Geochemical characterization by thermal desorption, liquid chromatography, gas chromatography, isotope-mass-spec and gas chromatography mass-spectrometry of extracts from the following North Slope wells:

Mobil Oil Corp. Beli Unit No. 1 (5590'-5680' of cuttings, 8400'-8670' of cuttings, 9010'-9180' of cuttings, 10,810'-10840' of cuttings, and 10900'-10940' of cuttings)

Humble Oil E. Mikkelsen Bay State No. 1 (11500'-11600' of cuttings)

BP Alaska Inc. Kuparuk Unit No. 1 (5900'-5950' of unwashed cuttings)

Mobil Oil Co. Mikkelsen Bay State 13-09-19 (10564'-10650' of core, and 11650'-11701' of core)

Arco Alaska Ravik State No. 1 (2560'-2650' of cuttings)

Exxon Corp. Pt. Thomson Unit No. 2 (5790'-6240' of cuttings, and 10158'-10210' of core)

Mobil Oil Co. West Staines State 18-09-23 (10594' of core, 11672'-11710' of core, 12545'-12560' of core, and 12653'-12660' of core).

There are also some additional geochemical data on the following North Slope wells:

Mobil Oil Co. Kadler State 15-09-16

Atlantic Richfield Susie Unit No. 1 (4610'-4660' of core and cuttings)

Atlantic Richfield Itkillik River Unit No. 1 (7200'-7340' of cuttings)

Received at the GMC 15 June 1990 Total of 226 pages in report

GEOCHEMICAL CHARACTERISATION OF EXTRACTS FROM RAVIK-1, BELI UNIT-1, PT THOMSON-2, MIKKELSEN BAY-1, E. MIKKELSEN BAY-1, WEST STAINES-1, SUSIE UNIT-1, KUPARUK UNIT-1 AND ITKILLIK RIVER-1 BY THERMAL DESORPTION, LIQUID CHROMATOGRAPHY,GAS CHROMATOGRAPHY, ISOTOPE-MASS-SPEC AND GAS CHROMATOGRAPHY MASS-SPECTROMETRY

WELL	DEPTH	IDENT	S1	S2	S3	TOC	HI	OI	Tmax	ROK CHROM
BELI UNIT #1	8670	4234	0.99	4.54	1.27	1.42	319	89	419	A
BELI UNIT #1	9180	4235	3.61	19.40	1.05	2.93	662	35	428	A
ITTKILLIK RIVER #1	7340	4236	0.24	0.62	0.46	0.72	86	63	441	
RAVIK STATE #1	2650	4237	2.52	5.95	3.42	3.68	161	92	430	A
RAVIK STATE #1	4240	4238	0.26	0.54	1.36	0.81	66	167	423	
KUPARUK UNIT #1	2761	4239	0.11	0.13	0.21	0.23	56	91	381	
MIKKELSEN BAY	10650	4240	1.57	2.59	0.74	1.24	208	59	434	A
MIKKELSEN BAY	11701	4241	1.16	1.72	0.21	0.83	207	25	438	A
PT. THOMPSON #2	6240	4242	2.50	5.36	0.79	1.30	412	60	430	A
PT. THOMPSON #2	10210	4243	5.64	5.17	1.56	2.07	249	75	423	A
PT. THOMPSON #2	11823	4244	0.62	1.36	1.01	1.05	129	96	439	
WEST STAINES #1	6060	4245	0.06	0.31	0.27	0.30	103	90	431	
WEST STAINES #1	10594	4246	11.55	9.12	0.49	2.00	456	24	426	A
WEST STAINES #1	11710	4247	8.25	12.05	0.81	3.47	347	23	431	A
WEST STAINES #1	12560	4248	1.55	7.37	0.44	2.35	313	18	428	A
WEST STAINES #1	12660	4249	3.77	3.79	0.47	0.81	467	58	438	IS
E MIKKELSON BAY	7950	4250	0.26	0.69	1.75	0.89	77	196	436	
E MIKKELSON BAY	8600	4251	0.19	0.31	2.32	0.64	48	362	432	
E MIKKELSON BAY	9780	4252	0.34	0.47	2.47	0.06	**	**	435	
E MIKKELSON BAY	10280	4253	0.36	0.86	1.61	0.99	86	162	428	
E MIKKELSON BAY	11600	4254	0.49	0.92	1.80	0.87	105	206	423	IS
SUSIE UNIT #1	4660	4255	0.13	0.04	0.19	0.24	**	79	**	
BELI UNIT #1	5680	4272	1.53	8.41	0.92	1.50	560	61	423	A
BELI UNIT #1	10840	4273	9.73	108.34	1.05	13.42	807	7	439	A
BELI UNIT #1	10940	4274	5.32	27.05	1.54	5.31	509	29	431	A
KUPARUK UNIT #1	5950	4275	2.77	0.44	1.40	0.26	169	538	431	IS

** Values of S2, S3, or TOC below 0.1 did not permit accurate calculation of this parameter.

* IS= INSUFFICIENT SAMPLE FOR ANALYSIS
A= SEE ATTACHED DATA SHEET

WELL	DEPTH (ft)	LAB IDENTIFIER	EXTRACT YIELD	∂13C TSE (‰)	SARA	SAT GC	SAT BIOMARK
BELI UNIT #1	8670	WF 4234	6.57	-27.98	A	A	A
BELI UNIT #1	9180	4235	26.20	-28.16	A	A	A
RAVIK STATE #1	2650	4237	7.01	-28.75	A	A	A
MIKKELSEN BAY	10650	4240	3.62	-29.15	A	A	A
MIKKELSEN BAY	11701	4241	2.20	-28.75	A	A	A
PT. THOMPSON #2	6240	4242	7.55	-29.57	A	IS	A
PT. THOMPSON #2	10210	4243	9.70	-29.29	A	A	A
WEST STAINES #1	10594	4246	26.21	-29.57	A	A	A
WEST STAINES #1	11710	4247	12.50	-28.90	A	A	A
WEST STAINES #1	12560	4248	2.90	-30.50	A	A	A
WEST STAINES #1	12660	4249	8.10	-28.97	A	IS	A
E MIKKELSON BAY	11600	4254	1.83	-28.95	A	A	A
BELI UNIT #1	5680	4272	15.50	-28.13	A	A	A
BELI UNIT #1	10840	4273	120.63	-27.61	A	A	A
BELI UNIT #1	10940	4274	43.11	-28.02	A	A	A
KUPARUK UNIT #1	5950	4275	2.60	-29.47	A	A	A

* IS= INSUFFICIENT SAMPLE FOR ANALYSIS

A = SEE ATTACHED DATA SHEET

EXTRACT YIELD=KG/TON

SARA=HPLC

SAT GC= SATURATE CHROMATOGRAM

SAT BIOMARK=SAT GC/MS

*** PETROLEUM GEOCHEMISTRY ***

SARA ANALYSIS

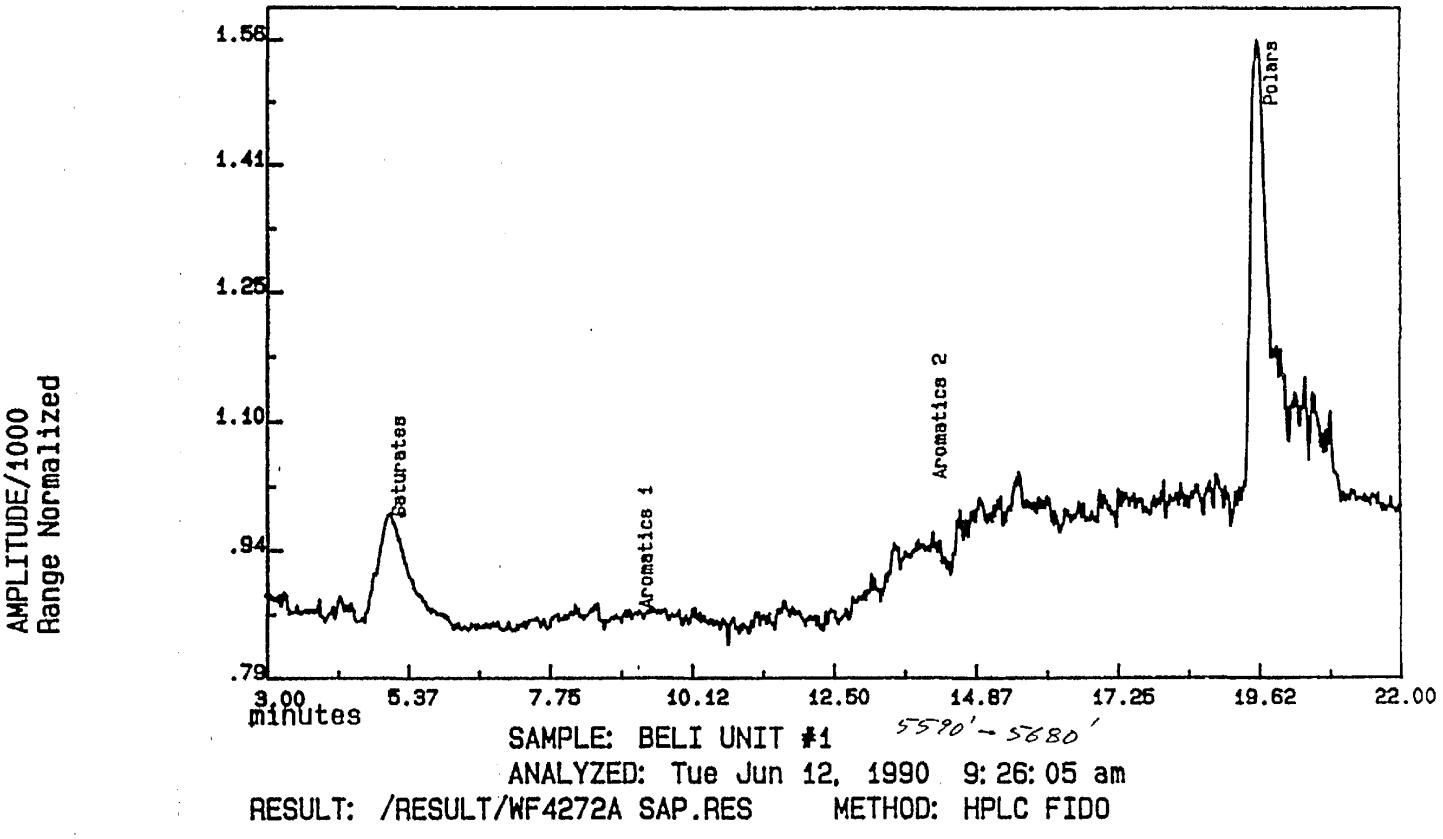
5590' - 5680'

SAMPLE NAME : BELI UNIT #1
INSTRUMENT : HPLC_FID
INJECT TIME : Tue Jun 12, 1990 9:26:05 am
METHOD USED : /METHOD/HPLC_FID0.MTH
SEQUENCE : /DATA/LOOP/SEQUENCE/HP1090_AUTOCS.SEQ
RESULT FILE : /RESULT/WF4272A_SAP.RES
REPORT TIME : 9:51 AM TUE., 12 JUNE, 1990

	AREA	TIME	RESPONSE FACTOR
Saturates	5693.	5.29	.1275E-03
Aromatics 1	3181.	9.42	.5470E-04
Aromatics 2	26348.	14.36	.5470E-04
Polars	38841.	19.92	.4160E-04

	AMOUNT (mg)	% RESIDUE
Saturates	.73	18.3
Aromatics	1.62	40.8
Polars	1.62	40.8

	% OIL
Saturates	14.2
Aromatics	31.6
Polars	31.7
Asphaltenes	22.5


AMPLITUDE/1000
Range Normalized
1.56
1.41
1.25
1.10
.94
.79
Saturates
Aromatics 1
Aromatics 2
Polars
3.00
5.37
7.75
10.12
12.50
14.87
17.25
19.62
22.00
minutes
SAMPLE: BELI UNIT #1
5590' - 5680'
ANALYZED: Tue Jun 12, 1990 9:26:05 am
RESULT: /RESULT/WF4272A SAP.RES METHOD: HPLC FIDO

*** PETROLEUM GEOCHEMISTRY ***
SATURATE GC

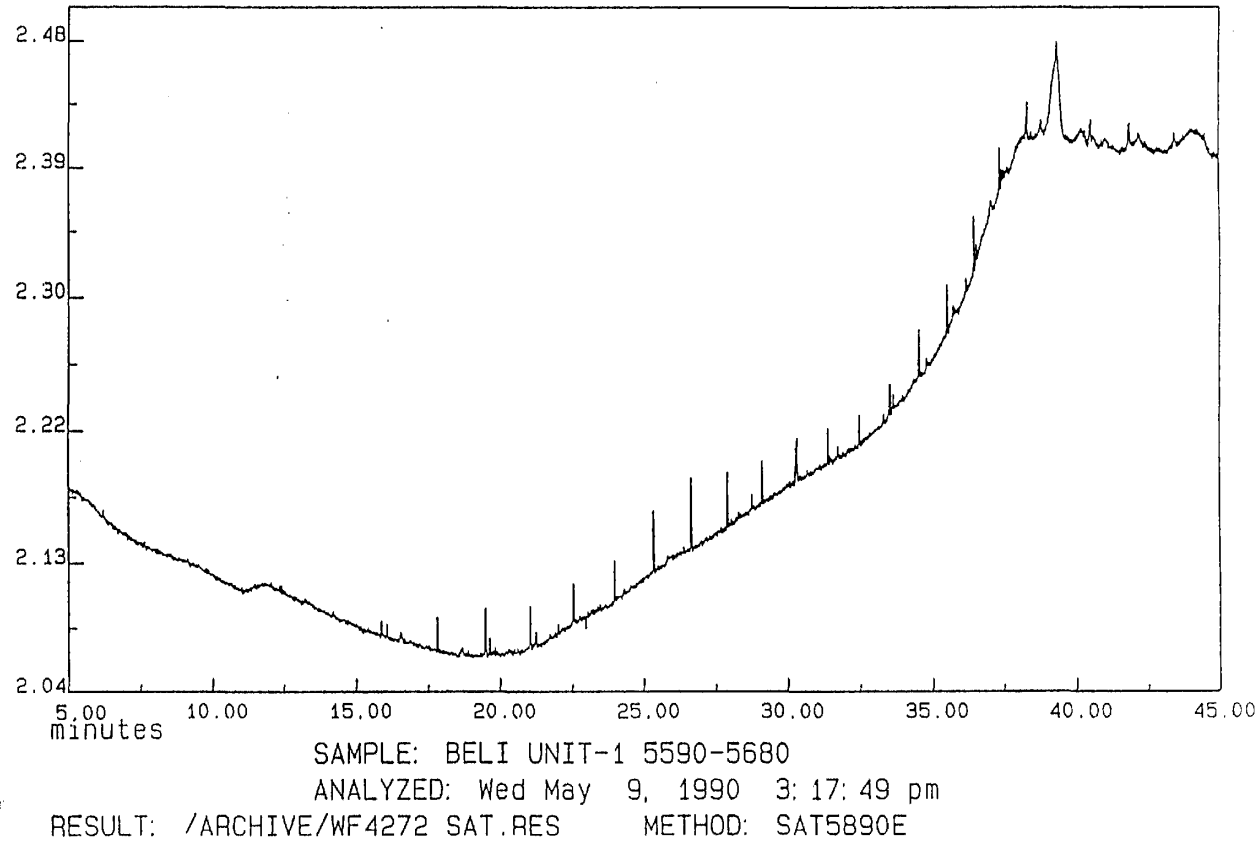
SAMPLE NAME : BELI UNIT-1 5590-5680
INSTRUMENT : HP_5890_2
INJECT TIME : Wed May 9, 1990 3:17:49 pm
METHOD USED : /METHOD/SAT5890E.MTH
RESULT FILE : /RESULT/WF4272_SAT.RES
REPORT TIME : 4:08 PM WED., 9 MAY , 1990

CPI VALUE : .99

PRISTANE / PHYTANE :	.86	C15/C25 :	0.00
PRISTANE / C17 :	.47	C17/Pr :	2.14
PHYTANE / C18 :	.49	C18/Ph :	2.04

	AREA	%AREA NALK	TIME	NORM C15
N-C10	0.	0.0	0.00	*****
N-C11	0.	0.0	0.00	*****
N-C12	0.	0.0	0.00	*****
N-C13	0.	0.0	0.00	*****
N-C14	0.	0.0	0.00	*****
N-C15	0.	0.0	0.00	*****
N-C16	187.	1.4	17.79	*****
N-C17	263.	2.0	19.45	*****
N-C18	292.	2.2	21.02	*****
N-C19	312.	2.3	22.52	*****
N-C20	277.	2.1	23.95	*****
N-C21	367.	2.8	25.32	*****
N-C22	469.	3.5	26.63	*****
N-C23	300.	2.3	27.89	*****
N-C24	369.	2.8	29.09	*****
N-C25	454.	3.4	30.29	*****
N-C26	184.	1.4	31.37	*****
N-C27	234.	1.8	32.45	*****
N-C28	240.	1.8	33.49	*****
N-C29	390.	2.9	34.49	*****
N-C30	279.	2.1	35.47	*****
N-C31	280.	2.1	36.41	*****
N-C32	899.	6.8	37.32	*****
N-C33	1701.	12.8	38.26	*****
N-C34	4985.	37.4	39.31	*****
N-C35	283.	2.1	40.48	*****
N-C36	551.	4.1	41.85	*****

	AREA	%AREA ISPR	TIME
Farnesane	0.	0.0	0.00
Acyclic C16	0.	0.0	0.00
Acyclic C18	0.	0.0	0.00
Pristane	123.	46.4	19.61
Phytane	143.	53.6	21.22

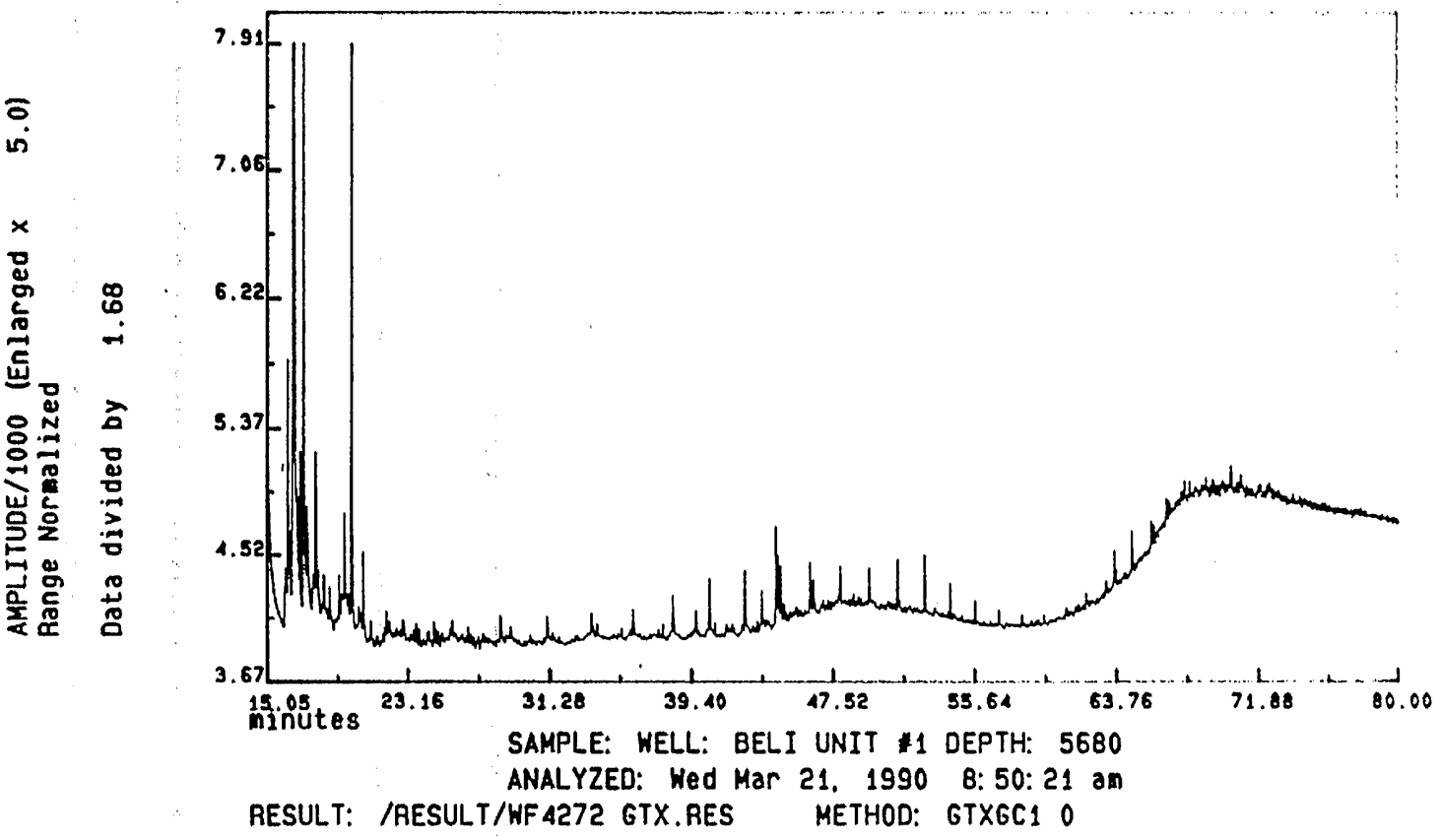

AMPLITUDE/1000
Range Normalized
2.48
2.39
2.30
2.22
2.13
2.04
5.00
10.00
15.00
20.00
25.00
30.00
35.00
40.00
45.00
minutes
SAMPLE: BELI UNIT-1 5590-5680
ANALYZED: Wed May 9, 1990 3:17:49 pm
RESULT: /ARCHIVE/WF4272 SAT.RES METHOD: SAT5890E

SAMPLE : WELL: BELI UNIT #1 DEPTH: 5680
INJECTED AT : Fri May 11, 1990 4:02:25 am
INSTRUMENT : GROCK
METHOD USED : /METHOD/PYRO5.MTH
RESULT FILE : /RESULT/WF42728_GRO.RES
BLANK FILE : /RESULT/BLANK13_GRO.RES

***** AREA SLICE INTEGRATION *****

AREA	YIELD (mg/g)	FRACTION
78106848.	1.57	S1
262600260.	8.26	S2

SAMPLE WT. : 97.70 mgs
Tmax : 415 C.


AMPLITUDE/1000 (Enlarged x 5.0)
Range Normalized
Data divided by 1.68
7.91
7.06
6.22
5.37
4.52
3.67
15.05
23.16
31.28
39.40
47.52
55.64
63.76
71.88
80.00
minutes
SAMPLE: WELL: BELI UNIT #1 DEPTH: 5680
ANALYZED: Wed Mar 21, 1990 8:50:21 am
RESULT: /RESULT/WF4272 GTX.RES METHOD: GTXGC1 0

**** PETROLEUM GEOCHEMISTRY / GNH PGC AUTO ****

SAMPLE : WELL: BELI UNIT #1 DEPTH: 5680
INJECTED AT : Fri May 11, 1990 4:02:24 am
INSTRUMENT : GPGC_2
METHOD USED : /METHOD/GPGC2_0.MTH
RESULT FILE : /RESULT/WF42728_GPG.RES
BLANK FILE : /RESULT/BLANK19_GPG.RES

***** AREA SLICE INTEGRATION *****

AREA	AREA PERCENT	FRACTION
12851248.	3.3	METHANE
82108032.	20.9	GASES
120960930.	30.7	GASOLINE
99323472.	25.2	KEROSENE
65858144.	16.7	GAS-OIL
12483568.	3.2	WAX-DISTILLATE

TOTAL AREA : 393585470. AREA %: 100.0

SAMPLE WT. : 97.70 mgs

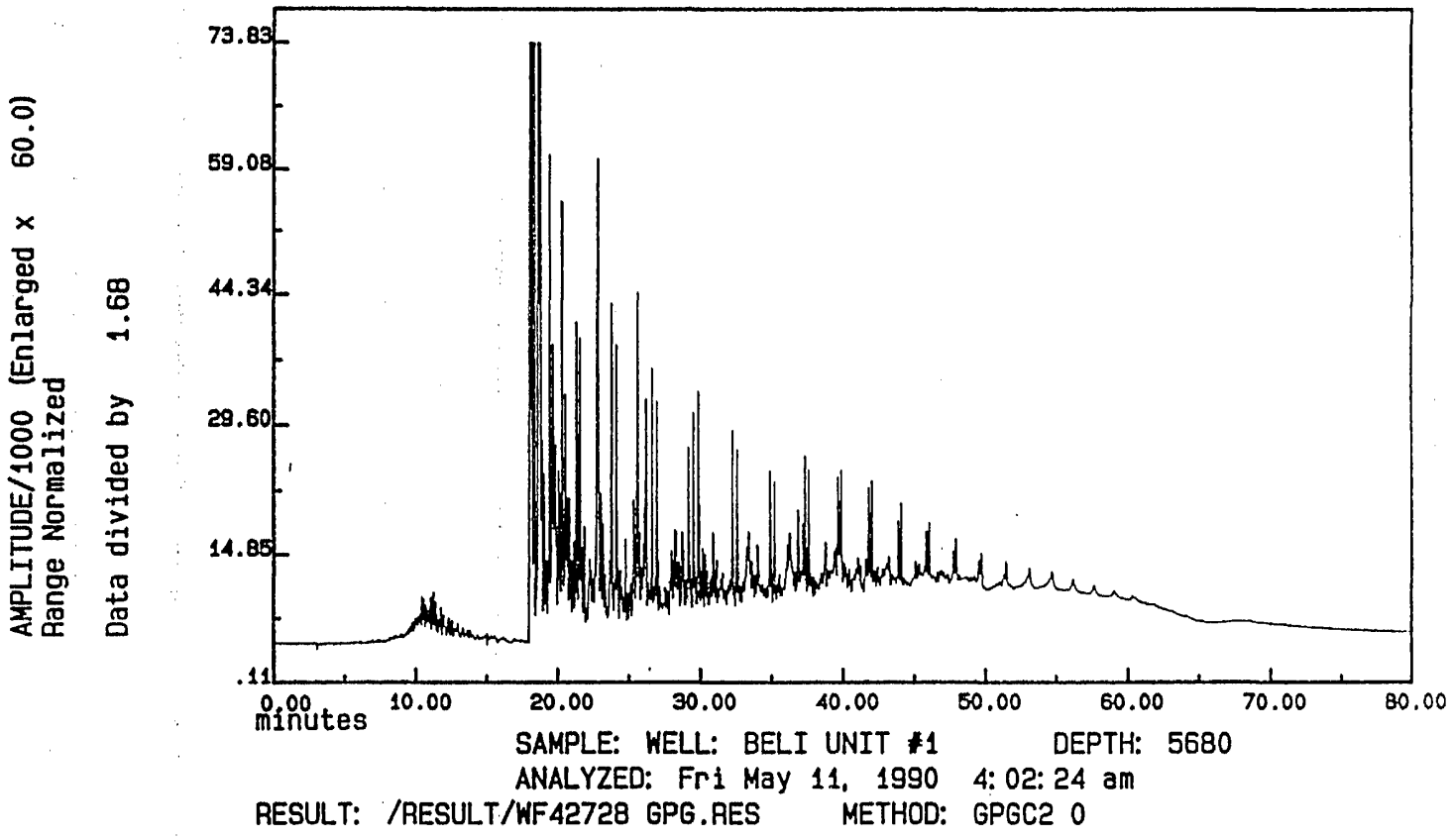
SAMPLE GOGI = .32
THIS IS OIL + GAS PRONE

METHANE + GASES = 24.1
GASOLINE+KEROSINE+GAS OIL+WAX DISTILLATE = 75.9

BY FACTOR ANALYSIS OF KEROGEN PYROLYSATE
THIS READING DOES NOT CONFORM TO KNOWN PARAMETERS
INVESTIGATE PRODUCT DISTRIBUTION

THIS ANALYSIS DETERMINES KEROGEN POTENTIAL AT ITS
PRESENT MATURITY. THIS IS NOT A KEROGEN TYPE ANALYSIS.

SAMPLE K2 = 8.16 mg/gm


AMPLITUDE/1000 (Enlarged x 60.0)
Range Normalized
Data divided by 1.68
73.83
59.08
44.34
29.60
14.85
.11
0.00
10.00
20.00
30.00
40.00
50.00
60.00
70.00
80.00
minutes
SAMPLE: WELL: BELI UNIT #1 DEPTH: 5680
ANALYZED: Fri May 11, 1990 4:02:24 am
RESULT: /RESULT/WF42728 GPG.RES METHOD: GPGC2 0

Normalized Percent Report

Information from Current Data File Header:
File: /chem/msd/WF4272_SAT.d
Operator:
Date Acquired: Sat Apr 28 90 05:34:53 AM
Sample Name: WF4272_SAT
Misc Info:
Sequence Index: 1 **Bottle Number:** 25 **Repetition Number:** 1

SATURATE BIOMARKERS

Calibration Table Last Updated: Sun Jun 10 17:49:53 1990

Reference Peak Window: 0.250 Absolute Minutes
Non-reference Peak Window: 0.250 Absolute Minutes

Default Sample Amount: 0
Uncalib. Peak Response Factor: 0
Default Multiplier: 1

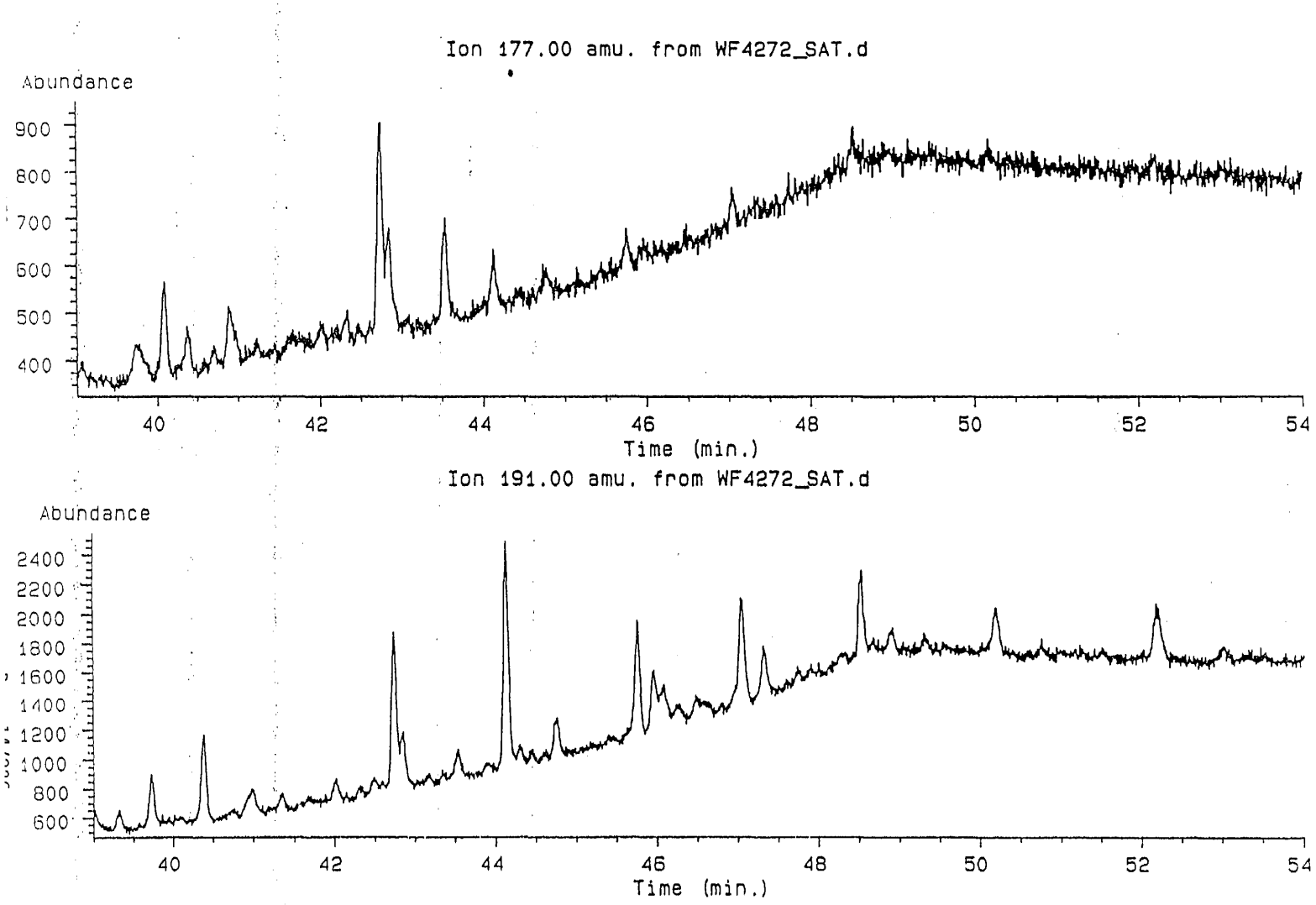
Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount	
1	VV	39.728	191.00 amu	C27 18A HOPANE TS	19079	3.081	%
2	VV	40.389	191.00 amu	C27 17A HOPANE TM	28633	4.624	%
3	VV	41.819	191.00 amu	C28 BISNORHOPANE X	725	0.1170	%
4	VV	42.742	191.00 amu	C29 HOPANE D	52755	8.519	%
5	VV	42.852	191.00 amu	C29 NORHOPANE D2	20091	3.244	%
6	VV	43.255	191.00 amu	C30 PENTACYCLANE PI	360	0.05818	%
7	VV	43.873	191.00 amu	C30 18A OLEANANE B	3857	0.6228	%*
8	VV	44.132	191.00 amu	C30 HOPANE G	73201	11.82	%
9	VV	44.734	191.00 amu	C30 MORETANE K	15077	2.435	%
10	VV	45.760	191.00 amu	C31S HOPANE N	36884	5.956	%
11	VV	45.945	191.00 amu	C31R HOPANE O	23463	3.789	%
12	VV	46.051	191.00 amu	O & GAMMACERANE	16231	2.621	%
13	VV	46.343	191.00 amu	GAMMACERANE	556	0.08979	%
14	VV	46.482	191.00 amu	P	1606	0.2593	%
15	VV	46.621	191.00 amu	R	1324	0.2137	%
16	VV	47.058	191.00 amu	C32S HOPANE U	21385	3.453	%
17	VV	47.314	191.00 amu	C32R HOPANE V	9758	1.576	%
18	VV	48.530	191.00 amu	C33S HOPANE ALPHA	37620	6.075	%
19	VV	48.915	191.00 amu	C33R HOPANE BETA	11213	1.811	%
20	VV	50.200	191.00 amu	C34S HOPANE GAMMA	30287	4.891	%
21	VV	50.764	191.00 amu	C34R HOPANE DELTA	4891	0.7898	%
22	VV	52.182	191.00 amu	C35S HOPANE EPSILON	14606	2.359	%
23	VV	52.999	191.00 amu	C35R HOPANE ZETA	1479	0.2388	%
24	VV	27.143	217.00 amu	C21 STERANE Y	7443	1.202	%
25	VV	36.086	217.00 amu	C27S ba DIASTERANE10	8294	1.339	%
26	VV	36.744	217.00 amu	C27R ba DIASTERANE11	7031	1.135	%

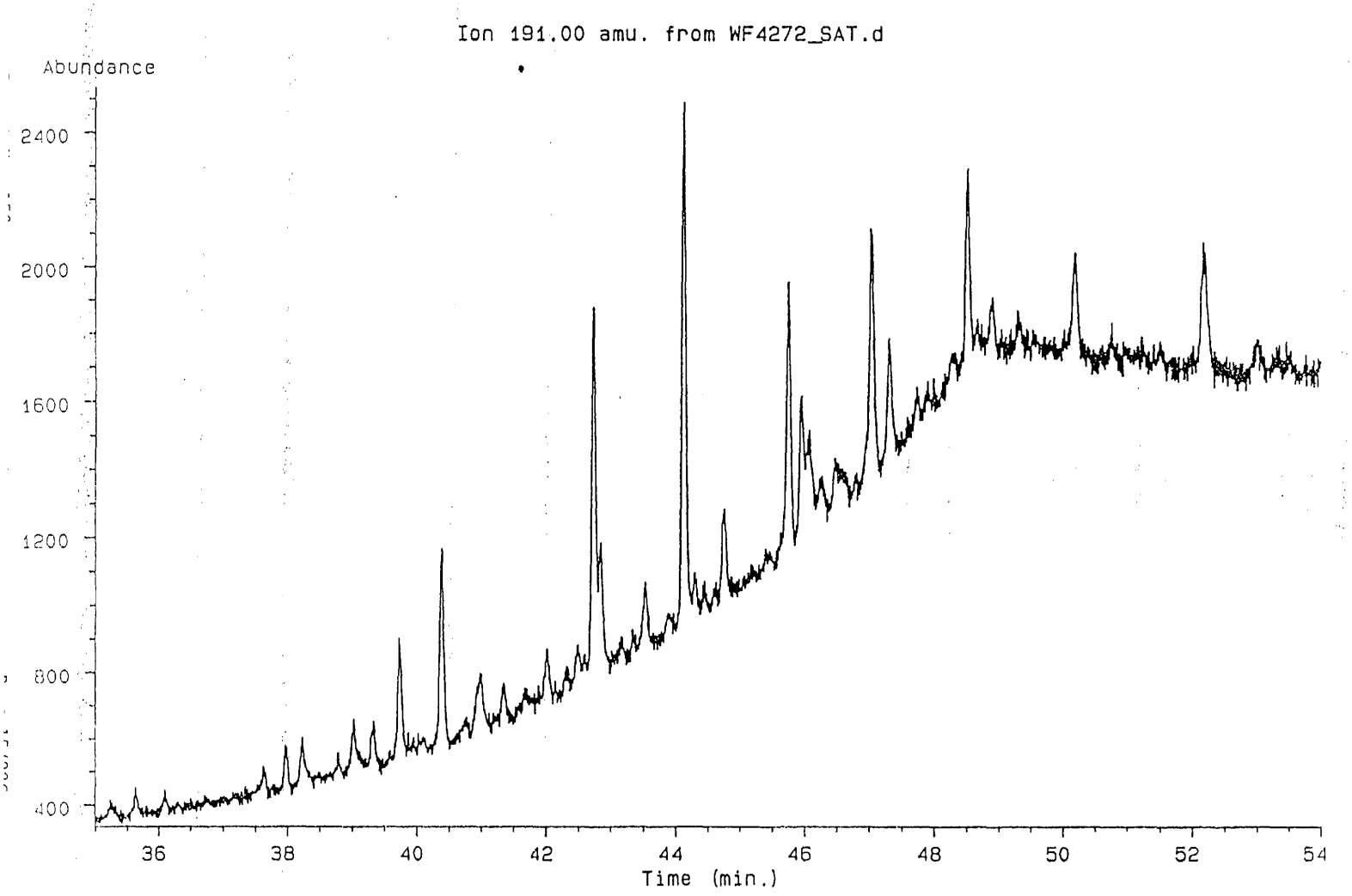
Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount
27		-	217.00 amu	13	-Not Found-	
28	VV	37.649	217.00 amu	14	5243	0.8466 %
29	VV	37.767	217.00 amu	15	5617	0.9070 %
30	VV	37.901	217.00 amu	16	1876	0.3029 %
31	VV	38.432	217.00 amu	18	5109	0.8250 %
32	PV	38.596	217.00 amu	19	170	0.02738 %
33	VV	38.802	217.00 amu	20	12083	1.951 %
34	VV	39.054	217.00 amu	21	7352	1.187 %
35	VV	39.285	217.00 amu	22	2177	0.3515 %
36	VV	39.527	217.00 amu	C27R aaa STERANE 25	11386	1.839 %
37	VV	39.803	217.00 amu	27	14375	2.321 %
38	VV	41.368	217.00 amu	C28R aaa STERANE 36	9159	1.479 %
39	VB	41.878	217.00 amu	C29S aaa STERANE 39	9923	1.602 %
40	VV	42.886	217.00 amu	C29R aaa STERANE 42	13188	2.130 %
41	VV	39.012	218.00 amu	C27R abb STERANE 21B	10930	1.765 %
42	VV	39.180	218.00 amu	C27S abb STERANE 22	10685	1.725 %
43	VV	40.763	218.00 amu	C28R abb STERANE 33A	10988	1.774 %
44	VV	40.931	218.00 amu	C28S abb STERANE 34	10976	1.772 %
45	VV	42.206	218.00 amu	C29R abb STERANE 40	14411	2.327 %
46	VV	42.336	218.00 amu	C29S abb STERANE 41	15772	2.547 %

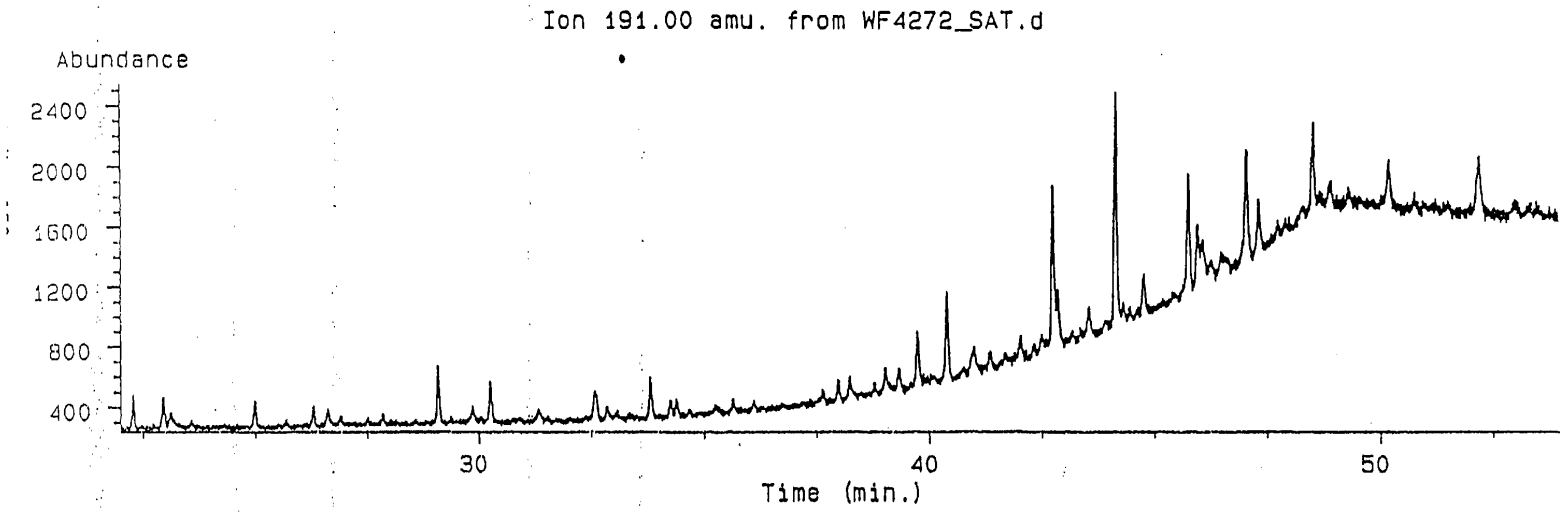
***** REPORT ERRORS *****

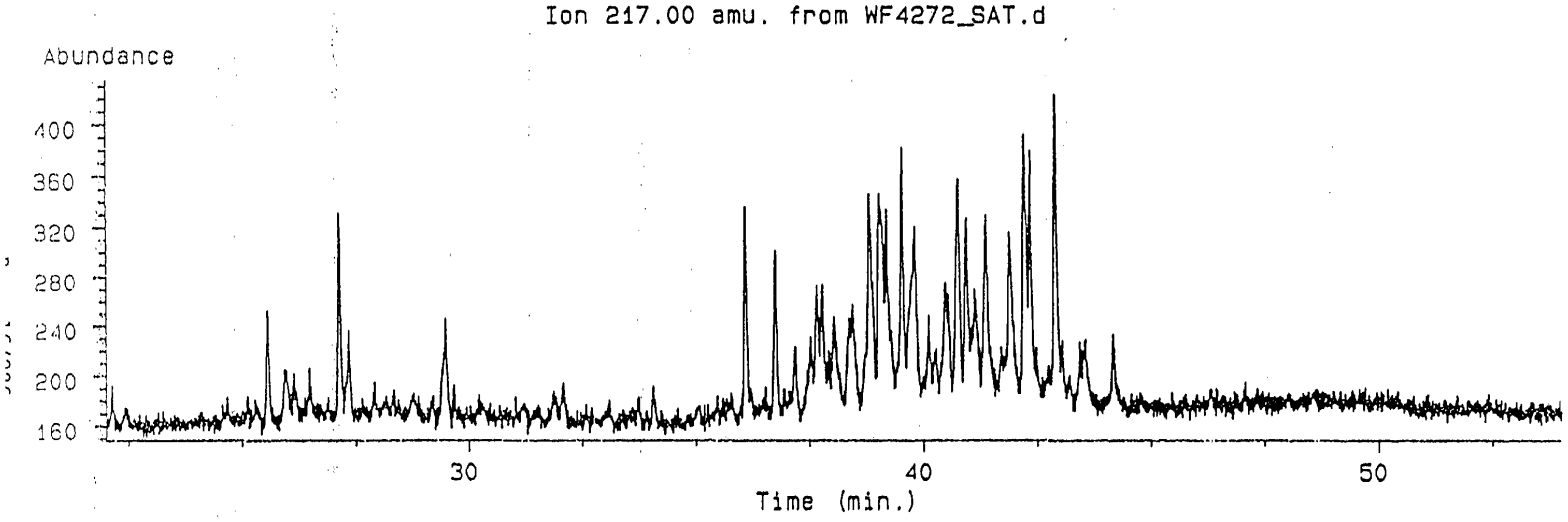
Calibration Peak #7's Qualifiers Were Not Satisfied.

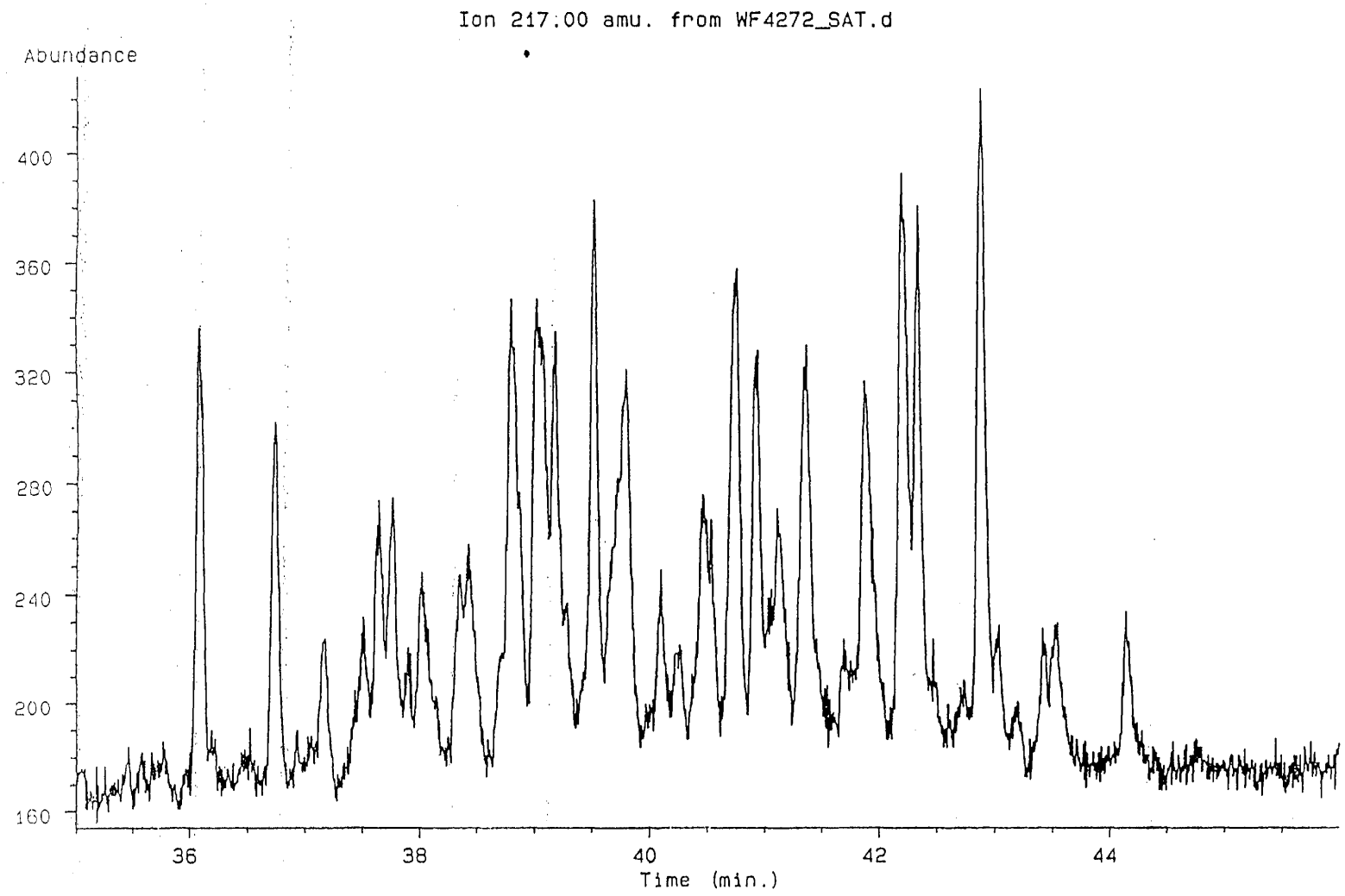
*** Not All Calibrated Peaks Found ***


Ion 177.00 amu. from WF4272_SAT.d
Abundance
900
800
700
600
500
400
40
42
44
46
48
50
52
54
Time (min.)
Ion 191.00 amu. from WF4272_SAT.d
Abundance
2400
2200
2000
1800
1600
1400
1200
1000
800
600
40
42
44
46
48
50
52
54
Time (min.)


Ion 191.00 amu. from WF4272_SAT.d
Abundance
2400
2000
1600
1200
800
400
36
38
40
42
44
46
48
50
52
54
Time (min.)


Ion 191.00 amu. from WF4272_SAT.d
Abundance
2400
2000
1600
1200
800
400
30
40
50
Time (min.)


Ion 217.00 amu. from WF4272_SAT.d
Abundance
400
360
320
280
240
200
160
30
40
50
Time (min.)


Ion 217.00 amu. from WF4272_SAT.d
Abundance
400
360
320
280
240
200
160
36
38
40
42
44
Time (min.)

*** PETROLEUM GEOCHEMISTRY ***

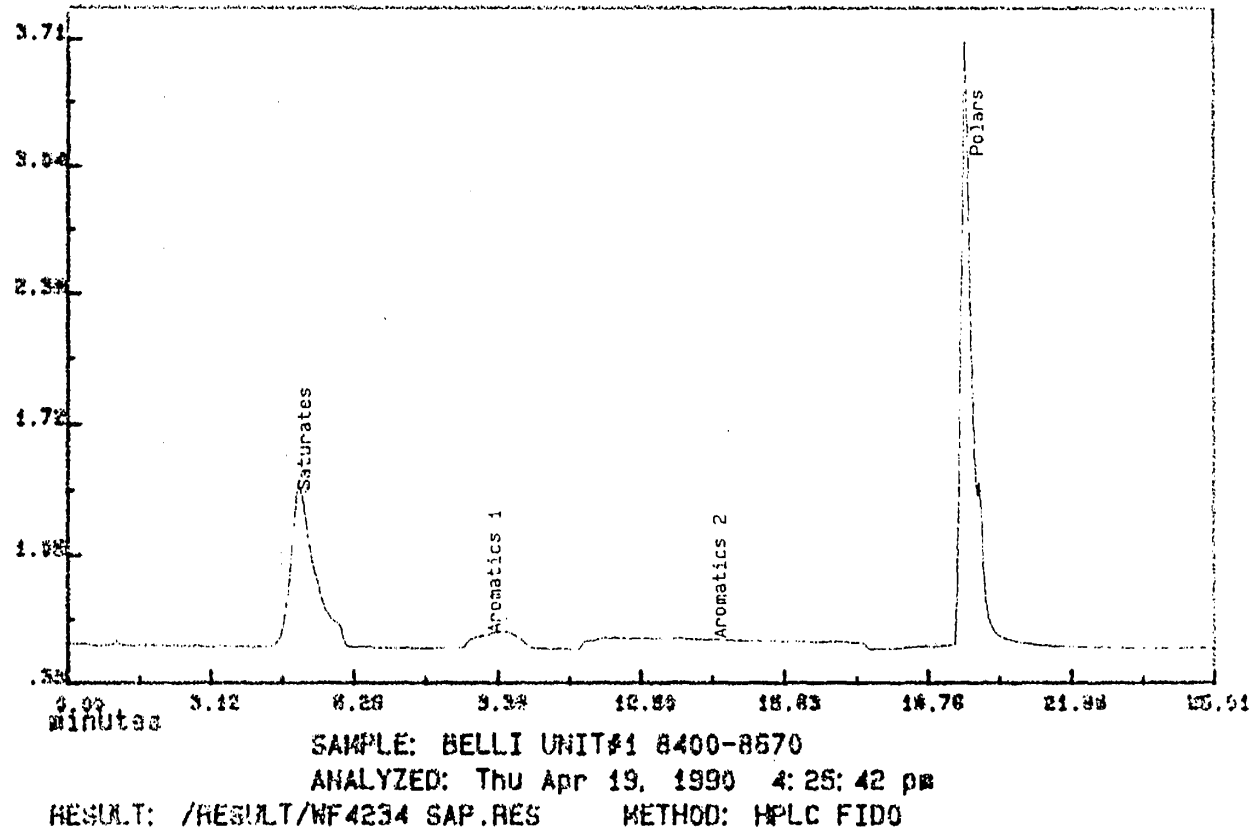
SARA ANALYSIS

SAMPLE NAME : BELLI UNIT#1 8400-8670
INSTRUMENT : HPLC_FID
INJECT TIME : Thu Apr 19, 1990 4:25:42 pm
METHOD USED : /METHOD/HPLC_FIDO.MTH
SEQUENCE : /DATA/LOOP/SEQUENCE/HP1090_AUTOBY.SEQ
RESULT FILE : /RESULT/WF4234_SAP.RES
REPORT TIME : 4:51 PM THU., 19 APR., 1990

	AREA	TIME	RESPONSE FACTOR
Saturates	31080.	5.29	.1275E-03
Aromatics 1	5952.	9.42	.5470E-04
Aromatics 2	18291.	14.36	.5470E-04
Polars	60821.	19.96	.4160E-04

	AMOUNT (mg)	% RESIDUE
Saturates	3.96	50.7
Aromatics	1.33	17.0
Polars	2.53	32.4

	% OIL
Saturates	42.6
Aromatics	14.3
Polars	27.2
Asphaltenes	16.0



SAMPLE: BELLI UNIT#1 8400-8570
ANALYZED: Thu Apr 19, 1990 4:25:42 pm
RESULT: /RESULT/WF4234 SAP.RES METHOD: HPLC FIDO

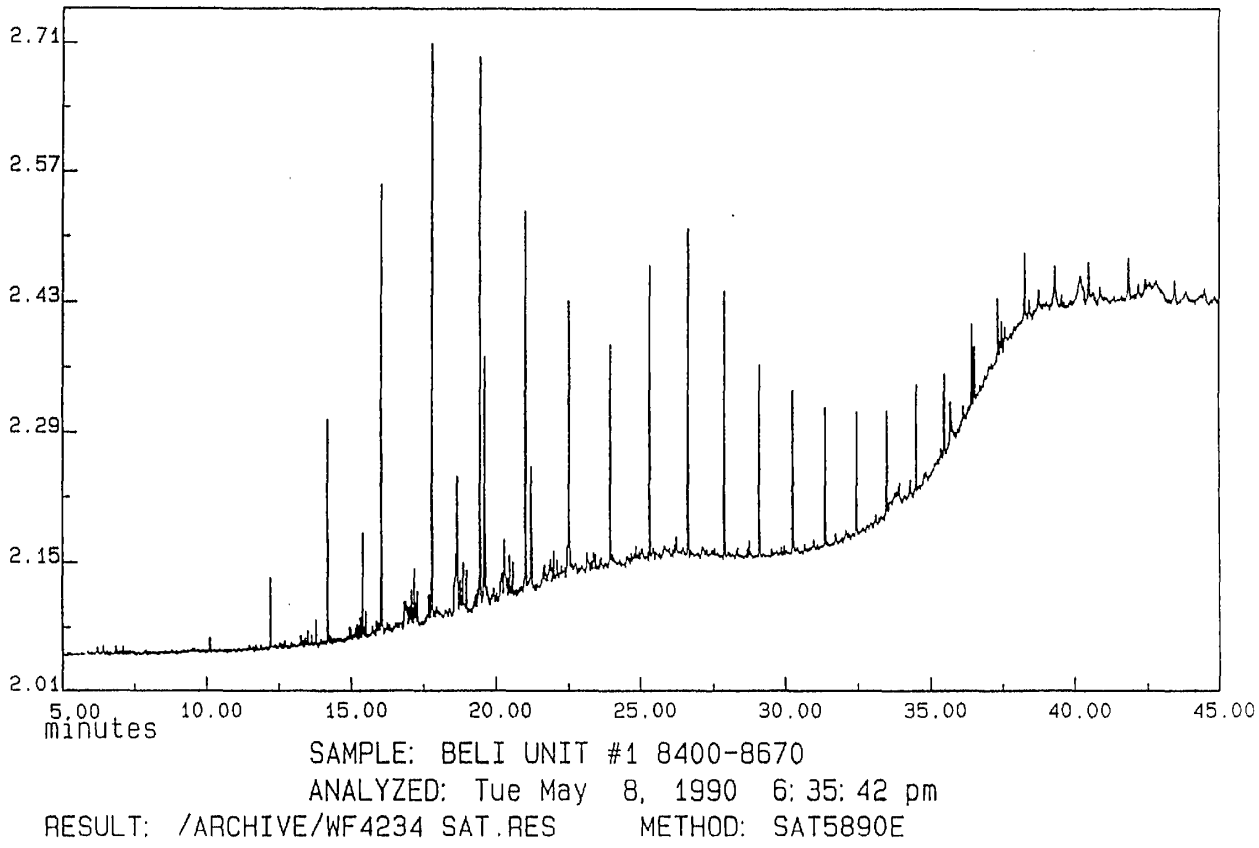
*** PETROLEUM GEOCHEMISTRY ***
SATURATE GC

SAMPLE NAME : BELI UNIT #1 8400-8670
INSTRUMENT : HP_5890_2
INJECT TIME : Tue May 8, 1990 6:35:42 pm
METHOD USED : /METHOD/SAT5890E.MTH
RESULT FILE : /RESULT/WF4234_SAT.RES
REPORT TIME : 7:27 PM TUE.. 8 MAY , 1990

CPI VALUE : 1.01
PRISTANE / PHYTANE : 1.95 C15/C25 : 2.38
PRISTANE / C17 : .69 C17/Pr : 1.45
PHYTANE / C18 : .50 C18/Ph : 2.01

	AREA	%AREA NALK	TIME	NORM C15
N-C10	0.	0.0	0.00	0.00
N-C11	0.	0.0	0.00	0.00
N-C12	145.	.3	10.11	.04
N-C13	665.	1.5	12.22	.19
N-C14	1688.	3.8	14.19	.48
N-C15	3519.	8.0	16.04	1.00
N-C16	4493.	10.2	17.79	1.28
N-C17	4478.	10.1	19.45	1.27
N-C18	3188.	7.2	21.02	.91
N-C19	2744.	6.2	22.52	.78
N-C20	1997.	4.5	23.95	.57
N-C21	2336.	5.3	25.32	.66
N-C22	2717.	6.1	26.63	.77
N-C23	2169.	4.9	27.89	.62
N-C24	1710.	3.9	29.09	.49
N-C25	1477.	3.3	30.26	.42
N-C26	1213.	2.7	31.37	.34
N-C27	1099.	2.5	32.45	.31
N-C28	1071.	2.4	33.49	.30
N-C29	988.	2.2	34.50	.28
N-C30	737.	1.7	35.47	.21
N-C31	727.	1.6	36.41	.21
N-C32	981.	2.2	37.32	.28
N-C33	932.	2.1	38.27	.26
N-C34	1518.	3.4	39.31	.43
N-C35	802.	1.8	40.49	.23
N-C36	819.	1.9	41.85	.23

	AREA	%AREA ISPR	TIME
Farnesane	311.	4.2	13.78
Acyclic C16	901.	12.1	15.40
Acyclic C18	1580.	21.2	18.67
Pristane	3087.	41.3	19.61
Phytane	1586.	21.2	21.22

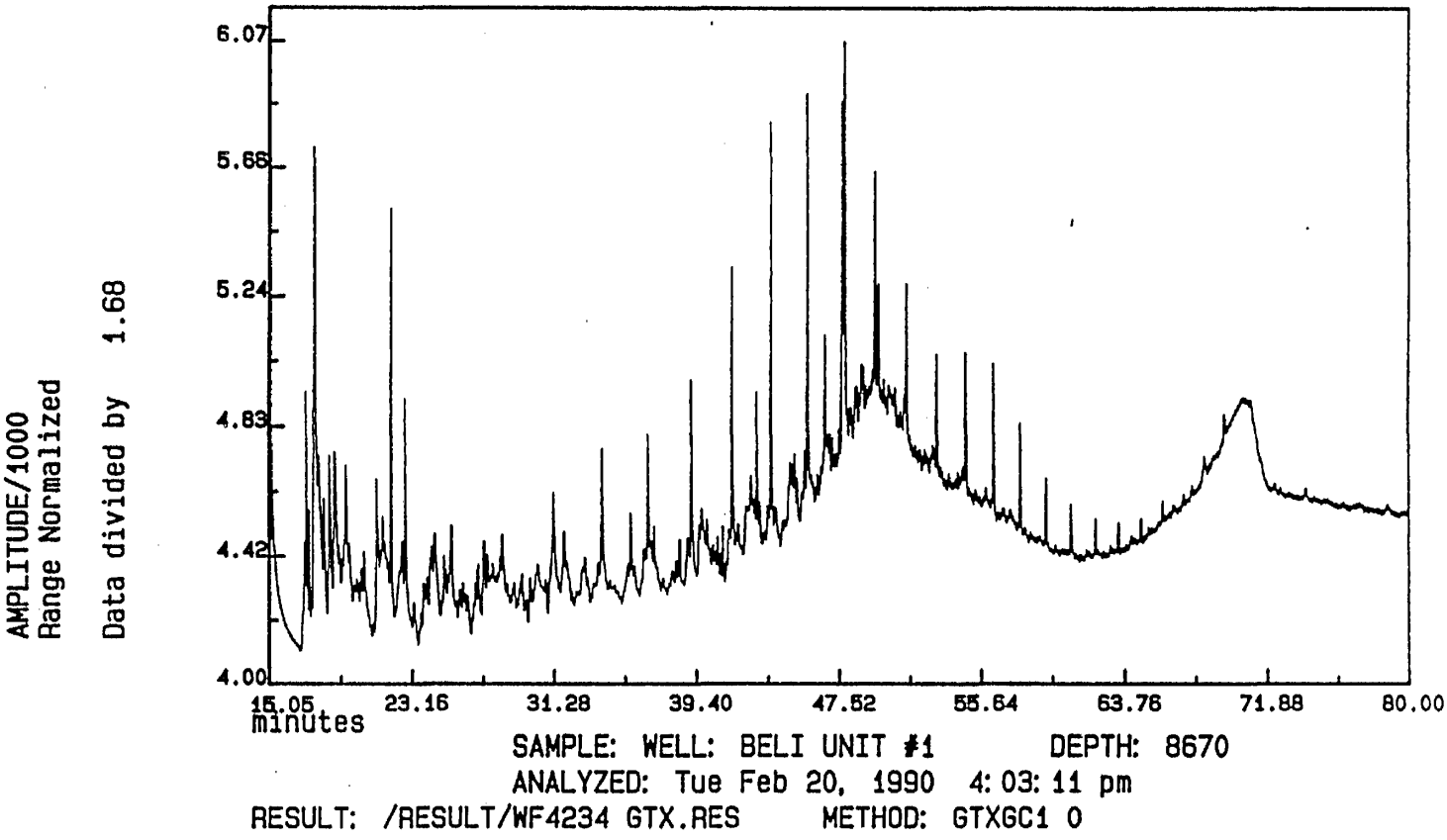

AMPLITUDE/1000
Range Normalized
2.71
2.57
2.43
2.29
2.15
2.01
5.00
10.00
15.00
20.00
25.00
30.00
35.00
40.00
45.00
minutes
SAMPLE: BELI UNIT #1 8400-8670
ANALYZED: Tue May 8, 1990 6:35:42 pm
RESULT: /ARCHIVE/WF4234 SAT.RES METHOD: SAT5890E

SAMPLE : WELL: BELI UNIT #1 DEPTH: 8670
INJECTED AT : Tue Feb 20, 1990 4:03:11 pm
INSTRUMENT : GROCK
METHOD USED : /METHOD/PYRO5.MTH
RESULT FILE : /RESULT/WF4234_GRO.RES
BLANK FILE : /RESULT/BLANK13_GRO.RES

***** AREA SLICE INTEGRATION *****

AREA	YIELD (mg/g)	FRACTION
15992160.	1.68	S1
111932750.	4.50	S2

SAMPLE WT. : 18.70 mgs
Tmax : 435 C


AMPLITUDE/1000
Range Normalized
Data divided by 1.68
6.07
5.66
5.24
4.83
4.42
4.00
15.05
23.16
31.28
39.40
47.52
55.64
63.76
71.88
80.00
minutes
SAMPLE: WELL: BELI UNIT #1 DEPTH: 8670
ANALYZED: Tue Feb 20, 1990 4:03:11 pm
RESULT: /RESULT/WF4234 GTX.RES METHOD: GTXGC1 0

SAMPLE : WELL: BELI UNIT #1 DEPTH: 8670
INJECTED AT : Tue Feb 20, 1990 4:03:11 pm
INSTRUMENT : GPGC_2
METHOD USED : /METHOD/GPGC2_0.MTH
RESULT FILE : /RESULT/WF4234_GPG.RES
BLANK FILE : /RESULT/BLANK14_GPG.RES

***** AREA SLICE INTEGRATION *****

AREA	AREA PERCENT	FRACTION
4821447.	7.2	METHANE
13918842.	20.7	GASES
17343224.	25.9	GASOLINE
18281164.	27.3	KEROSENE
8151146.	12.2	GAS-OIL
4569234.	6.8	WAX-DISTILLATE

TOTAL AREA : 67085056. AREA %: 100.0

SAMPLE WT. : 18.70 mgs

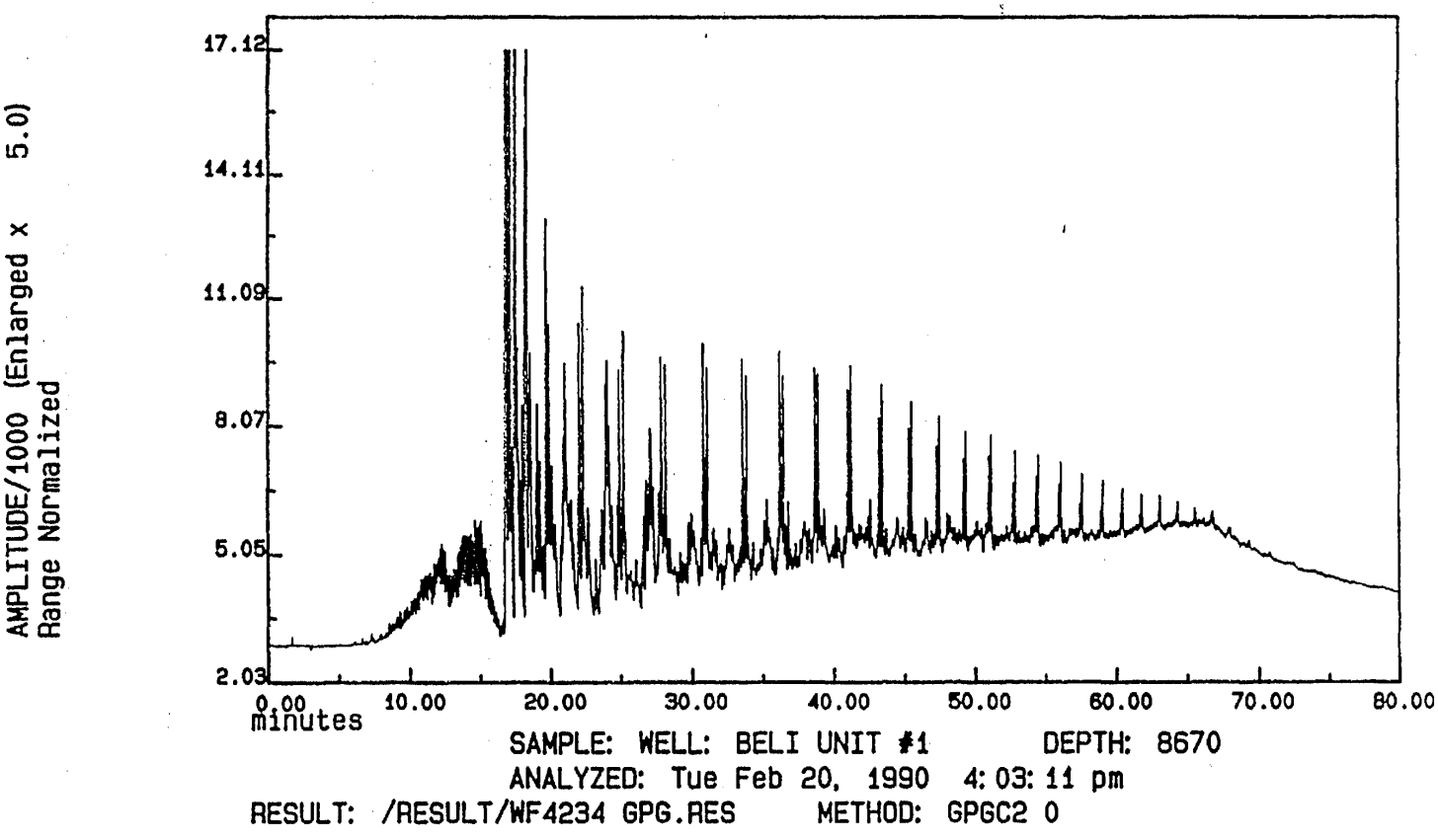
SAMPLE GOGI = .39
THIS IS GAS + OIL PRONE

METHANE + GASES = 27.9
GASOLINE+KEROSINE+GAS OIL+WAX DISTILLATE = 72.1

BY FACTOR ANALYSIS OF KEROGEN PYROLYSATE
THIS IS A GAS+OIL SOURCE

THIS ANALYSIS DETERMINES KEROGEN POTENTIAL AT ITS
PRESENT MATURITY. THIS IS NOT A KEROGEN TYPE ANALYSIS.

SAMPLE K2 = 4.37 mg/gm


AMPLITUDE/1000 (Enlarged x 5.0)
Range Normalized
17.12
14.11
11.09
8.07
5.05
2.03
0.00
10.00
20.00
30.00
40.00
50.00
60.00
70.00
80.00
minutes
SAMPLE: WELL: BELI UNIT #1 DEPTH: 8670
ANALYZED: Tue Feb 20, 1990 4:03:11 pm
RESULT: /RESULT/WF4234 GPG.RES METHOD: GPGC2 0

Normalized Percent Report

Information from Current Data File Header:
File: /chem/msd/WF4234_SAT.d
Operator:
Date Acquired: Sat Apr 28 90 02:06:38 AM
Sample Name: WF4234_SAT
Misc Info:
Sequence Index: 1 **Bottle Number:** 22 **Repetition Number:** 1

SATURATE BIOMARKERS

Calibration Table Last Updated: Sun Jun 10 17:02:03 1990

Reference Peak Window: 0.250 Absolute Minutes
Non-reference Peak Window: 0.250 Absolute Minutes

Default Sample Amount: 0
Uncalib. Peak Response Factor: 0
Default Multiplier: 1

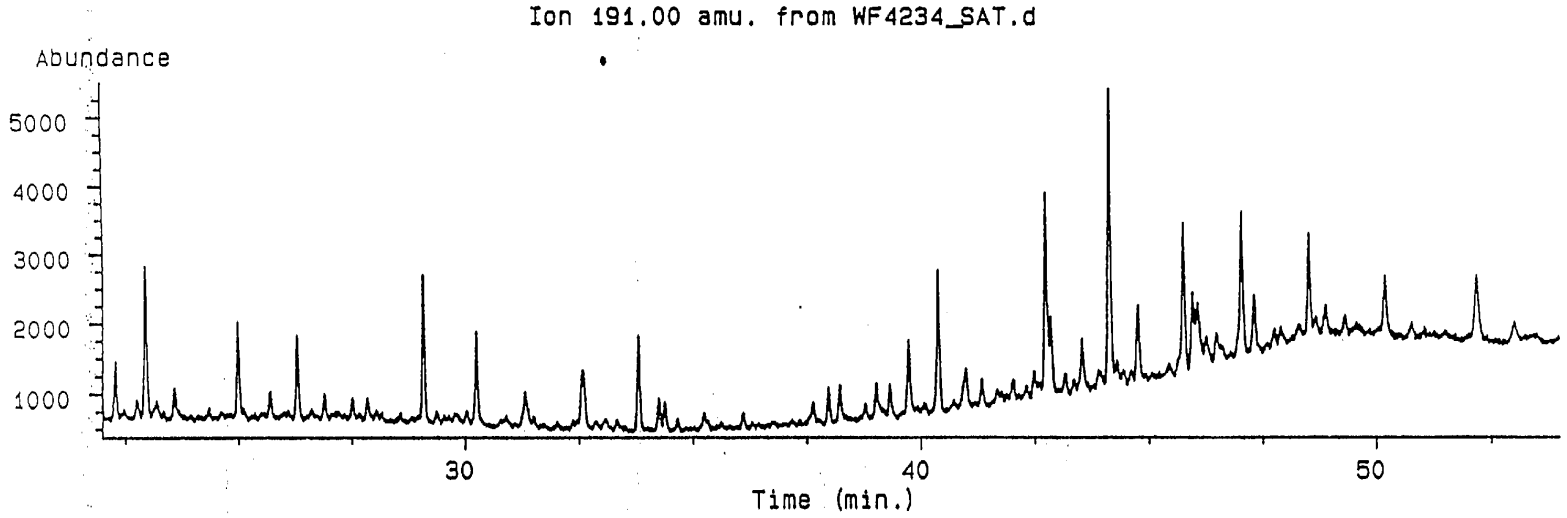
Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount	
1	VV	39.741	191.00 amu	C27 18A HOPANE TS	58695	2.593	%
2	VV	40.396	191.00 amu	C27 17A HOPANE TM	94671	4.182	%
3	VV	41.784	191.00 amu	C28 BISNORHOPANE X	3576	0.1580	%
4	VV	42.750	191.00 amu	C29 HOPANE D	140202	6.194	%
5	VV	42.861	191.00 amu	C29 NORHOPANE D2	58693	2.593	%
6	VV	43.270	191.00 amu	C30 PENTACYCLANE PI	607	0.02682	%
7	VV	43.881	191.00 amu	C30 18A OLEANANE B	5355	0.2366	%*
8	VV	44.142	191.00 amu	C30 HOPANE G	208575	9.214	%
9	VV	44.876	191.00 amu	C30 MORETANE K	7728	0.3414	%
10	VV	45.769	191.00 amu	C31S HOPANE N	125214	5.531	%
11	VV	45.961	191.00 amu	C31R HOPANE O	77595	3.428	%
12	VV	46.273	191.00 amu	O & GAMMACERANE	52591	2.323	%
13		-	191.00 amu	GAMMACERANE	-Not Found-		
14	VV	46.485	191.00 amu	P	49288	2.177	%
15	VV	46.620	191.00 amu	R	21902	0.9675	%
16	VV	47.059	191.00 amu	C32S HOPANE U	159118	7.029	%
17	VV	47.329	191.00 amu	C32R HOPANE V	71615	3.164	%
18	VV	48.530	191.00 amu	C33S HOPANE ALPHA	125042	5.524	%
19	VV	48.913	191.00 amu	C33R HOPANE BETA	53997	2.385	%
20	VV	50.207	191.00 amu	C34S HOPANE GAMMA	91269	4.032	%
21	VV	50.775	191.00 amu	C34R HOPANE DELTA	40068	1.770	%
22	VV	52.192	191.00 amu	C35S HOPANE EPSILON	85778	3.789	%
23	VV	53.023	191.00 amu	C35R HOPANE ZETA	39841	1.760	%
24	VV	27.164	217.00 amu	C21 STERANE Y	54808	2.421	%
25	VV	36.092	217.00 amu	C27S ba DIASTERANE10	36919	1.631	%
26	VV	36.740	217.00 amu	C27R ba DIASTERANE11	29923	1.322	%

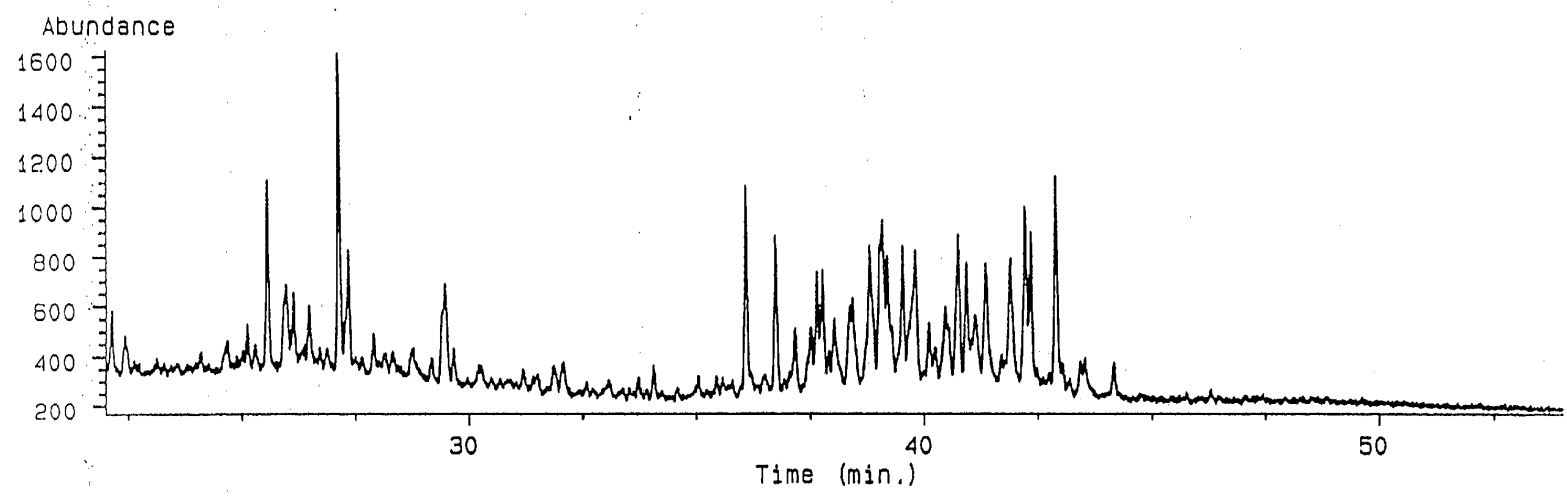
Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount
27	PV	37.332	217.00 amu	13	621	0.02744 %
28	VV	37.648	217.00 amu	14	20942	0.9251 %
29	VV	37.770	217.00 amu	15	24914	1.101 %
30	VV	37.914	217.00 amu	16	6219	0.2748 %
31	VV	38.433	217.00 amu	18	19867	0.8777 %
32		-	217.00 amu	19	-Not Found-	
33	PV	38.812	217.00 amu	20	43449	1.919 %
34	VV	39.093	217.00 amu	21	50500	2.231 %
35	VV	39.297	217.00 amu	22	8579	0.3790 %
36	VV	39.529	217.00 amu	C27R aaa STERANE 25	32113	1.419 %
37	VV	39.196	217.00 amu	27	27232	1.203 %
38	VV	41.363	217.00 amu	C28R aaa STERANE 36	32391	1.431 %
39	VB	41.904	217.00 amu	C29S aaa STERANE 39	29753	1.314 %
40	VV	42.891	217.00 amu	C29R aaa STERANE 42	43902	1.939 %
41	VV	39.026	218.00 amu	C27R abb STERANE 21B	39809	1.759 %
42	VV	39.194	218.00 amu	C27S abb STERANE 22	30159	1.332 %
43	VV	40.767	218.00 amu	C28R abb STERANE 33A	34148	1.509 %
44	VV	40.938	218.00 amu	C28S abb STERANE 34	33553	1.482 %
45	VV	42.217	218.00 amu	C29R abb STERANE 40	45018	1.989 %
46	VV	42.348	218.00 amu	C29S abb STERANE 41	47445	2.096 %

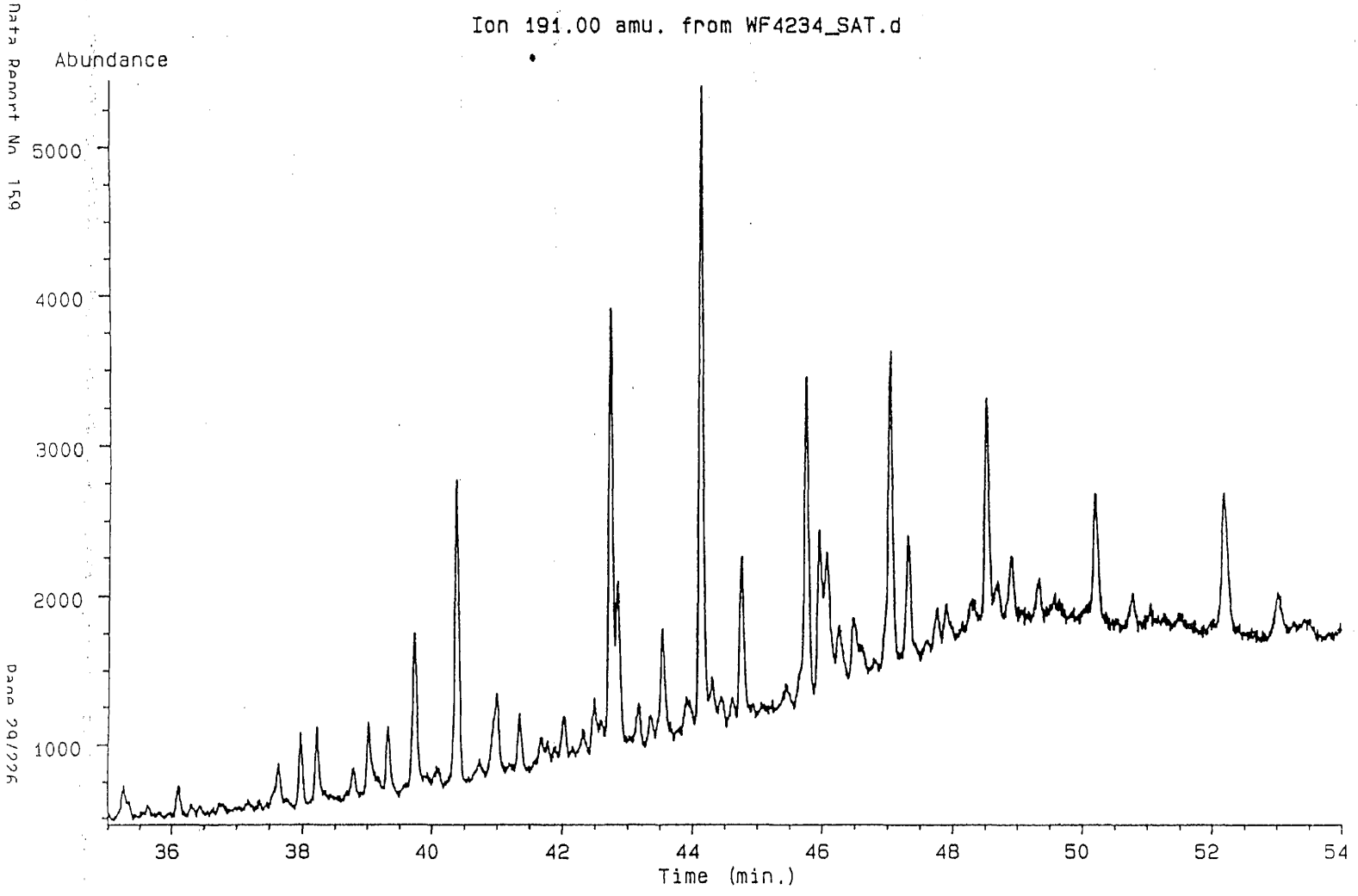
***** REPORT ERRORS *****

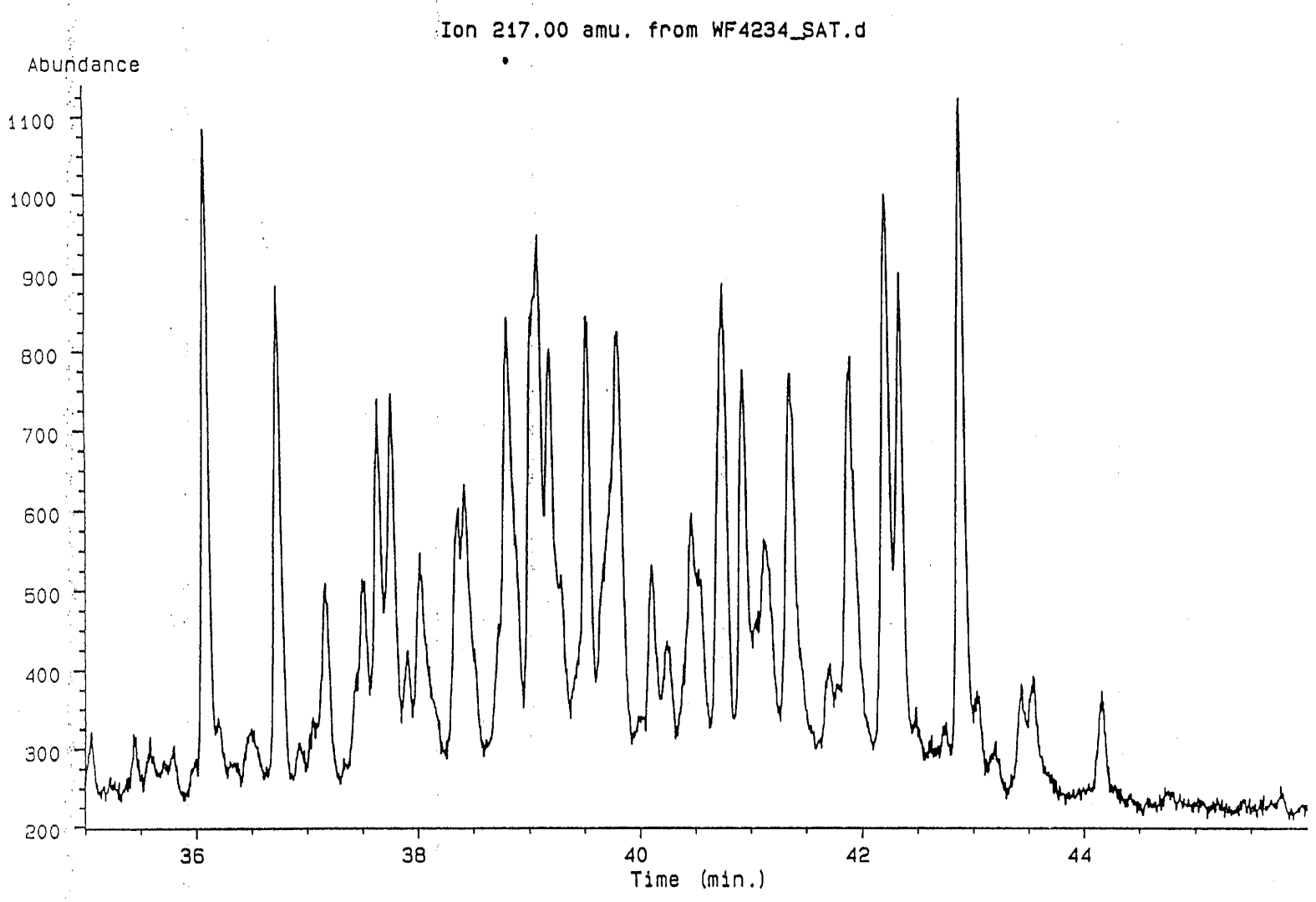
Calibration Peak #7's Qualifiers Were Not Satisfied.

