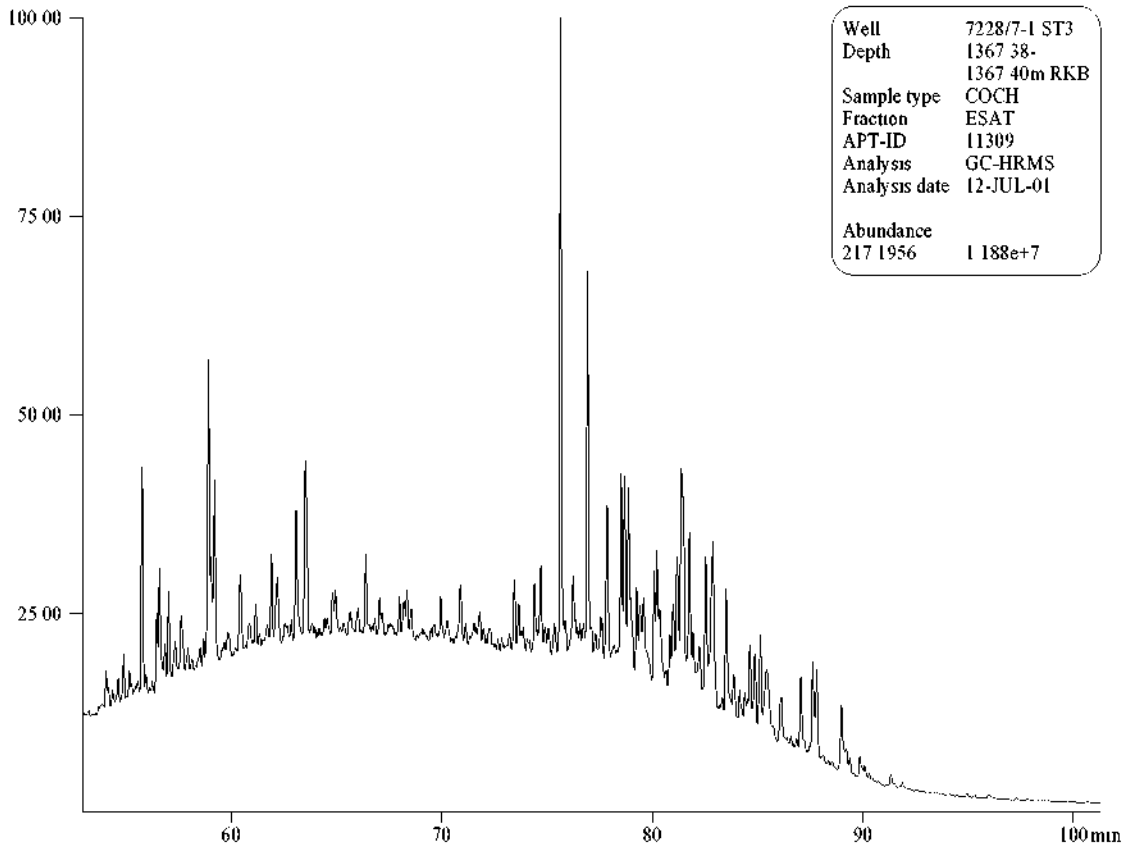

100 00
75 00
50 00
25 00
60
70
80
90
100 min
Well 7228/7-1 A
Depth 2833 00-2833 02m RKB
Sample type COCH
Fraction ESAT
APT-ID 11024
Analysis GC-HRMS
Analysis date 11-JUL-01
Abundance
253 1956,253 2895 4 466e+7

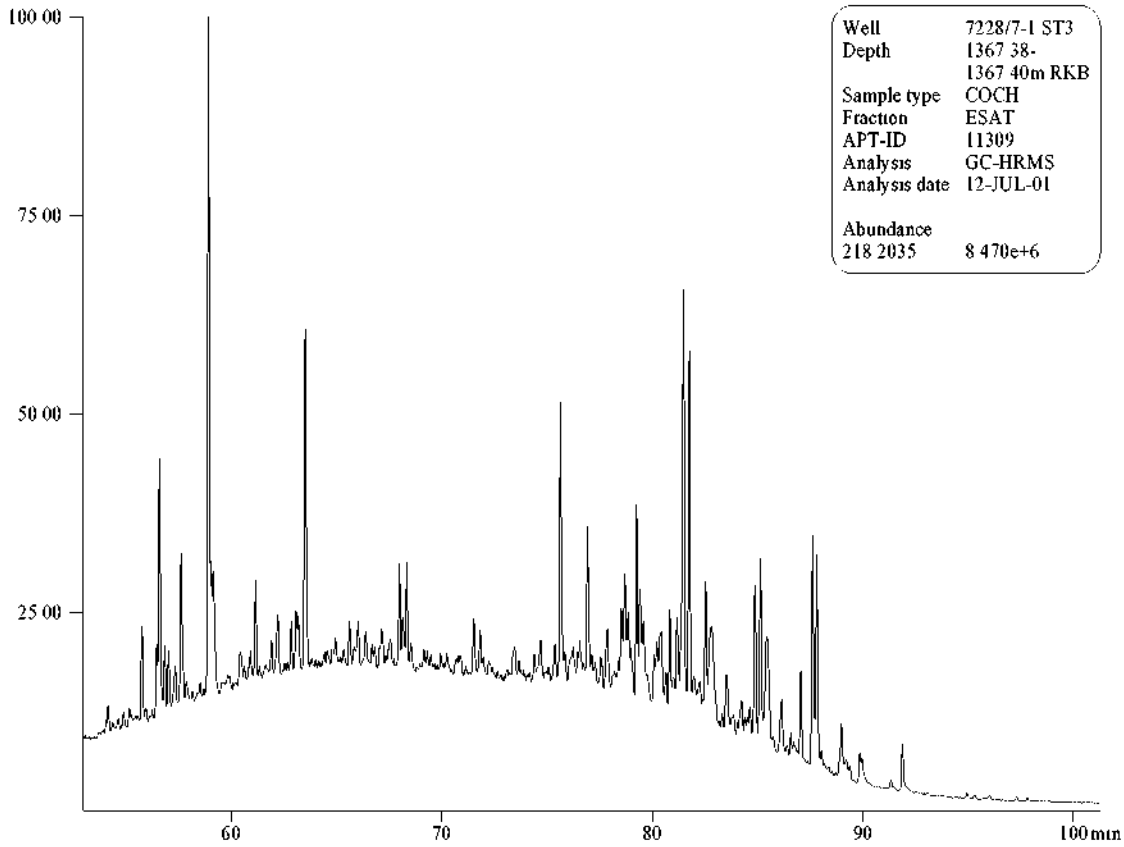

100 00
75 00
50 00
25 00
60
70
80
90
100 min
Well 7228/7-1 A
Depth 2833 00-2833 02m RKB
Sample type COCH
Fraction ESAT
APT-ID 11024
Analysis GC-HRMS
Analysis date 11-JUL-01
Abundance
259 2426 8 957e+6

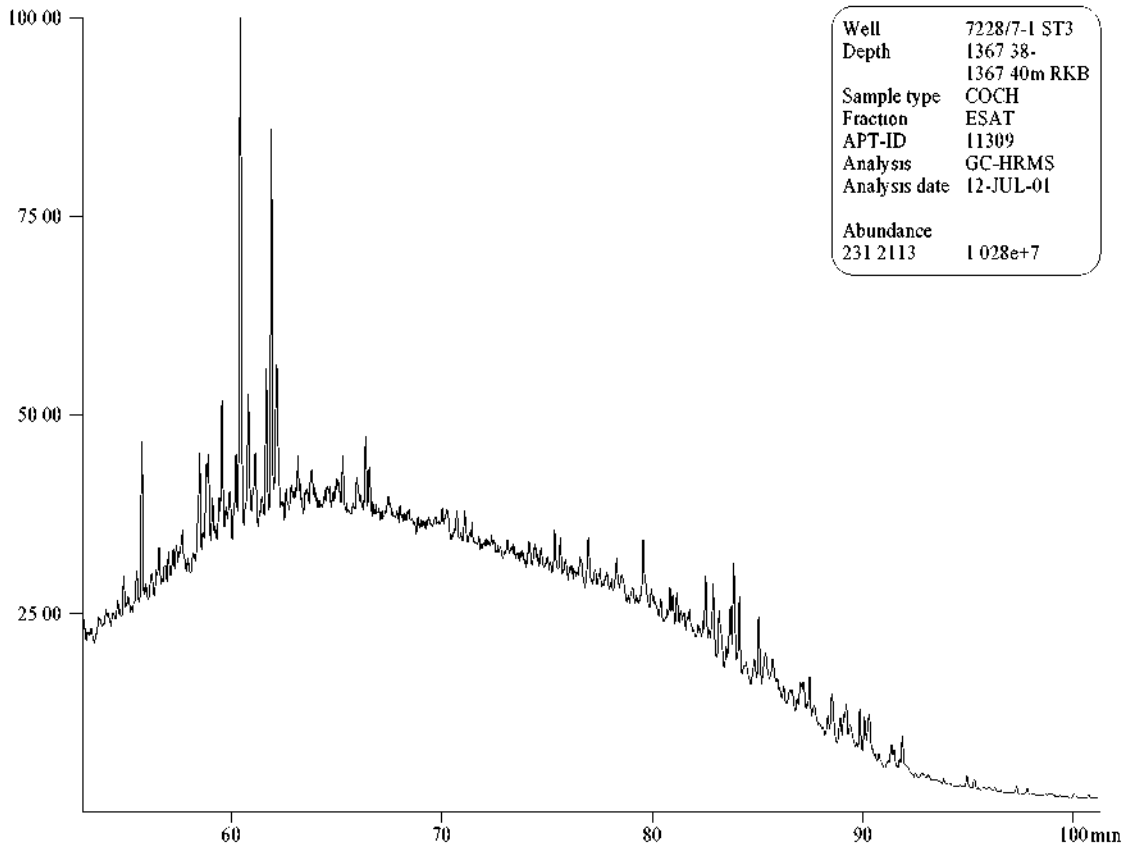

Well 7228/7-1 ST3
Depth 1367 38-1367 40m RKB
Sample type COCH
Fraction ESAT
APT-ID 11309
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
177 1643 1 203e+7
100 00
75 00
50 00
25 00
50
60
70
80
90
100
110 mm

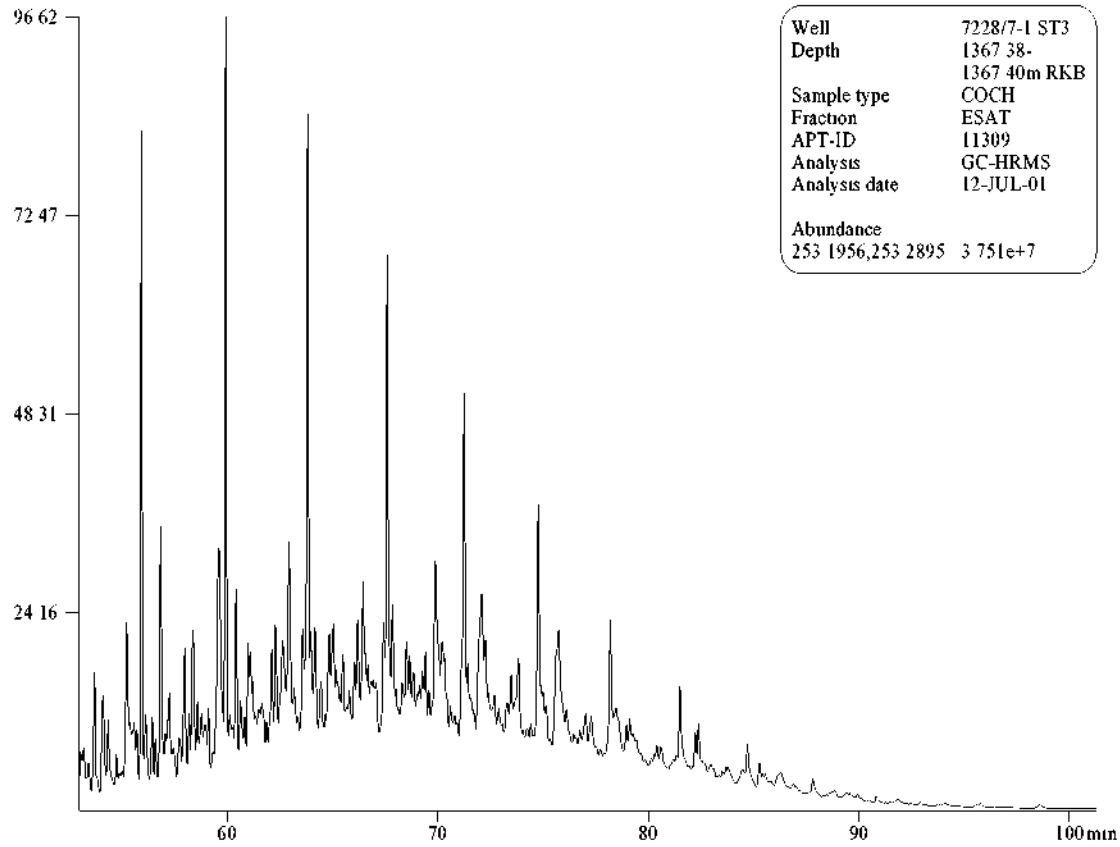

Well 7228/7-1 ST3
Depth 1367 38-1367 40m RKB
Sample type COCH
Fraction ESAT
APT-ID 11309
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
191 1800 2 598e+7
100 00
75 00
50 00
25 00
50
60
70
80
90
100
110 mm

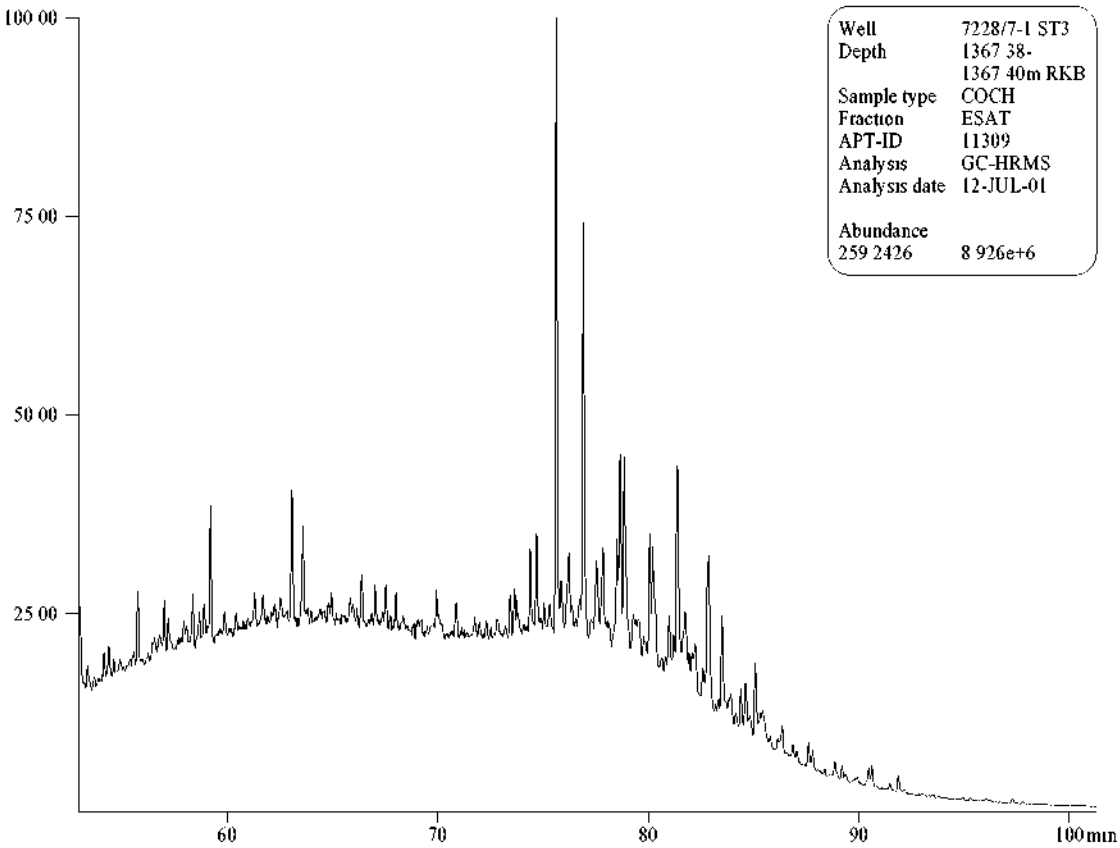

100 00
75 00
50 00
25 00
50
60
70
80
90
100
110 min
Well 7228/7-1 ST3
Depth 1367 38-1367 40m RKB
Sample type COCH
Fraction ESAT
APT-ID 11309
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
205 1956 9 343e+6

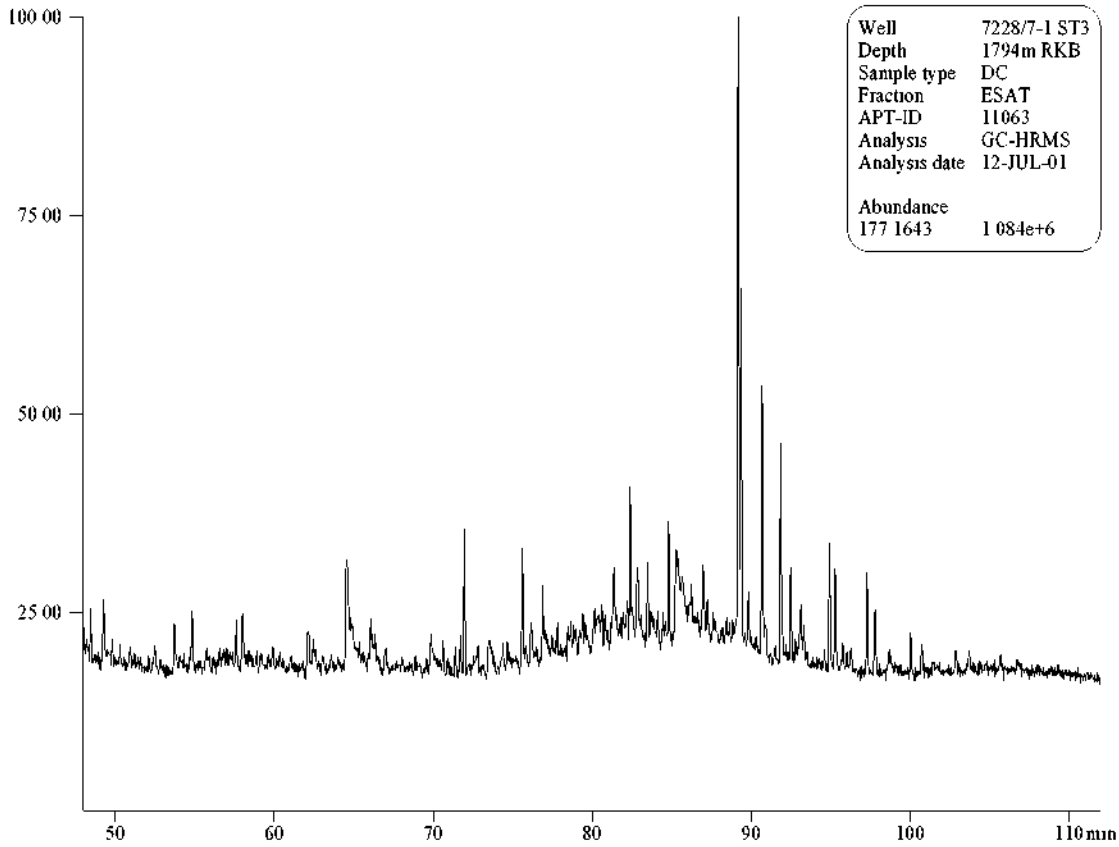

100 00
75 00
50 00
25 00
60
70
80
90
100 min
Well 7228/7-1 ST3
Depth 1367 38-1367 40m RKB
Sample type COCH
Fraction ESAT
APT-ID 11309
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
217 1956 1 188e+7

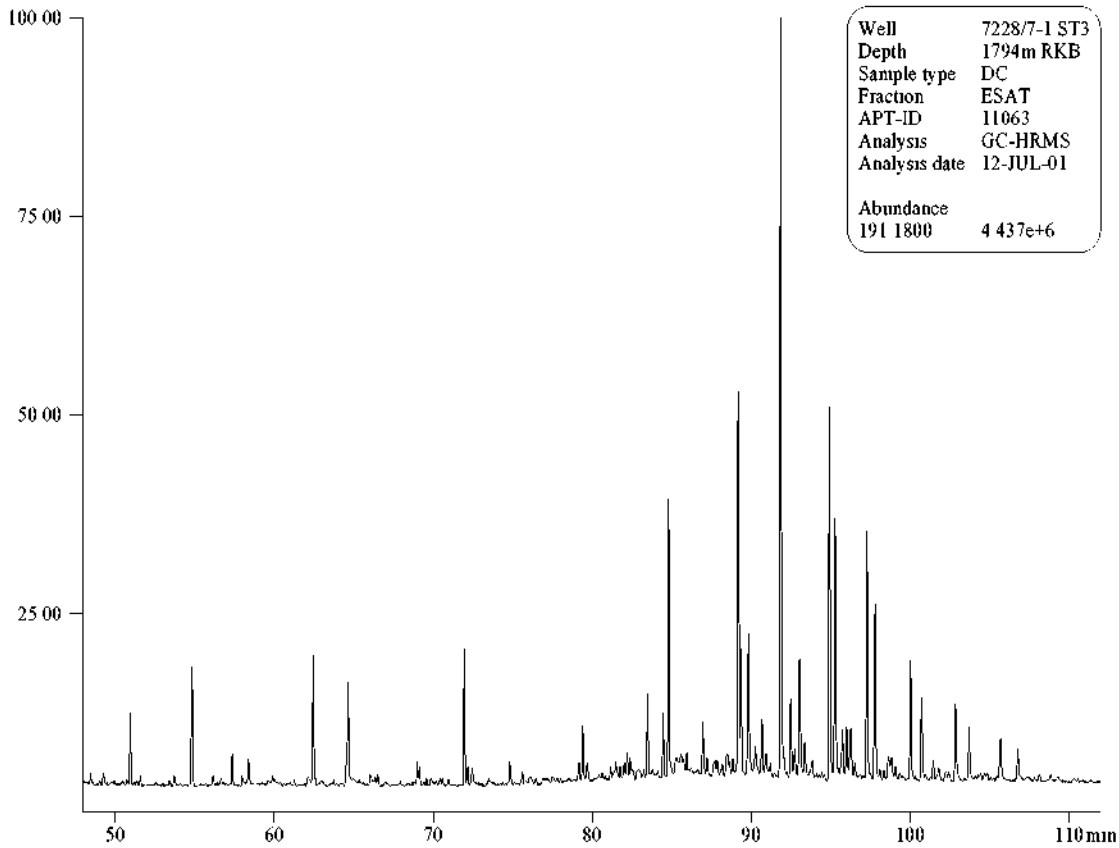

100 00
75 00
50 00
25 00
60
70
80
90
100 min
Well 7228/7-1 ST3
Depth 1367 38-1367 40m RKB
Sample type COCH
Fraction ESAT
APT-ID 11309
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
218 2035 8 470e+6

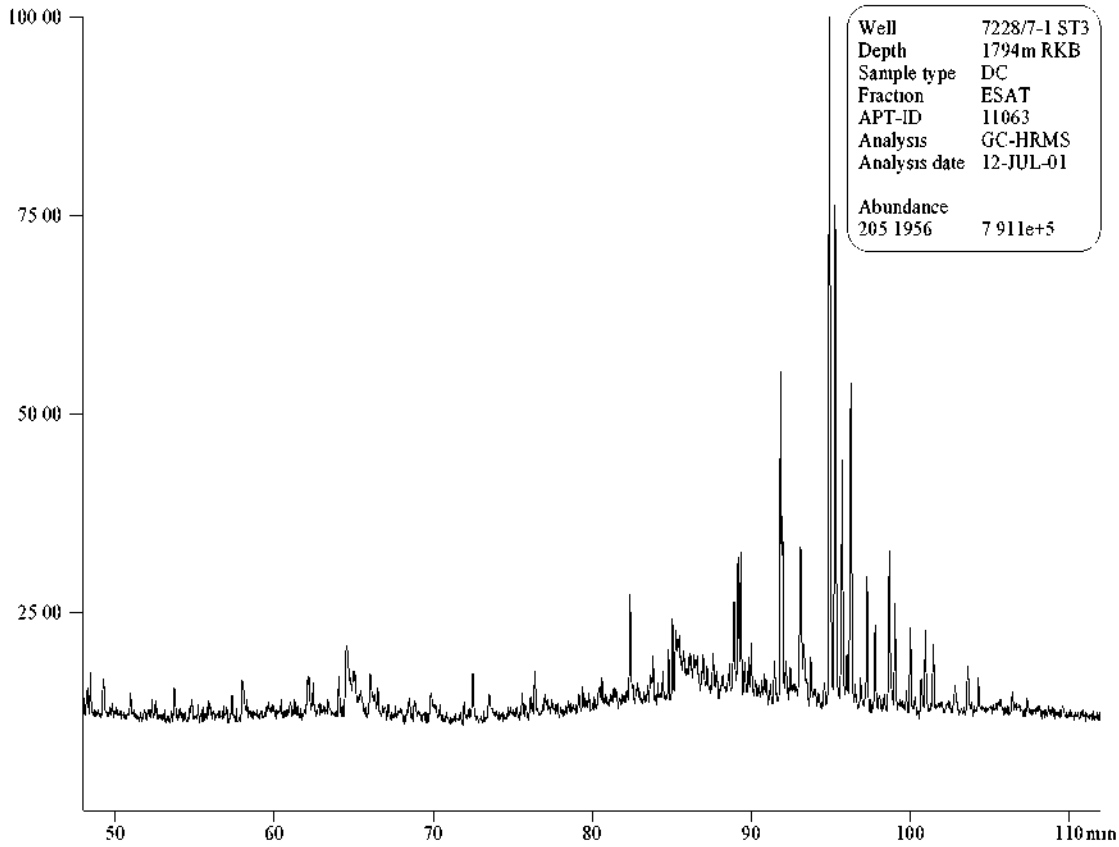

100 00
75 00
50 00
25 00
60
70
80
90
100 min
Well 7228/7-1 ST3
Depth 1367 38-1367 40m RKB
Sample type COCH
Fraction ESAT
APT-ID 11309
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
231 2113 1 028e+7

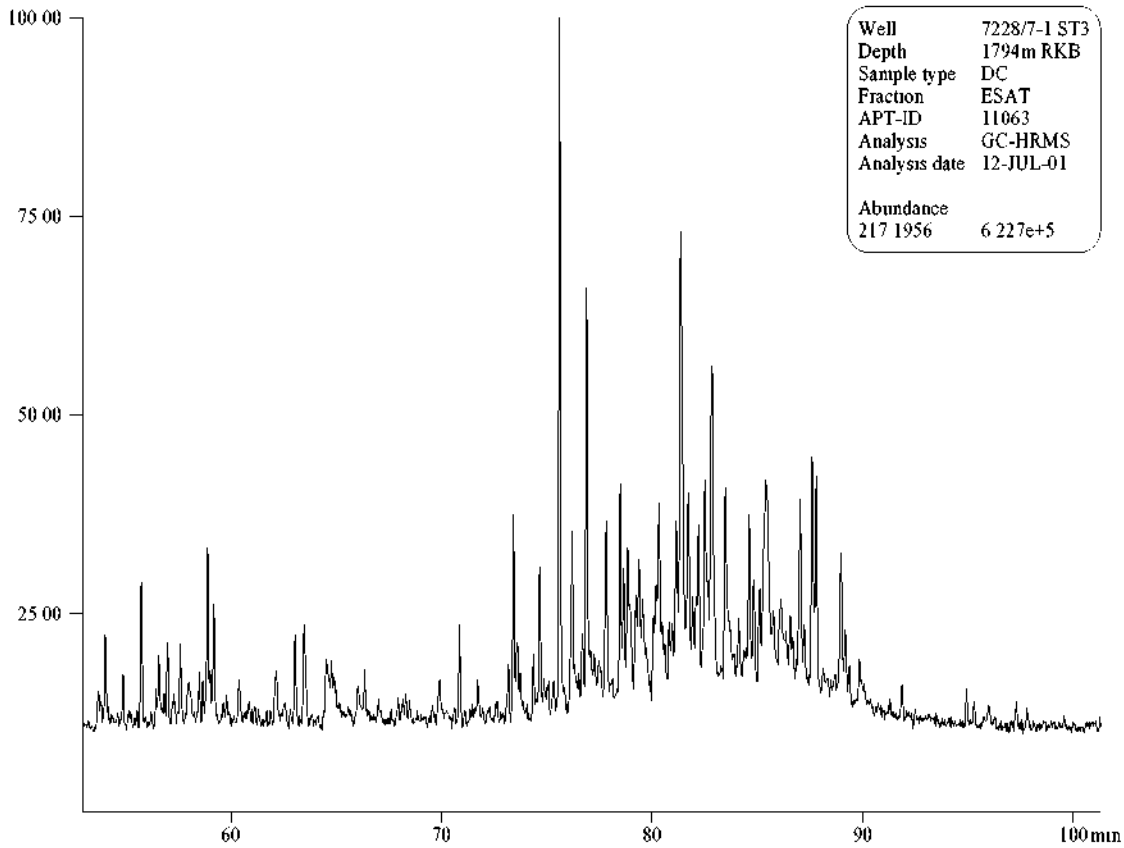

96 62
72 47
48 31
24 16
60
70
80
90
100 min
Well 7228/7-1 ST3
Depth 1367 38-1367 40m RKB
Sample type COCH
Fraction ESAT
APT-ID 11309
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
253 1956,253 2895 3 751e+7

