TEST SUMMARY 6506/12-4

Production Testing (DST)

One production test was performed in well 6506/12-4.

Test no.	Perf.int. (m RKB)	Prod. fluid
1	3133-3150	Water

Statistics from preliminary log analysis of perforated interval:

Net Sand : 12.5 m
Ø : 0.26
Sw : 0.76

Description of test operations and summary of flow data are enclosed.

WELL: 6506/12-4 | S E Q U E N C E O F E V E N T S | CHP/PG: 2.2/-
DST No: 1 | Perfs.: 3133-3150
Zone tested: FINNVÆR

DATE	TIME	O P E R A T I O N S
		PERFORATIONS
01.08.85	1433	Perforated test interval 3133-3150 m using TCP
		FLOWING THE WELL
		Flowed well to tank on 12.70 mm choke.
	1506	Increased choke to 19.05 mm. Rate decreasing.
	1900	Rate stable at 11.4 m3/day
		REVERSING THE TUBING
	2113	Closed PCT valve. Total recovery 5.25 m3.
	2354	MIRV valve opened, reversed out via adjustable choke. Caught samples of returns.
01.08.85	0055	Completed reversing.
		DISPLACED TUBING
	0222	Displaced tubing to diesel.
	0445	Reopened PCT valve. Surface pressure 16789 kpa.
		FLOWING THE WELL
	0453	Opened well to tank 6.35 mm choke. Initial rate 105 m3/D decreasing.
	0522	Increased choke to 9.53 mm.
	0645	Rate decreased to 7.7 m3/day.
		BUILD UP
	0845	Shut in at PCT. Total recovery 5.6 m3.
	1438	Open MIRV valve Reversed out tubing contents. Caught samples of returns.
	1530	Completed reversing, prepared to bullhead. End of test.
		Max chloride content 13000 ppm.

FLOW DATA

6506/12-4

Test no.	Perf. int. (mRKB)	Flow period no	Duration (min)	Choke (mm)	Water rate (sm3/d)	WHP (Bar)	WHT (deg C)	BHP (Bar)
1	3133-3150	1	400	19.05	11.3	0.3	11	380
		2	232	12.7	7.7	0	13	340

PRELIMINARY TEST ANALYSIS

A preliminary test analysis shows a permeability around 1 md, and a initial pressure of 47450 kpa. However, the data quality is questionable, and a more extensive analysis is required to verify these results and explain the pressure effects seen on the buildup data.

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Pressure Survey Report
for
Statoil
Well No. 6506/12-4
31 JULY 1985
D.S.T. No. 1
Bottomhole Data

SPERRY-SUN INTERNATIONAL INC.
MAGNETIC RECORDING PRESSURE GAUGE REPORT

STATOIL
HALTENBANKEN
6506/12-4

OFFSHORE NORWAY
31 JULY 1985
NR-MS-50173

CHECK PRESSURE SHEET

GAUGE NO: (MK 3B)	098/1977	106/2241
TIME MODE	2 MINS	4 MINS
DELAY	17 HRS	17 HRS
TRANSDUCER SIZE	10 K	10 K
TEMP. RATING	149 C	149 C
GAUGE SENSING DEPTH (M.RKB)	3095.62	3095.62
MAX. TEMP.(Deg.C)	105.9	104.6

END OF EVENT	TIME	DATE	PRESS.	PRESS.
INIT. STATIC	14:33	1/8/85	48931.1	48901.4
FIRST FLOW	21:13	1/8/85	*	39630.5
FIRST BUILD-UP	04:53	2/8/85	*	45011.8
SECOND FLOW	08:45	2/8/85	35318.4	35288.1
SECOND BUILD-UP	15:27	2/8/85	42686.9	42638.5

All pressure data reported in KPa. Abs.

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* Gauge stopped recording at 16:34 on 1/8/85 & restarted at 07:38 on 2/8/85.

Note : Both gauges ran in 8"/22 ft. gauge carrier.

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CLIENT : STATOIL
WELL : 6506/12-4
RIG : DYVI STENA
FIELD : SMØRBUKK
DATE : 29/07/TO/02/08-1985

WELL TEST/D.A.T.A SYSTEM REPORT

SUMMARY

The test string was initally run with a seawater cushion and although production was sustained no surface pressures could be reliably established, (i.e. less than 3 psi = 0.207 BAR) it was decided to abhort the test and reverse out the string contents in order to obtain samples.
After obtaining samples the test string was displaced to a diesel (0.84 S.G.) cushion. Further production was obtained and the flowrate terminated to allow a build-up (downhole) and further samples collected during the process of reversing out string contents.
The well was killed according to programme and the well observed dead.

MAIN RESULTS

DST 1

flow period No 1 - Annular fluid 1.65 S.G.- Cushion seawater

Choke	Time on choke	Total production Oil	Gas	Cushion	Ave prod. rate
19,1 mm	6 hrs 42 min	Nil	Nil	5.246	18.79 M^3/Day

Unable to reliably record surface pressures

Flow period No 2 - Annular fluid 1.65 S.G. Cushion - Diesel (0.84) SG

Choke	Time on choke	Total production Oil	Gas	Cushion	Ave prod. rate
9,5 mm	3 hrs 52 min.	Nil	Nil	5.604	24.31 M^3/D

STATOIL

WELL: 6506/12 - 4

MATERIAL AND MUD CONSUMPTION

36" HOLE & 26" HOLE

PRODUCT	QUANTITY AND UNIT	COST IN US DOLLARS	TOTAL COST IN US DOLLARS
Bentonite	24.00 MT	270.00	6,480.00
Caustic	15 x 25 Kg	8.20	123.00
Soda Ash	8 x 50 Kg	15.29	122.32
Lime	14 x 20 Kg	5.44	76.16
			$ 6,801.48

26" HOLE

Barite	260.00 MT	94.00	24,440.00
Bentonite	85.00 MT	270.00	22,950.00
Caustic	65 x 25 Kg	8.20	533.00
Soda Ash	6 x 50 Kg	15.29	91.74
Bicarbonate	18 x 50 Kg	16.77	301.86
FCL	22 x 25 Kg	11.20	246.40
XC-POLYMER	6 x 25 Kg	340.56	2,043.36
Defoamer	1 x 25 Lt	85.48	85.48
Mica Fine	45 x 25 Kg	14.71	661.95
Mica Coarse	22 x 25 Kg	14.71	323.62
Nut Plug Fine	10 x 25 Kg	13.89	138.90
NUT Plug Coarse	10 x 25 Kg	13.89	138.90
			$ 51,955.21
USED FOR CEMENTING 20" Casing. 3.00 MT BENTONITE			$ 801.00
			$ 52,765.21
FOR 36" SECTION			$ 6,801.48
			$ 59,566.69

MUD VOLUME BUILT 2027 M^3 at $28.99/$M^3$

MUD VOLUME USED 1839 M^3

LESS 188 M^3 MUD REMAINING at $28.99 M^3 $ 5,450.12

SECTION TOTAL $ 54,116.57

Material And Mud Consumption (Cont'd)

VOLUME BUILT ON RIG:	2027	M^3	@ 1.02 - 1.2	SG
SUB TOTAL:	2027	M^3	@ 1.02 - 1.2	SG
SURFACE LOSSES:	1040	M^3		
SUB SURFACE LOSSES:	799	M^3		
TOTAL LOSSES:	1839	M^3		
VOLUME LEFT AT END OF SECTION:	188	M^3		
NET VOLUME OF MUD USED:	**1839**	**M^3**		

NOTE:

Mud volume record sheet includes losses dumped and lost on surface.

Material And Mud Consumption (Cont'd)

17½" HOLE SECTION

PRODUCT	QUANTITY AND UNIT	COST IN US DOLLARS	TOTAL COST IN US DOLLARS
Barite	484.00 MT	94.00	45,496.00
Bentonite	31.00 MT	270.00	8,370.00
Caustic	184 x 25 Kg	8.20	1,508.80
FCL	163 x 25 Kg	11.20	1,825.60
IDF-FLR	161 x 25 Kg	148.47	23,903.67
IDF-FLR XL	79 x 25 Kg	153.58	12,132.82
Gypsum	665 x 40 Kg	6.80	4,522.00
Soda Ash	10 x 50 Kg	15.29	152.90
Bicarbonate	1 x 50 Kg	16.77	16.77
XC-Polymer	1 x 25 Kg	340.56	340.56
Defoamer	2 x 25 Lt	85.48	170.96
			$ 98,440.08
USED FOR CEMENTING 13-3/8" Casing			
Bentonite	2.00 MT	270,00	540.00
Defaomer	5 x 25 Lt	85.48	427.40
			$ 967.40

MAINTENANCE COST	$ 98,440.08
188 M^3 MUD RECEIVED @ $28.99 /$M^3$	$ 5,450.12
LESS 315 M^3 MUD REMAINING @ $74.26 /$M^3$	$ 23,391.90
SECTION TOTAL*	$ 80,498.30

* NOT INCLUDING MATERIAL USED FOR CEMENTATION

Material And Mud Consumption (Cont'd)

INITIAL VOLUME OF MUD ON RIG:	188	M^3	@ 1.20 SG
VOLUME BUILT ON RIG:	1211	M^3	@ 1.50 SG
SUB TOTAL:	1399	M^3	@ 1.50 SG
SURFACE LOSSES:	966	M^3	
SUB SURFACE LOSSES:	118	M^3	
TOTAL LOSSES:	1084	M^3	
VOLUME LEFT AT END OF SECTION:	315*	M^3	
NET VOLUME OF MUD USED:	1084	M^3	

*315 M^3 @ 74.26$/$M^3$ transfered to 12¼" section

Material And Mud Consumption (Cont'd)

12¼" HOLE SECTION

PRODUCT	QUANTITY AND UNIT	COST IN US DOLLARS	TOTAL COST IN US DOLLARS
Barite	1509.00 MT	94.00	141,846.00
Bentonite	6.00 MT	270.00	1,890.00
Caustic	432 x 25 Kg	8.20	3,542.40
Soda Ash	3 x 50 Kg	15.29	45.87
Bicarbonate	2 x 50 Kg	16.77	33.54
Lime	144 x 20 Kg	5.44	783.36
Gypsum	901 x 40 Kg	6.80	6,126.80
FCL	1317 x 25 Kg	11.20	14,750.40
Chrome Lignite	417 x 25 Kg	15.30	6,380.10
IDF-FLR	99 x 25 Kg	148.47	14,698.53
IDF-FLR XL	338 x 25 Kg	153.58	51,910.04
IDFLO LT	15 x 25 Lt	41.60	624.00
XC-POLYMER	9 x 25 Kg	340.56	3,056.04
Defoamer	54 x 25 Lt	85.48	4,615.92
Drilling Detergent	25 x 200 Lt	353.00	8,825.00
IDLUBE	4 x 200 Lt	557.00	2,228.00
IDTEX	300 x 25 Kg	83.43	25,029.00
			$286,394.00
MAINTENANCE COST			$286,394.00
315 M^3 MUD RECEIVED @ $74.26/$M^3$			$ 23,391.90
LESS 361 M^3 MUD REMAINING @ $222.55 /$M^3$			$ 80,340.55
SECTION TOTAL			$182,661.55

Material And Mud Consumption (Cont'd)

INITIAL VOLUME OF MUD ON RIG:	315	M^3	@ 1.50 SG
VOLUME BUILT ON RIG:	1077	M^3	@ 1.75 SG
SUB TOTAL:	1392	M^3	@ 1.75 SG
SURFACE LOSSES:	929	M^3	
SUB SURFACE LOSSES:	102	M^3	
TOTAL LOSSES:	1031	M^3	
VOLUME LEFT AT END OF SECTION:	361*	M^3	
NET VOLUME OF MUD USED:	**1031**	**M^3**	

* 361 M^3 222.55$/$M^3$ transfered to 8½" hole section

Material And Mud Consumption (Cont'd)

8½" HOLE SECTION

PRODUCT	QUANTITY AND UNIT	COST IN US DOLLARS	TOTAL COST IN US DOLLARS
Barite	320.00 MT	94.00	30,080.00
Caustic	90 x 25 Kg	8.20	738.00
Bicarbonate	3 x 50 Kg	16.77	50.31
FCL	58 x 25 Kg	11.20	649.60
Chrome Lignite	101 x 25 Kg	15.30	1,545.30
IDF-FLR	86 x 25 Kg	148.47	12,768.42
IDF-FLR XL	65 x 25 Kg	153.58	9,982.70
Drilling Detergent	4 x 200 Lt	353.00	1,412.00
Defoamer	16 X 25 Lt	85.48	1,367.68
			$ 58,594.01

MAINTENANCE COST	$ 58,594.01
361 M^3 MUD RECEIVED @ $222.55 M^3	$ 80,340.55
LESS 572 M^3 MUD REMAINING @ $214.40 M^3	$122,636.80
SECTION TOTAL	$ 16,297.76

Material And Mud Consumption (Cont'd)

INITIAL VOLUME OF MUD ON RIG:	361	M^3	@ 1.75 SG
VOLUME BUILT ON RIG:	287	M^3	@ 1,3-1, 79 SG
SUB TOTAL:	648	M^3	@ 1,3-1, 79 SG
SURFACE LOSSES:	75	M^3	
SUB SURFACE LOSSES:	1	M^3	
TOTAL LOSSES:	76	M^3	
VOLUME LEFT AT END OF SECTION:	572*	M^3	
NET VOLUME OF MUD USED:	**76**	**M^3**	

* 572 M^3 @ $214.40 of 1.79 SG mud from 8½" hole section transfered to completion and abandon section.

Materials And Mud Consumption (Cont'd)

INITIAL VOLUME OF MUD ON RIG:	572 m^3	@ 1.79	S.G.
VOLUME RECEIVED ON RIG:	0 m^3	@	S.G.
VOLUME BUILT ON RIG:	155 m^3	@ 1.80-/.50	
SUB TOTAL:	727 m^3	@	S.G.
SURFACE LOSSES:	560 m^3		
SUB SURFACE LOSSES:	168 m^3		
OTHER LOSSES DUMPED:	m^3		
TOTAL LOSSES:	728 m^3		
VOLUME RETURNED TO TOWN:	0 m^3		
VOLUME LEFT AT END OF SECTION:	0 m^3		
NET VOLUME OF MUD USED:	727 m^3		

L-460

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GEOCHEM LABORATORIES LIMITED

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Prepared for

STATOIL

GEOCHEMICAL EVALUATION OF STATOIL'S 6506/12-4

HALTENBANKEN WELL

TEXT AND TABLES

GEOCHEM

November 1985

Petroleum Geochemistry Division

INTRODUCTION

This report presents a geochemical evaluation of the section between 350 metres and 4457.7 metres (TD) in Statoil's 6506/12-4 Haltenbanken well, offshore Norway.

The analytical format employed in this study was specified by Trygve Meyer and was designed to:-

a) investigate the hydrocarbon source potential of the section in terms of richness, maturity and potential for oil or gas
b) detect and characterise shows of migrated hydrocarbons. A suite of core samples were included in the study for this purpose.

This project was authorised by Trygve Meyer, Statoil.

ANALYTICAL

A total of two hundred and sixty one (261) canned ditch cuttings samples were received from 350-4457.7 metres in this well. These samples were composited over fifty (50) metres above 2100 metres and, below this depth, over ten (10) metres. In addition, sixteen (16) sidewall core samples and twenty three (23) core samples were included in the study. The cores are from 3131.12-4008.45 metres and, of these, five (5) represent potential source rocks. The other eighteen (18) are sandstone cores. The sandstone cores were assigned the Geochem job number 1150 with the other core, sidewall core and ditch cuttings samples being allocated to job 1144. All of the samples have been integrated into this study.

Depths are reported relative to KB.

Contamination (grease) was only observed at 3960-3990 metres during the sample preparation procedures. The interval from 3151 metres to 3772 metres was turbodrilled.

Geochem were instructed to analyse one hundred and fifty six (156) samples according to the following programme:-

400	-	200 m	every 100 m
2200	-	3100 m	every 30 m
3100	-	4000 m	every 10 m
4000	-	4420 m	every 30 m
4420	-	4457 m	every 10 m

The total numbers of analyses performed in this study are tabulated below.

ANALYSIS	NUMBER OF SAMPLES
headspace and occluded gas	156
headspace gas on canned cores	4
sample preparation	196
total organic carbon	307
Rockeval pyrolysis	164
vitrinite reflectance	50
kerogen typing and spore colouration	50
*C_{15+} extraction and fractionation	40
capillary GC - saturates	40
capillary GC - aromatics	40
pyrolysis-GC	20
carbon isotopes - saturates, aromatics, extracts	112
GC-MS biomarker analysis	38

*using Statoil standard analytical procedures

Headspace gas analyses could not be run on 14 samples for which the cans were punctured or the lids insecure.

The data are presented in tables 1 through 13 and graphically in figures 1 through 17. A brief description of the analytical techniques employed in this study is included in the back of the report.

GENERAL INFORMATION

Ten (10) copies of this report have been forwarded to Trygve Meyer at Statoil in Stavanger, together with the kerogen slides prepared for this study. A copy of the data has been retained by Geochem for future consultation with authorised Statoil personnel. A magnetic tape of the analytical results will be sent to Statoil.

The remaining sample material will be handled as directed.

EVALUATION OF TURBODRILLING

The interval between 3151 metres and 3772 metres was turbodrilled.

However, it is difficult to demonstrate that this affected the quality of the samples. Thus there are no obvious effects in the total organic carbon, pyrolysis or light hydrocarbon data. The C_{15+} analyses indicate contamination, but it is not restricted to this interval. There is a problem in picking the top of the mature zone (3200 metres) and turbodrilling is known to affect vitrinite reflectance measurements, but this does not appear to be the case in this well.

In summary therefore, the data do not indicate any deterioration in sample quality due to turbodrilling.

TABLE 1
ORGANIC CARBON RESULTS AND GROSS LITHOLOGIC DESCRIPTIONS

GEOCHEM SAMPLE NUMBER	DEPTH	GROSS LITHOLOGIC DESCRIPTION	G S A Colour Code	TOTAL ORGANIC CARBON (Wt. % of Rock)
1144-002	400-450m	A 85% Claystone, blocky, soft, sl. calc., minor cavings, light grey	N7	0.25
		B 15% Igneous, blocky, hard, granitic, very light brownish grey	5YR7/1	
1144-004	500-550m	A 75% Claystone, as 1144-002A, minor cavings	N7	0.25,0.25
		B 25% Igneous, as 1144-002B Minor shell fragments	5YR7/1	
1144-006	600-650m	A 60% Claystone, as 1144-002A, minor cavings	N7	0.28
		B 25% Igneous, as 1144-002B	5YR7/1	
		C 15% Quartz sand, subangular to sub-rounded, fairly well sorted, clear, white	N9	
1144-008	700-750m	A 55% Claystone, as 1144-002A, minor cavings	N7	0.36
		B 20% Quartz sand, as 1144-006C	N9	
		C 15% Igneous, as 1144-002B	5YR7/1	
		D 10% LCM - cement		
1144-010	800-850m	A 55% Claystone, as 1144-002A, minor cavings	N7	0.37
		B 30% Quartz sand, as 1144-006C	N9	
		C 15% Igneous, as 1144-002B	5YR7/1	
1144-012	900-950m	A 75% Claystone, blocky, soft, v. sl. calc., light grey	N7	0.30
		B 15% Igneous, blocky, hard, granitic, light grey to medium light grey	N7-6	
		C 10% Quartz sand, as 1144-006C	N9	
1144-014	1000-1050m	A 70% Claystone, as 1144-012A, minor cavings	N7	0.30,0.31
		B 15% Igneous, as 1144-012B	N7-6	
		C 15% Quartz sand, as 1144-006C	N9	
1144-016	1100-1150m	A 50% Claystone, as 1144-012A	N7	0.46
		B 35% Quartz sand, as 1144-006C	N9	
		C 15% Igneous, as 1144-012B	N7-6	
1144-018	1200-1250m	A 65% Claystone, blocky, soft, sl. calc., medium light grey to light olive grey	N6-5Y6/1	0.39
		B 25% Quartz sand, as 1144-006C	N9	
		C 10% Igneous, as 1144-016C	N7-6	
1144-020	1300-1350m	A 60% Claystone, as 1144-018A	N6-5Y6/1	0.34
		B 30% Quartz sand, as 1144-006C	N9	
		C 10% Igneous, as 1144-016C	N7-6	
1144-022	1400-1450m	A 80% Claystone, as 1144-018A	N6-5Y6/1	0.38,0.39
		B 20% Quartz sand, as 1144-006C Minor igneous	N9	
1144-024	1500-1550m	A 80% Claystone, as 1144-018A	N6-5Y6/1	0.53
		B 15% Quartz sand, as 1144-006C	N9	

Abbreviations = **arena**ceous, **argil**laceous, **calc**areous, **Cut**, **dol**omitic, Fluorescence, **foram**inifera, **fossil**iferous Lost Circulation Material, **mod**erately, **occ**asionally, **sl**ightly, very

TABLE 1
ORGANIC CARBON RESULTS AND GROSS LITHOLOGIC DESCRIPTIONS

GEOCHEM SAMPLE NUMBER	DEPTH		GROSS LITHOLOGIC DESCRIPTION	GSA Colour Code	TOTAL ORGANIC CARBON (Wt. % of Rock)
1144-024	1500-1550m	C 5%	Igneous, blocky, hard, basaltic, greyish black	N2	
1144-026	1600-1650m	A 90%	Claystone/shaly mudstone, blocky to subfissile, soft, non-calc., light olive grey	5Y6/1	0.73
		B 10%	Quartz sand, subangular to sub-rounded, fairly well sorted, clear, white Minor igneous	N9	
1144-028	1700-1750m	A 98%	Claystone, as 1144-026A, minor cavings Minor LCM - grease?	5Y6/1	0.76
1144-030	1800-1850m	A 98%	Silty mudstone, subfissile to blocky, soft, sl. calc., sig. cavings, medium olive grey to light olive grey Minor sand and igneous Minor LCM	5Y5/1-5Y6/1	0.70
1144-032	1900-1950m	A 95%	Shaly mudstone, subfissile, soft to mod. hard, non-calc., minor cavings, very light brownish grey	5YR7/1	1.12
		B 5%	Shaly mudstone, subfissile, soft, non-calc., light grey to very light olive grey	N7-5Y7/1	0.76,0.78
1144-034	2000-2050m	A 90%	Shale, platy, mod. hard, v. sl. calc., minor cavings, very light olive grey	5Y7/1	0.36
		B 10%	Silty mudstone, blocky, soft, non-calc., medium brownish grey	5YR5/1	0.97
1144-036	2110-2120m	A 65%	Mudstone, subfissile to blocky, soft to mod. hard, non-calc., medium light grey	N6	0.97
		B 35%	Silty mudstone, as 1144-034B	5YR5/1	1.43
1144-045	2200-2210m	A 70%	Shale, subfissile, soft, non-calc., medium dark grey	N4	1.08,1.10
		B 30%	Shaly mudstone, subfissile, soft, non-calc., minor cavings, very light olive grey	5Y7/1	0.33
1144-046	2207.5m SWC	A 98%	Shaly mudstone/claystone, subfissile, soft, non-calc., dark grey to dark olive grey	N3-5Y3/1	1.13
1144-049	2230-2240m	A 60%	Shaly mudstone, as 1144-045B, minor cavings	5Y7/1	0.35
		B 40%	Shale, as 1144-045A LCM - cement	N4	0.81
1144-052	2260-2270m	A 98%	Shaly mudstone, subfissile, mod. hard, non-calc., minor to sig. cavings, medium light grey to light grey Minor other mudstone	N6-7	0.43

Abbreviations = **aren**aceous, **argi**llaceous, **calc**areous, Cut, **dol**omitic, Fluorescence, **foram**inifera, **foss**iliferous Lost Circulation Material, **mod**erately, **occ**asionally, **sl**ightly, very

