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Geochemical investigation of a core samples from
wells 205/9-1, SF104A and SF254A, United Kingdom

by

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**KONINKLIJKE/SHELL EXPLORATIE EN PRODUKTIE LABORATORIUM
RIJSWIJK, THE NETHERLANDS**

(Shell research B.V.)

CONTENTS

	page
1. Introduction	1
2. Conclusions	1
3. Correlations	2
3. Geochemical parameters	
Summary of the analytical data	3
Bar diagram of normal alkanes & isoprenoids	6
GCMS sterane typing	9
GCMS triterpane typing	12
4. Analytical data (3x)	
Gas chromatogram of the whole crude	
Gross composition	
Sterane fragmentogram	
Triterpane fragmentogram	

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Geochemical investigation of a core samples from wells 205/9-1, SF104A and SF254A, United Kingdom

1.0 Introduction

A geochemical investigation has been carried out on the following three extracts from the United Kingdom (request telex ref. ABX 016350 of 04.07.94):

- 205/9-1, core, 3468.45+3471.55+3471.80 m, Late Palaeocene;
- SF104A, depth 1.00 m, shallow corehole;
- SF245A, depth 0.8 m, shallow corehole.

Biostrat. analysis have shown abundant Middle Jurassic reworking in the shallow corehole samples.

The geochemical parameters are shown on pages 2 to 14, analysis results are presented on the yellow pages.

2.0 Conclusions

1. Transformation processes

All three samples show low organic carbon contents, high amounts of saturates in the gross composition and low amounts of extract, indicating that they classify only as very lightly impregnated with hydrocarbons.

2. Maturity

The biomarker distributions (sterane isomerisation features) show that the impregnation from 205/9-1 has a mature character, while the impregnations from SF104A and SF245A are only marginally mature.

3. Environment of deposition / Type of organic matter

All three extracts have been derived from shaly source rocks (high amounts of rearranged steranes, low C29/C30 triterpane ratio), that contained predominantly structureless organic matter (biomarker distributions), most likely deposited in a marine environment (bisnorhopane). The slight C29-predominance could suggest some landplant input.

4. Correlation

All three impregnations type rather similar, apart from the maturity difference between 205/9-1 and the corehole samples SF104A and SF245A.

A comparison has been carried out with the previously described crudes from the West Shetlands. The carbon isotopes and the (slight) C29-sterane predominance of the three impregnations are slightly different from those of the West Shetland crudes. Moreover, 25-nor-hopanes are also absent in the impregnations. Since the impregnations do not match exactly the oils, it is very well possible that they have been generated locally, while the oils represent larger source rock intervals or various source rocks.

A comparison with specific source rocks will be presented in a separate report.

Correlation table
wells 205/9-1, SF104A and SF254A, United Kingdom

	205/09-01 3468.45 m. S167883/ 2	SF104A CORE HOLE -- S168006/ 1	SF245A CORE HOLE -- S168007/ 1
Pristane/Phytane	1.5	0.7	0.1
Pristane/n-C17	0.6	0.8	0.6
Phytane/n-C18	0.3	0.9	3.9
STERANES/TRITERPANES:			
iso-steranes	36	41	42
rearranged steranes	44	39	33
triterpanes	20	20	25
STERANE CONVERSION DIAGRAM:			
iso-steranes	41	43	46
rearranged steranes	34	28	24
normal steranes	25	29	30
STERANE CARBON NUMBER:			
C27 steranes	31	31	24
C28 steranes	28	27	31
C29 steranes	41	42	45
3R/3R+5R terpanes	0.19	0.12	0.11
Ts/Tm	0.79	0.53	0.68
20S/20(R+S) C29 steranes	0.44	0.37	0.41
iso/(iso+normal) C29 steranes	0.60	0.53	0.60
Carbon isotope ratios (per mil):			
total oil	-28.1	-28.6	-28.8
saturates	no data	no data	no data
aromatics	no data	no data	no data

Summary of the Geochemical Data of the extract from well 205/09-01 (3468.45 m.), United Kingdom

Gravity and Gross Composition

% Extract :	0.02
% TOC after extract :	0.1
Extract/TOC :	0.20
Gross Composition (W%)	
Saturates :	30
Aromatics :	4
Heterocompounds :	65
Rest (High molecular) :	1
Sulphur (%) :	no data
Vanadium (ppm) :	no data
Nickel (ppm) :	no data

Saturates Distributions (Gaschromatography)

Pristane / Phytane :	1.5
Pristane / n-C17 :	0.6
Phytane / n-C18 :	0.3
ACI :	11
Corr. Coeff. :	-0.8828

C-7 Distributions (Gaschromatography)

C-7 Alkanes (%)	
Normal C-7 :	no data
Mono Branched :	
Poly Branched :	
C-7 Alkanes / Cyclo Alkanes (%)	
Normal C-7 :	no data
Cyclo Alkanes :	
Branched Alkanes :	
C-7 Alk. / Cyclo Alk. / Aromatics (%)	
Alkanes :	no data
Cyclo Alkanes :	
Aromatics :	

Carbon Isotope Ratios (Mass Spectrometry)

Total Sample (topped) :	-28.1
Saturates :	no data
Aromatics :	no data

Distribution of Ring Compounds

(Field Ionisation Mass Spectrometry)

C-15 Ring Compounds (%)	
1 ring :	no data
2 ring :	
3 ring :	
C-30 Ring Compounds (%)	
3 ring :	no data
4 ring :	
5 ring :	
C-29 VR/E :	no data

Sterane and Triterpane Distributions

(Gaschromatography / Mass Spectrometry)

Steranes/Triterpanes (%)	
Iso Steranes :	36
Rearranged Steranes :	44
Triterpanes :	20
Steranes (%)	
Iso Steranes :	41
Rearranged Steranes :	34
Normal Steranes :	25
Triterpanes (%)	
C-30 Hopanes :	100
Oleanane ($\alpha + \beta$) :	0
W + T :	0
Steranes Carbon No. Dist. (%)	
C-27 :	31
C-28 :	28
C-29 :	41
C-29 Sterane Ratios	
20S / 20R + 20S :	0.44
Iso / Iso + Normal :	0.60
Triterpane Ratios	
TS / TM :	0.79
3R / 3R + 5R :	0.19

Summary of the Geochemical Data of the extract from well SF104A CORE HOLE (1 m.), United Kingdom

Gravity and Gross Composition

% Extract :	0.04
% TOC after extract :	0.4
Extract/TOC :	0.10
Gross Composition (W%)	
Saturates :	24
Aromatics :	14
Heterocompounds :	58
Rest (High molecular) :	4
Sulphur (%) :	no data
Vanadium (ppm) :	no data
Nickel (ppm) :	no data

Saturates Distributions (Gaschromatography)

Pristane / Phytane :	0.7
Pristane / n-C17 :	0.8
Phytane / n-C18 :	0.9
ACI :	3
Corr. Coeff. :	-0.2970

C-7 Distributions (Gaschromatography)

C-7 Alkanes (%)	
Normal C-7 :	no data
Mono Branched :	
Poly Branched :	
C-7 Alkanes / Cyclo Alkanes (%)	
Normal C-7 :	no data
Cyclo Alkanes :	
Branched Alkanes :	
C-7 Alk. / Cyclo Alk. / Aromatics (%)	
Alkanes :	no data
Cyclo Alkanes :	
Aromatics :	

Carbon Isotope Ratios (Mass Spectrometry)

Total Sample (topped) :	-28.6
Saturates :	no data
Aromatics :	no data

Distribution of Ring Compounds

(Field Ionisation Mass Spectrometry)

C-15 Ring Compounds (%)

1 ring :	no data
2 ring :	
3 ring :	

C-30 Ring Compounds (%)

3 ring :	no data
4 ring :	
5 ring :	

C-29 VR/E :	no data
-------------	---------

Sterane and Triterpane Distributions

(Gaschromatography / Mass Spectrometry)

Steranes/Triterpanes (%)

Iso Steranes :	41
Rearranged Steranes :	39
Triterpanes :	20

Steranes (%)

Iso Steranes :	43
Rearranged Steranes :	28
Normal Steranes :	29

Triterpanes (%)

C-30 Hopanes :	100
Oleanane ($\alpha + \beta$) :	0
W + T :	0

Steranes Carbon No. Dist. (%)

C-27 :	31
C-28 :	27
C-29 :	42

C-29 Sterane Ratios

20S / 20R + 20S :	0.37
Iso / Iso + Normal :	0.53

Triterpane Ratios

TS / TM :	0.53
3R / 3R + 5R :	0.12

Summary of the Geochemical Data of the extract from well SF245A CORE HOLE, United Kingdom

Gravity and Gross Composition

% Extract :	0.03
% TOC after extract :	0.2
Extract/TOC :	0.15
Gross Composition (W%)	
Saturates :	38
Aromatics :	14
Heterocompounds :	46
Rest (High molecular) :	2
Sulphur (%) :	no data
Vanadium (ppm) :	no data
Nickel (ppm) :	no data

Saturates Distributions (Gaschromatography)

Pristane / Phytane :	0.1
Pristane / n-C17 :	0.6
Phytane / n-C18 :	3.9
ACI :	0
Corr. Coeff. :	0.0109

C-7 Distributions

(Gaschromatography)

C-7 Alkanes (%)	
Normal C-7 :	no data
Mono Branched :	
Poly Branched :	
C-7 Alkanes / Cyclo Alkanes (%)	
Normal C-7 :	no data
Cyclo Alkanes :	
Branched Alkanes :	
C-7 Alk. / Cyclo Alk. / Aromatics (%)	
Alkanes :	no data
Cyclo Alkanes :	
Aromatics :	

Carbon Isotope Ratios (Mass Spectrometry)

Total Sample (topped) :	-28.8
Saturates :	no data
Aromatics :	no data

Distribution of Ring Compounds

(Field Ionisation Mass Spectrometry)

C-15 Ring Compounds (%)

1 ring :	no data
2 ring :	
3 ring :	

C-30 Ring Compounds (%)

3 ring :	no data
4 ring :	
5 ring :	

C-29 VR/E :	no data
-------------	---------

Sterane and Triterpane Distributions

(Gaschromatography / Mass Spectrometry)

Steranes/Triterpanes (%)

Iso Steranes :	42
Rearranged Steranes :	33
Triterpanes :	25

Steranes (%)

Iso Steranes :	46
Rearranged Steranes :	24
Normal Steranes :	30

Triterpanes (%)

C-30 Hopanes :	100
Oleanane ($\alpha + \beta$) :	0
W + T :	0

Steranes Carbon No. Dist. (%)

