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BIGHT-DUNTROON BASINS

SOURCE ROCK STUDIES

REPORTS AND DATA

Submitted by

BHP Petroleum Pty Ltd
1992

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MINES AND ENERGY
SOUTH AUSTRALIA



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**GEOCHEMICAL ANALYSIS OF
SAMPLES FROM**

**PLATYPUS-1
ECHIDNA-1**

**DUNTROON BASIN,
OFFSHORE SOUTH AUSTRALIA**

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JP0032

DATE: JULY, 1992.

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INTRODUCTION

A sampling programme was undertaken by BHP Petroleum Pty. Ltd. on 13 April, 1992 at the BMR Core Library in Fyshwick, Canberra, ACT. This programme consisted of obtaining cuttings samples from various stratigraphic intervals intersected in the Platypus-1 and Echidna-1 wells in the Duntroon Basin, offshore South Australia, for the purposes of geochemical analysis.

This report provides a summary of the samples obtained, the range of geochemical analyses performed on them, and the results obtained from these analyses.

SAMPLING PROGRAMME

Cuttings samples from the Platypus-1 and Echidna-1 wells from the Duntroon Basin, S.A. were acquired by BHP Petroleum during a sampling programme at the BMR Core Library, Fyshwick, ACT, on 13 April, 1992. The samples obtained during this programme are listed in Table 1.

A total of 30 samples were acquired from the Platypus-1 well, and 10 samples from the Echidna-1 well, their respective depths being shown in Table 1 in both feet and metres.

The samples were submitted to Geotechnical Services (Geotech) Pty. Ltd., Perth, for analysis in May 1992.

LIST OF SAMPLES.

DEPTHS: (ORIGINAL DEPTHS IN FEET)

NOTE: CUTTINGS SAMPLED AT 10ft INTERVALS.

WELL: PLATYPUS-1

ROCK-EVAL SCREENING - 20 SAMPLES

No. DEPTHS: (FEET)	No. DEPTHS: (METRES)
1 5760 - 5770	1 1755.6 - 1758.7
2 6020 - 6030	2 1834.9 - 1837.9
3 6150 - 6160	3 1874.5 - 1877.6
4 6540 - 6550	4 1993.4 - 1996.4
5 6670 - 6680	5 2033.0 - 2036.1
6 6800 - 6810	6 2072.6 - 2075.7
7 6930 - 6940	7 2112.3 - 2115.3
8 7060 - 7070	8 2151.9 - 2154.9
9 7320 - 7330	9 2231.1 - 2234.2
10 7450 - 7460	10 2270.8 - 2273.8
11 7710 - 7720	11 2350.0 - 2353.1
12 7970 - 7980	12 2429.3 - 2432.3
13 8240 - 8250	13 2511.6 - 2514.6
14 8360 - 8370	14 2548.1 - 2551.2
15 8630 - 8640	15 2630.4 - 2633.5
16 8880 - 8890	16 2706.6 - 2709.7
17 9010 - 9020	17 2746.2 - 2749.3
18 9140 - 9150	18 2785.9 - 2788.9
19 9270 - 9280	19 2825.5 - 2828.5
20 9400 - 9410	20 2865.1 - 2868.2

WELL: PLATYPUS-1

PGC ANALYSES - 10 SAMPLES

No. DEPTHS: (FEET)	No. DEPTHS: (METRES)
1 9530 - 9540	1 2904.7 - 2907.8
2 9880 - 9890	2 3011.4 - 3014.5
3 9990 - 10000	3 3045.0 - 3048.0
4 10170 - 10180	4 3099.8 - 3102.9
5 11080 - 11090	5 3377.2 - 3380.2
6 11500 - 11510	6 3505.2 - 3508.2
7 12050 - 12060	7 3672.8 - 3675.9
8 12220 - 12230	8 3724.7 - 3727.7
9 12530 - 12540	9 3819.1 - 3822.2
10 12730 - 12740	10 3880.1 - 3883.2

WELL: ECHIDNA-1

PGC ANALYSES - 10 SAMPLES

No. DEPTHS: (FEET)	No. DEPTHS: (METRES)
1 4450 - 4460	1 1356.4 - 1359.4
2 4750 - 4760	2 1447.8 - 1450.8
3 4810 - 4820	3 1466.1 - 1469.1
4 4940 - 4950	4 1505.7 - 1508.8
5 4990 - 5000	5 1521.0 - 1524.0
6 11690 - 11700	6 3563.1 - 3566.2
7 11990 - 12000	7 3654.6 - 3657.6
8 12290 - 12300	8 3746.0 - 3749.0
9 12420 - 12430	9 3785.6 - 3788.7
10 12560 - 12570	10 3828.3 - 3831.3

ORGANIC GEOCHEMICAL ANALYSIS

Platypus-1

As Table 1 indicates, 20 samples from between 5760-9410 feet (1756-2868 metres) in the Platypus-1 well were submitted for the determination of total organic carbon (TOC) content, and for the pyrolysis of appropriate samples (based on TOC results) by the Rock-Eval technique. In all, 19 samples were submitted for Rock-Eval pyrolysis, only one containing insufficient TOC to justify this work.

In addition, 10 samples from between 9530-12740 feet (2905-3883 metres) in Platypus-1 were submitted for pyrolysis gas chromatography (pyrolysis-GC) analysis. Their eligibility for this work was based on existing Rock-Eval pyrolysis data for these samples (McKirdy, 1984; Watson, 1990). Each of the samples was hand-picked to isolate shale/claystone and coal material; pyrolysis-GC was performed on the coal fractions of six of the samples, and on the shale fractions of the four remaining samples.

The results of the TOC determinations and Rock-Eval pyrolysis are listed in Table 2. Results of the pyrolysis-GC analyses are included in this report as Appendix 1 (pyrolysis-gas chromatograms), Appendix 2 (alkene and alkane component analyses), Appendix 3 (aromatic and phenolic component analyses), and Appendix 4 (parameter summaries).

ROCK-EVAL PYROLYSIS DATA (one run)

PLATYPUS 1

May-92

DEPTH (ft)	TMAX	S1	S2	S3	S1+S2	S2/S3	PI	PC	TOC	HI	OI
5760-5770	nd	nd	nd	nd	nd	nd	nd	nd	0.25	nd	nd
6020-6030	429	1.82	1.41	3.62	3.23	0.39	0.56	0.27	1.69	83	214
6150-6160	427	2.12	0.70	2.73	2.82	0.26	0.75	0.23	1.05	67	260
6540-6550	430	1.30	1.35	3.39	2.65	0.40	0.49	0.22	1.38	98	246
6670-6680	427	2.11	0.86	2.92	2.97	0.29	0.71	0.25	1.06	81	275
6800-6810	426	1.70	1.07	3.56	2.77	0.30	0.61	0.23	1.05	102	339
6930-6940	426	0.41	0.96	2.14	1.37	0.45	0.30	0.11	1.37	70	156
7060-7070	426	0.32	0.64	2.31	0.96	0.28	0.33	0.08	0.98	65	236
7320-7330	428	0.31	0.76	2.59	1.07	0.29	0.29	0.09	1.05	72	247
7450-7460	427	0.83	1.00	2.18	1.83	0.46	0.45	0.15	1.05	95	208
7710-7720	427	3.45	1.13	3.12	4.58	0.36	0.75	0.38	1.28	88	244
7970-7980	426	1.67	0.97	2.71	2.64	0.36	0.63	0.22	1.11	87	244
8240-8250	412	1.73	0.83	1.94	2.56	0.43	0.68	0.21	0.98	85	198
8360-8370	431	0.72	1.01	2.67	1.73	0.38	0.42	0.14	1.10	92	243
8630-8640	427	0.36	0.95	1.91	1.31	0.50	0.27	0.11	1.29	74	148
8880-8890	431	1.90	1.89	2.33	3.79	0.81	0.50	0.31	1.73	109	135
9010-9020	430	0.10	0.51	2.17	0.61	0.24	0.16	0.05	1.24	41	175
9140-9150	433	0.17	0.88	1.88	1.05	0.47	0.16	0.09	1.31	67	144
9270-9280	432	0.09	0.61	1.93	0.70	0.32	0.13	0.06	1.17	52	165
9400-9410	429	0.13	0.85	1.61	0.98	0.53	0.13	0.08	1.18	72	136

TMAX = Max. temperature S2

S1+S2 = Potential yield

PC = Pyrolysable carbon

OI = Oxygen index

S1 = Volatile hydrocarbons (HC)

S3 = Organic carbon dioxide

TOC = Total organic carbon

nd = no data

S2 = HC generating potential

PI = Production index

HI = Hydrogen index

Echidna-1

Ten samples from between 4450-12570 feet in Echidna-1 were submitted for pyrolysis-GC analysis. The eligibility of five of the samples was based on existing Rock-Eval pyrolysis data (McKirdy, 1984; Watson, 1990). However, TOC/Rock-Eval pyrolysis was performed on the remaining five samples by Geotech to directly ascertain their eligibility. Of these five samples, three were considered unsuitable for pyrolysis-GC work. Therefore, seven of the Echidna-1 samples were eventually analysed by the pyrolysis-GC method. Following hand-picking, two of these samples yielded amounts of coal which were sufficient to justify pyrolysis-GC analysis of this fraction; analyses of the remaining five samples were performed on the bulk cuttings lithologies.

Results of the TOC/Rock-Eval determinations on five of the Echidna-1 samples are listed in Table 3. Results of the seven pyrolysis-GC analyses are included in this report as Appendix 5 (pyrolysis-gas chromatograms), Appendix 6 (alkene and alkane component analysis), Appendix 7 (aromatic and phenolic component analysis), and Appendix 8 (parameter summaries).

ROCK-EVAL PYROLYSIS DATA (one run)

ECHIDNA 1

May-92

DEPTH (ft)	TMAX	S1	S2	S3	S1+S2	S2/S3	PI	PC	TOC	HI	OI
11690-11700	426	0.16	0.20	0.72	0.36	0.28	0.44	0.03	1.25	16	58
11990-12000	nd	0.10	0.19	0.78	0.29	0.24	0.34	0.02	1.29	15	60
12290-12300	412	0.12	0.24	0.58	0.36	0.41	0.33	0.03	1.29	19	45
12420-12430	nd	0.14	0.14	0.42	0.28	0.33	0.50	0.02	1.16	12	36
12560-12570	nd	0.09	0.13	0.54	0.22	0.24	0.41	0.02	1.02	13	53

TMAX = Max. temperature
 S1+S2 = Potential yield
 PC = Pyrolysable carbon
 OI = Oxygen Index

S1 = Volatile hydrocarbons (HC)
 S3 = Organic carbon dioxide
 TOC = Total organic carbon
 nd = no data

S2 = HC generating potential
 PI = Production index
 HI = Hydrogen index

References

McKirdy, D.M., 1984. Coastal bitumen and potential source rocks, Duntroon Basin, South Australia. AMDEL Report F5769/84 for Getty Oil Development Co. Ltd. (unpubl.).

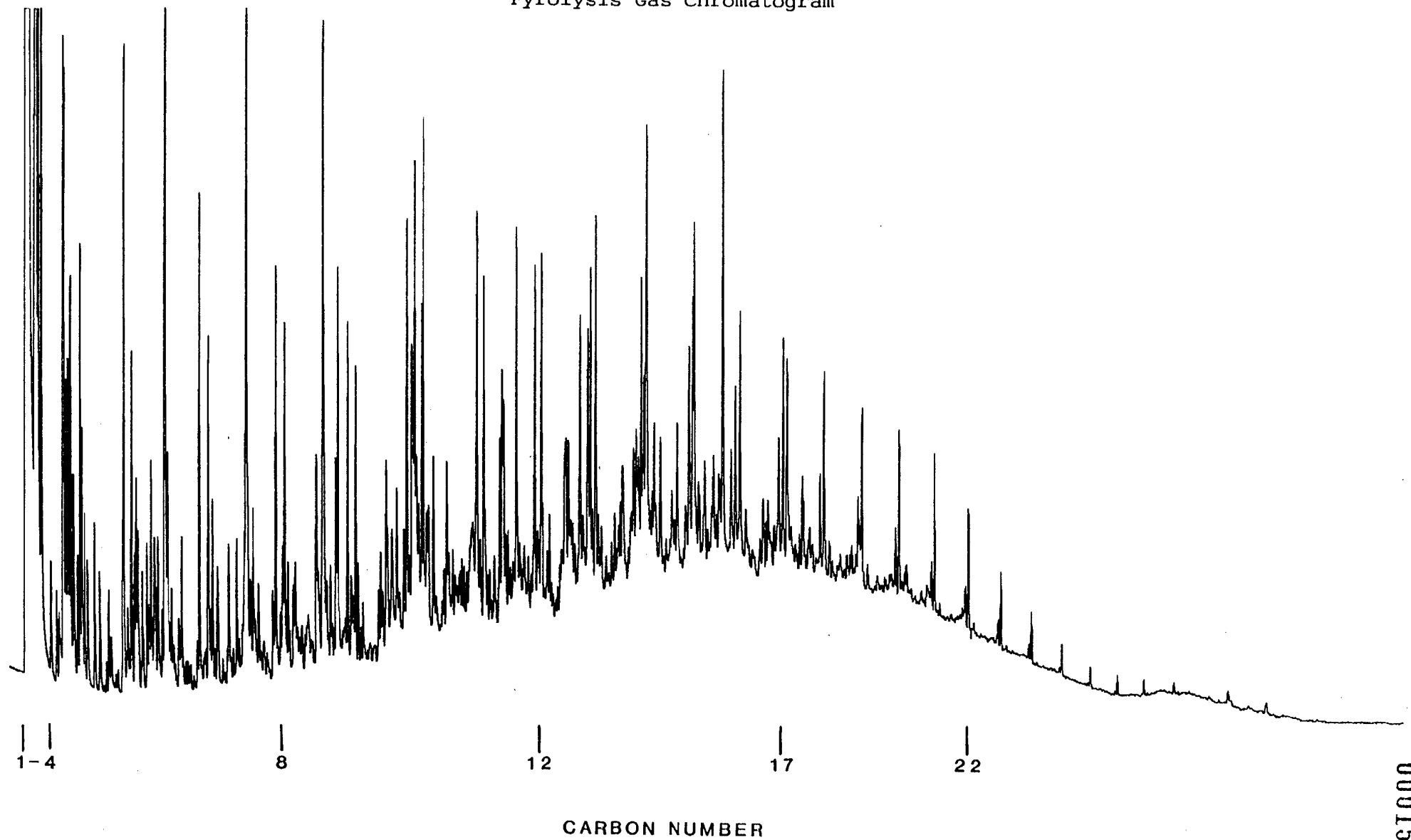
Watson, B.L., 1990. Source rock analysis and oil geochemistry, Great Australian Bight and Duntroon Basin. AMDEL Report 009/054 In: Cockshell, C.D., Hill, A.J., and McKirdy, D.M., Final Report APIRA Project P.298, Bight-Duntroon Basins Study - Appendix 1. South Australia. Department of Mines and Energy. Open file Envelope 6978.

APPENDIX 1

PLATYPUS-1 PGC

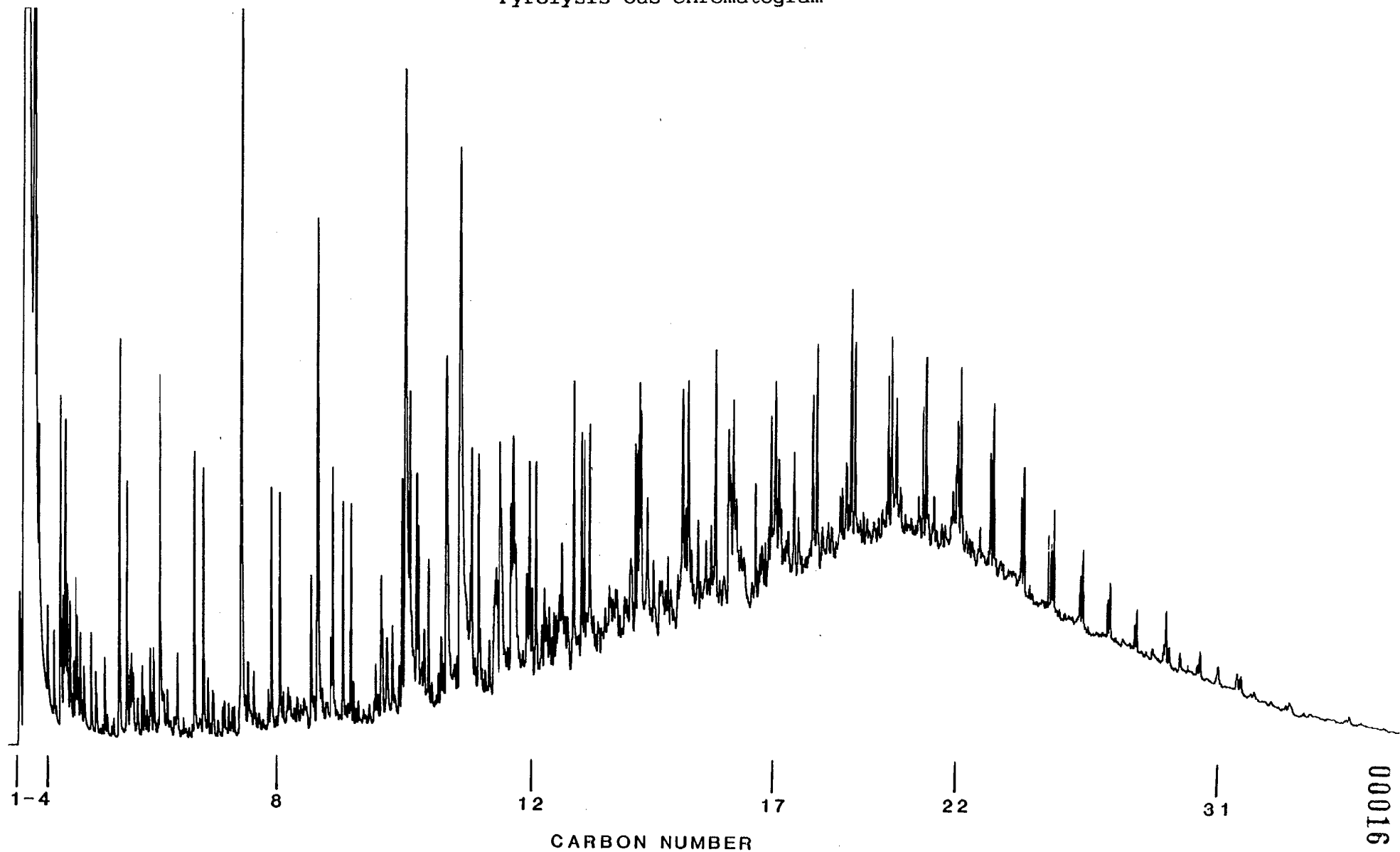
Pyrolysis - Gas Chromatograms

PLATYPUS 1, 9530 - 9540ft, Shale
Pyrolysis Gas Chromatogram



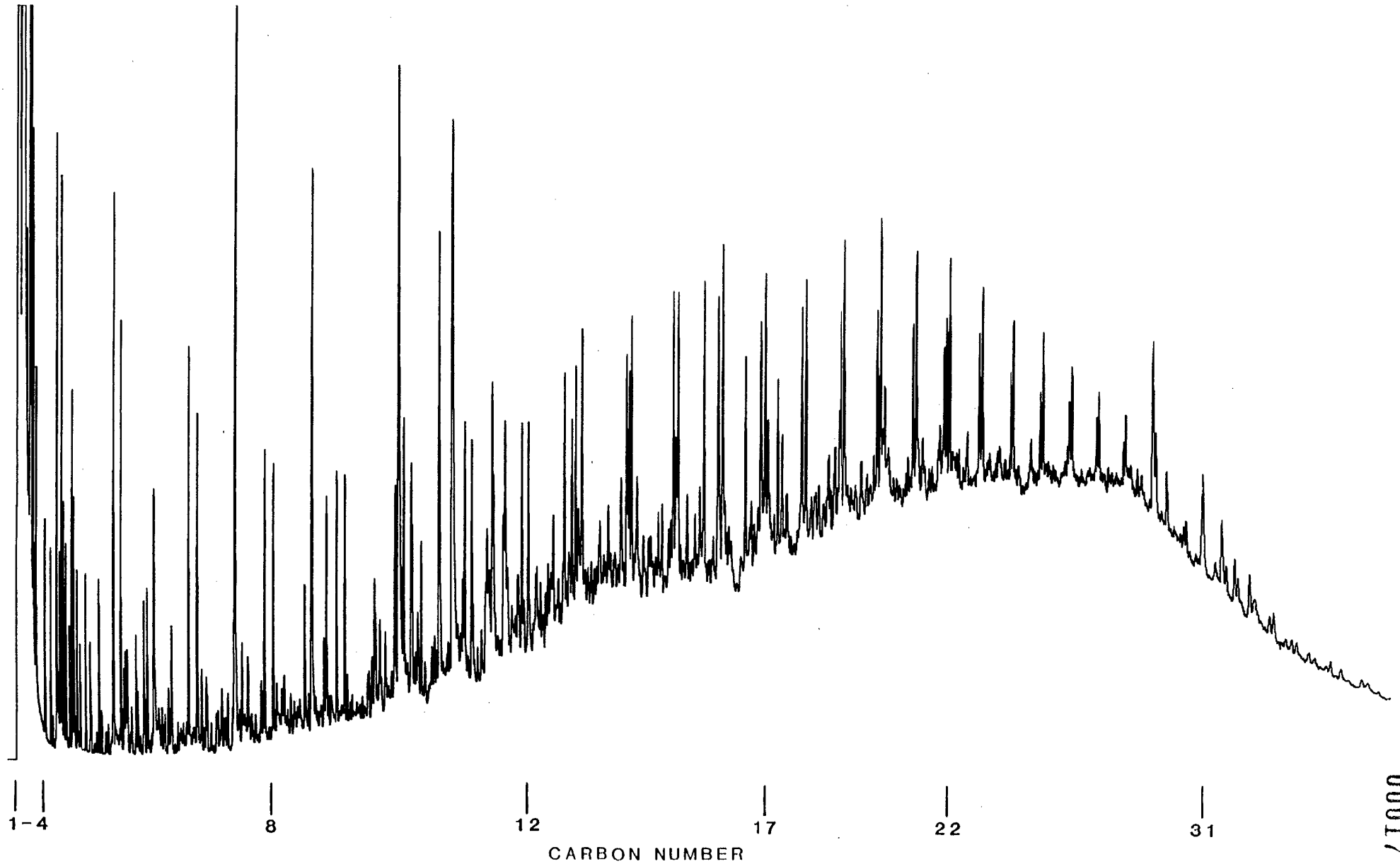
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PLATYPUS 1, 9880 - 9890ft, Coal
Pyrolysis Gas Chromatogram