TABLE 1
ORGANIC CARBON RESULTS AND GROSS LITHOLOGIC DESCRIPTIONS

GEOCHEM SAMPLE NUMBER	DEPTH		GROSS LITHOLOGIC DESCRIPTION	GSA Colour Code	TOTAL ORGANIC CARBON (Wt. % of Rock)
1144-054	2280-2290m	A 98%	Shaly mudstone, subfissile, mod. hard, non-calc., minor cavings, medium light grey to light grey Minor pyrites and other mudstone LCM - cement	N6-7	0.49,0.48
1144-057	2320m	A 70%	Shaly mudstone, as 1144-054A, sig. to abundant cavings	N6-7	0.63
		B 30%	LCM - lignite		
1144-060	2350m	A 55%	Shale, platy mod. hard, non-calc., minor to sig. cavings, light grey	N7	0.64
		B 45%	Mudstone, blocky, soft to mod. hard, non-calc., minor cavings, light grey	N7	0.68
1144-062	2374.5m SWC	A 98%	Shaly mudstone, subfissile, soft, non-calc., medium olive grey to olive grey	5Y5/1-5Y4/1	0.74
1144-064	2380-2390m	A 75%	Mudstone, as 1144-060B, minor cavings	N7	0.95,0.95
		B 25%	Shale, as 1144-060A, minor cavings	N7	0.73
		C 10%	LCM - lignite		
1144-067	2410-2420m	A 80%	Mudstone, blocky, soft, non-calc., minor cavings, medium light grey to light grey	N6-7	1.03
		B 10%	Shaly mudstone, platy, soft, non-calc., medium light grey to light grey	N6-7	0.86
		C 10%	LCM - lignite		
1144-070	2440-2450m	A 75%	Mudstone, as 1144-067A, minor cavings	N6-7	0.96
		B 10%	Shaly mudstone, as 1144-067B	N6-7	0.79
		C 10%	Sand, unconsolidated, medium grained, subangular, well sorted, clear, white	N9	
		D 5%	LCM - lignite		
1144-073	2470-2480m	A 90%	Silty mudstone, blocky, soft, non-calc., medium light grey	N6-7	0.92,0.92
		B 10%	Shaly mudstone, as 1144-067B Minor sand and glauconite Minor LCM - lignite	N6-7	0.78
1144-074	2481.5m SWC	A 98%	Shaly mudstone, subfissile, soft to mod. non-calc., silty laminations, medium grey to medium light grey	N5-6	0.64
1144-077	2500-2510m	A 90%	Silty mudstone, blocky, soft, non-calc., minor cavings, medium light grey to light grey	N6-7	0.94
		B 10%	Shaly mudstone, as 1144-067B, sig. to abundant cavings Minor sand and glauconite LCM - lignite	N6-7	
1144-080	2530-2540m	A 90%	Silty mudstone, as 1144-077A, minor cavings	N6-7	0.91

Abbreviations = **arena**ceous, **argi**llaceous, **calc**areous, **Cut**, **dolo**mitic, **F**luorescence, **foram**inifera, **fossi**liferous
Lost **C**irculation **M**aterial, **mod**erately, **occ**asionally, **sl**ightly, **v**ery

TABLE 1
ORGANIC CARBON RESULTS AND GROSS LITHOLOGIC DESCRIPTIONS

GEOCHEM SAMPLE NUMBER	DEPTH		GROSS LITHOLOGIC DESCRIPTION	G S A Colour Code	TOTAL ORGANIC CARBON (Wt. % of Rock)
1144-080	2530-2540m	B 10%	Shaly mudstone, platy, soft, non-calc., abundant cavings, medium light grey to light grey Minor sand	N6-7	0.91
1144-083	2560-2570m	A 98%	Silty mudstone, blocky, soft, non-calc., minor cavings, medium light grey to light grey Minor other mudstone and sand	N6-7	0.82,0.83
1144-085	2579.5m SWC	A 98%	Mudstone, subfissile to blocky, soft, non-calc., silty in part, olive grey to light olive grey	5Y4/1-5Y6/1	0.77
1144-087	2590-2600m	A 98%	Silty mudstone, blocky, soft, non-calc., grades to siltstone, minor cavings, medium grey to medium light grey Minor other mudstone and sand	N5-6	0.78
1144-089	2630m	A 85%	Shaly mudstone, blocky to subfissile, soft to mod. hard, non-calc., minor cavings, medium grey	N5	0.86
		B 15%	Silty mudstone, as 1144-087A, minor to sig. cavings	N5-6	0.61
1144-091	2659m	A 65%	Silty mudstone, blocky, soft, non-calc., sig. cavings, medium light grey to light grey	N6-7	0.60
		B 35%	Mudstone, blocky, soft, non-calc., medium grey	N5	0.82,0.84
1144-092	2679.5m SWC	A 98%	Siltstone, blocky, soft, non-calc., grades to silty sandstone, light grey to light greenish grey	N7-5GY8/1	0.61
1144-094	2690-2700m	A 50%	Silty mudstone/siltstone, blocky, soft, non-calc., minor cavings, light grey	N7	0.81
		B 50%	Shaly mudstone, subfissile to blocky, soft, silty, non-calc., medium grey Minor limestone	N5	0.91
1144-096	2710-2720m	A 60%	Shaly mudstone, as 1144-094B, minor cavings	N5	0.97
		B 40%	Silty mudstone, as 1144-094A, minor to sig. cavings Minor limestone	N7	0.91,0.92
1144-098	2750-2760m	A 70%	Shaly mudstone, as 1144-094B, minor cavings	N5	0.97
		B 30%	Silty mudstone, as 1144-094A, sig. to abundant cavings Minor other caved mudstone	N7	0.82
1144-101	2780.5m SWC	A 98%	Shaly mudstone, subfissile, soft to mod. hard, non-calc., sl. silty, medium grey	N5	0.57

Abbreviations = **arena**ceous, **argil**laceous, **calc**areous, Cut, **dolo**mitic, Fluorescence, **foram**inifera, **foss**iliferous
Lost Circulation Material, **mod**erately, **occ**asionally, **sl**ightly, very

TABLE 1
ORGANIC CARBON RESULTS AND GROSS LITHOLOGIC DESCRIPTIONS

GEOCHEM SAMPLE NUMBER	DEPTH		GROSS LITHOLOGIC DESCRIPTION	G S A Colour Code	TOTAL ORGANIC CARBON (Wt. % of Rock)
1144-102	2780-2790m	A 50%	Silty mudstone, blocky, soft to mod. hard, non-calc., minor cavings, medium grey	N7	0.85
		B 50%	Shaly mudstone, subfissile to blocky, soft to mod. hard, non-calc., medium dark grey	N4	0.93,0.95
1144-104	2800-2810m	A 50%	Silty mudstone, as 1144-102A, minor cavings	N7	0.80
		B 50%	Shaly mudstone, as 1144-102B, minor cavings	N4	0.97
1144-105	2840m	A 60%	Silty mudstone, as 1144-102A, minor cavings	N7	0.89
		B 40%	Shaly mudstone, as 1144-102B, minor to sig. cavings	N4	1.09,1.09
1144-107	2870-2880m	A 55%	Silty mudstone, as 1144-102A, minor cavings	N7	0.87
		B 45%	Shaly mudstone, as 1144-102B, minor to sig. cavings Minor sandstone	N4	1.01
1144-108	2879.5m SWC	A 98%	Mudstone, subfissile, soft, silty, non-calc., with minor siltstone laminations, medium grey	N5	0.73
1144-111	2900-2910m	A 60%	Mudstone, subfissile to blocky, soft, sl. silty, non-calc., minor cavings, medium dark grey to medium grey	N4-5	0.96
		B 40%	Mudstone, silty, blocky, soft, non-calc., minor cavings, medium light grey Minor sand	N6	0.88
1144-114	2934.5m SWC	A 98%	Mudstone, subfissile to blocky, soft, non-calc., minor siltstone laminations, medium grey	N5	0.66,0.68
1144-115	2930-2940m	A 75%	Silty mudstone, grading in part to siltstone, blocky, soft, non-calc., minor cavings, light grey	N7	0.84
		B 25%	Shale, platy, mod. hard, non-calc., abundant cavings, medium grey Minor other caved mudstone	N5	0.93
1144-118	2964.5m SWC	A 98%	Shale, subfissile, hard, non-calc., medium dark grey	N4	0.74
1144-119	2960-2970m	A 70%	Silty mudstone, as 1144-102A, minor cavings	N7	0.74
		B 30%	Shaly mudstone, as 1144-102B, minor to sig. cavings Minor siltstone/sandstone	N4	0.90,0.94
1144-122	2990-3000m	A 85%	Silty mudstone, blocky, soft, non-calc., grades to siltstone, minor cavings, medium light grey	N6	0.97

Abbreviations = **are**naceous, **argil**laceous, **calc**areous, **Cut**, **dol**omitic, **F**luorescence, **foram**inifera, **foss**iliferous
Lost **C**irculation **M**aterial, **mod**erately, **occ**asionally, slightly, very

TABLE 1
ORGANIC CARBON RESULTS AND GROSS LITHOLOGIC DESCRIPTIONS

GEOCHEM SAMPLE NUMBER	DEPTH		GROSS LITHOLOGIC DESCRIPTION	G S A Colour Code	TOTAL ORGANIC CARBON (Wt. % of Rock)
1144-122	2990-3000m	B 15%	Shaly mudstone, subfissile, soft to mod. hard, non-calc., minor cavings, medium grey	N5	0.95
1144-125	3020-3030m	A 50%	Shale, platy to fissile, mod. hard, non-calc., sig. cavings, medium dark grey	N4	0.90
		B 50%	Silty mudstone, blocky, soft, non-calc., grades to siltstone, minor cavings, medium light grey	N6	0.64
1144-128	3050-3060m	A 70%	Silty mudstone, as 1144-125B, minor cavings	N6	1.00
		B 30%	Shale, as 1144-125A, abundant cavings	N4	0.94,0.93
		C 10%	LCM - lignite Minor siltstone and other mudstone		
1144-131	3084.5m SWC	A 98%	Silty mudstone, subfissile, soft, non-calc., medium grey to mediun olive grey	N5-5Y5/1	0.80
1144-132	3080-3090m	A 75%	Silty mudstone, blocky, soft, non-calc., minor cavings, medium light grey	N6	1.00
		B 25%	Shale, as 1144-125A, sig. cavings Minor LCM - lignite	N4	1.00
1144-134	3100-3110m	A 90%	Shaly mudstone, subfissile, soft, non-calc., medium dark grey	N4	1.17
		B 10%	Silty mudstone, as 1144-132A, sig. cavings	N6	
1144-135	3114.5m SWC	A 98%	Shaly mudstone, subfissile, soft to mod. hard, non-calc., medium dark grey	N4	1.35,1.34
1144-136	3110-3120m	A 80%	Shaly mudstone, blocky, soft to mod. hard, non-calc., minor cavings, medium dark grey to medium grey	N4-5	1.25
		B 20%	LCM - lignite Minor other mudstone		
1144-137	3120-3130m	A 40%	Shale, platy to thinly fissile, mod. hard, non-calc., minor to sig. cavings, medium grey	N5	1.02
		B 30%	Mudstone, subfissile to blocky, soft to mod. hard, non-calc., minor cavings, light grey	N7	0.74
		C 20%	Sand, unconsolidated, medium grained, subangular to subrounded, fairly well sorted, clear, white	N9	
		D 10%	LCM - lignite and paint		
1150-001 CORE	3131.12m	A 98%	Sandstone, blocky, medium grained, subrounded to subangular, well sorted, non-calc. matrix, glaucon-ititc, v. pale milky cut, light grey to very light grey	N7-8	

Abbreviations = **are**naceous, **arg**illaceous, **calc**areous, Cut, **dol**omitic, Fluorescence, **foram**inifera, **foss**iliferous
Lost Circulation Material, *mod*erately, *occ*asionally, *sl*ightly, very

TABLE 1
ORGANIC CARBON RESULTS AND GROSS LITHOLOGIC DESCRIPTIONS

GEOCHEM SAMPLE NUMBER	DEPTH	GROSS LITHOLOGIC DESCRIPTION	G S A Colour Code	TOTAL ORGANIC CARBON (Wt. % of Rock)
1144-138 CORE	3132.65m	A 98% Shale, platy, mod. hard, non-calc., medium grey to medium dark grey	N5-4	1.54
1150-002 CORE	3135.61m	A 98% Sandstone, blocky, medium grained, subrounded, fairly well sorted, non-calc. matrix, occasional coaly flecks, sl. micaceous and glauconitic, v. pale milky cut, light grey	N7	
1144-139	3130-3140m	A 70% Shale, platy to thinly fissile, mod. hard, non-calc., abundant? cavings, medium grey	N5	1.04
		B 30% Mudstone, subfissile to blocky, soft to mod. hard, non-calc., sig. to abundant cavings, light grey	N7	1.04
		C 20% Sand, unconsolidated, medium grained, subangular to subrounded, fairly well sorted, clear, white	N9	0.58,0.59
		D 10% LCM - lignite		
1150-003 CORE	3139.42m	A 98% Sandstone, blocky, medium grained, subangular to subrounded, fairly well sorted, non-calc. matrix, sl. micaceous, v. pale milky cut, light grey to very light grey	N7-8	
1150-004 CORE	3142.60m	A 98% Sandstone, blocky, fine - medium grained, subrounded to subangular, well sorted, non-calc., sl. micaceous, light grey to very light grey	N7-8	
1144-140 CORE	3144.48m	A 98% Shale, platy, mod. hard, non-calc., medium dark grey	N4	0.86
1150-005 CORE	3146.00m	A 70% Sandstone, blocky, fine grained, well sorted, glauconitic, very light grey	N8	
		with lenses of		
		B 30% Shaly mudstone, subfissile, soft to mod. hard, non-calc., medium grey	N5	1.18
1144-141 CORE	3148.39m	A 98% Shale, platy to subfissile, mod. hard, non-calc., medium dark grey	N4	0.86
1144-142	3140-3150m	A 50% Shale, platy to thinly fissile, mod. hard, non-calc., minor to sig. cavings, medium grey	N5	1.05
		B 40% Mudstone, blocky to subfissile, soft to mod. hard, non-calc., light grey	N7	0.61
		C 10% LCM - lignite		
		Minor sand		
1144-143	3150-3160m	A 60% Shale, as 1144-142A, minor to sig. cavings	N5	1.27,1.26
		B 25% Mudstone, as 1144-142B	N7	0.63
		C 15% Mudstone, blocky, soft, sl. silty, non-calc., medium dark grey to brownish grey	N4-5YR4/1	1.07
		D 5% LCM - lignite		
		Minor sand		

Abbreviations = **aren**aceous, **argil**laceous, **calc**areous, **Cut**, **dolomitic**, **F**luorescence, **foram**inifera, **foss**iliferous
Lost **C**irculation **M**aterial, **mod**erately, **occ**asionally, **sl**ightly, very

TABLE 1
ORGANIC CARBON RESULTS AND GROSS LITHOLOGIC DESCRIPTIONS

GEOCHEM SAMPLE NUMBER	DEPTH		GROSS LITHOLOGIC DESCRIPTION	GSA Colour Code	TOTAL ORGANIC CARBON (Wt. % of Rock)
1144-144	3160-3170m	A 80%	Mudstone, blocky, soft, sl. silty, non-calc., medium dark grey to brownish grey	N4-5YR4/1	0.86
		B 20%	Shale, platy to thinly fissile, mod. hard, non-calc., sig. cavings, medium grey Minor other mudstone Minor LCM	N5	1.12
1144-145	3175.0m SWC	A 98%	Shaly mudstone, subfissile, soft, non-calc., with siltstone laminations, olive grey	5Y4/1	1.09
1144-146	3170-3180m	A 80%	Mudstone, as 1144-144A	N4-5YR4/1	1.03,1.01
		B 15%	Shale, as 1144-144B, sig. cavings	N5	
		C 5%	LCM - paint and lignite		
1144-147	3180-3190m	A 75%	Mudstone, as 1144-144A	N4-5YR4/1	1.01
		B 15%	Shale, as 1144-144B, sig. cavings	N5	1.07
		C 10%	LCM - lignite		
1144-148	3190-3200m	A 75%	Mudstone, as 1144-144A	N4-5YR4/1	1.07
		B 15%	Shale, as 1144-144B, sig. cavings	N5	1.07
		C 10%	LCM - lignite Minor other mudstone		
1144-149	3200-3210m	A 85%	Mudstone, as 1144-144A	N4-5YR4/1	0.94,0.92
		B 10%	Shale, as 1144-144B, sig. cavings	N5	1.00
		C 5%	LCM - lignite		
1144-150	3210-3220m	A 95%	Mudstone, as 1144-144A	N4-5YR4/1	0.99
		B 5%	Shale, as 1144-144B, sig. cavings	N5	1.05
			Minor LCM - lignite		
1144-151	3220-3230m	A 95%	Mudstone, blocky, soft, silty, non-calc., minor cavings, medium dark grey to brownish grey	N4-5YR4/1	0.97
		B 5%	Shale, platy, mod. hard, non-calc., sig. cavings, medium dark grey Minor LCM - lignite	N4	1.10
1144-152	3230-3240m	A 80%	Mudstone, as 1144-151A, minor cavings	N4-5YR4/1	1.02
		B 10%	Shale, as 1144-151B, sig. cavings	N4	0.94
		C 10%	LCM - lignite		
1144-153	3240-3250m	A 95%	Mudstone, as 1144-151A, minor cavings	N4-5YR4/1	1.10
		B 5%	Shale, as 1144-151B, sig. cavings LCM - lignite	N4	
1144-154	3250-3260m	A 95%	Mudstone, blocky, soft, non-calc., minor cavings, medium grey to medium brownish grey	N5-5YR5/1	0.99,1.01
		B 5%	Shale, platy to subfissile, mod. hard, non-calc., sig. cavings, medium dark grey LCM - lignite	N4	0.99
1144-155	3264.5m SWC	A 98%	Shale, subfissile, soft, non-calc., medium dark grey to olive grey	N4-5Y4/1	0.96

Abbreviations = **arena**ceous, **argil**laceous, **calc**areous, Cut, **dol**omitic, Fluorescence, **foram**inifera, **fossil**iferous
Lost Circulation Material, **mod**erately, **occ**asionally, **sl**ightly, very

TABLE 1
ORGANIC CARBON RESULTS AND GROSS LITHOLOGIC DESCRIPTIONS

GEOCHEM SAMPLE NUMBER	DEPTH	GROSS LITHOLOGIC DESCRIPTION	GSA Colour Code	TOTAL ORGANIC CARBON (Wt. % of Rock)
1144-156	3260-3270m	A 90% Mudstone, blocky, soft, non-calc., minor cavings, medium grey to medium brownish grey	N5-5YR5/1	0.98
		B 5% Shale, platy to subfissile, mod. hard, non-calc., minor to sig. cavings, medium dark grey Minor lignite	N4	0.99
1144-157	3270-3280m	A 90% Mudstone, as 1144-156A, minor cavings	N5-5YR5/1	1.07,1.05
		B 5% LCM - lignite		
		C 5% Shale, as 1144-156B, minor cavings	N4	1.04
1144-158	3280-3290m	A 65% Mudstone, blocky to subfissile, mod. hard, non-calc., medium dark grey to brownish grey	N4-5YR4/1	0.95
		B 20% Shale, as 1144-156B, minor cavings	N4	0.96
		C 15% Drilling mud/cement?		
1144-159	3290-3300m	A 90% Mudstone, blocky, soft, non-calc., minor cavings, medium grey to medium brownish grey	N5-5YR5/1	1.02
		B 10% Shale, platy, mod. hard, non-calc., minor to sig. cavings, medium dark grey Minor LCM	N4	1.01
1144-160	3300-3310m	A 90% Mudstone, as 144-159A, minor cavings	N5-5YR5/1	1.01
		B 5% Shale, as 1144-159B, minor to sig. cavings	N4	0.98,1.00
		C 5% LCM - lignite		
1144-161	3310-3320m	A 90% Mudstone, as 1144-159A, minor cavings	N5-5YR5/1	1.08
		B 10% Shale, as 1144-159B, minor to sig. cavings LCM - lignite	N4	1.12
1144-162	3320-3330m	A 85% Mudstone, as 1144-159A, minor cavings	N5-5YR5/1	1.03
		B 15% Shale, as 1144-159B, minor to sig. cavings Minor lignite	N4	0.98
1144-163	3330-3340m	A 50% Shale, platy, mod. hard, non-calc., sig. cavings, medium dark grey	N4	0.96
		B 50% Mudstone, blocky, soft, non-calc., minor cavings, medium grey Minor lignite	N5	0.97,0.95
1144-164	3340-3350m	A 65% Mudstone, as 1144-163B, minor cavings	N5	0.94
		B 35% Shale, as 1144-163A, minor to sig. cavings Minor lignite	N4	0.98
1144-165	3350-3360m	A 65% Mudstone, as 1144-163B, minor cavings	N5	0.95
		B 35% Shale, as 1144-163A, minor to sig. cavings Minor pyrites LCM - lignite	N4	0.95

Abbreviations = arenaceous, argillaceous, calcareous, Cut, dolomitic, Fluorescence, foraminifera, fossiliferous
Lost Circulation Material, moderately, occasionally, slightly, very

TABLE 1
ORGANIC CARBON RESULTS AND GROSS LITHOLOGIC DESCRIPTIONS

GEOCHEM SAMPLE NUMBER	DEPTH	GROSS LITHOLOGIC DESCRIPTION	G S A Colour Code	TOTAL ORGANIC CARBON (Wt. % of Rock)
1144-166	3360-3370m	A 55% Mudstone, blocky, soft, non-calc., minor cavings, medium grey	N5	1.15,1.17
		B 20% Shale, platy, mod. hard, non-calc., minor to sig. cavings, medium dark grey	N4	0.93
		C 15% Silty mudstone, blocky, mod. hard, non-calc., medium grey	N5	1.01
		D 10% LCM - lignite		
1144-167	3370-3380m	A 50% Mudstone, as 1144-166A, minor cavings	N5	1.13
		B 35% Silty mudstone, as 1144-166C	N5	1.01
		C 15% Shale, as 1144-166B, sig. cavings	N4	0.98
		Minor lignite		
1144-168	3384.5m SWC	A 98% Shaly mudstone, subfissile, soft, non-calc., medium dark grey	N4	1.03,1.04
1144-169	3380-3390m	A 55% Mudstone, as 1144-166A, minor cavings	N5	1.06
		B 35% Silty mudstone, as 1144-166C	N5	0.85
		C 10% Shale, as 1144-166B, sig. cavings	N4	0.98
		Minor lignite		
1144-170	3390-3400m	A 60% Mudstone, as 1144-166A, minor cavings	N5	1.01
		B 30% Silty mudstone, as 1144-166C	N5	0.86,0.88
		C 10% Shale, as 1144-166B, sig. cavings	N4	0.93
		Minor lignite		
1144-171	3400-3410m	A 75% Mudstone, blocky, soft, non-calc., minor cavings, medium grey	N5	0.92
		B 15% Silty mudstone, blocky, mod. hard, non-calc., minor cavings, medium dark grey to medium grey	N4-5	0.85
		C 10% Shale, platy, mod. hard, non-calc., sig. cavings, medium dark grey	N4	0.94
		Minor other mudstone		
1144-172	3410-3420m	A 45% Mudstone, as 1144-171A, minor cavings	N5	1.02
		B 40% Silty mudstone, as 1144-171B, minor cavings	N4-5	0.92,0.94
		C 15% Shale, as 1144-171C, sig. cavings	N4	0.99
1144-173	3420-3430m	A 55% Mudstone, as 1144-171A, minor cavings	N5	1.22
		B 30% Silty mudstone, as 1144-171B, minor cavings	N4-5	1.16
		C 15% Shale, as 1144-171C, sig. cavings	N4	0.96
1144-174	3430-3440m	A 60% Mudstone, as 1144-171A, minor cavings	N5	1.14,1.11
		B 25% Silty mudstone, as 1144-171B, minor cavings	N4-5	1.00
		C 15% Shale, as 1144-171C, sig. cavings	N4	1.03
1144-175	3440-3450m	A 45% Mudstone, as 1144-171A, minor cavings	N5	1.14
		B 40% Silty mudstone, as 1144-171B, minor cavings	N4-5	0.83
		C 15% Shale, as 1144-171C, sig. cavings	N4	0.96
1144-176	3450-3460m	A 60% Mudstone, as 1144-171A, minor cavings	N5	0.82,0.82
		B 25% Silty mudstone, as 1144-171B	N4-5	0.99
		C 15% Shale, as 1144-171C, minor to sig. cavings	N4	