C-27 :	24
C-28 :	31
C-29 :	45

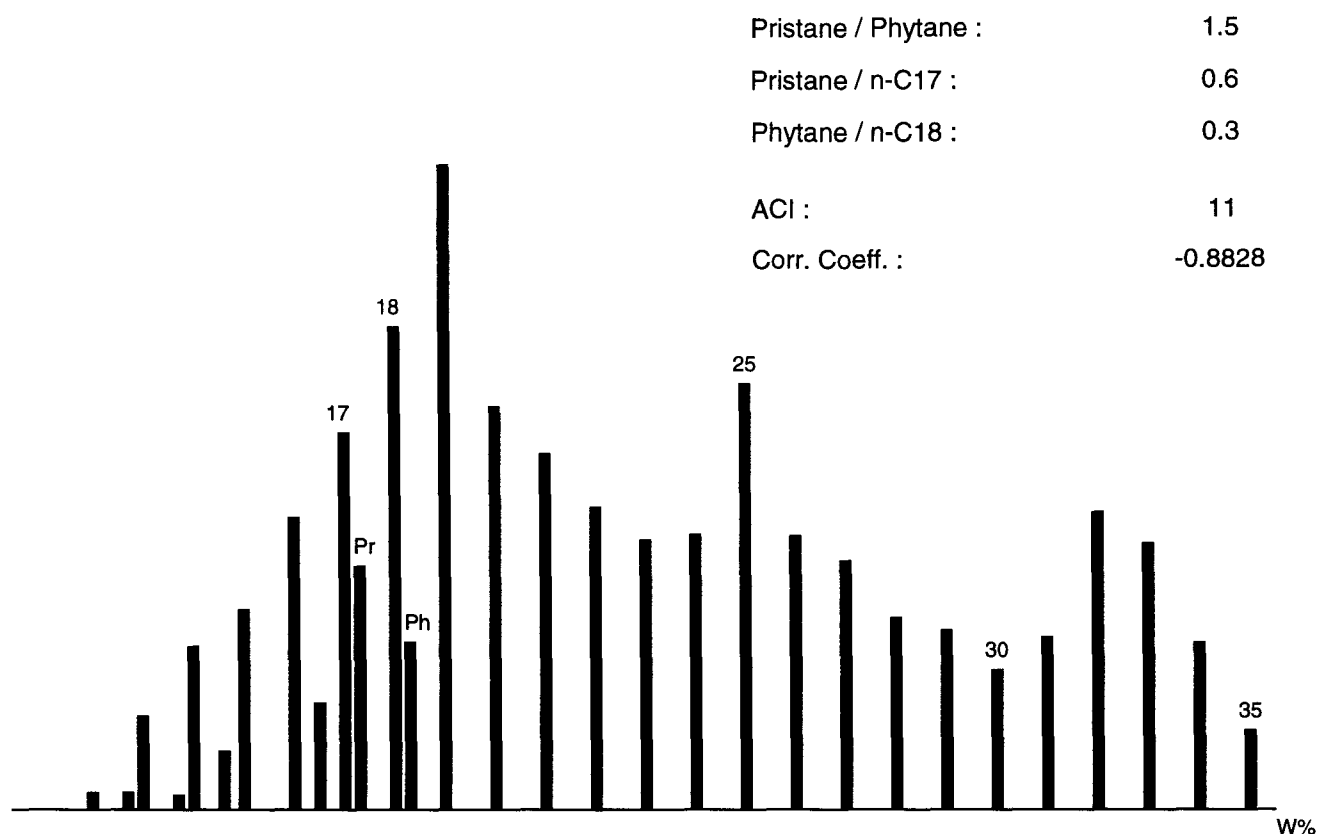
C-29 Sterane Ratios

20S / 20R + 20S :	0.41
Iso / Iso + Normal :	0.60

Triterpane Ratios

TS / TM :	0.68
3R / 3R + 5R :	0.11

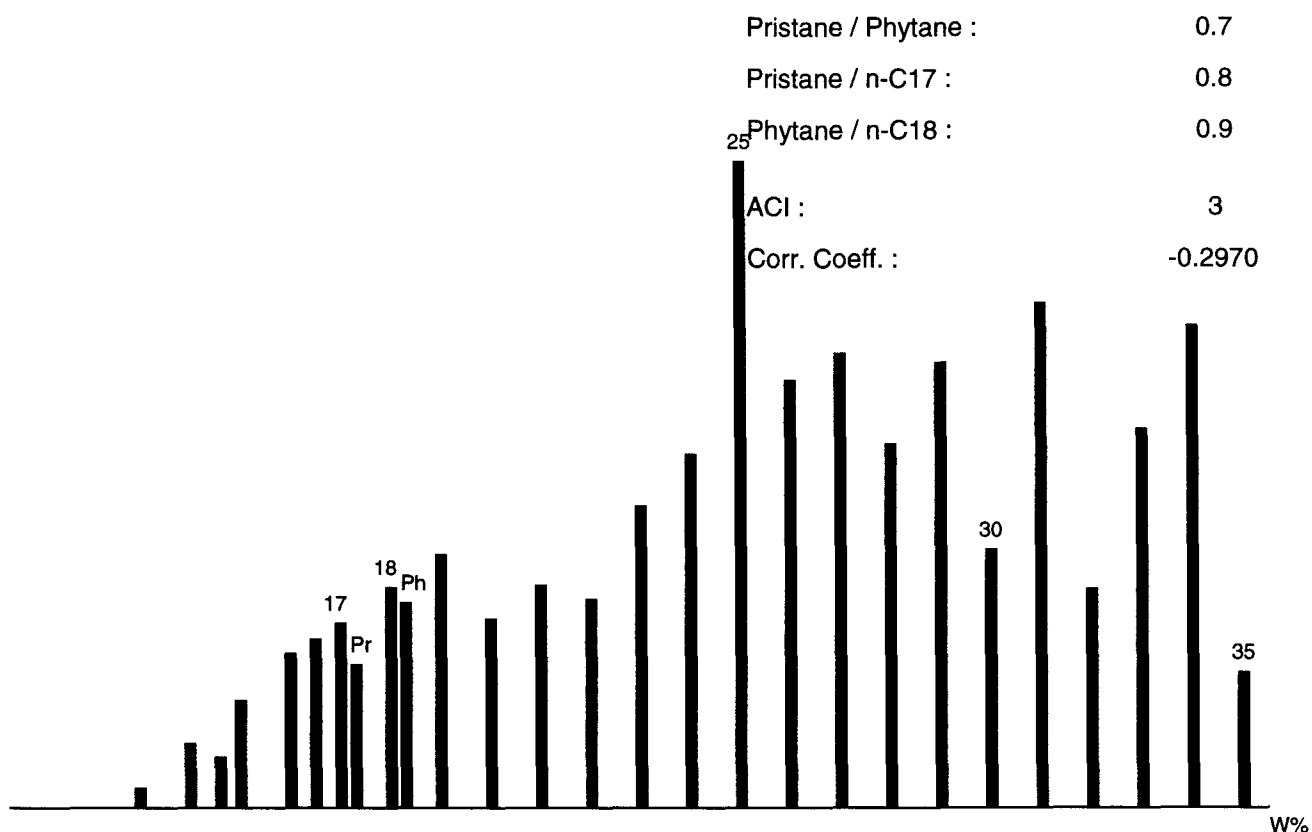
Bar diagram of Normal-alkanes & Isoprenoids of the extract from well 205/09-01 (3468.45 m.), United Kingdom



Conclusions based on saturated hydrocarbon fraction :

- 1 : the saturates show no indication of bacterial degradation
- 2 : the n-alkane distribution has a mature character
- 3 : the saturates indicate that the oil has been expelled from a source rock containing structureless organic matter with a small contribution of landplant matter

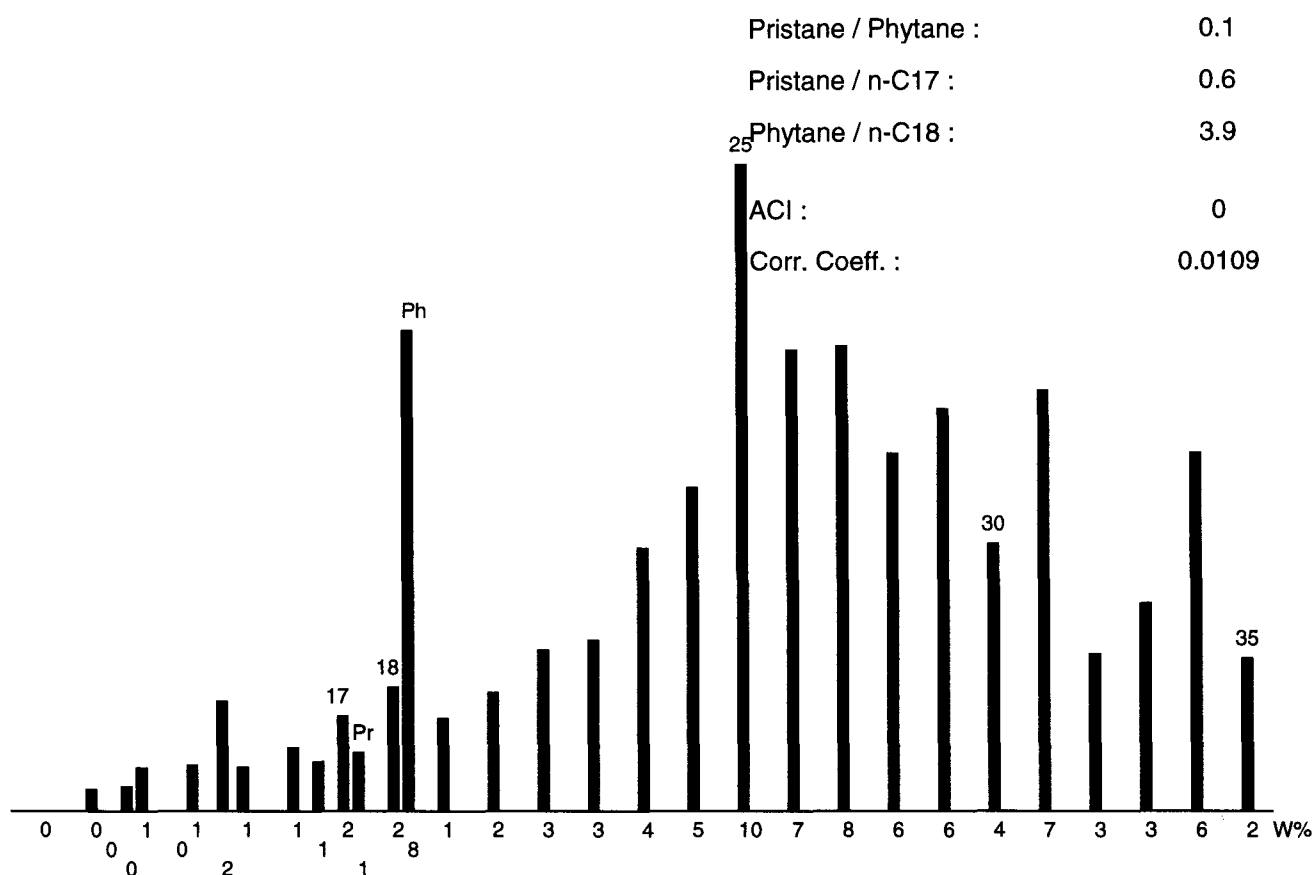
Bar diagram of Normal-alkanes & Isoprenoids of the extract from well SF104A CORE HOLE (1 m.), United Kingdom



Conclusions based on saturated hydrocarbon fraction :

- 1 : the saturates show no indication of bacterial degradation
- 2 : the n-alkane distribution has a low mature character
- 3 : the saturates indicate that the oil has been expelled from a source rock containing structureless organic matter with a substantial contribution of algal matter

Bar diagram of Normal-alkanes & Isoprenoids of the extract from well SF245A CORE HOLE, United Kingdom

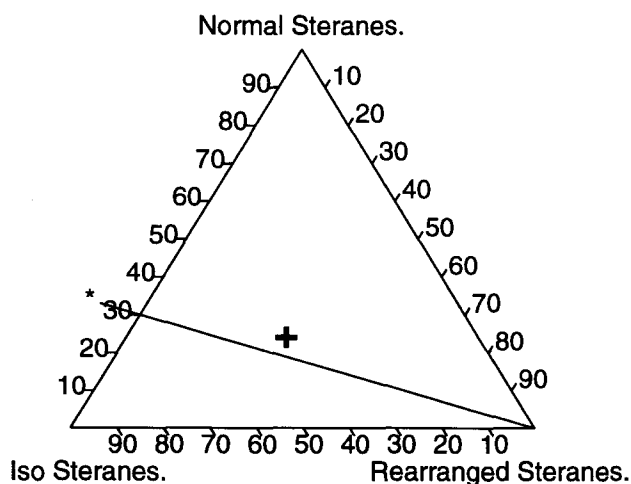


Conclusions based on saturated hydrocarbon fraction :

- 1 : the saturates show no indication of bacterial degradation
- 2 : the n-alkane distribution has a low mature character
- 3 : it is likely that the saturates indicate a carbonate source rock
- 4 : the saturates indicate that the oil has been expelled from a source rock containing structureless organic matter with a substantial contribution of algal matter

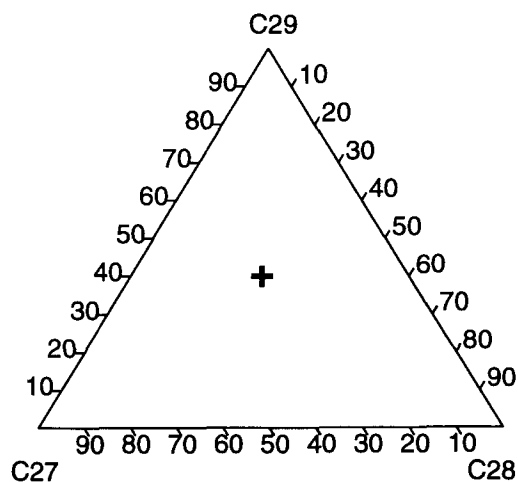
GCMS Sterane typing of the extract from well 205/09-01 (3468.45 m.), United Kingdom

Sterane Conversion Diagram

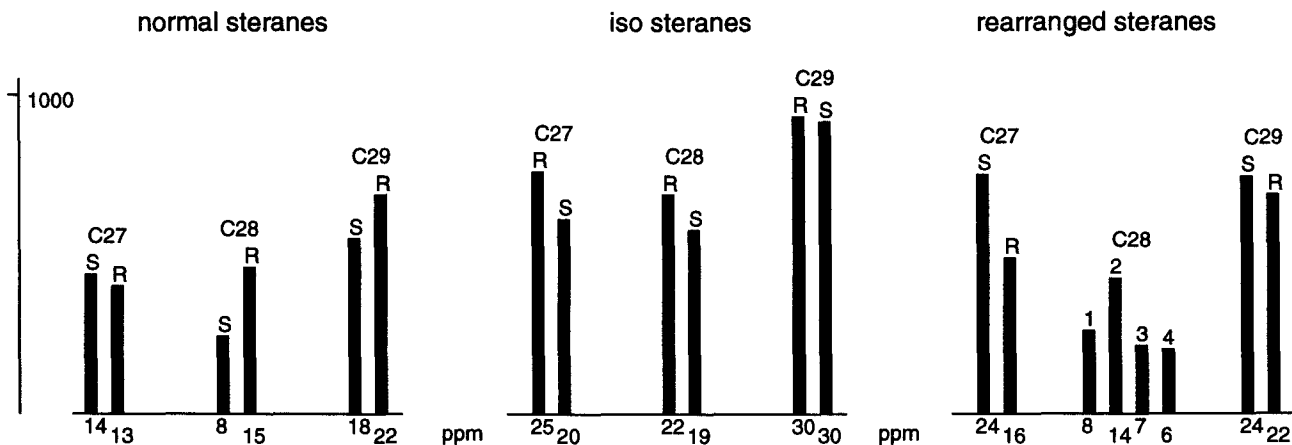


* The line of complete sterane isomerisation indicating a mature character

Sterane Typing Diagram



Sterane Distribution



STERANE DISTRIBUTION	(ppm)	(%)
Iso Steranes :	145	41
Rearranged Steranes :	122	34
Normal Steranes :	90	25

CARBON NUMBER DISTRIBUTION

C-27 :	112	31
C-28 :	99	28
C-29 :	146	41

C-29 STERANE CONVERSION RATIOS

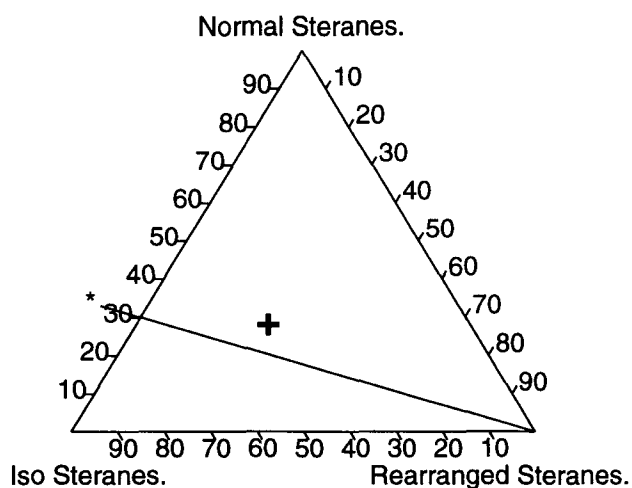
20S / 20R + 20S :	0.44
Iso / Iso + Normal :	0.60

Conclusions based on steranes :

- 1 : it is likely that the complete sterane isomerisation indicates that this oil has been expelled from a mature source rock
- 2 : it is likely that the steranes indicate a shaly source rock

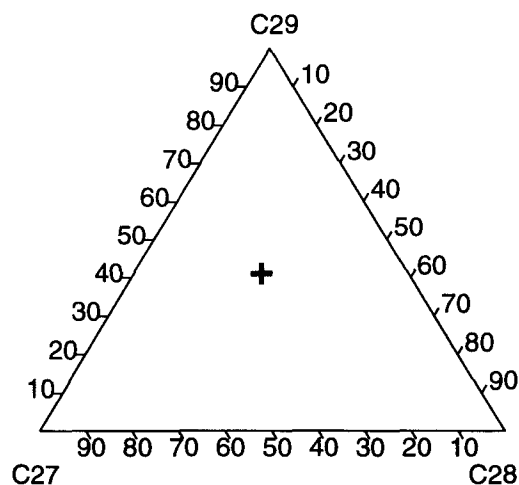
GCMS Sterane typing of the extract from well SF104A CORE HOLE (1 m.), United Kingdom