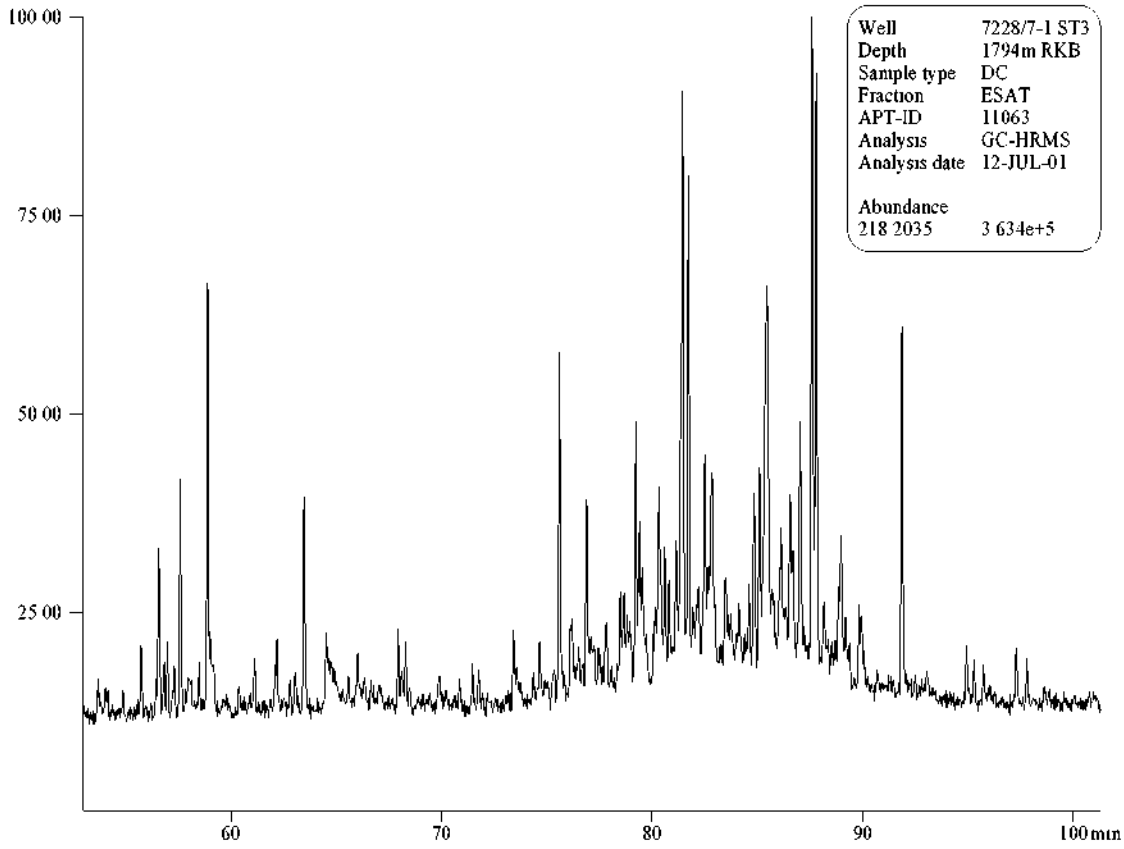

100 00
75 00
50 00
25 00
60
70
80
90
100 min
Well 7228/7-1 ST3
Depth 1367 38-1367 40m RKB
Sample type COCH
Fraction ESAT
APT-ID 11309
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
259 2426 8 926e+6

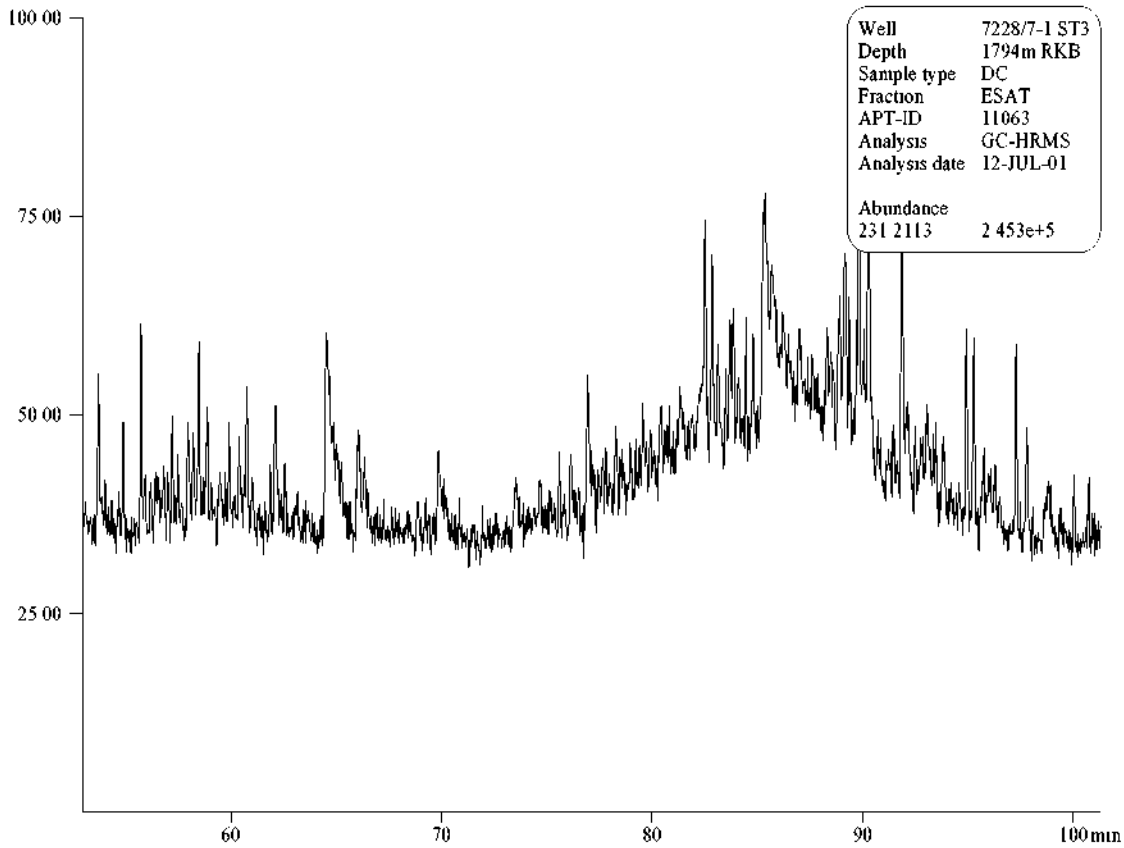

100 00
75 00
50 00
25 00
50
60
70
80
90
100
110 min
Well 7228/7-1 ST3
Depth 1794m RKB
Sample type DC
Fraction ESAT
APT-ID 11063
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
177 1643 1 084e+6

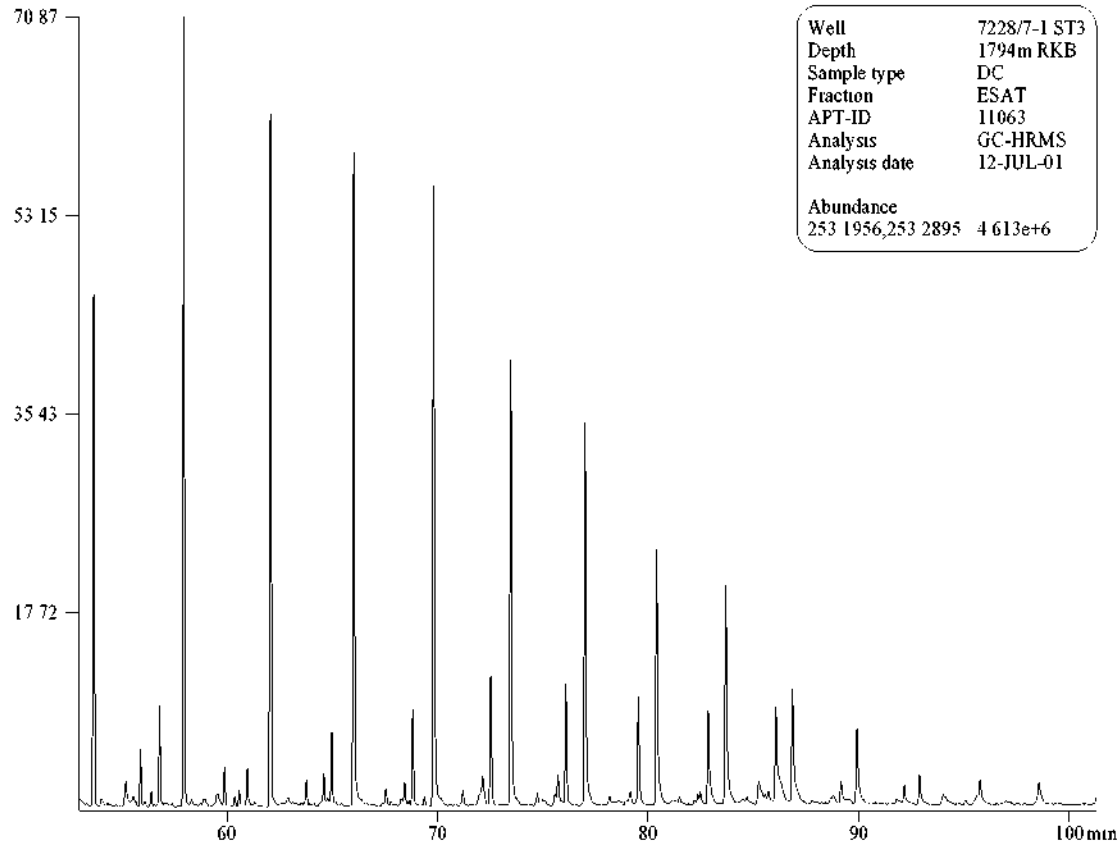

100 00
75 00
50 00
25 00
50
60
70
80
90
100
110 min
Well 7228/7-1 ST3
Depth 1794m RKB
Sample type DC
Fraction ESAT
APT-ID 11063
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
191 1800 4 437e+6

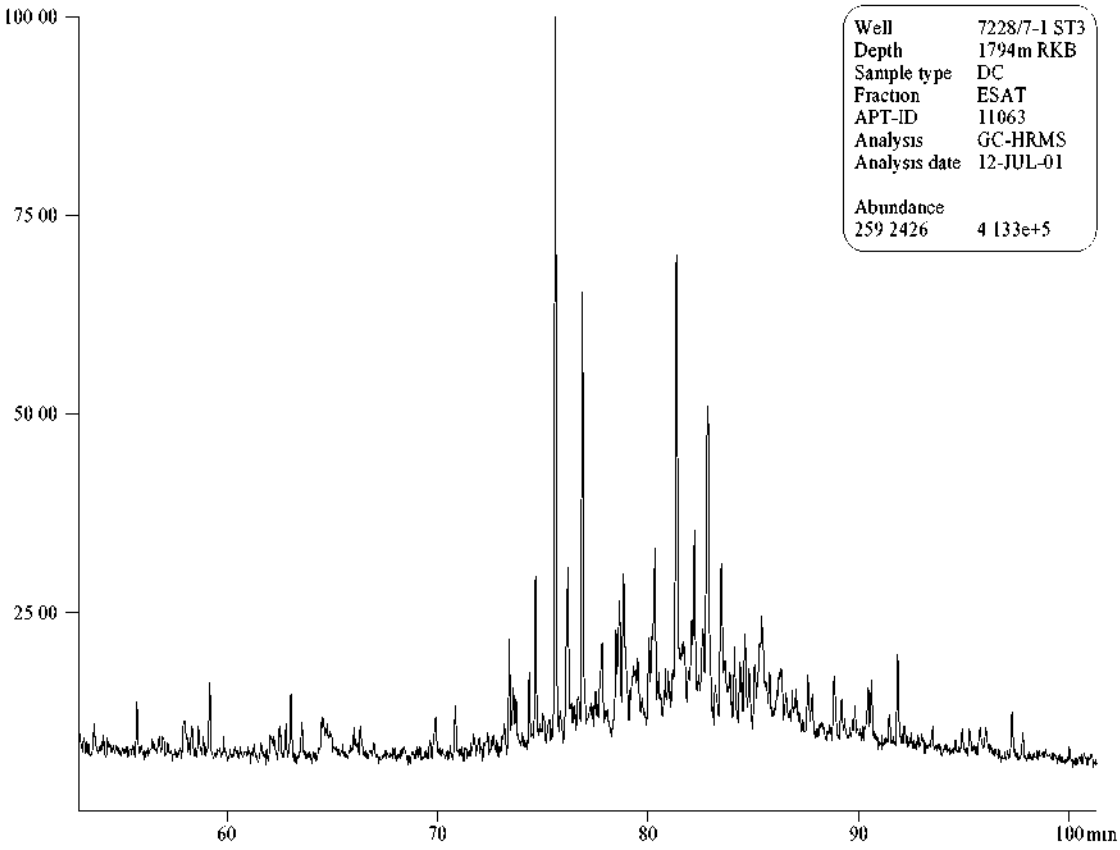

100 00
75 00
50 00
25 00
50
60
70
80
90
100
110 min
Well 7228/7-1 ST3
Depth 1794m RKB
Sample type DC
Fraction ESAT
APT-ID 11063
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
205 1956 7 911e+5


100 00
75 00
50 00
25 00
60
70
80
90
100 min
Well 7228/7-1 ST3
Depth 1794m RKB
Sample type DC
Fraction ESAT
APT-ID 11063
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
217 1956 6 227e+5

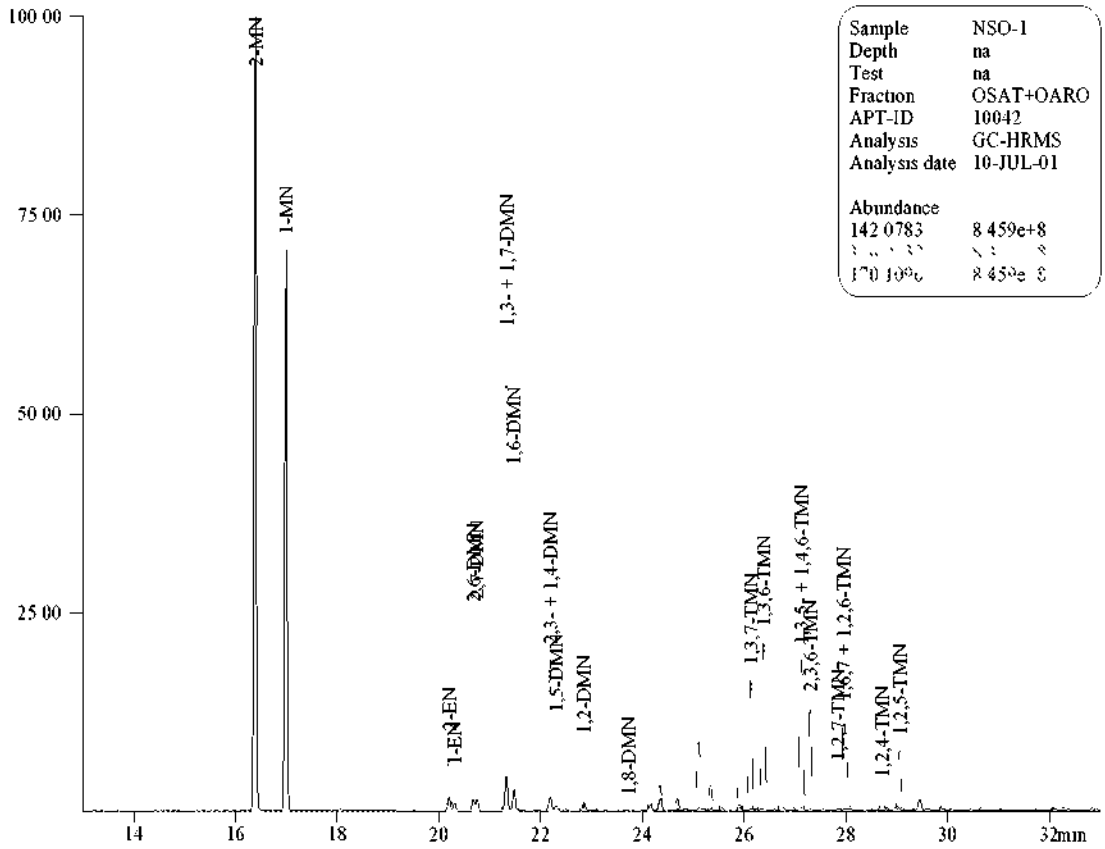

100 00
75 00
50 00
25 00
60
70
80
90
100 min
Well 7228/7-1 ST3
Depth 1794m RKB
Sample type DC
Fraction ESAT
APT-ID 11063
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
218 2035 3 634e+5

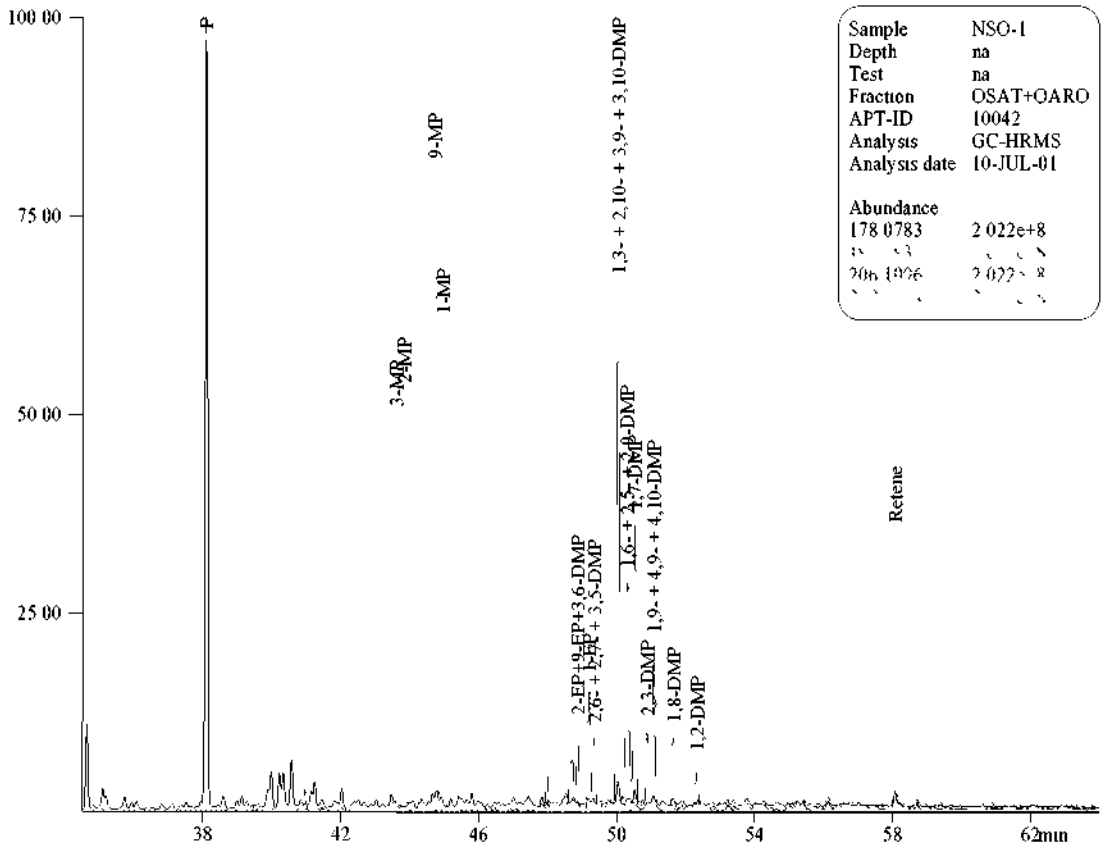

100 00
75 00
50 00
25 00
60
70
80
90
100 min
Well 7228/7-1 ST3
Depth 1794m RKB
Sample type DC
Fraction ESAT
APT-ID 11063
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
231 2113 2 453e+5

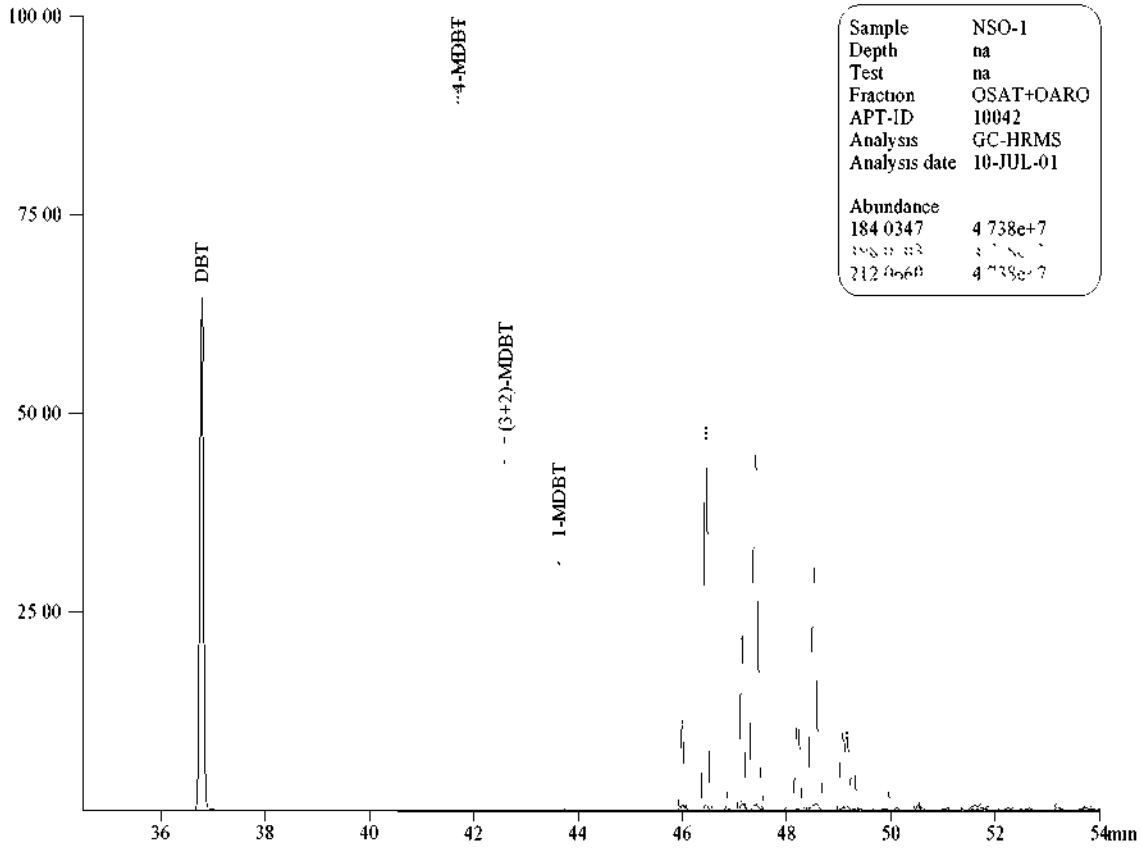

70 87
53 15
35 43
17 72
60
70
80
90
100 min
Well 7228/7-1 ST3
Depth 1794m RKB
Sample type DC
Fraction ESAT
APT-ID 11063
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
253 1956,253 2895 4 613e+6

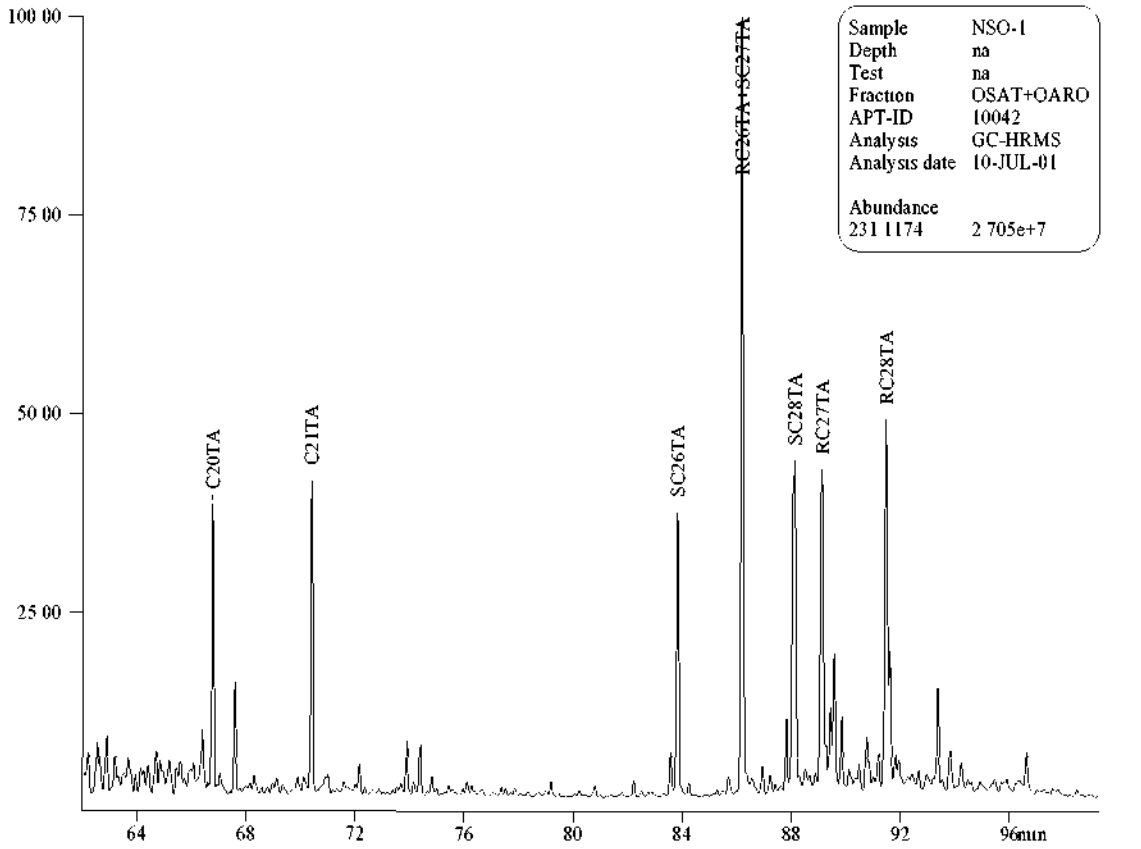

100 00
75 00
50 00
25 00
60
70
80
90
100 min
Well 7228/7-1 ST3
Depth 1794m RKB
Sample type DC
Fraction ESAT
APT-ID 11063
Analysis GC-HRMS
Analysis date 12-JUL-01
Abundance
259 2426 4 133e+5

