Table 5.4 MDT wellsite worksheet run 1A

					SAGA PETROLEUM ASA						PAGE: 1 OF 1
WELL:			15/12-10S		MDT WELLSITE WORKSHEET					WITNESSED BY:	B. K. Pedersen
PRESSURE UNITS:			BARA		RIG:	Deep Sea Bergen				DATE:	29.okt.96
					KB (M):	23.00					
RUN # :	DEPTH	DEPTH	BEF. HYDROST.		FORMATION		AFT. HYDROST.		TEMP	MOB.	REMARKS
1A	MD	TVD	PRESSURE		PRESSURE		PRESSURE			INDEX	
	RKB	RKB	HP	EMW	HP	EMW	HP	EMW			
TEST #	m	m	bara	g/cm3	bara	g/cm3	bara	g/cm3	C	mD/cP	
1	3532.00	3078.34	408.3911	1.352	360.1544	1.193	408.1994	1.352	114.8	7.63	Lim.draw-down pretest (LDDP)
2	3517.03	3065.89	406.0521	1.350	359.8864	1.197	405.9043	1.350	116.6	0.27	LDDP. Low perm.
3	3511.34	3061.17	405.1282	1.349	358.1896	1.193	405.1382	1.349	117.3	13.84	LDDP
4	3497.06	3049.34	403.5136	1.349	357.4130	1.195	403.6012	1.349	118.3	1.07	LDDP
5	3485.35	3039.65	402.1291	1.349			402.2630	1.349	118.4		Tight, abandon.
6	3484.91	3039.29	402.3466	1.349			402.3274	1.349	119.2		Tight, abandon.
7	3385.56	2957.95	392.5280	1.353			392.4170	1.352	118.5		Tight, abandon.
8	3385.34	2957.77	392.2092	1.352	350.7589	1.209	391.7776	1.350	118.7	0.04	LDDP. Low perm.
9	3384.07	2956.73	391.5422	1.350			391.4646	1.350	118.7		Tight, abandon.
10	3382.25	2955.25	391.1987	1.349	347.8927	1.200	391.1503	1.349	118.9	0.50	LDDP
11	3381.31	2954.49	391.0531	1.349	347.7486	1.200	391.0493	1.349	119.0	0.71	LDDP
12	3379.52	2953.03	390.8239	1.349	347.8724	1.201	390.8430	1.349	119.2	0.35	LDDP
13	3376.50	2950.57	390.5945	1.349	348.2696	1.203	390.5865	1.349	119.3	0.29	LDDP
14	3372.95	2947.69	391.5331	1.354	347.2209	1.201	391.3235	1.353	118.7	0.37	LDDP
15	3372.26	2947.13	391.2663	1.353	347.5538	1.202	390.8666	1.352	118.7	0.22	LDDP
16	3372.10	2947.00	390.6947	1.351			390.6070	1.351	118.7		Tight, abandon.
17	3298.57	2887.16	381.9770	1.349			381.9704	1.349	118.4		Tight, abandon.
18	3298.35	2886.98	381.9582	1.349			381.9587	1.349	118.2		Tight, abandon.
19	3423.73	2989.07	396.3362	1.352			396.2629	1.351	119.3		Seal failure / mud set
20	3424.00	2989.29	395.6870	1.349			395.6691	1.349	120.1		Seal failure / mud set
21	3423.52	2988.90	395.7031	1.350			395.5484	1.349	119.4		Tight, abandon.
22	3423.61	2988.97	395.7852	1.350			395.6974	1.349	120.5		Seal failure.
23	3423.30	2988.72	395.7160	1.350			395.5750	1.349	120.5		Tight, abandon.

Table 5.5 MDT wellsite worksheet run 1B

					SAGA PETROLEUM ASA						PAGE: 1 OF 1
WELL:			15/12-10S		MDT WELLSITE WORKSHEET					WITNESSED BY:	B. K. Pedersen
PRESSURE UNITS:			BARA		RIG:	Deep Sea Bergen				DATE:	30.okt.96
					KB (M):	23.00					
RUN # :	DEPTH	DEPTH	BEF. HYDROST.		FORMATION		AFT. HYDROST.		TEMP	MOB.	REMARKS
1B	MD	TVD	PRESSURE		PRESSURE		PRESSURE			INDEX	
	RKB	RKB	HP	EMW	HP	EMW	HP	EMW			
TEST #	m	m	bara	g/cm3	bara	g/cm3	bara	g/cm3	C	mD/cP	
1	3382.52	2955.47	391.2575	1.349			391.0874	1.349	114.5		Tight, abandon.
2	3381.38	2954.54	390.9796	1.349			390.8169	1.348	115.6		Tight, abandon.
3	3383.13	2955.97	391.1055	1.349			390.9163	1.348	116.8		Tight, abandon.
4	3382.09	2955.12	390.7498	1.348			390.5313	1.347	118.3		Low perm., abandon (Last pressure 347.7)
5	3385.57	2957.95	391.1028	1.348			390.9373	1.347	118.5		Tight, abandon.
6	3382.21	2955.22	390.4896	1.347			390.4113	1.347	119.2		Tight, abandon.
7	3384.27	2956.90	390.7991	1.347			390.6702	1.347	119.6		Tight, abandon.
8	3383.04	2955.89	390.5728	1.347			390.5086	1.347	119.7		Tight, abandon.
9	3379.47	2952.99	390.0623	1.346	347.4764	1.199	390.0895	1.347	120.3	0.26	LDDP
10	3376.59	2950.65	390.2575	1.348	347.9823	1.202	390.0312	1.347	120.9	0.45	LDDP
11	3375.30	2949.60	389.8231	1.347	347.9930	1.203	389.6588	1.347	121.2	0.15	LDDP. Minor fluctuations.
12	3372.77	2947.54	389.3252	1.346			389.3287	1.346	121.3		Tight, abandon.
13	3373.01	2947.74	389.4157	1.347			389.4010	1.347	121.4		Tight, abandon.
14	3372.22	2947.09	389.4233	1.347			389.3773	1.347	121.6		Tight, abandon. Drop down, come up to same.
15	3372.15	2947.04	389.4000	1.347	347.08	1.201					LDDP.
16	3372.15	2947.04			347.0070	1.200					Second LDDP at same depth
17	3372.15	2947.04							124.0		Sample Lower 2 3/4 (MRSC 03). Close after 4 hours 5 min. (P=48.87,T=124).
18	3372.15	2947.04					389.0330	1.346	123.5		Sample Upper 2 3/4 (MRSC 02). Close after 5 hours (P=62.3,T=123.5). Retract after 1 hour (P=342.7,T=122.9).

Table 5.6 Composition of oil from MDT sample

Component	Mol %	Molweight	Density (kg/m^3)
Methane	0.17		
Ethane	0.46		
Propane	1.93		
IC4	0.75		
NC4	2.27		
22DMC3	0.02		
IC5	1.40		
NC5	1.96		
Hexanes	3.36	84.92	668.7
Heptanes	5.77	91.95	742.2
Octanes	6.63	105.46	761.7
Nonanes	4.43	120.24	767.2
Decanes plus	70.87	252.33	845.2
Average molecular weight		204.5	

Table 5.7 Composition of gas from MDT sample

Component	Mol %	Mol weight
CO_2	2.31	
Oxygen	0	
Nitrogen	2.28	
Methane	57.38	
Ethane	14.92	
Propane	14.02	
IC4	2.12	
NC4	4.02	
IC5	0.92	
NC5	0.91	
Hexanes	0.56	
Heptanes	0.36	89.02
Octanes	0.18	102.45
Nonanes	0.03	112.19
Decanes plus	0	
Average molecular weight		27.43

Table 5.8 Analysis of water from MDT chamber

Component/Parameter	Concentration/Value
Sodium, Na	37100 mg/l
Calsium, Ca	16800 mg/l
Magnesium, Mg	2380 mg/l
Barium, Ba	78.8 mg/l
Iron, Fe	<0.1 mg/l
Strontium, Sr	587 mg/l
Potassium, K	1250 mg/l
Chloride, Cl	96700 mg/l
Sulphate, SO4	17 mg/l
Bicarbonate, HCO3	395 mg/l
Ion balance cat/an	-1.5%
Total salinity	155000 mg/l
pH @ 20 deg. C	5.6
Suspended solids	307 mg/l
Specific gravity(15 degC)	1.114 g/cm3
Resistivity (25 degC)	0.057 ohm-m

6.2 Mud Data

6.2.1 Mud Properties, Daily Report

Table 6.2.1 lists the daily reported mud properties (2 pages)

Date	Hole size	Hole depth	Mud weight	PV	YP	Gel strength	pH	Alkalinity Pf /Mf	Ca++ mg/l	Cl- mg/l	Sand %	Solids %	Mudtype
961001	PSPUD					/		/					WATER BASED
961002	PSPUD		1.20			/		/					WATER BASED
961003	PSPUD	207.0	1.20	28.0		/		/					WATER BASED
961004	PSPUD	285.0	1.20	28.0	23.0	14/30	9.5	/					WATER BASED
961005	PSPUD	285.0	1.20	28.0	23.0	14/30	9.5	/					WATER BASED
961006	PSPUD	1396.0	1.20	28.0	23.0	14/30	9.5	/					WATER BASED
961007	PSPUD	1396.0	1.20	28.0	23.0	14/30	9.5	/					WATER BASED
961008	PSPUD	1396.0				/		/					OIL BASED
961009	12 1/4"	1396.0	1.33	34.0	11.0	10/19		/		88836		14.5	OIL BASED
961010	12 1/4"	2018.0	1.33	31.0	18.0	15/32		/			.5	15.5	OIL BASED
961011	12 1/4"	2640.0	1.50	33.0	19.0	14/30		/			.5	20.0	OIL BASED
961012	12 1/4"	2933.0	1.51	35.0	18.0	14/30		/			.5	20.0	OIL BASED
961013	12 1/4"	3135.0	1.52	33.0	18.0	13/30		/			.5	21.0	OIL BASED
961014	12 1/4"	3160.0	1.52	32.0	18.0	14/30		/		97	.5	21.5	OIL BASED
961015	12 1/4"	3160.0	1.52	34.0	17.0	14/32		/		97	.5	21.5	OIL BASED
961016	12 1/4"	3160.0	1.52	34.0	17.0	14/33		/		97	.5	21.5	OIL BASED
961017	12 1/4"	3160.0	1.52	32.0	21.0	14/31		/		97	.5	21.5	OIL BASED
961018	12 1/4"	3160.0	1.53	35.0	22.0	20/40		/		97	.5	21.0	OIL BASED
961019		3160.0	1.53	35.0	17.0	17/37		/		97	1.5	22.0	OIL BASED
961020		3160.0	1.53	36.0	17.0	16/37		/		84	2.0	22.0	OIL BASED
961021		3160.0	1.53	35.0	17.0	17/34		/		97	1.0	22.0	OIL BASED
961022	8 1/2"	3160.0	1.33	16.0	8.0	6/12		/		84	2.0	15.0	OIL BASED
961023	8 1/2"	3427.0	1.33	24.0	10.0	12/26		/		105	2.0	16.0	OIL BASED
961024	8 1/2"	3448.0	1.37	23.0	12.0	11/26		/		101	1.5	17.0	OIL BASED
961025	8 1/2"	3448.0	1.36	30.0	18.0	15/36		/		127	1.5	17.0	OIL BASED
961026	8 1/2"	3550.0	1.37	29.0	14.0	16/32		/		124	1.5	17.5	OIL BASED
961027	8 1/2"	3550.0	1.37	30.0	14.0	15/30		/		120	1.5	17.5	OIL BASED

Well: 15/12-10S

Date	Hole size	Hole depth	Mud weight	PV	YP	Gel strength	pH	Alkalinity Pf /Mf	Ca++ mg/l	Cl- mg/l	Sand %	Solids %	Mudtype
961028	8 1/2"	3550.0	1.36	27.0	15.0	17/34		/		120	1.5	16.0	OIL BASED
961029	8 1/2"	3550.0	1.36	30.0	17.0	19/36		/		114	1.5	16.5	OIL BASED
961030	8 1/2"	3550.0	1.36	28.0	17.0	18/31		/		114	1.5	16.5	OIL BASED
961031	8 1/2"	3550.0	1.36	28.0	17.0	18/31		/		114	1.5	17.0	OIL BASED
961101	8 1/2"	3550.0	1.36	28.0	17.0	18/31		/		114	1.5	17.0	OIL BASED
961102	8 1/2"	3550.0	1.38	32.0	15.0	13/27		/		92	1.2	17.0	OIL BASED
961103	8 1/2"	3550.0	1.53	23.0	42.0	38/74		/					WATER BASED
961104		3550.0	1.53	23.0	42.0	38/74		/					WATER BASED
961105		3550.0	1.53	23.0	42.0	38/74		/					WATER BASED
961106		3550.0	1.53	23.0	42.0	38/74		/					WATER BASED
961107						/		/					WATER BASED

6.2.2 Mud Materials Used

The mud material consumption is shown in Table 6.2.2 (1 page)

Table 6.2.2

TOTAL MUD CONSUMPTION WELL 15/12-10S

Material	Unit	36"	16"	12 1/4"	8 1/2"	P & A	Total
Anco Vert P	KG			6555	2945		9500
Anco Vert S	KG			2124	1676		3800
Anco Vert F	KG			2683	897		3580
Anco Vert M	KG			380	380		760
Anco Vert Vis	KG			5875	2125		8000
Ancotec B	KG				12000		12000
Barite	MT	29	85	201	18	179	512
Baseoil	M3			207	89		296
Bentonite	MT	20	60	1		9	90
Cal.Chloride	KG			7350	5250		12600
CMC EHV	KG		25				25
Lime	KG	120	450	7170	1060	125	8925
Lampac Lovis	KG		1000				1000
Lampac Exlo	KG		275				275
Soda Ash	KG	200	600			225	1025

Saga Petroleum

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Title
Petroleum Geochemistry, well 15/12-10S

Author(s)
N Mills

Abstract
Standard Petroleum Geochemical analyses have been performed on samples from well 15/12-10S.

The analyses have been performed by Robertson Research International Ltd (most of the routine analyses on cuttings and core chips), Saga Petroleum ASA (some screening and follow-up analyses on swc samples and analysis of the oil recovered from an MDT) and IFE (carbon isotope analysis of gas and oil fractions).

The well was drilled using oil based mud (OBM), with HDF 200 as the oil base and this has affected a number of analyses. The core was cut using a core gel and this has affected the Iatroscan data.

Key words
15/12-10s, Petroleum Geochemistry, MDT, OBM, Core gel, Iatroscan, GC, GCMS

Classification:

☐ Open ☒ Saga and partners ☐ Internal ☐ Confidential ☐ Strictly confidential

Resp. unit:	EUG			
Prepared	N.Mills			
Reviewed				
Approved	T.Haaland			

1 Introduction

All depths in the following text and in all data tables are in mMD RKB.

The well was drilled using oil based mud (OBM), with HDF 200 as the oil base and this has affected much of the follow-up analyses.

Analyses have been performed according to NIGOGA, 1992.

APPENDIX 1:

Data from ROBERTSON RESEARCH INTERNATIONAL

ROBERTSON LABORATORIES

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United Kingdom

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Memorandum Number: RL/97/657

Title:

GEOCHEMICAL ANALYSIS OF WELL 15/12-10S

Prepared For:

SAGA PETROLEUM A.S.A.
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Author's signature M. Wadsworth **Date** 17/3/97
Mr M C Wadsworth

General Manager **Date** 17/3/97
Mr J McEwan

CONTENTS

SUMMARY & INTRODUCTION

Client name	Saga Petroleum A.S.A.
Well names	15/12-10S
Location	Norwegian North Sea
Dates of receipt (cuttings) (core chips) (sidewall core)	 8/11/96 8/1/97 2/1/97
Dates of analysis	13/11/96 - 17/3/97
Sample types	Cuttings, Core Chips & SWC
RL job no	96028
Client ref. nos.	K-FK-94-052/EUG-007

Wet ditch cuttings were received in geochemical cans from the interval 1400.0 to 3547.0 m, ninety one samples were submitted for analysis. Forty core chips were also received in the interval 3427.0 to 3446.5 m. Furthermore, a single sidewall core from 3424.0m was also received from Saga Petroleum A.S.A..

The objective of this report is to present analytical data produced from the samples documented above. All selection of analysis was carried out by Saga's personnel. The aim of this report is to allow geochemical interpretation to be carried out at Saga Petroleum A.S.A.. The isotope analysis presented in this report was performed, at Saga's request, by IFE.

The tables on pages 4 to 6 of this report fully document the analysis carried out on each sample.

EXPERIMENTAL PROCEDURES

Unless otherwise stated, analysis was carried out following 'the Norwegian Industry Guide to Organic Geochemical Analysis, November 1992'. A detailed table documenting the methodologies adopted can be found overleaf.

