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REPORT TITLE

Source rock evaluation of well 30/6-2.

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SUMMARY The analysed sequence of the well is divided into eight zones.
A: -1580m: Immature, poor potential as a source rock for oil and gas.
B: 1580-1795m: Immature, fair potential as a source rock for oil and gas.
C: 1795-1985m: Immature, good potential as a source rock for oil and gas. Migrated hydrocarbons in the zone.
D: 1985-2075m: Immature, fair/good potential as a source rock for oil and gas.
E: 2072-2225m: Immature, good to rich potential as a source rock for oil and gas.
F: 2225-2400m: Immature. Claystone has a good to roch potential as a source rock for gas and oil. Large amounts of migrated light hydrocarbons.
G: 2400-2550m: Immature.Migrated hydrocarbons heavier than in zone F.
H: 2550-2900m: Immature. Mainly sandstone. No definte evidence of migrated hydrocarbons.

KEY WORDS

Source rock.

EXPERIMENTAL

One ml. of the headspace gas from each of the cans was analysed gas chromatographically for light hydrocarbons. The results are shown in Table Ia. The canned samples were washed with temperated water on a 0.125 mm sieve to remove drilling mud and thereafter dried at 35°C.

Total Organic Carbon (TOC)

The various selected samples were crushed on a centrifugal mill and sieved. The portions with a particle size between 0.125 mm and 0.063 mm were used in the further work. Aliquotes of the samples were treated with hot 6N HCl to remove carbonate and washed twice with distilled water to remove traces of HCl, then placed in a vacuum oven at 50°C, evacuated to 20 mm Hg for 12 hrs. The samples were then analysed on a Leco E C 12 carbon determinator, to determine the total organic carbon (TOC).

Extractable Organic Matter (EOM)

From the TOC results samples were selected for extraction. Of the selected samples, approximately 100 gm of each was extracted on soxhlet apparatus for 48 hrs using dichloromethane (DCM) as solvent. The DCM used as solvent was distilled in an all glass apparatus to remove contaminants. The paper thimbles used in the soxhlet apparatus were previously washed with DCM on a large soxhlet apparatus for 48 hrs. to remove any soluble components.

Activated copper foil was used in the flasks to remove any free sulphur from the samples.

After extraction, the solvent was removed on a Buchi Rotavapor and transferred to a 50 ml flask. The rest of the solvent was then removed and the amount of extractable organic matter (EOM) determined.

Chromatographic Separation

The extractable organic matter (EOM) was separated on chromatographic columns, packed with silica, Riedel & Hähn, 0.063 mm, using the slurry method with hexane as solvent. On top of the silica, small amounts of

alumina, approximately 2 cm, was added. The EOM, after it was "taken up" on alumina, was transferred to the top of the columns, which were then eluted with predistilled hexane, benzene and methanol using a ratio of 200 ml of each solvent pr. gm of EOM.

The various eluants were removed on a Buchi Rotavapor and the samples transferred to vials and dried at 40°C in a stream of dry nitrogen, and the amount of the various fractions, saturated, aromatic and NSO fraction (Nitrogen, Sulphur, Oxygen), determined. The saturated fractions were analysed gas chromatographically on a 25 m OV 101 glass capillary column with He as carrier gas (0.7 ml/min.) using the splitless injection technique. The glass capillary column was mounted in a Carlo Erba F V 2150 gas chromatograph.

Vitrinite Reflectance

Samples, taken at various intervals, were sent for vitrinite reflectance measurements at Geoconsultants, Newcastle-upon-Tyne. The samples were mounted in Bakelite resin blocks; care being taken during the setting of the plastic to avoid temperatures in excess of 100°C. The samples where then ground, initially on a diamond lap followed by two grades of corundum paper. All grinding and subsequent polishing stages in the preparation were carried out using isopropyl alcohol as lubricant, since water leads to the swelling and disintegration of the clay fraction of the samples.

Polishing of the samples was performed on Selvyt cloths using three grades of alumina, 5/20, 3/50 and Gamma, followed by careful cleaning of the surface.

Reflectance determinations were carried out on a Leitz M.P.V. microphotometer under oil immersion, R.I. 1.516 at a wavelength of 546 nm. The field measured was varied to suit the size of the organic particle, but was usually of the order of 2 micron diameter.

The surface of the polished block was searched by the operator for suitable areas of vitrinitic material in the sediment. The reflectance of the organic particle was determined relative to optical glass standards of known reflectance. Where possible, a minimum of twenty individual particles of vitrinite was measured, although in many cases this number could not be achieved.

Processing of Samples for Evaluation of Visual Kerogen

The rock samples were crushed and afterwards treated with hydrochloric and hydrofluoric acids to remove the minerals. A series of microscopic slides was mounted in glycerine jelly:

T-slide represents the total acid insoluble residue.
O-slide represents the residue screened through 15 sieves.
N-1,2,3 slides contain palynodebris remaining after flotation ($Zn\ Br_2$) to remove disturbing heavy minerals.
X-1,2,3 slides contain oxidized residues, when oxidizing is required due to high coalification or much sapropel.

T & O slides are necessary to evaluate kerogen composition/palynofacies which is closely related to sample lithology.

Screened slides are normally required to consentrate the larger fragments, and to study palynomorphs (pollen, spores and dinoflagellates) for paleo-dating and colour evaluation.

So far visual evaluations of kerogen have been undertaken from residues mounted in glycerine jelly, and studied by Leitz Dialux in normal light (halogene) using x10 and x40 objectives.

Rock-Eval Pyrolyses

100 mg crushed sample was put into a boat whose bottom and cover are made of sintered steal and analysed on a Rock-Eval pyrolyser.

RESULTS AND DISCUSSION

Light Hydrocarbons

Based on the headspace analysis, the analysed sequence of the well will be divided into eight zones:

A: - 1580 m
B: 1580 - 1795 m
C: 1795 - 1985 m
D: 1985 - 2075 m
E: 2075 - 2225 m
F: 2225 - 2400 m
G: 2400 - 2550 m
H: 2550 - 2900 m.

The analyses show some variation in the abundance of light hydrocarbons, while the wetness of the gas and the isobutane/n-butane ratio (iC_4/nC_4) are relatively constant throughout the analysed sequence.

In the upper part of the well (Tertiary and Cretaceous part), i.e. down to 2200 m, every second sample was analysed, while in the lower part of the well every sample was analysed.

A: - 1580 m: This part of the well shows a slight increase in the abundance of C_1 - C_4 hydrocarbons, while the abundance of C_5^+ hydrocarbons is relatively stable. The wetness of the gas shows a sharp decrease with increasing depth.

B: 1580 - 1795 m: This zone has a good abundance of both C_1 - C_4 and C_5^+ hydrocarbons, and the wetness of the gas increases with increasing depth, while the $iC_4/n\text{-}C_4$ ratio is constant.

C: 1795 - 1885 m: The abundance of both C_1 - C_4 and C_5^+ hydrocarbons is lower in this zone compared to the zone above, while the wetness of the gas is slightly lower than the maximum reached at the lower end in the zone above.

D: 1985 - 2075 m: The abundance of the C_1 - C_4 hydrocarbons is markedly higher in this zone compared to the zone above and there is also an increase in the wetness of the gas. A light hydrocarbon abundance as high as recorded here would indicate migrated light hydrocarbons.

E: 2075 - 2225 m: A zone with variable abundance both in light hydrocarbons and wetness of the gas. The whole zone shows a good abundance of light hydrocarbons.

F: 2225 - 2400 m: The abundance of both C_1 - C_4 and C_5^+ hydrocarbons is very high for this zone, which indicates migrated hydrocarbons in the sandstone in this zone.

G: 2400 - 2550 m: This zone shows a marked drop in the abundance of C_1 - C_4 hydrocarbons, while the C_5^+ hydrocarbons still show an overall high abundance. The wetness of the gas is markedly higher than in the zone above. These results would indicate that there are migrated hydrocarbons in this zone, but that the amount of light hydrocarbons, especially methane is less than in the zone above.

H: 2550 - 2900 m: The abundance of light hydrocarbons especially C_5^+ hydrocarbons drops sharply in this zone at the same time as the wetness of the gas decrease. This indicates that this zone is below those which contain migrated hydrocarbons, with exception of the sample from 2625 - 2640 m which has a high abundance of both C_1 - C_4 and C_5^+ hydrocarbons.

Total Organic Carbon (TOC)

A: - 1580 m: Mainly a good abundance of organic carbon.

B: 1580 - 1795 m: This zone has a markedly lower abundance of organic carbon than the zone above. Most of the zone has a fair abundance of organic carbon.

C: 1795 - 1985 m: The abundance of organic carbon in this zone varies considerably, but it is found to have an overall good abundance.

D: 1985 - 2075 m: The abundance of organic carbon drops sharply in this zone compared to the zone above and has an overall fair abundance.

E: 2075 - 2225 m: The upper part of this zone has an abundance of organic carbon similar to zone D, while the abundance increases sharply in the lower end to a good to rich abundance.

F: 2225 - 2400 m: Again a zone with a large variation in the abundance of organic carbon, but showing an overall good abundance.

G: 2400 - 2550 m: Very similar to zone F.