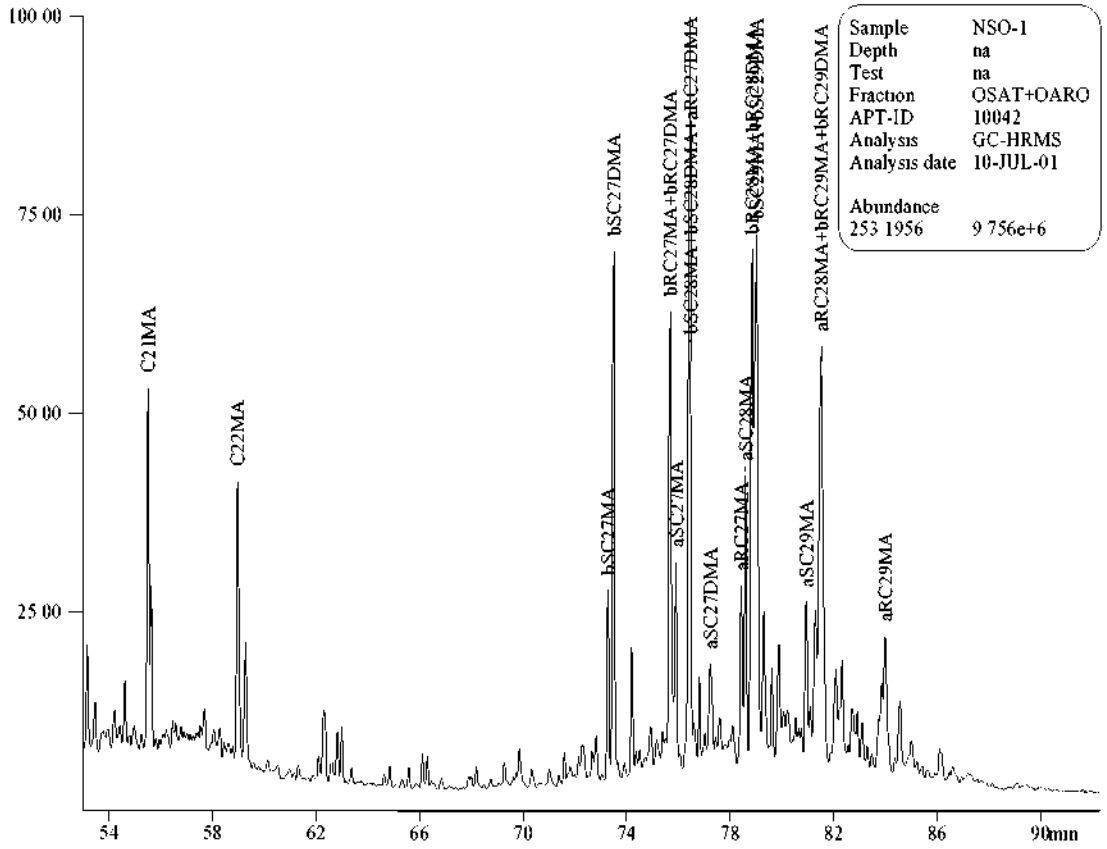
GC-MS Chromatograms of Aromatic Hydrocarbons

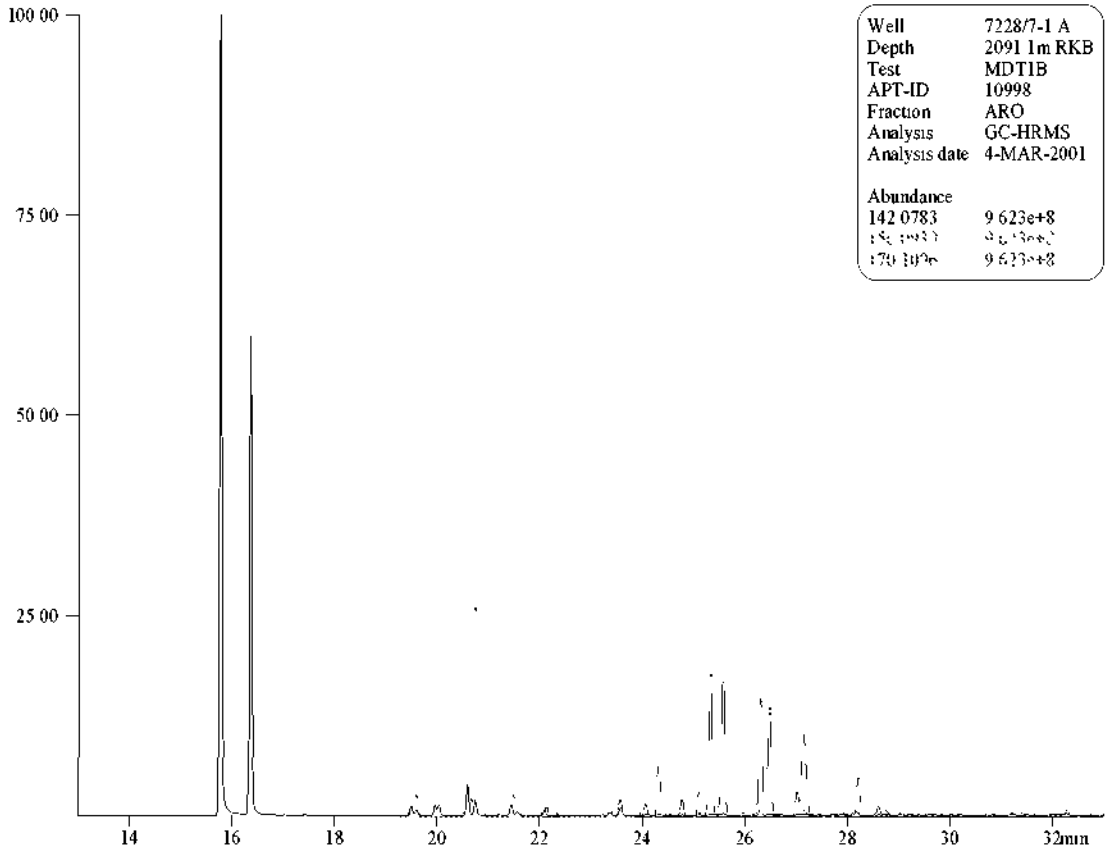

Sample NSO-1
Depth na
Test na
Fraction OSAT+OARO
APT-ID 10042
Analysis GC-HRMS
Analysis date 10-JUL-01
Abundance
142 0783 8 459e+8
170 1096 8 459e 8
100 00
75 00
50 00
25 00
2-MN
1-MN
1,3- + 1,7-DMN
1,6-DMN
1,5-DMN
2,3- + 1,4-DMN
1,2-DMN
1,8-DMN
1,3,7-TMN
1,3,6-TMN
2,3,6-TMN + 1,4,6-TMN
1,2,7-TMN + 1,2,6-TMN
1,2,4-TMN
1,2,5-TMN
14
16
18
20
22
24
26
28
30
32mn

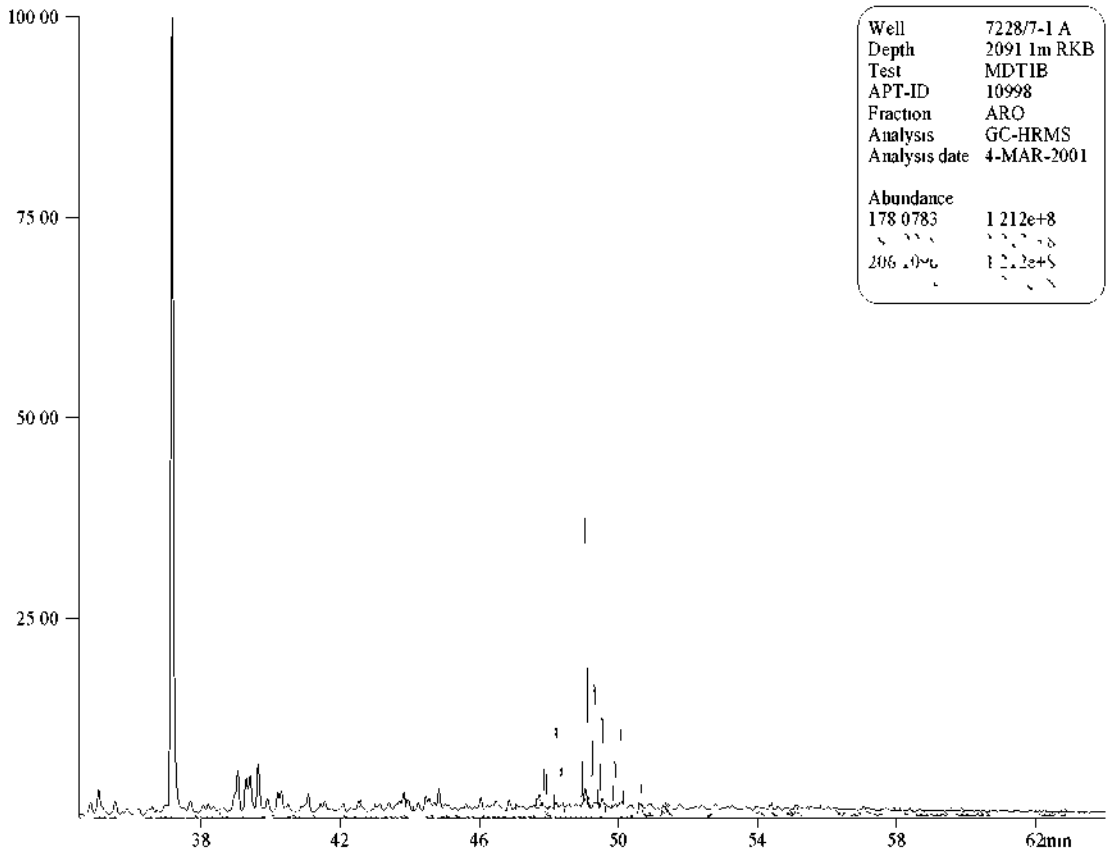

Sample NSO-1
Depth na
Test na
Fraction OSAT+OARO
APT-ID 10042
Analysis GC-HRMS
Analysis date 10-JUL-01
Abundance
178 0783 2 022e+8
206 1926 2 022e 8
100 00
75 00
50 00
25 00
9-MP
1-MP
3-MP
2-MP
1,3- + 2,10- + 3,9- + 3,10-DMP
2-EP+9-EP+3,6-DMP
2,6- + 1,9-EP + 3,5-DMP
2,3-DMP
1,9- + 4,9- + 4,10-DMP
1,8-DMP
1,2-DMP
Retene
38
42
46
50
54
58
62mn

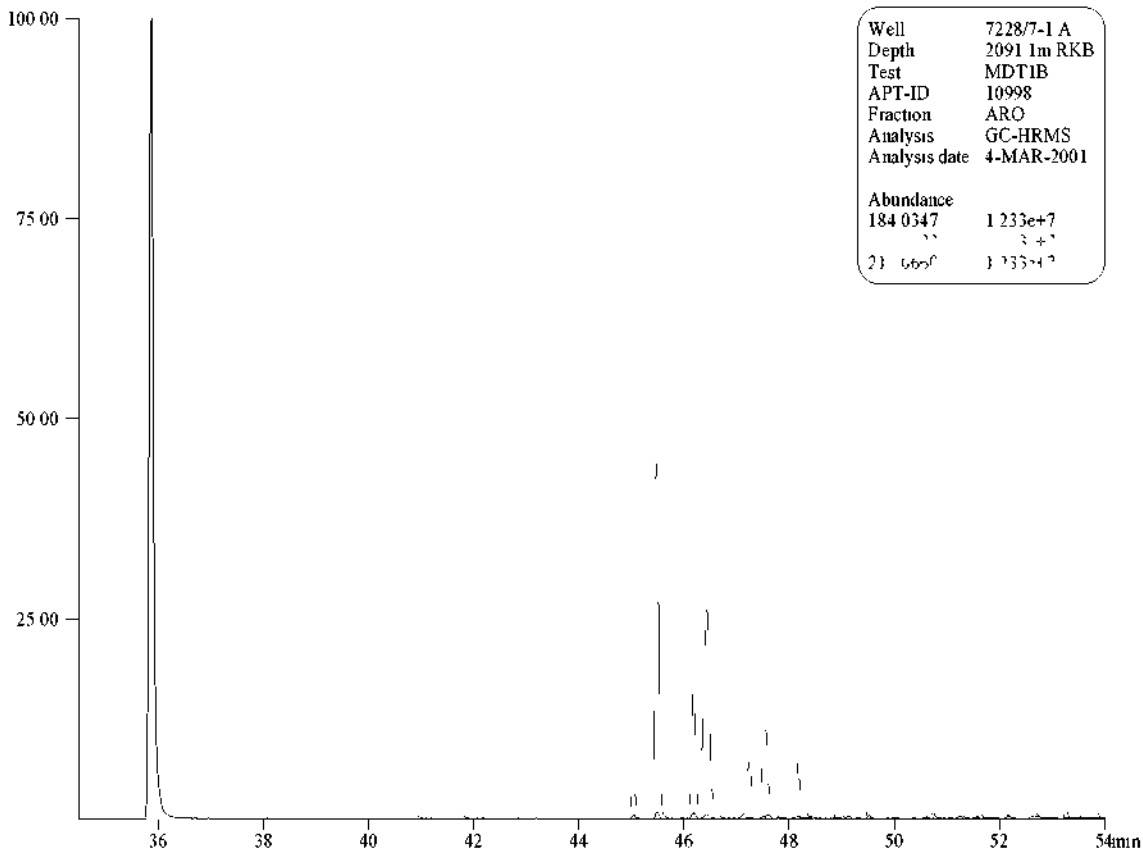

100 00
75 00
50 00
25 00
DBT
4-MDBT
(3+2)-MDBT
1-MDBT
Sample NSO-1
Depth na
Test na
Fraction OSAT+OARO
APT-ID 10042
Analysis GC-HRMS
Analysis date 10-JUL-01
Abundance
184 0347 4 738e+7
36
38
40
42
44
46
48
50
52
54min

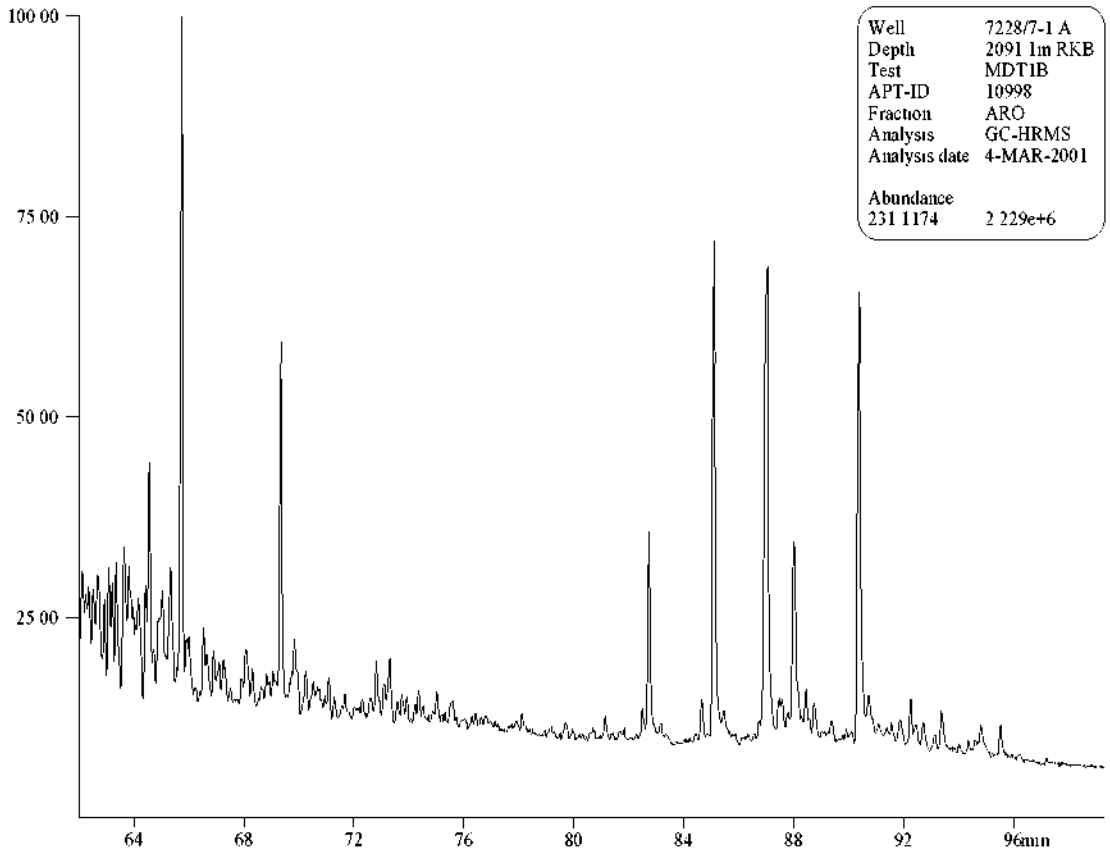

100 00
75 00
50 00
25 00
C20TA
C21TA
SC26TA
RC26TA+SC27TA
SC28TA
RC27TA
RC28TA
Sample NSO-1
Depth na
Test na
Fraction OSAT+OARO
APT-ID 10042
Analysis GC-HRMS
Analysis date 10-JUL-01
Abundance
231 1174 2 705e+7
64
68
72
76
80
84
88
92
96min

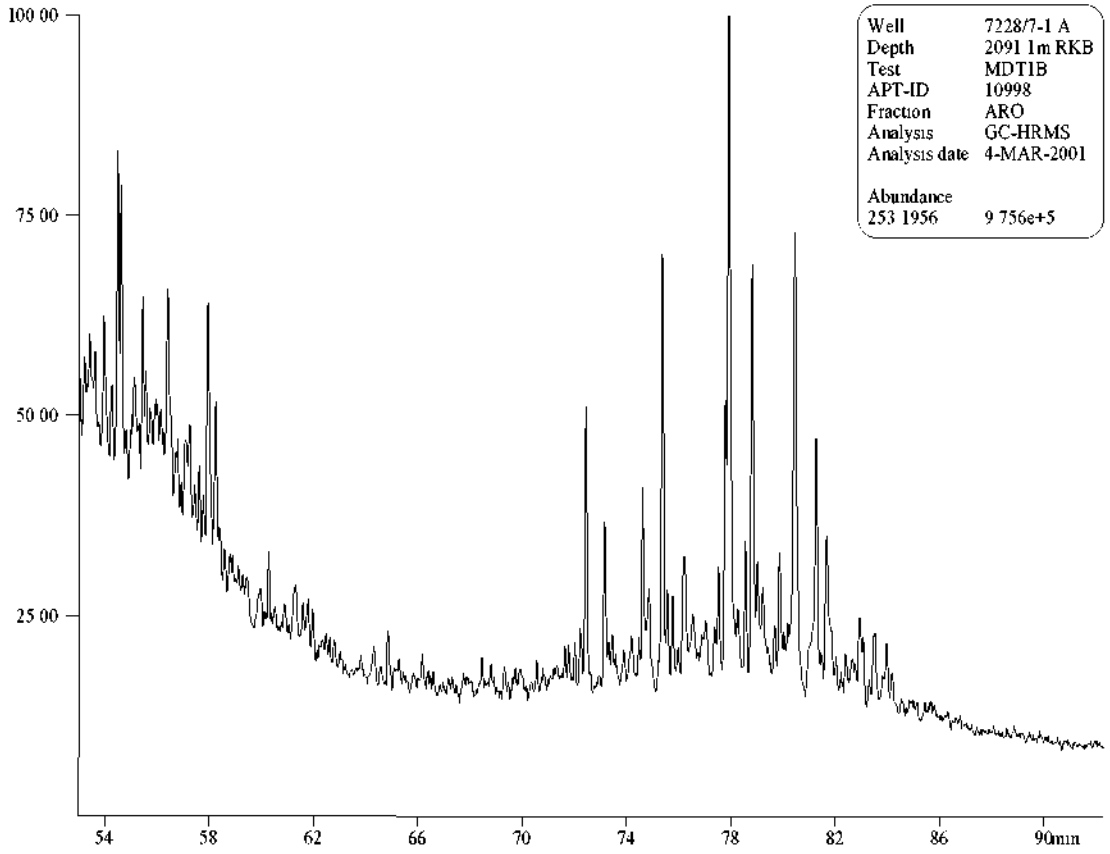

100 00
75 00
50 00
25 00
C21MA
C22MA
bSC27MA
bSC27DMA
bRC27MA+bRC27DMA
aSC27MA
aSC27DMA
aRC27MA+aSC28MA
aSC29MA
aRC28MA+bRC29MA+bRC29DMA
aRC29MA
Sample NSO-1
Depth na
Test na
Fraction OSAT+OARO
APT-ID 10042
Analysis GC-HRMS
Analysis date 10-JUL-01
Abundance
253 1956 9 756e+6
54
58
62
66
70
74
78
82
86
90mn

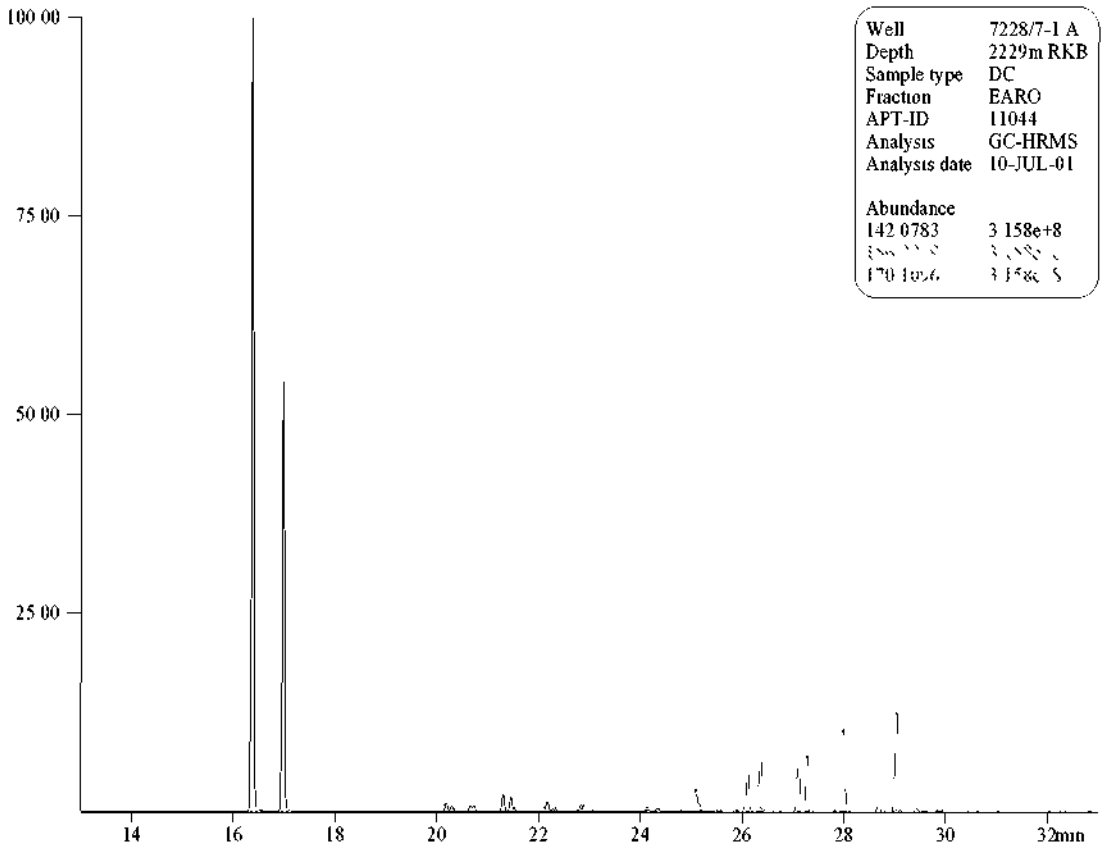

100 00
75 00
50 00
25 00
Well 7228/7-1 A
Depth 2091 1m RKB
Test MDT1B
APT-ID 10998
Fraction ARO
Analysis GC-HRMS
Analysis date 4-MAR-2001
Abundance
142 0783 9 623e+8
14
16
18
20
22
24
26
28
30
32mn

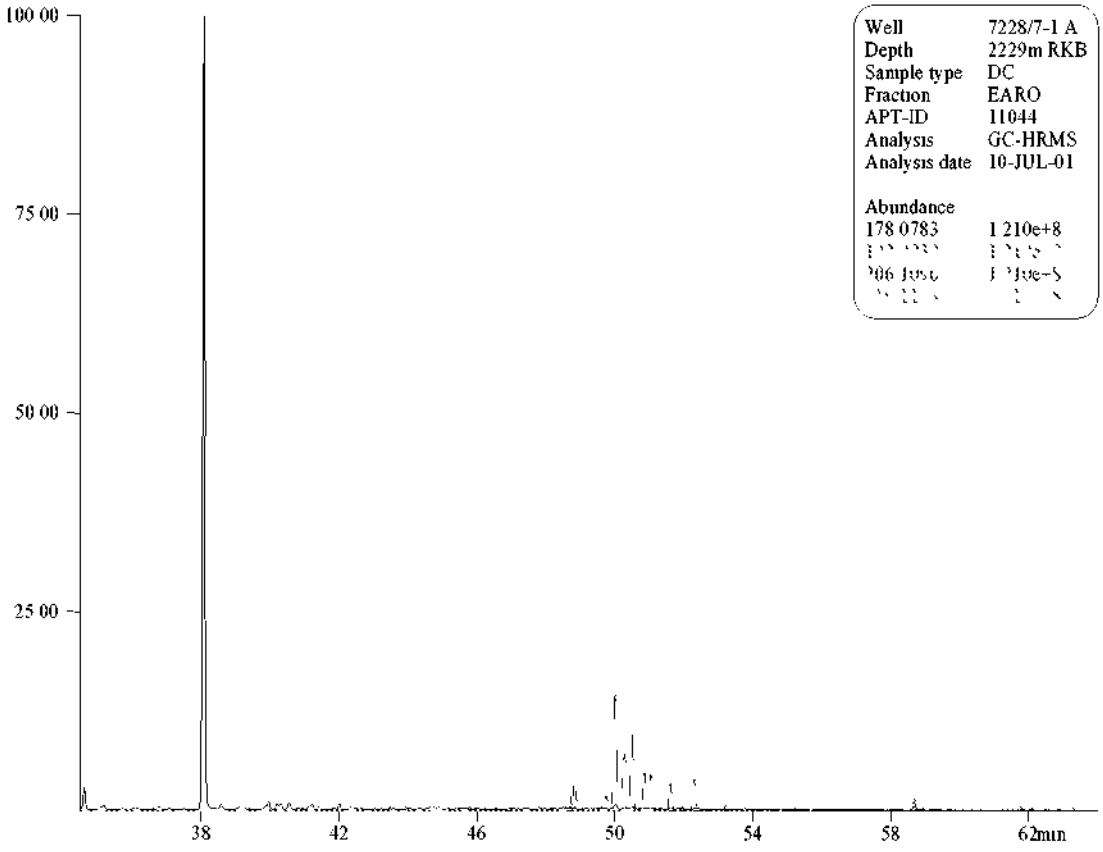

100 00
75 00
50 00
25 00
38
42
46
50
54
58
62min
Well 7228/7-1 A
Depth 2091 1m RKB
Test MDT1B
APT-ID 10998
Fraction ARO
Analysis GC-HRMS
Analysis date 4-MAR-2001
Abundance
178 0783 1 212e+8