EXPERIMENTAL PROCEDURES (Table 1)

ANALYSIS	INSTRUMENT	METHOD	TEMPERATURE PROGRAM	COLUMNS
Headspace gas	Perkin Elmer Sigma 3	NPD method	isothermal 110C	1/8" SS, packed
Occluded gas	Perkin Elmer Sigma 3	NPD method	isothermal 110C	1/8" SS, packed
TOC	Leco CS 125	OLS 1 *		
Rock Eval Pyrolysis	Rock Eval II	OLS 5 *	Cycle 1	
Kerogen Description	Leitz Dialux / Laborlux microscope	NPD method		
Quantitative Extraction	Soxhtec Tecator 1043	NPD method	Boil 1 hr, rinse 2hrs (DCM:MeOH, 7:1)	
Asphaltene precipitation		NPD method		
Iatroscan	Iatrosacn Mk III	NPD method		
Hydrocarbon separation	Kontron HPLC	NPD method		Lobar Lichroprep Si60
Alkane GC	HP5890a (on column)	NPD method	80C 1min, 5C/min to 300C, 300C 20 min.	CP SIL-5 (30m)
Pyrolysis GC **	HP5790	NPD method	30C, 6C/min to 300C, 300C 20 min.	GC-1 (30m)
Branched Cyclic GC/MS	Finnegan 4000	OLS 27	50C 1min, 15C/min to 145C, 3.3C/min to 310C 15 min.	DB-5MS (30m)
Isotope analysis	sub contracted and run at Saga's request by IFE			

*** - TOC and Rock Eval methods are comparable with NPD method. However we do not have Black Ven Marl. Consequently, the Rock Eval was calibrated with a standard related to Delsi IFP standard. In house check standards are run at greater frequency than prescribed in the NPD guidelines. Furthermore, both these methods are NAMAS accredited. Robertson Laboratories has been NAMAS accredited for the majority of it's geochemical services since 1991. NAMAS, an organisation established by the UK government, has reciprocal agreements with Norske Veritas. NAMAS accreditation is specifically designed for laboratory testing and is broadly based on ISO 9001. Robertson Laboratories were audited by Saga (Audit no. SAGA-93-110) and it's geochemical methods which are accredited by NAMAS were found to be satisfactory.**

**** - Pyrolysis GC analysis was subcontracted to GC2 Chromatography Ltd.**

ANALYTICAL PROGRAM (Table 2)

Well	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	Headspace gas analysis	Occluded gas analysis	Gas Isotope analysis	Lithology descriptions	TOC	Rock Eval Pyrolysis	Iatroscan	Pyrolysis GC	Pyrolysis GC of Asphalt	Visual Kerogen	Solvent Extraction	Asphaltene content	MPLC	Saturate GC	Branched Cyclic GC/MS	Carbon Isotopes (S & A)
15/12-10S	NOR	96028-1	1400.0	1400.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-2	1430.0	1430.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-3	1460.0	1460.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-4	1490.0	1490.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-5	1520.0	1520.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-6	1550.0	1550.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-7	1580.0	1580.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-8	1610.0	1610.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-9	1640.0	1640.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-10	1670.0	1670.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-11	1700.0	1700.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-12	1730.0	1730.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-13	1760.0	1760.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-14	1790.0	1790.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-15	1820.0	1820.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-16	1850.0	1850.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-17	1890.0	1890.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-18	1920.0	1920.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-19	1950.0	1950.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-20	1980.0	1980.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-21	2010.0	2010.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-22	2040.0	2040.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-23	2070.0	2070.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-24	2100.0	2100.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-25	2130.0	2130.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-26	2170.0	2170.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-27	2200.0	2200.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-28	2230.0	2230.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-29	2260.0	2260.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-30	2290.0	2290.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-31	2320.0	2320.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-32	2350.0	2350.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-33	2380.0	2380.0	Cuttings	X	X	X	X												
15/12-10S	NOR	96028-34	2410.0	2410.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-35	2440.0	2440.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-36	2470.0	2470.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-37	2500.0	2500.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-38	2530.0	2530.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-39	2560.0	2560.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-40	2590.0	2590.0	Cuttings	X	X	X	X												
15/12-10S	NOR	96028-41	2620.0	2620.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-42	2650.0	2650.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-43	2680.0	2680.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-44	2710.0	2710.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-45	2740.0	2740.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-46	2770.0	2770.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-47	2800.0	2800.0	Cuttings	X	X	X	X												
15/12-10S	NOR	96028-48	2830.0	2830.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-49	2860.0	2860.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-50	2890.0	2890.0	Cuttings	X	X		X												

ANALYTICAL PROGRAM (Table 2)

Well	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	Headspace gas analysis	Occluded gas analysis	Gas Isotope analysis	Lithology descriptions	TOC	Rock Eval Pyrolysis	Iatroscan	Pyrolysis GC	Pyrolysis GC of Asphalt	Visual Kerogen	Solvent Extraction	Asphaltene content	MPLC	Saturate GC	Branched Cyclic GC/MS	Carbon Isotopes (S & A)
15/12-10S	NOR	96028-51	2920.0	2920.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-52	2950.0	2950.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-53	2980.0	2980.0	Cuttings	X	X	X	X												
15/12-10S	NOR	96028-54	3010.0	3010.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-55	3040.0	3040.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-56	3070.0	3070.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-57	3100.0	3100.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-58	3130.0	3130.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-59	3160.0	3160.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-60	3187.0	3187.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-61	3205.0	3205.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-62	3214.0	3214.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-63	3223.0	3223.0	Cuttings	X	X	X	X												
15/12-10S	NOR	96028-64	3232.0	3232.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-65	3241.0	3241.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-66	3250.0	3250.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-67	3259.0	3259.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-68	3268.0	3268.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-69	3277.0	3277.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-69AX	3277.0	3277.0	SE Cuttings					X	X										
15/12-10S	NOR	96028-70	3286.0	3286.0	Cuttings	X	X	X	X												
15/12-10S	NOR	96028-70AX	3286.0	3286.0	SE Cuttings					X	X										
15/12-10S	NOR	96028-71	3295.0	3295.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-71AX	3295.0	3295.0	SE Cuttings					X	X										
15/12-10S	NOR	96028-72	3304.0	3304.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-72AX	3304.0	3304.0	SE Cuttings					X	X										
15/12-10S	NOR	96028-73	3331.0	3331.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-73AX	3331.0	3331.0	SE Cuttings					X	X										
15/12-10S	NOR	96028-74	3340.0	3340.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-74AX	3340.0	3340.0	SE Cuttings					X	X										
15/12-10S	NOR	96028-75	3349.0	3349.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-75AX	3349.0	3349.0	SE Cuttings					X	X										
15/12-10S	NOR	96028-75BX	3349.0	3349.0	SE Cuttings					X	X										
15/12-10S	NOR	96028-76	3358.0	3358.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-76AX	3358.0	3358.0	SE Cuttings					X	X										
15/12-10S	NOR	96028-76BX	3358.0	3358.0	SE Cuttings					X	X										
15/12-10S	NOR	96028-77	3367.0	3367.0	Cuttings	X	X	X	X												
15/12-10S	NOR	96028-77AX	3367.0	3367.0	SE Cuttings					X	X										
15/12-10S	NOR	96028-77BX	3367.0	3367.0	SE Cuttings					X	X										
15/12-10S	NOR	96028-78	3376.0	3376.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-78AX	3376.0	3376.0	SE Cuttings					X	X										
15/12-10S	NOR	96028-78BX	3376.0	3376.0	SE Cuttings					X	X										
15/12-10S	NOR	96028-79	3385.0	3385.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-79AX	3385.0	3385.0	SE Cuttings					X	X										
15/12-10S	NOR	96028-79BX	3385.0	3385.0	SE Cuttings					X	X										
15/12-10S	NOR	96028-80	3394.0	3394.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-80AX	3394.0	3394.0	SE Cuttings					X	X										
15/12-10S	NOR	96028-80BX	3394.0	3394.0	SE Cuttings					X	X										
15/12-10S	NOR	96028-80CX	3394.0	3394.0	SE Cuttings					X	X										
15/12-10S	NOR	96028-81	3403.0	3403.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-81AX	3403.0	3403.0	SE Cuttings					X	X										
15/12-10S	NOR	96028-81BX	3403.0	3403.0	SE Cuttings					X	X										
15/12-10S	NOR	96028-82	3412.0	3412.0	Cuttings	X	X	X	X												
15/12-10S	NOR	96028-82AX	3412.0	3412.0	SE Cuttings					X	X										

ANALYTICAL PROGRAM (Table 2)

Well	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	Headspace gas analysis	Occluded gas analysis	Gas Isotope analysis	Lithology descriptions	TOC	Rock Eval Pyrolysis	Iatroscan	Pyrolysis GC	Pyrolysis GC of Asphalt	Visual Kerogen	Solvent Extraction	Asphaltene content	MPLC	Saturate GC	Branched Cyclic GC/MS	Carbon Isotopes (S & A)
15/12-10S	NOR	96028-82B	3412.0	3412.0	Cuttings										X	X	X	X	X	X	X
15/12-10S	NOR	96028-82BX	3412.0	3412.0	SE Cuttings					X	X		X								
15/12-10S	NOR	96028-83	3421.0	3421.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-83A	3421.0	3421.0	Cuttings										X	X	X	X	X	X	X
15/12-10S	NOR	96028-83AX	3421.0	3421.0	SE Cuttings					X	X		X								
15/12-10S	NOR	96028-83B	3421.0	3421.0	Cuttings										X	X	X	X	X	X	X
15/12-10S	NOR	96028-83BX	3421.0	3421.0	SE Cuttings					X	X		X								
15/12-10S	NOR	96028-83CX	3421.0	3421.0	SE Cuttings					X	X										
15/12-10S	NOR	96028-92	3424.0	3424.0	SWC								X								
15/12-10S	NOR	96028-92X	3424.0	3424.0	SWC								X								
15/12-10S	NOR	96028-132	3427.0	3427.0	Core				X			X				X	X	X	X	X	
15/12-10S	NOR	96028-93	3427.5	3427.5	Core				X			X									
15/12-10S	NOR	96028-94	3428.0	3428.0	Core				X			X									
15/12-10S	NOR	96028-95	3428.5	3428.5	Core				X			X									
15/12-10S	NOR	96028-96	3429.0	3429.0	Core				X			X									
15/12-10S	NOR	96028-97	3429.5	3429.5	Core				X			X									
15/12-10S	NOR	96028-98	3430.0	3430.0	Core				X			X				X	X	X	X	X	
15/12-10S	NOR	96028-99	3430.5	3430.5	Core				X			X									
15/12-10S	NOR	96028-100	3431.0	3431.0	Core				X			X									
15/12-10S	NOR	96028-101	3431.5	3431.5	Core				X			X									
15/12-10S	NOR	96028-102	3432.0	3432.0	Core				X			X									
15/12-10S	NOR	96028-103	3432.5	3432.5	Core				X			X									
15/12-10S	NOR	96028-104	3433.0	3433.0	Core				X			X									
15/12-10S	NOR	96028-105	3433.5	3433.5	Core				X			X									
15/12-10S	NOR	96028-106	3434.0	3434.0	Core				X			X									
15/12-10S	NOR	96028-107	3434.5	3434.5	Core				X			X									
15/12-10S	NOR	96028-108	3435.0	3435.0	Core				X			X				X	X	X	X	X	
15/12-10S	NOR	96028-109	3435.5	3435.5	Core				X			X									
15/12-10S	NOR	96028-110	3436.0	3436.0	Core				X			X									
15/12-10S	NOR	96028-111	3436.5	3436.5	Core				X			X									
15/12-10S	NOR	96028-112	3437.0	3437.0	Core				X			X									
15/12-10S	NOR	96028-113	3437.5	3437.5	Core				X			X				X	X	X	X	X	
15/12-10S	NOR	96028-114	3438.0	3438.0	Core				X			X									
15/12-10S	NOR	96028-115	3438.5	3438.5	Core				X			X									
15/12-10S	NOR	96028-116	3439.0	3439.0	Core				X			X				X	X	X	X	X	
15/12-10S	NOR	96028-117	3439.5	3439.5	Core				X			X									
15/12-10S	NOR	96028-118	3440.0	3440.0	Core				X			X									
15/12-10S	NOR	96028-119	3440.5	3440.5	Core				X			X									
15/12-10S	NOR	96028-120	3441.0	3441.0	Core				X			X		X		X	X	X			
15/12-10S	NOR	96028-121	3441.5	3441.5	Core				X			X									
15/12-10S	NOR	96028-122	3442.0	3442.0	Core				X			X		X		X	X	X			
15/12-10S	NOR	96028-123	3442.5	3442.5	Core				X			X									
15/12-10S	NOR	96028-124	3443.0	3443.0	Core				X			X									
15/12-10S	NOR	96028-125	3443.5	3443.5	Core				X			X									
15/12-10S	NOR	96028-126	3444.0	3444.0	Core				X			X		X		X	X	X	X	X	
15/12-10S	NOR	96028-127	3444.5	3444.5	Core				X			X									
15/12-10S	NOR	96028-128	3445.0	3445.0	Core				X			X				X	X	X	X	X	
15/12-10S	NOR	96028-129	3445.5	3445.5	Core				X			X				X	X	X	X	X	
15/12-10S	NOR	96028-130	3446.0	3446.0	Core				X			X				X	X	X	X	X	
15/12-10S	NOR	96028-131	3446.5	3446.5	Core				X			X									
15/12-10S	NOR	96028-84	3484.0	3484.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-85	3493.0	3493.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-86	3502.0	3502.0	Cuttings	X	X	X	X												
15/12-10S	NOR	96028-87	3511.0	3511.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-88	3520.0	3520.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-89	3529.0	3529.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-90	3538.0	3538.0	Cuttings	X	X		X												
15/12-10S	NOR	96028-91	3547.0	3547.0	Cuttings	X	X	X	X												
						91	91	10	131	26	26	40	5	3	3	14	14	14	12	12	3

HEADSPACE GAS DATA (Table 3)