H: The upper part of this zone has a rich abundance of organic carbon, while it drops sharply from 2770 m, and the lower part of the zone has only a fair abundance of organic carbon.

Extractable Organic Matter (EOM) and Chromatographic Separation

A: - 1580 m: No sample from this zone was extracted.

B: 1580 - 1795 m: One sample, 1580 - 1610 m, from this zone was extracted, showing a fair/good abundance of extractable hydrocarbons. The gas chromatogram of the saturated hydrocarbon fraction is very front biased, almost no alkanes are registered above n-C_{20}. It is believed that this is caused by contamination of diesel from the drilling mud.

C: 1795 - 1985 m: One sample, 1925-40 m, from this zone was extracted, showing a rich abundance of extractable hydrocarbons. The HC/TOC ratio is, however, that high that it indicates that the sample is contaminated by migrated hydrocarbons. The gas chromatogram of the saturated hydrocarbon fraction shows a smooth front biased distribution with the pristane/n-C_{17} ratio close to unity and a rather low pristane/phytane ratio.

D: 1985 - 2075 m: One sample, 2015-40 m, from this zone was extracted, again showing a rich abundance of extractable hydrocarbons. As with the sample from the zone above, the HC/TOC ratio is found that high that it indicates the sample to be contaminated by migrated hydrocarbons. The gas chromatogram of the saturated hydrocarbon fraction shows a smooth front biased distribution typical for the saturated hydrocarbon fraction of a well matured crude oil.

E: 2075 - 2225 m: One sample, 2195 - 22 10 m, from this zone, was extracted, showing a rich abundance of extractable hydrocarbons. The HC/TOC ratio is, however, markedly lower than in the zone above. The gas chromatogram of the saturated hydrocarbon fraction is very similar to one of the analysed samples from zone D.

F: 2225 - 2400 m: One sample, 2255-70 m, from this zone was extracted, showing a rich abundance of extractable hydrocarbons. The gas chromatogram of the saturated hydrocarbon fraction is almost identical to the two from the zone above.

G: 2400 - 2550 m: One sample, 2400 - 2410 m, from this zone was extracted, showing a good to rich abundance of extractable hydrocarbons. The HC/TOC ratio is markedly lower than in the zones above, suggesting tbat this sample is free from contamination of migrated hydrocarbons. The gas chromatogram of the saturated hydrocarbon fraction changes compared to the analysed samples above. The carbon preference index is markedly higher, while the pristane/n-C_{17} ratio is again close to unity.

Vitrinite Reflectance

Twelve samples were analysed for vitrinite reflectance. In the following each sample is described, and together with the reflectance data, other information from the analyses will be given.

1520-50 m: Shale, R_o = 0.33(21).

Bitumen wisps in the sample are dominant. Otherwise low content of vitrinite particles and wispy particles. Only a trace of inertinite and reworked material. UV light shows a yellow and yellow/orange fluorescence from spores with a low exinite content.

1723 m: Calcareous shale, R_o = 0.39(12).

The sample has only a trace of organic material with bitumen wisps in a few cuttings. Occasional particles of vitrinite and reworked material. UV light shows a light orange fluorescence from spore fragments, rather dull, and a low exinite content.

1865-80 m: Mixed shale and carbonate lithologies, R_o = 0.32(8).

Plentiful small bitumen wisps, but otherwise only a low content of poor particles of inertinite and wispy particles of vitrinite. UV light shows a yellow fluorescence from spore specks and a trace of exinite.

2001 m: Shale, R_o = 0.45(20).

The sample has a moderate organic content with bitumen wisps and stringers. Otherwise, mostly inertinite and reworked particles with some wisps and particles of vitrinite. UV light shows a light orange fluorescence from spores and a moderate to rich exinite content.

2108.5 m: Shale, R_o = 0.48(20).

The sample has a low to moderate organic content with bitumen wisps and localized staining. Inertinite and reworked particles are dominant with subordinate wispy particles of vitrinite. UV light shows a light and mid-orange fluorescence from spores and a low to moderate exinite content.

2191 m: Calcareous shale, R_o = 0.45(20).

The sample has a low organic content showing bitumen wisps. Particles of reworked material and inertinite are dominant, but some particles of vitrinite are recorded. UV light shows a light and mid-orange fluorescence from spore specks and a trace of exinite.

2278 m: Shaly limestone, R_o = 0.37(5).

The sample has a low to moderate organic content, almost entirely inertinite and reworked particles. Some bitumen wisps and very occasionally vitrinite wispy particles are recorded. UV light shows a light orange fluorescence from spores and hydrocarbon specks and a trace of exinite.

2385 m: Silty shale, R_o = 0.33(20).

The sample has a moderate organic content, about equal proportions of vitrinite wisps and particles with particles of inertinite and reworked material. Bitumen wisps are also present. UV light shows yellow to orange and mid-orange fluorescence from spores and a moderate to rich exinite content.

2481 m: Siltstone, R_o = 0.39(20).

The sample has a moderate organic content, mostly particles and wispy particles of vitrinite. Some bitumen wisps and subordinate inertinite and reworked particles. UV light shows a mid-orange fluorescence from spores and a moderate to rich exinite content.

2582 m: Shale, R_o = 0.51(20).

The sample has a low organic content with fragments of inertinite and reworked material. Particles of lignite, most included in sediment matrix. Only a trace of vitrinite and bitumen. UV light shows a mid-orange fluorescence from spores and a trace of exinite.

2645-60 m: Shale, Carbargillete and coal, R_o = 0.50(23).

The sample has a moderate to rich overall organic content.
Coal: Low rank, vitrinite but dirty.
Carbargillete: Good vitrinite wisps and stringers together with some inertinite particles.
Shale: A few reworked and inertinite particles.
UV light shows a light to mid-orange fluorescence from spores and resin together with a moderate exinite content.

2810-25 m: Mixed shale lithologies, R_o = 0.44(20).

The sample has a low overall organic content, but very variable. Mostly small bitumen wisps together with inertinite and reworked particles. A few vitrinite particles and coal fragments. UV light shows a light to mid-orange fluorescence from spores and a low exinite content.

2884 m: Red siltstone.

No determination possible.

Visual Evaluation of Kerogen

The kerogen study of this well is based on sixteen samples, approximately one per hundred meter, which gives a fairly rough sketch of the changes in environment compared to the study of well 30/6-1.

The maturation parametres of the organic remains in this well resemble those recorded for well 30/6-1. However, in drafting the results (Table VIII cfr. Fig. 5) from 30/6-1, the maturation index was misplaced at the 3 level instead of 2. The entire well seems immature.

1460 - 1490 m to 1640 - 1670 m: The three samples examined from this interval are dominated by sapropel. The residues are generally finely disperse but include aggregates. There is a minor fraction of indeterminate herbaceous material and wood remains beside small black coal fragments. Pollen and cysts are present and well preserved.

Colour index: 1+ to 1+/2- an immature formation though with potential for oil and gas formation.

1760 - 1790 m to 1865 - 1880 m: The two residues from this interval are characterized by the abundance of acid resistant minerals compared with the interval above. In the upper sample dark coal fragments and woody material are dominant compared with sapropel. The cysts and pollen recorded are well preserved. The lower sample is dominated by sapropel, and a rich and varied cyst assemblage is present.

Colour index: -2 for a formation that is immature but has potential for oil and gas, more oilprone below.

1955 - 1970 m to 2165 - 2180 m: There is an abundance of acid resistant minerals in these residues. Sapropel dominates and the content of indeterminate herbaceous remains, woody material and coaly particles varies. The palynomorphs are dominantly pollen in the two upper samples, pollen and spores in the lowest sample.

Colour index: -2/2 for an immature formation that has potential for oil and gas.

2255 - 2770 m: Sapropel, partly recovered as aggregates, dominates, but there is also about 40 % indeterminate herbaceous and woody material. Well preserved cysts are present.

Colour index: 2/2+, could be slightly too high as a maturation parametre, due to presence of carbonate. An immature formation with potential for oil and gas generation.

2345 -2360 m: Sapropel dominates and embeds palynomorphs. Indeterminate herbaceous material, cuticular fragments and woody material are present in small amounts.

Colour index: 2. An immature formation with potential for oil and gas generation.

2465 - 2480 m to 2750 - 2765 m: Terrestric remains dominate this interval. Woody/coaly material dominates below 2555 m. All samples have an element of

cuticular fragments, indeterminate herbaceous material, pollen grains and sometimes pollen and spores. Sapropel seems present in small proportions.

Colour index: 2, 2/2+, in some samples slightly increased due to lithologic control.

2810 - 2825 m: A finely dispersed residue dominated by sapropel and with considerable amounts of very small sized undissolved heavy minerals. The terrestric element is minor and includes cuticles woody matter, coal particles and indeterminate herbaceous beside pollen and spores.

Colour index: 2. An immature formation with potential for oil and gas generation.

2885 - 2900 m: More than 50 % of the residue are undissolved minerals. The organic residue seems half indeterminate herbaceous, half true sapropel.

Colour index: Light coloured material, we suspect contamination in an otherwise barren formation.