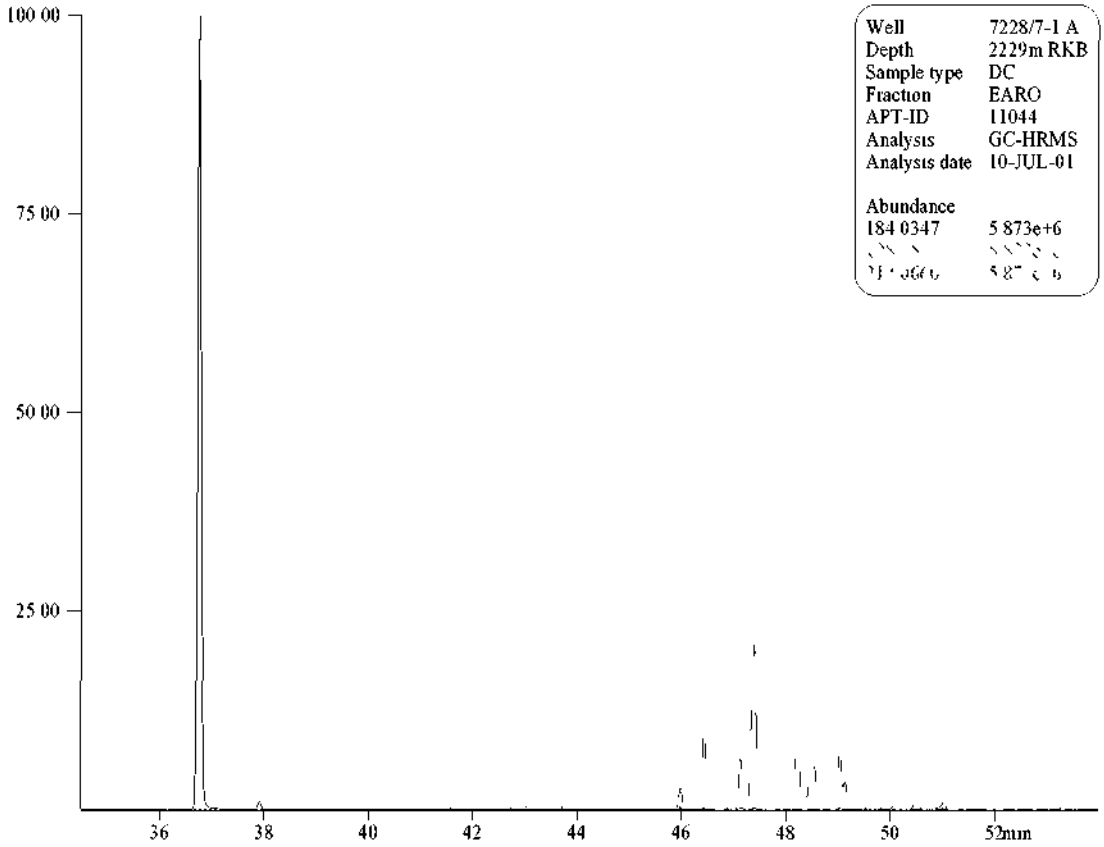

100 00
75 00
50 00
25 00
36
38
40
42
44
46
48
50
52
54min
Well 7228/7-1 A
Depth 2091 1m RKB
Test MDT1B
APT-ID 10998
Fraction ARO
Analysis GC-HRMS
Analysis date 4-MAR-2001
Abundance
184 0347 1 233e+7

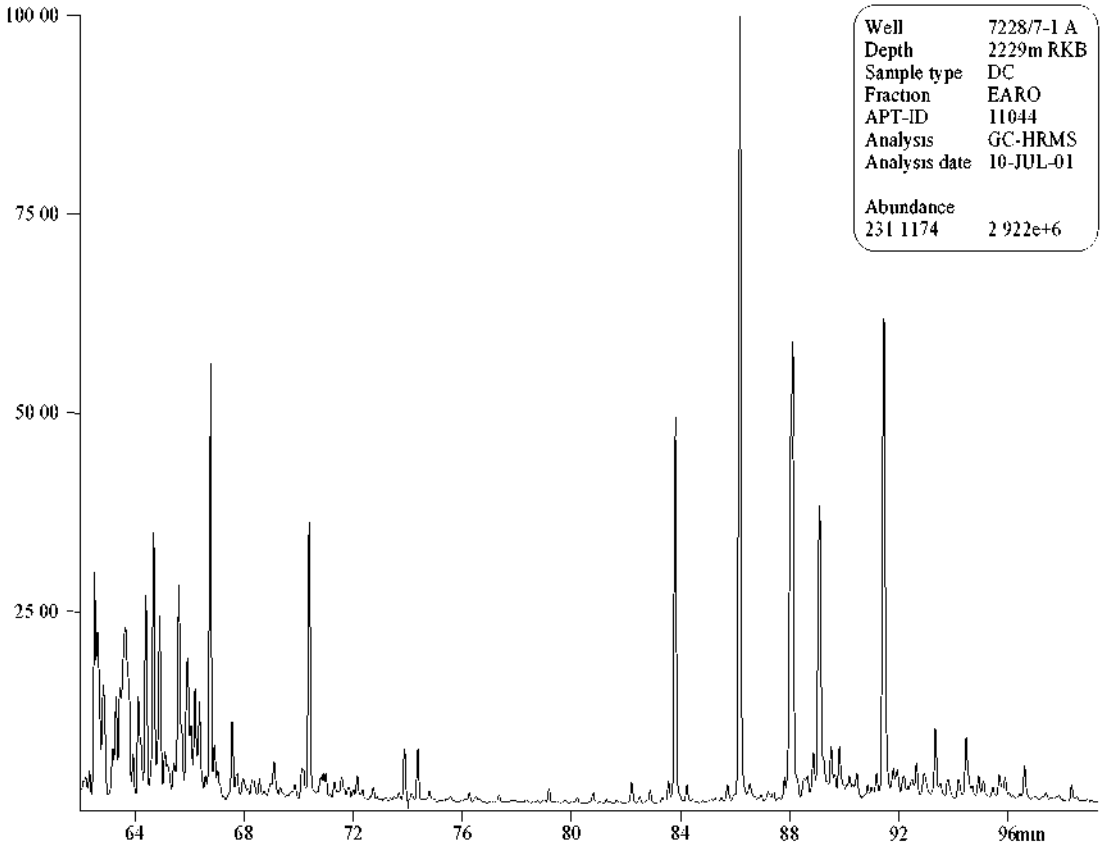

100 00
75 00
50 00
25 00
64
68
72
76
80
84
88
92
96mn
Well 7228/7-1 A
Depth 2091 1m RKB
Test MDT1B
APT-ID 10998
Fraction ARO
Analysis GC-HRMS
Analysis date 4-MAR-2001
Abundance
231 1174 2 229e+6

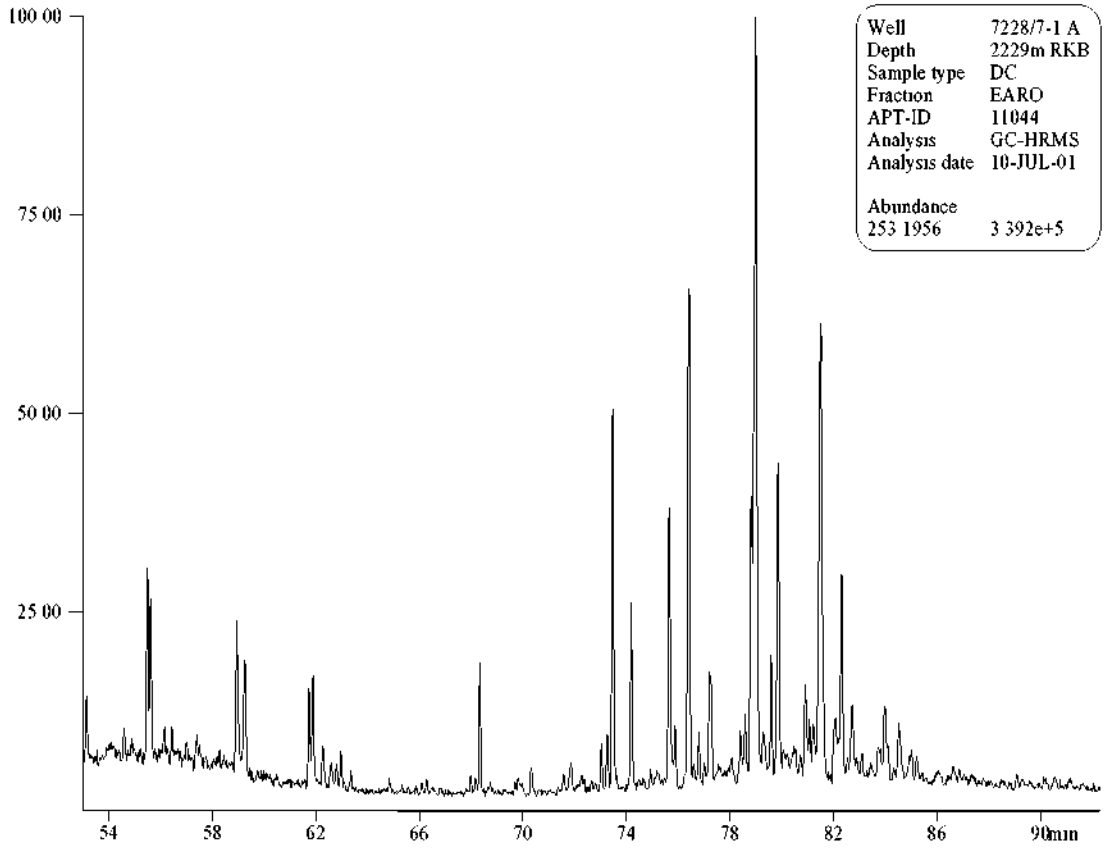

100 00
75 00
50 00
25 00
54
58
62
66
70
74
78
82
86
90mn
Well 7228/7-1 A
Depth 2091 1m RKB
Test MDT1B
APT-ID 10998
Fraction ARO
Analysis GC-HRMS
Analysis date 4-MAR-2001
Abundance
253 1956 9 756e+5

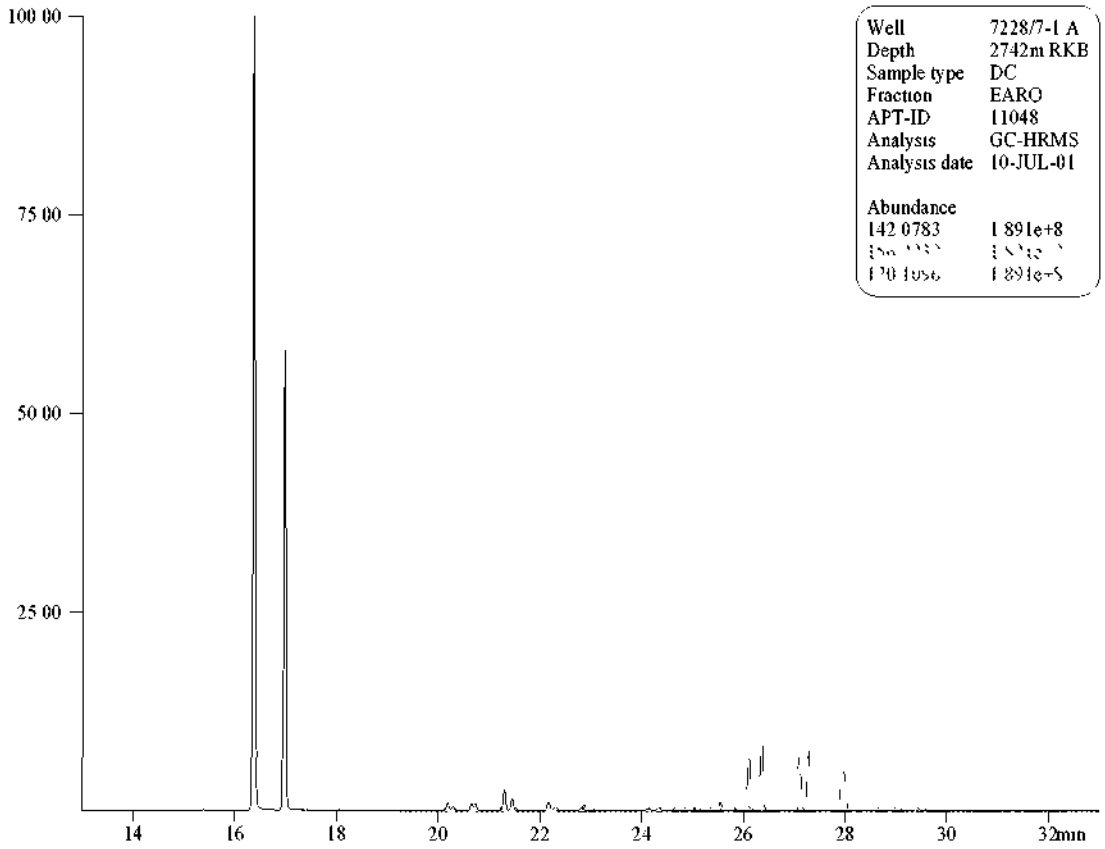

100 00
75 00
50 00
25 00
14
16
18
20
22
24
26
28
30
32min
Well 7228/7-1 A
Depth 2229m RKB
Sample type DC
Fraction EARO
APT-ID 11044
Analysis GC-HRMS
Analysis date 10-JUL-01
Abundance
142 0783 3 158e+8

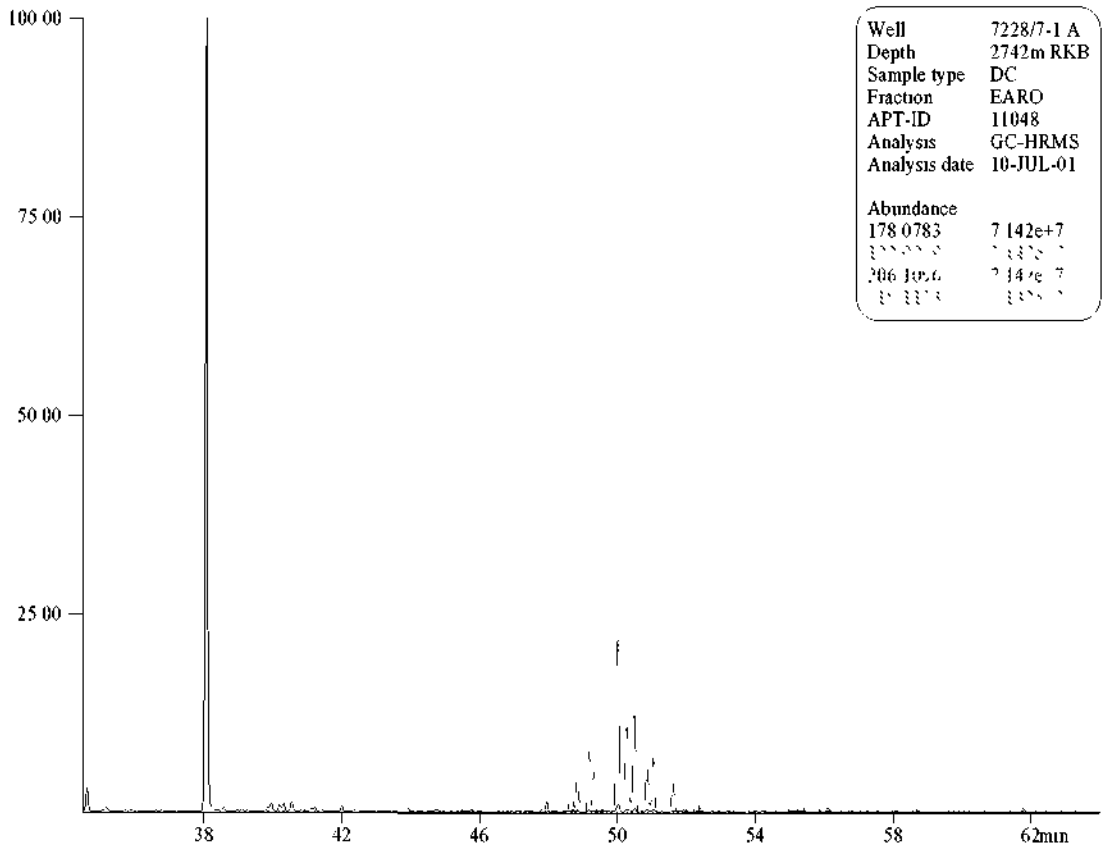

100 00
75 00
50 00
25 00
38
42
46
50
54
58
62min
Well 7228/7-1 A
Depth 2229m RKB
Sample type DC
Fraction EARO
APT-ID 11044
Analysis GC-HRMS
Analysis date 10-JUL-01
Abundance
178 0783 1 210e+8

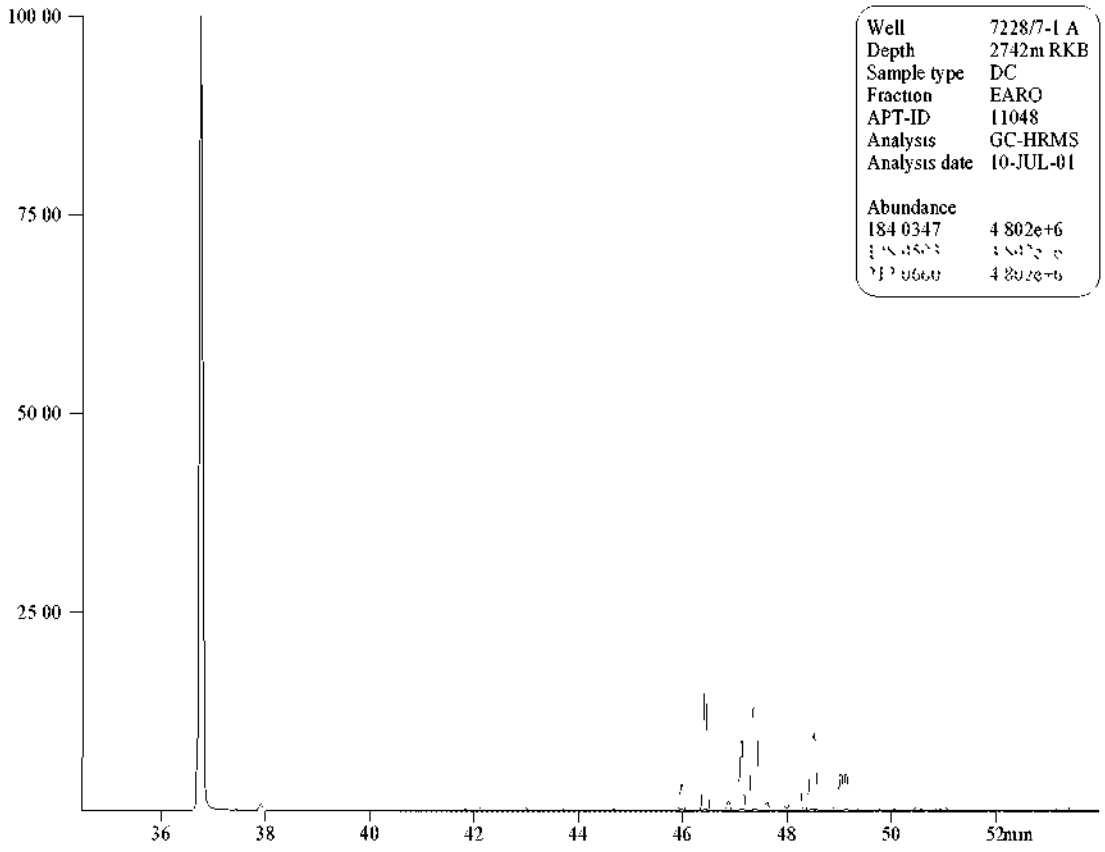

100 00
75 00
50 00
25 00
36
38
40
42
44
46
48
50
52min
Well 7228/7-1 A
Depth 2229m RKB
Sample type DC
Fraction EARO
APT-ID 11044
Analysis GC-HRMS
Analysis date 10-JUL-01
Abundance
184 0347 5 873e+6

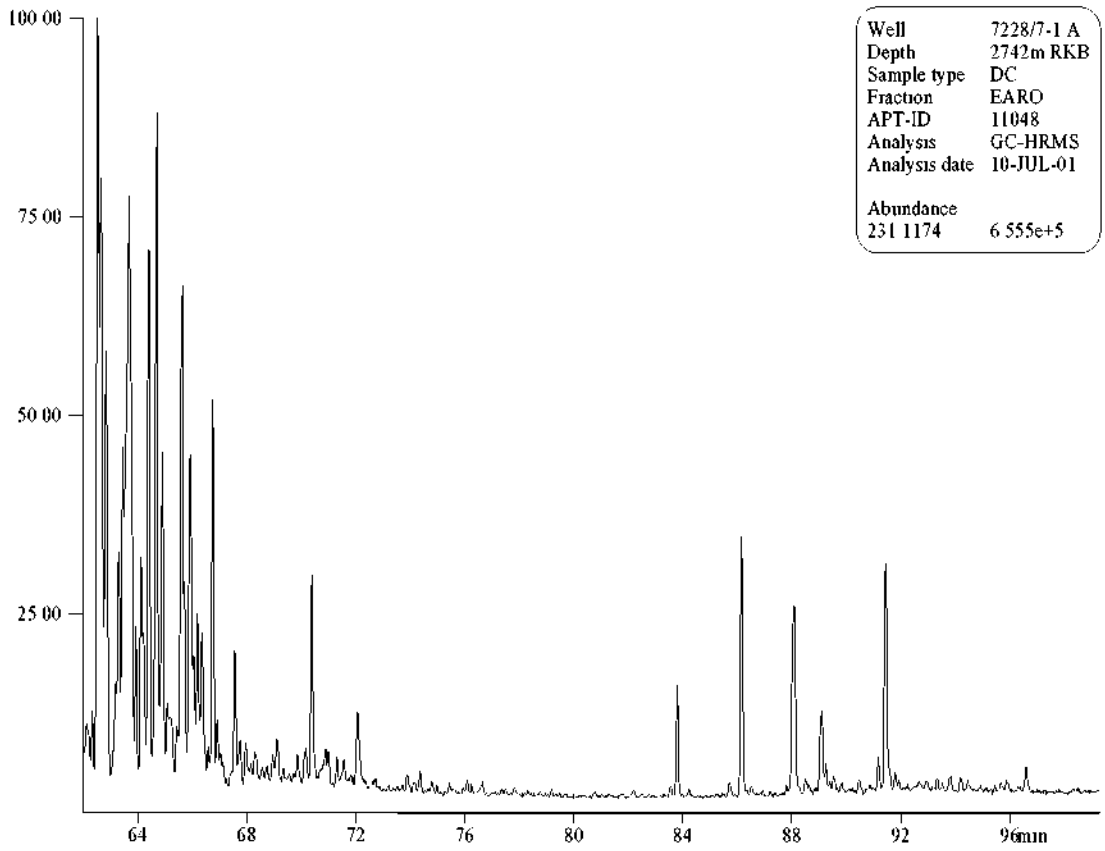

100 00
75 00
50 00
25 00
64
68
72
76
80
84
88
92
96min
Well 7228/7-1 A
Depth 2229m RKB
Sample type DC
Fraction EARO
APT-ID 11044
Analysis GC-HRMS
Analysis date 10-JUL-01
Abundance
231 1174 2 922e+6

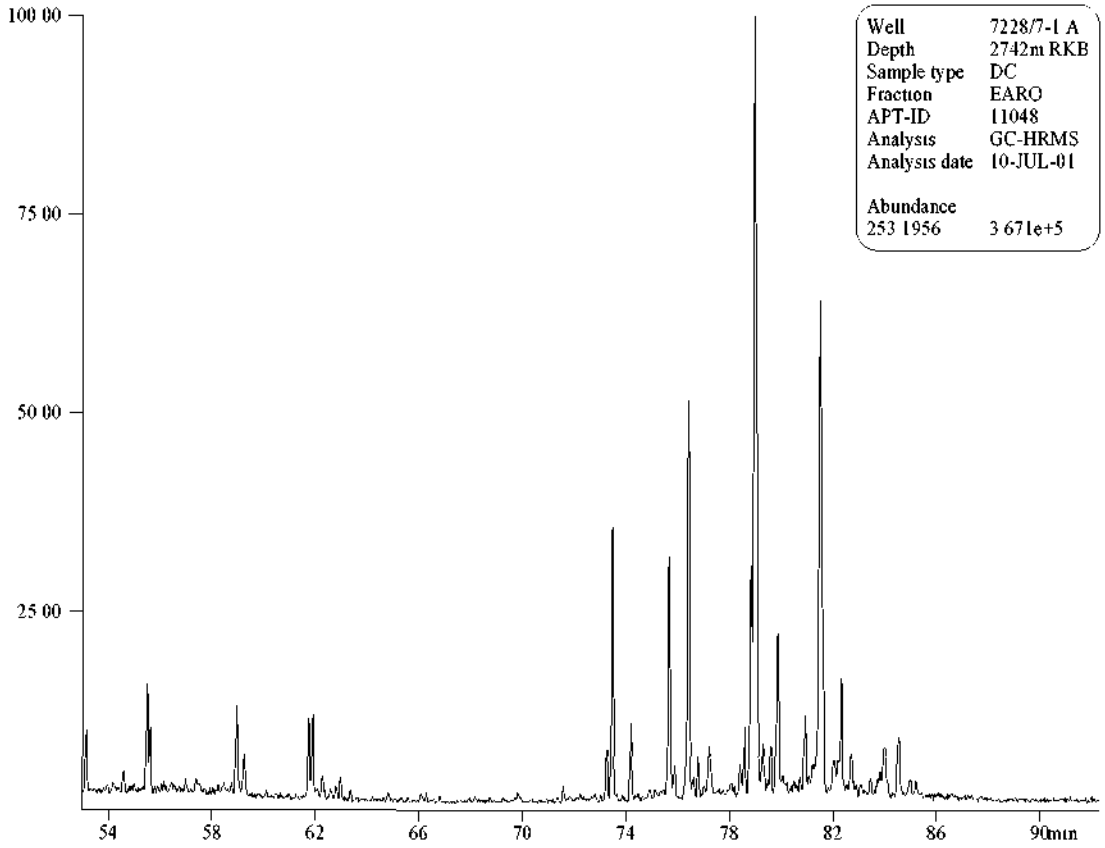

100 00
75 00
50 00
25 00
54
58
62
66
70
74
78
82
86
90min
Well 7228/7-1 A
Depth 2229m RKB
Sample type DC
Fraction EARO
APT-ID 11044
Analysis GC-HRMS
Analysis date 10-JUL-01
Abundance
253 1956 3 392e+5

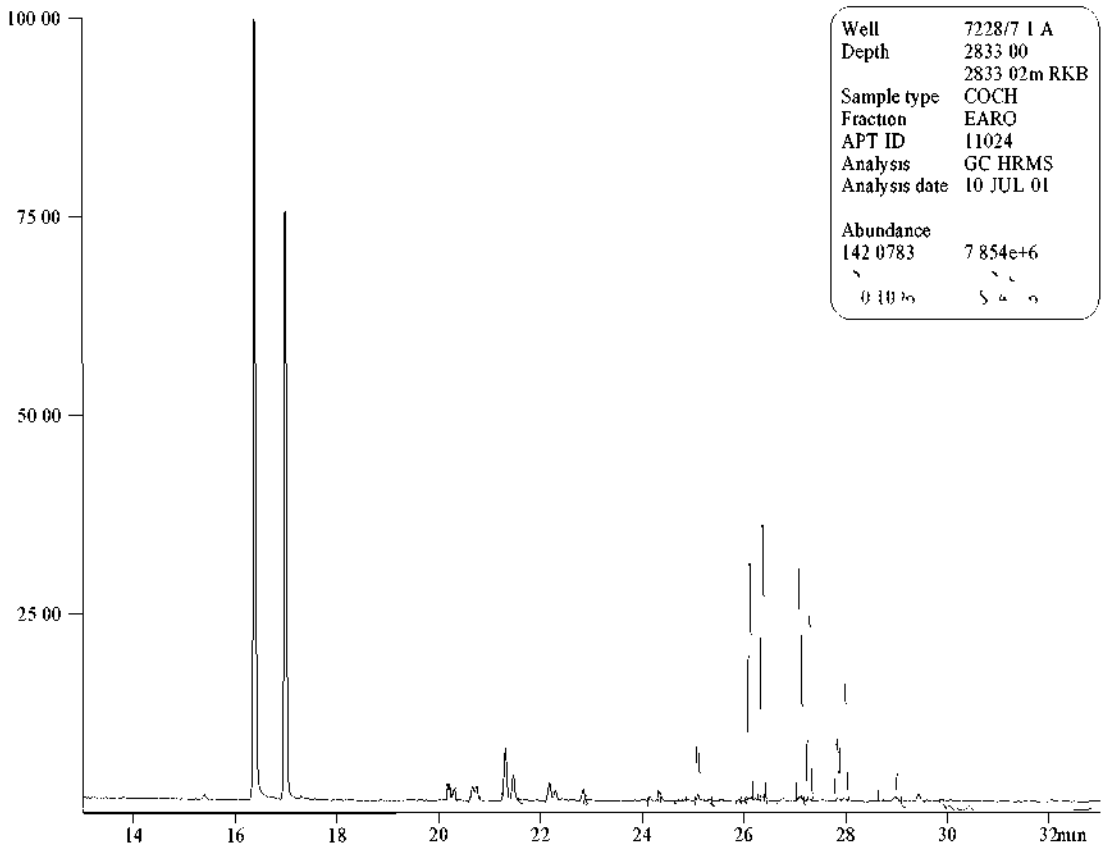

100 00
75 00
50 00
25 00
14
16
18
20
22
24
26
28
30
32min
Well 7228/7-1 A
Depth 2742m RKB
Sample type DC
Fraction EARO
APT-ID 11048
Analysis GC-HRMS
Analysis date 10-JUL-01
Abundance
142 0783 1 891e+8