Well	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	C1 uL/Kg rock	C2 uL/Kg rock	C3 uL/Kg rock	iC4 uL/Kg rock	nC4 uL/Kg rock	C5+ uL/Kg rock	SUM C1-C4	SUM C2-C4	Wetness %	iC4 nC4
15/12-10S	NOR	96028-1	1400.0	1400.0	CUT	11376	88	9	0	2	16	11475	99	0.86	
15/12-10S	NOR	96028-2	1430.0	1430.0	CUT	10135	91	11	3	2	14	10242	107	1.05	1.93
15/12-10S	NOR	96028-3	1460.0	1460.0	CUT	20924	186	32	10	2	18	21154	230	1.09	4.11
15/12-10S	NOR	96028-4	1490.0	1490.0	CUT	18320	186	44	22	2	21	18575	255	1.37	9.75
15/12-10S	NOR	96028-5	1520.0	1520.0	CUT	20176	278	79	33	4	17	20571	395	1.92	7.53
15/12-10S	NOR	96028-6	1550.0	1550.0	CUT	64	4	10	13	5	31	96	32	33.22	2.57
15/12-10S	NOR	96028-7	1580.0	1580.0	CUT	9483	185	99	38	7	21	9812	329	3.36	5.16
15/12-10S	NOR	96028-8	1610.0	1610.0	CUT	6725	156	99	33	6	19	7018	293	4.17	5.54
15/12-10S	NOR	96028-9	1640.0	1640.0	CUT	4962	121	95	32	7	19	5217	256	4.90	4.43
15/12-10S	NOR	96028-10	1670.0	1670.0	CUT	3868	111	84	24	6	12	4093	225	5.50	4.18
15/12-10S	NOR	96028-11	1700.0	1700.0	CUT	7247	243	200	57	16	29	7764	516	6.65	3.64
15/12-10S	NOR	96028-12	1730.0	1730.0	CUT	7735	260	213	57	15	25	8279	544	6.57	3.87
15/12-10S	NOR	96028-13	1760.0	1760.0	CUT	4599	206	170	47	14	23	5035	437	8.67	3.35
15/12-10S	NOR	96028-14	1790.0	1790.0	CUT	1671	98	108	33	10	21	1920	249	12.94	3.49
15/12-10S	NOR	96028-15	1820.0	1820.0	CUT	3424	150	138	43	13	20	3767	343	9.11	3.34
15/12-10S	NOR	96028-16	1850.0	1850.0	CUT	3648	171	146	41	13	26	4019	371	9.23	3.18
15/12-10S	NOR	96028-17	1890.0	1890.0	CUT	3069	201	219	67	22	36	3578	509	14.22	3.09
15/12-10S	NOR	96028-18	1920.0	1920.0	CUT	18	3	36	34	15	48	106	88	82.97	2.23
15/12-10S	NOR	96028-19	1950.0	1950.0	CUT	7	1	4	11	8	39	31	24	76.61	1.45
15/12-10S	NOR	96028-20	1980.0	1980.0	CUT	10	1	4	7	6	38	28	18	64.24	1.25
15/12-10S	NOR	96028-21	2010.0	2010.0	CUT	6	0	2	5	4	27	18	11	63.89	1.35
15/12-10S	NOR	96028-22	2040.0	2040.0	CUT	7	1	1	4	4	34	18	11	58.44	1.12
15/12-10S	NOR	96028-23	2070.0	2070.0	CUT	25	13	68	36	15	32	157	132	84.07	2.44
15/12-10S	NOR	96028-24	2100.0	2100.0	CUT	11	2	22	28	13	42	76	66	85.78	2.10
15/12-10S	NOR	96028-25	2130.0	2130.0	CUT	41	5	21	31	17	77	115	75	64.69	1.82
15/12-10S	NOR	96028-26	2170.0	2170.0	CUT	579	128	226	91	29	64	1054	475	45.04	3.12
15/12-10S	NOR	96028-27	2200.0	2200.0	CUT	381	113	186	77	21	36	778	397	51.01	3.62
15/12-10S	NOR	96028-28	2230.0	2230.0	CUT	511	84	133	61	18	35	807	296	36.68	3.40
15/12-10S	NOR	96028-29	2260.0	2260.0	CUT	1059	168	180	83	21	39	1512	453	29.95	3.90
15/12-10S	NOR	96028-30	2290.0	2290.0	CUT	1161	214	185	89	20	38	1670	509	30.47	4.36
15/12-10S	NOR	96028-31	2320.0	2320.0	CUT	1663	361	239	112	26	46	2401	737	30.72	4.40
15/12-10S	NOR	96028-32	2350.0	2350.0	CUT	574	107	70	39	8	18	798	224	28.05	4.64
15/12-10S	NOR	96028-33	2380.0	2380.0	CUT	350	78	43	23	6	13	500	150	30.03	4.00
15/12-10S	NOR	96028-34	2410.0	2410.0	CUT	148	69	56	23	7	11	303	154	50.98	3.31
15/12-10S	NOR	96028-35	2440.0	2440.0	CUT	136	63	67	20	7	11	295	158	53.75	2.78
15/12-10S	NOR	96028-36	2470.0	2470.0	CUT	311	82	87	23	10	11	513	201	39.29	2.29
15/12-10S	NOR	96028-37	2500.0	2500.0	CUT	308	65	59	15	12	11	459	151	32.97	1.27
15/12-10S	NOR	96028-38	2530.0	2530.0	CUT	386	296	402	71	93	32	1247	861	69.06	0.77
15/12-10S	NOR	96028-39	2560.0	2560.0	CUT	2551	2341	2266	423	571	337	8152	5601	68.71	0.74
15/12-10S	NOR	96028-40	2590.0	2590.0	CUT	902	645	845	126	192	121	2711	1809	66.72	0.65
15/12-10S	NOR	96028-41	2620.0	2620.0	CUT	364	487	521	68	90	66	1530	1166	76.23	0.76
15/12-10S	NOR	96028-42	2650.0	2650.0	CUT	229	322	366	47	63	37	1027	798	77.74	0.74
15/12-10S	NOR	96028-43	2680.0	2680.0	CUT	156	252	275	31	48	27	762	606	79.48	0.65
15/12-10S	NOR	96028-44	2710.0	2710.0	CUT	322	72	71	9	15	18	490	168	34.24	0.63
15/12-10S	NOR	96028-45	2740.0	2740.0	CUT	1589	271	255	60	73	62	2249	660	29.33	0.82

HEADSPACE GAS DATA (Table 3)

Well	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	C1 uL/Kg rock	C2 uL/Kg rock	C3 uL/Kg rock	iC4 uL/Kg rock	nC4 uL/Kg rock	C5+ uL/Kg rock	SUM C1-C4	SUM C2-C4	Wetness %	iC4/nC4
15/12-10S	NOR	96028-46	2770.0	2770.0	CUT	2409	344	133	15	25	18	2926	517	17.68	0.62
15/12-10S	NOR	96028-47	2800.0	2800.0	CUT	975	214	113	15	23	18	1340	365	27.25	0.66
15/12-10S	NOR	96028-48	2830.0	2830.0	CUT	300	63	30	4	6	9	404	104	25.65	0.55
15/12-10S	NOR	96028-49	2860.0	2860.0	CUT	221	32	17	2	5	13	276	55	19.89	0.36
15/12-10S	NOR	96028-50	2890.0	2890.0	CUT	151	17	7	1	2	8	178	27	15.30	0.36
15/12-10S	NOR	96028-51	2920.0	2920.0	CUT	93	20	10	1	2	11	127	34	26.65	0.50
15/12-10S	NOR	96028-52	2950.0	2950.0	CUT	77	16	8	1	2	8	103	27	25.76	0.30
15/12-10S	NOR	96028-53	2980.0	2980.0	CUT	141	23	11	1	2	6	178	37	20.82	0.44
15/12-10S	NOR	96028-54	3010.0	3010.0	CUT	49	14	8	1	2	4	74	25	33.83	0.33
15/12-10S	NOR	96028-55	3040.0	3040.0	CUT	118	22	10	1	2	8	153	34	22.55	0.39
15/12-10S	NOR	96028-56	3070.0	3070.0	CUT	144	21	10	1	2	6	178	34	18.88	0.34
15/12-10S	NOR	96028-57	3100.0	3100.0	CUT	82	19	9	1	3	7	113	31	27.62	0.27
15/12-10S	NOR	96028-58	3130.0	3130.0	CUT	97	25	13	3	4	8	142	45	31.42	0.77
15/12-10S	NOR	96028-59	3160.0	3160.0	CUT	153	30	17	2	3	7	205	52	25.34	0.50
15/12-10S	NOR	96028-60	3187.0	3187.0	CUT	41	11	5	1	1	5	59	17	29.85	0.58
15/12-10S	NOR	96028-61	3205.0	3205.0	CUT	23	7	4	0	1	9	35	12	34.89	0.80
15/12-10S	NOR	96028-62	3214.0	3214.0	CUT	81	25	8	0	2	11	115	34	29.76	
15/12-10S	NOR	96028-63	3223.0	3223.0	CUT	86	16	4	1	1	6	108	22	20.70	0.44
15/12-10S	NOR	96028-64	3232.0	3232.0	CUT	77	12	4	1	1	7	95	18	18.79	0.89
15/12-10S	NOR	96028-65	3241.0	3241.0	CUT	76	11	4	1	1	7	92	16	17.63	0.83
15/12-10S	NOR	96028-66	3250.0	3250.0	CUT	65	9	3	0	0	7	77	12	15.61	
15/12-10S	NOR	96028-67	3259.0	3259.0	CUT	118	47	36	3	4	8	207	90	43.28	0.72
15/12-10S	NOR	96028-68	3268.0	3268.0	CUT	273	53	29	2	4	9	360	88	24.31	0.52
15/12-10S	NOR	96028-69	3277.0	3277.0	CUT	374	105	79	5	11	15	573	199	34.74	0.48
15/12-10S	NOR	96028-70	3286.0	3286.0	CUT	490	89	41	2	4	7	627	137	21.80	0.54
15/12-10S	NOR	96028-71	3295.0	3295.0	CUT	436	165	105	7	13	12	725	289	39.81	0.50
15/12-10S	NOR	96028-72	3304.0	3304.0	CUT	345	193	141	10	18	18	708	363	51.24	0.57
15/12-10S	NOR	96028-73	3331.0	3331.0	CUT	514	148	87	6	10	9	765	252	32.90	0.59
15/12-10S	NOR	96028-74	3340.0	3340.0	CUT	259	60	27	1	3	5	351	91	25.98	0.39
15/12-10S	NOR	96028-75	3349.0	3349.0	CUT	210	46	22	1	2	3	281	71	25.34	0.48
15/12-10S	NOR	96028-76	3358.0	3358.0	CUT	410	112	62	4	8	10	595	186	31.20	0.48
15/12-10S	NOR	96028-77	3367.0	3367.0	CUT	448	84	32	1	3	4	569	121	21.28	0.40
15/12-10S	NOR	96028-78	3376.0	3376.0	CUT	862	172	134	25	30	29	1223	360	29.46	0.83
15/12-10S	NOR	96028-79	3385.0	3385.0	CUT	493	186	230	45	53	44	1006	512	50.95	0.84
15/12-10S	NOR	96028-80	3394.0	3394.0	CUT	188	64	58	8	11	11	330	141	42.86	0.75
15/12-10S	NOR	96028-81	3403.0	3403.0	CUT	408	102	56	3	7	9	577	168	29.22	0.45
15/12-10S	NOR	96028-82	3412.0	3412.0	CUT	50643	16312	7830	479	645	117	75909	25266	33.29	0.74
15/12-10S	NOR	96028-83	3421.0	3421.0	CUT	25911	7139	3240	174	251	44	36716	10805	29.43	0.69
15/12-10S	NOR	96028-84	3484.0	3484.0	CUT	2335	198	29	0	2	3	2564	229	8.94	0.30
15/12-10S	NOR	96028-85	3493.0	3493.0	CUT	222	37	11	0	1	4	271	49	18.19	0.43
15/12-10S	NOR	96028-86	3502.0	3502.0	CUT	133	20	5	0	0	1	159	25	15.97	0.29
15/12-10S	NOR	96028-87	3511.0	3511.0	CUT	951	74	11	0	1	3	1037	87	8.35	0.45
15/12-10S	NOR	96028-88	3520.0	3520.0	CUT	351	32	5	0	1	3	389	38	9.79	0.57
15/12-10S	NOR	96028-89	3529.0	3529.0	CUT	341	33	5	0	0	2	381	39	10.33	0.29
15/12-10S	NOR	96028-90	3538.0	3538.0	CUT	796	50	6	0	0	2	852	56	6.63	0.42
15/12-10S	NOR	96028-91	3547.0	3547.0	CUT	321	47	10	0	1	6	378	57	15.13	0.56

OCCLUDED GAS DATA (Table 4)

Well	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	C1 uL/Kg rock	C2 uL/Kg rock	C3 uL/Kg rock	iC4 uL/Kg rock	nC4 uL/Kg rock	C5+ uL/Kg rock	SUM C1-C4	SUM C2-C4	Wetness %	iC4 nC4
5/12-10	NOR	96028-1	1400.0	1400.0	CUT	47	3	1	0	0	31	52	5	9.13	
5/12-10	NOR	96028-2	1430.0	1430.0	CUT	80	6	4	0	1	71	91	11	11.73	0.33
5/12-10	NOR	96028-3	1460.0	1460.0	CUT	96	9	6	3	2	106	115	19	16.63	1.57
5/12-10	NOR	96028-4	1490.0	1490.0	CUT	65	6	6	5	2	62	84	19	22.38	2.75
5/12-10	NOR	96028-5	1520.0	1520.0	CUT	84	9	10	8	2	96	113	29	25.44	3.89
5/12-10	NOR	96028-6	1550.0	1550.0	CUT	17	2	2	4	3	121	29	12	41.22	1.46
5/12-10	NOR	96028-7	1580.0	1580.0	CUT	56	11	16	11	5	99	98	42	43.16	2.35
5/12-10	NOR	96028-8	1610.0	1610.0	CUT	21	4	8	6	3	97	43	22	51.04	1.87
5/12-10	NOR	96028-9	1640.0	1640.0	CUT	21	4	6	4	2	110	37	16	43.53	2.00
5/12-10	NOR	96028-10	1670.0	1670.0	CUT	13	3	7	2	3	92	28	15	52.80	0.85
5/12-10	NOR	96028-11	1700.0	1700.0	CUT	32	7	11	6	5	131	62	30	47.64	1.29
5/12-10	NOR	96028-12	1730.0	1730.0	CUT	19	5	11	6	4	85	45	26	57.20	1.62
5/12-10	NOR	96028-13	1760.0	1760.0	CUT	29	9	15	9	5	122	67	38	56.40	1.73
5/12-10	NOR	96028-14	1790.0	1790.0	CUT	11	2	6	4	1	46	25	13	53.78	2.57
5/12-10	NOR	96028-15	1820.0	1820.0	CUT	18	6	9	7	6	72	46	28	61.47	1.20
5/12-10	NOR	96028-16	1850.0	1850.0	CUT	11	3	3	2	2	78	21	10	45.83	0.80
5/12-10	NOR	96028-17	1890.0	1890.0	CUT	18	6	13	7	5	79	49	32	64.11	1.35
5/12-10	NOR	96028-18	1920.0	1920.0	CUT	11	1	1	2	2	84	16	5	34.25	1.14
5/12-10	NOR	96028-19	1950.0	1950.0	CUT	22	4	3	2	2	142	32	10	31.72	0.70
5/12-10	NOR	96028-20	1980.0	1980.0	CUT	14	2	1	2	1	79	20	6	28.09	1.17
5/12-10	NOR	96028-21	2010.0	2010.0	CUT	6	0	1	1	1	114	9	3	30.43	0.67
5/12-10	NOR	96028-22	2040.0	2040.0	CUT	17	3	2	2	1	142	24	7	28.44	1.75
5/12-10	NOR	96028-23	2070.0	2070.0	CUT	11	1	3	4	3	81	22	11	48.96	1.42
5/12-10	NOR	96028-24	2100.0	2100.0	CUT	22	4	3	5	5	133	40	18	44.68	1.04
5/12-10	NOR	96028-25	2130.0	2130.0	CUT	14	1	3	7	4	179	29	15	51.52	1.50
5/12-10	NOR	96028-26	2170.0	2170.0	CUT	18	3	18	19	11	294	69	51	74.52	1.67
5/12-10	NOR	96028-27	2200.0	2200.0	CUT	16	4	21	19	10	141	71	54	76.92	1.87
5/12-10	NOR	96028-28	2230.0	2230.0	CUT	15	2	10	9	5	120	42	26	63.05	1.87
5/12-10	NOR	96028-29	2260.0	2260.0	CUT	9	2	15	13	7	116	45	36	80.54	2.04
5/12-10	NOR	96028-30	2290.0	2290.0	CUT	18	6	21	18	9	154	72	54	74.92	2.00
5/12-10	NOR	96028-31	2320.0	2320.0	CUT	21	7	20	26	11	153	85	64	75.68	2.24
5/12-10	NOR	96028-32	2350.0	2350.0	CUT	16	3	6	12	4	75	41	25	61.25	2.94
5/12-10	NOR	96028-33	2380.0	2380.0	CUT	11	2	1	2	1	58	16	6	34.29	2.00
5/12-10	NOR	96028-34	2410.0	2410.0	CUT	12	2	4	6	3	66	26	14	55.17	2.17
5/12-10	NOR	96028-35	2440.0	2440.0	CUT	12	2	5	5	3	73	27	15	55.75	1.58
5/12-10	NOR	96028-36	2470.0	2470.0	CUT	15	4	7	5	4	70	35	20	58.04	1.18
5/12-10	NOR	96028-37	2500.0	2500.0	CUT	15	3	4	3	4	44	29	14	48.80	0.61
5/12-10	NOR	96028-38	2530.0	2530.0	CUT	11	4	27	14	30	117	86	75	87.31	0.45
5/12-10	NOR	96028-39	2560.0	2560.0	CUT	50	55	276	120	231	783	733	683	93.11	0.52
5/12-10	NOR	96028-40	2590.0	2590.0	CUT	32	9	47	17	42	238	147	115	78.51	0.39
5/12-10	NOR	96028-41	2620.0	2620.0	CUT	19	3	12	4	10	167	48	29	60.79	0.38
5/12-10	NOR	96028-42	2650.0	2650.0	CUT	25	3	12	3	9	111	52	28	52.92	0.35
5/12-10	NOR	96028-43	2680.0	2680.0	CUT	17	4	10	3	8	78	41	24	58.90	0.33
5/12-10	NOR	96028-44	2710.0	2710.0	CUT	13	2	5	1	4	63	25	13	50.00	0.30
5/12-10	NOR	96028-45	2740.0	2740.0	CUT	15	4	16	9	15	79	59	44	74.34	0.63

OCCLUDED GAS DATA (Table 4)