Abbreviations = **aren**aceous, **argil**laceous, **calc**areous, **Cut**, **dol**omitic, Fluorescence, **foram**inifera, **foss**iliferous
Lost Circulation Material, **mod**erately, **occ**asionally, **sl**ightly, **v**ery

TABLE 1
ORGANIC CARBON RESULTS AND GROSS LITHOLOGIC DESCRIPTIONS

GEOCHEM SAMPLE NUMBER	DEPTH	GROSS LITHOLOGIC DESCRIPTION	G S A Colour Code	TOTAL ORGANIC CARBON (Wt. % of Rock)
1144-177	3460-3470m	A 60% Silty mudstone, blocky, mod. hard, non-calc., medium dark grey to medium grey	N4-5	0.89
		B 30% Mudstone, blocky, soft, non-calc., minor cavings, medium grey	N5	0.87
		C 10% Shale, platy, mod. hard, non-calc., sig. cavings, medium dark grey	N4	0.95,0.96
1144-178	3474.5m SWC	A 98% Shaly mudstone, subfissile, soft, non-calc., medium dark grey	N4	0.67
1144-179	3470-3480m	A 80% Silty mudstone, as 1144-177A, minor cavings	N4-5	1.18
		B 10% Shale, as 1144-177C, sig. cavings	N4	
		C 10% LCM - lignite Minor other mudstone		
1144-180	3480-3490m	A 70% Shale, platy to subfissile, mod. hard, non-calc., sig. to abundant cavings, medium dark grey	N4	0.99
		B 20% Mudstone, blocky, soft, non-calc., minor cavings, medium grey	N5	0.83
		C 10% LCM - lignite Minor other mudstone		
1144-181	3490-3500m	A 55% LCM - lignite and drilling mud		
		B 35% Shale, as 1144-180A, sig. cavings	N4	0.98,0.98
		C 10% Sand, unconsolidated, medium grained, white Minor mudstone	N9	
1144-182	3504.5m SWC	A 98% Shale, subfissile to platy, mod. hard, non-calc., medium grey to medium light grey	N5-6	0.94
1144-183	3500-3510m	A 55% Shale, as 1144-180A, minor cavings	N4	0.86
		B 20% Sand, as 1144-181C	N9	
		C 15% Mudstone, blocky, soft, sl. silty, non-calc., minor cavings, medium grey	N5	0.90
		D 10% LCM - lignite		
1144-184	3510-3520m	A 60% Silty mudstone, mod. hard, non-calc., minor cavings, medium grey to medium dark grey	N5-4	0.82
		B 40% Shale, platy, mod. hard, non-calc., sig. cavings, medium dark grey Minor other mudstone. LCM - lignite	N4	0.86,0.85
1144-185	3520-3530m	A 45% Mudstone, blocky, soft to mod. hard, non-calc., minor cavings, medium grey	N5	0.93
		B 30% Shale, platy, mod. hard, non-calc., sig. cavings, medium dark grey	N4	0.96
		C 25% Silty mudstone, blocky, mod. hard, non-calc., medium grey	N5	0.98
1144-186	3520-3530m	A 55% Mudstone, blocky, soft, non-calc., sl. silty, minor cavings, medium grey	N5	1.03

Abbreviations = **are**naceous, **arg**illaceous, **calc**areous, Cut, **dol**omitic, Fluorescence, **foram**inifera, **foss**iliferous
Lost Circulation Material, **mod**erately, **occ**asionally, **sl**ightly, very

TABLE 1
ORGANIC CARBON RESULTS AND GROSS LITHOLOGIC DESCRIPTIONS

GEOCHEM SAMPLE NUMBER	DEPTH	GROSS LITHOLOGIC DESCRIPTION	GSA Colour Code	TOTAL ORGANIC CARBON (Wt. % of Rock)
1144-186	3520-3530m	B 30% Shale, platy, mod. hard, non-calc., minor to sig. cavings, medium dark grey	N4	0.92
		C 15% Silty mudstone, blocky, mod. hard, non-calc., medium dark grey to medium grey	N4-5	0.87
1144-187	3540-3550m	A 65% Mudstone, blocky, soft, non-calc., sl. silty, minor cavings, medium grey	N5	0.95
		B 25% Shale, as 1144-186B, minor to sig. cavings	N4	0.87,0.86
		C 10% Silty mudstone, as 1144-186C	N4-5	0.88
1144-188	3540-3550m	A 65% Mudstone, as 1144-187A, minor cavings	N5	0.88,0.86
		B 20% Shale, as 1144-186B, sig. cavings	N4	0.92
		C 15% Silty mudstone, as 1144-186C	N4-5	0.82
1144-189	3550-3560m	A 80% Mudstone, as 1144-187A, minor cavings	N5	0.90
		B 15% Shale, as 1144-186B, sig. cavings	N4	0.89
		C 5% Silty mudstone, as 1144-186C	N4-5	0.91
1144-190	3560-3570m	A 85% Mudstone, as 1144-187A, minor cavings	N5	0.92,0.90
		B 15% Shale, as 1144-186B, sig. cavings	N4	0.81
		Minor other mudstone		
1144-191	3570-3580m	A 70% Silty mudstone, blocky, hard, non-calc., medium grey to medium dark grey	N5-4	1.25
		B 30% LCM - metal, lignite		
		Minor shale and other mudstone		
1144-192	3580-3590m	A 60% Mudstone, blocky, soft, non-calc., minor cavings, medium grey	N5	1.15
		B 20% Silty mudstone, as 1144-191A	N5-4	1.04
		C 20% LCM - lignite		
		Minor shale		
1144-193	3590-3600m	A 80% Mudstone, as 1144-192A	N5	0.92
		B 15% Shale, platy, mod. hard, non-calc., sig. cavings, medium dark grey	N4	0.94,0.93
		C 5% Silty mudstone, as 1144-191A	N5-4	
		Minor lignite		
1144-194	3600-3610m	A 90% Mudstone, as 11440192A	N5	0.92
		B 10% Shale, as 1144-193B, sig. cavings	N4	0.92
		Minor other mudstone		
		Minor lignite		
1144-195	3620-3630m	A 85% Mudstone, as 1144-192A, minor cavings	N5	0.86
		B 15% Shale, as 1144-193B, sig. cavings	N4	0.94
		Minor other mudstone		
		Minor lignite		
1144-196	3620-3630m	A 85% Mudstone, as 1144-192A, minor cavings	N5	0.84
		B 15% Shlae, as 1144-193B, sig. cavings	N4	0.85
		Minor other mudstone		
		Minor lignite		
1144-197	3630-3640m	A 85% Mudstone, as 1144-192A, minor cavings	N5	0.75,0.74

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Lost **C**irculation **M**aterial, **mod**erately, **occ**asionally, **sl**ightly, **v**ery

TABLE 1
ORGANIC CARBON RESULTS AND GROSS LITHOLOGIC DESCRIPTIONS

GEOCHEM SAMPLE NUMBER	DEPTH	GROSS LITHOLOGIC DESCRIPTION	G S A Colour Code	TOTAL ORGANIC CARBON (Wt. % of Rock)
1144-197	3630-3640m	B 15% Shale, platy, mod. hard, non-calc., sig. cavings, medium dark grey Minor other mudstone Minor lignite	N4	0.93
1144-198	3640-3650m	A 65% Silty mudstone, blocky, mod. hard, non-calc., minor cavings, medium grey to medium dark grey	N5-4	0.90
		B 30% Mudstone, blocky, soft, non-calc., minor cavings, medium grey	N5	0.91
		C 5% Shale, as 1144-197B, sig. cavings	N4	
1144-199	3650-3660m	A 85% Silty mudstone, as 1144-198A, minor cavings	N5-4	0.99
		B 15% Mudstone, as 1155-198B, minor cavings Minor shale and lignite	N5	1.02
1144-200	3660-3670m	A 85% Silty mudstone, as 1144-198A, minor cavings	N5-4	0.92
		B 15% Mudstone, as 1144-198B, minor cavings Minor shale and lignite	N5	0.97,0.96
1144-201	3670-3680m	A 80% Silty mudstone, as 1144-198A, minor cavings	N5-4	1.49
		B 20% Mudstone, as 1144-198B, minor cavings Minor shale and lignite	N5	1.35
1144-202	3680-3690m	A 85% Silty mudstone, as 1144-198A, minor cavings	N5-4	0.99
		B 15% Shale, platy, mod. hard, non-calc., minor to sig. cavings, medium dark grey Minor other mudstone and lignite	N4	0.95
1144-203	3690-3700m	A 95% Silty mudstone, as 1144-198A, minor cavings	N5-4	1.91,1.88
		B 5% Shale, as 1144-202B, sig. cavings Minor other mudstone	N4	
1144-204	3700-3710m	A 70% Silty mudstone, blocky, mod. hard, non-calc., minor cavings, medium dark grey	N4	1.60
		B 20% Shale, platy to thinly fissile, mod. hard, non-calc., minor to sig. cavings	N4	0.89
		C 10% Mudstone, blocky, soft to mod. hard, non-calc., minor cavings, medium grey	N5	0.73
1144-205	3710-3720m	A 80% Silty mudstone, as 1144-204A, minor cavings	N4	1.48
		B 15% Shale, as 1144-204B, minor cavings	N4	0.93,0.93
		C 5% Mudstone, as 1144-204C	N5	
1144-206	3720-3720m	A 90% Silty mudstone, as 1144-204A, minor cavings	N4	1.23
		B 10% Shale, as 1144-204B, minor cavings Minor mudstone	N4	1.12

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TABLE 1
ORGANIC CARBON RESULTS AND GROSS LITHOLOGIC DESCRIPTIONS

GEOCHEM SAMPLE NUMBER	DEPTH	GROSS LITHOLOGIC DESCRIPTION	G S A Colour Code	TOTAL ORGANIC CARBON (Wt. % of Rock)
1144-207	3730-3740m	A 45% Mudstone, blocky, soft, non-calc., minor cavings, medium grey	N5	0.89
		B 30% Silty mudstone, blocky, mod. hard, non-calc., minor cavings, medium dark grey	N4	1.17
		C 25%% Shale, platy to thinly fissile, mod. hard, non-calc., minor cavings, medium dark grey	N4	1.01,1.02
		Minor other mudstone		
1144-208	3740-3750m	A 50% Mudstone, as 1144-207A	N5	0.91
		B 40% Shale, as 1144-207C, minor to sig. cavings	N4	0.91
		C 10% Silty mudstone, as 1144-207B, minor cavings	N4	1.01
		Minor sandstone		
1144-209	3750-3760m	A 60% Mudstone, as 1144-207A, minor cavings	N5	0.96
		B 40% Shale, as 1144-207C, minor to sig. cavings	N4	0.99,1.02
		Minor sand and other mudstone		
1144-210	3760-3770m	A 55% Mudstone, as 1144-207A, minor cavings	N5	0.91
		B 30% Shale, as 1144-207C, minor to sig. cavings	N4	0.88
		C 15% Silty mudstone, blocky, mod. hard, non-calc., minor cavings, medium dark grey	N4	0.90
1144-211	3770-3780m	A 60% Shale, platy to subfissile, mod. hard, non-calc., sig. to abundant cavings, medium dark grey	N4	0.95
		B 40% Mudstone, blocky, soft to mod. hard, non-calc., sig. cavings, medium grey	N5	0.74,0.74
		Minor sand and other mudstone		
1144-213	3780-3790m	A 55% Shale, as 1144-211A, sig. to abundant cavings	N4	0.88
		B 45% Mudstone, as 1144-211B, minor cavings	N5	0.80
		Minor sand, pyrites and other mudstone		
		LCM - lignite		
1144-214	3790-3800m	A 50% Shale, as 1144-211A, sig. to abundant cavings	N4	0.81
		B 40% Shaly mudstone, blocky to subfissile, soft to mod. hard, non-calc., minor cavings, medium grey to medium olive grey	N5-5Y5/1	0.77
		C 10% LCM - lignite		
1144-215	3800-3810m	A 65% Shale, platy to thinly fissile, mod. hard, non-calc., sig. cavings, medium dark grey	N4	0.80
		B 30% Shaly mudstone, as 1144-214B, minor cavings	N5-5Y5/1	0.67,0.69
		C 5% Shale, platy, mod. hard, non-calc., greyish red	5R4/2	0.21
		Minor other mudstone. Minor lignite.		

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Lost **C**irculation **M**aterial, **mod**erately, **occ**asionally, **sl**ightly, **v**ery

TABLE 1
ORGANIC CARBON RESULTS AND GROSS LITHOLOGIC DESCRIPTIONS

GEOCHEM SAMPLE NUMBER	DEPTH		GROSS LITHOLOGIC DESCRIPTION	G S A Colour Code	TOTAL ORGANIC CARBON (Wt. % of Rock)
1144-216	3810-3820m	A 70%	Shale, platy to thinly fissile, mod. hard, non-calc., sig. to abundant cavings, medium dark grey	N4	0.89
		B 30%	Shaly mudstone, blocky to subfissile, soft to mod. hard, non-calc., sig. cavings, medium grey to medium olive grey	N5-5Y5/1	0.88
			Minor other shale and mudstone		
1144-217	3820-3830m	A 65%	Shale, as 1144-216A, sig. to abundant cavings	N4	0.96
		B 20%	Shaly mudstone, as 1144-216B, sig. cavings	N5-5Y5/1	0.69,0.70
		C 15%	Shaly mudstone, subfissile, soft to mod. hard, non-calc., minor cavings, greyish red	5R4/2	0.27
1144-218	3830-3840m	A 60%	Shale, as 1144-216A, sig. cavings	N4	1.31
		B 35%	Shaly mudstone, as 1144-217C	5R4/2	0.41
		C 5%	Shaly mudstone, as 1144-216B, minor cavings	N5-5Y5/1	0.66
1144-219	3830-3840m	A 55%	Shale, as 1144-216A, sig. cavings	N4	0.89
		B 45%	Mudstone, blocky to subfissile, soft to mod. hard, non-calc., minor to sig. cavings, medium grey to medium olive grey	N5-5Y5/1	1.22,1.23
			Minor other mudstone		
			LCM - lignite		
1144-220	3840-3850m	A 45%	Shale, platy, mod. hard, non-calc., minor cavings, medium dark grey	N4	1.38
		B 35%	Shaly mudstone, subfissile, soft, non-calc., minor cavings, dark grey to dark brownish grey	N3-5YR3/1	8.45
		C 15%	Mudstone, as 1144-219B, minor to sig. cavings	N5-5Y5/1	0.72
		D 5%	Limestone, blocky, soft, pinkish grey	5YR8/1	0.18
			LCM - lignite. Minor other mudstone		
1144-221	3850-3860m	A 50%	Shale, as 1144-220A, minor to sig. cavings	N4	0.93,0.93
		B 35%	Shaly mudstone, as 1144-220B, minor cavings	N3-5YR3/1	6.34
		C 15%	Mudstone, as 1144-219B, minor cavings	N5-5Y5/1	1.69
			Minor limestone and other mudstone		
			Minor LCM - lignite		
1144-222	3860-3870m	A 45%	Shale, as 1144-220A, minor to sig. cavings	N4	0.90
		B 30%	Mudstone, blocky, soft to mod. hard, non-calc., minor cavings, medium grey to medium olive grey	N5-5Y5/1	0.95
		C 15%	Shaly mudstone, as 1144-220B, minor cavings	N3-5YR3/1	3.50
			Minor limestone and other mudstone		
			Minor lignite		

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Lost Circulation Material, **mod**erately, **occ**asionally, **sl**ightly, very

TABLE 1
ORGANIC CARBON RESULTS AND GROSS LITHOLOGIC DESCRIPTIONS

GEOCHEM SAMPLE NUMBER	DEPTH	GROSS LITHOLOGIC DESCRIPTION	G S A Colour Code	TOTAL ORGANIC CARBON (Wt. % of Rock)
1144-223	3870-3880m	A 60% Shale, platy, mod. hard, non-calc., minor to sig. cavings, medium dark grey	N4	1.00,1.00
		B 40% Mudstone, shaly in part, blocky to subfissile, mod. hard, non-calc., minor to sig. cavings, medium olive grey	5Y5/1	1.34
		Minor other mudstone		
1144-224	3880-3890m	A 65% Shale, as 1144-223A, minor to sig. cavings	N4	0.92
		B 35% Mudstone, as 1144-223B, minor cavings	5Y5/1	1.03
		Minor other mudstone		
1144-225	3880-3890m	A 60% Shale, as 1144-223A, minor to sig. cavings	N4	0.86
		B 40% Mudstone, as 1144-223B, minor cavings	5Y5/1	1.04,1.03
		Minor other mudstone		
1144-226	3900-3910m	A 40% Mudstone, blocky to subfissile, soft to mod. hard, sl. silty, non-calc., minor cavings, brownish grey	5YR4/1	2.00
		B 35% Shale, platy, mod. hard, non-calc., sig. cavings, medium dark grey	N4	0.88
		C 25% Mudstone, blocky, soft to mod. hard, non-calc., minor to sig. cavings, medium olive grey to olive grey	5Y5/1-5Y4/1	0.84
		Minor other mudstone		
1144-227	3910-3920m	A 45% Mudstone, as 1144-226A, minor cavings	5YR4/1	1.84
		B 40% Shale, as 1144-226B, sig. cavings	N4	0.84
		C 15% Mudstone, as 1144-226C	5Y5/1-5Y4/1	0.98,0.95
		Minor other mudstone		
1144-228	3940-3950m	A 50% Shale, platy, mod. hard, non-calc., sig. cavings, medium dark grey	N4	1.01
		B 50% Mudstone, blocky, soft to mod. hard, sl. silty, sl. calc., minor cavings, brownish grey	5YR4/1	2.02
		Minor other shale and mudstone		
1144-229	3950-3960m	A 40% Mudstone, as 1144-228B, minor to sig. cavings	5YR4/1	2.25
		B 30% Shale, as 1144-228A, minor cavings	N4	2.02
		C 30% LCM - lignite?, paint and cement		
1144-230	3960-3970m	A 90% Silty mudstone, subfissile, soft, non-calc., minor cavings, brownish grey	5YR4/1	2.53,2.52
		B 10% LCM - cement and paint		
		Minor caved shale		
1144-231	3972.05m CORE	A 98% Silty shale, subfissile to blocky, mod. hard, sl. micaceous, non-calc., medium dark grey	N4	0.69
1144-232	3975.06m CORE	A 98% Shale, subfissile to platy, mod. hard, non-calc., medium dark grey	N4	1.80

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Lost Circulation Material, **mod**erately, **occ**asionally, **sl**ightly, **very**

TABLE 1
ORGANIC CARBON RESULTS AND GROSS LITHOLOGIC DESCRIPTIONS

GEOCHEM SAMPLE NUMBER	DEPTH	GROSS LITHOLOGIC DESCRIPTION	GSA Colour Code	TOTAL ORGANIC CARBON (Wt. % of Rock)
1150-006 CORE	3976.38-3976.45m	A 98% Siltstone, blocky, mod. hard, pyrite nodules, calc., minor mudstone clasts, pungent "Formalin" type smell, pale milky cut, medium grey	N5	1.05
1144-233	3970-3980m	A 60% Silty mudstone, subfissile to blocky, soft to mod. hard, sl. micaceous, non-calc., minor cavings, brownish grey	5YR4/1	2.59
		B 40% LCM - lignite, cement and paint Minor shale		
1150-007 CORE	3979.37-3979.44m	A 98% Sandstone, blocky, medium grained, subangular, well sorted, non-calc. matrix, sl. micaceous, pungent "Formalin" type smell, pale milky cut, pale yellowish brown	10YR6/2	
1150-008	3980m CORE	A 98% Sandstone, as 1150-007A, pale milky cut	10YR6/2	
1150-009 CORE	3980.28m	A 98% Sandstone, blocky, medium grained, subangular to subrounded, fairly well sorted, non-calc. matrix, pale milky cut, very light brownish grey	5YR7/1	
1150-010 CORE	3983.57m	A 98% Sandstone, as 1150-009A, pale milky cut	5YR7/1	
1144-234	3980-3990m	A 75% Sand, unconsolidated, medium grained, subangular to subrounded, fairly well sorted, clear, white to dark yellowish orange	N9-10YR6/6	
		B 15% Silty mudstone, as 1144-233A, minor cavings	5YR4/1	2.41
		C 10% Shale, platy, mod. hard, non-calc., minor cavings, medium dark grey Minor LCM - paint and lignite	N4	2.28
1150-011 CORE	3985.10m	A 98% Sandstone, blocky, medium to coarse grained, subrounded to subangular, fairly well to poorly sorted, non-calc. matrix, pale milky cut, very light brownish grey	5YR7/1	
1150-012 CORE	3988.55m	A 98% Sandstone, medium grained, fairly well sorted, non-calc. matrix, pale milky cut, very light brownish grey to light brownish grey	5YR7/1-5YR6/1	
1150-013 CORE	3990.00m	A 98% Sandstone, as 1150-012A, pale milky cut	5YR7/1 5YR6/1	
1150-014 CORE	3994.00m	A 98% Sandstone, blocky, medium grained, subangular to subrounded, non-calc. matrix, pale milky cut, minor creamy F., very light brownish grey	5YR7/1	
1144-235	3990-4000m	A 90% Sand, as 1144-234A	N9-10YR6/6	

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TABLE 1
ORGANIC CARBON RESULTS AND GROSS LITHOLOGIC DESCRIPTIONS

GEOCHEM SAMPLE NUMBER	DEPTH		GROSS LITHOLOGIC DESCRIPTION	G S A Colour Code	TOTAL ORGANIC CARBON (Wt. % of Rock)
1144-235	3990-4000m	B 5%	Shale, platy, mod. hard, non-calc., sig. cavings, medium dark grey	N4	2.53,2.51
		C 5%	Silty mudstone, subfissile to blocky, soft to mod. hard, sl. micaceous, non-calc., sig. cavings, brownish grey	5YR4/1	2.23
			Minor LCM		
1150-015 CORE	3998.27m	A 98%	Sandstone, blocky, medium grained, subangular to subrounded, non-calc. matrix, pale milky cut, very light brownish grey	5YR7/1	
1150-016 CORE	4000.39m	A 98%	Sandstone, as 1150-015A, pale milky cut	5YR7/1	
1144-236	4000-4010m	A 85%	Sand, unconsolidated, medium grained, subangular to subrounded, fairly well sorted, clear, white to dark yellowish orange	N9-10YR6/6	
		B 10%	Silty mudstone, as 1144-235C, sig. cavings	5YR4/1	
		C 5%	LCM - lignite		
			Minor shale		
1150-017 CORE	4006.04m	A 98%	Sandstone, blocky, medium grained, subangular to subrounded, fairly well sorted, non-calc. matrix, pale milky cut, very light brownish grey	5YR7/1	
1150-018 CORE	4008.40-4008.45m	A 98%	Sandstone, blocky, medium grained, subangular, well sorted, non-calc. matrix, pungent "Formalin" type smell, slickensided, pale milky cut, patchy milky cut, pale yellowish brown	10YR6/2	
1144-237	4010-4020m	A 95%	Sandstone, mostly unconsolidated, medium grained, subangular, fairly well sorted, clear, pale milky cut, white to pale yellowish orange	N9-10YR8/6	
		B 5%	Silty mudstone, as 1144-235C, sig. to abundant cavings	5YR4/1	
1144-242	4060-4070m	A 98%	Sandstone, as 1144-237A, pale milky cut	N9-10YR8/6	
			Minor mudstone and shale		
1144-245	4090-4100m	A 98%	Sandstone, as 1144-239A, pale milky cut	N9-10YR8/6	
			Minor mudstone		
1144-248	4120-4130m	A 90%	Sandstone, blocky, fine-medium grained, subangular, fairly well sorted, non-calc., pale milky cut, pinkish grey to yellowish grey	5YR8/1-5Y8/1	
		B 10%	LCM - lignite		
			Minor caved shale		

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Lost Circulation Material, **mod**erately, **occ**asionally, **sl**ightly, **very**