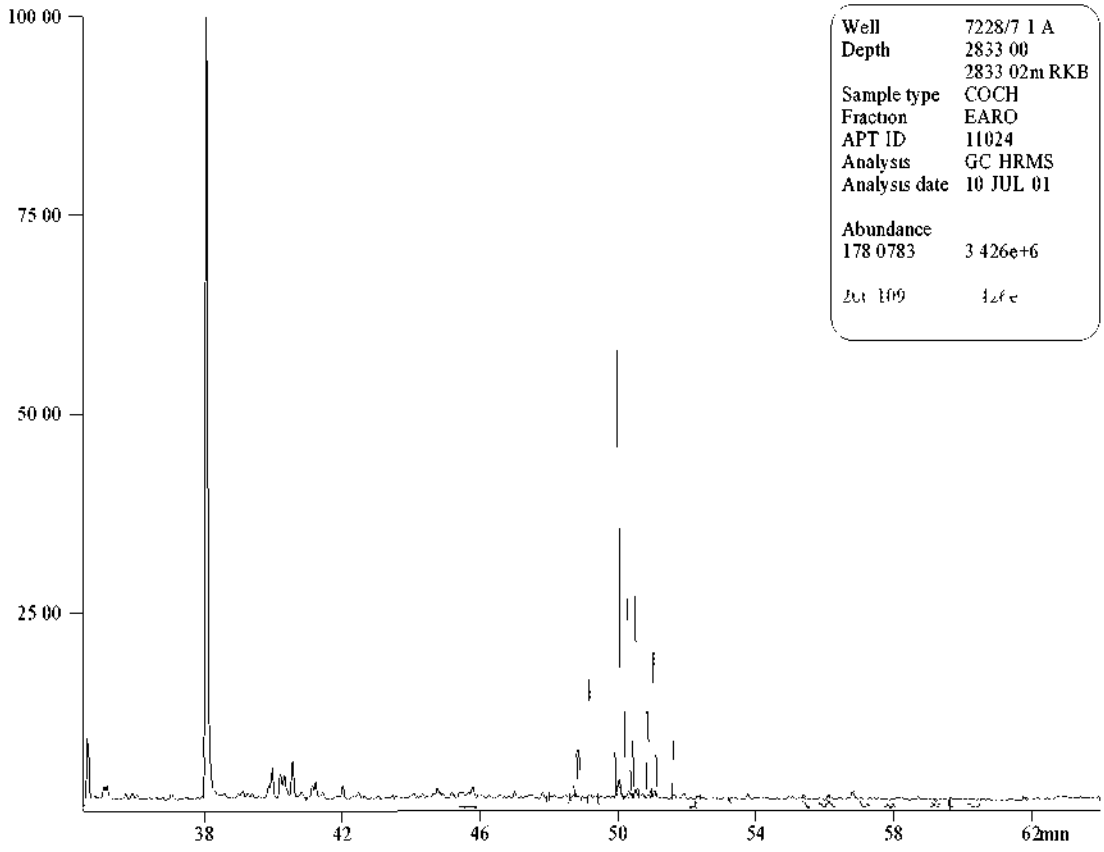

100 00
75 00
50 00
25 00
38
42
46
50
54
58
62min
Well 7228/7-1 A
Depth 2742m RKB
Sample type DC
Fraction EARO
APT-ID 11048
Analysis GC-HRMS
Analysis date 10-JUL-01
Abundance
178 0783 7 142e+7

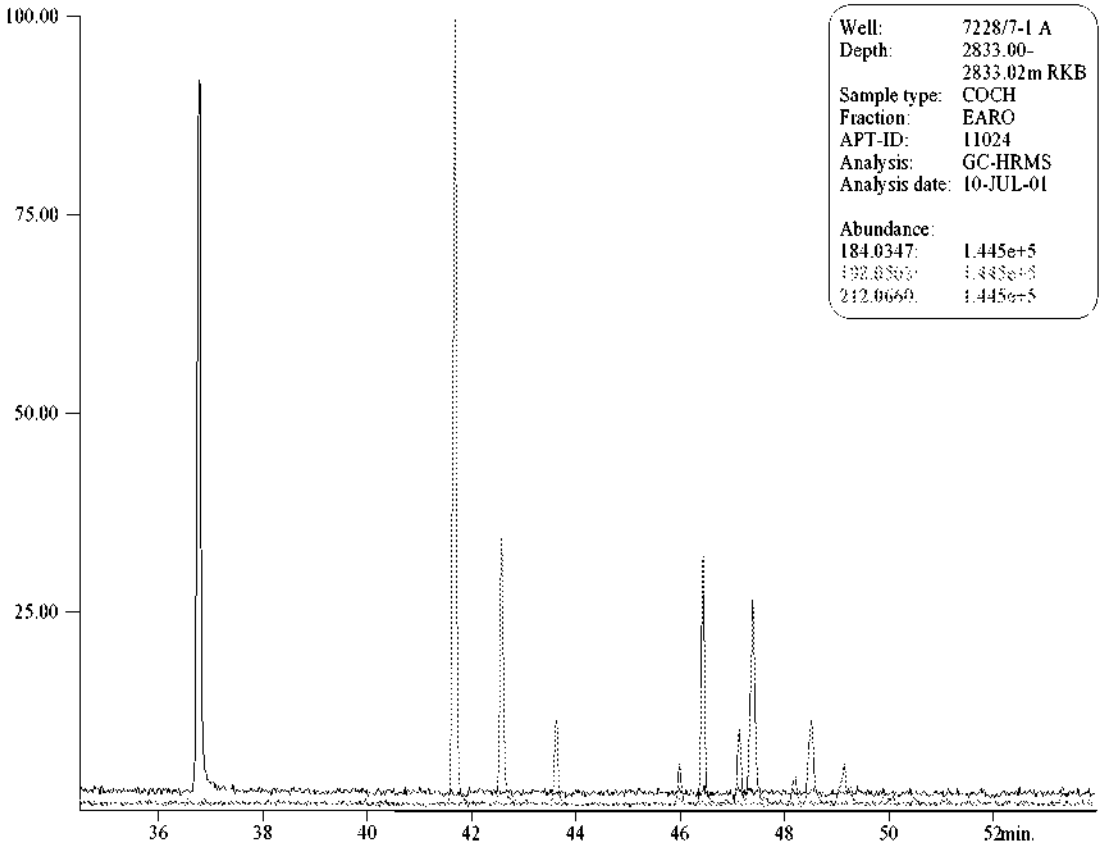

100 00
75 00
50 00
25 00
36
38
40
42
44
46
48
50
52min
Well 7228/7-1 A
Depth 2742m RKB
Sample type DC
Fraction EARO
APT-ID 11048
Analysis GC-HRMS
Analysis date 10-JUL-01
Abundance
184 0347 4 802e+6

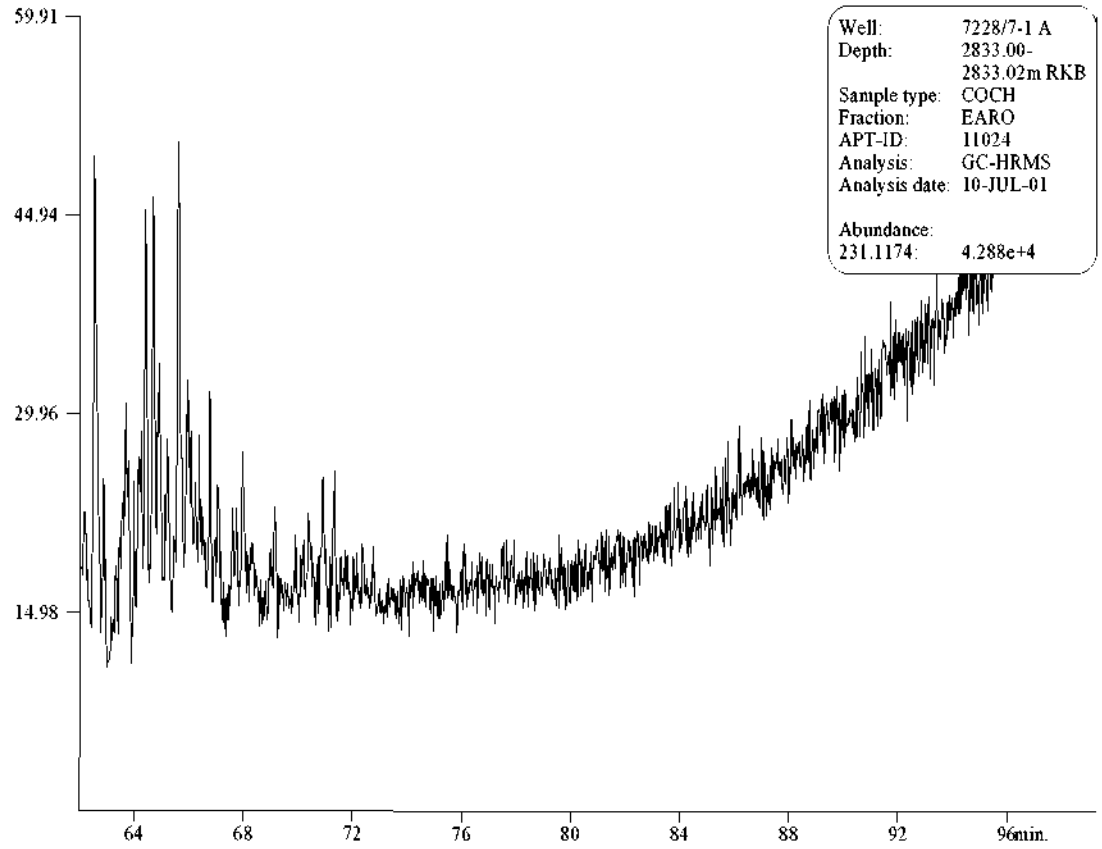

100 00
75 00
50 00
25 00
64
68
72
76
80
84
88
92
96min
Well 7228/7-1 A
Depth 2742m RKB
Sample type DC
Fraction EARO
APT-ID 11048
Analysis GC-HRMS
Analysis date 10-JUL-01
Abundance
231 1174 6 555e+5

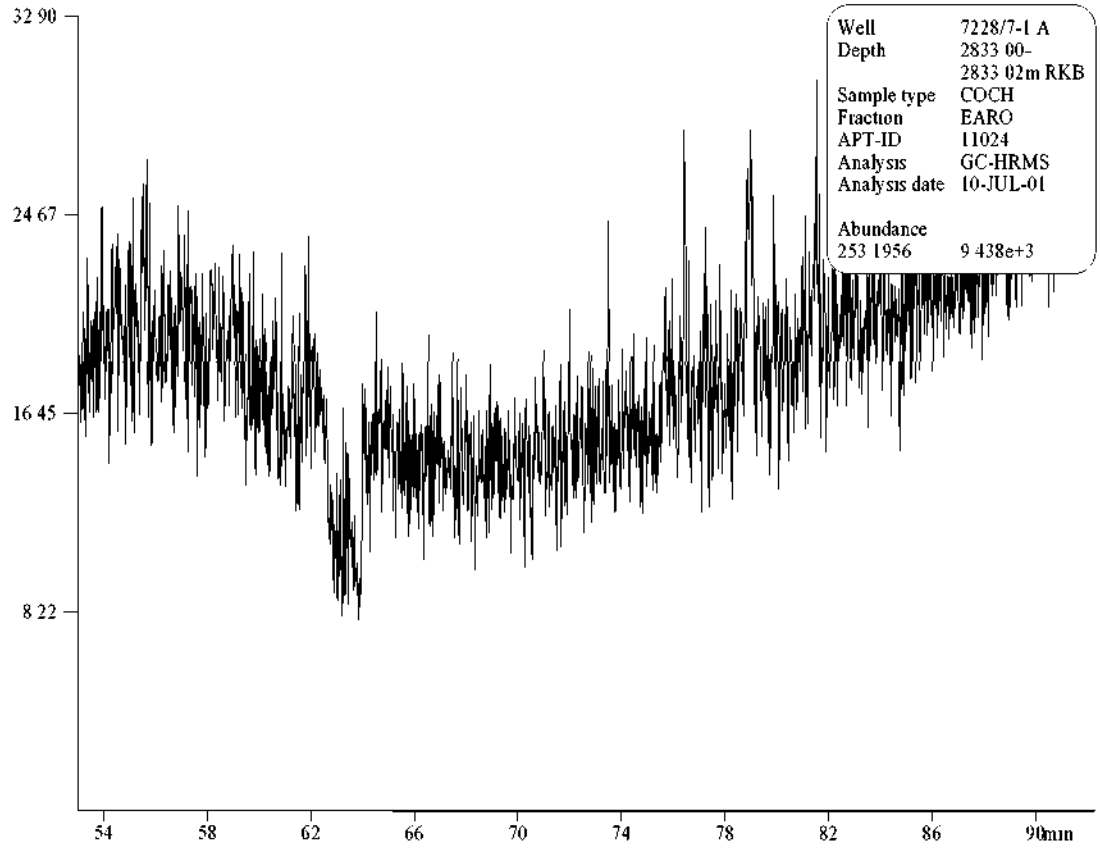

100 00
75 00
50 00
25 00
54
58
62
66
70
74
78
82
86
90min
Well 7228/7-1 A
Depth 2742m RKB
Sample type DC
Fraction EARO
APT-ID 11048
Analysis GC-HRMS
Analysis date 10-JUL-01
Abundance
253 1956 3 671e+5

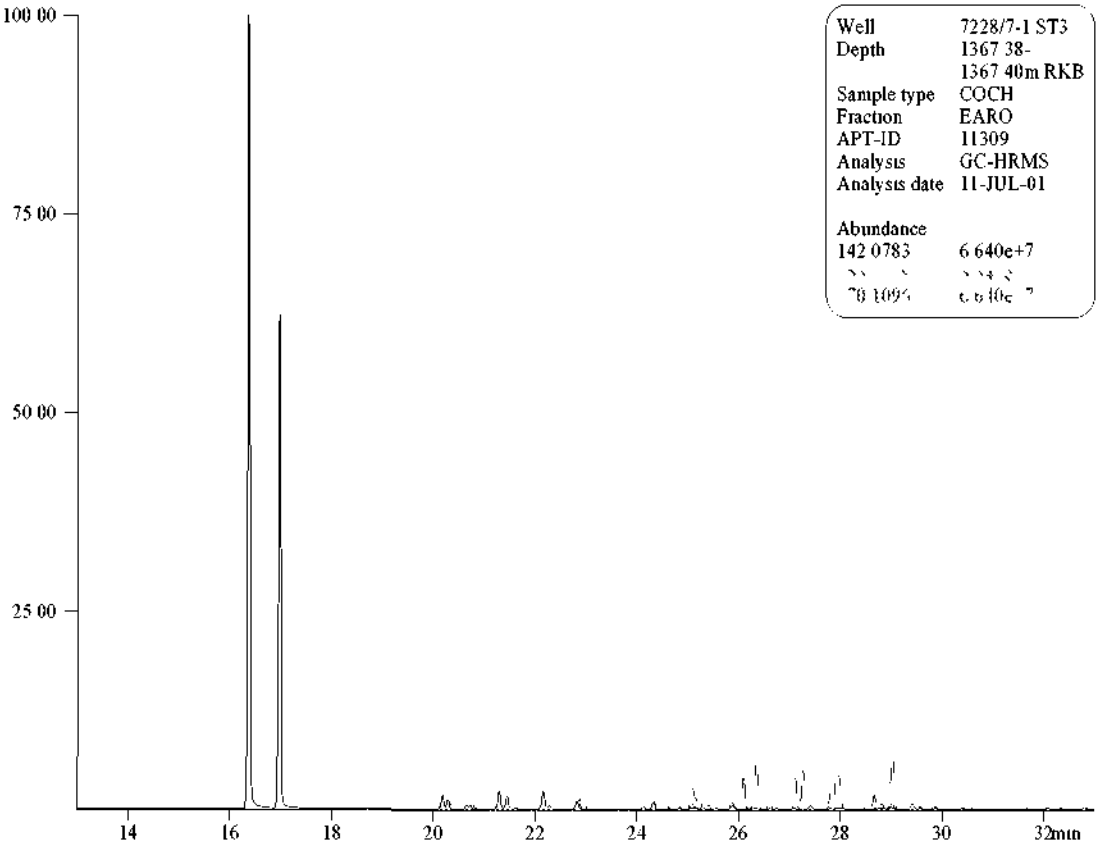

100 00
75 00
50 00
25 00
14
16
18
20
22
24
26
28
30
32min
Well 7228/7 1 A
Depth 2833 00
2833 02m RKB
Sample type COCH
Fraction EARO
APT ID 11024
Analysis GC HRMS
Analysis date 10 JUL 01
Abundance
142 0783 7 854e+6

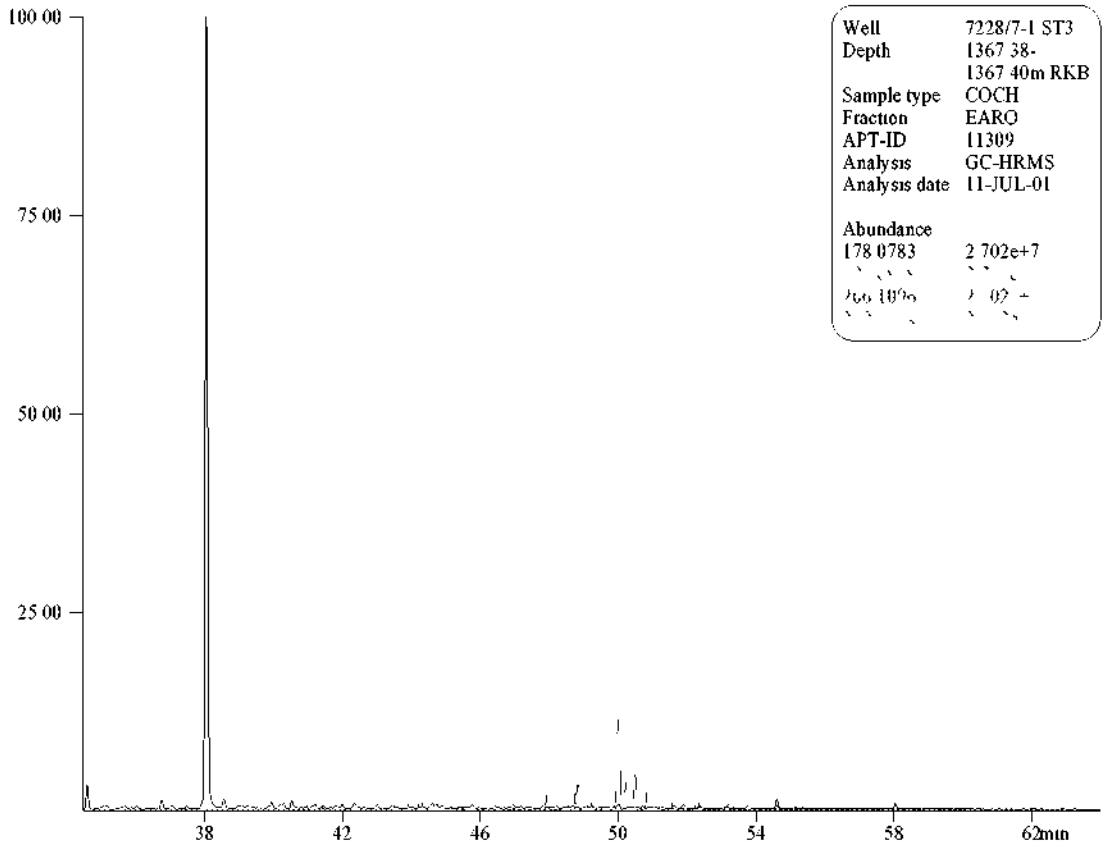

100 00
75 00
50 00
25 00
38
42
46
50
54
58
62min
Well 7228/7 1 A
Depth 2833 00
2833 02m RKB
Sample type COCH
Fraction EARO
APT ID 11024
Analysis GC HRMS
Analysis date 10 JUL 01
Abundance
178 0783 3 426e+6

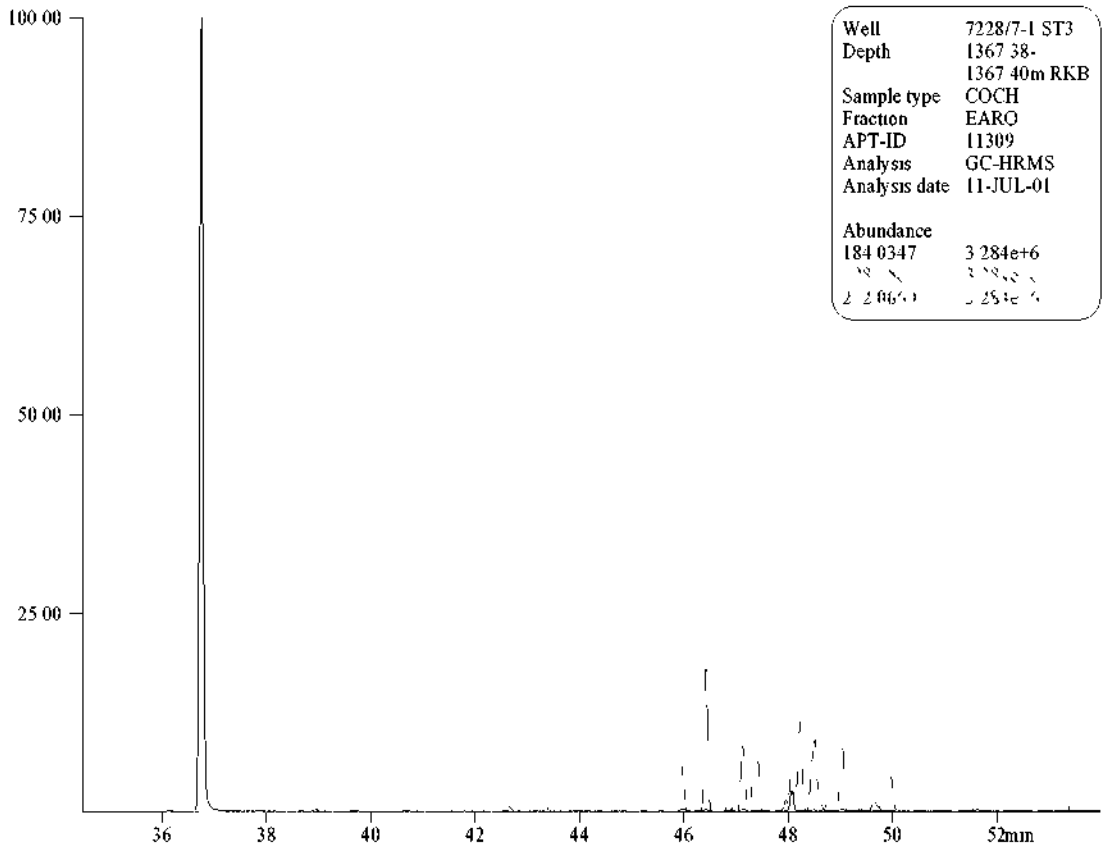

100.00
75.00
50.00
25.00
Well: 7228/7-1 A
Depth: 2833.00-2833.02m RKB
Sample type: COCH
Fraction: EARO
APT-ID: 11024
Analysis: GC-HRMS
Analysis date: 10-JUL-01
Abundance:
184.0347: 1.445e+5
212.0660: 1.445e+5
36
38
40
42
44
46
48
50
52min.

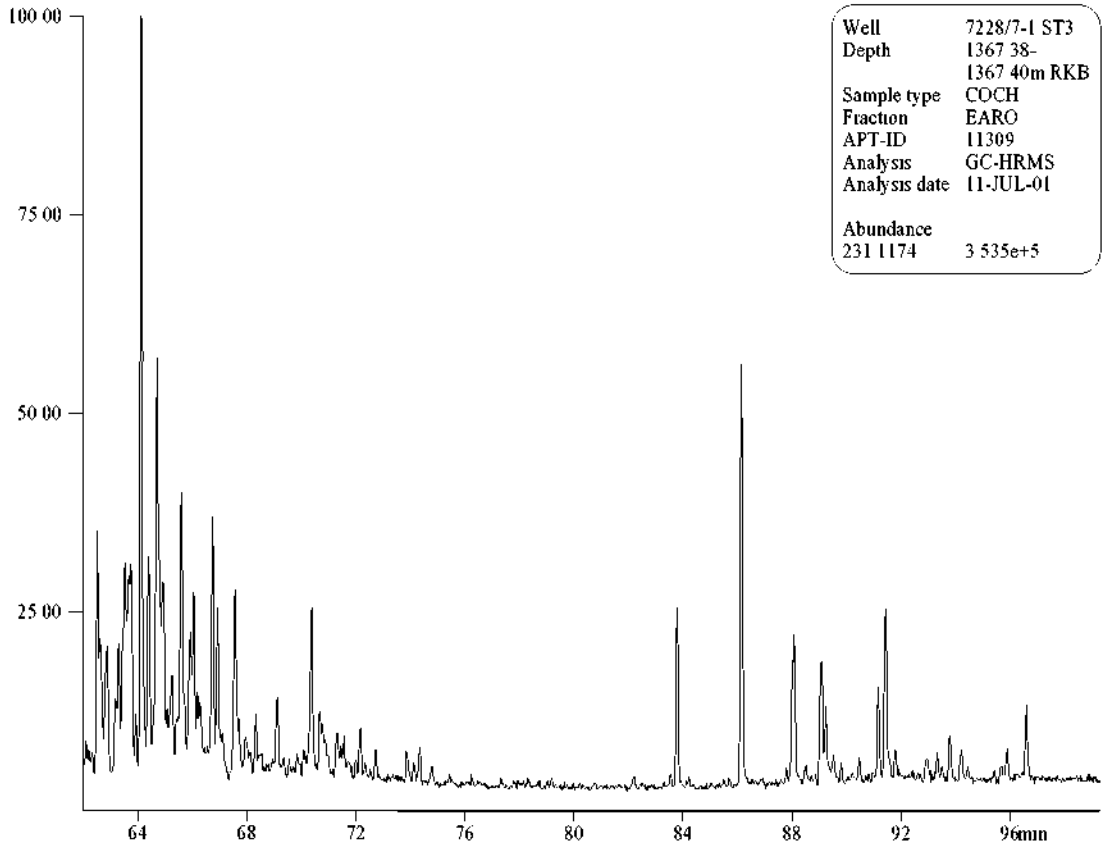

59.91
44.94
29.96
14.98
Well: 7228/7-1 A
Depth: 2833.00-2833.02m RKB
Sample type: COCH
Fraction: EARO
APT-ID: 11024
Analysis: GC-HRMS
Analysis date: 10-JUL-01
Abundance:
231.1174: 4.288e+4
64
68
72
76
80
84
88
92
96min.