Well	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	C1 uL/Kg rock	C2 uL/Kg rock	C3 uL/Kg rock	iC4 uL/Kg rock	nC4 uL/Kg rock	C5+ uL/Kg rock	SUM C1-C4	SUM C2-C4	Wetness %	iC4 nC4
5/12-10	NOR	96028-46	2770.0	2770.0	CUT	17	8	17	6	12	101	61	43	71.43	0.46
5/12-10	NOR	96028-47	2800.0	2800.0	CUT	18	3	10	5	10	155	46	28	61.11	0.49
5/12-10	NOR	96028-48	2830.0	2830.0	CUT	14	5	8	2	5	150	33	19	57.93	0.32
5/12-10	NOR	96028-49	2860.0	2860.0	CUT	14	2	3	1	3	104	23	9	38.89	0.42
5/12-10	NOR	96028-50	2890.0	2890.0	CUT	11	2	2	1	0	98	16	5	31.82	
5/12-10	NOR	96028-51	2920.0	2920.0	CUT	10	0	0	0	0	124	10	0		
5/12-10	NOR	96028-52	2950.0	2950.0	CUT	20	6	4	0	2	145	31	12	36.80	
5/12-10	NOR	96028-53	2980.0	2980.0	CUT	14	0	0	0	0	138	14	0		
5/12-10	NOR	96028-54	3010.0	3010.0	CUT	18	5	4	0	2	171	29	11	36.84	0.13
5/12-10	NOR	96028-55	3040.0	3040.0	CUT	11	2	2	1	2	111	18	6	36.76	0.25
5/12-10	NOR	96028-56	3070.0	3070.0	CUT	19	6	4	0	3	144	32	13	41.18	
5/12-10	NOR	96028-57	3100.0	3100.0	CUT	21	8	5	1	3	181	38	16	43.48	0.33
5/12-10	NOR	96028-58	3130.0	3130.0	CUT	19	8	4	1	2	77	34	15	43.23	0.30
5/12-10	NOR	96028-59	3160.0	3160.0	CUT	14	3	4	1	2	155	24	10	41.51	0.56
5/12-10	NOR	96028-60	3187.0	3187.0	CUT	19	6	6	0	1	117	32	13	40.58	0.40
5/12-10	NOR	96028-61	3205.0	3205.0	CUT	28	10	4	1	2	137	45	17	38.14	0.33
5/12-10	NOR	96028-62	3214.0	3214.0	CUT	22	13	9	0	3	187	47	25	52.58	
5/12-10	NOR	96028-63	3223.0	3223.0	CUT	23	8	5	0	2	119	39	15	39.77	
5/12-10	NOR	96028-64	3232.0	3232.0	CUT	25	9	4	0	1	123	39	14	36.63	0.17
5/12-10	NOR	96028-65	3241.0	3241.0	CUT	16	5	2	0	1	100	23	7	31.43	
5/12-10	NOR	96028-66	3250.0	3250.0	CUT	20	7	3	0	1	81	32	12	36.09	
5/12-10	NOR	96028-67	3259.0	3259.0	CUT	22	7	13	1	5	108	48	26	53.55	0.20
5/12-10	NOR	96028-68	3268.0	3268.0	CUT	42	11	9	1	3	131	67	25	37.10	0.21
5/12-10	NOR	96028-69	3277.0	3277.0	CUT	28	7	15	1	6	102	58	30	52.32	0.23
5/12-10	NOR	96028-70	3286.0	3286.0	CUT	38	12	14	1	6	120	72	33	46.71	0.25
5/12-10	NOR	96028-71	3295.0	3295.0	CUT	33	14	34	4	13	159	98	65	65.94	0.31
5/12-10	NOR	96028-72	3304.0	3304.0	CUT	43	19	31	3	11	46	107	64	59.48	0.31
5/12-10	NOR	96028-73	3331.0	3331.0	CUT	32	22	43	6	14	91	116	84	72.11	0.40
5/12-10	NOR	96028-74	3340.0	3340.0	CUT	30	17	28	2	8	105	85	55	64.30	0.19
5/12-10	NOR	96028-75	3349.0	3349.0	CUT	43	26	43	3	11	185	125	82	65.78	0.25
5/12-10	NOR	96028-76	3358.0	3358.0	CUT	50	40	59	5	14	138	167	118	70.20	0.33
5/12-10	NOR	96028-77	3367.0	3367.0	CUT	145	37	33	2	10	69	227	82	35.96	0.22
5/12-10	NOR	96028-78	3376.0	3376.0	CUT	132	74	144	45	73	279	467	335	71.79	0.61
5/12-10	NOR	96028-79	3385.0	3385.0	CUT	58	36	97	32	53	123	276	218	78.97	0.62
5/12-10	NOR	96028-80	3394.0	3394.0	CUT	35	19	52	11	23	65	141	106	75.08	0.50
5/12-10	NOR	96028-81	3403.0	3403.0	CUT	62	32	52	4	17	130	165	104	62.74	0.23
5/12-10	NOR	96028-82	3412.0	3412.0	CUT	7199	10010	7832	545	1096	627	26682	19483	73.02	0.50
5/12-10	NOR	96028-83	3421.0	3421.0	CUT	8118	9359	7101	437	925	532	25940	17822	68.70	0.47
5/12-10	NOR	96028-84	3484.0	3484.0	CUT	153	198	108	3	12	80	475	322	67.72	0.24
5/12-10	NOR	96028-85	3493.0	3493.0	CUT	61	64	46	1	6	60	179	118	65.85	0.23
5/12-10	NOR	96028-86	3502.0	3502.0	CUT	36	32	26	1	3	173	98	61	62.76	0.38
5/12-10	NOR	96028-87	3511.0	3511.0	CUT	81	64	32	1	5	26	184	103	55.87	0.21
5/12-10	NOR	96028-88	3520.0	3520.0	CUT	37	60	38	1	5	114	141	104	73.93	0.19
5/12-10	NOR	96028-89	3529.0	3529.0	CUT	195	180	83	3	12	122	473	278	58.78	0.22
5/12-10	NOR	96028-90	3538.0	3538.0	CUT	506	305	122	4	14	158	950	444	46.74	0.26
5/12-10	NOR	96028-91	3547.0	3547.0	CUT	104	103	55	1	8	116	271	167	61.47	0.10

LITHOLOGY DESCRIPTIONS (Table 6)

Well	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	Lithology descriptions
15/12-10S	NOR	96028-1	1400.0	1400.0	Cuttings	Sh, lt olv gy, sndy + 20% Clyst, dk gy + 10% Sh, olv blk + tr Sd
15/12-10S	NOR	96028-2	1430.0	1430.0	Cuttings	Clyst, olv blk + 20% Clyst, olv gy + 10% Clyst, lt olv gy + tr Sd
15/12-10S	NOR	96028-3	1460.0	1460.0	Cuttings	Clyst, olv blk, shly + 20% Clyst, lt olv gy, calc + tr Sd
15/12-10S	NOR	96028-4	1490.0	1490.0	Cuttings	Clyst, olv blk, shly + 10% Clyst, lt olv gy, calc + tr Lst, v lt gy
15/12-10S	NOR	96028-5	1520.0	1520.0	Cuttings	Clyst, olv blk, shly + 20% Clyst, lt olv gy, calc + tr Lst, v lt gy
15/12-10S	NOR	96028-6	1550.0	1550.0	Cuttings	Clyst, olv blk, shly + 10% Clyst, lt olv gy, calc + tr Sst, lt gy, calc
15/12-10S	NOR	96028-7	1580.0	1580.0	Cuttings	Clyst, olv blk, shly + 10% Clyst, lt olv gy, calc
15/12-10S	NOR	96028-8	1610.0	1610.0	Cuttings	Clyst, brn gy, sndy + 20% Clyst, olv blk, shly
15/12-10S	NOR	96028-9	1640.0	1640.0	Cuttings	Clyst, brn gy, sndy + 20% Clyst, olv blk, shly
15/12-10S	NOR	96028-10	1670.0	1670.0	Cuttings	Clyst, olv blk, shly + 20% Clyst, brn gy + mnr Clyst, lt olv gy
15/12-10S	NOR	96028-11	1700.0	1700.0	Cuttings	Clyst, olv blk, shly + 20% Clyst, brn gy + mnr Clyst, lt olv gy
15/12-10S	NOR	96028-12	1730.0	1730.0	Cuttings	Clyst, brn gy + 10% Clyst, lt olv gy + tr Clyst, pk gy
15/12-10S	NOR	96028-13	1760.0	1760.0	Cuttings	Clyst, brn gy + 10% Clyst, lt olv gy + tr Clyst, pk gy
15/12-10S	NOR	96028-14	1790.0	1790.0	Cuttings	Clyst, brn gy + 10% Clyst, lt olv gy
15/12-10S	NOR	96028-15	1820.0	1820.0	Cuttings	Clyst, brn gy + 10% Clyst, lt olv gy
15/12-10S	NOR	96028-16	1850.0	1850.0	Cuttings	Clyst, brn gy + 10% Clyst, lt olv gy + tr Clyst, olv blk
15/12-10S	NOR	96028-17	1890.0	1890.0	Cuttings	Clyst, lt brn gy + 20% Clyst, lt olv gy + tr Clyst, brn gy
15/12-10S	NOR	96028-18	1920.0	1920.0	Cuttings	Clyst, lt brn gy + 20% Clyst, lt olv gy, calc + tr Clyst, brn gy
15/12-10S	NOR	96028-19	1950.0	1950.0	Cuttings	Clyst, lt brn gy + 20% Clyst, lt olv gy, calc + tr Clyst, brn gy
15/12-10S	NOR	96028-20	1980.0	1980.0	Cuttings	Clyst, lt brn gy + 20% Clyst, lt olv gy, calc + tr Clyst, brn gy
15/12-10S	NOR	96028-21	2010.0	2010.0	Cuttings	Clyst, lt brn gy, calc + 20% Clyst, pa yel brn + tr Clyst, brn gy
15/12-10S	NOR	96028-22	2040.0	2040.0	Cuttings	Clyst, lt brn gy, calc + 20% Clyst, pa yel brn + 10% Clyst, brn gy
15/12-10S	NOR	96028-23	2070.0	2070.0	Cuttings	Clyst, lt brn gy + 20% Clyst, brn gy + 10% Clyst, pa yel brn
15/12-10S	NOR	96028-24	2100.0	2100.0	Cuttings	Clyst, pa yel brn + 20% Clyst, brn gy
15/12-10S	NOR	96028-25	2130.0	2130.0	Cuttings	Clyst, pa yel brn + 20% Clyst, brn gy
15/12-10S	NOR	96028-26	2170.0	2170.0	Cuttings	Clyst, pa yel brn + 20% Clyst, brn gy
15/12-10S	NOR	96028-27	2200.0	2200.0	Cuttings	Clyst, brn blk + 20% Clyst, pa yel brn
15/12-10S	NOR	96028-28	2230.0	2230.0	Cuttings	Clyst, brn blk + 20% Clyst, pa yel brn
15/12-10S	NOR	96028-29	2260.0	2260.0	Cuttings	Clyst, brn blk + 20% Clyst, pa yel brn
15/12-10S	NOR	96028-30	2290.0	2290.0	Cuttings	Clyst, brn blk + 20% Clyst, pa yel brn
15/12-10S	NOR	96028-31	2320.0	2320.0	Cuttings	Clyst, med dk gy + 20% Clyst, brn blk + 20% Clyst, pa yel brn
15/12-10S	NOR	96028-32	2350.0	2350.0	Cuttings	Clyst, med dk gy + 20% Clyst, brn blk + 20% Clyst, pa yel brn
15/12-10S	NOR	96028-33	2380.0	2380.0	Cuttings	Clyst, lt med gy + 20% Clyst, pa yel brn + 10% Clyst, brn blk + tr Clyst, med dk gy
15/12-10S	NOR	96028-34	2410.0	2410.0	Cuttings	Clyst, lt med gy + 20% Clyst, med dk gy + 10% Clyst, brn blk + tr Clyst, pa yel brn

Well	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	Lithology descriptions
15/12-10S	NOR	96028-35	2440.0	2440.0	Cuttings	Clyst, lt med gy + 20% Clyst, med dk gy + 10% Clyst, brn blk + tr Clyst, pa yel brn + tr Lst, pk gy
15/12-10S	NOR	96028-36	2470.0	2470.0	Cuttings	Clyst, lt med gy + 20% Clyst, med dk gy + tr Clyst, brn blk + tr Clyst, pa yel brn + tr Lst, pk gy
15/12-10S	NOR	96028-37	2500.0	2500.0	Cuttings	Clyst, lt med gy + 20% Clyst, med dk gy + tr Clyst, brn blk + tr Clyst, pa yel brn + tr Lst, pk gy
15/12-10S	NOR	96028-38	2530.0	2530.0	Cuttings	Clyst, lt med gy + 20% Clyst, med dk gy + tr Clyst, brn gy + tr Clyst, pa yel brn + tr Lst, pk gy
15/12-10S	NOR	96028-39	2560.0	2560.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt med gy + mnr Clyst, pa yel brn + tr Clyst, lt brn gy + tr Lst, pk gy + tr Lst, v lt gy
15/12-10S	NOR	96028-40	2590.0	2590.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt med gy + 20% Clyst, pa yel brn + tr Lst, pk gy + tr Lst, v lt gy
15/12-10S	NOR	96028-41	2620.0	2620.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt med gy + 20% Clyst, pa yel brn + tr Lst, pk gy
15/12-10S	NOR	96028-42	2650.0	2650.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt med gy + 20% Clyst, brn gy + tr Clyst, pa yel brn + tr Lst, pk gy
15/12-10S	NOR	96028-43	2680.0	2680.0	Cuttings	Clyst, lt med gy + 20% Clyst, med dk gy + 10% Clyst, rd brn + tr Clyst, brn gy + tr Clyst, pa yel brn
15/12-10S	NOR	96028-44	2710.0	2710.0	Cuttings	Clyst, lt med gy + 20% Clyst, pa yel brn + 10% Clyst, med dk gy + tr Lst, v lt gy
15/12-10S	NOR	96028-45	2740.0	2740.0	Cuttings	Clyst, lt med gy + 20% Clyst, pa yel brn + 10% Clyst, lt gy + tr Clyst, med dk gy + tr Lst, v lt gy
15/12-10S	NOR	96028-46	2770.0	2770.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt med gy + 20% Clyst, v dsky rd + tr Lst, pk gy
15/12-10S	NOR	96028-47	2800.0	2800.0	Cuttings	Clyst, med dk gy + 20% Clyst, lt med gy + 20% Clyst, pa yel brn + tr Lst, pk gy
15/12-10S	NOR	96028-48	2830.0	2830.0	Cuttings	Clyst, med dk gy + 20% Lst, wht + 20% Clyst, v dsky rd
15/12-10S	NOR	96028-49	2860.0	2860.0	Cuttings	Clyst, pa yel brn + 20% Lst, wht + 20% Clyst, lt med gy
15/12-10S	NOR	96028-50	2890.0	2890.0	Cuttings	Lst, pk gy + 10% Clyst, pa yel brn + 10% Clyst, med dk gy + mnr Clyst, lt med gy
15/12-10S	NOR	96028-51	2920.0	2920.0	Cuttings	Lst, pk gy + 20% Clyst, med dk gy + 10% Clyst, pa yel brn + mnr Clyst, lt med gy
15/12-10S	NOR	96028-52	2950.0	2950.0	Cuttings	Lst, pk gy + 10% Clyst, med dk gy + tr Clyst, lt med gy
15/12-10S	NOR	96028-53	2980.0	2980.0	Cuttings	Lst, pk gy + 10% Clyst, med dk gy + mnr Clyst, lt med gy + tr Clyst, brn gy
15/12-10S	NOR	96028-54	3010.0	3010.0	Cuttings	Lst, pk gy + 10% Clyst, med dk gy + mnr Clyst, lt med gy + tr Clyst, dsky yel brn, calc + tr Lst, wht
15/12-10S	NOR	96028-55	3040.0	3040.0	Cuttings	Lst, pk gy + 10% Clyst, med dk gy + mnr Clyst, lt med gy + tr Clyst, dsky yel brn, calc + tr Lst, wht
15/12-10S	NOR	96028-56	3070.0	3070.0	Cuttings	Lst, pk gy + 10% Clyst, med dk gy + 10% Clyst, lt med gy + tr Clyst, dsky yel brn, calc + tr Lst, wht
15/12-10S	NOR	96028-57	3100.0	3100.0	Cuttings	Lst, pa yel brn + 20% Lst, dk yel brn + 10% Clyst, med dk gy + 10% Clyst, dsky yel brn + tr Clyst, lt med gy + tr Lst, wht
15/12-10S	NOR	96028-58	3130.0	3130.0	Cuttings	Lst, pa yel brn + 20% Lst, dk yel brn + 10% Clyst, med dk gy + 10% Clyst, lt olv gy + tr Clyst, lt med gy + tr Lst, wht
15/12-10S	NOR	96028-59	3160.0	3160.0	Cuttings	Lst, pa yel brn + 20% Sh, med dk gy + 10% Sh, lt med gy + tr Lst, wht
15/12-10S	NOR	96028-60	3187.0	3187.0	Cuttings	Clyst, med dk gy, calc + 20% Lst, pa yel brn + 10% Sh, lt med gy + tr Lst, v lt gy
15/12-10S	NOR	96028-61	3205.0	3205.0	Cuttings	Lst, v lt gy + 20% Lst, pa yel brn + 20% Clyst, med dk gy + mnr Sh, lt med gy
15/12-10S	NOR	96028-62	3214.0	3214.0	Cuttings	Lst, lt brn gy + 20% Lst, pa yel brn + 20% Lst, brn gy + 10% Clyst, med dk gy + mnr Clyst, lt med gy
15/12-10S	NOR	96028-63	3223.0	3223.0	Cuttings	Lst, lt brn gy + 20% Lst, pa yel brn + 20% Lst, brn gy + 10% Clyst, med dk gy + mnr Clyst, lt med gy
15/12-10S	NOR	96028-64	3232.0	3232.0	Cuttings	Lst, lt brn gy + 20% Lst, pa yel brn + 20% Lst, dsky yel brn + 10% Clyst, med dk gy + mnr Clyst, lt med gy
15/12-10S	NOR	96028-65	3241.0	3241.0	Cuttings	Lst, lt brn gy + 20% Lst, pa yel brn + 20% Lst, brn gy + 10% Clyst, med dk gy + mnr Clyst, lt med gy + tr Lst, v lt gy
15/12-10S	NOR	96028-66	3250.0	3250.0	Cuttings	Lst, pa rd + 30% Lst, v lt gy + 20% Lst, rd gy + 10% Lst, lt gy
15/12-10S	NOR	96028-67	3259.0	3259.0	Cuttings	Lst, v lt gy + 20% Lst, lt med gy + 20% Lst, lt gy + 10% Clyst, med dk gy + mnr Lst, rd gy
15/12-10S	NOR	96028-68	3268.0	3268.0	Cuttings	Lst, v lt gy + 20% Clyst, med dk gy + 20% Lst, rd gy + 10% Lst, lt med gy + mnr Lst, wht