CONCLUSION

Based on the headspace data, the analysed sequence of the well was divided into eight zones:
A: - 1580 m, B: 1580 - 1795 m, C: 1795 - 1985 m, D: 1985 - 2075 m, E: 2075 - 2225 m, F: 2225 - 2400 m, G: 2400 - 2550 m and H: 2550 - 2900 m.

In our evaluation of the well, the richness rating is based on the abundance of light hydrocarbons, total organic carbon and extractable hydrocarbons. The maturity rating is based on the vitrinite reflectance and the colour of the kerogen, while the type of source rock is based on the type of kerogen determined by the visual kerogen estimations.

A: The abundance of light hydrocarbons in this zone is poor, while the abundance of organic carbon is good. Vitrinite reflectance measurements show a large proportion of reworked material. The visual kerogen examination shows the samples to be dominated by sapropels. It is believed that the descrepencies shown in the various analyses are caused by the large amount of reworked material, which would give a high TOC value but no light hydrocarbons. These reworked particles could be completely blanked out by the voluminous sapropel material.

On the background of this, this zone will be rated as immature with a poor potential as a source rock for oil and gas.

B: 1580 - 1795 m: The abundance of light hydrocarbons is higher than in zone A, while the organic carbon drops sharply. Some of the samples are contaminated by diesel from the drilling mud. The zone has a slightly higher potential than zone A and it is rated as immature with a fair potential as a source rock for oil and gas.

C: 1795 - 1985 m: The organic carbon values increase again in this zone, and extraction indicates contamination of hydrocarbons. The gas chromatogram of the saturated hydrocarbon fraction shows this contamination to be migrated hydrocarbons and not diesel. The zone will be rated as immature with a good potential as a source rock for oil and gas. The zone is most oilprone in the lower part. Migrated hydrocarbons registered in the zone.

D: 1985 - 2075 m: Both light hydrocarbons and extraction results show this zone to contain migrated hydrocarbons. The zone is rated as immature with a fair/good potential as a source rock for oil and gas.

E: 2075 - 2225 m: This zone is also found to be immature, but with a good to rich potential as a source rock for oil and gas. Possibly migrated hydrocarbons in the zone which might have resulted in too high a rating.

F: 2225 - 2400 m: This zone contains large amounts of light hydrocarbons probably reservoired in the sandstone in the zone.

The claystone in the zone is immature and rated to have a good/rich potential as a source rock for gas and oil. The sandstone contains large amounts of migrated light hydrocarbons.

G: 2400 - 2550 m: Again an immature zone where the claystone has a good/rich potential as a source rock for gas and oil. The sandstone still contains migrated hydrocarbons, but the composition is different to the zone above. The C_1 - C_4 is not as pronounced as in zone F, while the C_5^+ hydrocarbons has a very high abundance. This indicates that the gas is wetter than in zone G, and there is a larger concentration of heavier hydrocarbons reservoired here.

H: 2550 - 2900 m: The abundance of C_5^+ hydrocarbons drops sharply in zone H apart from some samples, and due to the zone being mainly sandstone it will not work as a source rock. The zone is immature to moderate mature. There is no direct evidence of migrated hydrocarbons in this zone.

Headspace 30/6-2

Concentration µ gas/pr. kg rock

Sample	Depth (m)	C_1	C_2	C_3	iC_4	nC_4	C_5+	ΣC_1-C_4	ΣC_2-C_4	% wetness	iC_4/nC_4
K1489	1340- 70	94	30	130	64	232	556	550	456	82.86	0.28
K1491	1400- 30	124	54	355	264	573	1565	1370	1246	90.92	0.46
K1493	1460- 90	13	3	16	2	8	592	41	28	69.22	0.29
K1495	1520- 50	2222	76	953	18	37	1749	3306	1084	32.80	0.49
K1497	1580-1610	12487	512	3815	43	86	1919	16943	4456	26.30	0.51
K1499	1640- 70	20849	2032	23334	283	908	3779	47506	26657	56.11	0.42
K1501	1700- 30	2146	1142	11504	572	1116	2472	16482	14335	86.98	0.51
K1503	1760- 90	9074	3505	29962	623	1524	4073	44689	35614	76.69	0.41
K1505	1805- 20	8359	4363	39526	1843	7395	8427	57886	49527	85.56	0.49
K1507	1835- 50	4361	2968	1141	1579	2476	732	12524	8163	65.18	0.64
K1509	1865- 80	7615	3935	3838	1567	3736	5064	20692	13076	63.20	0.42
K1511	1895-1910	4630	1738	2025	560	1359	1899	10313	5682	55.10	0.41
K1513	1925- 40	6211	3319	3034	1005	2245	2326	15815	9604	60.73	0.45
K1515	1955- 70	6735	3630	3887	1387	3134	3815	18773	12038	64.13	0.44
K1517	1985-2000	9100	5621	4503	1982	3864	4572	25070	15970	63.70	0.51
K1519	2015- 30	177133	75661	118695	306000	490828	32526	1168318	991186	84.84	0.62
K1521	2045- 60	72888	38698	37024	90341	156902	5210	395854	322966	81.59	0.58
K1523	2075- 90	8281	4166	3917	10610	16883	236	43857	35576	81.12	0.63
K1525	2105- 20	6305	3258	2825	1120	3294	2711	15902	9598	60.35	0.47

Concentration µ gas/pr. kg. rock

Headspace 30/6-2

Sample	Depth (m)	C_1	C_2	C_3	iC_4	nC_4	C_5+	ΣC_1-C_4	ΣC_2-C_4	% wetness	iC_4/nC_4
K1527	2135- 50	7372	3732	3518	1297	2772	2779	18690	11318	60.56	0.47
K1529	2165- 80	21665	13328	15687	9449	14994	6196	75124	53458	71.16	0.63
K1531	2195-2210	8547	4757	4114	922	2108	4886	20449	11902	58.20	0.44
K1532	2210- 25	2220	848	1121	326	848	3455	5363	3143	58.60	0.38
K1533	2225- 40	13208	4318	2525	531	1308	3135	21890	8682	39.66	0.41
K1534	2240- 55	26373	16578	16035	5917	12351	17399	77255	50882	65.86	0.48
K1535	2755- 70	39306	17619	16851	3034	7825	14485	84636	45329	53.56	0.39
K1536	2270- 85	110286	67317	91421	18930	50675	98172	338630	228343	67.43	0.37
K1537	2285-2300	27331	15592	16138	5341	13832	20157	78234	50903	65.06	0.39
K1538	2300- 15	18533	11696	12584	5544	12134	1819	60491	41958	69.36	0.46
K1539	2315- 30	27140	14465	19924	4401	11397	18243	77326	50186	64.90	0.39
K1540	2330- 45	28348	14784	14120	3671	9316	9979	70240	41892	59.64	0.39
K1541	2345- 60	8663	5125	4150	1333	3053	2255	22325	13662	61.20	0.44
K1542	2360- 75	7708	4394	3641	641	1435	1868	17819	10111	56.74	0.45
K1543	2375- 90	18011	11426	10234	3419	8225	13823	51316	33304	64.90	0.42
K1544	2390-2400	21263	13120	12139	3081	7686	13689	57291	36028	62.89	0.40
K1545	2400	3397	1757	1489	376	824	1479	7843	4446	56.69	0.46
K1580	2405- 20	407	537	1347	337	831	2251	3460	3053	88.22	0.41
K1581	2420- 35	1929	1472	3256	846	1911	5853	9314	7485	79.51	0.44

Concentration µ gas/pr. kg. rock

Headspace 30/6-2

Sample	Depth (m)	C_1	C_2	C_3	iC_4	nC_4	C_5+	ΣC_1-C_4	ΣC_2-C_4	% wetness	iC_4/nC_4
K1582	2435- 50	301	214	516	146	387	9030	1567	1264	80.78	0.38
K1583	2450- 65	1577	1291	4288	1576	4175	28401	12909	11331	87.78	0.38
K1584	2465- 80	2045	1057	2459	884	1920	8025	8366	6321	75.56	0.46
K1585	2480- 95	4061	1601	2783	832	1878	8158	11155	7094	63.59	0.44
K1586	2495-2510	3663	1818	4066	1465	3647	1368	14659	10996	75.01	0.40
K1587	2510- 25	3965	3062	4712	1789	4757	1778	18285	14320	78.31	0.38
K1588	2525- 40	6799	2995	6925	2295	6097	2400	25111	18312	72.92	0.38
K1589	2540- 55	6553	2881	6181	2178	5424	2702	23217	16664	71.78	0.40
K1590	2555- 70	3173	1139	1925	528	1395	783	8160	4988	61.12	0.38
K1591	2570- 85	7970	4017	2009	253	526	85	14775	6805	46.06	0.48
K1592	2585-2600	3364	1778	885	111	231	36	6369	3005	47.18	0.48
K1593	2600- 15	3945	1947	1079	151	307	53	7428	3483	46.89	0.49
K1594	2615- 30	4883	2591	1549	231	465	77	9720	4836	49.76	0.50
K1595	2630- 45	34335	21371	10846	1409	2849	299	70831	36476	51.50	0.49
K1596	2645- 60	1264	2511	1317	177	340	46	5609	4345	77.47	0.52
K1597	2660- 70	4469	2511	1283	167	318	47	8748	4279	48.19	0.53
K1598	2675- 90	2864	1291	653	92	190	29	5090	2225	43.72	0.48
K1599	2690-2705	1316	455	274	43	103	43	2193	876	39.95	0.42
K1600	2705- 20	2064	792	433	64	146	43	3500	1435	41.02	0.43