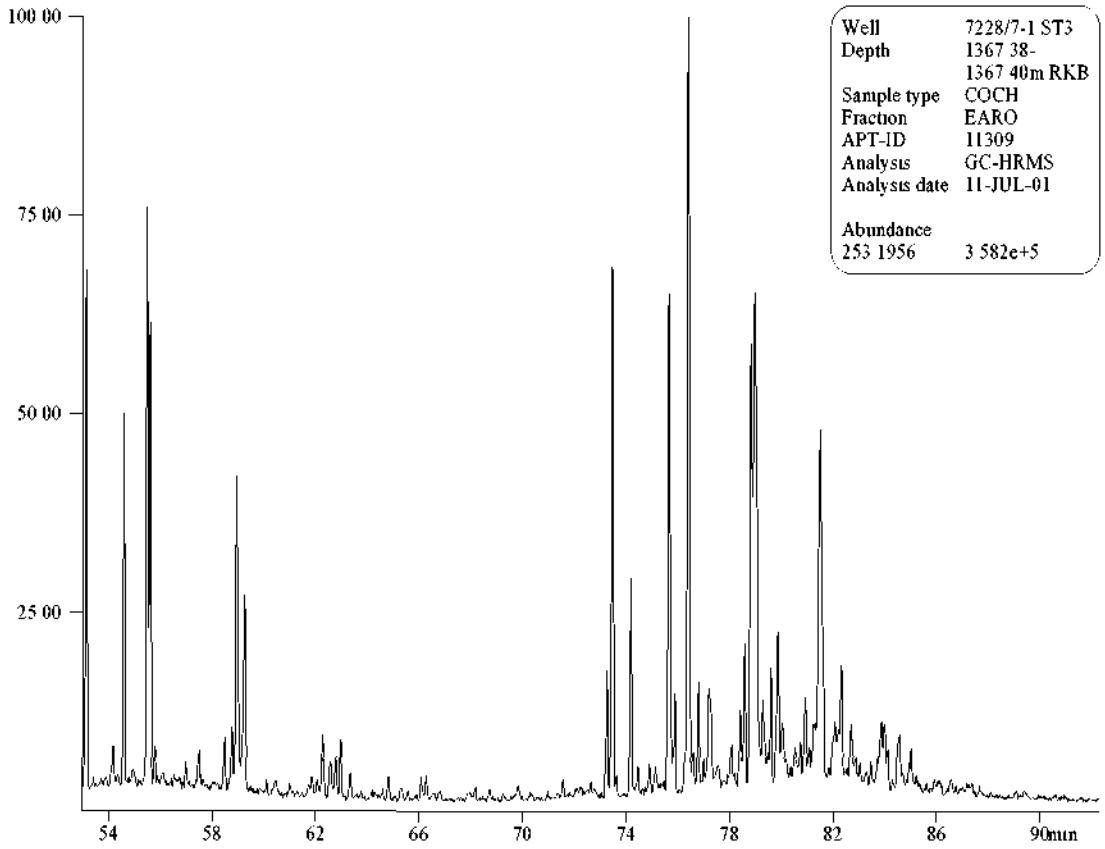

32 90
24 67
16 45
8 22
54
58
62
66
70
74
78
82
86
90min
Well 7228/7-1 A
Depth 2833 00-
2833 02m RKB
Sample type COCH
Fraction EARO
APT-ID 11024
Analysis GC-HRMS
Analysis date 10-JUL-01
Abundance
253 1956 9 438e+3

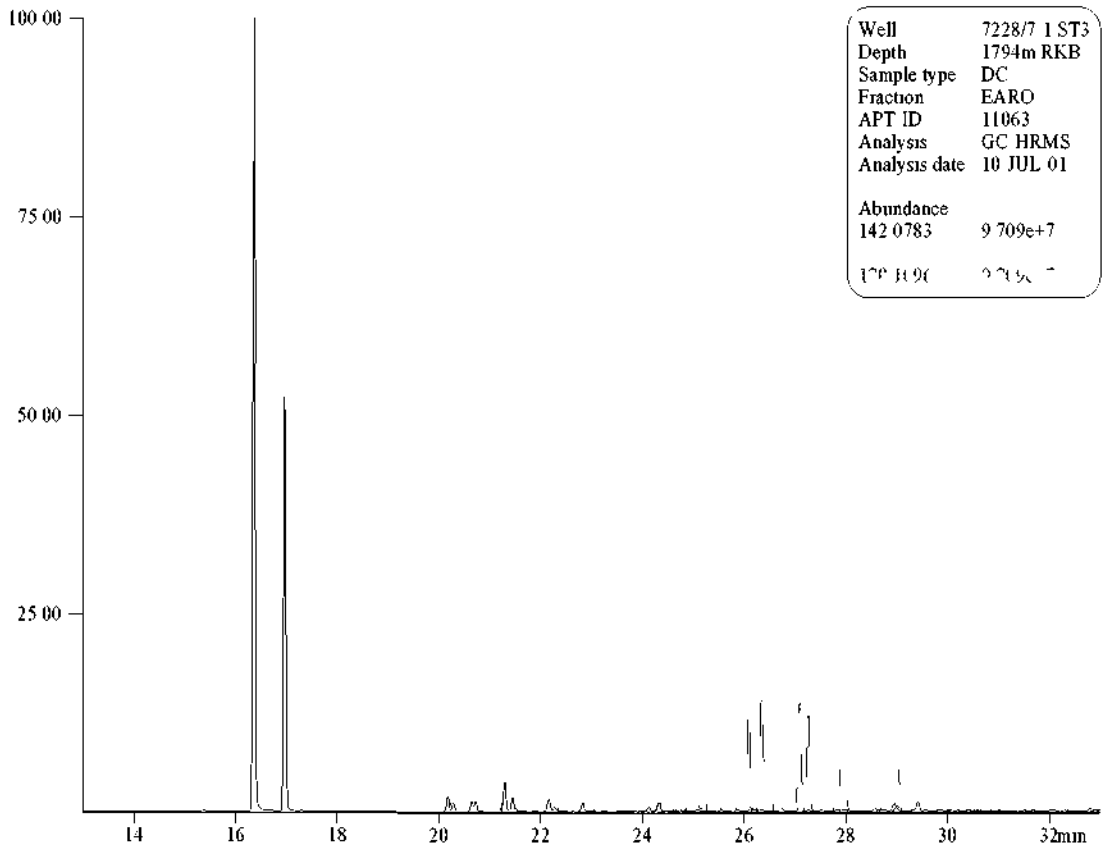

100 00
75 00
50 00
25 00
14
16
18
20
22
24
26
28
30
32min
Well 7228/7-1 ST3
Depth 1367 38-
1367 40m RKB
Sample type COCH
Fraction EARO
APT-ID 11309
Analysis GC-HRMS
Analysis date 11-JUL-01
Abundance
142 0783 6 640e+7

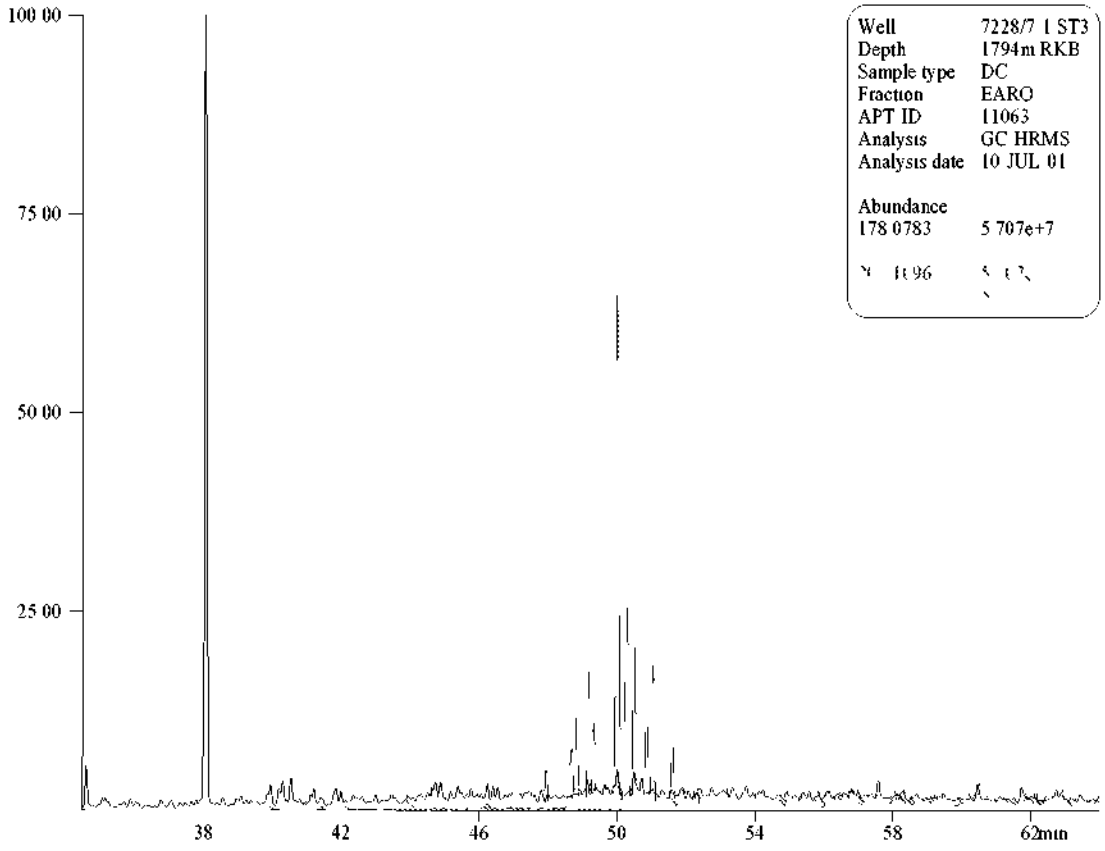

100 00
75 00
50 00
25 00
38
42
46
50
54
58
62min
Well 7228/7-1 ST3
Depth 1367 38-1367 40m RKB
Sample type COCH
Fraction EARO
APT-ID 11309
Analysis GC-HRMS
Analysis date 11-JUL-01
Abundance
178 0783 2 702e+7

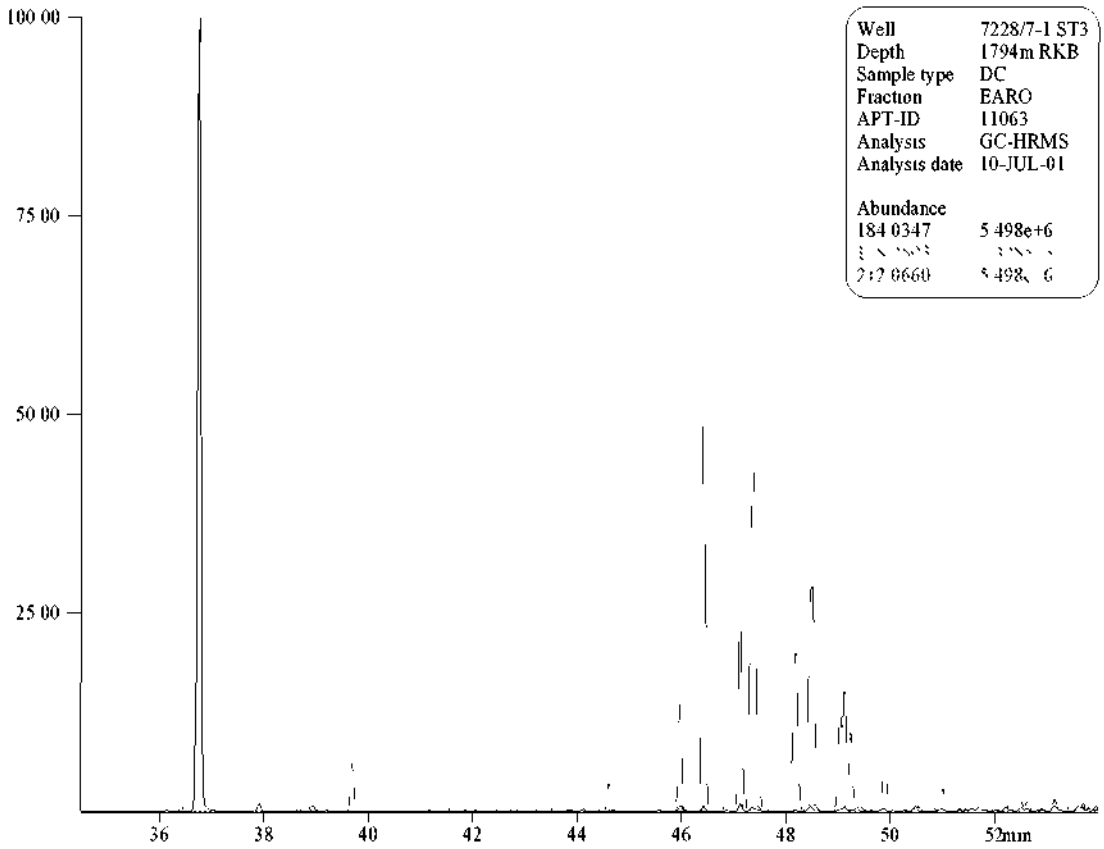

100 00
75 00
50 00
25 00
36
38
40
42
44
46
48
50
52min
Well 7228/7-1 ST3
Depth 1367 38-1367 40m RKB
Sample type COCH
Fraction EARO
APT-ID 11309
Analysis GC-HRMS
Analysis date 11-JUL-01
Abundance
184 0347 3 284e+6

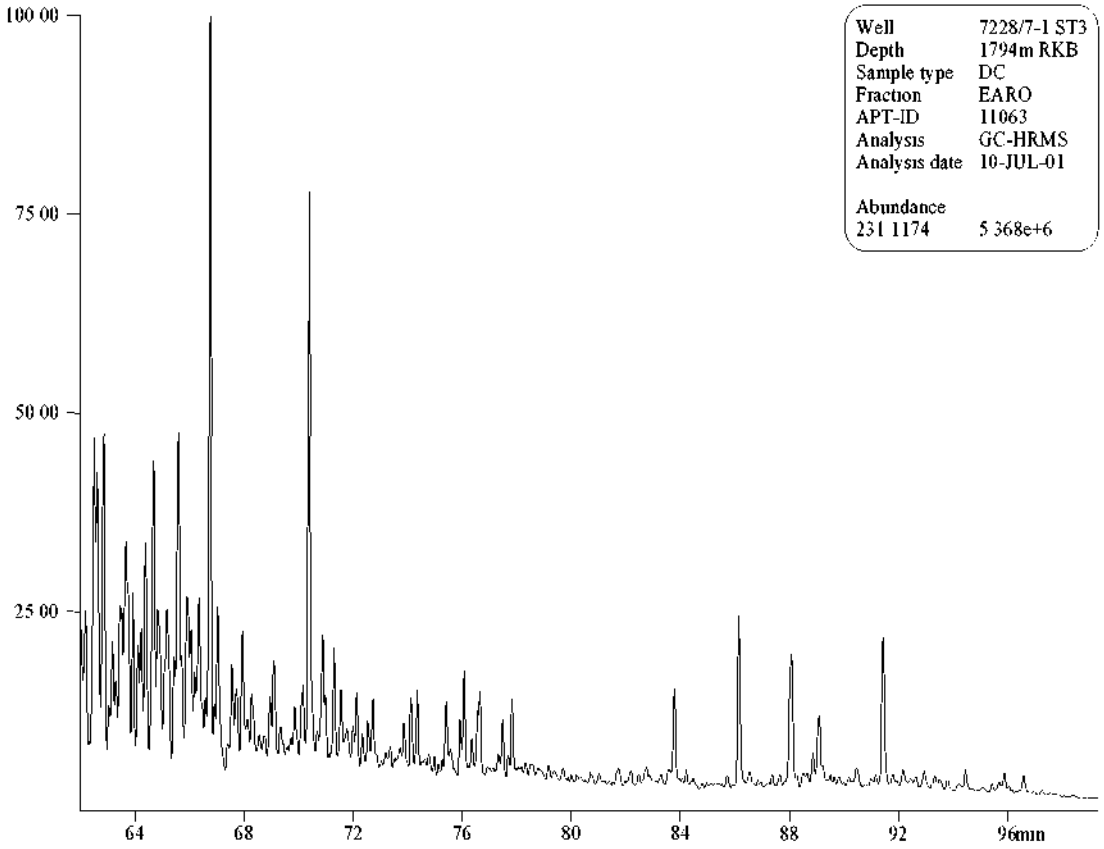

100 00
75 00
50 00
25 00
64
68
72
76
80
84
88
92
96min
Well 7228/7-1 ST3
Depth 1367 38-1367 40m RKB
Sample type COCH
Fraction EARO
APT-ID 11309
Analysis GC-HRMS
Analysis date 11-JUL-01
Abundance
231 1174 3 535e+5

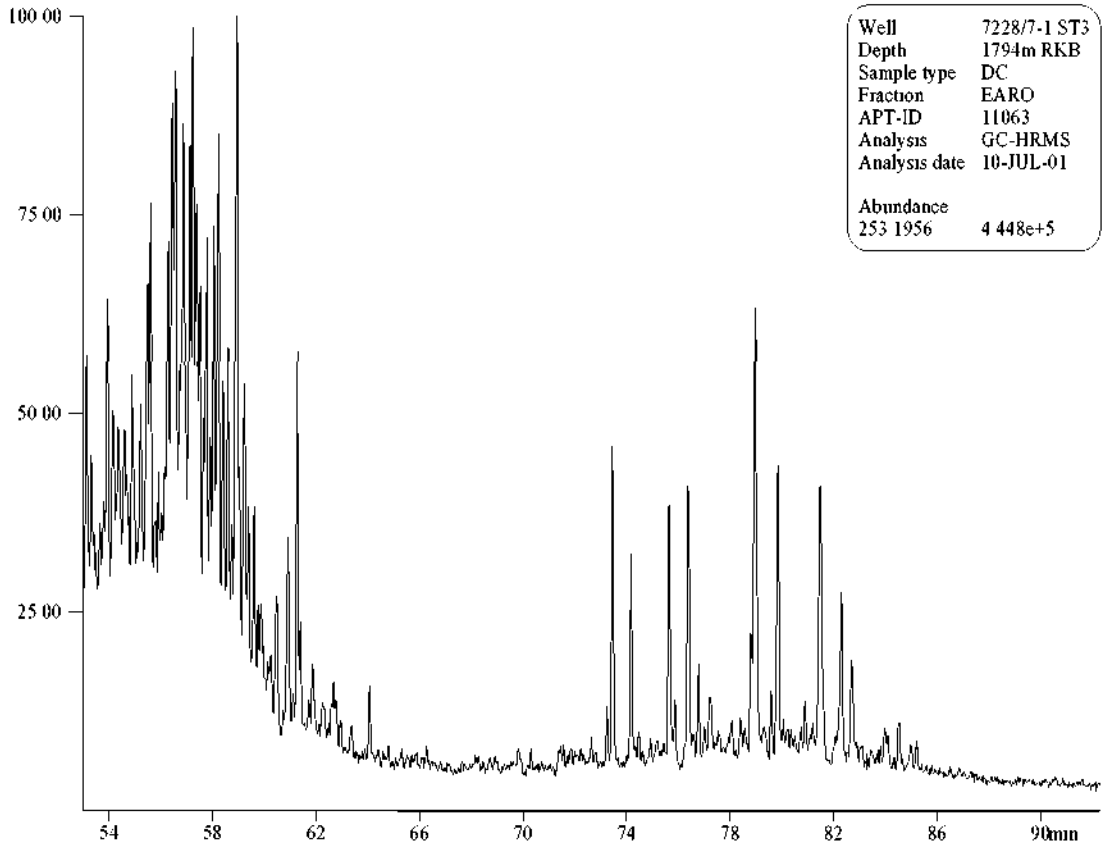

100 00
75 00
50 00
25 00
54
58
62
66
70
74
78
82
86
90min
Well 7228/7-1 ST3
Depth 1367 38-1367 40m RKB
Sample type COCH
Fraction EARO
APT-ID 11309
Analysis GC-HRMS
Analysis date 11-JUL-01
Abundance
253 1956 3 582e+5


100 00
75 00
50 00
25 00
14
16
18
20
22
24
26
28
30
32min
Well 7228/7 1 ST3
Depth 1794m RKB
Sample type DC
Fraction EARO
APT ID 11063
Analysis GC HRMS
Analysis date 10 JUL 01
Abundance
142 0783 9 709e+7

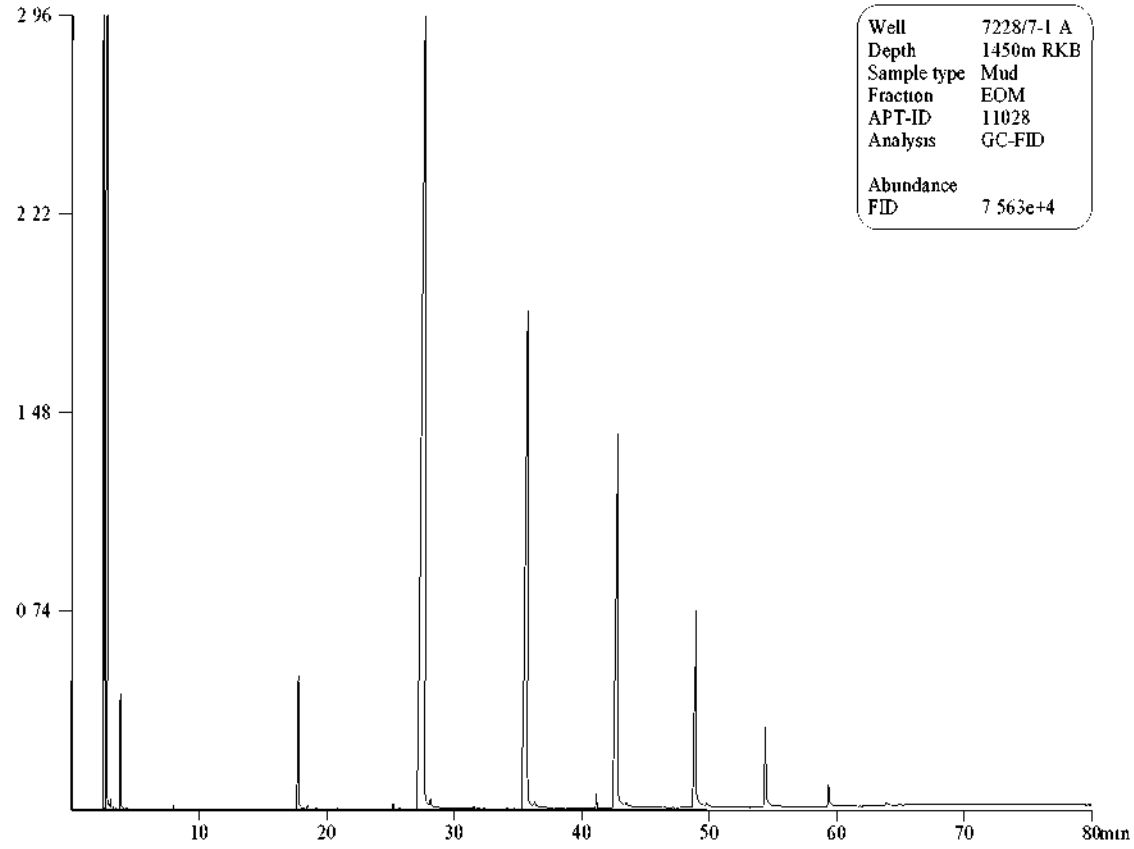

100 00
75 00
50 00
25 00
38
42
46
50
54
58
62min
Well 7228/7 1 ST3
Depth 1794m RKB
Sample type DC
Fraction EARO
APT ID 11063
Analysis GC HRMS
Analysis date 10 JUL 01
Abundance
178 0783 5 707e+7

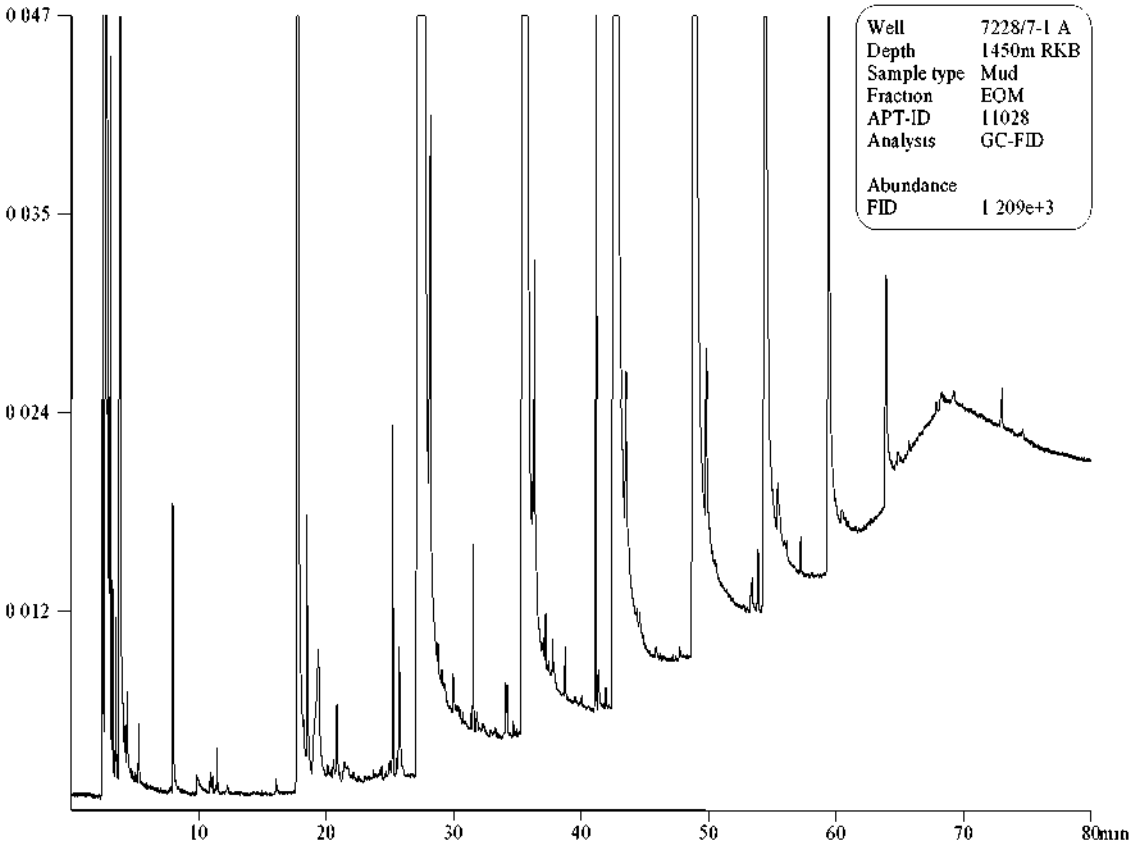

100 00
75 00
50 00
25 00
36
38
40
42
44
46
48
50
52mn
Well 7228/7-1 ST3
Depth 1794m RKB
Sample type DC
Fraction EARO
APT-ID 11063
Analysis GC-HRMS
Analysis date 10-JUL-01
Abundance
184 0347 5 498e+6