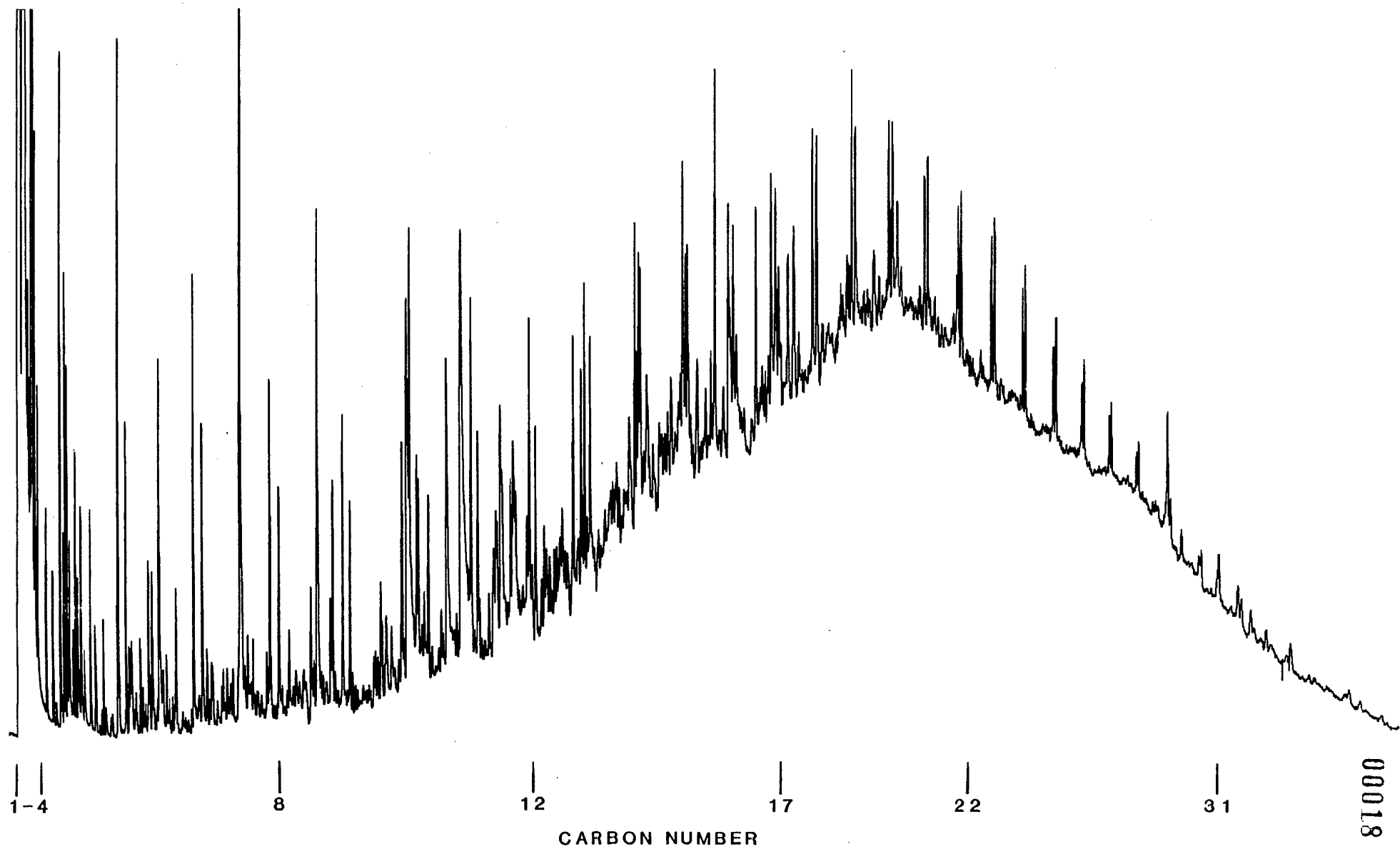
00016

PLATYPUS 1, 9990 - 10000ft, Coal
Pyrolysis Gas Chromatogram

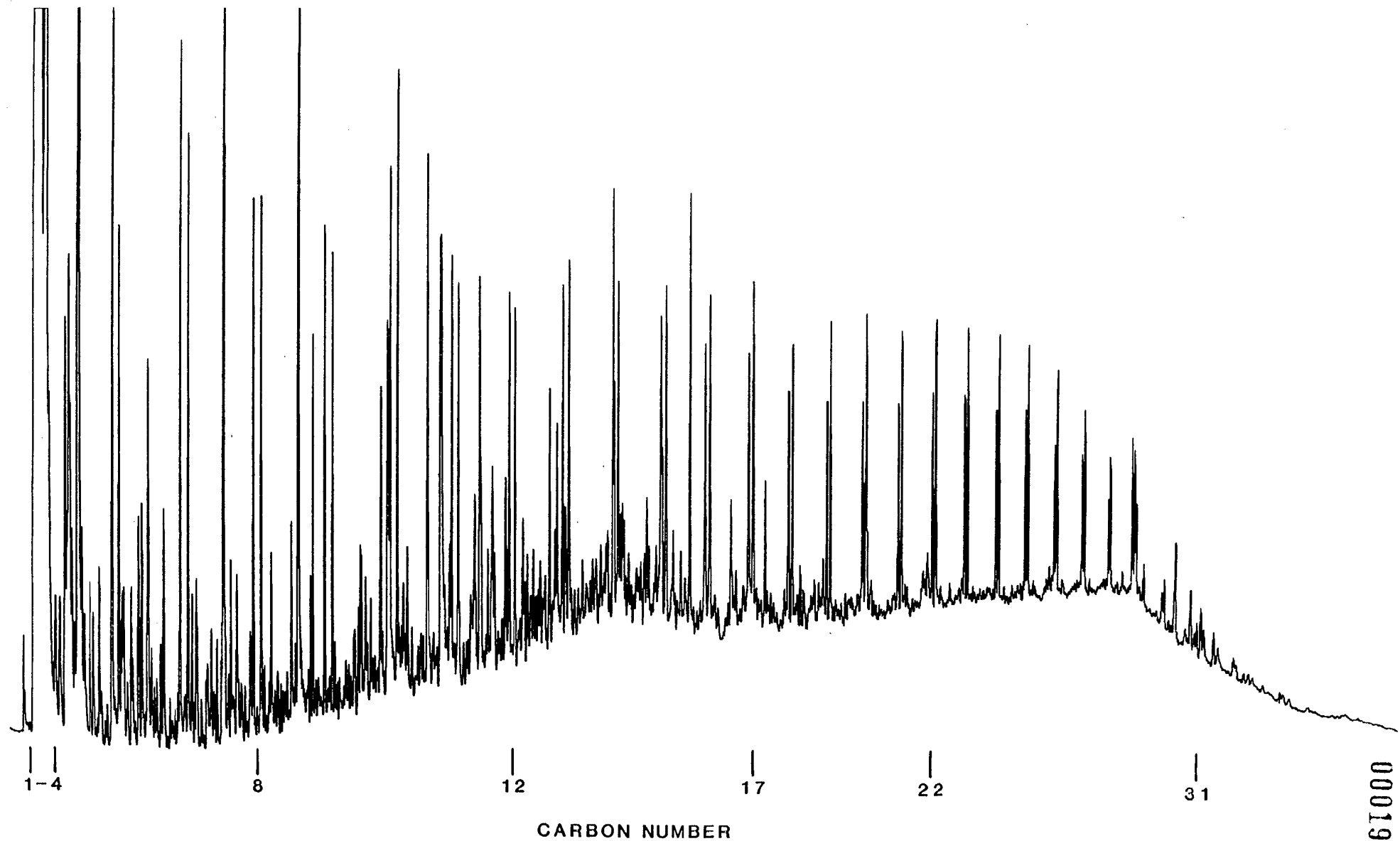


00017

PLATYPUS 1, 10170 - 10180ft, Coal
Pyrolysis Gas Chromatogram

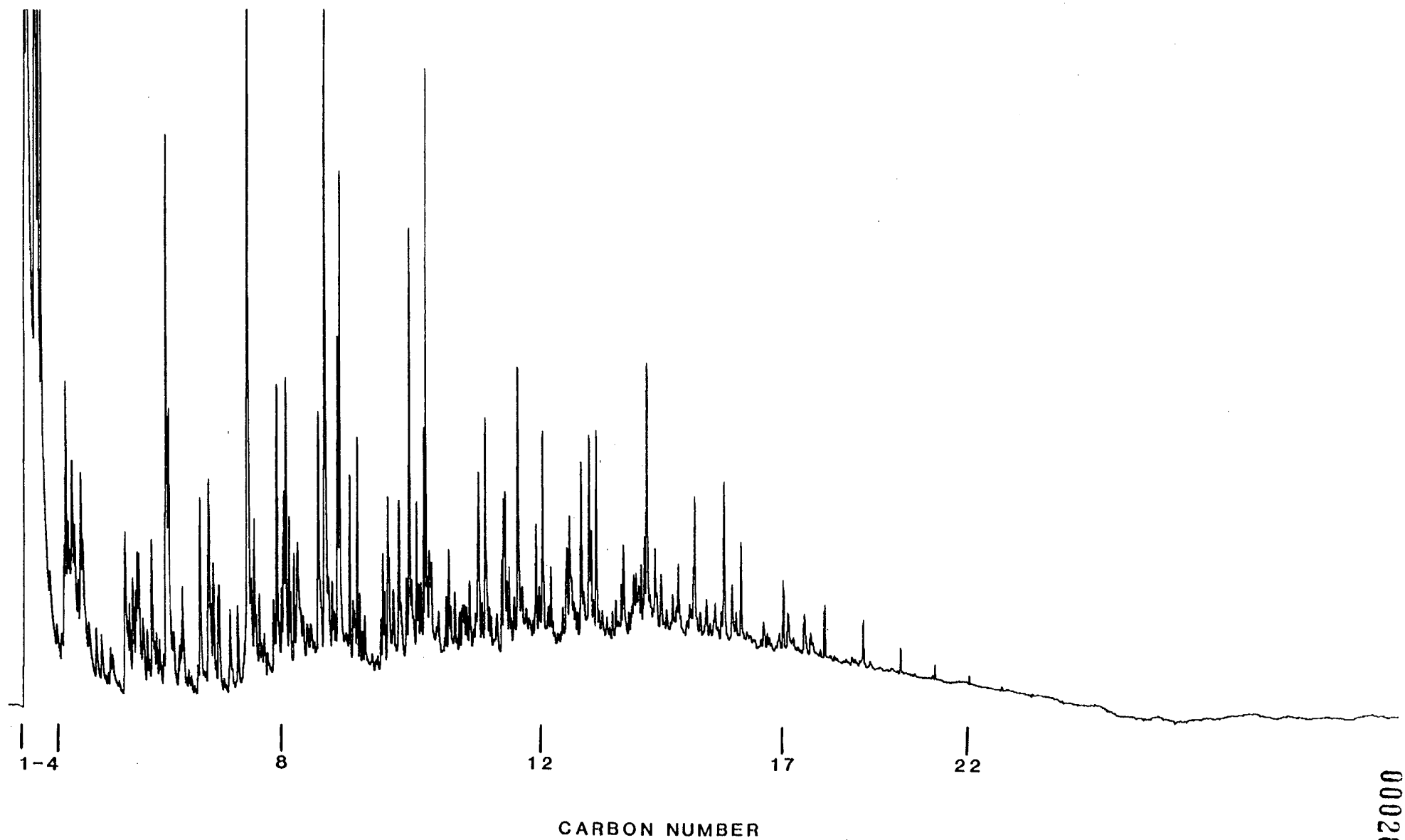


PLATYPUS 1, 11080 - 11090ft, Coal
Pyrolysis Gas Chromatogram

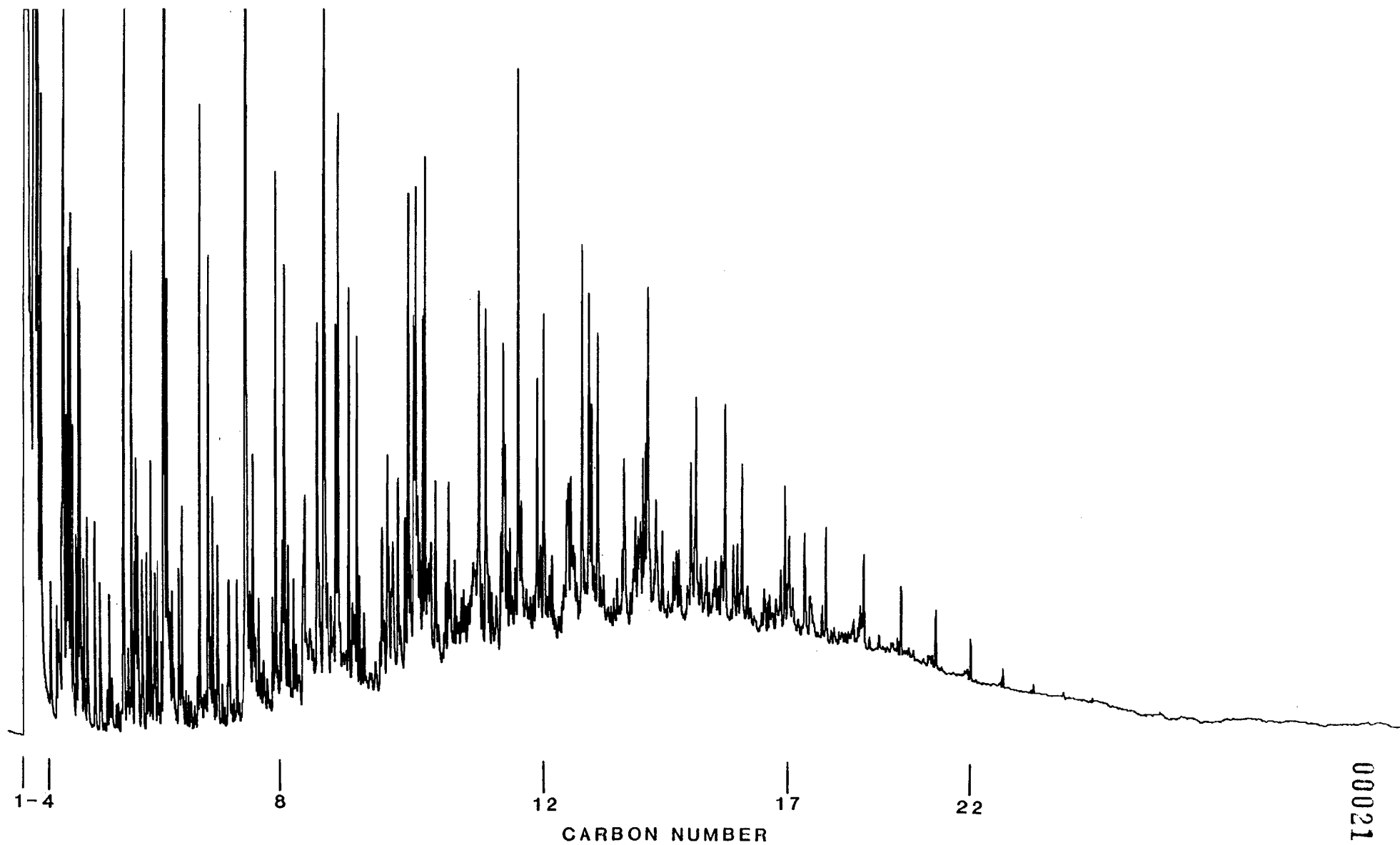


00019

PLATYPUS 1, 11500 - 11510ft, Shale
Pyrolysis Gas Chromatogram

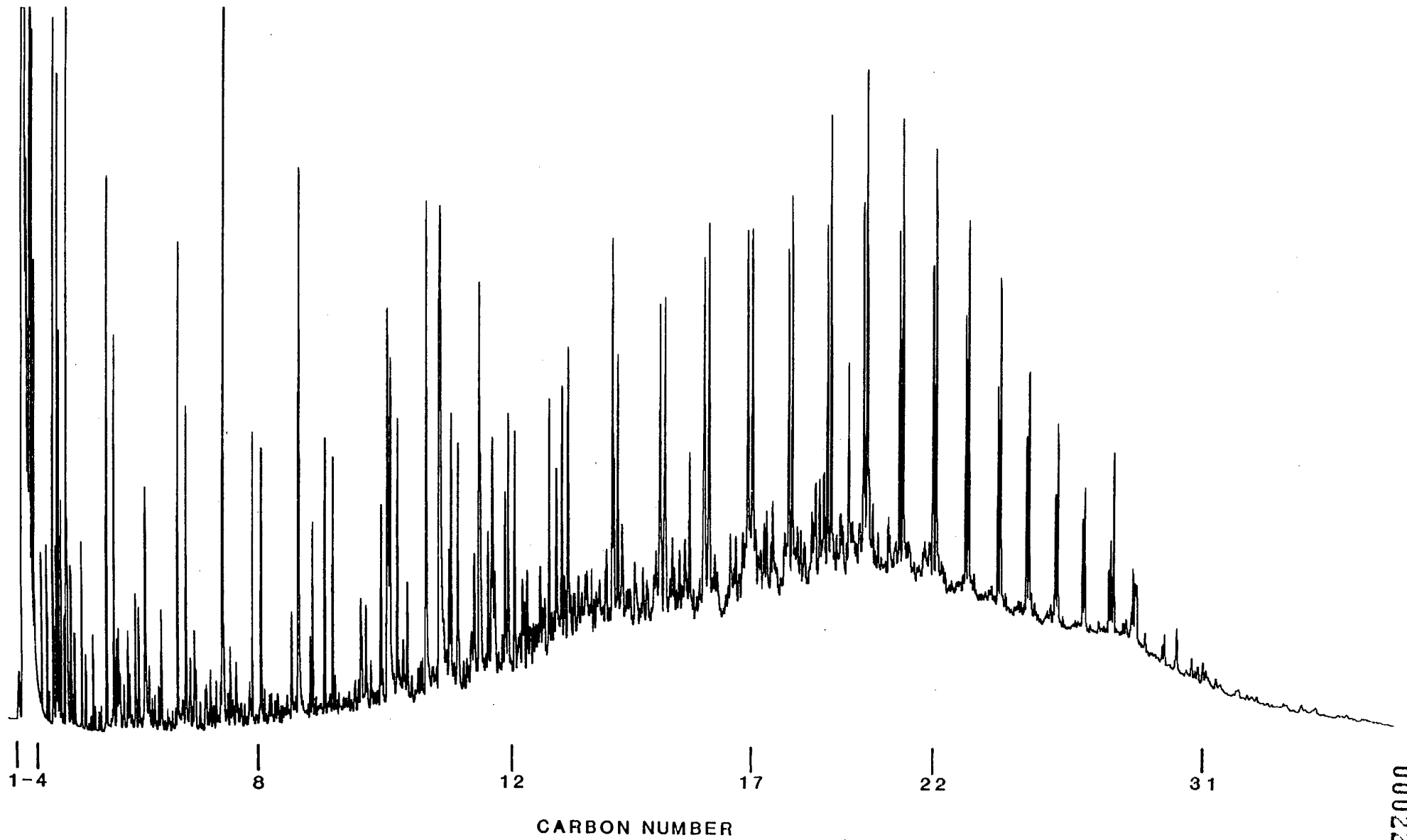


PLATYPUS 1, 12050 - 12060ft, Shale
Pyrolysis Gas Chromatogram



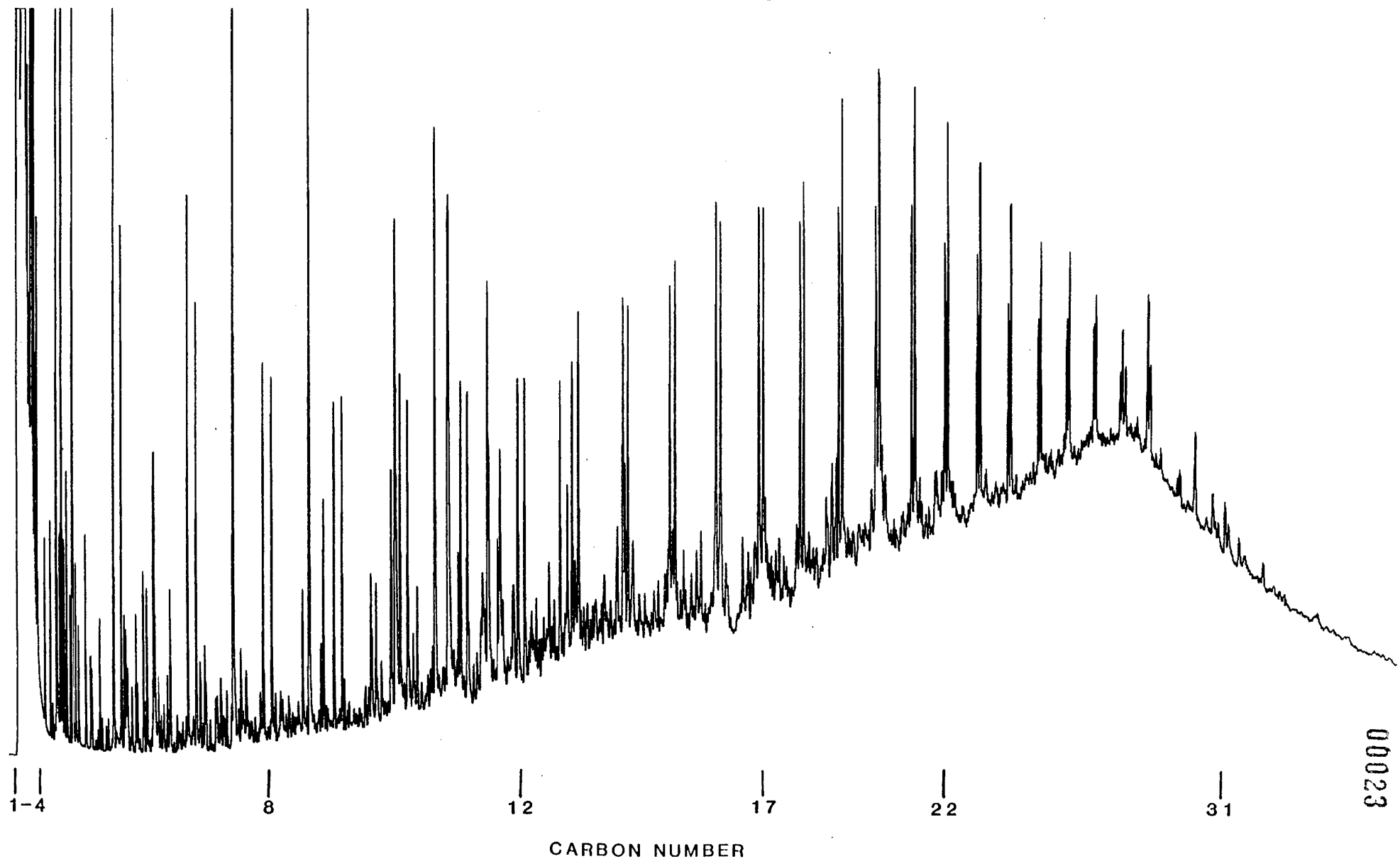
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PLATYPUS 1, 12220 - 12230ft, Coal
Pyrolysis Gas Chromatogram



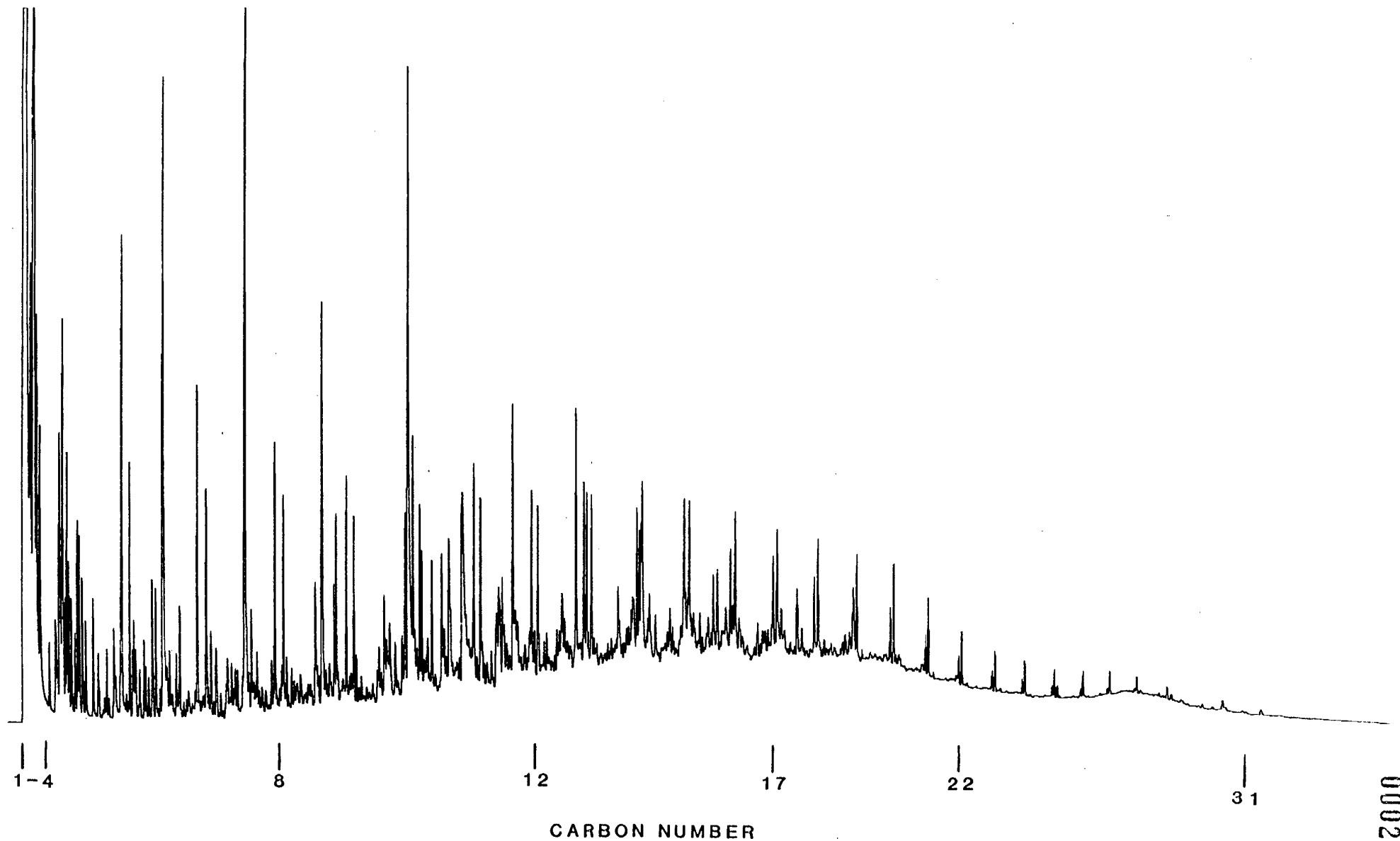
00022

PLATYPUS 1, 12530 - 12540ft, Coal
Pyrolysis Gas Chromatogram



00023

PLATYPUS 1, 12730 - 12740ft, Shale
Pyrolysis Gas Chromatogram



00024

APPENDIX 2

PLATYPUS-1 PGC

Alkene and Alkane Component Analyses

ALKENE AND ALKANE COMPONENT ANALYSIS FROM PYROLYSIS-GC

PLATYPUS 1, 9530-9540ft, Shale

May-92

Carbon No.	-----Alkane + Alkene-----			-----Alkane-----			-----Alkene-----			Alkane/Alkene
	A	B	C	A	B	C	A	B	C	
1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
5	1.725	0.130	nd	0.744	0.056	nd	0.981	0.074	nd	0.76
6	1.725	0.130	nd	0.476	0.036	nd	1.249	0.094	nd	0.38
7	1.424	0.107	nd	0.657	0.049	nd	0.767	0.058	nd	0.86
8	1.391	0.104	nd	0.631	0.047	nd	0.760	0.057	nd	0.83
9	0.936	0.070	nd	0.449	0.034	nd	0.487	0.037	nd	0.92
10	1.258	0.094	nd	0.404	0.030	nd	0.854	0.064	nd	0.47
11	1.505	0.113	nd	0.532	0.040	nd	0.973	0.073	nd	0.55
12	1.340	0.101	nd	0.616	0.046	nd	0.724	0.054	nd	0.85
13	1.218	0.091	nd	0.701	0.053	nd	0.517	0.039	nd	1.36
14	1.968	0.148	nd	1.433	0.108	nd	0.535	0.040	nd	2.68
15	1.188	0.089	nd	0.597	0.045	nd	0.591	0.044	nd	1.01
16	0.824	0.062	nd	0.499	0.037	nd	0.325	0.024	nd	1.54
17	0.846	0.064	nd	0.421	0.032	nd	0.425	0.032	nd	0.99
18	0.673	0.051	nd	0.422	0.032	nd	0.251	0.019	nd	1.68
19	0.462	0.035	nd	0.316	0.024	nd	0.146	0.011	nd	2.16
20	0.424	0.032	nd	0.300	0.023	nd	0.124	0.009	nd	2.42
21	0.366	0.027	nd	0.277	0.021	nd	0.089	0.007	nd	3.11
22	0.275	0.021	nd	0.198	0.015	nd	0.077	0.006	nd	2.57
23	0.179	0.013	nd	0.125	0.009	nd	0.054	0.004	nd	2.31
24	0.102	0.008	nd	0.079	0.006	nd	0.023	0.002	nd	3.43
25	0.046	0.003	nd	0.046	0.003	nd	0.000	0.000	nd	nd
26	0.037	0.003	nd	0.037	0.003	nd	0.000	0.000	nd	nd
27	0.034	0.003	nd	0.034	0.003	nd	0.000	0.000	nd	nd
28	0.027	0.002	nd	0.027	0.002	nd	0.000	0.000	nd	nd
29	0.024	0.002	nd	0.024	0.002	nd	0.000	0.000	nd	nd
30	0.018	0.001	nd	0.018	0.001	nd	0.000	0.000	nd	nd
31	0.012	0.001	nd	0.012	0.001	nd	0.000	0.000	nd	nd