Headspace 30/6-2

Concentration µ gas/pr. kg. rock

Sample	Depth (m)	C_1	C_2	C_3	iC_4	nC_4	C_{5+}	ΣC_1-C_4	ΣC_2-C_4	% wetness	iC_4/nC_4
K1601	2720- 35	5396	2039	712	90	201	42	8439	3042	36.05	0.45
K1602	2735- 50	3291	1541	711	93	194	32	5829	2538	43.54	0.48
K1603	2750- 65	5226	2726	1276	116	296	37	9690	4464	46.07	0.56
K1604	2765- 80	3031	1283	506	76	151	28	5047	2016	39.95	0.50
K1605	2780- 95	18900	6425	2216	261	602	155	28404	9503	33.46	0.43
K1606	2795-2810	6942	2750	822	96	200	42	10810	3868	35.78	0.48
K1607	2810- 25	25969	4929	2593	332	7 21	151	34554	8585	24.85	0.46
K1608	2825- 40	494	73	101	21	49	22	738	244	33.08	0.43
K1609	2840- 55	151	28	66	13	39	19	297	146	49.21	0.33
K1610	2855- 70	1862	2695	640	67	130	6	5395	3532	65.48	0.52
K1611	2870- 85	1515	230	148	22	50	15	1966	451	22.94	0.45
K1612	2885-2900	13127	591	638	120	268	271	14744	1617	10.97	0.45

Iku No.	Depth	TOC	Lithology
K1489	1340- 70	1.72	100% Claystone, grey, brownish sm.am. Sand, white, subangular, coarse
K1490	1370-1400	1.73	100% Claystone, grey sm.am. Sand, white, subangular to rounded, coarse to fine
K1491	1400- 30	1.80	100% Claystone, grey, sm.am Sand, subangular, coarse to fine
K1492	1420- 60	1.77	100% Claystone, as above sm.am Sand, white, subangular to subrounded, coarse
K1493	1460-1490	1.96	40% Claystone, grey, brown, 60% Sand, white, subangular - rounded, coarse to fine
K1494	1490-5120	1.80	50% Claystone, grey 50% Sand, white, subangular - rounded, coarse to fine sm.am Limestone, white
K1495	1520- 50	1.78	60% Claystone, grey, brown 40% Sand/Sandstone, white, subangular, coarse to fine Obs: Pyrite
K1497	1580-1610	3.09	100% Claystone, grey, brown; sm.am Limestone, white; Sand, white, subrounded, coarse
K1499	1640- 70	1.00	100% Claystone, grey, brown, greenish Sm.am Limestone consisting of Calcite and Siderite, some marly and silty, light grey to brown, white; Pyrite
K1501	1700- 30	0.78	100% Claystine, grey to browm, greenish sm.am Limestone, as above; Pyrite; Sand, subangular, coarse
K1503	1760- 90	0.63	100% Claystone, grey, brown, green sm.am Pyrite; Limestone, as above

IKU No.	Depth	Toc	Lithology
K1505	1805- 20	1.08	100% Claystone, grey, brown, green sm.am Pyrite; Limestone consisting of Siderite and Calcite, some grading to sandy Siltstone and Marl, light brown
K1507	1835- 50	1.73	100% Claystine, grey to brown, green sm.am Pyrite; Limestone, as above
K1509	1865- 80	1.19	100% Claystone, grey to brown, green sm.am Pyrite; Limestone, as above; Sand, sub-angular, coarst
K1511	1895-1910	0.85	93% Claystone, grey to green 7% Limestone, white - light brown, consisting og Calcite and Siderite, grading to clayey Siltstone sm.am Pyrite
K1513	1925- 40	1.39	100% Claystone, grey to green, brown, sm.am Limestone, white to light brown; Pyrite, Sand, subangular, coarse
K1515	1955- 70	1.10	80% Claystone, grey to green, brown, 20% Clay/Siltstone, sand, brownish, light grey light brown, partly calcareous, ?Sideritic sm.am Limestone, light brown, white, consisting of Calcite/Siderite; Pyrite, Sandstone, light brown
K1517	1985-2000	1.17	100% Claystone, grey to green, brown, light grey to brownish (Calcereous), dark grey ovserved. 5% Marl to Limestone, white to light brown, (Sideritic) sm.am Sand, white, subangular coarse; Pyrite
K1519	2015- 30	1.90	100% Claystone, as above sm.am Pyrite; Marl/Limestone, as above. Sand, white, subrounded, coarse; Clay/Siltstone, with very fine Sand, light brown

IKU No.	Depth	TOC	Lithology
K1521	2045- 60	0.86	100% Claystone, as above sm.am Pyrite; Limestone/Marl, light brown and white, grading to Sandstone; Sand, subangular, fine to coarse
K1523	2075- 90	0.91	100% Claystone, as above sm.am Marl/Limestone, white to light brown; Pyrite Sand, white subrounded, coarse
K1525	2105- 20	0.81	85% Claystone, as above 15% Marl/Limestone, silty and sandy, white to light brown, ?sideritic, grey sm.am Sand, white, subangular, coarse; Pyrite
K1527	2135- 50	0.92	92% Claystone, grey to green, brown 8% Marl/Limestone, grey to light brown, some white sm.am Pyrite; Sand, white, subrounded, coarse
K1529	2165- 80	0.87	75% Claystone, grey, light, dark, green 25% Marl/Limestone, white, grey to light brown sm.am Pyrite; Sand grain, white, subrounded, fine
K1531	2195-2210	2.67	50% Claystone, grey to green 50% Sand, white, subangular/angular, medium sm.am Marl/Limestone, white, grey to light brown; Lignite/Coal; Pyrite
K1532	2210 - 25	1.19	80% Claystone, grey to greenish and light grey 20% Sand, white, subangular/angular, medium sm.am Marl/Limestone as above; Pyrite
K1533	2225 - 40	2.29	95% Claystone, grey, light grey, green, greybrown 5% Silty/Claystone, brownish, light grey/white, calcareous sm.am Pyrite; Sand, white, subangular, coarse to fine

IKU No.	Depth	TOC	Lithology
K1534	2240 - 55	1.47	65% Claystone, as above 30% Sand, white, subangular/subrounded, medium to coarse, 5% Siltstone, clayey and sandy, very micaceous, brown sm.am Silt/Claystone and Marl, white, brownish, Mica; Pyrite; Coal
K1535	2255 - 70	1.59	75% Claystone, as above 25% Sand,white, subangular, coarse to fine, sm.am Pyrite; Mica; Coal Marl to Clay/Siltstone, white to light brown, Mica
K1536	2270 - 85	2.09	78% Claystone, as above 20% Sand, white, subangular, coarse to fine 2% Pyrite sm.am Mica; Coal; Marl to Clay/Siltstone, white to light brown
K1537	2285-2300	1.24	40% Claystone, grey, some grading to very micaceous Siltstone, dark grey, brown, green 40% Sand, white, subangular, coarse to fine 20% Calcareous Claystone grading to Marl, silty and sandy, brownish light grey/white to light brown sm.am Pyrite; Coal; Ooliths; Mica; Coal; sandstone, very fine, light brown
K1538	2300 - 15	0.94	35% Claystone, light to dark grey, brown, 50% Sand, white, subangular, coarse to fine 10% Claystone/Marl, as above sm.am Pyrite; Mica; Coal; ?Siderite, brown, Sandstone very fine, brown; Ooliths

IKU No.	Depth	TOC	Lithology
K1539	2315- 30	1.03	30% Claystone, grey, dark grey, green, brownish 50% Sand, and some Sandstone 10% Claystone/Marl as above sm.am Pyrite; Coal; Mica; very fine Sandstone, brown
K1540	2330- 45	1.19	60% Claystone, grey, brownish, green, some dark grey 30% Sand, as above 10% Claystone/Marl as above sm.am Pyrite; Mica
K1541	2345- 60	1.55	90% Claystine, as above 10% Claystone/Marl as above sm.am Pyrite; Sand, white, subrounded, coarse to fine; Mica
K1542	2360- 75	1.61	80% Claystone, grey, brownish, some green, micaceous 20% Sandstone, white, subangular, fine to very fine sm.am Pyrite; Coal, Claystone/Marl as above, Mica
K1543	2375- 90	1.79	80% Claystone, grey, brownish dark grey, green/greenish 10% Marl/Claystone, silty, white to light brown 10% Sandstone, white/light grey, fine to very fine sm.am Pyrite; Coal; Mica
K1544	2390-2400	1.73	80% Claystone, as above 10% Sandstone, as above 10% Marl/Claystone, as above sm.am Pyrite; Coal; Mica