Sterane Conversion Diagram

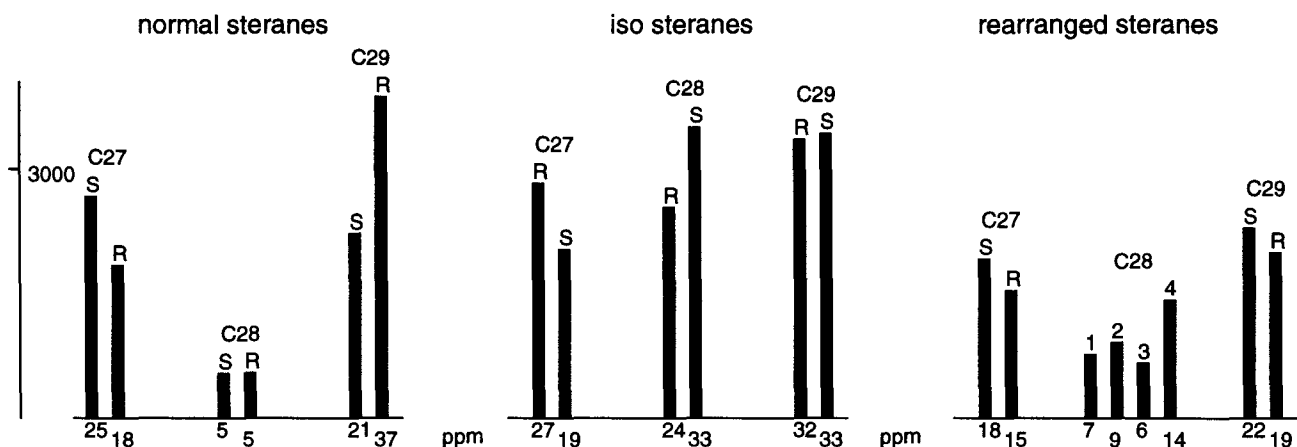


* The line of complete sterane isomerisation indicating a mature character

Sterane Typing Diagram



Sterane Distribution



STERANE DISTRIBUTION	(ppm)	(%)
Iso Steranes :	168	43
Rearranged Steranes :	110	28
Normal Steranes :	111	29

CARBON NUMBER DISTRIBUTION

C-27 :	122	31
C-28 :	104	27
C-29 :	163	42

C-29 STERANE CONVERSION RATIOS

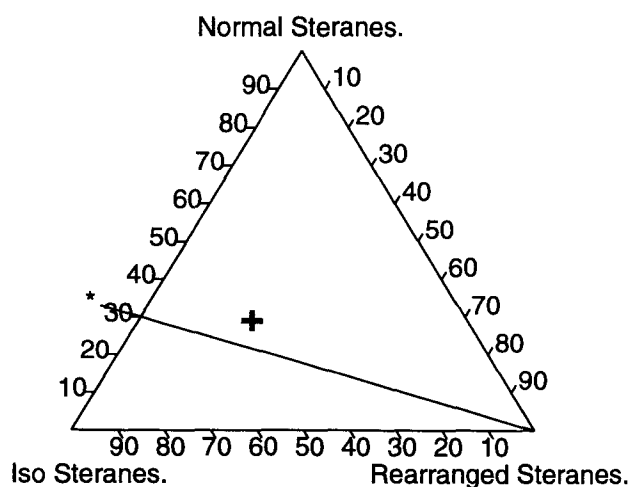
20S / 20R + 20S :	0.37
Iso / Iso + Normal :	0.53

Conclusions based on steranes :

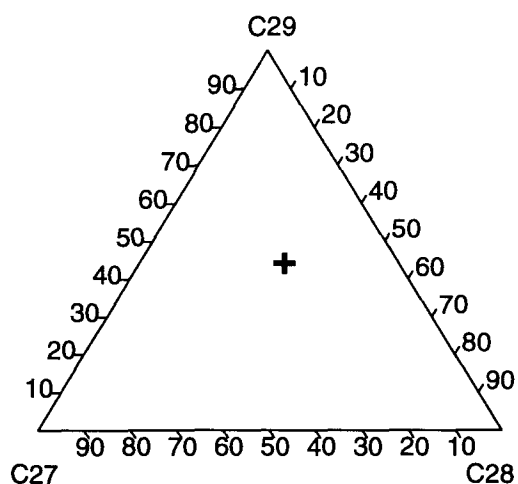
1 : the sterane distribution indicates an oil derived from a just-mature, shaly source rock.

GCMS Sterane typing of the extract from well SF245A CORE HOLE, United Kingdom

Sterane Conversion Diagram

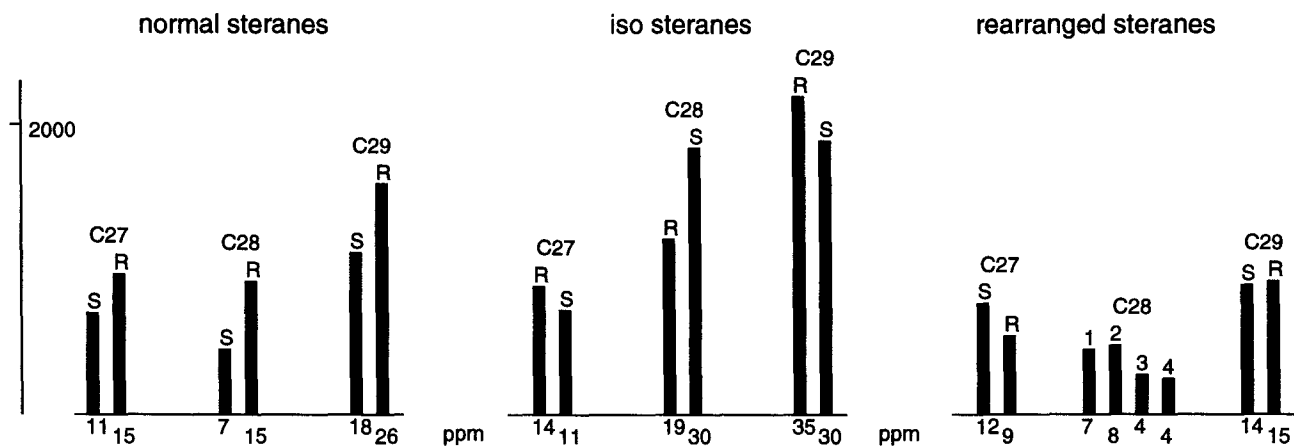


Sterane Typing Diagram



* The line of complete sterane isomerisation indicating a mature character

Sterane Distribution



STERANE DISTRIBUTION (ppm) (%)

Iso Steranes :	140	46
Rearranged Steranes :	73	24
Normal Steranes :	92	30

CARBON NUMBER DISTRIBUTION

C-27 :	73	24
C-28 :	94	31
C-29 :	138	45

C-29 STERANE CONVERSION RATIOS

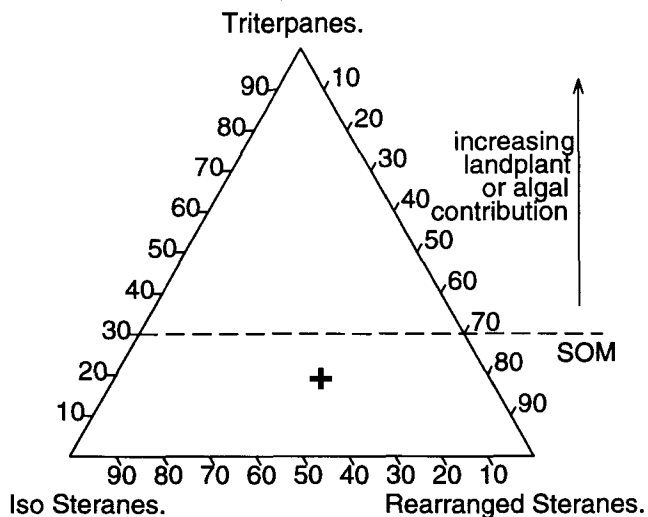
20S / 20R + 20S :	0.41
Iso / Iso + Normal :	0.60

Conclusions based on steranes :

1 : it is likely that the complete sterane isomerisation indicates that this oil has been expelled from a mature source rock

GCMS Triterpane typing of the extract from well 205/09-01 (3468.45 m.), United Kingdom

Sterane/Triterpane Diagram



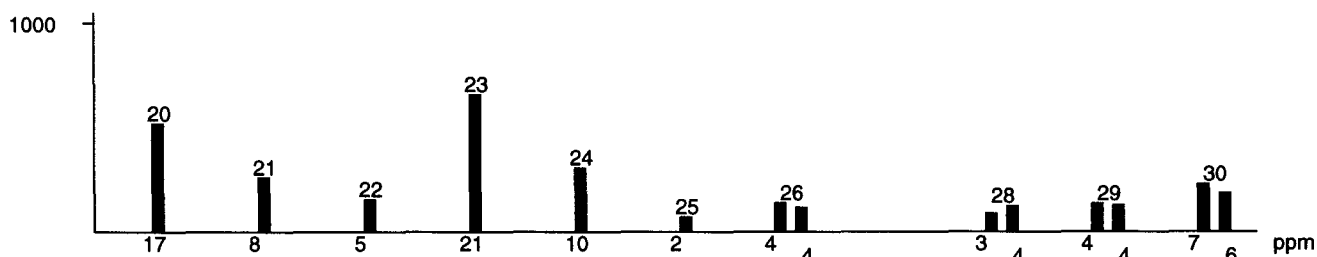
STERANES/TRITERPANES (calculated %)

Iso Steranes :	36
Rearranged Steranes :	44
Triterpanes :	20

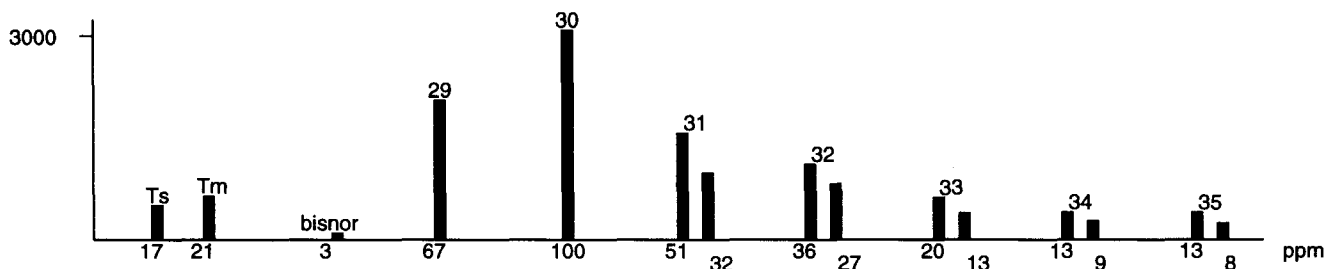
TRITERPANE CONVERSION RATIOS

TS / TM :	0.79
3R / 3R + 5R :	0.19
C30 Hopane (ppm) :	100

Tricyclic Terpanes



Pentacyclic Terpanes

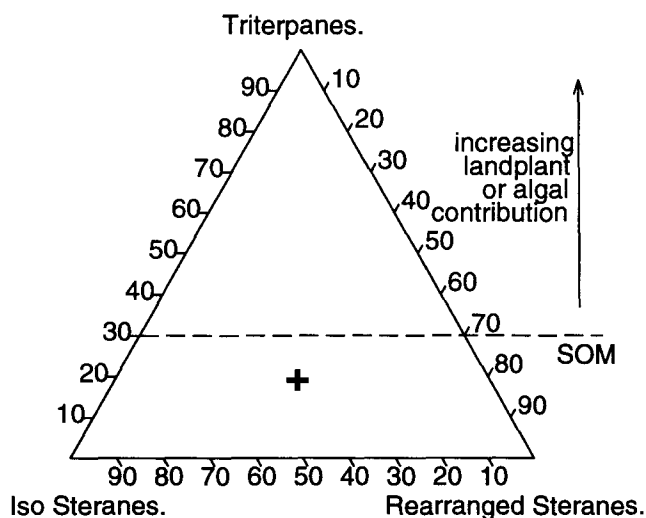


Conclusions based on triterpanes :

- 1 : the triterpane distribution indicates a source rock containing predominantly structureless organic matter

GCMS Triterpane typing of the extract from well SF104A CORE HOLE (1 m.), United Kingdom

Sterane/Triterpane Diagram



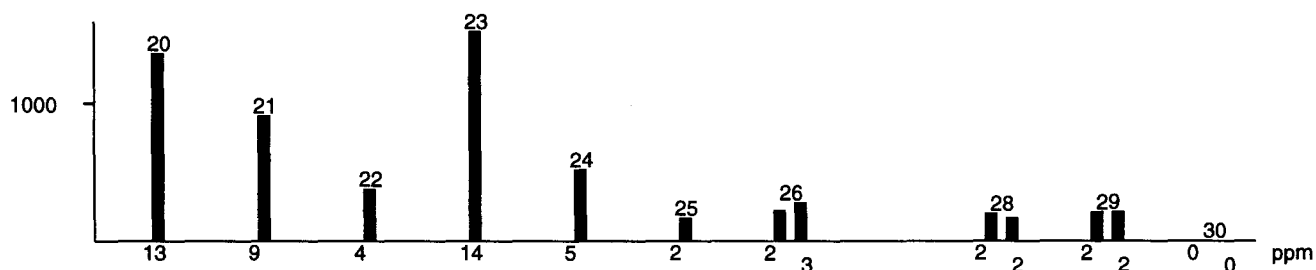
STERANES/TRITERPANES (calculated %)