nd = no data

A = % of S2

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ALKENE AND ALKANE COMPONENT ANALYSIS FROM PYROLYSIS-GC

PLATYPUS 1, 9880-9890ft, Coal

May-92

Carbon No.	-----Alkane + Alkene-----			-----Alkane-----			-----Alkene-----			Alkane/Alkene
	A	B	C	A	B	C	A	B	C	
1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
5	1.256	0.681	nd	0.606	0.329	nd	0.650	0.352	nd	0.93
6	1.097	0.595	nd	0.447	0.242	nd	0.650	0.352	nd	0.69
7	0.985	0.534	nd	0.459	0.249	nd	0.526	0.285	nd	0.87
8	0.864	0.468	nd	0.447	0.242	nd	0.417	0.226	nd	1.07
9	0.698	0.378	nd	0.331	0.179	nd	0.367	0.199	nd	0.90
10	0.646	0.350	nd	0.316	0.171	nd	0.330	0.179	nd	0.96
11	0.829	0.449	nd	0.381	0.207	nd	0.448	0.243	nd	0.85
12	0.801	0.434	nd	0.399	0.216	nd	0.402	0.218	nd	0.99
13	0.811	0.440	nd	0.493	0.267	nd	0.318	0.172	nd	1.55
14	0.959	0.520	nd	0.561	0.304	nd	0.398	0.216	nd	1.41
15	1.687	0.915	nd	0.802	0.435	nd	0.885	0.480	nd	0.91
16	0.968	0.525	nd	0.612	0.332	nd	0.356	0.193	nd	1.72
17	1.063	0.576	nd	0.693	0.376	nd	0.370	0.201	nd	1.87
18	0.902	0.489	nd	0.433	0.235	nd	0.469	0.254	nd	0.92
19	1.100	0.596	nd	0.383	0.208	nd	0.717	0.389	nd	0.53
20	0.781	0.423	nd	0.445	0.241	nd	0.336	0.182	nd	1.32
21	0.602	0.326	nd	0.353	0.191	nd	0.249	0.135	nd	1.42
22	0.792	0.429	nd	0.345	0.187	nd	0.447	0.242	nd	0.77
23	0.522	0.283	nd	0.293	0.159	nd	0.229	0.124	nd	1.28
24	0.386	0.209	nd	0.212	0.115	nd	0.174	0.094	nd	1.22
25	0.305	0.165	nd	0.159	0.086	nd	0.146	0.079	nd	1.09
26	0.215	0.117	nd	0.130	0.070	nd	0.085	0.046	nd	1.53
27	0.155	0.084	nd	0.091	0.049	nd	0.064	0.035	nd	1.42
28	0.104	0.056	nd	0.063	0.034	nd	0.041	0.022	nd	1.54
29	0.143	0.078	nd	0.113	0.061	nd	0.030	0.016	nd	3.77
30	0.079	0.043	nd	0.057	0.031	nd	0.022	0.012	nd	2.59
31	0.100	0.054	nd	0.048	0.026	nd	0.052	0.028	nd	0.92

nd = no data

A = % of S2

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ALKENE AND ALKANE COMPONENT ANALYSIS FROM PYROLYSIS-GC

PLATYPUS 1, 9990-10000ft, Coal

May-92

Carbon No.	-----Alkane + Alkene-----			-----Alkane-----			-----Alkene-----			Alkane/Alkene
	A	B	C	A	B	C	A	B	C	
1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
5	1.313	1.637	nd	0.551	0.687	nd	0.762	0.950	nd	0.72
6	1.106	1.379	nd	0.396	0.494	nd	0.710	0.885	nd	0.56
7	0.863	1.076	nd	0.413	0.515	nd	0.450	0.561	nd	0.92
8	0.725	0.904	nd	0.379	0.472	nd	0.346	0.431	nd	1.10
9	0.664	0.828	nd	0.318	0.396	nd	0.346	0.431	nd	0.92
10	0.595	0.742	nd	0.305	0.380	nd	0.290	0.362	nd	1.05
11	0.667	0.831	nd	0.324	0.404	nd	0.343	0.428	nd	0.94
12	0.642	0.800	nd	0.329	0.410	nd	0.313	0.390	nd	1.05
13	0.740	0.922	nd	0.402	0.501	nd	0.338	0.421	nd	1.19
14	0.699	0.871	nd	0.384	0.479	nd	0.315	0.393	nd	1.22
15	1.062	1.324	nd	0.447	0.557	nd	0.615	0.767	nd	0.73
16	1.374	1.713	nd	0.586	0.731	nd	0.788	0.982	nd	0.74
17	1.235	1.540	nd	0.670	0.835	nd	0.565	0.704	nd	1.19
18	1.030	1.284	nd	0.426	0.531	nd	0.604	0.753	nd	0.71
19	0.875	1.091	nd	0.486	0.606	nd	0.389	0.485	nd	1.25
20	0.915	1.141	nd	0.450	0.561	nd	0.465	0.580	nd	0.97
21	0.855	1.066	nd	0.473	0.590	nd	0.382	0.476	nd	1.24
22	0.712	0.888	nd	0.351	0.438	nd	0.361	0.450	nd	0.97
23	0.593	0.739	nd	0.284	0.354	nd	0.309	0.385	nd	0.92
24	0.410	0.511	nd	0.238	0.297	nd	0.172	0.214	nd	1.38
25	0.518	0.646	nd	0.319	0.398	nd	0.199	0.248	nd	1.60
26	0.449	0.560	nd	0.268	0.334	nd	0.181	0.226	nd	1.48
27	0.301	0.375	nd	0.183	0.228	nd	0.118	0.147	nd	1.55
28	0.226	0.282	nd	0.141	0.176	nd	0.085	0.106	nd	1.66
29	0.675	0.841	nd	0.173	0.216	nd	0.502	0.626	nd	0.34
30	0.102	0.127	nd	0.059	0.074	nd	0.043	0.054	nd	1.37
31	0.236	0.294	nd	0.050	0.062	nd	0.186	0.232	nd	0.27

nd = no data

A = % of S2

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ALKENE AND ALKANE COMPONENT ANALYSIS FROM PYROLYSIS-GC

PLATYPUS 1, 10170-10180ft, Coal

May-92

Carbon No.	-----Alkane + Alkene-----			-----Alkane-----			-----Alkene-----			Alkane/Alkene
	A	B	C	A	B	C	A	B	C	
1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
5	0.795	0.815	nd	0.330	0.338	nd	0.465	0.477	nd	0.71
6	0.881	0.904	nd	0.259	0.266	nd	0.622	0.638	nd	0.42
7	0.661	0.678	nd	0.271	0.278	nd	0.390	0.400	nd	0.69
8	0.614	0.630	nd	0.221	0.227	nd	0.393	0.403	nd	0.56
9	0.529	0.543	nd	0.200	0.205	nd	0.329	0.337	nd	0.61
10	1.127	1.156	nd	0.188	0.193	nd	0.939	0.963	nd	0.20
11	0.595	0.610	nd	0.221	0.227	nd	0.374	0.384	nd	0.59
12	0.752	0.771	nd	0.254	0.261	nd	0.498	0.511	nd	0.51
13	0.597	0.612	nd	0.318	0.326	nd	0.279	0.286	nd	1.14
14	1.088	1.116	nd	0.590	0.605	nd	0.498	0.511	nd	1.18
15	1.842	1.889	nd	0.884	0.907	nd	0.958	0.983	nd	0.92
16	1.516	1.555	nd	0.899	0.922	nd	0.617	0.633	nd	1.46
17	2.362	2.422	nd	1.239	1.271	nd	1.123	1.152	nd	1.10
18	0.765	0.785	nd	0.345	0.354	nd	0.420	0.431	nd	0.82
19	0.809	0.830	nd	0.256	0.263	nd	0.553	0.567	nd	0.46
20	0.506	0.519	nd	0.234	0.240	nd	0.272	0.279	nd	0.86
21	0.391	0.401	nd	0.199	0.204	nd	0.192	0.197	nd	1.04
22	0.378	0.388	nd	0.213	0.218	nd	0.165	0.169	nd	1.29
23	0.372	0.382	nd	0.219	0.225	nd	0.153	0.157	nd	1.43
24	0.290	0.297	nd	0.160	0.164	nd	0.130	0.133	nd	1.23
25	0.240	0.246	nd	0.124	0.127	nd	0.116	0.119	nd	1.07
26	0.214	0.219	nd	0.100	0.103	nd	0.114	0.117	nd	0.88
27	0.137	0.141	nd	0.073	0.075	nd	0.064	0.066	nd	1.14
28	0.095	0.097	nd	0.052	0.053	nd	0.043	0.044	nd	1.21
29	0.267	0.274	nd	0.246	0.252	nd	0.021	0.022	nd	11.71
30	0.082	0.084	nd	0.052	0.053	nd	0.030	0.031	nd	1.73
31	0.099	0.102	nd	0.035	0.036	nd	0.064	0.066	nd	0.55

nd = no data

A = % of S2

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ALKENE AND ALKANE COMPONENT ANALYSIS FROM PYROLYSIS-GC

PLATYPUS 1, 11080-11090ft, Coal

May-92

Carbon No.	-----Alkane + Alkene-----			-----Alkane-----			-----Alkene-----			Alkane/Alkene
	A	B	C	A	B	C	A	B	C	
1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
5	1.990	3.007	nd	1.240	1.874	nd	0.750	1.133	nd	1.65
6	1.843	2.785	nd	0.728	1.100	nd	1.115	1.685	nd	0.65
7	1.549	2.341	nd	0.701	1.059	nd	0.848	1.281	nd	0.83
8	1.260	1.904	nd	0.636	0.961	nd	0.624	0.943	nd	1.02
9	1.029	1.555	nd	0.480	0.725	nd	0.549	0.830	nd	0.87
10	1.569	2.371	nd	0.716	1.082	nd	0.853	1.289	nd	0.84
11	1.053	1.591	nd	0.604	0.913	nd	0.449	0.679	nd	1.35
12	0.880	1.330	nd	0.435	0.657	nd	0.445	0.672	nd	0.98
13	0.875	1.322	nd	0.474	0.716	nd	0.401	0.606	nd	1.18
14	0.976	1.475	nd	0.448	0.677	nd	0.528	0.798	nd	0.85
15	0.953	1.440	nd	0.507	0.766	nd	0.446	0.674	nd	1.14
16	0.992	1.499	nd	0.465	0.703	nd	0.527	0.796	nd	0.88
17	1.090	1.647	nd	0.478	0.722	nd	0.612	0.925	nd	0.78
18	0.710	1.073	nd	0.350	0.529	nd	0.360	0.544	nd	0.97
19	0.694	1.049	nd	0.415	0.627	nd	0.279	0.422	nd	1.49
20	0.859	1.298	nd	0.457	0.691	nd	0.402	0.608	nd	1.14
21	0.640	0.967	nd	0.369	0.558	nd	0.271	0.410	nd	1.36
22	0.695	1.050	nd	0.391	0.591	nd	0.304	0.459	nd	1.29
23	0.609	0.920	nd	0.337	0.509	nd	0.272	0.411	nd	1.24
24	0.576	0.870	nd	0.331	0.500	nd	0.245	0.370	nd	1.35
25	0.561	0.848	nd	0.300	0.453	nd	0.261	0.394	nd	1.15
26	0.487	0.736	nd	0.262	0.396	nd	0.225	0.340	nd	1.16
27	0.384	0.580	nd	0.205	0.310	nd	0.179	0.271	nd	1.15
28	0.336	0.508	nd	0.207	0.313	nd	0.129	0.195	nd	1.60
29	0.377	0.570	nd	0.160	0.242	nd	0.217	0.328	nd	0.74
30	0.054	0.082	nd	0.054	0.082	nd	0.000	0.000	nd	nd
31	0.094	0.142	nd	0.094	0.142	nd	0.000	0.000	nd	nd

nd = no data

A = % of S₂

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ALKENE AND ALKANE COMPONENT ANALYSIS FROM PYROLYSIS-GC

PLATYPUS 1, 11500-11510ft, Shale

May-92

Carbon No.	-----Alkane + Alkene-----			-----Alkane-----			-----Alkene-----			Alkane/Alkene
	A	B	C	A	B	C	A	B	C	
1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
5	2.624	0.037	nd	1.212	0.017	nd	1.412	0.020	nd	0.86
6	1.118	0.016	nd	0.318	0.004	nd	0.800	0.011	nd	0.40
7	1.747	0.025	nd	1.004	0.014	nd	0.743	0.010	nd	1.35
8	1.545	0.022	nd	0.745	0.011	nd	0.800	0.011	nd	0.93
9	0.855	0.012	nd	0.486	0.007	nd	0.369	0.005	nd	1.32
10	0.716	0.010	nd	0.416	0.006	nd	0.300	0.004	nd	1.39
11	1.220	0.017	nd	0.502	0.007	nd	0.718	0.010	nd	0.70
12	0.876	0.012	nd	0.535	0.008	nd	0.341	0.005	nd	1.57
13	0.744	0.010	nd	0.523	0.007	nd	0.221	0.003	nd	2.37
14	0.834	0.012	nd	0.834	0.012	nd	0.000	0.000	nd	nd
15	0.569	0.008	nd	0.569	0.008	nd	0.000	0.000	nd	nd
16	0.220	0.003	nd	0.220	0.003	nd	0.000	0.000	nd	nd
17	0.158	0.002	nd	0.158	0.002	nd	0.000	0.000	nd	nd
18	0.121	0.002	nd	0.121	0.002	nd	0.000	0.000	nd	nd
19	0.148	0.002	nd	0.148	0.002	nd	0.000	0.000	nd	nd
20	0.056	0.001	nd	0.056	0.001	nd	0.000	0.000	nd	nd
21	0.033	0.000	nd	0.033	0.000	nd	0.000	0.000	nd	nd
22	0.017	0.000	nd	0.017	0.000	nd	0.000	0.000	nd	nd
23	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd
24	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd
25	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd
26	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd
27	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd
28	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd
29	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd
30	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd
31	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd

nd = no data

A = % of S2

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ALKENE AND ALKANE COMPONENT ANALYSIS FROM PYROLYSIS-GC

PLATYPUS 1, 12050-12060ft, Shale

May-92

Carbon No.	-----Alkane + Alkene-----			-----Alkane-----			-----Alkene-----			Alkane/Alkene
	A	B	C	A	B	C	A	B	C	
1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
5	2.598	0.030	nd	0.765	0.009	nd	1.833	0.021	nd	0.42
6	1.912	0.022	nd	0.552	0.006	nd	1.360	0.016	nd	0.41
7	1.556	0.018	nd	0.742	0.009	nd	0.814	0.009	nd	0.91
8	1.256	0.015	nd	0.585	0.007	nd	0.671	0.008	nd	0.87
9	0.907	0.011	nd	0.433	0.005	nd	0.474	0.005	nd	0.91
10	1.081	0.013	nd	0.371	0.004	nd	0.710	0.008	nd	0.52
11	1.225	0.014	nd	0.454	0.005	nd	0.771	0.009	nd	0.59
12	0.929	0.011	nd	0.481	0.006	nd	0.448	0.005	nd	1.07
13	0.630	0.007	nd	0.424	0.005	nd	0.206	0.002	nd	2.06
14	1.242	0.014	nd	0.996	0.012	nd	0.246	0.003	nd	4.05
15	0.774	0.009	nd	0.422	0.005	nd	0.352	0.004	nd	1.20
16	0.353	0.004	nd	0.246	0.003	nd	0.107	0.001	nd	2.30
17	0.365	0.004	nd	0.223	0.003	nd	0.142	0.002	nd	1.57
18	0.231	0.003	nd	0.179	0.002	nd	0.052	0.001	nd	3.44
19	0.191	0.002	nd	0.130	0.002	nd	0.061	0.001	nd	2.13
20	0.120	0.001	nd	0.098	0.001	nd	0.022	0.000	nd	4.45
21	0.103	0.001	nd	0.086	0.001	nd	0.017	0.000	nd	5.06
22	0.056	0.001	nd	0.056	0.001	nd	0.000	0.000	nd	nd
23	0.037	0.000	nd	0.026	0.000	nd	0.011	0.000	nd	2.36
24	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd
25	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd
26	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd
27	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd
28	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd
29	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd
30	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd
31	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd

nd = no data

A = % of S2

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ALKENE AND ALKANE COMPONENT ANALYSIS FROM PYROLYSIS-GC

PLATYPUS 1, 12220-12230ft, Coal

May-92

Carbon No.	-----Alkane + Alkene-----			-----Alkane-----			-----Alkene-----			Alkane/Alkene
	A	B	C	A	B	C	A	B	C	
1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
5	1.511	1.810	nd	0.711	0.852	nd	0.800	0.958	nd	0.89
6	1.581	1.894	nd	0.652	0.781	nd	0.929	1.113	nd	0.70
7	1.178	1.411	nd	0.582	0.697	nd	0.596	0.714	nd	0.98
8	1.065	1.276	nd	0.536	0.642	nd	0.529	0.634	nd	1.01
9	0.922	1.105	nd	0.435	0.521	nd	0.487	0.583	nd	0.89
10	1.461	1.750	nd	0.536	0.642	nd	0.925	1.108	nd	0.58
11	1.075	1.288	nd	0.589	0.706	nd	0.486	0.582	nd	1.21
12	0.946	1.133	nd	0.465	0.557	nd	0.481	0.576	nd	0.97
13	1.093	1.310	nd	0.641	0.768	nd	0.452	0.542	nd	1.42
14	1.263	1.513	nd	0.529	0.634	nd	0.734	0.879	nd	0.72
15	1.898	2.274	nd	0.922	1.105	nd	0.976	1.169	nd	0.94
16	2.226	2.667	nd	0.964	1.155	nd	1.262	1.512	nd	0.76
17	1.679	2.012	nd	0.713	0.854	nd	0.966	1.157	nd	0.74
18	1.871	2.242	nd	0.821	0.984	nd	1.050	1.258	nd	0.78
19	1.658	1.986	nd	0.937	1.123	nd	0.721	0.864	nd	1.30
20	1.893	2.268	nd	0.934	1.119	nd	0.959	1.149	nd	0.97
21	1.649	1.976	nd	0.969	1.161	nd	0.680	0.815	nd	1.43
22	1.553	1.861	nd	0.925	1.108	nd	0.628	0.752	nd	1.47
23	1.309	1.568	nd	0.720	0.863	nd	0.589	0.706	nd	1.22
24	1.100	1.318	nd	0.657	0.787	nd	0.443	0.531	nd	1.48
25	0.822	0.985	nd	0.445	0.533	nd	0.377	0.452	nd	1.18
26	0.635	0.761	nd	0.369	0.442	nd	0.266	0.319	nd	1.39
27	0.466	0.558	nd	0.247	0.296	nd	0.219	0.262	nd	1.13
28	0.486	0.582	nd	0.337	0.404	nd	0.149	0.179	nd	2.26
29	0.269	0.322	nd	0.119	0.143	nd	0.150	0.180	nd	0.79
30	0.101	0.121	nd	0.057	0.068	nd	0.044	0.053	nd	1.30
31	0.022	0.026	nd	0.022	0.026	nd	0.000	0.000	nd	nd

nd = no data

A = % of S2

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ALKENE AND ALKANE COMPONENT ANALYSIS FROM PYROLYSIS-GC

PLATYPUS 1, 12530-12540ft, Coal

May-92

Carbon No.	-----Alkane + Alkene-----			-----Alkane-----			-----Alkene-----			Alkane/Alkene
	A	B	C	A	B	C	A	B	C	
1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
5	1.341	1.890	nd	0.620	0.874	nd	0.721	1.016	nd	0.86
6	1.222	1.722	nd	0.513	0.723	nd	0.709	0.999	nd	0.72
7	0.982	1.384	nd	0.490	0.691	nd	0.492	0.693	nd	1.00
8	0.851	1.199	nd	0.436	0.614	nd	0.415	0.585	nd	1.05
9	0.763	1.075	nd	0.370	0.521	nd	0.393	0.554	nd	0.94
10	0.852	1.201	nd	0.495	0.698	nd	0.357	0.503	nd	1.39
11	0.742	1.046	nd	0.394	0.555	nd	0.348	0.490	nd	1.13
12	0.828	1.167	nd	0.427	0.602	nd	0.401	0.565	nd	1.06
13	0.767	1.081	nd	0.416	0.586	nd	0.351	0.495	nd	1.19
14	1.040	1.466	nd	0.447	0.630	nd	0.593	0.836	nd	0.75
15	0.993	1.399	nd	0.417	0.588	nd	0.576	0.812	nd	0.72
16	1.569	2.211	nd	0.678	0.956	nd	0.891	1.256	nd	0.76
17	1.238	1.745	nd	0.454	0.640	nd	0.784	1.105	nd	0.58
18	1.182	1.666	nd	0.517	0.729	nd	0.665	0.937	nd	0.78
19	1.110	1.564	nd	0.645	0.909	nd	0.465	0.655	nd	1.39
20	1.788	2.520	nd	0.959	1.352	nd	0.829	1.168	nd	1.16
21	1.233	1.738	nd	0.648	0.913	nd	0.585	0.824	nd	1.11
22	0.967	1.363	nd	0.499	0.703	nd	0.468	0.660	nd	1.07
23	0.884	1.246	nd	0.423	0.596	nd	0.461	0.650	nd	0.92
24	0.700	0.987	nd	0.398	0.561	nd	0.302	0.426	nd	1.32
25	0.732	1.032	nd	0.423	0.596	nd	0.309	0.435	nd	1.37
26	0.708	0.998	nd	0.430	0.606	nd	0.278	0.392	nd	1.55
27	0.547	0.771	nd	0.292	0.412	nd	0.255	0.359	nd	1.15
28	0.279	0.393	nd	0.178	0.251	nd	0.101	0.142	nd	1.76
29	0.400	0.564	nd	0.143	0.202	nd	0.257	0.362	nd	0.56
30	0.086	0.121	nd	0.059	0.083	nd	0.027	0.038	nd	2.19
31	0.184	0.259	nd	0.184	0.259	nd	0.000	0.000	nd	nd

nd = no data

A = % of S2

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ALKENE AND ALKANE COMPONENT ANALYSIS FROM PYROLYSIS-GC

PLATYPUS 1, 12730-12740ft, Shale

May-92

Carbon No.	-----Alkane + Alkene-----			-----Alkane-----			-----Alkene-----			Alkane/Alkene
	A	B	C	A	B	C	A	B	C	
1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
5	2.267	0.034	nd	0.761	0.011	nd	1.506	0.022	nd	0.51
6	1.970	0.029	nd	0.573	0.009	nd	1.397	0.021	nd	0.41
7	1.359	0.020	nd	0.597	0.009	nd	0.762	0.011	nd	0.78
8	1.307	0.019	nd	0.650	0.010	nd	0.657	0.010	nd	0.99
9	0.989	0.015	nd	0.421	0.006	nd	0.568	0.008	nd	0.74
10	0.838	0.012	nd	0.406	0.006	nd	0.432	0.006	nd	0.94
11	1.151	0.017	nd	0.442	0.007	nd	0.709	0.011	nd	0.62
12	1.026	0.015	nd	0.510	0.008	nd	0.516	0.008	nd	0.99
13	0.876	0.013	nd	0.502	0.007	nd	0.374	0.006	nd	1.34
14	1.062	0.016	nd	0.717	0.011	nd	0.345	0.005	nd	2.08
15	1.329	0.020	nd	0.677	0.010	nd	0.652	0.010	nd	1.04
16	0.632	0.009	nd	0.362	0.005	nd	0.270	0.004	nd	1.34
17	0.823	0.012	nd	0.379	0.006	nd	0.444	0.007	nd	0.85
18	0.649	0.010	nd	0.347	0.005	nd	0.302	0.004	nd	1.15
19	0.572	0.009	nd	0.265	0.004	nd	0.307	0.005	nd	0.86
20	0.408	0.006	nd	0.258	0.004	nd	0.150	0.002	nd	1.72
21	0.299	0.004	nd	0.199	0.003	nd	0.100	0.001	nd	1.99
22	0.216	0.003	nd	0.143	0.002	nd	0.073	0.001	nd	1.96
23	0.162	0.002	nd	0.105	0.002	nd	0.057	0.001	nd	1.84
24	0.125	0.002	nd	0.087	0.001	nd	0.038	0.001	nd	2.29
25	0.103	0.002	nd	0.069	0.001	nd	0.034	0.001	nd	2.03
26	0.098	0.001	nd	0.066	0.001	nd	0.032	0.000	nd	2.06
27	0.116	0.002	nd	0.082	0.001	nd	0.034	0.001	nd	2.41
28	0.053	0.001	nd	0.053	0.001	nd	0.000	0.000	nd	nd
29	0.040	0.001	nd	0.040	0.001	nd	0.000	0.000	nd	nd
30	0.016	0.000	nd	0.016	0.000	nd	0.000	0.000	nd	nd
31	0.009	0.000	nd	0.009	0.000	nd	0.000	0.000	nd	nd

nd = no data

A = % of S2

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

APPENDIX 3

PLATYPUS-1 PGC

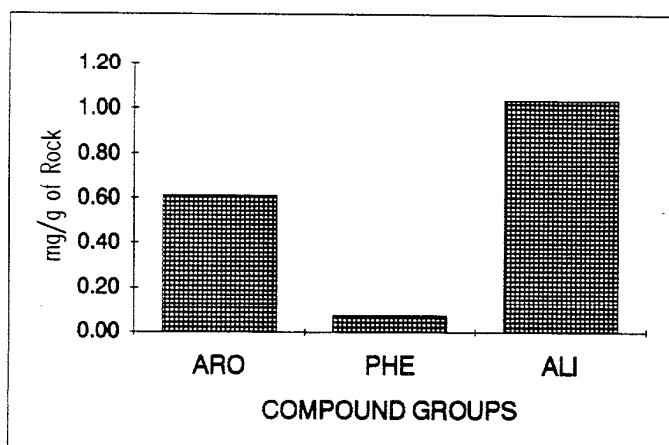
Aromatic and Phenolic Component Analyses