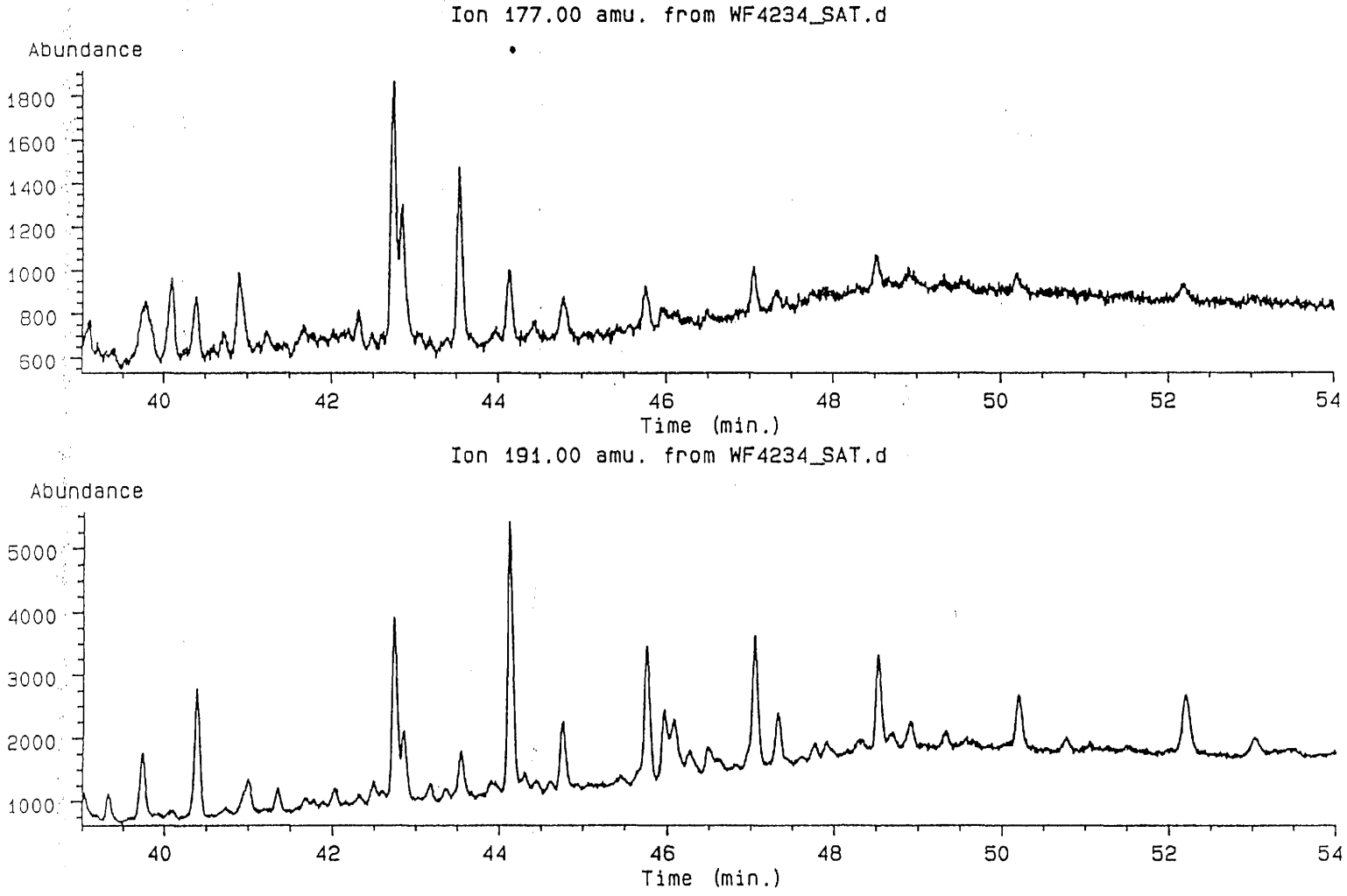
*** Not All Calibrated Peaks Found ***


Ion 191.00 amu. from WF4234_SAT.d
Abundance
5000
4000
3000
2000
1000
30
40
50
Time (min.)


Ion 217.00 amu. from WF4234_SAT.d
Abundance
1600
1400
1200
1000
800
600
400
200
30
40
50
Time (min.)


Ion 191.00 amu. from WF4234_SAT.d
Abundance
5000
4000
3000
2000
1000
36
38
40
42
44
46
48
50
52
54
Time (min.)


Ion 217.00 amu. from WF4234_SAT.d
Abundance
1100
1000
900
800
700
600
500
400
300
200
36
38
40
42
44
Time (min.)


Ion 177.00 amu. from WF4234_SAT.d
Abundance
1800
1600
1400
1200
1000
800
600
40
42
44
46
48
50
52
54
Time (min.)
Ion 191.00 amu. from WF4234_SAT.d
Abundance
5000
4000
3000
2000
1000
40
42
44
46
48
50
52
54
Time (min.)

Ion 177.00 amu. from WF4234_SAT.d
WF4234_SAT

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	42.750	BV	0.052	30704	42.576	42.815
2	43.544	BB	0.061	36557	43.446	43.657

Ion 191.00 amu. from WF4234_SAT.d
WF4234_SAT

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	22.290	BB	0.064	33533	22.194	22.387
2	22.964	BV	0.066	95433	22.853	23.072
3	25.017	BV	0.062	52897	24.932	25.113
4	26.325	BB	0.066	51124	26.219	26.453
5	29.100	BB	0.065	83013	29.018	29.222
6	30.259	BB	0.063	55176	30.131	30.393
7	32.580	BB	0.106	59310	32.295	32.711
8	33.807	BB	0.065	57372	33.720	33.928
9	39.740	BB	0.076	50577	39.550	39.866
10	40.395	BB	0.065	93333	40.247	40.520
11	42.750	VV	0.073	142247	42.561	42.817
12	42.860	VB	0.062	50291	42.817	42.992
13	44.142	BV	0.064	181222	44.036	44.249
14	44.768	VB	0.062	51903	44.687	44.902
15	45.769	BV	0.077	111649	45.580	45.874
16	45.972	PV	0.066	47484	45.874	46.019
17	46.085	VV	0.079	49082	46.019	46.204
18	47.058	BB	0.078	105615	46.774	47.160
19	48.531	BV	0.066	63568	48.441	48.618
20	52.207	BV	0.089	60082	52.073	52.331

Ion 217.00 amu. from WF4234_SAT.d
WF4234_SAT

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	22.136	BV	0.060	9937	22.056	22.225
2	25.585	PV	0.067	33640	25.429	25.753
3	25.996	BV	0.094	23021	25.857	26.078
4	26.164	VV	0.065	13689	26.078	26.253
5	26.508	VV	0.060	10231	26.442	26.607
6	27.164	BV	0.063	52902	27.077	27.255
7	27.369	VV	0.074	24474	27.255	27.443
8	29.483	BV	0.104	29652	29.338	29.611
9	36.092	PV	0.065	31698	36.014	36.173

10	36.740	BV	0.059	28538	36.612	36.877
11	37.510	VV	0.069	10118	37.462	37.585
12	37.648	VV	0.056	18614	37.585	37.705
13	37.770	VV	0.066	22394	37.705	37.856
14	38.032	VB	0.082	16393	37.971	38.210
15	38.377	BV	0.060	12140	38.283	38.395
16	38.433	VV	0.080	19349	38.395	38.595
17	38.812	PV	0.099	44084	38.595	38.951
18	39.093	VV	0.098	51408	38.951	39.149
19	39.196	VV	0.094	35708	39.149	39.373
20	39.528	VV	0.081	32473	39.373	39.605
21	39.810	VV	0.120	51104	39.605	39.927
22	40.115	VV	0.083	14298	39.927	40.185
23	40.473	VV	0.113	27598	40.321	40.632
24	40.758	VV	0.078	36643	40.632	40.851
25	40.937	VV	0.084	25501	40.851	41.020
26	41.138	VV	0.121	24656	41.020	41.267
27	41.363	VV	0.089	32858	41.267	41.591
28	41.905	VV	0.107	36379	41.745	42.099
29	42.218	PV	0.074	35622	42.099	42.286
30	42.348	VV	0.065	26057	42.286	42.449
31	42.891	BV	0.069	38084	42.800	42.999

Ion 218.00 amu. from WF4234_SAT.d
WF4234_SAT

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	36.097	VV	0.058	8224	36.025	36.175
2	39.026	PV	0.071	34713	38.936	39.135
3	39.194	VB	0.060	22843	39.135	39.266
4	39.531	BV	0.070	12635	39.385	39.604
5	39.731	PV	0.093	5454	39.604	39.781
6	40.478	BV	0.090	16636	40.347	40.651
7	40.767	PV	0.072	31062	40.651	40.855
8	40.938	VV	0.067	29923	40.855	41.028
9	41.138	VV	0.083	22347	41.028	41.275
10	41.368	PV	0.066	7406	41.275	41.436
11	42.217	BV	0.069	42721	42.110	42.279
12	42.348	VV	0.064	41725	42.279	42.468
13	42.888	BB	0.072	24413	42.726	43.114

*** PETROLEUM GEOCHEMISTRY ***

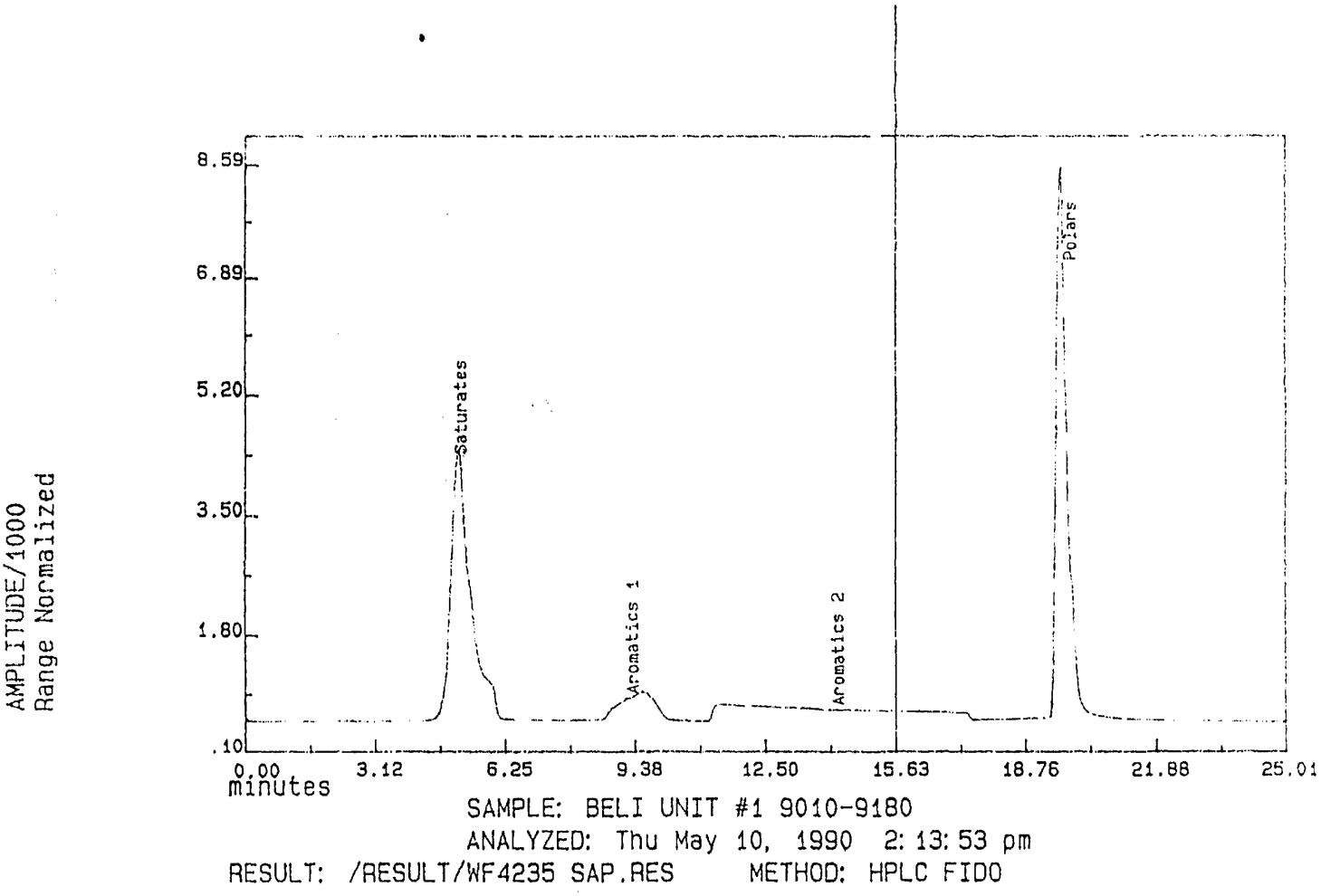
SARA ANALYSIS

SAMPLE NAME : BELI UNIT #1 9010-9180
INSTRUMENT : HPLC_FID
INJECT TIME : Thu May 10, 1990 2:13:53 pm
METHOD USED : /METHOD/HPLC_FID0.MTH
SEQUENCE : /DATA/LOOP/SEQUENCE/HP1090_AUTOCF.SEQ
RESULT FILE : /RESULT/WF4235_SAP.RES
REPORT TIME : 2:39 PM THU., 10 MAY , 1990

	AREA	TIME	RESPONSE FACTOR
Saturates	128456.	5.29	.1275E-03
Aromatics 1	24951.	9.42	.5470E-04
Aromatics 2	66303.	14.36	.5470E-04
Polars	157032.	19.96	.4160E-04

	AMOUNT (mg)	% RESIDUE
Saturates	16.38	58.7
Aromatics	4.99	17.9
Polars	6.53	23.4

	% OIL
Saturates	41.2
Aromatics	12.6
Polars	16.5
Asphaltenes	29.7


AMPLITUDE/1000
Range Normalized
8.59
6.89
5.20
3.50
1.80
.10
Saturates
Aromatics 1
Aromatics 2
Polars
0.00
3.12
6.25
9.38
12.50
15.63
18.76
21.88
25.01
minutes
SAMPLE: BELI UNIT #1 9010-9180
ANALYZED: Thu May 10, 1990 2:13:53 pm
RESULT: /RESULT/WF4235 SAP.RES METHOD: HPLC FIDO

*** PETROLEUM GEOCHEMISTRY ***
SATURATE GC

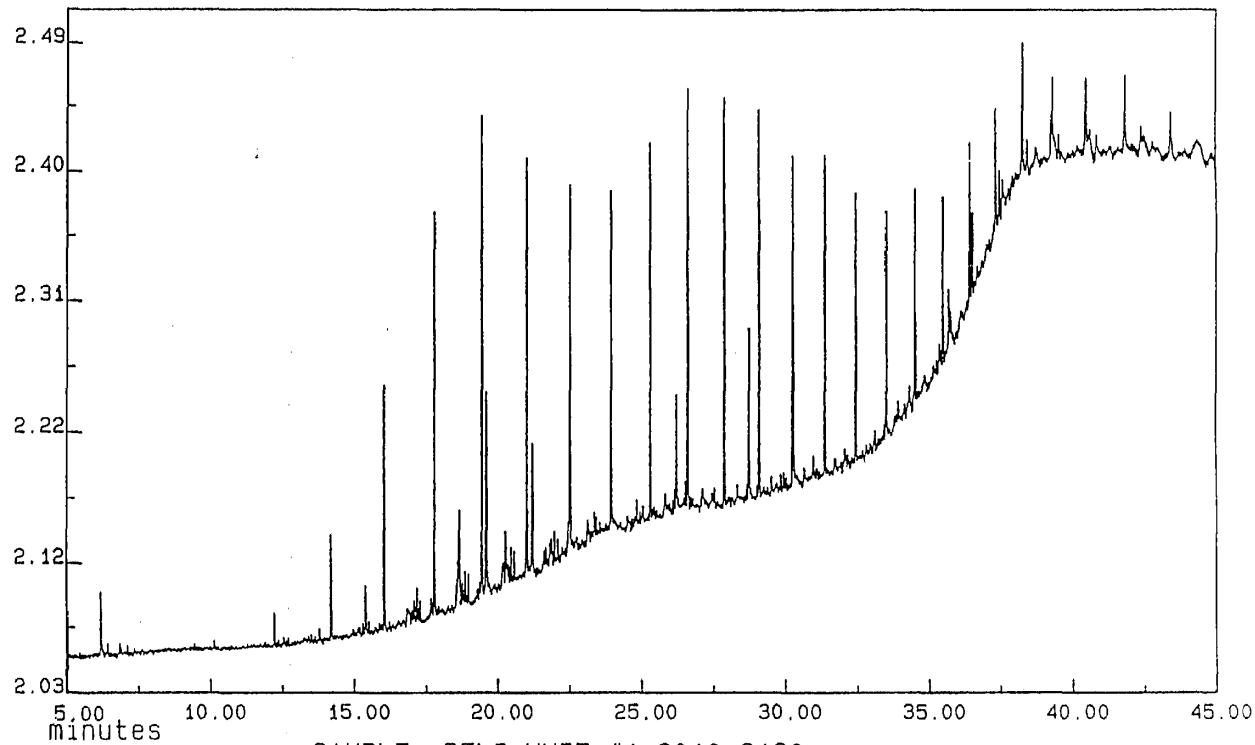
SAMPLE NAME : BELI UNIT #1 9010-9180
INSTRUMENT : HP_5890_2
INJECT TIME : Sat May 12, 1990 6:16:21 pm
METHOD USED : /METHOD/SAT5890E.MTH
RESULT FILE : /RESULT/WF4235_SAT.RES
REPORT TIME : 7:07 PM SAT., 12 MAY , 1990

CPI VALUE : 1.02

PRISTANE / PHYTANE	1.47	C15/C25	.55
PRISTANE / C17	.65	C17/Pr	1.54
PHYTANE / C18	.49	C18/Ph	2.04

	AREA	%AREA NALK	TIME	NORM C15
N-C10	0.	0.0	0.00	0.00
N-C11	0.	0.0	0.00	0.00
N-C12	0.	0.0	0.00	0.00
N-C13	176.	.5	12.21	.14
N-C14	525.	1.4	14.18	.41
N-C15	1276.	3.4	16.03	1.00
N-C16	2040.	5.4	17.78	1.60
N-C17	2565.	6.8	19.44	2.01
N-C18	2317.	6.1	21.01	1.82
N-C19	2255.	6.0	22.51	1.77
N-C20	1914.	5.1	23.94	1.50
N-C21	1872.	4.9	25.31	1.47
N-C22	2285.	6.0	26.62	1.79
N-C23	2189.	5.8	27.88	1.72
N-C24	2036.	5.4	29.08	1.60
N-C25	2330.	6.2	30.24	1.83
N-C26	1867.	4.9	31.36	1.46
N-C27	1535.	4.1	32.44	1.20
N-C28	1597.	4.2	33.48	1.25
N-C29	1398.	3.7	34.48	1.10
N-C30	971.	2.6	35.46	.76
N-C31	930.	2.5	36.40	.73
N-C32	917.	2.4	37.31	.72
N-C33	1155.	3.0	38.25	.90
N-C34	1404.	3.7	39.29	1.10
N-C35	1016.	2.7	40.47	.80
N-C36	1310.	3.5	41.83	1.03

	AREA	%AREA ISPR	TIME
Farnesane	0.	0.0	0.00
Acyclic C16	327.	8.4	15.38
Acyclic C18	767.	19.7	18.66
Pristane	1669.	42.8	19.60
Phytane	1135.	29.1	21.21


AMPLITUDE/1000
Range Normalized
2.49
2.40
2.31
2.22
2.12
2.03
5.00
10.00
15.00
20.00
25.00
30.00
35.00
40.00
45.00
minutes
SAMPLE: BELI UNIT #1 9010-9180
ANALYZED: Sat May 12, 1990 6:16:21 pm
RESULT: /ARCHIVE/WF4235 SAT.RES METHOD: SAT5890E

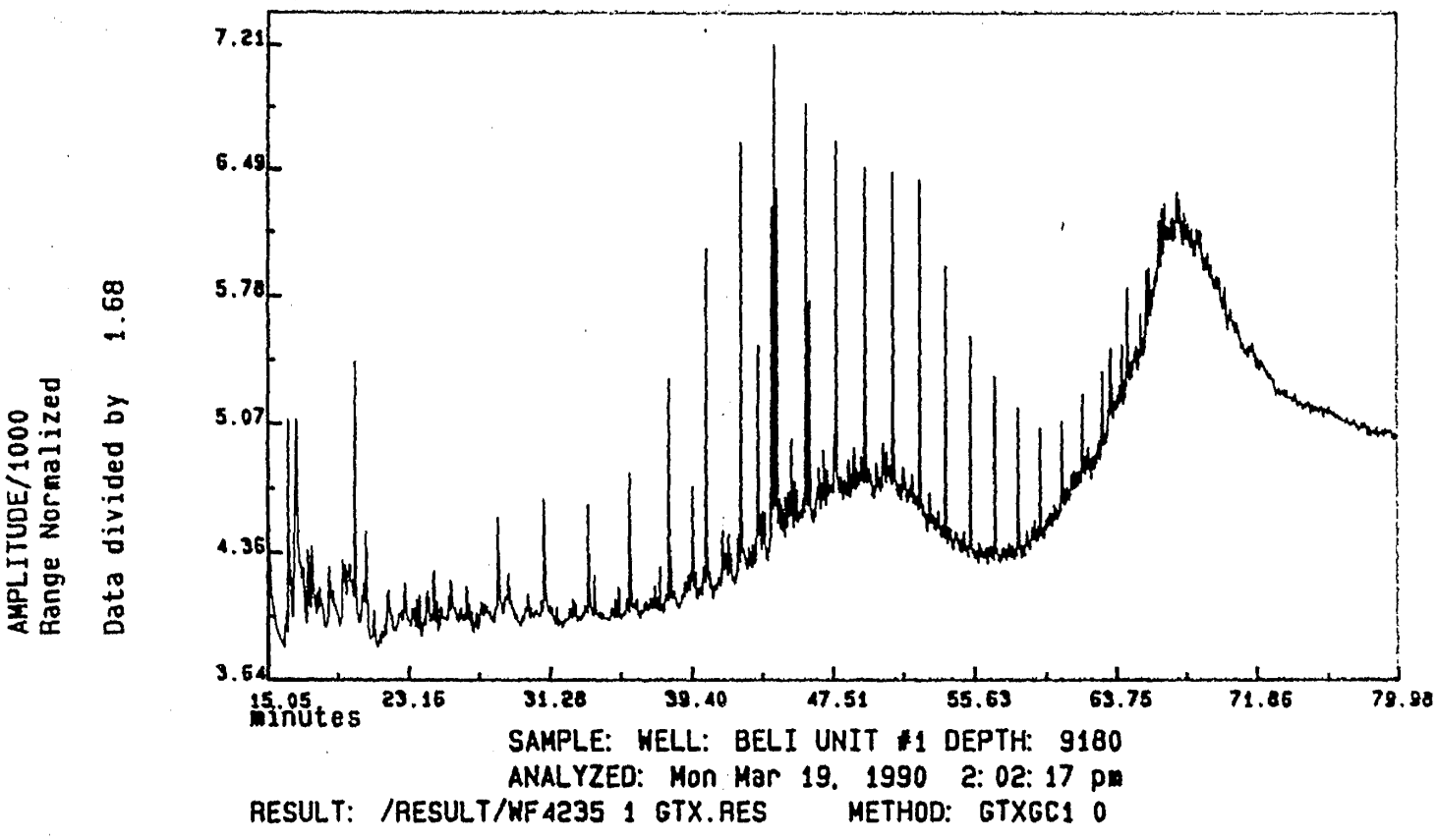
**** PETROLEUM GEOCHEMISTRY / GNH ROCK EVAL ***

SAMPLE : 9010-9180 FT.
INJECTED AT : Mon Mar 19, 1990 2:02:17 pm
INSTRUMENT : GROCK
METHOD USED : /METHOD/PYRO5.MTH
RESULT FILE : /RESULT/WF4235_1_GRO.RES
BLANK FILE : /RESULT/BLANK13_GRO.RES

***** AREA SLICE INTEGRATION *****

AREA	YIELD (mg/g)	FRACTION
27857124.	2.22	S1
141428770.	17.29	S2

SAMPLE WT. : 24.70 mgs
Tmax : 421 C


AMPLITUDE/1000
Range Normalized
Data divided by 1.68
7.21
6.49
5.78
5.07
4.36
3.64
15.05
23.16
31.28
39.40
47.51
55.63
63.75
71.86
79.98
minutes
SAMPLE: WELL: BELI UNIT #1 DEPTH: 9180
ANALYZED: Mon Mar 19, 1990 2:02:17 pm
RESULT: /RESULT/WF4235 1 GTX.RES METHOD: GTXGC1 0

**** PETROLEUM GEOCHEMISTRY / GNH PGC AUTO ****

SAMPLE : WELL: BELI UNIT #1 DEPTH: 9180
INJECTED AT : Mon Mar 19, 1990 2:02:17 pm
INSTRUMENT : GPGC_2
METHOD USED : /METHOD/GPGC2_0.MTH
RESULT FILE : /RESULT/WF4235_1_GPG.RES
BLANK FILE : /RESULT/BLANK15_GPG.RES

***** AREA SLICE INTEGRATION *****

AREA	AREA PERCENT	FRACTION
4137651.	6.1	METHANE
8614926.	12.7	GASES
20010012.	29.6	GASOLINE
17046044.	25.2	KEROSENE
14437232.	21.3	GAS-OIL
3422110.	5.1	WAX-DISTILLATE

TOTAL AREA : 67667984. AREA %: 100.0

SAMPLE WT. : 24.70 mgs

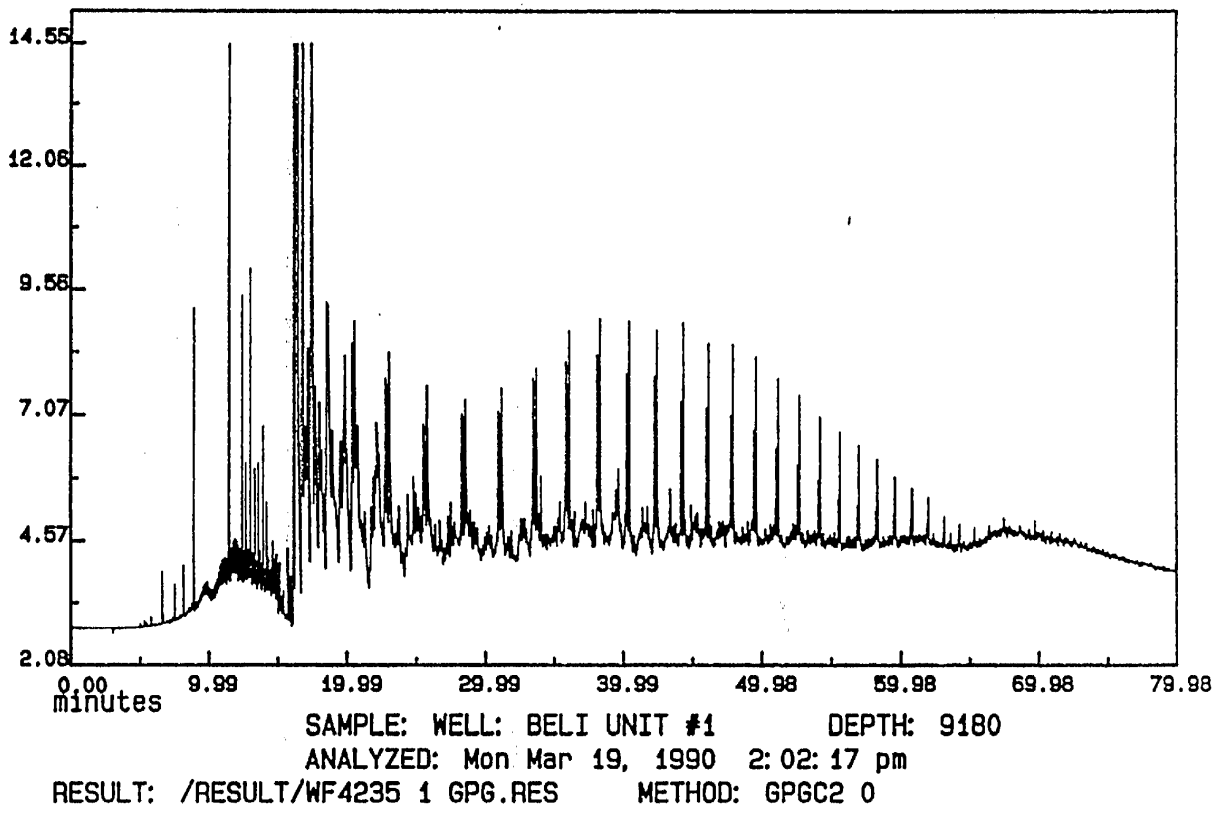
SAMPLE GOGI = .23
THIS IS OIL PRONE

METHANE + GASES = 18.8
GASOLINE+KEROSINE+GAS OIL+WAX DISTILLATE = 81.2

BY FACTOR ANALYSIS OF KEROGEN PYROLYSATE
THIS IS AN OIL+GAS SOURCE

THIS ANALYSIS DETERMINES KEROGEN POTENTIAL AT ITS
PRESENT MATURITY. THIS IS NOT A KEROGEN TYPE ANALYSIS.

SAMPLE K2 = 16.77 mg/gm


AMPLITUDE/1000 (Enlarged x 12.0)
Range Normalized
14.55
12.06
9.56
7.07
4.57
2.08
0.00
9.99
19.99
29.99
39.99
49.98
59.98
69.98
79.98
minutes
SAMPLE: WELL: BELI UNIT #1 DEPTH: 9180
ANALYZED: Mon Mar 19, 1990 2:02:17 pm
RESULT: /RESULT/WF4235 1 GPG.RES METHOD: GPGC2 0

Normalized Percent Report

Information from Current Data File Header:
File: /chem/msd/WF4235_SAT.d
Operator:
Date Acquired: Fri May 25 90 07:25:00 PM
Sample Name: WF4235_SAT
Misc Info:
Sequence Index: 1 **Bottle Number:** 1 **Repetition Number:** 1

SATURATE BIOMARKERS

Calibration Table Last Updated: Mon Jun 11 12:37:36 1990

Reference Peak Window: 0.250 Absolute Minutes
Non-reference Peak Window: 0.250 Absolute Minutes

Default Sample Amount: 0
Uncalib. Peak Response Factor: 0
Default Multiplier: 1

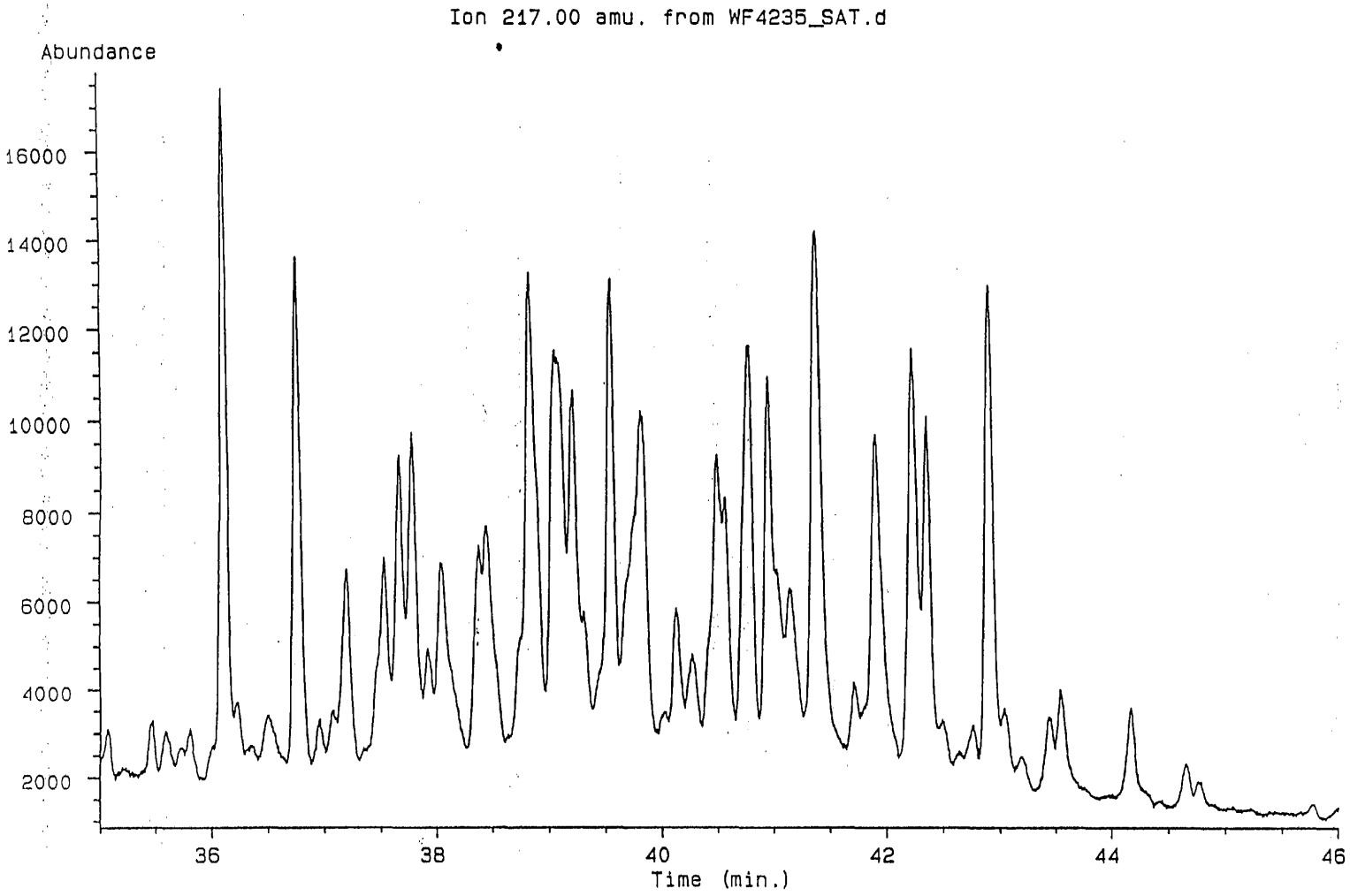
Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount	
1	VV	39.759	191.00 amu	C27 18A HOPANE TS	659994	1.514	%
2	VV	40.417	191.00 amu	C27 17A HOPANE TM	3978398	9.127	%
3	VV	41.792	191.00 amu	C28 BISNORHOPANE X	102130	0.2343	%
4	VV	42.762	191.00 amu	C29 HOPANE D	2956125	6.782	%
5	VV	42.864	191.00 amu	C29 NORHOPANE D2	780374	1.790	%
6	VV	43.179	191.00 amu	C30 PENTACYCLANE PI	296603	0.6805	%
7	VV	43.792	191.00 amu	C30 18A OLEANANE B	72708	0.1668	%*
8	VV	44.152	191.00 amu	C30 HOPANE G	3999642	9.176	%
9	VV	44.771	191.00 amu	C30 MORETANE K	5118358	11.74	%
10	VV	45.773	191.00 amu	C31S HOPANE N	1668483	3.828	%
11	VV	45.973	191.00 amu	C31R HOPANE O	860424	1.974	%
12	VV	46.099	191.00 amu	O & GAMMACERANE	5513382	12.65	%
13	VV	46.256	191.00 amu	GAMMACERANE	450562	1.034	%
14	VV	46.493	191.00 amu	P	588454	1.350	%
15	VV	46.806	191.00 amu	R	157817	0.3621	%
16	VV	47.052	191.00 amu	C32S HOPANE U	1414449	3.245	%
17	VV	47.327	191.00 amu	C32R HOPANE V	863008	1.980	%
18	VV	48.526	191.00 amu	C33S HOPANE ALPHA	810345	1.859	%
19	VV	48.909	191.00 amu	C33R HOPANE BETA	451738	1.036	%
20	VV	50.198	191.00 amu	C34S HOPANE GAMMA	607281	1.393	%
21	VV	50.764	191.00 amu	C34R HOPANE DELTA	260611	0.5979	%
22	VV	52.184	191.00 amu	C35S HOPANE EPSILON	645092	1.480	%
23	PV	53.009	191.00 amu	C35R HOPANE ZETA	301716	0.6922	%
24	VV	27.201	217.00 amu	C21 STERANE Y	670624	1.539	%
25	VV	36.111	217.00 amu	C27S ba DIASTERANE10	666037	1.528	%
26	VV	36.760	217.00 amu	C27R ba DIASTERANE11	543764	1.248	%

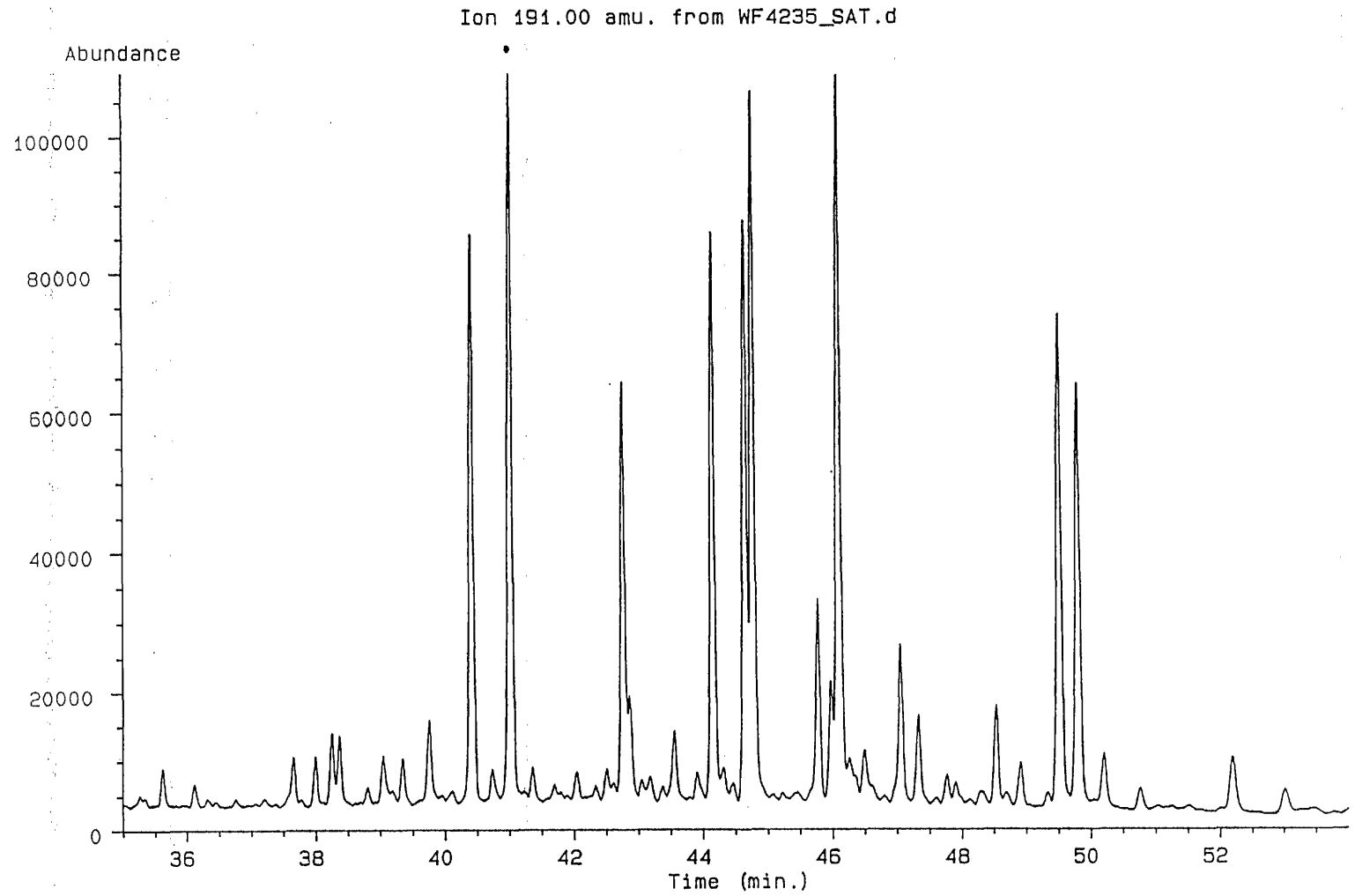
Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount
27	VV	37.197	217.00 amu	13	235792	0.5410 %
28	VV	37.670	217.00 amu	14	332519	0.7629 %
29	VV	37.787	217.00 amu	15	386659	0.8871 %
30	VV	37.925	217.00 amu	16	108872	0.2498 %
31	VV	38.448	217.00 amu	18	303696	0.6968 %
32	PV	38.635	217.00 amu	19	1271	0.002916 %
33	VV	38.831	217.00 amu	20	755541	1.733 %
34	VV	39.216	217.00 amu	21	370984	0.8511 %
35	VB	39.308	217.00 amu	22	72140	0.1655 %
36	BV	39.550	217.00 amu	C27R aaa STERANE 25	487606	1.119 %
37	VB	39.821	217.00 amu	27	692190	1.588 %
38	VB	41.378	217.00 amu	C28R aaa STERANE 36	752851	1.727 %
39	VV	41.904	217.00 amu	C29S aaa STERANE 39	534447	1.226 %
40	VV	42.901	217.00 amu	C29R aaa STERANE 42	596292	1.368 %
41	BV	39.040	218.00 amu	C27R abb STERANE 21B	559684	1.284 %
42	VB	39.210	218.00 amu	C27S abb STERANE 22	418135	0.9593 %
43	VV	40.789	218.00 amu	C28R abb STERANE 33A	593957	1.363 %
44	VV	40.952	218.00 amu	C28S abb STERANE 34	653502	1.499 %
45	PV	42.224	218.00 amu	C29R abb STERANE 40	633310	1.453 %
46	VV	42.357	218.00 amu	C29S abb STERANE 41	659743	1.514 %

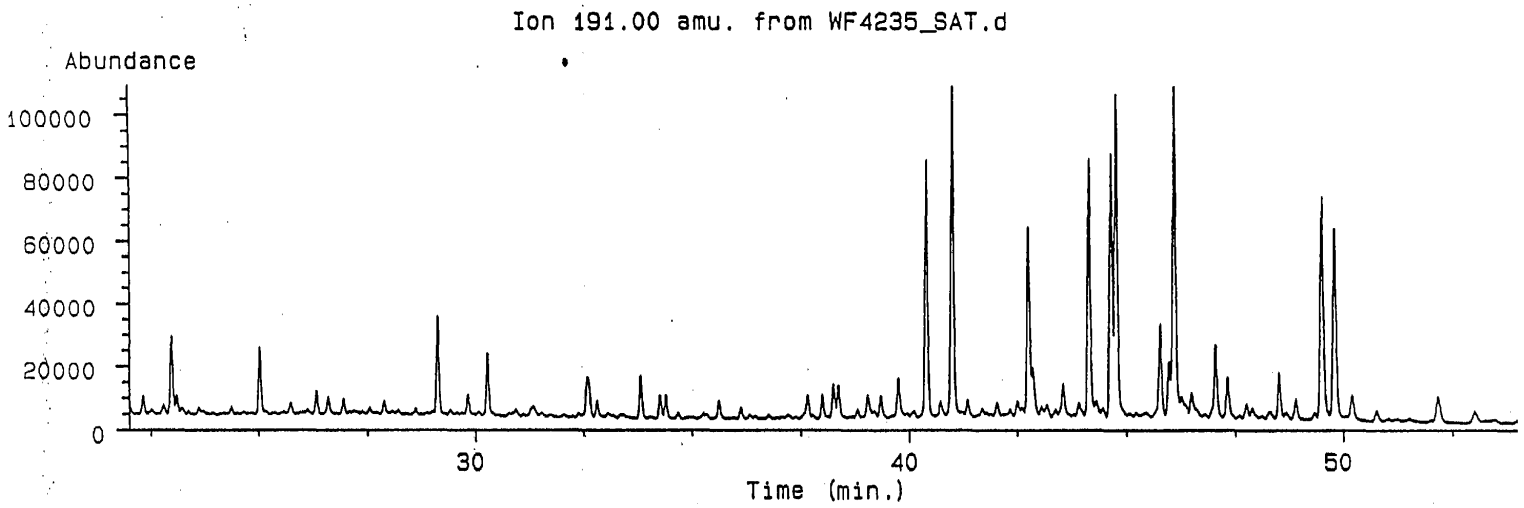
*** REPORT ERRORS ***

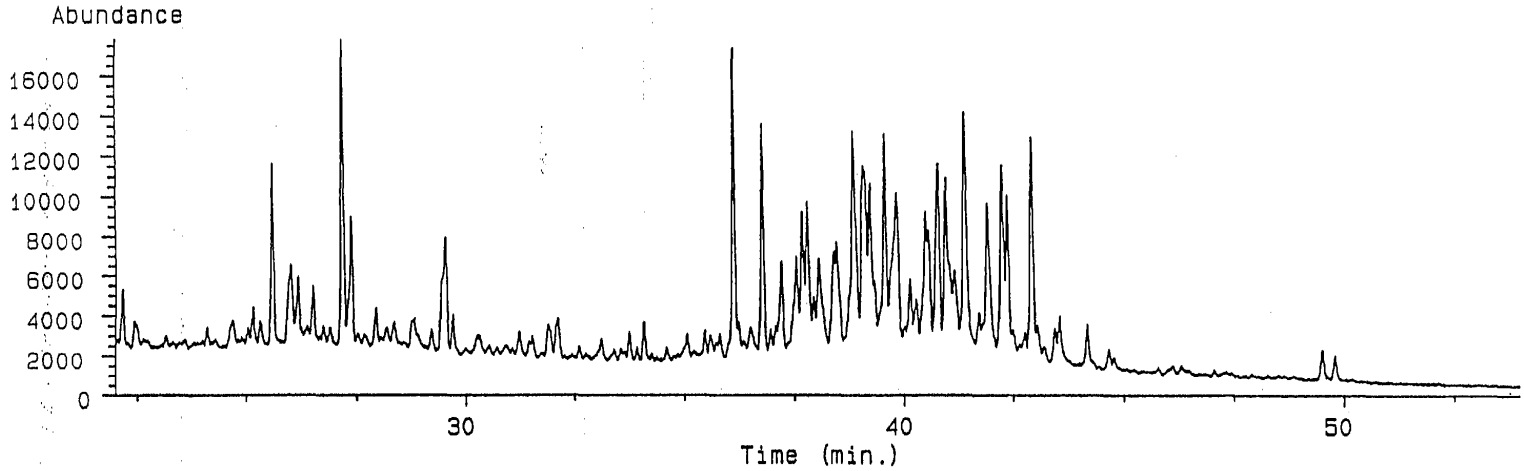
Calibration Peak #7's Qualifiers Were Not Satisfied.

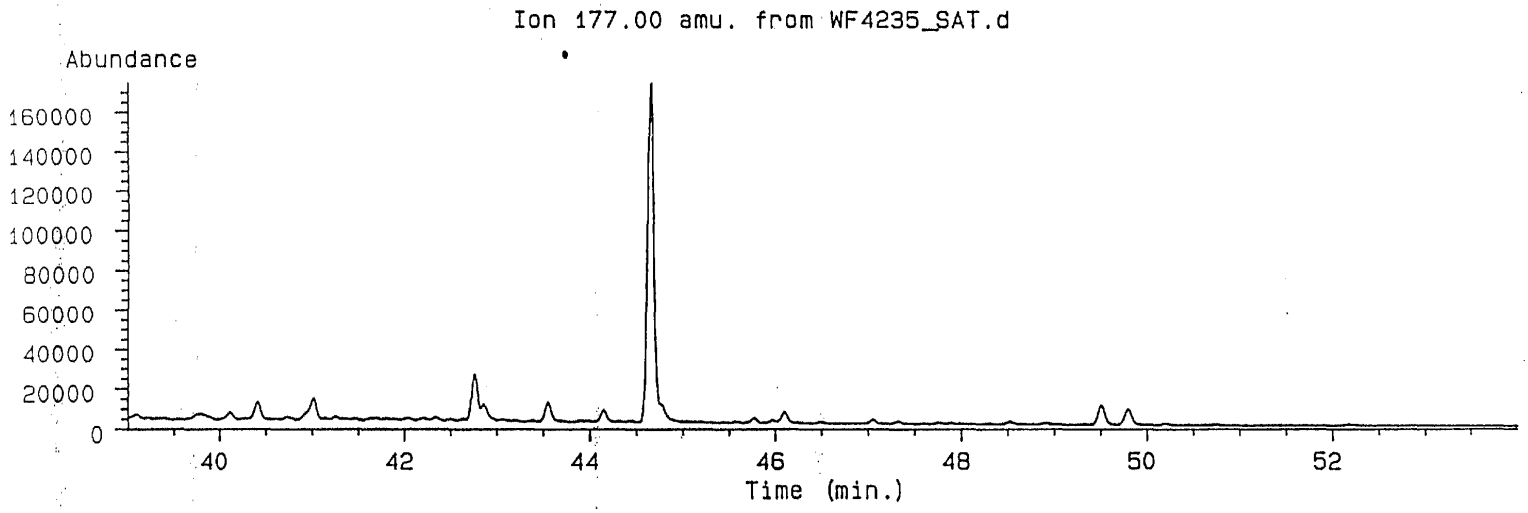
*** Not All Calibrated Peaks Found ***

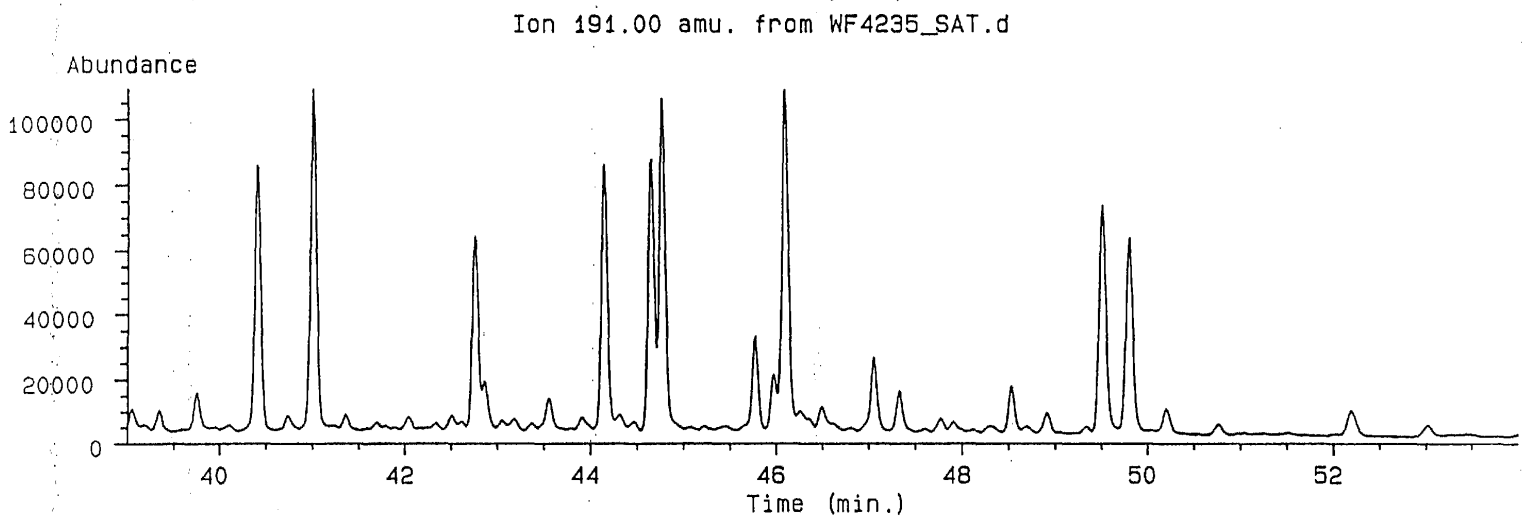

Ion 217.00 amu. from WF4235_SAT.d
Abundance
16000
14000
12000
10000
8000
6000
4000
2000
36
38
40
42
44
46
Time (min.)


Ion 191.00 amu. from WF4235_SAT.d
Abundance
100000
80000
60000
40000
20000
0
36
38
40
42
44
46
48
50
52
Time (min.)


Ion 191.00 amu. from WF4235_SAT.d
Abundance
100000
80000
60000
40000
20000
0
30
40
50
Time (min.)


Ion 217.00 amu. from WF4235_SAT.d
Abundance
16000
14000
12000
10000
8000
6000
4000
2000
0
30
40
50
Time (min.)


Ion 177.00 amu. from WF4235_SAT.d
Abundance
160000
140000
120000
100000
80000
60000
40000
20000
0
40
42
44
46
48
50
52
Time (min.)


Ion 191.00 amu. from WF4235_SAT.d
Abundance
100000
80000
60000
40000
20000
0
40
42
44
46
48
50
52
Time (min.)

*** PETROLEUM GEOCHEMISTRY ***

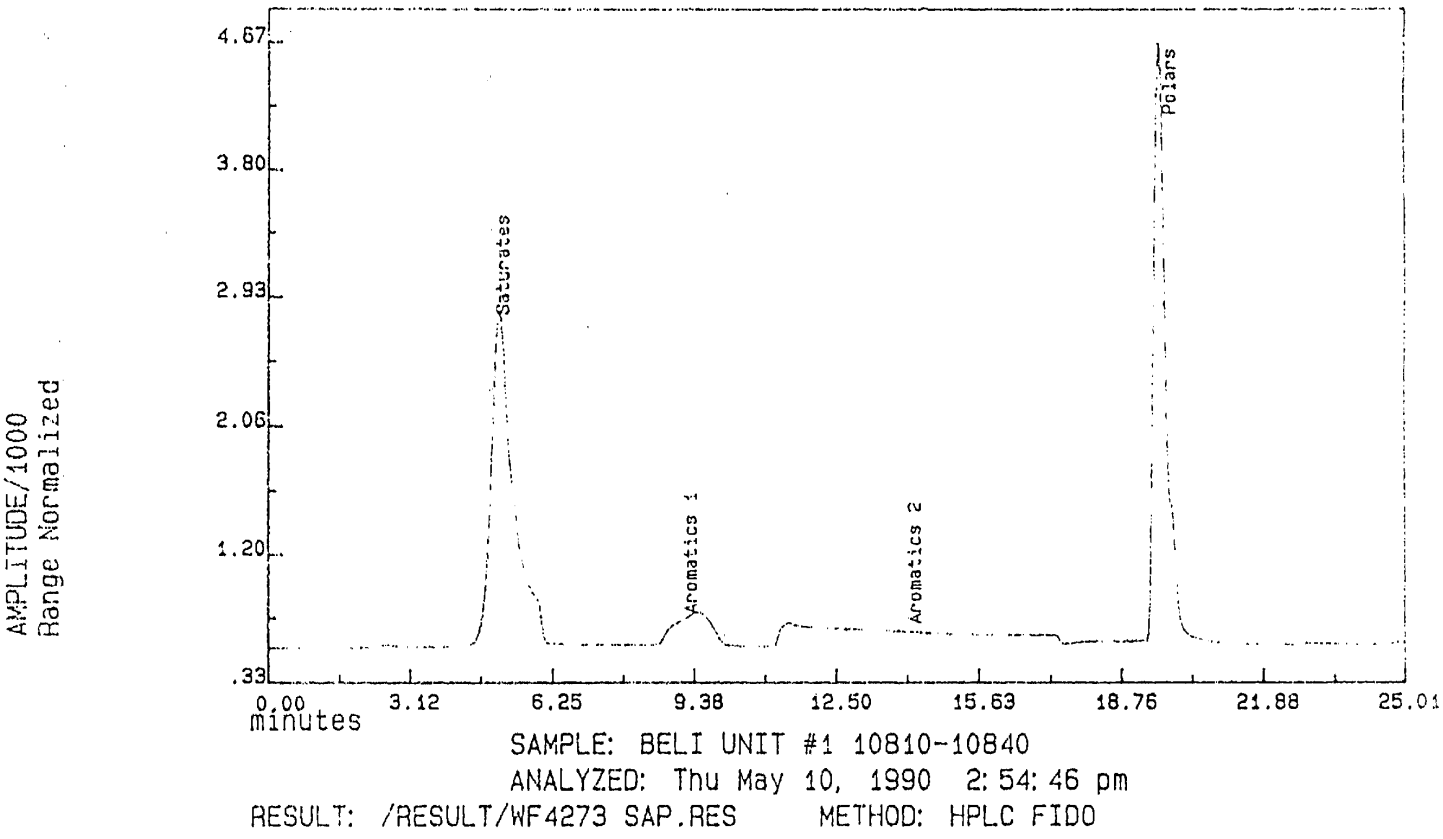
SARA ANALYSIS

SAMPLE NAME : BELI UNIT #1 10810-10840
INSTRUMENT : HPLC_FID
INJECT TIME : Thu May 10, 1990 2:54:46 pm
METHOD USED : /METHOD/HPLC_FIDO.MTH
SEQUENCE : /DATA/LOOP/SEQUENCE/HP1090_AUTOCF.SEQ
RESULT FILE : /RESULT/WF4273_SAP.RES
REPORT TIME : 3:20 PM THU., 10 MAY , 1990

	AREA	TIME	RESPONSE FACTOR
Saturates	77231.	5.29	.1275E-03
Aromatics 1	12185.	9.42	.5470E-04
Aromatics 2	35294.	14.36	.5470E-04
Polars	78645.	19.96	.4160E-04

	AMOUNT (mg)	% RESIDUE
Saturates	9.85	62.7
Aromatics	2.60	16.5
Polars	3.27	20.8

	% OIL
Saturates	62.7
Aromatics	16.5
Polars	20.8
Asphaltenes	0.0

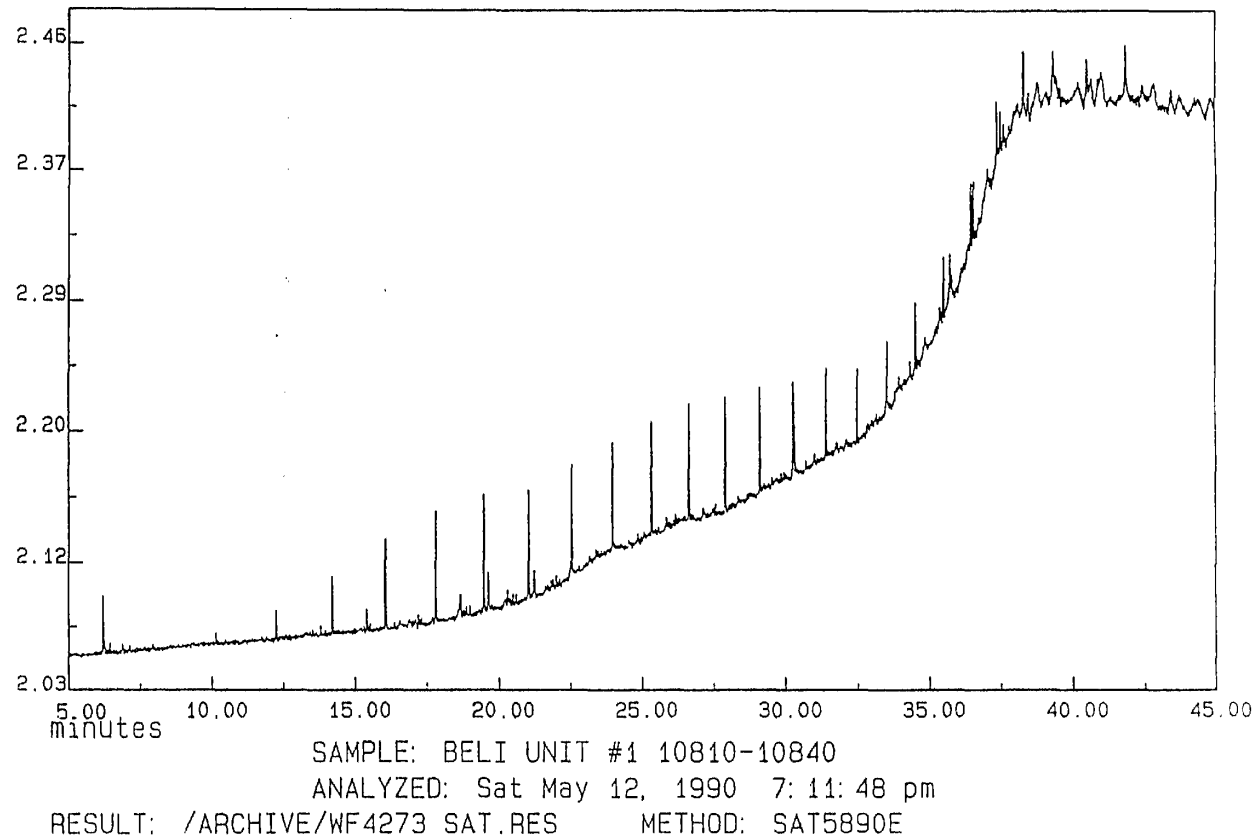

AMPLITUDE/1000
Range Normalized
4.67
3.80
2.93
2.06
1.20
.33
Saturates
Aromatics 1
Aromatics 2
Polars
0.00
3.12
6.25
9.38
12.50
15.63
18.76
21.88
25.01
minutes
SAMPLE: BELI UNIT #1 10810-10840
ANALYZED: Thu May 10, 1990 2:54:46 pm
RESULT: /RESULT/WF4273 SAP.RES METHOD: HPLC FIDO

SAMPLE NAME : BELI UNIT #1 10810-10840
INSTRUMENT : HP_5890_2
INJECT TIME : Sat May 12, 1990 7:11:48 pm
METHOD USED : /METHOD/SAT5890E.MTH
RESULT FILE : /RESULT/WF4273_SAT.RES
REPORT TIME : 8:02 PM SAT., 12 MAY , 1990

CPI VALUE : .85
PRISTANE / PHYTANE : 1.09 C15/C25 : .55
PRISTANE / C17 : .49 C17/Pr : 2.05
PHYTANE / C18 : .46 C18/Ph : 2.19

	AREA	%AREA NALK	TIME	NORM C15
N-C10	0.	0.0	0.00	0.00
N-C11	0.	0.0	0.00	0.00
N-C12	0.	0.0	0.00	0.00
N-C13	166.	1.0	12.21	.36
N-C14	285.	1.7	14.18	.62
N-C15	464.	2.8	16.04	1.00
N-C16	553.	3.3	17.78	1.19
N-C17	604.	3.7	19.44	1.30
N-C18	592.	3.6	21.02	1.28
N-C19	768.	4.7	22.51	1.66
N-C20	1065.	6.4	23.94	2.30
N-C21	576.	3.5	25.31	1.24
N-C22	674.	4.1	26.62	1.45
N-C23	576.	3.5	27.88	1.24
N-C24	618.	3.7	29.08	1.33
N-C25	840.	5.1	30.25	1.81
N-C26	563.	3.4	31.36	1.21
N-C27	377.	2.3	32.44	.81
N-C28	525.	3.2	33.48	1.13
N-C29	452.	2.7	34.48	.97
N-C30	351.	2.1	35.46	.76
N-C31	363.	2.2	36.50	.78
N-C32	1152.	7.0	37.31	2.48
N-C33	1370.	8.3	38.07	2.95
N-C34	1292.	7.8	39.29	2.79
N-C35	641.	3.9	40.62	1.38
N-C36	1655.	10.0	41.83	3.57

	AREA	%AREA ISPR	TIME
Farnesane	0.	0.0	0.00
Acyclic C16	153.	16.7	15.39
Acyclic C18	201.	21.8	18.60
Pristane	295.	32.1	19.60
Phytane	270.	29.4	21.21


AMPLITUDE/1000
Range Normalized
2.46
2.37
2.29
2.20
2.12
2.03
5.00
10.00
15.00
20.00
25.00
30.00
35.00
40.00
45.00
minutes
SAMPLE: BELI UNIT #1 10810-10840
ANALYZED: Sat May 12, 1990 7:11:48 pm
RESULT: /ARCHIVE/WF4273 SAT.RES METHOD: SAT5890E

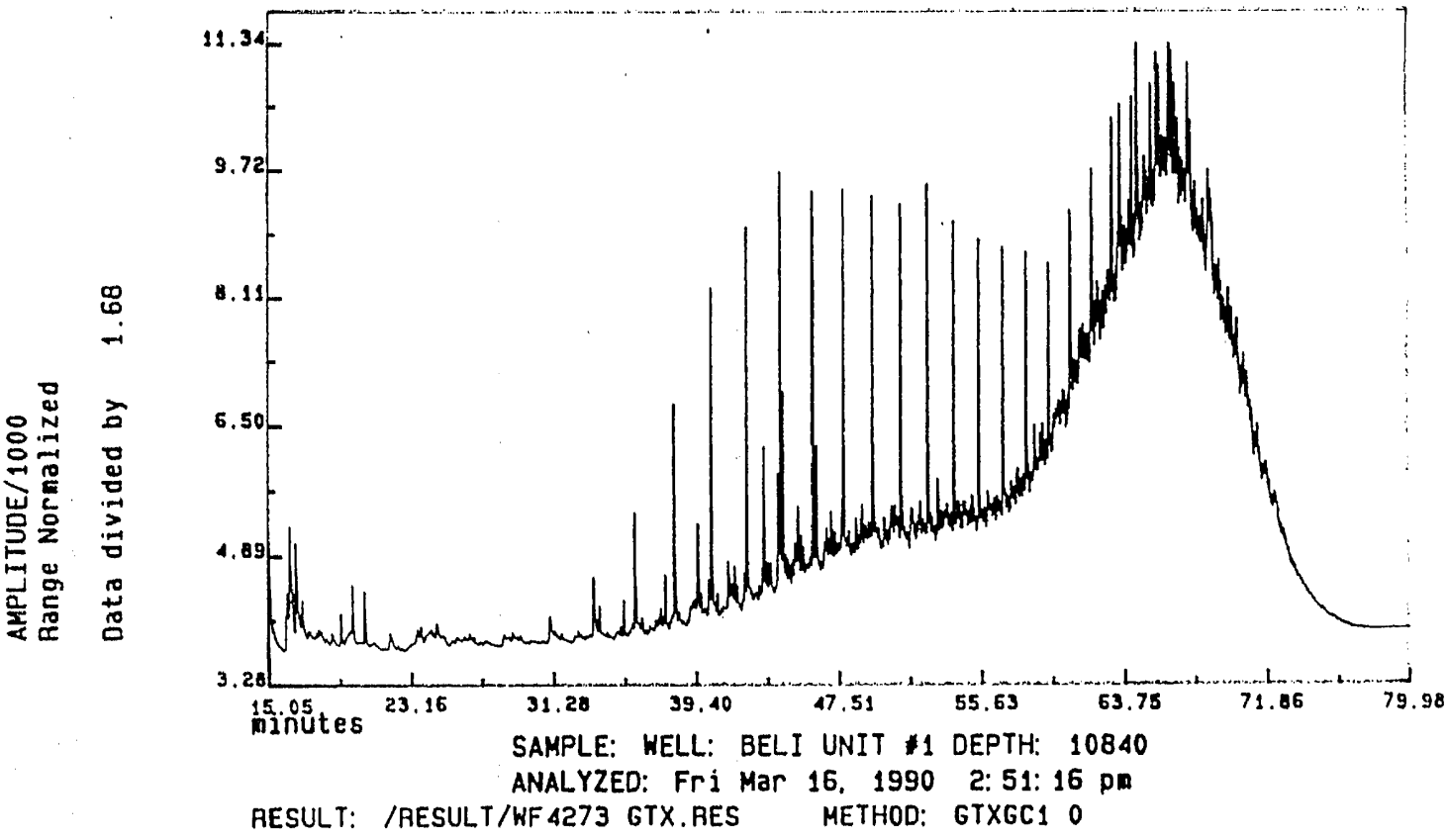
**** PETROLEUM GEOCHEMISTRY / GNH ROCK EVAL ***

SAMPLE : WELL: BELI UNIT #1 DEPTH: 10840
INJECTED AT : Fri Apr 27, 1990 12:53:26 pm
INSTRUMENT : GROCK
METHOD USED : /METHOD/PYRO5.MTH
RESULT FILE : /RESULT/WF427311_GRO.RES
BLANK FILE : /RESULT/BLANK13_GRO.RES

***** AREA SLICE INTEGRATION *****

AREA	YIELD (mg/g)	FRACTION
3074965.	10.23	S1
14464380.	98.39	S2

SAMPLE WT. : 6.80 mgs
Tmax : 457 C


AMPLITUDE/1000
Range Normalized
Data divided by 1.68
11.34
9.72
8.11
6.50
4.89
3.28
15.05
23.16
31.28
39.40
47.51
55.63
63.75
71.86
79.98
minutes
SAMPLE: WELL: BELI UNIT #1 DEPTH: 10840
ANALYZED: Fri Mar 16, 1990 2:51:16 pm
RESULT: /RESULT/WF4273 GTX.RES METHOD: GTXGC1 0

SAMPLE : WELL: BELI UNIT #1 DEPTH: 10840
INJECTED AT : Fri Apr 27, 1990 12:53:26 pm
INSTRUMENT : GPGC_2
METHOD USED : /METHOD/GPGC2_0.MTH
RESULT FILE : /RESULT/WF427311_GPG.RES
BLANK FILE : /RESULT/BLANK15_GPG.RES

***** AREA SLICE INTEGRATION *****

AREA	AREA PERCENT	FRACTION
1420206.	9.0	METHANE
6484635.	41.1	GASES
5141986.	32.6	GASOLINE
1945427.	12.3	KEROSENE
631713.	4.0	GAS-OIL
138661.	.9	WAX-DISTILLATE

TOTAL AREA : 15762630. AREA %: 100.0

SAMPLE WT. : 6.80 mgs

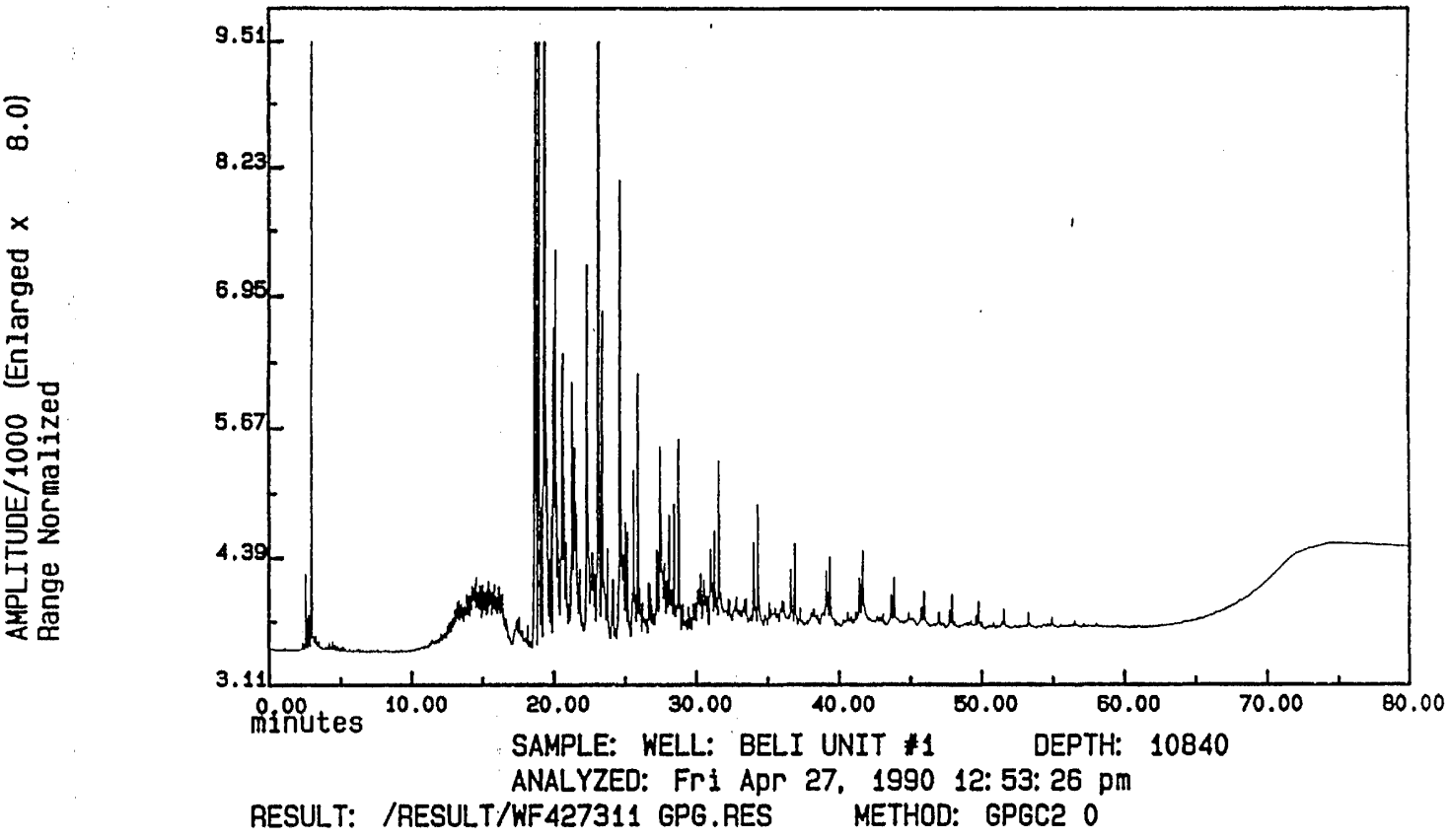
SAMPLE GOGI = 1.01
THIS IS GAS PRONE

METHANE + GASES = 50.1
GASOLINE+KEROSINE+GAS OIL+WAX DISTILLATE = 49.9

BY FACTOR ANALYSIS OF KEROGEN PYROLYSATE
THIS IS GAS PRONE

THIS ANALYSIS DETERMINES KEROGEN POTENTIAL AT ITS
PRESENT MATURITY. THIS IS NOT A KEROGEN TYPE ANALYSIS.

SAMPLE K2 = 92.63 mg/gm


AMPLITUDE/1000 (Enlarged x 8.0)
Range Normalized
9.51
8.23
6.95
5.67
4.39
3.11
0.00
10.00
20.00
30.00
40.00
50.00
60.00
70.00
80.00
minutes
SAMPLE: WELL: BELI UNIT #1 DEPTH: 10840
ANALYZED: Fri Apr 27, 1990 12:53:26 pm
RESULT: /RESULT/WF427311 GPG.RES METHOD: GPGC2 0

Normalized Percent Report

Information from Current Data File Header:
File: /chem/msd/WF4273_SAT.d
Operator:
Date Acquired: Fri May 25 90 08:36:20 PM
Sample Name: WF4273_SAT
Misc Info:
Sequence Index: 1 **Bottle Number:** 2 **Repetition Number:** 1

SATURATE BIOMARKERS

Calibration Table Last Updated: Mon Jun 11 13:22:55 1990

Reference Peak Window: 0.250 Absolute Minutes
Non-reference Peak Window: 0.250 Absolute Minutes

Default Sample Amount: 0
Uncalib. Peak Response Factor: 0
Default Multiplier: 1

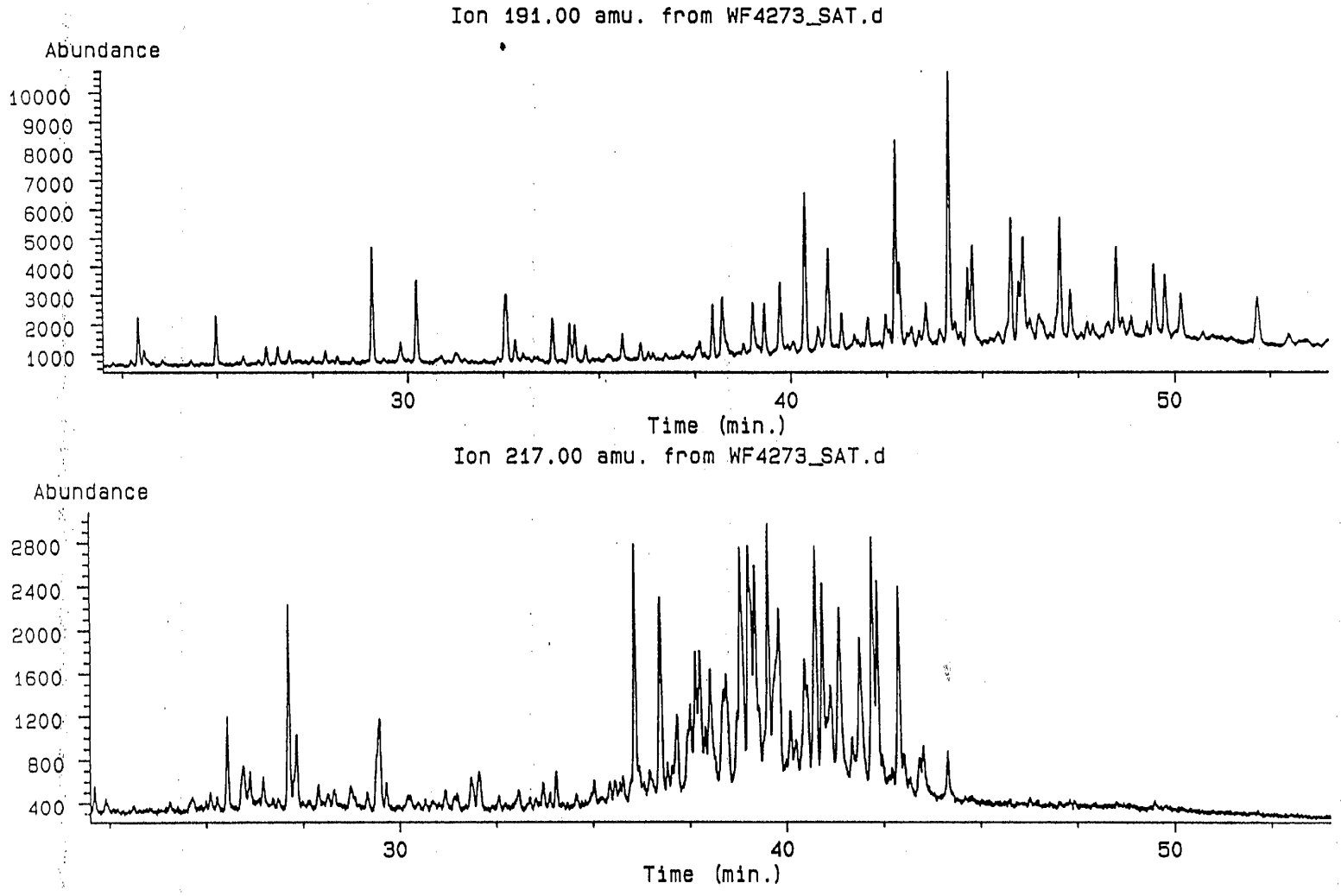
Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount	
1	VV	39.725	191.00 amu	C27 18A HOPANE TS	134417	2.274	%
2	VV	40.374	191.00 amu	C27 17A HOPANE TM	271782	4.599	%
3	VV	41.756	191.00 amu	C28 BISNORHOPANE X	21107	0.3572	%
4	VV	42.727	191.00 amu	C29 HOPANE D	341298	5.775	%
5	VV	42.834	191.00 amu	C29 NORHOPANE D2	161093	2.726	%
6	VV	43.155	191.00 amu	C30 PENTACYCLANE PI	61369	1.038	%
7	VV	43.867	191.00 amu	C30 18A OLEANANE B	61617	1.043	%*
8	VV	44.116	191.00 amu	C30 HOPANE G	483509	8.181	%
9	VV	44.739	191.00 amu	C30 MORETANE K	228907	3.873	%
10	VV	45.745	191.00 amu	C31S HOPANE N	295713	5.004	%
11	VV	45.946	191.00 amu	C31R HOPANE O	127218	2.153	%
12	VV	46.238	191.00 amu	O & GAMMACERANE	94455	1.598	%
13	VV	46.064	191.00 amu	GAMMACERANE	267049	4.519	%
14	VV	46.493	191.00 amu	P	118220	2.000	%
15	VV	46.853	191.00 amu	R	11338	0.1919	%
16	VV	47.032	191.00 amu	C32S HOPANE U	320146	5.417	%
17	VV	47.301	191.00 amu	C32R HOPANE V	158915	2.689	%
18	VV	48.508	191.00 amu	C33S HOPANE ALPHA	206083	3.487	%
19	VV	48.883	191.00 amu	C33R HOPANE BETA	93208	1.577	%
20	VV	50.172	191.00 amu	C34S HOPANE GAMMA	141844	2.400	%
21	VV	50.748	191.00 amu	C34R HOPANE DELTA	56737	0.9601	%
22	VV	52.163	191.00 amu	C35S HOPANE EPSILON	137158	2.321	%
23	VV	52.982	191.00 amu	C35R HOPANE ZETA	40824	0.6908	%
24	PV	27.138	217.00 amu	C21 STERANE Y	81749	1.383	%
25	VV	36.073	217.00 amu	C27S ba DIASTERANE10	105594	1.787	%
26	VV	36.729	217.00 amu	C27R ba DIASTERANE11	96517	1.633	%

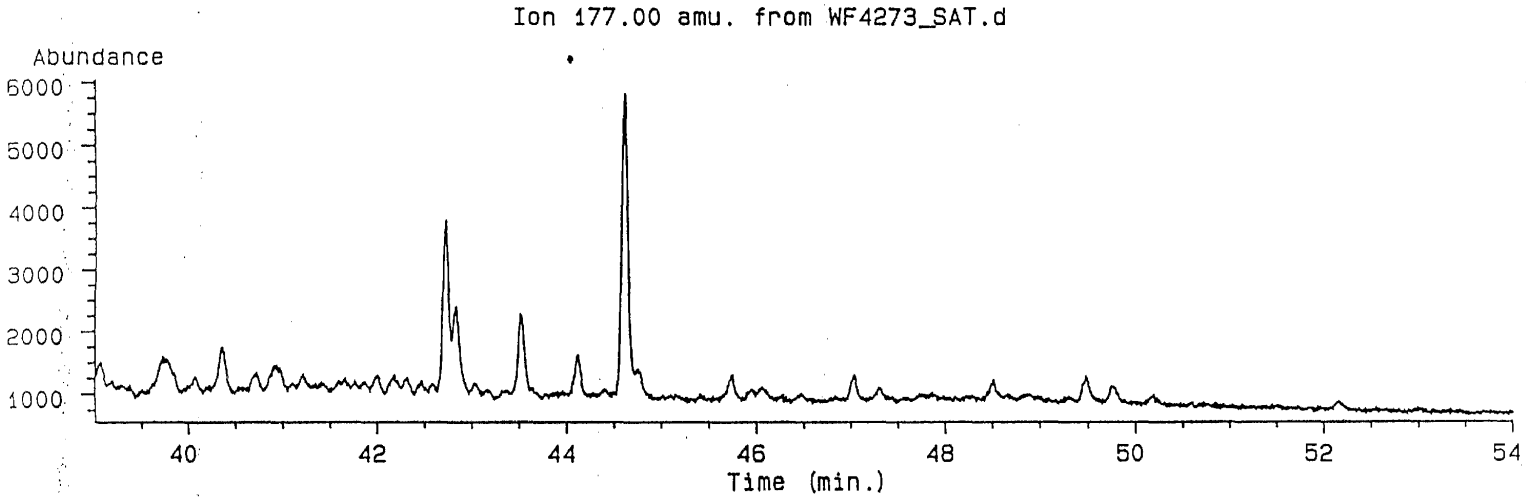
Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount
27	VV	37.319	217.00 amu	13	1738	0.02941 %
28	VV	37.741	217.00 amu	14	74340	1.258 %
29	VV	37.887	217.00 amu	15	25607	0.4333 %
30	VV	38.011	217.00 amu	16	71790	1.215 %
31	VV	38.421	217.00 amu	18	64113	1.085 %
32	PV	38.702	217.00 amu	19	22332	0.3779 %
33	VB	39.789	217.00 amu	20	144665	2.448 %
34	VV	39.173	217.00 amu	21	92035	1.557 %
35	VB	39.264	217.00 amu	22	19667	0.3328 %
36	BV	39.514	217.00 amu	C27R aaa STERANE 25	112459	1.903 %
37		-	217.00 amu	27	-Not Found-	
38	VB	41.346	217.00 amu	C28R aaa STERANE 36	108267	1.832 %
39	VV	41.869	217.00 amu	C29S aaa STERANE 39	92934	1.573 %
40	VV	42.868	217.00 amu	C29R aaa STERANE 42	98932	1.674 %
41	BV	39.005	218.00 amu	C27R abb STERANE 21B	142469	2.411 %
42	VV	39.168	218.00 amu	C27S abb STERANE 22	134754	2.280 %
43	VV	40.746	218.00 amu	C28R abb STERANE 33A	135350	2.290 %
44	VV	40.917	218.00 amu	C28S abb STERANE 34	133036	2.251 %
45	VV	42.190	218.00 amu	C29R abb STERANE 40	149950	2.537 %
46	VV	42.323	218.00 amu	C29S abb STERANE 41	167489	2.834 %

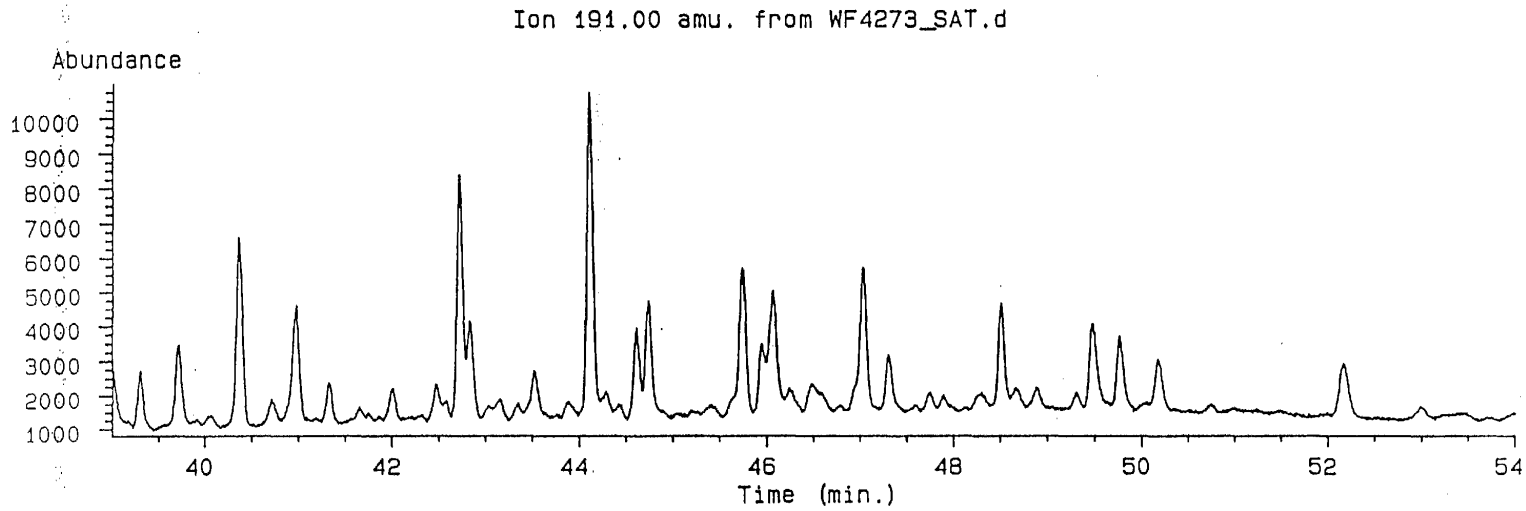
*** REPORT ERRORS ***

Calibration Peak #7's Qualifiers Were Not Satisfied.