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ORGANIC CARBON RESULTS AND GROSS LITHOLOGIC DESCRIPTIONS

GEOCHEM SAMPLE NUMBER	DEPTH	GROSS LITHOLOGIC DESCRIPTION	G S A Colour Code	TOTAL ORGANIC CARBON (Wt. % of Rock)
1144-251	4150-4160m	A 95% Sandstone, blocky, fine-medium grained, subangular, fairly well sorted, non-calc., pale milky cut, light grey to yellowish grey	N7-5Y8/1	
		B 5% LCM - lignite Minor shale, mudstone and siltstone		
1144-254	4180-4190m	A 95% Sandstone, mostly unconsolidated, medium grained, subangular, fairly well sorted, white to dark yellowish orange	N9-10YR6/6	
		B 5% Siltstone, blocky, soft, grades to sandstone, non-calc., light grey	N7	0.72
1144-257	4210-4220m	A 98% Sandstone, as 1144-254A Minor pyrite. Minor caved shale.	N9-10YR6/6	
1144-260	4240-4250m	A 98% Sandstone, as 1144-254A, pale milky cut Minor shale	N9-10YR6/6	
1144-263	4270-4280m	A 95% Sandstone, as 1144-254A, pale milky cut	N9-10YR6/6	
		B <5% Shale, platy, mod. hard, non-calc., sig. cavings, dark grey	N3	2.73,2.74
1144-266	4300-4310m	A 98% Sandstone, as 1144-254A, pale milky cut Minor shale	N9-10YR6/6	
1144-269	4330-4340m	A 98% Sandstone, blocky, medium grained, subangular, fairly well sorted, non-calc. matrix, pale milky cut, white to very pale yellowish brown Minor shale	N9-10YR7/2	
1144-272	4360-4370m	A 98% Sandstone, as 1144-269A, pale milky cut Minor shale, siltstone and other shale	N9-10YR7/2	
1144-276	4390-4400m	A 98% Sandstone, as 1144-269A, pale milky cut Minor shale	N9-10YR7/2	
1144-279	4420-4430m	A 98% Sandstone, mostly unconsolidated, medium grained, subangular, fairly well sorted, pale milky cut, white to very pale yellowish brown Minor shale	N9-10YR7/2	
1144-280	4430-4440m	A 85% Sandstone, as 1144-279A, pale milky cut	N9-10YR7/2	
		B 15% Silty mudstone, subfissile, soft, non-calc., minor cavings, brownish grey to dark brownish grey Minor shale	5YR4/1-5YR3/1	5.01
1144-281	4440-4450m	A 70% Sandstone, as 1144-279A, pale milky cut	N9-10YR7/2	

Abbreviations = **arena**ceous, **argil**laceous, **calc**areous, **Cut**, **dolo**mitic, **F**luorescence, **foram**inifera, **foss**iliferous
Lost **C**irculation **M**aterial, **mod**erately, **occ**asionally, **sl**ightly, **v**ery

TABLE 1
ORGANIC CARBON RESULTS AND GROSS LITHOLOGIC DESCRIPTIONS

GEOCHEM SAMPLE NUMBER	DEPTH		GROSS LITHOLOGIC DESCRIPTION	G S A Colour Code	TOTAL ORGANIC CARBON (Wt. % of Rock)
1144-281	4440-4450m	B 15%	Silty mudstone, subfissile, soft, non-calc., minor cavings, brownish grey to dark brownish grey	5YR4/1-5YR3/1	2.96
		C 10%	Shale, platy, mod. hard, non-calc., sig. cavings, medium dark grey	N4	2.88
		D 5%	Coal, shaly, platy to subfissile, soft to mod. hard, greyish black to dark grey	N2-3	33.10
1144-282	4450-4460m	A 70%	Sandstone, mostly unconsolidated, medium grained, subangular, fairly well sorted, pale milky cut, white to very pale yellowish brown	N9-10YR7/2	
		B 15%	Siltstone, subfissile, soft, non-calc., minor cavings, medium light grey	N6	1.01
		C 10%	Shale, platy, mod. hard, carbonaceous, non-calc., minor cavings, dark grey	N3	3.37,3.36
		D 5%	Silty mudstone, as 1144-281B, sig. to abundant cavings	5YR4/1-5YR3/1	3.37

Abbreviations = **aren**aceous, **arg**illaceous, **calc**areous, **Cut**, **dol**omitic, Fluorescence, **foram**inifera, **foss**iliferous
Lost Circulation Material, **mod**erately, **occ**asionally, **sl**ightly, very

TABLE 2A

CONCENTRATION (VOL. PPM OF ROCK) OF C_1 - C_7 HYDROCARBONS IN AIR SPACE GAS

GEOCHEM SAMPLE NUMBER	DEPTH	C_1 Methane	C_2 Ethane	C_3 Propane	iC_4 Isobutane	nC_4 Butane	TOTAL C_1 - C_4	TOTAL C_2 - C_4	% GAS WETNESS	TOTAL C_5 - C_7	$\frac{iC_4}{nC_4}$
1144-002	400-450	13	7	7	3	6	36	23	64.2	34	0.48
1144-004	500-550	2014	16	3	1	4	2037	23	1.1	44	0.17
1144-006	600-650	2126	21	3	1	1	2152	26	1.2	59	0.64
1144-008	700-750	248	1	0	0	0	251	2	1.0	3	0.71
1144-010	800-850	1809	0	1	0	0	1811	2	0.1	79	0.67
1144-012	900-950	751	5	1	0	0	757	6	0.8	5	0.56
1144-014	1000-1050	215	2	1	0	1	219	4	1.8	51	0.00
1144-016	1100-1150	1220	4	2	2	1	1229	9	0.7	16	1.91
1144-018	1200-1250	1199	4	1	0	0	1204	6	0.5	13	0.23
1144-020	1300-1350	87	0	0	0	0	87	0	0.0	29	0.00
1144-022	1400-1450	1795	5	2	0	0	1802	8	0.4	25	0.84
1144-024	1500-1550	6641	12	6	3	2	6665	23	0.4	26	2.11
1144-026	1600-1650	1	0	0	0	0	2	0	3.5	4	0.51
1144-028	1700-1750	750	8	5	3	3	768	19	2.4	82	1.07
1144-030	1800-1850	25	3	1	0	0	30	5	15.1	28	0.41
1144-032	1900-1950	2817	12	8	3	2	2842	26	0.9	60	1.32
1144-034	2000-2050	1046	17	9	2	2	1076	30	2.8	88	0.92
1144-036	2110-2120	1051	24	7	4	2	1089	38	3.5	83	1.82
1144-045	2200-2210	2433	53	19	7	6	2518	86	3.4	96	1.03
1144-049	2230-2240	984	14	4	1	1	1004	20	2.0	21	0.62
1144-052	2260-2270	718	14	4	1	2	739	21	2.9	21	0.92
1144-054	2280-2290	1699	36	11	3	4	1753	53	3.1	38	0.87
1144-057	2320	709	7	3	1	1	720	11	1.6	84	1.80
1144-060	2350	101	2	1	1	0	105	5	4.4	35	1.80
1144-064	2380-2390	640	33	19	10	6	708	68	9.5	26	1.52
1144-067	2410-2420	1005	40	21	11	8	1086	81	7.5	39	1.33
1144-070	2440-2450	513	63	27	14	9	625	113	18.0	25	1.61
1144-073	2470-2480	183	21	9	5	3	220	38	17.1	6	1.83
1144-077	2500-2510	796	108	54	26	18	1001	205	20.5	33	1.46
1144-080	2530-2540	865	115	62	30	22	1094	229	20.9	49	1.41

TABLE 2A

CONCENTRATION (VOL. PPM OF ROCK) OF C_1 - C_7 HYDROCARBONS IN AIR SPACE GAS

GEOCHEM SAMPLE NUMBER	DEPTH	C_1 Methane	C_2 Ethane	C_3 Propane	iC_4 Isobutane	nC_4 Butane	TOTAL C_1 - C_4	TOTAL C_2 - C_4	% GAS WETNESS	TOTAL C_5 - C_7	$\frac{iC_4}{nC_4}$
1144-083	2560-2570	557	56	34	18	13	678	121	17.8	30	1.45
1144-087	2590-2600	526	89	38	17	10	679	154	22.6	20	1.73
1144-089	2630	592	36	20	10	6	665	72	10.9	33	1.71
1144-091	2659	170	15	6	3	2	197	27	13.6	183	1.39
1144-094	2690-2700	973	107	45	20	12	1158	185	16.0	45	1.67
1144-096	2710-2720	571	79	34	17	8	709	138	19.5	25	2.04
1144-098	2750-2760	242	61	22	10	4	338	97	28.6	7	2.76
1144-102	2780-2790	258	61	19	8	3	350	91	26.1	6	2.80
1144-104	2800-2810	2386	160	50	21	6	2625	238	9.1	102	3.42
1144-105	2840	255	31	17	7	3	313	58	18.5	23	2.66
1144-107	2870-2880	431	60	21	7	3	522	91	17.5	1	2.68
1144-111	2900-2910	154	17	7	2	1	182	28	15.2	1	2.56
1144-115	2930-2940	921	236	138	40	27	1363	442	32.4	44	1.48
1144-119	2960-2970	260	56	26	6	3	351	91	25.9	6	1.78
1144-122	2990-3000	6	1	1	0	0	8	2	26.5	0	1.46
1144-125	3020-3030	2073	281	183	42	42	2622	548	20.9	177	1.00
1144-128	3050-3060	423	107	59	13	9	611	188	30.8	10	1.41
1144-132	3080-3090	254	61	54	13	16	398	144	36.2	36	0.80
1144-134	3100-3110	4791	158	189	42	70	5250	459	8.7	162	0.60
1144-136	3110-3120	7	2	2	0	0	12	4	38.2	2	0.89
1144-137	3120-3130	1734	712	520	104	168	3238	1505	46.5	323	0.62
1144-139	3130-3140	2451	658	417	79	121	3726	1275	34.2	368	0.66
1144-142	3140-3150	361	101	121	27	45	655	294	44.8	218	0.62
1144-143	3150-3160	41	21	27	8	10	107	65	61.3	184	0.79
1144-144	3160-3170	10	8	12	3	10	44	34	76.3	140	0.31
1144-146	3170-3180	1965	820	1268	427	821	5302	3337	62.9	2636	0.52
1144-147	3180-3190	1323	750	898	382	617	3969	2646	66.7	1392	0.62
1144-148	3190-3200	2069	957	1640	597	1051	6313	4245	67.2	3344	0.57
1144-149	3200-3210	737	219	407	165	272	1800	1063	59.1	740	0.61
1144-150	3210-3220	691	257	471	191	330	1940	1249	64.4	949	0.58

TABLE 2A

CONCENTRATION (VOL. PPM OF ROCK) OF C_1 - C_7 HYDROCARBONS IN AIR SPACE GAS

GEOCHEM SAMPLE NUMBER	DEPTH	C_1 Methane	C_2 Ethane	C_3 Propane	iC_4 Isobutane	nC_4 Butane	TOTAL C_1 - C_4	TOTAL C_2 - C_4	% GAS WETNESS	TOTAL C_5 - C_7	$\frac{iC_4}{nC_4}$
1144-151	3220-3230	615	216	367	141	264	1603	988	61.7	768	0.53
1144-152	3230-3240	415	129	164	55	88	850	435	51.2	253	0.63
1144-153	3240-3250	54	21	24	9	13	121	67	55.2	70	0.70
1144-156	3260-3270	741	208	243	89	134	1414	674	47.6	271	0.67
1144-157	3270-3280	188	40	39	15	18	301	113	37.5	50	0.79
1144-159	3290-3300	32	9	15	9	11	76	44	57.5	99	0.88
1144-160	3300-3310	739	164	157	63	86	1208	469	38.8	267	0.73
1144-161	3310-3320	116	25	25	13	13	191	76	39.5	60	1.01
1144-162	3320-3330	513	123	146	70	82	934	421	45.1	341	0.85
1144-163	3330-3340	1141	461	252	60	63	1978	836	42.3	115	0.96
1144-164	3340-3350	181	59	47	18	14	319	138	43.3	38	1.31
1144-165	3350-3360	872	310	307	119	140	1748	876	50.1	380	0.85
1144-166	3360-3370	85	38	36	15	14	187	102	54.5	124	1.05
1144-167	3370-3380	162	41	43	20	16	282	120	42.6	47	1.19
1144-169	3380-3390	73	16	19	10	8	126	53	42.2	31	1.27
1144-170	3390-3400	405	71	58	32	26	592	187	31.6	52	1.22
1144-171	3400-3410	587	110	115	57	57	927	339	36.6	108	1.00
1144-172	3410-3420	61	16	24	15	12	129	68	52.4	47	1.24
1144-173	3420-3430	51	13	23	11	7	105	55	52.0	72	1.52
1144-174	3430-3440	85	38	65	39	33	260	175	67.2	149	1.19
1144-175	3440-3450	409	85	99	50	43	685	276	40.3	86	1.16
1144-176	3450-3460	662	150	185	87	80	1164	502	43.1	220	1.09
1144-177	3460-3470	398	71	77	35	35	616	217	35.3	70	1.00
1144-184	3510-3520	55	13	14	7	5	94	39	41.3	21	1.55

TABLE 2A

CONCENTRATION (VOL. PPM OF ROCK) OF C_1 - C_7 HYDROCARBONS IN AIR SPACE GAS

GEOCHEM SAMPLE NUMBER	DEPTH	C_1 Methane	C_2 Ethane	C_3 Propane	iC_4 Isobutane	nC_4 Butane	TOTAL C_1 - C_4	TOTAL C_2 - C_4	% GAS WETNESS	TOTAL C_5 - C_7	$\frac{iC_4}{nC_4}$
1144-185	3520-3530	47	12	13	6	5	83	36	43.9	6	1.17
1144-186	3520-3530	55	14	15	7	5	95	40	42.4	36	1.62
1144-187	3540-3550	102	23	34	19	11	189	87	46.1	34	1.77
1144-193	3590-3600	107	30	52	27	19	235	127	54.2	58	1.43
1144-194	3600-3610	253	44	42	25	14	379	126	33.2	40	1.72
1144-196	3620-3630	31	11	19	10	15	86	56	64.5	42	0.69
1144-195	3620-3630	16	4	7	3	2	32	17	52.1	42	1.58
1144-197	3630-3640	24	4	4	3	2	38	14	36.3	112	1.32
1144-198	3640-3650	10	3	2	1	0	16	6	38.7	29	2.46
1144-199	3650-3660	33	16	29	5	4	88	54	62.1	375	1.37
1144-200	3660-3670	380	93	118	40	59	691	311	45.0	231	0.68
1144-201	3670-3680	70	22	28	9	12	142	71	50.3	100	0.75
1144-202	3680-3690	84	18	27	12	16	158	74	46.6	90	0.78
1144-203	3690-3700	118	63	148	43	73	444	326	73.5	222	0.58
1144-204	3700-3710	134	43	56	12	15	261	127	48.5	118	0.79
1144-205	3710-3720	587	149	169	32	59	996	409	41.0	201	0.53
1144-207	3730-3740	235	45	36	8	10	334	99	29.6	43	0.72
1144-208	3740-3750	156	45	41	10	7	258	103	39.7	57	1.47
1144-209	3750-3760	158	41	39	8	9	257	98	38.3	58	0.87
1144-210	3760-3770	276	162	225	43	57	763	487	63.9	374	0.76
1144-211	3770-3780	755	295	114	15	16	1195	440	36.8	127	0.96
1144-213	3780-3790	457	300	199	27	34	1017	560	55.1	251	0.79
1144-215	3800-3810	156	126	86	9	14	391	236	60.2	252	0.67

TABLE 2A

CONCENTRATION (VOL. PPM OF ROCK) OF C_1 - C_7 HYDROCARBONS IN AIR SPACE GAS

GEOCHEM SAMPLE NUMBER	DEPTH	C_1 Methane	C_2 Ethane	C_3 Propane	iC_4 Isobutane	nC_4 Butane	TOTAL C_1 - C_4	TOTAL C_2 - C_4	% GAS WETNESS	TOTAL C_5 - C_7	$\frac{iC_4}{nC_4}$
1144-216	3810-3820	203	147	68	8	12	438	235	53.7	156	0.65
1144-217	3820-3830	87	87	69	10	22	276	189	68.3	241	0.43
1144-218	3830-3840	43	35	28	3	5	113	70	61.8	200	0.56
1144-219	3830-3840	304	142	79	8	13	546	242	44.3	65	0.64
1144-220	3840-3850	1081	1086	1244	134	506	4051	2970	73.3	909	0.26
1144-221	3850-3860	210	289	629	88	327	1543	1333	86.4	782	0.27
1144-222	3860-3870	98	60	72	11	37	279	181	64.8	205	0.30
1144-223	3870-3880	77	61	71	12	34	255	179	70.0	167	0.34
1144-224	3880-3890	28	24	47	9	31	140	111	79.9	234	0.27
1144-225	3880-3890	136	116	137	21	50	460	324	70.4	166	0.42
1144-226	3900-3910	229	112	93	12	27	474	245	51.6	71	0.44
1144-227	3910-3920	350	282	239	21	56	947	598	63.1	92	0.38
1144-228	3940-3950	31	26	25	3	6	90	59	65.8	66	0.48
1144-230	3960-3970	1703	911	744	80	139	3577	1874	52.4	117	0.57
1144-233	3970-3980	845	366	217	20	43	1491	646	43.3	77	0.46
1144-234	3980-3990	1246	492	314	31	62	2145	899	41.9	91	0.50
1144-235	3990-4000	857	258	171	23	39	1348	491	36.4	130	0.59
1144-236	4000-4010	313	98	71	13	28	523	210	40.1	141	0.45
1144-239	4030-4040	294	94	63	11	17	479	184	38.5	59	0.64
1144-242	4060-4070	480	125	113	25	38	781	300	38.5	152	0.66
1144-245	4090-4100	368	126	95	17	23	628	260	41.5	56	0.73
1144-248	4120-4130	250	85	128	39	61	564	313	55.6	137	0.65
1144-251	4150-4160	133	49	85	24	47	339	206	60.8	129	0.51
1144-254	4180-4190	138	32	58	15	38	280	142	50.7	90	0.39
1144-257	4210-4220	126	36	40	7	17	225	100	44.3	89	0.39
1144-260	4240-4250	54	17	15	2	4	91	37	41.0	29	0.44
1144-263	4270-4280	121	81	89	11	28	330	210	63.5	139	0.41
1144-266	4300-4310	46	29	33	5	11	124	77	62.5	79	0.42
1144-269	4330-4340	1753	602	474	75	215	3119	1366	43.8	449	0.35

TABLE 2A

CONCENTRATION (VOL. PPM OF ROCK) OF C_1 - C_7 HYDROCARBONS IN AIR SPACE GAS

GEOCHEM SAMPLE NUMBER	DEPTH	C_1 Methane	C_2 Ethane	C_3 Propane	iC_4 Isobutane	nC_4 Butane	TOTAL C_1 - C_4	TOTAL C_2 - C_4	% GAS WETNESS	TOTAL C_5 - C_7	$\frac{iC_4}{nC_4}$
1144-272	4360-4370	140	80	117	25	58	420	280	66.7	240	0.43
1144-276	4390-4400	136	80	59	7	14	296	159	53.8	63	0.52
1144-279	4420-4430	545	322	270	32	76	1246	701	56.3	159	0.42
1144-280	4430-4440	678	382	353	57	97	1567	889	56.7	106	0.59
1144-281	4440-4450	2696	1256	970	107	171	5199	2503	48.1	177	0.63
1144-282	4450-4460	2121	554	200	19	29	2922	801	27.4	98	0.65

TABLE 2B

CONCENTRATION (VOL. PPM OF ROCK) OF C_1 - C_7 HYDROCARBONS IN CUTTING GAS

GEOCHEM SAMPLE NUMBER	DEPTH	C_1 Methane	C_2 Ethane	C_3 Propane	iC_4 Isobutane	nC_4 Butane	TOTAL C_1 - C_4	TOTAL C_2 - C_4	% GAS WETNESS	TOTAL C_5 - C_7	$\frac{iC_4}{nC_4}$
1144-002	400-450	218	19	18	3	10	267	48	18.2	125	0.29
1144-004	500-550	305	7	4	0	2	317	13	4.0	75	0.21
1144-006	600-650	1181	11	6	0	5	1203	23	1.9	75	0.00
1144-008	700-750	1160	5	3	1	3	1173	13	1.1	65	0.29
1144-010	800-850	2777	3	1	0	0	2782	5	0.2	63	0.50
1144-012	900-950	2379	7	4	1	2	2392	13	0.6	55	0.79
1144-014	1000-1050	416	11	8	0	6	441	25	5.6	88	0.01
1144-016	1100-1150	654	7	3	1	2	667	13	2.0	68	0.83
1144-018	1200-1250	567	13	6	1	2	589	22	3.7	45	0.26
1144-020	1300-1350	160	6	3	1	1	170	11	6.3	51	1.23
1144-022	1400-1450	551	6	2	0	1	561	10	1.7	59	0.46
1144-024	1500-1550	240	5	3	1	1	250	10	4.1	46	0.80
1144-026	1600-1650	94	12	8	3	5	121	27	22.3	67	0.57
1144-028	1700-1750	329	11	5	2	3	350	21	6.0	69	0.52
1144-030	1800-1850	37	5	2	0	3	46	9	20.4	45	0.00
1144-032	1900-1950	60	9	3	0	4	77	16	21.2	35	0.00
1144-034	2000-2050	35	3	2	0	1	41	5	12.9	41	0.37
1144-036	2110-2120	68	9	4	3	3	86	18	21.0	103	1.06
1144-045	2200-2210	139	6	3	0	2	150	12	7.7	78	0.00
1144-049	2230-2240	87	4	0	0	0	91	4	4.3	57	0.00
1144-052	2260-2270	100	8	2	0	0	110	10	9.3	71	0.00
1144-054	2280-2290	64	4	0	0	0	68	4	6.6	141	0.00
1144-057	2320	16	5	7	2	3	33	17	51.6	33	0.52
1144-060	2350	54	16	17	2	4	93	38	41.3	205	0.59
1144-064	2380-2390	128	9	12	9	9	167	39	23.1	136	0.93
1144-067	2410-2420	189	19	22	15	15	260	70	27.1	166	0.97
1144-070	2440-2450	110	11	12	10	7	151	40	26.8	480	1.32
1144-073	2470-2480	472	43	45	28	32	620	147	23.8	202	0.88
1144-077	2500-2510	198	26	27	18	30	299	101	33.7	334	0.63
1144-080	2530-2540	99	16	25	18	30	188	89	47.4	240	0.61

TABLE 2B

CONCENTRATION (VOL. PPM OF ROCK) OF C_1 - C_7 HYDROCARBONS IN CUTTING GAS

GEOCHEM SAMPLE NUMBER	DEPTH	C_1 Methane	C_2 Ethane	C_3 Propane	iC_4 Isobutane	nC_4 Butane	TOTAL C_1 - C_4	TOTAL C_2 - C_4	% GAS WETNESS	TOTAL C_5 - C_7	$\frac{iC_4}{nC_4}$
1144-083	2560-2570	91	19	26	23	34	193	102	52.7	208	0.68
1144-087	2590-2600	162	27	35	20	28	273	111	40.7	185	0.72
1144-089	2630	41	11	11	7	9	79	37	47.5	130	0.76
1144-091	2659	68	11	6	2	6	93	26	27.3	144	0.40
1144-094	2690-2700	51	12	14	8	11	96	44	46.4	155	0.67
1144-096	2710-2720	75	18	17	8	10	127	53	41.3	101	0.86
1144-098	2750-2760	182	34	26	12	11	267	84	31.6	74	1.08
1144-102	2780-2790	64	15	15	10	5	108	45	41.3	110	1.84
1144-104	2800-2810	29	6	4	0	1	40	11	27.2	33	0.00
1144-105	2840	51	84	59	18	19	230	179	77.8	66	0.95
1144-107	2870-2880	52	22	43	10	11	137	85	62.1	39	0.88
1144-111	2900-2910	29	14	23	9	12	85	57	66.5	44	0.74
1144-115	2930-2940	61	44	19	19	31	173	112	64.8	86	0.62
1144-119	2960-2970	57	32	65	18	32	205	148	72.1	73	0.56
1144-122	2990-3000	64	50	81	19	30	244	180	73.8	103	0.63
1144-125	3020-3030	47	17	32	11	22	130	83	63.7	123	0.52
1144-128	3050-3060	87	107	224	45	88	551	464	84.2	125	0.51
1144-132	3080-3090	27	13	43	12	39	135	108	80.0	101	0.32
1144-134	3100-3110	37	25	92	24	72	251	214	85.3	226	0.33
1144-136	3110-3120	74	49	132	35	103	393	318	81.1	290	0.34
1144-137	3120-3130	165	90	182	59	167	663	499	75.2	1304	0.35
1144-139	3130-3140	102	65	142	48	114	471	370	78.4	734	0.42
1144-142	3140-3150	42	13	25	10	28	118	76	64.6	270	0.36
1144-143	3150-3160	49	15	44	19	58	185	136	73.4	400	0.33
1144-144	3160-3170	118	29	30	26	84	287	169	58.8	1926	0.30
1144-146	3170-3180	278	114	344	336	897	1970	1691	85.9	12799	0.38
1144-147	3180-3190	240	85	178	134	363	1000	760	76.0	4388	0.37
1144-148	3190-3200	164	43	116	109	295	727	563	77.5	5380	0.37
1144-149	3200-3210	140	31	47	23	78	319	179	56.2	1588	0.30
1144-150	3210-3220	238	44	83	43	136	543	305	56.1	1160	0.31