AROMATIC AND PHENOLIC COMPONENT ANALYSIS FROM PYROLYSIS-GC

PLATYPUS 1, 9530-9540ft, Shale

May-92

Key	Compound Name	Value		
		A	B	C
A.	Benzene	2.244	0.169	nd
B.	Toluene	2.574	0.193	nd
C.	Ethylbenzene	0.488	0.037	nd
D.	m- + p-xylene	1.803	0.135	nd
E.	Styrene	0.380	0.029	nd
F.	o-xylene	0.639	0.048	nd
G.	Phenol	0.961	0.072	nd
H.	o-cresol	0.000	0.000	nd
I.	m- + p-cresol	0.000	0.000	nd
J.	C2 phenol	0.000	0.000	nd
K.	C2 phenol	0.000	0.000	nd



nd = no data

A = % of S₂

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ARO = aromatic compounds (A to F)

PHE = phenolic compounds (G to K)

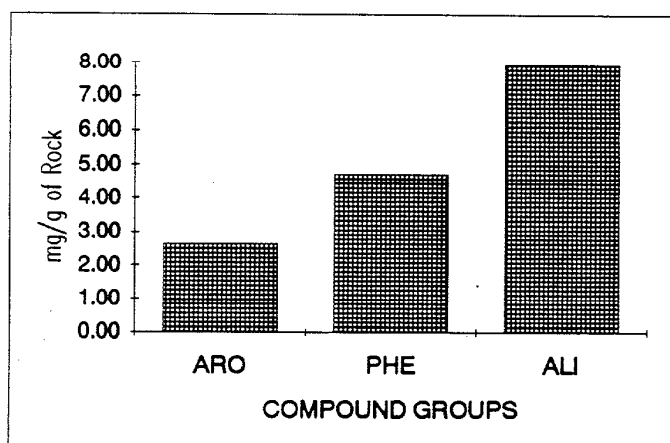
ALI = aliphatic compounds (C₉ to C₃₁ alkenes + alkanes)

AROMATIC AND PHENOLIC COMPONENT ANALYSIS FROM PYROLYSIS-GC

PLATYPUS 1, 9880-9890ft, Coal

May-92

Key	Compound Name	Value		
		A	B	C
A.	Benzene	0.615	0.333	nd
B.	Toluene	1.983	1.075	nd
C.	Ethylbenzene	0.309	0.168	nd
D.	m- + p-xylene	1.334	0.723	nd
E.	Styrene	0.162	0.088	nd
F.	o-xylene	0.458	0.248	nd
G.	Phenol	2.615	1.418	nd
H.	o-cresol	1.271	0.689	nd
I.	m- + p-cresol	3.497	1.896	nd
J.	C2 phenol	0.454	0.246	nd
K.	C2 phenol	0.870	0.472	nd



nd = no data

A = % of S2

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ARO = aromatic compounds (A to F)

PHE = phenolic compounds (G to K)

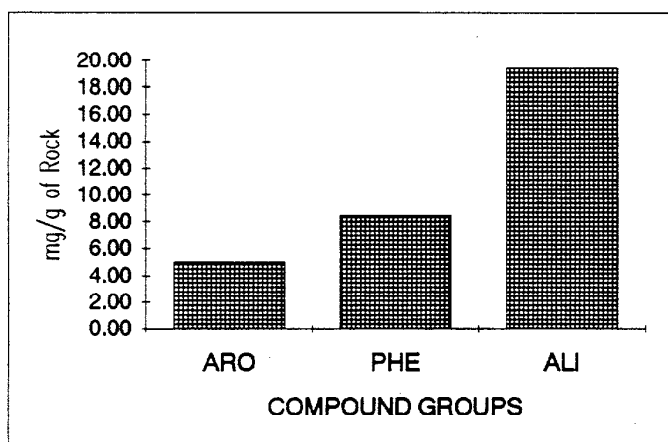
ALI = aliphatic compounds (C9 to C31 alkenes + alkanes)

AROMATIC AND PHENOLIC COMPONENT ANALYSIS FROM PYROLYSIS-GC

PLATYPUS 1, 9990-10000ft, Coal

May-92

Key	Compound Name	Value		
		A	B	C
A.	Benzene	0.614	0.765	nd
B.	Toluene	1.671	2.083	nd
C.	Ethylbenzene	0.203	0.253	nd
D.	m- + p-xylene	1.124	1.401	nd
E.	Styrene	0.122	0.152	nd
F.	o-xylene	0.302	0.376	nd
G.	Phenol	1.660	2.069	nd
H.	o-cresol	1.101	1.373	nd
I.	m- + p-cresol	2.058	2.566	nd
J.	C2 phenol	1.020	1.272	nd
K.	C2 phenol	0.929	1.158	nd



nd = no data

A = % of S₂

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ARO = aromatic compounds (A to F)

PHE = phenolic compounds (G to K)

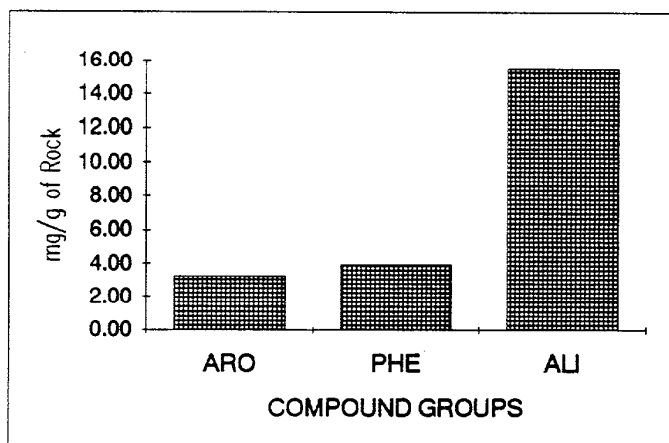
ALI = aliphatic compounds (C₉ to C₃₁ alkenes + alkanes)

AROMATIC AND PHENOLIC COMPONENT ANALYSIS FROM PYROLYSIS-GC

PLATYPUS 1, 10170-10180ft, Coal

May-92

Key	Compound Name	Value		
		A	B	C
A.	Benzene	0.546	0.560	nd
B.	Toluene	1.254	1.286	nd
C.	Ethylbenzene	0.219	0.225	nd
D.	m- + p-xylene	0.781	0.801	nd
E.	Styrene	0.130	0.133	nd
F.	o-xylene	0.244	0.250	nd
G.	Phenol	0.880	0.903	nd
H.	o-cresol	0.627	0.643	nd
I.	m- + p-cresol	1.405	1.441	nd
J.	C2 phenol	0.352	0.361	nd
K.	C2 phenol	0.579	0.594	nd



nd = no data

A = % of S2

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ARO = aromatic compounds (A to F)

PHE = phenolic compounds (G to K)

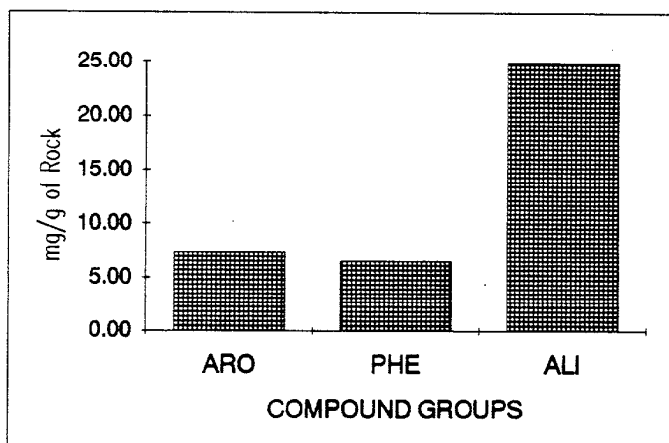
ALI = aliphatic compounds (C9 to C31 alkenes + alkanes)

AROMATIC AND PHENOLIC COMPONENT ANALYSIS FROM PYROLYSIS-GC

PLATYPUS 1, 11080-11090ft, Coal

May-92

Key	Compound Name	Value		
		A	B	C
A.	Benzene	0.709	1.071	nd
B.	Toluene	1.963	2.966	nd
C.	Ethylbenzene	0.343	0.518	nd
D.	m- + p-xylene	1.258	1.901	nd
E.	Styrene	0.157	0.237	nd
F.	o-xylene	0.427	0.645	nd
G.	Phenol	0.721	1.090	nd
H.	o-cresol	0.961	1.452	nd
I.	m- + p-cresol	1.384	2.092	nd
J.	C2 phenol	0.825	1.247	nd
K.	C2 phenol	0.408	0.617	nd



nd = no data

A = % of S2

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ARO = aromatic compounds (A to F)

PHE = phenolic compounds (G to K)

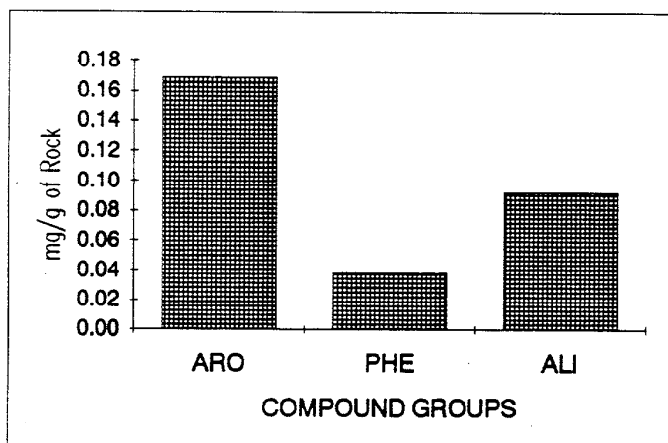
ALI = aliphatic compounds (C9 to C31 alkenes + alkanes)

AROMATIC AND PHENOLIC COMPONENT ANALYSIS FROM PYROLYSIS-GC

PLATYPUS 1, 11500-11510ft, Shale

May-92

Key	Compound Name	Value		
		A	B	C
A.	Benzene	2.188	0.031	nd
B.	Toluene	3.777	0.053	nd
C.	Ethylbenzene	1.068	0.015	nd
D.	m- + p-xylene	2.648	0.037	nd
E.	Styrene	0.812	0.011	nd
F.	o-xylene	1.466	0.021	nd
G.	Phenol	1.218	0.017	nd
H.	o-cresol	0.000	0.000	nd
I.	m- + p-cresol	0.000	0.000	nd
J.	C2 phenol	0.405	0.006	nd
K.	C2 phenol	1.102	0.016	nd



nd = no data

A = % of S₂

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ARO = aromatic compounds (A to F)

PHE = phenolic compounds (G to K)

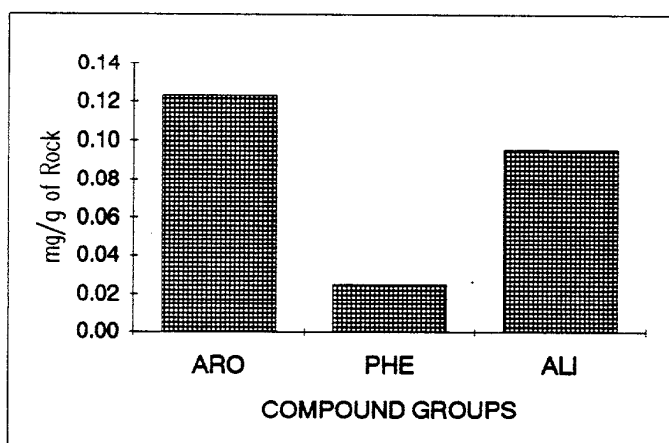
ALI = aliphatic compounds (C₉ to C₃₁ alkenes + alkanes)

AROMATIC AND PHENOLIC COMPONENT ANALYSIS FROM PYROLYSIS-GC

PLATYPUS 1, 12050-12060ft, Shale

May-92

Key	Compound Name	Value		
		A	B	C
A.	Benzene	2.672	0.031	nd
B.	Toluene	3.718	0.043	nd
C.	Ethylbenzene	0.732	0.008	nd
D.	m- + p-xylene	2.098	0.024	nd
E.	Styrene	0.552	0.006	nd
F.	o-xylene	0.840	0.010	nd
G.	Phenol	0.769	0.009	nd
H.	o-cresol	0.000	0.000	nd
I.	m- + p-cresol	0.000	0.000	nd
J.	C2 phenol	0.478	0.006	nd
K.	C2 phenol	0.889	0.010	nd



nd = no data

A = % of S₂

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ARO = aromatic compounds (A to F)

PHE = phenolic compounds (G to K)

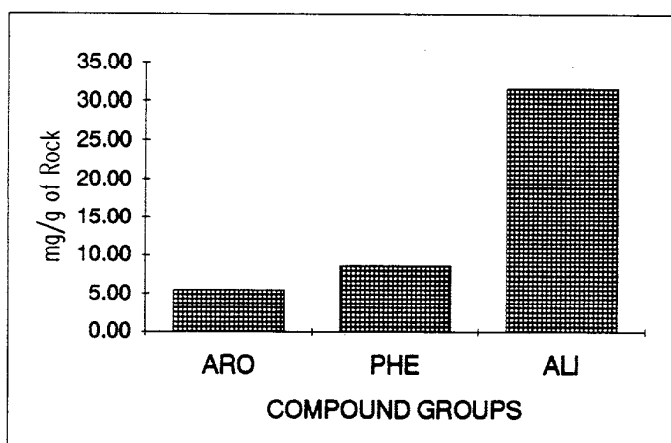
ALI = aliphatic compounds (C₉ to C₃₁ alkenes + alkanes)

AROMATIC AND PHENOLIC COMPONENT ANALYSIS FROM PYROLYSIS-GC

PLATYPUS 1, 12220-12230ft, Coal

May-92

Key	Compound Name	Value		
		A	B	C
A.	Benzene	0.724	0.867	nd
B.	Toluene	1.754	2.101	nd
C.	Ethylbenzene	0.237	0.284	nd
D.	m- + p-xylene	1.362	1.632	nd
E.	Styrene	0.143	0.171	nd
F.	o-xylene	0.326	0.391	nd
G.	Phenol	1.280	1.534	nd
H.	o-cresol	1.451	1.738	nd
I.	m- + p-cresol	2.283	2.735	nd
J.	C2 phenol	1.374	1.646	nd
K.	C2 phenol	0.790	0.946	nd



nd = no data

A = % of S2

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ARO = aromatic compounds (A to F)

PHE = phenolic compounds (G to K)

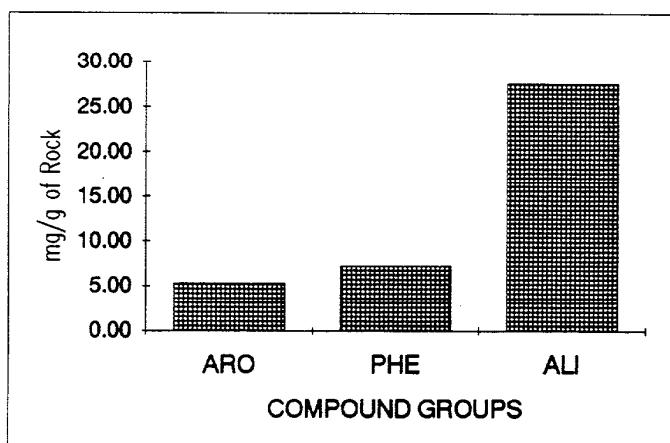
ALI = aliphatic compounds (C9 to C31 alkenes + alkanes)

AROMATIC AND PHENOLIC COMPONENT ANALYSIS FROM PYROLYSIS-GC

PLATYPUS 1, 12530-12540ft, Coal

May-92

Key	Compound Name	Value-----		
		A	B	C
A.	Benzene	0.603	0.850	nd
B.	Toluene	1.441	2.031	nd
C.	Ethylbenzene	0.173	0.244	nd
D.	m- + p-xylene	1.187	1.673	nd
E.	Styrene	0.106	0.149	nd
F.	o-xylene	0.275	0.388	nd
G.	Phenol	1.021	1.439	nd
H.	o-cresol	1.010	1.423	nd
I.	m- + p-cresol	1.492	2.103	nd
J.	C2 phenol	1.092	1.539	nd
K.	C2 phenol	0.554	0.781	nd



nd = no data

A = % of S₂

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ARO = aromatic compounds (A to F)

PHE = phenolic compounds (G to K)

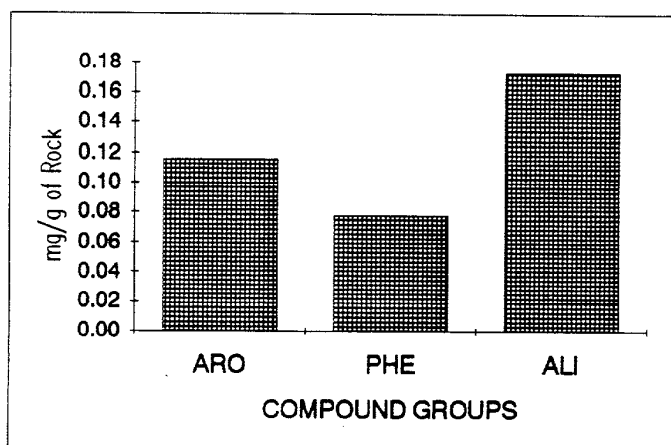
ALI = aliphatic compounds (C₉ to C₃₁ alkenes + alkanes)

AROMATIC AND PHENOLIC COMPONENT ANALYSIS FROM PYROLYSIS-GC

PLATYPUS 1, 12730-12740ft, Shale

May-92

Key	Compound Name	Value		
		A	B	C
A.	Benzene	2.308	0.034	nd
B.	Toluene	2.836	0.042	nd
C.	Ethylbenzene	0.368	0.005	nd
D.	m- + p-xylene	1.550	0.023	nd
E.	Styrene	0.307	0.005	nd
F.	o-xylene	0.406	0.006	nd
G.	Phenol	2.926	0.044	nd
H.	o-cresol	0.878	0.013	nd
I.	m- + p-cresol	1.403	0.021	nd
J.	C2 phenol	0.000	0.000	nd
K.	C2 phenol	0.000	0.000	nd



nd = no data

A = % of S₂

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ARO = aromatic compounds (A to F)

PHE = phenolic compounds (G to K)

ALI = aliphatic compounds (C₉ to C₃₁ alkenes + alkanes)

APPENDIX 4

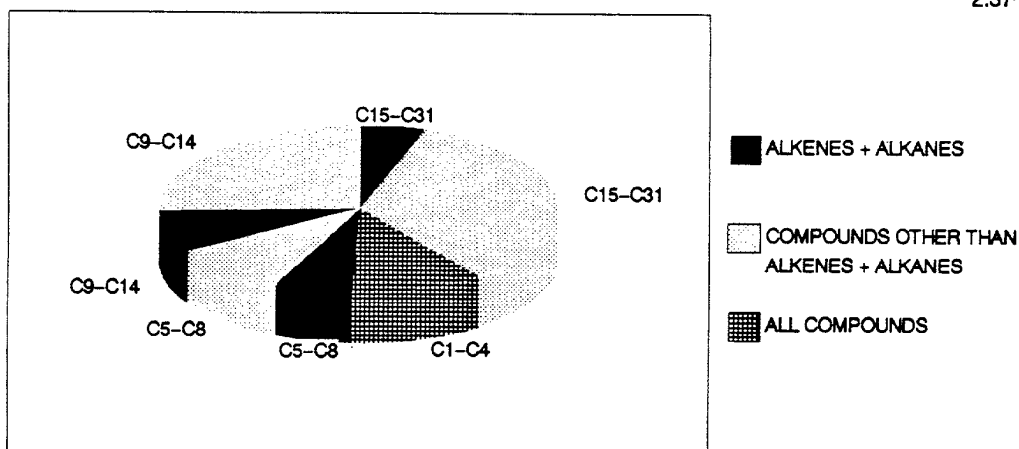
**PLATYPUS-1 PGC
Parameter Summaries**

PARAMETER SUMMARY FOR PYROLYSIS GAS CHROMATOGRAPHY

PLATYPUS 1, 9530-9540ft, Shale

May-92

Parameter	-----Value-----			
	A	B	C	D
C1-C4 abundance (all compounds)	11.06	0.83	nd	
C5-C8 abundance (all compounds)	15.64	1.17	nd	
C5-C8 abundance (alkanes + alkenes)	6.27	0.47	nd	
C9-C14 abundance (all compounds)	33.57	2.52	nd	
C9-C14 abundance (alkanes + alkenes)	8.23	0.62	nd	
C15-C31 abundance (all compounds)	39.74	2.98	nd	
C15-C31 abundance (alkanes + alkenes)	5.54	0.42	nd	
C9-C31 abundance (all compounds)	73.30	5.50	nd	
C9-C31 abundance (alkanes + alkenes)	13.76	1.03	nd	
C5-C31 abundance (all compounds)	88.94	6.68	nd	
C5-C31 abundance (alkanes + alkenes)	20.03	1.50	nd	
C5-C31 alkane abundance	10.08	0.76	nd	
C5-C31 alkene abundance	9.95	0.75	nd	
C5-C8 alkane/alkene				0.67
C9-C14 alkane/alkene				1.01
C15-C31 alkane/alkene				1.63
C5-C31 alkane/alkene				1.01
(C1-C5)/C6+				0.17
R				2.37



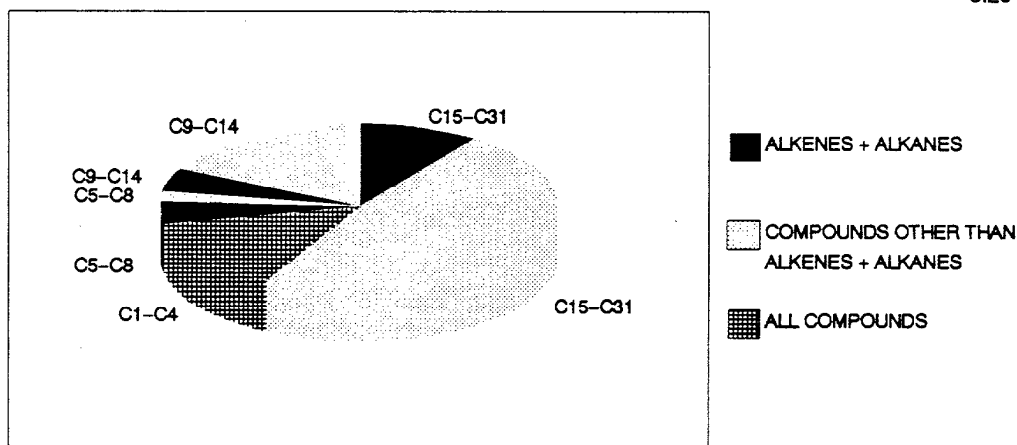
nd = no data
 A = % of S2
 B = mg/g Rock (Rock-Eval)
 C = (mg/g Rock)/TOC
 D = no units
 R = m+p-xylene/n-octene