*** Not All Calibrated Peaks Found ***


Ion 191.00 amu. from WF4273_SAT.d
Abundance
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
30
40
50
Time (min.)
Ion 217.00 amu. from WF4273_SAT.d
Abundance
2800
2400
2000
1600
1200
800
400
30
40
50
Time (min.)


Ion 177.00 amu. from WF4273_SAT.d
Abundance
5000
4000
3000
2000
1000
40
42
44
46
48
50
52
54
Time (min.)


Ion 191.00 amu. from WF4273_SAT.d
Abundance
10000
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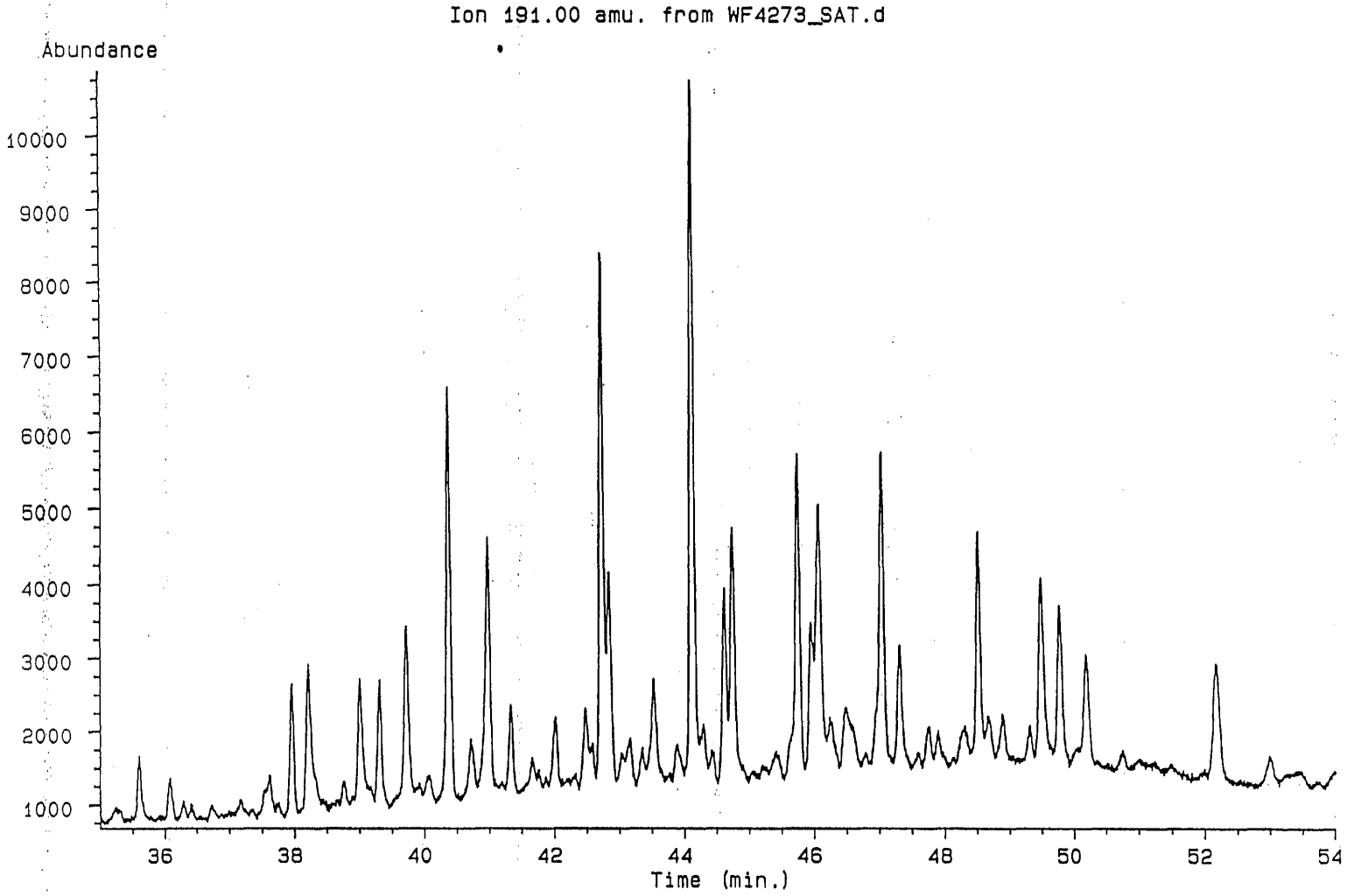
8000
7000
6000
5000
4000
3000
2000
1000
40
42
44
46
48
50
52
54
Time (min.)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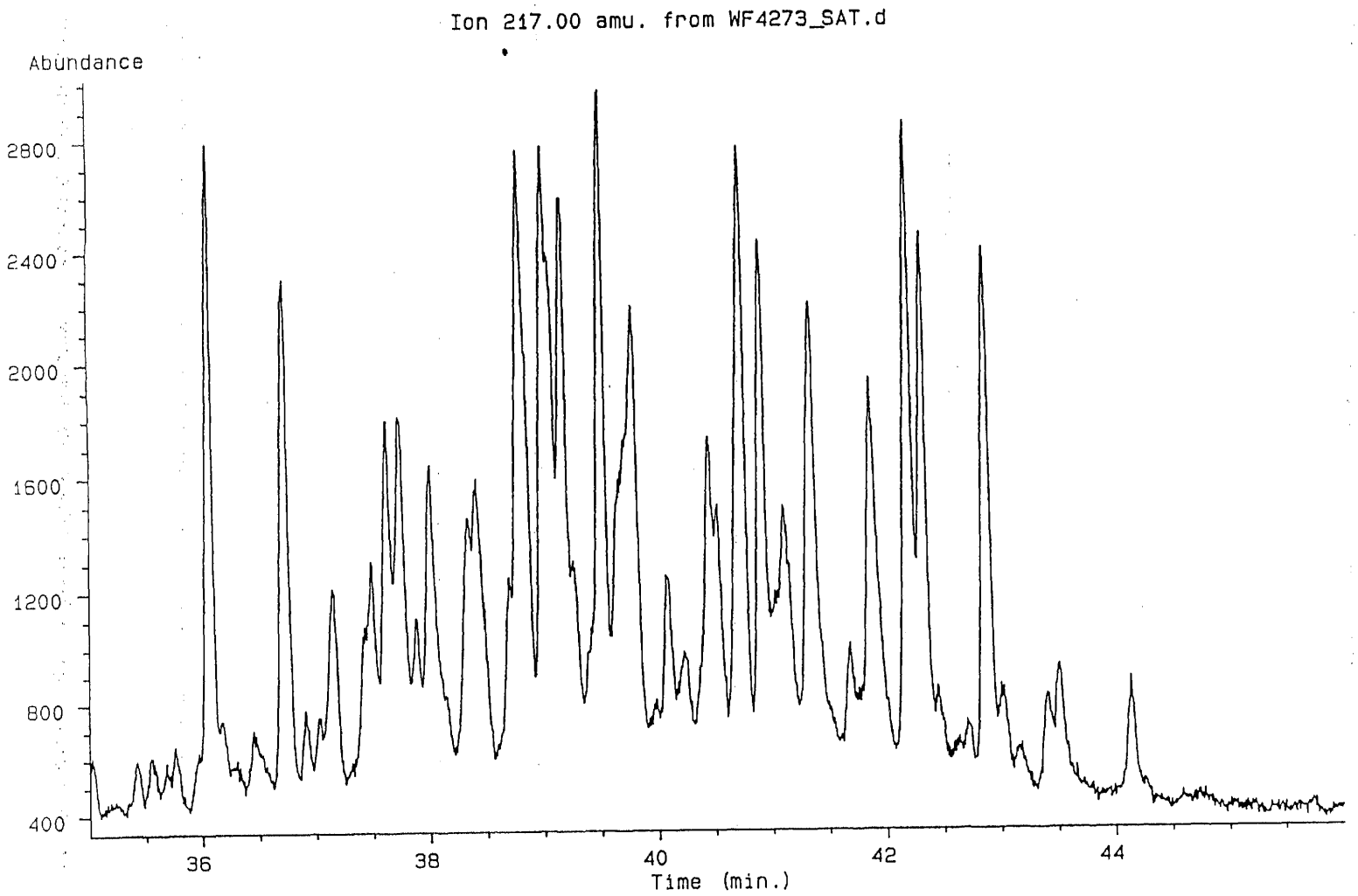
Abundance
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
36
38
40
42
44
46
48
50
52
54
Time (min.)


Ion 217.00 amu. from WF4273_SAT.d
Abundance
2800
2400
2000
1600
1200
800
400
36
38
40
42
44
Time (min.)

*** PETROLEUM GEOCHEMISTRY ***

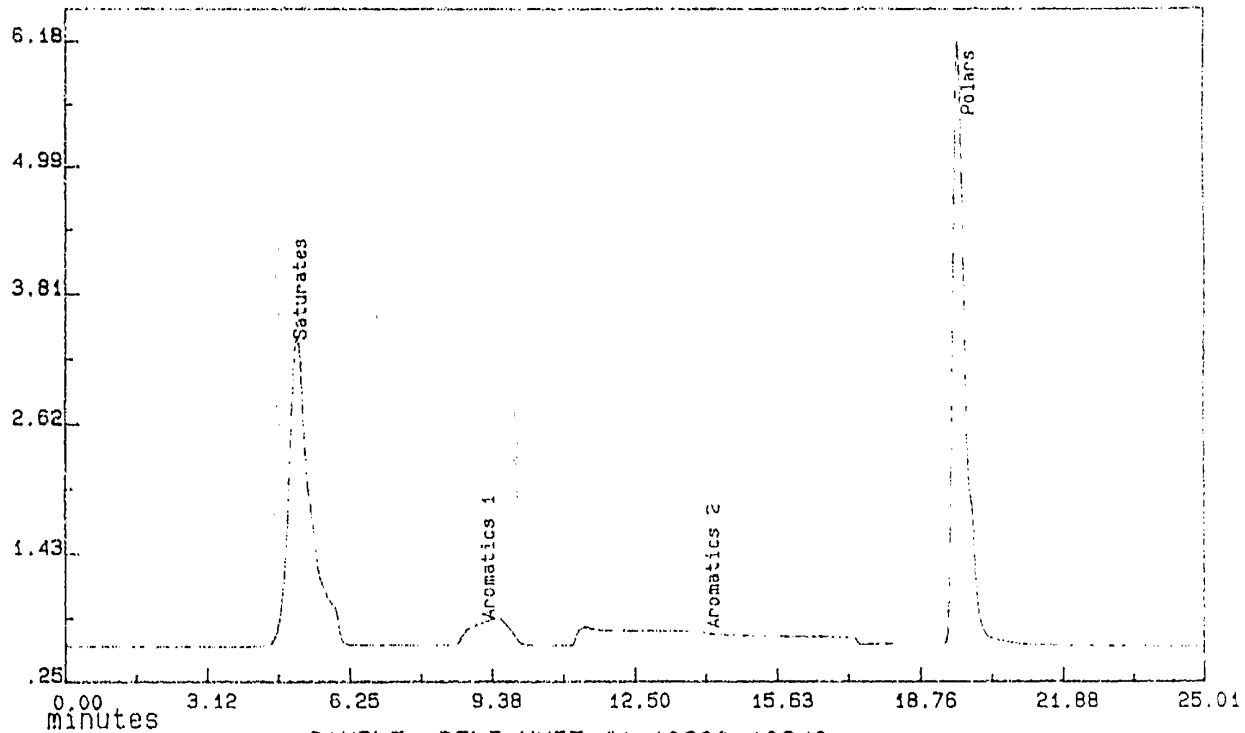
SARA ANALYSIS

SAMPLE NAME : BELI UNIT #1 10900-10940
INSTRUMENT : HPLC_FID
INJECT TIME : Thu May 10, 1990 3:35:40 pm
METHOD USED : /METHOD/HPLC_FIDO.MTH
SEQUENCE : /DATA/LOOP/SEQUENCE/HP1090_AUTOCF.SEQ
RESULT FILE : /RESULT/WF4274_SAP.RES
REPORT TIME : 3:52 PM FRI., 11 MAY , 1990

	AREA	TIME	RESPONSE FACTOR
Saturates	94713.	5.29	.1275E-03
Aromatics 1	14908.	9.42	.5470E-04
Aromatics 2	44195.	14.36	.5470E-04
Polars	112401.	19.96	.4160E-04

	AMOUNT (mg)	% RESIDUE
Saturates	12.08	60.4
Aromatics	3.23	16.2
Polars	4.68	23.4

	% OIL
Saturates	42.1
Aromatics	11.3
Polars	16.3
Asphaltenes	30.3



SAMPLE: BELI UNIT #1 10900-10940
ANALYZED: Thu May 10, 1990 3:35:40 pm
RESULT: /RESULT/WF4274 SAP.RES METHOD: HPLC FIDO

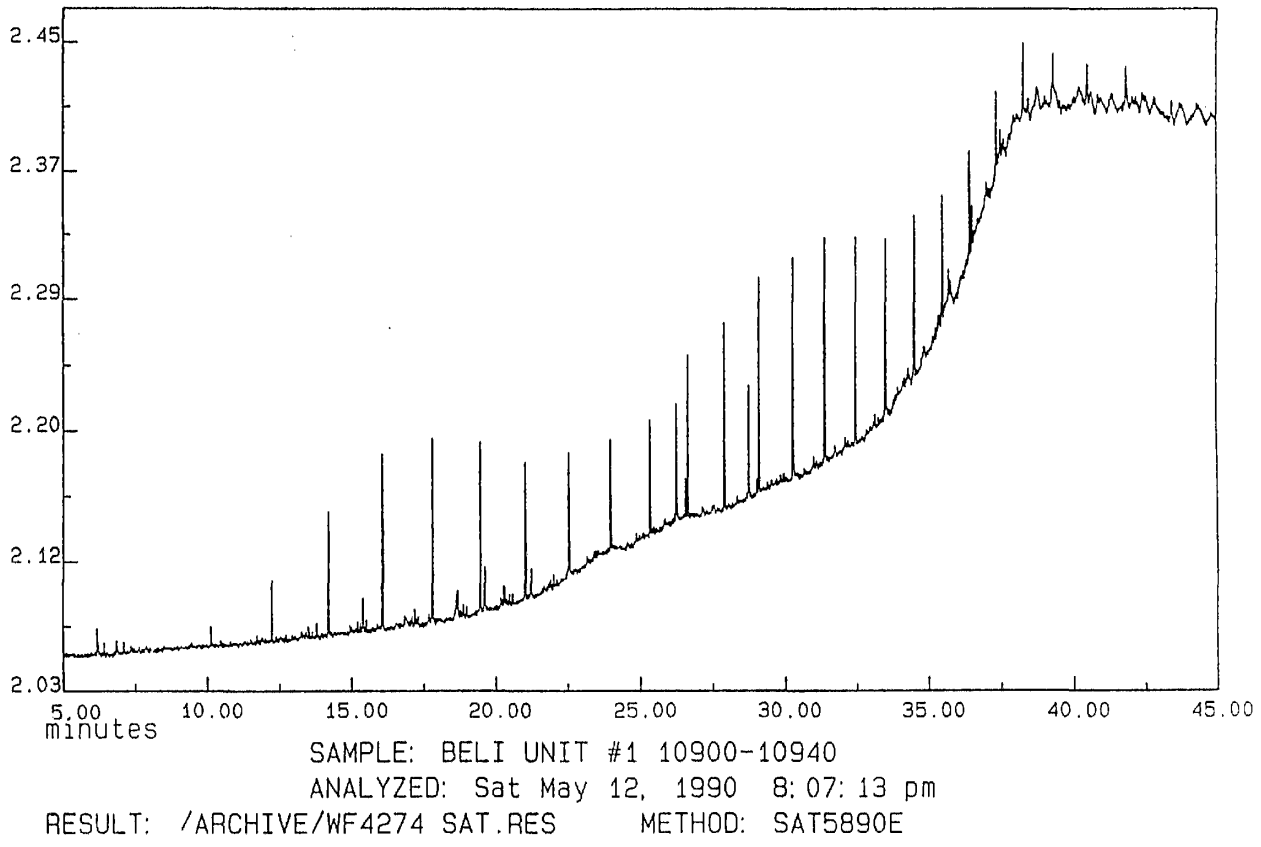
*** PETROLEUM GEOCHEMISTRY ***
SATURATE GC

SAMPLE NAME : BELI UNIT #1 10900-10940
INSTRUMENT : HP_5890_2
INJECT TIME : Sat May 12, 1990 8:07:13 pm
METHOD USED : /METHOD/SAT5890E.MTH
RESULT FILE : /RESULT/WF4274_SAT.RES
REPORT TIME : 8:58 PM SAT., 12 MAY , 1990

CPI VALUE : .96
PRISTANE / PHYTANE : 1.36 C15/C25 : .74
PRISTANE / C17 : .41 C17/Pr : 2.45
PHYTANE / C18 : .34 C18/Ph : 2.96

	AREA	%AREA NALK	TIME	NORM C15
N-C10	0.	0.0	0.00	0.00
N-C11	0.	0.0	0.00	0.00
N-C12	104.	.5	10.11	.12
N-C13	283.	1.4	12.21	.32
N-C14	593.	3.0	14.18	.66
N-C15	893.	4.5	16.04	1.00
N-C16	860.	4.3	17.79	.96
N-C17	858.	4.3	19.44	.96
N-C18	764.	3.8	21.02	.86
N-C19	813.	4.1	22.52	.91
N-C20	657.	3.3	23.95	.74
N-C21	564.	2.8	25.32	.63
N-C22	794.	4.0	26.62	.89
N-C23	950.	4.7	27.88	1.06
N-C24	1071.	5.3	29.09	1.20
N-C25	1205.	6.0	30.25	1.35
N-C26	1191.	5.9	31.36	1.33
N-C27	1096.	5.5	32.44	1.23
N-C28	1030.	5.1	33.48	1.15
N-C29	902.	4.5	34.49	1.01
N-C30	783.	3.9	35.46	.88
N-C31	604.	3.0	36.40	.68
N-C32	967.	4.8	37.32	1.08
N-C33	495.	2.5	38.25	.55
N-C34	1407.	7.0	39.30	1.58
N-C35	573.	2.9	40.47	.64
N-C36	595.	3.0	41.83	.67

	AREA	%AREA ISPR	TIME
Farnesane	109.	9.5	13.77
Acyclic C16	205.	17.9	15.39
Acyclic C18	221.	19.3	18.66
Pristane	350.	30.7	19.60
Phytane	258.	22.6	21.21


AMPLITUDE/1000
Range Normalized
2.45
2.37
2.29
2.20
2.12
2.03
5.00
10.00
15.00
20.00
25.00
30.00
35.00
40.00
45.00
minutes
SAMPLE: BELI UNIT #1 10900-10940
ANALYZED: Sat May 12, 1990 8:07:13 pm
RESULT: /ARCHIVE/WF4274 SAT.RES METHOD: SAT5890E

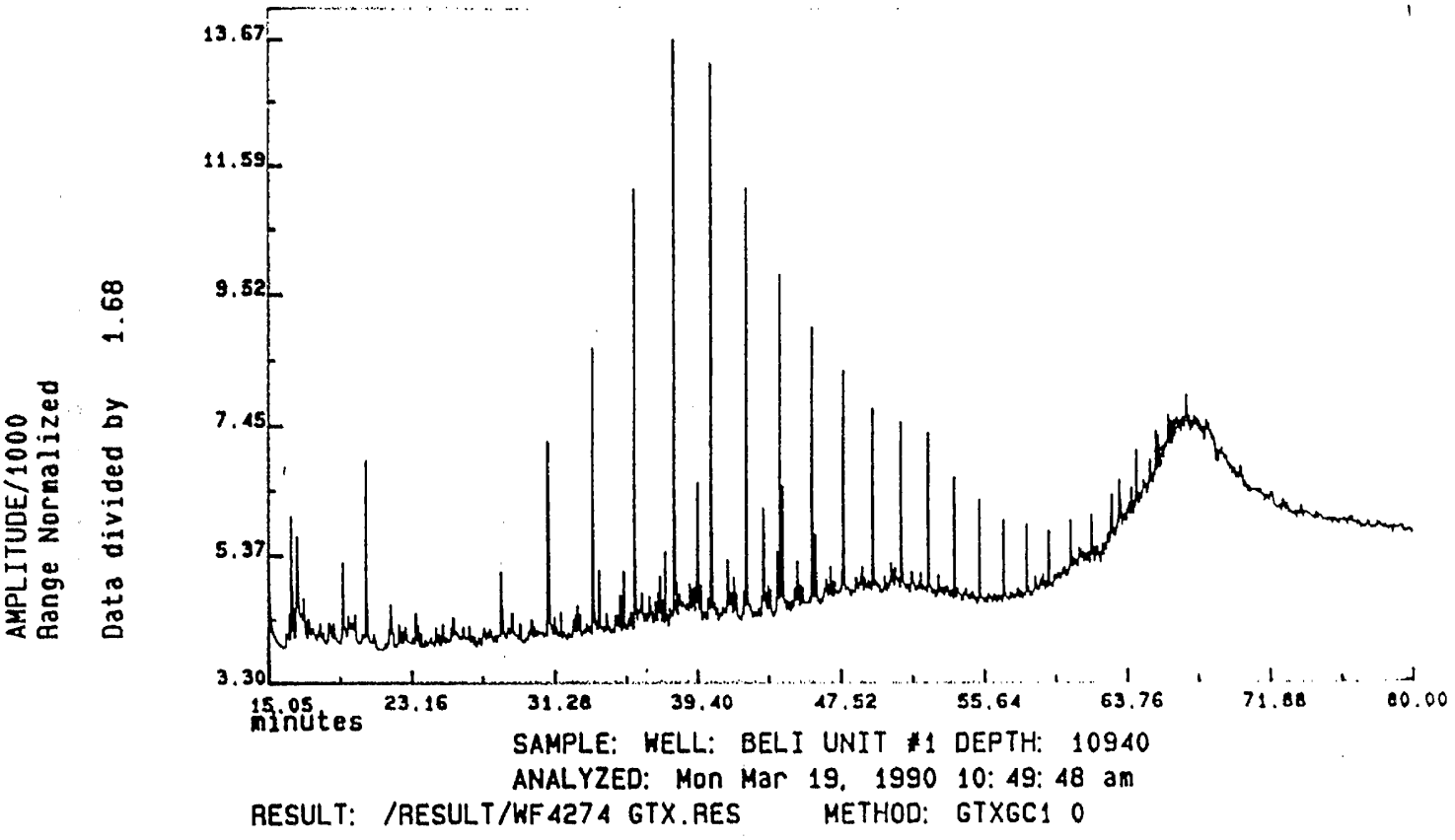
**** PETROLEUM GEOCHEMISTRY / GNH ROCK EVAL ***

SAMPLE : WELL: BELI UNIT #1 DEPTH: 10940
INJECTED AT : Fri Apr 27, 1990 2:39:02 pm
INSTRUMENT : GROCK
METHOD USED : /METHOD/PYRO5.MTH
RESULT FILE : /RESULT/WF427411_GRO.RES
BLANK FILE : /RESULT/BLANK13_GRO.RES

***** AREA SLICE INTEGRATION *****

AREA	YIELD (mg/g)	FRACTION
1616122.	2.63	S1
37284296.	23.19	S2

SAMPLE WT. : 13.90 mgs
Tmax : 454 C.


AMPLITUDE/1000
Range Normalized
Data divided by 1.68
13.67
11.59
9.52
7.45
5.37
3.30
15.05
23.16
31.28
39.40
47.52
55.64
63.76
71.88
80.00
minutes
SAMPLE: WELL: BELI UNIT #1 DEPTH: 10940
ANALYZED: Mon Mar 19, 1990 10:49:48 am
RESULT: /RESULT/WF4274 GTX.RES METHOD: GTXGC1 0

**** PETROLEUM GEOCHEMISTRY / GNH PGC AUTO ****

SAMPLE : WELL: BELI UNIT #1 DEPTH: 10940
INJECTED AT : Fri Apr 27, 1990 2:39:02 pm
INSTRUMENT : GPGC_2
METHOD USED : /METHOD/GPGC2_0.MTH
RESULT FILE : /RESULT/WF427411_GPG.RES
BLANK FILE : /RESULT/BLANK15_GPG.RES

***** AREA SLICE INTEGRATION *****

AREA	AREA PERCENT	FRACTION
4675853.	14.6	METHANE
10140442.	31.7	GASES
10422142.	32.6	GASOLINE
5401934.	16.9	KEROSENE
1255691.	3.9	GAS-OIL
115624.	.4	WAX-DISTILLATE

TOTAL AREA : 32011692. AREA %: 100.0

SAMPLE WT. : 13.90 mgs

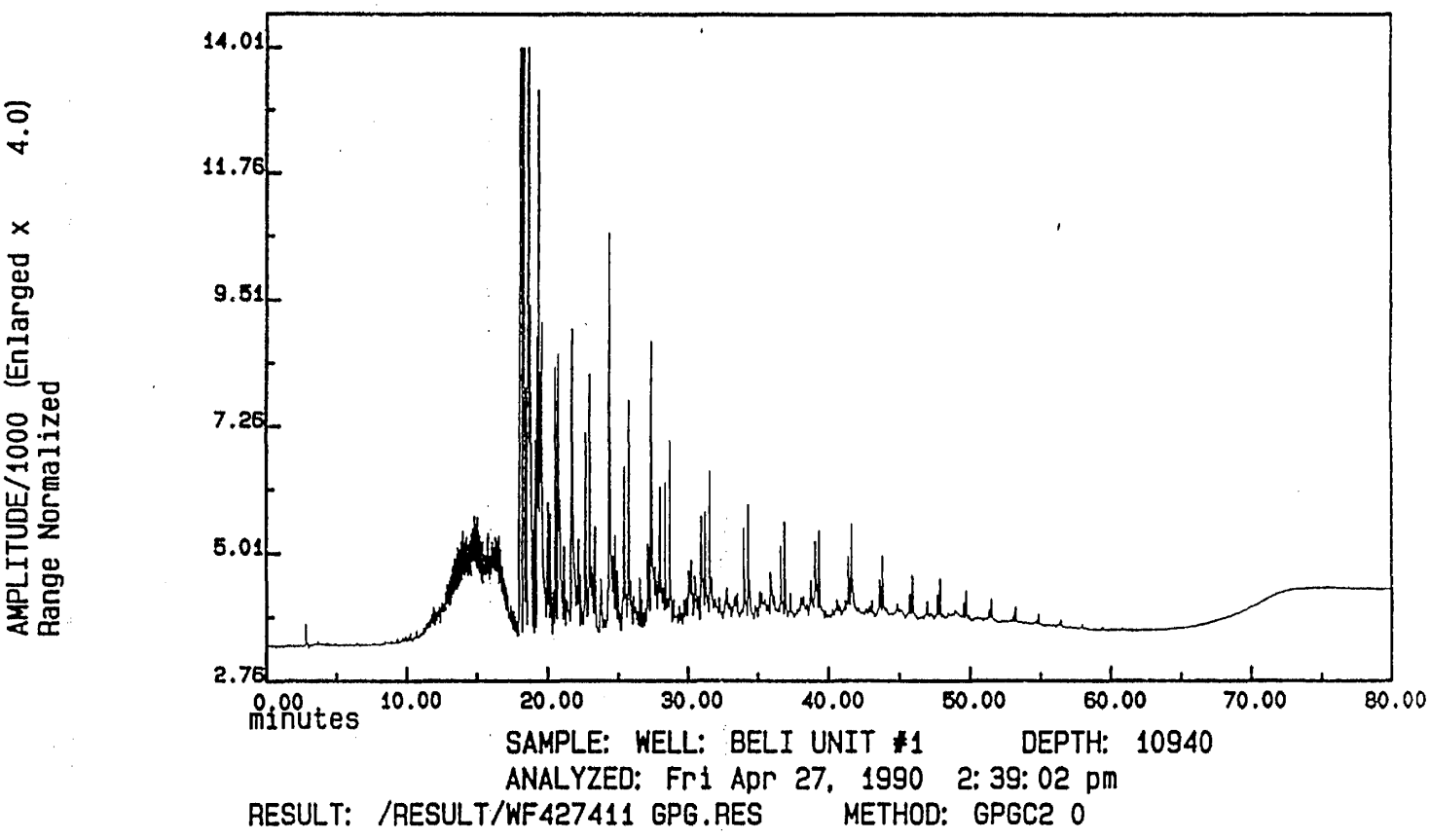
SAMPLE GOGI = .86
THIS IS GAS PRONE

METHANE + GASES = 46.3
GASOLINE+KEROSINE+GAS OIL+WAX DISTILLATE = 53.7

BY FACTOR ANALYSIS OF KEROGEN PYROLYSATE
THIS IS GAS PRONE

THIS ANALYSIS DETERMINES KEROGEN POTENTIAL AT ITS
PRESENT MATURITY. THIS IS NOT A KEROGEN TYPE ANALYSIS.

SAMPLE K2 = 22.31 mg/gm


AMPLITUDE/1000 (Enlarged x 4.0)
Range Normalized
14.01
11.76
9.51
7.26
5.01
2.76
0.00
10.00
20.00
30.00
40.00
50.00
60.00
70.00
80.00
minutes
SAMPLE: WELL: BELI UNIT #1 DEPTH: 10940
ANALYZED: Fri Apr 27, 1990 2:39:02 pm
RESULT: /RESULT/WF427411 GPG.RES METHOD: GPGC2 0

Normalized Percent Report

Information from Current Data File Header:
File: /chem/msd/WF4274_SAT.d
Operator:
Date Acquired: Fri May 25 90 09:47:14 PM
Sample Name: WF4274_SAT
Misc Info:
Sequence Index: 1 Bottle Number: 3 Repetition Number: 1

SATURATE BIOMARKERS

Calibration Table Last Updated: Mon Jun 11 13:07:13 1990

Reference Peak Window: 0.250 Absolute Minutes
Non-reference Peak Window: 0.250 Absolute Minutes

Default Sample Amount: 0
Uncalib. Peak Response Factor: 0
Default Multiplier: 1

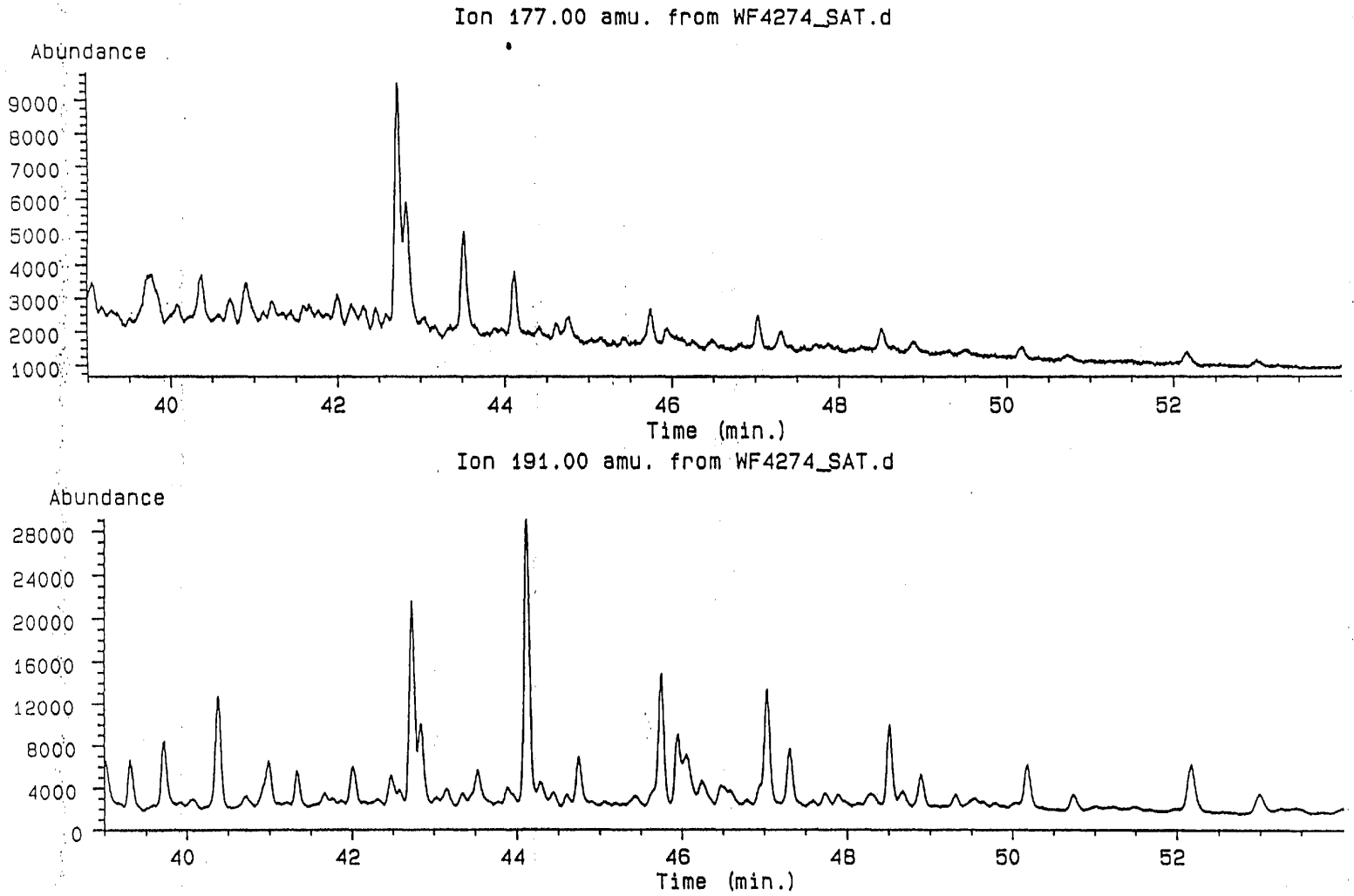
Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount	
1	VV	39.727	191.00 amu	C27 18A HOPANE TS	354247	2.425	%
2	VV	40.382	191.00 amu	C27 17A HOPANE TM	539297	3.692	%
3	VV	41.764	191.00 amu	C28 BISNORHOPANE X	51342	0.3514	%
4	VV	42.737	191.00 amu	C29 HOPANE D	947821	6.488	%
5	VV	42.841	191.00 amu	C29 NORHOPANE D2	429816	2.942	%
6	VV	43.154	191.00 amu	C30 PENTACYCLANE PI	148773	1.018	%
7	VV	43.880	191.00 amu	C30 18A OLEANANE B	186019	1.273	%*
8	VV	44.124	191.00 amu	C30 HOPANE G	1343331	9.195	%
9	VV	44.746	191.00 amu	C30 MORETANE K	297226	2.035	%
10	VV	45.750	191.00 amu	C31S HOPANE N	771031	5.278	%
11	VV	45.949	191.00 amu	C31R HOPANE O	394390	2.700	%
12	VV	46.241	191.00 amu	O & GAMMACERANE	251711	1.723	%
13	VV	46.481	191.00 amu	GAMMACERANE	209617	1.435	%
14	VV	46.589	191.00 amu	P	108297	0.7413	%
15	VV	46.851	191.00 amu	R	7446	0.05097	%
16	VV	47.033	191.00 amu	C32S HOPANE U	745294	5.102	%
17	VV	47.310	191.00 amu	C32R HOPANE V	395175	2.705	%
18	VV	48.509	191.00 amu	C33S HOPANE ALPHA	437064	2.992	%
19	VV	48.890	191.00 amu	C33R HOPANE BETA	244078	1.671	%
20	VV	50.183	191.00 amu	C34S HOPANE GAMMA	311345	2.131	%
21	VV	50.743	191.00 amu	C34R HOPANE DELTA	133299	0.9125	%
22	VV	52.169	191.00 amu	C35S HOPANE EPSILON	343581	2.352	%
23	PV	52.984	191.00 amu	C35R HOPANE ZETA	156913	1.074	%
24	PV	27.148	217.00 amu	C21 STERANE Y	264071	1.808	%
25	VV	36.080	217.00 amu	C27S ba DIASTERANE10	287306	1.967	%
26	VV	36.735	217.00 amu	C27R ba DIASTERANE11	275768	1.888	%

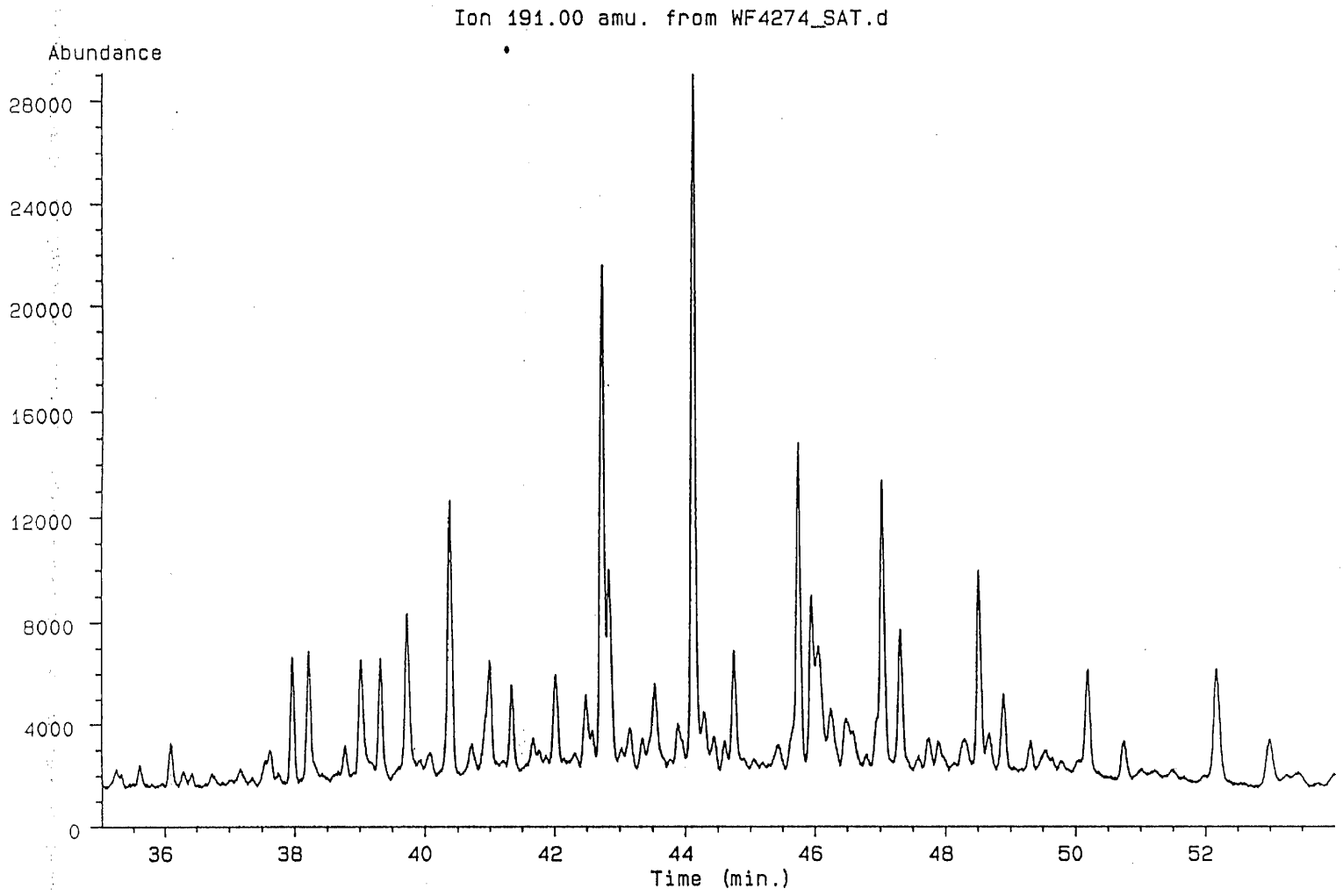
Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount	
27	VV	37.157	217.00 amu	13	123028	0.8422	%
28	VV	37.756	217.00 amu	14	210768	1.443	%
29	VV	37.893	217.00 amu	15	70387	0.4818	%
30	VV	38.016	217.00 amu	16	230833	1.580	%
31	VV	38.426	217.00 amu	18	184323	1.262	%
32	PV	38.708	217.00 amu	19	56052	0.3837	%
33	VB	39.794	217.00 amu	20	317208	2.171	%
34	VV	39.178	217.00 amu	21	244445	1.673	%
35	VB	39.274	217.00 amu	22	52019	0.3561	%
36	BV	39.518	217.00 amu	C27R aaa STERANE 25	341431	2.337	%
37	VV	39.673	217.00 amu	27	96539	0.6608	%
38	VB	41.356	217.00 amu	C28R aaa STERANE 36	336915	2.306	%
39	VV	41.875	217.00 amu	C29S aaa STERANE 39	270364	1.851	%
40	VV	42.876	217.00 amu	C29R aaa STERANE 42	271170	1.856	%
41	BV	39.009	218.00 amu	C27R abb STERANE 21B	370648	2.537	%
42	VB	39.176	218.00 amu	C27S abb STERANE 22	283922	1.944	%
43	VV	40.757	218.00 amu	C28R abb STERANE 33A	388182	2.657	%
44	VV	40.924	218.00 amu	C28S abb STERANE 34	371599	2.544	%
45	PV	42.200	218.00 amu	C29R abb STERANE 40	364452	2.495	%
46	VV	42.333	218.00 amu	C29S abb STERANE 41	390193	2.671	%

***** REPORT ERRORS *****

Calibration Peak #7's Qualifiers Were Not Satisfied.

*** Not All Calibrated Peaks Found ***


Ion 177.00 amu. from WF4274_SAT.d
Abundance
9000
8000
7000
6000
5000
4000
3000
2000
1000
40
42
44
46
48
50
52
Time (min.)
Ion 191.00 amu. from WF4274_SAT.d
Abundance
28000
24000
20000
16000
12000
8000
4000
0
40
42
44
46
48
50
52
Time (min.)


Ion 191.00 amu. from WF4274_SAT.d
Abundance
28000
24000
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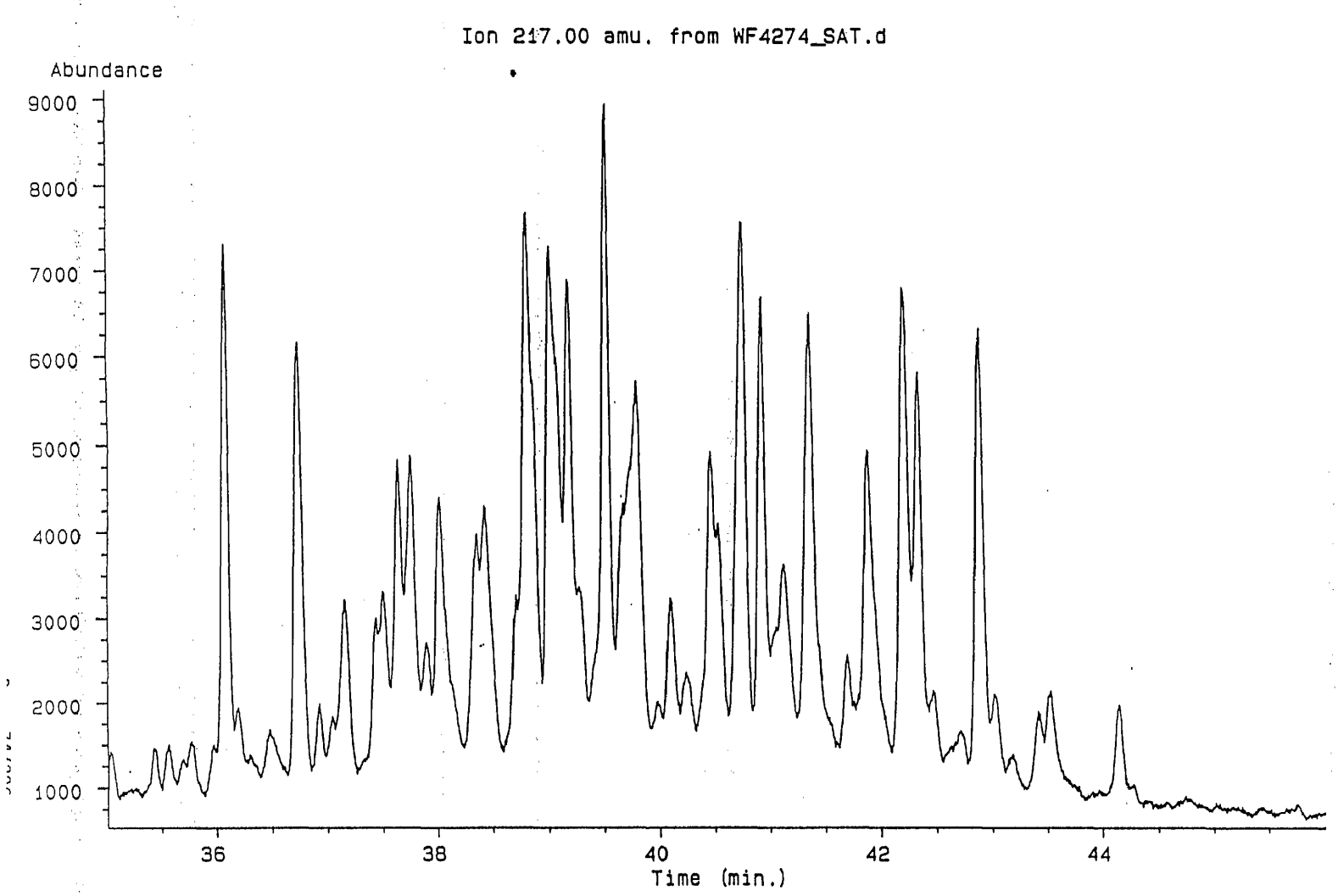
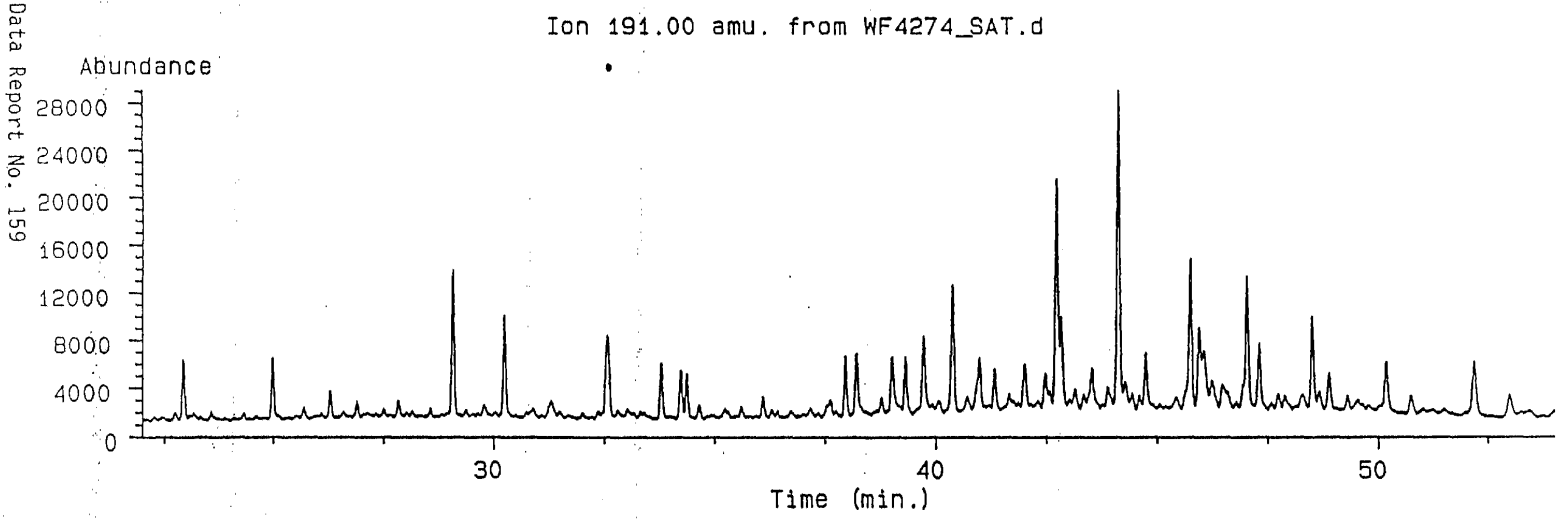
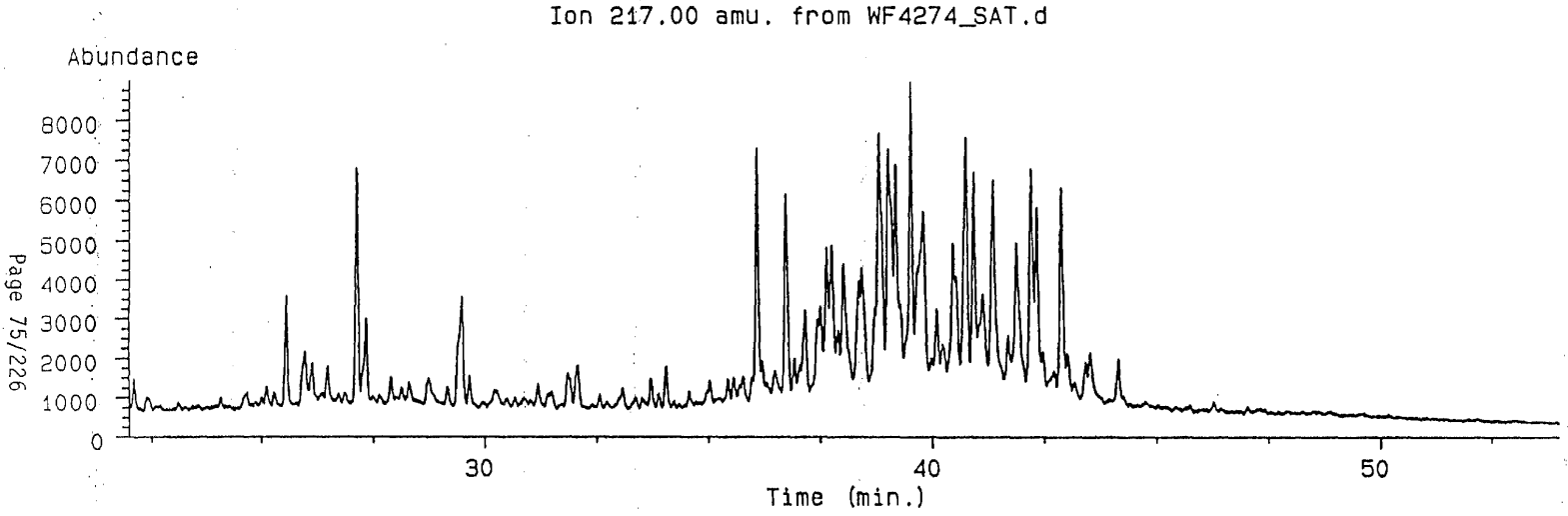
16000
12000
8000
4000
0
36
38
40
42
44
46
48
50
52
Time (min.)


Ion 217.00 amu. from WF4274_SAT.d
Abundance
9000
8000
7000
6000
5000
4000
3000
2000
1000
36
38
40
42
44
Time (min.)


Ion 191.00 amu. from WF4274_SAT.d
Abundance
28000
24000
20000
16000
12000
8000
4000
0
30
40
50
Time (min.)


Ion 217.00 amu. from WF4274_SAT.d
Abundance
8000
7000
6000
5000
4000
3000
2000
1000
0
30
40
50
Time (min.)

*** PETROLEUM GEOCHEMISTRY ***

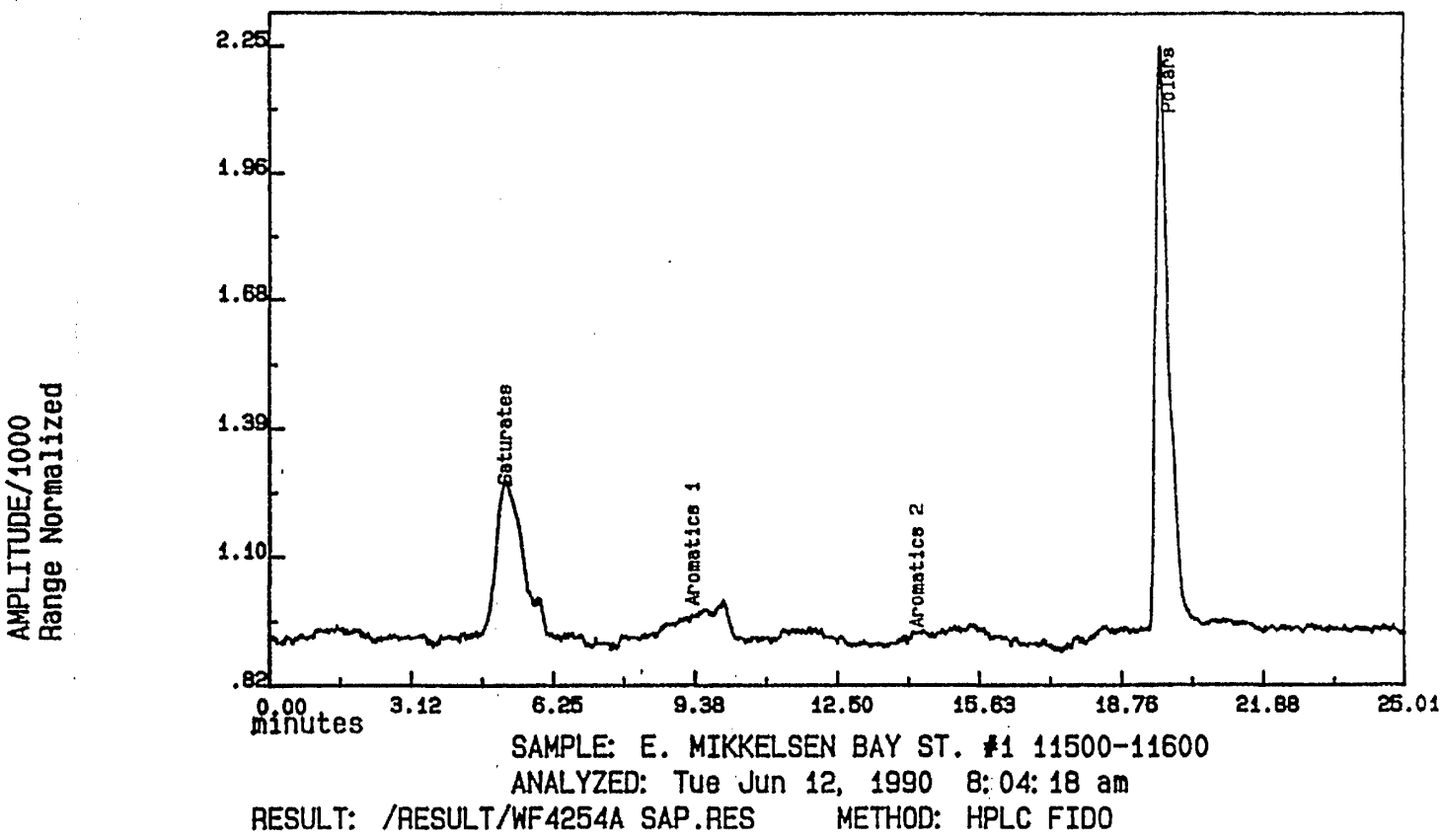
SARA ANALYSIS

SAMPLE NAME : E. MIKKELSEN BAY ST. #1 11500-11600
INSTRUMENT : HPLC_FID
INJECT TIME : Tue Jun 12, 1990 8:04:18 am
METHOD USED : /METHOD/HPLC_FIDG.MTH
SEQUENCE : /DATA/LOOP/SEQUENCE/HP1090_AUTOCS.SEQ
RESULT FILE : /RESULT/MF4254A_SAP.RES
REPORT TIME : 8:42 AM TUE., 12 JUNE, 1990

	AREA	TIME	RESPONSE FACTOR
Saturates	17317.	5.29	.1275E-03
Aromatics 1	6995.	9.42	.5470E-04
Aromatics 2	4884.	14.36	.5470E-04
Polars	30649.	19.92	.4160E-04

	AMOUNT (mg)	% RESIDUE
Saturates	2.21	53.4
Aromatics	.65	15.7
Polars	1.27	30.9

	% OIL
Saturates	52.9
Aromatics	15.6
Polars	30.6
Asphaltenes	.9


AMPLITUDE/1000
Range Normalized
2.25
1.96
1.68
1.39
1.10
.82
Saturates
Aromatics 1
Aromatics 2
Polars
0.00
3.12
6.25
9.38
12.50
15.63
18.76
21.88
25.01
minutes
SAMPLE: E. MIKKELSEN BAY ST. #1 11500-11600
ANALYZED: Tue Jun 12, 1990 8:04:18 am
RESULT: /RESULT/WF4254A SAP.RES METHOD: HPLC FID0

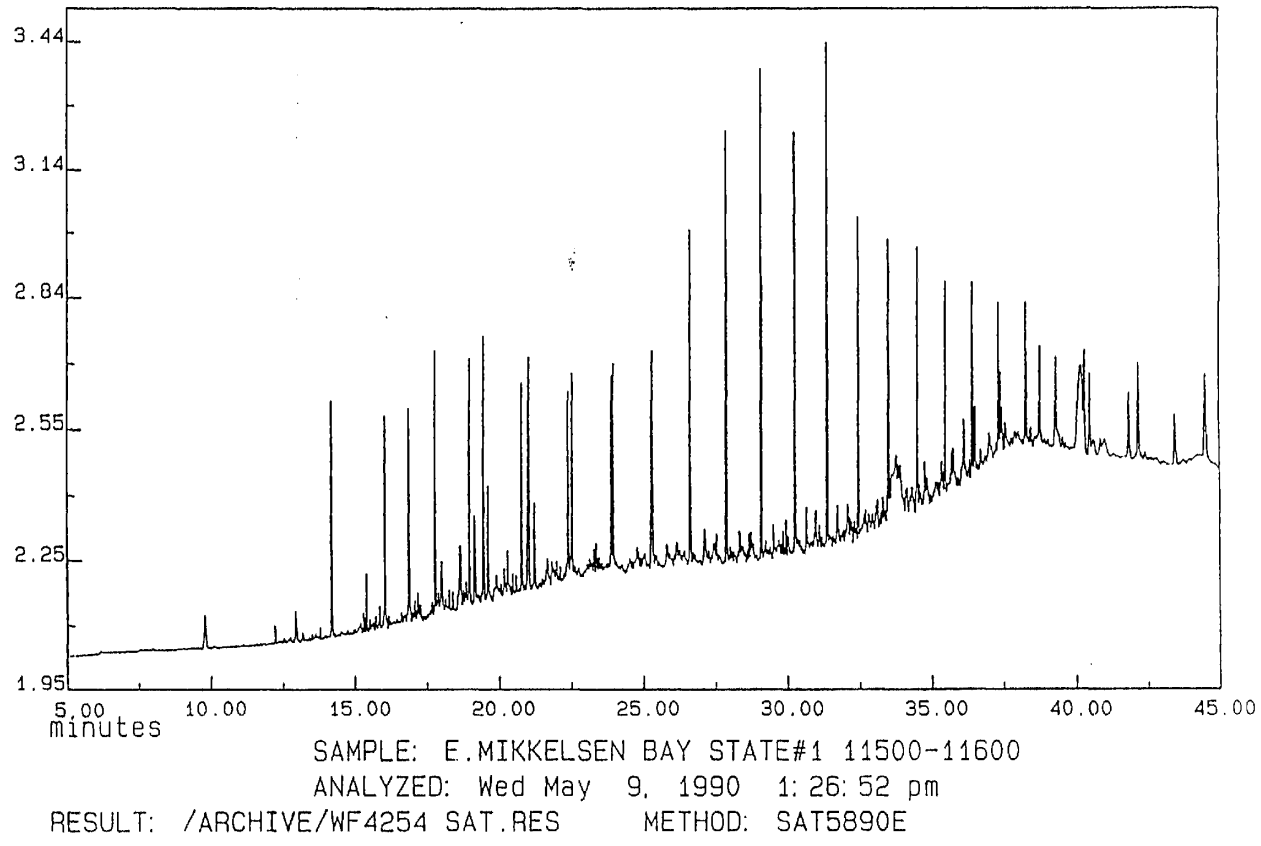
*** PETROLEUM GEOCHEMISTRY ***
SATURATE GC

SAMPLE NAME : E.MIKKELSEN BAY STATE#1 11500-11600
INSTRUMENT : HP_5890_2
INJECT TIME : Wed May 9, 1990 1:26:52 pm
METHOD USED : /METHOD/SAT5890E.MTH
RESULT FILE : /RESULT/WF4254_SAT.RES
REPORT TIME : 2:18 PM WED., 9 MAY , 1990

CPI VALUE : .85
PRISTANE / PHYTANE : 1.29 C15/C25 : .52
PRISTANE / C17 : .62 C17/Pr : 1.60
PHYTANE / C18 : .39 C18/Ph : 2.54

	AREA	%AREA NALK	TIME	NORM C15
N-C10	0.	0.0	0.00	0.00
N-C11	0.	0.0	0.00	0.00
N-C12	0.	0.0	0.00	0.00
N-C13	319.	.3	12.20	.07
N-C14	4933.	4.1	14.17	1.15
N-C15	4275.	3.6	16.03	1.00
N-C16	4320.	3.6	17.78	1.01
N-C17	4916.	4.1	19.44	1.15
N-C18	6027.	5.0	21.01	1.41
N-C19	3656.	3.1	22.51	.86
N-C20	4008.	3.3	23.94	.94
N-C21	3740.	3.1	25.31	.87
N-C22	8604.	7.2	26.62	2.01
N-C23	8271.	6.9	27.87	1.93
N-C24	9012.	7.5	29.08	2.11
N-C25	8247.	6.9	30.25	1.93
N-C26	9159.	7.6	31.37	2.14
N-C27	5704.	4.8	32.45	1.33
N-C28	6209.	5.2	33.49	1.45
N-C29	5336.	4.5	34.49	1.25
N-C30	4021.	3.4	35.46	.94
N-C31	3552.	3.0	36.41	.83
N-C32	3084.	2.6	37.32	.72
N-C33	2952.	2.5	38.26	.69
N-C34	4019.	3.4	39.30	.94
N-C35	3153.	2.6	40.29	.74
N-C36	2280.	1.9	41.84	.53

	AREA	%AREA ISPR	TIME
Farnesane	205.	2.4	13.76
Acyclic C16	1070.	12.8	15.38
Acyclic C18	1671.	19.9	18.65
Pristane	3071.	36.6	19.60
Phytane	2373.	28.3	21.21


3.44
3.14
2.84
2.55
2.25
1.95
AMPLITUDE/1000
Range Normalized
5.00
10.00
15.00
20.00
25.00
30.00
35.00
40.00
45.00
minutes
SAMPLE: E.MIKKELSEN BAY STATE#1 11500-11600
ANALYZED: Wed May 9, 1990 1:26:52 pm
RESULT: /ARCHIVE/WF4254 SAT.RES METHOD: SAT5890E

*** PETROLEUM GEOCHEMISTRY ***
SATURATE GC

SAMPLE NAME : E.MIKKELSEN BAY STATE#1 11500-11600
INSTRUMENT : HP_5890_2
INJECT TIME : Wed May 9, 1990 1:26:52 pm
METHOD USED : /METHOD/SAT5890E.MTH
RESULT FILE : /RESULT/WF4254_SAT.RES
REPORT TIME : 2:18 PM WED., 9 MAY , 1990

CPI VALUE : .85

PRISTANE / PHYTANE :	1.29	C15/C25 :	.52
PRISTANE / C17 :	.62	C17/Pr :	1.60
PHYTANE / C18 :	.39	C18/Ph :	2.54

	AREA	%AREA NALK	TIME	NORM C15
N-C10	0.	0.0	0.00	0.00
N-C11	0.	0.0	0.00	0.00
N-C12	0.	0.0	0.00	0.00
N-C13	319.	.3	12.20	.07
N-C14	4933.	4.1	14.17	1.15
N-C15	4275.	3.6	16.03	1.00
N-C16	4320.	3.6	17.78	1.01
N-C17	4916.	4.1	19.44	1.15
N-C18	6027.	5.0	21.01	1.41
N-C19	3656.	3.1	22.51	.86
N-C20	4008.	3.3	23.94	.94
N-C21	3740.	3.1	25.31	.87
N-C22	8604.	7.2	26.62	2.01
N-C23	8271.	6.9	27.87	1.93
N-C24	9012.	7.5	29.08	2.11
N-C25	8247.	6.9	30.25	1.93
N-C26	9159.	7.6	31.37	2.14
N-C27	5704.	4.8	32.45	1.33
N-C28	6209.	5.2	33.49	1.45
N-C29	5336.	4.5	34.49	1.25
N-C30	4021.	3.4	35.46	.94
N-C31	3552.	3.0	36.41	.83
N-C32	3084.	2.6	37.32	.72
N-C33	2952.	2.5	38.26	.69
N-C34	4019.	3.4	39.30	.94
N-C35	3153.	2.6	40.29	.74
N-C36	2280.	1.9	41.84	.53

	AREA	%AREA ISPR	TIME
Farnesane	205.	2.4	13.76
Acyclic C16	1070.	12.8	15.38
Acyclic C18	1671.	19.9	18.65
Pristane	3071.	36.6	19.60
Phytane	2373.	28.3	21.21

Normalized Percent Report

Information from Current Data File Header:
File: /chem/msd/WF4254_SAT.d
Operator:
Date Acquired: Sat Apr 28 90 04:25:39 AM
Sample Name: WF4254_SAT
Misc Info:
Sequence Index: 1 **Bottle Number:** 24 **Repetition Number:** 1

SATURATE BIOMARKERS

Calibration Table Last Updated: Sun Jun 10 15:39:47 1990

Reference Peak Window: 0.250 Absolute Minutes
Non-reference Peak Window: 0.250 Absolute Minutes

Default Sample Amount: 0
Uncalib. Peak Response Factor: 0
Default Multiplier: 1

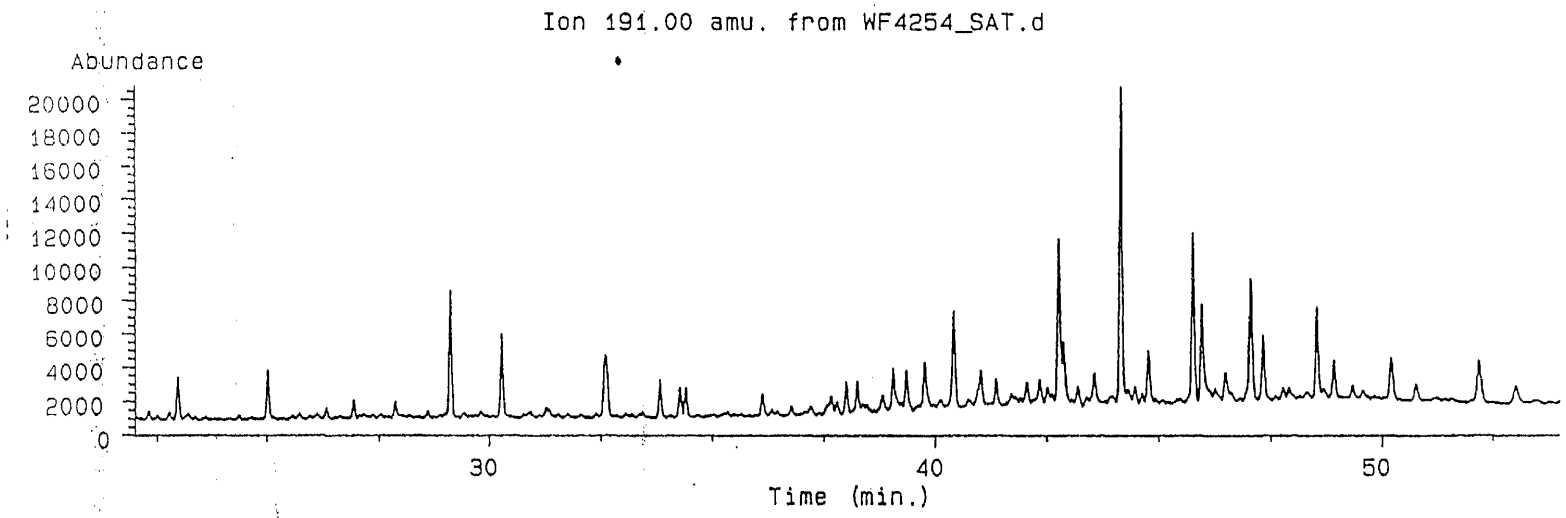
Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount
1	VV	39.763	191.00 amu	C27 18A HOPANE TS	168317	1.557 %
2	VV	40.419	191.00 amu	C27 17A HOPANE TM	301738	2.791 %
3	VV	41.366	191.00 amu	C28 BISNORHOPANE X	89784	0.8305 %
4	VV	42.771	191.00 amu	C29 HOPANE D	472140	4.368 %
5	VV	42.876	191.00 amu	C29 NORHOPANE D2	187761	1.737 %
6	VV	43.187	191.00 amu	C30 PENTACYCLANE PI	60727	0.5617 %
7	VV	43.851	191.00 amu	C30 18A OLEANANE B	2254	0.02085 %*
8	VV	44.158	191.00 amu	C30 HOPANE G	873287	8.078 %
9	VV	44.776	191.00 amu	C30 MORETANE K	161403	1.493 %
10	VV	45.781	191.00 amu	C31S HOPANE N	475474	4.398 %
11	VV	45.976	191.00 amu	C31R HOPANE O	317733	2.939 %
12	VV	46.139	191.00 amu	O & GAMMACERANE	28129	0.2602 %
13	VV	46.274	191.00 amu	GAMMACERANE	59725	0.5525 %
14	VV	46.502	191.00 amu	P	101738	0.9411 %
15	VV	46.631	191.00 amu	R	17584	0.1627 %
16	VV	47.063	191.00 amu	C32S HOPANE U	364683	3.373 %
17	VV	47.335	191.00 amu	C32R HOPANE V	187203	1.732 %
18	VV	48.536	191.00 amu	C33S HOPANE ALPHA	257149	2.379 %
19	VV	48.916	191.00 amu	C33R HOPANE BETA	107457	0.9940 %
20	VV	50.205	191.00 amu	C34S HOPANE GAMMA	146214	1.353 %
21	VV	50.767	191.00 amu	C34R HOPANE DELTA	59300	0.5486 %
22	VV	52.192	191.00 amu	C35S HOPANE EPSILON	171834	1.590 %
23	PV	53.019	191.00 amu	C35R HOPANE ZETA	85331	0.7893 %
24	PV	27.180	217.00 amu	C21 STERANE Y	166365	1.539 %
25	PV	36.116	217.00 amu	C27S ba DIASTERANE10	351305	3.250 %
26	VV	36.765	217.00 amu	C27R ba DIASTERANE11	248736	2.301 %

Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount
27		-	217.00 amu	13	-Not Found-	
28	VV	37.674	217.00 amu	14	229673	2.125 %
29	VV	37.795	217.00 amu	15	239958	2.220 %
30	VV	37.938	217.00 amu	16	51822	0.4794 %
31	BV	38.388	217.00 amu	18	129052	1.194 %
32	VV	38.460	217.00 amu	19	185973	1.720 %
33	PV	38.836	217.00 amu	20	457059	4.228 %
34	VV	39.108	217.00 amu	21	409632	3.789 %
35	VV	39.311	217.00 amu	22	84340	0.7802 %
36	VV	39.555	217.00 amu	C27R aaa STERANE 25	317534	2.937 %
37	VV	39.827	217.00 amu	27	430639	3.984 %
38	VV	41.394	217.00 amu	C28R aaa STERANE 36	341433	3.158 %
39	VB	41.913	217.00 amu	C29S aaa STERANE 39	259727	2.403 %
40	VV	42.911	217.00 amu	C29R aaa STERANE 42	299177	2.768 %
41	VV	39.049	218.00 amu	C27R abb STERANE 21B	324883	3.005 %
42	VV	39.217	218.00 amu	C27S abb STERANE 22	255667	2.365 %
43	VV	40.794	218.00 amu	C28R abb STERANE 33A	365387	3.380 %
44	VV	40.957	218.00 amu	C28S abb STERANE 34	336634	3.114 %
45	VV	42.236	218.00 amu	C29R abb STERANE 40	293070	2.711 %
46	VV	42.368	218.00 amu	C29S abb STERANE 41	335255	3.101 %

***** REPORT ERRORS *****

Calibration Peak #7's Qualifiers Were Not Satisfied.

*** Not All Calibrated Peaks Found ***


Ion 191.00 amu. from WF4254_SAT.d
Abundance
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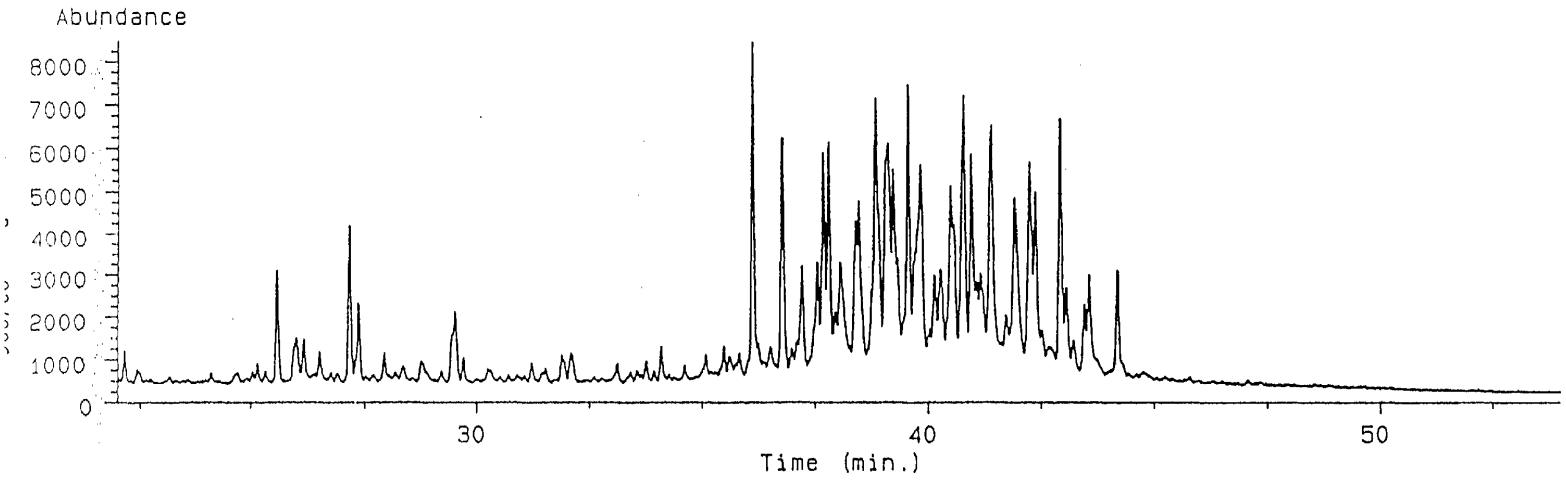
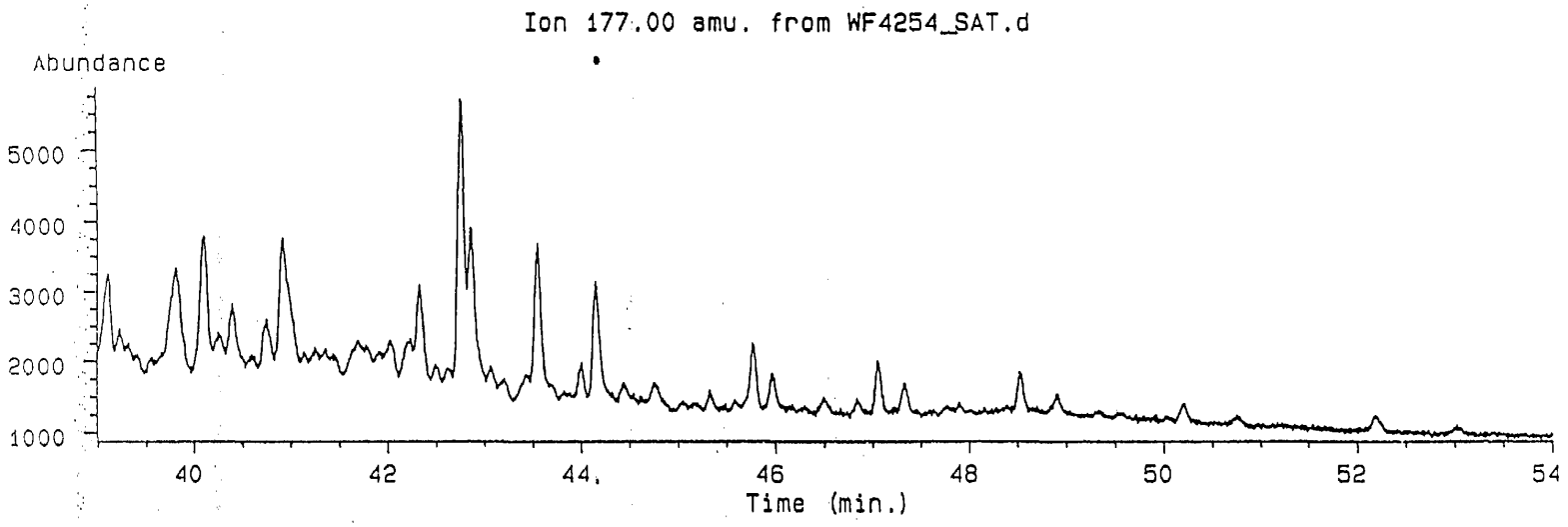
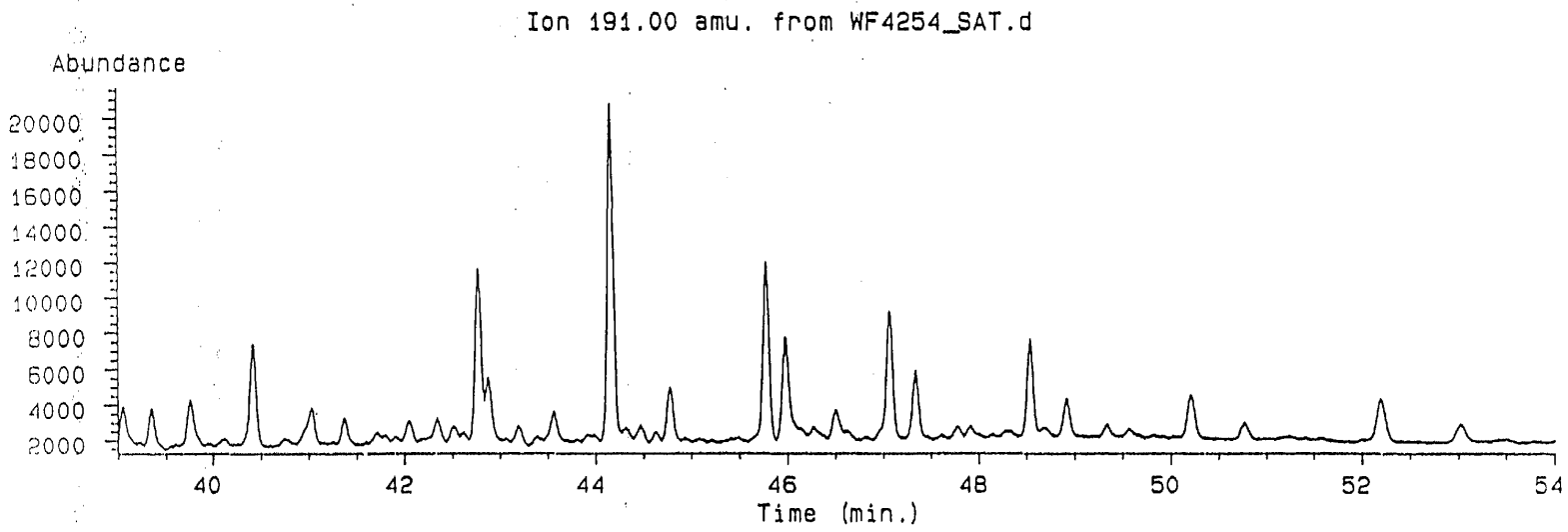
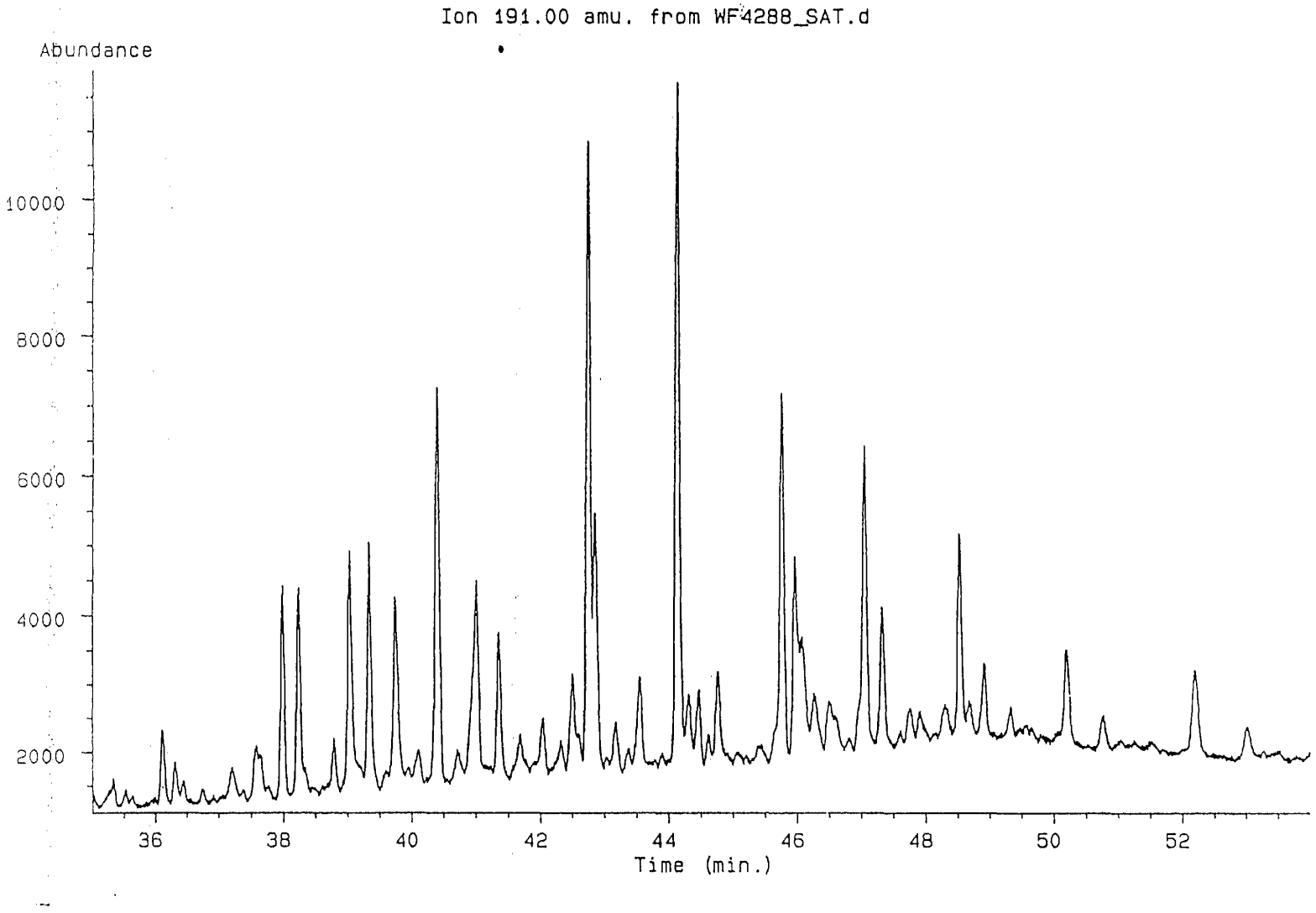
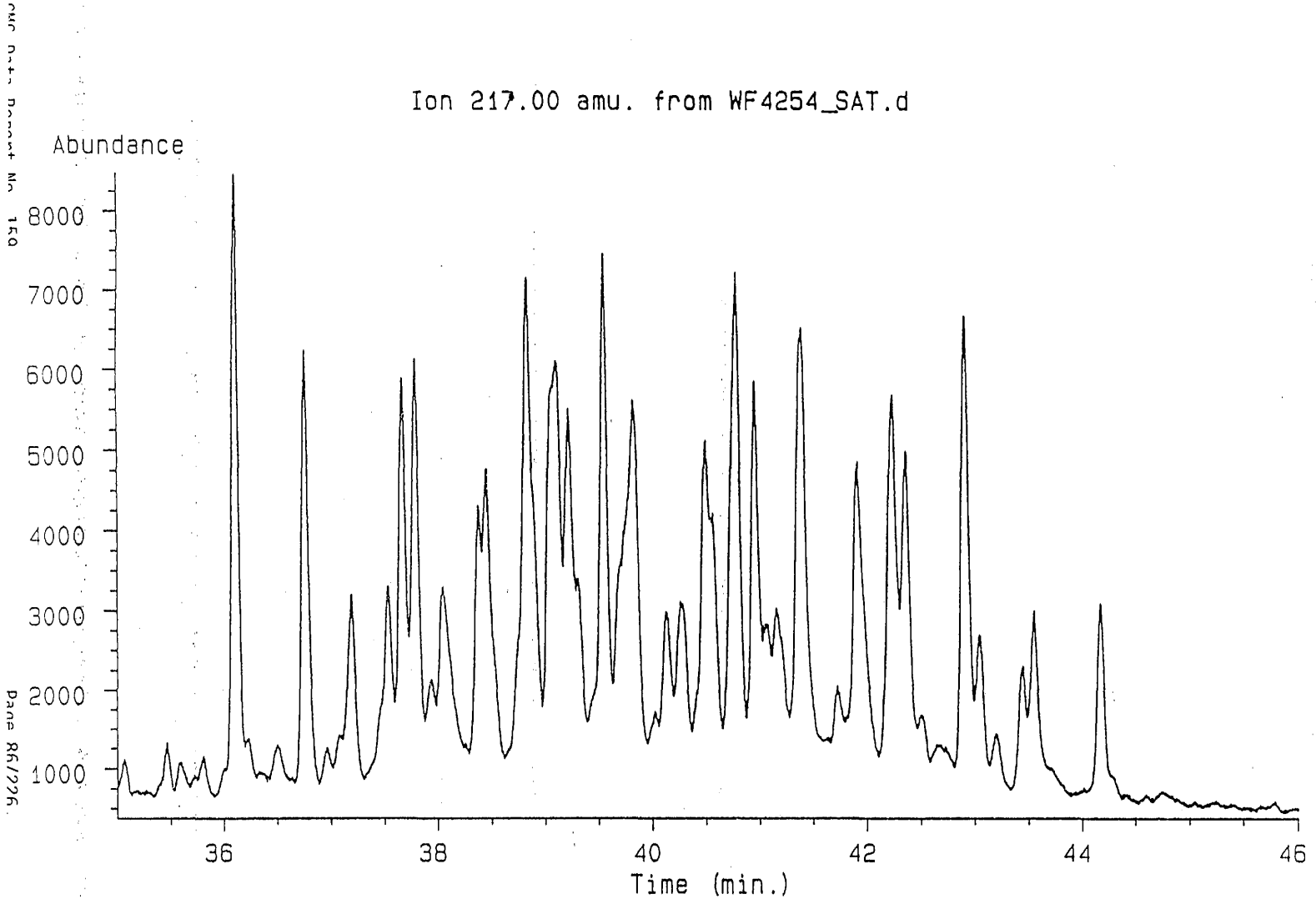
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
30
40
50
Time (min.)