TABLE 2B

CONCENTRATION (VOL. PPM OF ROCK) OF C_1 - C_7 HYDROCARBONS IN CUTTING GAS

GEOCHEM SAMPLE NUMBER	DEPTH	C_1 Methane	C_2 Ethane	C_3 Propane	iC_4 Isobutane	nC_4 Butane	TOTAL C_1 - C_4	TOTAL C_2 - C_4	% GAS WETNESS	TOTAL C_5 - C_7	$\frac{iC_4}{nC_4}$
1144-151	3220-3230	118	28	56	35	129	366	248	67.9	1218	0.27
1144-152	3230-3240	101	24	63	31	96	315	214	67.9	594	0.32
1144-153	3240-3250	58	12	15	9	31	125	67	53.4	421	0.29
1144-154	3250-3260	244	73	106	38	107	567	324	57.1	552	0.35
1144-156	3260-3270	142	34	41	13	62	292	150	51.5	442	0.21
1144-157	3270-3280	97	25	43	21	60	246	149	60.6	384	0.35
1144-158	3280-3290	109	21	11	4	14	160	50	31.5	220	0.32
1144-159	3290-3300	109	23	16	11	34	193	84	43.5	403	0.34
1144-160	3300-3310	158	31	35	17	44	285	127	44.6	307	0.39
1144-161	3310-3320	478	74	45	21	52	669	192	28.6	318	0.40
1144-162	3320-3330	152	33	34	19	54	292	140	48.0	501	0.35
1144-163	3330-3340	130	105	194	67	122	618	488	79.0	330	0.55
1144-164	3340-3350	165	37	67	34	85	389	224	57.5	479	0.40
1144-165	3350-3360	52	16	50	30	74	222	170	76.7	407	0.40
1144-166	3360-3370	189	33	22	10	26	279	90	32.3	193	0.37
1144-167	3370-3380	154	40	59	31	80	363	209	57.6	383	0.39
1144-169	3380-3390	526	72	43	21	56	718	192	26.8	356	0.37
1144-170	3390-3400	184	36	45	24	54	343	159	46.3	278	0.45
1144-171	3400-3410	192	40	81	48	105	467	275	58.9	319	0.46
1144-172	3410-3420	209	39	57	45	95	444	235	52.9	467	0.48
1144-173	3420-3430	99	22	36	27	52	235	136	57.9	199	0.52
1144-174	3430-3440	101	18	57	42	91	310	208	67.2	334	0.46
1144-175	3440-3450	170	52	123	66	121	533	363	68.1	276	0.55
1144-176	3450-3460	145	38	98	59	101	441	296	67.0	272	0.59
1144-177	3460-3470	216	34	36	20	43	350	133	38.2	171	0.46
1144-179	3470-3480	615	84	56	35	73	862	247	28.7	229	0.47
1144-180	3480-3490	60	17	161	98	229	565	504	89.3	562	0.43
1144-181	3490-3500	69	18	15	7	12	121	52	42.9	55	0.53
1144-183	3500-3510	70	15	6	4	7	102	33	32.0	32	0.47
1144-184	3510-3520	148	32	32	21	45	277	129	46.6	184	0.46

TABLE 2B

CONCENTRATION (VOL. PPM OF ROCK) OF C_1 - C_7 HYDROCARBONS IN CUTTING GAS

GEOCHEM SAMPLE NUMBER	DEPTH	C_1 Methane	C_2 Ethane	C_3 Propane	iC_4 Isobutane	nC_4 Butane	TOTAL C_1 - C_4	TOTAL C_2 - C_4	% GAS WETNESS	TOTAL C_5 - C_7	$\frac{iC_4}{nC_4}$
1144-185	3520-3530	478	124	180	90	170	1041	563	54.1	316	0.53
1144-186	3520-3530	209	47	73	39	86	454	245	54.0	259	0.45
1144-188	3540-3550	122	23	35	23	51	254	132	52.1	139	0.44
1144-187	3540-3550	175	44	79	43	101	441	266	60.3	247	0.42
1144-189	3550-3560	99	23	33	23	62	239	140	58.5	168	0.37
1144-190	3560-3570	128	24	44	22	64	281	153	54.6	177	0.35
1144-191	3570-3580	153	28	26	16	43	265	112	42.3	157	0.38
1144-192	3580-3590	65	13	12	12	30	132	67	51.1	225	0.39
1144-193	3590-3600	150	46	169	71	177	614	464	75.5	437	0.40
1144-194	3600-3610	79	14	15	8	26	143	64	44.8	203	0.31
1144-196	3620-3630	361	79	129	46	103	718	357	49.8	267	0.45
1144-195	3620-3630	63	13	19	12	30	137	74	54.0	199	0.38
1144-197	3630-3640	56	13	24	13	36	140	85	60.2	152	0.36
1144-198	3640-3650	141	25	39	14	43	263	121	46.2	142	0.33
1144-199	3650-3660	67	11	7	4	19	107	40	37.2	217	0.19
1144-200	3660-3670	241	34	25	9	42	351	110	31.3	226	0.21
1144-201	3670-3680	233	32	39	16	58	378	145	38.3	176	0.27
1144-202	3680-3690	634	106	60	17	68	885	251	28.3	269	0.25
1144-203	3690-3700	300	39	71	14	80	505	205	40.5	205	0.17
1144-204	3700-3710	593	93	183	43	167	1079	486	45.1	531	0.26
1144-205	3710-3720	1653	81	62	12	56	1864	211	11.3	132	0.21
1144-206	3720-3730	1402	96	81	11	56	1646	244	14.8	142	0.21
1144-207	3730-3740	111	23	49	10	33	225	114	50.7	105	0.29
1144-208	3740-3750	62	15	45	5	28	155	93	60.0	50	0.19
1144-209	3750-3760	118	24	48	10	41	242	124	51.1	108	0.25
1144-210	3760-3770	50	11	23	6	19	109	59	54.0	58	0.31
1144-211	3770-3780	81	221	235	27	61	624	543	87.0	88	0.44
1144-213	3780-3790	46	92	138	19	39	334	288	86.3	54	0.48
1144-214	3790-3800	103	137	144	14	38	436	333	76.3	41	0.37
1144-215	3800-3810	39	62	176	12	71	360	321	89.3	63	0.18

TABLE 2B

CONCENTRATION (VOL. PPM OF ROCK) OF C_1 - C_7 HYDROCARBONS IN CUTTING GAS

GEOCHEM SAMPLE NUMBER	DEPTH	C_1 Methane	C_2 Ethane	C_3 Propane	iC_4 Isobutane	nC_4 Butane	TOTAL C_1 - C_4	TOTAL C_2 - C_4	% GAS WETNESS	TOTAL C_5 - C_7	$\frac{iC_4}{nC_4}$
1144-216	3810-3820	45	160	449	41	242	938	893	95.2	251	0.17
1144-217	3820-3830	20	22	68	10	55	176	156	88.6	95	0.18
1144-218	3830-3840	73	29	90	12	62	266	193	72.6	70	0.19
1144-219	3830-3840	56	484	1255	83	537	2417	2361	97.7	342	0.15
1144-220	3840-3850	103	556	4136	1098	6041	11933	11831	99.1	7211	0.18
1144-221	3850-3860	121	111	1018	454	2945	4648	4527	97.4	7818	0.15
1144-222	3860-3870	44	21	156	77	564	861	817	94.9	2969	0.14
1144-223	3870-3880	106	45	374	162	1075	1761	1656	94.0	3470	0.15
1144-224	3880-3890	95	27	173	71	481	846	752	88.8	2062	0.15
1144-225	3880-3890	77	30	168	50	381	707	630	89.1	1208	0.13
1144-226	3900-3910	119	167	835	127	938	2186	2067	94.6	862	0.14
1144-227	3910-3920	66	260	1018	92	716	2152	2086	96.9	563	0.13
1144-228	3940-3950	41	45	374	37	255	753	712	94.6	316	0.15
1144-229	3950-3960	65	28	184	23	134	434	369	85.0	224	0.17
1144-230	3960-3970	189	921	1153	94	412	2769	2580	93.2	498	0.23
1144-233	3970-3980	102	160	382	39	175	858	756	88.1	241	0.22
1144-234	3980-3990	6108	1100	1003	176	426	8814	2706	30.7	720	0.41
1144-235	3990-4000	3532	418	343	61	150	4504	972	21.6	733	0.40
1144-236	4000-4010	4013	598	586	108	267	5573	1560	28.0	299	0.41
1144-239	4030-4040	1155	305	413	71	209	2154	999	46.4	546	0.34
1144-242	4060-4070	550	117	238	79	220	1204	655	54.4	1074	0.36
1144-245	4090-4100	153	22	38	17	53	283	130	45.9	464	0.33
1144-248	4120-4130	102	33	137	75	269	617	515	83.4	1287	0.28
1144-251	4150-4160	115	57	306	125	460	1063	948	89.1	1365	0.27
1144-254	4180-4190	108	12	27	11	37	195	87	44.5	346	0.30
1144-257	4210-4220	159	25	35	8	36	263	105	39.7	259	0.23
1144-260	4240-4250	258	72	129	25	93	576	318	55.3	385	0.26
1144-263	4270-4280	195	14	19	4	22	253	59	23.1	235	0.17
1144-266	4300-4310	184	21	41	13	46	305	121	39.5	331	0.28
1144-269	4330-4340	384	207	484	136	491	1703	1319	77.4	904	0.28

TABLE 2B

CONCENTRATION (VOL. PPM OF ROCK) OF C_1 - C_7 HYDROCARBONS IN CUTTING GAS

GEOCHEM SAMPLE NUMBER	DEPTH	C_1 Methane	C_2 Ethane	C_3 Propane	iC_4 Isobutane	nC_4 Butane	TOTAL C_1 - C_4	TOTAL C_2 - C_4	% GAS WETNESS	TOTAL C_5 - C_7	$\frac{iC_4}{nC_4}$
1144-272	4360-4370	315	60	201	80	317	973	658	67.6	1606	0.25
1144-276	4390-4400	92	47	88	14	51	292	200	68.5	237	0.28
1144-279	4420-4430	146	107	199	40	117	609	463	76.0	530	0.34
1144-280	4430-4440	237	672	1111	131	550	2702	2464	91.2	840	0.24
1144-281	4440-4450	4595	3321	1654	140	404	10114	5519	54.6	556	0.35
1144-282	4450-4460	841	1476	1065	97	317	3795	2955	77.8	579	0.31

TABLE 2C

TOTAL CONCENTRATION (VOL. PPM OF ROCK) OF C_1 - C_7 HYDROCARBONS (2A + 2B)

GEOCHEM SAMPLE NUMBER	DEPTH	C_1 Methane	C_2 Ethane	C_3 Propane	iC_4 Isobutane	nC_4 Butane	TOTAL C_1 - C_4	TOTAL C_2 - C_4	% GAS WETNESS	TOTAL C_5 - C_7	$\frac{iC_4}{nC_4}$
1144-002	400-450	231	26	24	6	16	303	72	23.6	159	0.36
1144-004	500-550	2318	23	7	1	5	2355	36	1.5	119	0.18
1144-006	600-650	3307	32	9	1	7	3356	48	1.4	134	0.13
1144-008	700-750	1409	6	4	1	4	1424	15	1.1	67	0.33
1144-010	800-850	4586	3	2	0	0	4593	6	0.1	142	0.56
1144-012	900-950	3129	11	5	1	2	3149	20	0.6	61	0.76
1144-014	1000-1050	631	13	9	0	7	660	29	4.4	139	0.01
1144-016	1100-1150	1875	11	6	3	2	1897	22	1.2	84	1.21
1144-018	1200-1250	1766	17	7	1	3	1793	28	1.5	58	0.25
1144-020	1300-1350	246	6	3	1	1	257	11	4.1	80	1.23
1144-022	1400-1450	2346	11	4	1	1	2363	17	0.7	85	0.59
1144-024	1500-1550	6881	17	9	4	3	6914	34	0.5	72	1.52
1144-026	1600-1650	95	12	8	3	5	122	27	22.0	71	0.57
1144-028	1700-1750	1078	19	10	5	6	1118	40	3.6	151	0.78
1144-030	1800-1850	62	8	3	0	3	76	14	18.4	73	0.04
1144-032	1900-1950	2877	21	11	3	6	2919	42	1.4	94	0.50
1144-034	2000-2050	1082	20	10	2	3	1117	35	3.1	129	0.77
1144-036	2110-2120	1119	33	11	7	5	1175	56	4.8	186	1.43
1144-045	2200-2210	2572	60	22	7	9	2669	97	3.6	174	0.77
1144-049	2230-2240	1071	18	4	1	1	1095	24	2.2	78	0.59
1144-052	2260-2270	818	22	7	1	2	850	32	3.7	93	0.71
1144-054	2280-2290	1763	40	11	3	4	1821	58	3.2	179	0.87
1144-057	2320	725	13	10	2	4	754	29	3.8	117	0.70
1144-060	2350	155	18	18	3	4	198	43	21.6	239	0.72
1144-064	2380-2390	769	42	31	18	15	875	106	12.1	162	1.17
1144-067	2410-2420	1195	59	44	26	23	1346	151	11.2	205	1.10
1144-070	2440-2450	623	74	40	24	16	776	153	19.7	505	1.48
1144-073	2470-2480	655	64	54	33	34	840	185	22.0	208	0.95
1144-077	2500-2510	994	134	81	44	47	1300	306	23.5	368	0.94
1144-080	2530-2540	964	131	87	49	51	1282	318	24.8	289	0.95

TABLE 2C

TOTAL CONCENTRATION (VOL. PPM OF ROCK) OF C_1 - C_7 HYDROCARBONS (2A + 2B)

GEOCHEM SAMPLE NUMBER	DEPTH	C_1 Methane	C_2 Ethane	C_3 Propane	iC_4 Isobutane	nC_4 Butane	TOTAL C_1 - C_4	TOTAL C_2 - C_4	% GAS WETNESS	TOTAL C_5 - C_7	$\frac{iC_4}{nC_4}$
1144-083	2560-2570	649	76	59	41	46	871	223	25.5	238	0.89
1144-087	2590-2600	687	117	72	37	38	952	265	27.8	206	0.98
1144-089	2630	634	47	31	17	15	743	110	14.7	163	1.14
1144-091	2659	238	26	12	6	9	290	52	18.0	328	0.68
1144-094	2690-2700	1024	119	58	28	24	1253	229	18.3	200	1.18
1144-096	2710-2720	646	97	50	26	18	837	191	22.8	126	1.41
1144-098	2750-2760	424	96	49	22	15	605	181	29.9	81	1.48
1144-102	2780-2790	322	76	34	18	8	458	136	29.7	116	2.18
1144-104	2800-2810	2415	166	54	21	7	2664	249	9.4	135	2.88
1144-105	2840	306	115	76	25	21	543	237	43.6	88	1.17
1144-107	2870-2880	483	82	64	17	14	659	176	26.8	41	1.24
1144-111	2900-2910	183	31	29	11	13	267	84	31.5	45	0.88
1144-115	2930-2940	982	280	157	59	58	1535	554	36.1	130	1.02
1144-119	2960-2970	317	88	91	24	36	556	239	42.9	79	0.68
1144-122	2990-3000	70	51	81	19	31	252	182	72.3	103	0.64
1144-125	3020-3030	2121	298	215	54	64	2752	631	22.9	300	0.83
1144-128	3050-3060	509	214	283	58	97	1162	652	56.1	135	0.60
1144-132	3080-3090	281	74	98	25	55	532	252	47.3	137	0.46
1144-134	3100-3110	4828	184	281	66	142	5501	673	12.2	388	0.47
1144-136	3110-3120	81	51	133	35	103	404	323	79.9	292	0.34
1144-137	3120-3130	1899	803	702	163	336	3902	2003	51.3	1627	0.48
1144-139	3130-3140	2553	723	559	128	235	4197	1645	39.2	1102	0.54
1144-142	3140-3150	403	114	146	38	73	773	370	47.9	487	0.52
1144-143	3150-3160	90	36	71	27	67	292	201	69.0	584	0.39
1144-144	3160-3170	128	37	41	29	95	331	202	61.2	2066	0.30
1144-146	3170-3180	2243	934	1612	764	1718	7271	5028	69.1	15434	0.44
1144-147	3180-3190	1563	834	1075	516	980	4969	3406	68.5	5780	0.53
1144-148	3190-3200	2232	1000	1755	706	1346	7040	4808	68.3	8724	0.52
1144-149	3200-3210	877	250	454	188	350	2119	1242	58.6	2328	0.54
1144-150	3210-3220	929	301	553	234	466	2483	1554	62.6	2109	0.50

TABLE 2C

TOTAL CONCENTRATION (VOL. PPM OF ROCK) OF C_1 - C_7 HYDROCARBONS (2A + 2B)

GEOCHEM SAMPLE NUMBER	DEPTH	C_1 Methane	C_2 Ethane	C_3 Propane	iC_4 Isobutane	nC_4 Butane	TOTAL C_1 - C_4	TOTAL C_2 - C_4	% GAS WETNESS	TOTAL C_5 - C_7	$\frac{iC_4}{nC_4}$
1144-151	3220-3230	732	244	422	177	393	1969	1237	62.8	1986	0.45
1144-152	3230-3240	516	152	226	86	184	1165	649	55.7	847	0.47
1144-153	3240-3250	113	32	40	18	44	247	134	54.3	491	0.41
1144-154	3250-3260	244	73	106	38	107	567	324	57.1	552	0.35
1144-156	3260-3270	882	242	284	102	196	1706	824	48.3	713	0.52
1144-157	3270-3280	285	65	82	36	79	547	262	47.9	434	0.45
1144-158	3280-3290	109	21	11	4	14	160	50	31.5	220	0.32
1144-159	3290-3300	141	32	30	21	45	269	127	47.4	502	0.47
1144-160	3300-3310	897	195	192	80	130	1493	596	39.9	574	0.62
1144-161	3310-3320	594	99	70	34	65	861	267	31.0	379	0.52
1144-162	3320-3330	664	156	180	89	136	1225	561	45.8	841	0.65
1144-163	3330-3340	1271	566	446	128	185	2596	1324	51.0	444	0.69
1144-164	3340-3350	347	96	114	52	99	708	362	51.1	517	0.53
1144-165	3350-3360	923	326	356	149	215	1970	1046	53.1	787	0.69
1144-166	3360-3370	274	71	58	24	40	467	192	41.2	317	0.61
1144-167	3370-3380	316	81	102	50	96	645	329	51.1	431	0.52
1144-169	3380-3390	599	89	62	31	64	845	246	29.1	387	0.48
1144-170	3390-3400	588	106	103	56	80	935	346	37.0	331	0.70
1144-171	3400-3410	779	150	196	105	163	1393	614	44.1	427	0.65
1144-172	3410-3420	271	55	80	61	107	574	303	52.8	515	0.57
1144-173	3420-3430	150	35	59	38	59	341	191	56.1	271	0.64
1144-174	3430-3440	187	56	121	81	124	569	383	67.2	483	0.65
1144-175	3440-3450	579	137	222	116	164	1218	639	52.4	362	0.71
1144-176	3450-3460	807	188	283	146	181	1605	797	49.7	492	0.81
1144-177	3460-3470	614	105	113	55	78	965	351	36.4	241	0.70
1144-179	3470-3480	615	84	56	35	73	862	247	28.7	229	0.47
1144-180	3480-3490	60	17	161	98	229	565	504	89.3	562	0.43
1144-181	3490-3500	69	18	15	7	12	121	52	42.9	55	0.53
1144-183	3500-3510	70	15	6	4	7	102	33	32.0	32	0.47
1144-184	3510-3520	203	45	46	28	49	371	168	45.3	205	0.56

TABLE 2C

TOTAL CONCENTRATION (VOL. PPM OF ROCK) OF C_1 - C_7 HYDROCARBONS (2A + 2B)

GEOCHEM SAMPLE NUMBER	DEPTH	C_1 Methane	C_2 Ethane	C_3 Propane	iC_4 Isobutane	nC_4 Butane	TOTAL C_1 - C_4	TOTAL C_2 - C_4	% GAS WETNESS	TOTAL C_5 - C_7	$\frac{iC_4}{nC_4}$
1144-185	3520-3530	524	136	193	96	175	1124	600	53.3	322	0.55
1144-186	3520-3530	264	61	88	46	90	549	286	52.0	295	0.51
1144-188	3540-3550	122	23	35	23	51	254	132	52.1	139	0.44
1144-187	3540-3550	277	67	113	62	112	630	353	56.1	281	0.55
1144-189	3550-3560	99	23	33	23	62	239	140	58.5	168	0.37
1144-190	3560-3570	128	24	44	22	64	281	153	54.6	177	0.35
1144-191	3570-3580	153	28	26	16	43	265	112	42.3	157	0.38
1144-192	3580-3590	65	13	12	12	30	132	67	51.1	225	0.39
1144-193	3590-3600	258	76	221	98	196	848	591	69.6	496	0.50
1144-194	3600-3610	332	59	58	33	41	522	190	36.4	243	0.81
1144-196	3620-3630	391	90	149	57	118	804	413	51.3	309	0.48
1144-195	3620-3630	78	17	26	15	33	169	91	53.6	241	0.46
1144-197	3630-3640	80	16	28	16	38	178	98	55.1	264	0.42
1144-198	3640-3650	151	28	41	15	43	279	128	45.8	172	0.35
1144-199	3650-3660	101	27	36	9	23	195	94	48.4	591	0.39
1144-200	3660-3670	621	127	143	49	101	1042	421	40.4	457	0.49
1144-201	3670-3680	304	54	68	25	70	520	216	41.6	277	0.35
1144-202	3680-3690	719	124	87	30	84	1043	324	31.1	359	0.35
1144-203	3690-3700	418	102	219	57	154	949	531	55.9	427	0.37
1144-204	3700-3710	727	136	239	56	182	1340	613	45.7	649	0.31
1144-205	3710-3720	2241	229	231	43	115	2860	619	21.7	334	0.37
1144-206	3720-3730	1402	96	81	11	56	1646	244	14.8	142	0.21
1144-207	3730-3740	346	68	85	17	43	559	213	38.1	148	0.40
1144-208	3740-3750	218	60	86	15	35	413	196	47.3	107	0.44
1144-209	3750-3760	277	65	87	19	51	499	222	44.5	166	0.37
1144-210	3760-3770	326	173	248	49	76	872	546	62.7	432	0.65
1144-211	3770-3780	836	516	349	42	76	1819	983	54.0	215	0.55
1144-213	3780-3790	503	393	337	46	73	1350	848	62.8	305	0.62
1144-214	3790-3800	103	137	144	14	38	436	333	76.3	41	0.37
1144-215	3800-3810	195	189	262	22	85	751	557	74.1	315	0.26

TABLE 2C

TOTAL CONCENTRATION (VOL. PPM OF ROCK) OF C_1 - C_7 HYDROCARBONS (2A + 2B)