IKU No.	Depth	TOC	Lithology
K1545	2400	2.16	75% Claystone, as above, laminated 10% Marl/Claystone, (silty) as above 15% Sand/Sandstone, as above sm.am Pyrite; Mica; Considerably contaminated by cement
K1580	2405- 20	1.31	90% Claystone, grey, brownish (partly very micaceous and silty) 5% ?Siderite, brown 5% Claystone/Marl, as above sm.am Sandstone; Pyrite; Mica
K1581	2420- 35	1.51	100% Claystone, grey, brownish sm.am Sandstone, as above; Pyrite; Mica; ?Siderite, light brown to brown; Marl/Claystone, as above
K1582	2435- 50	1.62	50% Claystone, as above 50% Sand/Sandstone, white, subangular, fine to very fine sm.am Pyrite; Coal; Mica; Marl, brownish white to light brown
K1583	2450- 65	1.48	80% Claystone, as above 10% Marl, silty, sandy, white to light grey and light brown 10% Sandstone, white, subangular, fine, to very fine, slightly micaceous sm.am Pyrite; Coal; Mica; Siderite, brown
K1584	2465- 80	1.24	70% Claystone, as above 30% Marl, as above, some brown sm.am Sand, white, subrounded, coarse; Pyrite, Mica

IKU No.	Depth	TOC	Lithology
K1585	2480- 95	1.52	50% Claystone, as above 40% Sand/Sandstone, white to grey, light brown subrounded, very fine - fine, some coarse 10% Marl to Limestone, white to grey and brown (?Siderite) sm.am Coal; Pyrite; Mica,
K1586	2495-2510	2.34	15% Claystone, as above 15% Sandstone, white, subrounded, very fine to fine 70% Coal sm.am Marl/Limestone, white to brown; Mica
K1587	2510- 25	1.04	60% Claystone, as above 5% Coal 25% Sandstone, white, grey, light brown, subrounded, fine to very fine 10% Marl to Limestone, sandy/silty, light grey to brown, (?Siderite) sm.am Pyrite; Mica
K1588	2525- 40	1.54	40% Claystone, as above, partly sandy 50% Sandstone, white to grey and light brown 10% Marl to Limestone, as above, very fine to fine, some coarse sm.am Coal; Pyrite;
K1589	2540- 55	1.67	20% Claystone, partly silty and micaceous, grey some light brown (silty/sandy, calcareous) 70% Sand, white, subangular-angular, coarse to fine sm.am Pyrite; Limestone/Marl, white, silty very fine Sandstone, light grey, micaceous, Mica; ?Siderite, brown
K1590	2555- 70	0.90	30% Claystone, as above 70% Sand, white, subrounded, coarse to medium, some very fine to fine, Sandstone, light grey sm.am Pyrite; Coal; Limestone, white; Mica

IKU No.	Depth	TOC	Lithology
K1591	2570- 85	3.74	15% Claystone, as above, light greybrown 3% Coal & carbonaceous Claystone, dark brown to black, Coal-lamina in carbonaceous Claystone, Pyrite 82% Sand, white, subangular to angular, medium to coarse, some very coarse sm.am Marl/Limestone, white; Pyrite; Mica
K1592	2585-2600	2.13	10% Claystone, as above 90% Sand, as above sm.am carbonaceous Claystone/Coal; Limestone, white Pyrite; Mica
K1593	2600- 15	2.44	100% Sand, white, subangular/angular, coarse-medium, some very coarse sm.am carbonaceous Claystone/Coal; Claystone, grey (Silt, scattered Sand grains), some light brown; Mica
K1594	2615- 30	1.71	95% Sand, as above, very coarse and gravel 5% carbonaceous Claystone/Coal, dark brown to black, sandy, Claystone, grey sm.am Pyrite
K1595	2630- 45	4.67	70% carbonaceous Claystone, dark grey and dark brown, with Coal, and Claystone, light greybrown to greybrown (wavy), with Coal-lenses 30% Sand, white, subangular (very) coarse to medium sm.am Claystone, grey, with Silt-lamina; Coal; Pyrite; micaceous Silt/Sandstone, light grey
K1596	2645- 60	2.81	85% Sand, coarse-medium, some very coarse 15% Claystone, silty, grey, dark, grey (silty, micaceous), light brown-greybrown, dark (carbonaceous) sm.am Coal; Pyrite; Mica

IKU No.	Depth	TOC	Lithology
K1597	2660- 75	4.26	5% Claystone, grey, greybrown 93% Sand, as above 2% Carb, Shale, with Coal sm.am Pyrite; Coal; Sandstone, calcareous, white, fine, ?Siderite, brown
K1598	2675- 90	1.54	20% Claystone, brown (with Coal)- grey (micaceous, silty), dark grey (with Coal) 80% Sand, coarse to medium, subangular/angular, with light brown Siderite Sand sm.am Coal; Pyrite; Sandstone, calcareous, white, fine
K1599	2690-2705	1.49	20% Claystone, greybrown (waxy) (scattered Sand grains and Coal fragments) to grey 80% Sand, as above with subrounded light brown Siderite grains sm.am Carb. Claystone; Pyrite; Coal; Mica; Chlorite, green
K1600	2705- 20	1.06	20% Claystone, grey, light dark, light brown (waxy)/ greybrown, some dark grey 80% Sand, white, subangular, coarse to medium, with Siderite Sand sm.am Pyrite; Coal
K1601	2720- 35	4.64	3% Claystone, as above 97% Sand, white, medium to coarse, angular/subangular, some very coarse sm.am Coal
K1602	2735- 50	0.94	10% Claystone, grey to greybrown, carbonaceous Claystone/Coal 90% Sand, as above, some Siderite Sand sm.am Coal; Pyrite;

IKU No.	Depth	TOC	Lithology
K1603	2750- 65	1.77	4% Claystone, grey (partly micaceous, silty, with Coal) 91% Sand, as above, some very coarse and Gravel 5% Coal, and Carbonaceous Claystone sm.am Pyrite; Mica
K1604	2765- 80	2.51	30% Claystone, greybrown-grey 70% Sand, as above sm.am Pyrite; Coal and carbonaceous Claystone; Mica
K1605	2780- 95	1.32	5% Claystone, as above, partly silty, with Coal-fragments; carbonaveous Claystone/Coal 95% Sand, white, medium-coarse, subangular, Siderite Sand observed sm.am Pyrite
K1606	2795-2810		5% Claystone, as above 95% Sand, white, subangular medium-coarse, some very coarse sm.am Coal! Pyrite; light brown Siderite Sand
K1607	2810- 25	0.88	70% Claystone, redbrown, browngrey, light green, yellow, grey (silty, micaceous) 30% Sand, medium-coarse, very coarse, sm.am carb. Claystone; Coal; Pyrite; Marl, white
K1608	2825- 40	4.61	70% Claystone, redbrown/brown, brownish, grey, yellow, white (silty),light green 30% Sandstone, white, silty, very fine-fine, calc, some medium to coarse Sand sm.am Pyrite; Coal; Marl; Mica
K1609	2840- 55	0.33	50% Claystone, as above, redbrown, partly silty/sandy and calc 50% Sandstone, as above, also medium sm.am Pyrite; Mica; Marl, white

IKU No.	Depth	TOC	Lithology
K1610	2855- 70	0.89	50% Claystone, redbrown/brown (silty, sandy, calc partly), yellow, grey, light green, white (calc) 50% Sand, white subangular coarse - medium sm.am coalified & pyritized wood; Pyrite; Coal; Mica
K1611	2870- 85	0.52	30% Claystone, redbrown, grey-browngrey, some yellow, green 70% Sandstone (some calc) and some Sand, white, subangular, fine to coar-e sm.am Coal; Pyrite; Mica
K1612	2885- 2900	0.32	60% Claystone, as above, some slightly sandy, white (calcareous) 40% Sand/Sandstone, white, subangular, coarse - fine sm.am Pytire; Coal; Mica

TABLE III

WEIGHT (mg) OF EOM AND CHROMATOGRAPHIC FRACTIONS

Sample	Depth(m	Rock extracted (g)	EOM	Sat.	Aro.	HC	Non HC	TOC
-1497	1580 - 1610	35,3	22,3	2,2	7,1	9,3	5,0	3,08
-1513	1925 - 40	100,1	439,0	167,7	157,1	324,8	49,4	1,39
-1519	2015 - 30	66,4	307,3	121,1	42,0	163,1	107,2	1,90
-1531	2195 - 2210	29,9	110,1	22,8	38,6	61,4	29,3	2,67
-1535	2255 - 70	33,1	93,6	20,0	26,7	46,7	15,7	1,59
-1545	2400 - 2415	81,2	89,7	14,5	30,4	44,9	16,1	2,16

TABLE IV

CONCENTRATION OF EOM AND CHROMATOGRAPHIC FRACTIONS (Weight ppm of rock)

IKU No.	Depth (m)	EOM	SAT	Aro	HC	Non HC
K-1597	1580 - 1010	632,-	62,-	201,-	263,-	142,-
K-1513	1925 - 40	4386,-	1675,-	1569,-	3245,-	494,-
K-1519	2015 - 30	4628,-	1824,-	633,-	2456,-	1614,-
K-1531	2195 - 2210	3682,-	763,-	1291,-	2054,-	980,-
K-1535	2255 - 70	2828,-	604,-	807,-	1411,-	474,-
K-1545	2400 - 15	1105,-	179,-	374,-	533,-	198,-

TABLE V

CONCENTRATION OF EOM AND CHROMATOGRAPHIC FRACTIONS (mg/g/TOC).