GAS ISOTOPE DATA (Table 5)

Well	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	C1 del C 13	C2 del C 13	C3 del C 13	iC4 del C 13	nC4 del C 13	C1 del D	CO2 del C 13	CO2 del O 18
15/12-10S	NOR	96028-33	2380.0	2380.0	Cuttings	-46.2	-23.5	-23.9	-22.0			-28.3	
15/12-10S	NOR	96028-40	2590.0	2590.0	Cuttings	-37.1	-22.4	-24.6	-25.1	-25.9		-27.3	
15/12-10S	NOR	96028-47	2800.0	2800.0	Cuttings	-28.8	-22.5	-22.8	-21.7	-24.1		-27.2	
15/12-10S	NOR	96028-53	2980.0	2980.0	Cuttings	-44.6	-24.5					-27.2	
15/12-10S	NOR	96028-63	3223.0	3223.0	Cuttings							-27.7	
15/12-10S	NOR	96028-70	3286.0	3286.0	Cuttings	-37.4	-23.7	-22.1				-27.8	
15/12-10S	NOR	96028-77	3367.0	3367.0	Cuttings	-38.3	-22.9	-21.9				-28.4	
15/12-10S	NOR	96028-82	3412.0	3412.0	Cuttings	-37.1	-26.9	-24.8	-24.9	-26.8	-213	-29.7	-15.9
15/12-10S	NOR	96028-86	3502.0	3502.0	Cuttings	-34.9						-28.6	
15/12-10S	NOR	96028-91	3547.0	3547.0	Cuttings	-41.4	-26.3					-28.2	

Well	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	Lithology descriptions
15/12-10S	NOR	96028-69	3277.0	3277.0	Cuttings	Clyst, med dk gy + 20% Lst, v lt gy + 20% Lst, rd gy + 10% Lst, lt gy
15/12-10S	NOR	96028-70	3286.0	3286.0	Cuttings	Clyst, med dk gy + 20% Lst, v lt gy + 20% Lst, lt gy + tr Lst, rd gy
15/12-10S	NOR	96028-71	3295.0	3295.0	Cuttings	Clyst, med dk gy + 20% Lst, v lt gy + 20% Lst, lt gy + tr Lst, rd gy
15/12-10S	NOR	96028-72	3304.0	3304.0	Cuttings	Clyst, med dk gy + 20% Lst, v lt gy + 20% Lst, lt gy + tr Lst, rd gy
15/12-10S	NOR	96028-73	3331.0	3331.0	Cuttings	Clyst, med dk gy + 20% Lst, v lt gy + 10% Lst, lt gy + tr Clyst, brn gy
15/12-10S	NOR	96028-74	3340.0	3340.0	Cuttings	Clyst, olv blk + tr Lst, v lt gy + tr Lst, rd gy
15/12-10S	NOR	96028-75	3349.0	3349.0	Cuttings	Clyst, brn gy + 20% Clyst, olv blk + tr Lst, v lt gy
15/12-10S	NOR	96028-76	3358.0	3358.0	Cuttings	Clyst, olv blk + 20% Clyst, brn gy + 10% Lst, v lt gy + tr Clyst, med dk gy
15/12-10S	NOR	96028-77	3367.0	3367.0	Cuttings	Clyst, olv blk + 20% Clyst, brn gy + 10% Lst, v lt gy + tr Clyst, med dk gy
15/12-10S	NOR	96028-78	3376.0	3376.0	Cuttings	Clyst, brn gy + 20% Clyst, lt brn gy + 10% Lst, v lt gy + tr Clyst, olv blk
15/12-10S	NOR	96028-79	3385.0	3385.0	Cuttings	Clyst, lt brn gy + 20% Clyst, olv blk + tr Lst, v lt gy + tr Clyst, med dk gy
15/12-10S	NOR	96028-80	3394.0	3394.0	Cuttings	Clyst, brn gy + 20% Clyst, olv blk + 10% Clyst, lt brn gy + tr Lst, v lt gy + tr Clyst, rd gy
15/12-10S	NOR	96028-81	3403.0	3403.0	Cuttings	Clyst, brn gy + 20% Clyst, olv blk + 10% Lst, v lt gy + tr Clyst, med dk gy
15/12-10S	NOR	96028-82	3412.0	3412.0	Cuttings	Clyst, lt brn gy + 20% Clyst, med dk gy + Clyst, dk gy + tr Lst, v lt gy
15/12-10S	NOR	96028-83	3421.0	3421.0	Cuttings	Clyst, brn gy + 20% Clyst, dk gy, carb + 10% Clyst, med dk gy + tr Lst, v lt gy + tr Clyst, lt brn gy
15/12-10S	NOR	96028-84	3484.0	3484.0	Cuttings	Lst, pa yel brn, sndy in pts + 20% Lst, v lt gy + 20% Clyst, med dk gy + 10% Clyst, brn gy + tr Clyst, olv blk + tr Lst, pk gy
15/12-10S	NOR	96028-85	3493.0	3493.0	Cuttings	Lst, pa yel brn, sndy in pts + 20% Lst, v lt gy + 20% Clyst, lt med gy + 10% Clyst, brn gy + tr Clyst, olv blk + tr Lst, rd gy
15/12-10S	NOR	96028-86	3502.0	3502.0	Cuttings	Lst, v lt gy + 20% Lst, pa yel brn, sndy in pts + 20% Clyst, lt med gy + 10% Clyst, brn gy + tr Clyst, olv blk + tr Clyst, dk yel brn
15/12-10S	NOR	96028-87	3511.0	3511.0	Cuttings	Lst, v lt gy + 20% Lst, pa yel brn, sndy in pts + 20% Clyst, lt med gy + 10% Clyst, dk yel brn + tr Clyst, olv blk + tr Clyst, brn gy
15/12-10S	NOR	96028-88	3520.0	3520.0	Cuttings	Lst, v lt gy + 20% Lst, pa yel brn, sndy in pts + 20% Clyst, lt med gy + 10% Clyst, dk yel brn + tr Clyst, olv blk + tr Clyst, brn gy
15/12-10S	NOR	96028-89	3529.0	3529.0	Cuttings	Lst, v lt gy + 20% Lst, pa yel brn, sndy in pts + 20% Clyst, med rd brn + 10% Clyst, lt med gy + tr Clyst, brn gy + tr Lst, org gy
15/12-10S	NOR	96028-90	3538.0	3538.0	Cuttings	Lst, v lt gy + 20% Lst, pa yel brn, sndy in pts + 20% Clyst, dk yel brn + 10% Clyst, med rd brn + mnr Clyst, lt med gy + tr Lst, org gy
15/12-10S	NOR	96028-91	3547.0	3547.0	Cuttings	Lst, v lt gy + 20% Lst, pa yel brn, sndy in pts + 20% Clyst, med dk gy + 10% Clyst, lt gy + tr Clyst, rd gy + tr Lst, org gy

Well	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	Lithology descriptions
15/12-10S	NOR	96028-132	3427.0	3427.0	Core	Sst, lt brn gy, f
15/12-10S	NOR	96028-93	3427.5	3427.5	Core	Dol, brn gy, occ sndy
15/12-10S	NOR	96028-94	3428.0	3428.0	Core	Sst, brn gy, v f, slty in pts, dol
15/12-10S	NOR	96028-95	3428.5	3428.5	Core	Dol, brn gy, sndy in pts
15/12-10S	NOR	96028-96	3429.0	3429.0	Core	Dol, brn gy
15/12-10S	NOR	96028-97	3429.5	3429.5	Core	Sst, lt brn gy, v f, occ carb frags
15/12-10S	NOR	96028-98	3430.0	3430.0	Core	Sst, pk gy, f, non calc
15/12-10S	NOR	96028-99	3430.5	3430.5	Core	Sst, pk gy, f, band, non calc
15/12-10S	NOR	96028-100	3431.0	3431.0	Core	Clyst, m gy, mic, slty in pts
15/12-10S	NOR	96028-101	3431.5	3431.5	Core	Dol, m brn, microxtn
15/12-10S	NOR	96028-102	3432.0	3432.0	Core	Sst, v lt brn, f
15/12-10S	NOR	96028-103	3432.5	3432.5	Core	Sst, lt brn gy, v f, non calc
15/12-10S	NOR	96028-104	3433.0	3433.0	Core	Dol, brn gy, microxln
15/12-10S	NOR	96028-105	3433.5	3433.5	Core	Sst, pk gy, f, w cmtd, non calc
15/12-10S	NOR	96028-106	3434.0	3434.0	Core	Sst, v lt gy, f, non calc
15/12-10S	NOR	96028-107	3434.5	3434.5	Core	Sst, pk gy, f, band, non calc
15/12-10S	NOR	96028-108	3435.0	3435.0	Core	Sst, v lt brn gy, f
15/12-10S	NOR	96028-109	3435.5	3435.5	Core	Dol, brn gy, microxtn & Sst, pk gy, f
15/12-10S	NOR	96028-110	3436.0	3436.0	Core	Sst, v lt brn gy, f, dol
15/12-10S	NOR	96028-111	3436.5	3436.5	Core	Dol, brn gy, xtn
15/12-10S	NOR	96028-112	3437.0	3437.0	Core	Sltst, med lt gy, mic, dol
15/12-10S	NOR	96028-113	3437.5	3437.5	Core	Sst, pk gy, f, non calc
15/12-10S	NOR	96028-114	3438.0	3438.0	Core	Sst, grn gy, xtn in pts, non calc
15/12-10S	NOR	96028-115	3438.5	3438.5	Core	Sst, yel gy, f
15/12-10S	NOR	96028-116	3439.0	3439.0	Core	Sst, v lt gy, f, mic, non calc
15/12-10S	NOR	96028-117	3439.5	3439.5	Core	Clyst, med gy, mic, non calc
15/12-10S	NOR	96028-118	3440.0	3440.0	Core	Sst, lt bl gy, f, non calc
15/12-10S	NOR	96028-119	3440.5	3440.5	Core	Clyst, med bl gy, microxtn, non calc
15/12-10S	NOR	96028-120	3441.0	3441.0	Core	Sst, v lt bl gy, v f, non calc
15/12-10S	NOR	96028-121	3441.5	3441.5	Core	Sst, lt grn gy, f, non calc
15/12-10S	NOR	96028-122	3442.0	3442.0	Core	Sst, lt bl gy, f, non calc
15/12-10S	NOR	96028-123	3442.5	3442.5	Core	Sst, lt yel gy, v f, non calc
15/12-10S	NOR	96028-124	3443.0	3443.0	Core	Sst, lt grn gy, f, non calc
15/12-10S	NOR	96028-125	3443.5	3443.5	Core	Sst, lt grn gy, f, mic, non calc
15/12-10S	NOR	96028-126	3444.0	3444.0	Core	Sst, lt grn gy, f, mic, non calc
15/12-10S	NOR	96028-127	3444.5	3444.5	Core	Sst, lt olv gy, f, mic, non calc
15/12-10S	NOR	96028-128	3445.0	3445.0	Core	Sst, lt grn gy, f, non calc
15/12-10S	NOR	96028-129	3445.5	3445.5	Core	Sst, lt grn gy, f, sl calc
15/12-10S	NOR	96028-130	3446.0	3446.0	Core	Sst, lt olv gy, f, v mic, non calc
15/12-10S	NOR	96028-131	3446.5	3446.5	Core	Sst, lt grn gy, f, mic, non calc

Well	Nation	Sample Name	Upper Depth	Lower Depth	Picked Lithologies
15/12-10S	NOR	96028-69A	3277.0	3277.0	Clyst, med dk gy
15/12-10S	NOR	96028-70A	3286.0	3286.0	Clyst, med dk gy
15/12-10S	NOR	96028-71A	3295.0	3295.0	Clyst, med dk gy
15/12-10S	NOR	96028-72A	3304.0	3304.0	Clyst, med dk gy
15/12-10S	NOR	96028-73A	3331.0	3331.0	Clyst, med dk gy
15/12-10S	NOR	96028-74A	3340.0	3340.0	Clyst, olv blk
15/12-10S	NOR	96028-75A	3349.0	3349.0	Clyst, brn gy
15/12-10S	NOR	96028-75B	3349.0	3349.0	Clyst, olv blk
15/12-10S	NOR	96028-76A	3358.0	3358.0	Clyst, olv blk
15/12-10S	NOR	96028-76B	3358.0	3358.0	Clyst, brn gy
15/12-10S	NOR	96028-77A	3367.0	3367.0	Clyst, olv blk
15/12-10S	NOR	96028-77B	3367.0	3367.0	Clyst, brn gy
15/12-10S	NOR	96028-78A	3376.0	3376.0	Clyst, brn gy
15/12-10S	NOR	96028-78B	3376.0	3376.0	Clyst, lt brn gy
15/12-10S	NOR	96028-79A	3385.0	3385.0	Clyst, lt brn gy
15/12-10S	NOR	96028-79B	3385.0	3385.0	Clyst, olv blk
15/12-10S	NOR	96028-80A	3394.0	3394.0	Clyst, brn gy
15/12-10S	NOR	96028-80B	3394.0	3394.0	Clyst, olv blk
15/12-10S	NOR	96028-80C	3394.0	3394.0	Clyst, lt brn gy
15/12-10S	NOR	96028-81A	3403.0	3403.0	Clyst, brn gy
15/12-10S	NOR	96028-81B	3403.0	3403.0	Clyst, olv blk
15/12-10S	NOR	96028-82A	3412.0	3412.0	Clyst, lt brn gy
15/12-10S	NOR	96028-82B	3412.0	3412.0	Clyst, med dk gy
15/12-10S	NOR	96028-83A	3421.0	3421.0	Clyst, brn gy
15/12-10S	NOR	96028-83B	3421.0	3421.0	Clyst, dk gy, carb
15/12-10S	NOR	96028-83C	3421.0	3421.0	Clyst, med dk gy

TOC and Rock Eval Pyrolysis Data (Table 8)