GEOCHEM SAMPLE NUMBER	DEPTH	C_1 Methane	C_2 Ethane	C_3 Propane	iC_4 Isobutane	nC_4 Butane	TOTAL C_1 - C_4	TOTAL C_2 - C_4	% GAS WETNESS	TOTAL C_5 - C_7	$\frac{iC_4}{nC_4}$
1144-216	3810-3820	248	307	517	49	255	1376	1128	82.0	407	0.19
1144-217	3820-3830	108	110	138	20	77	452	345	76.2	336	0.25
1144-218	3830-3840	116	64	118	15	67	379	263	69.4	270	0.22
1144-219	3830-3840	360	627	1335	91	550	2962	2603	87.9	407	0.17
1144-220	3840-3850	1183	1642	5381	1231	6547	15984	14801	92.6	8119	0.19
1144-221	3850-3860	331	400	1646	542	3272	6191	5860	94.7	8600	0.17
1144-222	3860-3870	142	81	228	88	602	1140	998	87.5	3174	0.15
1144-223	3870-3880	182	106	445	174	1110	2017	1834	91.0	3637	0.16
1144-224	3880-3890	123	52	220	79	512	986	863	87.6	2295	0.15
1144-225	3880-3890	213	146	305	72	431	1167	954	81.7	1374	0.17
1144-226	3900-3910	348	279	928	139	966	2659	2312	86.9	934	0.14
1144-227	3910-3920	416	542	1257	113	771	3099	2684	86.6	655	0.15
1144-228	3940-3950	72	71	399	40	261	843	771	91.5	382	0.15
1144-229	3950-3960	65	28	184	23	134	434	369	85.0	224	0.17
1144-230	3960-3970	1892	1832	1897	173	552	6346	4454	70.2	614	0.31
1144-233	3970-3980	947	526	600	59	218	2349	1402	59.7	318	0.27
1144-234	3980-3990	7354	1592	1317	208	488	10959	3605	32.9	810	0.42
1144-235	3990-4000	4389	676	514	84	190	5852	1463	25.0	863	0.44
1144-236	4000-4010	4326	696	658	121	295	6096	1770	29.0	440	0.41
1144-239	4030-4040	1450	398	476	82	226	2633	1183	44.9	606	0.36
1144-242	4060-4070	1030	242	351	104	258	1985	955	48.1	1226	0.40
1144-245	4090-4100	521	147	133	34	76	912	391	42.8	520	0.45
1144-248	4120-4130	353	119	265	115	330	1181	828	70.1	1424	0.35
1144-251	4150-4160	248	106	391	149	508	1402	1154	82.3	1494	0.29
1144-254	4180-4190	247	44	84	26	75	476	229	48.1	436	0.34
1144-257	4210-4220	284	61	75	15	53	489	204	41.8	348	0.28
1144-260	4240-4250	311	89	143	26	97	666	355	53.3	414	0.27
1144-263	4270-4280	315	95	108	15	50	583	268	46.0	375	0.30
1144-266	4300-4310	231	50	74	17	57	429	198	46.2	410	0.31
1144-269	4330-4340	2137	810	958	211	706	4822	2685	55.7	1353	0.30

TABLE 2C

TOTAL CONCENTRATION (VOL. PPM OF ROCK) OF C_1 - C_7 HYDROCARBONS (2A + 2B)

GEOCHEM SAMPLE NUMBER	DEPTH	C_1 Methane	C_2 Ethane	C_3 Propane	iC_4 Isobutane	nC_4 Butane	TOTAL C_1 - C_4	TOTAL C_2 - C_4	% GAS WETNESS	TOTAL C_5 - C_7	$\frac{iC_4}{nC_4}$
1144-272	4360-4370	455	140	317	105	375	1393	938	67.3	1846	0.28
1144-276	4390-4400	228	126	146	22	65	587	359	61.1	300	0.33
1144-279	4420-4430	691	429	469	72	194	1855	1164	62.7	689	0.37
1144-280	4430-4440	915	1055	1464	188	646	4269	3353	78.6	946	0.29
1144-281	4440-4450	7291	4577	2623	247	575	15313	8022	52.4	733	0.43
1144-282	4450-4460	2962	2029	1265	116	345	6718	3756	55.9	678	0.34

TABLE 3

ROCKEVAL PYROLYSIS DATA

GEOCHEM SAMPLE NUMBER	DEPTH	S1 (mg/g)	S2 (mg/g)	S3 (mg/g)	Production INDEX	Hydrogen INDEX	Oxygen INDEX	Tmax (%C)
1144-002A	400-450	0.03	0.07	0.93	0.30	28.0	372.0	423
1144-004A	500-550	0.02	0.07	0.83	0.22	28.0	332.0	391
1144-006A	600-650	0.01	0.11	1.10	0.08	39.3	392.9	388
1144-008A	700-750	0.03	0.21	1.23	0.13	58.3	341.7	402
1144-010A	800-850	0.02	0.15	0.91	0.12	40.5	245.9	419
1144-012A	900-950	0.02	0.13	0.80	0.13	43.3	266.7	399
1144-014A	1000-1050	0.02	0.10	0.84	0.17	33.3	280.0	391
1144-016A	1100-1150	0.02	0.28	1.17	0.07	60.9	254.3	427
1144-018A	1200-1250	0.02	0.17	0.84	0.11	43.6	215.4	405
1144-020A	1300-1350	0.04	0.30	0.86	0.12	88.2	252.9	399
1144-022A	1400-1450	0.04	0.31	0.87	0.11	81.6	228.9	420
1144-024A	1500-1550	0.05	0.46	1.14	0.10	86.8	215.1	421
1144-026A	1600-1650	0.12	1.15	1.37	0.09	157.5	187.7	436
1144-028A	1700-1750	0.15	0.89	1.25	0.14	117.1	164.5	422
1144-030A	1800-1850	0.13	0.76	1.38	0.15	108.6	197.1	422
1144-032A	1900-1950	0.19	1.81	1.31	0.09	161.6	117.0	416
1144-034A	2000-2050	0.07	0.22	1.12	0.24	61.1	311.1	377
1144-036A	2110-2120	0.07	1.21	2.15	0.05	124.7	221.6	422
1144-036B	2110-2120	0.13	2.32	1.59	0.05	162.2	111.2	417
1144-045A	2200-2210	0.07	0.34	2.39	0.17	31.2	219.3	423
1144-046A	2207.5	0.01	0.25	1.65	0.04	22.1	146.0	417
1144-049B	2230-2240	0.05	0.26	1.47	0.16	32.1	181.5	409
1144-052A	2260-2270	0.03	0.10	1.14	0.23	23.3	265.1	307
1144-054A	2280-2290	0.04	0.17	1.48	0.19	35.4	308.3	404
1144-057A	2320	0.02	0.11	1.22	0.15	17.5	193.7	414
1144-060A	2350	0.06	0.24	1.84	0.20	37.5	287.5	412
1144-062A	2374.5	0.00	0.32	1.12	0.00	43.2	151.4	426
1144-064A	2380-2390	0.03	0.62	1.60	0.05	65.3	168.4	428
1144-067A	2410-2420	0.03	0.63	1.41	0.05	61.2	136.9	429
1144-070B	2440-2450	0.04	0.40	1.31	0.09	50.6	165.8	424
1144-073A	2470-2480	0.05	0.69	1.16	0.07	75.0	126.1	428
1144-074A	2481.5	0.01	0.35	0.53	0.03	54.7	82.8	423
1144-077A	2500-2510	0.04	0.82	1.44	0.05	87.2	153.2	432
1144-080A	2530-2540	0.08	0.79	1.27	0.09	86.8	139.6	430
1144-083A	2560-2570	0.06	0.67	1.03	0.08	81.7	125.6	428
1144-085A	2579.5	0.01	0.43	0.61	0.02	55.8	79.2	420
1144-087A	2590-2600	0.04	0.50	1.15	0.07	64.1	147.4	428
1144-089A	2630	0.04	0.46	1.43	0.08	53.5	166.3	428
1144-091A	2659	0.03	0.36	2.06	0.08	60.0	343.3	425
1144-091B	2659	0.07	0.60	1.46	0.10	72.3	175.9	426
1144-092A	2679.5	0.01	0.34	0.86	0.03	55.7	141.0	426
1144-094A	2690-2700	0.05	0.58	1.35	0.08	71.6	166.7	430
1144-096A	2710-2720	0.08	0.65	1.58	0.11	67.0	162.9	429
1144-098A	2750-2760	0.08	0.65	1.65	0.11	67.0	170.1	428
1144-102A	2780-2790	0.05	0.50	1.21	0.09	58.8	142.4	430
1144-101A	2780.5	0.01	0.15	0.26	0.06	26.3	45.6	423
1144-104B	2800-2810	0.08	0.69	1.50	0.10	71.1	154.6	427
1144-105A	2840	0.07	0.57	1.80	0.11	64.0	202.2	427
1144-107B	2870-2880	0.12	0.70	1.50	0.15	69.3	148.5	426
1144-108A	2879.5	0.03	0.52	1.27	0.05	71.2	174.0	428

TABLE 3

ROCKEVAL PYROLYSIS DATA

GEOCHEM SAMPLE NUMBER	DEPTH	S1 (mg/g)	S2 (mg/g)	S3 (mg/g)	Production INDEX	Hydrogen INDEX	Oxygen INDEX	Tmax (%C)
1144-171A	3400-3410	0.09	0.36	1.74	0.20	39.1	189.1	424
1144-172B	3410-3420	0.09	0.88	1.05	0.09	94.6	112.9	381
1144-173A	3420-3430	0.19	0.41	1.43	0.32	33.6	117.2	435
1144-174A	3430-3440	0.17	0.69	1.59	0.20	61.6	142.0	433
1144-175B	3440-3450	0.09	0.09	0.62	0.50	10.8	74.7	406
1144-177A	3460-3470	0.08	0.20	0.99	0.29	22.5	111.2	385
1144-178A	3474.5	0.03	0.32	0.87	0.09	47.8	129.9	434
1144-180A	3480-3490	0.08	0.52	0.38	0.13	52.5	38.4	433
1144-181B	3490-3500	0.11	0.47	0.75	0.19	48.0	76.5	439
1144-183A	3500-3510	0.05	0.41	0.39	0.11	47.7	45.3	437
1144-182A	3504.5	0.07	0.69	0.29	0.09	73.4	30.9	437
1144-184B	3510-3520	0.05	0.37	0.43	0.12	43.5	50.6	438
1144-185A	3520-3530	0.07	0.49	0.57	0.13	52.7	61.3	432
1144-187A	3540-3550	0.10	0.53	1.50	0.16	55.8	157.9	437
1144-189A	3550-3560	0.08	0.29	1.79	0.22	32.2	198.9	432
1144-190A	3560-3570	0.10	0.38	2.09	0.21	41.8	229.7	436
1144-191A	3570-3580	0.10	1.07	1.28	0.09	85.6	102.4	428
1144-192A	3580-3590	0.10	0.51	2.33	0.16	44.3	202.6	432
1144-193A	3590-3600	0.15	0.39	1.66	0.28	42.4	180.4	430
1144-194B	3600-3610	0.10	0.56	0.58	0.15	60.9	63.0	439
1144-195A	3620-3630	0.11	0.36	1.66	0.23	41.9	193.0	425
1144-197A	3630-3640	0.11	0.34	1.79	0.24	45.9	241.9	430
1144-198A	3640-3650	0.09	0.27	1.74	0.25	30.0	193.3	430
1144-199A	3650-3660	0.16	0.47	1.78	0.25	47.5	179.8	430
1144-200A	3660-3670	0.07	0.29	1.25	0.19	31.5	135.9	428
1144-201A	3670-3680	0.14	0.44	1.46	0.24	29.5	98.0	436
1144-202A	3680-3690	0.12	0.50	2.34	0.19	50.5	236.4	436
1144-203A	3690-3700	0.17	1.03	2.98	0.14	54.5	157.7	431
1144-204B	3700-3710	0.07	0.34	0.56	0.17	38.2	62.9	439
1144-205A	3710-3720	0.10	0.28	0.91	0.26	18.9	61.5	427
1144-206A	3720-3730	0.12	0.46	1.57	0.21	37.4	127.6	428
1144-207A	3730-3740	0.07	0.25	1.07	0.22	28.1	120.2	423
1144-208B	3740-3750	0.05	0.37	0.51	0.12	40.7	56.0	435
1144-209A	3750-3760	0.06	0.26	1.15	0.19	27.1	119.8	427
1144-210A	3760-3770	0.06	0.29	1.42	0.17	31.9	156.0	430
1144-211A	3770-3780	0.05	0.43	0.50	0.10	45.3	52.6	437
1144-213A	3780-3790	0.06	0.20	0.61	0.23	22.7	69.3	437
1144-214A	3790-3800	0.04	0.20	0.47	0.17	24.7	58.0	436
1144-215A	3800-3810	0.04	0.15	0.60	0.21	18.7	75.0	436
1144-216B	3810-3820	0.04	0.27	1.00	0.13	30.7	113.6	434
1144-217A	3820-3830	0.08	0.28	0.44	0.22	29.2	45.8	439
1144-218A	3830-3840	0.11	0.48	0.48	0.19	36.6	36.6	440
1144-219B	3830-3840	0.08	0.61	1.54	0.12	50.0	126.2	436
1144-220B	3840-3850	3.37	23.24	1.09	0.13	275.0	12.9	437
1144-221B	3850-3860	5.56	20.29	1.05	0.22	320.0	16.6	438
1144-222B	3860-3870	0.06	0.45	0.84	0.12	47.4	88.4	433
1144-223A	3870-3880	0.09	0.36	0.61	0.20	36.0	61.0	438
1144-224A	3880-3890	0.10	0.32	0.54	0.24	34.8	58.7	438
1144-226A	3900-3910	0.47	2.56	0.94	0.16	128.0	47.0	438
1144-227A	3910-3920	0.27	1.11	1.04	0.20	60.3	56.5	441

TABLE 3

ROCKEVAL PYROLYSIS DATA

GEOCHEM SAMPLE NUMBER	DEPTH	S1 (mg/g)	S2 (mg/g)	S3 (mg/g)	Production INDEX	Hydrogen INDEX	Oxygen INDEX	Tmax (%C)
1144-111A	2900-2910	0.07	0.50	1.58	0.12	52.1	164.6	428
1144-111B	2900-2910	0.06	0.53	1.33	0.10	60.2	151.1	429
1144-115A	2930-2940	0.07	0.39	1.08	0.15	46.4	128.6	429
1144-114A	2934.5	0.02	0.26	0.62	0.07	38.8	92.5	425
1144-119B	2960-2970	0.05	0.51	1.16	0.09	55.4	126.1	430
1144-118A	2964.5	0.05	0.12	1.18	0.29	16.2	159.5	353
1144-122A	2990-3000	0.06	0.92	1.01	0.06	94.8	104.1	431
1144-125A	3020-3030	0.05	0.45	0.76	0.10	50.0	84.4	429
1144-125B	3020-3030	0.04	0.16	1.15	0.20	25.0	179.7	424
1144-128A	3050-3060	0.09	0.74	1.08	0.11	74.0	108.0	436
1144-132A	3080-3090	0.08	0.74	0.95	0.10	74.0	95.0	432
1144-131A	3084.5	0.03	0.39	0.95	0.07	48.7	118.7	431
1144-134A	3100-3110	0.16	1.08	0.86	0.13	92.3	73.5	434
1144-136A	3110-3120	0.12	1.06	0.96	0.10	84.8	76.8	436
1144-135A	3114.5	0.11	0.79	0.44	0.12	59.0	32.8	427
1144-137A	3120-3130	0.05	0.64	0.63	0.07	62.7	61.8	435
1144-139A	3130-3140	0.06	0.71	0.56	0.08	68.3	53.8	432
1144-138A	3132.65	0.17	1.73	0.22	0.09	112.3	14.3	435
1144-142A	3140-3150	0.07	0.66	0.48	0.10	62.9	45.7	434
1144-140A	3144.48	0.25	2.85	0.17	0.08	331.4	19.8	432
1144-141A	3148.39	0.05	0.33	0.17	0.13	38.4	19.8	433
1144-143A	3150-3160	0.16	1.23	0.61	0.12	97.6	48.4	436
1144-143B	3150-3160	0.02	0.15	1.00	0.12	23.8	158.7	426
1144-144A	3160-3170	0.09	0.41	1.21	0.18	47.7	140.7	428
1144-146A	3170-3180	0.21	0.82	0.94	0.20	80.4	92.2	431
1144-145A	3175.0	0.18	1.05	1.96	0.15	96.3	179.8	433
1144-147B	3180-3190	0.17	1.00	0.53	0.15	93.5	49.5	433
1144-148A	3190-3200	0.33	1.16	0.94	0.22	108.4	87.9	432
1144-149B	3200-3210	0.14	0.84	0.82	0.14	84.0	82.0	434
1144-150A	3210-3220	0.14	0.80	1.17	0.15	80.8	118.2	432
1144-151A	3220-3230	0.18	0.84	1.03	0.18	86.6	106.2	431
1144-152A	3230-3240	0.11	0.73	1.52	0.13	71.6	149.0	433
1144-153A	3240-3250	0.16	0.76	1.54	0.17	69.1	140.0	431
1144-154A	3250-3260	0.10	0.66	1.73	0.13	66.0	173.0	431
1144-156A	3260-3270	0.09	0.60	1.10	0.13	61.2	112.2	433
1144-155A	3264.5	0.05	0.93	0.51	0.05	96.9	53.1	436
1144-157A	3270-3280	0.10	0.75	1.25	0.12	70.8	117.9	431
1144-158A	3280-3290	0.22	0.22	0.82	0.50	23.2	86.3	358
1144-159B	3290-3300	0.09	0.75	0.68	0.11	74.3	67.3	435
1144-160A	3300-3310	0.11	0.64	1.01	0.15	63.4	100.0	434
1144-161A	3310-3320	0.10	0.62	1.39	0.14	57.4	128.7	433
1144-162A	3320-3330	0.13	0.59	1.09	0.18	57.3	105.8	433
1144-163A	3330-3340	0.06	0.78	0.50	0.07	81.2	52.1	436
1144-164B	3340-3350	0.06	0.66	0.33	0.08	67.3	33.7	437
1144-165B	3350-3360	0.08	0.65	0.38	0.11	68.4	40.0	435
1144-166A	3360-3370	0.07	0.69	1.36	0.09	59.5	117.2	434
1144-167A	3370-3380	0.07	0.73	1.26	0.09	64.6	111.5	434
1144-169A	3380-3390	0.12	0.53	1.23	0.18	50.0	116.0	433
1144-168A	3384.5	0.06	0.73	0.68	0.08	70.9	66.0	436
1144-170A	3390-3400	0.11	0.53	1.27	0.17	52.5	125.7	431

TABLE 3

ROCKEVAL PYROLYSIS DATA

GEOCHEM SAMPLE NUMBER	DEPTH	S1 (mg/g)	S2 (mg/g)	S3 (mg/g)	Production INDEX	Hydrogen INDEX	Oxygen INDEX	Tmax (%C)
1144-228A	3940-3950	0.09	0.30	0.45	0.23	29.7	44.6	436
1144-228B	3940-3950	0.32	1.19	1.37	0.21	58.9	67.8	441
1144-229A	3950-3960	0.32	1.90	0.66	0.14	84.4	29.3	443
1144-230A	3960-3970	0.24	1.43	0.50	0.14	56.7	19.8	449
1144-233A	3970-3980	0.29	1.51	0.43	0.16	58.3	16.6	446
1144-231A	3972.05	0.04	0.24	1.02	0.14	34.8	147.8	460
1144-232A	3972.06	0.25	1.80	0.13	0.12	100.0	7.2	447
1144-234B	3980-3990	0.32	1.88	0.42	0.15	78.0	17.4	443
1144-235B	3990-4000	0.28	1.21	0.40	0.19	48.0	15.9	446
1144-236B	4000-4010	0.28	1.55	0.33	0.15	70.1	14.9	444
1144-280B	4430-4440	1.47	7.31	0.91	0.17	145.9	18.2	448
1144-281B	4440-4450	0.69	2.88	1.16	0.19	97.3	39.2	450
1144-281C	4440-4450	0.40	2.03	0.89	0.16	70.5	30.9	447
1144-282C	4450-4460	0.52	2.79	0.61	0.16	83.0	18.2	449

TABLE 4

GOGI INDEX

GEOCHEM SAMPLE NUMBER	DEPTH	% C_1	% C_{2-5}	% C_{6-14}	% C_{15+}
1144-020A	1300-1350m	14.83	65.88	19.29	0
1144-026A	1600-1650m	10.00	71.14	18.86	0
1144-032A	1900-1950m	16.01	40.44	43.11	0.44
1144-036B	2110-2120m	14.19	16.29	39.92	29.60
1144-067A	2410-2420m	20.09	60.26	19.65	0
1144-074A	2481.5m SWC	22.49	51.90	25.61	0
1144-085A	2579.5m SWC	20.25	46.78	32.95	0
1144-134A	3100-3110m	26.95	29.89	22.28	20.88
1144-140A	3144.48m CORE	18.05	20.58	35.79	25.58
1144-148A	3190-3200m	17.67	11.88	51.87	18.58
1144-163A	3330-3340m	16.82	61.44	8.39	13.35
1144-191A	3570-3580m	26.44	29.81	20.71	23.04
1144-203A	3690-3700m	29.75	44.87	20.59	4.79
1144-220B	3840-3850m	25.67	11.41	24.71	38.21
1144-221B	3850-3860m	26.03	35.18	22.78	16.01
1144-226A	3900-3910m	20.24	29.86	25.97	23.92
1144-229A	3950-3960m	21.97	19.59	24.33	34.11
1144-232A	3975.06m CORE	35.01	18.33	29.25	17.41
1144-280B	4430-4440m	39.98	18.57	19.21	22.25
1144-281B	4440-4450m	30.72	13.80	23.69	31.79

TABLE 5

KEROGEN TYPE AND MATURATION

GEOCHEM SAMPLE NUMBER	DEPTH	ORGANIC MATTER DESCRIPTION					THERMAL MATURATION	
		TYPES 40%; 10-40%; 10%	REMARKS	RE-WORKED (%)	PARTICLE SIZE	PRESERV-ATION	INDEX	1 – 10 SCALE
1144-014A	1000-1050m	W-I;Al-H;Am	fairly lean	50	F-M	G	1+	
1144-020A	1300-1350m	W;I-H;Al-Am		30	F-M	F	1+ to 2-	
1144-026A	1600-1650m	-;W-Am*-I-Al;Am	* grainy, not prime quality H at 2- and 2- to 2	30	F-C	F	1+ to 2- (?)	
1144-032A	1900-1950m	Am*;Al-W-H;I	differentiation difficult * not prime quality, includes incompletely developed material	5	F-C	F	1+ to 2-	
1144-036A	2110-2120m	H;Al-Am-I;W	significant contamination	20	M	F-G	1+/1+ to 2-	
1144-046A	2207.5m SWC	W;I-H;Al	H at 2- and 2- to 2	60	F-M/C	F-G	1+ to 2- (?)	
1144-057A	2320m	W;I;H-Al-Am	dominant H at 2- to 2 and 2-	70	F-C	G	1+ to 2- (?)	
1144-062A	2374.5m SWC	W-I;H;Al-Am	dominant H marginally mature	70	M	G	1+ to 2-	
1144-067A	2410-2420m	W;I;H-Al-Am	dominant H marginally mature	50	M-C	G	1+ to 2- (?)	
1144-074A	2481.5m SWC	W;I-Al;H-Am		60	F-C	F	2-	
1144-080A	2530-2540m	I-W;H;Al		70	M-C	F-G	2-	
1144-085A	2579.5m SWC	W-I;Al;H-Am		70	F-M	G	2- (?)	
1144-089A	2630m	W-I;-;H-Al-Am	H at 2- to 2	80	F-M	F-G	2-	
1144-092A	2679.5m SWC	W-I;H;Al		60	M	F-G	2-	
1144-096A	2710-2720m	W-I;-;H-Al-Am	H at 2- and 2- to 2 contamination	80	F-M	F	1+ to 2- (?)	
1144-101A	2780.5m SWC	I-W;-;Al-H	contamination	75	F-C	F	2-	
1144-108A	2879.5m SWC	W-I;-;H-Al		70	F-M	F	2-	
1144-114A	2934.5m SWC	W-I;-;H-Al-Am		75	F-M	F-G	2- to 2	
1144-118A	2964.5m SWC	I-W;-;H-Al-Am	contamination	90	F-M	F	2- (?)	
1144-125A	3020-3030m	W-I;-;H-Al-Am	H at 2	75	M	G	2- to 2	