IKU No.	Depth (m)	EOM	SAT	Aro	Total hydrocarb.	Non hydrocarb.
K-1497	1580 - 1610	21,-	2,-	7,-	9,-	5,-
K-1513	1925 - 40	316,-	121,-	113,-	233,-	36,-
K-1519	2015 - 30	244,-	96,-	33,-	129,-	85,-
K-1531	2195 - 2210	138,-	29,-	48,-	77,-	37,-
K-1535	2255 - 70	178,-	38,-	51,-	89,-	30,-
K-1545	2400	51,-	8,-	17,-	26,-	9,-

TABLE VI

COMPOSITION IN % OF THE MATERIAL EXTRACTED FROM THE ROCK

IKU No.	Depth (m)	Sat / EOM	Aro / EOM	HC / EOM	Sat / Aro	Non HC / EOM	HC / Non HC
K-1497	1580 - 1610	10,-	32,-	42,-	31,-	22,-	186,-
K-1513	1925 - 40	38,-	36,-	74,-	107,-	11,-	657,-
K-1519	2015 - 30	39,-	14,-	53,-	288,-	35,-	152,-
K-1531	2195 - 2210	21,-	35,-	56,-	59,-	27,-	210,-
K-1535	2255 - 70	21,-	29,-	50,-	75,-	17,-	297,-
K-1545	2400	16,-	34,-	50,-	48,-	18,-	279,-

TABLE VII

TABULATION OF DATAS FROM THE GASCHROMATOGRAMS

IKU No.	Depth (m)	Pristane/nC_{17}	Pristane/Phytane	CPI
K-1497		0.72	1.55	N.D.P.
K-1513		1.16	1.57	1.0
K-1519		0.58	1.71	1.0
K-1531		o.55	1.50	1.0
K-1535		0.57	1.55	1.0
K-1545		0.90	2.00	1.75

TABLE VIII -

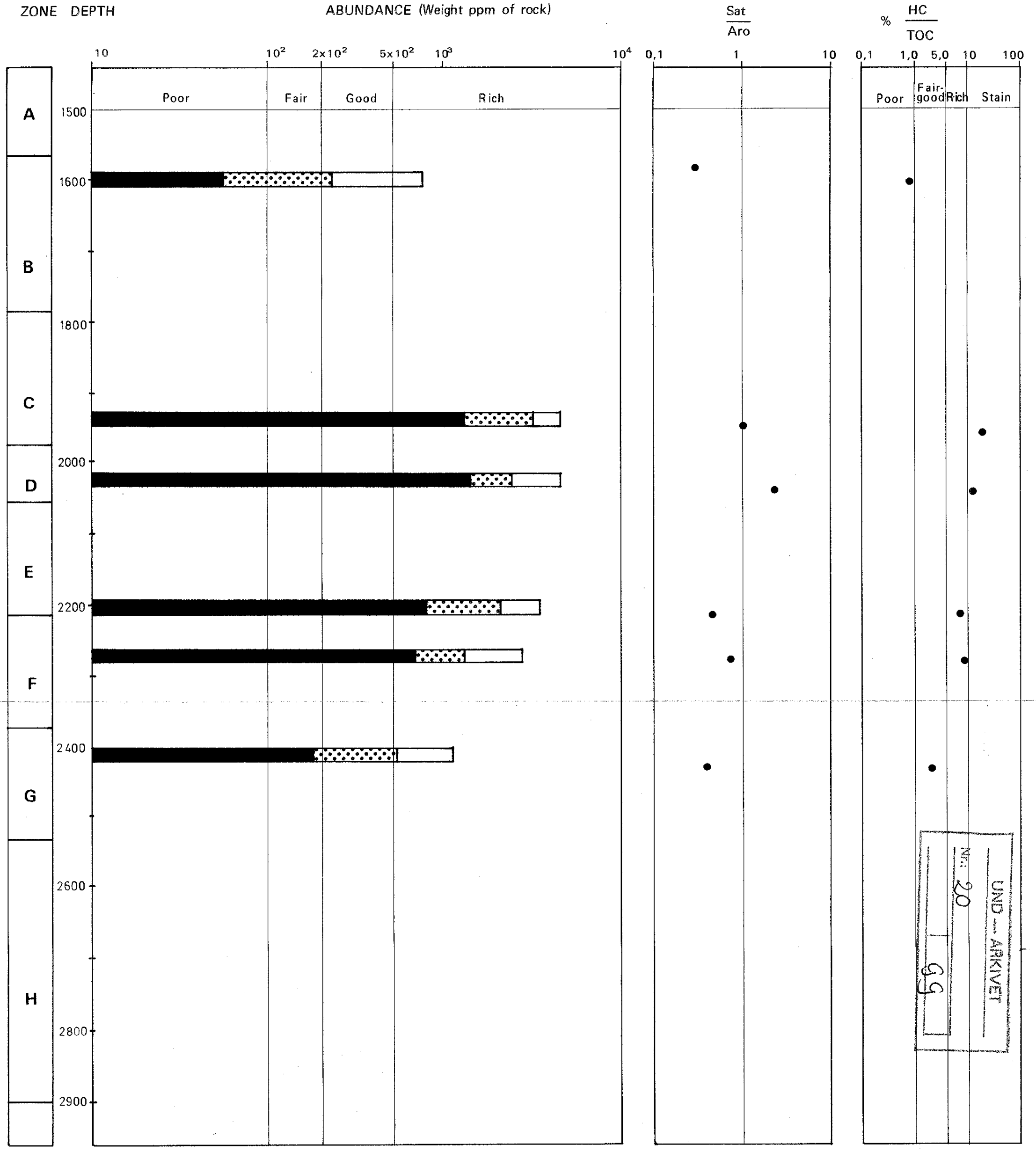
VITRINITE REFLECTANCE AND VISUAL KEROGEN MEASUREMENTS

Depth (m)	Vitrinite reflectance	Color index	Type of organic matter
1460 - 1490	30 40 50 70 80 90	H/2-	Am, Cysts/Coal R!/Mud add., W, Poll-spor
1520 - 1550	0,33(21)		
1580 - 1610		H/2-	Am/He, Coal R!/Mud add.
1640 - 1670		2-	Am, Cysts/W, Coal R!, Poll-spor
1723	0.39(12)		
1760 - 1790		2-	Coal R!, W, Poll-spor/Am, Cysts
1865 - 1880	0,32(8)	2-	Am, Cysts/Coal R!, He, Pollen
1955 - 1970		2-/2	Am, Cysts/He, Coal R!, Pollen
2001	0.45(20)		
2075 - 2090		2-	Am, He, Coal R! mud add
2108.5	0,48(20)		
2165 - 2180		2-/2	Am/He,W, Coal R!
2191	/.45(20)		
2255 - 2270		2/2+	Am, Cysts/He, W
2278	0.37(5)		
2345 - 2360		2	Am, Cysts/He, Cut, W Poll-spor
2385	0.33(20)		
2465 - 2480		2	Cut, W, He, Coal R!, Pollen/Am, Cysts
2431	0,39(20)		
2555 - 2570		2	W, Cut, He, Coal R!, Pollen/Am, algae
2582	0.51(20)		
2645 - 2660	0,50(23)	2	W, Cut, He, Poll-spor/Am, Cysts
2750 - 2765		2	W, He, Poll spor/Am, Cysts
2750 - 2765		2/2+	W, He, Poll-spor/Am
2810 - 2825	0,44(20)	2	Am/He, Cut, W, C, Poll-spor
2884	NDP		
2885 - 2900		-	Am, He

C_{15}^{+} HYDROCARBONS

Presentation of Analytical Data

30/6-2



Sat. Aro. NSO Asp

Sat: Saturated Hydrocarbons
Aro: Aromatic Hydrocarbons
NSO: Nitrogen, Sulphur and Oxygen containing compounds