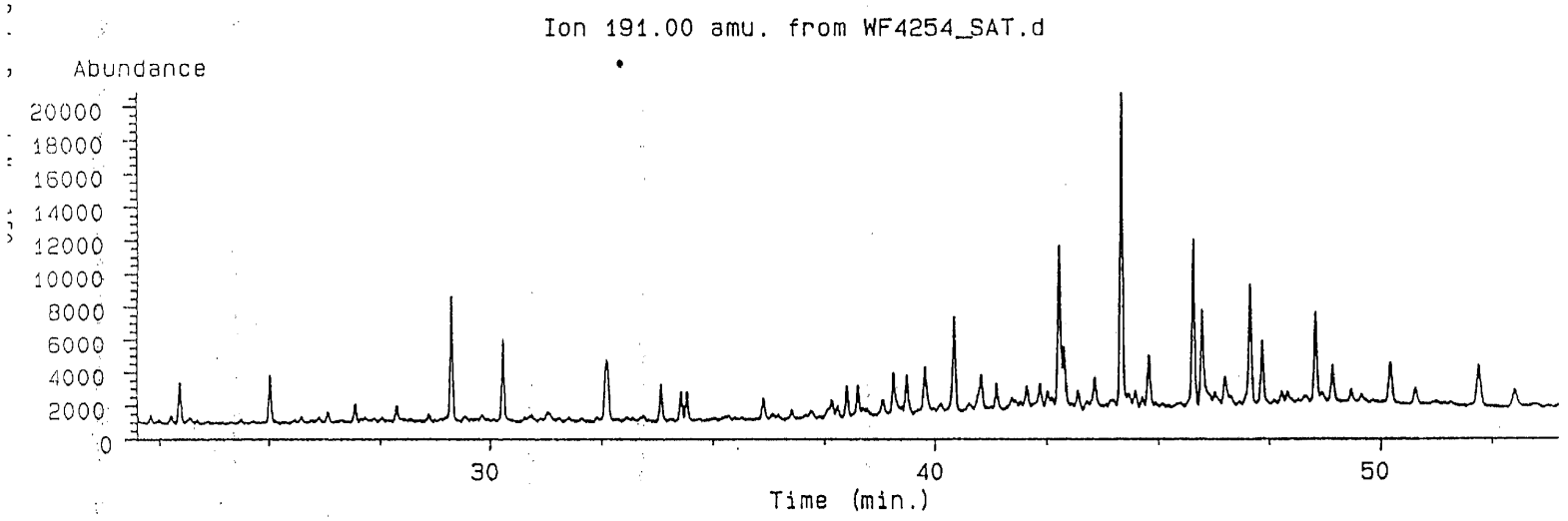

Ion 217.00 amu. from WF4254_SAT.d
Abundance
8000
7000
6000
5000
4000
3000
2000
1000
0
30
40
50
Time (min.)

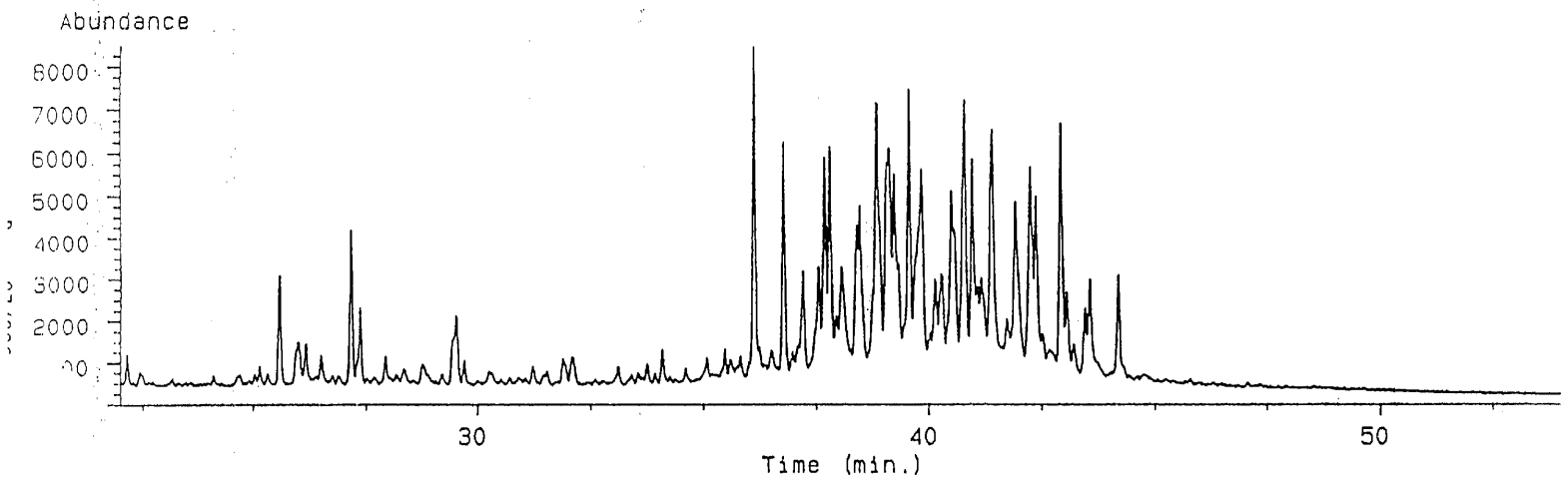

Ion 177.00 amu. from WF4254_SAT.d
Abundance
5000
4000
3000
2000
1000
40
42
44
46
48
50
52
54
Time (min.)


Ion 191.00 amu. from WF4254_SAT.d
Abundance
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
40
42
44
46
48
50
52
54
Time (min.)


Ion 191.00 amu. from WF4288_SAT.d
Abundance
10000
8000
6000
4000
2000
36
38
40
42
44
46
48
50
52
Time (min.)


Ion 217.00 amu. from WF4254_SAT.d
Abundance
8000
7000
6000
5000
4000
3000
2000
1000
36
38
40
42
44
46
Time (min.)


Ion 191.00 amu. from WF4254_SAT.d
Abundance
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
30
40
50
Time (min.)


Ion 217.00 amu. from WF4254_SAT.d
Abundance
8000
7000
6000
5000
4000
3000
2000
30
40
50
Time (min.)

*** PETROLEUM GEOCHEMISTRY ***

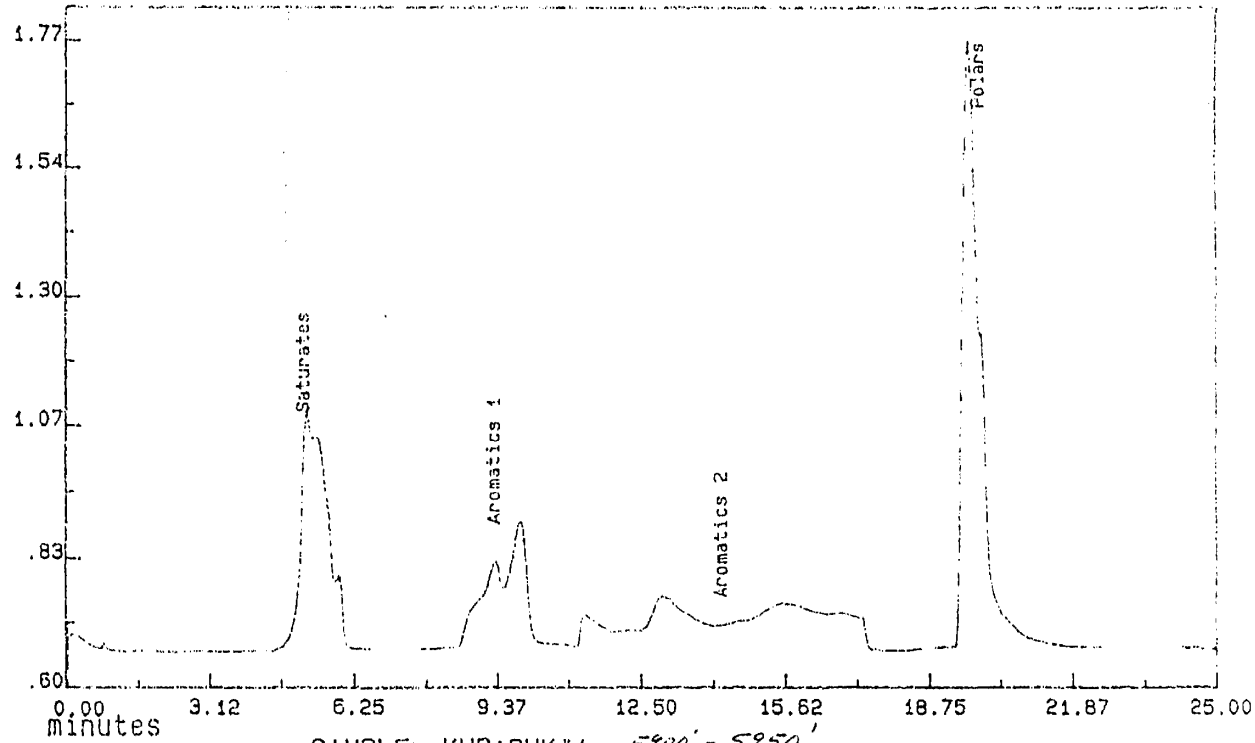
SARA ANALYSIS

SAMPLE NAME : KUPARUK#1 5900' - 5950'
INSTRUMENT : HPLC_FID
INJECT TIME : Mon Apr 16, 1990 3:46:56 pm
METHOD USED : /METHOD/HPLC_FIDO.MTH
SEQUENCE : /DATA/LOOP/SEQUENCE/HP1090_AUTOBV.SEQ
RESULT FILE : /RESULT/WF4279_SAP.RES
REPORT TIME : 4:12 PM MON., 16 APR., 1990

	AREA	TIME	RESPONSE FACTOR
Saturates	17064.	5.29	.1275E-03
Aromatics 1	11026.	9.42	.5470E-04
Aromatics 2	20546.	14.36	.5470E-04
Polars	30412.	19.96	.4160E-04

	AMOUNT (mg)	% RESIDUE
Saturates	2.18	42.1
Aromatics	1.73	33.4
Polars	1.27	24.5

	% OIL
Saturates	41.8
Aromatics	33.2
Polars	24.3
Asphaltenes	.8



SAMPLE: KUPARUK#1 5900' - 5950'

ANALYZED: Mon Apr 16, 1990 3:46:56 pm

RESULT: /RESULT/WF4275 SAP.RES METHOD: HPLC FIDO

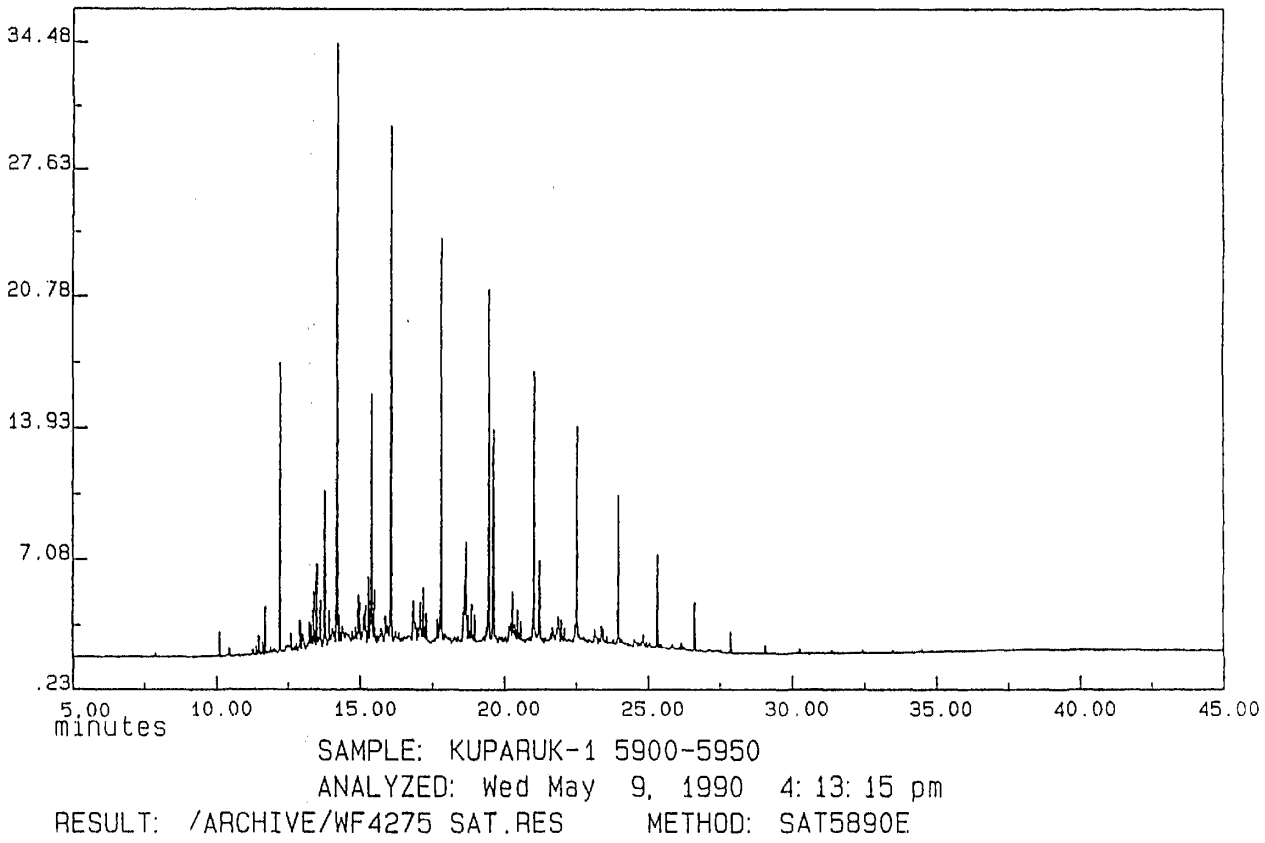
*** PETROLEUM GEOCHEMISTRY ***
SATURATE GC

SAMPLE NAME : KUPARUK-1 5900-5950
INSTRUMENT : HP_5890_2
INJECT TIME : Wed May 9, 1990 4:13:15 pm
METHOD USED : /METHOD/SAT5890E.MTH
RESULT FILE : /RESULT/WF4275_SAT.RES
REPORT TIME : 5:05 PM WED., 9 MAY , 1990

CPI VALUE : 1.08
PRISTANE / PHYTANE : 2.62 C15/C25 : 109.34
PRISTANE / C17 : .83 C17/Pr : 1.20
PHYTANE / C18 : .40 C18/Ph : 2.50

	AREA	%AREA NALK	TIME	NORM C15
N-C10	218.	.0	5.62	.00
N-C11	1597.	.1	7.88	.01
N-C12	8925.	.7	10.10	.04
N-C13	106345.	8.2	12.22	.44
N-C14	271145.	20.8	14.22	1.13
N-C15	239814.	18.4	16.07	1.00
N-C16	168747.	13.0	17.82	.70
N-C17	150653.	11.6	19.47	.63
N-C18	119889.	9.2	21.04	.50
N-C19	88946.	6.8	22.54	.37
N-C20	65236.	5.0	23.97	.27
N-C21	36309.	2.8	25.33	.15
N-C22	19732.	1.5	26.64	.08
N-C23	8606.	.7	27.89	.04
N-C24	3517.	.3	29.10	.01
N-C25	2193.	.2	30.26	.01
N-C26	1384.	.1	31.37	.01
N-C27	1222.	.1	32.45	.01
N-C28	1272.	.1	33.49	.01
N-C29	1364.	.1	34.50	.01
N-C30	822.	.1	35.47	.00
N-C31	824.	.1	36.41	.00
N-C32	892.	.1	37.32	.00
N-C33	675.	.1	38.27	.00
N-C34	1276.	.1	39.31	.01
N-C35	501.	.0	40.63	.00
N-C36	415.	.0	41.85	.00

	AREA	%AREA ISPR	TIME
Farnesane	63439.	15.5	13.78
Acyclic C16	116501.	28.5	15.41
Acyclic C18	55207.	13.5	18.68
Pristane	125596.	30.7	19.63
Phytane	47929.	11.7	21.23



SAMPLE: KUPARUK-1 5900-5950
ANALYZED: Wed May 9, 1990 4:13:15 pm
RESULT: /ARCHIVE/WF4275 SAT.RES METHOD: SAT5890E

Normalized Percent Report

Information from Current Data File Header:
File: /chem/msd/WF4275_SAT.d
Operator:
Date Acquired: Fri Apr 27 90 10:38:44 PM
Sample Name: WF4275_SAT
Misc Info:
Sequence Index: 1 Bottle Number: 19 Repetition Number: 1

SATURATE BIOMARKERS

Calibration Table Last Updated: Tue Jun 12 15:32:53 1990

Reference Peak Window: 0.250 Absolute Minutes
Non-reference Peak Window: 0.250 Absolute Minutes

Default Sample Amount: 0
Uncalib. Peak Response Factor: 0
Default Multiplier: 1

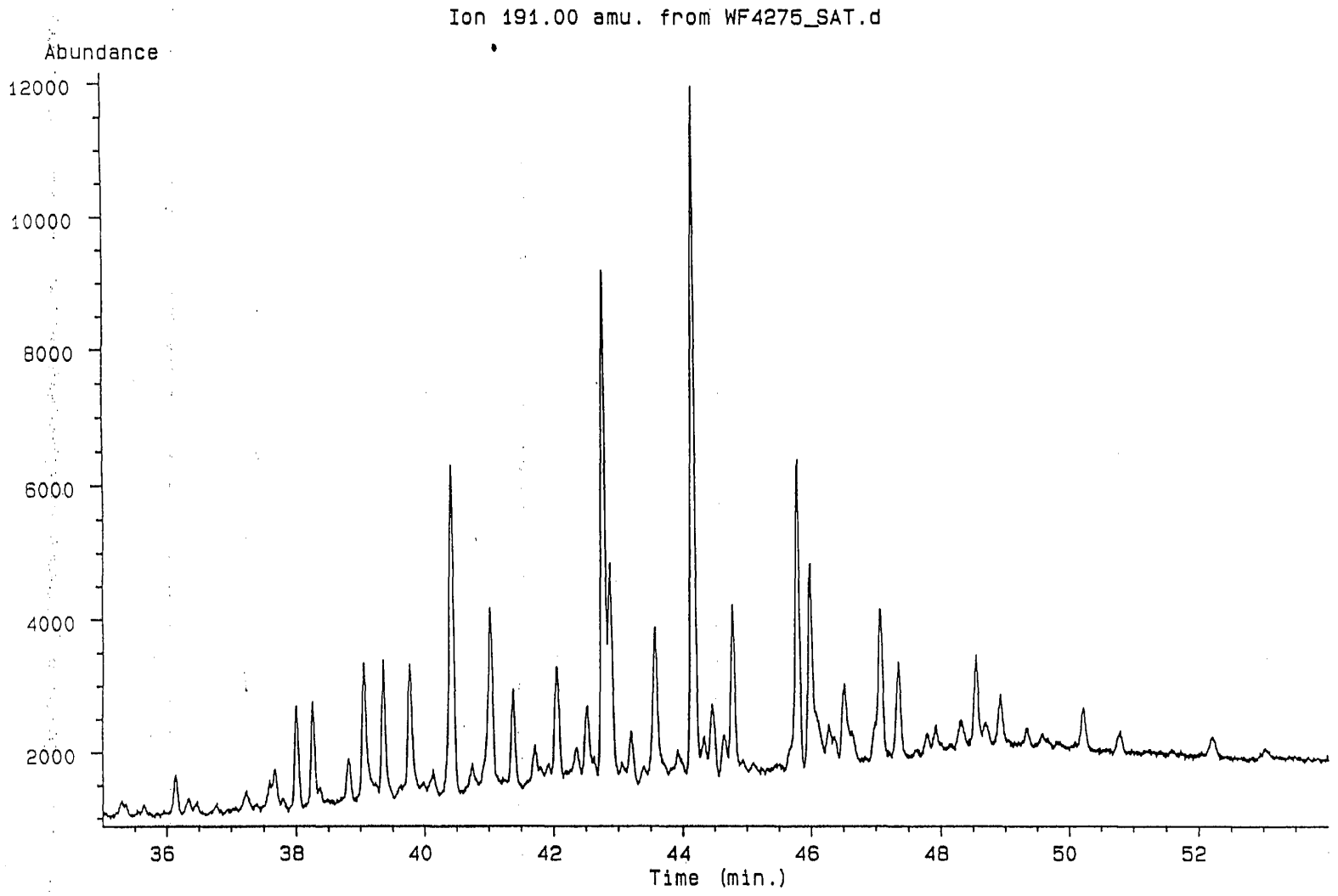
Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount
1	VV	39.765	191.00 amu	C27 18A HOPANE TS	108364	2.140 %
2	VV	40.424	191.00 amu	C27 17A HOPANE TM	254302	5.022 %
3	VV	41.024	191.00 amu	C28 BISNORHOPANE X	166878	3.296 %
4	VV	42.772	191.00 amu	C29 HOPANE D	361781	7.144 %
5	VV	42.878	191.00 amu	C29 NORHOPANE D2	165882	3.276 %
6	VV	43.390	191.00 amu	C30 PENTACYCLANE PI	20285	0.4006 %
7	VV	43.975	191.00 amu	C30 18A OLEANANE B	16407	0.3240 %*
8	VV	44.159	191.00 amu	C30 HOPANE G	478171	9.443 %
9	VV	44.778	191.00 amu	C30 MORETANE K	139817	2.761 %
10	VV	45.787	191.00 amu	C31S HOPANE N	266891	5.271 %
11	VV	45.983	191.00 amu	C31R HOPANE O	241053	4.760 %
12	VV	46.269	191.00 amu	O & GAMMACERANE	48327	0.9544 %
13	VV	46.339	191.00 amu	GAMMACERANE	8912	0.1760 %
14	VV	46.509	191.00 amu	P	100079	1.976 %
15	VV	46.623	191.00 amu	R	46043	0.9093 %
16	VV	47.064	191.00 amu	C32S HOPANE U	183724	3.628 %
17	VV	47.342	191.00 amu	C32R HOPANE V	124295	2.455 %
18	VV	48.543	191.00 amu	C33S HOPANE ALPHA	118174	2.334 %
19	VV	48.923	191.00 amu	C33R HOPANE BETA	95381	1.884 %
20	VV	50.213	191.00 amu	C34S HOPANE GAMMA	83725	1.653 %
21	VV	50.784	191.00 amu	C34R HOPANE DELTA	50471	0.9967 %
22	VV	52.205	191.00 amu	C35S HOPANE EPSILON	39142	0.7730 %
23	VV	53.028	191.00 amu	C35R HOPANE ZETA	12736	0.2515 %
24	VV	27.334	217.00 amu	C21 STERANE Y	235815	4.657 %
25	VV	36.123	217.00 amu	C27S ba DIASTERANE10	79225	1.565 %
26	VV	36.772	217.00 amu	C27R ba DIASTERANE11	65993	1.303 %

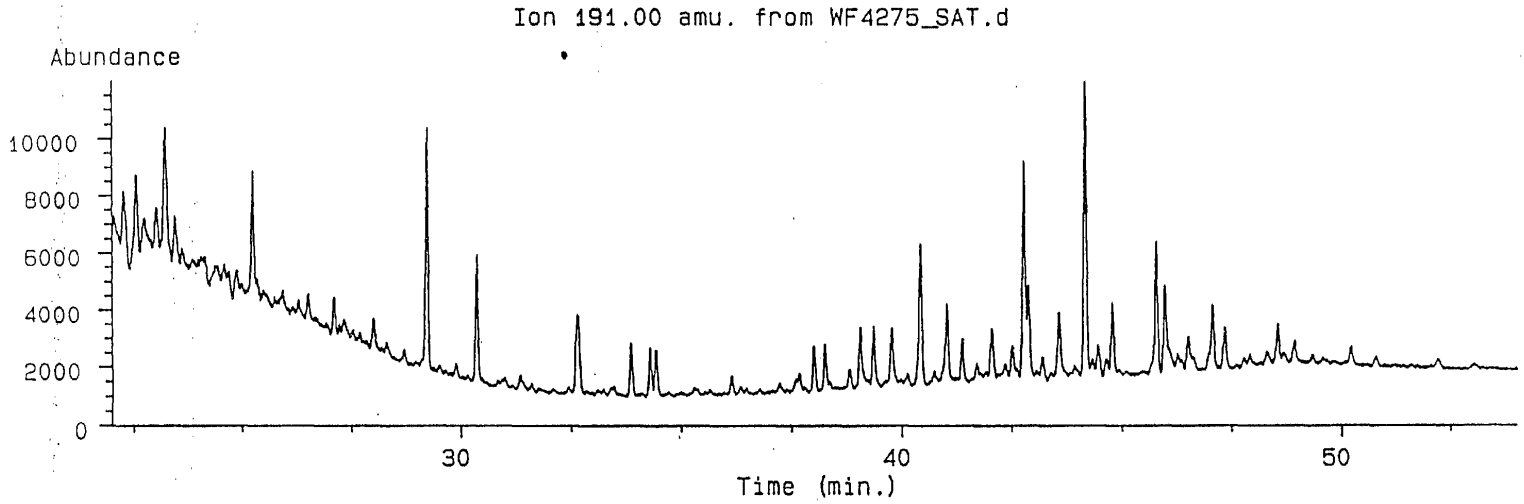
Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount
27	VV	37.203	217.00 amu	13	30443	0.6012 %
28	VV	37.675	217.00 amu	14	53488	1.056 %
29	VV	37.802	217.00 amu	15	55711	1.100 %
30	VV	37.942	217.00 amu	16	18147	0.3584 %
31	VV	38.464	217.00 amu	18	48264	0.9531 %
32		-	217.00 amu	19	-Not Found-	
33	PV	38.841	217.00 amu	20	111205	2.196 %
34	VV	39.113	217.00 amu	21	155483	3.070 %
35		-	217.00 amu	22	-Not Found-	
36	BV	39.559	217.00 amu	C27R aaa STERANE 25	96013	1.896 %
37	VB	39.829	217.00 amu	27	133554	2.637 %
38	VV	41.386	217.00 amu	C28R aaa STERANE 36	93778	1.852 %
39	BB	41.910	217.00 amu	C29S aaa STERANE 39	69309	1.369 %
40	PB	42.911	217.00 amu	C29R aaa STERANE 42	133040	2.627 %
41	BV	39.049	218.00 amu	C27R abb STERANE 21B	111402	2.200 %
42	VV	39.217	218.00 amu	C27S abb STERANE 22	84047	1.660 %
43	PV	40.791	218.00 amu	C28R abb STERANE 33A	90073	1.779 %
44	PB	40.961	218.00 amu	C28S abb STERANE 34	74823	1.478 %
45	VV	42.368	218.00 amu	C29R abb STERANE 40	94123	1.859 %
46	BV	42.236	218.00 amu	C29S abb STERANE 41	99020	1.955 %

***** REPORT ERRORS *****

Calibration Peak #7's Qualifiers Were Not Satisfied.

*** Not All Calibrated Peaks Found ***


Ion 191.00 amu. from WF4275_SAT.d
Abundance
12000
10000
8000
6000
4000
2000
36
38
40
42
44
46
48
50
52
Time (min.)


Ion 191.00 amu. from WF4275_SAT.d
Abundance
10000
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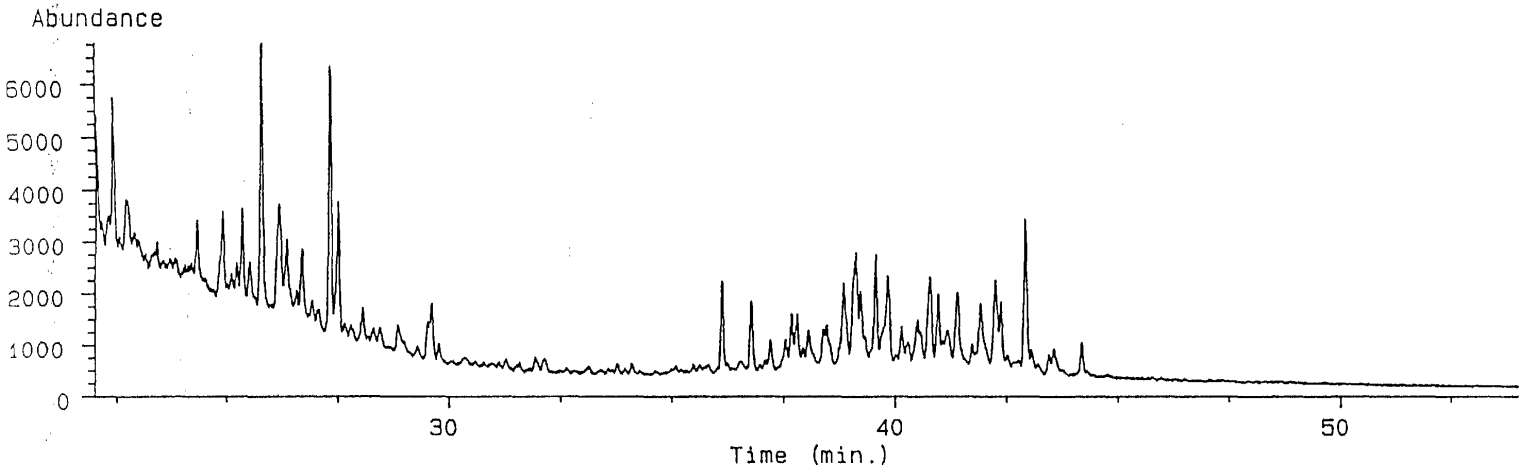
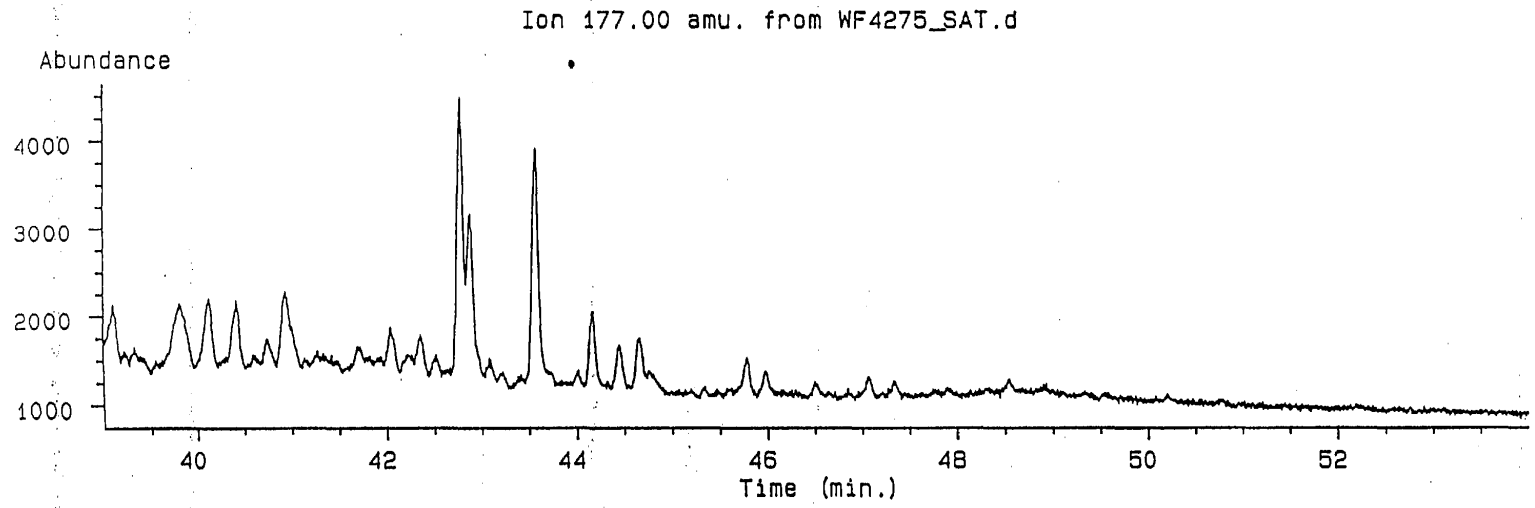
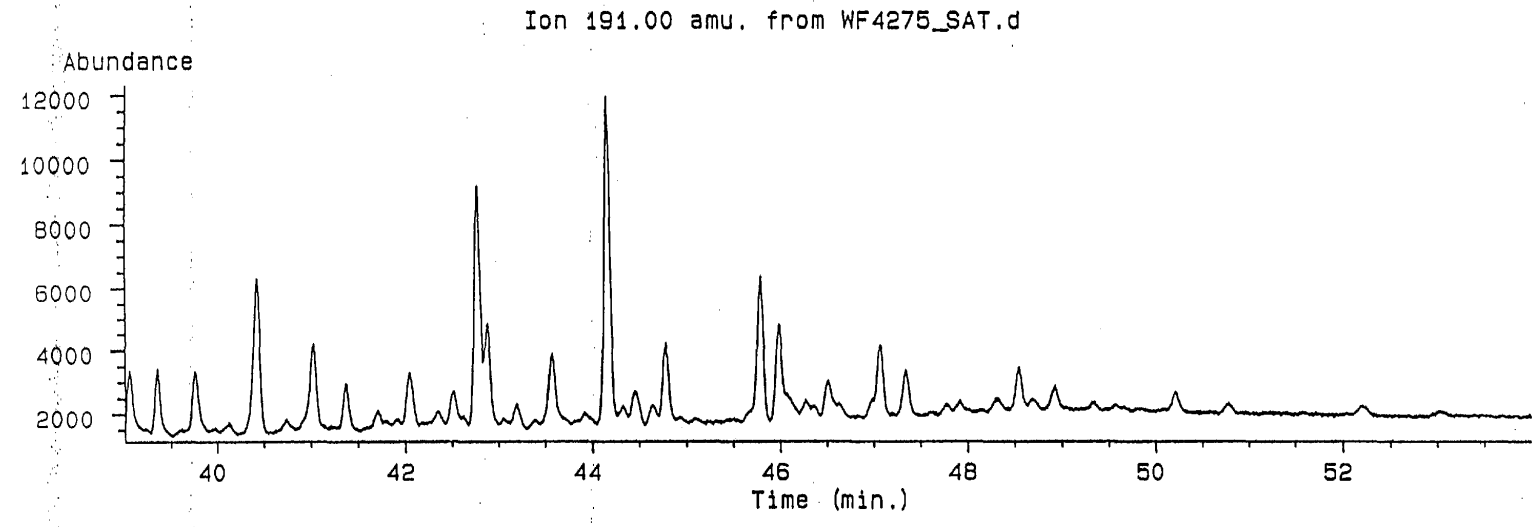
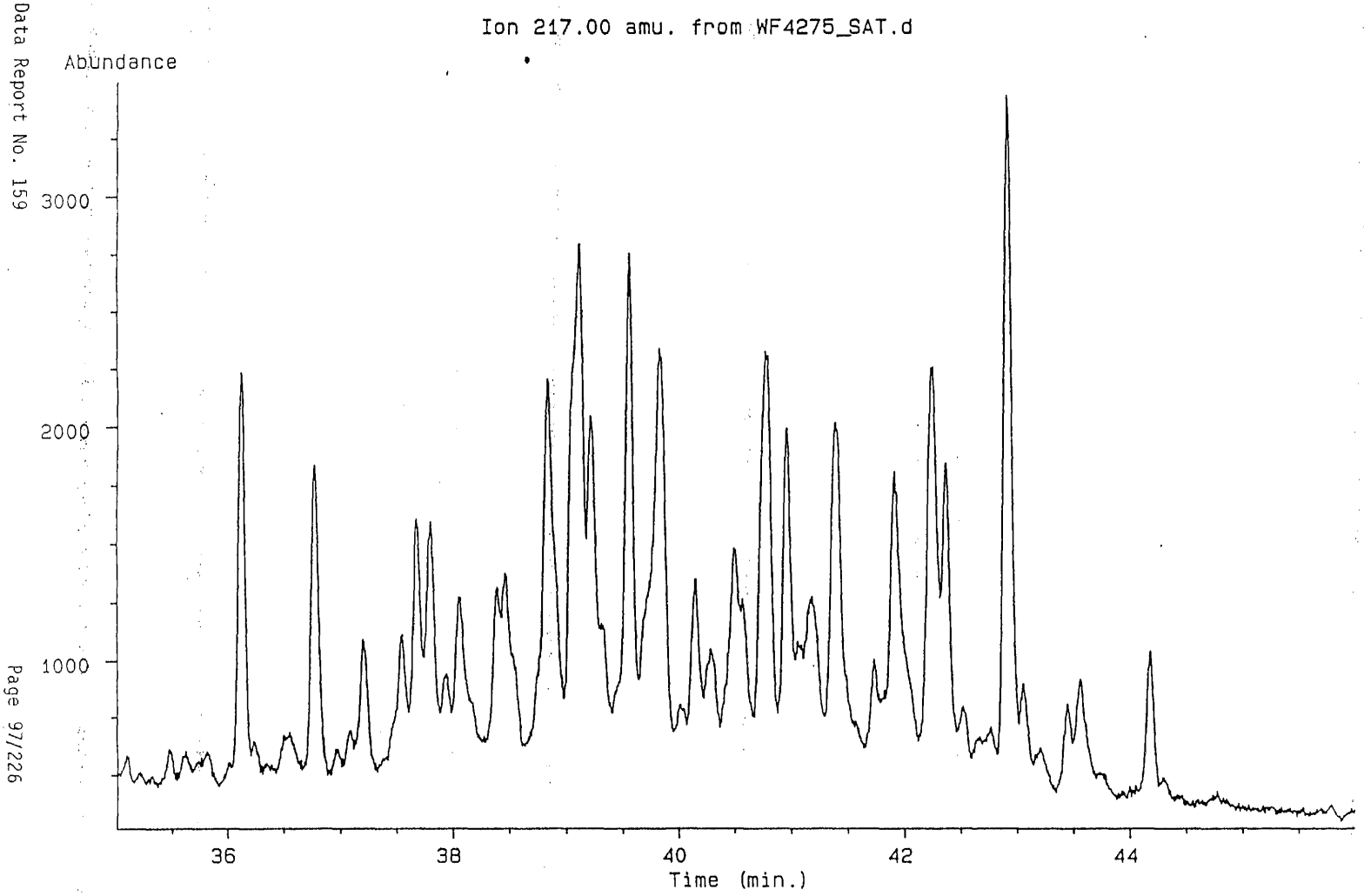
4000
2000
0
30
40
50
Time (min.)


Ion 217.00 amu. from WF4275_SAT.d
Abundance
6000
5000
4000
3000
2000
1000
0
30
40
50
Time (min.)


Ion 177.00 amu. from WF4275_SAT.d
Abundance
4000
3000
2000
1000
40
42
44
46
48
50
52
Time (min.)


Ion 191.00 amu. from WF4275_SAT.d
Abundance
12000
10000
8000
6000
4000
2000
40
42
44
46
48
50
52
Time (min.)


Ion 217.00 amu. from WF4275_SAT.d
Abundance
3000
2000
1000
36
38
40
42
44
Time (min.)

*** PETROLEUM GEOCHEMISTRY ***

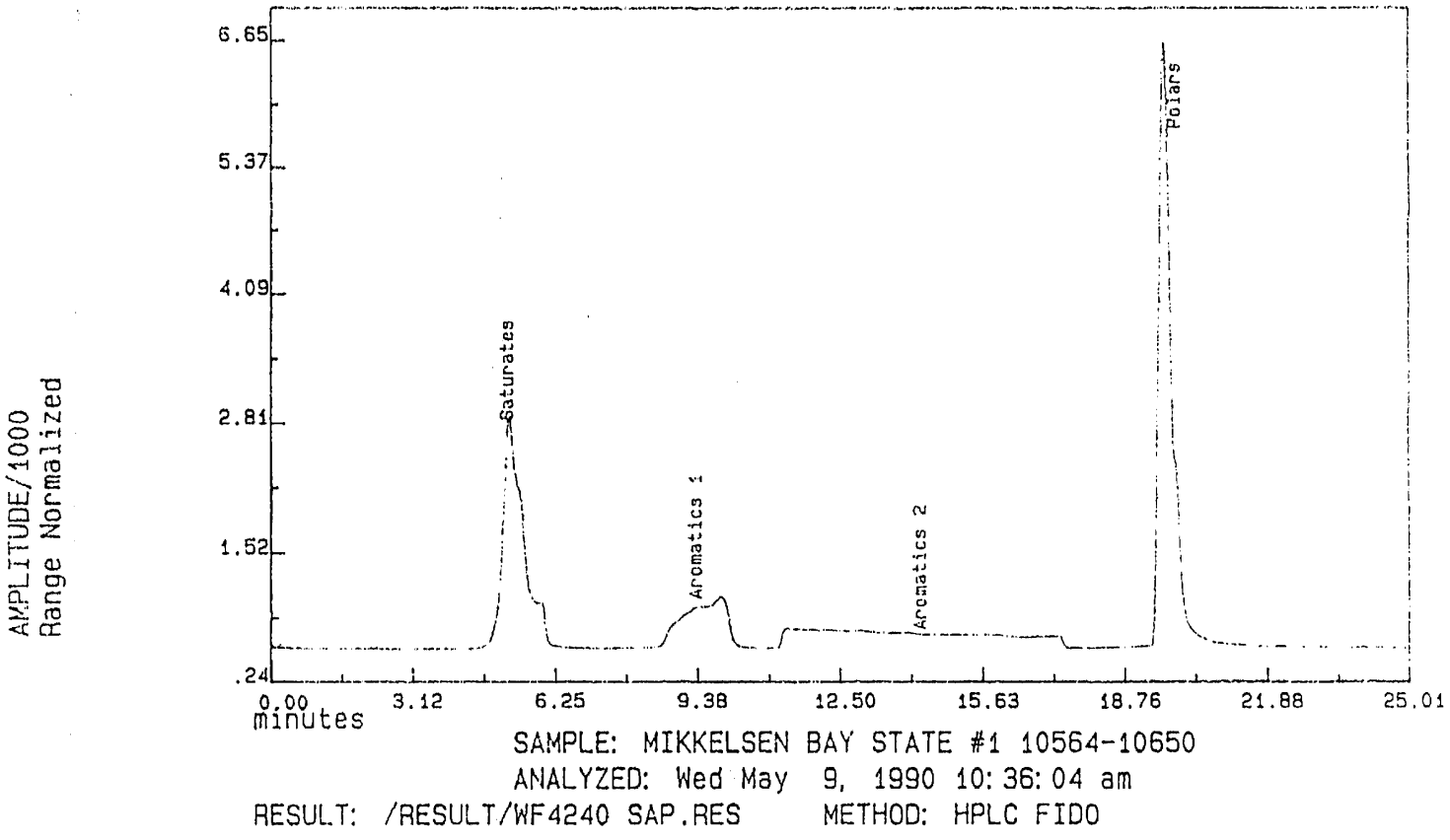
SARA ANALYSIS

SAMPLE NAME : MIKKELSEN BAY STATE #1 10564-10650
INSTRUMENT : HPLC_FID
INJECT TIME : Wed May 9, 1990 10:36:04 am
METHOD USED : /METHOD/HPLC_FIDO.MTH
SEQUENCE : /DATA/LOOP/SEQUENCE/HP1090_AUTOCA.SEQ
RESULT FILE : /RESULT/WF4240_SAP.RES
REPORT TIME : 11:01 AM WED., 9 MAY , 1990

	AREA	TIME	RESPONSE FACTOR
Saturates	73696.	5.29	.1275E-03
Aromatics 1	33257.	9.42	.5470E-04
Aromatics 2	56275.	14.36	.5470E-04
Polars	127021.	19.96	.4160E-04

	AMOUNT (mg)	% RESIDUE
Saturates	9.40	48.0
Aromatics	4.90	25.0
Polars	5.28	27.0

	% OIL
Saturates	46.8
Aromatics	24.4
Polars	26.3
Asphaltenes	2.4


AMPLITUDE/1000
Range Normalized
6.65
5.37
4.09
2.81
1.52
.24
Saturates
Aromatics 1
Aromatics 2
Polars
0.00
3.12
6.25
9.38
12.50
15.63
18.76
21.88
25.01
minutes
SAMPLE: MIKKELSEN BAY STATE #1 10564-10650
ANALYZED: Wed May 9, 1990 10:36:04 am
RESULT: /RESULT/WF4240 SAP.RES METHOD: HPLC FIDO

*** PETROLEUM GEOCHEMISTRY ***
SATURATE GC

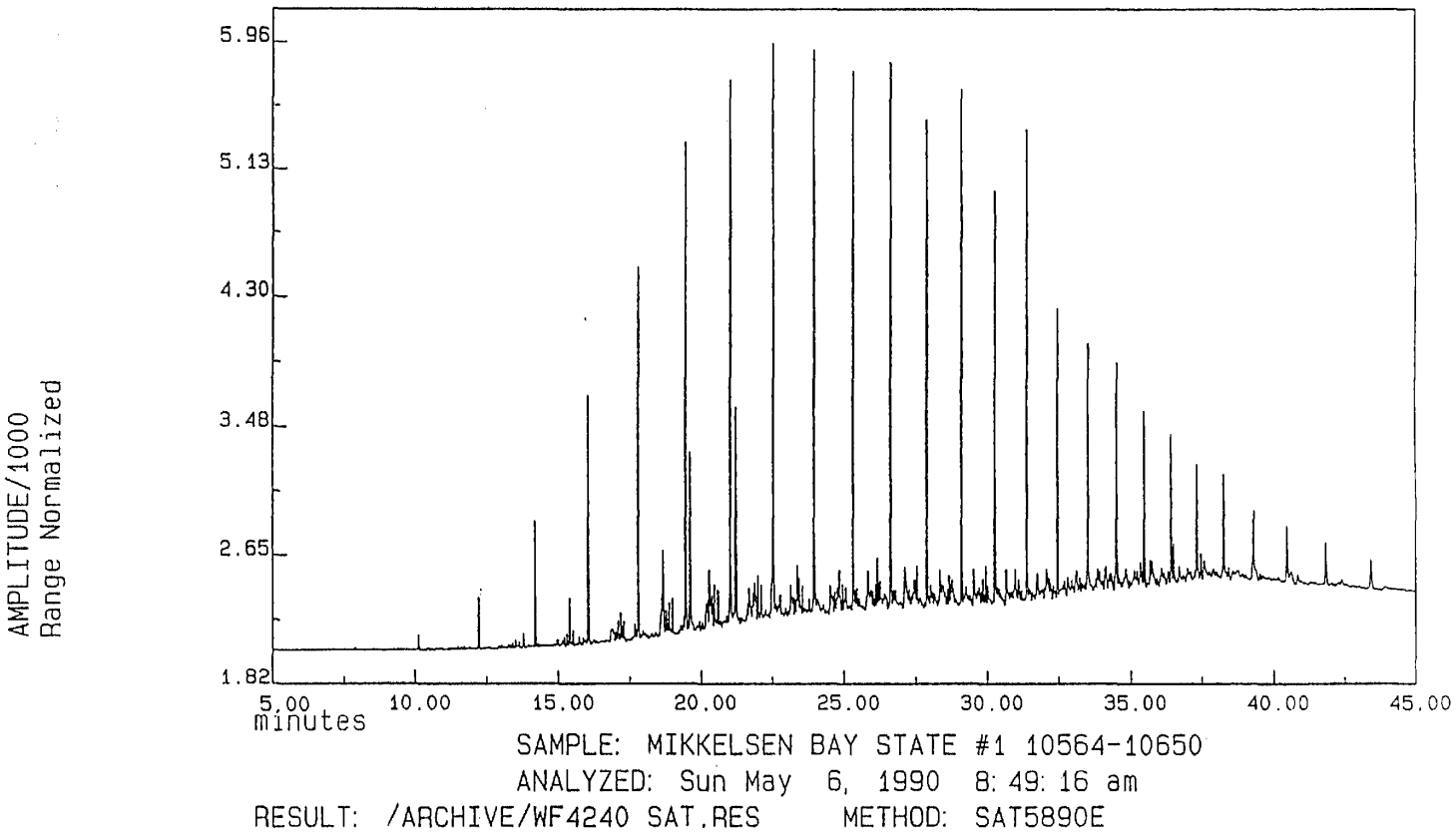
SAMPLE NAME : MIKKELSEN BAY STATE #1 10564-10650
INSTRUMENT : HP_5890_2
INJECT TIME : Sun May 6, 1990 8:49:16 am
METHOD USED : /METHOD/SAT5890E.MTH
RESULT FILE : /ARCHIVE/WF4240_SAT.RES
REPORT TIME : 4:08 PM TUE., 12 JUNE, 1990

CPI VALUE : .92

PRISTANE / PHYTANE :	.86	C15/C25 :	.53
PRISTANE / C17 :	.58	C17/Pr :	1.72
PHYTANE / C18 :	.57	C18/Ph :	1.76

	AREA	%AREA NALK	TIME	NORM C15
N-C10	0.	0.0	0.00	0.00
N-C11	146.	.0	7.87	.01
N-C12	694.	.2	10.10	.06
N-C13	2252.	.6	12.21	.19
N-C14	5657.	1.5	14.18	.49
N-C15	11602.	3.0	16.04	1.00
N-C16	17177.	4.5	17.79	1.48
N-C17	23645.	6.1	19.45	2.04
N-C18	27958.	7.3	21.02	2.41
N-C19	27938.	7.2	22.52	2.41
N-C20	29181.	7.6	23.95	2.52
N-C21	25896.	6.7	25.32	2.23
N-C22	27617.	7.2	26.63	2.38
N-C23	25125.	6.5	27.89	2.17
N-C24	26166.	6.8	29.09	2.26
N-C25	22045.	5.7	30.25	1.90
N-C26	23841.	6.2	31.37	2.05
N-C27	14314.	3.7	32.45	1.23
N-C28	14356.	3.7	33.49	1.24
N-C29	12768.	3.3	34.49	1.10
N-C30	9757.	2.5	35.46	.84
N-C31	7826.	2.0	36.41	.67
N-C32	6667.	1.7	37.32	.57
N-C33	6124.	1.6	38.26	.53
N-C34	7759.	2.0	39.30	.67
N-C35	4818.	1.2	40.48	.42
N-C36	4171.	1.1	41.84	.36

	AREA	%AREA ISPR	TIME
Farnesane	708.	1.8	13.77
Acyclic C16	2505.	6.5	15.39
Acyclic C18	5916.	15.3	18.66
Pristane	13713.	35.4	19.60
Phytane	15860.	41.0	21.22


AMPLITUDE/1000
Range Normalized
5.96
5.13
4.30
3.48
2.65
1.82
5.00
10.00
15.00
20.00
25.00
30.00
35.00
40.00
45.00
minutes
SAMPLE: MIKKELSEN BAY STATE #1 10564-10650
ANALYZED: Sun May 6, 1990 8:49:16 am
RESULT: /ARCHIVE/WF4240 SAT.RES METHOD: SAT5890E

SAMPLE : WELL: MIKKELSEN BAY ST1 DEPTH: 10651
INJECTED AT : Mon May 7, 1990 2:38:54 am
INSTRUMENT : GROCK
METHOD USED : /METHOD/PYRO5.MTH
RESULT FILE : /RESULT/WF42408_GRO.RES
BLANK FILE : /RESULT/BLANK13_GRO.RES

***** AREA SLICE INTEGRATION *****

AREA	YIELD (mg/g)	FRACTION
52849696.	1.16	S1
147041820.	3.22	S2

SAMPLE WT. : 89.50 mgs
Tmax : 444 C

SAMPLE : 10691
INJECTED AT : Mon May 7, 1990 2:38:54 am
INSTRUMENT : GPGC_2
METHOD USED : /METHOD/GPGC2_0.MTH
RESULT FILE : /RESULT/WF42408_GPG.RES
BLANK FILE : /RESULT/BLANK15_GPG.RES

***** AREA SLICE INTEGRATION *****

AREA	AREA PERCENT	FRACTION
27215144.	12.4	METHANE
35879312.	16.3	GASES
52250800.	23.8	GASOLINE
59674024.	27.1	KEROSENE
27594004.	12.5	GAS-OIL
17262392.	7.9	WAX-DISTILLATE

TOTAL AREA : 219875710. AREA %: 100.0

SAMPLE WT. : 89.53 mgs

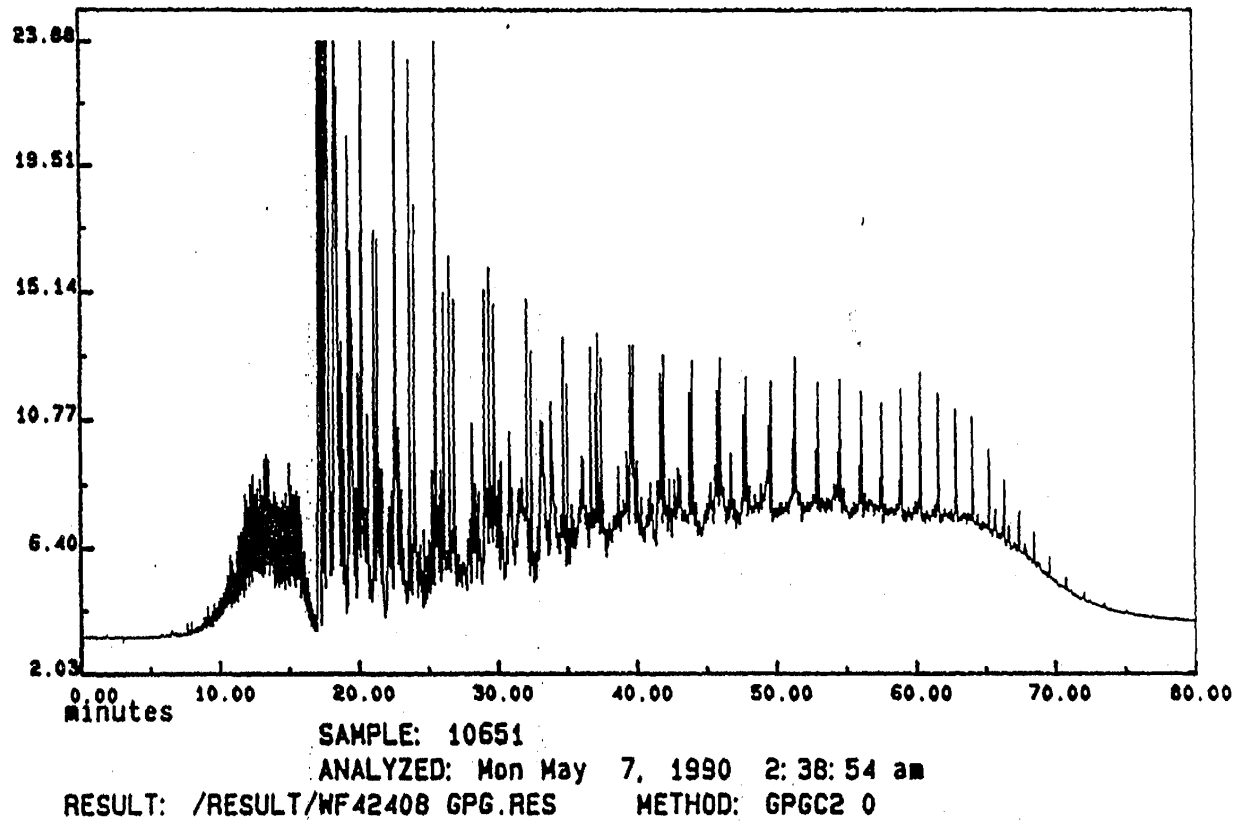
SAMPLE GOGI = .40
THIS IS GAS + OIL PRONE

METHANE + GASES = 28.7
GASOLINE+KEROSINE+GAS OIL+WAX DISTILLATE = 71.3

BY FACTOR ANALYSIS OF KEROGEN PYROLYSATE
THIS IS A GAS+OIL SOURCE

THIS ANALYSIS DETERMINES KEROGEN POTENTIAL AT ITS
PRESENT MATURITY. THIS IS NOT A KEROGEN TYPE ANALYSIS.

SAMPLE K2 = 3.21 mg/gm


AMPLITUDE/1000 (Enlarged x 6.0)
Range Normalized
23.88
19.51
15.14
10.77
6.40
2.03
0.00
10.00
20.00
30.00
40.00
50.00
60.00
70.00
80.00
minutes
SAMPLE: 10651
ANALYZED: Mon May 7, 1990 2:38:54 am
RESULT: /RESULT/WF42408 GPG.RES
METHOD: GPGC2 0

Normalized Percent Report

Information from Current Data File Header:
File: /chem/msd/WF4240_SAT.d
Operator:
Date Acquired: Sun May 13 90 01:18:03 PM
Sample Name: WF4240_SAT
Misc Info:
Sequence Index: 1 **Bottle Number:** 86 **Repetition Number:** 1

SATURATE BIOMARKERS

Calibration Table Last Updated: Tue Jun 05 07:56:00 1990

Reference Peak Window: 0.250 Absolute Minutes
Non-reference Peak Window: 0.250 Absolute Minutes

Default Sample Amount: 0
Uncalib. Peak Response Factor: 0
Default Multiplier: 1

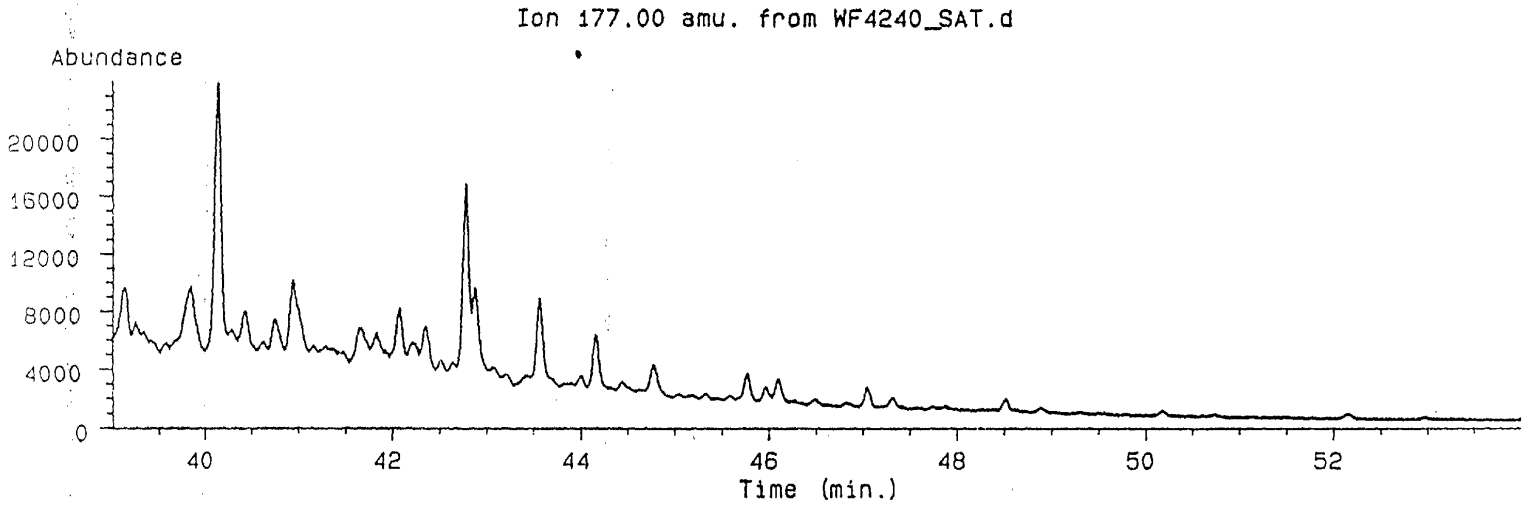
Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount	
1	VV	39.785	191.00 amu	C27 18A HOPANE TS	451079	1.501	%
2	VV	40.440	191.00 amu	C27 17A HOPANE TM	1028221	3.422	%
3	VV	40.744	191.00 amu	C28 BISNORHOPANE X	105649	0.3516	%
4	VV	42.779	191.00 amu	C29 HOPANE D	1507821	5.019	%
5	VV	42.877	191.00 amu	C29 NORHOPANE D2	494744	1.647	%
6	VV	43.193	191.00 amu	C30 PENTACYCLANE PI	138028	0.4594	%
7	VV	43.808	191.00 amu	C30 18A OLEANANE B	28086	0.09348	%*
8	VV	44.155	191.00 amu	C30 HOPANE G	2212684	7.365	%
9	VV	44.771	191.00 amu	C30 MORETANE K	1515412	5.044	%
10	VV	45.771	191.00 amu	C31S HOPANE N	1022838	3.404	%
11	VV	45.964	191.00 amu	C31R HOPANE O	552441	1.839	%
12	VV	46.095	191.00 amu	O & GAMMACERANE	1491041	4.963	%
13	VV	46.255	191.00 amu	GAMMACERANE	189188	0.6297	%
14	VV	46.484	191.00 amu	P	262529	0.8738	%
15		-	191.00 amu	R	-Not Found-		
16	VV	47.046	191.00 amu	C32S HOPANE U	724165	2.410	%
17	VV	47.318	191.00 amu	C32R HOPANE V	352405	1.173	%
18	VV	48.518	191.00 amu	C33S HOPANE ALPHA	433329	1.442	%
19	VV	48.892	191.00 amu	C33R HOPANE BETA	151962	0.5058	%
20	VV	50.177	191.00 amu	C34S HOPANE GAMMA	230496	0.7672	%
21	PV	50.739	191.00 amu	C34R HOPANE DELTA	75209	0.2503	%
22	VV	52.163	191.00 amu	C35S HOPANE EPSILON	269829	0.8981	%
23	VV	52.985	191.00 amu	C35R HOPANE ZETA	114061	0.3796	%
24	VV	27.228	217.00 amu	C21 STERANE Y	840517	2.798	%
25	PB	36.144	217.00 amu	C27S ba DIASTERANE10	1015418	3.380	%
26	VV	36.788	217.00 amu	C27R ba DIASTERANE11	811215	2.700	%

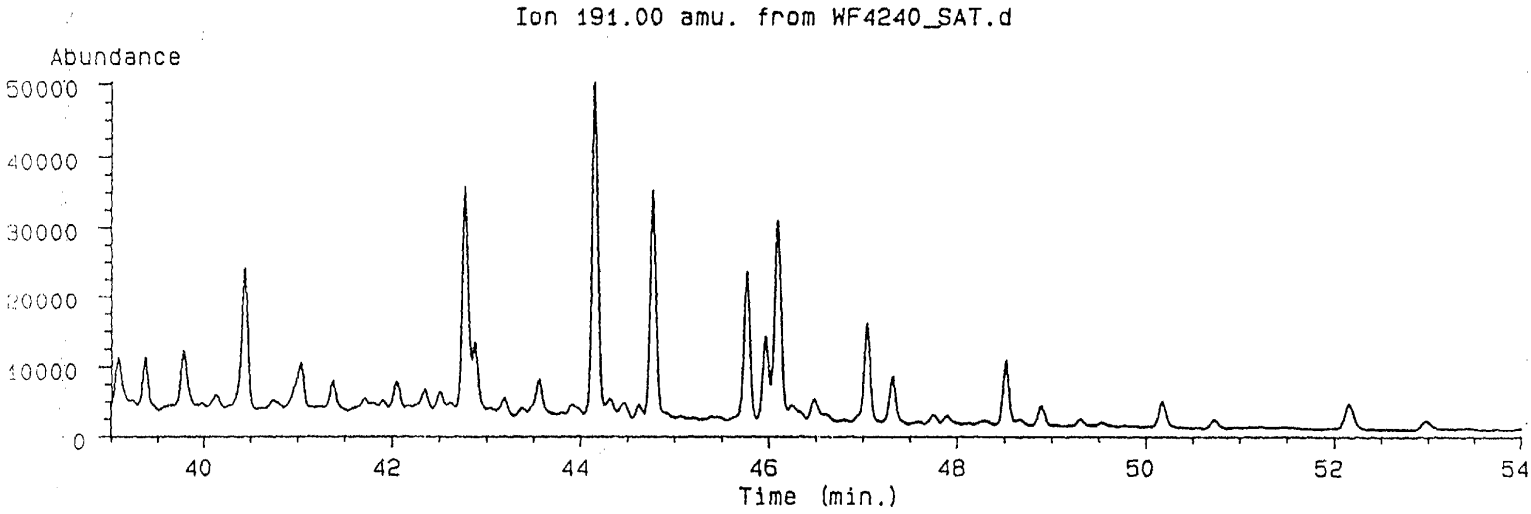
Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount
27	VV	37.222	217.00 amu	13	408541	1.360 %
28	VV	37.694	217.00 amu	14	774278	2.577 %
29	VV	37.818	217.00 amu	15	802436	2.671 %
30	VV	37.957	217.00 amu	16	209791	0.6983 %
31	VV	38.475	217.00 amu	18	620592	2.066 %
32		-	217.00 amu	19	-Not Found-	
33	VV	39.076	217.00 amu	20	516024	1.718 %
34	VV	39.121	217.00 amu	21	783777	2.609 %
35	VV	39.326	217.00 amu	22	253537	0.8439 %
36	VV	39.571	217.00 amu	C27R aaa STERANE 25	746074	2.483 %
37	VV	39.848	217.00 amu	27	1217367	4.052 %
38	VV	41.393	217.00 amu	C28R aaa STERANE 36	715033	2.380 %
39	VV	41.920	217.00 amu	C29S aaa STERANE 39	596722	1.986 %
40	VV	42.913	217.00 amu	C29R aaa STERANE 42	645886	2.150 %
41	VV	39.063	218.00 amu	C27R abb STERANE 21B	1106474	3.683 %
42	VV	39.237	218.00 amu	C27S abb STERANE 22	913855	3.042 %
43	VV	40.807	218.00 amu	C28R abb STERANE 33A	1030700	3.431 %
44	VV	40.967	218.00 amu	C28S abb STERANE 34	955882	3.182 %
45	PV	42.242	218.00 amu	C29R abb STERANE 40	803298	2.674 %
46	VV	42.372	218.00 amu	C29S abb STERANE 41	925427	3.080 %

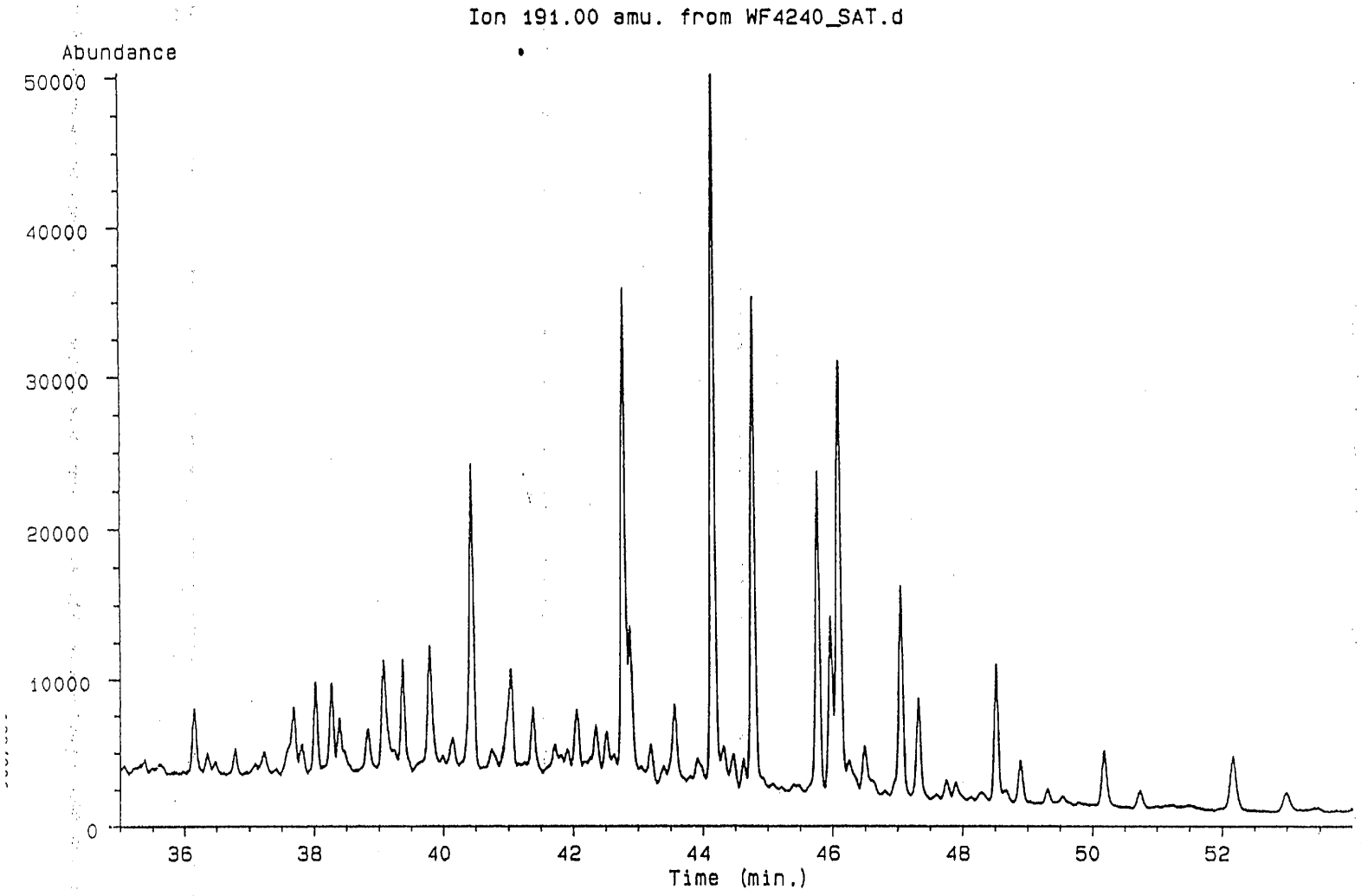
***** REPORT ERRORS *****

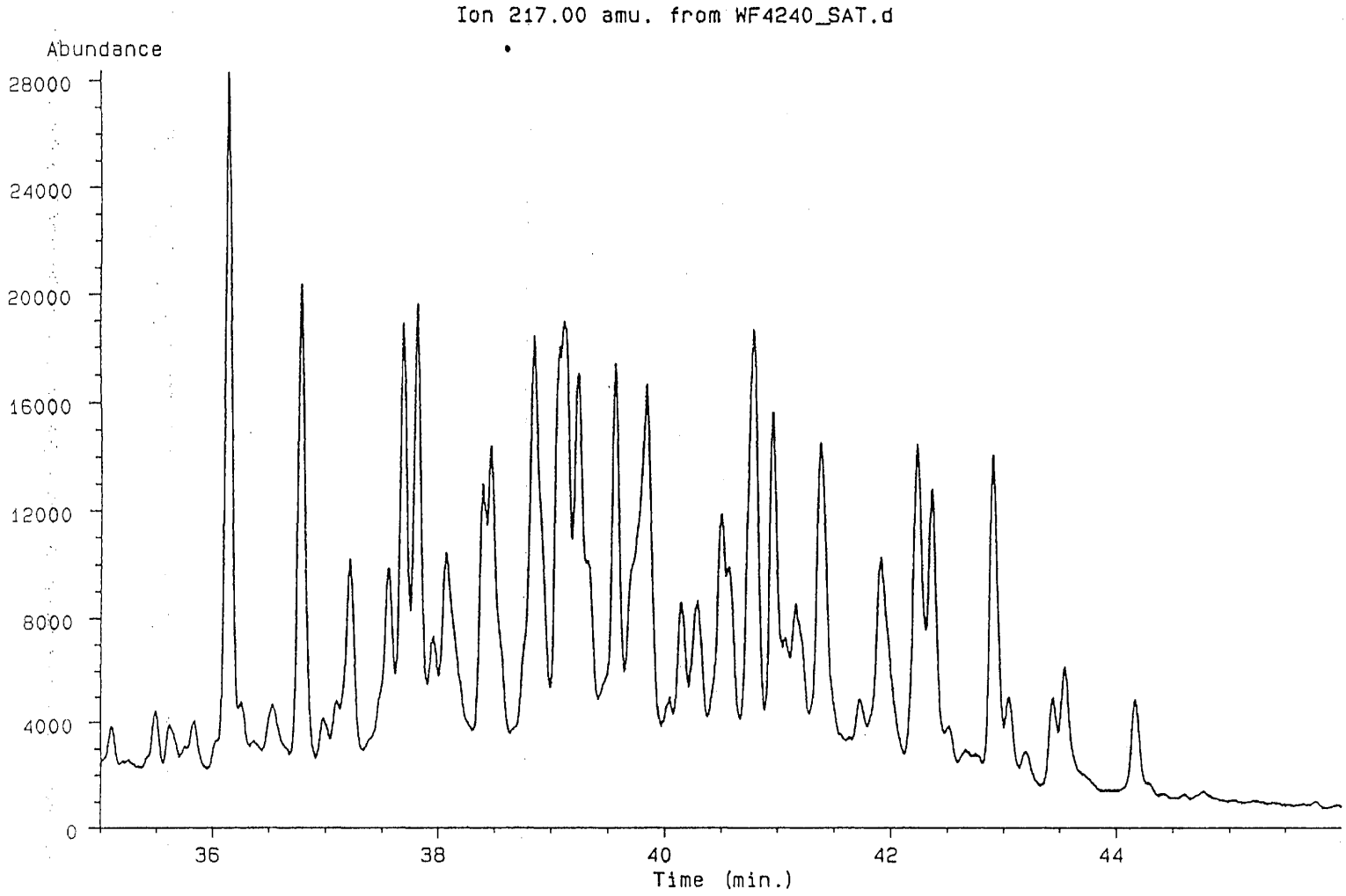
Calibration Peak #7's Qualifiers Were Not Satisfied.

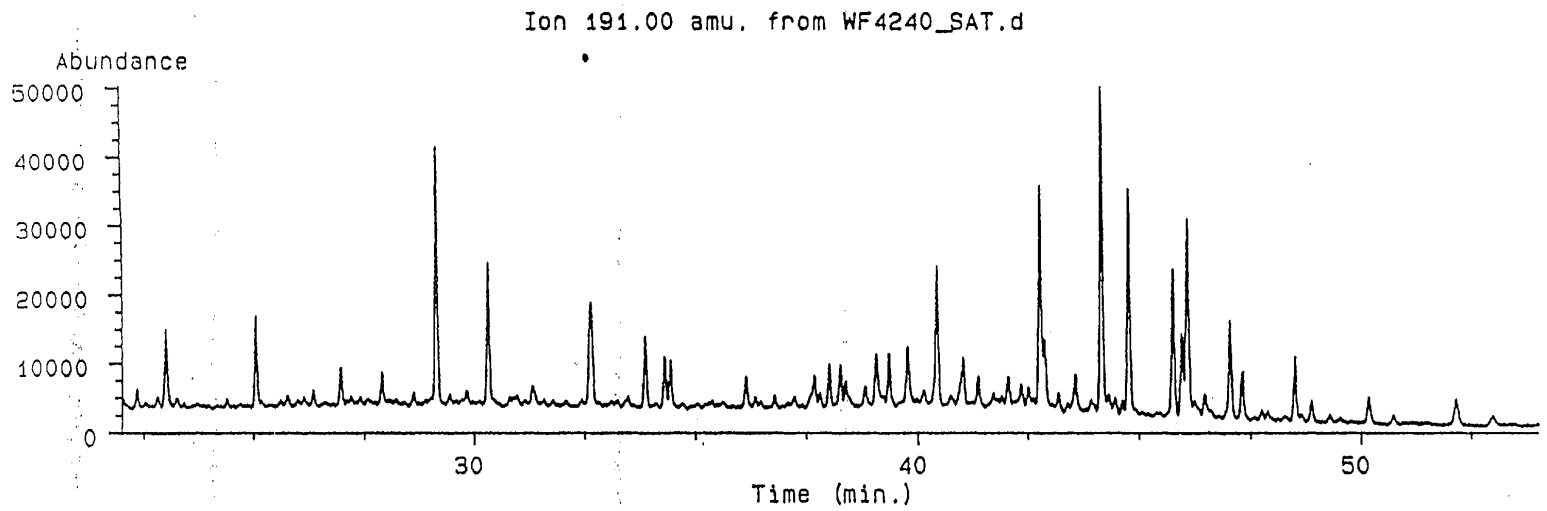
*** Not All Calibrated Peaks Found ***

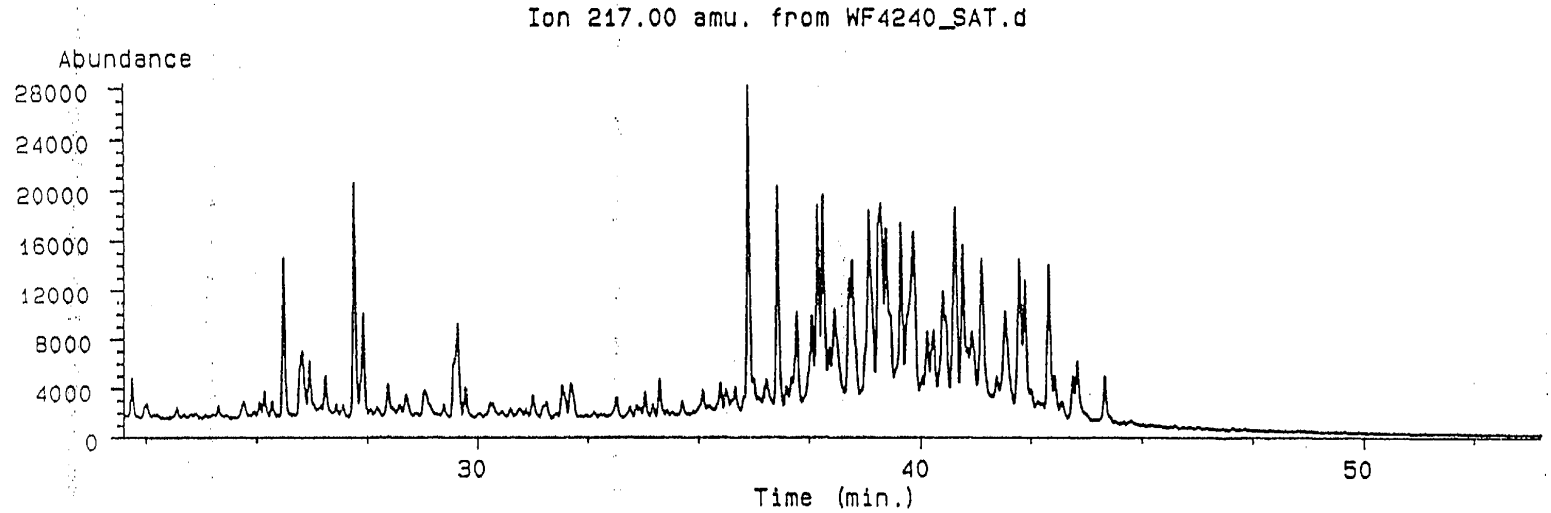

Ion 177.00 amu. from WF4240_SAT.d
Abundance
20000
16000
12000
8000
4000
0
40
42
44
46
48
50
52
Time (min.)


Ion 191.00 amu. from WF4240_SAT.d
Abundance
50000
40000
30000
20000
10000
0
40
42
44
46
48
50
52
54
Time (min.)


Ion 191.00 amu. from WF4240_SAT.d
Abundance
50000
40000
30000
20000
10000
0
36
38
40
42
44
46
48
50
52
Time (min.)


Ion 217.00 amu. from WF4240_SAT.d
Abundance
28000
24000
20000
16000
12000
8000
4000
0
36
38
40
42
44
Time (min.)


Ion 191.00 amu. from WF4240_SAT.d
Abundance
50000
40000
30000
20000
10000
0
30
40
50
Time (min.)


Ion 217.00 amu. from WF4240_SAT.d
Abundance
28000
24000
20000
16000
12000
8000
4000
0
30
40
50
Time (min.)