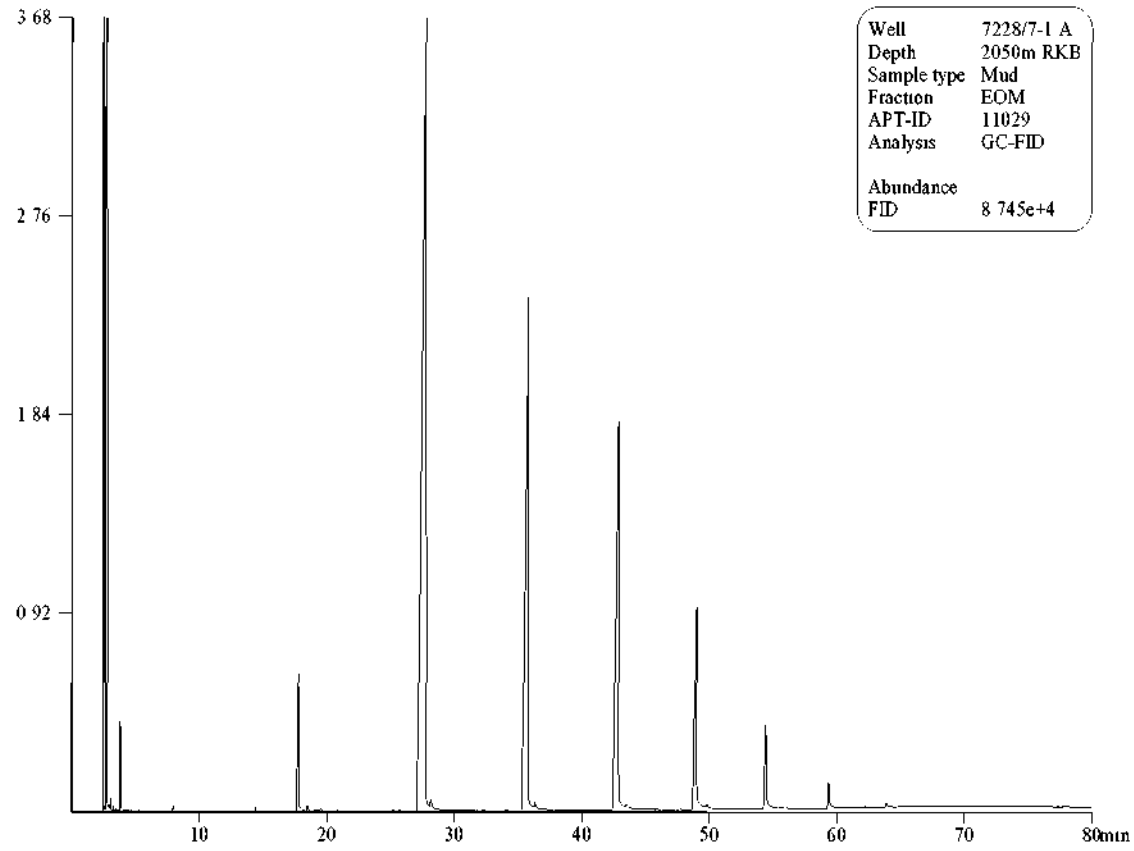

100 00
75 00
50 00
25 00
64
68
72
76
80
84
88
92
96mn
Well 7228/7-1 ST3
Depth 1794m RKB
Sample type DC
Fraction EARO
APT-ID 11063
Analysis GC-HRMS
Analysis date 10-JUL-01
Abundance
231 1174 5 368e+6

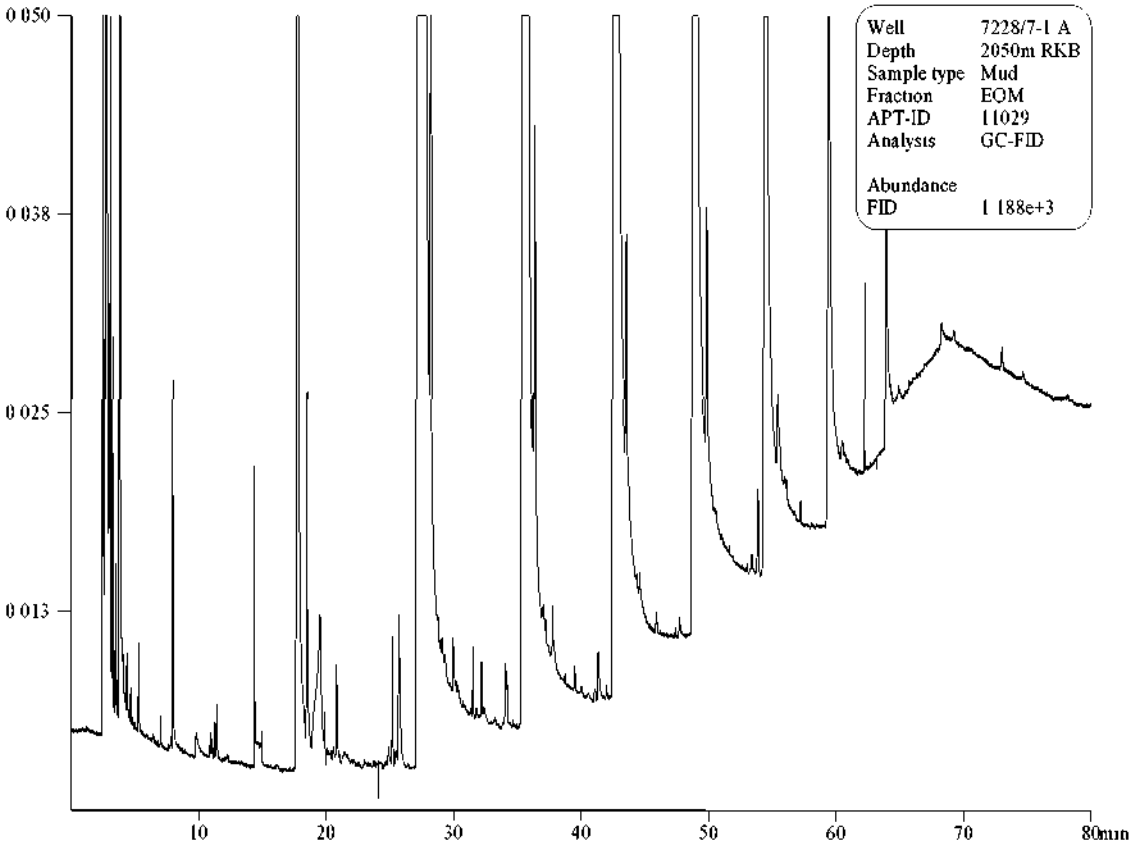

100 00
75 00
50 00
25 00
54
58
62
66
70
74
78
82
86
90mn
Well 7228/7-1 ST3
Depth 1794m RKB
Sample type DC
Fraction EARO
APT-ID 11063
Analysis GC-HRMS
Analysis date 10-JUL-01
Abundance
253 1956 4 448e+5

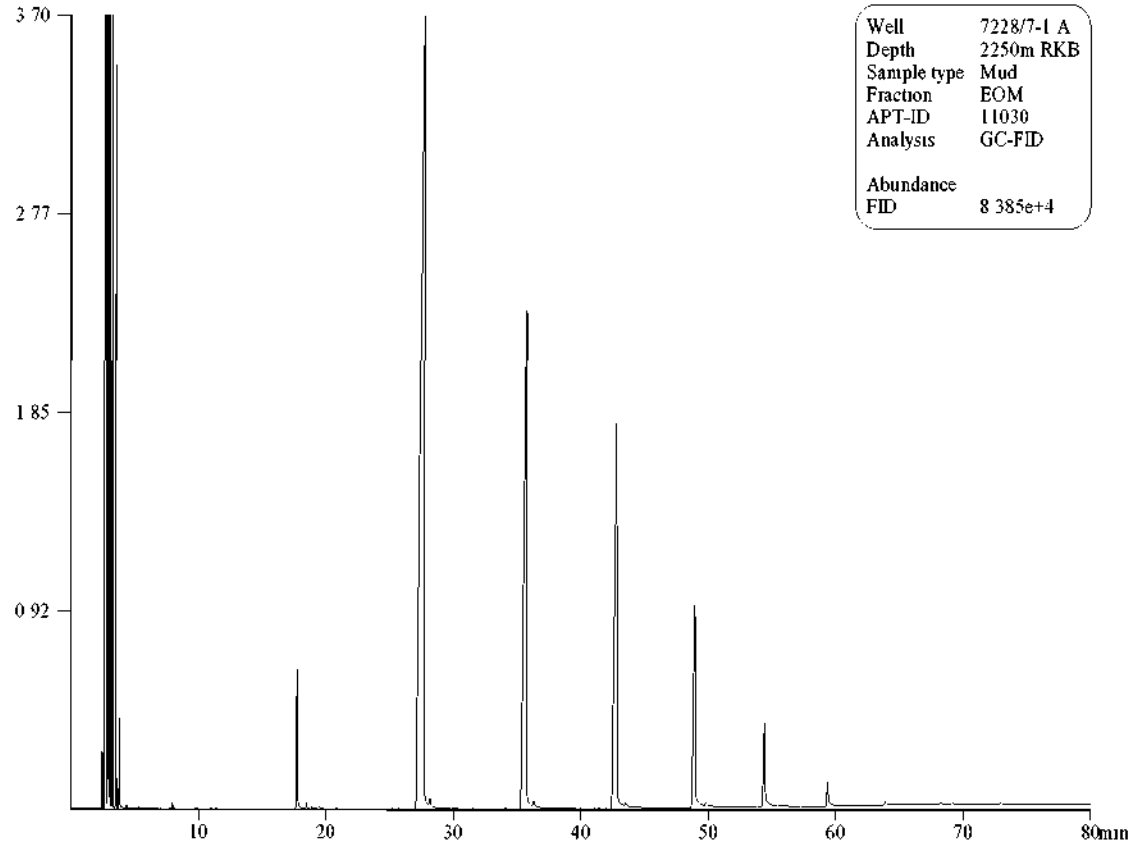
Gas Chromatograms of Mud samples

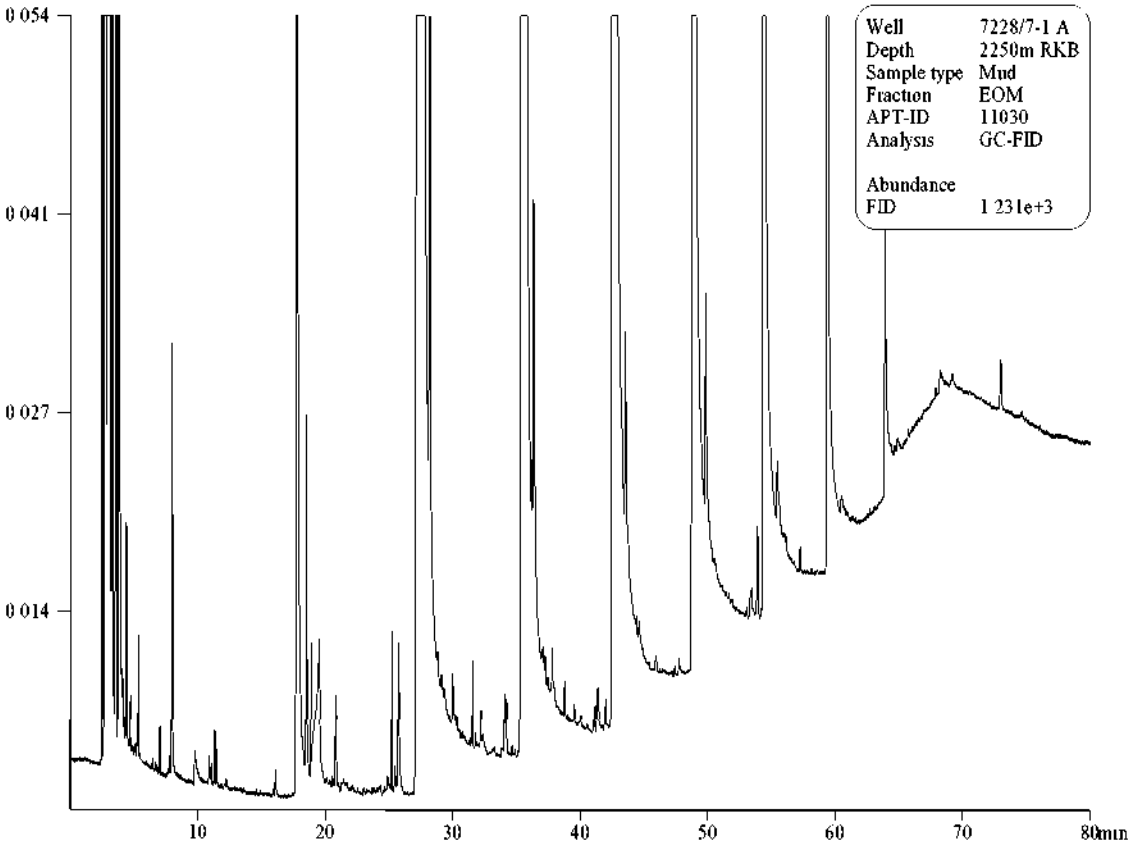

2 96
2 22
1 48
0 74
Well 7228/7-1 A
Depth 1450m RKB
Sample type Mud
Fraction EOM
APT-ID 11028
Analysis GC-FID
Abundance
FID 7 563e+4
10
20
30
40
50
60
70
80min

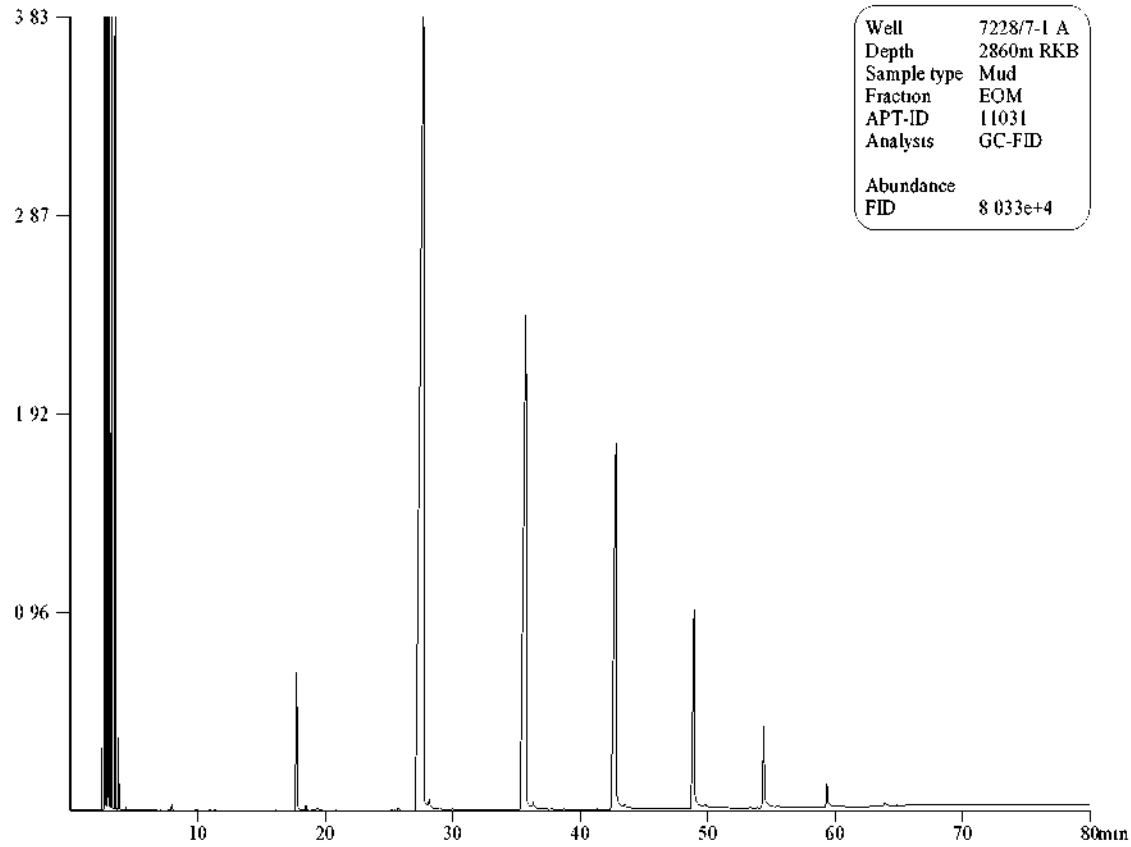

0 047
0 035
0 024
0 012
Well 7228/7-1 A
Depth 1450m RKB
Sample type Mud
Fraction EOM
APT-ID 11028
Analysis GC-FID
Abundance
FID 1 209e+3
10
20
30
40
50
60
70
80min

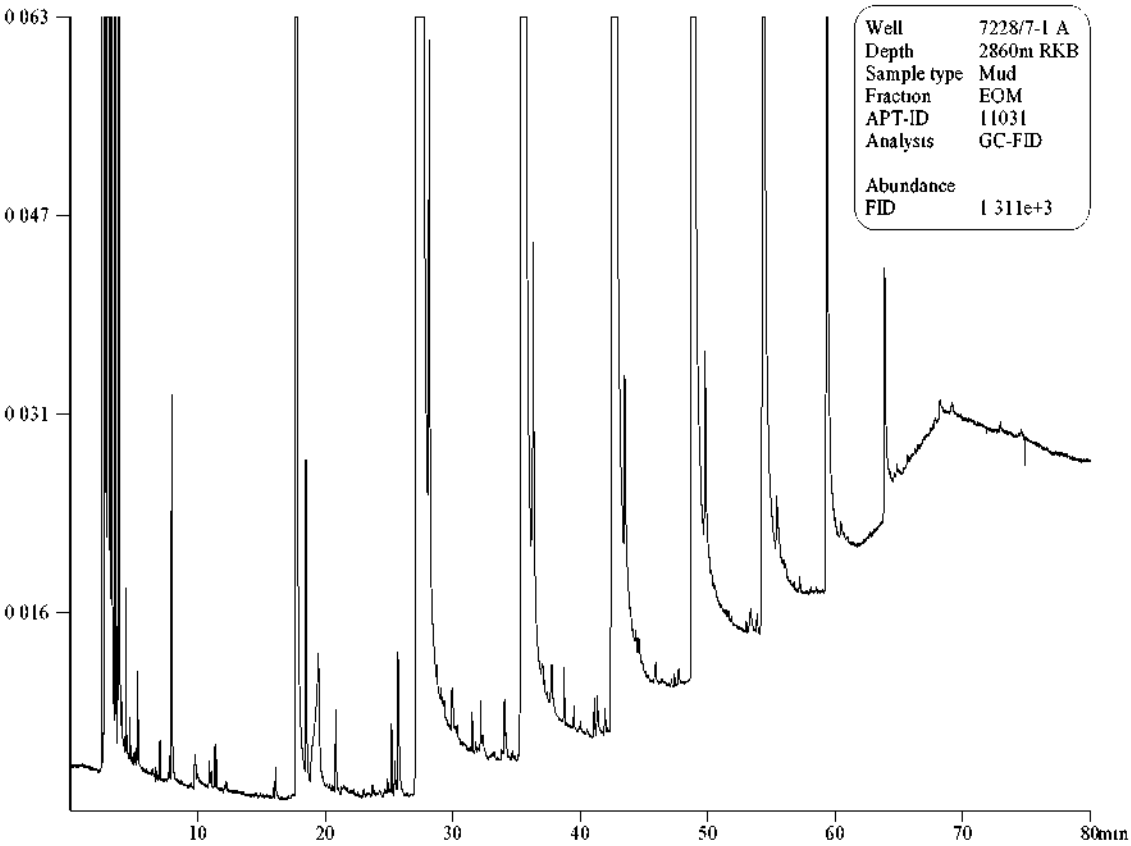

3 68
2 76
1 84
0 92
10
20
30
40
50
60
70
80min
Well 7228/7-1 A
Depth 2050m RKB
Sample type Mud
Fraction EOM
APT-ID 11029
Analysis GC-FID
Abundance
FID 8 745e+4

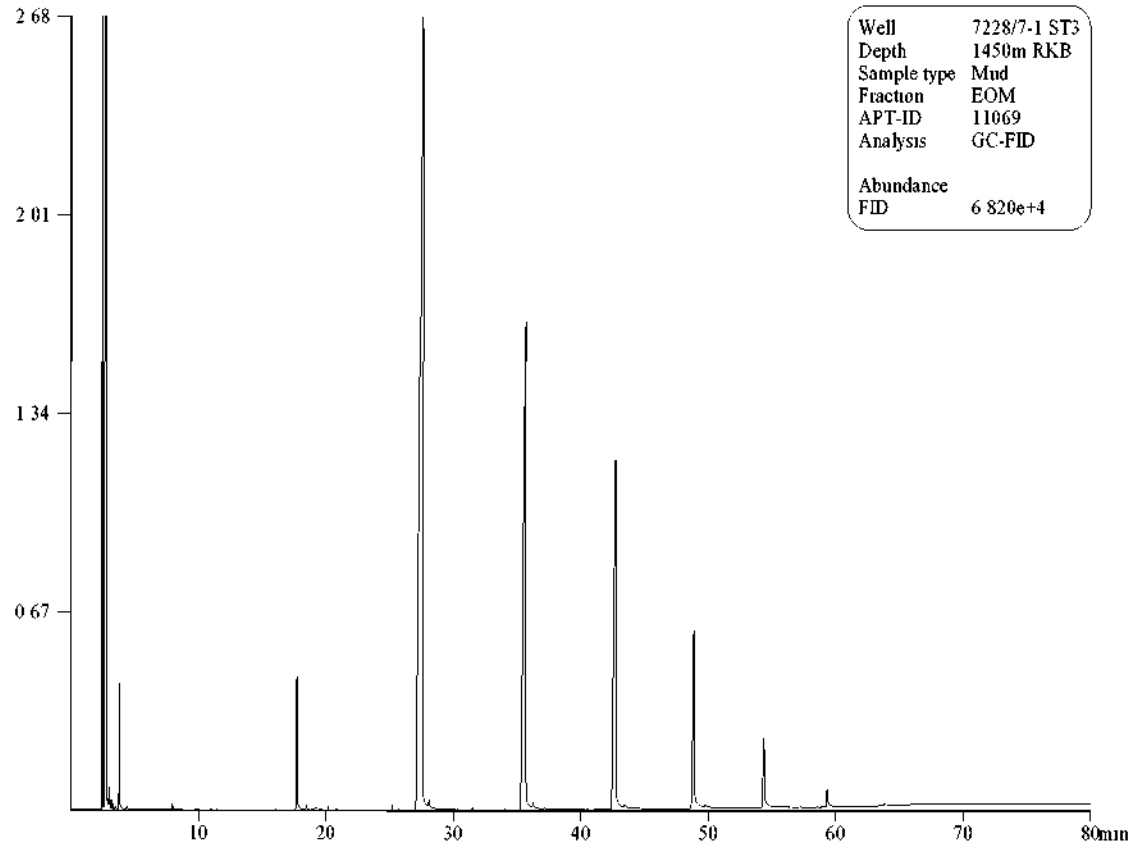

0 050
0 038
0 025
0 013
10
20
30
40
50
60
70
80min
Well 7228/7-1 A
Depth 2050m RKB
Sample type Mud
Fraction EOM
APT-ID 11029
Analysis GC-FID
Abundance
FID 1 188e+3

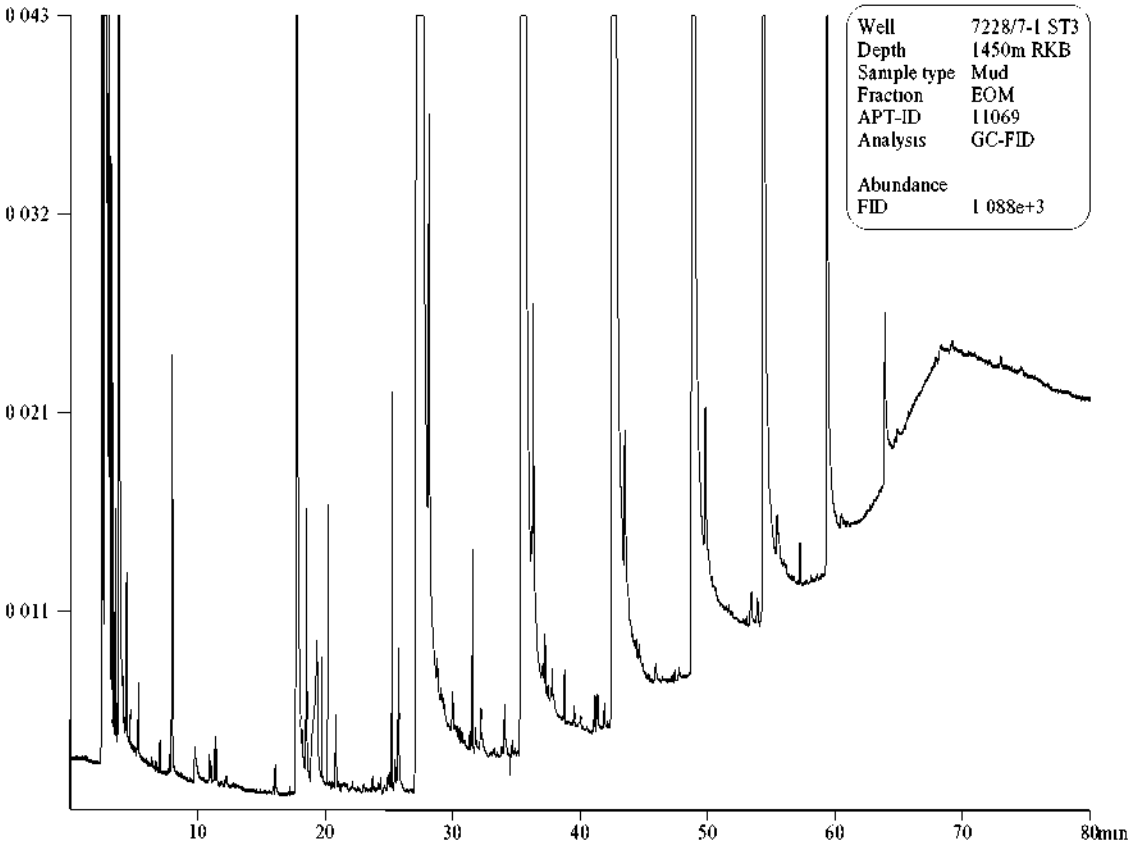

3 70
2 77
1 85
0 92
10
20
30
40
50
60
70
80min
Well 7228/7-1 A
Depth 2250m RKB
Sample type Mud
Fraction EOM
APT-ID 11030
Analysis GC-FID
Abundance
FID 8 385e+4

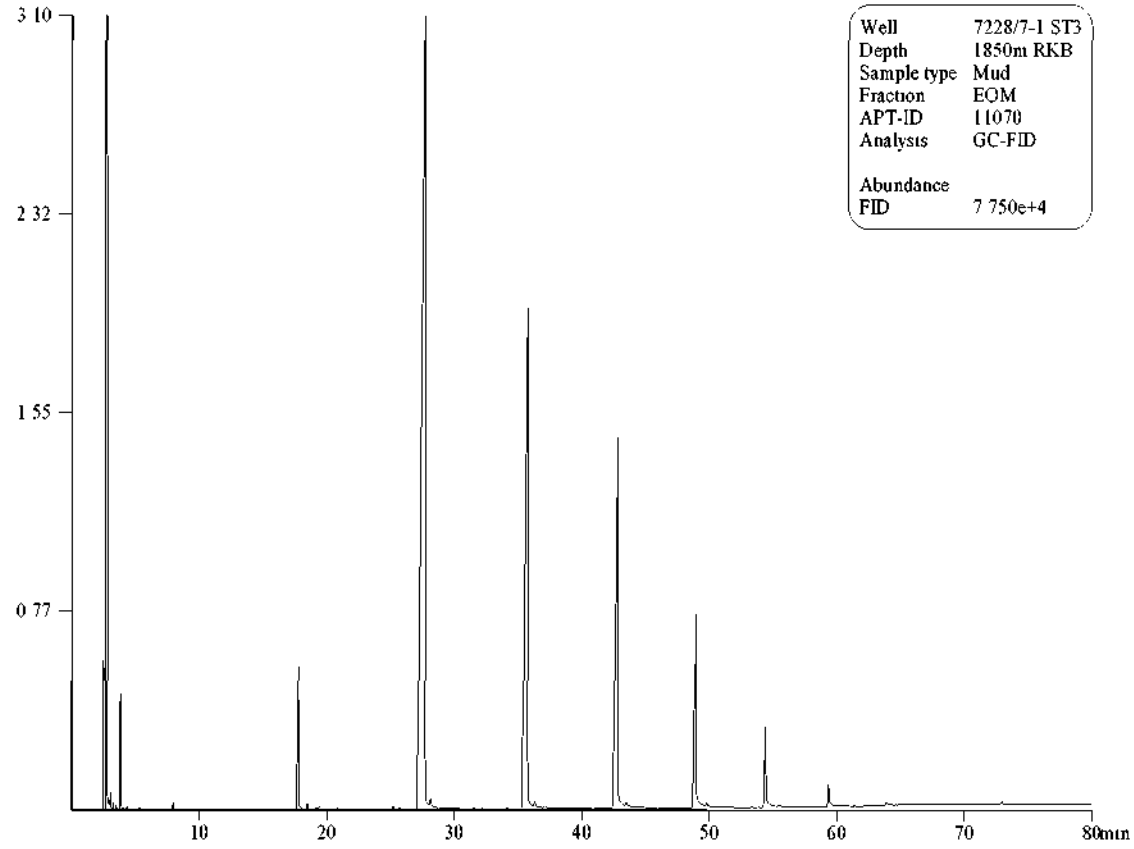

0 054
0 041
0 027
0 014
10
20
30
40
50
60
70
80min
Well 7228/7-1 A
Depth 2250m RKB
Sample type Mud
Fraction EOM
APT-ID 11030
Analysis GC-FID
Abundance
FID 1 231e+3