Asp: Asphaltenes
HC: C_{15} Hydrocarbons
TOC: Total Organic Carbon

C_{15}^{+} SATURATED HYDROCARBONS

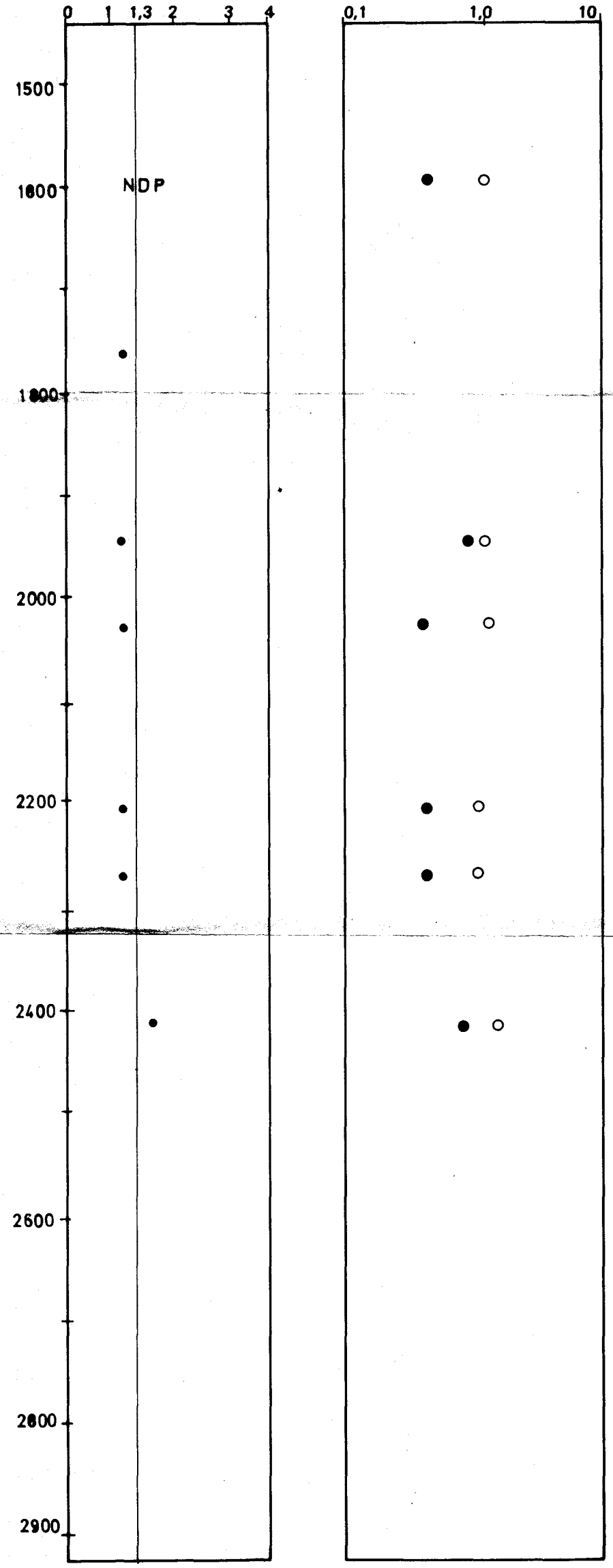
30/6-2

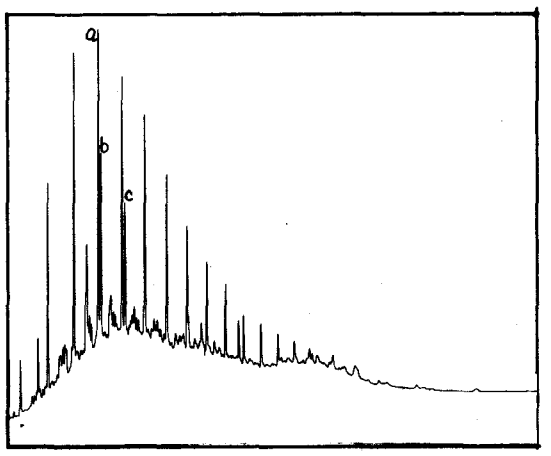
DEPTH

CPI

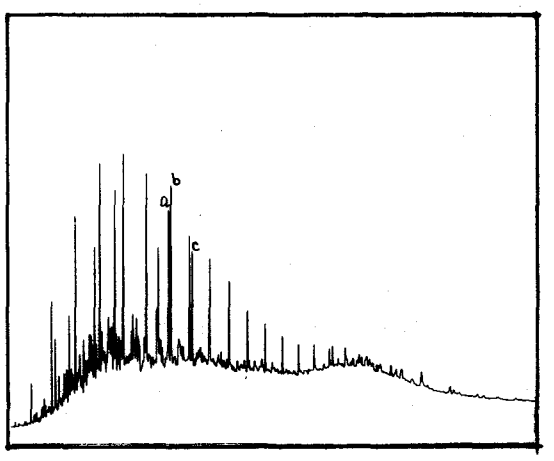
● PRISTANE / nC_{17}

○ PRISTANE / PHYTANE

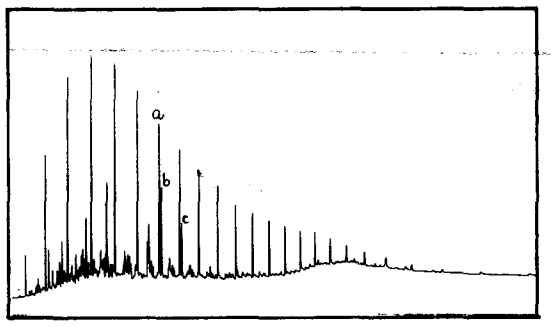




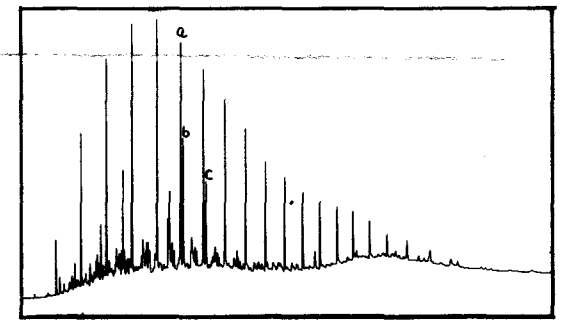
1580 - 1610



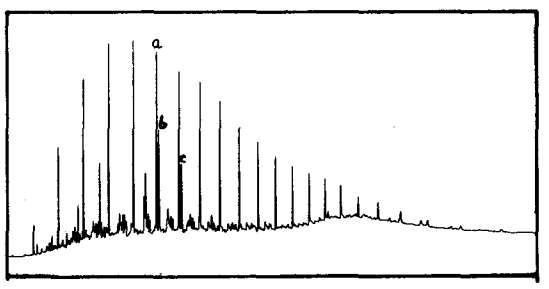
1925 - 40



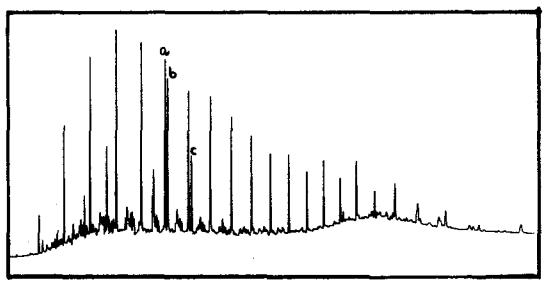
2015 - 30



2195 - 2210



2255 - 70



2400 - 15

a = nC_{17}
b = Pristane
c = Phytane

NDP — No determination possible.