*** PETROLEUM GEOCHEMISTRY ***

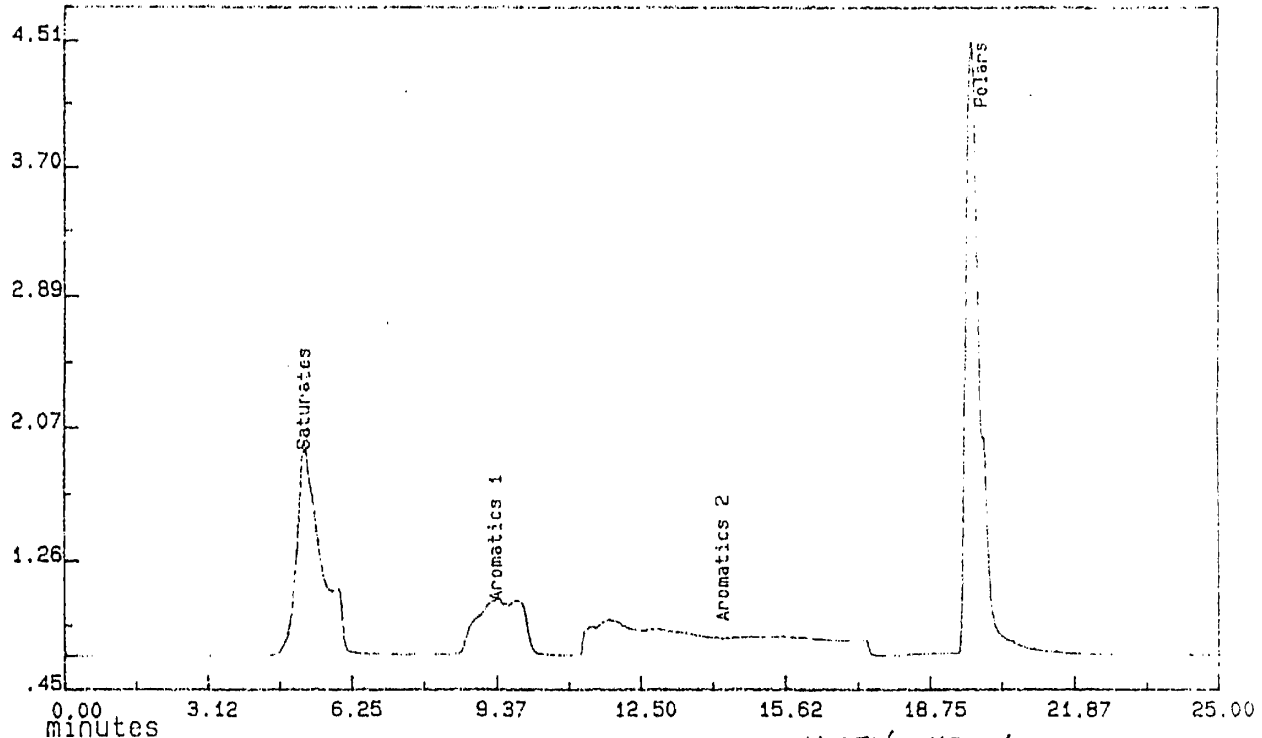
SARA ANALYSIS

SAMPLE NAME : MIKKELSEN BAY STATE 11,650' - 11,701'
INSTRUMENT : HPLC_FID
INJECT TIME : Mon Apr 16, 1990 11:33:11 am
METHOD USED : /METHOD/HPLC_FIDO.MTH
SEQUENCE : /DATA/LOOP/SEQUENCE/HP1090_AUTOBV.SEQ
RESULT FILE : /RESULT/WF4241_SAP.RES
REPORT TIME : 11:58 AM MON., 16 APR., 1990

	AREA	TIME	RESPONSE FACTOR
Saturates	49088.	5.29	.1275E-03
Aromatics 1	24575.	9.42	.5470E-04
Aromatics 2	50949.	14.36	.5470E-04
Polars	86686.	19.96	.4160E-04

	AMOUNT (mg)	% RESIDUE
Saturates	6.26	44.7
Aromatics	4.13	29.5
Polars	3.61	25.8

	% OIL
Saturates	42.1
Aromatics	27.8
Polars	24.3
Asphaltenes	5.7



SAMPLE: MIKKELSEN BAY STATE 11,650' – 11,701'
ANALYZED: Mon Apr 16, 1990 11:33:11 am
RESULT: /RESULT/WF4241 SAP.RES METHOD: HPLC FIDO

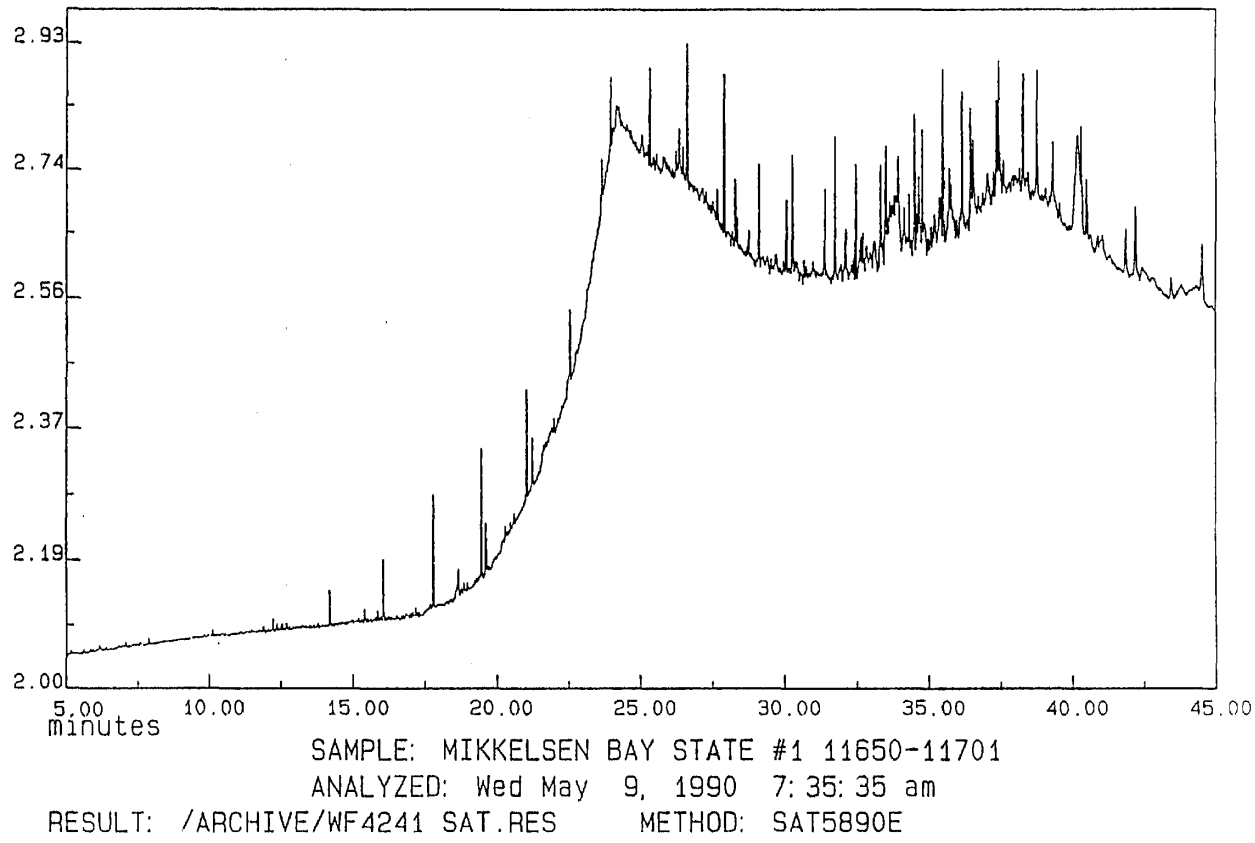
*** PETROLEUM GEOCHEMISTRY ***
SATURATE GC

SAMPLE NAME : MIKKELSEN BAY STATE #1 11650-11701
INSTRUMENT : HP_5890_2
INJECT TIME : Wed May 9, 1990 7:35:35 am
METHOD USED : /METHOD/SAT5890E.MTH
RESULT FILE : /RESULT/WF4241_SAT.RES
REPORT TIME : 8:27 AM WED., 9 MAY , 1990

CPI VALUE : .45
PRISTANE / PHYTANE : .89 C15/C25 : .40
PRISTANE / C17 : .55 C17/Pr : 1.83
PHYTANE / C18 : .63 C18/Ph : 1.59

	AREA	%AREA NALK	TIME	NORM C15
N-C10	118.	.2	5.98	.17
N-C11	0.	0.0	0.00	0.00
N-C12	102.	.2	10.09	.14
N-C13	274.	.5	12.20	.39
N-C14	363.	.7	14.18	.52
N-C15	705.	1.3	16.04	1.00
N-C16	1176.	2.2	17.79	1.67
N-C17	1485.	2.8	19.45	2.11
N-C18	1450.	2.8	21.02	2.06
N-C19	1427.	2.7	22.52	2.02
N-C20	13988.	26.5	23.95	19.84
N-C21	1230.	2.3	25.32	1.74
N-C22	1979.	3.8	26.63	2.81
N-C23	1814.	3.4	27.89	2.57
N-C24	1410.	2.7	29.10	2.00
N-C25	1747.	3.3	30.26	2.48
N-C26	1735.	3.3	31.38	2.46
N-C27	1347.	2.6	32.46	1.91
N-C28	3203.	6.1	33.49	4.54
N-C29	2322.	4.4	34.50	3.29
N-C30	2381.	4.5	35.48	3.38
N-C31	2150.	4.1	36.52	3.05
N-C32	3125.	5.9	37.41	4.43
N-C33	1662.	3.2	38.27	2.36
N-C34	1896.	3.6	39.32	2.69
N-C35	2591.	4.9	40.31	3.67
N-C36	1041.	2.0	41.86	1.48

	AREA	%AREA ISPR	TIME
Farnesane	0.	0.0	0.00
Acyclic C16	219.	8.1	15.39
Acyclic C18	741.	27.6	18.66
Pristane	813.	30.3	19.60
Phytane	914.	34.0	21.22

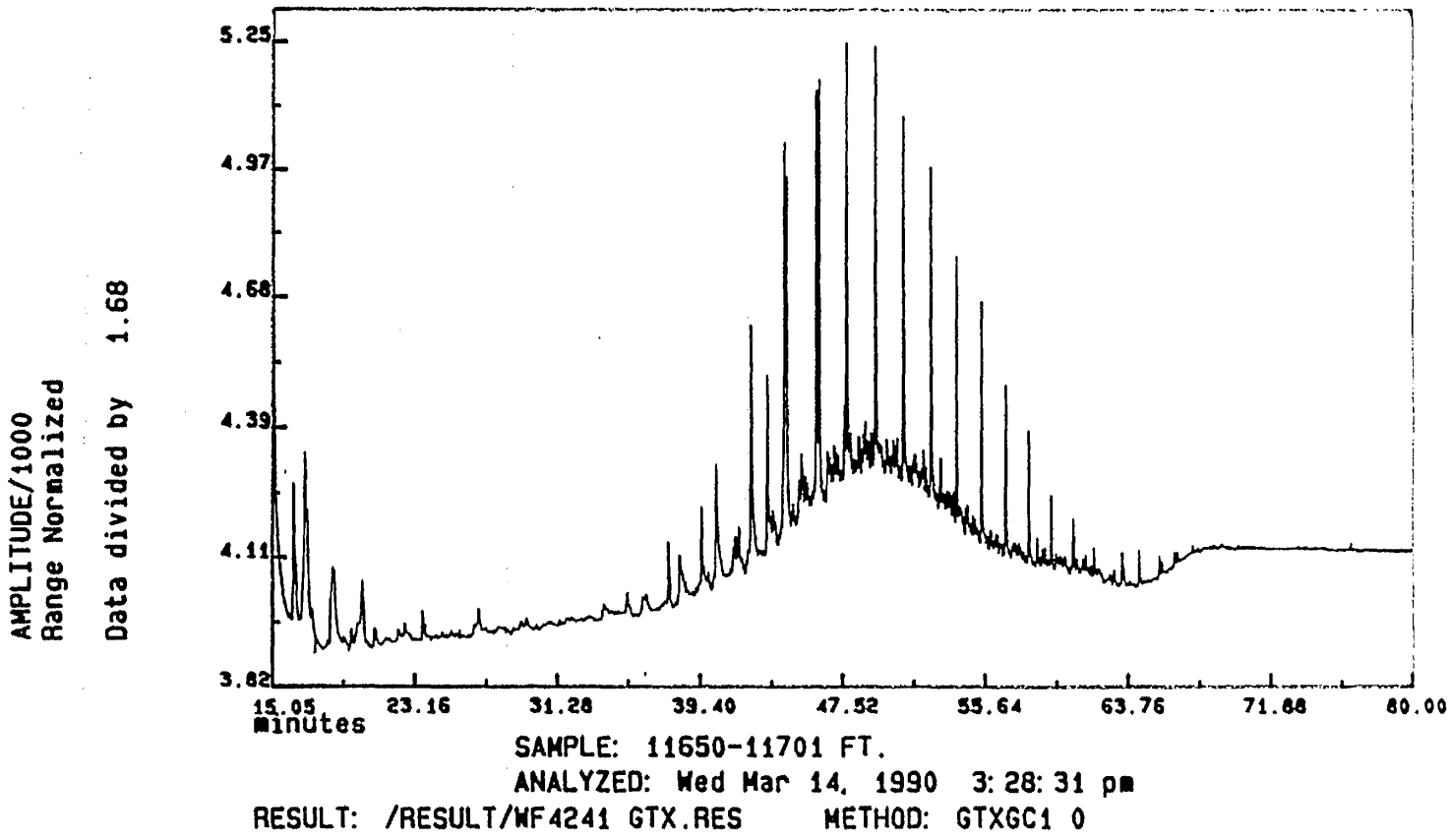

AMPLITUDE/1000
Range Normalized
2.93
2.74
2.56
2.37
2.19
2.00
5.00
10.00
15.00
20.00
25.00
30.00
35.00
40.00
45.00
minutes
SAMPLE: MIKKELSEN BAY STATE #1 11650-11701
ANALYZED: Wed May 9, 1990 7:35:35 am
RESULT: /ARCHIVE/WF4241 SAT.RES METHOD: SAT5890E

SAMPLE : WELL:MIKKELESEN BAY ST1 DEPTH: 11650
INJECTED AT : Wed Mar 14, 1990 3:28:31 pm
INSTRUMENT : GROCK
METHOD USED : /METHOD/PYRO5.MTH
RESULT FILE : /RESULT/WF4241_GRO.RES
BLANK FILE : /RESULT/BLANK13_GRO.RES

***** AREA SLICE INTEGRATION *****

AREA	YIELD (mg/g)	FRACTION
10663102.	.90	S1
17604020.	1.48	S2

SAMPLE WT. : 14.90 mgs
Tmax : 441 C


AMPLITUDE/1000
Range Normalized
Data divided by 1.68
5.25
4.97
4.68
4.39
4.11
3.82
15.05
23.16
31.28
39.40
47.52
55.64
63.76
71.88
80.00
minutes
SAMPLE: 11650-11701 FT.
ANALYZED: Wed Mar 14, 1990 3:28:31 pm
RESULT: /RESULT/WF4241 GTX.RES METHOD: GTXGC1 0

**** PETROLEUM GEOCHEMISTRY / GNH PGC AUTO ****

SAMPLE : WELL:MIKKELESEN BAY ST 1 DEPTH:11701
INJECTED AT : Wed Mar 14, 1990 3:28:31 pm
INSTRUMENT : GPGC_2
METHOD USED : /METHOD/GPGC2_0.MTH
RESULT FILE : /RESULT/WF4241_GPG.RES
BLANK FILE : /RESULT/BLANK_4_GPG.RES

***** AREA SLICE INTEGRATION *****

AREA	AREA PERCENT	FRACTION
2247929.	9.1	METHANE
2112594.	8.6	GASES
4553797.	18.5	GASOLINE
2448619.	9.9	KEROSENE
4283725.	17.4	GAS-OIL
8962718.	36.4	WAX-DISTILLATE

TOTAL AREA : 24609384. AREA %: 100.0

SAMPLE WT. : 14.90 mgs

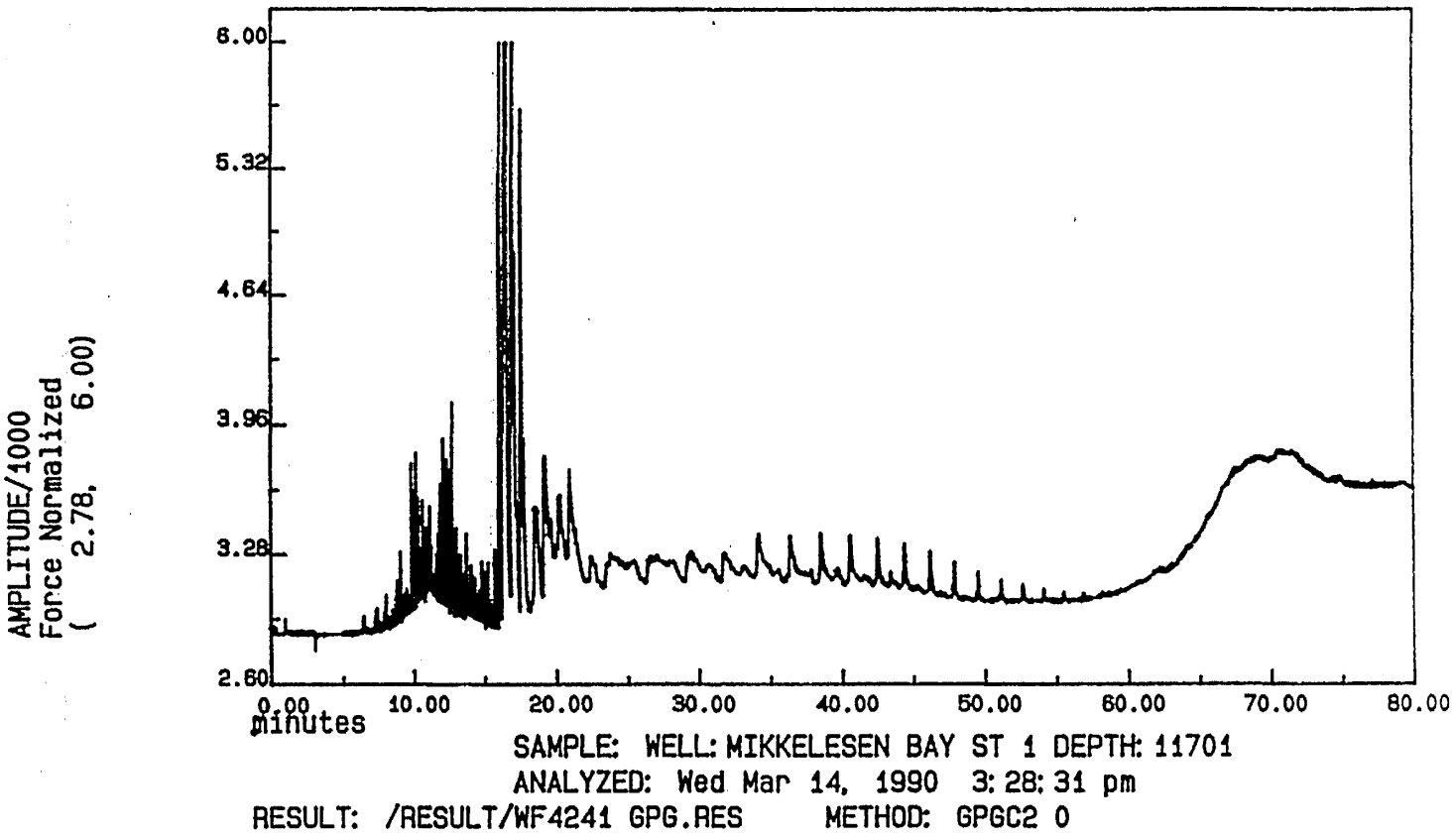
SAMPLE GOGI = .22
THIS IS OIL PRONE

METHANE + GASES = 17.7
GASOLINE+KEROSINE+GAS OIL+WAX DISTILLATE = 82.3

BY FACTOR ANALYSIS OF KEROGEN PYROLYSATE
THIS IS AN OIL+GAS SOURCE

THIS ANALYSIS DETERMINES KEROGEN POTENTIAL AT ITS
PRESENT MATURITY. THIS IS NOT A KEROGEN TYPE ANALYSIS.

SAMPLE K2 = 1.38 mg/gm


AMPLITUDE/1000
Force Normalized
(2.78, 6.00)
6.00
5.32
4.64
3.96
3.28
2.60
0.00
10.00
20.00
30.00
40.00
50.00
60.00
70.00
80.00
minutes
SAMPLE: WELL: MIKKELESEN BAY ST 1 DEPTH: 11701
ANALYZED: Wed Mar 14, 1990 3:28:31 pm
RESULT: /RESULT/WF4241 GPG.RES METHOD: GPGC2 0

Normalized Percent Report

Information from Current Data File Header:
File: /chem/msd/WF4241_SAT.d
Operator:
Date Acquired: Fri Apr 27 90 07:08:51 PM
Sample Name: WF4241_SAT
Misc Info:
Sequence Index: 1 **Bottle Number:** 16 **Repetition Number:** 1

SATURATE BIOMARKERS

Calibration Table Last Updated: Sun Jun 10 13:29:44 1990

Reference Peak Window: 0.250 Absolute Minutes
Non-reference Peak Window: 0.250 Absolute Minutes

Default Sample Amount: 0
Uncalib. Peak Response Factor: 0
Default Multiplier: 1

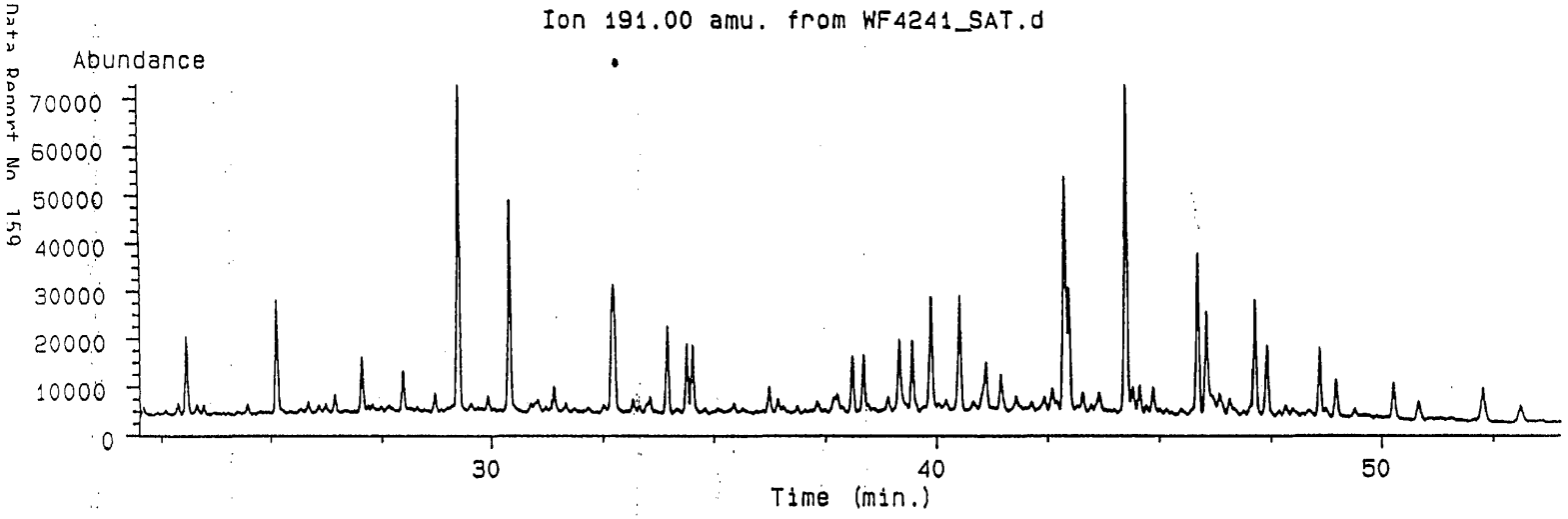
Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount	
1	VV	39.873	191.00 amu	C27 18A HOPANE TS	1230306	4.262	%
2	VV	40.529	191.00 amu	C27 17A HOPANE TM	1211994	4.198	%
3	VV	40.839	191.00 amu	C28 BISNORHOPANE X	138622	0.4802	%
4	VV	42.876	191.00 amu	C29 HOPANE D	2340028	8.106	%
5	VV	42.970	191.00 amu	C29 NORHOPANE D2	1195233	4.140	%
6	VV	43.286	191.00 amu	C30 PENTACYCLANE PI	260172	0.9012	%
7	VV	43.904	191.00 amu	C30 18A OLEANANE B	52425	0.1816	%*
8	VV	44.254	191.00 amu	C30 HOPANE G	3255565	11.28	%
9	VV	44.862	191.00 amu	C30 MORETANE K	315608	1.093	%
10	VV	45.864	191.00 amu	C31S HOPANE N	1715658	5.943	%
11	VV	46.059	191.00 amu	C31R HOPANE O	1266776	4.388	%
12	VV	46.203	191.00 amu	O & GAMMACERANE	178112	0.6170	%
13	VV	46.349	191.00 amu	GAMMACERANE	365362	1.266	%
14	VV	46.583	191.00 amu	P	242671	0.8406	%
15	VV	46.689	191.00 amu	R	109755	0.3802	%
16	VV	47.138	191.00 amu	C32S HOPANE U	1288667	4.464	%
17	VV	47.407	191.00 amu	C32R HOPANE V	807688	2.798	%
18	VV	48.601	191.00 amu	C33S HOPANE ALPHA	711523	2.465	%
19	VV	48.981	191.00 amu	C33R HOPANE BETA	464381	1.609	%
20	VV	50.280	191.00 amu	C34S HOPANE GAMMA	445196	1.542	%
21	VV	50.840	191.00 amu	C34R HOPANE DELTA	249878	0.8655	%
22	VV	52.283	191.00 amu	C35S HOPANE EPSILON	481385	1.667	%
23	VV	53.107	191.00 amu	C35R HOPANE ZETA	270590	0.9373	%
24	PV	27.309	217.00 amu	C21 STERANE Y	1014032	3.512	%
25	VV	36.223	217.00 amu	C27S ba DIASTERANE10	736564	2.551	%
26	VV	36.868	217.00 amu	C27R ba DIASTERANE11	523537	1.813	%

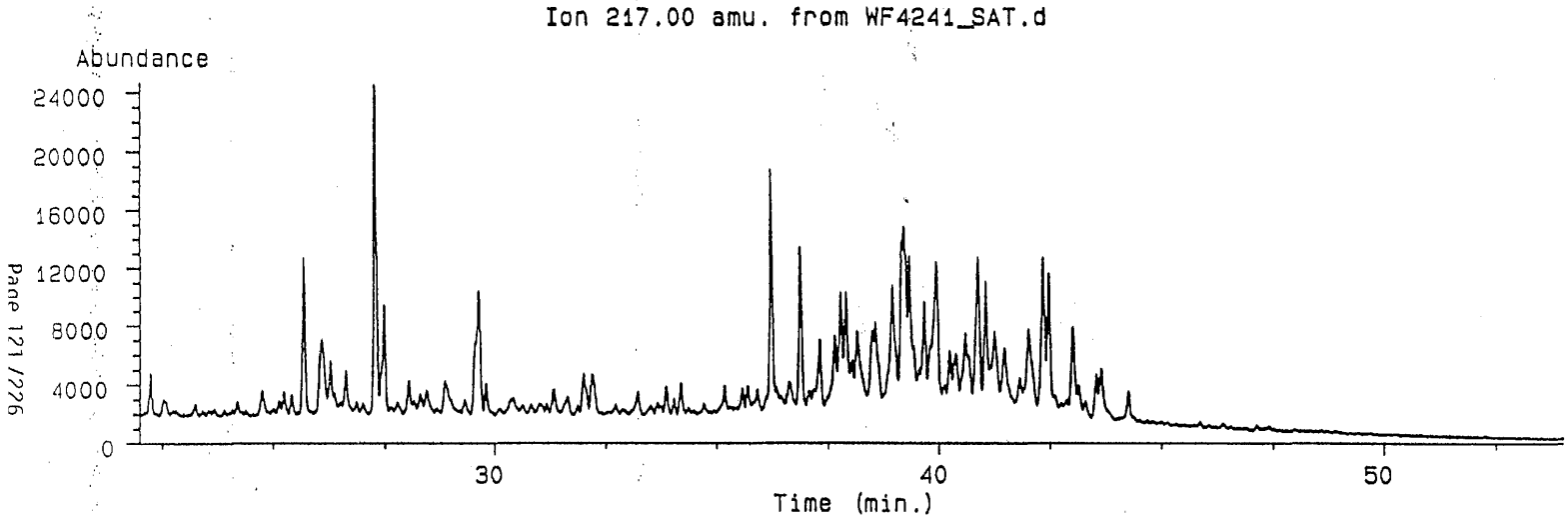
Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount
27	VV	37.305	217.00 amu	13	240640	0.8335 %
28	PV	37.641	217.00 amu	14	291315	1.009 %
29	VV	37.777	217.00 amu	15	385622	1.336 %
30	VV	37.900	217.00 amu	16	391764	1.357 %
31	BV	38.487	217.00 amu	18	195168	0.6760 %
32	PV	38.763	217.00 amu	19	4321	0.01497 %
33		-	217.00 amu	20	-Not Found-	
34	VV	39.162	217.00 amu	21	411078	1.424 %
35	VV	39.329	217.00 amu	22	486893	1.687 %
36	VV	39.659	217.00 amu	C27R aaa STERANE 25	316528	1.096 %
37	VV	39.812	217.00 amu	27	143566	0.4973 %
38	VV	41.480	217.00 amu	C28R aaa STERANE 36	259618	0.8993 %
39	VV	42.005	217.00 amu	C29S aaa STERANE 39	446895	1.548 %
40	VV	42.996	217.00 amu	C29R aaa STERANE 42	349794	1.212 %
41	VV	39.152	218.00 amu	C27R abb STERANE 21B	795468	2.755 %
42	VV	39.324	218.00 amu	C27S abb STERANE 22	627755	2.174 %
43	VV	40.889	218.00 amu	C28R abb STERANE 33A	634866	2.199 %
44	VV	41.054	218.00 amu	C28S abb STERANE 34	598863	2.074 %
45	BV	42.329	218.00 amu	C29R abb STERANE 40	669532	2.319 %
46	VV	42.462	218.00 amu	C29S abb STERANE 41	748038	2.591 %

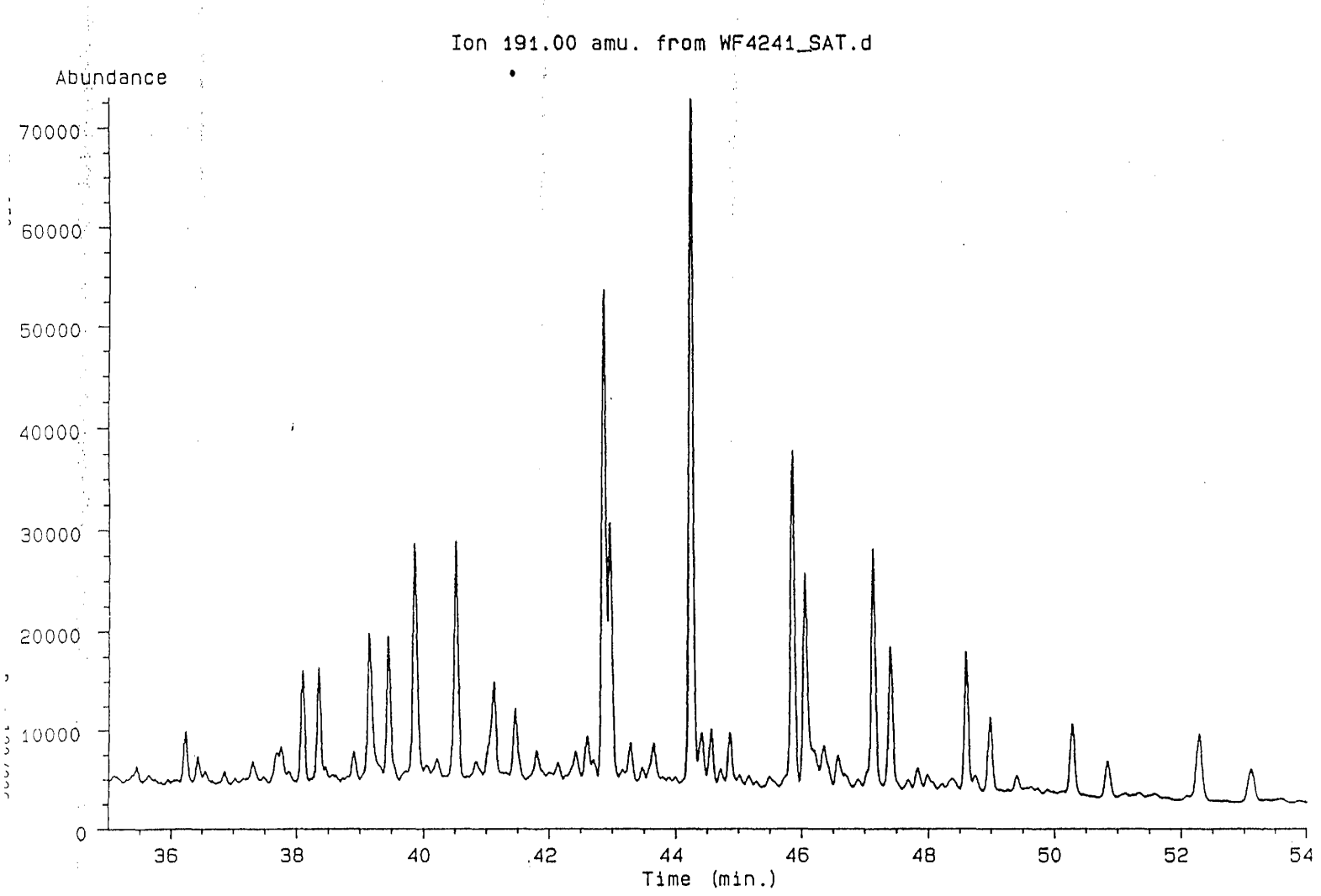
*** REPORT ERRORS ***

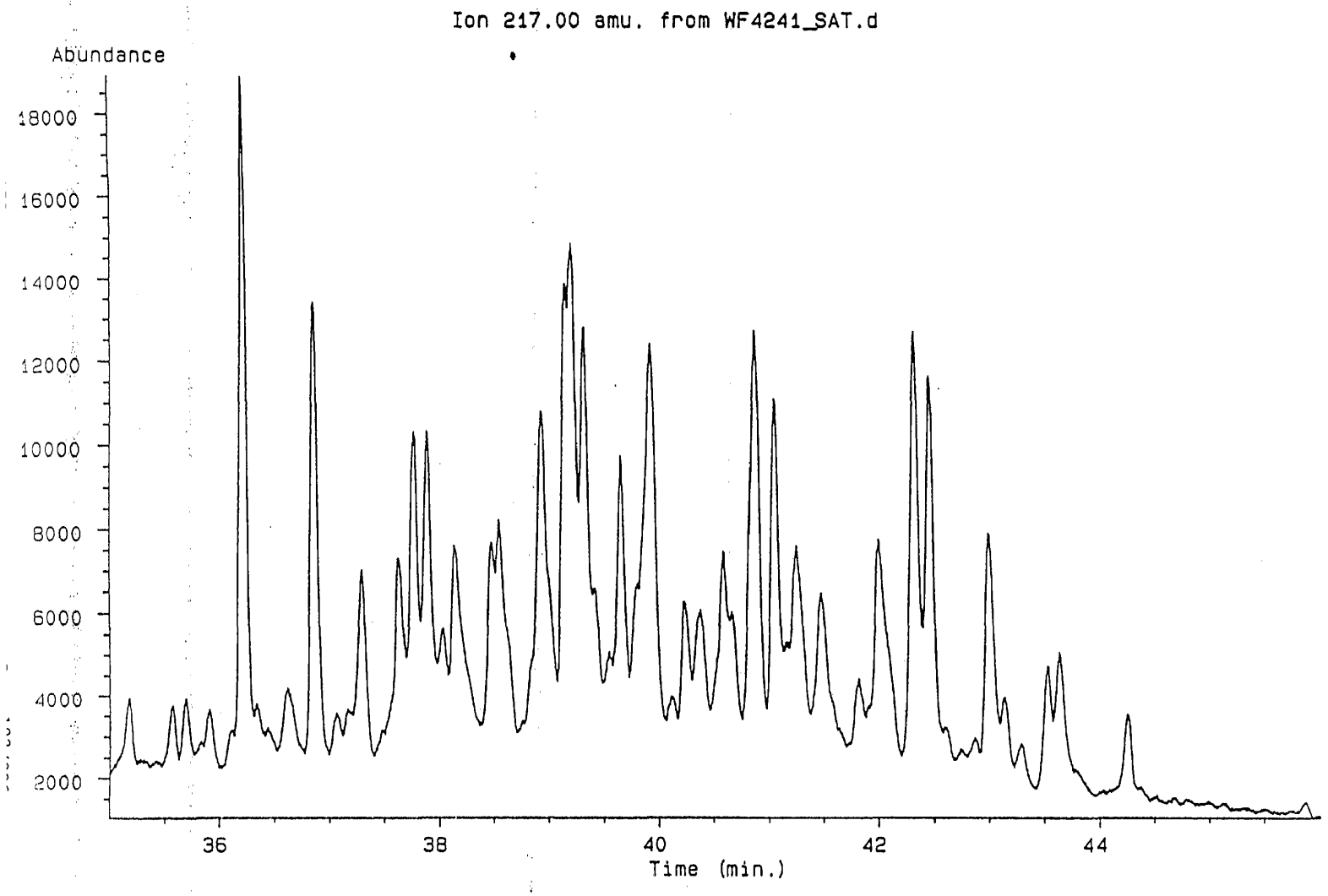
- Calibration Peak #7's Qualifiers Were Not Satisfied.

*** Not All Calibrated Peaks Found ***


Ion 191.00 amu. from WF4241_SAT.d
Abundance
70000
60000
50000
40000
30000
20000
10000
0
30
40
50
Time (min.)


Ion 217.00 amu. from WF4241_SAT.d
Abundance
24000
20000
16000
12000
8000
4000
0
30
40
50
Time (min.)


Ion 191.00 amu. from WF4241_SAT.d
Abundance
70000
60000
50000
40000
30000
20000
10000
0
36
38
40
42
44
46
48
50
52
54
Time (min.)


Ion 217.00 amu. from WF4241_SAT.d
Abundance
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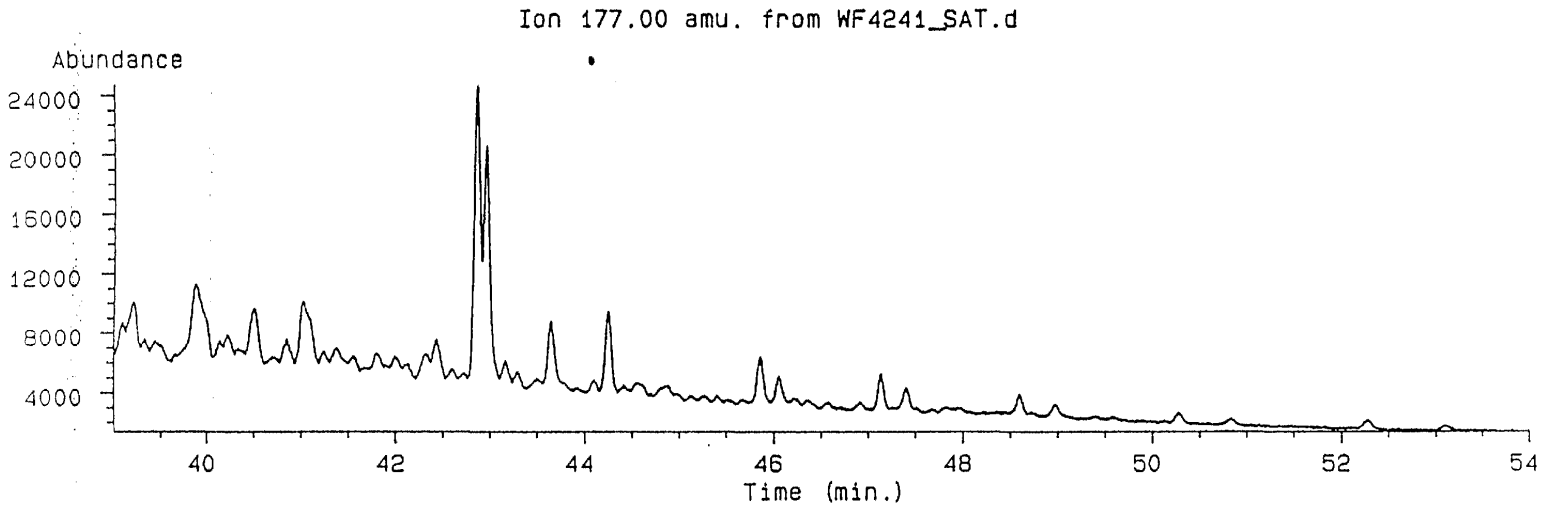
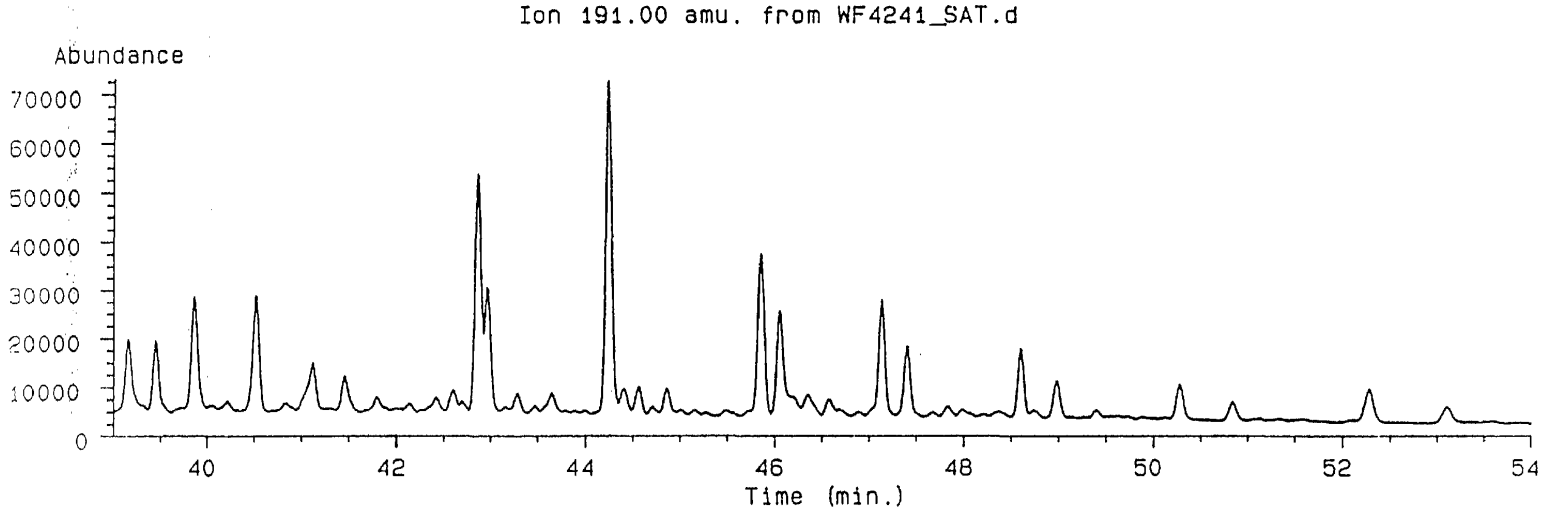
16000
14000
12000
10000
8000
6000
4000
2000
36
38
40
42
44
Time (min.)


Ion 177.00 amu. from WF4241_SAT.d
Abundance
24000
20000
16000
12000
8000
4000
40
42
44
46
48
50
52
54
Time (min.)


Ion 191.00 amu. from WF4241_SAT.d
Abundance
70000
60000
50000
40000
30000
20000
10000
0
40
42
44
46
48
50
52
54
Time (min.)

Ion 177.00 amu. from WF4241_SAT.d
WF4241_SAT

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	39.096	BV	0.056	83363	39.013	39.128
2	39.215	VV	0.084	220819	39.128	39.290
3	39.885	VV	0.129	513711	39.689	40.068
4	40.142	VV	0.061	57982	40.068	40.182
5	40.220	VV	0.067	91583	40.182	40.299
6	40.505	VV	0.090	236420	40.414	40.616
7	40.853	VV	0.064	79855	40.780	40.933
8	41.032	VV	0.107	324838	40.933	41.193
9	41.382	VV	0.071	55738	41.303	41.499
10	41.796	BV	0.064	45279	41.734	41.881
11	42.321	PV	0.074	99238	42.215	42.371
12	42.436	VV	0.077	155142	42.371	42.526
13	42.875	VV	0.071	938769	42.764	42.926
14	42.971	VV	0.067	748390	42.926	43.102
15	43.166	VV	0.066	78991	43.102	43.236
16	43.653	VV	0.080	261164	43.559	43.876
17	44.096	BV	0.067	39501	44.011	44.157
18	44.254	VV	0.072	269336	44.157	44.351
19	45.862	PV	0.064	137999	45.744	45.979
20	46.058	VV	0.065	77489	45.979	46.169
21	47.138	BB	0.055	99524	47.018	47.220
22	47.407	BV	0.060	64689	47.296	47.497
23	48.599	BV	0.065	57567	48.500	48.683

==========

Ion 191.00 amu. from WF4241_SAT.d
WF4241_SAT

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	22.091	BV	0.073	79958	22.013	22.249
2	22.604	VB	0.066	39099	22.464	22.697
3	22.890	VV	0.066	105338	22.805	22.967
4	23.084	VV	0.069	713024	22.967	23.203
5	23.321	VV	0.075	109841	23.203	23.409
6	23.482	VV	0.067	78371	23.409	23.563
7	24.486	BV	0.064	88381	24.349	24.581
8	25.156	VV	0.070	1050905	25.029	25.376
9	25.870	VV	0.068	105816	25.779	25.971
10	26.092	VV	0.075	69237	26.010	26.168
11	26.241	VV	0.079	86770	26.168	26.361
12	26.455	VV	0.067	153001	26.361	26.585
13	27.071	PV	0.068	498670	26.965	27.157
14	27.201	VV	0.060	46887	27.157	27.253
15	27.304	VV	0.069	65315	27.253	27.383
16	27.682	PV	0.057	31505	27.565	27.727
17	28.004	PV	0.064	328665	27.903	28.095

18	28.727	PV	0.062	156488	28.623	28.813
19	29.123	VV	0.064	54744	29.037	29.145
20	29.253	VV	0.071	2974534	29.145	29.449
21	29.538	VV	0.073	77103	29.449	29.648
22	29.925	VV	0.058	120757	29.841	30.003
23	30.409	BV	0.068	1924067	30.268	30.615
24	30.894	BV	0.061	72597	30.805	30.931
25	30.981	VV	0.051	57252	30.931	30.994
26	31.045	VV	0.079	135510	30.994	31.151
27	31.220	VV	0.070	50334	31.151	31.295
28	31.402	VV	0.072	248862	31.295	31.545
29	31.667	VV	0.072	87834	31.545	31.766
30	32.507	BV	0.079	86942	32.418	32.590
31	32.728	VV	0.111	1815827	32.590	32.945
32	33.172	VV	0.063	120504	33.087	33.249
33	33.314	VV	0.074	61055	33.249	33.409
34	33.551	PV	0.084	191579	33.409	33.644
35	33.947	BV	0.068	798658	33.839	34.058
36	34.391	VV	0.067	603169	34.279	34.454
37	34.522	VV	0.065	617074	34.454	34.689
38	35.099	VB	0.096	54021	35.021	35.225
39	35.459	BV	0.086	107215	35.233	35.550
40	36.241	VV	0.067	253372	36.152	36.353
41	36.440	VV	0.061	135039	36.353	36.511
42	36.560	VV	0.074	75283	36.511	36.723
43	36.869	VV	0.060	63659	36.723	36.963
44	37.316	BV	0.067	90625	37.229	37.449
45	37.695	BV	0.070	157103	37.573	37.728
46	37.762	VV	0.065	170623	37.728	37.836
47	38.106	VV	0.071	511785	37.966	38.205
48	38.356	VV	0.068	534246	38.251	38.432
49	38.452	VV	0.057	70490	38.432	38.528
50	38.914	VV	0.073	175911	38.824	38.994
51	39.157	VV	0.087	970990	38.994	39.364
52	39.455	VV	0.077	756665	39.364	39.625
53	39.873	VV	0.083	1370899	39.625	39.996
54	40.052	VV	0.085	121807	39.996	40.115
55	40.220	VV	0.092	201256	40.115	40.302
56	40.528	VV	0.077	1306258	40.302	40.655
57	40.839	VV	0.131	246946	40.655	40.945
58	41.126	VV	0.106	821031	40.945	41.279
59	41.463	VV	0.085	485062	41.380	41.626
60	41.803	VV	0.105	278509	41.626	41.882
61	42.140	VV	0.077	148688	42.070	42.220
62	42.424	VV	0.119	320403	42.220	42.515
63	42.604	VV	0.087	295457	42.515	42.669
64	42.700	VV	0.065	131946	42.669	42.770
65	42.876	VV	0.072	2347573	42.770	42.932
66	42.970	VV	0.068	1201128	42.932	43.102
67	43.286	VV	0.084	264045	43.202	43.389
68	43.473	VV	0.071	113495	43.389	43.530
69	43.652	VV	0.097	328119	43.530	43.762
70	44.254	VV	0.072	3246431	44.060	44.349
71	44.412	VV	0.079	312286	44.349	44.488

72	44.566	VV	0.073	303038	44.488	44.652
73	44.715	VV	0.065	100765	44.652	44.783
74	44.862	VV	0.081	302921	44.783	44.967
75	45.162	VV	0.069	67888	45.094	45.229
76	45.494	VV	0.095	95547	45.410	45.639
77	45.864	VV	0.076	1677298	45.639	45.962
78	46.059	VV	0.094	1396854	45.962	46.281
79	46.350	VV	0.103	336490	46.281	46.496
80	46.583	VV	0.086	215411	46.496	46.663
81	46.689	VV	0.068	84231	46.663	46.807
82	47.138	VV	0.079	1224538	46.966	47.295
83	47.407	VV	0.079	747053	47.295	47.583
84	47.687	VV	0.068	57334	47.583	47.746
85	47.835	VV	0.082	131088	47.746	47.921
86	47.988	VV	0.097	120471	47.921	48.148
87	48.373	VV	0.110	109420	48.267	48.507
88	48.601	VV	0.071	657215	48.507	48.700
89	48.752	VV	0.082	86681	48.700	48.866
90	48.981	VB	0.078	390812	48.866	49.217
91	49.400	PV	0.067	71054	49.310	49.495
92	50.280	VV	0.084	384903	50.173	50.443
93	50.841	BV	0.094	222692	50.692	50.981
94	52.283	BB	0.105	491471	51.989	52.557
95	53.107	BB	0.108	237383	52.908	53.294
96	54.729	BB	0.111	62885	54.553	54.889

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Ion 217.00 amu. from WF4241_SAT.d
WF4241_SAT

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	22.243	VV	0.066	126460	22.172	22.373
2	22.535	PV	0.099	83600	22.438	22.685
3	23.267	VV	0.069	41941	23.132	23.369
4	24.224	VV	0.082	51418	24.148	24.358
5	24.785	PV	0.082	99791	24.652	24.889
6	25.161	VV	0.064	40686	25.092	25.211
7	25.270	VV	0.068	69338	25.211	25.370
8	25.446	VV	0.063	55875	25.370	25.534
9	25.715	PV	0.067	460051	25.604	25.882
10	26.107	VV	0.113	388985	25.978	26.226
11	26.302	VV	0.068	181593	26.226	26.365
12	26.387	VV	0.057	58673	26.365	26.473
13	26.527	VV	0.060	34834	26.473	26.566
14	26.647	VV	0.085	166588	26.566	26.801
15	26.879	VV	0.078	40144	26.801	26.961
16	27.031	VV	0.068	36345	26.961	27.167
17	27.309	PV	0.071	1012214	27.167	27.390
18	27.505	VV	0.080	408549	27.390	27.593
19	27.660	VV	0.064	22744	27.615	27.720
20	27.807	VV	0.091	51836	27.720	27.924

21	28.066	VV	0.071	120150	27.924	28.141
22	28.182	VV	0.062	42860	28.141	28.243
23	28.326	VV	0.081	80525	28.243	28.392
24	28.468	VV	0.101	120294	28.392	28.627
25	28.699	VV	0.070	21318	28.627	28.762
26	28.881	VV	0.118	215893	28.789	29.086
27	29.326	VV	0.085	63277	29.245	29.457
28	29.570	VV	0.059	175446	29.457	29.583
29	29.648	VV	0.088	483109	29.583	29.746
30	29.816	VV	0.076	114395	29.746	30.009
31	30.374	VV	0.084	61314	30.222	30.396
32	30.435	VV	0.082	70627	30.396	30.565
33	30.649	VV	0.077	37735	30.591	30.735
34	30.832	VV	0.071	40641	30.761	30.905
35	31.024	VV	0.071	42211	30.905	31.048
36	31.061	VV	0.062	26565	31.048	31.126
37	31.179	VV	0.065	36250	31.126	31.249
38	31.335	VV	0.081	102807	31.249	31.455
39	31.582	VV	0.060	44235	31.455	31.600
40	31.643	VV	0.061	62375	31.600	31.729
41	31.869	VV	0.059	29302	31.770	31.912
42	32.004	VV	0.092	188811	31.912	32.115
43	32.195	VV	0.093	200078	32.115	32.345
44	32.728	VV	0.081	46835	32.600	32.799
45	33.225	VV	0.099	117345	33.037	33.368
46	33.513	VV	0.098	52598	33.368	33.596
47	33.665	VV	0.061	40178	33.596	33.705
48	33.746	VV	0.057	29234	33.705	33.791
49	33.860	VV	0.072	99071	33.791	33.965
50	34.041	VV	0.061	53316	33.965	34.110
51	34.195	VV	0.074	115396	34.110	34.300
52	34.363	VV	0.075	28431	34.300	34.426
53	34.712	VV	0.087	57970	34.611	34.815
54	35.182	VV	0.097	146029	34.993	35.251
55	35.268	VV	0.055	20326	35.251	35.307
56	35.579	VV	0.080	110117	35.476	35.635
57	35.703	VV	0.076	115005	35.635	35.776
58	35.839	VV	0.061	48238	35.776	35.862
59	35.919	VV	0.085	104861	35.862	36.006
60	36.123	VV	0.073	59117	36.029	36.135
61	36.223	VV	0.069	789346	36.135	36.314
62	36.342	VV	0.065	101868	36.314	36.417
63	36.442	VV	0.070	77736	36.417	36.525
64	36.624	VV	0.123	226242	36.525	36.776
65	36.868	VV	0.080	610672	36.776	37.000
66	37.069	VV	0.077	106025	37.000	37.125
67	37.171	VV	0.066	91654	37.125	37.216
68	37.305	VV	0.085	327262	37.216	37.410
69	37.481	VV	0.068	56061	37.410	37.495
70	37.640	VV	0.098	390615	37.495	37.703
71	37.777	VV	0.082	469618	37.703	37.835
72	37.900	VV	0.082	494435	37.835	37.982
73	38.039	VV	0.075	207800	37.982	38.084
74	38.148	VV	0.131	595521	38.084	38.387

75	38.487	VV	0.078	322128	38.387	38.522
76	38.555	VV	0.094	465348	38.522	38.723
77	38.762	VV	0.048	47432	38.723	38.775
78	38.941	VV	0.126	850740	38.775	39.078
79	39.162	VV	0.058	500725	39.078	39.182
80	39.217	VV	0.067	633586	39.182	39.277
81	39.329	VV	0.078	599499	39.277	39.402
82	39.549	VV	0.066	170925	39.484	39.579
83	39.659	VV	0.081	461133	39.579	39.731
84	39.812	VV	0.080	239091	39.731	39.827
85	39.934	VV	0.116	881029	39.827	40.065
86	40.112	VV	0.080	124420	40.065	40.168
87	40.234	VV	0.080	265822	40.168	40.300
88	40.383	VV	0.092	327536	40.300	40.463
89	40.594	VV	0.098	419781	40.463	40.647
90	40.669	VV	0.064	202796	40.647	40.753
91	40.879	VV	0.089	780388	40.753	40.978
92	41.055	VV	0.086	546013	40.978	41.140
93	41.150	VV	0.023	48894	41.140	41.163
94	41.171	VV	0.023	48906	41.163	41.186
95	41.253	VV	0.100	466393	41.186	41.380
96	41.480	VV	0.111	434809	41.380	41.623
97	41.819	VV	0.079	173077	41.739	41.881
98	42.005	VV	0.125	615298	41.881	42.205
99	42.328	VV	0.086	641482	42.205	42.397
100	42.459	VV	0.085	556700	42.397	42.577
101	42.740	VV	0.077	54831	42.694	42.796
102	42.869	VV	0.072	72064	42.796	42.907
103	42.996	VV	0.091	383239	42.907	43.093
104	43.138	VV	0.076	123480	43.093	43.224
105	43.288	VV	0.083	72234	43.224	43.426
106	43.529	VV	0.063	148355	43.426	43.574
107	43.636	VV	0.088	216853	43.574	43.765
108	44.254	PV	0.072	85904	44.108	44.350

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Ion 218.00 amu. from WF4241_SAT.d
WF4241_SAT

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	35.184	VV	0.055	20589	35.082	35.273
2	35.574	VV	0.068	34359	35.475	35.640
3	35.701	VV	0.062	25963	35.640	35.779
4	35.919	VV	0.083	100419	35.779	36.018
5	36.108	VV	0.070	73741	36.018	36.157
6	36.227	VV	0.072	216779	36.157	36.303
7	36.343	VV	0.053	30747	36.303	36.374
8	36.397	VV	0.074	47571	36.374	36.522
9	36.619	VV	0.130	127886	36.522	36.776
10	36.865	VV	0.083	199505	36.776	36.958
11	37.065	VV	0.079	85311	36.995	37.136

12	37.155	VV	0.049	24026	37.136	37.198
13	37.277	VV	0.096	131123	37.198	37.396
14	37.487	VV	0.082	34190	37.396	37.497
15	37.558	VV	0.065	70462	37.497	37.597
16	37.644	VV	0.074	97255	37.597	37.697
17	37.776	VV	0.088	215281	37.697	37.844
18	37.899	VV	0.066	144600	37.844	37.941
19	38.033	VV	0.092	302224	37.941	38.089
20	38.148	VV	0.104	463497	38.089	38.391
21	38.492	VV	0.078	99423	38.391	38.507
22	38.601	VV	0.109	279742	38.507	38.708
23	38.844	VV	0.091	205246	38.708	38.887
24	38.944	VV	0.098	277182	38.887	39.065
25	39.152	VV	0.080	861447	39.065	39.257
26	39.324	VV	0.073	676020	39.257	39.401
27	39.429	VV	0.060	129070	39.401	39.497
28	39.551	VV	0.055	87983	39.497	39.579
29	39.662	VV	0.083	270185	39.579	39.730
30	39.806	VV	0.062	212718	39.730	39.828
31	39.874	VV	0.052	191760	39.828	39.897
32	39.934	VV	0.079	306181	39.897	40.073
33	40.138	VV	0.063	64987	40.073	40.167
34	40.229	VV	0.081	137083	40.167	40.298
35	40.357	VV	0.084	130389	40.298	40.441
36	40.597	VV	0.104	298240	40.441	40.658
37	40.668	VV	0.070	91694	40.658	40.756
38	40.889	VV	0.082	691462	40.756	40.973
39	41.054	VV	0.076	641311	40.973	41.141
40	41.252	VV	0.097	565191	41.141	41.381
41	41.476	VV	0.088	165600	41.381	41.525
42	41.564	VV	0.088	137826	41.525	41.703
43	41.822	VV	0.087	146294	41.703	41.880
44	41.909	VV	0.049	61538	41.880	41.940
45	42.056	VV	0.116	314326	41.940	42.198
46	42.329	VV	0.075	705659	42.198	42.394
47	42.462	VV	0.080	777956	42.394	42.582
48	42.720	VV	0.077	47654	42.677	42.801
49	42.870	VV	0.073	41328	42.801	42.916
50	42.997	VV	0.093	200645	42.916	43.099
51	43.125	VV	0.074	56638	43.099	43.225
52	43.293	VV	0.074	49870	43.225	43.420
53	43.534	PV	0.069	148721	43.420	43.578
54	43.631	VV	0.077	171421	43.578	43.739
55	44.257	PV	0.076	135626	44.045	44.369

*** PETROLEUM GEOCHEMISTRY ***

SARA ANALYSIS

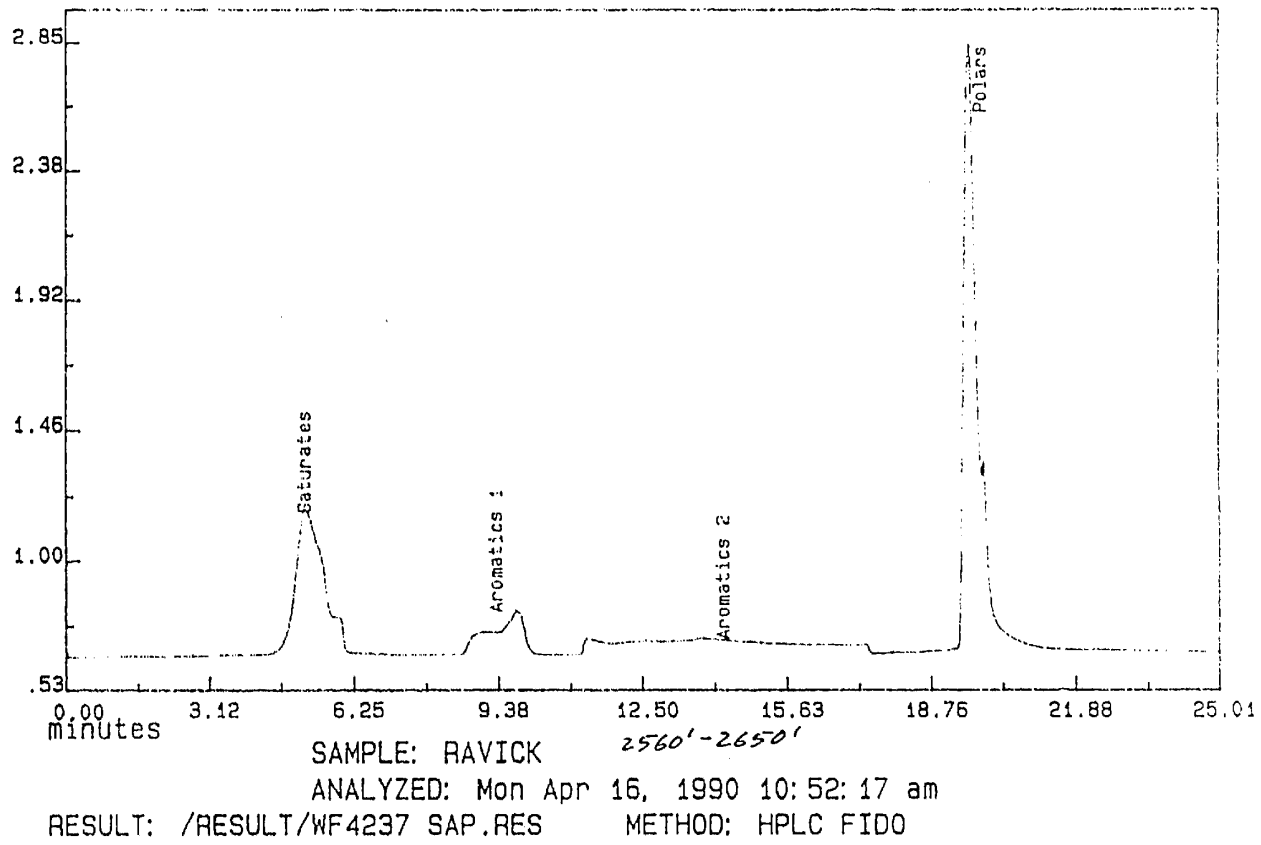
2560'-2650'

SAMPLE NAME : RAVICK
INSTRUMENT : HPLC_FID
INJECT TIME : Mon Apr 16, 1990 10:52:17 am
METHOD USED : /METHOD/HPLC_FIDO.MTH
SEQUENCE : /DATA/LOOP/SEQUENCE/HP1090_AUTOBV.SEQ
RESULT FILE : /RESULT/WF4237_SAP.RES
REPORT TIME : 11:17 AM MON., 16 APR., 1990

	AREA	TIME	RESPONSE FACTOR
Saturates	23065.	5.29	.1275E-03
Aromatics 1	7612.	9.42	.5470E-04
Aromatics 2	15896.	14.36	.5470E-04
Polars	49191.	19.96	.4160E-04

	AMOUNT (mg)	% RESIDUE
Saturates	2.94	46.9
Aromatics	1.29	20.5
Polars	2.05	32.6

	% OIL
Saturates	39.7
Aromatics	17.4
Polars	27.6
Asphaltenes	15.3


AMPLITUDE/1000
Range Normalized
2.85
2.38
1.92
1.46
1.00
.53
Saturates
Aromatics 1
Aromatics 2
Polars
0.00
3.12
6.25
9.38
12.50
15.63
18.76
21.88
25.01
minutes
SAMPLE: RAVICK
2560'-2650'
ANALYZED: Mon Apr 16, 1990 10:52:17 am
RESULT: /RESULT/WF4237 SAP.RES
METHOD: HPLC FIDO

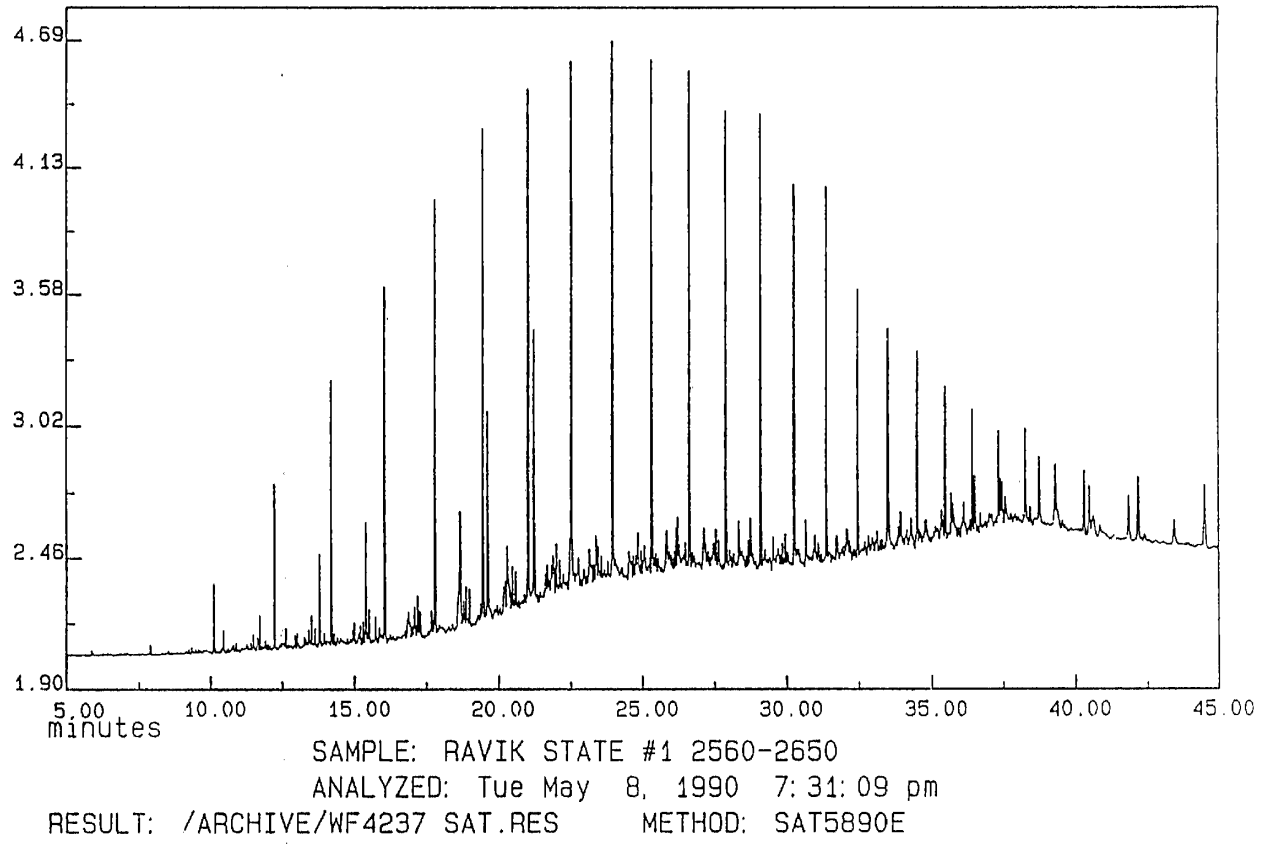
*** PETROLEUM GEOCHEMISTRY ***
SATURATE GC

SAMPLE NAME : RAVIK STATE #1 2560-2650
INSTRUMENT : HP_5890_2
INJECT TIME : Tue May 8, 1990 7:31:09 pm
METHOD USED : /METHOD/SAT5890E.MTH
RESULT FILE : /RESULT/WF4237_SAT.RES
REPORT TIME : 8:23 PM TUE., 8 MAY , 1990

CPI VALUE : .93
PRISTANE / PHYTANE : .71 C15/C25 : .81
PRISTANE / C17 : .63 C17/Pr : 1.60
PHYTANE / C18 : .78 C18/Ph : 1.28

	AREA	%AREA NALK	TIME	NORM C15
N-C10	174.	.1	5.85	.02
N-C11	330.	.1	7.88	.03
N-C12	2080.	.8	10.11	.19
N-C13	4985.	1.9	12.21	.46
N-C14	7773.	3.0	14.19	.72
N-C15	10852.	4.2	16.04	1.00
N-C16	13558.	5.3	17.79	1.25
N-C17	15901.	6.2	19.45	1.47
N-C18	17819.	7.0	21.03	1.64
N-C19	17570.	6.9	22.53	1.62
N-C20	19055.	7.4	23.96	1.76
N-C21	16048.	6.3	25.32	1.48
N-C22	16503.	6.4	26.64	1.52
N-C23	15477.	6.0	27.89	1.43
N-C24	15035.	5.9	29.10	1.39
N-C25	13343.	5.2	30.26	1.23
N-C26	12649.	4.9	31.38	1.17
N-C27	8856.	3.5	32.45	.82
N-C28	9629.	3.8	33.49	.89
N-C29	7338.	2.9	34.50	.68
N-C30	5684.	2.2	35.47	.52
N-C31	4081.	1.6	36.41	.38
N-C32	3845.	1.5	37.33	.35
N-C33	4355.	1.7	38.27	.40
N-C34	6294.	2.5	39.31	.58
N-C35	3284.	1.3	40.30	.30
N-C36	3366.	1.3	41.85	.31

	AREA	%AREA ISPR	TIME
Farnesane	3236.	8.8	13.78
Acyclic C16	4236.	11.5	15.39
Acyclic C18	5401.	14.7	18.67
Pristane	9955.	27.1	19.61
Phytane	13926.	37.9	21.22


4.69
4.13
3.58
3.02
2.46
1.90
AMPLITUDE/1000
Range Normalized
5.00
10.00
15.00
20.00
25.00
30.00
35.00
40.00
45.00
minutes
SAMPLE: RAVIK STATE #1 2560-2650
ANALYZED: Tue May 8, 1990 7:31:09 pm
RESULT: /ARCHIVE/WF4237 SAT.RES
METHOD: SAT5890E

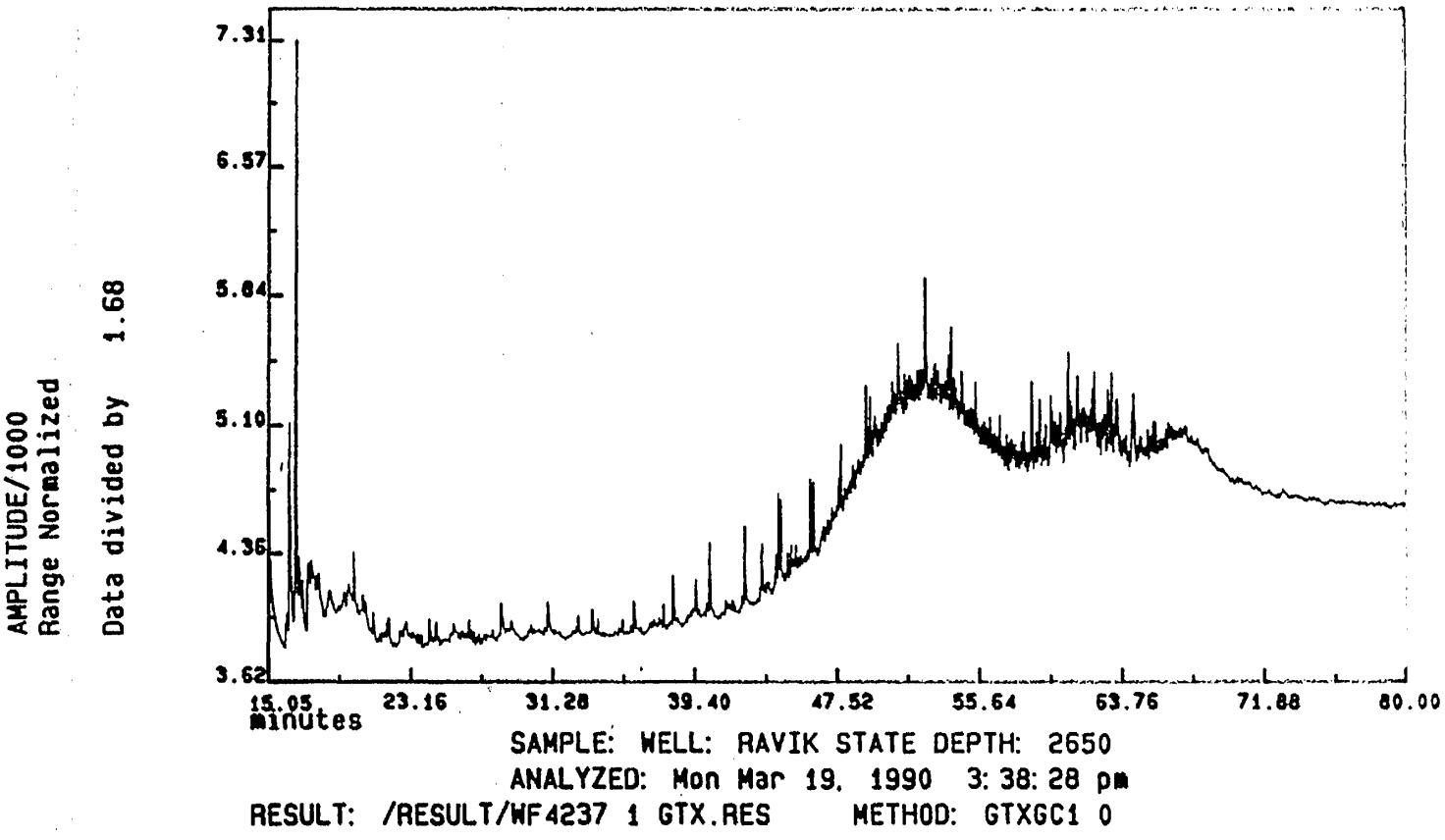
**** PETROLEUM GEOCHEMISTRY / GNH ROCK EVAL ***

SAMPLE : WF4237
INJECTED AT : Mon Apr 16, 1990 11:51:18 pm
INSTRUMENT : GROCK
METHOD USED : /METHOD/PYRO5.MTH
RESULT FILE : /RESULT/WF423710_GRO.RES
BLANK FILE : /RESULT/BLANK13_GRO.RES

***** AREA SLICE INTEGRATION *****

AREA	YIELD (mg/g)	FRACTION
93455312.	4.09	S1
578772990.	5.46	S2

SAMPLE WT. : 44.80 mgs
Tmax : 441 C


AMPLITUDE/1000
Range Normalized
Data divided by 1.68
7.31
6.57
5.84
5.10
4.36
3.62
15.05
23.16
31.28
39.40
47.52
55.64
63.76
71.88
80.00
minutes
SAMPLE: WELL: RAVIK STATE DEPTH: 2650
ANALYZED: Mon Mar 19, 1990 3:38:28 pm
RESULT: /RESULT/WF4237 1 GTX.RES METHOD: GTXGC1 0

**** PETROLEUM GEOCHEMISTRY / GNH PGC AUTO ****

SAMPLE : WELL: RAVIK ST #1 DEPTH: 2650
INJECTED AT : Mon Apr 16, 1990 11:51:17 pm
INSTRUMENT : GPGC_2
METHOD USED : /METHOD/CGPG2_0.MTH
RESULT FILE : /RESULT/WF423710_GPG.RES
BLANK FILE : /RESULT/BLANK15_GPG.RES

***** AREA SLICE INTEGRATION *****

AREA	AREA PERCENT	FRACTION
4082455.	16.6	METHANE
6703502.	27.3	GASES
7728040.	31.5	GASOLINE
4756055.	19.4	KEROSENE
1253421.	5.1	GAS-OIL
0.	0.0	WAX-DISTILLATE

TOTAL AREA : 24523476. AREA %: 100.0

SAMPLE WT. : 44.80 mgs

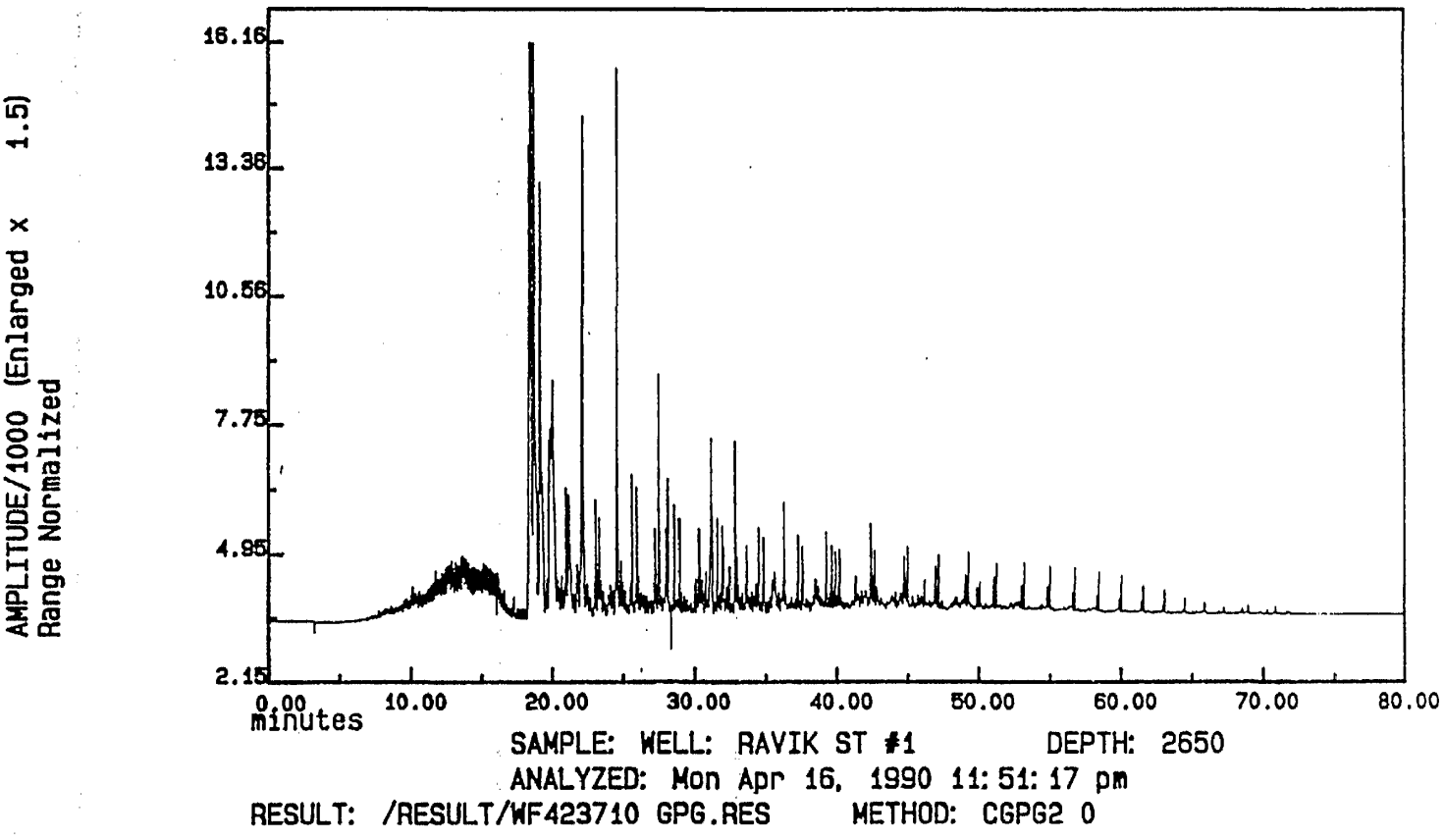
SAMPLE GOGI = .79
THIS IS GAS PRONE

METHANE + GASES = 44.0
GASOLINE+KEROSINE+GAS OIL+WAX DISTILLATE = 56.0

BY FACTOR ANALYSIS OF KEROGEN PYROLYSATE
THIS IS A GAS+CONDENSATE SOURCE

THIS ANALYSIS DETERMINES KEROGEN POTENTIAL AT ITS
PRESENT MATURITY. THIS IS NOT A KEROGEN TYPE ANALYSIS.