Algal, Amorphous, Herbaceous, Inertinite, Resin, Wood

postscript = coarse, cuticle, cysts, degraded, fine, other,. structured, spore-pollen, thick-walled, unstructured

Dominant, Major, Significant, Minor

TABLE 5

KEROGEN TYPE AND MATURATION

GEOCHEM SAMPLE NUMBER	DEPTH	ORGANIC MATTER DESCRIPTION					THERMAL MATURATION	
		TYPES 40%; 10-40%; 10%	REMARKS	RE-WORKED (%)	PARTICLE SIZE	PRESERV-ATION	INDEX	1 – 10 SCALE
1144-131A	3084.5m SWC	W;I;Al-H-Am		70	F-M	F-G	2-/2- to 2 (?)	
1144-135A	3114.5m SWC	W-I;-;H-Al	H at 2	70	F-M	G	2- to 2	
1144-140A	3144.48m SWC	W;I-H;Al-Am	disseminated amorphous-like material resembling contamination	55	F-C	F	2- to 2	
1144-145A	3175.0m SWC	W;I-H;Al-Am		55	F-M	F	2- to 2	
1144-151A	3220-3230m	W-I;-;H-Al	chiefly contamination	80	F-M	F	2- to 2 (?)	
1144-155A	3264.5m SWC	W;I-H;Am-Al	contamination, H at 2	60	F-C	F	2- to 2	
1144-160A	3300-3310m	W-I;-;H-Al	caving	70	F-M	F	2- to 2	
1144-164B	3340-3350m	W;I-H;Al-Am	H at 2	70	F-M	G	2- to 2	
1144-168A	3384.5m SWC	W-I;H;Al-Am	H at 2	70	F-M/C	F-G	2- to 2/2	
1144-173A	3420-3430m	W-I;-;H-Al	significant contamination H at 2, close to 2	70	F-C	F	2- to 2	
1144-178A	3474.5m SWC	W-I;-;H-Al		80	F-M	G	2	
1144-182A	3504.5m SWC	W-I;H;Al-Am	minor contamination	60	F-C	F	2	
1144-187A	3540-3550m	(W-I;-;H)	virtually barren, unreliable		F	F	---	
1144-194B	3600-3610m	W;I;H-Al-Am	caving, H at 2 to 2+	175	M	F-G	2	
1144-198A	3640-3650m	(W-I;-;H-Al)	very dominantly amorphous-like material resembling contamination, otherwise lean, unreliable		F-M	F	---	
1144-201A	3670-3680m	W;-;I-H-Al	chiefly amorphous-like contamination, otherwise frequently resembles lignite		F-C	F	1+	
1144-203A	3690-3700m	W;I;H-Al	frequent contamination ** unreliable, 2- to 2 at best but includes frequent material resembling lignite		F-C	F	**	

Algal, Amorphous, Herbaceous, Inertinite, Resin, Wood

postscript = coarse, cuticle, cysts, degraded, fine, other,. structured, spore-pollen, thick-walled, unstructured

Dominant, Major, Significant, Minor

TABLE 5

KEROGEN TYPE AND MATURATION

GEOCHEM SAMPLE NUMBER	DEPTH	ORGANIC MATTER DESCRIPTION					THERMAL MATURATION	
		TYPES 40%; 10-40%; 10%	REMARKS	RE-WORKED (%)	PARTICLE SIZE	PRESERV-ATION	INDEX	1 – 10 SCALE
1144-206A	3720-3730m	(I-W;-;H)	lean, unreliable - very dominantly dark, degraded amorphous-like contamination		F-M	P	---	
1144-209A	3750-3760m	W-I;-;H-Al	caving	90	F-M	F	2 (?)	
1144-211A	3770-3780m	I-W;-;H-Al	caving, H at 2 to 2+	85	F-M	F-G	2	
1144-217A	3820-3830m	I-W;-;H-Al	H at 2 to 2+ and 2+, caving	90	F-M	F	2 (?)	
1144-220B	3840-3850m	Al^{+}-Am*;I-W;H	+ includes material passing to amorphous * degraded, incompletely developed, not prime quality, differentiation difficult	20	F-C	F	2 (?)	
1144-221B	3850-3860m	-;Am^{+}-Al^{+}-I-W;H	differentiation difficult + as 220B	40	F-M/C	F	2 to 2+ (?)	
1144-223A	3870-388-m	I-W;-;H-Al-Am	significant caving	75	F-C	G	2 to 2+ (?)	
1144-226A	3900-3910m	W-I;H;Al-Am	amorphous-like contamination	75	F-M	F	2 to 2+	
1144-228A	3940-3950m	I-W;-;H-Al	H at 2 - caving?	85	M-C	G	2 to 2+	
1144-230A	3960-3970m	W-I;H;Am-Al		65	F-C	G	2 to 2+	
1144-232A	3975.06m CORE	W-I;-;H-Al-Am	contamination	75	M-C	F-G	2 to 2+	
1144-236B	4000-4010m	W-I;H;Am-Al		70	F-C	F-G	2 to 2+	
1144-281B	4440-4450m	-;Al*-W-Am*-I;H	differentiation difficult * includes material passing to amorphous	30	M-C	G	2 to 2+	

Algal, Amorphous, Herbaceous, Inertinite, Resin, Wood

postscript = coarse, cuticle, cysts, degraded, fine, other,. structured, spore-pollen, thick-walled, unstructured

Dominant, Major, Significant, Minor

TABLE 6
VITRINITE REFLECTANCE DATA

GEOCHEM SAMPLE NUMBER	DEPTH	SAMPLE TYPE	AVERAGE REFLECTIVITY Ro (%), (NUMBER OF PARTICLES)			REMARKS
			1	2	3	
1144-014	1000-1050m	WR	0.40(2)			
1144-020A	1300-1350m	WR	0.35(3)	0.84(2)*		
1144-026A	1600-1650m	WR	0.36(2)	0.62(2)*		
1144-032A	1900-1950m	WR	0.44(3)			
1144-036A	2110-2120m	WR	0.46(2)	0.99(2)*		
1144-046A	2207.5m	WR	0.36(2)	0.91(11)*		
1144-057A	2320m	WR	0.89(7)*			
1144-062A	2360m	WR	0.44(5)	0.75(10)*	0.91(1)*	
1144-067A	2410-2420m	WR	0.47(4)	0.81(11)*		
1144-074A	2481.5m	WR	0.48(4)	0.86(11)*		
1144-080A	2530-2540m	WR	0.47(4)	0.81(9)*		
1144-085A	2579.5m	WR	0.51(11)	0.84(4)*		
1144-089A	2630m	WR	0.53(4)	0.89(10)*		
1144-092A	2679.5m	WR	0.50(5)	0.86(9)*		
1144-096A	2710-2720m	WR	0.52(4)	0.86(11)*		
1144-101A	2780.5m	WR	1.02(13)*			
1144-108A	2879.5m	WR	0.49(4)	0.83(5)*	1.09(6)*	
1144-114A	2934.5m	WR	0.47(2)	0.93(13)*		
1144-118A	2964.5m	WR	1.78(12)*			
1144-125A	3020-3030m	WR	0.53(6)	0.95(9)*		
1144-131A	3084.5m	WR	0.57(4)	0.99(7)*		
1144-135A	3114.5m	WR	0.54(13)	0.98(12)*		
1144-140A	3144.48m	WR	0.55(18)			
1144-145A	3175.0m	WR	0.54(8)	0.98(10)*		
1144-151A	3220-3230m	WR	0.58(8)	1.09(6)*		
1144-155A	3264.5m	WR	0.57(8)	1.01(7)*		
1144-160A	3300-3310m	WR	0.57(4)	0.99(7)*		
1144-164A	3340-3350m	WR	0.60(10)	1.01(5)*		
1144-168A	3384.5m	WR	0.60(12)	1.03(3)*		
1144-173A	3420-3430m	WR	0.58(9)	1.08(6)*		
1144-78A	3474.5m	WR	0.75(9)	1.13(8)		
1144-182A	3504.5m	WR	0.75(18)			
1144-187A	3540-3550m	WR	0.76(10)	1.12(4)*		
1144-190A	3560-3570m	WR	0.77(8)	1.17(7)*		
1144-194B	3600-3610m	WR	0.81(11)	1.15(4)*		
1144-198A	3640-3650m	WR	1.33(4)*			

CT—ditch cuttings; CO—core; WR—whole rock; KC—kerogen concentrate. Colours — spore fluorescence. *Reworked

TABLE 6
VITRINITE REFLECTANCE DATA

GEOCHEM SAMPLE NUMBER	DEPTH	SAMPLE TYPE	AVERAGE REFLECTIVITY Ro (%), (NUMBER OF PARTICLES)			REMARKS
			1	2	3	
1144-201A	3670-3680m	WR	0.28(12)			
1144-203A	3690-3700m	WR	0.27(8)			
1144-206A	3720-3730m	WR	1.24(13)*			
1144-209A	3750-3760m	WR	1.19(7)*			
1144-211A	3770-3780m	WR	0.80(5)	1.28(7)*		
1144-217A	3820-3830m	WR	0.80(9)	1.36(6)*		
1144-221B	3850-3860m	KC	0.85(13)			
1144-223A	3870-3880m	WR	0.78(8)	1.30(5)*		
1144-226A	3900-3910m	WR	0.79(12)			
1144-228A	3940-3950m	WR	0.79(7)	1.28(6)*		
1144-230A	3960-3970m	WR	0.78(15)			
1144-232A	3975.06m	KC	1.00(19)*			
1144-236B	4000-4010m	WR	0.30(3)	0.80(12)		
1144-281D	4440-4450m	WR	0.83(30)			

CT—ditch cuttings; CO—core; WR—whole rock; KC—kerogen concentrate. Colours — spore fluorescence. *Reworked

TABLE 7

METHYL PHENANTHRENE INDEX

GEOCHEM SAMPLE NUMBER	DEPTH	% AREA	% HEIGHT
1150-001	3131.12m	0.82	0.80
1144-138A	3132.65m	0.73	0.78
1150-002	3135.61m	0.71	0.69
1150-003	3139.42m	0.79	0.79
1150-004	3142.60m	0.67	0.72
1150-005	3146.00m	0.51	0.50
1144-146A	3170-3180m	0.69	0.75
1144-151	3220-3230m	0.58	0.61
1144-155A	3264.5m	0.57	0.53
1144-163	3330-3340m	0.61	0.53
1144-168A	3384.5m	0.71	0.67
1144-187A	3540-3550m	0.54	0.55
1144-198A	3640-3650m	0.59	0.58
1144-206A	3720-3730m	0.62	0.60
1144-213	3780-3790m	0.56	0.50
1144-217A	3820-3830m	0.55	0.55
1144-221B	3850-3860m	0.46	0.58
1144-223	3870-3880m	0.57	0.58
1144-226A	3900-3910m	0.56	0.62
1144-230A	3960-3970m	0.55	0.67
1150-006	3976.38-3976.45m	0.65	0.73
1150-007	3979.37-3979.44m	0.75	0.76
1150-008	3980.00m	0.72	0.73
1150-009	3980.28m	0.76	0.73
1150-010	3983.57m	0.75	0.77
1150-011	3985.10m	0.74	0.70
1150-012	3988.55m	0.76	0.76
1144-234	3980-3990m	0.64	0.64
1150-013	3990.00m	0.74	0.78
1150-014	3994.00m	0.61	0.66
1150-015	3998.27m	0.62	0.64
1150-016	4000.39m	0.72	0.73
1150-017	4006.04m	0.64	0.73
1150.018	4008.40-4008.45m	0.76	0.78
1144-242A	4060-4070m	0.63	0.65
1144-248A	4120-4130m	0.67	0.68
1144-260A	4240-4250m	0.68	0.68
1144-269A	4330-4340m	0.71	0.81
1144-272A	4360-4370m	0.75	0.76
1144-280	4430-4440m	0.72	0.03

TABLE 8a

CONCENTRATION (PPM) OF EXTRACTED C_{15+} MATERIAL IN ROCK

GEOCHEM SAMPLE NUMBER	DEPTH	TOTAL EXTRACT	HYDROCARBONS			NON HYDROCARBONS			
			Paraffin - Naphthenes	Aromatics	TOTAL	Precipitd. Asphaltenes	Eluted NSO's	Non-eluted NSO's	Sulphur
"DITCH CUTTINGS SAMPLES"									
1144-138A	3132.65	298	80	80	160	42	75	13	8
1144-146A	3170-3180	666	279	121	400	144	111	10	0
1144-151	3220-3230	607	213	142	356	139	91	12	10
1144-155A	3264.5	354	103	64	167	94	82	11	0
1144-163	3330-3340	951	343	198	541	134	221	27	28
1144-168A	3384.5	358	133	67	200	73	76	9	0
1144-187A	3540-3550	529	212	124	335	59	124	3	9
1144-198A	3640-3650	379	162	89	251	50	68	9	0
1144-206A	3720-3730	542	240	104	344	62	107	14	16
1144-213	3780-3790	539	122	138	259	45	220	14	0
1144-217A	3820-3830	511	202	112	314	88	91	12	6
1144-221B	3850-3860	7884	3568	2004	5573	1190	990	79	52
1144-223	3870-3880	738	313	206	519	76	134	4	5
1144-226A	3900-3910	1609	512	381	893	290	391	25	10
1144-230A	3960-3970	1077	482	258	741	152	170	12	2
1144-234	3980-3990	129	69	24	93	12	19	3	1
1144-242A	4060-4070	188	117	23	141	23	21	4	0
1144-248A	4120-4130	430	218	79	297	39	86	8	0
1144-260A	4240-4250	152	58	25	84	31	33	3	2
1144-269A	4330-4340	619	401	104	505	27	76	10	2
1144-272A	4360-4370	337	165	69	233	55	47	2	0
1144-280	4430-4440	376	132	91	223	66	72	11	3
"CORE SAMPLES"									
1150-001	3131.12	2131	1750	250	2000	42	73	10	7
1150-002	3135.61	1031	829	108	937	42	29	10	13
1150-003	3139.42	1796	1518	175	1692	39	43	11	12
1150-004	3142.60	79	27	18	45	25	8	1	0
1150-005	3146.00	114	49	17	66	25	19	2	1
1150-006	3976.38-.45	457	153	117	270	121	57	7	3
1150-007	3979.37-.44	695	161	28	190	486	12	2	5
1150-008	3980	221	159	35	194	13	10	1	3
1150-009	3980.28	453	332	40	372	48	28	4	0
1150-010	3983.57	578	425	36	461	50	41	16	9
1150-011	3985.10	587	447	58	506	49	21	6	6
1150-012	3988.55	335	226	40	266	45	15	5	4
1150-013	3990.00	1044	798	128	926	40	54	6	17
1150-014	3994.00	650	487	72	559	47	36	6	1
1150-015	3998.27	676	486	86	572	53	37	6	8
1150-016	4000.39	482	370	48	418	44	13	4	3
1150-017	4006.04	278	198	32	230	29	15	3	1
1150-018	4008.40-.45	469	58	12	70	373	24	1	1

TABLE 8b

COMPOSITION (NORMALISED %) OF C_{15+} MATERIAL EXTRACTED FROM ROCK

GEOCHEM SAMPLE NUMBER	DEPTH	HYDROCARBONS		NON HYDROCARBONS			
		Paraffin – Naphthenes	Aromatics	Preciptd. Asphaltenes	Eluted NSO's	Non eluted NSO's	Sulphur
"DITCH CUTTINGS SAMPLES"							
1144-138A	3132.65	26.85	26.85	14.16	25.16	4.23	2.75
1144-146A	3170-3180	41.93	18.23	21.61	16.67	1.56	0.00
1144-151	3220-3230	35.14	23.46	22.89	14.91	1.90	1.71
1144-155A	3264.5	29.23	17.95	26.67	23.08	3.08	0.00
1144-163	3330-3340	36.07	20.83	14.07	23.26	2.80	2.98
1144-168A	3384.5	37.13	18.81	20.30	21.29	2.48	0.00
1144-187A	3540-3550	40.00	23.33	11.11	23.33	0.56	1.67
1144-198A	3640-3650	42.77	23.49	13.25	18.07	2.41	0.00
1144-206A	3720-3730	44.27	19.11	11.46	19.75	2.55	2.87
1144-213	3780-3790	22.64	25.53	8.42	40.85	2.55	0.00
1144-217A	3820-3830	39.64	21.89	17.16	17.75	2.37	1.18
1144-221B	3850-3860	45.26	25.42	15.10	12.56	1.00	0.66
1144-223	3870-3880	42.41	27.93	10.30	18.14	0.51	0.71
1144-226A	3900-3910	31.80	23.70	18.02	24.30	1.57	0.60
1144-230A	3960-3970	44.79	24.00	14.11	15.79	1.16	0.15
1144-234	3980-3990	53.51	18.82	9.52	14.97	2.04	1.13
1144-242A	4060-4070	62.25	12.42	12.42	10.91	2.01	0.00
1144-248A	4120-4130	50.75	18.44	8.97	20.04	1.79	0.00
1144-260A	4240-4250	38.36	16.67	20.63	21.43	1.85	1.06
1144-269A	4330-4340	64.72	16.83	4.31	12.28	1.54	0.33
1144-272A	4360-4370	48.84	20.35	16.28	13.95	0.58	0.00
1144-280	4430-4440	35.14	24.29	17.61	19.07	3.00	0.89
"CORE SAMPLES"							
1150-001	3131.12	82.09	11.73	1.97	3.45	0.45	0.31
1150-002	3135.61	80.48	10.43	4.03	2.85	0.94	1.26
1150-003	3139.42	84.47	9.71	2.17	2.39	0.61	0.65
1150-004	3142.60	33.51	23.24	31.35	10.27	1.62	0.00
1150-005	3146.00	42.75	15.24	21.93	17.10	1.86	1.12
1150-006	3976.38-.45	33.48	25.56	26.56	12.39	1.45	0.56
1150-007	3979.37-.44	23.21	4.09	69.95	1.76	0.31	0.67
1150-008	3980	71.96	15.74	5.85	4.65	0.45	1.35
1150-009	3980.28	73.27	8.91	10.56	6.19	0.99	0.08
1150-010	3983.57	73.49	6.30	8.71	7.14	2.78	1.58
1150-011	3985.10	76.20	9.96	8.27	3.59	1.00	1.00
1150-012	3988.55	67.50	11.96	13.44	4.43	1.48	1.18
1150-013	3990.00	76.45	12.27	3.88	5.20	0.54	1.67
1150-014	3994.00	74.92	11.07	7.30	5.57	0.98	0.16
1150-015	3998.27	71.88	12.75	7.87	5.44	0.94	1.12
1150-016	4000.39	76.76	9.97	9.13	2.73	0.85	0.56
1150-017	4006.04	71.21	11.57	10.61	5.37	0.96	0.28
1150-018	4008.40-.45	12.37	2.65	79.40	5.17	0.14	0.27

TABLE 9

SIGNIFICANT RATIOS (%) OF C_{15+} FRACTIONS AND ORGANIC CARBON

GEOCHEM SAMPLE NUMBER	DEPTH	ORGANIC CARBON (wt. %)	HYDROCARBONS / TOTAL EXTRACT	HYDROCARBONS / ORG. CARBON	TOTAL EXTRACT / ORG. CARBON	P-NAPHTHENES / AROMATICS
"DITCH CUTTINGS SAMPLES"						
1144-138A	3132.65	1.60	53.70	1.00	1.87	1.00
1144-146A	3170-3180	1.05	60.16	3.81	6.34	2.30
1144-151	3220-3230	0.99	58.59	3.59	6.13	1.50
1144-155A	3264.5	1.09	47.18	1.53	3.25	1.63
1144-163	3330-3340	1.09	56.90	4.96	8.73	1.73
1144-168A	3384.5	0.94	55.94	2.13	3.80	1.97
1144-187A	3540-3550	1.04	63.33	3.22	5.09	1.71
1144-198A	3640-3650	0.89	66.27	2.82	4.26	1.82
1144-206A	3720-3730	1.15	63.38	2.99	4.72	2.32
1144-213	3780-3790	1.80	48.17	1.44	2.99	0.89
1144-217A	3820-3830	1.06	61.54	2.96	4.82	1.81
1144-221B	3850-3860	5.15	70.68	10.82	15.31	1.78
1144-223	3870-3880	1.17	70.34	4.43	6.30	1.52
1144-226A	3900-3910	1.60	55.50	5.58	10.06	1.34
1144-230A	3960-3970	2.52	68.79	2.94	4.27	1.87
1144-234	3980-3990	0.65	72.34	1.43	1.98	2.84
1144-242A	4060-4070	0.17	74.66	8.28	11.09	5.01
1144-248A	4120-4130	0.35	69.19	8.50	12.28	2.75
1144-260A	4240-4250	0.15	55.03	5.57	10.12	2.30
1144-269A	4330-4340	0.33	81.54	15.30	18.76	3.85
1144-272A	4360-4370	0.19	69.19	12.28	17.75	2.40
1144-280	4430-4440	0.53	59.43	4.21	7.09	1.45
"CORE SAMPLES"						
1150-001	3131.12	0.23	93.82	86.94	92.67	7.00
1150-002	3135.61	0.63	90.91	14.87	16.36	7.71
1150-003	3139.42	0.24	94.19	70.50	74.85	8.70
1150-004	3142.60	0.20	56.76	2.26	3.97	1.44
1150-005	3146.00	0.26	57.99	2.53	4.37	2.80
1150-006	3976.38-.45	1.10	59.04	2.45	4.15	1.31
1150-007	3979.37-.44	0.14	27.31	13.56	49.64	5.67
1150-008	3980	0.12	87.71	16.18	18.45	4.57
1150-009	3980.28	0.11	82.18	33.85	41.19	8.22
1150-010	3983.57	0.15	79.80	30.74	38.53	11.66
1150-011	3985.10	0.12	86.16	42.13	48.90	7.65
1150-012	3988.55	0.10	79.47	26.65	33.53	5.64
1150-013	3990.00	0.10	88.71	92.62	104.41	6.23
1150-014	3994.00	0.11	85.98	50.78	59.06	6.77
1150-015	3998.27	0.13	84.63	44.02	52.01	5.64
1150-016	4000.39	0.12	86.74	34.86	40.19	7.70
1150-017	4006.04	0.10	82.78	22.98	27.76	6.15
1150-018	4008.40-.45	0.12	15.02	5.87	39.10	4.67