Well Name	Nation	Sample Name	Upper depth	Lower depth	Sample Type	Picked Lithology	S1 mg/g	S2 mg/g	S3 mg/g	Tmax deg C	TOC % wt
15/12-10S	NOR	96028-69AX	3277.00	3277.00	SE Cuttings	Clyst, med dk gy	0.08	4.11	0.43	435	1.71
15/12-10S	NOR	96028-70AX	3286.00	3286.00	SE Cuttings	Clyst, med dk gy	0.08	3.87	0.55	434	1.56
15/12-10S	NOR	96028-71AX	3295.00	3295.00	SE Cuttings	Clyst, med dk gy	0.07	2.67	0.49	434	1.26
15/12-10S	NOR	96028-72AX	3304.00	3304.00	SE Cuttings	Clyst, med dk gy	0.07	2.32	1.03	435	1.14
15/12-10S	NOR	96028-73AX	3331.00	3331.00	SE Cuttings	Clyst, med dk gy	0.06	1.06	0.31	436	0.88
15/12-10S	NOR	96028-74AX	3340.00	3340.00	SE Cuttings	Clyst, olv blk	0.07	1.95	0.33	434	1.17
15/12-10S	NOR	96028-75AX	3349.00	3349.00	SE Cuttings	Clyst, brn gy	0.09	3.09	0.71	433	1.74
15/12-10S	NOR	96028-75BX	3349.00	3349.00	SE Cuttings	Clyst, olv blk	0.08	1.30	0.36	437	1.00
15/12-10S	NOR	96028-76AX	3358.00	3358.00	SE Cuttings	Clyst, olv blk	0.09	1.62	0.34	435	1.21
15/12-10S	NOR	96028-76BX	3358.00	3358.00	SE Cuttings	Clyst, brn gy	0.07	1.27	0.37	435	0.94
15/12-10S	NOR	96028-77AX	3367.00	3367.00	SE Cuttings	Clyst, olv blk	0.08	1.69	0.41	435	1.10
15/12-10S	NOR	96028-77BX	3367.00	3367.00	SE Cuttings	Clyst, brn gy	0.08	1.71	0.35	433	1.09
15/12-10S	NOR	96028-78AX	3376.00	3376.00	SE Cuttings	Clyst, brn gy	0.08	1.58	0.39	434	0.98
15/12-10S	NOR	96028-78BX	3376.00	3376.00	SE Cuttings	Clyst, lt brn gy	0.07	1.85	0.36	436	0.92
15/12-10S	NOR	96028-79AX	3385.00	3385.00	SE Cuttings	Clyst, lt brn gy	0.08	1.74	0.39	437	0.94
15/12-10S	NOR	96028-79BX	3385.00	3385.00	SE Cuttings	Clyst, olv blk	0.08	2.96	0.36	435	1.22
15/12-10S	NOR	96028-80AX	3394.00	3394.00	SE Cuttings	Clyst, brn gy	0.07	2.74	0.39	436	1.24
15/12-10S	NOR	96028-80BX	3394.00	3394.00	SE Cuttings	Clyst, olv blk	0.08	2.67	0.38	435	1.31
15/12-10S	NOR	96028-80CX	3394.00	3394.00	SE Cuttings	Clyst, lt brn gy	0.10	2.21	0.49	435	1.20
15/12-10S	NOR	96028-81AX	3403.00	3403.00	SE Cuttings	Clyst, brn gy	0.08	1.96	0.39	434	0.92
15/12-10S	NOR	96028-81BX	3403.00	3403.00	SE Cuttings	Clyst, olv blk	0.10	2.83	0.46	434	1.52
15/12-10S	NOR	96028-82AX	3412.00	3412.00	SE Cuttings	Clyst, lt brn gy	0.08	3.87	0.48	437	2.34
15/12-10S	NOR	96028-82BX	3412.00	3412.00	SE Cuttings	Clyst, med dk gy	0.51	73.99	1.12	433	27.80
15/12-10S	NOR	96028-83AX	3421.00	3421.00	SE Cuttings	Clyst, brn gy	0.43	36.44	0.59	432	14.60
15/12-10S	NOR	96028-83BX	3421.00	3421.00	SE Cuttings	Clyst, dk gy, carb	1.00	152.85	1.57	431	53.70
15/12-10S	NOR	96028-83CX	3421.00	3421.00	SE Cuttings	Clyst, med dk gy	0.08	5.04	0.59	438	3.90

KEROGEN DESCRIPTIONS (Table 9)

Well	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	Lithology	Spore Colour Index		% (visual from microscopy)		
							Indigenous	Reworked	Vitrinite	Inertinite	Sapropel
15/12-10S	NOR	96028-82B	3412.0	3412.0	Cuttings	Clyst, med dk gy	4.5-5.0	7.5-8.0	70 inc. am	30	Mnr
appears to be mainly humic, includes non fluorescent amorphous material, spores rare (forams @ 7.5 - 8.0), occasional indeterminate, yellow orange, rarely orange spore fluorescence.											
15/12-10S	NOR	96028-83A	3421.0	3421.0	Cuttings	Clyst, brn gy	4.5-5.0	8.0	80? inc. am	20	Mnr
mainly humic, spores rare, poor preservation, forams present, orange / dk orange spore fluorescence, but little fluorescent material.											
15/12-10S	NOR	96028-83B	3421.0	3421.0	Cuttings	Clyst, dk gy, carb	4.5-5.0		80? inc. am	20?	present
as above.											

Extraction Separation data (Table 10)

Well	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	Lith	Wt of Rock (g)	EOM mg/g	SAT mg/g	ARO mg/g	NSO mg/g	Asph mg/g	Polars mg/g	TOC %
15/12-10S	NOR	96028-132	3427.00	3427.00	Core	Sst, lt brn gy	10.0	10.56	5.15	0.07	4.46	0.89	5.35	
15/12-10S	NOR	96028-98	3430.00	3430.00	Core	Sst, pk gy	11.0	14.15	1.21	0.08	10.66	2.21	12.87	
15/12-10S	NOR	96028-108	3435.00	3435.00	Core	Sst, v lt brn gy	9.5	11.13	3.87	0.03	3.60	3.63	7.23	
15/12-10S	NOR	96028-113	3437.50	3437.50	Core	Sst, pk gy	10.0	8.39	4.35	0.03	2.96	1.05	4.01	
15/12-10S	NOR	96028-116	3439.00	3439.00	Core	Sst, v lt gy	10.0	8.29	1.82	0.03	0.67	5.77	6.44	
15/12-10S	NOR	96028-120	3441.00	3441.00	Core	Sst, v lt bl gy	9.5	9.47	1.57	0.02	0.85	7.04	7.89	
15/12-10S	NOR	96028-122	3442.00	3442.00	Core	Sst, lt bl gy	10.0	8.14	*0.38	*0.01	*2.37	5.38	7.75	
15/12-10S	NOR	96028-126	3444.00	3444.00	Core	Sst, lt grn gy	9.5	17.96	10.03	0.08	2.10	5.75	7.85	
15/12-10S	NOR	96028-128	3445.00	3445.00	Core	Sst, lt grn gy	11.0	8.45	2.39	0.08	0.82	5.15	5.97	
15/12-10S	NOR	96028-129	3445.50	3445.50	Core	Sst, lt grn gy	10.0	8.53	3.59	0.01	1.06	3.87	4.93	
15/12-10S	NOR	96028-130	3446.00	3446.00	Core	Sst, lt olv gy	10.0	8.76	6.58	0.07	0.61	1.50	2.11	
15/12-10S	NOR	96028-82B	3412.00	3412.00	Cuttings	Clyst, med dk gy	5.0	77.84	30.92	9.97	4.56	32.38	36.94	
15/12-10S	NOR	96028-83A	3421.00	3421.00	Cuttings	Clyst, brn gy	8.0	40.88	30.93	2.09	2.13	5.72	7.85	
15/12-10S	NOR	96028-83B	3421.00	3421.00	Cuttings	Clyst, dk gy	5.0	78.50	30.22	10.22	4.46	33.60	38.06	

* - Small deasphalted extract - separation carried out by short column chromatography

Iatroscan fractionation data (Table 11)

Well	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	Lith	Wt of Rock (g)	EOM mg/g	SAT mg/g	ARO mg/g	Polars mg/g	TOC %
15/12-10S	NOR	96028-132	3427.00	3427.00	Core	Sst, lt brn gy	2.0	7.40	4.23	0.27	2.90	
15/12-10S	NOR	96028-93	3427.50	3427.50	Core	Dol, brn gy	2.0	7.90	2.19	0.27	5.44	
15/12-10S	NOR	96028-94	3428.00	3428.00	Core	Sst, brn gy	2.0	0.30	0.11	0.04	0.15	
15/12-10S	NOR	96028-95	3428.50	3428.50	Core	Dol, brn gy	2.0	3.80	0.84	0.09	2.87	
15/12-10S	NOR	96028-96	3429.00	3429.00	Core	Dol, brn gy	2.0	3.00	0.56	0.08	2.36	
15/12-10S	NOR	96028-97	3429.50	3429.50	Core	Sst, lt brn gy	2.0	1.40	0.23	0.08	1.09	
15/12-10S	NOR	96028-98	3430.00	3430.00	Core	Sst, pk gy	2.0	14.30	2.50	0.19	11.61	
15/12-10S	NOR	96028-99	3430.50	3430.50	Core	Sst, pk gy	2.0	2.40	0.63	0.02	1.74	
15/12-10S	NOR	96028-100	3431.00	3431.00	Core	Clyst, m gy	2.0	0.95	0.18	0.03	0.74	
15/12-10S	NOR	96028-101	3431.50	3431.50	Core	Dol, m brn	2.0	3.60	0.90	0.09	2.61	
15/12-10S	NOR	96028-102	3432.00	3432.00	Core	Sst, v lt brn	2.0	6.95	1.06	0.34	5.55	
15/12-10S	NOR	96028-103	3432.50	3432.50	Core	Sst, lt brn gy	2.0	3.75	1.26	0.05	2.45	
15/12-10S	NOR	96028-104	3433.00	3433.00	Core	Dol, brn gy	2.0	1.40	0.40	0.03	0.97	
15/12-10S	NOR	96028-105	3433.50	3433.50	Core	Sst, pk gy	2.0	9.90	2.36	1.88	5.66	
15/12-10S	NOR	96028-106	3434.00	3434.00	Core	Sst, v lt gy	2.0	11.45	2.76	1.05	7.64	
15/12-10S	NOR	96028-107	3434.50	3434.50	Core	Sst, pk gy	2.0	5.05	2.28	0.25	2.53	
15/12-10S	NOR	96028-108	3435.00	3435.00	Core	Sst, v lt brn gy	2.0	10.10	4.64	0.08	5.38	
15/12-10S	NOR	96028-109	3435.50	3435.50	Core	Dol, brn gy	2.0	3.35	1.07	0.03	2.25	
15/12-10S	NOR	96028-110	3436.00	3436.00	Core	Sst, v lt brn gy	2.0	14.00	4.83	0.25	8.92	
15/12-10S	NOR	96028-111	3436.50	3436.50	Core	Dol, brn gy	2.0	0.75	0.17	0.02	0.57	
15/12-10S	NOR	96028-112	3437.00	3437.00	Core	Sltst, med lt gy	2.0	3.20	2.29	0.05	0.86	
15/12-10S	NOR	96028-113	3437.50	3437.50	Core	Sst, pk gy	2.0	8.15	6.14	0.12	1.89	
15/12-10S	NOR	96028-114	3438.00	3438.00	Core	Sst, grn gy	2.0	1.00	0.16	0.02	0.83	
15/12-10S	NOR	96028-115	3438.50	3438.50	Core	Sst, yel gy	2.0	11.90	6.90	0.26	4.74	
15/12-10S	NOR	96028-116	3439.00	3439.00	Core	Sst, v lt gy	2.0	12.50	8.61	0.15	3.74	
15/12-10S	NOR	96028-117	3439.50	3439.50	Core	Clyst, med gy	2.0	1.70	1.42	0.11	0.16	
15/12-10S	NOR	96028-118	3440.00	3440.00	Core	Sst, lt bl gy	2.0	3.10	2.88	0.07	0.15	
15/12-10S	NOR	96028-119	3440.50	3440.50	Core	Clyst, med bl gy	2.0	1.95	0.81	0.12	1.02	
15/12-10S	NOR	96028-120	3441.00	3441.00	Core	Sst, v lt bl gy	2.0	12.45	1.31	0.57	10.57	
15/12-10S	NOR	96028-121	3441.50	3441.50	Core	Sst, lt grn gy	2.0	14.30	3.26	0.33	10.71	
15/12-10S	NOR	96028-122	3442.00	3442.00	Core	Sst, lt bl gy	2.0	13.95	0.68	1.02	12.25	
15/12-10S	NOR	96028-123	3442.50	3442.50	Core	Sst, lt yel gy	2.0	11.30	2.64	0.29	8.36	
15/12-10S	NOR	96028-124	3443.00	3443.00	Core	Sst, lt grn gy	2.0	2.70	1.78	0.08	0.85	
15/12-10S	NOR	96028-125	3443.50	3443.50	Core	Sst, lt grn gy	2.0	6.60	1.32	2.20	3.08	
15/12-10S	NOR	96028-126	3444.00	3444.00	Core	Sst, lt grn gy	2.0	17.80	10.02	0.28	7.49	
15/12-10S	NOR	96028-127	3444.50	3444.50	Core	Sst, lt olv gy	2.0	2.60	1.53	0.12	0.95	
15/12-10S	NOR	96028-128	3445.00	3445.00	Core	Sst, lt grn gy	2.0	10.10	7.77	0.18	2.15	
15/12-10S	NOR	96028-129	3445.50	3445.50	Core	Sst, lt grn gy	2.0	8.05	7.10	0.23	0.72	
15/12-10S	NOR	96028-130	3446.00	3446.00	Core	Sst, lt olv gy	2.0	8.60	6.68	0.44	1.48	
15/12-10S	NOR	96028-131	3446.50	3446.50	Core	Sst, lt grn gy	2.0	6.70	5.31	0.15	1.23	

Pyrolysis GC Data (Table 12)

Well	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	C1 %	C2-C5 %	C6-14 %	C15+ %
15/12-10S	NOR	96028-82BX	3412.0	3412.0	SE Cuttings	16.5	3.9	28.8	50.8
15/12-10S	NOR	96028-83AX	3421.0	3421.0	SE Cuttings	28.5	7.7	41.4	22.4
15/12-10S	NOR	96028-83BX	3421.0	3421.0	SE Cuttings	16.8	5.1	27.7	50.4
15/12-10S	NOR	96028-92	3424.0	3424.0	SWC	13.3	5.4	29.2	52.1
15/12-10S	NOR	96028-92X	3424.0	3424.0	SE SWC	10.8	4.3	29.0	55.9
15/12-10S	NOR	96028-120	3441.0	3441.0	Asphaltene (from Core)	0.4	8.4	69.1	22.1
15/12-10S	NOR	96028-122	3442.0	3442.0	Asphaltene (from Core)	0.3	68.1	31.7	0.0
15/12-10S	NOR	96028-126	3444.0	3444.0	Asphaltene (from Core)	0.9	5.1	33.2	60.8

SATURATE GC DATA - PEAK HEIGHTS (Table 13)

Well	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	Lithology	n_C10 mV	n_C17 mV	n_C18 mV	n_C22 mV	n_C27 mV	n_C32 mV	i_C18 mV	Pristane mV	Phytane mV	CPI1 mV	CPI2 mV
15/12-10S	NOR	96028-82B	3412.0	3412.0	Picked Ctgs	Clyst, med dk gy	0	107312	102449	21110	8706	1447	46976	138563	37729	1.52	1.33
15/12-10S	NOR	96028-83A	3421.0	3421.0	Picked Ctgs	Clyst, brn gy	0	77121	69174	8597	1258	235	30800	43722	21122	1.36	1.00
15/12-10S	NOR	96028-83B	3421.0	3421.0	Picked Ctgs	Clyst, dk gy, carb	0	119148	111538	19041	8134	1510	50285	154425	36954	1.46	1.27
15/12-10S	NOR	96028-132	3427.0	3427.0	Core	Sst, lt brn gy, f	0	93362	87102	9398	603	296	31516	29464	22121	1.01	1.05
15/12-10S	NOR	96028-98	3430.0	3430.0	Core	Sst, pk gy, f, non calc	0	83796	85460	10660	651	140	28780	27372	22719	1.00	0.93
15/12-10S	NOR	96028-108	3435.0	3435.0	Core	Sst, v lt brn gy, f	0	97251	97239	11302	242	75	33116	33637	27379	1.03	0.91
15/12-10S	NOR	96028-113	3437.5	3437.5	Core	Sst, pk gy, f, non calc	0	88334	82185	8290	200	42	30465	28656	21205	1.10	1.04
15/12-10S	NOR	96028-116	3439.0	3439.0	Core	Sst, v lt gy, f, mic, non calc	0	115942	124462	14172	323	98	38200	41796	35573	1.18	1.22
15/12-10S	NOR	96028-126	3444.0	3444.0	Core	Sst, lt grn gy, f, mic, non calc	0	96577	87064	7898	70	14	33401	31564	23629	1.17	0.82
15/12-10S	NOR	96028-128	3445.0	3445.0	Core	Sst, lt grn gy, f, non calc	0	108054	107520	11207	231	45	36735	35143	29039	1.23	1.07
15/12-10S	NOR	96028-129	3445.5	3445.5	Core	Sst, lt grn gy, f, sl calc	0	124626	122585	13412	239	23	42728	42699	34252	1.28	1.23
15/12-10S	NOR	96028-130	3446.0	3446.0	Core	Sst, lt olv gy, f, v mic, non calc	0	114196	103142	10462	125	62	39950	36752	29542	1.09	1.00

Branched Cyclic GC/MS - Peak Height Data (Table 14)