PARAMETER SUMMARY FOR PYROLYSIS GAS CHROMATOGRAPHY

PLATYPUS 1, 9880-9890ft, Coal

May-92

Parameter	-----Value-----			
	A	B	C	D
C1-C4 abundance (all compounds)	13.89	7.53	nd	
C5-C8 abundance (all compounds)	6.24	3.38	nd	
C5-C8 abundance (alkanes + alkenes)	4.20	2.28	nd	
C9-C14 abundance (all compounds)	22.06	11.96	nd	
C9-C14 abundance (alkanes + alkenes)	4.74	2.57	nd	
C15-C31 abundance (all compounds)	57.81	31.35	nd	
C15-C31 abundance (alkanes + alkenes)	9.90	5.37	nd	
C9-C31 abundance (all compounds)	79.87	43.31	nd	
C9-C31 abundance (alkanes + alkenes)	14.65	7.94	nd	
C5-C31 abundance (all compounds)	86.11	46.69	nd	
C5-C31 abundance (alkanes + alkenes)	18.85	10.22	nd	
C5-C31 alkane abundance	9.67	5.24	nd	
C5-C31 alkene abundance	9.18	4.98	nd	
C5-C8 alkane/alkene				0.87
C9-C14 alkane/alkene				1.10
C15-C31 alkane/alkene				1.12
C5-C31 alkane/alkene				1.05
(C1-C5)/C6+				0.18
R				3.20



nd = no data

A = % of S2

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

D = no units

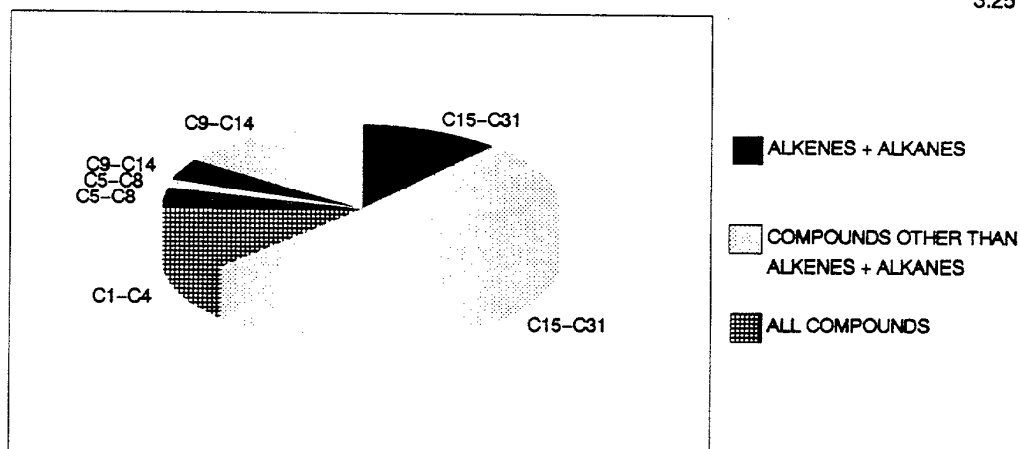
R = m+p-xylene/n-octene

PARAMETER SUMMARY FOR PYROLYSIS GAS CHROMATOGRAPHY

PLATYPUS 1, 9990-10000ft, Coal

May-92

Parameter	Value			
	A	B	C	D
C1-C4 abundance (all compounds)	12.24	15.26	nd	
C5-C8 abundance (all compounds)	5.58	6.96	nd	
C5-C8 abundance (alkanes + alkenes)	4.01	5.00	nd	
C9-C14 abundance (all compounds)	19.47	24.28	nd	
C9-C14 abundance (alkanes + alkenes)	4.01	5.00	nd	
C15-C31 abundance (all compounds)	62.69	78.15	nd	
C15-C31 abundance (alkanes + alkenes)	11.57	14.42	nd	
C9-C31 abundance (all compounds)	82.17	102.43	nd	
C9-C31 abundance (alkanes + alkenes)	15.58	19.42	nd	
C5-C31 abundance (all compounds)	87.75	109.38	nd	
C5-C31 abundance (alkanes + alkenes)	19.58	24.41	nd	
C5-C31 alkane abundance	9.41	11.72	nd	
C5-C31 alkene abundance	10.18	12.69	nd	
C5-C8 alkane/alkene				0.77
C9-C14 alkane/alkene				1.06
C15-C31 alkane/alkene				0.94
C5-C31 alkane/alkene				0.92
(C1-C5)/C6+				0.16
R				3.25



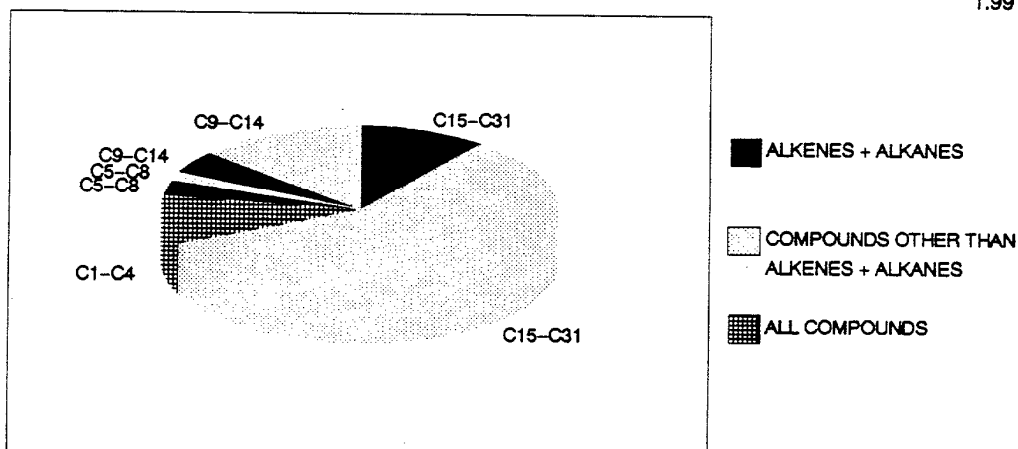
nd = no data
A = % of S2
B = mg/g Rock (Rock-Eval)
C = (mg/g Rock)/TOC
D = no units
R = m+p-xylene/n-octene

PARAMETER SUMMARY FOR PYROLYSIS GAS CHROMATOGRAPHY

PLATYPUS 1, 10170-10180ft, Coal

May-92

Parameter	Value			
	A	B	C	D
C1-C4 abundance (all compounds)	9.16	9.39	nd	
C5-C8 abundance (all compounds)	4.52	4.63	nd	
C5-C8 abundance (alkanes + alkenes)	2.95	3.03	nd	
C9-C14 abundance (all compounds)	18.04	18.50	nd	
C9-C14 abundance (alkanes + alkenes)	4.69	4.81	nd	
C15-C31 abundance (all compounds)	68.29	70.04	nd	
C15-C31 abundance (alkanes + alkenes)	10.37	10.63	nd	
C9-C31 abundance (all compounds)	86.33	88.54	nd	
C9-C31 abundance (alkanes + alkenes)	15.05	15.44	nd	
C5-C31 abundance (all compounds)	90.84	93.17	nd	
C5-C31 abundance (alkanes + alkenes)	18.00	18.46	nd	
C5-C31 alkane abundance	8.18	8.39	nd	
C5-C31 alkene abundance	9.82	10.07	nd	
C5-C8 alkane/alkene				0.58
C9-C14 alkane/alkene				0.61
C15-C31 alkane/alkene				1.06
C5-C31 alkane/alkene				0.83
(C1-C5)/C6+				0.11
R				1.99



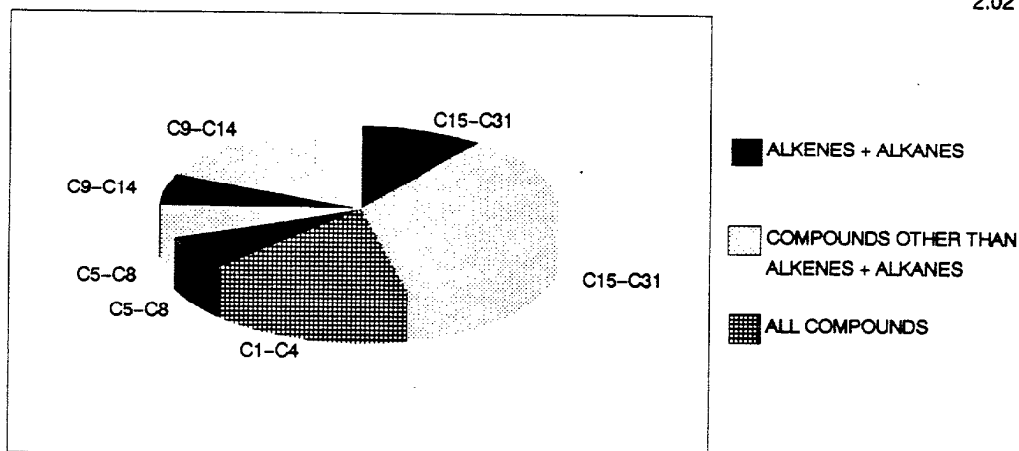
nd = no data
A = % of S2
B = mg/g Rock (Rock-Eval)
C = (mg/g Rock)/TOC
D = no units
R = m+p-xylene/n-octene

PARAMETER SUMMARY FOR PYROLYSIS GAS CHROMATOGRAPHY

PLATYPUS 1, 11080-11090ft, Coal

May-92

Parameter	-----Value-----			
	A	B	C	D
C1-C4 abundance (all compounds)	16.42	24.81	nd	
C5-C8 abundance (all compounds)	12.76	19.29	nd	
C5-C8 abundance (alkanes + alkenes)	6.64	10.04	nd	
C9-C14 abundance (all compounds)	24.64	37.23	nd	
C9-C14 abundance (alkanes + alkenes)	6.38	9.64	nd	
C15-C31 abundance (all compounds)	46.18	69.79	nd	
C15-C31 abundance (alkanes + alkenes)	10.11	15.28	nd	
C9-C31 abundance (all compounds)	70.82	107.02	nd	
C9-C31 abundance (alkanes + alkenes)	16.49	24.92	nd	
C5-C31 abundance (all compounds)	83.58	126.31	nd	
C5-C31 abundance (alkanes + alkenes)	23.14	34.96	nd	
C5-C31 alkane abundance	11.84	17.90	nd	
C5-C31 alkene abundance	11.29	17.06	nd	
C5-C8 alkane/alkene				0.99
C9-C14 alkane/alkene				0.98
C15-C31 alkane/alkene				1.14
C5-C31 alkane/alkene				1.05
(C1-C5)/C6+				0.26
R				2.02



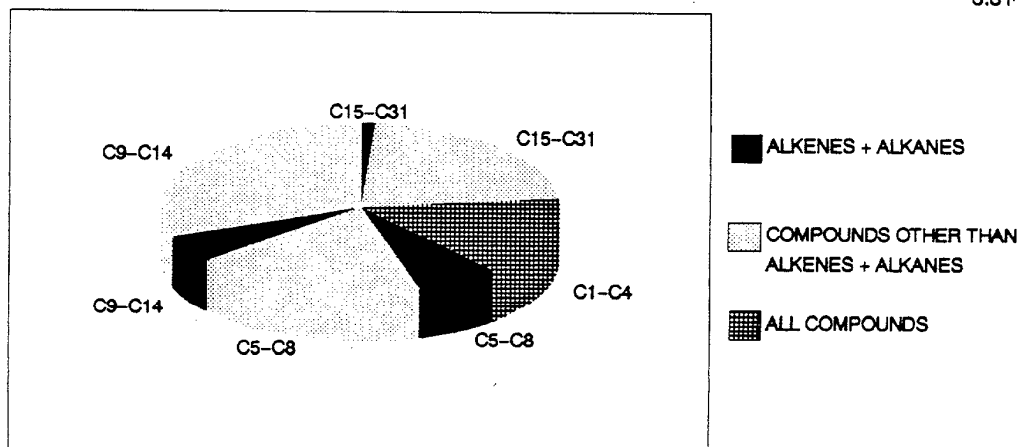
nd = no data
 A = % of S2
 B = mg/g Rock (Rock-Eval)
 C = (mg/g Rock)/TOC
 D = no units
 R = m+p-xylene/n-octene

PARAMETER SUMMARY FOR PYROLYSIS GAS CHROMATOGRAPHY

PLATYPUS 1, 11500-11510ft, Shale

May-92

Parameter	-----Value-----			
	A	B	C	D
C1-C4 abundance (all compounds)	15.27	0.22	nd	
C5-C8 abundance (all compounds)	25.60	0.36	nd	
C5-C8 abundance (alkanes + alkenes)	7.03	0.10	nd	
C9-C14 abundance (all compounds)	36.04	0.51	nd	
C9-C14 abundance (alkanes + alkenes)	5.25	0.07	nd	
C15-C31 abundance (all compounds)	23.10	0.33	nd	
C15-C31 abundance (alkanes + alkenes)	1.32	0.02	nd	
C9-C31 abundance (all compounds)	59.14	0.83	nd	
C9-C31 abundance (alkanes + alkenes)	6.57	0.09	nd	
C5-C31 abundance (all compounds)	84.73	1.19	nd	
C5-C31 abundance (alkanes + alkenes)	13.60	0.19	nd	
C5-C31 alkane abundance	7.90	0.11	nd	
C5-C31 alkene abundance	5.70	0.08	nd	
C5-C8 alkane/alkene				0.87
C9-C14 alkane/alkene				1.69
C15-C31 alkane/alkene				nd
C5-C31 alkane/alkene				1.38
(C1-C5)/C6+				0.24
R				3.31



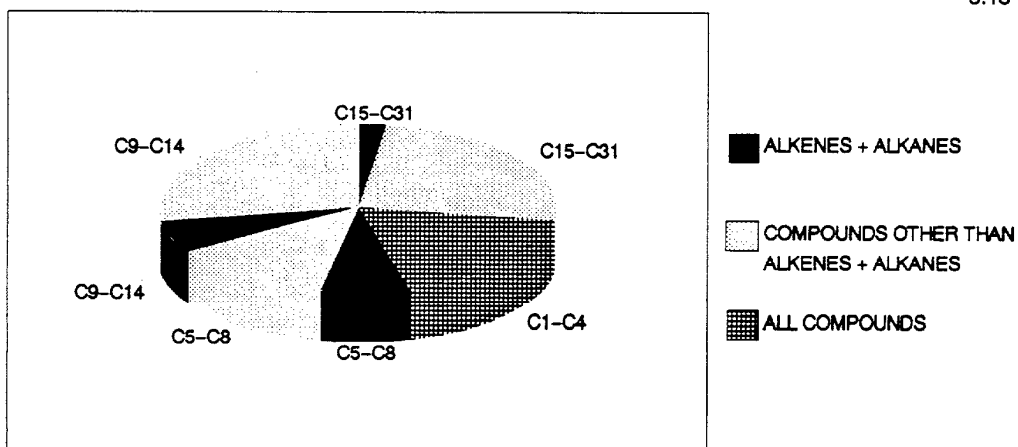
nd = no data
 A = % of S2
 B = mg/g Rock (Rock-Eval)
 C = (mg/g Rock)/TOC
 D = no units
 R = m+p-xylene/n-octene

PARAMETER SUMMARY FOR PYROLYSIS GAS CHROMATOGRAPHY

PLATYPUS 1, 12050-12060ft, Shale

May-92

Parameter	-----Value-----			
	A	B	C	D
C1-C4 abundance (all compounds)	18.41	0.21	nd	
C5-C8 abundance (all compounds)	20.37	0.24	nd	
C5-C8 abundance (alkanes + alkenes)	7.32	0.08	nd	
C9-C14 abundance (all compounds)	33.72	0.39	nd	
C9-C14 abundance (alkanes + alkenes)	6.01	0.07	nd	
C15-C31 abundance (all compounds)	27.50	0.32	nd	
C15-C31 abundance (alkanes + alkenes)	2.23	0.03	nd	
C9-C31 abundance (all compounds)	61.22	0.71	nd	
C9-C31 abundance (alkanes + alkenes)	8.24	0.10	nd	
C5-C31 abundance (all compounds)	81.60	0.95	nd	
C5-C31 abundance (alkanes + alkenes)	15.57	0.18	nd	
C5-C31 alkane abundance	7.27	0.08	nd	
C5-C31 alkene abundance	8.30	0.10	nd	
C5-C8 alkane/alkene				0.57
C9-C14 alkane/alkene				1.11
C15-C31 alkane/alkene				1.92
C5-C31 alkane/alkene				0.88
(C1-C5)/C6+				0.29
R				3.13



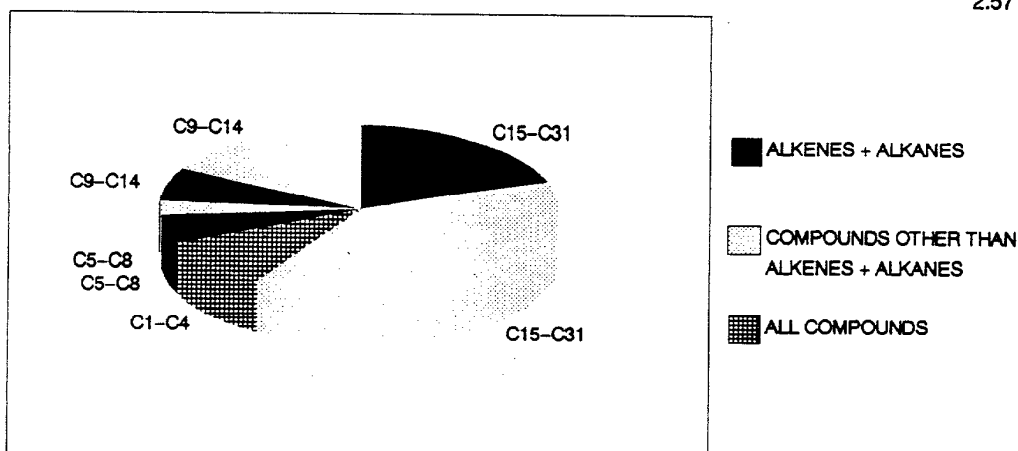
nd = no data
A = % of S2
B = mg/g Rock (Rock-Eval)
C = (mg/g Rock)/TOC
D = no units
R = m+p-xylene/n-octene

PARAMETER SUMMARY FOR PYROLYSIS GAS CHROMATOGRAPHY

PLATYPUS 1, 12220-12230ft, Coal

May-92

Parameter	-----Value-----			
	A	B	C	D
C1-C4 abundance (all compounds)	9.68	11.60	nd	
C5-C8 abundance (all compounds)	7.82	9.36	nd	
C5-C8 abundance (alkanes + alkenes)	5.34	6.39	nd	
C9-C14 abundance (all compounds)	23.87	28.60	nd	
C9-C14 abundance (alkanes + alkenes)	6.76	8.10	nd	
C15-C31 abundance (all compounds)	58.64	70.25	nd	
C15-C31 abundance (alkanes + alkenes)	19.64	23.53	nd	
C9-C31 abundance (all compounds)	82.51	98.85	nd	
C9-C31 abundance (alkanes + alkenes)	26.40	31.63	nd	
C5-C31 abundance (all compounds)	90.32	108.21	nd	
C5-C31 abundance (alkanes + alkenes)	31.73	38.02	nd	
C5-C31 alkane abundance	15.83	18.97	nd	
C5-C31 alkene abundance	15.90	19.05	nd	
C5-C8 alkane/alkene				0.87
C9-C14 alkane/alkene				0.90
C15-C31 alkane/alkene				1.07
C5-C31 alkane/alkene				1.00
(C1-C5)/C6+				0.14
R				2.57



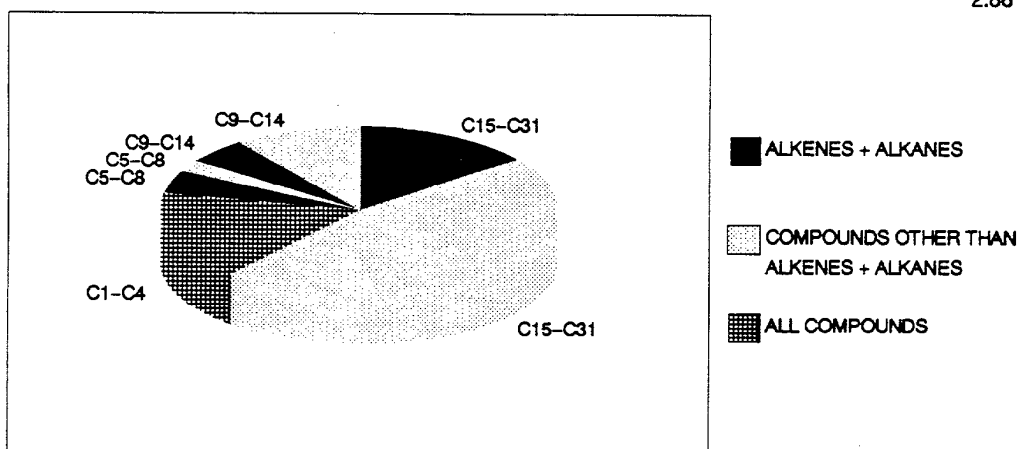
nd = no data
A = % of S2
B = mg/g Rock (Rock-Eval)
C = (mg/g Rock)/TOC
D = no units
R = m+p-xylene/n-octene

PARAMETER SUMMARY FOR PYROLYSIS GAS CHROMATOGRAPHY

PLATYPUS 1, 12530-12540ft, Coal

May-92

Parameter	Value			
	A	B	C	D
C1-C4 abundance (all compounds)	16.91	23.83	nd	
C5-C8 abundance (all compounds)	6.52	9.19	nd	
C5-C8 abundance (alkanes + alkenes)	4.40	6.20	nd	
C9-C14 abundance (all compounds)	15.14	21.34	nd	
C9-C14 abundance (alkanes + alkenes)	4.99	7.04	nd	
C15-C31 abundance (all compounds)	61.33	86.43	nd	
C15-C31 abundance (alkanes + alkenes)	14.60	20.58	nd	
C9-C31 abundance (all compounds)	76.47	107.77	nd	
C9-C31 abundance (alkanes + alkenes)	19.59	27.61	nd	
C5-C31 abundance (all compounds)	82.99	116.96	nd	
C5-C31 abundance (alkanes + alkenes)	23.99	33.81	nd	
C5-C31 alkane abundance	11.96	16.85	nd	
C5-C31 alkene abundance	12.03	16.96	nd	
C5-C8 alkane/alkene				0.88
C9-C14 alkane/alkene				1.04
C15-C31 alkane/alkene				1.01
C5-C31 alkane/alkene				0.99
(C1-C5)/C6+				0.23
R				2.86



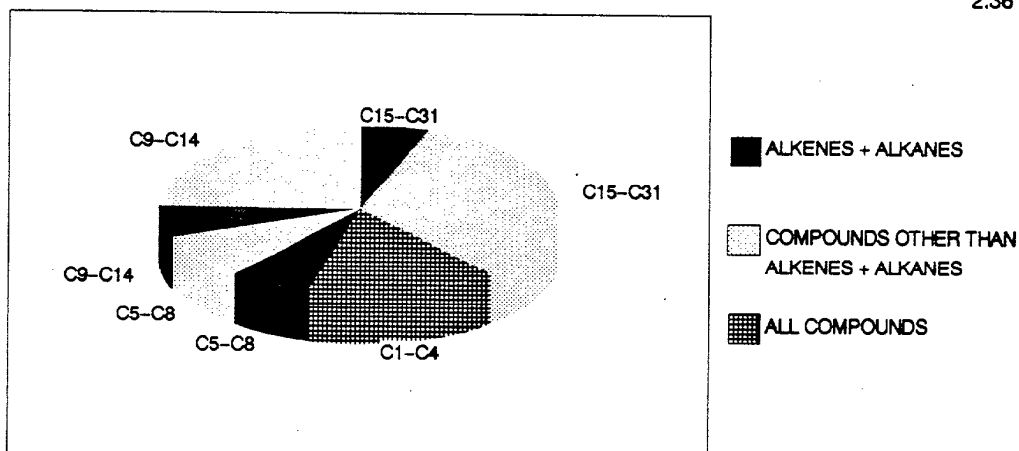
nd = no data
 A = % of S2
 B = mg/g Rock (Rock-Eval)
 C = (mg/g Rock)/TOC
 D = no units
 R = m+p-xylene/n-octene

PARAMETER SUMMARY FOR PYROLYSIS GAS CHROMATOGRAPHY

PLATYPUS 1, 12730-12740ft, Shale

May-92

Parameter	-----Value-----			
	A	B	C	D
C1-C4 abundance (all compounds)	15.45	0.23	nd	
C5-C8 abundance (all compounds)	15.16	0.23	nd	
C5-C8 abundance (alkanes + alkenes)	6.90	0.10	nd	
C9-C14 abundance (all compounds)	30.59	0.46	nd	
C9-C14 abundance (alkanes + alkenes)	5.94	0.09	nd	
C15-C31 abundance (all compounds)	38.62	0.58	nd	
C15-C31 abundance (alkanes + alkenes)	5.65	0.08	nd	
C9-C31 abundance (all compounds)	69.21	1.03	nd	
C9-C31 abundance (alkanes + alkenes)	11.59	0.17	nd	
C5-C31 abundance (all compounds)	84.37	1.26	nd	
C5-C31 abundance (alkanes + alkenes)	18.50	0.28	nd	
C5-C31 alkane abundance	8.74	0.13	nd	
C5-C31 alkene abundance	9.76	0.15	nd	
C5-C8 alkane/alkene				0.60
C9-C14 alkane/alkene				1.02
C15-C31 alkane/alkene				1.27
C5-C31 alkane/alkene				0.90
(C1-C5)/C6+				0.23
R				2.36

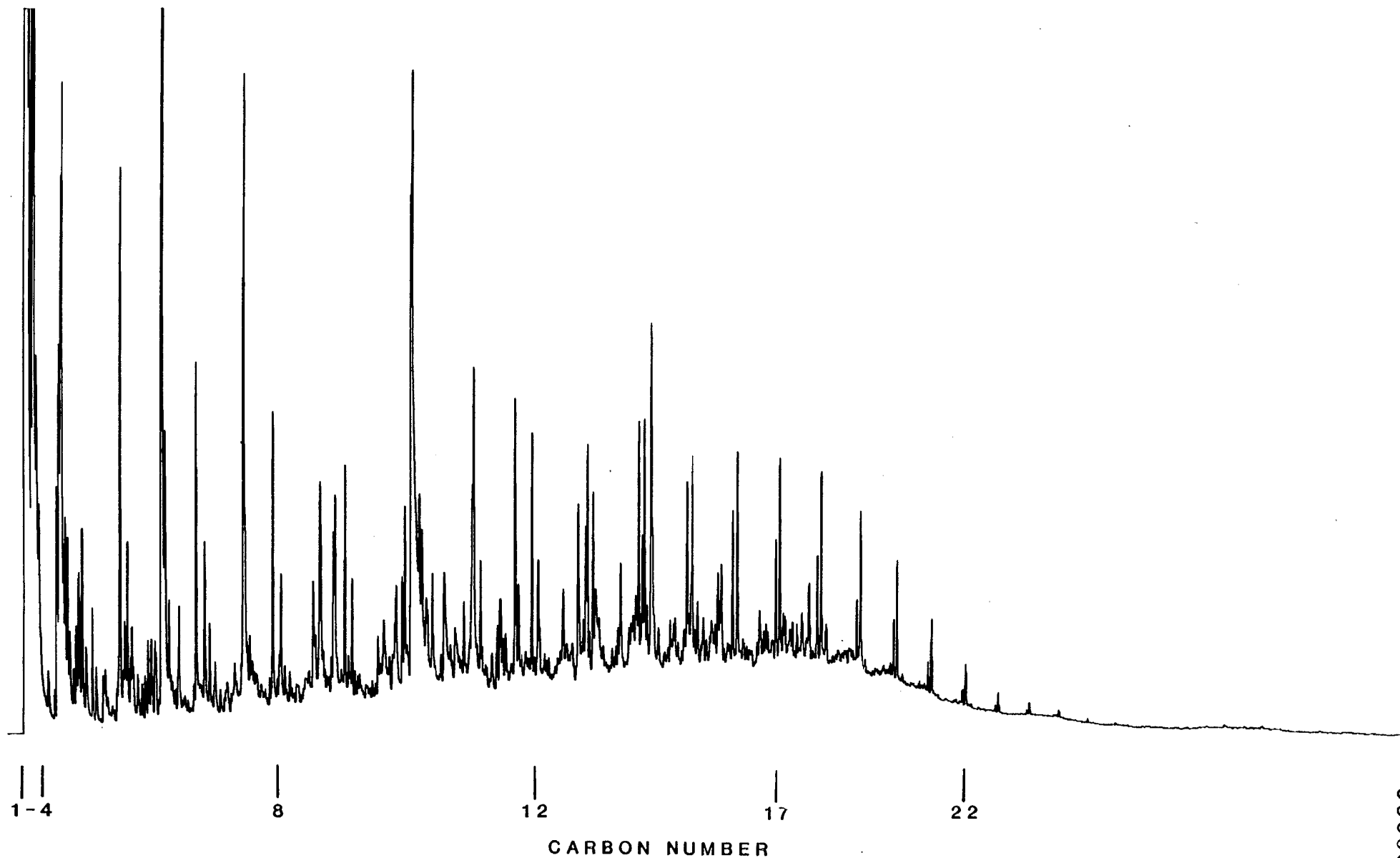


nd = no data
A = % of S2
B = mg/g Rock (Rock-Eval)
C = (mg/g Rock)/TOC
D = no units
R = m+p-xylene/n-octene