Iso Steranes :	41
Rearranged Steranes :	39
Triterpanes :	20

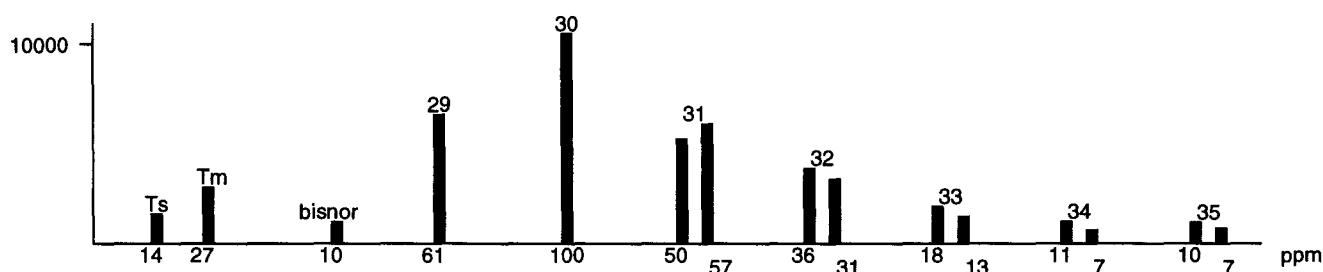
TRITERPANE CONVERSION RATIOS

TS / TM :	0.53
3R / 3R + 5R :	0.12
C30 Hopane (ppm) :	100

Tricyclic Terpanes



Pentacyclic Terpanes

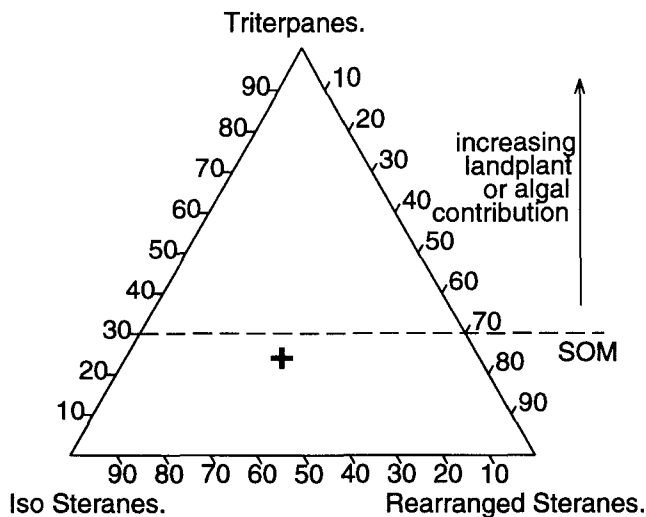


Conclusions based on triterpanes :

- 1 : the triterpane distribution indicates a source rock containing predominantly structureless organic matter

GCMS Triterpane typing of the extract from well SF245A CORE HOLE, United Kingdom

Sterane/Triterpane Diagram



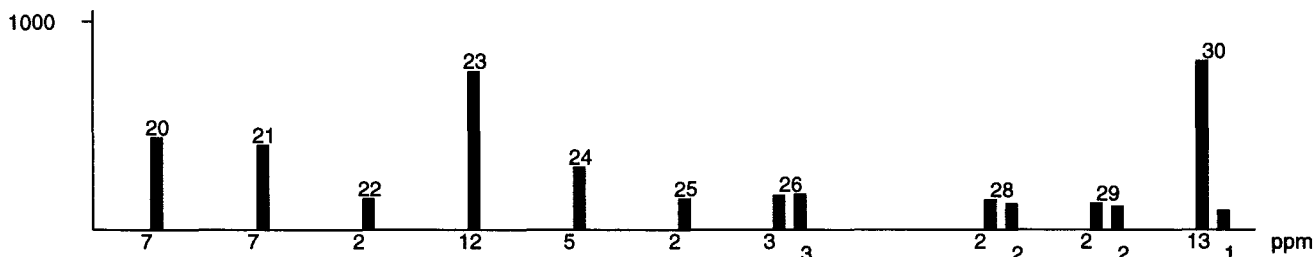
STERANES/TRITERPANES (calculated %)

Iso Steranes :	42
Rearranged Steranes :	33
Triterpanes :	25

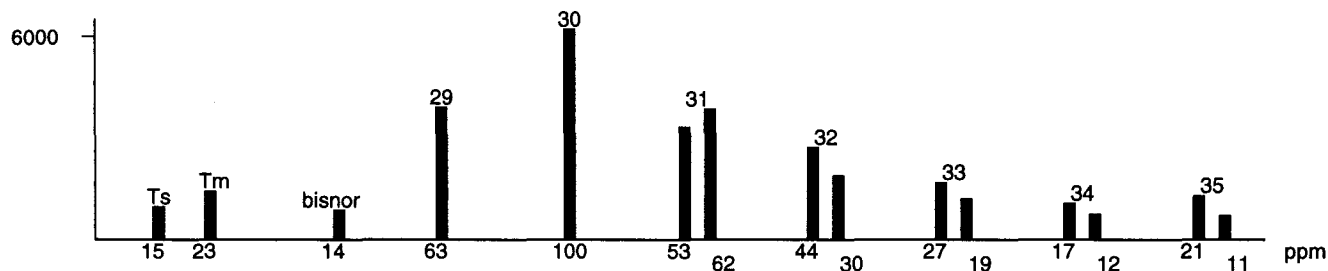
TRITERPANE CONVERSION RATIOS

TS / TM :	0.68
3R / 3R + 5R :	0.11
C30 Hopane (ppm) :	100

Tricyclic Terpanes



Pentacyclic Terpanes



Conclusions based on triterpanes :

- 1 : the triterpane distribution indicates a source rock containing predominantly structureless organic matter

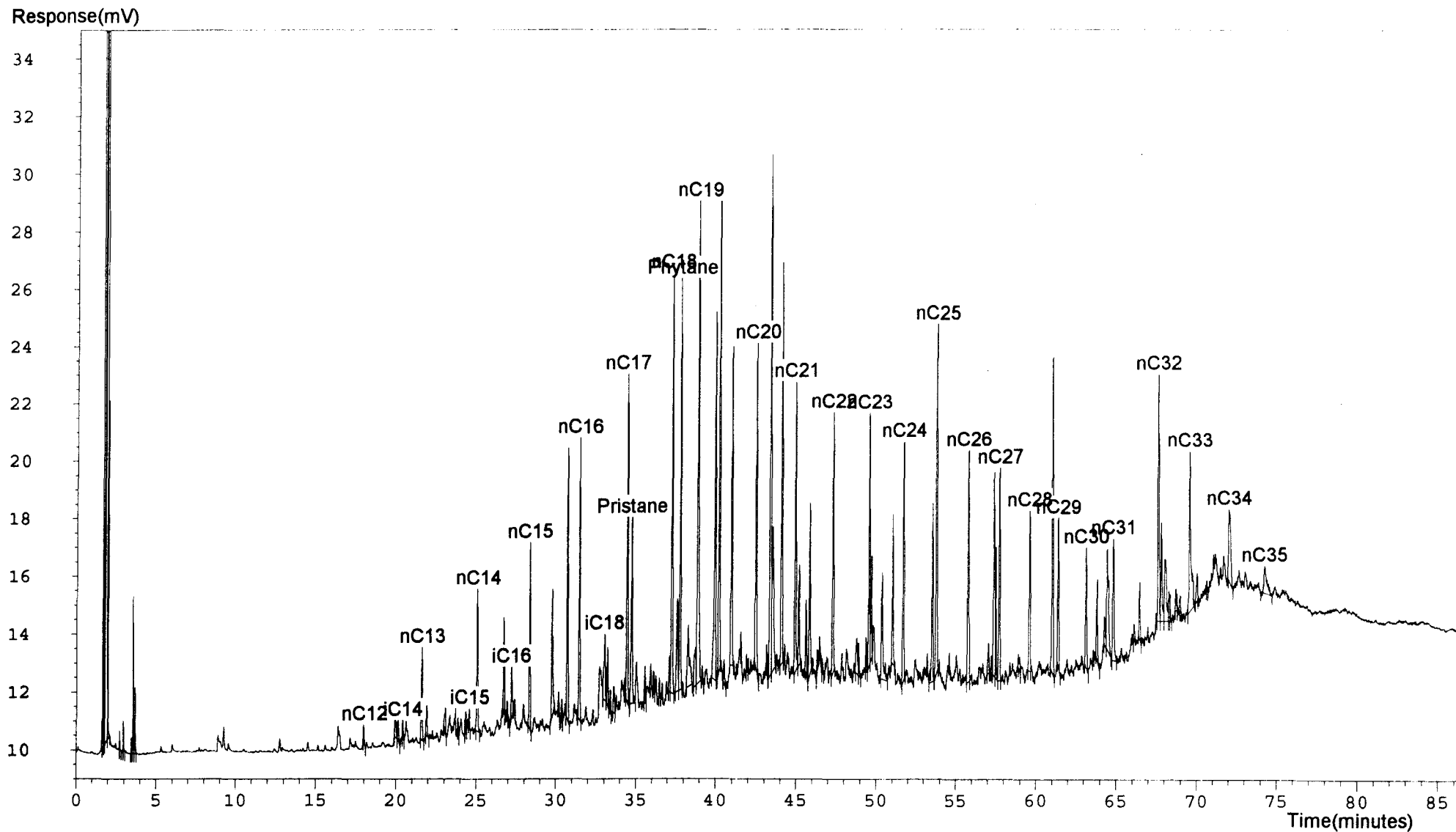
ANALYTICAL DATA
well 205/09-01 (3468.45 m.), United Kingdom

SL6788302

Gas chromatogram of the whole oil sample from well 205/09-01 (3468.45 m.), United Kingdom

RKER.94.105

GASCHROMATOGRAM OF THE EXTRACTED HYDROCARBONS

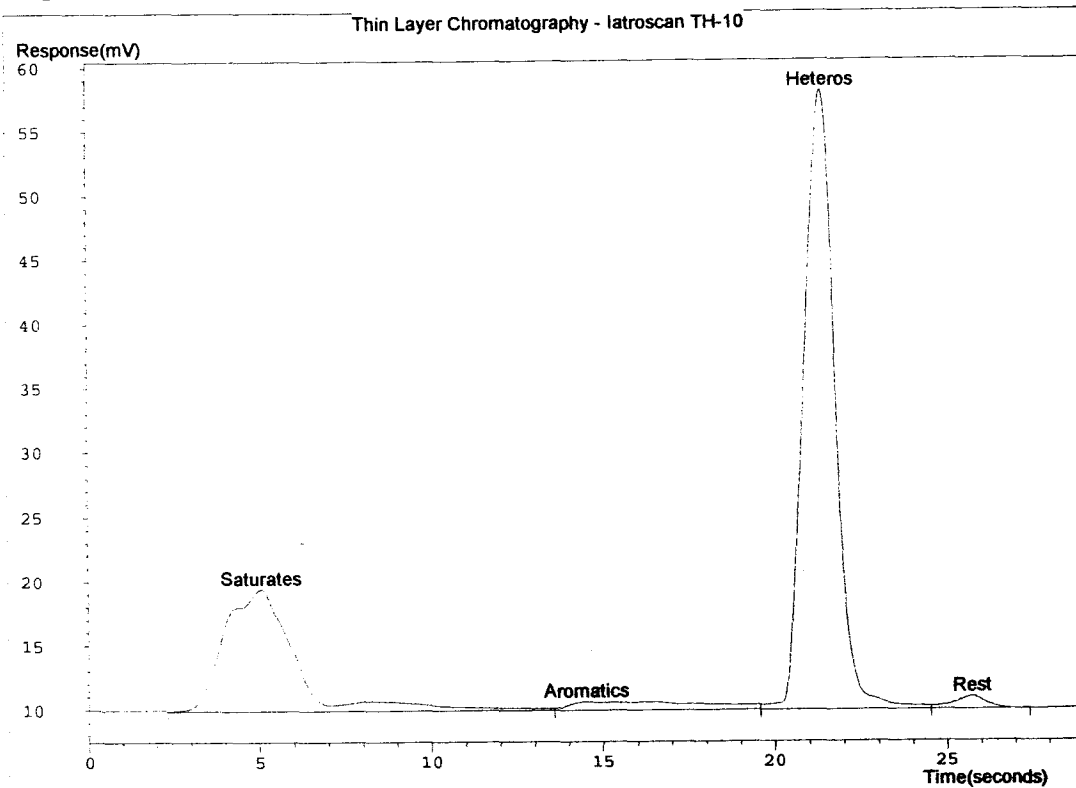


Confidential

Gross Composition of the extract from
well 205/09-01 (3468.45 m.), United Kingdom

Printed at 11:07am on 11 July 1994
Project: defproj Instrument: channel4
Sample: S 167883/2

Page 1
Analysis: o613-614
Injection: 1



Analyst Name M B
Analysis Name Shell oil samples
Comment Thin Layer Chromatografie / GC-Iatroscan bepaling.

Peak information:

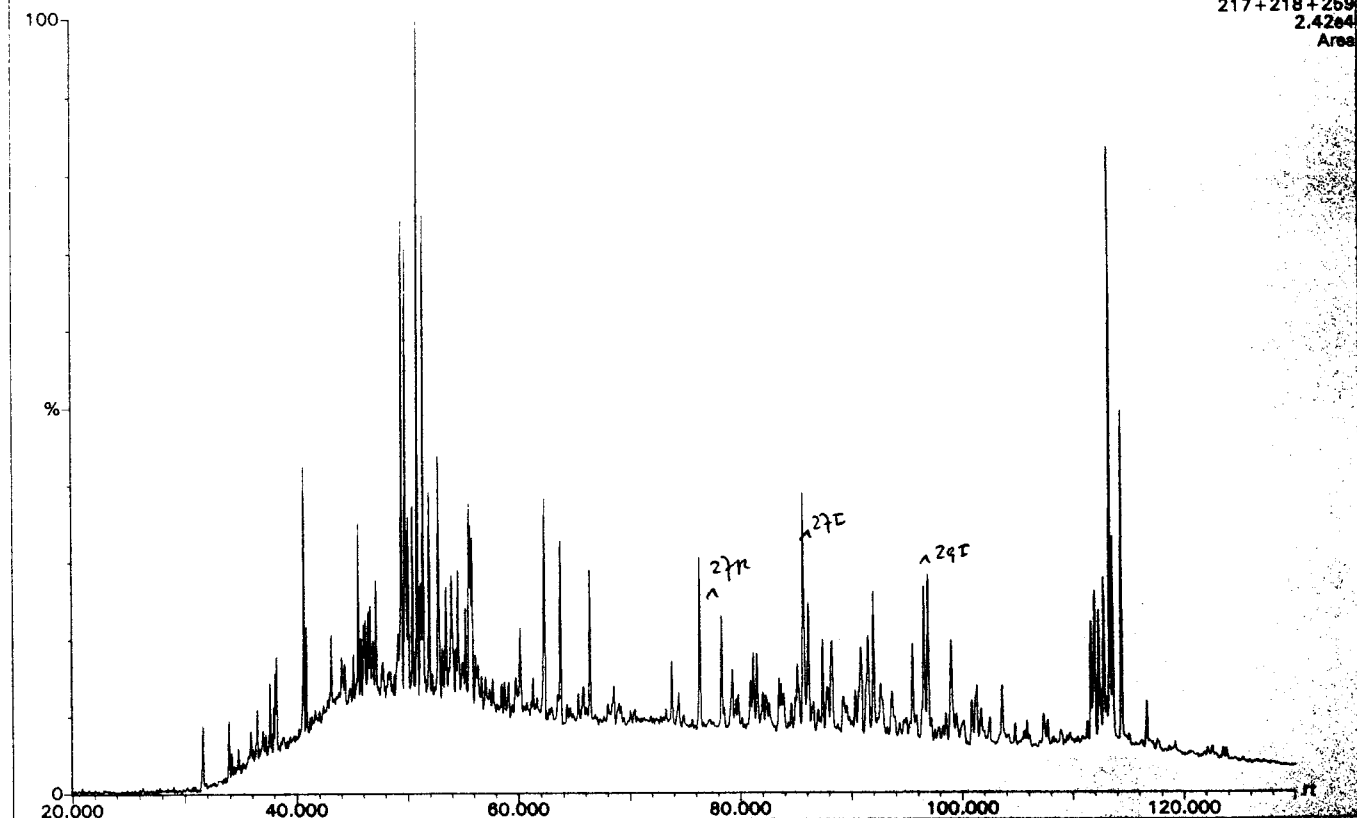
Peak No.	Peak Name	Amount	Norm/Area	Area
1	Saturates	29.6	22.70	
2	Aromatics	4.0	3.05	
3	Heteros	65.0	49.96	
4	Rest	1.4	1.10	

**Sterane Fragmentograms of the extract from
well 205/09-01 (3468.45 m.), United Kingdom**

KSEPL
21-Aug-1994 00:51:31
S1678832 Sm (SG, 2x3)

U.K. 205/09-01 3468.45-3471.80 M CORE WHOLE EXTRACT NO I.S.