SAMPLE K2 = 5.34 mg/gm


AMPLITUDE/1000 (Enlarged x 1.5)
Range Normalized
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13.36
10.56
7.75
4.95
2.15
0.00
10.00
20.00
30.00
40.00
50.00
60.00
70.00
80.00
minutes
SAMPLE: WELL: RAVIK ST #1 DEPTH: 2650
ANALYZED: Mon Apr 16, 1990 11:51:17 pm
RESULT: /RESULT/WF423710 GPG.RES METHOD: CGPG2 0

Normalized Percent Report

Information from Current Data File Header:
File: /chem/msd/WF4237_SAT.d
Operator:
Date Acquired: Fri Apr 27 90 05:58:24 PM
Sample Name: WF4237_SAT
Misc Info:
Sequence Index: 1 **Bottle Number:** 15 **Repetition Number:** 1

SATURATE BIOMARKERS

Calibration Table Last Updated: Sun Jun 10 13:14:59 1990

Reference Peak Window: 0.250 Absolute Minutes
Non-reference Peak Window: 0.250 Absolute Minutes

Default Sample Amount: 0
Uncalib. Peak Response Factor: 0
Default Multiplier: 1

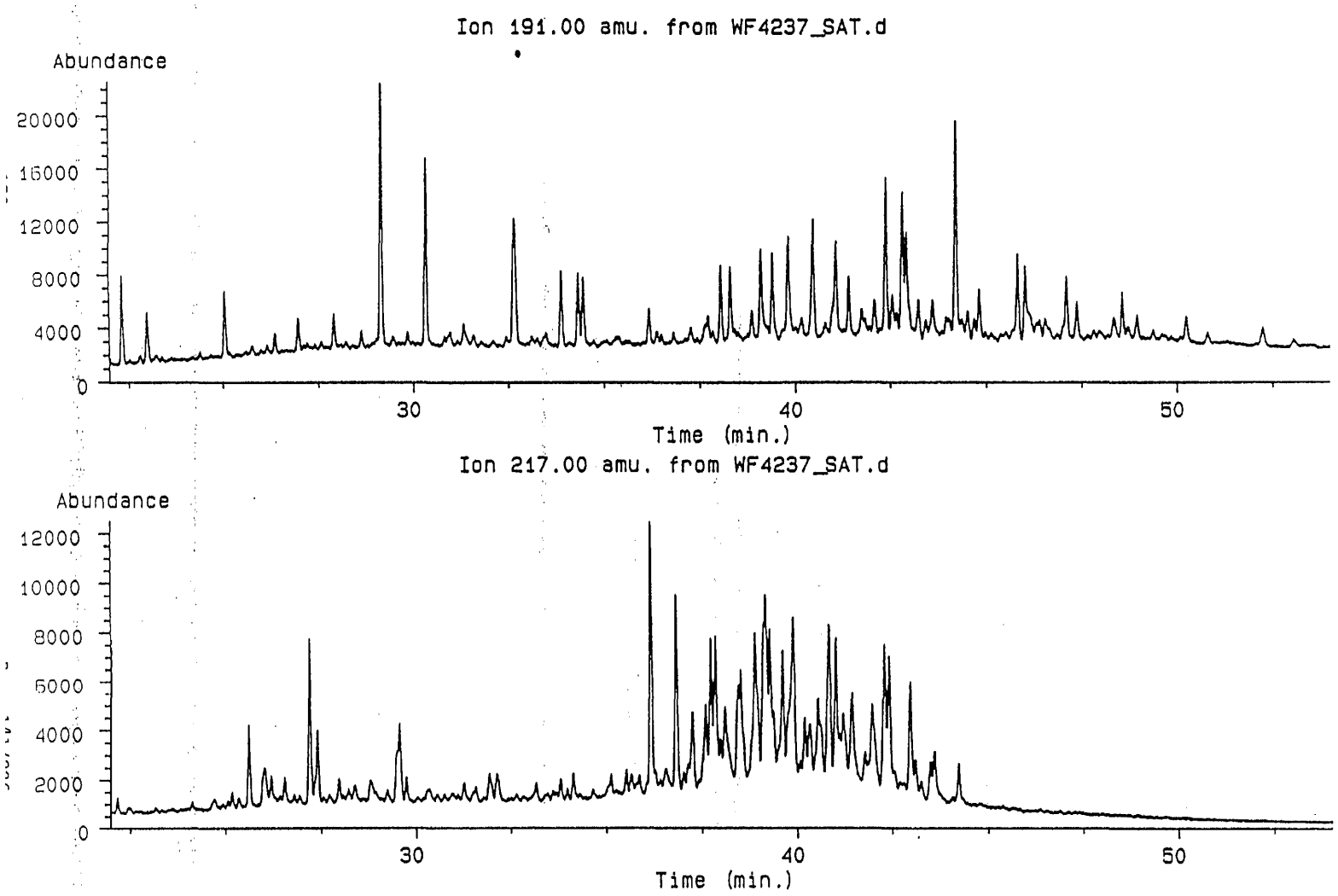
Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount
1	VV	39.821	191.00 amu	C27 18A HOPANE TS	436997	3.334 %
2	VV	40.481	191.00 amu	C27 17A HOPANE TM	500812	3.821 %
3	VV	40.805	191.00 amu	C28 BISNORHOPANE X	98004	0.7477 %
4	VV	42.829	191.00 amu	C29 HOPANE D	529787	4.042 %
5	VV	42.930	191.00 amu	C29 NORHOPANE D2	485321	3.703 %
6	VV	43.245	191.00 amu	C30 PENTACYCLANE PI	180528	1.377 %
7	VV	43.853	191.00 amu	C30 18A OLEANANE B	35165	0.2683 %*
8	VV	44.211	191.00 amu	C30 HOPANE G	860006	6.561 %
9	VV	44.826	191.00 amu	C30 MORETANE K	209273	1.597 %
10	VV	45.831	191.00 amu	C31S HOPANE N	341675	2.607 %
11	VV	46.025	191.00 amu	C31R HOPANE O	459379	3.505 %
12	VV	46.327	191.00 amu	O & GAMMACERANE	73263	0.5589 %
13	VV	46.414	191.00 amu	GAMMACERANE	98432	0.7509 %
14	VV	46.548	191.00 amu	P	199225	1.520 %
15		-	191.00 amu	R	-Not Found-	
16	VV	47.110	191.00 amu	C32S HOPANE U	332316	2.535 %
17	VV	47.385	191.00 amu	C32R HOPANE V	184780	1.410 %
18	VV	48.585	191.00 amu	C33S HOPANE ALPHA	209889	1.601 %
19	VV	48.966	191.00 amu	C33R HOPANE BETA	161172	1.230 %
20	VV	50.263	191.00 amu	C34S HOPANE GAMMA	137825	1.051 %
21	VV	50.823	191.00 amu	C34R HOPANE DELTA	77181	0.5888 %
22	VV	52.266	191.00 amu	C35S HOPANE EPSILON	113097	0.8628 %
23	VV	53.074	191.00 amu	C35R HOPANE ZETA	49600	0.3784 %
24	PV	27.224	217.00 amu	C21 STERANE Y	290956	2.220 %
25	VV	36.168	217.00 amu	C27S ba DIASTERANE10	498291	3.801 %
26	VV	36.817	217.00 amu	C27R ba DIASTERANE11	383983	2.929 %

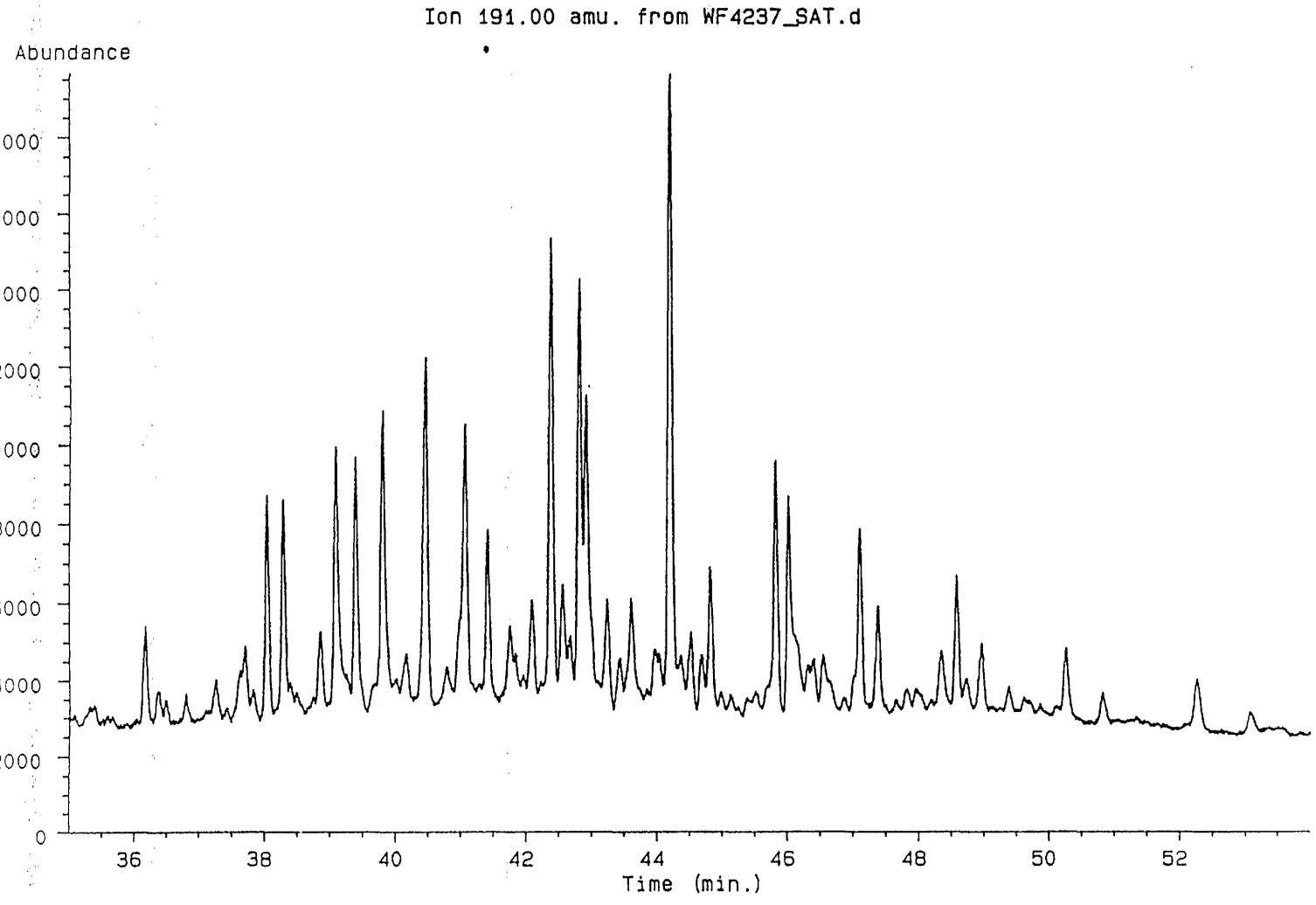
Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount
27	VV	37.251	217.00 amu	13	170857	1.303 %
28	VV	37.595	217.00 amu	14	195003	1.488 %
29	VV	37.726	217.00 amu	15	271305	2.070 %
30	VV	37.851	217.00 amu	16	326853	2.494 %
31	BV	38.438	217.00 amu	18	152571	1.164 %
32		-	217.00 amu	19	-Not Found-	
33	PV	38.889	217.00 amu	20	459485	3.505 %
34	VV	39.112	217.00 amu	21	216221	1.650 %
35	VV	39.273	217.00 amu	22	294489	2.247 %
36	VV	39.612	217.00 amu	C27R aaa STERANE 25	297485	2.270 %
37	VV	39.889	217.00 amu	27	551536	4.208 %
38	VV	41.443	217.00 amu	C28R aaa STERANE 36	256883	1.960 %
39	VV	41.972	217.00 amu	C29S aaa STERANE 39	281423	2.147 %
40	VV	42.965	217.00 amu	C29R aaa STERANE 42	251845	1.921 %
41	VV	39.100	218.00 amu	C27R abb STERANE 21B	470405	3.589 %
42	VV	39.271	218.00 amu	C27S abb STERANE 22	362466	2.765 %
43	VV	40.846	218.00 amu	C28R abb STERANE 33A	402194	3.068 %
44	VV	41.016	218.00 amu	C28S abb STERANE 34	395301	3.016 %
45	BV	42.287	218.00 amu	C29R abb STERANE 40	376884	2.875 %
46	VV	42.417	218.00 amu	C29S abb STERANE 41	427679	3.263 %

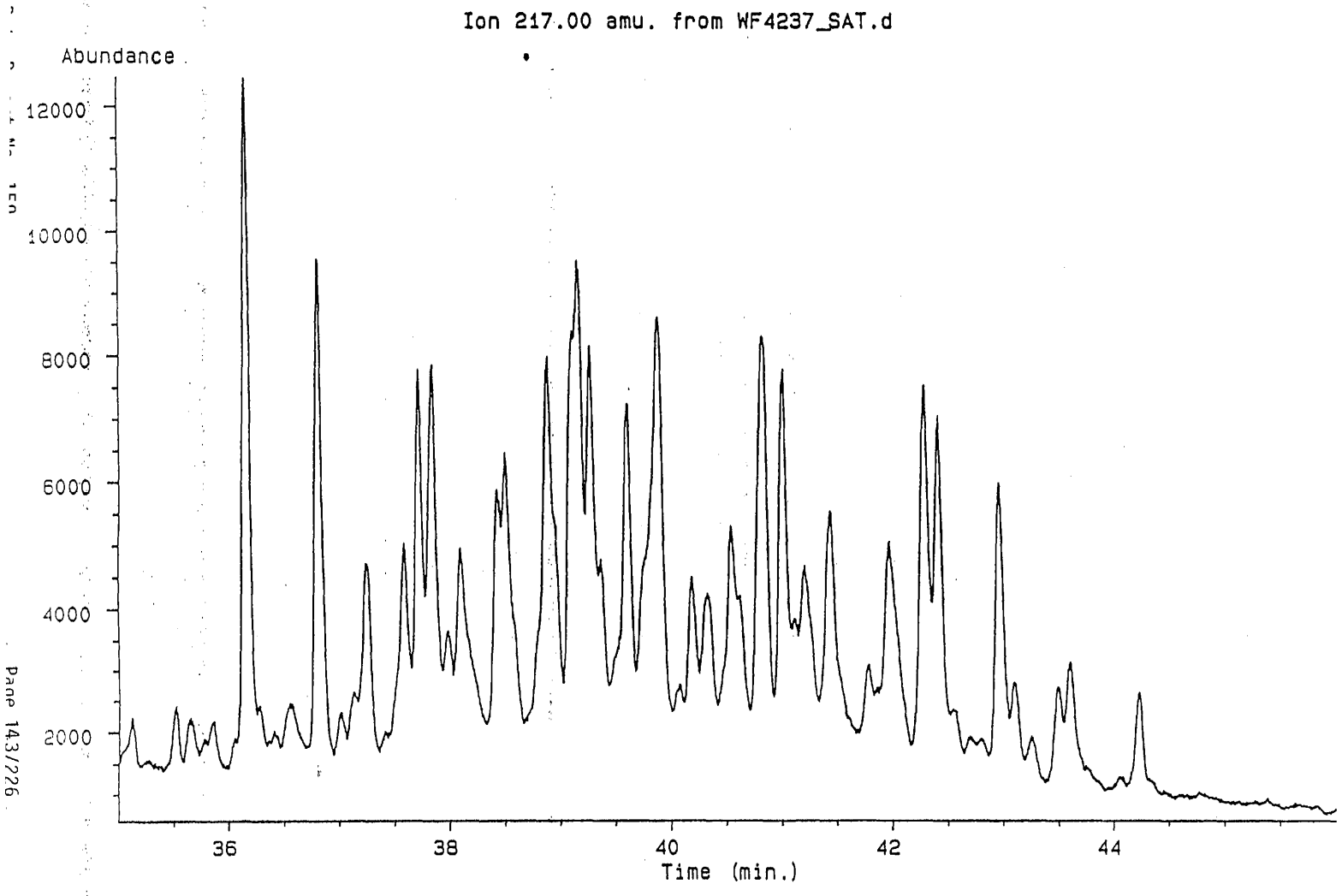
***** REPORT ERRORS *****

Calibration Peak #7's Qualifiers Were Not Satisfied.

*** Not All Calibrated Peaks Found ***


Ion 191.00 amu. from WF4237_SAT.d
Abundance
20000
16000
12000
8000
4000
0
30
40
50
Time (min.)
Ion 217.00 amu. from WF4237_SAT.d
Abundance
12000
10000
8000
6000
4000
2000
0
30
40
50
Time (min.)


Ion 191.00 amu. from WF4237_SAT.d
Abundance
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
36
38
40
42
44
46
48
50
52
Time (min.)


Ion 217.00 amu. from WF4237_SAT.d
Abundance
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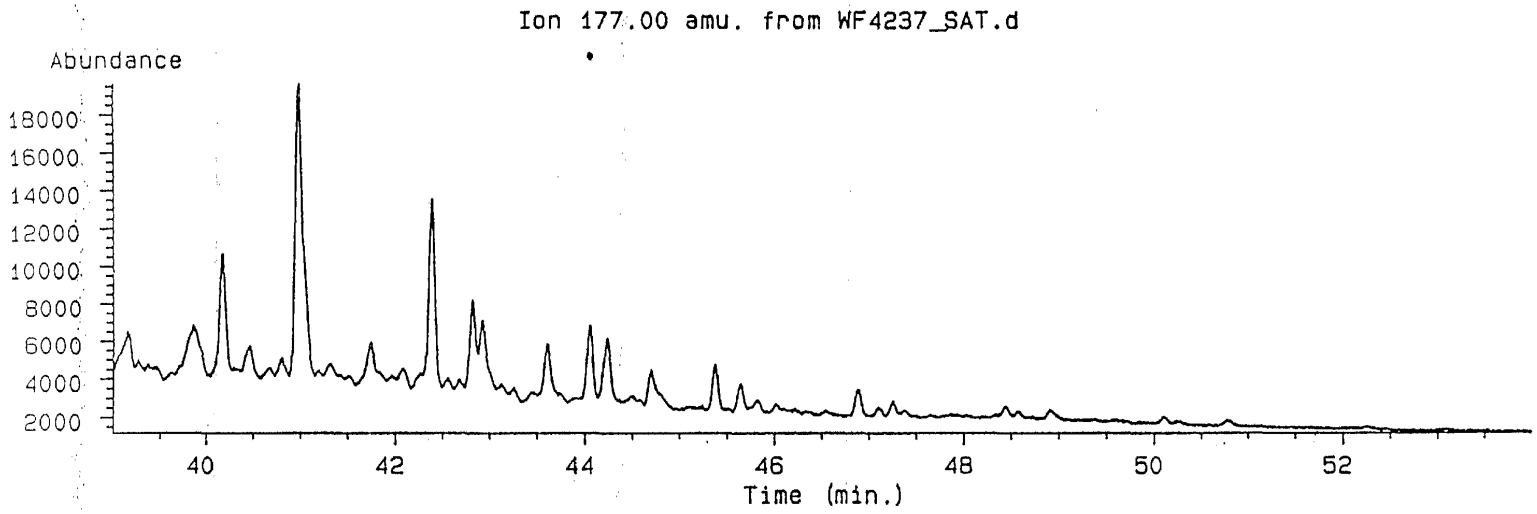
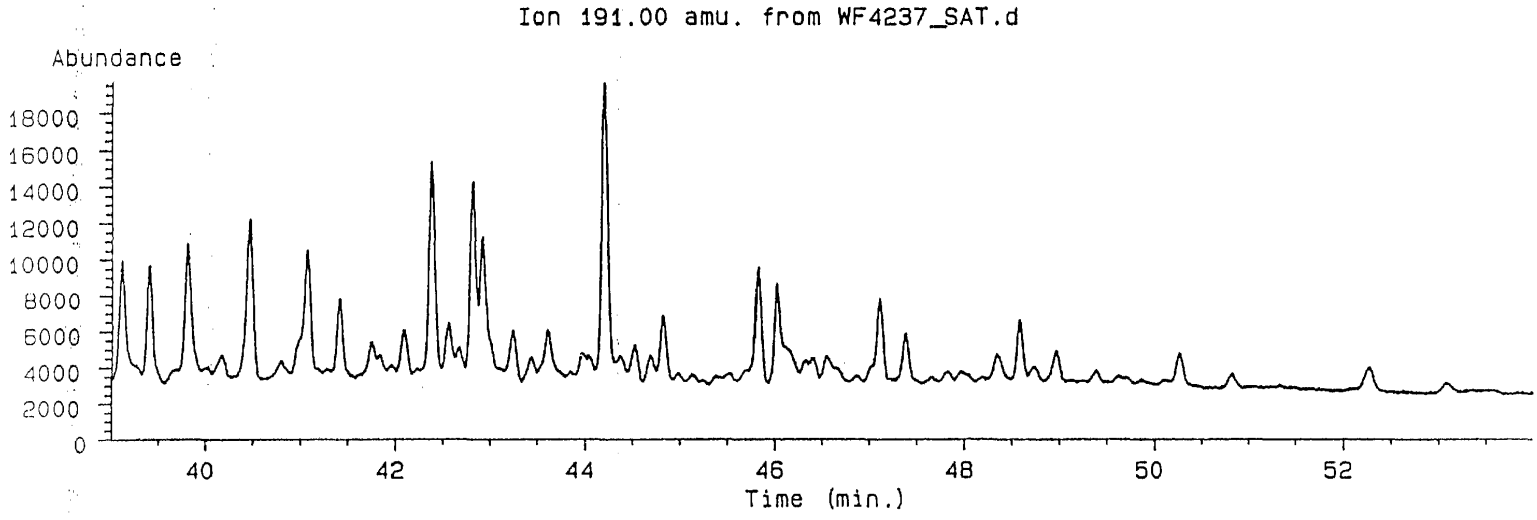
10000
8000
6000
4000
2000
36
38
40
42
44
Time (min.)


Ion 177.00 amu. from WF4237_SAT.d
Abundance
18000
16000
14000
12000
10000
8000
6000
4000
2000
40
42
44
46
48
50
52
Time (min.)


Ion 191.00 amu. from WF4237_SAT.d
Abundance
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
40
42
44
46
48
50
52
Time (min.)

Ion 177.00 amu. from WF4237_SAT.d
WF4237_SAT

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	39.156	BV	0.088	122224	39.012	39.232
2	39.868	VV	0.128	278588	39.668	40.016
3	40.180	PV	0.070	293453	40.016	40.278
4	40.466	BV	0.066	76961	40.367	40.593
5	40.810	VV	0.064	56460	40.731	40.883
6	40.982	VV	0.087	957794	40.883	41.157
7	41.751	PV	0.096	161255	41.594	41.911
8	42.393	VV	0.071	462360	42.298	42.498
9	42.824	VV	0.067	206132	42.739	42.881
10	42.928	VV	0.078	192132	42.881	43.075
11	43.612	VV	0.078	172141	43.512	43.727
12	44.058	PV	0.075	196718	43.829	44.140
13	44.240	VV	0.074	174442	44.140	44.354
14	44.708	BV	0.093	126381	44.632	44.952
15	45.384	BB	0.063	98330	45.299	45.496
16	45.652	BV	0.060	57017	45.562	45.720
17	46.891	BB	0.072	63230	46.762	47.017

Ion 191.00 amu. from WF4237_SAT.d
WF4237_SAT

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	22.333	BB	0.061	265200	22.214	22.438
2	23.004	PV	0.067	162480	22.886	23.121
3	25.070	BV	0.064	190199	24.943	25.168
4	26.380	PV	0.059	59778	26.287	26.481
5	26.990	BV	0.066	98466	26.893	27.076
6	27.933	BV	0.063	98011	27.831	28.004
7	28.657	BV	0.054	51203	28.538	28.758
8	29.171	VV	0.071	881102	28.953	29.376
9	29.852	BH	0.071	37796	29.773	29.935
10	30.331	BV	0.064	607147	30.209	30.588
11	30.981	VV	0.089	62209	30.868	31.059
12	31.331	BV	0.073	80800	31.244	31.518
13	32.651	BV	0.091	602359	32.541	32.885
14	33.487	PV	0.085	54178	33.327	33.552
15	33.881	PV	0.068	248626	33.781	34.005
16	34.325	BV	0.063	229128	34.209	34.393
17	34.459	VV	0.065	226671	34.393	34.630
18	36.182	BV	0.072	136979	35.981	36.305
19	36.391	VV	0.075	52044	36.305	36.461
20	37.274	VV	0.083	74494	37.143	37.363
21	37.641	VV	0.060	64165	37.501	37.661
22	37.718	VV	0.069	100792	37.661	37.784
23	38.052	PV	0.062	238337	37.942	38.148

24	38.299	PV	0.064	204469	38.148	38.375
25	38.868	VV	0.078	109524	38.792	38.962
26	39.108	VV	0.085	387598	38.962	39.255
27	39.406	VV	0.067	313558	39.329	39.579
28	39.822	PV	0.084	460331	39.579	39.954
29	40.177	VB	0.083	79530	40.081	40.282
30	40.478	BV	0.075	456536	40.344	40.610
31	40.801	PV	0.095	71428	40.610	40.900
32	41.082	VV	0.093	468758	40.900	41.247
33	41.423	VV	0.070	209651	41.325	41.595
34	41.760	VV	0.070	100766	41.660	41.818
35	41.847	VV	0.059	48271	41.818	41.923
36	42.097	VV	0.074	119785	42.013	42.181
37	42.392	BV	0.072	516473	42.267	42.487
38	42.568	VV	0.075	132477	42.487	42.626
39	42.682	VV	0.071	74220	42.626	42.741
40	42.828	VV	0.069	483995	42.741	42.882
41	42.930	VV	0.084	453411	42.882	43.155
42	43.245	VV	0.078	146685	43.155	43.342
43	43.441	PV	0.075	61342	43.342	43.499
44	43.614	VV	0.079	140121	43.499	43.726
45	43.970	BV	0.068	56426	43.911	44.022
46	44.039	VV	0.060	40864	44.022	44.100
47	44.211	VV	0.075	788596	44.100	44.328
48	44.527	VV	0.079	99909	44.445	44.622
49	44.689	PV	0.075	68589	44.622	44.753
50	44.826	VV	0.070	167417	44.753	44.934
51	45.831	BV	0.076	325186	45.614	45.938
52	46.026	PV	0.098	397257	45.938	46.262
53	46.327	VV	0.062	55083	46.262	46.354
54	46.398	VV	0.077	74080	46.354	46.477
55	46.549	VV	0.115	134435	46.477	46.799
56	47.110	VV	0.086	268787	46.942	47.251
57	47.384	VV	0.078	145901	47.282	47.552
58	48.348	VV	0.091	104614	48.229	48.494
59	48.585	VV	0.068	160996	48.494	48.664
60	48.966	VV	0.077	92158	48.841	49.072
61	50.263	BB	0.076	85147	50.177	50.502
62	50.823	BV	0.077	48192	50.702	50.936
63	52.266	BB	0.098	103751	52.015	52.471

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Ion 217.00 amu. from WF4237_SAT.d
WF4237_SAT

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	22.175	PV	0.055	25911	22.090	22.256
2	24.154	BV	0.055	13259	24.082	24.248
3	24.739	PV	0.102	30855	24.589	24.838
4	25.090	VV	0.054	11943	25.013	25.127
5	25.194	VV	0.067	28592	25.127	25.299

6	25.373	PV	0.061	17076	25.299	25.461
7	25.636	BV	0.067	144598	25.526	25.769
8	26.037	VV	0.100	119186	25.905	26.146
9	26.220	VV	0.077	62149	26.146	26.294
10	26.311	VV	0.057	14677	26.294	26.387
11	26.450	VV	0.062	18347	26.387	26.497
12	26.569	VV	0.072	61332	26.497	26.727
13	26.822	VV	0.067	19092	26.727	26.880
14	26.944	VV	0.068	17790	26.880	27.093
15	27.224	PV	0.067	289776	27.093	27.310
16	27.429	VV	0.077	157300	27.310	27.522
17	27.735	VV	0.079	18161	27.655	27.845
18	27.988	PV	0.070	47088	27.845	28.061
19	28.102	VV	0.060	10891	28.061	28.159
20	28.235	VV	0.080	27918	28.159	28.318
21	28.401	VV	0.081	41282	28.318	28.551
22	28.805	BV	0.099	55116	28.711	28.913
23	28.937	VV	0.064	12644	28.913	29.024
24	29.252	BV	0.073	24233	29.171	29.383
25	29.573	PV	0.100	240970	29.383	29.669
26	29.747	VV	0.064	45034	29.669	29.858
27	30.294	VV	0.050	15620	30.220	30.309
28	30.352	VV	0.084	32782	30.309	30.495
29	30.561	VV	0.072	15006	30.495	30.652
30	30.763	VV	0.067	15445	30.652	30.839
31	30.947	VV	0.057	13351	30.872	30.976
32	31.276	VV	0.093	44703	31.174	31.418
33	31.507	VV	0.055	12156	31.418	31.520
34	31.583	VV	0.065	29287	31.520	31.688
35	31.936	VV	0.092	70021	31.846	32.057
36	32.142	VV	0.100	73678	32.057	32.274
37	32.649	VV	0.065	12079	32.588	32.761
38	33.157	VV	0.092	46777	32.940	33.290
39	33.463	VV	0.093	20680	33.324	33.530
40	33.598	VV	0.061	16291	33.530	33.648
41	33.688	VV	0.063	13789	33.648	33.738
42	33.799	VV	0.077	39813	33.738	33.896
43	33.973	PV	0.053	17167	33.896	34.059
44	34.136	PV	0.064	46216	34.059	34.263
45	34.655	BV	0.066	17588	34.588	34.784
46	35.123	VV	0.097	76272	34.838	35.196
47	35.274	VV	0.080	20687	35.196	35.318
48	35.524	VV	0.075	62567	35.402	35.587
49	35.657	VV	0.093	62181	35.587	35.734
50	35.781	VV	0.066	26759	35.734	35.811
51	35.869	VV	0.076	57407	35.811	35.976
52	36.058	VV	0.054	22738	35.999	36.075
53	36.168	VV	0.079	577699	36.075	36.345
54	36.365	VV	0.031	14076	36.345	36.382
55	36.414	VV	0.062	34932	36.382	36.464
56	36.554	VV	0.119	124959	36.464	36.696
57	36.817	VV	0.078	445247	36.696	36.948
58	37.019	VV	0.070	63042	36.948	37.071
59	37.134	VV	0.070	72550	37.071	37.169

60	37.251	VV	0.095	228976	37.169	37.363
61	37.418	VV	0.062	40794	37.363	37.456
62	37.595	VV	0.095	266614	37.456	37.656
63	37.726	VV	0.067	323192	37.656	37.781
64	37.851	VV	0.088	398888	37.781	37.939
65	37.985	VV	0.076	129441	37.939	38.037
66	38.105	VV	0.130	387894	38.037	38.335
67	38.438	VV	0.068	232122	38.335	38.468
68	38.508	VV	0.093	372585	38.468	38.669
69	38.889	VV	0.133	682665	38.669	39.027
70	39.112	VV	0.064	279312	39.027	39.125
71	39.164	VV	0.067	442938	39.125	39.232
72	39.273	VV	0.073	365425	39.232	39.347
73	39.371	VV	0.057	153703	39.347	39.437
74	39.613	VV	0.104	469889	39.437	39.684
75	39.889	VV	0.145	784971	39.684	40.008
76	40.077	VV	0.075	94436	40.008	40.115
77	40.189	VV	0.090	211129	40.115	40.259
78	40.329	VV	0.093	232232	40.259	40.417
79	40.545	VV	0.097	302638	40.417	40.603
80	40.621	VV	0.064	145453	40.603	40.709
81	40.828	VV	0.103	528180	40.709	40.925
82	41.015	VV	0.076	399120	40.925	41.091
83	41.110	VV	0.056	93209	41.091	41.149
84	41.208	VV	0.101	292472	41.149	41.331
85	41.443	VV	0.134	439255	41.331	41.665
86	41.785	VV	0.087	128214	41.693	41.830
87	41.858	VV	0.035	40926	41.830	41.873
88	41.972	VV	0.124	404092	41.873	42.162
89	42.289	VV	0.093	406206	42.162	42.357
90	42.414	VV	0.080	342512	42.357	42.521
91	42.703	VV	0.070	49503	42.645	42.749
92	42.965	VV	0.089	289601	42.863	43.052
93	43.094	VV	0.076	100043	43.052	43.186
94	43.252	VV	0.089	62500	43.186	43.374
95	43.494	VV	0.079	95916	43.374	43.544
96	43.605	VV	0.091	137631	43.544	43.734
97	44.227	VV	0.083	94173	44.121	44.432

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Ion 218.00 amu. from WF4237_SAT.d
WF4237_SAT

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	35.514	PV	0.065	15361	35.422	35.589
2	35.641	VV	0.058	10862	35.589	35.720
3	35.861	VV	0.077	41196	35.720	35.972
4	36.057	PV	0.049	22871	35.972	36.096
5	36.171	VV	0.069	130239	36.096	36.253
6	36.281	VV	0.046	7807	36.253	36.333
7	36.594	BV	0.084	20901	36.470	36.605

8	36.617	VV	0.050	16519	36.605	36.725
9	36.820	VV	0.073	130522	36.725	36.942
10	37.014	VV	0.066	35924	36.942	37.077
11	37.133	VV	0.046	12488	37.077	37.149
12	37.240	VV	0.087	66521	37.149	37.347
13	37.532	VV	0.057	43290	37.437	37.551
14	37.593	VV	0.061	51059	37.551	37.643
15	37.733	VV	0.081	137469	37.643	37.793
16	37.845	VV	0.086	130686	37.793	37.919
17	37.984	VV	0.077	150516	37.919	38.040
18	38.098	VV	0.106	255014	38.040	38.342
19	38.444	VV	0.061	71613	38.342	38.465
20	38.541	VV	0.099	190072	38.465	38.662
21	38.794	VV	0.081	135155	38.662	38.839
22	38.892	VV	0.098	196427	38.839	39.019
23	39.100	VV	0.084	504485	39.019	39.209
24	39.271	VV	0.071	387594	39.209	39.352
25	39.372	VV	0.055	72444	39.352	39.445
26	39.613	VV	0.109	246150	39.445	39.688
27	39.815	VV	0.102	267408	39.688	39.850
28	39.880	VV	0.074	211492	39.850	40.021
29	40.083	VV	0.057	36689	40.021	40.109
30	40.179	VV	0.075	106872	40.109	40.254
31	40.312	VV	0.087	89508	40.254	40.405
32	40.547	VV	0.121	275243	40.405	40.718
33	40.847	VV	0.081	432413	40.718	40.931
34	41.016	VV	0.069	418830	40.931	41.101
35	41.207	VV	0.107	332221	41.101	41.340
36	41.444	VV	0.089	153459	41.340	41.502
37	41.524	VV	0.075	86518	41.502	41.648
38	41.790	VV	0.096	99570	41.648	41.840
39	41.887	VV	0.055	38645	41.840	41.899
40	42.025	VV	0.113	212306	41.899	42.166
41	42.287	VV	0.075	396600	42.166	42.353
42	42.417	VV	0.083	489383	42.353	42.635
43	42.687	VV	0.079	45101	42.635	42.771
44	42.965	VV	0.083	151111	42.860	43.053
45	43.093	VV	0.074	44381	43.053	43.180
46	43.258	VV	0.078	35420	43.180	43.389
47	43.498	PV	0.071	84037	43.389	43.547
48	43.598	VV	0.075	109282	43.547	43.890
49	44.223	VV	0.075	54521	44.122	44.312

*** PETROLEUM GEOCHEMISTRY ***

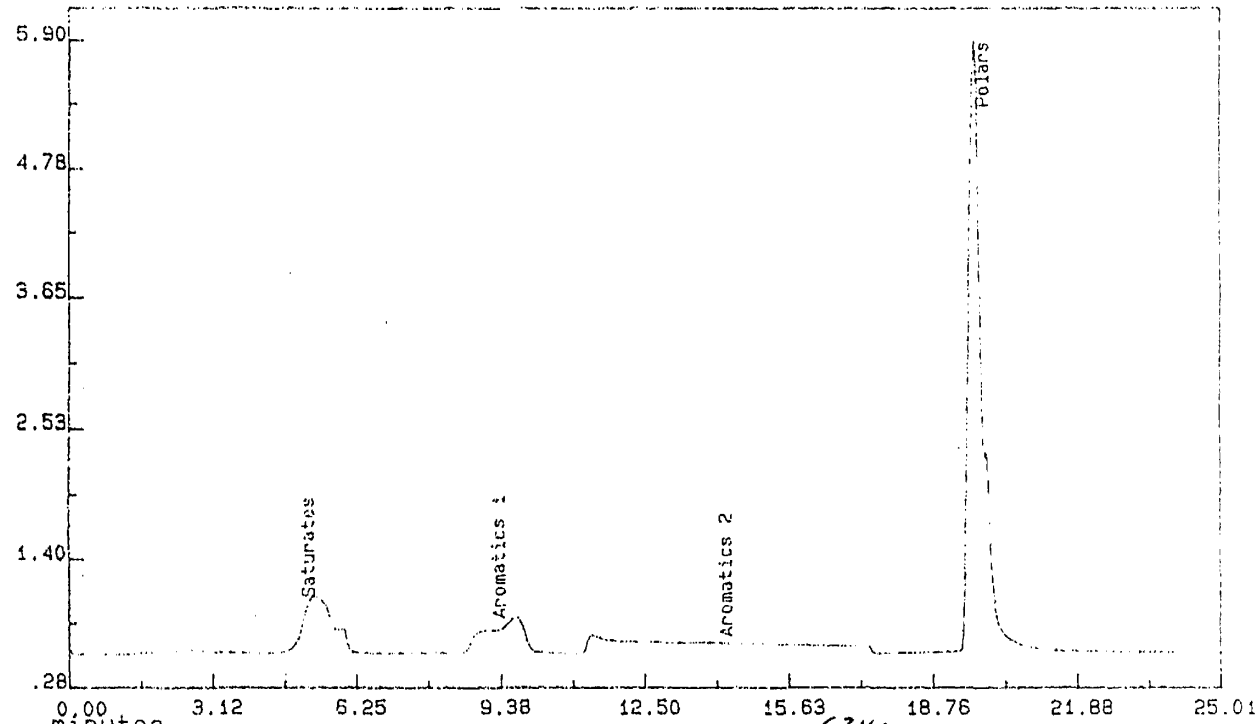
SARA ANALYSIS

SAMPLE NAME : PT. THOMSON #2 5790-6240
INSTRUMENT : HPLC_FID
INJECT TIME : Wed May 9, 1990 11:16:57 am
METHOD USED : /METHOD/HPLC_FID0.MTH
SEQUENCE : /DATA/LOOP/SEQUENCE/HP1090_AUTOCA.SEQ
RESULT FILE : /RESULT/WF4242_SAP.RES
REPORT TIME : 11:42 AM WED., 9 MAY , 1990

	AREA	TIME	RESPONSE FACTOR
Saturates	22849.	5.29	.1275E-03
Aromatics 1	16818.	9.42	.5470E-04
Aromatics 2	34197.	14.36	.5470E-04
Polars	115370.	19.92	.4160E-04

	AMOUNT (mg)	% RESIDUE
Saturates	2.91	27.7
Aromatics	2.79	26.6
Polars	4.80	45.7

	% OIL
Saturates	21.2
Aromatics	20.3
Polars	34.9
Asphaltenes	23.7



SAMPLE: PT. THOMSON #2 5790-~~5240~~ 6240

ANALYZED: Wed May 9, 1990 11:16:57 am

RESULT: /RESULT/WF4242 SAP.RES METHOD: HPLC FIDO

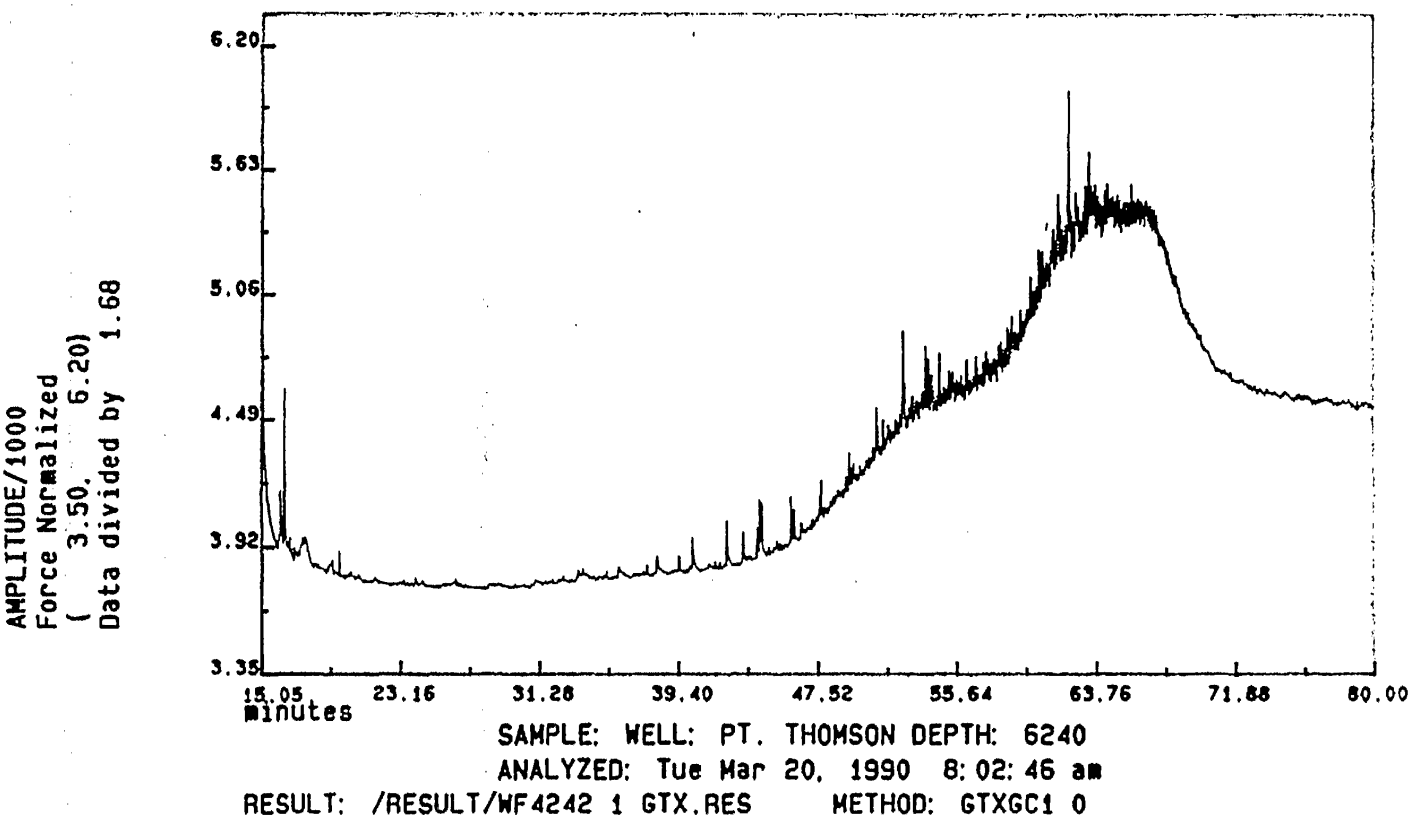
**** PETROLEUM GEOCHEMISTRY / GNH ROCK EVAL ***

SAMPLE : WELL: PT. THOMSON #2 DEPTH: 6240
INJECTED AT : Tue Apr 17, 1990 1:37:46 am
INSTRUMENT : GROCK
METHOD USED : /METHOD/PYRO5.MTH
RESULT FILE : /RESULT/WF424210_GRO.RES
BLANK FILE : /RESULT/BLANK13_GRO.RES

***** AREA SLICE INTEGRATION *****

AREA	YIELD (mg/g)	FRACTION
30985076.	3.12	S1
191448930.	4.23	S2

SAMPLE WT. : 15.90 mgs
Tmax : 414 C


AMPLITUDE/1000
Force Normalized
(3.50, 6.20)
Data divided by 1.68
6.20
5.63
5.06
4.49
3.92
3.35
15.05
23.16
31.28
39.40
47.52
55.64
63.76
71.88
80.00
minutes
SAMPLE: WELL: PT. THOMSON DEPTH: 6240
ANALYZED: Tue Mar 20, 1990 8:02:46 am
RESULT: /RESULT/WF4242 1 GTX.RES METHOD: GTXGC1 0

SAMPLE : WELL: PT. THOMSON #2 DEPTH: 6240
INJECTED AT : Tue Apr 17, 1990 1:37:46 am
INSTRUMENT : GPGC_2
METHOD USED : /METHOD/GPGC2_0.MTH
RESULT FILE : /RESULT/WF424210_GPG.RES
BLANK FILE : /RESULT/BLANK15_GPG.RES

***** AREA SLICE INTEGRATION *****

AREA	AREA PERCENT	FRACTION
457019.	6.1	METHANE
1467989.	19.5	GASES
3154635.	41.8	GASOLINE
1868971.	24.8	KEROSENE
590649.	7.8	GAS-OIL
0.	0.0	WAX-DISTILLATE

TOTAL AREA : 7539259. AREA %: 100.0

SAMPLE WT. : 15.90 mgs

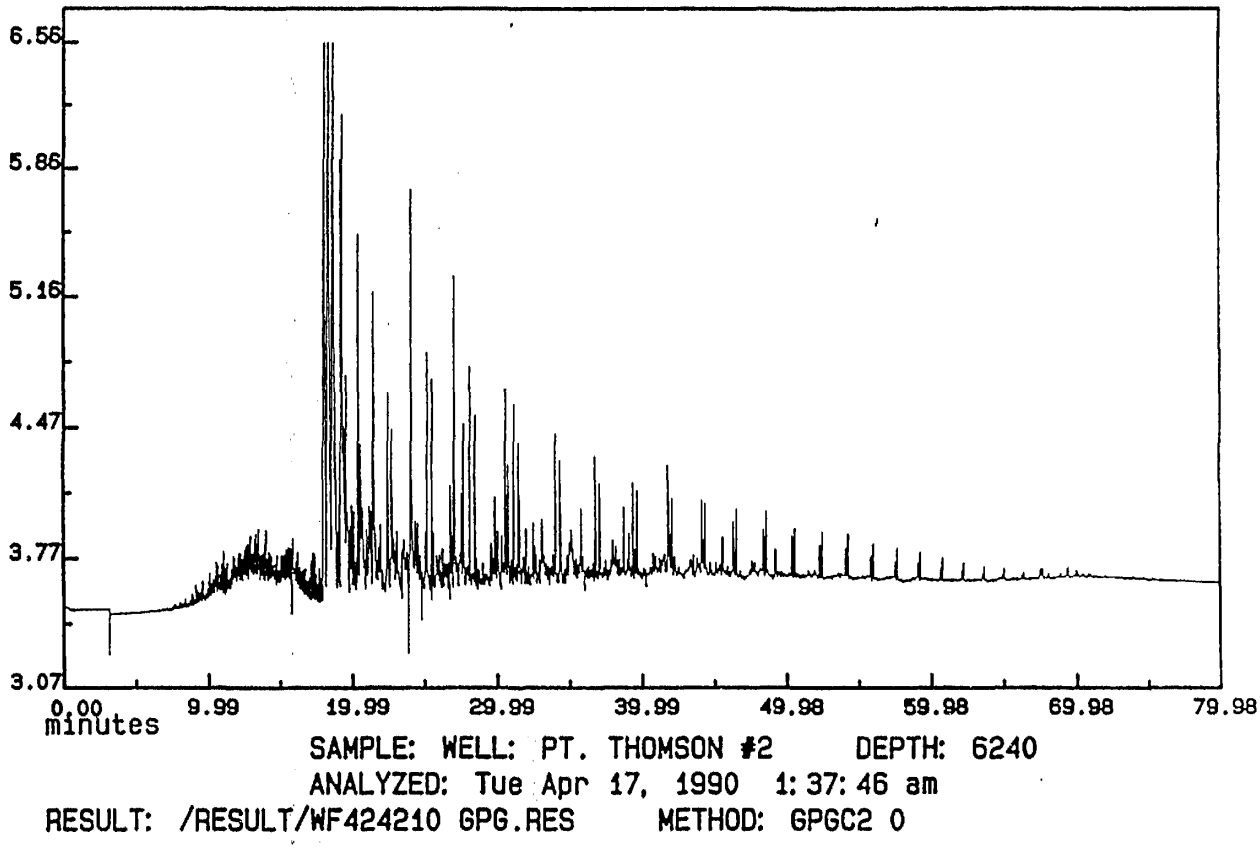
SAMPLE GOGI = .34
THIS IS OIL + GAS PRONE

METHANE + GASES = 25.5
GASOLINE+KEROSINE+GAS OIL+WAX DISTILLATE = 74.5

BY FACTOR ANALYSIS OF KEROGEN PYROLYSATE
THIS READING DOES NOT CONFORM TO KNOWN PARAMETERS
INVESTIGATE PRODUCT DISTRIBUTION

THIS ANALYSIS DETERMINES KEROGEN POTENTIAL AT ITS
PRESENT MATURITY. THIS IS NOT A KEROGEN TYPE ANALYSIS.

SAMPLE K2 = 3.91 mg/gm


AMPLITUDE/1000 (Enlarged x 1.5)
Range Normalized
6.56
5.86
5.16
4.47
3.77
3.07
0.00
9.99
19.99
29.99
39.99
49.98
59.98
69.98
79.98
minutes
SAMPLE: WELL: PT. THOMSON #2 DEPTH: 6240
ANALYZED: Tue Apr 17, 1990 1:37:46 am
RESULT: /RESULT/WF424210 GPG.RES METHOD: GPGC2 0

Normalized Percent Report

Information from Current Data File Header:
File: /chem/msd/WF4242_SAT.d
Operator:
Date Acquired: Fri May 11 90 08:18:38 PM
Sample Name: WF4242_SAT
Misc Info:
Sequence Index: 1 **Bottle Number:** 47 **Repetition Number:** 1

SATURATE BIOMARKERS

Calibration Table Last Updated: Sun Jun 10 21:28:04 1990

Reference Peak Window: 0.250 Absolute Minutes
Non-reference Peak Window: 0.250 Absolute Minutes

Default Sample Amount: 0
Uncalib. Peak Response Factor: 0
Default Multiplier: 1

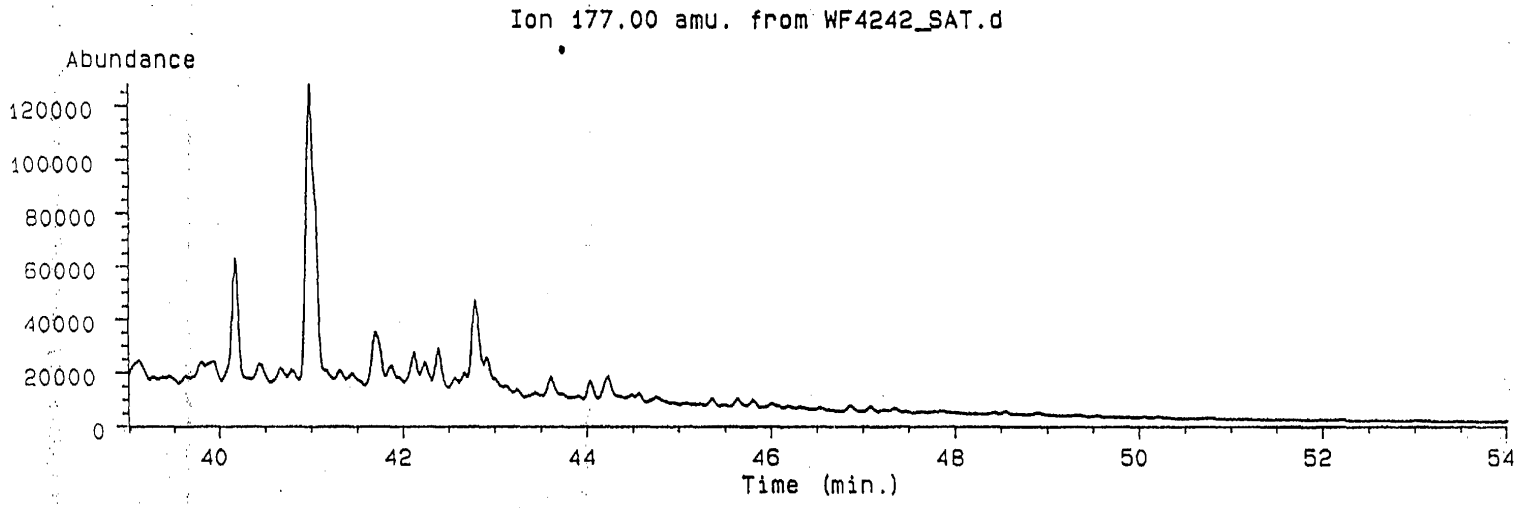
Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount
1	VV	39.817	191.00 amu	C27 18A HOPANE TS	1036572	2.338 %
2	VV	40.469	191.00 amu	C27 17A HOPANE TM	1902861	4.292 %
3	VV	41.844	191.00 amu	C28 BISNORHOPANE X	446682	1.007 %
4	VV	42.814	191.00 amu	C29 HOPANE D	2711485	6.115 %
5	VV	42.918	191.00 amu	C29 NORHOPANE D2	1660984	3.746 %
6	VV	43.232	191.00 amu	C30 PENTACYCLANE PI	747915	1.687 %
7	VV	43.828	191.00 amu	C30 18A OLEANANE B	239831	0.5409 %*
8	VV	44.192	191.00 amu	C30 HOPANE G	3250223	7.330 %
9	VV	44.805	191.00 amu	C30 MORETANE K	711361	1.604 %
10	VV	45.801	191.00 amu	C31S HOPANE N	1548855	3.493 %
11	VV	46.000	191.00 amu	C31R HOPANE O	1165031	2.628 %
12	VV	46.167	191.00 amu	O & GAMMACERANE	393252	0.8869 %
13	VV	46.291	191.00 amu	GAMMACERANE	616551	1.391 %
14	VV	46.521	191.00 amu	P	462215	1.042 %
15	VV	46.832	191.00 amu	R	126473	0.2852 %
16	VV	47.084	191.00 amu	C32S HOPANE U	1026092	2.314 %
17	VV	47.352	191.00 amu	C32R HOPANE V	712205	1.606 %
18	VV	48.547	191.00 amu	C33S HOPANE ALPHA	634225	1.430 %
19	VV	48.924	191.00 amu	C33R HOPANE BETA	418061	0.9429 %
20	VV	50.212	191.00 amu	C34S HOPANE GAMMA	325929	0.7351 %
21	VV	50.773	191.00 amu	C34R HOPANE DELTA	190424	0.4295 %
22	VV	52.199	191.00 amu	C35S HOPANE EPSILON	422429	0.9527 %
23	VV	53.023	191.00 amu	C35R HOPANE ZETA	263132	0.5935 %
24	PV	27.228	217.00 amu	C21 STERANE Y	2037039	4.594 %
25	VV	36.164	217.00 amu	C27S ba DIASTERANE10	1231382	2.777 %
26	VV	36.811	217.00 amu	C27R ba DIASTERANE11	1135884	2.562 %

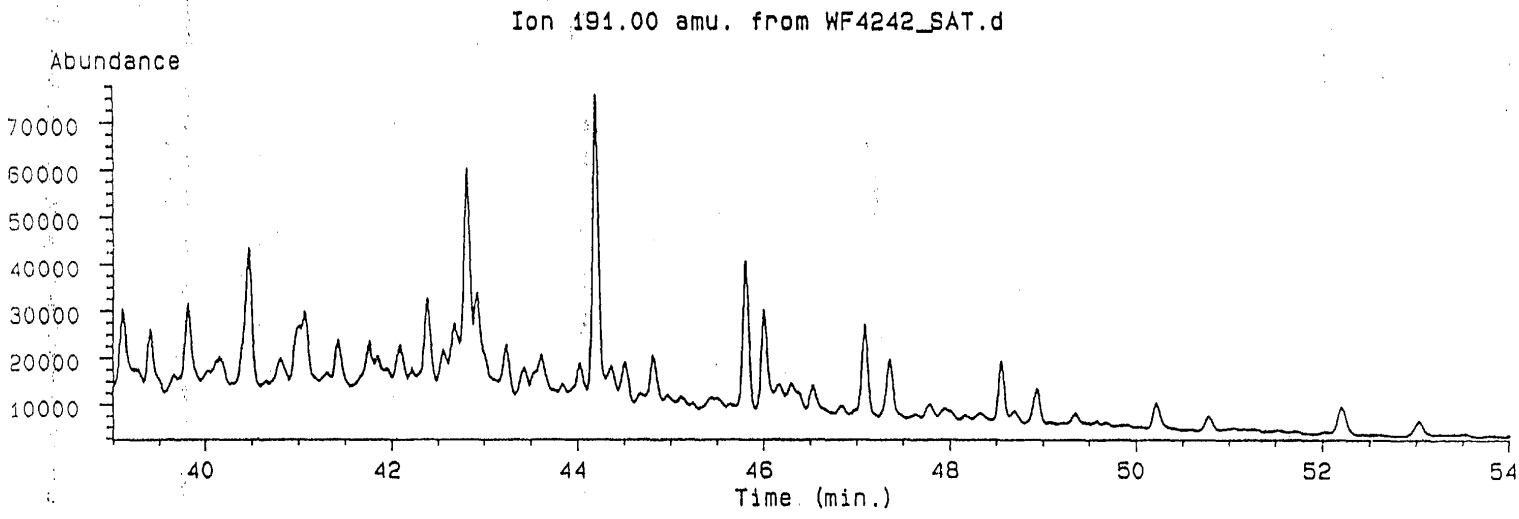
Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount
27	VV	37.248	217.00 amu	13	495724	1.118 %
28	VV	37.720	217.00 amu	14	932874	2.104 %
29	VV	37.840	217.00 amu	15	1162199	2.621 %
30	VV	37.969	217.00 amu	16	209930	0.4735 %
31	VV	38.500	217.00 amu	18	982833	2.217 %
32		-	217.00 amu	19	-Not Found-	
33	PV	38.880	217.00 amu	20	1271892	2.869 %
34	VV	39.152	217.00 amu	21	1371037	3.092 %
35	VB	39.369	217.00 amu	22	230027	0.5188 %
36	BV	39.607	217.00 amu	C27R aaa STERANE 25	783798	1.768 %
37	VV	39.796	217.00 amu	27	1465259	3.305 %
38	VV	41.426	217.00 amu	C28R aaa STERANE 36	945571	2.133 %
39	VV	41.963	217.00 amu	C29S aaa STERANE 39	935103	2.109 %
40	VV	42.947	217.00 amu	C29R aaa STERANE 42	848219	1.913 %
41	BV	39.095	218.00 amu	C27R abb STERANE 21B	1092414	2.464 %
42	VV	39.262	218.00 amu	C27S abb STERANE 22	941890	2.124 %
43	VV	40.838	218.00 amu	C28R abb STERANE 33A	1342014	3.027 %
44	VV	41.003	218.00 amu	C28S abb STERANE 34	1320595	2.978 %
45	VV	42.280	218.00 amu	C29R abb STERANE 40	1294974	2.921 %
46	VV	42.404	218.00 amu	C29S abb STERANE 41	1295171	2.921 %

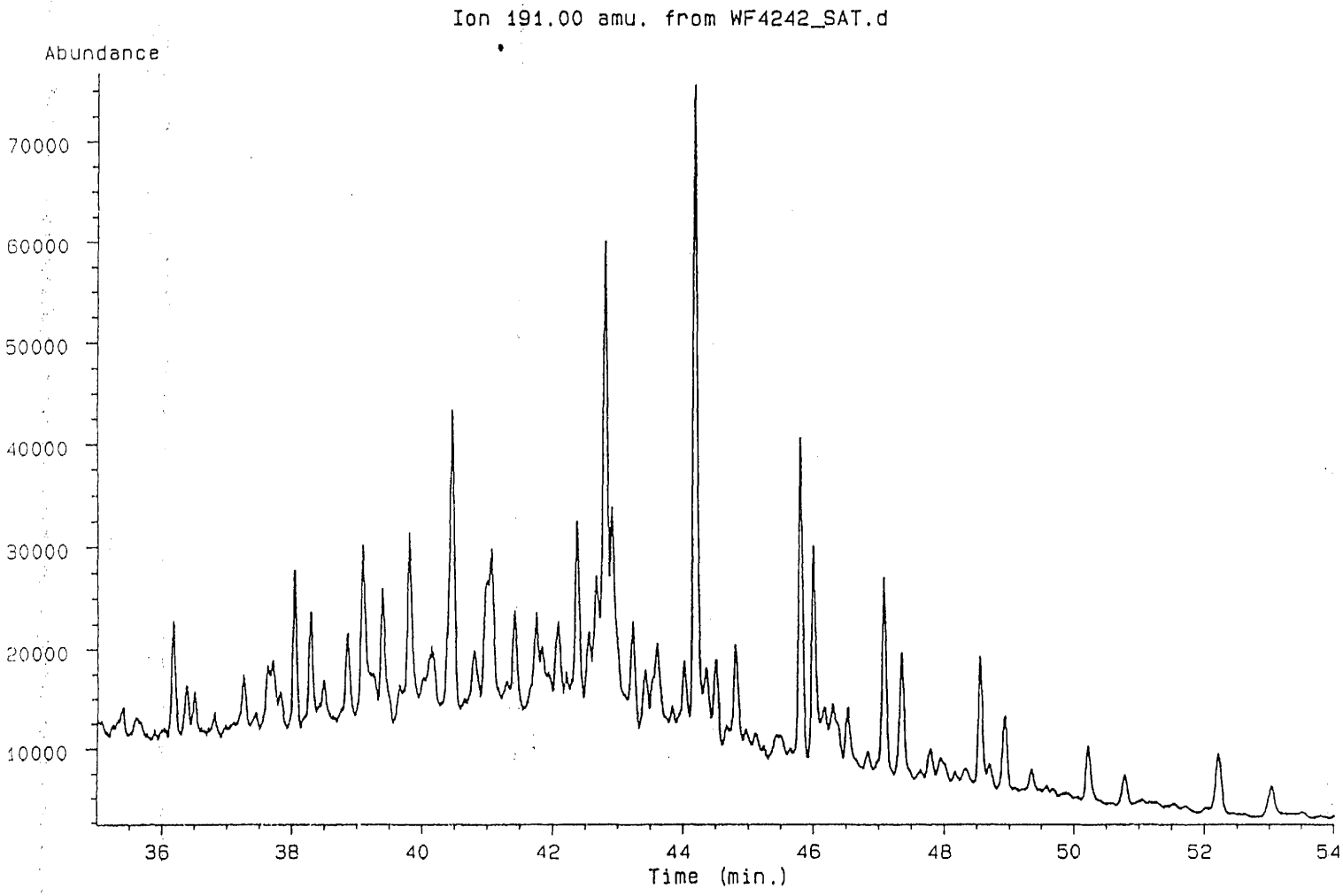
***** REPORT ERRORS *****

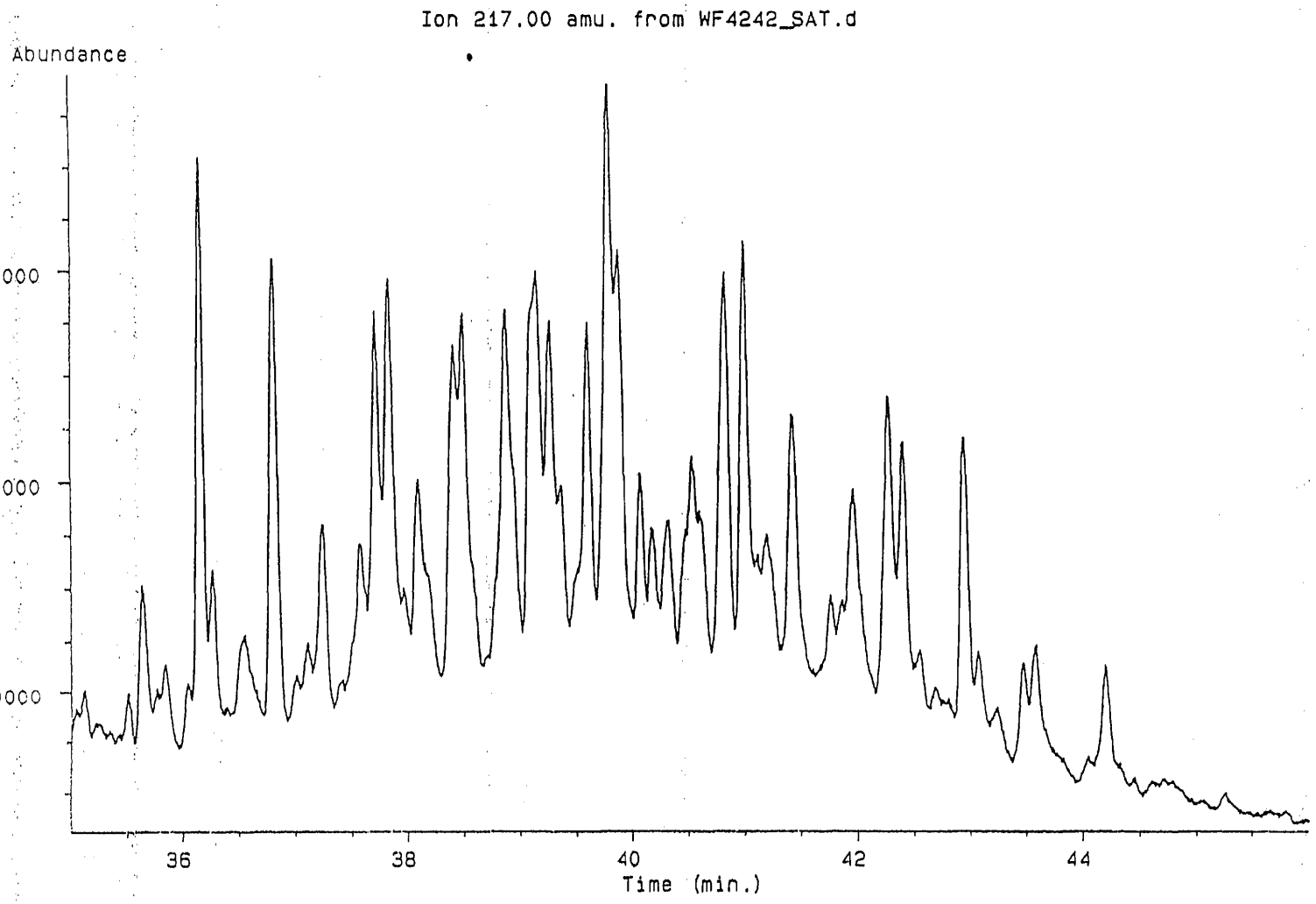
Calibration Peak #7's Qualifiers Were Not Satisfied.

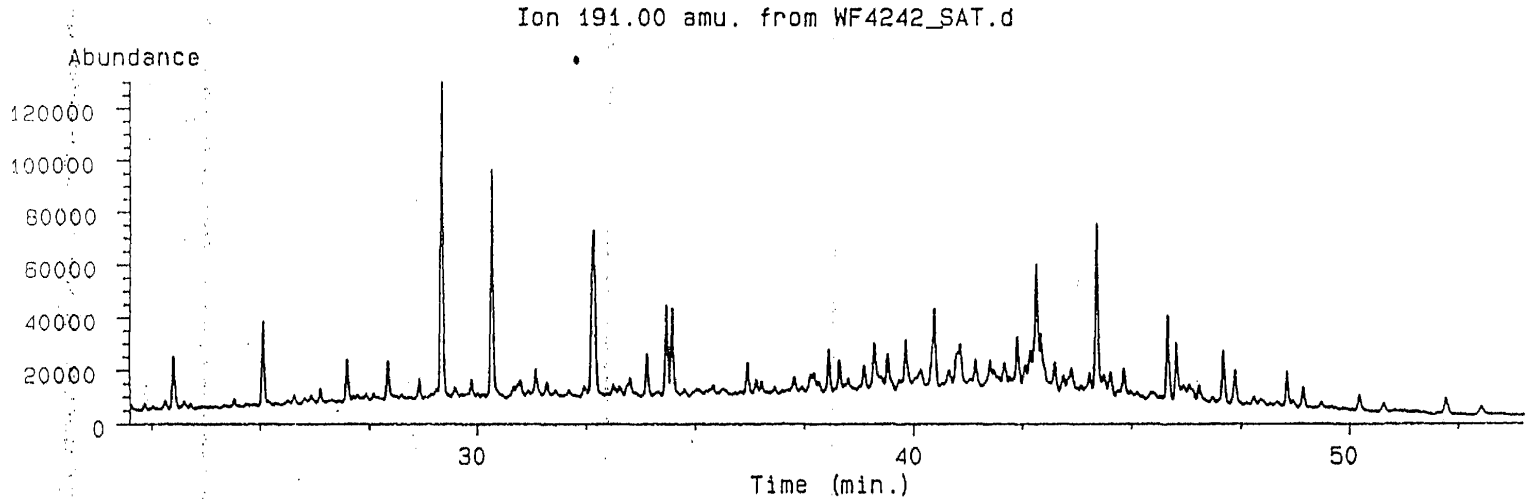
*** Not All Calibrated Peaks Found ***

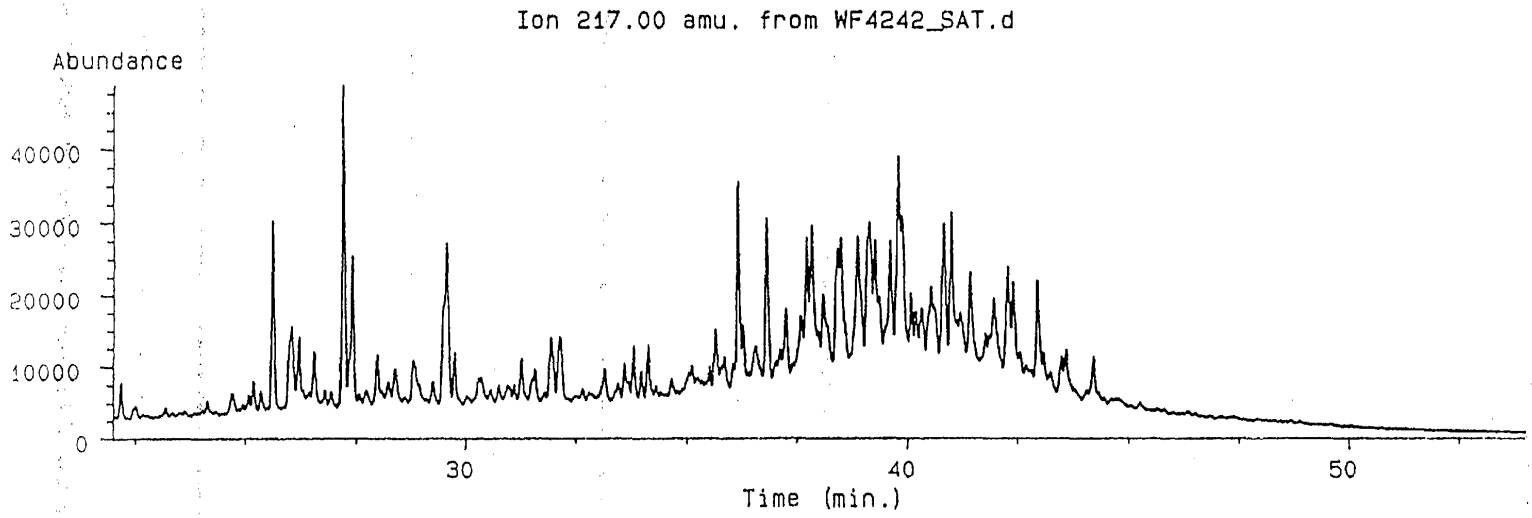

Ion 177.00 amu. from WF4242_SAT.d
Abundance
120000
100000
80000
60000
40000
20000
0
40
42
44
46
48
50
52
54
Time (min.)


Ion 191.00 amu. from WF4242_SAT.d
Abundance
70000
60000
50000
40000
30000
20000
10000
40
42
44
46
48
50
52
54
Time (min.)


Ion 191.00 amu. from WF4242_SAT.d
Abundance
70000
60000
50000
40000
30000
20000
10000
36
38
40
42
44
46
48
50
52
54
Time (min.)


Ion 217.00 amu. from WF4242_SAT.d
Abundance
30000
20000
10000
36
38
40
42
44
Time (min.)


Ion 191.00 amu. from WF4242_SAT.d
Abundance
120000
100000
80000
60000
40000
20000
0
30
40
50
Time (min.)


Ion 217.00 amu. from WF4242_SAT.d
Abundance
40000
30000
20000
10000
0
30
40
50
Time (min.)

*** PETROLEUM GEOCHEMISTRY ***

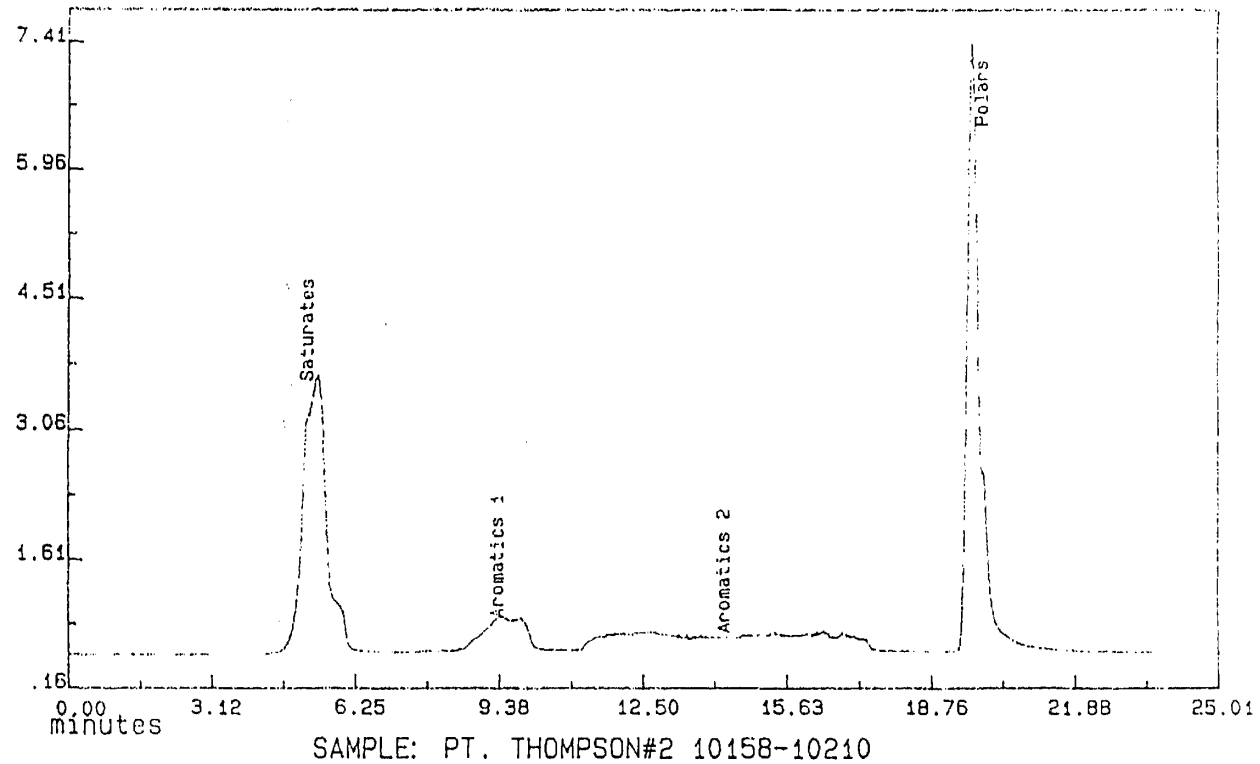
SARA ANALYSIS

SAMPLE NAME : PT. THOMPSON#2 10158-10210
INSTRUMENT : HPLC_FID
INJECT TIME : Thu Apr 19, 1990 5:06:36 pm
METHOD USED : /METHOD/HPLC_FID0.MTH
SEQUENCE : /DATA/LOOP/SEQUENCE/HP1090_AUTOBY.SEQ
RESULT FILE : /RESULT/WF4243_SAP.RES
REPORT TIME : 5:32 PM THU., 19 APR., 1990

	AREA	TIME	RESPONSE FACTOR
Saturates	111518.	5.29	.1275E-03
Aromatics 1	23922.	9.42	.5470E-04
Aromatics 2	63448.	14.36	.5470E-04
Polars	136069.	19.96	.4160E-04

	AMOUNT (mg)	% RESIDUE
Saturates	14.22	57.7
Aromatics	4.78	19.4
Polars	5.66	23.0

	% OIL
Saturates	57.0
Aromatics	19.2
Polars	22.7
Asphaltenes	1.1



SAMPLE: PT. THOMPSON#2 10158-10210
ANALYZED: Thu Apr 19, 1990 5:06:36 pm
RESULT: /RESULT/WF4243 SAP.RES METHOD: HPLC FIDO

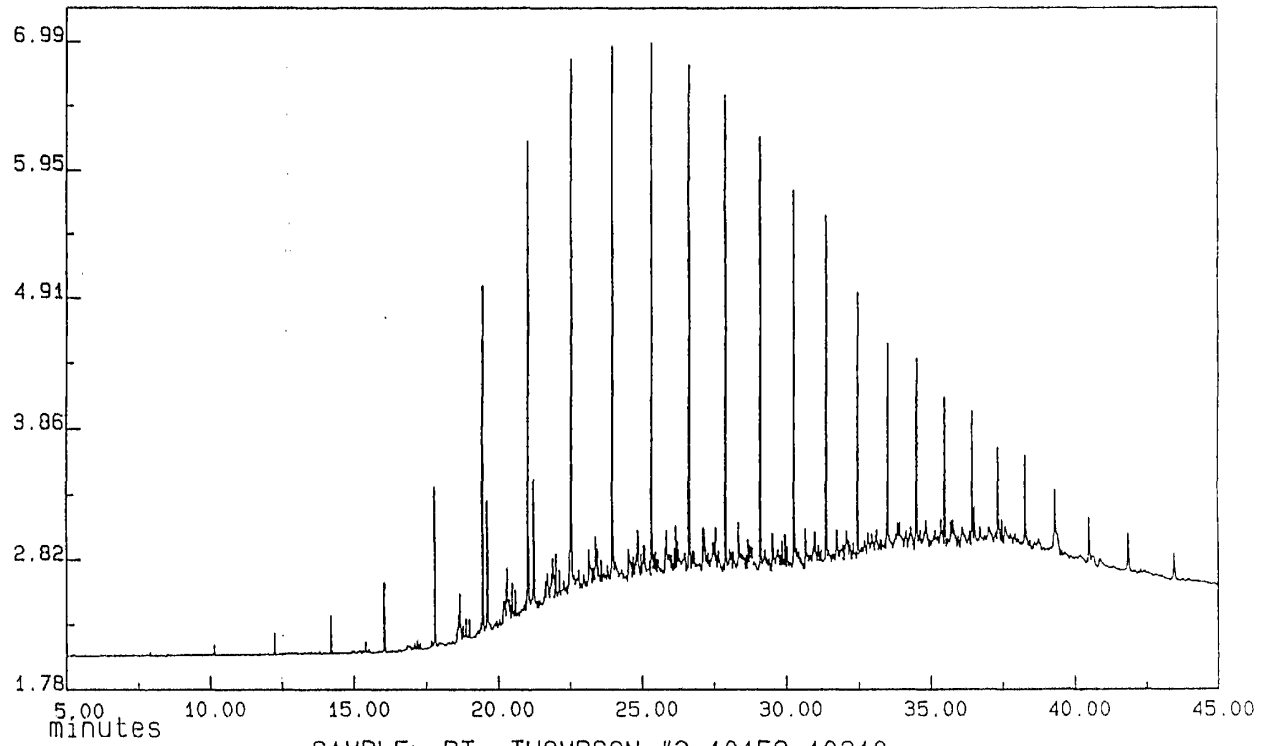
*** PETROLEUM GEOCHEMISTRY ***
SATURATE GC

SAMPLE NAME : PT. THOMPSON #2 10198-10210
INSTRUMENT : HP_5890_2
INJECT TIME : Wed May 9, 1990 8:31:02 am
METHOD USED : /METHOD/SAT5890E.MTH
RESULT FILE : /RESULT/WF4243_SAT.RES
REPORT TIME : 9:22 AM WED., 9 MAY , 1990

CPI VALUE : .97
PRISTANE / PHYTANE : .99 C15/C25 : .16
PRISTANE / C17 : .58 C17/Pr : 1.72
PHYTANE / C18 : .40 C18/Ph : 2.51

	AREA	%AREA NALK	TIME	NORM C15
N-C10	100.	.0	5.62	.02
N-C11	241.	.1	7.88	.06
N-C12	577.	.1	10.11	.14
N-C13	1237.	.3	12.22	.30
N-C14	2166.	.5	14.19	.52
N-C15	4157.	1.0	16.05	1.00
N-C16	9287.	2.2	17.80	2.23
N-C17	20664.	4.9	19.46	4.97
N-C18	30353.	7.3	21.03	7.30
N-C19	33328.	8.0	22.53	8.02
N-C20	36067.	8.6	23.96	8.68
N-C21	31502.	7.5	25.33	7.58
N-C22	31682.	7.6	26.64	7.62
N-C23	30189.	7.2	27.90	7.26
N-C24	27887.	6.7	29.11	6.71
N-C25	25726.	6.1	30.27	6.19
N-C26	23342.	5.6	31.38	5.61
N-C27	16486.	3.9	32.46	3.97
N-C28	16813.	4.0	33.50	4.04
N-C29	14655.	3.5	34.51	3.53
N-C30	10841.	2.6	35.48	2.61
N-C31	8855.	2.1	36.42	2.13
N-C32	8272.	2.0	37.33	1.99
N-C33	8353.	2.0	38.27	2.01
N-C34	14711.	3.5	39.32	3.54
N-C35	5666.	1.4	40.50	1.36
N-C36	5267.	1.3	41.86	1.27

	AREA	%AREA ISPR	TIME
Farnesane	288.	1.0	13.78
Acyclic C16	826.	2.8	15.40
Acyclic C18	4147.	14.1	18.67
Pristane	12027.	40.9	19.61
Phytane	12097.	41.2	21.23



SAMPLE: PT. THOMPSON #2 10158-10210
ANALYZED: Wed May 9, 1990 8:31:02 am
RESULT: /ARCHIVE/WF4243 SAT.RES METHOD: SAT5890E

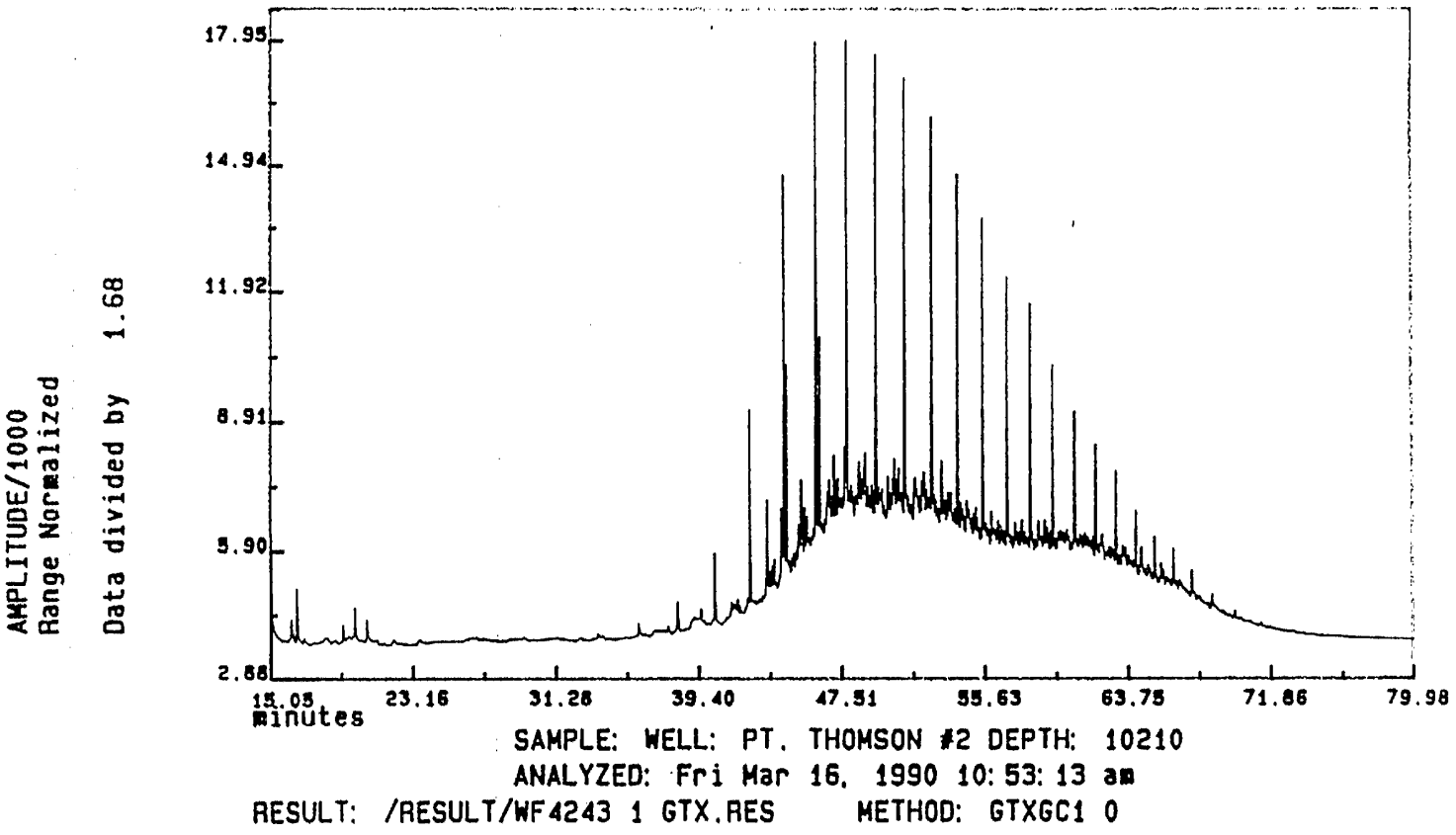
**** PETROLEUM GEOCHEMISTRY / GNH ROCK EVAL ***

SAMPLE : WELL: PT. THOMSON #2 DEPTH: 10210
INJECTED AT : Fri Mar 16, 1990 10:53:13 am
INSTRUMENT : GROCK
METHOD USED : /METHOD/PYRO5.MTH
RESULT FILE : /RESULT/WF4243_1_GRO.RES
BLANK FILE : /RESULT/BLANK13_GRO.RES

***** AREA SLICE INTEGRATION *****

AREA	YIELD (mg/g)	FRACTION
40632784.	2.66	S1
97994144.	4.99	S2

SAMPLE WT. : 23.80 mgs
Tmax : 425 C


AMPLITUDE/1000
Range Normalized
Data divided by 1.68
17.95
14.94
11.92
8.91
5.90
2.88
15.05
23.16
31.28
39.40
47.51
55.63
63.75
71.86
79.98
minutes
SAMPLE: WELL: PT. THOMSON #2 DEPTH: 10210
ANALYZED: Fri Mar 16, 1990 10:53:13 am
RESULT: /RESULT/WF4243 1 GTX.RES METHOD: GTXGC1 0

**** PETROLEUM GEOCHEMISTRY / GNH PGC AUTO ****

SAMPLE : WELL: PT. THOMSON #2 DEPTH: 10210
INJECTED AT : Fri Mar 16, 1990 10:53:13 am
INSTRUMENT : GPGC_2
METHOD USED : /METHOD/GPGC2_0.MTH
RESULT FILE : /RESULT/WF4243_1_GPG.RES
BLANK FILE : /RESULT/BLANK15_GPG.RES

***** AREA SLICE INTEGRATION *****

AREA	AREA PERCENT	FRACTION
2188791.	15.2	METHANE
2624237.	18.2	GASES
5788811.	40.2	GASOLINE
3122872.	21.7	KEROSENE
660229.	4.6	GAS-OIL
0.	0.0	WAX-DISTILLATE

TOTAL AREA : 14384942. AREA %: 100.0

SAMPLE WT. : 23.80 mgs

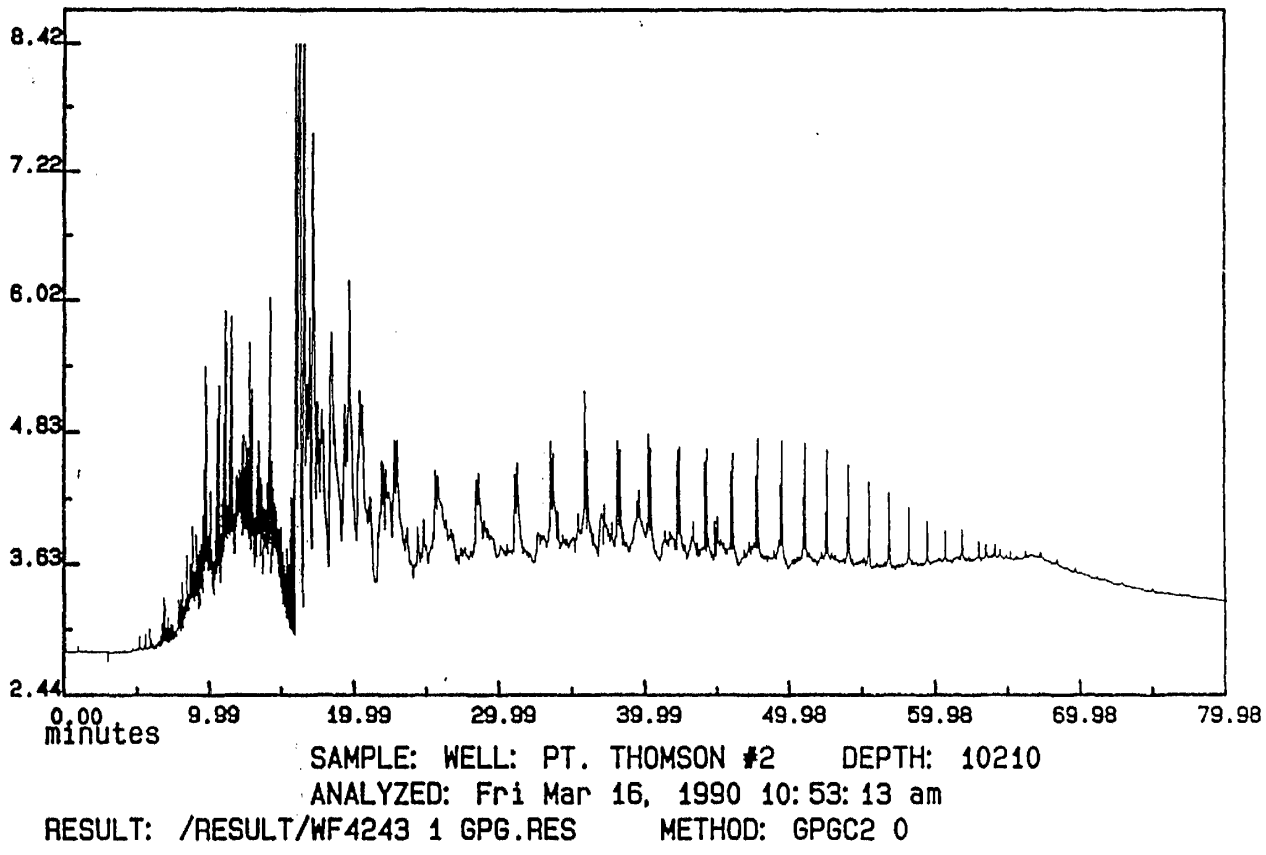
SAMPLE GOGI = .50
THIS IS GAS PRONE

METHANE + GASES = 33.5
GASOLINE+KEROSINE+GAS OIL+WAX DISTILLATE = 66.5

BY FACTOR ANALYSIS OF KEROGEN PYROLYSATE
THIS IS A GAS+CONDENSATE SOURCE

THIS ANALYSIS DETERMINES KEROGEN POTENTIAL AT ITS
PRESENT MATURITY. THIS IS NOT A KEROGEN TYPE ANALYSIS.