APPENDIX 5

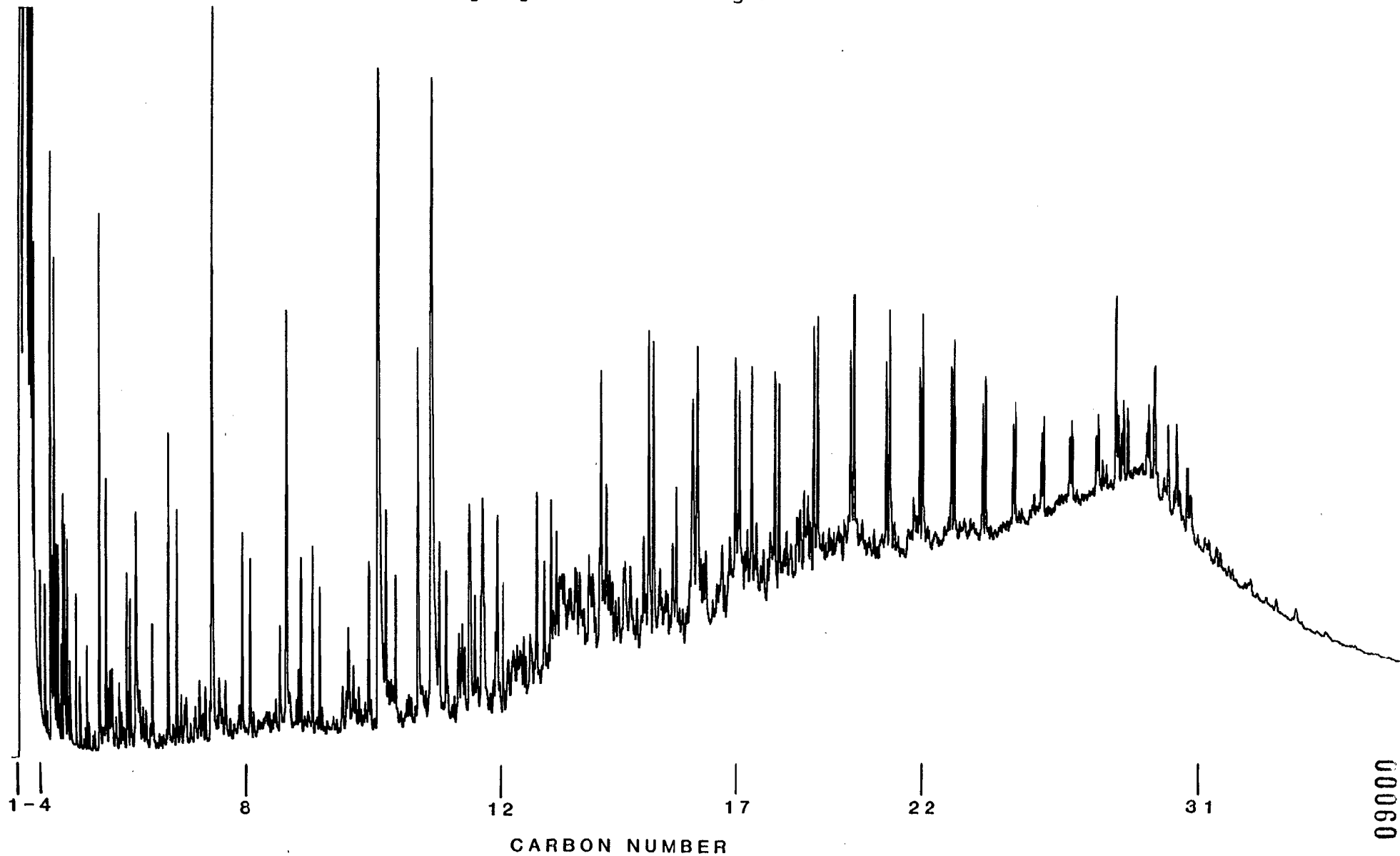
**ECHIDNA-1 PGC
Pyrolysis-Gas Chromatograms**

ECHIDNA 1, 4450-4460ft, Cuttings
Pyrolysis Gas Chromatogram

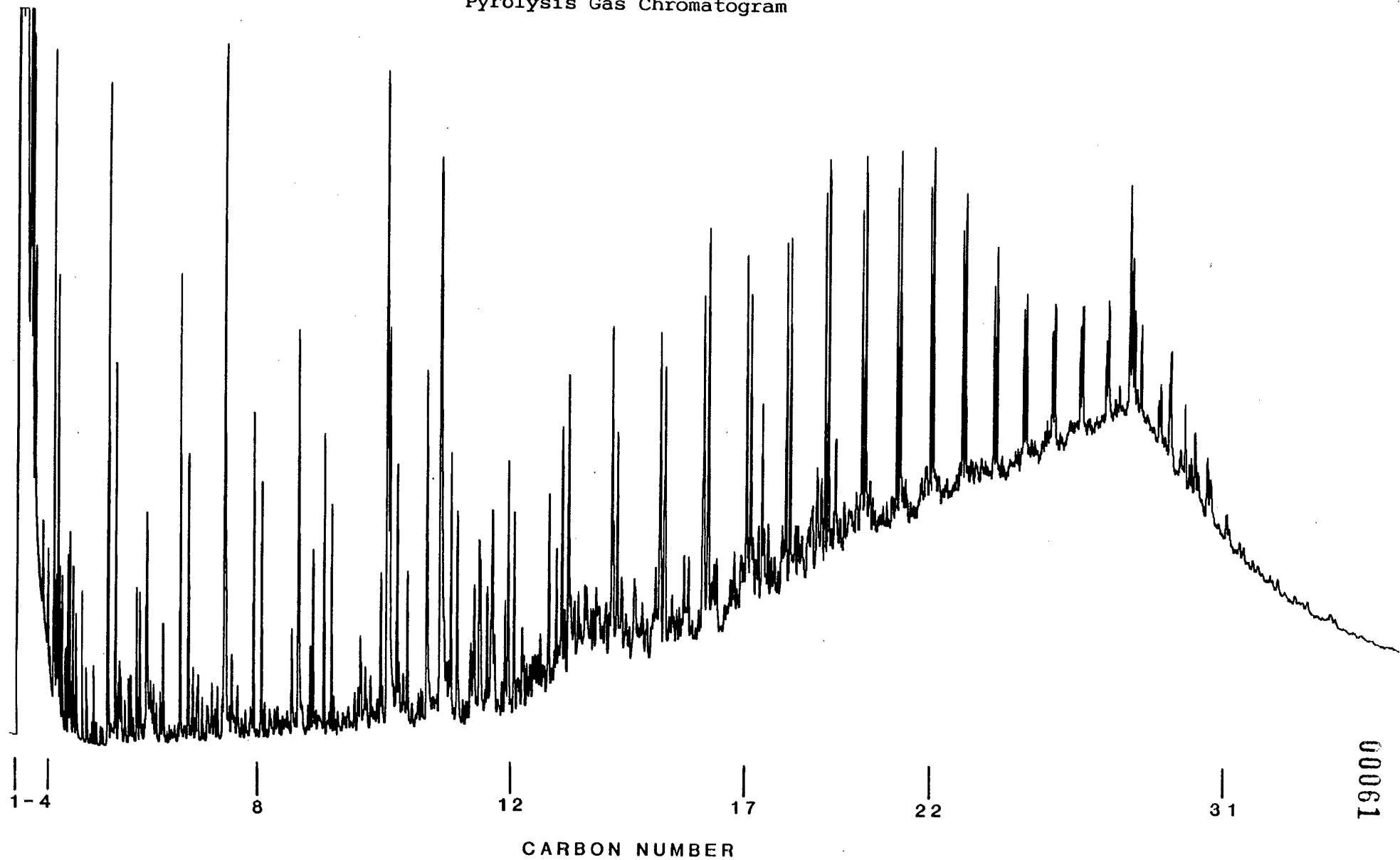


00059

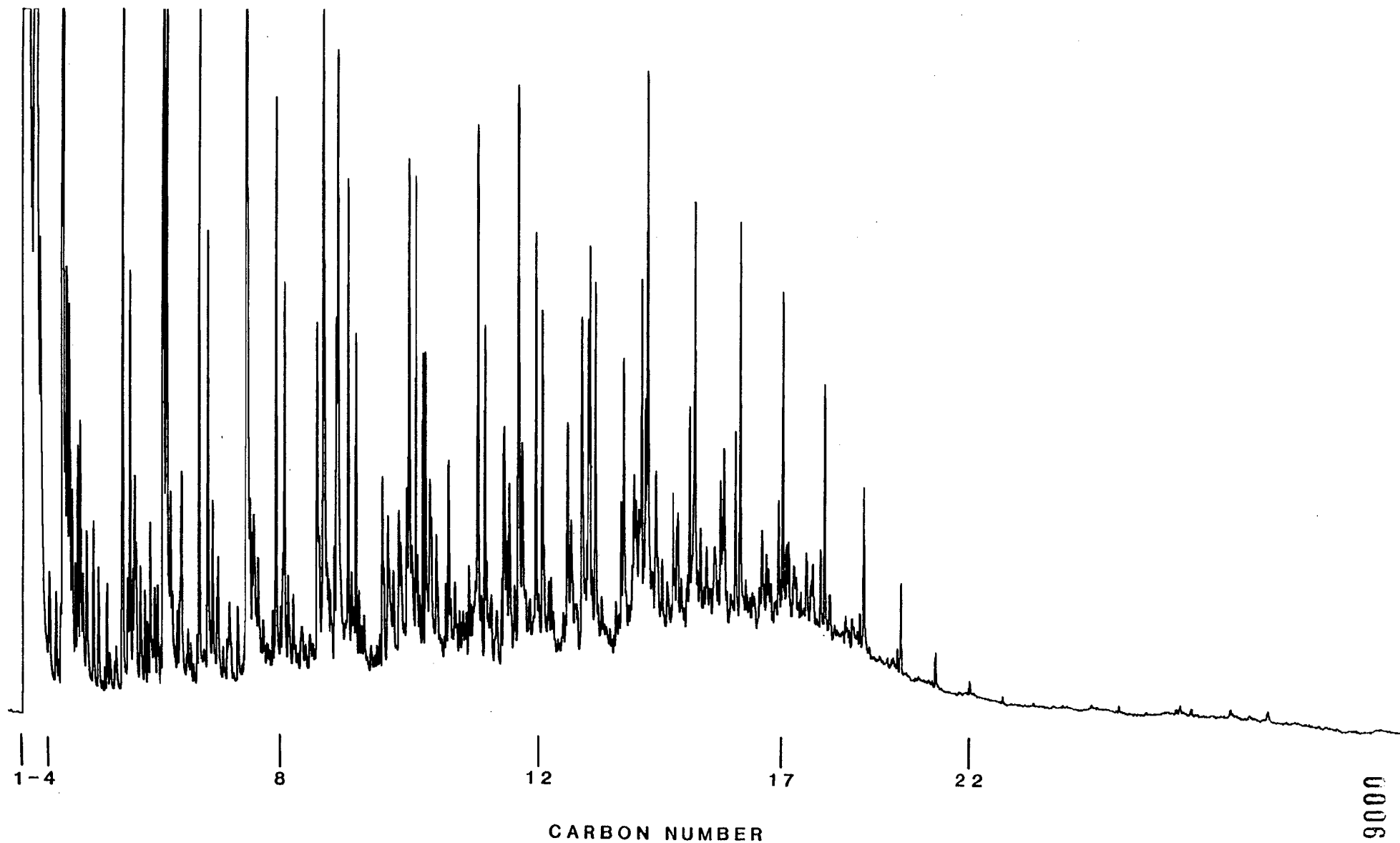
ECHIDNA 1, 4750-4760ft, Coal
Pyrolysis Gas Chromatogram



ECHIDNA 1, 4810-4820ft, Coal
Pyrolysis Gas Chromatogram

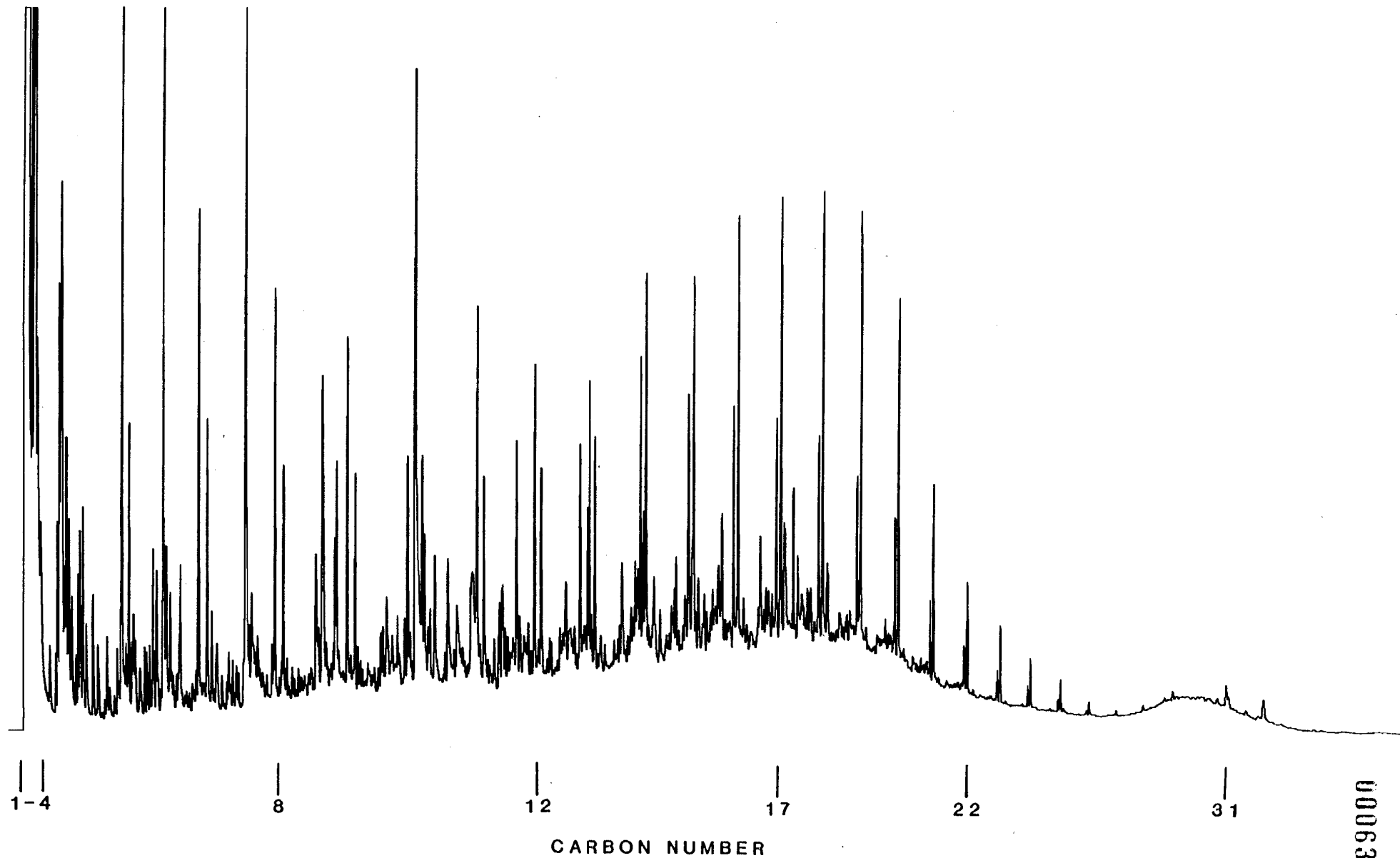


ECHIDNA 1, 4940-4950ft, Cuttings
Pyrolysis Gas Chromatogram



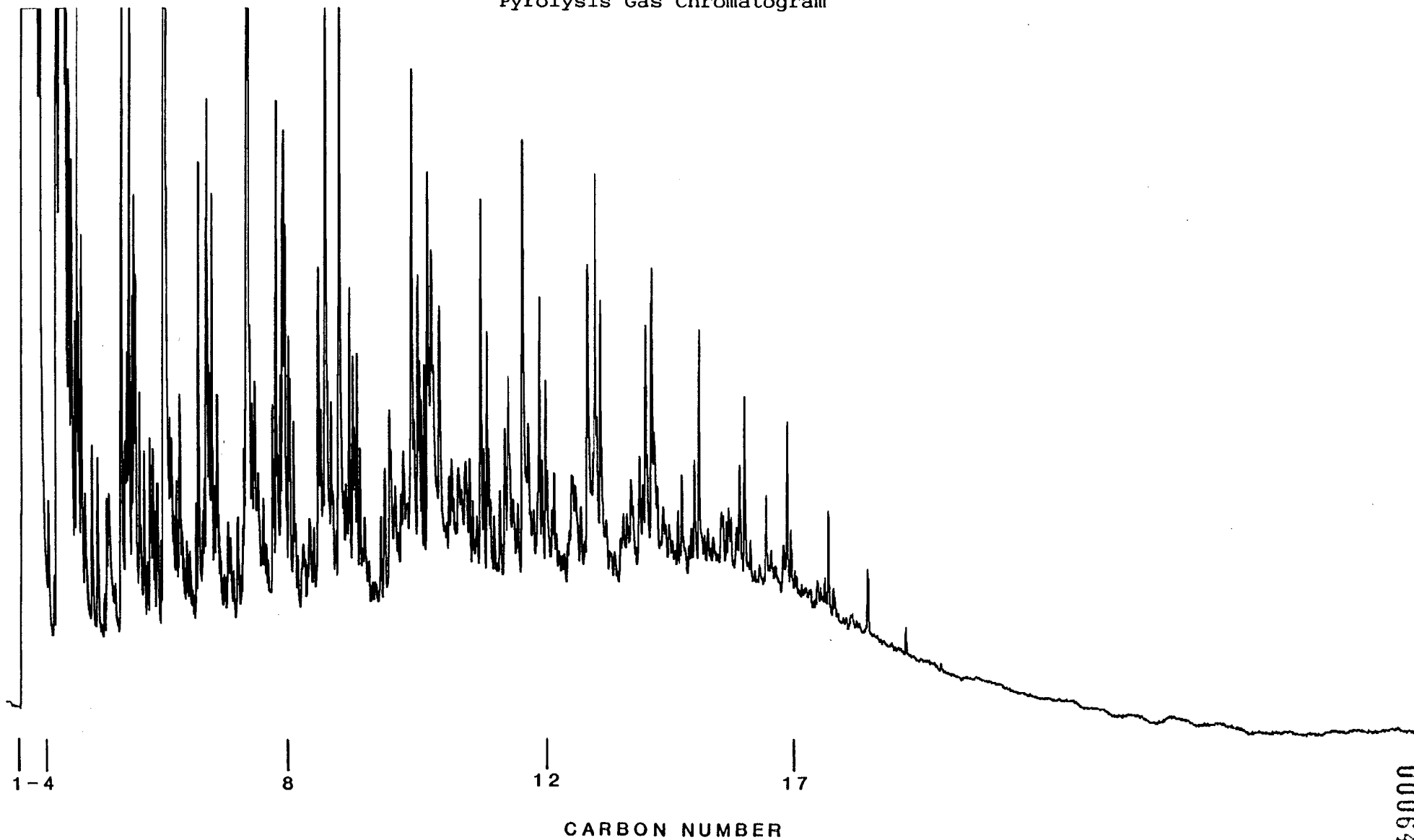
00062

ECHIDNA 1, 4990-5000ft, Cuttings
Pyrolysis Gas Chromatogram

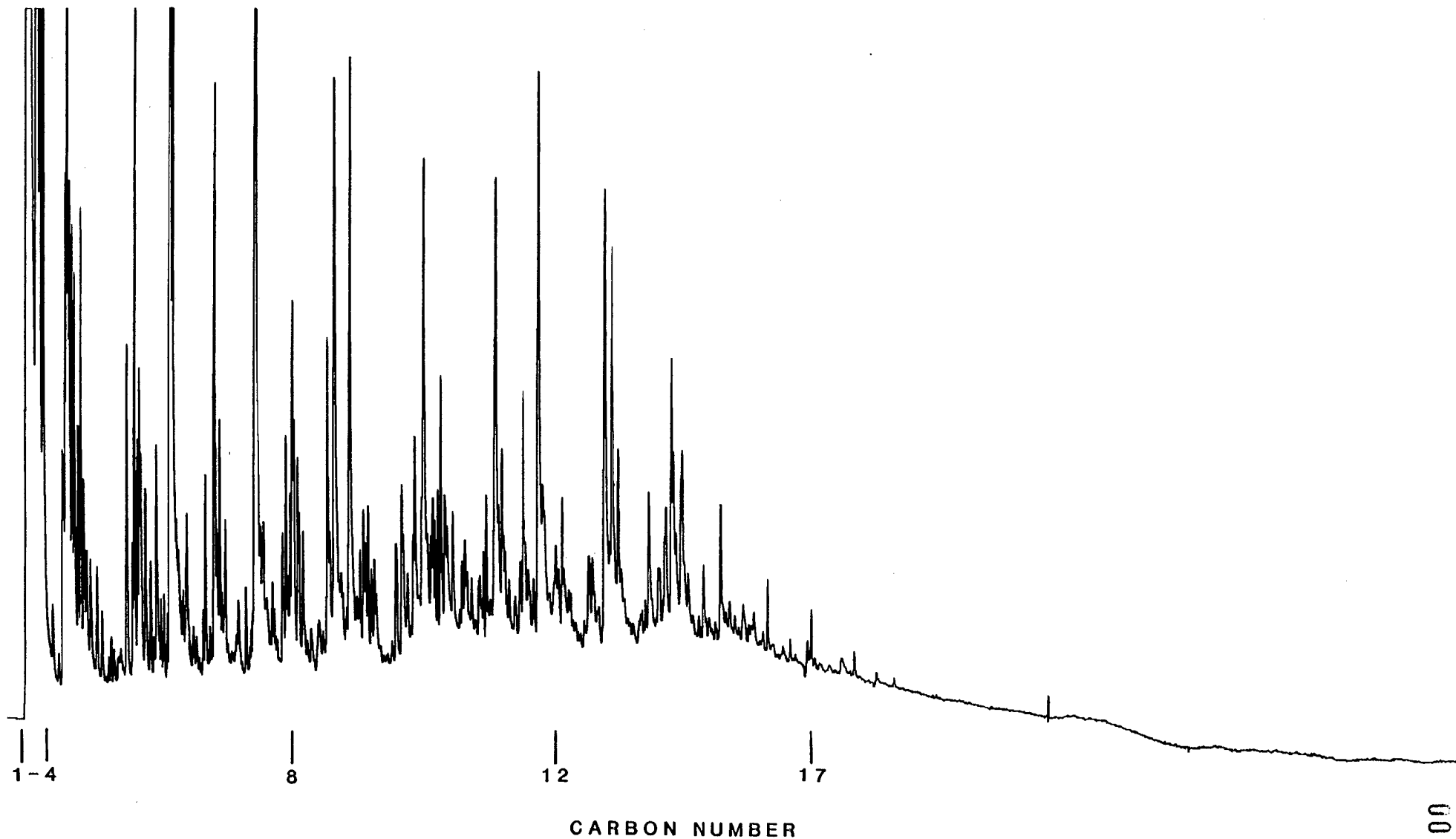


00063

ECHIDNA 1, 11690-11700ft, Cuttings
Pyrolysis Gas Chromatogram



ECHIDNA 1, 12290-12300ft, Cuttings
Pyrolysis Gas Chromatogram



APPENDIX 6

ECHIDNA-1 PGC

Alkene and Alkane Component Analyses

ALKENE AND ALKANE COMPONENT ANALYSIS FROM PYROLYSIS-GC

ECHIDNA 1, 4450-4460ft, Cuttings

May-92

Carbon No.	-----Alkane + Alkene-----			-----Alkane-----			-----Alkene-----			Alkane/Alkene
	A	B	C	A	B	C	A	B	C	
1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
5	2.586	0.017	nd	0.738	0.005	nd	1.848	0.012	nd	0.40
6	1.782	0.012	nd	0.349	0.002	nd	1.433	0.009	nd	0.24
7	1.229	0.008	nd	0.391	0.003	nd	0.838	0.006	nd	0.47
8	1.215	0.008	nd	0.415	0.003	nd	0.800	0.005	nd	0.52
9	0.691	0.005	nd	0.241	0.002	nd	0.450	0.003	nd	0.54
10	0.401	0.003	nd	0.232	0.002	nd	0.169	0.001	nd	1.37
11	1.732	0.011	nd	0.215	0.001	nd	1.517	0.010	nd	0.14
12	0.845	0.006	nd	0.285	0.002	nd	0.560	0.004	nd	0.51
13	0.912	0.006	nd	0.469	0.003	nd	0.443	0.003	nd	1.06
14	1.097	0.007	nd	0.511	0.003	nd	0.586	0.004	nd	0.87
15	0.992	0.007	nd	0.549	0.004	nd	0.443	0.003	nd	1.24
16	0.870	0.006	nd	0.509	0.003	nd	0.361	0.002	nd	1.41
17	0.881	0.006	nd	0.497	0.003	nd	0.384	0.003	nd	1.29
18	0.712	0.005	nd	0.469	0.003	nd	0.243	0.002	nd	1.93
19	0.575	0.004	nd	0.416	0.003	nd	0.159	0.001	nd	2.62
20	0.404	0.003	nd	0.283	0.002	nd	0.121	0.001	nd	2.34
21	0.238	0.002	nd	0.173	0.001	nd	0.065	0.000	nd	2.66
22	0.139	0.001	nd	0.103	0.001	nd	0.036	0.000	nd	2.86
23	0.068	0.000	nd	0.050	0.000	nd	0.018	0.000	nd	2.78
24	0.040	0.000	nd	0.028	0.000	nd	0.012	0.000	nd	2.33
25	0.018	0.000	nd	0.018	0.000	nd	0.000	0.000	nd	nd
26	0.010	0.000	nd	0.010	0.000	nd	0.000	0.000	nd	nd
27	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd
28	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd
29	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd
30	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd
31	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd