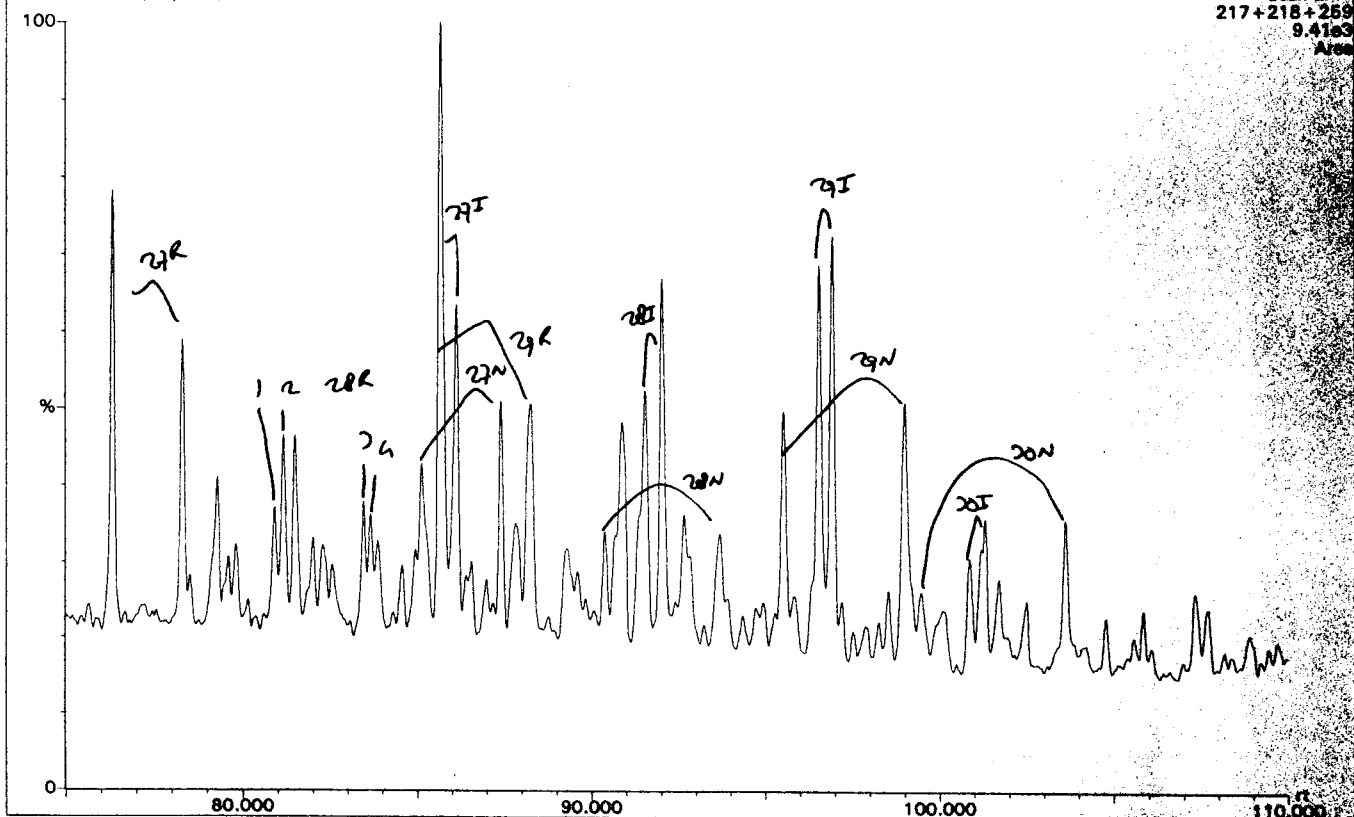
trio1000
RON
Scan El+
217+218+259
2.42e4
Area



KSEPL
21-Aug-1994 00:51:31
S1678832 Sm (SG, 2x3)

U.K. 205/09-01 3468.45-3471.80 M CORE WHOLE EXTRACT NO I.S.

trio1000
RON
Scan El+
217+218+259
9.41e3
Area

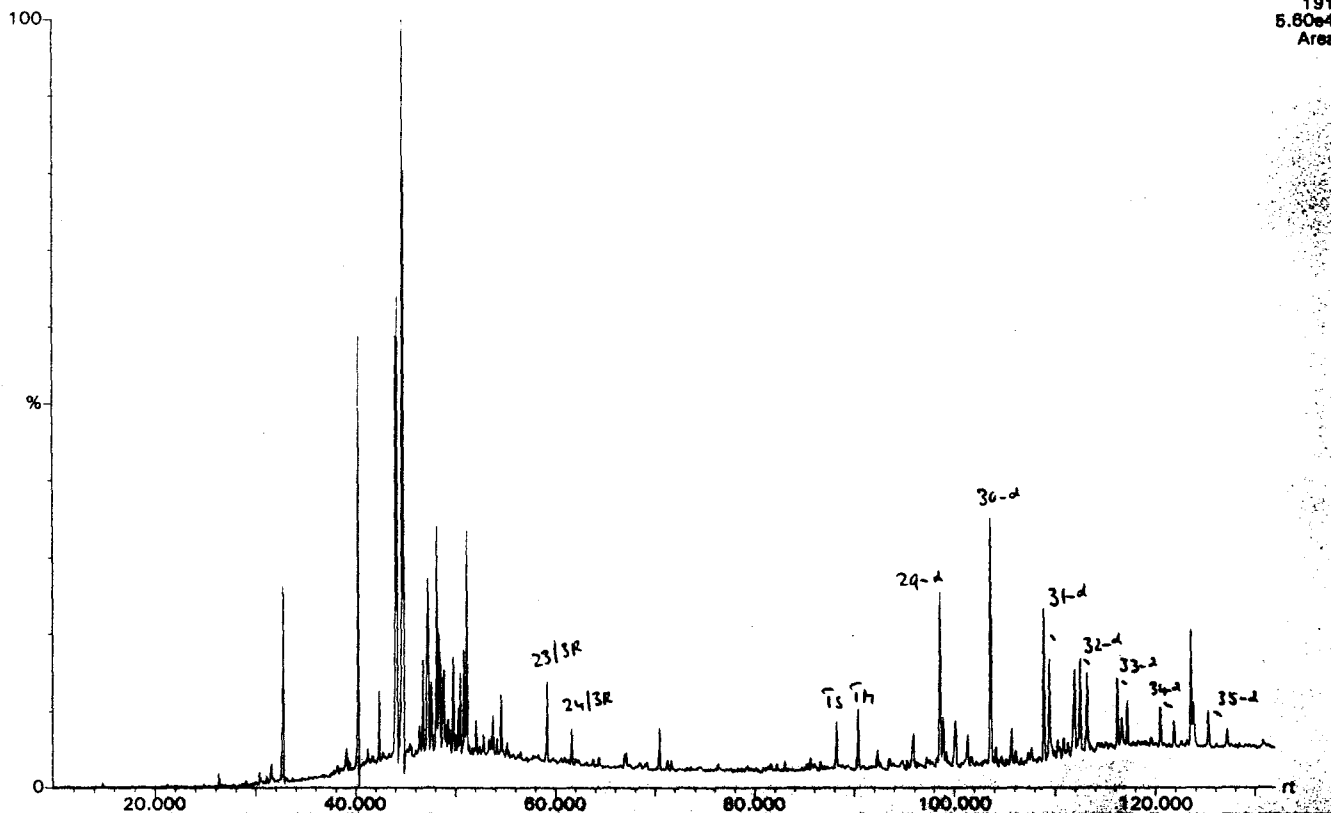


Triterpane Fragmentograms of the extract from well 205/09-01 (3468.45 m.), United Kingdom

KSEPL
21-Aug-1994 00:51:31
S1678832 Sm (SG, 2x3)

U.K. 205/09-01 3468.45-3471.80 M CORE WHOLE EXTRACT NO I.S.

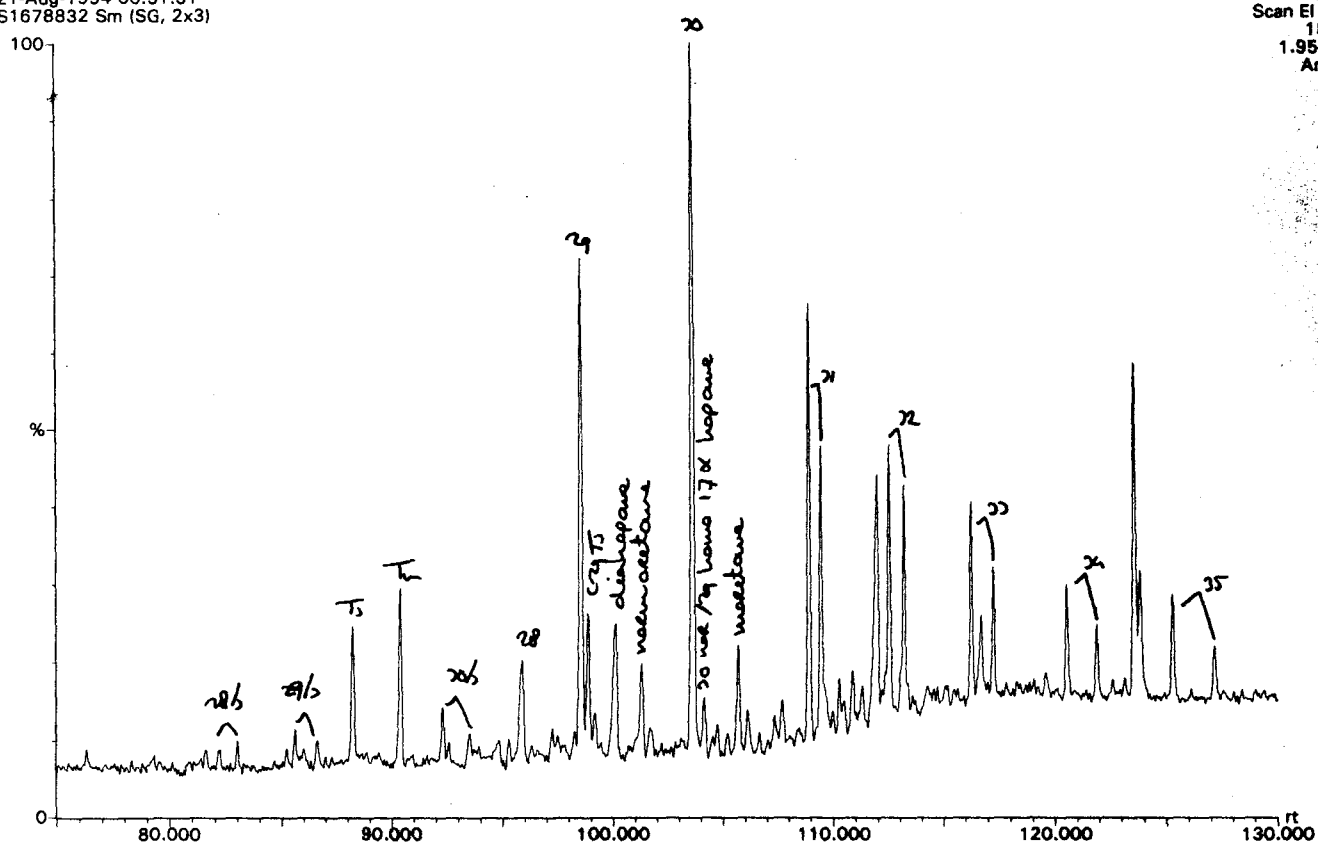
trio1000
RON
Scan EI +
191
5.80e4
Area



KSEPL
21-Aug-1994 00:51:31
S1678832 Sm (SG, 2x3)

U.K. 205/09-01 3468.45-3471.80 M CORE WHOLE EXTRACT NO I.S.