TABLE 10

COMPOSITION (NORMALISED %) OF C_{15+} PARAFFIN – NAPHTHENE HYDROCARBONS

GEOCHEM SAMPLE NUMBER	-001	-138A	-002	-003	-004	-005	-146A&B
DEPTH	3131.12m 0020	3132.65m 0021	3135.61m 0022	3139.42m 0023	3142.60m 0024	3146.00m 0024	3170-3180m 0026
SAMPLE TYPE	CORE		CORE	CORE	CORE	CORE	
nC_{15}	5.73	0.56	6.57	6.28	1.13	16.33	1.45
nC_{16}	7.80	2.31	8.32	8.14	5.37	21.77	5.21
nC_{17}	8.68	5.02	7.87	9.02	8.66	17.73	10.67
nC_{18}	9.20	6.23	8.32	8.80	10.53	10.30	12.54
nC_{19}	9.91	8.08	8.58	10.00	10.97	6.20	13.25
nC_{20}	9.48	8.01	7.69	8.11	9.47	4.15	10.86
nC_{21}	7.35	6.61	7.11	7.14	8.30	2.30	7.21
nC_{22}	7.34	6.84	6.80	6.93	7.56	3.03	6.31
nC_{23}	5.86	5.60	5.89	6.57	5.69	2.42	5.18
nC_{24}	6.20	5.91	7.57	6.23	5.97	2.57	4.41
nC_{25}	5.12	6.37	5.31	5.02	4.93	2.55	4.04
nC_{26}	3.92	6.00	4.15	3.98	3.11	2.02	3.29
nC_{27}	2.91	8.12	2.95	2.86	3.18	1.55	3.02
nC_{28}	2.63	5.37	2.86	2.30	2.81	1.22	2.39
nC_{29}	1.93	5.93	2.43	1.94	4.40	1.44	2.32
nC_{30}	1.44	3.13	1.62	1.56	1.66	1.04	1.71
nC_{31}	1.07	3.54	1.56	1.27	1.48	0.99	1.44
nC_{32}	0.89	2.15	1.17	1.01	1.09	0.78	1.29
nC_{33}	0.93	2.14	1.15	1.03	1.22	0.62	1.36
nC_{34}	0.95	1.09	1.12	1.07	1.29	0.53	1.23
nC_{35}	0.66	0.99	0.94	0.74	1.17	0.44	0.82
PARAFFIN	24.17	18.54	21.81	23.03	18.74	23.12	23.62
ISOPRENOID	2.87	2.80	2.18	2.86	2.63	6.55	3.95
NAPHTHENE	72.95	78.66	76.01	74.11	78.63	70.33	72.43
CPI INDEX A	0.92	1.05	0.90	0.98	0.99	0.87	0.98
CPI INDEX B	1.01	1.31	1.00	1.02	1.32	1.12	1.08
PRISTANE/PHYTANE	1.42	2.09	1.43	1.41	1.27	2.47	1.13
PRISTANE/nC_{17}	0.80	2.03	0.75	0.81	0.90	1.14	0.51

TABLE 10

COMPOSITION (NORMALISED %) OF C_{15+} PARAFFIN – NAPHTHENE HYDROCARBONS

GEOCHEM SAMPLE NUMBER	151	155A	163	168A	187A	198A	206A
DEPTH	3220–3230m	3264.5m	3330–3340m	3384.5m	3540–3550m	3640–3650m	3720–3730m
SAMPLE TYPE	0027	0028	0029	0030	0031	0032	0033
nC_{15}	3.46	1.47	3.24	5.97	3.20	4.45	2.37
nC_{16}	5.40	4.27	3.58	10.06	5.55	6.61	5.64
nC_{17}	6.52	6.27	4.45	9.72	7.14	8.58	8.45
nC_{18}	7.44	6.84	4.37	9.76	8.12	7.80	9.64
nC_{19}	8.78	8.51	6.19	11.10	8.78	7.66	12.05
nC_{20}	8.52	7.38	7.52	9.45	8.08	9.06	9.51
nC_{21}	7.15	6.27	4.43	9.41	5.77	7.08	7.93
nC_{22}	7.09	5.57	5.17	6.39	6.24	7.94	7.18
nC_{23}	6.86	5.96	7.06	5.53	5.14	4.63	4.99
nC_{24}	6.14	5.66	5.00	3.91	4.74	3.59	4.80
nC_{25}	6.71	11.56	7.85	4.01	6.68	8.39	6.26
nC_{26}	5.12	4.68	5.70	3.16	5.01	6.47	4.83
nC_{27}	4.22	5.49	5.28	2.43	4.56	5.55	3.59
nC_{28}	3.65	3.81	5.38	2.03	4.46	2.35	2.31
nC_{29}	3.15	4.03	4.76	2.02	4.18	2.06	2.58
nC_{30}	2.45	3.57	4.59	1.58	2.94	1.63	1.98
nC_{31}	1.83	2.81	3.75	1.24	2.97	1.51	1.34
nC_{32}	1.21	1.10	3.63	0.57	2.09	1.12	1.34
nC_{33}	1.42	2.63	2.87	0.73	1.97	1.29	1.24
nC_{34}	1.48	0.60	2.75	0.48	1.55	1.25	1.18
nC_{35}	1.42	1.52	2.45	0.46	0.83	1.00	0.80
PARAFFIN	13.36	9.91	12.25	21.76	16.27	9.33	11.80
ISOPRENOID	1.47	1.45	0.91	3.05	2.67	1.21	1.76
NAPHTHENE	85.17	88.63	86.83	75.19	81.05	89.46	86.44
CPI INDEX A	1.03	1.37	1.11	1.16	1.00	1.10	1.03
CPI INDEX B	1.10	1.58	1.08	1.12	1.17	1.38	1.15
PRISTANE/PHYTANE	1.38	2.20	1.69	1.54	1.92	1.87	1.30
PRISTANE/nC_{17}	0.98	1.61	1.05	0.87	1.51	0.99	1.00

TABLE 10

COMPOSITION (NORMALISED %) OF C_{15+} PARAFFIN – NAPHTHENE HYDROCARBONS

GEOCHEM SAMPLE NUMBER	213	217A	221B	006	007	008	009
DEPTH	3780-3790m	3820-3830m	3850-3860m	3976.38-3976.45m	3979.37-3979.44m	3980.00m	3980.28m
SAMPLE TYPE	0034	0035	0036	CORE	CORE	CORE	CORE
nC_{15}	5.71	3.08	11.40	7.20	3.22	2.80	4.72
nC_{16}	4.64	5.14	11.58	8.79	4.31	3.91	5.48
nC_{17}	0.45	7.34	10.63	8.17	4.86	4.44	6.14
nC_{18}	4.43	8.22	8.47	8.34	5.33	4.96	6.94
nC_{19}	5.92	8.64	9.14	8.34	6.01	5.89	7.32
nC_{20}	3.76	8.49	7.08	7.20	5.68	5.24	7.06
nC_{21}	3.36	6.65	5.65	6.16	4.77	4.96	5.98
nC_{22}	3.05	6.55	5.06	6.11	6.06	5.31	6.74
nC_{23}	6.23	5.36	4.33	6.55	5.20	5.06	5.09
nC_{24}	4.16	4.69	3.87	5.16	6.78	6.31	6.13
nC_{25}	10.94	7.52	4.98	5.68	6.53	6.22	5.66
nC_{26}	4.46	4.56	2.73	3.90	6.80	5.58	5.14
nC_{27}	10.56	3.60	2.55	4.01	4.84	5.31	4.18
nC_{28}	3.72	5.06	2.55	3.04	6.05	6.73	4.02
nC_{29}	8.91	2.98	1.81	3.07	4.23	5.30	5.70
nC_{30}	7.81	2.40	1.54	2.01	3.70	4.54	1.06
nC_{31}	5.90	2.35	1.42	2.06	3.25	3.93	2.74
nC_{32}	2.69	1.62	1.49	1.43	2.98	3.00	2.18
nC_{33}	1.68	1.94	0.84	1.10	3.12	3.12	2.53
nC_{34}	0.84	1.94	1.80	1.02	3.42	4.09	2.81
nC_{35}	0.79	1.86	1.07	0.65	2.83	3.28	2.38
PARAFFIN	10.45	29.42	16.83	26.37	24.35	20.44	20.33
ISOPRENOID	0.82	3.02	2.36	1.57	1.58	1.28	1.78
NAPHTHENE	88.74	67.56	80.80	72.06	74.07	78.28	77.89
CPI INDEX A	2.02	1.03	1.08	1.12	0.84	0.93	0.89
CPI INDEX B	1.87	1.10	1.15	1.24	0.89	0.97	1.30
PRISTANE/PHYTANE	1.55	1.31	1.74	2.35	1.19	1.26	1.02
PRISTANE/nC_{17}	10.68	0.79	0.84	0.51	0.73	0.79	0.72

TABLE 10

COMPOSITION (NORMALISED %) OF C_{15+} PARAFFIN – NAPHTHENE HYDROCARBONS

GEOCHEM SAMPLE NUMBER	010
DEPTH	3983.57m 6041
SAMPLE TYPE	
nC_{15}	3.02
nC_{16}	4.83
nC_{17}	5.37
nC_{18}	6.12
nC_{19}	7.05
nC_{20}	6.21
nC_{21}	6.69
nC_{22}	7.20
nC_{23}	6.01
nC_{24}	5.90
nC_{25}	6.11
nC_{26}	5.42
nC_{27}	5.07
nC_{28}	4.21
nC_{29}	4.06
nC_{30}	3.24
nC_{31}	3.53
nC_{32}	2.28
nC_{33}	2.57
nC_{34}	2.50
nC_{35}	2.61
PARAFFIN	21.80
ISOPRENOID	2.54
NAPHTHENE	75.66
CPI INDEX A	1.01
CPI INDEX B	1.12
PRISTANE/PHYTANE	1.91
PRISTANE/nC_{17}	1.42

TABLE 11

MOLECULAR MATURATION PARAMETERS

GEOCHEM SAMPLE NO.	DEPTH	STERANES M/Z 217 (259) $\frac{C_{29}\ 20S}{C_{29}\ 20R}$	$\frac{C_{29}\ 20R}{C_{29}\ 20R}$	$\frac{C_{27}\ (20S)\ Diasteranes}{C_{27}\ (20R)\ Diasteranes}$	TERPANES M/Z 191 $\frac{Tm}{Ts}$	$\frac{C_{30}\ Moretane}{C_{30}\ Hopane}$	$\frac{C_{29}\ normoretane}{C_{29}\ norhopane + C_{29}\ normoretane}$	$\frac{Bisnorhopane\ (C_{28})}{Tm + Bisnorhopane + C_{29}\ norhopane}$	$\frac{C_{31}\ (20S)}{C_{31}\ (20S) + C_{31}\ (20R)} \times 100$
1150-001	3131.12m	2.08	2.50	1.87	0.55	0.11	0.15	0.25	60%
1144-138A	3132.65m	0.23	0.22	1.45	2.03	0.25	0.36	0.07	52%
1150-002	3135.61m	1.68	2.43	1.63	0.39	0.11	0.17	0.30	55%
1150-003	3139.42m	2.07	3.07	1.51	0.44	0.09	0.16	0.26	58%
1150-004	3142.60m	Insufficient Sample							
1150-005	3146.00m	0.34	0.30	1.30	1.82	0.16	0.33	0.08	46%
1144-146A + B	3170-3180m	0.45	0.39	1.81	1.80	0.18	0.24	0.07	48%
1144-151	3220-3230m	0.46	0.32	1.47	1.62	0.18	0.19	0.05	52%
1144-155A	3264.5m	Insufficient Sample							
1144-163	3330-3340m	0.71	0.99	1.24	2.09	0.17	0.15	0.03	54%
1144-168	3384.5m	0.84	0.85	1.33	2.30	0.20	0.16	0.03	44%
1144-187A	3540-3550m	Insufficient Sample							
1144-198A	3640-3650m	0.91	0.98	1.43	2.65	0.24	0.16	0.05	51%
1144-206A	3720-3730m	0.97	1.13	1.52	1.82	0.15	0.11	0.06	52%
1144-213	3780-3790m	0.59	0.28	0.94	16.50	0.28	0.12	0.11	31%
1144-217A	3820-3830m	0.70	0.63	1.22	2.53	0.20	0.15	0.06	57%
1144-221B	3850-3860m	1.37	1.56	1.68	0.91	0.15	0.10	0.15	58%
1144-223	3870-3880m	0.65	0.43	1.59	4.80	0.24	0.12	0.04	43%
1144-226A	3900-3910m	0.61	0.42	1.85	4.50	0.24	0.11	0.04	42%
1144-230A	3960-3970m	1.07	1.27	1.28	1.85	0.15	0.11	0.05	44%

TABLE 11

MOLECULAR MATURATION PARAMETERS

GEOCHEM SAMPLE NO.	DEPTH	STERANES M/Z 217 (259) $\frac{C_{29}\ 20S\ (\alpha\alpha)}{C_{29}\ 20R\ (\alpha\alpha)}$	STERANES M/Z 217 (259) $\frac{C_{29}\ 20R\ (\beta\beta)}{C_{29}\ 20R\ (\alpha\alpha)}$	STERANES M/Z 217 (259) $\frac{C_{27}\ (20S)\ \text{Diasteranes}}{C_{27}\ (20R)\ \text{Diasteranes}}$	TERPANES M/Z 191 $\frac{Tm}{Ts}$	TERPANES M/Z 191 $\frac{C_{30}\ \text{Moretane}}{C_{30}\ \text{Hopane}}$	TERPANES M/Z 191 $\frac{C_{29}\ \text{normoretane}}{C_{29}\ \text{norhopane} + C_{29}\ \text{normoretane}}$	TERPANES M/Z 191 $\frac{\text{Bisnorhopane}\ (C_{28})}{Tm + \text{Bisnorhopane} + C_{29}\ \text{norhopane}}$	TERPANES M/Z 191 $\frac{C_{31}\ (20S)}{C_{31}\ (20S) + C_{31}\ (20R)} \times 100$
1150-006	3976.38-3976.45m	0.66	0.96	1.45	3.00	0.12	0.13	0.21	53%
1150-007	3979.37-3979.44m	1.61	2.08	1.41	0.78	0.30	0.10	0.14	50%
1150-008	3980.00m	1.76	2.32	1.52	0.45	0.18	0.10	0.24	57%
1150-009	3980.28m	0.63	0.78	1.78	0.88	0.18	0.09	0.17	46%
1150-010	3983.57m	0.83	1.21	1.58	0.59	0.13	0.12	0.24	49%
1150-011	3985.10m	1.66	2.0	1.54	0.91	0.16	0.11	0.17	51%
1150-012	3988.55m	0.93	1.34	1.79	0.74	0.15	0.09	0.21	52%
1144-234	3980-3990m	1.13	1.35	1.23	1.37	0.21	0.14	0.06	41%
1150-013	3990-00m	1.86	2.64	1.63	0.49	0.18	0.10	0.20	57%
1150-014	3994.00m	2.00	2.56	1.52	0.31	0.15	0.08	0.36	57%
1150-015	3998.27m	1.57	2.50	1.44	0.30	0.11	0.13	0.35	55%
1150-016	4000.39m	2.40	3.60	1.55	0.31	0.13	0.08	0.30	55%
1150-017	4006.04m	1.76	2.47	1.60	0.46	0.17	0.08	0.23	57%
1150-018	4008.40-4008.45m	2.00	2.75	1.51	0.37	0.15	0.11	0.24	59%
1144-242A	4060-4070m	1.38	1.68	1.21	0.64	0.20	0.11	0.34	52%
1144-248A	4120-4130m	1.30	1.09	1.21	0.64	0.20	0.11	0.34	52%
1144-260A	4240-4250m	0.94	0.99	1.49	1.80	0.19	0.11	0.05	55%
1144-269A	4330-4340m	1.14	1.47	1.55	1.40	0.19	0.14	0.07	47%
1144-272A	4360-4370m	0.86	0.80	1.26	2.78	0.23	0.12	0.03	46%
1144-280	4430-4440m	1.18	1.36	1.50	1.77	0.15	0.10	0.05	49%

TABLE 12a

COMPOSITION (NORMALISED %) OF C_{15+} AROMATIC HYDROCARBONS

- DIBENZOTHIOPHENE SERIES

GEOCHEM SAMPLE NO.	DEPTH	DIBENZOTHIOPHENE (m/z 184)	METHYL DIBENZOTHIOPHENE (m/z 198)	DIMETHYL DIBENZOTHIOPHENE (m/z 212)
1150-001	3131.12m	9.9	41.8	48.3
1144-138A	3132.65m	12.8	44.3	42.9
1150-002	3135.61m	13.8	42.4	43.8
1150-003	3139.42m	9.3	38.5	52.2
1150-004	3142.60m	15.9	44.6	39.5
1150-005	3146.00m	30.7	47.1	22.2
1144-146A + B	3170-3180m	7.0	34.6	58.4
1144-151	3220-3230m	8.0	32.1	59.9
1144-155	3264.5m	11.0	33.5	55.5
1144-163	3330-3340m	6.0	31.4	62.6
1144-168A	3384.5m	9.6	35.3	55.1
1144-187A	3540-3550m	11.7	29.7	58.60
1144-198A	3640-3650m	11.4	34.2	54.4
1144-206A	3720-3730m	12.5	30.6	56.9
1144-213	3780-3790m	11.4	31.0	57.6
1144-217A	3820-3830m	27.8	32.7	39.5
1144-221B	3850-3860m	11.8	37.8	50.4
1144-223	3870-3880m	15.7	44.5	39.8
1144-226A	3900-3910m	12.7	42.6	44.7
1144-230A	3960-3970m	19.1	38.3	42.6

TABLE 12a

COMPOSITION (NORMALISED %) OF C_{15+} AROMATIC HYDROCARBONS

- DIBENZOTHIOPHENE SERIES

GEOCHEM SAMPLE NO.	DEPTH	DIBENZOTHIOPHENE (m/z 184)	METHYL DIBENZOTHIOPHENE (m/z 198)	DIMETHYL DIBENZOTHIOPHENE (m/z 212)
1150-006	3976.38-3976.45m	8.1	44.0	47.9
1150-007	3979.37-3979.44m	7.5	39.9	52.6
1150-008	3980.00m	6.4	38.6	55.0
1150-009	3980.28m	7.8	39.8	52.4
1150-010	3983.57m	5.8	39.6	54.6
1150-011	3985.10m	7.1	37.5	55.4
1150-012	3988.55m	7.6	39.5	52.9
1144-234	3980-3990m	8.2	29.5	62.3
1150-013	3990.00m	5.4	38.8	55.8
1150-014	3994.00m	7.9	39.3	52.8
1150-015	3998.27m	6.5	38.8	54.7
1150-016	4000.39m	8.0	39.5	52.5
1150-017	4006.04m	6.0	37.7	56.3
1150-018	4008.40-4008.45m	5.9	37.6	56.5
1144-242A	4060-4070m	10.3	35.3	54.4
1144-248A	4120-4130m	8.0	31.5	60.5
1144-260A	4240-4250m	12.9	36.4	50.7
1144-269A	4330-4340m	7.4	30.7	61.9
1144-272A	4360-4370m	6.6	30.2	63.2
1144-280	4430-4440m	16.8	41.7	41.5

TABLE 12b

COMPOSITION (NORMALISED %) OF C_{15+} AROMATIC HYDROCARBONS - PHENANTHRENE SERIES

GEOCHEM SAMPLE NO.	DEPTH	PHENANTHRENE (m/z 178)	METHYL PHENANTHRENE (m/z 192)	DIMETHYL PHENANTHRENE (m/z 206)	TRIMETHYL PHENANTHRENE (m/z 220)
1150-001	3131.12m	13.8	42.8	30.4	13.0
1144-138A	3132.65m	12.8	44.3	34.0	8.9
1150-002	3135.61m	12.2	42.0	33.0	12.8
1150-003	3139.42m	14.6	39.3	34.0	12.1
1150-004	3142.60m	14.5	45.8	31.2	8.5
1150-005	3146.00m	32.6	45.4	16.4	5.6
1144-146A+B	3170-3180m	13.0	37.1	34.1	15.8
1144-151	3220-3230m	14.4	33.5	33.0	19.1
1144-155A	3264.5m	25.3	32.8	23.3	18.6
1144-163	3330-3340m	16.5	30.9	30.9	21.6
1144-168A	3384.5m	13.0	38.0	30.4	18.6
1144-187A	3540-3550m	30.5	29.4	23.1	17.0
1144-198A	3640-3650m	14.3	42.9	30.1	12.7
1144-206A	3720-3730m	15.5	34.6	30.8	19.1
1144-213	3780-3790m	28.6	22.3	22.2	26.9
1144-217A	3820-3830m	22.5	38.2	27.5	11.8
1144-221B	3850-3860m	10.0	31.3	35.9	22.8
1144-223	3870-3880m	20.0	34.0	31.0	15.0
1144-226A	3900-3910m	15.2	38.0	31.0	15.8
1144-230A	3960-3970m	15.2	38.1	30.9	15.8
1150-006	3976.38-3976.45m	10.8	44.3	34.2	10.7

TABLE 12b

COMPOSITION (NORMALISED %) OF C_{15+} AROMATIC HYDROCARBONS - PHENANTHRENE SERIES

GEOCHEM SAMPLE NO.	DEPTH	PHENANTHRENE (m/z 178)	METHYL PHENANTHRENE (m/z 192)	DIMETHYL PHENANTHRENE (m/z 206)	TRIMETHYL PHENANTHRENE (m/z 220)
1150-007	3979.37-3979.44m	11.7	41.9	32.5	13.9
1150-008	3980.00m	9.9	38.9	35.0	16.2
1150-009	3980.28m	10.8	39.6	34.6	15.0
1150-010	3983.57m	9.7	43.2	35.5	11.6
1150-011	3985.10m	11.5	37.7	34.4	16.4
1150-012	3988.55m	11.5	39.7	33.7	15.1
1144-234	3980-3990m	16.6	30.6	50.6	22.2
1150-013	3990.00m	9.7	39.4	35.4	15.5
1150-014	3994.00m	14.8	41.2	31.3	12.7
1150-015	3998.27m	11.6	41.2	33.8	13.4
1150-016	4000.39m	12.4	42.8	32.1	12.7
1150-017	4006.04m	10.8	39.5	34.7	15.0
1150-018	4008.40-4008.45m	8.9	38.9	36.1	16.21
1144-242A	4060-4070m	15.5	38.1	32.1	14.3
1144-248A	4120-4130m	12.8	35.5	34.9	16.8
1144-260A	4240-4250m	14.5	41.7	31.3	12.5
1144-269A	4330-4340m	12.0	35.1	34.6	18.3
1144-272A	4360-4370m	10.2	36.3	36.9	16.6
1144-280	4430-4440m	11.3	40.8	34.9	13.0

TABLE 13

CARBON ISOTOPE RESULTS

°/oo PDB

GEOCHEM SAMPLE NUMBER	DEPTH	SATURATES	AROMATICS	TOTAL EXTRACT
1150-001	3131.12m	-29.34	-27.45	-28.67
1144-138A	3132.65m	-29.50	-27.08	-27.81
1150-002	3135.61m	-29.23	-27.21	-28.62
1150-003	3139.42m	-29.35	-27.51	-29.03
1150-004	3142.60m	Insufficient Material		-28.17
1150-005	3146.00m	-29.24	-27.26	-28.30
1144-146A+B	3170-3180m	-28.55	-27.55	-27.81
1144-151	3220-3230m	-28.25	-27.09	-27.52
1144-155A	3264.5m	Insufficient Material		-29.41
1144-163	3330-3340m	-27.54	-26.89	-27.44
1144-168	33384.5m	Insufficient Material		-28.26
1144-187A	3540-3550m	-28.04	-27.20	-27.49
1144-198A	3640-3650m	-28.91	-28.05	-27.66
1144-206A	3720-3730m	-28.55	-27.60	-28.19
1144-213	3780-3790m	-30.20	-28.54	-29.56
1144-217A	3820-3830m	-28.40	-27.62	-27.71
1144-221B	3850-3860m	-30.58	-29.83	-28.92
1144-223	3870-3880m	-29.40	-28.77	-28.92
1144-226A	3900-3910m	-28.34	-26.78	-27.69
1144-230A	3960-3970m	-27.38	-25.96	-26.89
1150-006	3976.38-3976.45m	-28.06	-26.25	-26.30
1150-007	3979.37-3979.44m	-29.41	-28.19	-25.82
1150-008	3980.00m	-29.16	-27.62	-28.35
1150-009	3980.28m	-28.94	-27.11	-28.33
1150-010	3983.57m	-28.93	-27.57	-28.51
1150-011	3985.10m	-29.06	-27.89	-28.66
1150-012	3988.55m	Insufficient Material		-28.60
1144-234	3980-3990m	-28.21	-27.30	-27.66
1150-013	3990.00m	-28.90	-27.45	-28.54
1150-014	3994.00m	-29.23	-27.41	-28.73
1150-015	3998.27m	-29.10	-27.26	-28.67
1150-016	4000.39m	-29.15	-27.55	-29.46
1150-017	4006.04m	-28.92	-27.67	-28.65
1150-018	4008.40-4008.45m	-28.96	-28.07	-25.63
1144-242A	4060-4070m	-28.99	-25.52	-28.91
1144-248A	4120-4130m	-28.23	-27.54	-28.02
1144-260A	4240-4250m	-28.57	-27.81	-27.52
1144-269A	4330-4340m	-27.60	-27.16	-27.52
1144-272A	4350-4360m	-28.65	-27.99	-28.36
1144-280	4430-4440m	-27.60	-26.32	-26.91