nd = no data

A = % of S2

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ALKENE AND ALKANE COMPONENT ANALYSIS FROM PYROLYSIS-GC

ECHIDNA 1, 4750-4760ft, Coal

May-92

Carbon No.	Alkane + Alkene			Alkane			Alkene			Alkane/Alkene
	A	B	C	A	B	C	A	B	C	
1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
5	1.193	0.647	nd	0.505	0.274	nd	0.688	0.373	nd	0.73
6	1.045	0.567	nd	0.403	0.219	nd	0.642	0.348	nd	0.63
7	0.770	0.417	nd	0.337	0.183	nd	0.433	0.235	nd	0.78
8	0.633	0.343	nd	0.310	0.168	nd	0.323	0.175	nd	0.96
9	0.529	0.287	nd	0.228	0.124	nd	0.301	0.163	nd	0.76
10	0.498	0.270	nd	0.200	0.108	nd	0.298	0.162	nd	0.67
11	0.523	0.284	nd	0.212	0.115	nd	0.311	0.169	nd	0.68
12	0.659	0.357	nd	0.234	0.127	nd	0.425	0.230	nd	0.55
13	0.486	0.264	nd	0.158	0.086	nd	0.328	0.178	nd	0.48
14	0.759	0.412	nd	0.218	0.118	nd	0.541	0.293	nd	0.40
15	1.590	0.862	nd	0.699	0.379	nd	0.891	0.483	nd	0.78
16	2.042	1.107	nd	1.078	0.584	nd	0.964	0.523	nd	1.12
17	1.577	0.855	nd	0.889	0.482	nd	0.688	0.373	nd	1.29
18	0.931	0.505	nd	0.398	0.216	nd	0.533	0.289	nd	0.75
19	0.874	0.474	nd	0.420	0.228	nd	0.454	0.246	nd	0.93
20	0.932	0.505	nd	0.412	0.223	nd	0.520	0.282	nd	0.79
21	0.885	0.480	nd	0.466	0.253	nd	0.419	0.227	nd	1.11
22	0.889	0.482	nd	0.466	0.253	nd	0.423	0.229	nd	1.10
23	0.619	0.336	nd	0.336	0.182	nd	0.283	0.153	nd	1.19
24	0.604	0.327	nd	0.304	0.165	nd	0.300	0.163	nd	1.01
25	0.665	0.361	nd	0.320	0.174	nd	0.345	0.187	nd	0.93
26	0.495	0.268	nd	0.234	0.127	nd	0.261	0.142	nd	0.90
27	0.417	0.226	nd	0.220	0.119	nd	0.197	0.107	nd	1.12
28	0.300	0.163	nd	0.158	0.086	nd	0.142	0.077	nd	1.11
29	0.303	0.164	nd	0.150	0.081	nd	0.153	0.083	nd	0.98
30	0.283	0.153	nd	0.283	0.153	nd	0.000	0.000	nd	nd
31	0.158	0.086	nd	0.158	0.086	nd	0.000	0.000	nd	nd

nd = no data

A = % of S2

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ALKENE AND ALKANE COMPONENT ANALYSIS FROM PYROLYSIS-GC

ECHIDNA 1, 4810-4820ft, Coal

May-92

Carbon No.	-----Alkane + Alkene-----			-----Alkane-----			-----Alkene-----			Alkane/Alkene
	A	B	C	A	B	C	A	B	C	
1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
5	1.354	0.807	nd	0.525	0.313	nd	0.829	0.494	nd	0.63
6	1.165	0.694	nd	0.413	0.246	nd	0.752	0.448	nd	0.55
7	0.862	0.514	nd	0.374	0.223	nd	0.488	0.291	nd	0.77
8	0.744	0.443	nd	0.343	0.204	nd	0.401	0.239	nd	0.86
9	0.643	0.383	nd	0.281	0.167	nd	0.362	0.216	nd	0.78
10	1.162	0.693	nd	0.316	0.188	nd	0.846	0.504	nd	0.37
11	0.677	0.403	nd	0.373	0.222	nd	0.304	0.181	nd	1.23
12	0.653	0.389	nd	0.293	0.175	nd	0.360	0.215	nd	0.81
13	0.889	0.530	nd	0.551	0.328	nd	0.338	0.201	nd	1.63
14	1.072	0.639	nd	0.538	0.321	nd	0.534	0.318	nd	1.01
15	1.420	0.846	nd	0.645	0.384	nd	0.775	0.462	nd	0.83
16	1.566	0.933	nd	0.684	0.408	nd	0.882	0.526	nd	0.78
17	1.135	0.676	nd	0.440	0.262	nd	0.695	0.414	nd	0.63
18	1.061	0.632	nd	0.494	0.294	nd	0.567	0.338	nd	0.87
19	1.175	0.700	nd	0.635	0.378	nd	0.540	0.322	nd	1.18
20	1.148	0.684	nd	0.590	0.352	nd	0.558	0.333	nd	1.06
21	1.110	0.662	nd	0.579	0.345	nd	0.531	0.316	nd	1.09
22	1.101	0.656	nd	0.521	0.311	nd	0.580	0.346	nd	0.90
23	0.873	0.520	nd	0.402	0.240	nd	0.471	0.281	nd	0.85
24	0.614	0.366	nd	0.303	0.181	nd	0.311	0.185	nd	0.97
25	0.662	0.395	nd	0.375	0.224	nd	0.287	0.171	nd	1.31
26	0.658	0.392	nd	0.325	0.194	nd	0.333	0.198	nd	0.98
27	0.509	0.303	nd	0.273	0.163	nd	0.236	0.141	nd	1.16
28	0.516	0.308	nd	0.313	0.187	nd	0.203	0.121	nd	1.54
29	0.166	0.099	nd	0.166	0.099	nd	0.000	0.000	nd	nd
30	0.332	0.198	nd	0.332	0.198	nd	0.000	0.000	nd	nd
31	0.140	0.083	nd	0.140	0.083	nd	0.000	0.000	nd	nd

nd = no data

A = % of S2

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ALKENE AND ALKANE COMPONENT ANALYSIS FROM PYROLYSIS-GC

ECHIDNA 1, 4940-4950ft, Cuttings

May-92

Carbon No.	-----Alkane + Alkene-----			-----Alkane-----			-----Alkene-----			Alkane/Alkene
	A	B	C	A	B	C	A	B	C	
1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
5	2.403	0.017	nd	0.844	0.006	nd	1.559	0.011	nd	0.54
6	1.998	0.014	nd	0.585	0.004	nd	1.413	0.010	nd	0.41
7	1.535	0.011	nd	0.645	0.005	nd	0.890	0.006	nd	0.72
8	1.478	0.010	nd	0.695	0.005	nd	0.783	0.006	nd	0.89
9	1.003	0.007	nd	0.386	0.003	nd	0.617	0.004	nd	0.63
10	0.883	0.006	nd	0.340	0.002	nd	0.543	0.004	nd	0.63
11	1.237	0.009	nd	0.411	0.003	nd	0.826	0.006	nd	0.50
12	0.909	0.006	nd	0.321	0.002	nd	0.588	0.004	nd	0.55
13	0.984	0.007	nd	0.496	0.004	nd	0.488	0.003	nd	1.02
14	1.545	0.011	nd	0.931	0.007	nd	0.614	0.004	nd	1.52
15	0.989	0.007	nd	0.672	0.005	nd	0.317	0.002	nd	2.12
16	1.007	0.007	nd	0.674	0.005	nd	0.333	0.002	nd	2.02
17	0.655	0.005	nd	0.427	0.003	nd	0.228	0.002	nd	1.87
18	0.451	0.003	nd	0.338	0.002	nd	0.113	0.001	nd	2.99
19	0.316	0.002	nd	0.269	0.002	nd	0.047	0.000	nd	5.72
20	0.158	0.001	nd	0.130	0.001	nd	0.028	0.000	nd	4.64
21	0.058	0.000	nd	0.058	0.000	nd	0.000	0.000	nd	nd
22	0.018	0.000	nd	0.018	0.000	nd	0.000	0.000	nd	nd
23	0.013	0.000	nd	0.013	0.000	nd	0.000	0.000	nd	nd
24	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd
25	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd
26	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd
27	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd
28	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd
29	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd
30	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd
31	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd

nd = no data

A = % of S2

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ALKENE AND ALKANE COMPONENT ANALYSIS FROM PYROLYSIS-GC

ECHIDNA 1, 4990-5000ft, Cuttings

May-92

Carbon No.	Alkane + Alkene			Alkane			Alkene			Alkane/Alkene
	A	B	C	A	B	C	A	B	C	
1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
5	2.964	0.033	nd	0.748	0.008	nd	2.216	0.024	nd	0.34
6	2.137	0.024	nd	0.444	0.005	nd	1.693	0.019	nd	0.26
7	1.460	0.016	nd	0.503	0.006	nd	0.957	0.011	nd	0.53
8	1.241	0.014	nd	0.421	0.005	nd	0.820	0.009	nd	0.51
9	1.003	0.011	nd	0.386	0.004	nd	0.617	0.007	nd	0.63
10	0.533	0.006	nd	0.238	0.003	nd	0.295	0.003	nd	0.81
11	1.275	0.014	nd	0.345	0.004	nd	0.930	0.010	nd	0.37
12	0.992	0.011	nd	0.387	0.004	nd	0.605	0.007	nd	0.64
13	0.875	0.010	nd	0.454	0.005	nd	0.421	0.005	nd	1.08
14	1.295	0.014	nd	0.715	0.008	nd	0.580	0.006	nd	1.23
15	1.469	0.016	nd	0.838	0.009	nd	0.631	0.007	nd	1.33
16	1.272	0.014	nd	0.784	0.009	nd	0.488	0.005	nd	1.61
17	1.422	0.016	nd	0.924	0.010	nd	0.498	0.005	nd	1.86
18	1.371	0.015	nd	0.938	0.010	nd	0.433	0.005	nd	2.17
19	1.151	0.013	nd	0.810	0.009	nd	0.341	0.004	nd	2.38
20	0.964	0.011	nd	0.685	0.008	nd	0.279	0.003	nd	2.46
21	0.550	0.006	nd	0.405	0.004	nd	0.145	0.002	nd	2.79
22	0.280	0.003	nd	0.203	0.002	nd	0.077	0.001	nd	2.64
23	0.205	0.002	nd	0.139	0.002	nd	0.066	0.001	nd	2.11
24	0.136	0.001	nd	0.092	0.001	nd	0.044	0.000	nd	2.09
25	0.080	0.001	nd	0.057	0.001	nd	0.023	0.000	nd	2.48
26	0.042	0.000	nd	0.028	0.000	nd	0.014	0.000	nd	2.00
27	0.019	0.000	nd	0.013	0.000	nd	0.006	0.000	nd	2.17
28	0.049	0.001	nd	0.049	0.001	nd	0.000	0.000	nd	nd
29	0.183	0.002	nd	0.183	0.002	nd	0.000	0.000	nd	nd
30	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd
31	0.000	0.000	nd	0.000	0.000	nd	0.000	0.000	nd	nd

nd = no data

A = % of S2

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ALKENE AND ALKANE COMPONENT ANALYSIS FROM PYROLYSIS-GC

ECHIDNA 1, 11690-11700ft, Cuttings

May-92

Carbon No.	-----Alkane + Alkene-----			-----Alkane-----			-----Alkene-----			Alkane/Alkene
	A	B	C	A	B	C	A	B	C	
1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
5	4.186	0.008	0.007	1.214	0.002	0.002	2.972	0.006	0.005	0.41
6	1.737	0.003	0.003	0.733	0.001	0.001	1.004	0.002	0.002	0.73
7	0.916	0.002	0.001	0.466	0.001	0.001	0.450	0.001	0.001	1.04
8	1.046	0.002	0.002	0.542	0.001	0.001	0.504	0.001	0.001	1.08
9	0.453	0.001	0.001	0.211	0.000	0.000	0.242	0.000	0.000	0.87
10	0.565	0.001	0.001	0.238	0.000	0.000	0.327	0.001	0.001	0.73
11	0.732	0.001	0.001	0.206	0.000	0.000	0.526	0.001	0.001	0.39
12	0.640	0.001	0.001	0.159	0.000	0.000	0.481	0.001	0.001	0.33
13	1.193	0.002	0.002	0.569	0.001	0.001	0.624	0.001	0.001	0.91
14	0.829	0.002	0.001	0.527	0.001	0.001	0.302	0.001	0.000	1.75
15	0.394	0.001	0.001	0.265	0.001	0.000	0.129	0.000	0.000	2.05
16	0.339	0.001	0.001	0.202	0.000	0.000	0.137	0.000	0.000	1.47
17	0.314	0.001	0.001	0.221	0.000	0.000	0.093	0.000	0.000	2.38
18	0.127	0.000	0.000	0.102	0.000	0.000	0.025	0.000	0.000	4.08
19	0.074	0.000	0.000	0.074	0.000	0.000	0.000	0.000	0.000	nd
20	0.028	0.000	0.000	0.028	0.000	0.000	0.000	0.000	0.000	nd
21	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	nd
22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	nd
23	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	nd
24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	nd
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	nd
26	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	nd
27	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	nd
28	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	nd
29	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	nd
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	nd
31	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	nd

nd = no data

A = % of S2

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ALKENE AND ALKANE COMPONENT ANALYSIS FROM PYROLYSIS-GC

ECHIDNA 1, 12290-12300ft, Cuttings

May-92

Carbon No.	Alkane + Alkene			Alkane			Alkene			Alkane/Alkene
	A	B	C	A	B	C	A	B	C	
1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
5	3.439	0.008	0.006	1.062	0.003	0.002	2.377	0.006	0.004	0.45
6	1.038	0.002	0.002	1.038	0.002	0.002	0.000	0.000	0.000	nd
7	1.076	0.003	0.002	1.076	0.003	0.002	0.000	0.000	0.000	nd
8	0.879	0.002	0.002	0.879	0.002	0.002	0.000	0.000	0.000	nd
9	0.208	0.000	0.000	0.208	0.000	0.000	0.000	0.000	0.000	nd
10	0.493	0.001	0.001	0.493	0.001	0.001	0.000	0.000	0.000	nd
11	0.209	0.001	0.000	0.209	0.001	0.000	0.000	0.000	0.000	nd
12	0.192	0.000	0.000	0.192	0.000	0.000	0.000	0.000	0.000	nd
13	0.953	0.002	0.002	0.953	0.002	0.002	0.000	0.000	0.000	nd
14	0.553	0.001	0.001	0.553	0.001	0.001	0.000	0.000	0.000	nd
15	0.365	0.001	0.001	0.365	0.001	0.001	0.000	0.000	0.000	nd
16	0.112	0.000	0.000	0.112	0.000	0.000	0.000	0.000	0.000	nd
17	0.175	0.000	0.000	0.175	0.000	0.000	0.000	0.000	0.000	nd
18	0.038	0.000	0.000	0.038	0.000	0.000	0.000	0.000	0.000	nd
19	0.017	0.000	0.000	0.017	0.000	0.000	0.000	0.000	0.000	nd
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	nd
21	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	nd
22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	nd
23	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	nd
24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	nd
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	nd
26	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	nd
27	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	nd
28	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	nd
29	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	nd
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	nd
31	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	nd

nd = no data

A = % of S2

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

APPENDIX 7

ECHIDNA-1 PGC

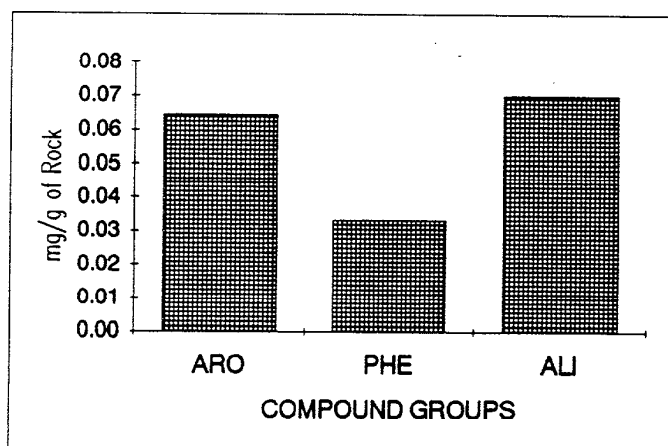
Aromatic and Phenolic Component Analyses

AROMATIC AND PHENOLIC COMPONENT ANALYSIS FROM PYROLYSIS-GC

ECHIDNA 1, 4450-4460ft, Cuttings

May-92

Key	Compound Name	Value		
		A	B	C
A.	Benzene	4.314	0.028	nd
B.	Toluene	2.703	0.018	nd
C.	Ethylbenzene	0.475	0.003	nd
D.	m- + p-xylene	1.119	0.007	nd
E.	Styrene	0.428	0.003	nd
F.	o-xylene	0.722	0.005	nd
G.	Phenol	5.051	0.033	nd
H.	o-cresol	0.000	0.000	nd
I.	m- + p-cresol	0.000	0.000	nd
J.	C2 phenol	0.000	0.000	nd
K.	C2 phenol	0.000	0.000	nd



nd = no data

A = % of S2

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ARO = aromatic compounds (A to F)

PHE = phenolic compounds (G to K)

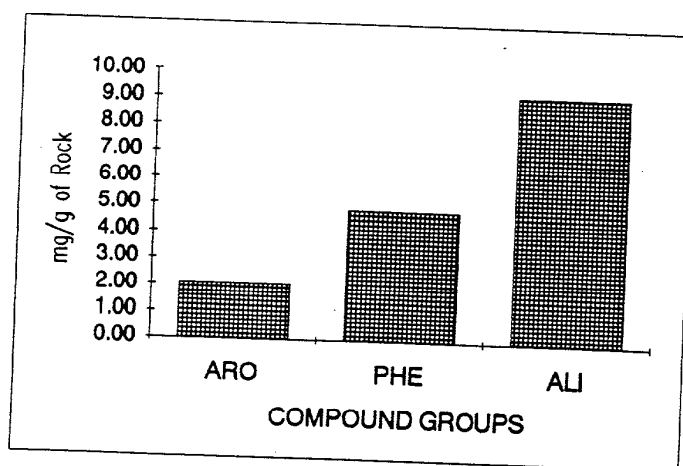
ALI = aliphatic compounds (C9 to C31 alkenes + alkanes)

AROMATIC AND PHENOLIC COMPONENT ANALYSIS FROM PYROLYSIS-GC

ECHIDNA 1, 4750-4760ft, Coal

May-92

Key	Compound Name	Value		
		A	B	C
A.	Benzene	0.696	0.377	nd
B.	Toluene	1.629	0.883	nd
C.	Ethylbenzene	0.200	0.108	nd
D.	m- + p-xylene	0.928	0.503	nd
E.	Styrene	0.079	0.043	nd
F.	o-xylene	0.250	0.136	nd
G.	Phenol	2.969	1.610	nd
H.	o-cresol	1.064	0.577	nd
I.	m- + p-cresol	3.136	1.700	nd
J.	C2 phenol	0.804	0.436	nd
K.	C2 phenol	0.973	0.528	nd



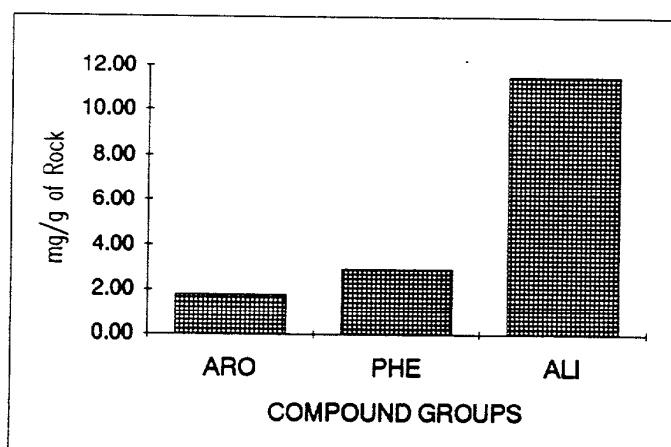
nd = no data
 A = % of S2
 B = mg/g Rock (Rock-Eval)
 C = (mg/g Rock)/TOC
 ARO = aromatic compounds (A to F)
 PHE = phenolic compounds (G to K)
 ALI = aliphatic compounds (C9 to C31 alkenes + alkanes)

AROMATIC AND PHENOLIC COMPONENT ANALYSIS FROM PYROLYSIS-GC

ECHIDNA 1, 4810-4820ft, Coal

May-92

Key	Compound Name	-----Value-----		
		A	B	C
A.	Benzene	0.467	0.278	nd
B.	Toluene	1.347	0.803	nd
C.	Ethylbenzene	0.143	0.085	nd
D.	m- + p-xylene	0.746	0.445	nd
E.	Styrene	0.105	0.063	nd
F.	o-xylene	0.223	0.133	nd
G.	Phenol	1.566	0.933	nd
H.	o-cresol	0.730	0.435	nd
I.	m- + p-cresol	1.927	1.148	nd
J.	C2 phenol	0.248	0.148	nd
K.	C2 phenol	0.469	0.280	nd



nd = no data

A = % of S2

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ARO = aromatic compounds (A to F)

PHE = phenolic compounds (G to K)

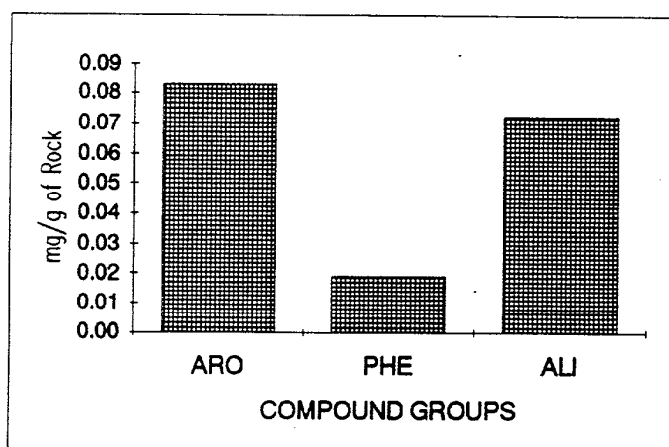
ALI = aliphatic compounds (C9 to C31 alkenes + alkanes)

AROMATIC AND PHENOLIC COMPONENT ANALYSIS FROM PYROLYSIS-GC

ECHIDNA 1, 4940-4950ft, Cuttings

May-92

Key	Compound Name	Value		
		A	B	C
A.	Benzene	3.502	0.025	nd
B.	Toluene	3.788	0.027	nd
C.	Ethylbenzene	0.696	0.005	nd
D.	m- + p-xylene	1.744	0.012	nd
E.	Styrene	0.559	0.004	nd
F.	o-xylene	1.384	0.010	nd
G.	Phenol	0.886	0.006	nd
H.	o-cresol	0.000	0.000	nd
I.	m- + p-cresol	0.000	0.000	nd
J.	C2 phenol	0.643	0.005	nd
K.	C2 phenol	1.151	0.008	nd



nd = no data

A = % of S2

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ARO = aromatic compounds (A to F)

PHE = phenolic compounds (G to K)

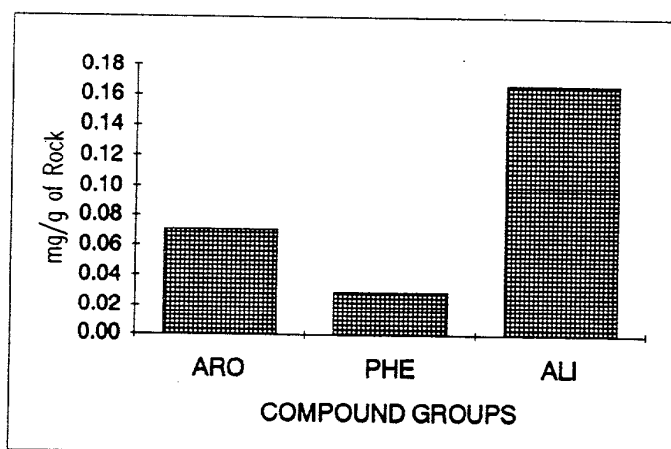
ALI = aliphatic compounds (C9 to C31 alkenes + alkanes)