Well	Nation	Sample name	Upper Depth	Lower Depth	Sample type	Lith	Ion m/z 217						Ion m/z 218		
							A	J	Q	R	S	T	B	D	F
15/12-10S	NOR	96028-82B	3412.00	3412.00	Cuttings	Clyst, med dk gy	1277	4488	12447	8406	4739	16490	850	1407	7464
15/12-10S	NOR	96028-83A	3421.00	3421.00	Cuttings	Clyst, brn gy	286	512	560	445	261	765	238	191	521
15/12-10S	NOR	96028-83B	3421.00	3421.00	Cuttings	Clyst, dk gy	412	656	3121	2066	1133	4432	241	369	1858
15/12-10S	NOR	96028-132	3427.00	3427.00	Core	Sst, lt brn gy	698	511	205	364	242	248	522	333	472
15/12-10S	NOR	96028-98	3430.00	3430.00	Core	Sst, pk gy	277	-	-	-	-	-	177	86	69
15/12-10S	NOR	96028-108	3435.00	3435.00	Core	Sst, v lt brn gy	424	421	120	119	184	143	213	151	146
15/12-10S	NOR	96028-113	3437.50	3437.50	Core	Sst, pk gy	456	392	155	124	106	124	194	140	199
15/12-10S	NOR	96028-116	3439.00	3439.00	Core	Sst, v lt gy	-	-	-	-	-	-	-	-	-
15/12-10S	NOR	96028-126	3444.00	3444.00	Core	Sst, lt grn gy	853	768	122	244	110	150	237	167	264
15/12-10S	NOR	96028-128	3445.00	3445.00	Core	Sst, lt grn gy	-	-	-	-	-	-	-	-	-
15/12-10S	NOR	96028-129	3445.50	3445.50	Core	Sst, lt grn gy	272	228	-	-	-	-	143	87	143
15/12-10S	NOR	96028-130	3446.00	3446.00	Core	Sst, lt olv gy	306	332	-	-	-	-	170	97	88

Branched Cyclic GC/MS - Peak Height Data (Table 14)

Well	Nation	Sample name	Upper Depth	Lower Depth	Sample type	Lith	Ion m/z 191										
							G1	G2	J1	J2	K1	K2	L1	L2	M1	M2	I
15/12-10S	NOR	96028-82B	3412.00	3412.00	Cuttings	Clyst, med dk gy	198576	136164	132777	88138	41864	28288	30220	20824	11054	7555	8706
15/12-10S	NOR	96028-83A	3421.00	3421.00	Cuttings	Clyst, brn gy	8598	5264	4723	3095	1418	929	970	623	336	243	392
15/12-10S	NOR	96028-83B	3421.00	3421.00	Cuttings	Clyst, dk gy	61946	40559	40084	24960	11284	7168	7001	4794	2426	1459	2172
15/12-10S	NOR	96028-132	3427.00	3427.00	Core	Sst, lt brn gy	1223	908	1644	468	428	294	208	216	233	204	235
15/12-10S	NOR	96028-98	3430.00	3430.00	Core	Sst, pk gy	121	97	-	-	-	-	-	-	-	-	-
15/12-10S	NOR	96028-108	3435.00	3435.00	Core	Sst, v lt brn gy	336	302	168	129	123	127	-	-	-	-	-
15/12-10S	NOR	96028-113	3437.50	3437.50	Core	Sst, pk gy	314	275	189	149	245	99	-	-	-	-	-
15/12-10S	NOR	96028-116	3439.00	3439.00	Core	Sst, v lt gy	-	-	-	-	-	-	-	-	-	-	-
15/12-10S	NOR	96028-126	3444.00	3444.00	Core	Sst, lt grn gy	315	211	207	147	160	-	-	-	-	-	-
15/12-10S	NOR	96028-128	3445.00	3445.00	Core	Sst, lt grn gy	-	-	-	-	-	-	-	-	-	-	-
15/12-10S	NOR	96028-129	3445.50	3445.50	Core	Sst, lt grn gy	126	87	-	-	-	-	-	-	-	-	-
15/12-10S	NOR	96028-130	3446.00	3446.00	Core	Sst, lt olv gy	280	149	130	140	-	-	-	-	-	-	-

Branched Cyclic GC/MS - Peak Height Data (Table 14)

Well	Nation	Sample name	Upper Depth	Lower Depth	Sample type	Lith	Ion m/z 191									
							Q	A	B	Z	C	C_2	X	D	E	F
15/12-10S	NOR	96028-82B	3412.00	3412.00	Cuttings	Clyst, med dk gy	2829	1468	167056	2613	258048	-	8848	56256	294879	97920
15/12-10S	NOR	96028-83A	3421.00	3421.00	Cuttings	Clyst, brn gy	470	212	9835	319	12248	-	450	2166	13111	3683
15/12-10S	NOR	96028-83B	3421.00	3421.00	Cuttings	Clyst, dk gy	781	599	58894	744	80990	-	2094	17024	86656	26912
15/12-10S	NOR	96028-132	3427.00	3427.00	Core	Sst, lt brn gy	1564	569	1027	430	2110	619	147	441	2404	464
15/12-10S	NOR	96028-98	3430.00	3430.00	Core	Sst, pk gy	310	309	224	-	497	218	-	-	332	-
15/12-10S	NOR	96028-108	3435.00	3435.00	Core	Sst, v lt brn gy	447	250	294	246	509	274	127	184	865	201
15/12-10S	NOR	96028-113	3437.50	3437.50	Core	Sst, pk gy	566	224	261	134	491	271	-	118	643	-
15/12-10S	NOR	96028-116	3439.00	3439.00	Core	Sst, v lt gy	134	-	184	-	207	-	-	-	240	-
15/12-10S	NOR	96028-126	3444.00	3444.00	Core	Sst, lt grn gy	840	377	323	219	712	368	192	203	904	172
15/12-10S	NOR	96028-128	3445.00	3445.00	Core	Sst, lt grn gy	131	-	-	-	-	-	-	-	-	-
15/12-10S	NOR	96028-129	3445.50	3445.50	Core	Sst, lt grn gy	340	190	174	-	295	136	-	-	406	-
15/12-10S	NOR	96028-130	3446.00	3446.00	Core	Sst, lt olv gy	606	208	261	168	515	263	-	-	473	124

Branched Cyclic GC/MS - Peak Height Data (Table 14)

Well	Nation	Sample name	Upper Depth	Lower Depth	Sample type	Lith	Ion m/z 177		Ion m/z 191					Ion m/z 217						Ion m/z 218		
							25nor28ab	25nor30ab	23/3	26/3	24/4	26/3(1)	26/3(2)	27dbR	27aaS	27bbR + 29dbS	29dbR	27bbR	28bbR	29bbR	30bbR	30bbS
15/12-10S	NOR	96028-82B	3412.00	3412.00	Cuttings	Clyst, med dk gy	-	-	2736	722	18176	600	481	861	788	10322	5312	870	2368	10720	249	299
15/12-10S	NOR	96028-83A	3421.00	3421.00	Cuttings	Clyst, brn gy	-	-	1087	271	1188	210	199	230	277	800	488	292	248	635	-	-
15/12-10S	NOR	96028-83B	3421.00	3421.00	Cuttings	Clyst, dk gy	-	-	742	221	5323	199	174	254	402	2928	1696	335	738	2884	107	127
15/12-10S	NOR	96028-132	3427.00	3427.00	Core	Sst, lt brn gy	-	-	3088	922	827	547	448	508	385	409	350	674	378	528	109	109
15/12-10S	NOR	96028-98	3430.00	3430.00	Core	Sst, pk gy	-	-	704	244	425	190	161	224	-	-	-	155	108	75	-	-
15/12-10S	NOR	96028-108	3435.00	3435.00	Core	Sst, v lt brn gy	-	-	1000	388	355	258	180	267	200	170	153	284	229	205	94	98
15/12-10S	NOR	96028-113	3437.50	3437.50	Core	Sst, pk gy	-	-	1142	357	360	224	208	314	238	238	104	233	133	183	-	-
15/12-10S	NOR	96028-116	3439.00	3439.00	Core	Sst, v lt gy	-	-	286	-	-	-	-	-	-	-	-	-	-	-	-	-
15/12-10S	NOR	96028-126	3444.00	3444.00	Core	Sst, lt grn gy	-	-	2029	701	723	496	456	488	394	260	232	407	246	248	89	129
15/12-10S	NOR	96028-128	3445.00	3445.00	Core	Sst, lt grn gy	-	-	325	122	-	-	-	-	-	-	-	-	-	-	-	-
15/12-10S	NOR	96028-129	3445.50	3445.50	Core	Sst, lt grn gy	-	-	895	230	297	164	195	220	-	-	-	135	87	112	-	-
15/12-10S	NOR	96028-130	3446.00	3446.00	Core	Sst, lt olv gy	-	-	968	391	316	216	168	200	147	153	-	245	105	88	-	-

CARBON ISOTOPE DATA (TABLE 15)

Well	Nation	Sample Name	Upper Depth	Lower Depth	Sample Type	Picked Lithology	Del C13 Sats	Del C13 Aroms
15/12-10S	NOR	96028-82B	3412.00	3412.00	Cuttings	Clyst, med dk gy	-27.9	-24.4
15/12-10S	NOR	96028-83A	3421.00	3421.00	Cuttings	Clyst, brn gy	-28.0	-25.0
15/12-10S	NOR	96028-83B	3421.00	3421.00	Cuttings	Clyst, dk gy, carb	-27.8	-24.3

APPENDIX 2:

Data from SAGA PETROLEUM ASA

Detailed Data summarised by Well

NOR:15/12-10S

End Depth mRKB(log)	End Depth m (IRKB)	Type	Stratigraphy	S1 (kg/t)	S2 (kg/t)	S3 (kg/t)	TOC (%)	HI (kg/t)	OI (kg/t)	PP (kg/t)	PI (kg/t)	Tmax (deg C)	Name	Lithology
3282.00	**3282.00**	SWC		6.42	1.70		1.42	120		8.12	0.79	430		CLST
3289.90	**3289.90**	SWC		10.02	1.49		1.30	115		11.51	0.87	431		CLST
3400.00	**3400.00**	SWC		13.45	1.13		1.47	77		14.58	0.92	430		CLST
3403.00	**3403.00**	SWC		6.00	4.97		2.24	222		10.97	0.55	426		CLST
3406.00	**3406.00**	SWC		15.62	2.85		1.91	149		18.47	0.85	435		CLST
3410.00	**3410.00**	SWC		12.21	2.15		1.67	129		14.36	0.85	425		CLST
3413.00	**3413.00**	SWC		10.90	2.13		1.60	133		13.03	0.84	426		CLST
3416.00	**3416.00**	SWC		1.47	2.51		1.39	181		3.98	0.37	433		CLST
3418.00	**3418.00**	SWC		4.33	1.82		1.20	152		6.15	0.70	426		CLST
3419.30	**3419.30**	SWC		12.80	1.88		1.61	117		14.68	0.87	431		CLST
3424.00	**3424.00**	SWC		9.45	120.91		32.18	376		130.36	0.07	431		COAL
	Avg(NOR:15/12-10S):			**9.33**	**13.05**		**4.36**	**161**		**22.4**	**0.7**	**429**		
	Standard Deviations:			**4.31**	**35.79**		**9.23**	**81**		**36.1**	**0.27**	**3**	**n:**	**11**

>>> End of NOR:15/12-10S <<<

Averages all wells/sample sites:				9.33	13.05		4.36	161		22.4	0.70	429	n:	11

Wells/Sample Sites: 1

Saga Petroleum ASA
File: C:\DATA\ANA_308\ 0201002.D

Date aquired: 19 Nov 96 4:41 pm
Method: BMS_ON

Sample: [119302] 15/12-10 S MDT 024 (1) sat

Saturate biomarkers

Rt. min	Ion m/z	Compound	Height
Steranes, m/z 217			
45.47	217	27dbS	9200
46.68	217	27dbR	6000
50.75	217	27aaS	4010
50.90	217	29dbS	7000
52.04	217	27aaR	4729
52.34	217	29dbR	5875
56.38	217	29aaS	4000
56.92	217	29bbR	4619
57.12	217	29bbS	5151
58.24	217	29aaR	3000
Steranes, m/z 218			
51.03	218	27bbR	7700
51.30	218	27bbS	7075
54.28	218	28bbR	5845
54.54	218	28bbS	6038
56.92	218	29bbR	8570
57.13	218	29bbS	8295
59.09	218	30bbR	2290
59.20	218	30bbS	2288
Triterpanes, m/z 177			
nd	177	25nor28ab	
nd	177	25nor30ab	
Triterpanes, m/z 191			
33.75	191	23/3	4125
35.61	191	24/3	3254
39.54	191	25/3	1837
42.23	191	24/4	2300
42.55	191	26/3	1282
53.02	191	27Ts	9800
54.30	191	27Tm	7577
57.05	191	28ab	4587
nd	191	25nor30ab	
58.48	191	29ab	26000
58.64	191	29Ts	12698
59.09	191	30D	5986
nd	191	29ba	
nd	191	30O	
61.07	191	30ab	60555
62.21	191	30ba	11800
nd	191	30G	
64.03	191	31abS	29224
64.37	191	31abR	19647
66.33	191	32abS	21840
66.82	191	32abR	15000
69.04	191	33abS	15797
69.79	191	33abR	10093
72.25	191	34abS	7902
73.31	191	34abR	5341
75.93	191	35abS	6207
77.46	191	35abR	3959

Saga Petroleum ASA
File: C:\DATA\ANA_338\ 0101001.D

Date aquired: 14 Apr 97 1:33 pm
Method: BMS_ON

Sample: 15/12-10S 3275 sat

Saturate biomarkers

Rt. min	Ion m/z	Compound	Height
Steranes, m/z 217			
45.16	217	27dbS	2058
46.36	217	27dbR	1327
50.39	217	27aaS	865
50.58	217	29dbS	1750
nd	217	27aaR	
nd	217	29dbR	
56.04	217	29aaS	957
56.60	217	29bbR	960
56.77	217	29bbS	666
57.91	217	29aaR	1277
Steranes, m/z 218			
50.71	218	27bbR	642
50.97	218	27bbS	670
53.93	218	28bbR	467
54.19	218	28bbS	338
56.58	218	29bbR	800
56.77	218	29bbS	816
nd	218	30bbR	
nd	218	30bbS	
Triterpanes, m/z 177			
nd	177	25nor28ab	
nd	177	25nor30ab	
Triterpanes, m/z 191			
33.52	191	23/3	1805
35.41	191	24/3	500
nd	191	25/3	
41.96	191	24/4	824
42.15	191	26/3	448
nd	191	27Ts	
53.94	191	27Tm	3455
nd	191	28ab	
nd	191	25nor30ab	
58.12	191	29ab	5967
58.25	191	29Ts	1335
nd	191	30D	
nd	191	29ba	
nd	191	30O	
60.68	191	30ab	8540
61.86	191	30ba	2206
nd	191	30G	
63.66	191	31abS	5362
64.02	191	31abR	3691
65.94	191	32abS	2713
66.43	191	32abR	1883
68.64	191	33abS	1876
69.38	191	33abR	1142
71.76	191	34abS	1146
72.81	191	34abR	752
75.37	191	35abS	556
nd	191	35abR	

Saga Petroleum ASA
File: C:\DATA\ANA_315\ 0901001.D

Date aquired: 19 Dec 96 9:32 am
Method: BMS_ON

Sample: 15/12-10 S 3375 sat

Saturate biomarkers

	Rt. min	Ion m/z	Compound	Height
Steranes, m/z 217				
	45.22	217	27dbS	1911
	46.42	217	27dbR	1039
	50.50	217	27aaS	943
	50.60	217	29dbS	637
	51.76	217	27aaR	2761
	52.06	217	29dbR	448
	56.10	217	29aaS	380
	56.61	217	29bbR	394
	56.79	217	29bbS	511
	58.00	217	29aaR	380
Steranes, m/z 218				
	50.75	218	27bbR	960
	51.01	218	27bbS	923
	53.99	218	28bbR	558
	54.25	218	28bbS	613
	56.62	218	29bbR	683
	56.80	218	29bbS	668
	nd	218	30bbR	
	nd	218	30bbS	
Triterpanes, m/z 177				
	nd	177	25nor28ab	
	nd	177	25nor30ab	
Triterpanes, m/z 191				
	33.73	191	23/3	5417
	35.52	191	24/3	1978
	39.27	191	25/3	1057
	42.03	191	24/4	1991
	42.34	191	26/3	936
	52.72	191	27Ts	1160
	54.00	191	27Tm	1042
	nd	191	28ab	
	nd	191	25nor30ab	
	58.20	191	29ab	2500
	58.34	191	29Ts	698
	nd	191	30D	
	nd	191	29ba	
	nd	191	30O	
	60.73	191	30ab	4332
	nd	191	30ba	
	nd	191	30G	
	63.70	191	31abS	1600
	64.04	191	31abR	1044
	65.98	191	32abS	1253
	66.49	191	32abR	974
	68.68	191	33abS	714
	69.14	191	33abR	600
	nd	191	34abS	
	nd	191	34abR	
	nd	191	35abS	
	nd	191	35abR	