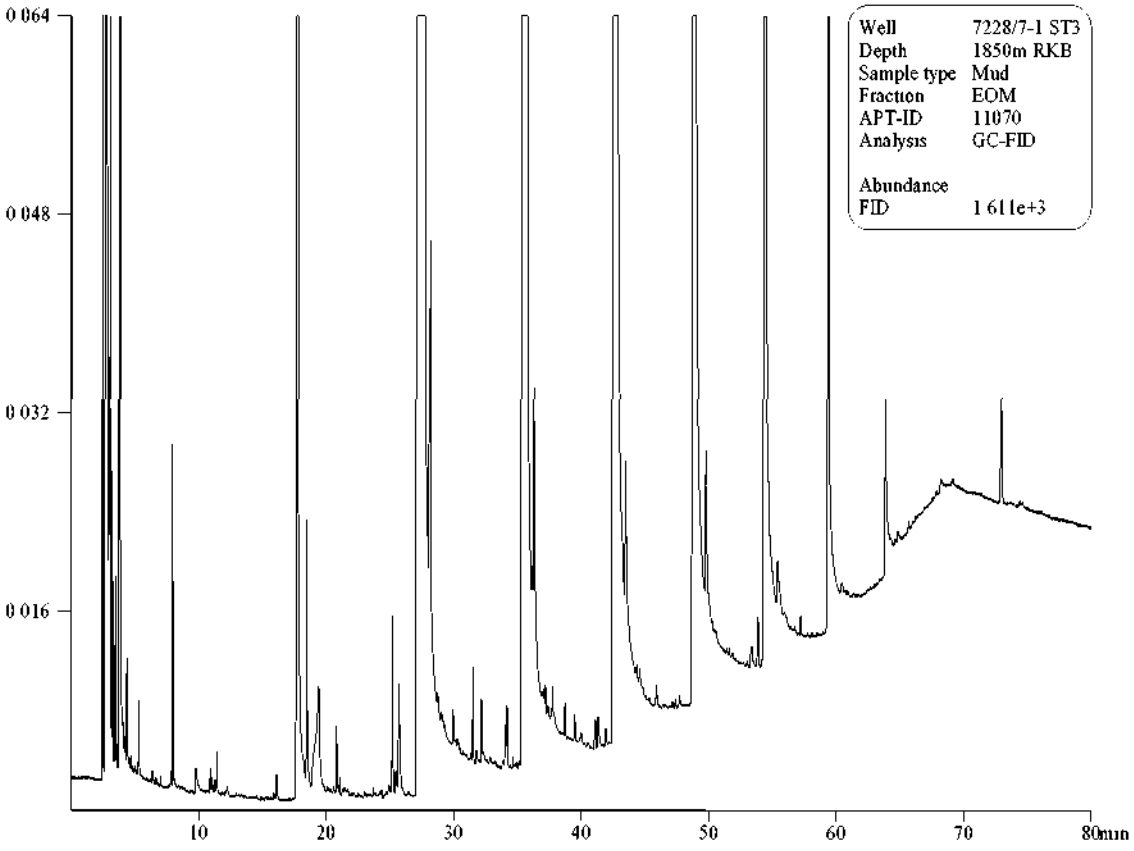

3 83
2 87
1 92
0 96
10
20
30
40
50
60
70
80min
Well 7228/7-1 A
Depth 2860m RKB
Sample type Mud
Fraction EOM
APT-ID 11031
Analysis GC-FID
Abundance
FID 8 033e+4

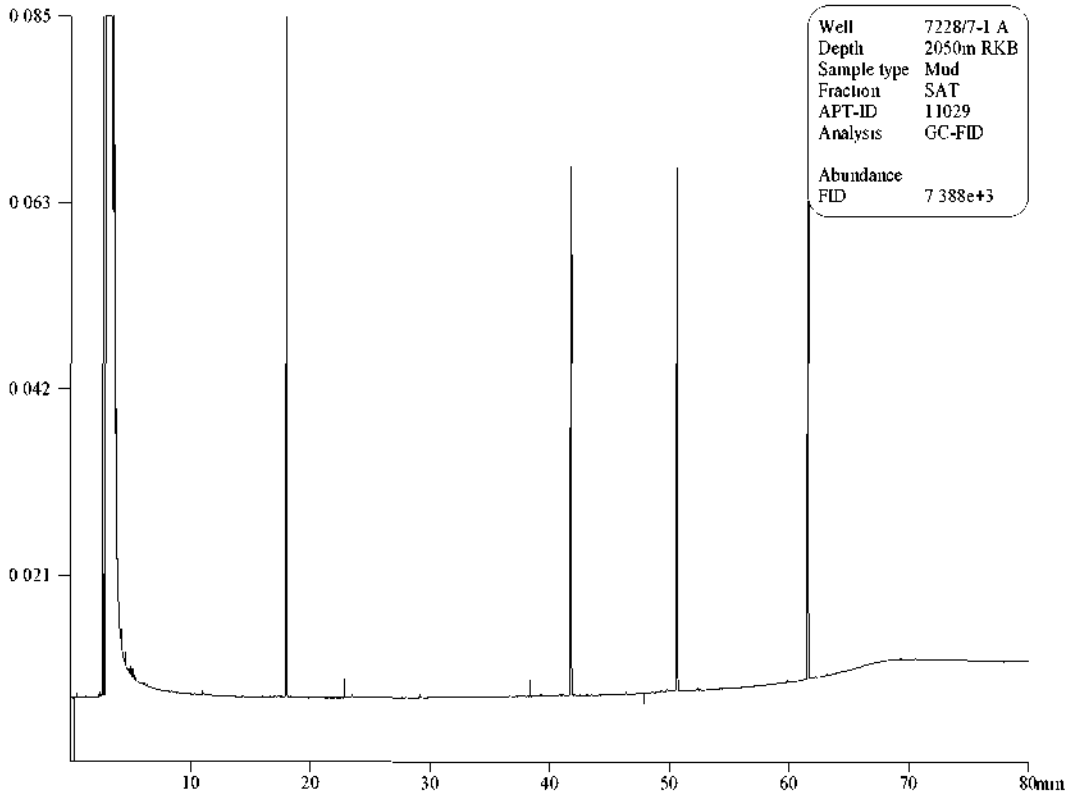

0 063
0 047
0 031
0 016
10
20
30
40
50
60
70
80min
Well 7228/7-1 A
Depth 2860m RKB
Sample type Mud
Fraction EOM
APT-ID 11031
Analysis GC-FID
Abundance
FID 1 311e+3


2 68
2 01
1 34
0 67
10
20
30
40
50
60
70
80min
Well 7228/7-1 ST3
Depth 1450m RKB
Sample type Mud
Fraction EOM
APT-ID 11069
Analysis GC-FID
Abundance
FID 6 820e+4

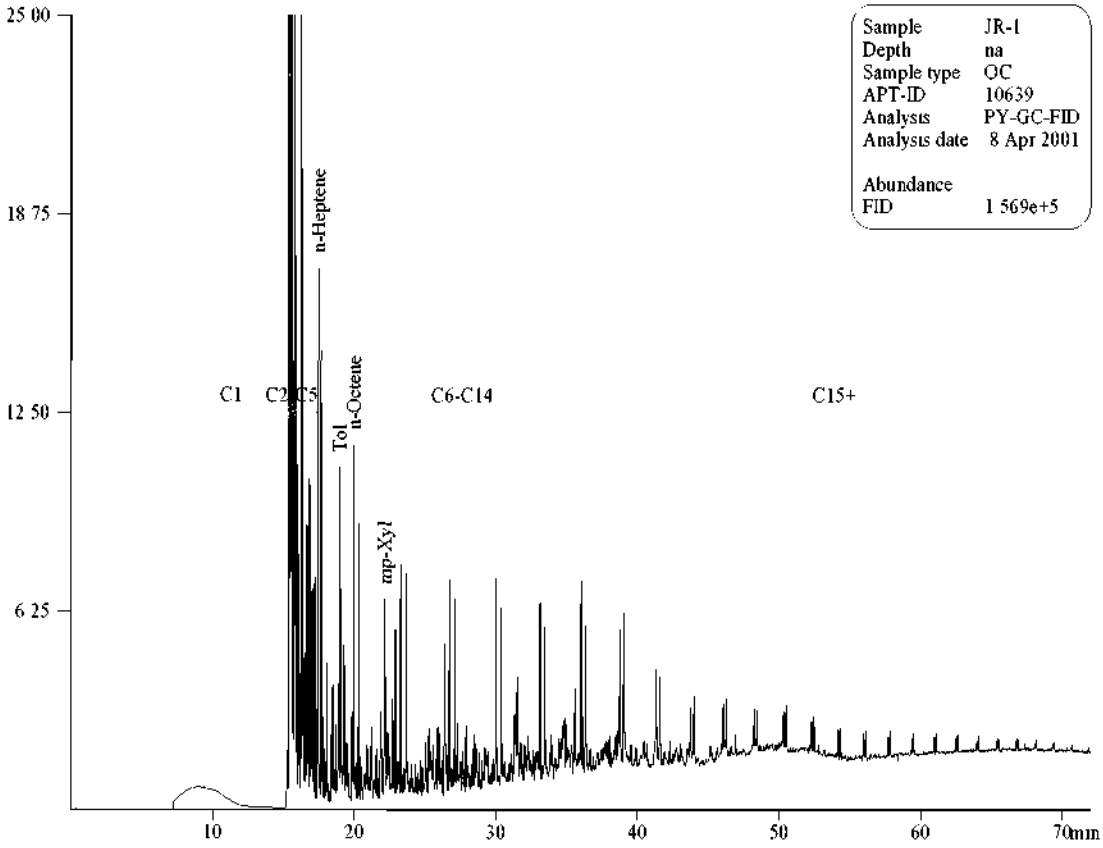

0 043
0 032
0 021
0 011
10
20
30
40
50
60
70
80min
Well 7228/7-1 ST3
Depth 1450m RKB
Sample type Mud
Fraction EOM
APT-ID 11069
Analysis GC-FID
Abundance
FID 1 088e+3

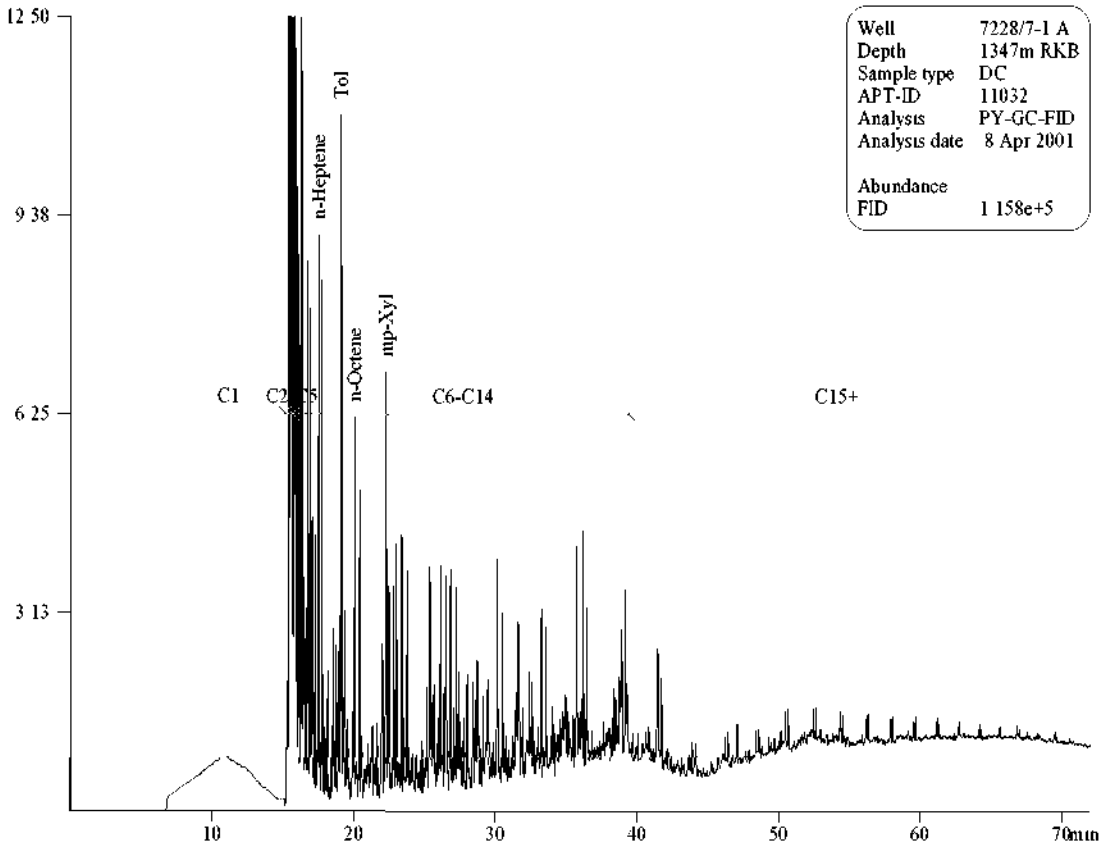

3 10
2 32
1 55
0 77
10
20
30
40
50
60
70
80min
Well 7228/7-1 ST3
Depth 1850m RKB
Sample type Mud
Fraction EOM
APT-ID 11070
Analysis GC-FID
Abundance
FID 7 750e+4

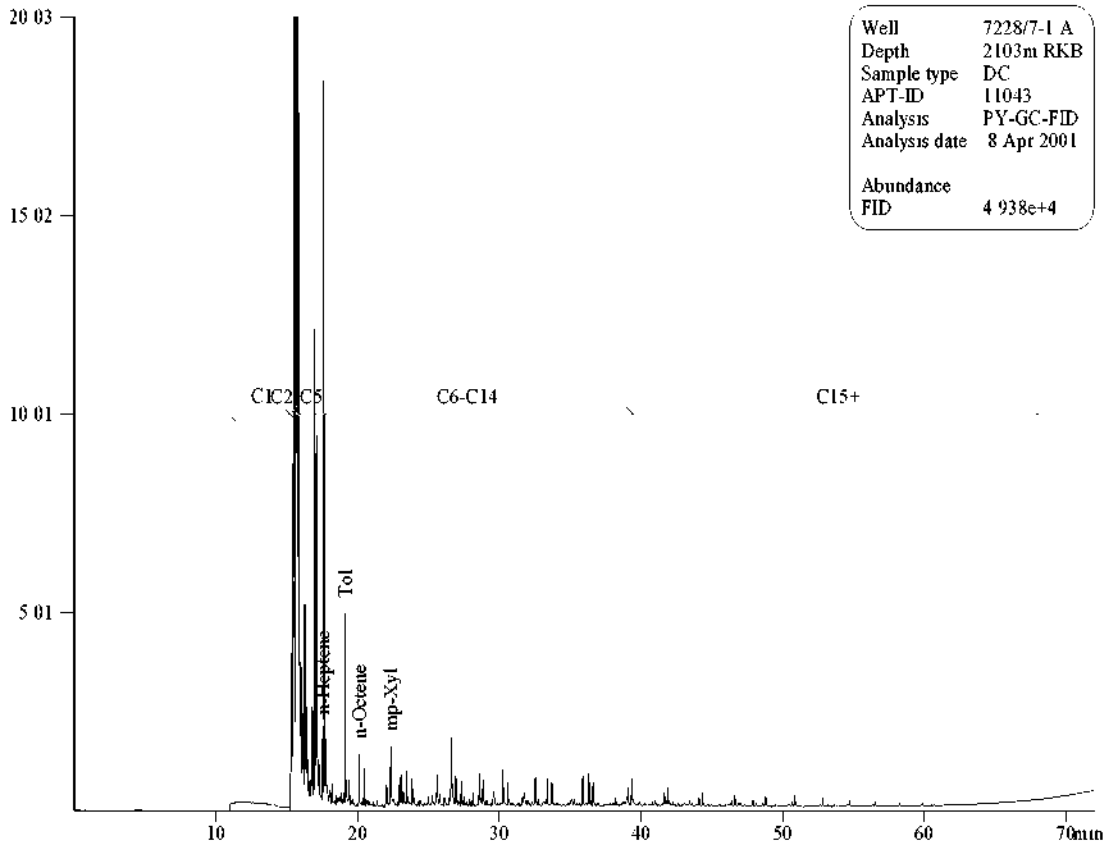

0 064
0 048
0 032
0 016
10
20
30
40
50
60
70
80min
Well 7228/7-1 ST3
Depth 1850m RKB
Sample type Mud
Fraction EOM
APT-ID 11070
Analysis GC-FID
Abundance
FID 1 611e+3

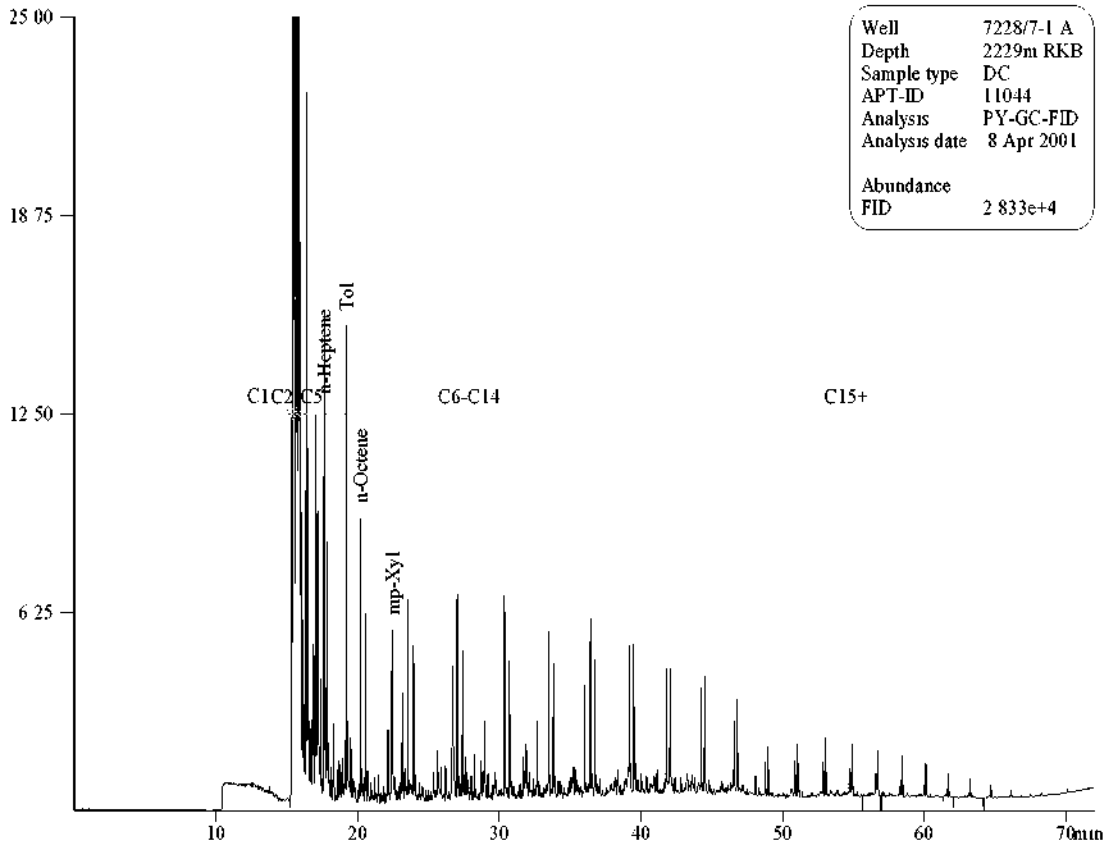

0 085
0 063
0 042
0 021
10
20
30
40
50
60
70
80mm
Well 7228/7-1 A
Depth 2050m RKB
Sample type Mud
Fraction SAT
APT-ID 11029
Analysis GC-FID
Abundance
FID 7 388e+3

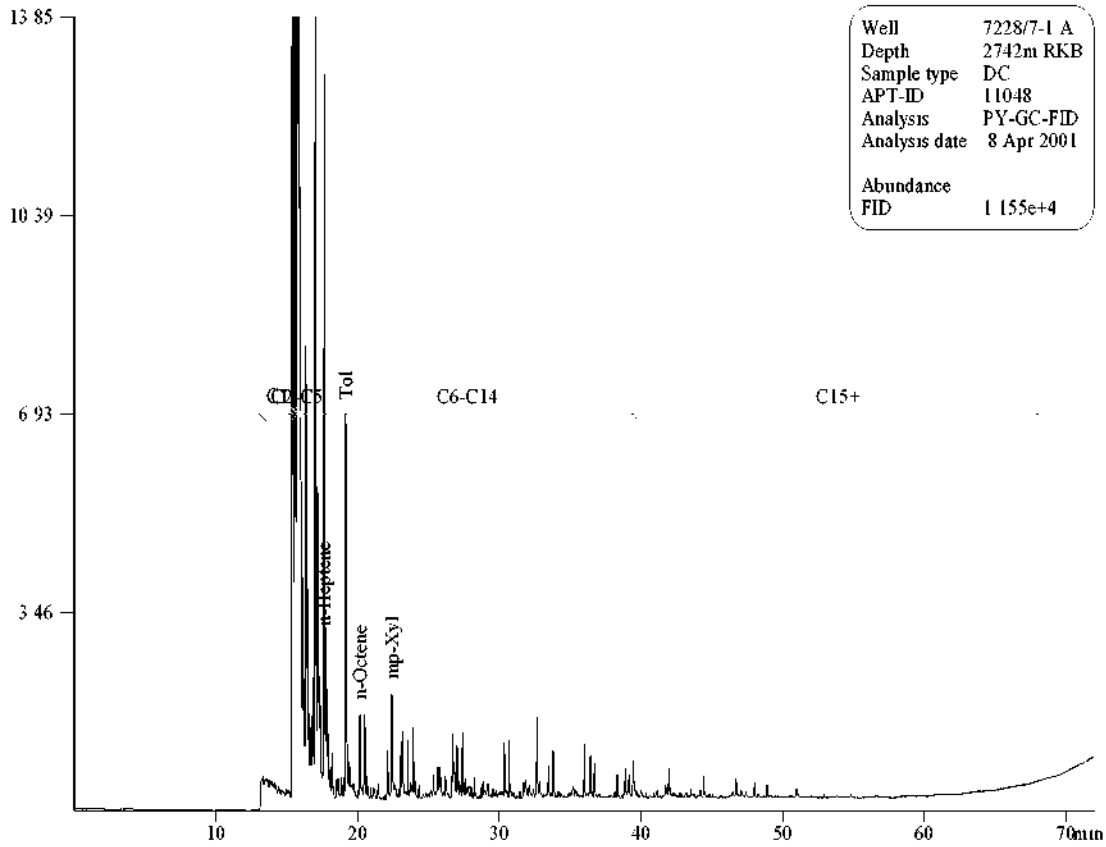
Pyrolysis Gas Chromatograms of extracted sediments

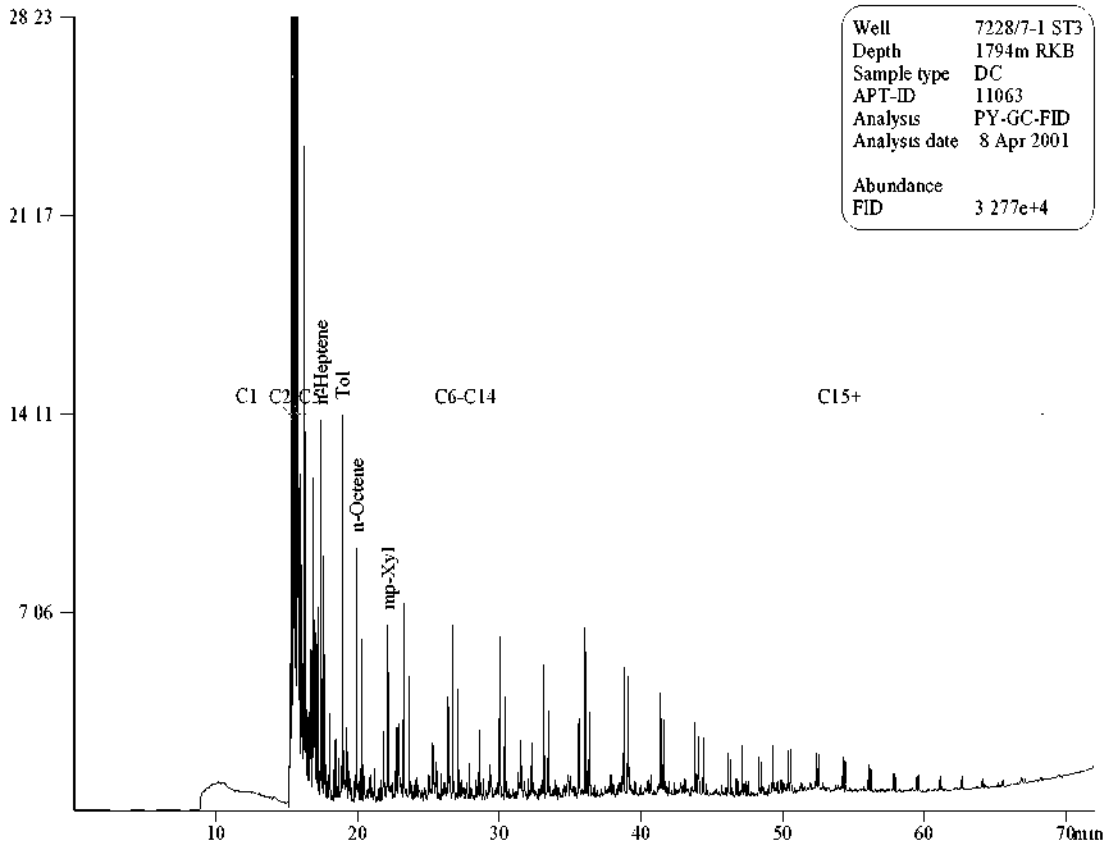

25 00
18 75
12 50
6 25
Sample JR-1
Depth na
Sample type OC
APT-ID 10639
Analysis PY-GC-FID
Analysis date 8 Apr 2001
Abundance
FID 1 569e+5
n-Heptene
n-Octene
Tol
mp-Xyl
C1
C2-C5
C6-C14
C15+
10
20
30
40
50
60
70min


12 50
9 38
6 25
3 13
Well 7228/7-1 A
Depth 1347m RKB
Sample type DC
APT-ID 11032
Analysis PY-GC-FID
Analysis date 8 Apr 2001
Abundance
FID 1 158e+5
Tol
n-Heptene
n-Octene
mp-Xyl
C1
C2-C5
C6-C14
C15+
10
20
30
40
50
60
70min


20 03
15 02
10 01
5 01
Well 7228/7-1 A
Depth 2103m RKB
Sample type DC
APT-ID 11043
Analysis PY-GC-FID
Analysis date 8 Apr 2001
Abundance
FID 4 938e+4
C1C2-C5
C6-C14
C15+
Tol
n-Heptene
n-Octene
mp-Xyl
10
20
30
40
50
60
70min


25 00
18 75
12 50
6 25
Well 7228/7-1 A
Depth 2229m RKB
Sample type DC
APT-ID 11044
Analysis PY-GC-FID
Analysis date 8 Apr 2001
Abundance
FID 2 833e+4
C1C2-C5
C6-C14
C15+
Tol
n-Heptene
n-Octene
mp-Xyl
10
20
30
40
50
60
70min


13 85
10 39
6 93
3 46
Well 7228/7-1 A
Depth 2742m RKB
Sample type DC
APT-ID 11048
Analysis PY-GC-FID
Analysis date 8 Apr 2001
Abundance
FID 1 155e+4
C1-C5
Tol
C6-C14
C15+
n-Heptene
n-Octene
mp-Xyl
10
20
30
40
50
60
70min


28 23
21 17
14 11
7 06
Well 7228/7-1 ST3
Depth 1794m RKB
Sample type DC
APT-ID 11063
Analysis PY-GC-FID
Analysis date 8 Apr 2001
Abundance
FID 3 277e+4
C1 C2-C5
nHeptene
Tol
C6-C14
C15+
n-Octene
mp-Xyl
10
20
30
40
50
60
70min