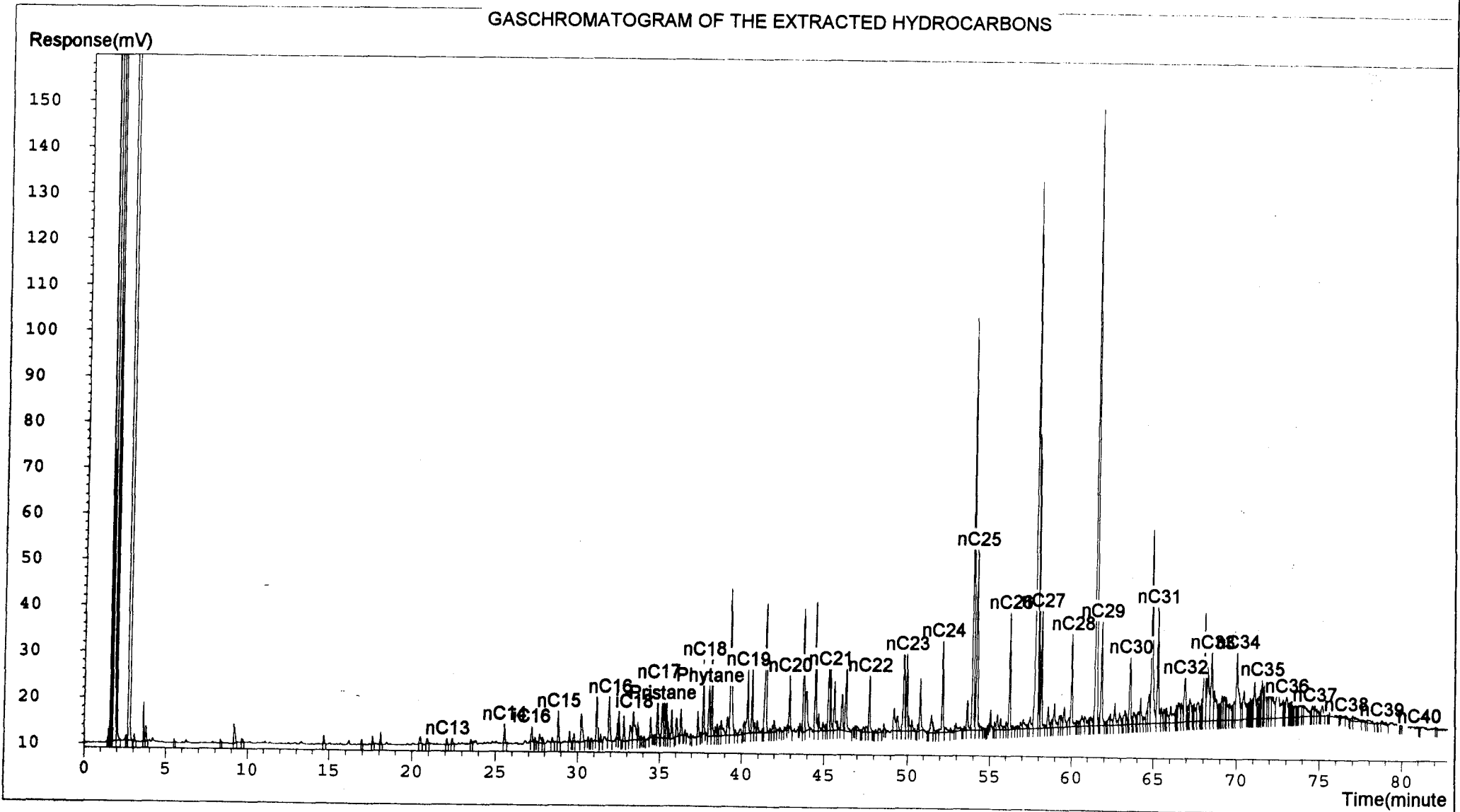
trio1000
RON
Scan EI +
191
1.95e4
Area



ANALYTICAL DATA
well SF104A CORE HOLE (1 m.), United Kingdom

Gas chromatogram of the whole oil sample from well SF104A CORE HOLE (1 m.), United Kingdom

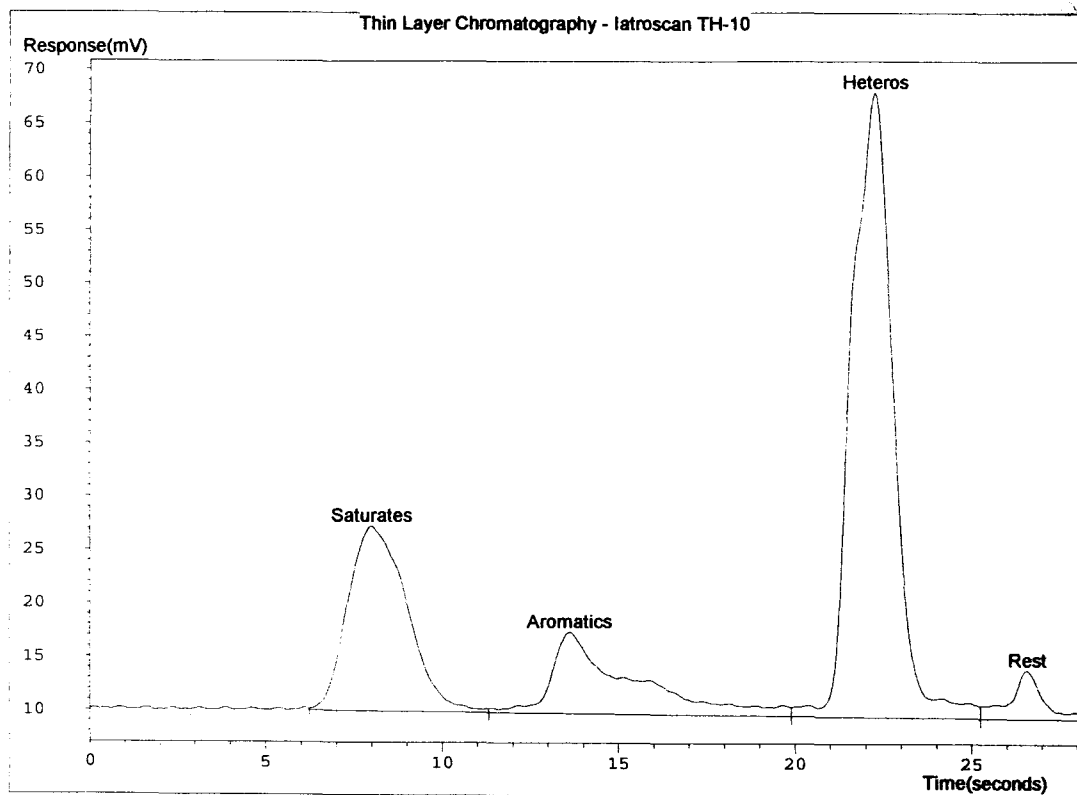
GASCHROMATOGRAM OF THE EXTRACTED HYDROCARBONS



Gross Composition of the extract from
well SF104A CORE HOLE (1 m.), United Kingdom

Printed at 02:13pm on 09 August 1994
Project: defproj Instrument: channel4
Sample: s 168006/1

Page 1
Analysis: o-618
Injection: 1



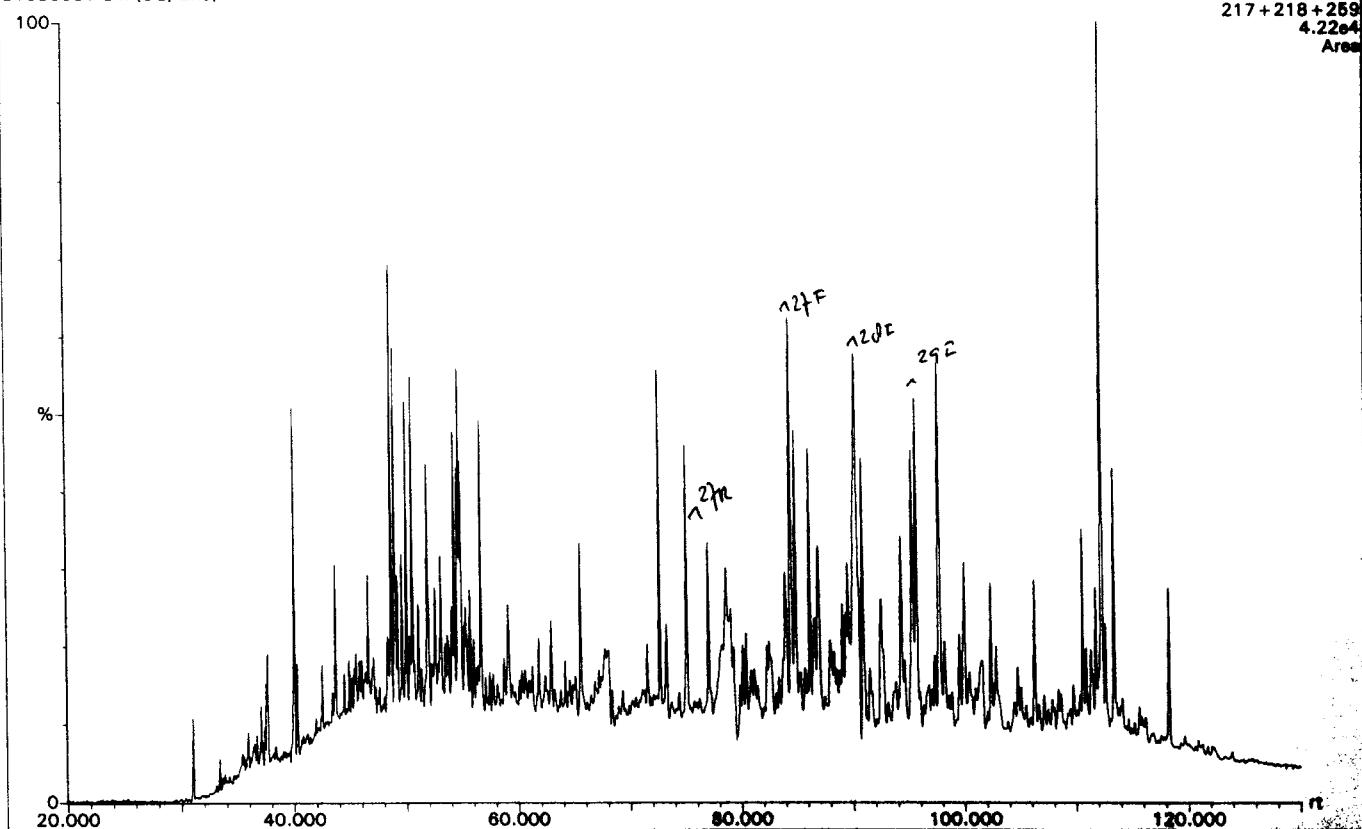
Analyst Name V V
Analysis Name Shell oil samples
Comment Thin Layer Chromatografie / GC-Iatroscan bepaling.

Peak information:

Peak No.	Peak Name	Amount	Norm/Area	Area
1	Saturates	24.2	33.55	
2	Aromatics	14.4	19.91	
3	Heteros	57.7	79.95	
4	Rest	3.8	5.22	

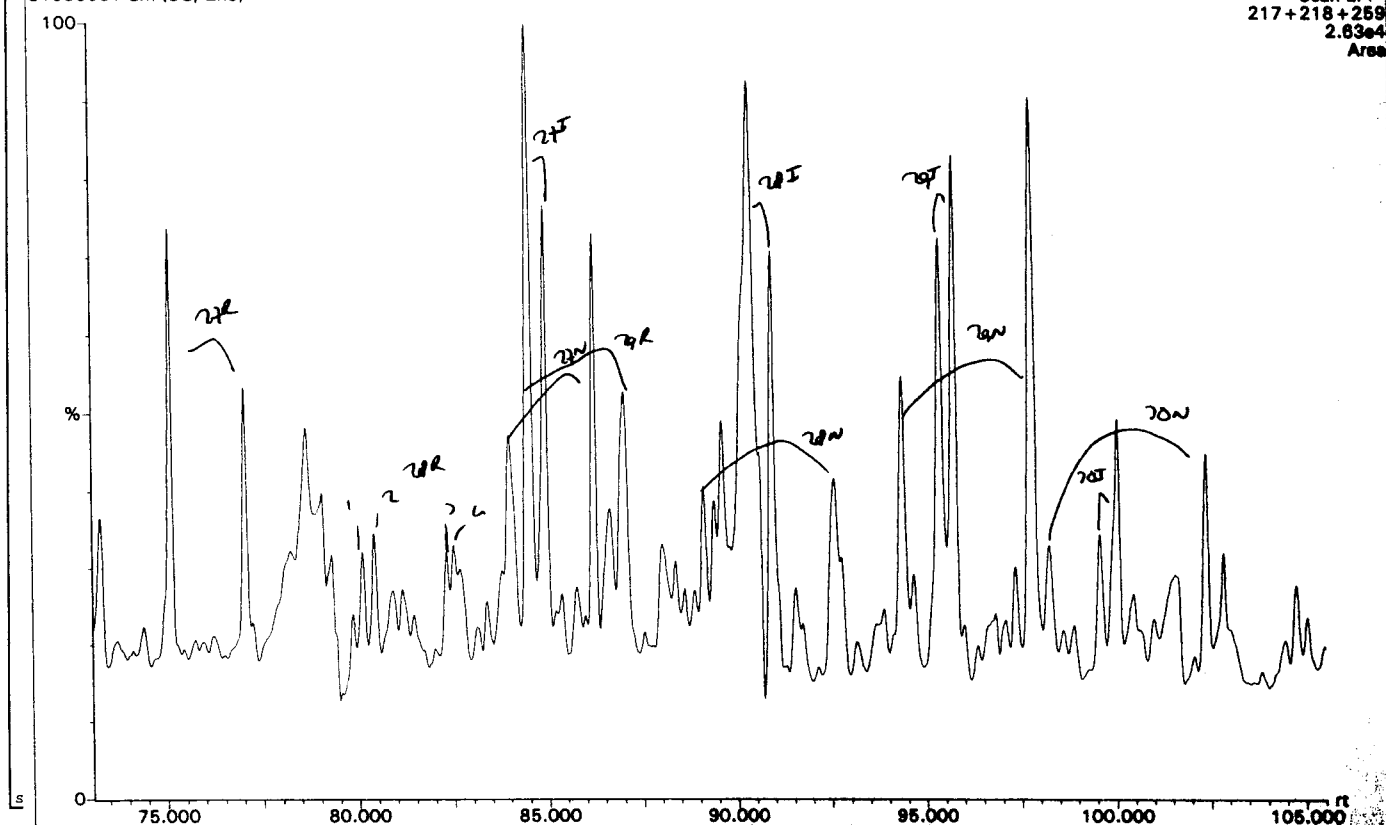
KSEPL
26-Oct-1994 01:30:56
S1680061 Sm (SG, 2x3)

trio 1000
RON
Scan EI +
217 + 218 + 259
4.22e4
Area



KSEPL
26-Oct-1994 01:30:56
S1680061 Sm (SG, 2x3)