Saga Petroleum ASA
File: C:\DATA\ANA_315\ 0801008.D

Date aquired: 18 Dec 96 10:53 pm
Method: BMS_ON

Sample: 15/12-10 S 3381 sat

Saturate biomarkers

Rt. min	Ion m/z	Compound	Height
Steranes, m/z 217			
45.24	217	27dbS	1626
46.44	217	27dbR	905
50.51	217	27aaS	785
50.77	217	29dbS	569
51.78	217	27aaR	2350
52.10	217	29dbR	400
56.10	217	29aaS	350
56.65	217	29bbR	385
56.83	217	29bbS	483
57.98	217	29aaR	416
Steranes, m/z 218			
50.76	218	27bbR	880
51.03	218	27bbS	737
54.02	218	28bbR	491
54.28	218	28bbS	571
56.64	218	29bbR	712
56.82	218	29bbS	665
nd	218	30bbR	
nd	218	30bbS	
Triterpanes, m/z 177			
nd	177	25nor28ab	
nd	177	25nor30ab	
Triterpanes, m/z 191			
33.71	191	23/3	5441
35.51	191	24/3	1882
39.26	191	25/3	1016
42.05	191	24/4	1672
42.34	191	26/3	808
52.74	191	27Ts	933
54.02	191	27Tm	1097
nd	191	28ab	
nd	191	25nor30ab	
58.20	191	29ab	2600
58.37	191	29Ts	835
58.82	191	30D	550
0.00	191	29ba	
nd	191	30O	
60.77	191	30ab	4335
nd	191	30ba	
nd	191	30G	
63.73	191	31abS	2113
64.08	191	31abR	1436
66.03	191	32abS	1348
66.50	191	32abR	700
68.74	191	33abS	719
nd	191	33abR	
nd	191	34abS	
nd	191	34abR	
nd	191	35abS	
nd	191	35abR	

Saga Petroleum ASA
File: C:\DATA\ANA_338\ 0201002.D

Date aquired: 14 Apr 97 3:58 pm
Method: BMS_ON

Sample: 15/12-10S 3410 sat

Saturate biomarkers

	Rt. min	Ion m/z	Compound	Height
Steranes, m/z 217				
	45.16	217	27dbS	543
	nd	217	27dbR	
	nd	217	27aaS	
	nd	217	29dbS	
	nd	217	27aaR	
	nd	217	29dbR	
	nd	217	29aaS	
	nd	217	29bbR	
	nd	217	29bbS	
	nd	217	29aaR	
Steranes, m/z 218				
	nd	218	27bbR	
	nd	218	27bbS	
	nd	218	28bbR	
	nd	218	28bbS	
	nd	218	29bbR	
	nd	218	29bbS	
	nd	218	30bbR	
	nd	218	30bbS	
Triterpanes, m/z 177				
	nd	177	25nor28ab	
	nd	177	25nor30ab	
Triterpanes, m/z 191				
	33.46	191	23/3	645
	nd	191	24/3	
	nd	191	25/3	
	nd	191	24/4	
	nd	191	26/3	
	nd	191	27Ts	
	53.93	191	27Tm	1538
	nd	191	28ab	
	nd	191	25nor30ab	
	58.11	191	29ab	2611
	nd	191	29Ts	
	nd	191	30D	
	nd	191	29ba	
	nd	191	30O	
	60.68	191	30ab	3695
	61.83	191	30ba	1081
	nd	191	30G	
	63.63	191	31abS	2396
	63.98	191	31abR	1770
	65.94	191	32abS	1179
	66.42	191	32abR	894
	nd	191	33abS	
	nd	191	33abR	
	nd	191	34abS	
	nd	191	34abR	
	nd	191	35abS	
	nd	191	35abR	

Saga Petroleum ASA
File: C:\DATA\ANA_315\ 0601006.D

Date aquired: 18 Dec 96 7:19 pm
Method: BMS_ON

Sample: 15/12-10 S 3424 coal sat

Saturate biomarkers

Steranes, m/z 217

Rt. min	Ion m/z	Compound	Height
45.20	217	27dbS	387
nd	217	27dbR	
nd	217	27aaS	
50.63	217	29dbS	3008
51.79	217	27aaR	524
52.06	217	29dbR	2043
56.11	217	29aaS	4691
56.65	217	29bbR	1970
56.84	217	29bbS	2022
57.98	217	29aaR	5313

Steranes, m/z 218

nd	218	27bbR	
nd	218	27bbS	
54.03	218	28bbR	1220
54.27	218	28bbS	707
56.65	218	29bbR	3111
56.84	218	29bbS	2879
nd	218	30bbR	
nd	218	30bbS	

Triterpanes, m/z 177

nd	177	25nor28ab	
nd	177	25nor30ab	

Triterpanes, m/z 191

nd	191	23/3	
35.39	191	24/3	861
nd	191	25/3	
41.96	191	24/4	9160
nd	191	26/3	
52.74	191	27Ts	657
54.03	191	27Tm	96000
nd	191	28ab	
nd	191	25nor30ab	
58.21	191	29ab	107404
nd	191	29Ts	
58.82	191	30D	4230
59.68	191	29ba	26000
nd	191	30O	
60.79	191	30ab	112734
61.93	191	30ba	46318
nd	191	30G	
63.76	191	31abS	85039
64.10	191	31abR	59832
66.05	191	32abS	55436
66.53	191	32abR	38119
68.74	191	33abS	19956
69.47	191	33abR	12824
71.89	191	34abS	14140
72.95	191	34abR	9352
75.53	191	35abS	5648
77.01	191	35abR	3507

Saga Petroleum ASA
File: C:\DATA\ANA_315\ 1101003.D

Date aquired: 19 Dec 96 1:04 pm
Method: BMS_ON

Sample: 15/12-10 S 3459 sat

Saturate biomarkers

	Rt. min	Ion m/z	Compound	Height
Steranes, m/z 217				
	45.18	217	27dbS	1222
	46.37	217	27dbR	669
	50.47	217	27aaS	527
	nd	217	29dbS	
	51.72	217	27aaR	1493
	nd	217	29dbR	
	nd	217	29aaS	
	nd	217	29bbR	
	nd	217	29bbS	
	nd	217	29aaR	
Steranes, m/z 218				
	50.72	218	27bbR	435
	50.96	218	27bbS	430
	53.95	218	28bbR	300
	54.23	218	28bbS	315
	56.60	218	29bbR	280
	56.79	218	29bbS	280
	nd	218	30bbR	
	nd	218	30bbS	
Triterpanes, m/z 177				
	nd	177	25nor28ab	
	nd	177	25nor30ab	
Triterpanes, m/z 191				
	33.61	191	23/3	3115
	35.42	191	24/3	1142
	39.31	191	25/3	671
	41.97	191	24/4	1113
	42.28	191	26/3	588
	52.68	191	27Ts	475
	nd	191	27Tm	
	nd	191	28ab	
	nd	191	25nor30ab	
	58.13	191	29ab	1270
	58.30	191	29Ts	300
	nd	191	30D	
	nd	191	29ba	
	nd	191	30O	
	60.72	191	30ab	1729
	nd	191	30ba	
	nd	191	30G	
	63.69	191	31abS	538
	64.10	191	31abR	450
	nd	191	32abS	
	nd	191	32abR	
	nd	191	33abS	
	nd	191	33abR	
	nd	191	34abS	
	nd	191	34abR	
	nd	191	35abS	
	nd	191	35abR	

Saga Petroleum ASA Date aquired: 19 Nov 96 7:38 pm
File: C:\DATA\ANA_308\ 0401004.D Method: BMA_ON

Sample: [119302] 15/12-10 S MDT 024 (1) aro **Aromatics**

	Rt. min	Ion m/z	Compound	Height
Phenantrenes				
	31.36	178	P	233103
	34.28	192	3-MP	123000
	34.43	192	2-MP	125930
	34.90	192	9-MP	189981
	35.02	192	1-MP	183270
Dibenzothiophenes				
	30.64	184	DBT	61696
	33.28	198	4-MDBT	65692
	33.76	198	3+2-MDBT	36265
	34.34	198	1-MDBT	24603
Triaromatic steroids				
	46.10	231	C20TA	18000
	47.93	231	C21TA	20503
	54.46	231	SC26TA	20204
	55.64	231	RC26TA/SC27TA	62587
	56.60	231	SC28TA	37000
	57.13	231	RC27TA	26358
	58.45	231	RC28-TA	28000
Monoaromatic steroids				
	40.27	253	A1 C21-M	7974
	42.03	253	B1 C22-MA	5576
	49.21	253	C1 bSC27MA	11866
	50.28	253	D1 bRC27MA	7997
	50.69	253	E1 bSC28MA	16198
	51.11	253	F1 aSC27DMA	3216
	51.96	253	G1 bRC28MA	12674
	53.19	253	H1 aSC29MA	13086
	nd	253	I1 aRC29MA	

Saga Petroleum ASA
File: C:\DATA\ANA_315\ 0401004.D

Date aquired: 18 Dec 96 4:36 pm
Method: BMA_ON

Sample: [119026] 15/12-10 S 3275 aro

Aromatics

	Rt. min	Ion m/z	Compound	Height
Phenantrenes				
	31.31	178	P	10452
	34.23	192	3-MP	3967
	34.37	192	2-MP	2460
	34.83	192	9-MP	7498
	34.95	192	1-MP	7226
Dibenzothiophenes				
	30.61	184	DBT	1920
	33.23	198	4-MDBT	1186
	33.70	198	3+2-MDBT	675
	34.27	198	1-MDBT	1953
Triaromatic steroids				
	46.01	231	C20TA	1977
	47.82	231	C21TA	1089
	54.35	231	SC26TA	2245
	55.51	231	RC26TA/SC27TA	5193
	56.48	231	SC28TA	2477
	57.01	231	RC27TA	2204
	58.31	231	RC28-TA	2308
Monoaromatic steroids				
	40.16	253	A1 C21-M	580
	41.90	253	B1 C22-MA	360
	49.09	253	C1 bSC27MA	1100
	50.16	253	D1 bRC27MA	800
	50.57	253	E1 bSC28MA	1619
	nd	253	F1 aSC27DMA	
	51.83	253	G1 bRC28MA	1834
	53.07	253	H1 aSC29MA	1245
	nd	253	I1 aRC29MA	

Saga Petroleum ASA Date aquired: 19 Dec 96 2:43 pm
File: C:\DATA\ANA_315\ 1201004.D Method: BMA_ON

Sample: 15/12-10 S 3375 aro **Aromatics**

	Rt. min	Ion m/z	Compound	Height
Phenantrenes				
	31.26	178	P	37439
	34.16	192	3-MP	19225
	34.30	192	2-MP	19473
	34.78	192	9-MP	15980
	34.90	192	1-MP	14628
Dibenzothiophenes				
	30.54	184	DBT	5359
	33.18	198	4-MDBT	6060
	33.65	198	3+2-MDBT	3345
	34.21	198	1-MDBT	1631
Triaromatic steroids				
	nd	231	C20TA	
	nd	231	C21TA	
	nd	231	SC26TA	
	nd	231	RC26TA/SC27TA	
	nd	231	SC28TA	
	nd	231	RC27TA	
	nd	231	RC28-TA	
Monoaromatic steroids				
	nd	253	A1 C21-M	
	nd	253	B1 C22-MA	
	nd	253	C1 bSC27MA	
	nd	253	D1 bRC27MA	
	nd	253	E1 bSC28MA	
	nd	253	F1 aSC27DMA	
	nd	253	G1 bRC28MA	
	nd	253	H1 aSC29MA	
	nd	253	I1 aRC29MA	

Saga Petroleum ASA
File: C:\DATA\ANA_315\ 0501005.D

Date aquired: 18 Dec 96 5:54 pm
Method: BMA_ON

Sample: 15/12-10 S 3381 aro

Aromatics

Rt. min	Ion m/z	Compound	Height
Phenantrenes			
31.29	178	P	38152
34.20	192	3-MP	18988
34.34	192	2-MP	19396
34.81	192	9-MP	15034
34.94	192	1-MP	15316
Dibenzothiophenes			
30.57	184	DBT	5815
33.21	198	4-MDBT	5766
33.69	198	3+2-MDBT	3400
34.25	198	1-MDBT	1570
Triaromatic steroids			
46.01	231	C20TA	972
nd	231	C21TA	
54.35	231	SC26TA	1270
55.51	231	RC26TA/SC27TA	3209
56.46	231	SC28TA	2320
57.01	231	RC27TA	1413
58.31	231	RC28-TA	2141
Monoaromatic steroids			
40.10	253	A1 C21-M	600
41.90	253	B1 C22-MA	320
49.09	253	C1 bSC27MA	1715
50.16	253	D1 bRC27MA	1061
50.57	253	E1 bSC28MA	2087
nd	253	F1 aSC27DMA	
51.83	253	G1 bRC28MA	1368
53.08	253	H1 aSC29MA	1192
nd	253	I1 aRC29MA	

Saga Petroleum ASA
File: C:\DATA\ANA_316\ 1301001.D

Date aquired: 2 Jan 97 1:41 pm
Method: BMA_ON

Sample: 15/12-10 S 3410 aro

Aromatics

	Rt. min	Ion m/z	Compound	Height
Phenantrenes				
	31.34	178	P	2745
	34.25	192	3-MP	1164
	34.37	192	2-MP	541
	34.83	192	9-MP	2829
	34.95	192	1-MP	2619
Dibenzothiophenes				
	nd	184	DBT	
	nd	198	4-MDBT	
	nd	198	3+2-MDBT	
	33.21	198	1-MDBT	350
Triaromatic steroids				
	45.99	231	C20TA	656
	47.80	231	C21TA	400
	54.33	231	SC26TA	820
	55.49	231	RC26TA/SC27TA	1901
	56.46	231	SC28TA	1206
	56.99	231	RC27TA	800
	58.29	231	RC28-TA	1063
Monoaromatic steroids				
	40.15	253	A1 C21-M	200
	41.91	253	B1 C22-MA	120
	49.07	253	C1 bSC27MA	340
	50.14	253	D1 bRC27MA	320
	50.55	253	E1 bSC28MA	520
	50.99	253	F1 aSC27DMA	200
	51.82	253	G1 bRC28MA	550
	53.06	253	H1 aSC29MA	500
	nd	253	I1 aRC29MA	

Saga Petroleum ASA
File: C:\DATA\ANA_315\ 0301003.D

Date aquired: 18 Dec 96 3:19 pm
Method: BMA_ON

Sample: 15/12-10 S 3424 coal aro

Aromatics

Rt. min	Ion m/z	Compound	Height
Phenantrenes			
31.28	178	P	117672
34.20	192	3-MP	51712
34.32	192	2-MP	56727
34.80	192	9-MP	53604
34.92	192	1-MP	103776
Dibenzothiophenes			
30.55	184	DBT	14887
33.19	198	4-MDBT	7790
33.67	198	3+2-MDBT	6151
34.25	198	1-MDBT	4991
Triaromatic steroids			
nd	231	C20TA	
nd	231	C21TA	
nd	231	SC26TA	
55.53	231	RC26TA/SC27TA	93523
56.48	231	SC28TA	110221
57.03	231	RC27TA	62076
58.33	231	RC28-TA	110578
Monoaromatic steroids			
nd	253	A1 C21-M	
nd	253	B1 C22-MA	
nd	253	C1 bSC27MA	
nd	253	D1 bRC27MA	
nd	253	E1 bSC28MA	
nd	253	F1 aSC27DMA	
51.85	253	G1 bRC28MA	9970
53.08	253	H1 aSC29MA	8804
nd	253	I1 aRC29MA	

Saga Petroleum ASA Date aquired: 2 Jan 97 3:13 pm
File: C:\DATA\ANA_316\ 1401002.D Method: BMA_ON

Sample: 15/12-10 S 3459 aro **Aromatics**

	Rt. min	Ion m/z	Compound	Height
Phenantrenes				
	31.26	178	P	14837
	34.20	192	3-MP	7853
	34.32	192	2-MP	6333
	34.79	192	9-MP	6005
	34.92	192	1-MP	5529
Dibenzothiophenes				
	30.55	184	DBT	2066
	33.19	198	4-MDBT	2514
	33.67	198	3+2-MDBT	1278
	34.23	198	1-MDBT	731
Triaromatic steroids				
	nd	231	C20TA	0
	47.82	231	C21TA	300
	54.35	231	SC26TA	200
	55.51	231	RC26TA/SC27TA	640
	56.44	231	SC28TA	300
	57.01	231	RC27TA	280
	58.29	231	RC28-TA	280
Monoaromatic steroids				
	40.22	253	A1 C21-M	300
	41.91	253	B1 C22-MA	220
	49.09	253	C1 bSC27MA	1213
	50.16	253	D1 bRC27MA	680
	50.57	253	E1 bSC28MA	1556
	nd	253	F1 aSC27DMA	
	51.83	253	G1 bRC28MA	700
	53.06	253	H1 aSC29MA	620
	nd	253	I1 aRC29MA	