AROMATIC AND PHENOLIC COMPONENT ANALYSIS FROM PYROLYSIS-GC

ECHIDNA 1, 4990-5000ft, Cuttings

May-92

Key	Compound Name	-----Value-----		
		A	B	C
A.	Benzene	1.794	0.020	nd
B.	Toluene	2.373	0.026	nd
C.	Ethylbenzene	0.415	0.005	nd
D.	m- + p-xylene	1.047	0.012	nd
E.	Styrene	0.344	0.004	nd
F.	o-xylene	0.479	0.005	nd
G.	Phenol	2.669	0.029	nd
H.	o-cresol	0.000	0.000	nd
I.	m- + p-cresol	0.000	0.000	nd
J.	C2 phenol	0.000	0.000	nd
K.	C2 phenol	0.000	0.000	nd



nd = no data

A = % of S2

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ARO = aromatic compounds (A to F)

PHE = phenolic compounds (G to K)

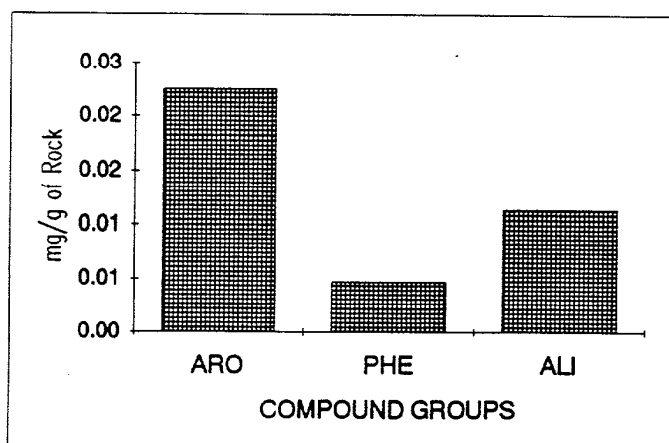
ALI = aliphatic compounds (C9 to C31 alkenes + alkanes)

AROMATIC AND PHENOLIC COMPONENT ANALYSIS FROM PYROLYSIS-GC

ECHIDNA 1, 11690-11700ft, Cuttings

May-92

Key	Compound Name	Value		
		A	B	C
A.	Benzene	5.362	0.011	0.009
B.	Toluene	2.431	0.005	0.004
C.	Ethylbenzene	0.545	0.001	0.001
D.	m- + p-xylene	1.674	0.003	0.003
E.	Styrene	0.053	0.000	0.000
F.	o-xylene	1.167	0.002	0.002
G.	Phenol	0.962	0.002	0.002
H.	o-cresol	0.000	0.000	0.000
I.	m- + p-cresol	0.000	0.000	0.000
J.	C2 phenol	0.539	0.001	0.001
K.	C2 phenol	0.841	0.002	0.001



nd = no data

A = % of S2

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ARO = aromatic compounds (A to F)

PHE = phenolic compounds (G to K)

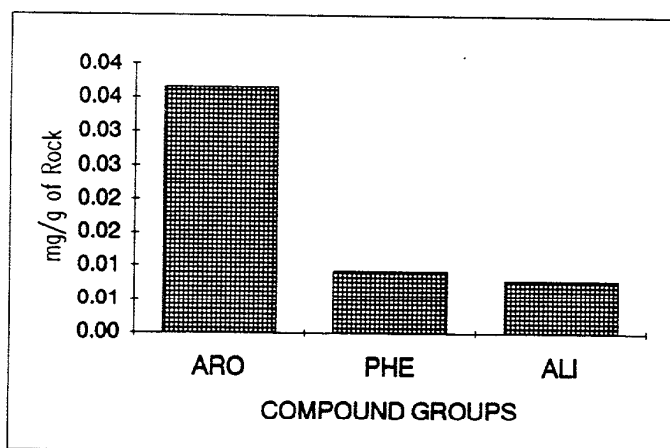
ALI = aliphatic compounds (C9 to C31 alkenes + alkanes)

AROMATIC AND PHENOLIC COMPONENT ANALYSIS FROM PYROLYSIS-GC

ECHIDNA 1, 12290-12300ft, Cuttings

May-92

Key	Compound Name	Value		
		A	B	C
A.	Benzene	5.900	0.014	0.011
B.	Toluene	4.566	0.011	0.008
C.	Ethylbenzene	0.784	0.002	0.001
D.	m- + p-xylene	2.237	0.005	0.004
E.	Styrene	0.072	0.000	0.000
F.	o-xylene	1.666	0.004	0.003
G.	Phenol	1.343	0.003	0.002
H.	o-cresol	0.000	0.000	0.000
I.	m- + p-cresol	0.000	0.000	0.000
J.	C2 phenol	0.768	0.002	0.001
K.	C2 phenol	1.765	0.004	0.003



nd = no data

A = % of S2

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

ARO = aromatic compounds (A to F)

PHE = phenolic compounds (G to K)

ALI = aliphatic compounds (C9 to C31 alkenes + alkanes)

APPENDIX 8

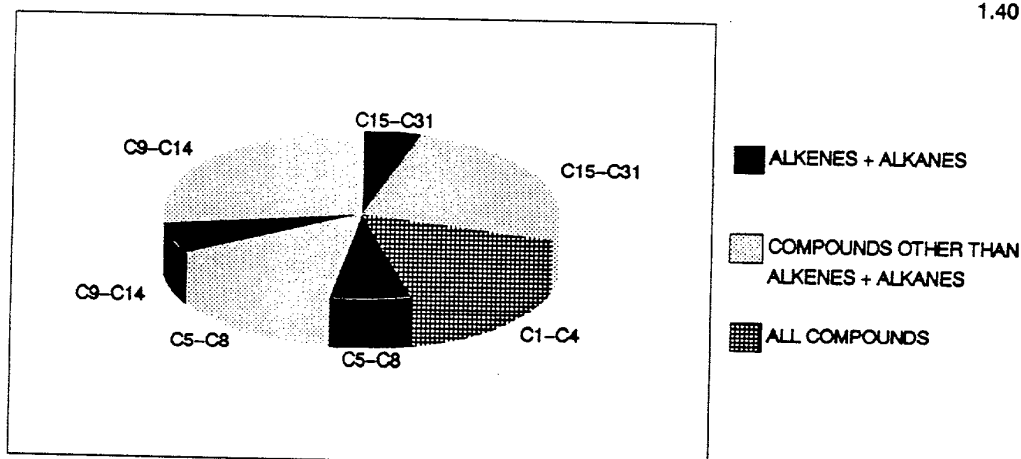
**ECHIDNA-1 PGC
Parameter Summaries**

PARAMETER SUMMARY FOR PYROLYSIS GAS CHROMATOGRAPHY

ECHIDNA 1, 4450-4460ft, Cuttings

May-92

Parameter	-----Value-----			
	A	B	C	D
C1-C4 abundance (all compounds)	16.19	0.11	nd	
C5-C8 abundance (all compounds)	21.36	0.14	nd	
C5-C8 abundance (alkanes + alkenes)	6.81	0.04	nd	
C9-C14 abundance (all compounds)	32.79	0.22	nd	
C9-C14 abundance (alkanes + alkenes)	5.68	0.04	nd	
C15-C31 abundance (all compounds)	29.65	0.20	nd	
C15-C31 abundance (alkanes + alkenes)	4.95	0.03	nd	
C9-C31 abundance (all compounds)	62.45	0.41	nd	
C9-C31 abundance (alkanes + alkenes)	10.63	0.07	nd	
C5-C31 abundance (all compounds)	83.81	0.55	nd	
C5-C31 abundance (alkanes + alkenes)	17.44	0.12	nd	
C5-C31 alkane abundance	6.95	0.05	nd	
C5-C31 alkene abundance	10.49	0.07	nd	
C5-C8 alkane/alkene				0.38
C9-C14 alkane/alkene				0.52
C15-C31 alkane/alkene				1.69
C5-C31 alkane/alkene				0.66
(C1-C5)/C6+				0.28
R				1.40



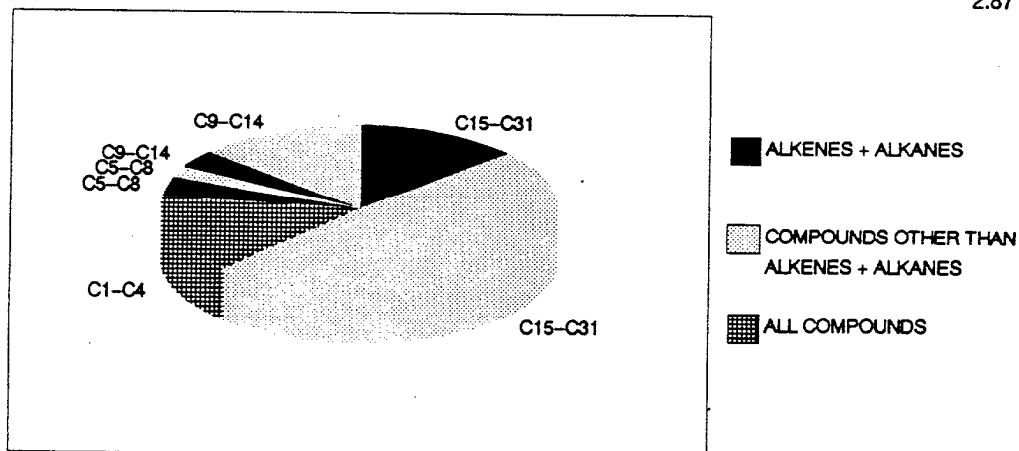
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 A = % of S2
 B = mg/g Rock (Rock-Eval)
 C = (mg/g Rock)/TOC
 D = no units
 R = m+p-xylene/n-octene

PARAMETER SUMMARY FOR PYROLYSIS GAS CHROMATOGRAPHY

ECHIDNA 1, 4750-4760ft, Coal

May-92

Parameter	-----Value-----			
	A	B	C	D
C1-C4 abundance (all compounds)	15.00	8.13	nd	
C5-C8 abundance (all compounds)	5.79	3.14	nd	
C5-C8 abundance (alkanes + alkenes)	3.64	1.97	nd	
C9-C14 abundance (all compounds)	16.99	9.21	nd	
C9-C14 abundance (alkanes + alkenes)	3.45	1.87	nd	
C15-C31 abundance (all compounds)	62.22	33.73	nd	
C15-C31 abundance (alkanes + alkenes)	13.56	7.35	nd	
C9-C31 abundance (all compounds)	79.20	42.94	nd	
C9-C31 abundance (alkanes + alkenes)	17.02	9.23	nd	
C5-C31 abundance (all compounds)	85.00	46.09	nd	
C5-C31 abundance (alkanes + alkenes)	20.66	11.20	nd	
C5-C31 alkane abundance	9.80	5.31	nd	
C5-C31 alkene abundance	10.86	5.89	nd	
C5-C8 alkane/alkene				0.75
C9-C14 alkane/alkene				0.57
C15-C31 alkane/alkene				1.06
C5-C31 alkane/alkene				0.90
(C1-C5)/C6+				0.20
R				2.87



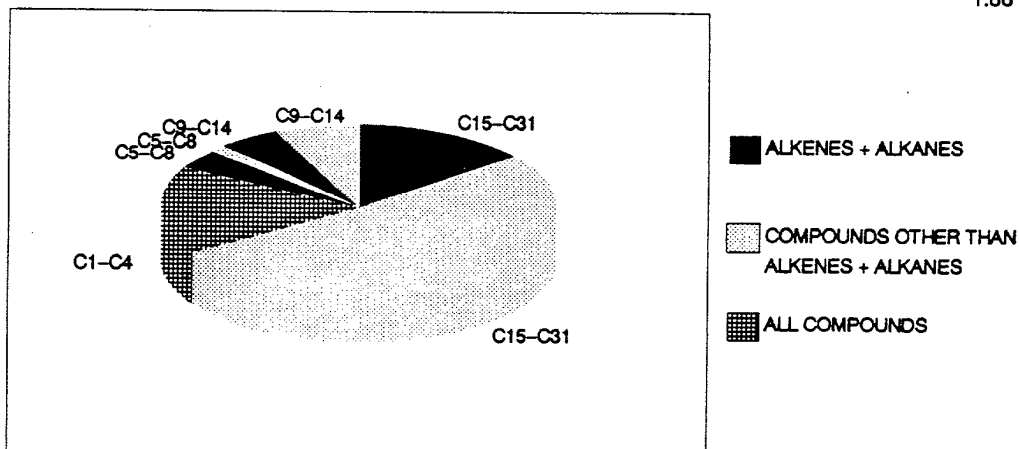
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A = % of S2
B = mg/g Rock (Rock-Eval)
C = (mg/g Rock)/TOC
D = no units
R = m+p-xylene/n-octene

PARAMETER SUMMARY FOR PYROLYSIS GAS CHROMATOGRAPHY

ECHIDNA 1, 4810-4820ft, Coal

May-92

Parameter	Value			
	A	B	C	D
C1-C4 abundance (all compounds)	16.87	10.06	nd	
C5-C8 abundance (all compounds)	5.25	3.13	nd	
C5-C8 abundance (alkanes + alkenes)	4.13	2.46	nd	
C9-C14 abundance (all compounds)	11.94	7.11	nd	
C9-C14 abundance (alkanes + alkenes)	5.10	3.04	nd	
C15-C31 abundance (all compounds)	65.92	39.29	nd	
C15-C31 abundance (alkanes + alkenes)	14.19	8.45	nd	
C9-C31 abundance (all compounds)	77.86	46.40	nd	
C9-C31 abundance (alkanes + alkenes)	19.28	11.49	nd	
C5-C31 abundance (all compounds)	83.11	49.54	nd	
C5-C31 abundance (alkanes + alkenes)	23.41	13.95	nd	
C5-C31 alkane abundance	11.22	6.69	nd	
C5-C31 alkene abundance	12.18	7.26	nd	
C5-C8 alkane/alkene				0.67
C9-C14 alkane/alkene				0.86
C15-C31 alkane/alkene				1.04
C5-C31 alkane/alkene				0.92
(C1-C5)/C6+				0.23
R				1.86



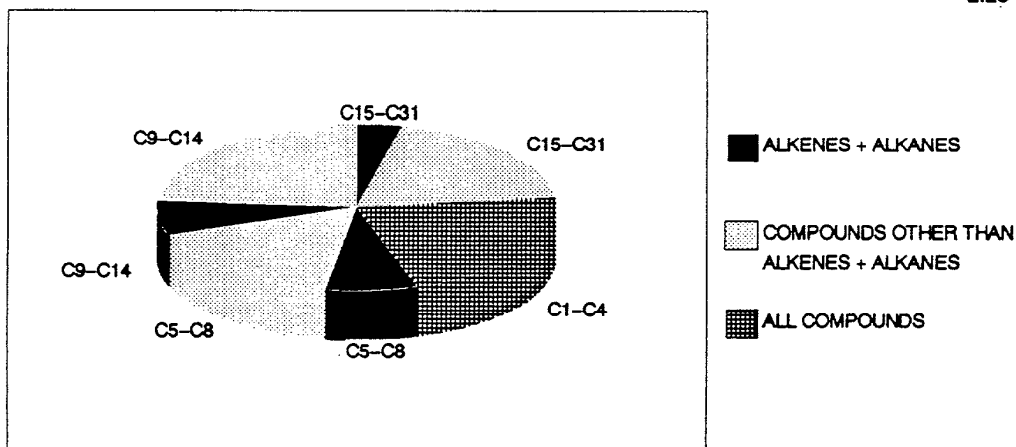
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 B = mg/g Rock (Rock-Eval)
 C = (mg/g Rock)/TOC
 D = no units
 R = m+p-xylene/n-octene

PARAMETER SUMMARY FOR PYROLYSIS GAS CHROMATOGRAPHY

ECHIDNA 1, 4940-4950ft, Cuttings

May-92

Parameter	-----Value-----			
	A	B	C	D
C1-C4 abundance (all compounds)	21.72	0.15	nd	
C5-C8 abundance (all compounds)	24.51	0.17	nd	
C5-C8 abundance (alkanes + alkenes)	7.41	0.05	nd	
C9-C14 abundance (all compounds)	30.37	0.22	nd	
C9-C14 abundance (alkanes + alkenes)	6.56	0.05	nd	
C15-C31 abundance (all compounds)	23.40	0.17	nd	
C15-C31 abundance (alkanes + alkenes)	3.67	0.03	nd	
C9-C31 abundance (all compounds)	53.77	0.38	nd	
C9-C31 abundance (alkanes + alkenes)	10.23	0.07	nd	
C5-C31 abundance (all compounds)	78.28	0.56	nd	
C5-C31 abundance (alkanes + alkenes)	17.64	0.13	nd	
C5-C31 alkane abundance	8.25	0.06	nd	
C5-C31 alkene abundance	9.39	0.07	nd	
C5-C8 alkane/alkene				0.60
C9-C14 alkane/alkene				0.78
C15-C31 alkane/alkene				2.44
C5-C31 alkane/alkene				0.88
(C1-C5)/C6+				0.36
R				2.23



nd = no data

A = % of S2

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

D = no units

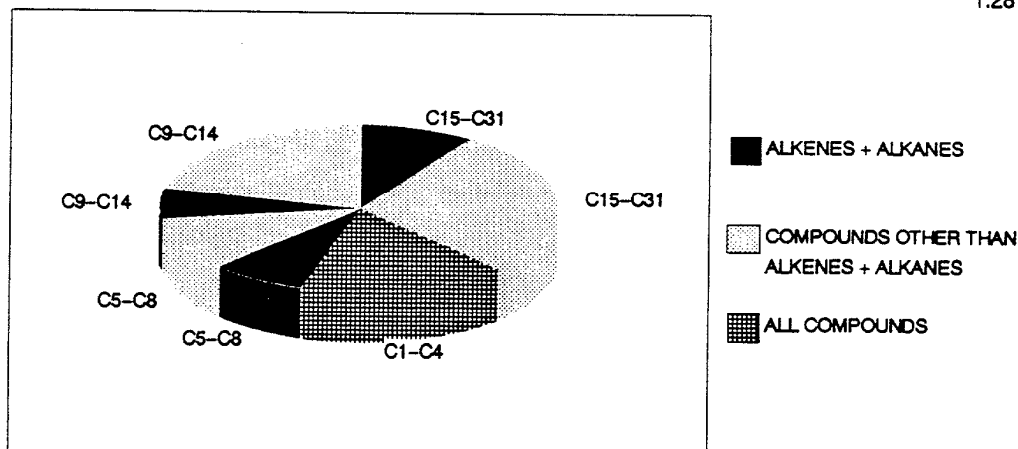
R = m+p-xylene/n-octene

PARAMETER SUMMARY FOR PYROLYSIS GAS CHROMATOGRAPHY

ECHIDNA 1, 4990-5000ft, Cuttings

May-92

Parameter	Value-----			
	A	B	C	D
C1-C4 abundance (all compounds)	16.98	0.19	nd	
C5-C8 abundance (all compounds)	18.07	0.20	nd	
C5-C8 abundance (alkanes + alkenes)	7.80	0.09	nd	
C9-C14 abundance (all compounds)	27.14	0.30	nd	
C9-C14 abundance (alkanes + alkenes)	5.97	0.07	nd	
C15-C31 abundance (all compounds)	37.81	0.42	nd	
C15-C31 abundance (alkanes + alkenes)	9.19	0.10	nd	
C9-C31 abundance (all compounds)	64.95	0.71	nd	
C9-C31 abundance (alkanes + alkenes)	15.17	0.17	nd	
C5-C31 abundance (all compounds)	83.02	0.91	nd	
C5-C31 abundance (alkanes + alkenes)	22.97	0.25	nd	
C5-C31 alkane abundance	10.79	0.12	nd	
C5-C31 alkene abundance	12.18	0.13	nd	
C5-C8 alkane/alkene				0.37
C9-C14 alkane/alkene				0.73
C15-C31 alkane/alkene				2.02
C5-C31 alkane/alkene				0.89
(C1-C5)/C6+				0.27
R				1.28



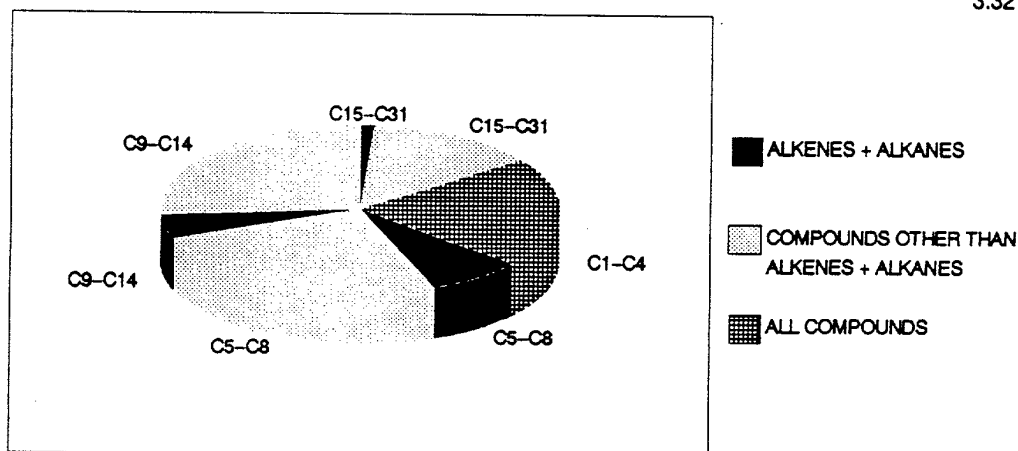
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 C = (mg/g Rock)/TOC
 D = no units
 R = m+p-xylene/n-octene

PARAMETER SUMMARY FOR PYROLYSIS GAS CHROMATOGRAPHY

ECHIDNA 1, 11690-11700ft, Cuttings

May-92

Parameter	-----Value-----			
	A	B	C	D
C1-C4 abundance (all compounds)	21.28	0.04	0.03	
C5-C8 abundance (all compounds)	32.93	0.07	0.05	
C5-C8 abundance (alkanes + alkenes)	7.89	0.02	0.01	
C9-C14 abundance (all compounds)	30.78	0.06	0.05	
C9-C14 abundance (alkanes + alkenes)	4.41	0.01	0.01	
C15-C31 abundance (all compounds)	14.94	0.03	0.02	
C15-C31 abundance (alkanes + alkenes)	1.28	0.00	0.00	
C9-C31 abundance (all compounds)	45.72	0.09	0.07	
C9-C31 abundance (alkanes + alkenes)	5.69	0.01	0.01	
C5-C31 abundance (all compounds)	78.66	0.16	0.13	
C5-C31 abundance (alkanes + alkenes)	13.57	0.03	0.02	
C5-C31 alkane abundance	5.76	0.01	0.01	
C5-C31 alkene abundance	7.82	0.02	0.01	
C5-C8 alkane/alkene				0.60
C9-C14 alkane/alkene				0.76
C15-C31 alkane/alkene				2.32
C5-C31 alkane/alkene				0.74
(C1-C5)/C6+				0.47
R				3.32



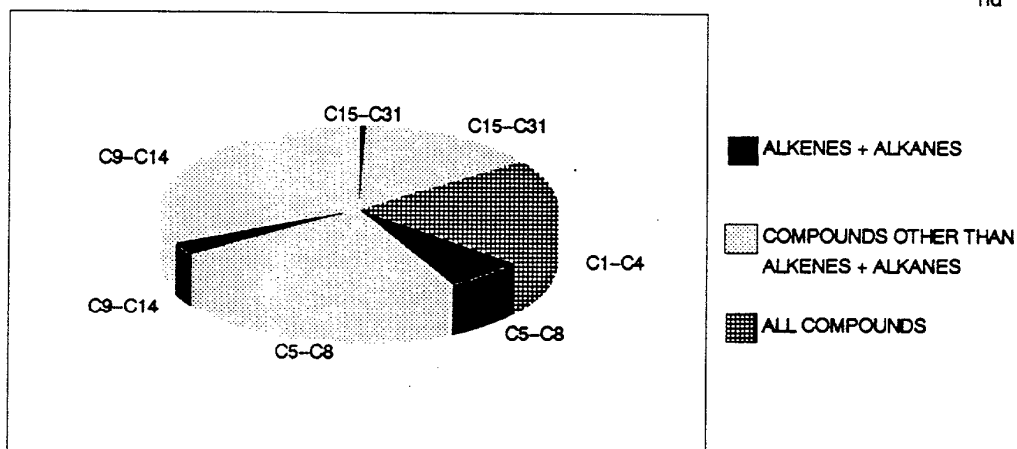
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A = % of S2
B = mg/g Rock (Rock-Eval)
C = (mg/g Rock)/TOC
D = no units
R = m+p-xylene/n-octene

PARAMETER SUMMARY FOR PYROLYSIS GAS CHROMATOGRAPHY

ECHIDNA 1, 12290-12300ft, Cuttings

May-92

Parameter	Value			
	A	B	C	D
C1-C4 abundance (all compounds)	20.83	0.05	0.04	
C5-C8 abundance (all compounds)	29.93	0.07	0.06	
C5-C8 abundance (alkanes + alkenes)	6.43	0.02	0.01	
C9-C14 abundance (all compounds)	34.07	0.08	0.06	
C9-C14 abundance (alkanes + alkenes)	2.61	0.01	0.00	
C15-C31 abundance (all compounds)	15.17	0.04	0.03	
C15-C31 abundance (alkanes + alkenes)	0.71	0.00	0.00	
C9-C31 abundance (all compounds)	49.24	0.12	0.09	
C9-C31 abundance (alkanes + alkenes)	3.32	0.01	0.01	
C5-C31 abundance (all compounds)	79.17	0.19	0.15	
C5-C31 abundance (alkanes + alkenes)	9.75	0.02	0.02	
C5-C31 alkane abundance	7.37	0.02	0.01	
C5-C31 alkene abundance	2.38	0.01	0.00	
C5-C8 alkane/alkene				1.71
C9-C14 alkane/alkene				nd
C15-C31 alkane/alkene				nd
C5-C31 alkane/alkene				3.10
(C1-C5)/C6+				0.38
R				nd



nd = no data

A = % of S2

B = mg/g Rock (Rock-Eval)

C = (mg/g Rock)/TOC

D = no units

R = m+p-xylene/n-octene