trio1000
RON
Scan El +
217+218+259
2.63e4
Area

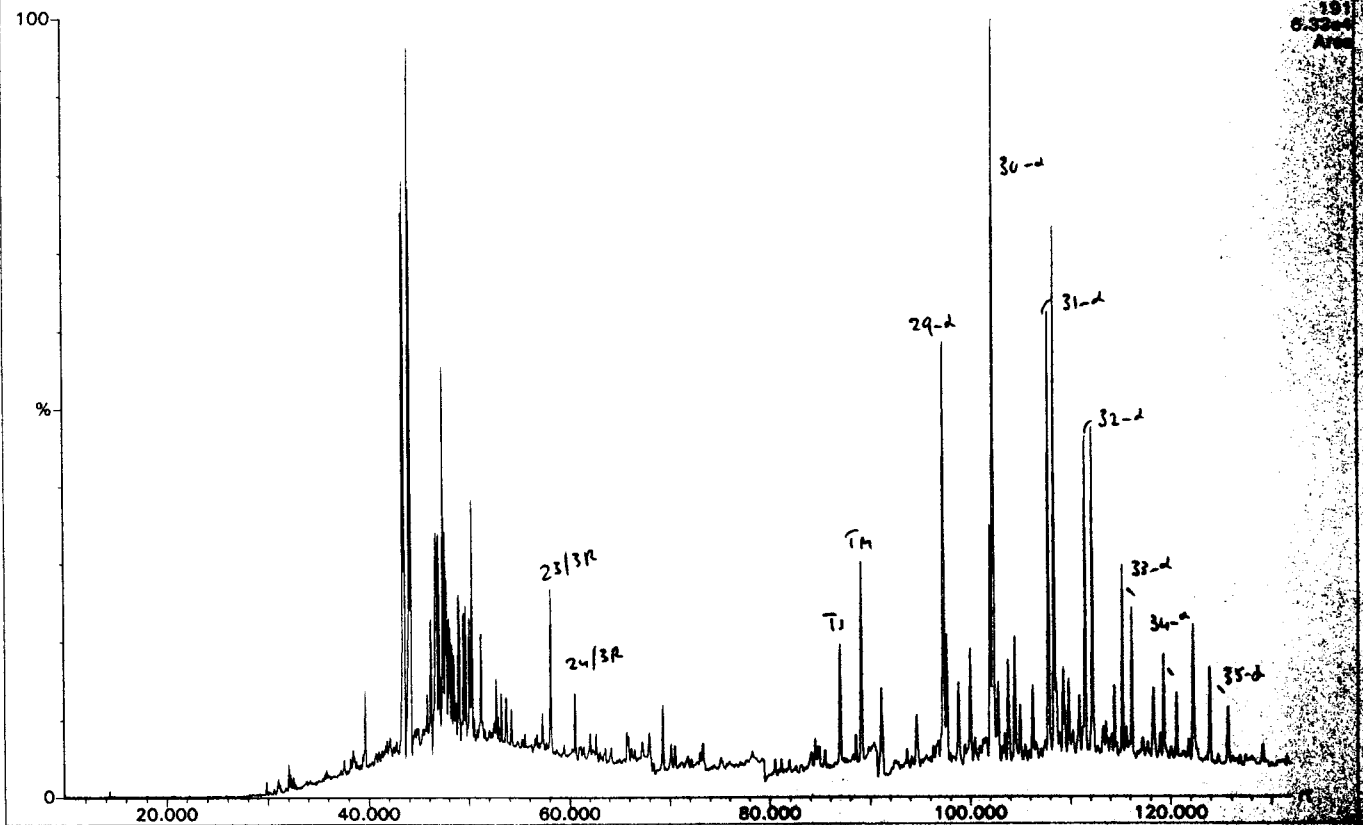


Triterpane Fragmentograms of the extract from well SF104A CORE HOLE (1 m.), United Kingdom

KSEPL
26-Oct-1994 01:30:56
S1680061 Sm (SG, 2x3)

U.K. SF104A CORE HOLE NO I.S.

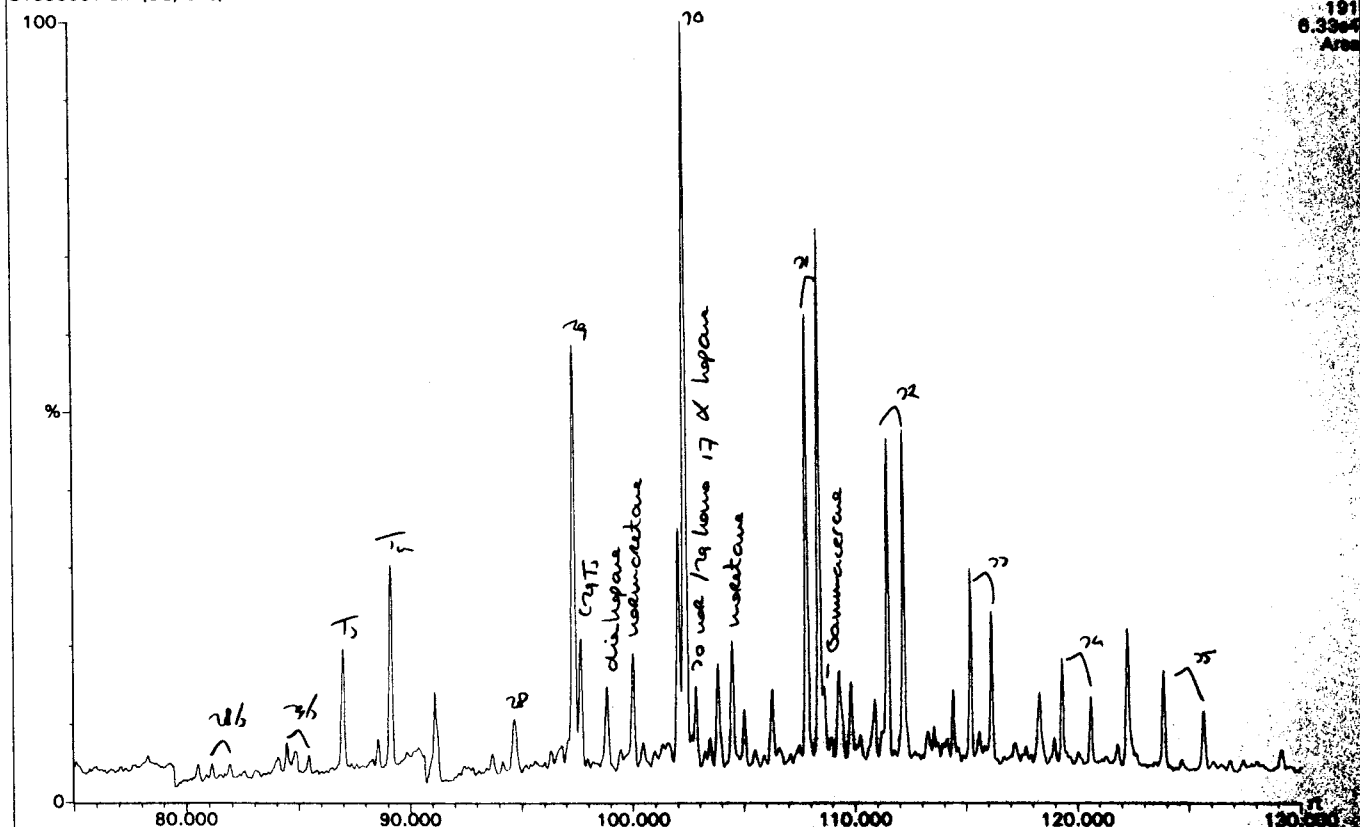
trio1000
RON
Scan El+
191
6.33e4
Area



KSEPL
26-Oct-1994 01:30:56
S1680061 Sm (SG, 2x3)

U.K. SF104A CORE HOLE NO I.S.

trio1000
RON
Scan El+
191
6.33e4
Area



MACERAL DESCRIPTION OF WELL/OUTCROP

United Kingdom, SF104A CORE HOLE

Date : 25-NOV-94

Sample(s)

1.00 m/R

ORGANIC MATTER																							MINERAL MATTER			
SOM			VITRINITE				LIPTINITE												INERTINITE	MINERAL MATTER						
DENSE	LOAD BEARING		DIFFUSE / INTERGRANULAR	NON-L. B.	VIT. - 1		VIT. - 2		SPORINITE (MICRO-)	SPORINITE (MEGA-)	CUTINITE	SUBERINITE	RESINITE (+ FLUORINITE)	LIPTODETRINITE	BOTRYOCOCCUS	TASMANITES	OTHER ALGAE	MICROPLANKTON	EXSUDATINITE (FLUORESCING)	EXSUDATINITE (NON-FLUORESCING) S. HYDR.	SCLEROTINITE	(SEMI-) FUSINITE (+ INERTODETRINITE)	MICRINITE (+ OXY-MICRINITE)	UNDEFINED MINERALS	FRAMBOIDAL PYRITE	AGGREGATES / CRYSTALS PYRITE
LAYERS		LAYERS / LENSES TELOCOLLINITE			DETITAL TELOCOLLINITE	LAYERS / LENSES TELINITE	DETITAL TELINITE	LAYERS / LENSES DESMOCOLLINITE																		
																								</		

L E G E N D	
*	ABUNDANT
+	COMMON
/	FEW
-	RARE

Depth (m)	Sample Type	Comment
1.00	R	Sample partly oxidised Rare acritarchs White/light yellow fluorescence -> probably immature

VISUAL VOLUME PERCENTAGE ESTIMATION United Kingdom, SF104A CORE HOLE

1.00 m/R

Sample(s)

ORGANIC MATTER										MINERAL MATTER	
SOM			VITRINITE				LIPTINITE			INERTINITE	
DENSE	LOAD BEARING			VIT.-1		VIT.-2		ALGAE			(SEMI-) FUSINITE (+ INERTODETRINITE)
LAYERS											
LENSES											
DIFFUSE / INTERGRANULAR				NON-L. B.							
LAYERS / LENSES TELOCOLLINITE											
DETRITAL TELOCOLLINITE											
LAYERS / LENSES TELINITE											
DETRITAL TELINITE											
LAYERS / LENSES DESMOCOLLINITE											
DETRITAL DESMOCOLLINITE											
SPORINITE (MICRO-)											
SPORINITE (MEGA-)											
CUTINITE											
SUBERINITE											
RESINITE (+ FLUORINITE)											
LIPTODETRINITE											
BOTRYOCOCCUS											
TASMANITES											
OTHER ALGAE											
MICROPLANKTON											
EXSUDATINITE (FLUORESCING)											
EXSUDATINITE (NON-FLUORESING) S.HYDR.											
SCLEROTINITE											

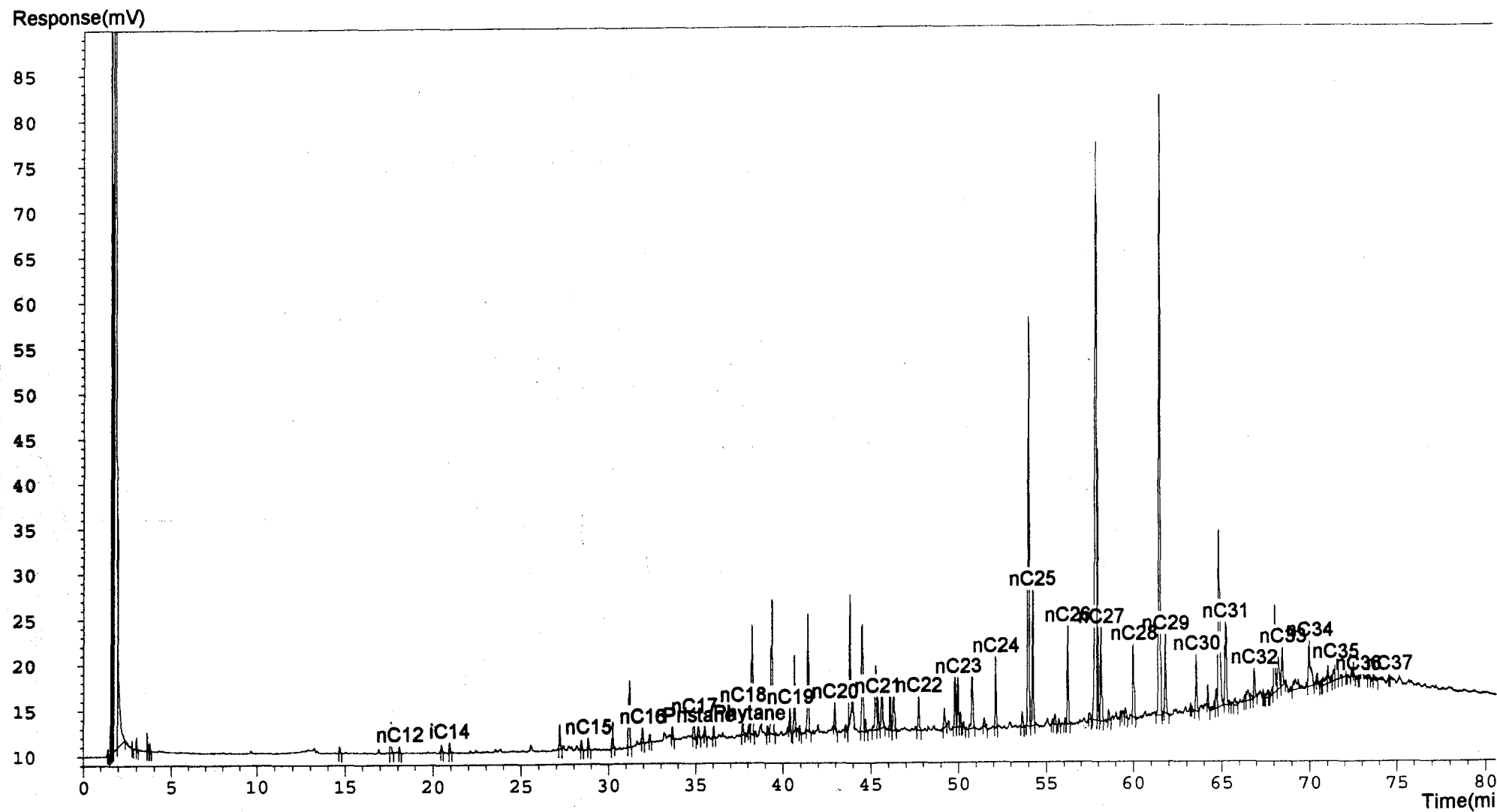
1.00 m/R

Sample(s)

ANALYTICAL DATA
well SF245A CORE HOLE, United Kingdom

Gas chromatogram of the whole oil sample from well SF245A CORE HOLE, United Kingdom