SAMPLE K2 = 4.86 mg/gm


AMPLITUDE/1000 (Enlarged x 5.0)
Range Normalized
8.42
7.22
6.02
4.83
3.63
2.44
0.00
9.99
19.99
29.99
39.99
49.98
59.98
69.98
79.98
minutes
SAMPLE: WELL: PT. THOMSON #2 DEPTH: 10210
ANALYZED: Fri Mar 16, 1990 10:53:13 am
RESULT: /RESULT/WF4243 1 GPG.RES METHOD: GPGC2 0

Normalized Percent Report

Information from Current Data File Header:
File: /chem/msd/WF4243_SAT.d
Operator:
Date Acquired: Sat Apr 28 90 03:15:25 AM
Sample Name: WF4243_SAT
Misc Info:
Sequence Index: 1 **Bottle Number:** 23 **Repetition Number:** 1

SATURATE BIOMARKERS

Calibration Table Last Updated: Sun Jun 10 16:46:57 1990

Reference Peak Window: 0.250 Absolute Minutes
Non-reference Peak Window: 0.250 Absolute Minutes

Default Sample Amount: 0
Uncalib. Peak Response Factor: 0
Default Multiplier: 1

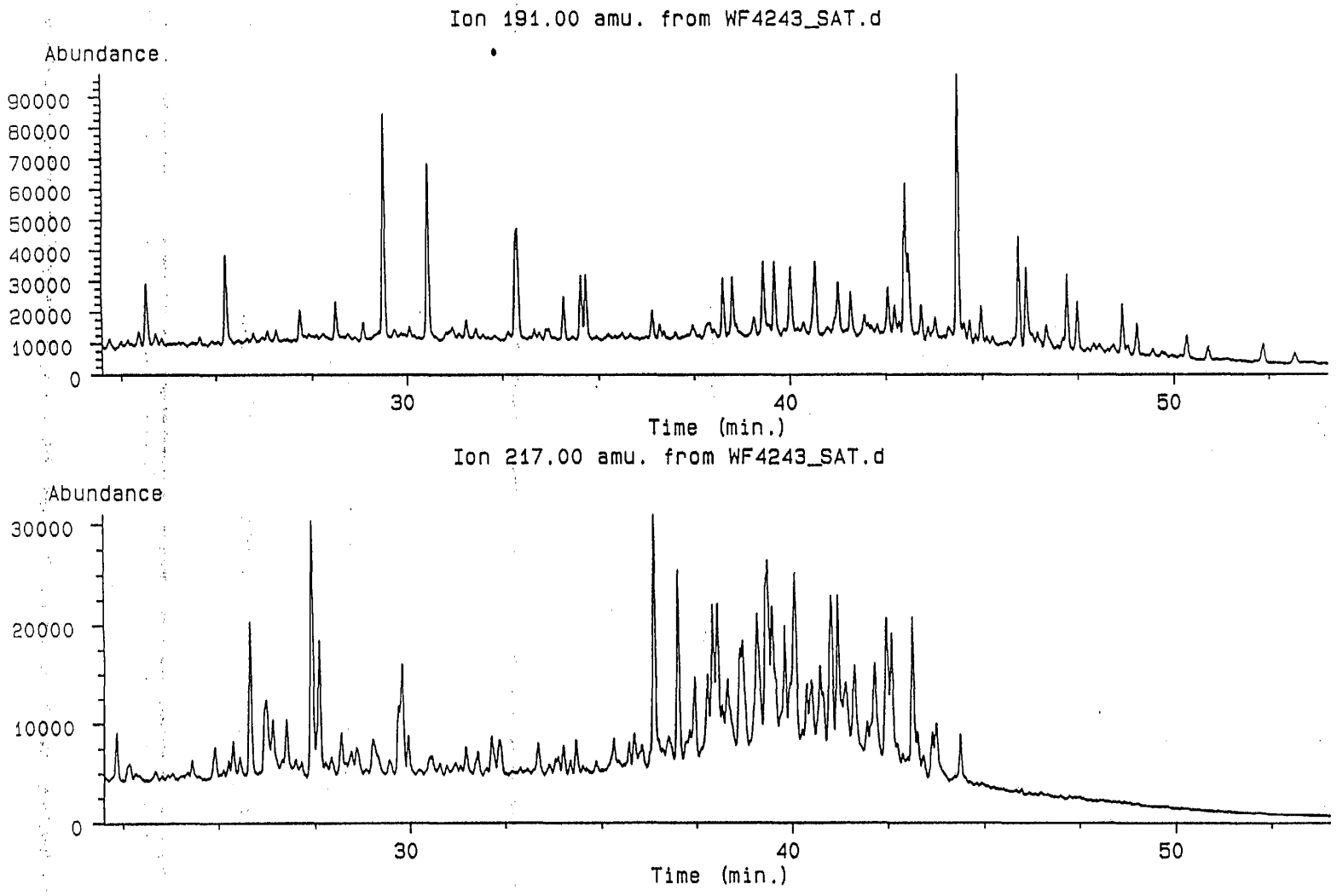
Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount	
1	VV	40.020	191.00 amu	C27 18A HOPANE TS	1363409	3.244	%
2	VV	40.675	191.00 amu	C27 17A HOPANE TM	1621133	3.857	%
3	VV	41.820	191.00 amu	C28 BISNORHOPANE X	73385	0.1746	%
4	VV	43.004	191.00 amu	C29 HOPANE D	2643803	6.291	%
5	VV	43.093	191.00 amu	C29 NORHOPANE D2	1502684	3.576	%
6	VV	43.277	191.00 amu	C30 PENTACYCLANE PI	180740	0.4301	%
7	VV	43.889	191.00 amu	C30 18A OLEANANE B	129951	0.3092	%*
8	VV	44.373	191.00 amu	C30 HOPANE G	4602979	10.95	%
9	VV	44.969	191.00 amu	C30 MORETANE K	724011	1.723	%
10	VV	45.957	191.00 amu	C31S HOPANE N	1846469	4.394	%
11	VV	46.153	191.00 amu	C31R HOPANE O	1536858	3.657	%
12	VV	46.295	191.00 amu	O & GAMMACERANE	264928	0.6304	%
13		-	191.00 amu	GAMMACERANE	-Not Found-		
14	VV	46.442	191.00 amu	P	469334	1.117	%
15	VV	46.671	191.00 amu	R	733656	1.746	%
16	VV	47.219	191.00 amu	C32S HOPANE U	1232357	2.932	%
17	VV	47.484	191.00 amu	C32R HOPANE V	911188	2.168	%
18	VV	48.665	191.00 amu	C33S HOPANE ALPHA	792649	1.886	%
19	VV	49.044	191.00 amu	C33R HOPANE BETA	537319	1.279	%
20	VV	50.334	191.00 amu	C34S HOPANE GAMMA	440067	1.047	%
21	PV	50.899	191.00 amu	C34R HOPANE DELTA	254980	0.6067	%
22	VV	52.324	191.00 amu	C35S HOPANE EPSILON	410243	0.9761	%
23	VV	53.150	191.00 amu	C35R HOPANE ZETA	265913	0.6327	%
24	PV	27.441	217.00 amu	C21 STERANE Y	1378416	3.280	%
25	PV	36.368	217.00 amu	C27S ba DIASTERANE10	1339092	3.186	%
26	VV	37.004	217.00 amu	C27R ba DIASTERANE11	981487	2.335	%

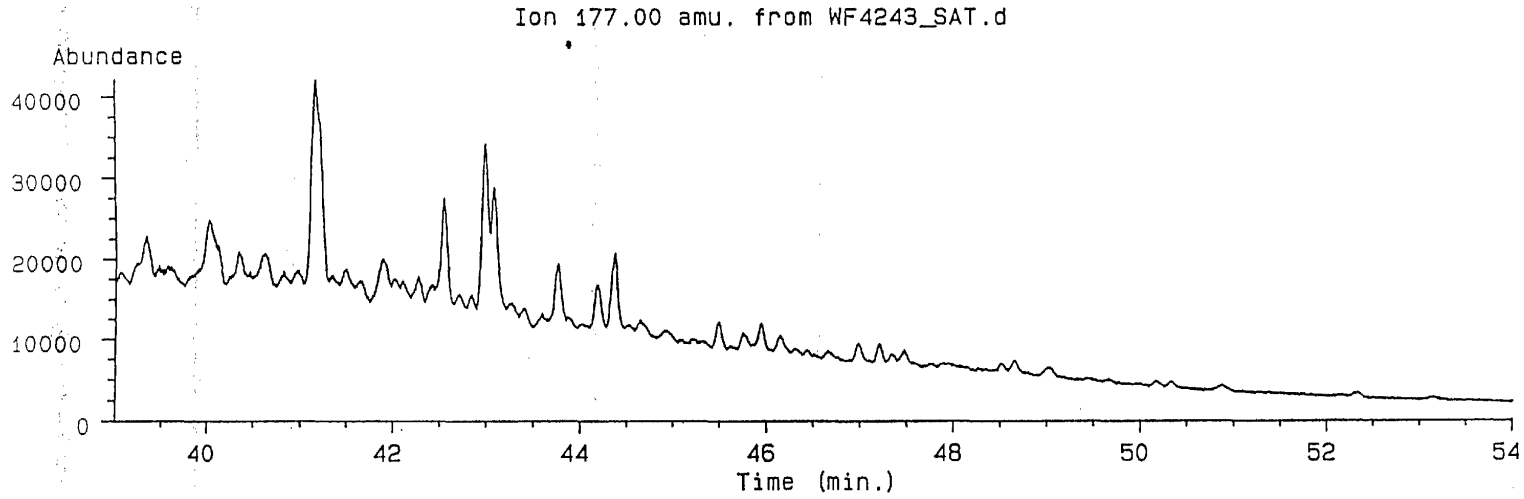
Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount
27	VV	37.310	217.00 amu	13	129484	0.3081 %
28	PV	37.617	217.00 amu	14	12133	0.02887 %
29	VV	37.781	217.00 amu	15	371182	0.8832 %
30	VV	37.913	217.00 amu	16	663037	1.578 %
31		-	217.00 amu	18	-Not Found-	
32	PV	38.627	217.00 amu	19	404413	0.9623 %
33	VV	38.698	217.00 amu	20	676768	1.610 %
34	VV	39.082	217.00 amu	21	1141942	2.717 %
35	VV	39.350	217.00 amu	22	1507252	3.586 %
36	VV	39.803	217.00 amu	C27R aaa STERANE 25	817462	1.945 %
37	VV	40.067	217.00 amu	27	1380915	3.286 %
38	VV	41.621	217.00 amu	C28R aaa STERANE 36	692275	1.647 %
39	VB	42.145	217.00 amu	C29S aaa STERANE 39	763782	1.817 %
40	VV	43.122	217.00 amu	C29R aaa STERANE 42	830824	1.977 %
41	VV	39.291	218.00 amu	C27R abb STERANE 21B	1134182	2.699 %
42	VV	39.466	218.00 amu	C27S abb STERANE 22	923661	2.198 %
43	VV	41.033	218.00 amu	C28R abb STERANE 33A	1064103	2.532 %
44	VV	41.192	218.00 amu	C28S abb STERANE 34	1060665	2.524 %
45	VV	42.452	218.00 amu	C29R abb STERANE 40	1003027	2.387 %
46	VV	42.589	218.00 amu	C29S abb STERANE 41	1212560	2.885 %

***** REPORT ERRORS *****

Calibration Peak #7's Qualifiers Were Not Satisfied.

*** Not All Calibrated Peaks Found ***


Ion 191.00 amu. from WF4243_SAT.d
Abundance
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
30
40
50
Time (min.)
Ion 217.00 amu. from WF4243_SAT.d
Abundance
30000
20000
10000
0
30
40
50
Time (min.)


Ion 177.00 amu. from WF4243_SAT.d
Abundance
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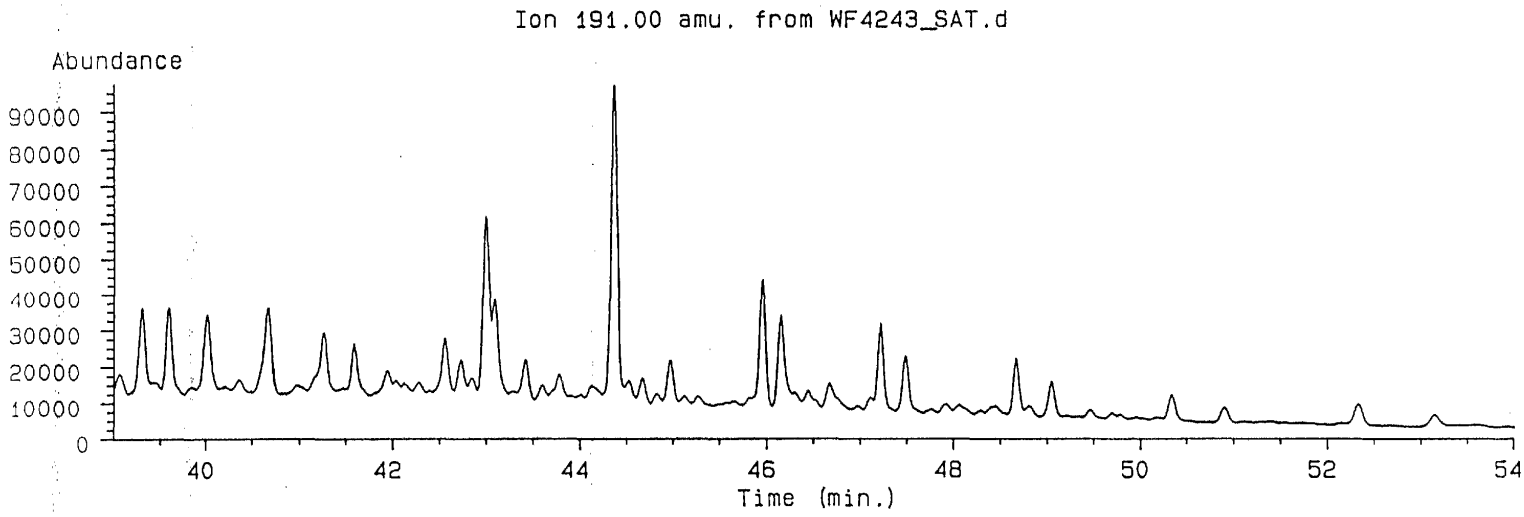
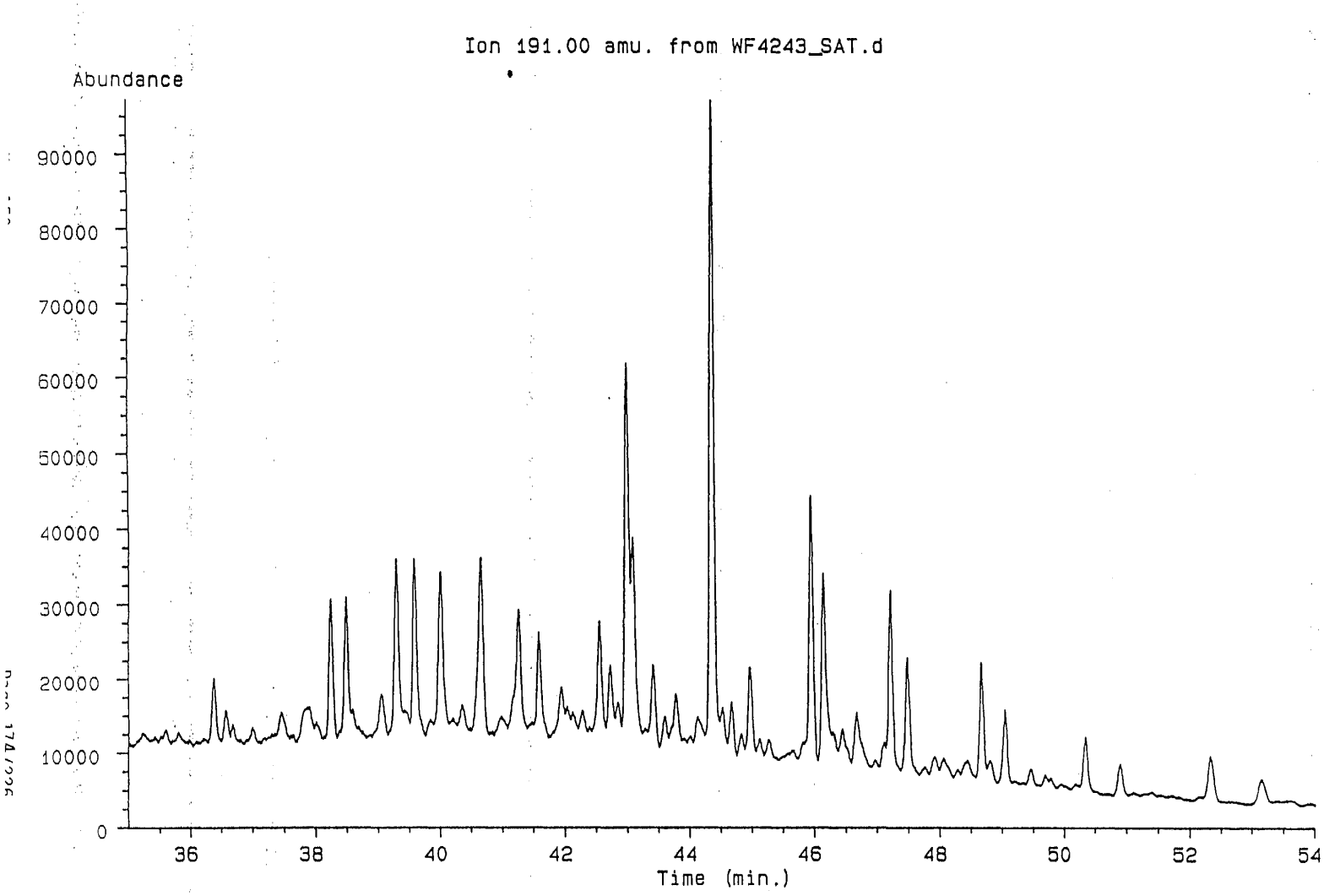
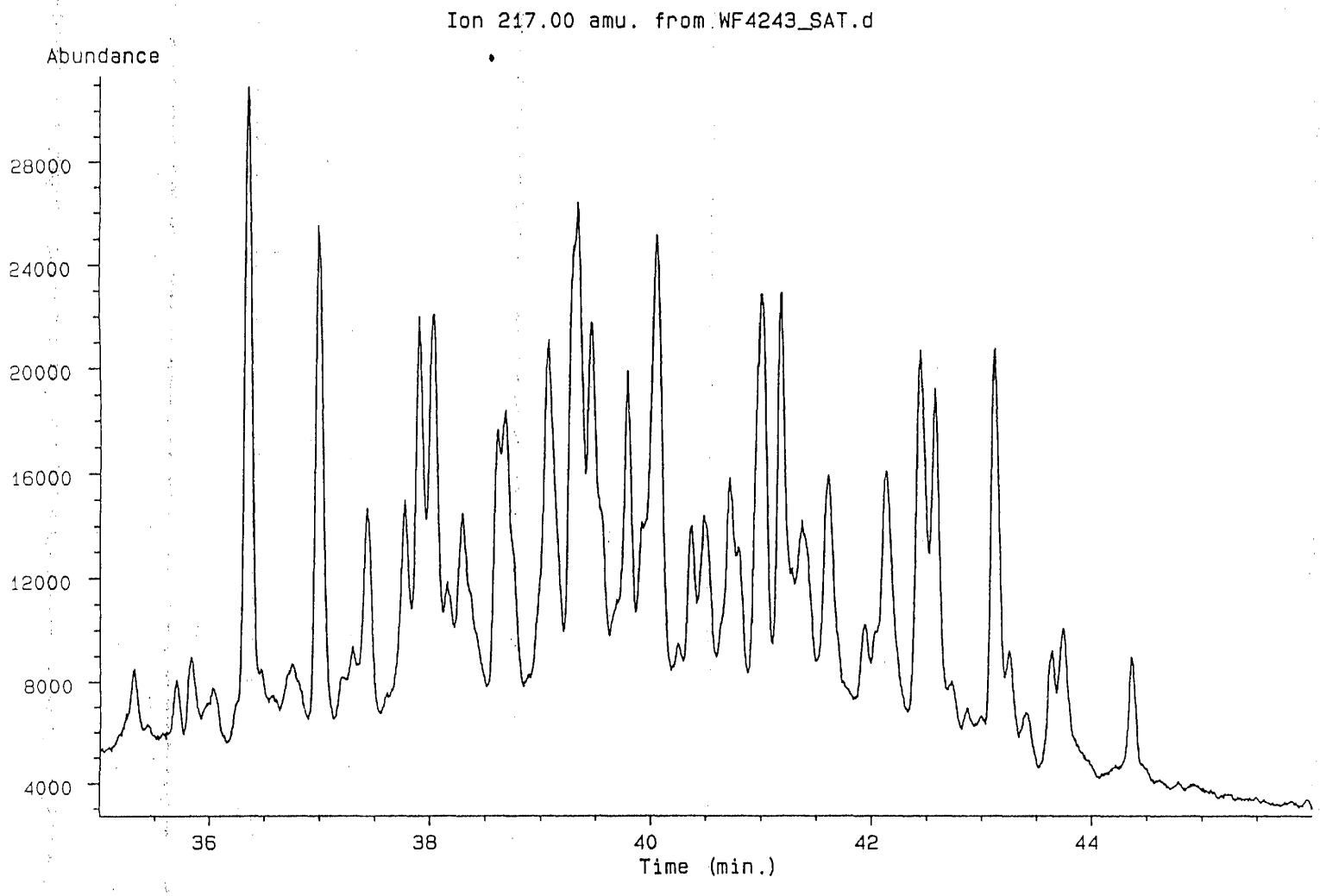
20000
10000
0
40
42
44
46
48
50
52
54
Time (min.)


Ion 191.00 amu. from WF4243_SAT.d
Abundance
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
40
42
44
46
48
50
52
54
Time (min.)


Ion 191.00 amu. from WF4243_SAT.d
Abundance
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
36
38
40
42
44
46
48
50
52
54
Time (min.)


Ion 217.00 amu. from WF4243_SAT.d
Abundance
28000
24000
20000
16000
12000
8000
4000
36
38
40
42
44
Time (min.)

*** PETROLEUM GEOCHEMISTRY ***

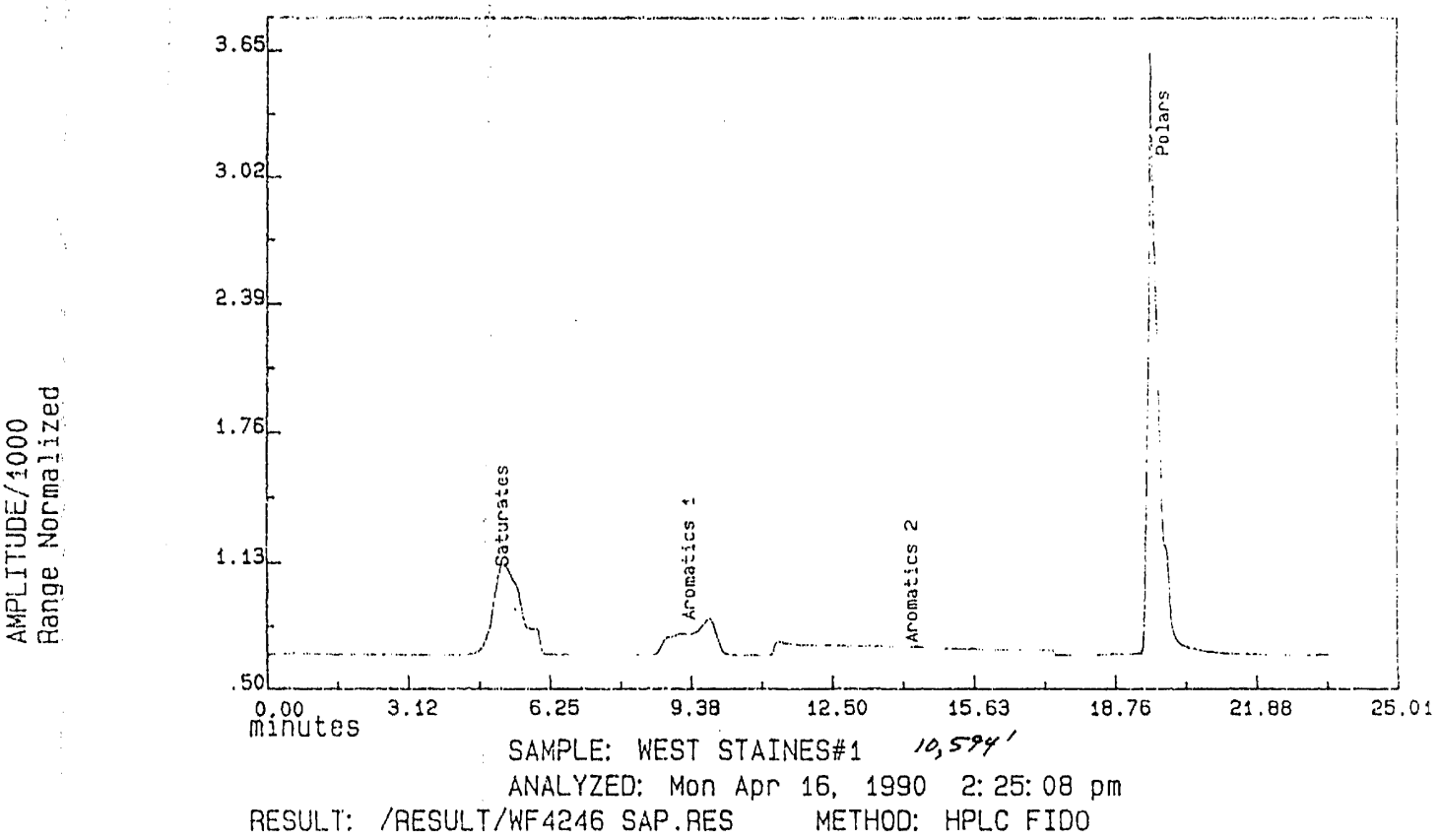
SARA ANALYSIS

SAMPLE NAME : WEST STAINES#1 10,594'
INSTRUMENT : HPLC_FID
INJECT TIME : Mon Apr 16, 1990 2:25:08 pm
METHOD USED : /METHOD/HPLC_FIDO.MTH
SEQUENCE : /DATA/LOOP/SEQUENCE/HP1090_AUTOBU.SEQ
RESULT FILE : /RESULT/WF4246_SAP.RES
REPORT TIME : 2:50 PM MON., 16 APR., 1990

	AREA	TIME	RESPONSE FACTOR
Saturates	19808.	5.29	.1275E-03
Aromatics 1	9463.	9.42	.5470E-04
Aromatics 2	15325.	14.36	.5470E-04
Polars	46416.	19.92	.4160E-04

	AMOUNT (mg)	% RESIDUE
Saturates	2.53	43.5
Aromatics	1.36	23.3
Polars	1.93	33.2

	% OIL
Saturates	37.9
Aromatics	20.4
Polars	29.0
Asphaltenes	12.7


AMPLITUDE/1000
Range Normalized
3.65
3.02
2.39
1.76
1.13
.50
Saturates
Aromatics 1
Aromatics 2
Polars
0.00
3.12
6.25
9.38
12.50
15.63
18.76
21.88
25.01
minutes
SAMPLE: WEST STAINES#1
10,594'
ANALYZED: Mon Apr 16, 1990 2:25:08 pm
RESULT: /RESULT/WF4246 SAP.RES METHOD: HPLC FIDO

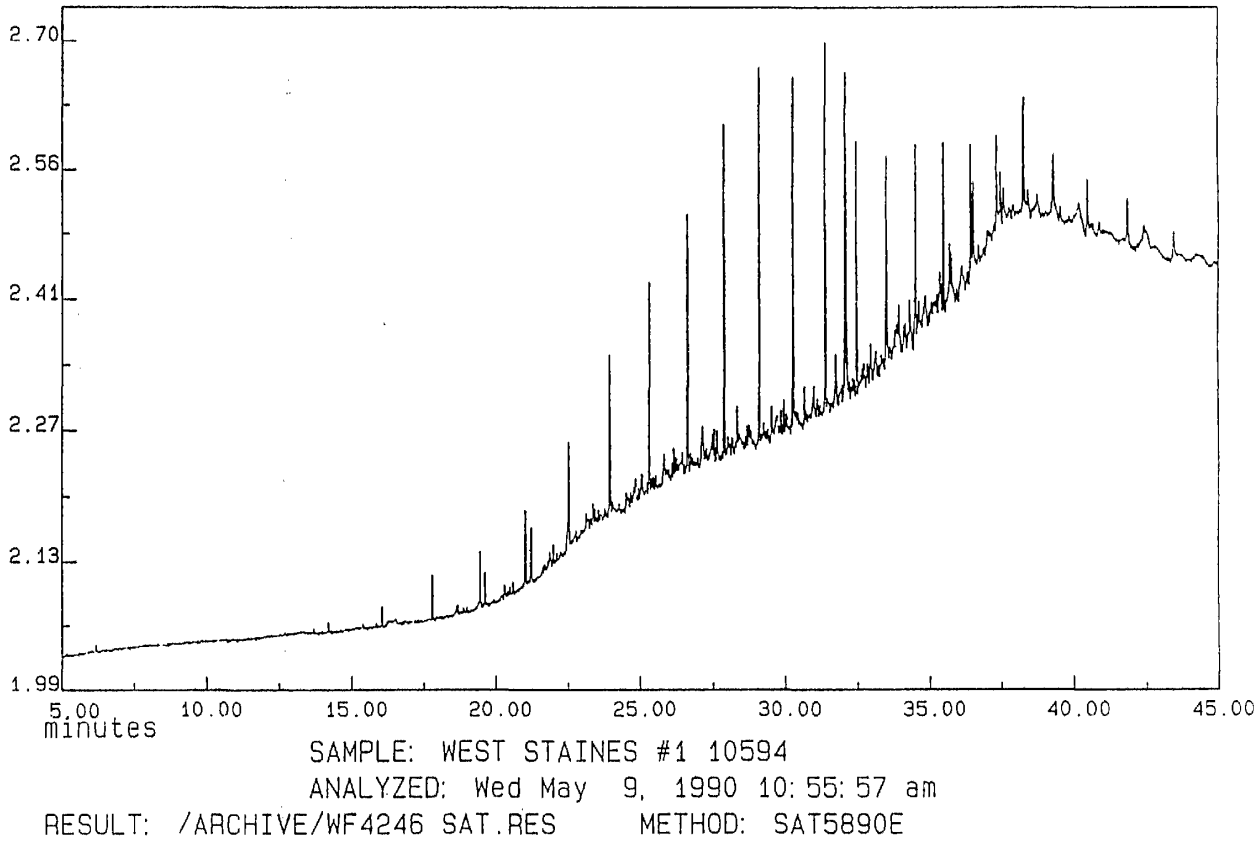
*** PETROLEUM GEOCHEMISTRY ***
SATURATE GC

SAMPLE NAME : WEST STAINES #1 10594
INSTRUMENT : HP_5890_2
INJECT TIME : Wed May 9, 1990 10:55:57 am
METHOD USED : /METHOD/SAT5890E.MTH
RESULT FILE : /RESULT/WF4246_SAT.RES
REPORT TIME : 11:47 AM WED., 9 MAY , 1990

CPI VALUE :	.90		
PRISTANE / PHYTANE :	.50	C15/C25 :	.06
PRISTANE / C17 :	.68	C17/Pr :	1.47
PHYTANE / C18 :	1.10	C18/Ph :	.91

	AREA	%AREA NALK	TIME	NORM C15
N-C10	0.	0.0	0.00	0.00
N-C11	0.	0.0	0.00	0.00
N-C12	0.	0.0	0.00	0.00
N-C13	0.	0.0	0.00	0.00
N-C14	0.	0.0	0.00	0.00
N-C15	187.	.5	16.03	1.00
N-C16	344.	.9	17.79	1.84
N-C17	610.	1.6	19.44	3.27
N-C18	762.	2.0	21.02	4.08
N-C19	1032.	2.7	22.52	5.52
N-C20	1780.	4.7	23.95	9.53
N-C21	1669.	4.4	25.32	8.93
N-C22	2376.	6.2	26.63	12.72
N-C23	2840.	7.5	27.88	15.20
N-C24	3140.	8.3	29.09	16.80
N-C25	3355.	8.8	30.25	17.95
N-C26	3309.	8.7	31.32	17.71
N-C27	2136.	5.6	32.45	11.43
N-C28	2667.	7.0	33.49	14.27
N-C29	2137.	5.6	34.49	11.44
N-C30	1741.	4.6	35.47	9.32
N-C31	1444.	3.8	36.51	7.73
N-C32	1530.	4.0	37.32	8.19
N-C33	1207.	3.2	38.26	6.46
N-C34	1960.	5.2	39.31	10.49
N-C35	868.	2.3	40.49	4.65
N-C36	941.	2.5	41.85	5.04

	AREA	%AREA ISPR	TIME
Farnesane	0.	0.0	0.00
Acyclic C16	0.	0.0	0.00
Acyclic C18	115.	8.4	18.66
Pristane	416.	30.4	19.60
Phytane	836.	61.1	21.21


AMPLITUDE/1000
Range Normalized
2.70
2.56
2.41
2.27
2.13
1.99
5.00
10.00
15.00
20.00
25.00
30.00
35.00
40.00
45.00
minutes
SAMPLE: WEST STAINES #1 10594
ANALYZED: Wed May 9, 1990 10:55:57 am
RESULT: /ARCHIVE/WF4246 SAT.RES METHOD: SAT5890E

**** PETROLEUM GEOCHEMISTRY / GNH ROCK EVAL ***

SAMPLE : WELL: WEST STAINES #1 DEPTH: 10594
INJECTED AT : Fri Apr 27, 1990 9:25:44 am
INSTRUMENT : GROCK
METHOD USED : /METHOD/PYRO5.MTH
RESULT FILE : /RESULT/WF424611_GRO.RES
BLANK FILE : /RESULT/BLANK13_GRO.RES

***** AREA SLICE INTEGRATION *****

AREA	YIELD (mg/g)	FRACTION
50614.	.01	S1
26998572.	7.37	S2

SAMPLE WT. : 14.50 mgs
Tmax : 496 C

SAMPLE : WEST STAINES #1 DEPTH: 10594
INJECTED AT : Fri Apr 27, 1990 9:25:02 am
INSTRUMENT : GPGC_2
METHOD USED : /METHOD/GPGC2_0.MTH
RESULT FILE : /RESULT/WF424611_GPG.RES
BLANK FILE : /RESULT/BLANK15_GPG.RES

***** AREA SLICE INTEGRATION *****

AREA	AREA PERCENT	FRACTION
11755922.	8.8	METHANE
4013864.	3.0	GASES
7900938.	5.9	GASOLINE
21397748.	16.0	KEROSENE
43113144.	32.2	GAS-OIL
45547320.	34.1	WAX-DISTILLATE

TOTAL AREA : 133728940. AREA %: 100.0

SAMPLE WT. : 14.50 mgs

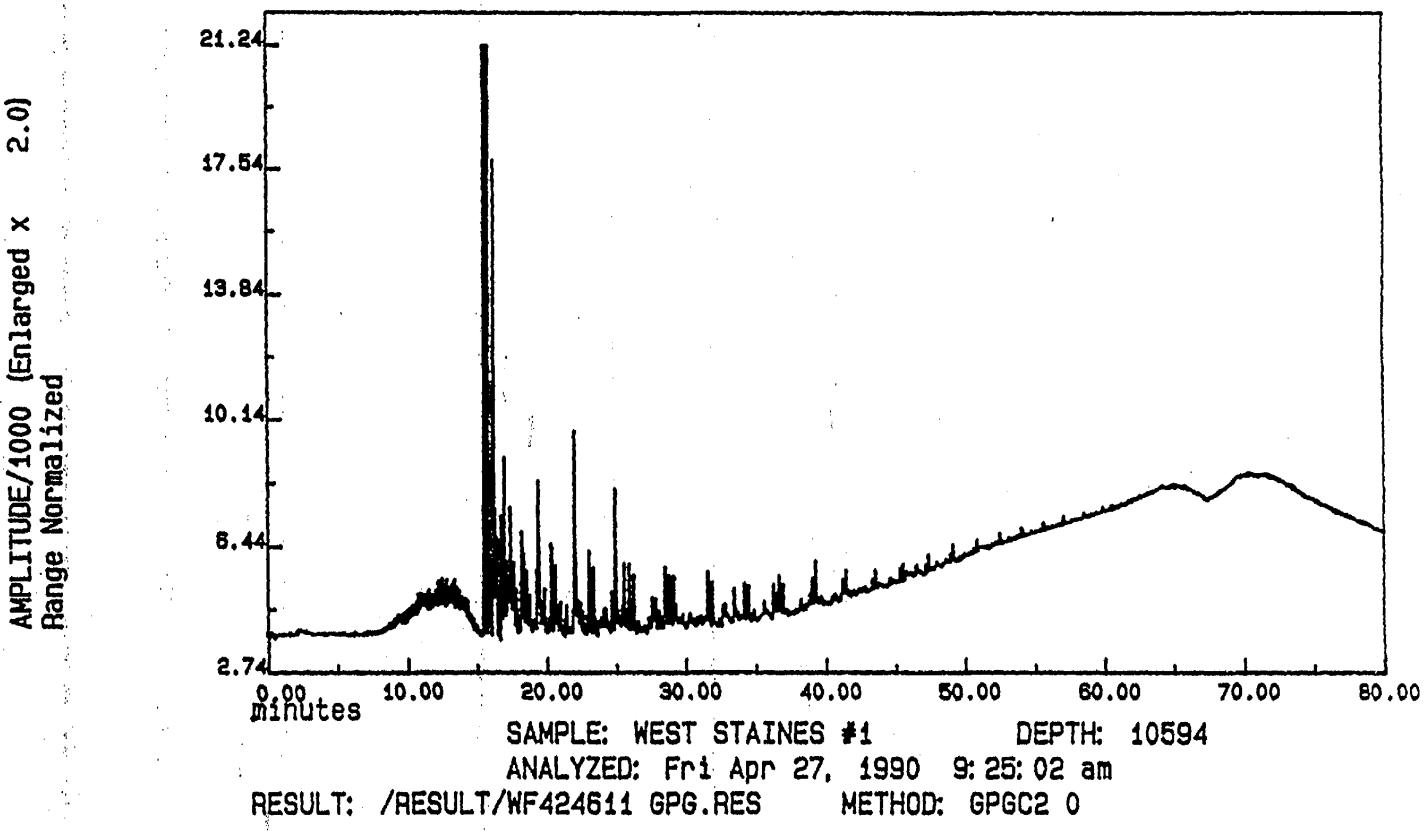
SAMPLE GOGI = .13
THIS IS OIL PRONE

METHANE + GASES = 11.8
GASOLINE+KEROSINE+GAS OIL+WAX DISTILLATE = 88.2

BY FACTOR ANALYSIS OF KEROGEN PYROLYSATE
THIS IS OIL PRONE

THIS ANALYSIS DETERMINES KEROGEN POTENTIAL AT ITS
PRESENT MATURITY. THIS IS NOT A KEROGEN TYPE ANALYSIS.

SAMPLE K2 = 7.71 mg/gm


AMPLITUDE/1000 (Enlarged x 2.0)
Range Normalized
21.24
17.54
13.84
10.14
6.44
2.74
0.00
10.00
20.00
30.00
40.00
50.00
60.00
70.00
80.00
minutes
SAMPLE: WEST STAINES #1 DEPTH: 10594
ANALYZED: Fri Apr 27, 1990 9:25:02 am
RESULT: /RESULT/WF424611 GPG.RES METHOD: GPGC2 0

Normalized Percent Report

Information from Current Data File Header:
File: /chem/msd/WF4246_SAT.d
Operator:
Date Acquired: Fri Apr 27 90 08:19:20 PM
Sample Name: WF4246_SAT
Misc Info:
Sequence Index: 1 **Bottle Number:** 17 **Repetition Number:** 1

SATURATE BIOMARKERS

Calibration Table Last Updated: Sun Jun 10 13:21:31 1990

Reference Peak Window: 0.250 Absolute Minutes
Non-reference Peak Window: 0.250 Absolute Minutes

Default Sample Amount: 0
Uncalib. Peak Response Factor: 0
Default Multiplier: 1

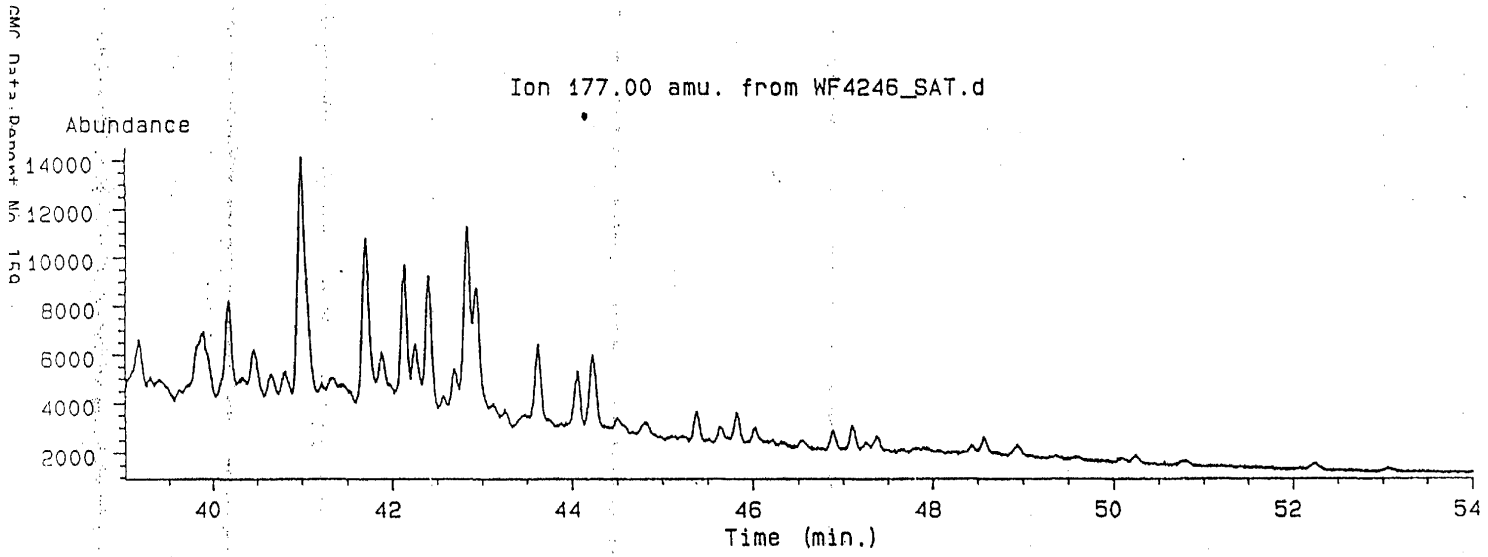
Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount
1	VV	39.827	191.00 amu	C27 18A HOPANE TS	426858	2.639 %
2	VV	40.482	191.00 amu	C27 17A HOPANE TM	633427	3.916 %
3	VV	40.820	191.00 amu	C28 BISNORHOPANE X	41050	0.2538 %
4	VV	42.829	191.00 amu	C29 HOPANE D	856412	5.294 %
5	VV	42.935	191.00 amu	C29 NORHOPANE D2	495384	3.062 %
6	VV	43.249	191.00 amu	C30 PENTACYCLANE PI	187790	1.161 %
7	VV	43.857	191.00 amu	C30 18A OLEANANE B	50318	0.3110 %*
8	VV	44.214	191.00 amu	C30 HOPANE G	1375268	8.501 %
9	VV	44.831	191.00 amu	C30 MORETANE K	273008	1.688 %
10	VV	45.828	191.00 amu	C31S HOPANE N	705104	4.359 %
11	VV	46.026	191.00 amu	C31R HOPANE O	592763	3.664 %
12	VV	46.321	191.00 amu	O & GAMMACERANE	160025	0.9892 %
13		-	191.00 amu	GAMMACERANE	-Not Found-	
14	VV	46.551	191.00 amu	P	257659	1.593 %
15		-	191.00 amu	R	-Not Found-	
16	VV	47.108	191.00 amu	C32S HOPANE U	567397	3.507 %
17	VV	47.382	191.00 amu	C32R HOPANE V	336815	2.082 %
18	VV	48.578	191.00 amu	C33S HOPANE ALPHA	369076	2.281 %
19	VV	48.956	191.00 amu	C33R HOPANE BETA	223027	1.379 %
20	VV	50.252	191.00 amu	C34S HOPANE GAMMA	228829	1.415 %
21	VV	50.812	191.00 amu	C34R HOPANE DELTA	114091	0.7053 %
22	VV	52.244	191.00 amu	C35S HOPANE EPSILON	212148	1.311 %
23	VV	53.075	191.00 amu	C35R HOPANE ZETA	117422	0.7259 %
24	VV	27.226	217.00 amu	C21 STERANE Y	267024	1.651 %
25	VV	36.175	217.00 amu	C27S ba DIASTERANE10	474330	2.932 %
26	VV	36.822	217.00 amu	C27R ba DIASTERANE11	354498	2.191 %

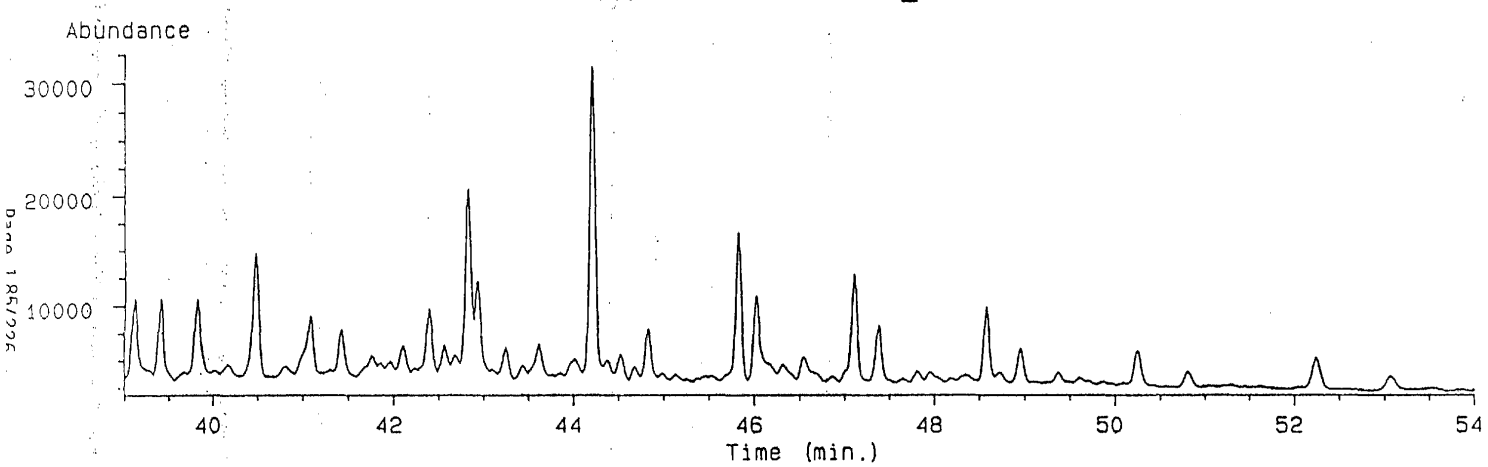
Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount
27	VV	37.261	217.00 amu	13	169454	1.048 %
28	PV	37.597	217.00 amu	14	195015	1.206 %
29	VV	37.735	217.00 amu	15	274369	1.696 %
30	VV	37.857	217.00 amu	16	318335	1.968 %
31	BV	38.450	217.00 amu	18	136838	0.8459 %
32		-	217.00 amu	19	-Not Found-	
33	PV	38.897	217.00 amu	20	485492	3.001 %
34	VV	39.172	217.00 amu	21	555219	3.432 %
35	VV	39.281	217.00 amu	22	380597	2.353 %
36	VV	39.616	217.00 amu	C27R aaa STERANE 25	343309	2.122 %
37	VV	39.898	217.00 amu	27	582575	3.601 %
38	VV	41.447	217.00 amu	C28R aaa STERANE 36	359397	2.222 %
39	VV	41.979	217.00 amu	C29S aaa STERANE 39	342593	2.118 %
40	VV	42.967	217.00 amu	C29R aaa STERANE 42	366945	2.268 %
41	VV	39.109	218.00 amu	C27R abb STERANE 21B	426027	2.634 %
42	VV	39.276	218.00 amu	C27S abb STERANE 22	339961	2.102 %
43	VV	40.851	218.00 amu	C28R abb STERANE 33A	407236	2.517 %
44	VV	41.013	218.00 amu	C28S abb STERANE 34	391509	2.420 %
45	BV	42.293	218.00 amu	C29R abb STERANE 40	360922	2.231 %
46	VV	42.424	218.00 amu	C29S abb STERANE 41	421418	2.605 %

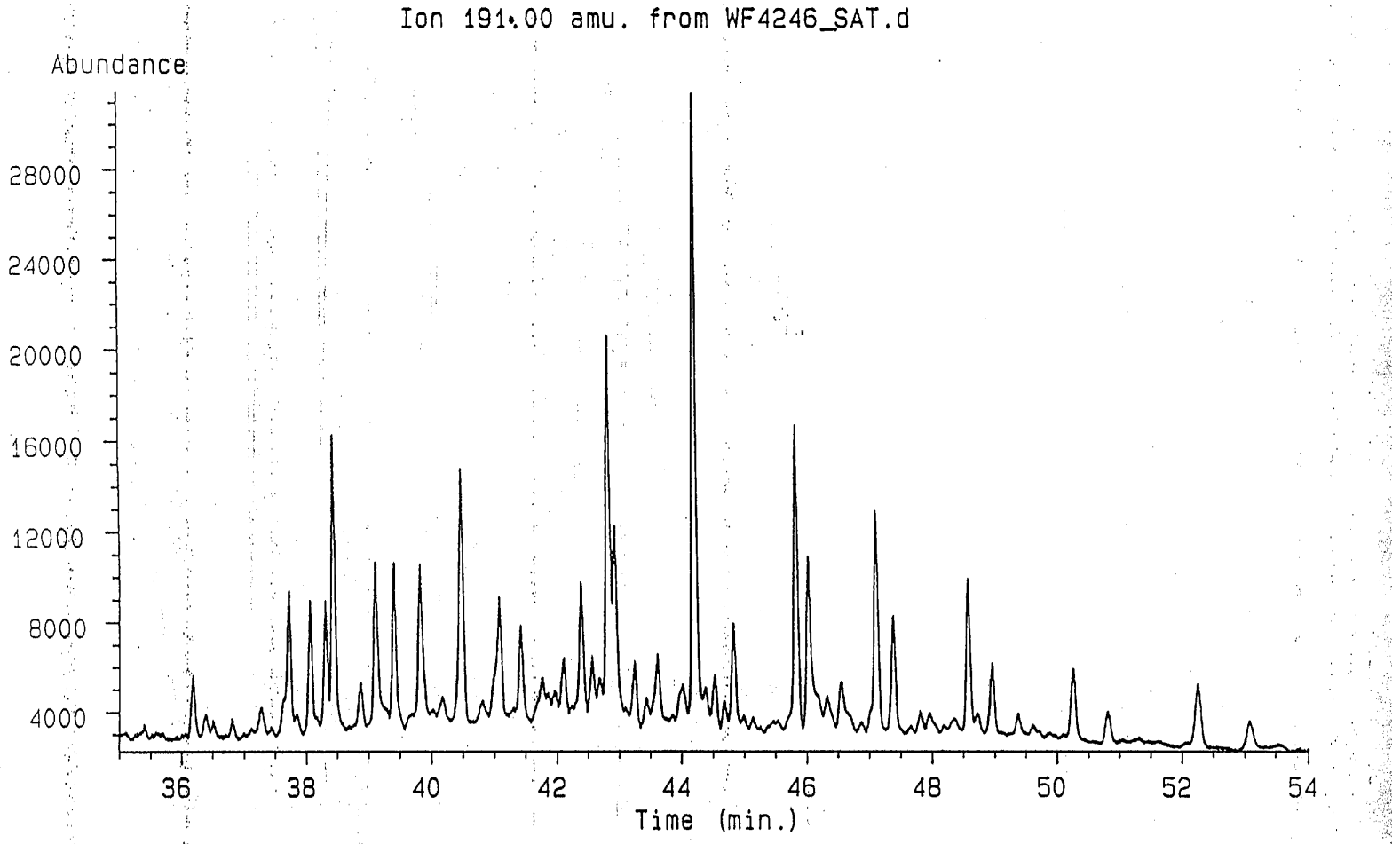
***** REPORT ERRORS *****

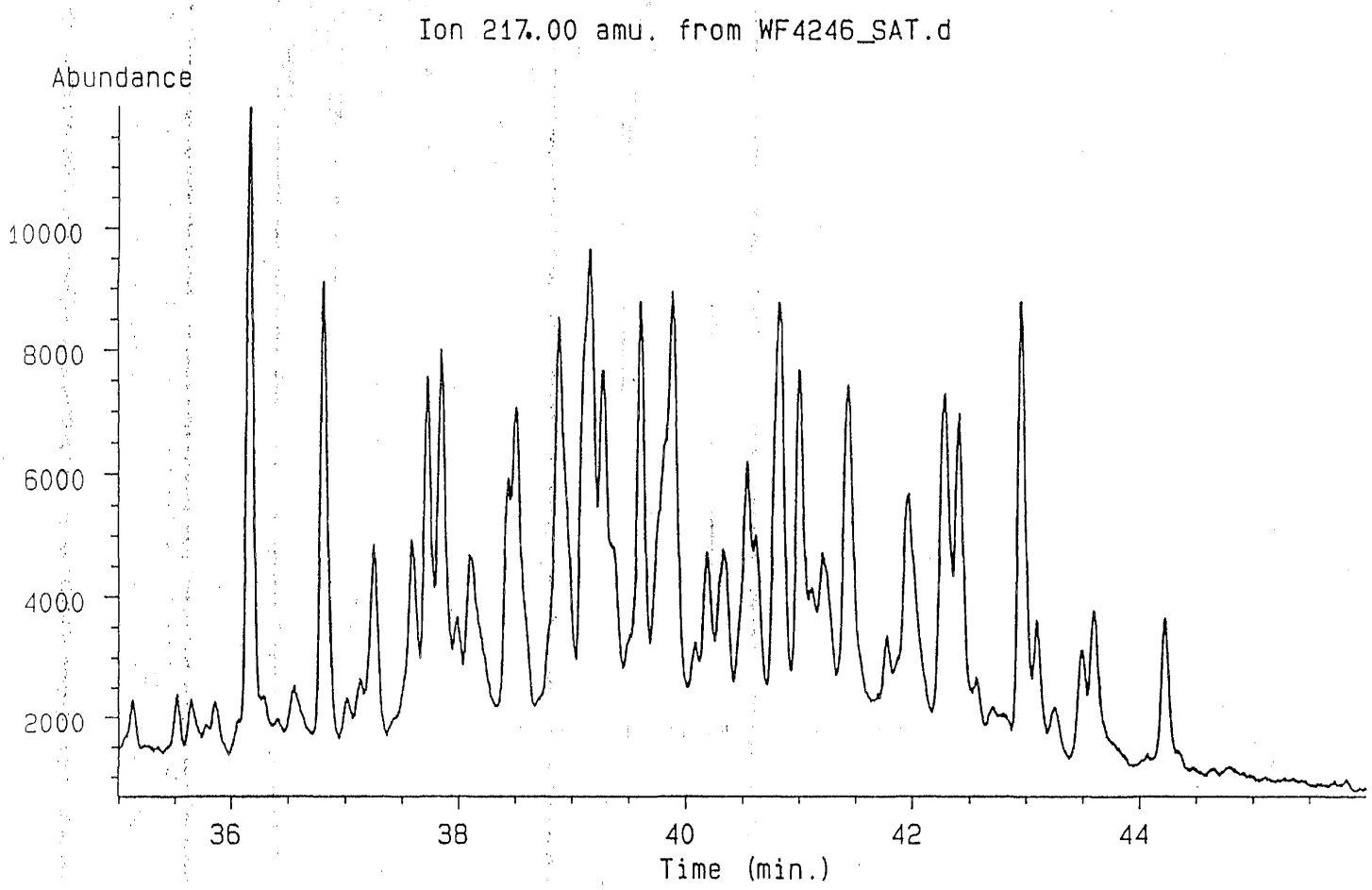
- Calibration Peak #7's Qualifiers Were Not Satisfied.

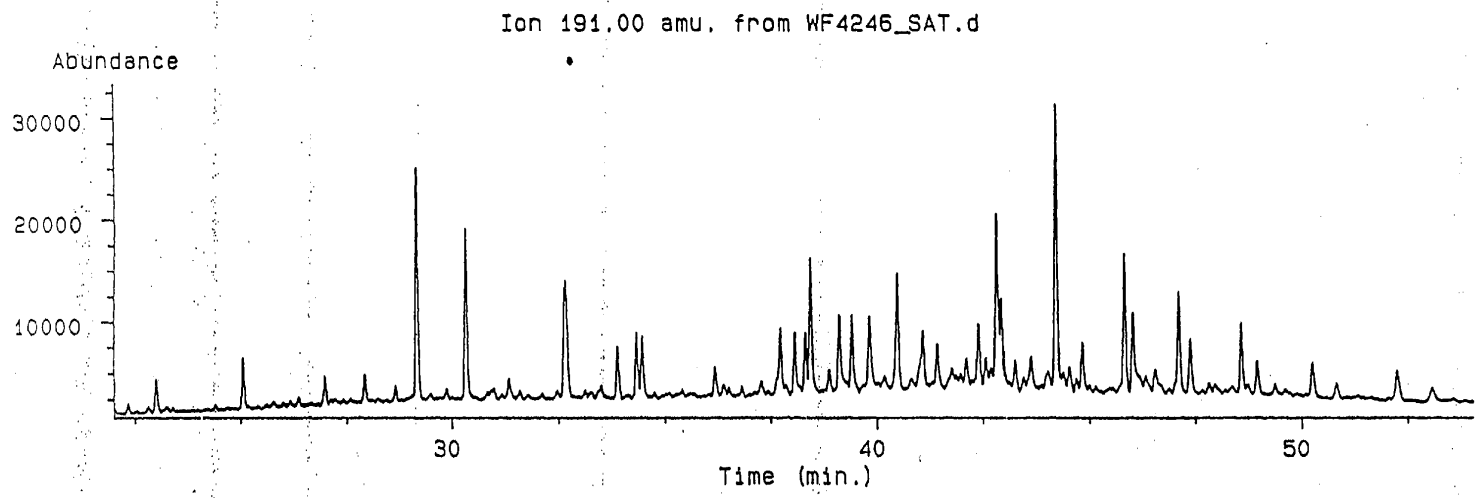
*** Not All Calibrated Peaks Found ***

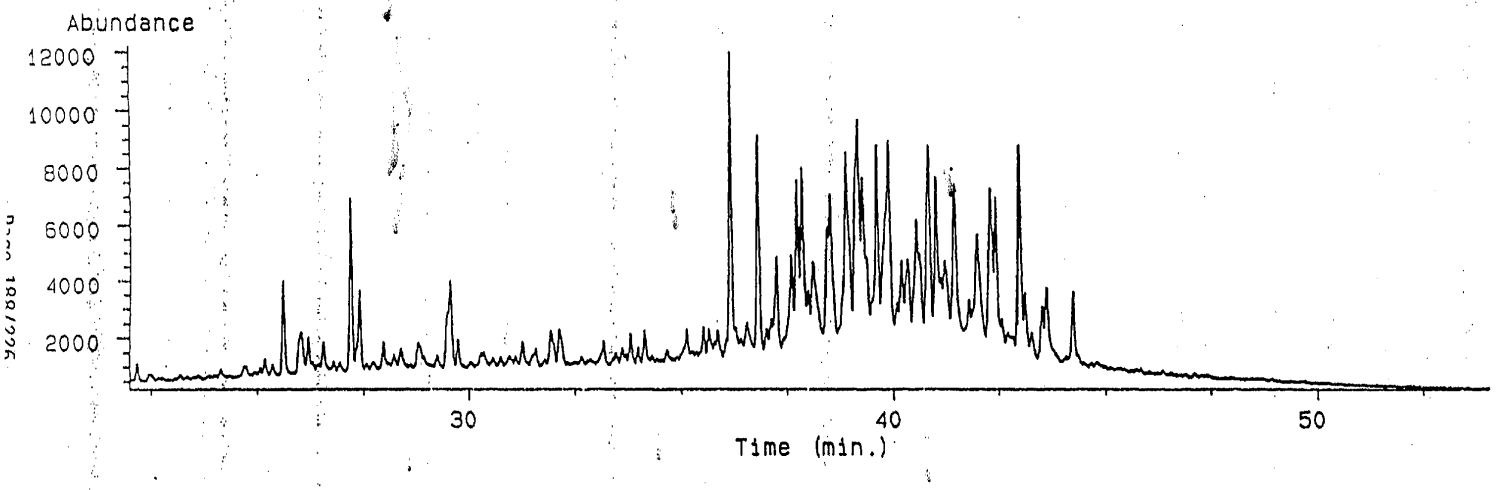

Ion 177.00 amu. from WF4246_SAT.d
Abundance
14000
12000
10000
8000
6000
4000
2000
40
42
44
46
48
50
52
54
Time (min.)


Ion 191.00 amu. from WF4246_SAT.d
Abundance
30000
20000
10000
40
42
44
46
48
50
52
54
Time (min.)


Ion 191.00 amu. from WF4246_SAT.d
Abundance
28000
24000
20000
16000
12000
8000
4000
36
38
40
42
44
46
48
50
52
54
Time (min.)


Ion 217.00 amu. from WF4246_SAT.d
Abundance
10000
8000
6000
4000
2000
36
38
40
42
44
Time (min.)


Ion 191.00 amu. from WF4246_SAT.d
Abundance
30000
20000
10000
30
40
50
Time (min.)


Ion 217.00 amu. from WF4246_SAT.d
Abundance
12000
10000
8000
6000
4000
2000
30
40
50
Time (min.)

*** PETROLEUM GEOCHEMISTRY ***

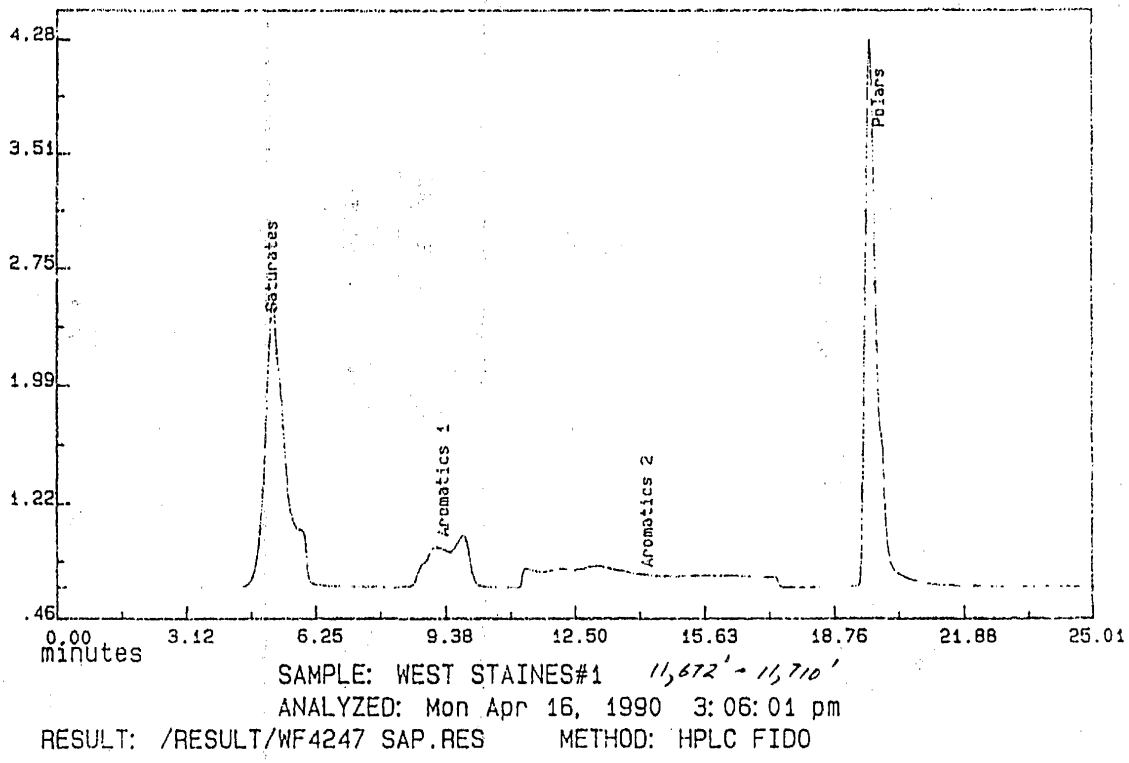
SARA ANALYSIS

SAMPLE NAME : WEST STAINES#1 11,672' - 11,710'
INSTRUMENT : HPLC_FID
INJECT TIME : Mon Apr 16, 1990 3:06:01 pm
METHOD USED : /METHOD/HPLC_FIDO.MTH
SEQUENCE : /DATA/LOOP/SEQUENCE/HP1090_AUTOBV.SEQ
RESULT FILE : /RESULT/WF4247_SAP.RES
REPORT TIME : 3:31 PM MON., 16 APR., 1990

	AREA	TIME	RESPONSE FACTOR
Saturates	64557.	5.29	.1275E-03
Aromatics 1	19774.	9.42	.5470E-04
Aromatics 2	36069.	14.36	.5470E-04
Polars	73934.	19.96	.4160E-04

	AMOUNT (mg)	% RESIDUE
Saturates	8.23	57.3
Aromatics	3.05	21.3
Polars	3.08	21.4

	% OIL
Saturates	56.0
Aromatics	20.8
Polars	20.9
Asphaltenes	2.3


AMPLITUDE/1000
Range Normalized
4.28
3.51
2.75
1.99
1.22
.46
Saturates
Aromatics 1
Aromatics 2
Polars
0.00
3.12
6.25
9.38
12.50
15.63
18.76
21.88
25.01
minutes
SAMPLE: WEST STAINES#1 11,672' - 11,710'
ANALYZED: Mon Apr 16, 1990 3:06:01 pm
RESULT: /RESULT/WF4247 SAP.RES METHOD: HPLC FIDO

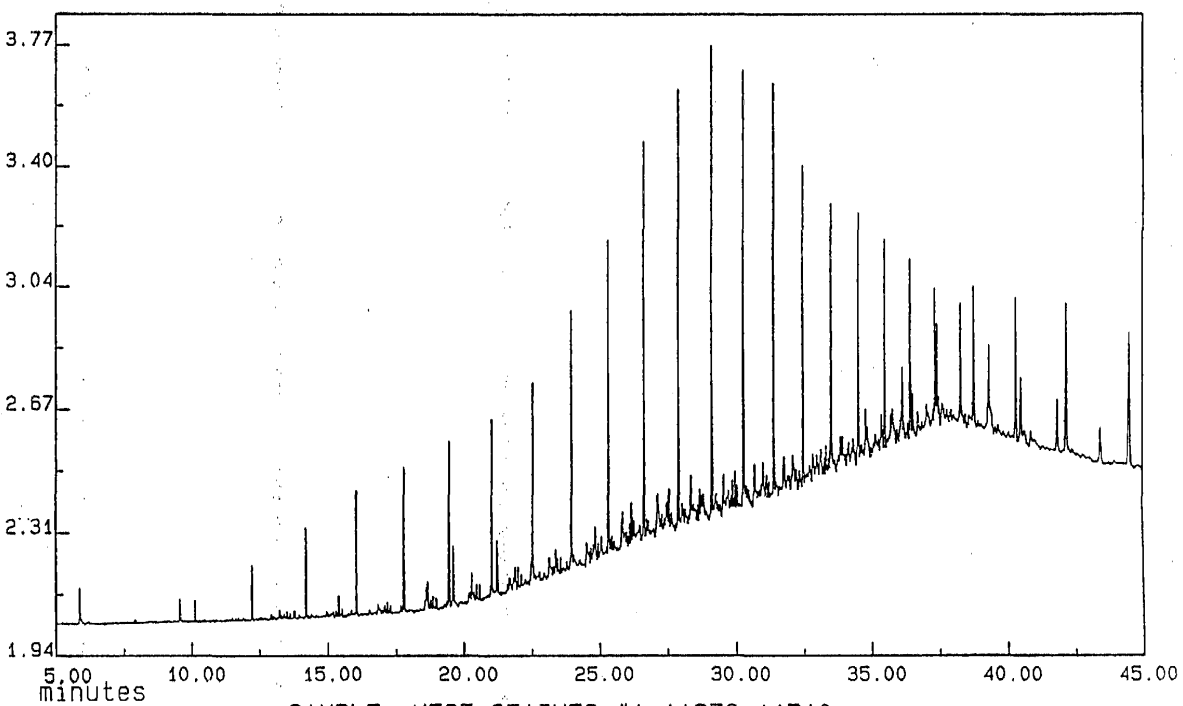
*** PETROLEUM GEOCHEMISTRY ***
SATURATE GC

SAMPLE NAME : WEST STAINES #1 11672-11710
INSTRUMENT : HP_5890_2
INJECT TIME : Wed May 9, 1990 11:51:24 am
METHOD USED : /METHOD/SAT5890E.MTH
RESULT FILE : /RESULT/WF4247_SAT.RES
REPORT TIME : 12:43 PM WED., 9 MAY , 1990

CPI VALUE : .98
PRISTANE / PHYTANE : 1.13 C15/C25 : .26
PRISTANE / C17 : .63 C17/Pr : 1.59
PHYTANE / C18 : .48 C18/Ph : 2.08

	AREA	%AREA NALK	TIME	NORM C15
N-C10	983.	.7	5.85	.36
N-C11	128.	.1	7.88	.05
N-C12	439.	.3	10.11	.16
N-C13	1168.	.8	12.21	.43
N-C14	1902.	1.3	14.18	.69
N-C15	2740.	1.9	16.04	1.00
N-C16	3196.	2.2	17.79	1.17
N-C17	3773.	2.6	19.45	1.38
N-C18	4351.	3.0	21.02	1.59
N-C19	5456.	3.8	22.52	1.99
N-C20	6386.	4.5	23.95	2.33
N-C21	6979.	4.9	25.32	2.55
N-C22	9144.	6.4	26.63	3.34
N-C23	10562.	7.4	27.89	3.85
N-C24	11154.	7.8	29.09	4.07
N-C25	10663.	7.5	30.25	3.89
N-C26	10481.	7.3	31.37	3.83
N-C27	7698.	5.4	32.45	2.81
N-C28	7433.	5.2	33.49	2.71
N-C29	6968.	4.9	34.49	2.54
N-C30	5324.	3.7	35.47	1.94
N-C31	4484.	3.1	36.41	1.64
N-C32	3976.	2.8	37.40	1.45
N-C33	4106.	2.9	38.26	1.50
N-C34	5373.	3.8	39.31	1.96
N-C35	5232.	3.7	40.30	1.91
N-C36	2610.	1.8	41.84	.95

	AREA	%AREA ISPR	TIME
Farnesane	261.	4.3	13.78
Acyclic C16	524.	8.6	15.39
Acyclic C18	870.	14.2	18.66
Pristane	2367.	38.7	19.60
Phytane	2094.	34.2	21.22



SAMPLE: WEST STAINES #1 11672-11710

ANALYZED: Wed May 9, 1990 11:51:24 am

RESULT: /ARCHIVE/WF4247 SAT.RES METHOD: SAT5890E

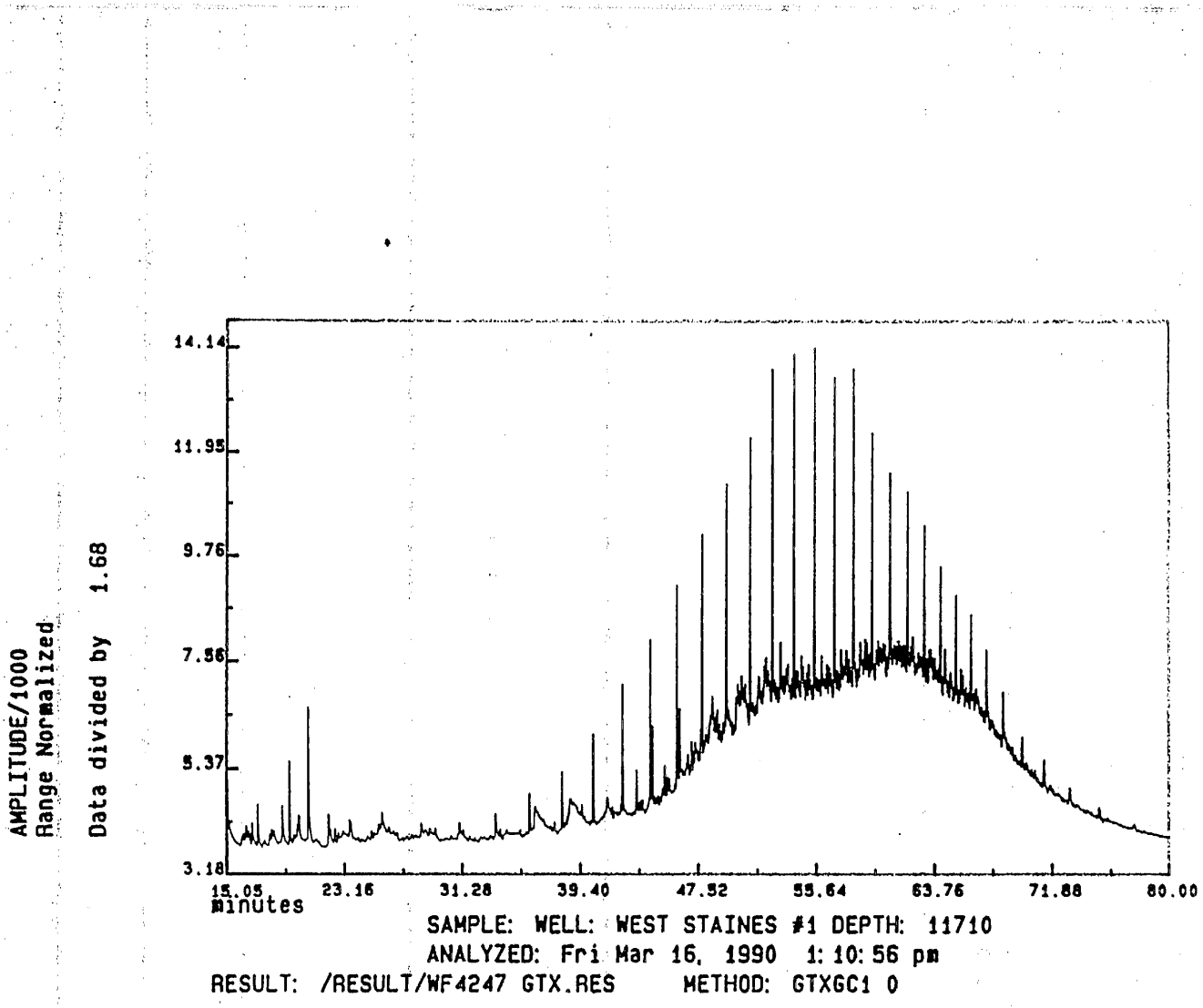
**** PETROLEUM GEOCHEMISTRY / GNH ROCK EVAL ***

SAMPLE : WELL: WEST STAINES #1 DEPTH: 11710
INJECTED AT : Tue Apr 17, 1990 7:25:30 am
INSTRUMENT : GROCK
METHOD USED : /METHOD/PYRO5.MTH
RESULT FILE : /RESULT/WF424710_GRO.RES
BLANK FILE : /RESULT/BLANK13_GRO.RES

***** AREA SLICE INTEGRATION *****

AREA	YIELD (mg/g)	FRACTION
46476688.	5.00	S1
522217220.	11.19	S2

SAMPLE WT. : 23.80 mgs
Tmax : 438 C


AMPLITUDE/1000
Range Normalized
Data divided by 1.68
14.14
11.95
9.76
7.56
5.37
3.18
15.05
23.16
31.28
39.40
47.52
55.64
63.76
71.88
80.00
minutes
SAMPLE: WELL: WEST STAINES #1 DEPTH: 11710
ANALYZED: Fri Mar 16, 1990 1:10:56 pm
RESULT: /RESULT/WF4247 GTX.RES METHOD: GTXGC1 0

**** PETROLEUM GEOCHEMISTRY / GNH PGC AUTO ****

SAMPLE : WELL: WEST STAINES #1 DEPTH: 11710
INJECTED AT : Tue Apr 17, 1990 7:25:29 am
INSTRUMENT : GPGC_2
METHOD USED : /METHOD/GPGC2_0.MTH
RESULT FILE : /RESULT/WF424710_GPG.RES
BLANK FILE : /RESULT/BLANK15_GPG.RES

***** AREA SLICE INTEGRATION *****

AREA	AREA PERCENT	FRACTION
2787390.	8.3	METHANE
2964178.	8.8	GASES
8911876.	26.6	GASOLINE
7374954.	22.0	KEROSENE
9838402.	29.3	GAS-OIL
1688621.	5.0	WAX-DISTILLATE

TOTAL AREA : 33565384. AREA %: 100.0

SAMPLE WT. : 23.80 mgs

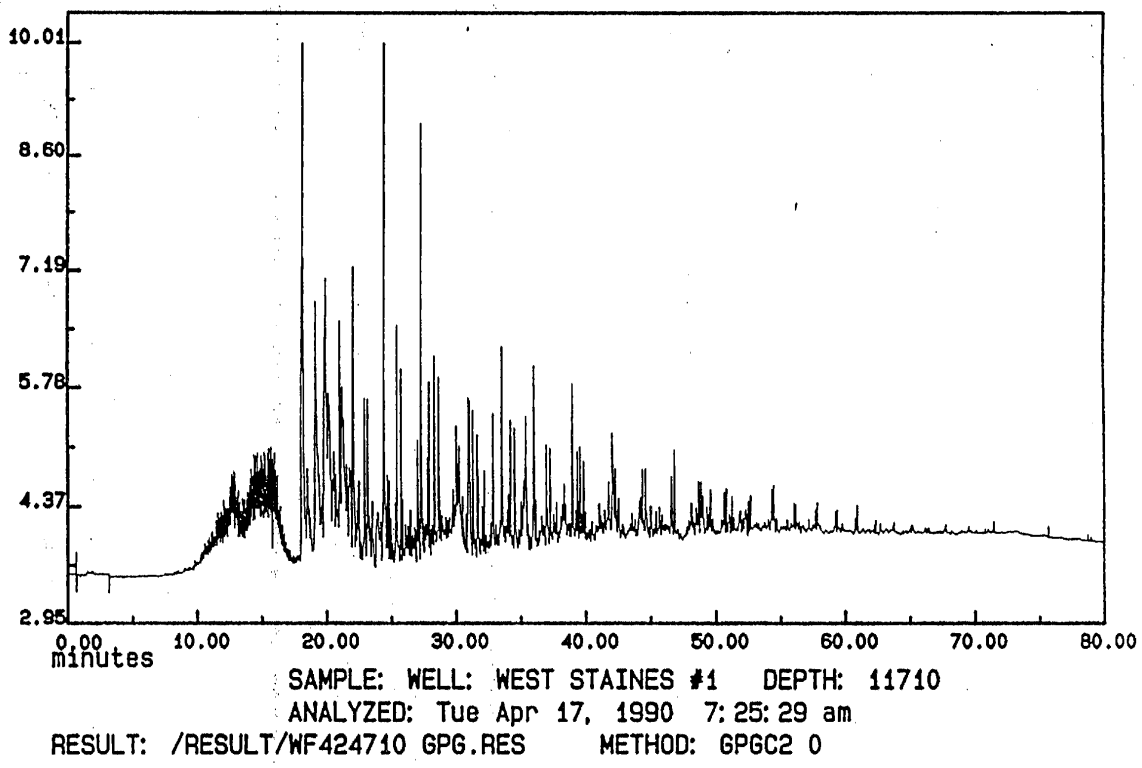
SAMPLE GOGI = .21
THIS IS OIL PRONE

METHANE + GASES = 17.1
GASOLINE+KEROSINE+GAS OIL+WAX DISTILLATE = 82.9

BY FACTOR ANALYSIS OF KEROGEN PYROLYSATE
THIS IS AN OIL+GAS SOURCE

THIS ANALYSIS DETERMINES KEROGEN POTENTIAL AT ITS
PRESENT MATURITY. THIS IS NOT A KEROGEN TYPE ANALYSIS.