30/6 - 2

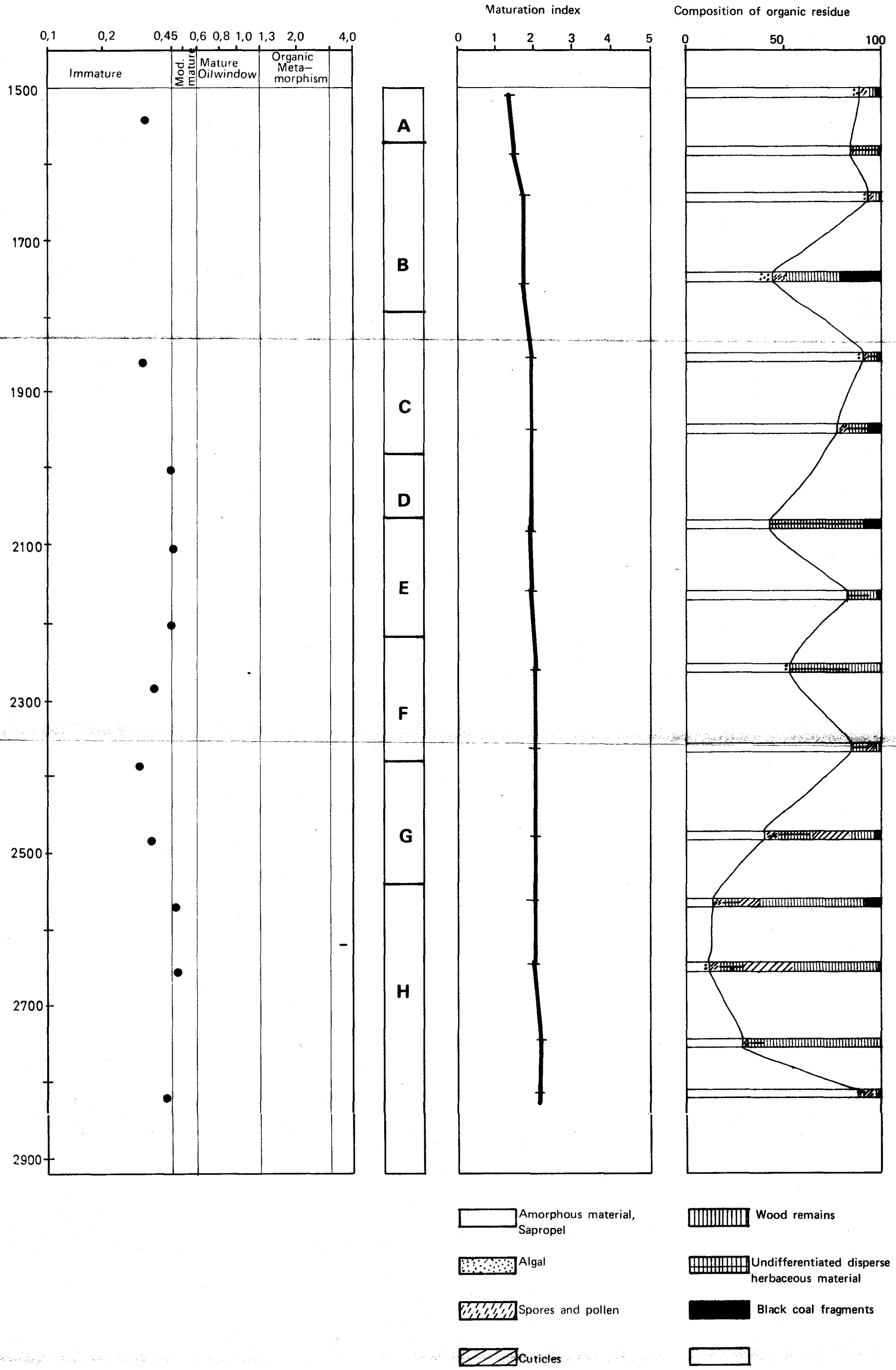
MATURATION

DEPTH

VITRINITE REFLECTANCE

ZONE

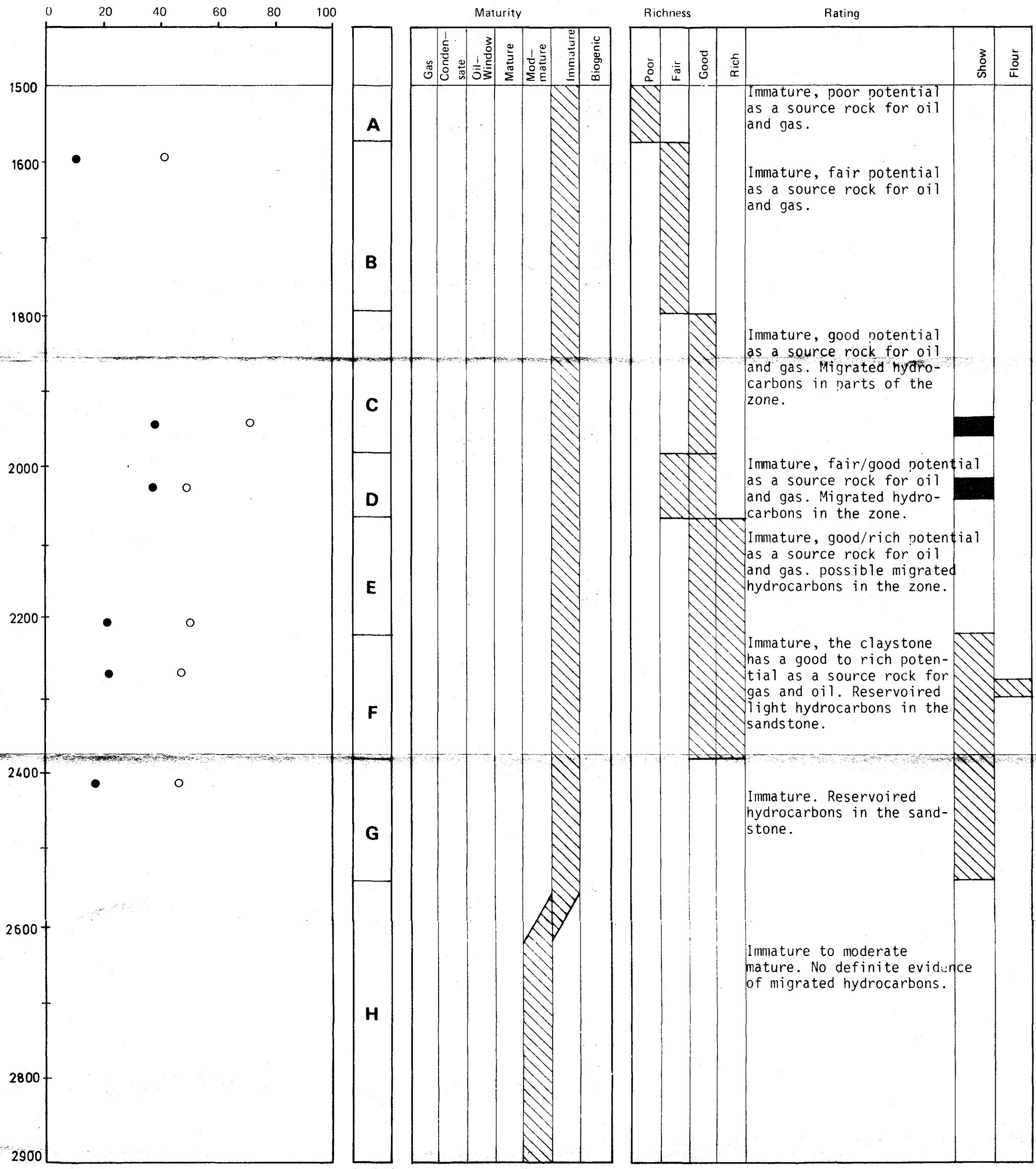
VISUAL KEROGEN
COLORATION AND COMPOSITION OF ORGANIC RESIDUE



INTERPRETATION DIAGRAM

30/6-2

DEPTH — MATURATION C_{15}^{+} FRACTION — ZONE — RATING — SUMMARY OF SOURCE POTENTIAL

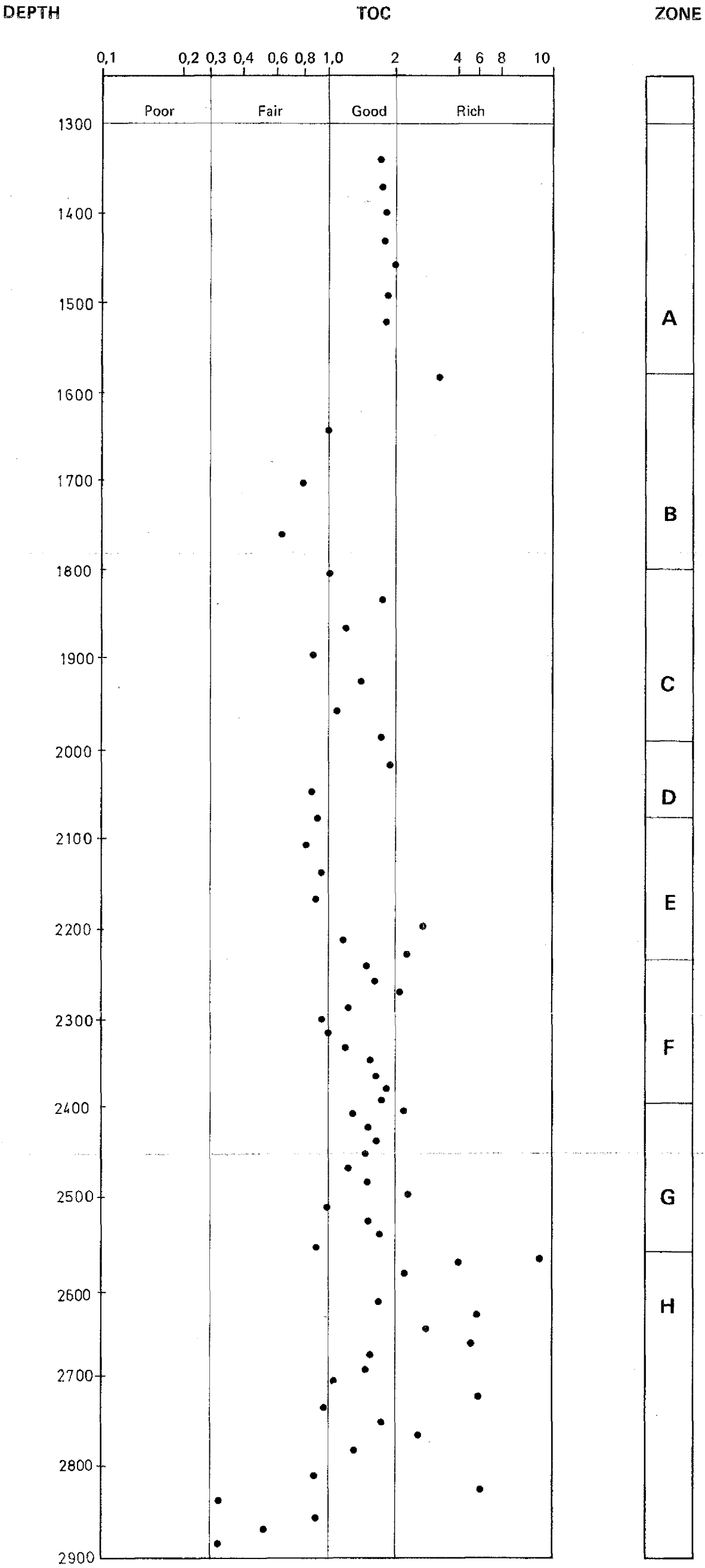


Sat: Saturated Hydrocarbons
HC: Hydrocarbons
EOM: Extractable Organic Matter

30/6-2

TOTAL ORGANIC CARBON (TOC)

Presentation of Analytical Data



$C_1 - C_7$ HYDROCARBONS
Presentation of Analytical Data