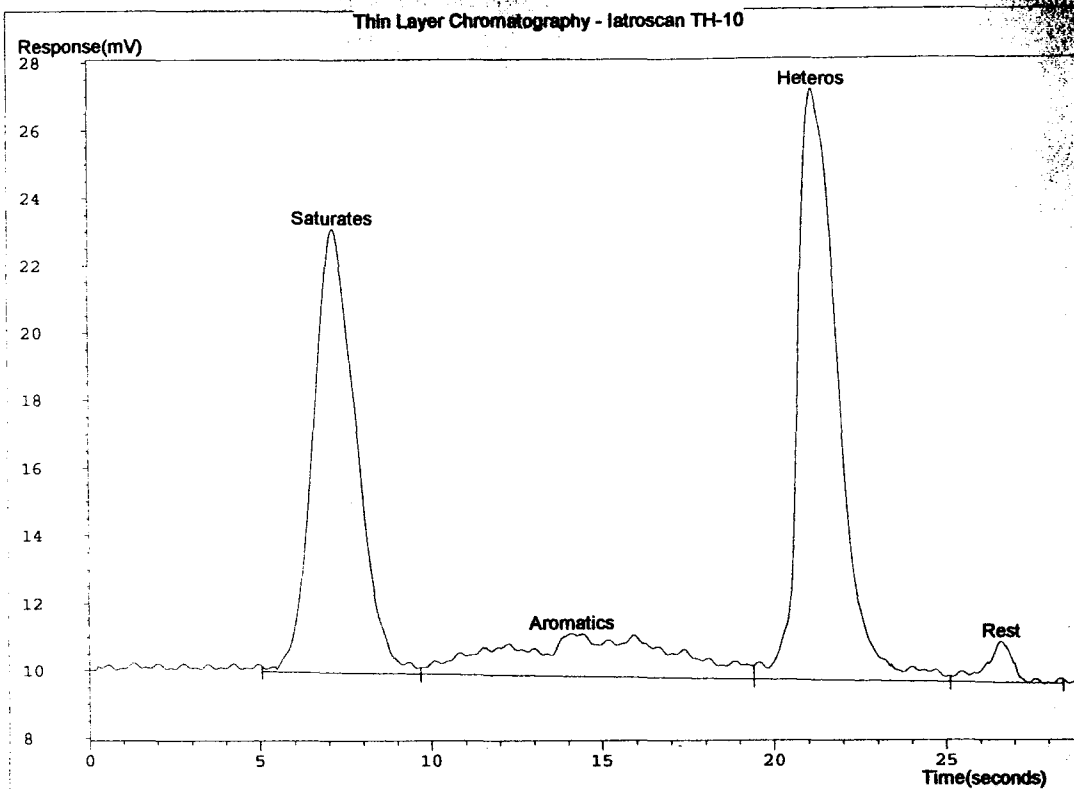
GASCHROMATOGRAM OF THE EXTRACTED HYDROCARBONS



Gross Composition of the extract from
well SF245A CORE HOLE, United Kingdom

Printed at 02:02pm on 08 August 1994
Project: defproj Instrument: channel4
Sample: s 168007/1

Page 1
Analysis: o-616d
Injection: 1

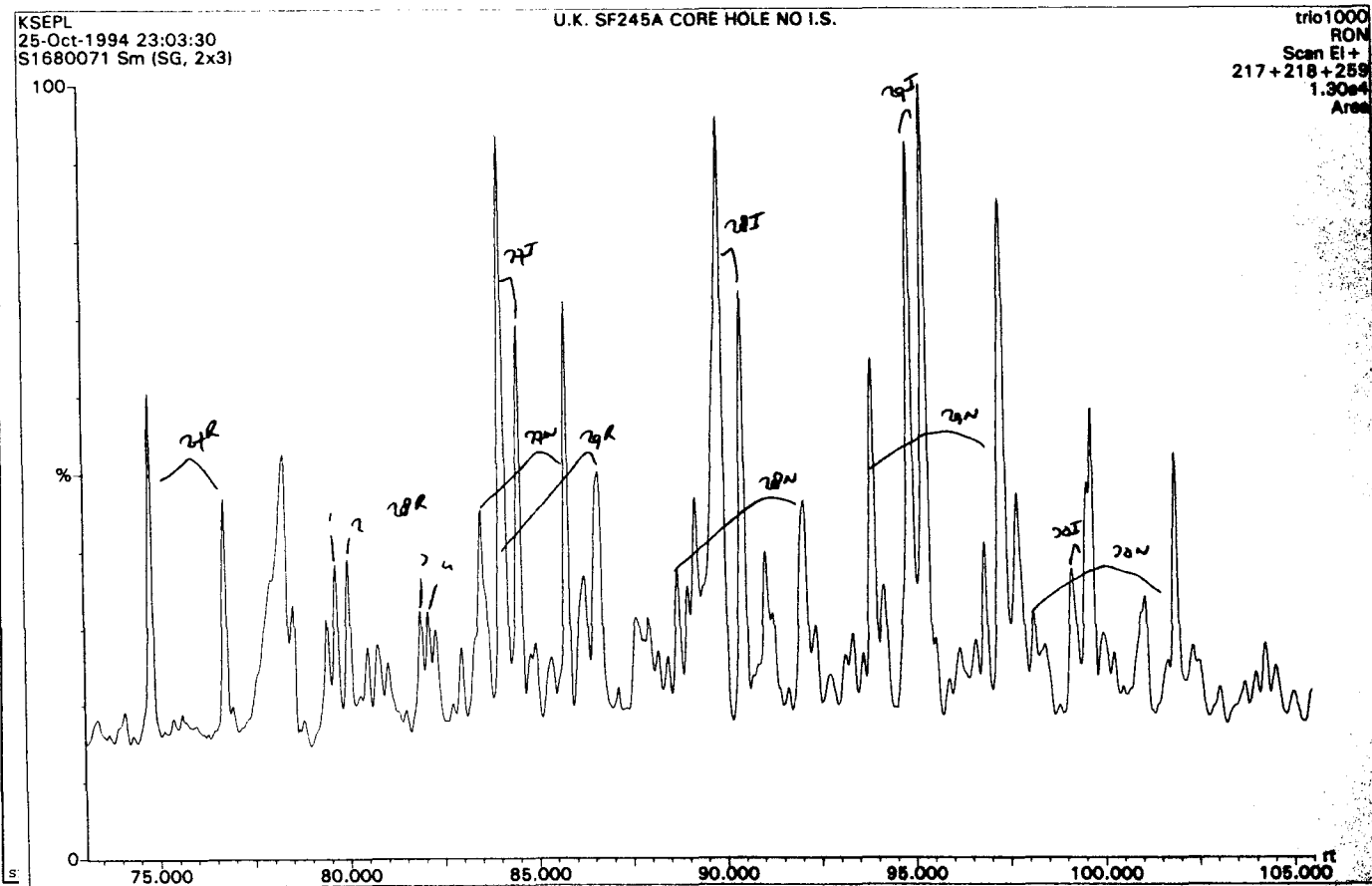
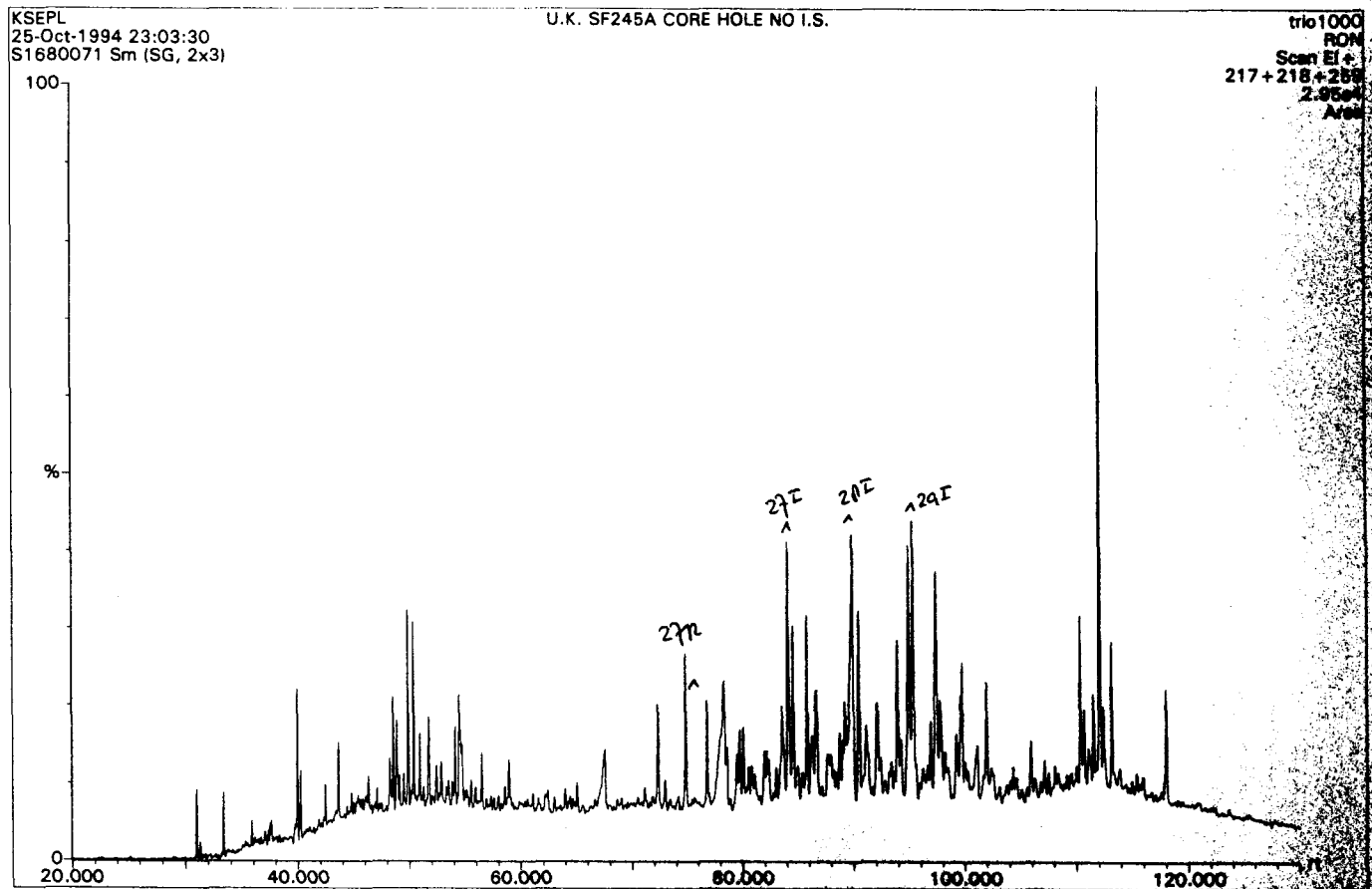


Analyst Name V V
Analysis Name Shell oil samples
Comment Thin Layer Chromatografie / GC-Iatroscan bepaling.

Peak information:

Peak No.	Peak Name	Amount	Norm/Area	Area
1	Saturates	37.5	19.14	
2	Aromatics	14.3	7.29	
3	Heteros	45.9	23.45	
4	Rest	2.3	1.15	

Sterane Fragmentograms of the extract from well SF245A CORE HOLE, United Kingdom

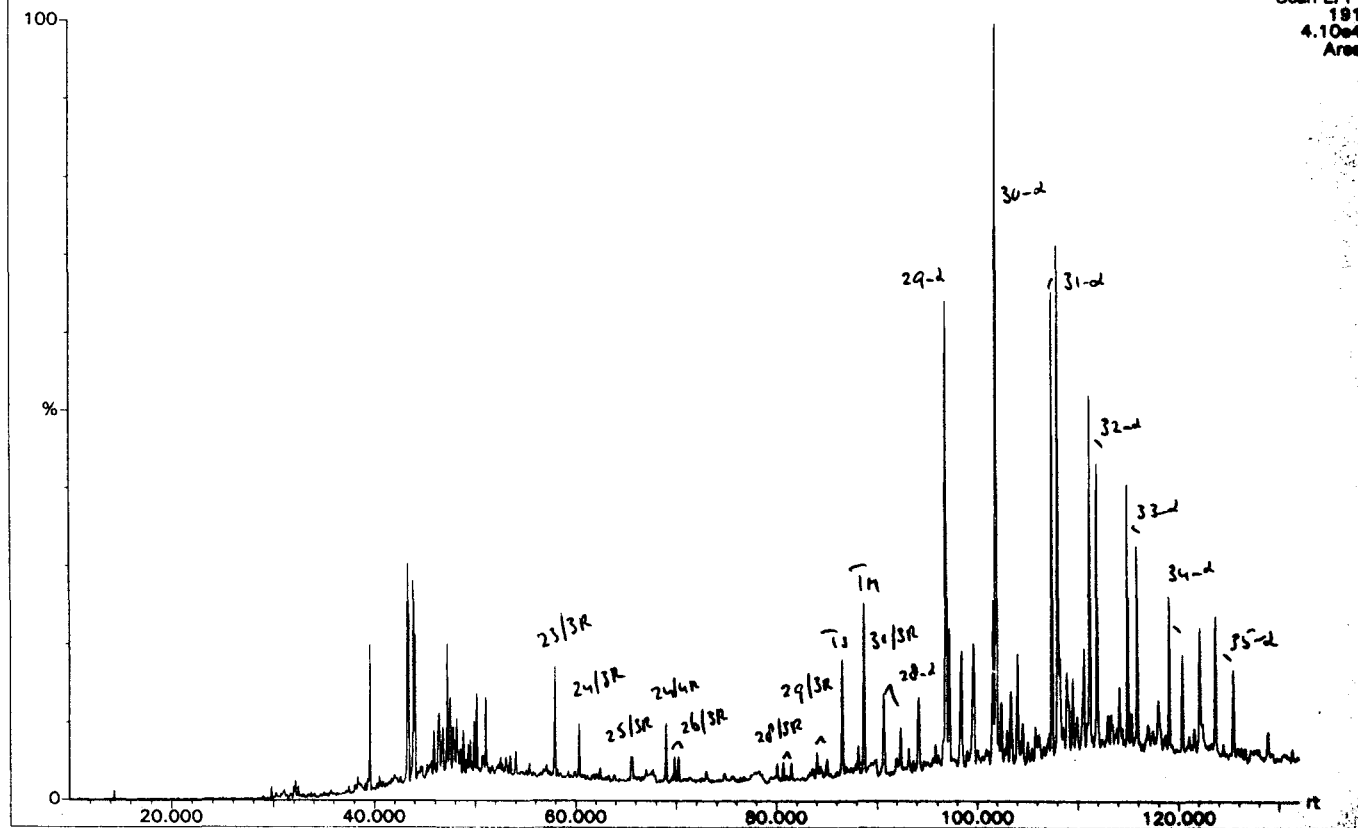


Triterpane Fragmentograms of the extract from well SF245A CORE HOLE, United Kingdom

KSEPL
25-Oct-1994 23:03:30
S1680071 Sm (SG, 2x3)

U.K. SF245A CORE HOLE NO I.S.

trio1000
RON
Scan EI+
191
4.10e4
Area



KSEPL
25-Oct-1994 23:03:30
S1680071 Sm (SG, 2x3)

U.K. SF245A CORE HOLE NO I.S.

trio1000
RON
Scan EI+
191
4.10e4
Area