SAMPLE K2 = 11.34 mg/gm


AMPLITUDE/1000 (Enlarged x 1.3)
Range Normalized
10.01
8.60
7.19
5.78
4.37
2.95
0.00
10.00
20.00
30.00
40.00
50.00
60.00
70.00
80.00
minutes
SAMPLE: WELL: WEST STAINES #1 DEPTH: 11710
ANALYZED: Tue Apr 17, 1990 7:25:29 am
RESULT: /RESULT/WF424710 GPG.RES METHOD: GPGC2 0

Normalized Percent Report

Information from Current Data File Header:
File: /chem/msd/WF4247_SAT.d
Operator:
Date Acquired: Fri Apr 27 90 09:29:04 PM
Sample Name: WF4247_SAT
Misc Info:
Sequence Index: 1 **Bottle Number:** 18 **Repetition Number:** 1

SATURATE BIOMARKERS

Calibration Table Last Updated: Sun Jun 10 14:34:58 1990

Reference Peak Window: 0.250 Absolute Minutes
Non-reference Peak Window: 0.250 Absolute Minutes

Default Sample Amount: 0
Uncalib. Peak Response Factor: 0
Default Multiplier: 1

Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount
1	VV	39.843	191.00 amu	C27 18A HOPANE TS	529511	3.414 %
2	VV	40.498	191.00 amu	C27 17A HOPANE TM	552851	3.564 %
3	VV	40.805	191.00 amu	C28 BISNORHOPANE X	86537	0.5579 %
4	VV	42.848	191.00 amu	C29 HOPANE D	852444	5.496 %
5	VV	42.948	191.00 amu	C29 NORHOPANE D2	535087	3.450 %
6	VV	43.270	191.00 amu	C30 PENTACYCLANE PI	255478	1.647 %
7	VV	43.878	191.00 amu	C30 18A OLEANANE B	52541	0.3387 %*
8	VV	44.232	191.00 amu	C30 HOPANE G	1510866	9.741 %
9	VV	44.845	191.00 amu	C30 MORETANE K	234562	1.512 %
10	VV	45.845	191.00 amu	C31S HOPANE N	703522	4.536 %
11	VV	46.036	191.00 amu	C31R HOPANE O	608720	3.924 %
12	VV	46.329	191.00 amu	O & GAMMACERANE	120257	0.7753 %
13	VV	46.408	191.00 amu	GAMMACERANE	52792	0.3403 %
14	VV	46.574	191.00 amu	P	261895	1.688 %
15		-	191.00 amu	R	-Not Found-	
16	VV	47.122	191.00 amu	C32S HOPANE U	544888	3.513 %
17	VV	47.390	191.00 amu	C32R HOPANE V	330646	2.132 %
18	VV	48.585	191.00 amu	C33S HOPANE ALPHA	315788	2.036 %
19	VV	48.968	191.00 amu	C33R HOPANE BETA	219239	1.413 %
20	VV	50.260	191.00 amu	C34S HOPANE GAMMA	188458	1.215 %
21	VV	50.823	191.00 amu	C34R HOPANE DELTA	104175	0.6716 %
22	VV	52.253	191.00 amu	C35S HOPANE EPSILON	162056	1.045 %
23	VV	53.085	191.00 amu	C35R HOPANE ZETA	97401	0.6279 %
24	PV	27.231	217.00 amu	C21 STERANE Y	316118	2.038 %
25	VV	36.193	217.00 amu	C27S ba DIASTERANE10	431750	2.783 %
26	VV	36.840	217.00 amu	C27R ba DIASTERANE11	336978	2.172 %

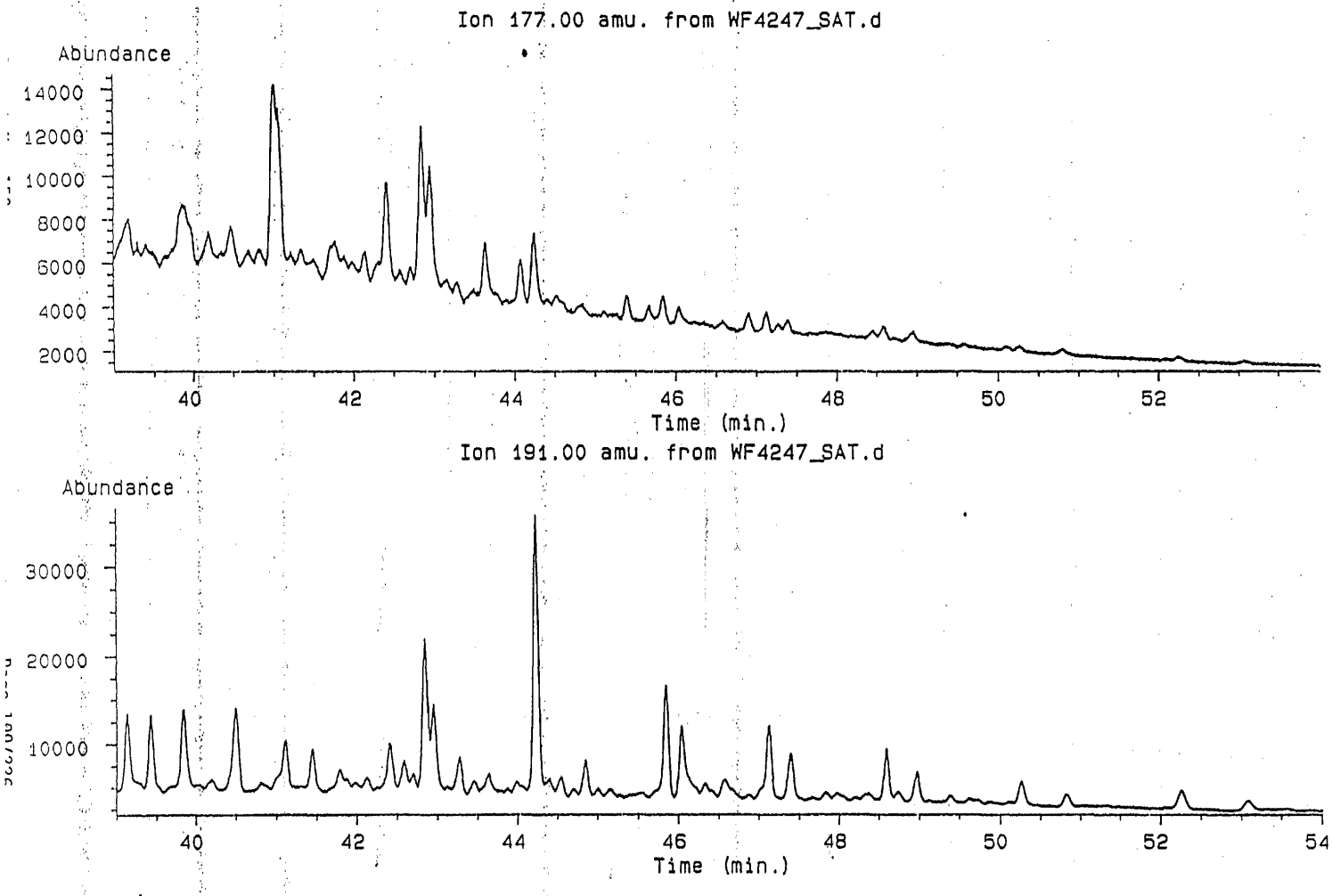
Sequence: /chem/msd/042790.s Vial: 18 Injection: 1

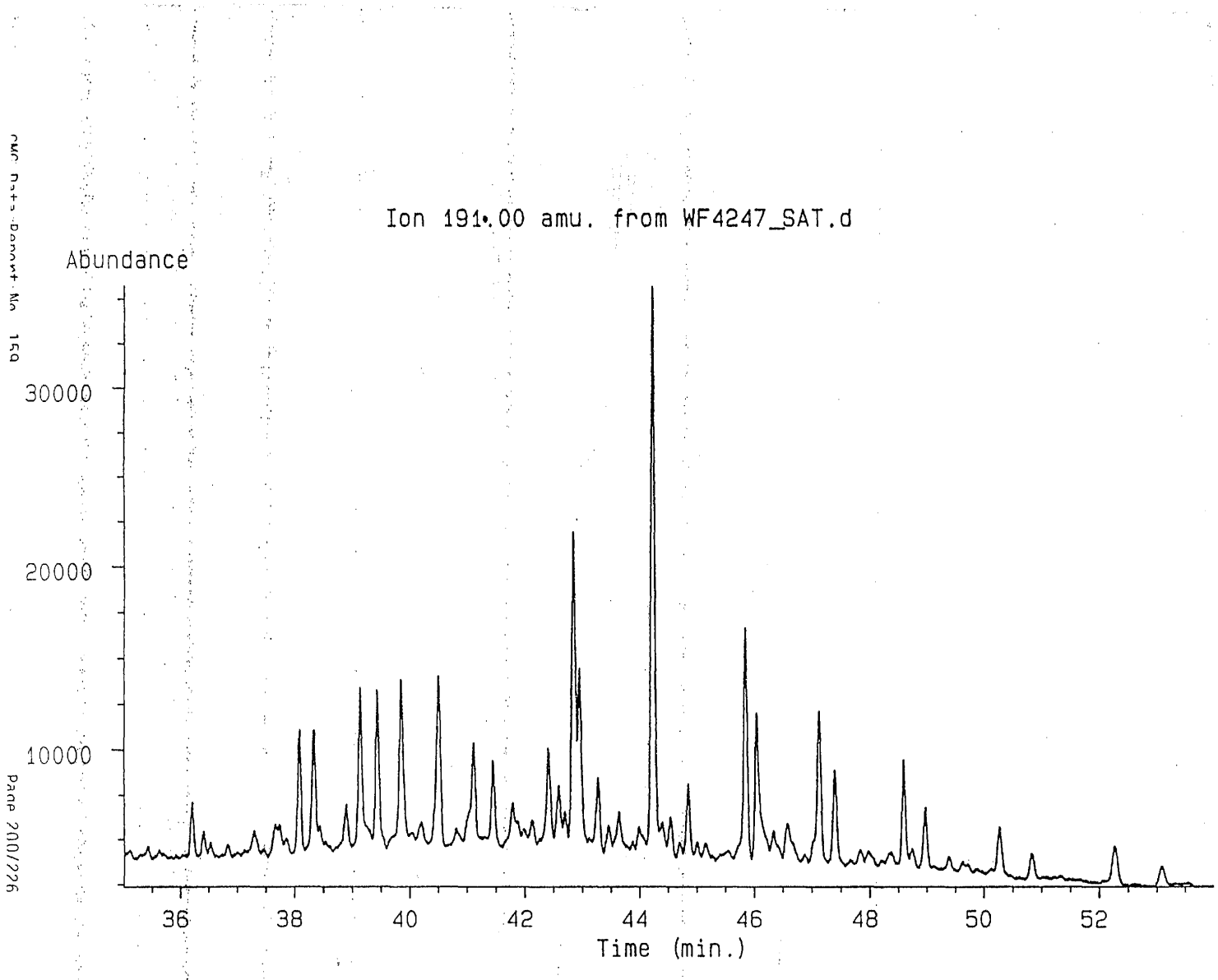
Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount
27	VV	37.277	217.00 amu	13	156153	1.007 %
28	VV	37.618	217.00 amu	14	167301	1.079 %
29	VV	37.751	217.00 amu	15	259254	1.671 %
30	VV	37.871	217.00 amu	16	314006	2.024 %
31	BV	38.465	217.00 amu	18	150792	0.9722 %
32	VV	38.529	217.00 amu	19	235040	1.515 %
33	VV	38.913	217.00 amu	20	399824	2.578 %
34	VV	39.193	217.00 amu	21	521963	3.365 %
35	VV	39.302	217.00 amu	22	273517	1.763 %
36	VV	39.632	217.00 amu	C27R aaa STERANE 25	267961	1.728 %
37	VV	39.907	217.00 amu	27	457248	2.948 %
38	VV	41.458	217.00 amu	C28R aaa STERANE 36	223066	1.438 %
39	VV	41.990	217.00 amu	C29S aaa STERANE 39	267415	1.724 %
40	VV	42.978	217.00 amu	C29R aaa STERANE 42	247339	1.595 %
41	VV	39.126	218.00 amu	C27R abb STERANE 21B	388844	2.507 %
42	VV	39.296	218.00 amu	C27S abb STERANE 22	302455	1.950 %
43	VV	40.869	218.00 amu	C28R abb STERANE 33A	365258	2.355 %
44	VV	41.030	218.00 amu	C28S abb STERANE 34	371276	2.394 %
45	BV	42.308	218.00 amu	C29R abb STERANE 40	341539	2.202 %
46	VV	42.440	218.00 amu	C29S abb STERANE 41	396330	2.555 %

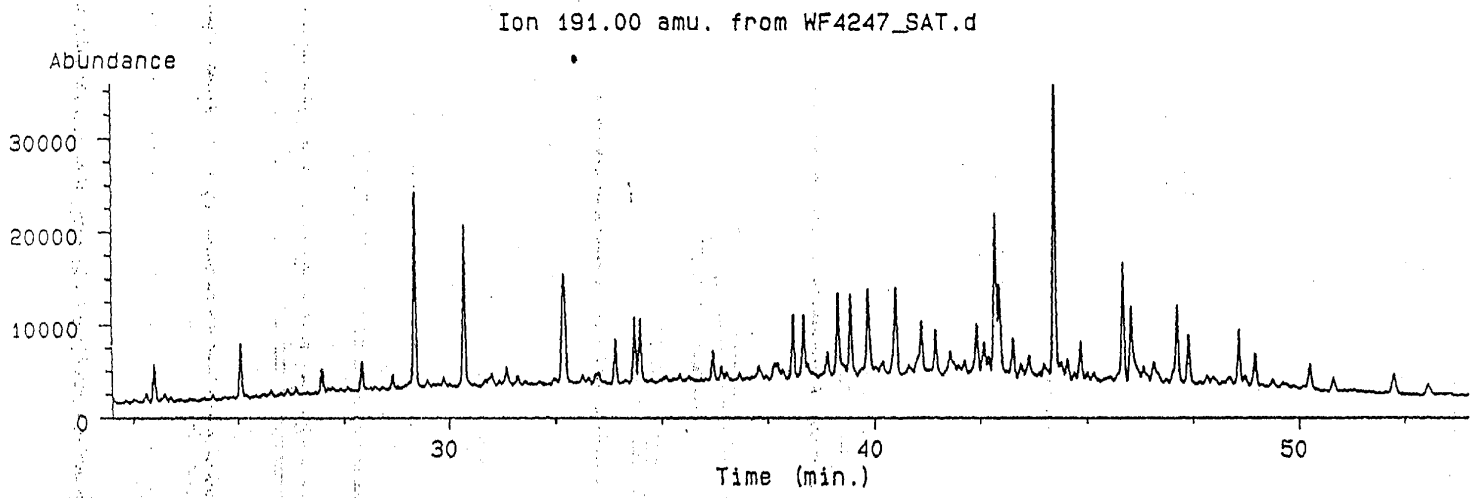
*** REPORT ERRORS ***

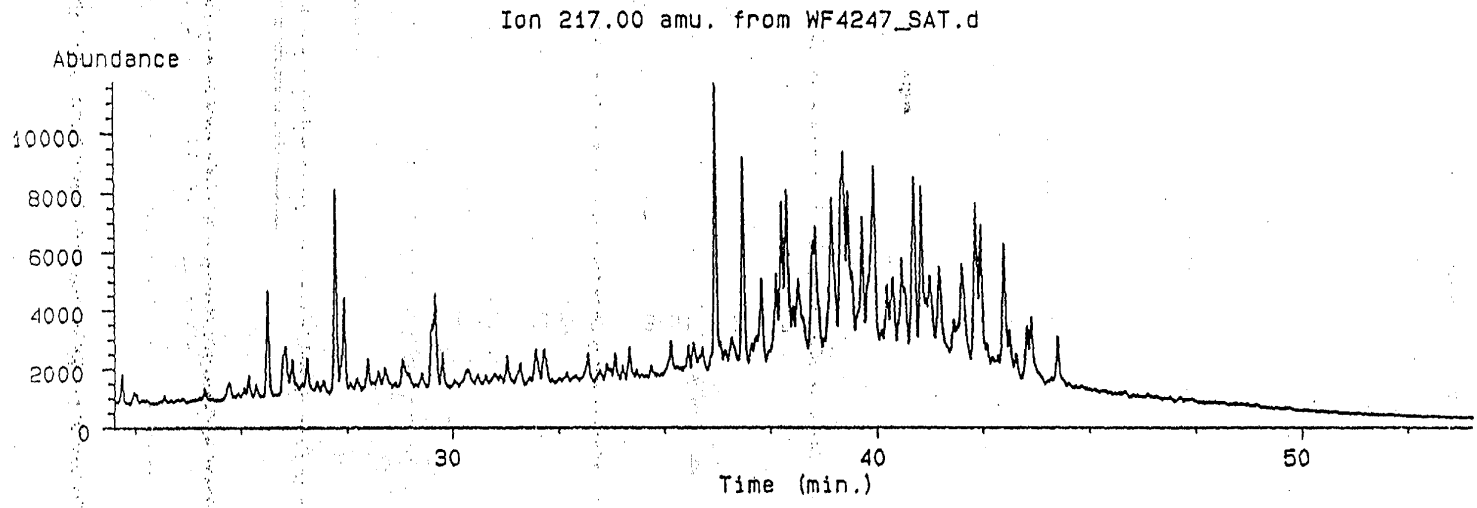
Calibration Peak #7's Qualifiers Were Not Satisfied.

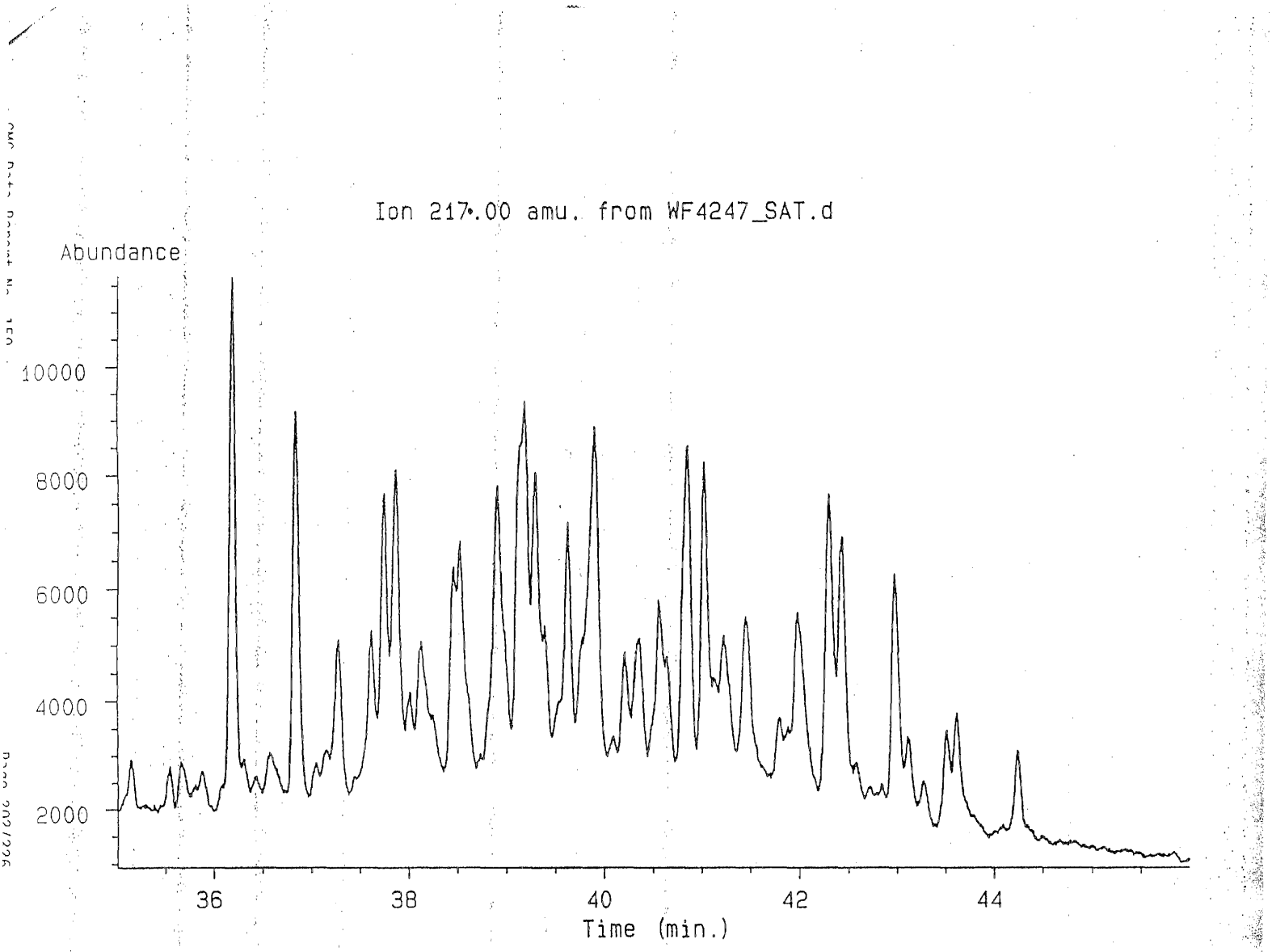
*** Not All Calibrated Peaks Found ***


Ion 177.00 amu. from WF4247_SAT.d
Abundance
14000
12000
10000
8000
6000
4000
2000
40
42
44
46
48
50
52
Time (min.)
Ion 191.00 amu. from WF4247_SAT.d
Abundance
30000
20000
10000
40
42
44
46
48
50
52
54
Time (min.)


Ion 191.00 amu. from WF4247_SAT.d
Abundance
30000
20000
10000
36
38
40
42
44
46
48
50
52
Time (min.)


Ion 191.00 amu. from WF4247_SAT.d
Abundance
30000
20000
10000
0
30
40
50
Time (min.)


Ion 217.00 amu. from WF4247_SAT.d
Abundance
10000
8000
6000
4000
2000
0
30
40
50
Time (min.)


Ion 217.00 amu. from WF4247_SAT.d
Abundance
10000
8000
6000
4000
2000
36
38
40
42
44
Time (min.)

*** PETROLEUM GEOCHEMISTRY ***

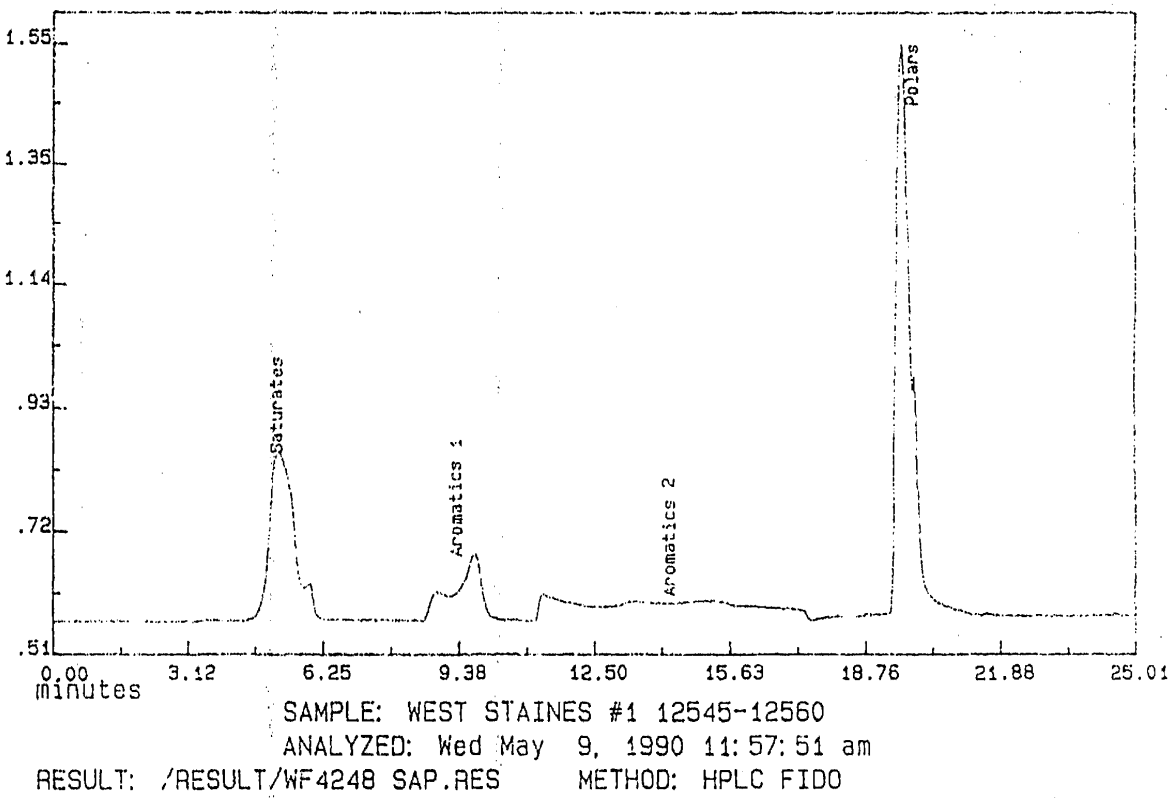
SARA ANALYSIS

SAMPLE NAME : WEST STAINES #1 12545-12560
INSTRUMENT : HPLC_FID
INJECT TIME : Wed May 9, 1990 11:57:51 am
METHOD USED : /METHOD/HPLC_FIDO.MTH
SEQUENCE : /DATA/LOOP/SEQUENCE/HP1090_AUTOCA.SEQ
RESULT FILE : /RESULT/WF4248_SAP.RES
REPORT TIME : 12:23 PM WED., 9 MAY , 1990

	AREA	TIME	RESPONSE FACTOR
Saturates	11463.	5.29	.1275E-03
Aromatics 1	4862.	9.42	.5470E-04
Aromatics 2	10322.	14.36	.5470E-04
Polars	24788.	19.96	.4160E-04

	AMOUNT (mg)	% RESIDUE
Saturates	1.46	44.0
Aromatics	.83	25.0
Polars	1.03	31.0

	% OIL
Saturates	41.3
Aromatics	23.4
Polars	29.1
Asphaltenes	6.2


AMPLITUDE/1000
Range Normalized
1.55
1.35
1.14
.93
.72
.51
Saturates
Aromatics 1
Aromatics 2
Polars
0.00
3.12
6.25
9.38
12.50
15.63
18.76
21.88
25.01
minutes
SAMPLE: WEST STAINES #1 12545-12560
ANALYZED: Wed May 9, 1990 11:57:51 am
RESULT: /RESULT/WF4248 SAP.RES
METHOD: HPLC FIDO

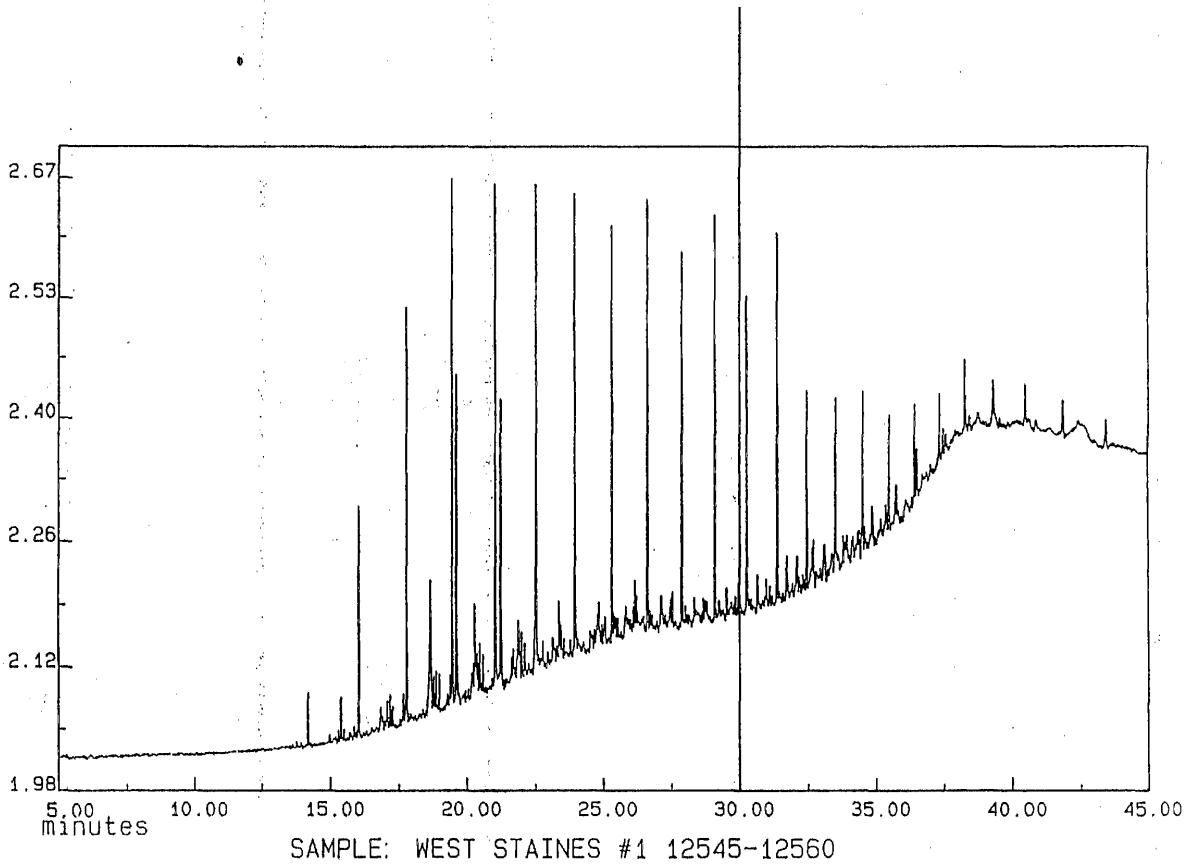
*** PETROLEUM GEOCHEMISTRY ***
SATURATE GC

SAMPLE NAME : WEST STAINES #1 12545-12560
INSTRUMENT : HP_5890_2
INJECT TIME : Sun May 6, 1990 10:40:14 am
METHOD USED : /METHOD/SAT5890E.MTH
RESULT FILE : /ARCHIVE/WF4248_SAT.RES
REPORT TIME : 4:06 PM TUE., 12 JUNE, 1990

CPI VALUE : .88
PRISTANE / PHYTANE : 1.18 C15/C25 : .62
PRISTANE / C17 : .91 C17/Pr : 1.10
PHYTANE / C18 : .76 C18/Ph : 1.32

	AREA	%AREA NALK	TIME	NORM C15
N-C10	0.	0.0	0.00	0.00
N-C11	0.	0.0	0.00	0.00
N-C12	0.	0.0	0.00	0.00
N-C13	0.	0.0	0.00	0.00
N-C14	548.	1.0	14.19	.29
N-C15	1870.	3.3	16.04	1.00
N-C16	3475.	6.1	17.79	1.86
N-C17	4621.	8.1	19.44	2.47
N-C18	4726.	8.3	21.02	2.53
N-C19	4298.	7.5	22.52	2.30
N-C20	4337.	7.6	23.95	2.32
N-C21	3555.	6.2	25.31	1.90
N-C22	3963.	6.9	26.62	2.12
N-C23	3194.	5.6	27.88	1.71
N-C24	3566.	6.2	29.09	1.91
N-C25	2993.	5.2	30.25	1.60
N-C26	3289.	5.8	31.37	1.76
N-C27	1775.	3.1	32.44	.95
N-C28	2098.	3.7	33.48	1.12
N-C29	1872.	3.3	34.49	1.00
N-C30	1210.	2.1	35.46	.65
N-C31	939.	1.6	36.40	.50
N-C32	847.	1.5	37.32	.45
N-C33	852.	1.5	38.26	.46
N-C34	1463.	2.6	39.30	.78
N-C35	917.	1.6	40.47	.49
N-C36	733.	1.3	41.83	.39

	AREA	%AREA ISPR	TIME
Farnesane	0.	0.0	0.00
Acyclic C16	365.	3.7	15.39
Acyclic C18	1624.	16.6	18.66
Pristane	4215.	43.1	19.60
Phytane	3579.	36.6	21.22



SAMPLE: WEST STAINES #1 12545-12560
ANALYZED: Sun May 6, 1990 10:40:14 am
RESULT: /ARCHIVE/WF4248 SAT.RES METHOD: SAT5890E

**** PETROLEUM GEOCHEMISTRY / GNH ROCK EVAL ***

SAMPLE : WELL: WEST STAINES #1 DEPTH: 12560
INJECTED AT : Thu May 3, 1990 11:12:49 pm
INSTRUMENT : GROCK
METHOD USED : /METHOD/PYRO5.MTH
RESULT FILE : /RESULT/WF42487_GRO.RES
BLANK FILE : /RESULT/BLANK13_GRO.RES

***** AREA SLICE INTEGRATION *****

AREA	YIELD (mg/g)	FRACTION
33976064.	1.39	S1
117998100.	6.91	S2

SAMPLE WT. : 32.10 mgs
Tmax : 441 C

**** PETROLEUM GEOCHEMISTRY / GNH PGC AUTO ****

SAMPLE : WELL: WEST STAINES #1 DEPTH: 12560
INJECTED AT : Thu May 3, 1990 11:12:48 pm
INSTRUMENT : GPGC_2
METHOD USED : /METHOD/GPGC2_0.MTH
RESULT FILE : /RESULT/WF42487_GPG.RES
BLANK FILE : /RESULT/BLANK15_GPG.RES

***** AREA SLICE INTEGRATION *****

AREA	AREA PERCENT	FRACTION
5959549.	4.0	METHANE
35178656.	23.7	GASES
43539888.	29.3	GASOLINE
38389808.	25.8	KEROSENE
23632864.	15.9	GAS-OIL
1868309.	1.3	WAX-DISTILLATE

TOTAL AREA : 148569090. AREA %: 100.0

SAMPLE WT. : 32.10 mgs

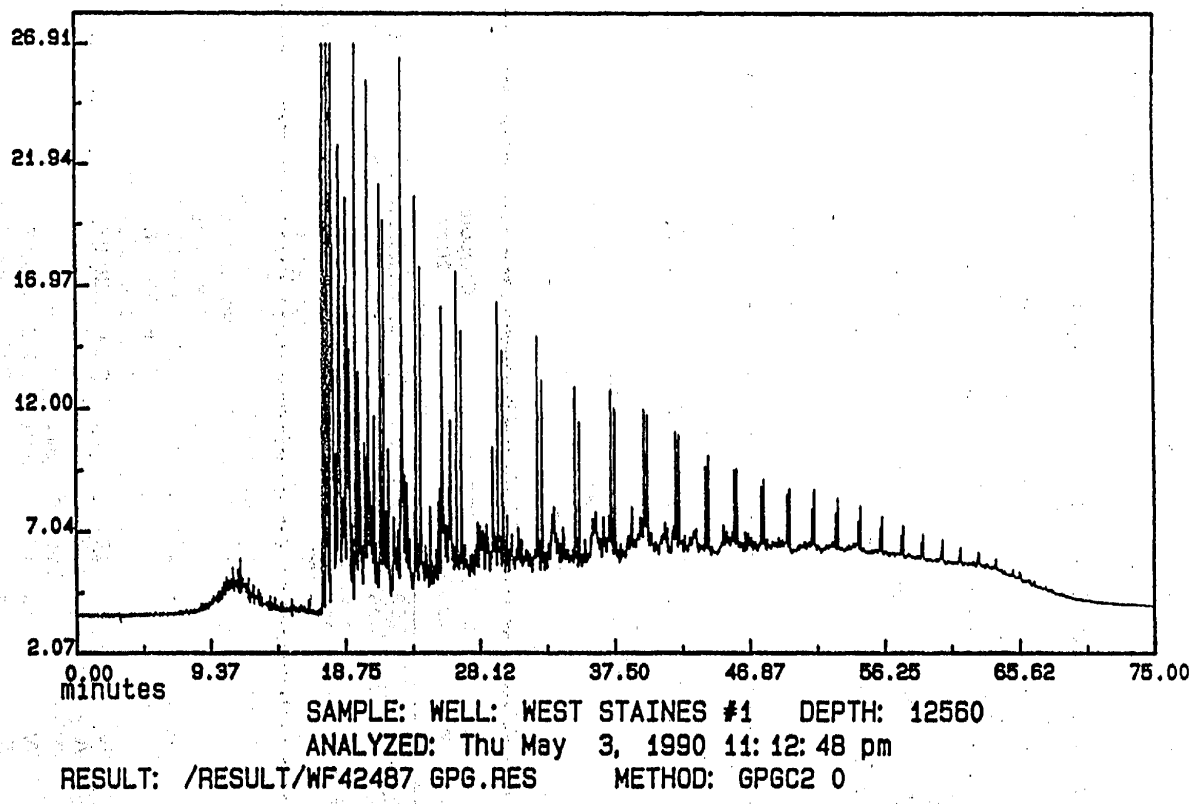
SAMPLE GOGI = .38
THIS IS GAS + OIL PRONE

METHANE + GASES = 27.7
GASOLINE+KEROSINE+GAS OIL+WAX DISTILLATE = 72.3

BY FACTOR ANALYSIS OF KEROGEN PYROLYSATE
THIS IS A GAS+OIL SOURCE

THIS ANALYSIS DETERMINES KEROGEN POTENTIAL AT ITS
PRESENT MATURITY. THIS IS NOT A KEROGEN TYPE ANALYSIS.

SAMPLE K2 = 6.73 mg/gm


AMPLITUDE/1000 (Enlarged x 5.0)
Range Normalized
26.91
21.94
16.97
12.00
7.04
2.07
0.00
9.37
18.75
28.12
37.50
46.87
56.25
65.62
75.00
minutes
SAMPLE: WELL: WEST STAINES #1 DEPTH: 12560
ANALYZED: Thu May 3, 1990 11:12:48 pm
RESULT: /RESULT/WF42487 GPG.RES METHOD: GPGC2 0

Normalized Percent Report

Information from Current Data File Header:
File: /chem/msd/WF4248_SAT.d
Operator:
Date Acquired: Fri May 11 90 09:27:39 PM
Sample Name: WF4248_SAT
Misc Info:
Sequence Index: 1 Bottle Number: 48 Repetition Number: 1

SATURATE BIOMARKERS

Calibration Table Last Updated: Thu Jun 07 14:02:48 1990

Reference Peak Window: 0.250 Absolute Minutes
Non-reference Peak Window: 0.250 Absolute Minutes

Default Sample Amount: 0
Uncalib. Peak Response Factor: 0
Default Multiplier: 1

Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount	
1	VV	39.750	191.00 amu	C27 18A HOPANE TS	297023	1.182	%
2	VV	40.406	191.00 amu	C27 17A HOPANE TM	542047	2.156	%
3	VV	40.844	191.00 amu	C28 BISNORHOPANE X	6179	0.02458	%
4	VV	42.753	191.00 amu	C29 HOPANE D	560836	2.231	%
5	VV	42.860	191.00 amu	C29 NORHOPANE D2	293163	1.166	%
6	VV	43.165	191.00 amu	C30 PENTACYCLANE PI	94299	0.3751	%
7	VV	43.896	191.00 amu	C30 18A OLEANANE B	19266	0.07664	%*
8	VV	44.141	191.00 amu	C30 HOPANE G	1053625	4.192	%
9	VV	44.762	191.00 amu	C30 MORETANE K	264290	1.051	%
10	VV	45.764	191.00 amu	C31S HOPANE N	546727	2.175	%
11	VV	45.964	191.00 amu	C31R HOPANE O	379653	1.510	%
12	VV	46.197	191.00 amu	O & GAMMACERANE	6402	0.02547	%
13	VV	46.252	191.00 amu	GAMMACERANE	65218	0.2594	%
14	VV	46.490	191.00 amu	P	163944	0.6522	%
15	VV	46.621	191.00 amu	R	14581	0.05801	%
16	VV	47.053	191.00 amu	C32S HOPANE U	422902	1.682	%
17	VV	47.319	191.00 amu	C32R HOPANE V	198727	0.7906	%
18	VV	48.521	191.00 amu	C33S HOPANE ALPHA	346460	1.378	%
19	VV	48.903	191.00 amu	C33R HOPANE BETA	116732	0.4644	%
20	VV	50.189	191.00 amu	C34S HOPANE GAMMA	190678	0.7586	%
21	VV	50.759	191.00 amu	C34R HOPANE DELTA	62082	0.2470	%
22	VV	52.182	191.00 amu	C35S HOPANE EPSILON	193172	0.7685	%
23	VV	53.002	191.00 amu	C35R HOPANE ZETA	74867	0.2978	%
24	VV	27.177	217.00 amu	C21 STERANE Y	613929	2.442	%
25	PV	36.107	217.00 amu	C27S ba DIASTERANE10	1244978	4.953	%
26	VV	36.752	217.00 amu	C27R ba DIASTERANE11	893329	3.554	%

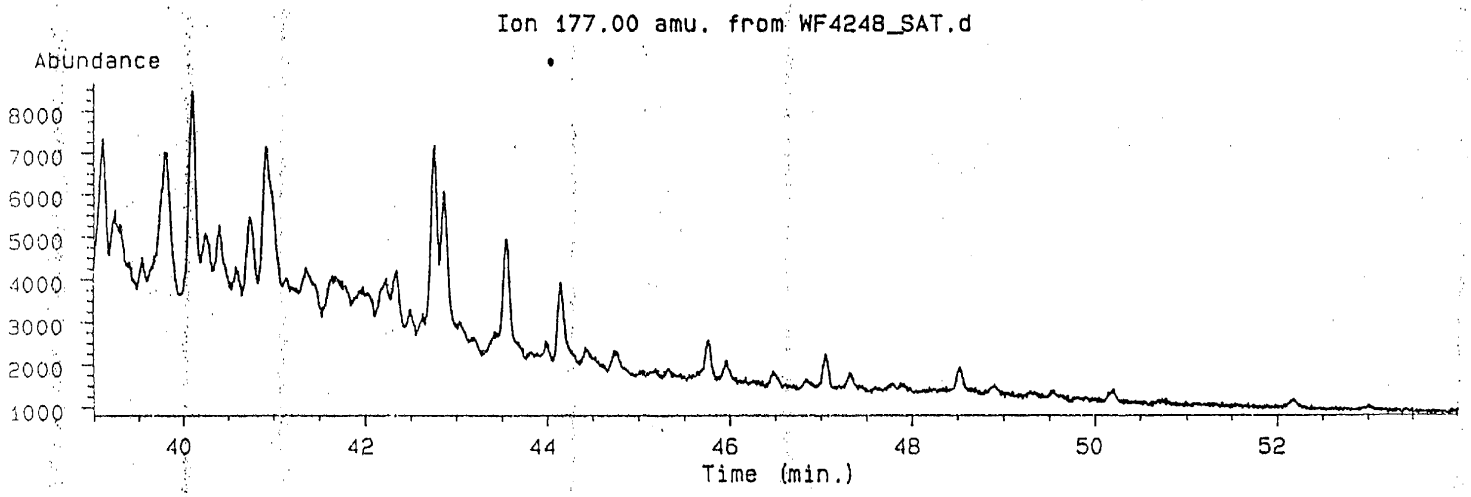
Sequence: /chem/msd/051190_SAT.s Vial: 48 Injection: 1

Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount	
27	VV	37.319	217.00 amu	13	4372	0.01739	%
28	VV	37.192	217.00 amu	14	466036	1.854	%
29	VV	37.658	217.00 amu	15	1065540	4.239	%
30	VV	37.790	217.00 amu	16	1088085	4.329	%
31	VV	37.926	217.00 amu	18	161314	0.6417	%
32	VV	38.443	217.00 amu	19	824682	3.281	%
33	PV	38.823	217.00 amu	20	1727131	6.871	%
34	VV	39.101	217.00 amu	21	1177278	4.683	%
35	VV	39.302	217.00 amu	22	388246	1.545	%
36	VV	39.544	217.00 amu	C27R aaa STERANE 25	1133721	4.510	%
37	VV	39.821	217.00 amu	27	722061	2.872	%
38	VV	41.377	217.00 amu	C28R aaa STERANE 36	1459079	5.804	%
39	VV	41.893	217.00 amu	C29S aaa STERANE 39	708816	2.820	%
40	PV	42.893	217.00 amu	C29R aaa STERANE 42	720625	2.867	%
41	VV	39.036	218.00 amu	C27R abb STERANE 21B	878816	3.496	%
42	VV	39.203	218.00 amu	C27S abb STERANE 22	654155	2.602	%
43	VV	40.777	218.00 amu	C28R abb STERANE 33A	1060007	4.217	%
44	VV	40.945	218.00 amu	C28S abb STERANE 34	916982	3.648	%
45	PV	42.220	218.00 amu	C29R abb STERANE 40	627477	2.496	%
46	VV	42.350	218.00 amu	C29S abb STERANE 41	687628	2.736	%

***** REPORT ERRORS *****

Calibration Peak #7's Qualifiers Were Not Satisfied.

*** Not All Calibrated Peaks Found ***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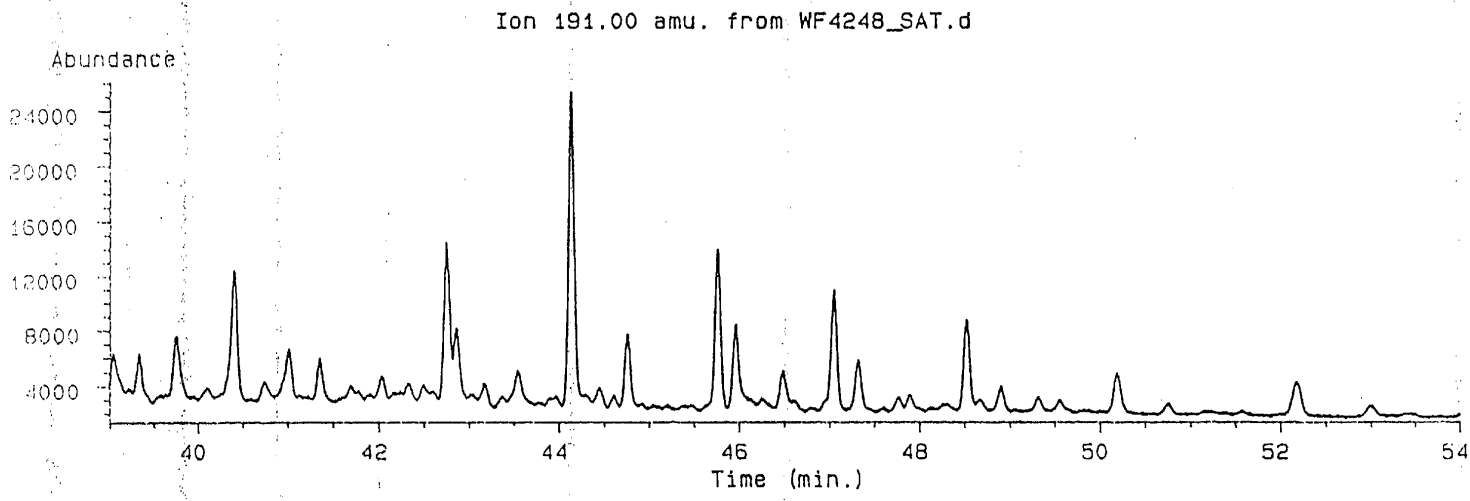
50
52
Time (min.)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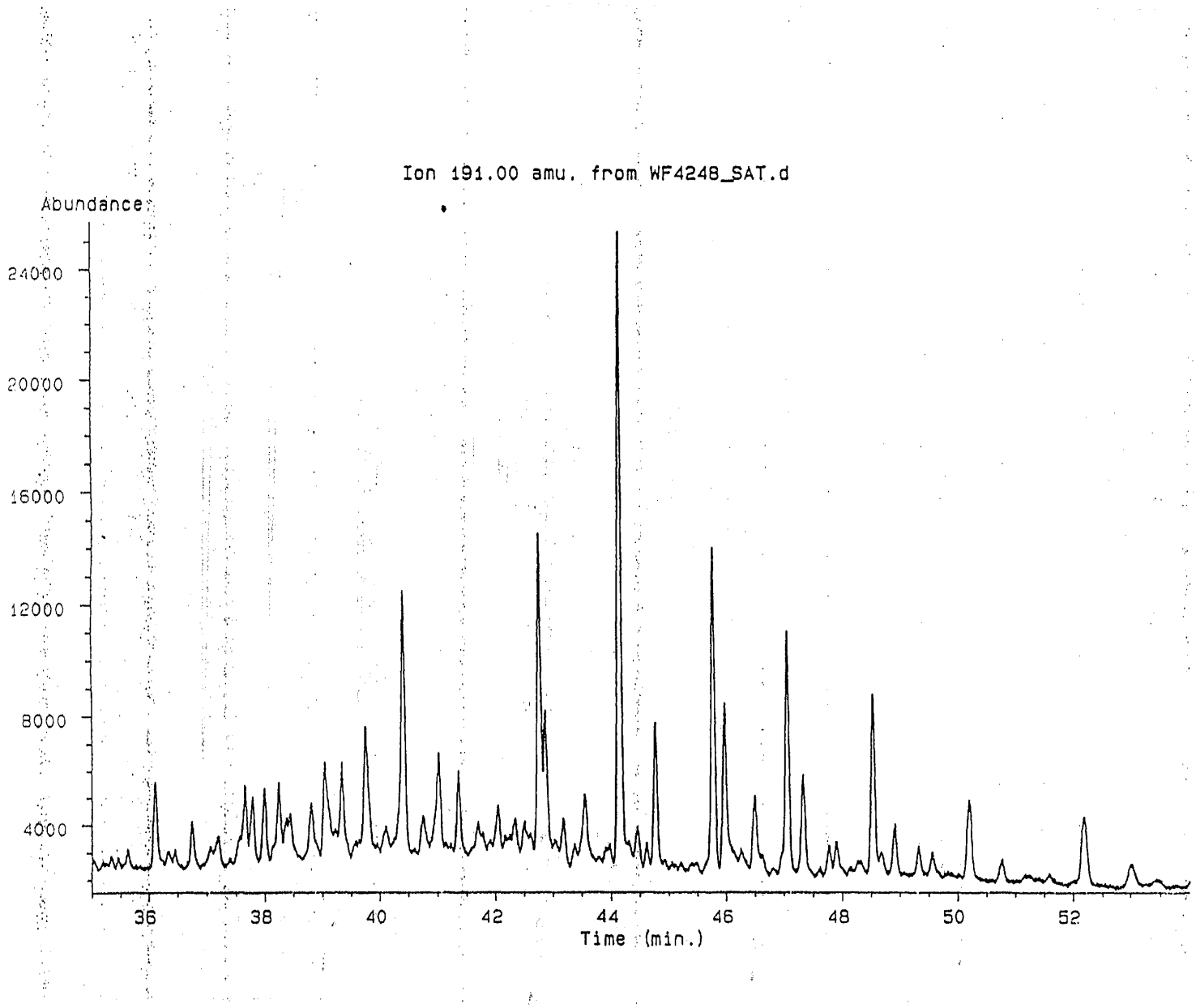
52
54
Time (min.)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Abundance
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12000
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4000
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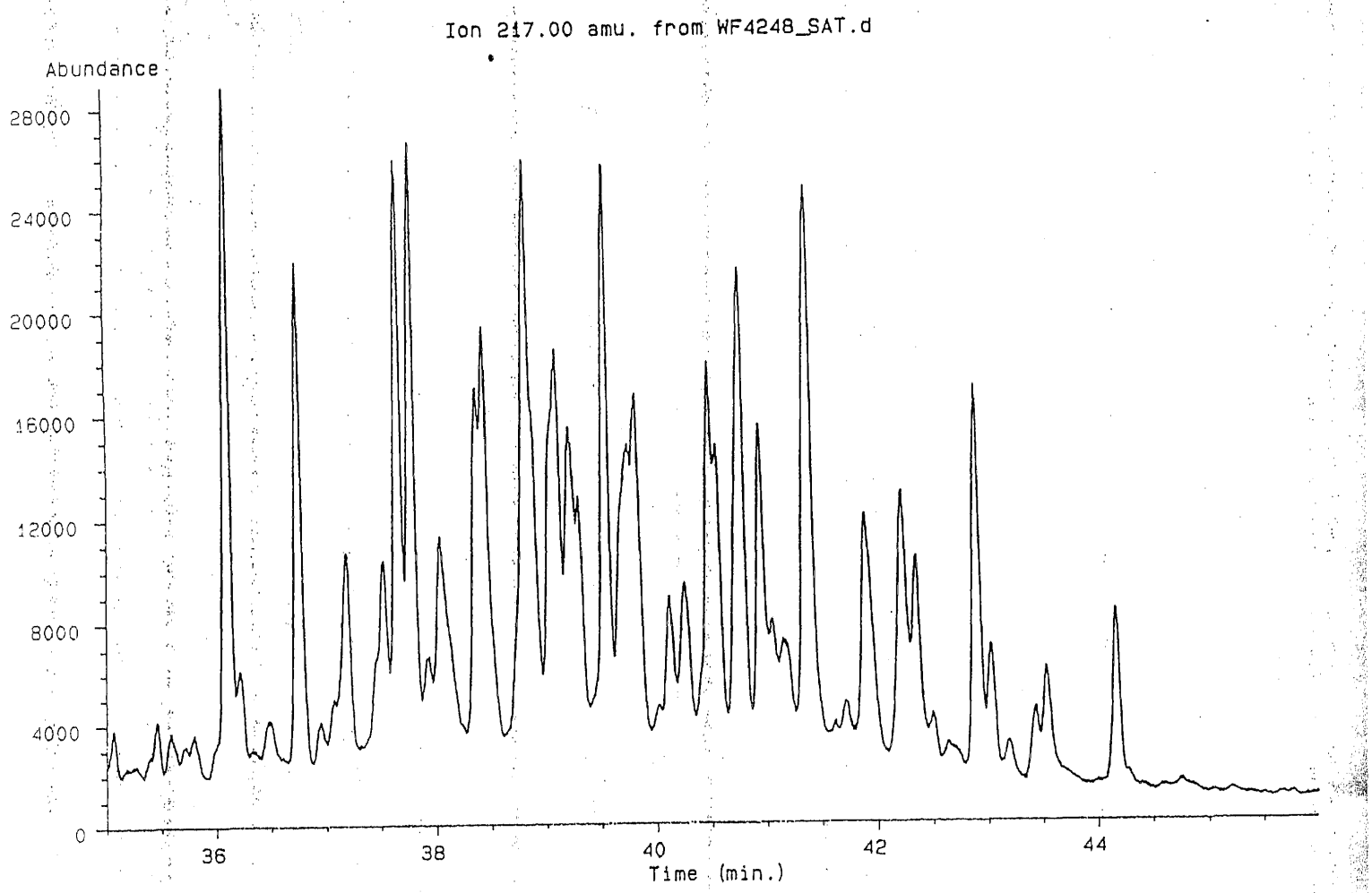
48
50
52
Time (min.)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16000
12000
8000
4000
0
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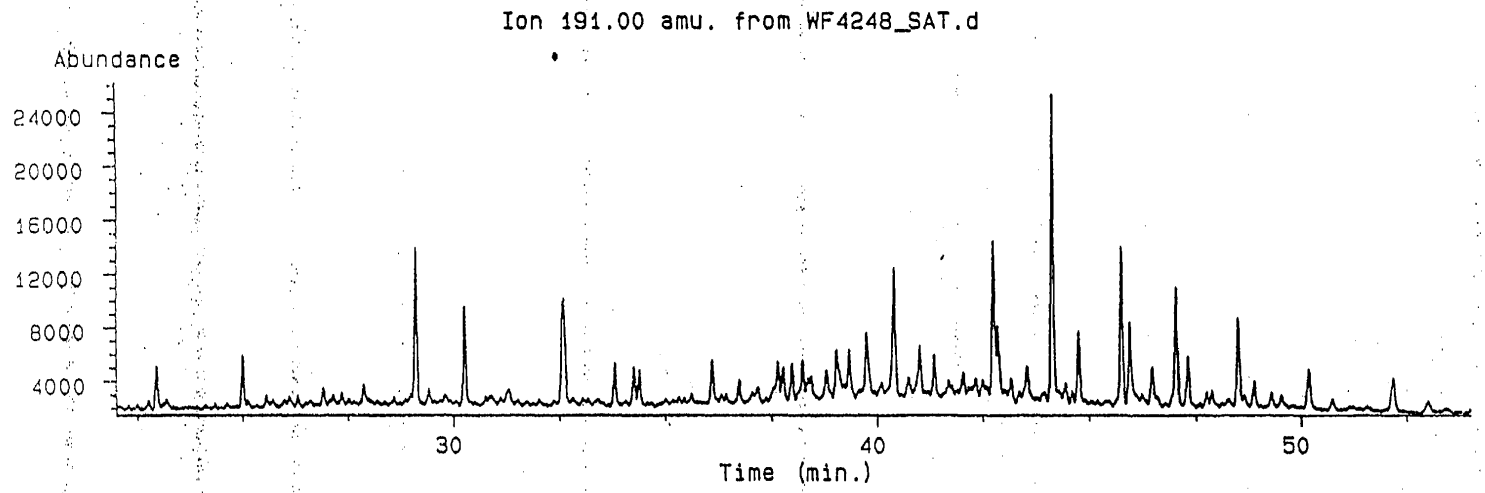
38
40
42
44
Time (min.)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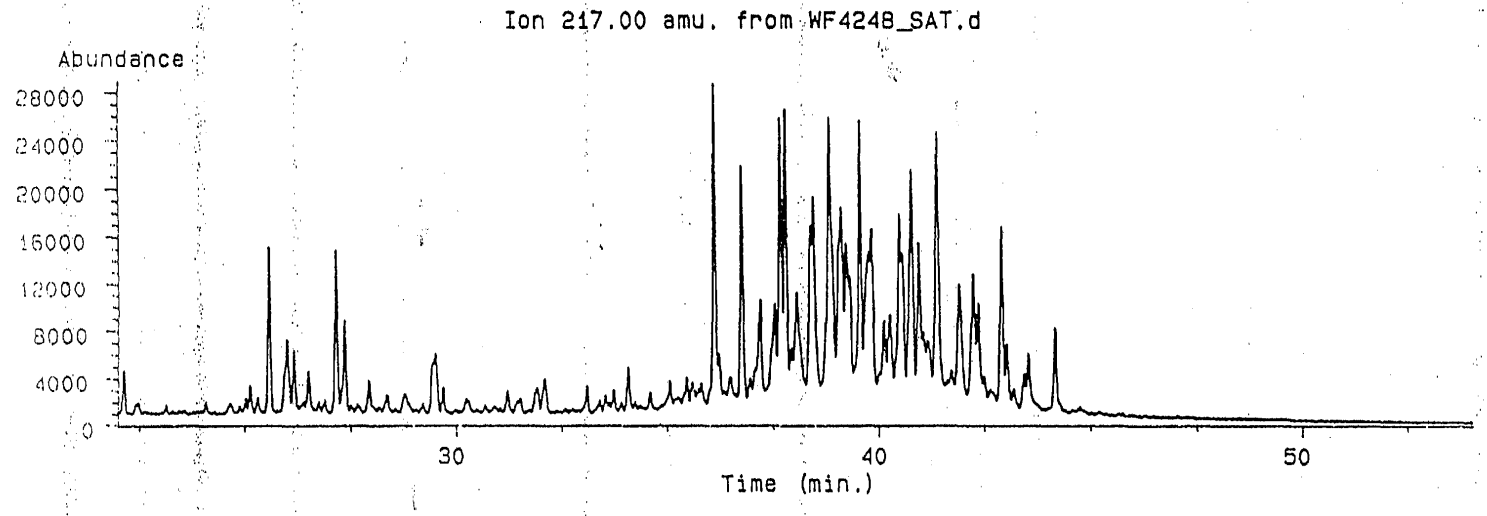
12000
8000
4000
30
40
50
Time (min.)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Abundance
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16000
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8000
4000
0
30
40
50
Time (min.)

*** PETROLEUM GEOCHEMISTRY ***

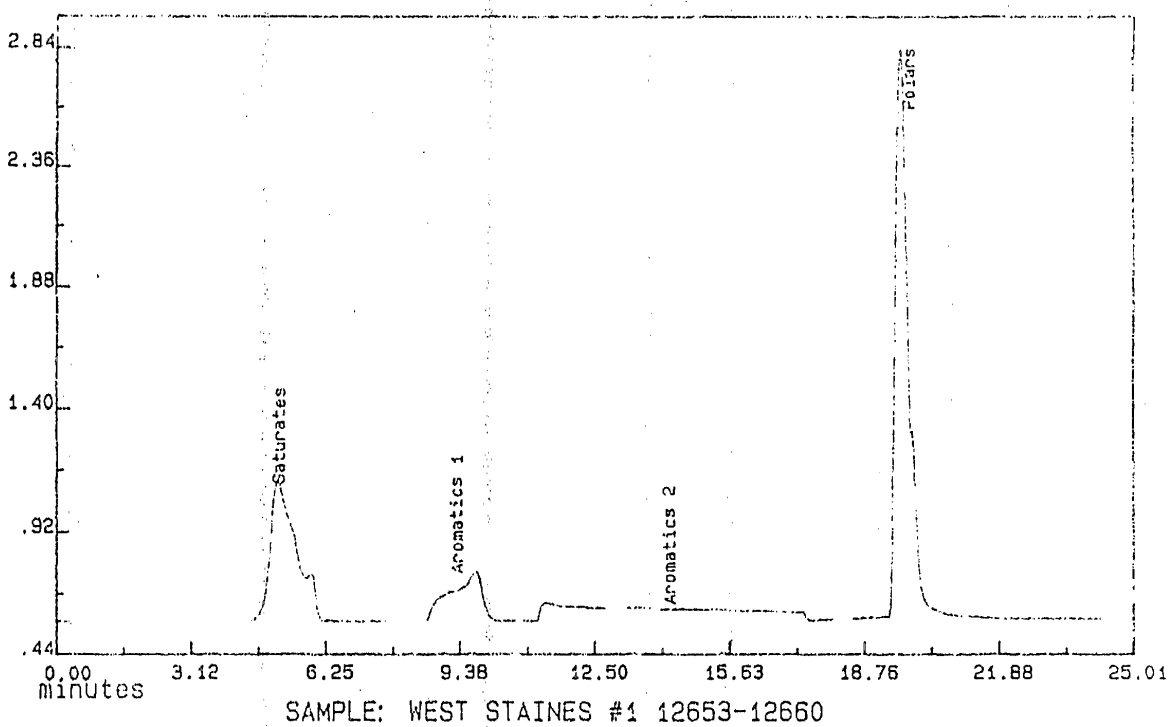
SARA ANALYSIS

SAMPLE NAME : WEST STAINES #1 12653-12660
INSTRUMENT : HPLC_FID
INJECT TIME : Wed May 9, 1990 12:38:45 pm
METHOD USED : /METHOD/HPLC_FID0.MTH
SEQUENCE : /DATA/LOOP/SEQUENCE/HP1090_AUTOCA.SEQ
RESULT FILE : /RESULT/WF4249_SAP.RES
REPORT TIME : 1:04 PM WED., 9 MAY , 1990

	AREA	TIME	RESPONSE FACTOR
Saturates	23405.	5.29	.1275E-03
Aromatics 1	9811.	9.42	.5470E-04
Aromatics 2	17306.	14.36	.5470E-04
Polars	50041.	19.92	.4160E-04

	AMOUNT (mg)	% RESIDUE
Saturates	2.98	45.6
Aromatics	1.48	22.6
Polars	2.08	31.8

	% OIL
Saturates	34.5
Aromatics	17.2
Polars	24.1
Asphaltenes	24.2



SAMPLE: WEST STAINES #1 12653-12660
ANALYZED: Wed May 9, 1990 12:38:45 pm
RESULT: /RESULT/WF4249 SAP.RES METHOD: HPLC FIDO

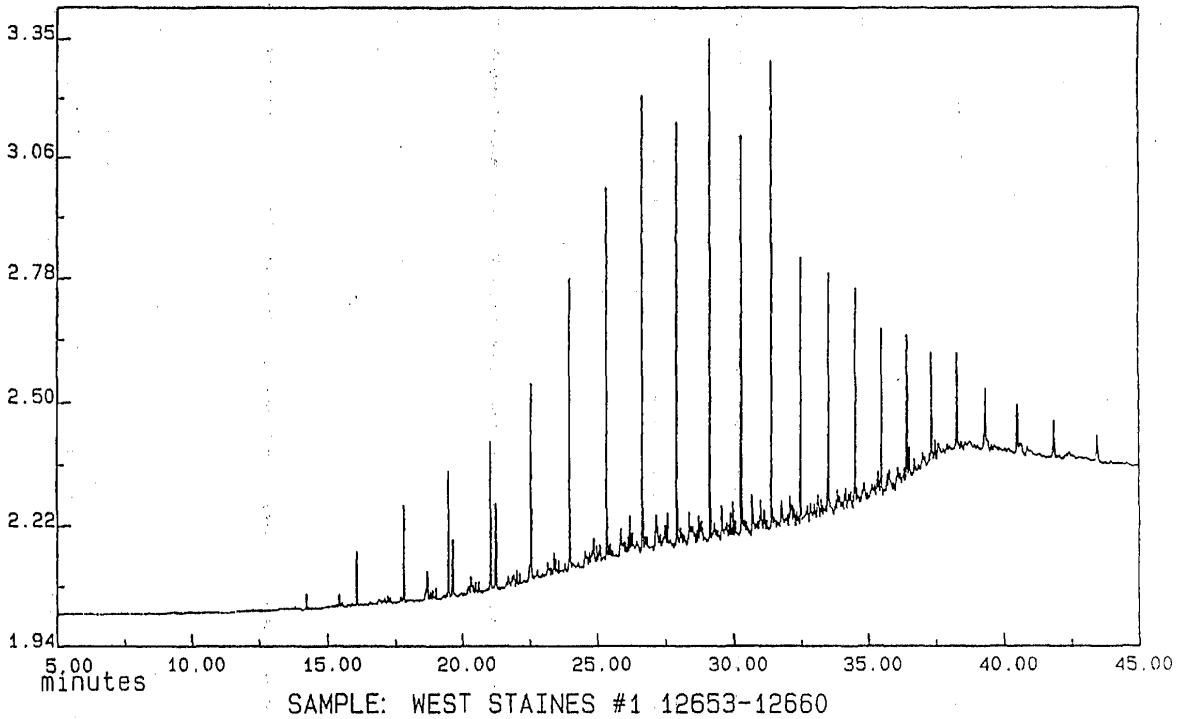
*** PETROLEUM GEOCHEMISTRY ***
SATURATE GC

SAMPLE NAME : WEST STAINES #1 12653-12660
INSTRUMENT : HP_5890_2
INJECT TIME : Sun May 6, 1990 11:35:43 am
METHOD USED : /METHOD/SAT5890E.MTH
RESULT FILE : /RESULT/WF4349_SAT.RES
REPORT TIME : 4:05 PM TUE., 12 JUNE, 1990

CPI VALUE : .88
PRISTANE / PHYTANE : .63 C15/C25 : .13
PRISTANE / C17 : .66 C17/Pr : 1.50
PHYTANE / C18 : .85 C18/Ph : 1.17

	AREA	%AREA NALK	TIME	NORM C15
N-C10	0.	0.0	0.00	0.00
N-C11	0.	0.0	0.00	0.00
N-C12	0.	0.0	0.00	0.00
N-C13	0.	0.0	0.00	0.00
N-C14	259.	.3	14.19	.28
N-C15	942.	1.0	16.04	1.00
N-C16	1637.	1.7	17.79	1.74
N-C17	2240.	2.4	19.45	2.38
N-C18	2786.	2.9	21.02	2.96
N-C19	3966.	4.2	22.52	4.21
N-C20	5367.	5.7	23.95	5.70
N-C21	6266.	6.6	25.32	6.65
N-C22	8227.	8.7	26.63	8.73
N-C23	7845.	8.3	27.88	8.33
N-C24	9042.	9.6	29.09	9.60
N-C25	7517.	7.9	30.25	7.98
N-C26	8685.	9.2	31.37	9.22
N-C27	4772.	5.0	32.45	5.06
N-C28	5105.	5.4	33.48	5.42
N-C29	4134.	4.4	34.49	4.39
N-C30	3238.	3.4	35.46	3.44
N-C31	2625.	2.8	36.40	2.79
N-C32	2272.	2.4	37.32	2.41
N-C33	1931.	2.0	38.26	2.05
N-C34	2817.	3.0	39.30	2.99
N-C35	1626.	1.7	40.48	1.73
N-C36	1351.	1.4	41.83	1.43

	AREA	%AREA ISPR	TIME
Farnesane	0.	0.0	0.00
Acyclic C16	251.	5.1	15.39
Acyclic C18	779.	15.9	18.66
Pristane	1490.	30.4	19.60
Phytane	2380.	48.6	21.22



SAMPLE: WEST STAINES #1 12653-12660
ANALYZED: Sun May 6, 1990 11:35:43 am
RESULT: /RESULT/WF4349 SAT.RES METHOD: SAT5890E

Normalized Percent Report

Information from Current Data File Header:
File: /chem/msd/WF4249_SAT.d
Operator:
Date Acquired: Fri May 11 90 10:36:34 PM
Sample Name: WF4249_SAT
Misc Info:
Sequence Index: 1 **Bottle Number:** 49 **Repetition Number:** 1

SATURATE BIOMARKERS

Calibration Table Last Updated: Sun Jun 10 13:58:56 1990

Reference Peak Window: 0.250 Absolute Minutes
Non-reference Peak Window: 0.250 Absolute Minutes

Default Sample Amount: 0
Uncalib. Peak Response Factor: 0
Default Multiplier: 1

Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount	
1	VV	39.770	191.00 amu	C27 18A HOPANE TS	380541	1.192	%
2	VV	40.421	191.00 amu	C27 17A HOPANE TM	747503	2.342	%
3	VV	40.853	191.00 amu	C28 BISNORHOPANE X	11279	0.03534	%
4	VV	42.769	191.00 amu	C29 HOPANE D	1038384	3.254	%
5	VV	42.874	191.00 amu	C29 NORHOPANE D2	394313	1.236	%
6	VV	43.189	191.00 amu	C30 PENTACYCLANE PI	153589	0.4812	%
7	VV	43.913	191.00 amu	C30 18A OLEANANE B	98673	0.3092	%*
8	VV	44.155	191.00 amu	C30 HOPANE G	1698412	5.322	%
9	VV	44.770	191.00 amu	C30 MORETANE K	302784	0.9487	%
10	VV	45.773	191.00 amu	C31S HOPANE N	1032227	3.234	%
11	VV	45.970	191.00 amu	C31R HOPANE O	701292	2.197	%
12		-	191.00 amu	O & GAMMACERANE	-Not Found-		
13	VV	46.266	191.00 amu	GAMMACERANE	131922	0.4134	%
14	VV	46.486	191.00 amu	P	264938	0.8301	%
15		-	191.00 amu	R	-Not Found-		
16	VV	47.058	191.00 amu	C32S HOPANE U	807965	2.532	%
17	VV	47.329	191.00 amu	C32R HOPANE V	376383	1.179	%
18	VV	48.529	191.00 amu	C33S HOPANE ALPHA	571937	1.792	%
19	VV	48.906	191.00 amu	C33R HOPANE BETA	184722	0.5788	%
20	VV	50.189	191.00 amu	C34S HOPANE GAMMA	297065	0.9308	%
21	VV	50.748	191.00 amu	C34R HOPANE DELTA	86470	0.2709	%
22	VV	52.175	191.00 amu	C35S HOPANE EPSILON	373987	1.172	%
23	VV	53.010	191.00 amu	C35R HOPANE ZETA	140884	0.4414	%
24	PV	27.179	217.00 amu	C21 STERANE Y	495637	1.553	%
25	PV	36.122	217.00 amu	C27S ba DIASTERANE10	1421559	4.454	%
26	VV	36.766	217.00 amu	C27R ba DIASTERANE11	990263	3.103	%

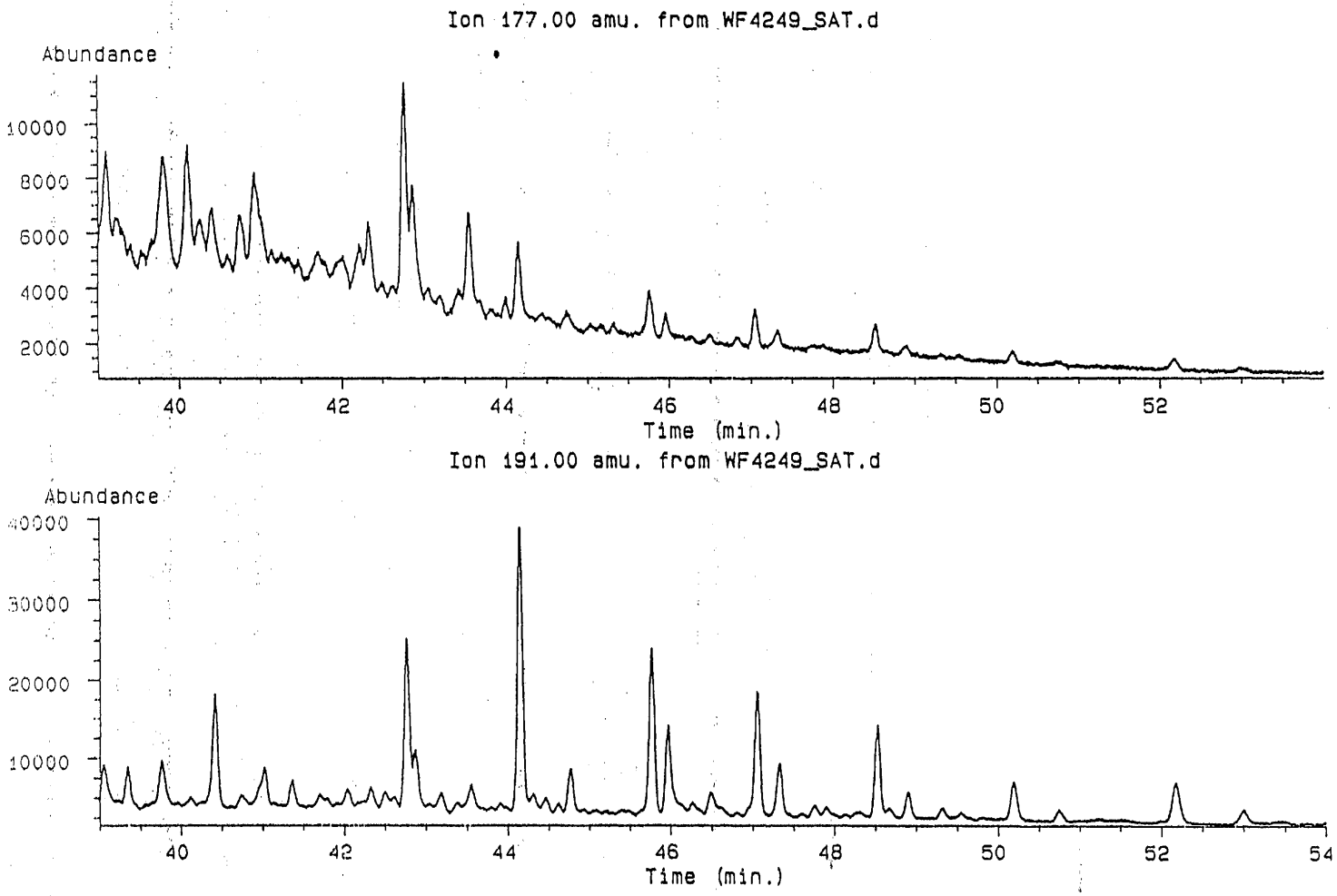
Sequence: /chem/msd/051190_SAT.s Vial: 49 Injection: 1

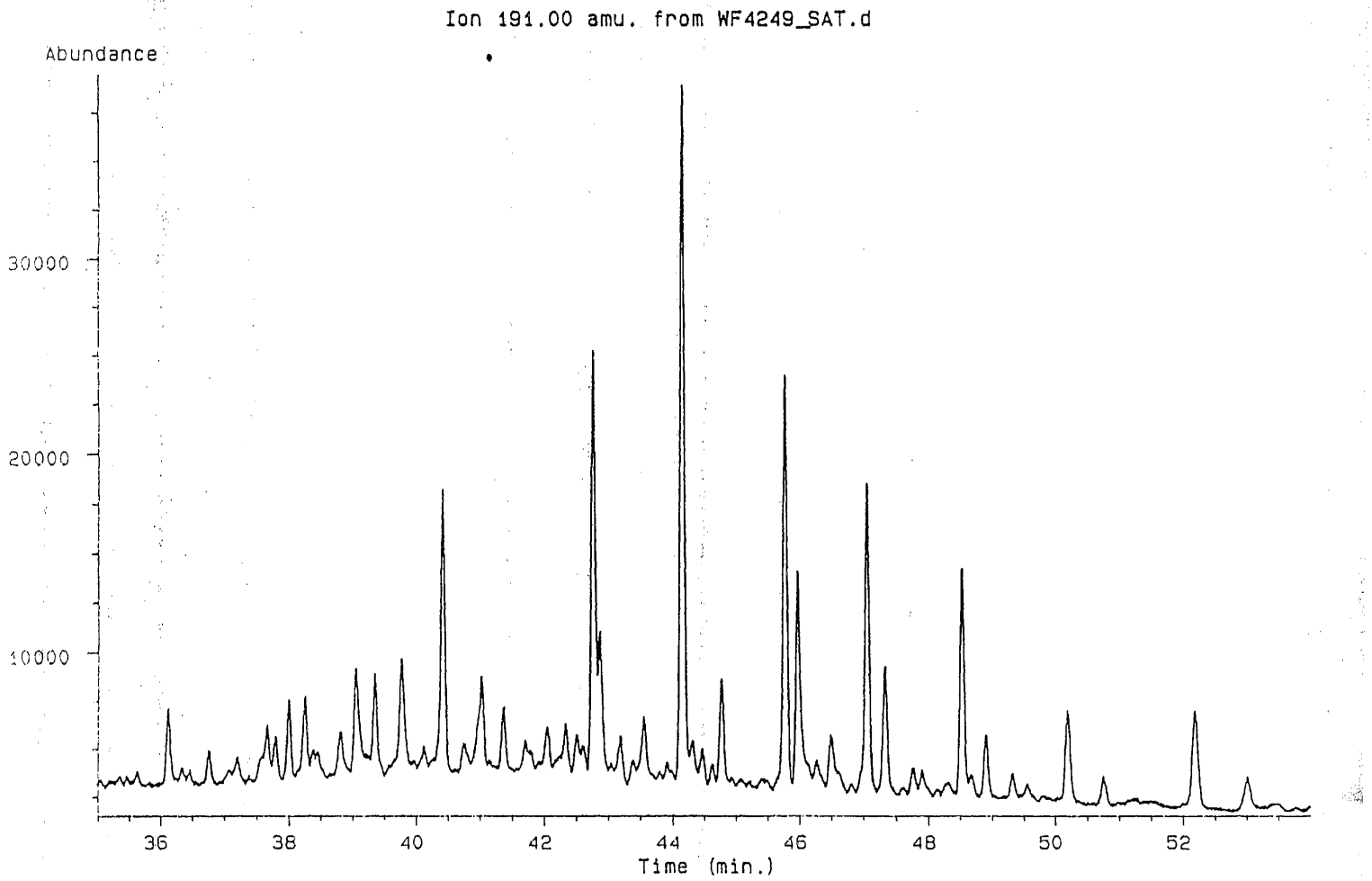
Peak Num	Int. Type	Ret. Time	Signal Description	Compound Name	Area	Amount
27	VV	37.204	217.00 amu	13	500380	1.568 %
28	VV	37.676	217.00 amu	14	970694	3.041 %
29	VV	37.800	217.00 amu	15	997900	3.127 %
30	VV	37.935	217.00 amu	16	220866	0.6920 %
31	BV	38.390	217.00 amu	18	498577	1.562 %
32	VV	38.459	217.00 amu	19	772424	2.420 %
33	PV	38.837	217.00 amu	20	1584390	4.964 %
34	VV	39.059	217.00 amu	21	793699	2.487 %
35	VV	39.307	217.00 amu	22	353768	1.108 %
36	VV	39.555	217.00 amu	C27R aaa STERANE 25	933271	2.924 %
37	VV	39.825	217.00 amu	27	1533754	4.806 %
38	VV	41.391	217.00 amu	C28R aaa STERANE 36	914511	2.865 %
39	VV	41.913	217.00 amu	C29S aaa STERANE 39	775999	2.431 %
40	VV	42.908	217.00 amu	C29R aaa STERANE 42	650631	2.039 %
41	VV	39.048	218.00 amu	C27R abb STERANE 21B	1361325	4.265 %
42	VV	39.217	218.00 amu	C27S abb STERANE 22	1333638	4.179 %
43	VV	40.792	218.00 amu	C28R abb STERANE 33A	1429509	4.479 %
44	VV	40.957	218.00 amu	C28S abb STERANE 34	1351513	4.235 %
45	BV	42.231	218.00 amu	C29R abb STERANE 40	1002283	3.140 %
46	VV	42.365	218.00 amu	C29S abb STERANE 41	1233318	3.864 %

*** REPORT ERRORS ***

Calibration Peak #7's Qualifiers Were Not Satisfied.

*** Not All Calibrated Peaks Found ***


Ion 177.00 amu. from WF4249_SAT.d
Abundance
10000
8000
6000
4000
2000
40
42
44
46
48
50
52
Time (min.)
Ion 191.00 amu. from WF4249_SAT.d
Abundance
40000
30000
20000
10000
40
42
44
46
48
50
52
54
Time (min.)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Abundance
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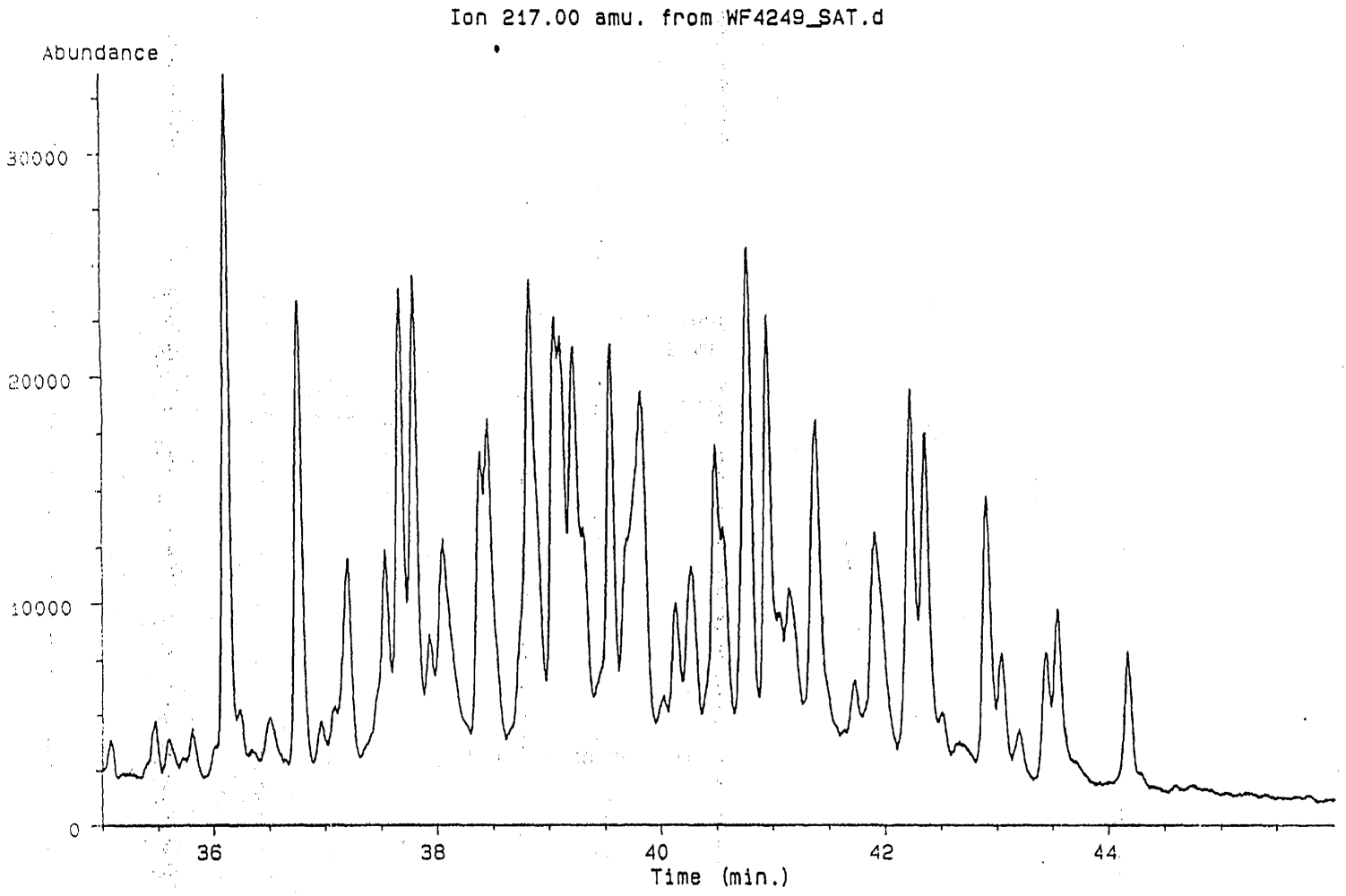
Time (min.)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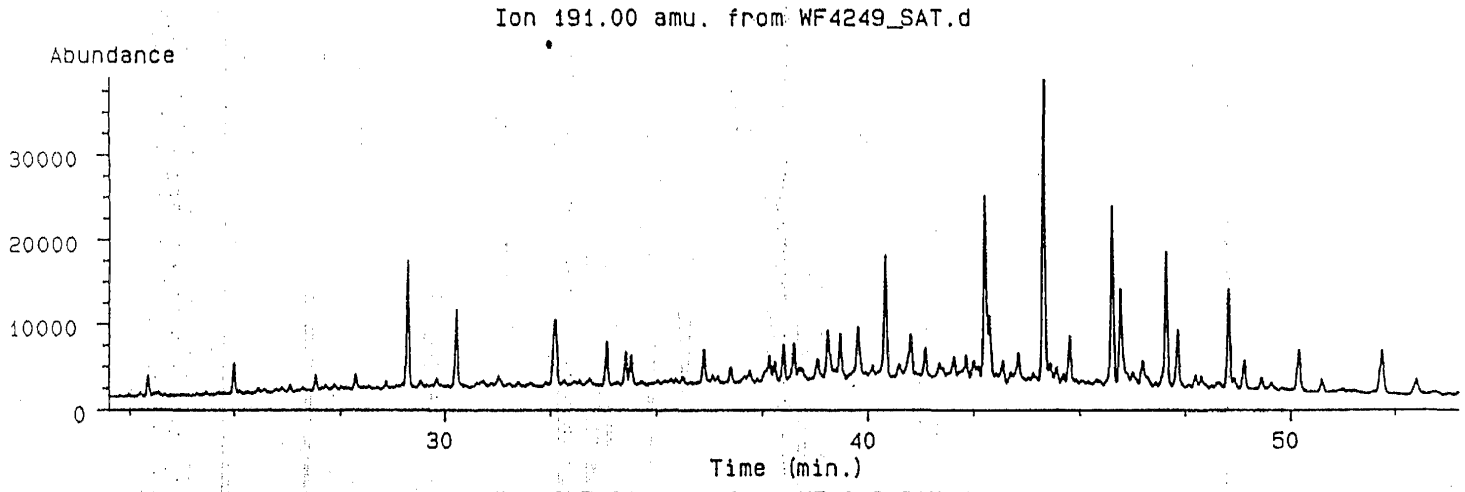
Time (min.)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30
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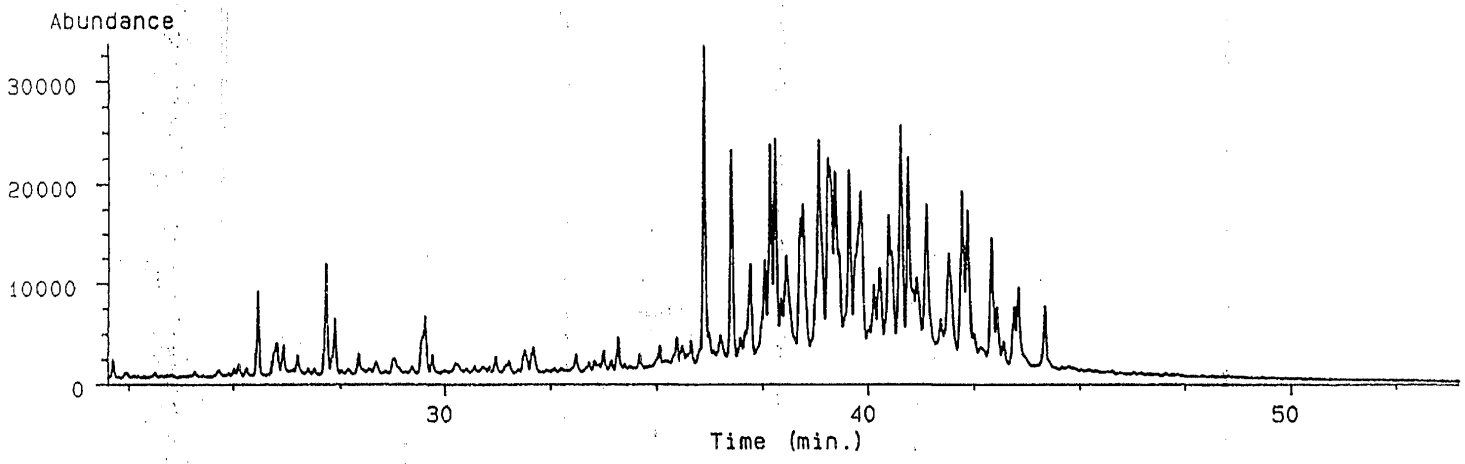
50
Time (min.)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Abundance
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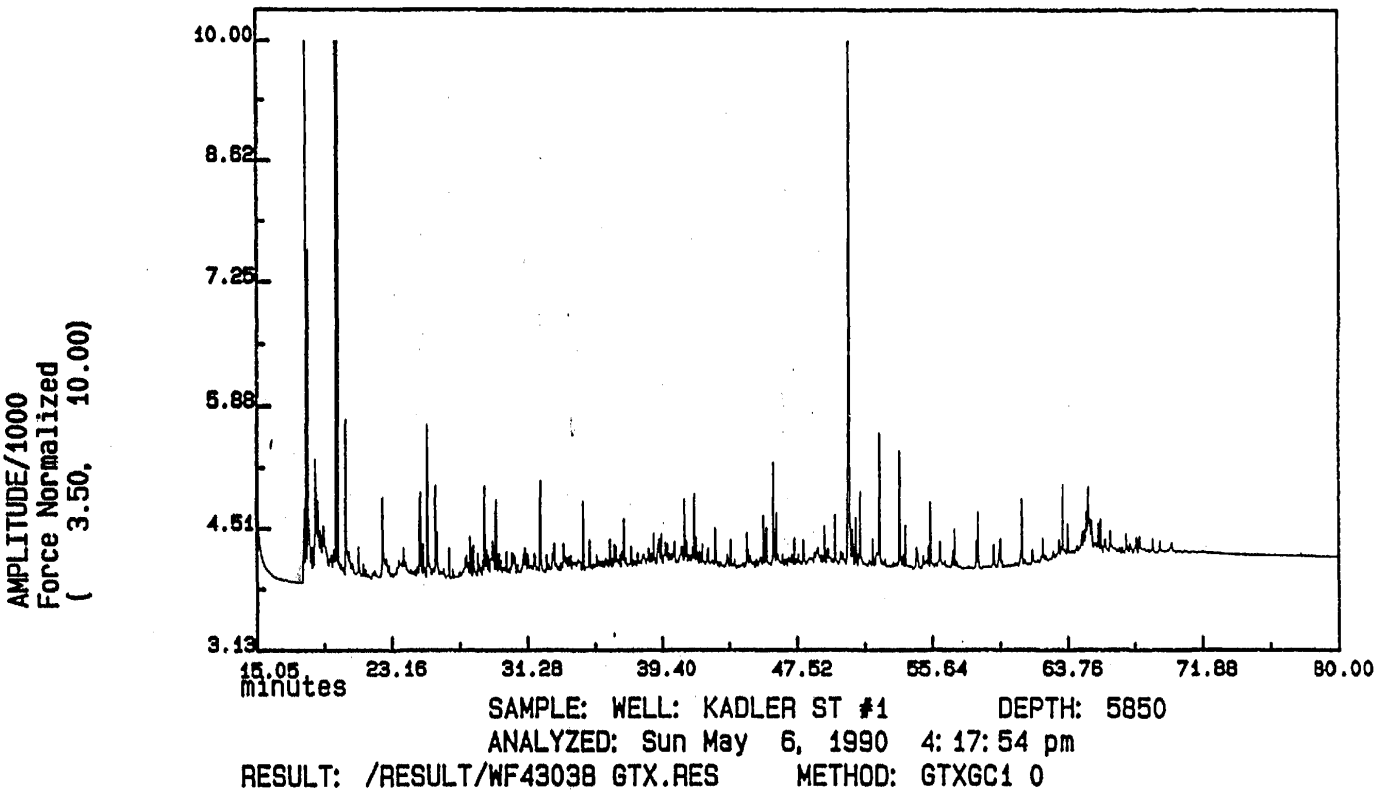
20000
10000
0
30
40
50
Time (min.)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(3.50, 10.00)
10.00
8.62
7.25
5.88
4.51
3.13
15.05
23.16
31.28
39.40
47.52
55.64
63.76
71.88
80.00
minutes
SAMPLE: WELL: KADLER ST #1 DEPTH: 5850
ANALYZED: Sun May 6, 1990 4:17:54 pm
RESULT: /RESULT/WF43038 GTX.RES METHOD: GTXGC1 0