

RFT RESULTS – PRESSURES
WELL: 35/9-1

All pressures from HP gauge.

Run no/ Test no	Depth m RKB MD	IHP Bar	FP Bar	FHP Bar	Mob.ratio	Comment
2A/1	2038.5	257.48	232.35	257.50	0.24	Lim. draw down
2A/2	2039.2	257.61	231.75	257.58	0.18	Lim. draw down
2A/3	2051.0	259.04	230.58	250.05	56.57	Good
2A/4	2054.0	259.43	230.63	259.44	76.70	Good
2A/5	2056.5	259.75	230.73	259.74	98.74	Good
2A/6	2077.5	262.37	233.12	262.41	0.29	Supercharged
2A/7	2087.8	–	232.??	–	–	Incomplete
2A/8	2090.5	264.05	231.92	264.03	1.98	Moderate
2A/9	2101.0	265.35	231.68	265.37	140.69	Very good
2A/10	3103.0	265.59	231.72	256.60	224.87	Excellent
2A/11	2106.0	266.01	231.79	266.03	42.09	Good
2A/12	2112.0	266.78	321.92	266.77	318.42	Excellent
2A/13	2117.0	267.44	232.04	267.45	328.96	Excellent
2A/14	2123.0	268.17	232.20	268.18	189.55	Very good
2A/15	2128.0	268.81	232.32	268.82	94.26	Good
2A/16	2135.0	269.69	232.49	269.71	20.92	Good
2A/17	2151.5	271.80	–	271.83	–	Tight
2A/18	2228.0	281.49	234.20	281.49	71.53	Good
2A/19	2233.0	282.09	234.28	282.10	352.77	Excellent
2A/20	2234.5	282.29	234.80	282.30	3.64	Supercharged
2A/21	2238.5	282.80	234.38	282.80	76.94	Good
2A/22	2244.0	283.49	234.53	283.51	25.99	Good
2A/23	2268.5	286.69	235.20	286.64	193.18	Very good
2A/24	2272.0	287.09	235.70	287.09	0.73	Supercharged
	2275.5	287.50	–	–	–	HP plugged
2A/25	2277.5	287.36 *	235.10 *	287.37 *	18.29	Good
2A/26	2282.5	288.00 *	235.16 *	288.00 *	21.33	Good
2A/27	2287.0	288.60 *	235.45 *	288.58 *	4.11	Moderate
2A/28	2289.3	288.87 *	230.60 *	288.87 *	44.24	Good
2A/29	2290.2	288.97 *	235.66 *	288.94 *	78.32	Good
2A/30	2300.4	290.30 *	–	290.25 *	–	Tight
Sample	2282.5					

* Strain gauge

Run	: 2A	2A
Chamber vol.(Gal)	: 2 3/4	1
Filling time (min)	: 221	50
Shut in pressure, Bar(HP) /T°C	: 226.44/71.8	185.43/71.3
Chamber pressure surface, Bar/T	: 131/80	–
Gas volume (SCM)	: 0.795	–
Oil volume (litres)	: 5.0	2.3
Oil gravity (API)	: 43	0.64/71.1°C ρ sat
Water/filtrate (litres)	: 0.5	0.19

Daily mud properties

Date
-1989

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System : BORE

Norsk Well: 35/9-1
Hydro Mud Contractor: M-I,Norge
Data: "Mid depth" from table 3, otherwise from table 14.

14. 4

Date	Mid depth m, MD	Mud Dens. (SG)	PV cp	YP Pa	GEL		pH	100 psi (cc)	HP/HT (cc)	Cl- inn/out mg/l	Alkalinity			Ca++ inn/out mg/l	Oil %	Sol %	H2O %	V.G. meter at 115 gr. F						Mud Type			
					0 Pa	10 Pa					Pf	Pm	Mf					600 rpm	300 rpm	200 rpm	100 rpm	6 rpm	3 rpm				
890329	384	1.48	0	0																			OLD KCL MUD				
890330	384	1.30	12	7																			KCL				
890331	384	1.05	0	0																			SPUDMUD				
890401	456	1.05	0	0																			SPUDMUD				
890402	466	1.05	0	0																			SPUDMUD				
890403	693	1.05	0	0																			SPUDMUD				
890404	815	1.05	0	0																			SPUDMUD				
890405	815	1.08	21	8	1	1	8.0	8.0		42000/42000			0.50							58	31	30	20	2	1	KCL/POLYM	
890406	815	1.08	21	8	1	1	8.0	8.0		42000/42000			0.50							58	37	30	20	2	1	KCL/POLY	
890407	815	1.08	21	8	1	1	8.0	8.0		42000/42000			0.50							58	37	30	20	2	1	KCL/POLY	
890408	886	1.10	13	5	1	1	9.8	10.0		44000/44000	0.35	2.00	1.20							36	23	17	11	1	1	KCL/POLY	
890409	1335	1.20	18	7	1	1	9.8	10.0		51000/51000	0.35	2.00	1.20							36	23	17	11	1	1	KCL/POLY	
890410	1605	1.20	17	8	1	2	8.0	6.4		55000/55000	0.01	0.01	0.80			12				51	34	27	17	3	2	KCL/POLY	
890411	1739	1.20	16	7	1	1	7.6	6.7		55000/55000			0.70			12				45	29	21	14	3	2	KCL/POLYMER	
890412	1850	1.22	17	8	1	3	7.8	6.5		54000/54000			0.80			13				50	33	26	16	4	2	KCL/POLYMER	
890413	1942	1.25	17	8	3	8	7.8	6.8		57000/57000			0.80				15			51	34	28	19	6	4	KCL/POLYMER	
890414	1942	1.25	17	8	3	7	7.7	6.6		57000/57000			0.80				14			50	33	26	18	6	4	KCL/POLYMER	
890415	1942	1.25	16	7	2	5	7.7	6.8		58000/58000			0.80				14			46	30	24	17	4	3	KCL/POLYMER	
890416	1942	1.25	13	5	2	5	10.8	7.8		55000/55000	0.45	3.40	1.30				14			36	23	18	12	3	2	KCL/POLYMER	
890417	1942	1.25	15	6	2	4	8.7	6.0		46000/46000	0.70	1.00	4.80				14			42	27	20	14	3	2	KCL/POLYMER	
890418	1942	1.25	14	6	2	4	9.0	6.0		46000/46000	0.70	1.00	4.00				14			40	26	20	13	3	2	KCL/POLYMER	
890419	1945	1.25	12	6	2	4	10.5	6.2		47000/47000	3.00	4.20	6.50				14			36	24	19	11	3	2	KCL/POLYMER	
890420	1945	1.25	12	6	2	4	10.5	6.2		46000/46000	2.00	3.30	5.00				14			35	23	18	11	3	2	KCL/POLYMER	
890421	1948	1.25	14	6	2	4	10.0	5.4		44000/44000	2.40	5.80	4.50				14			40	26	18	12	3	2	KCL/POLYMER	
890422	2040	1.25	24	6	1	4	11.2	9.5		34000/34000	3.00	6.80	5.90				11			67	43	33	21	3	2	KCL/POLYMER	
890423	2081	1.25	22	9	1	2	11.7	3.8		33000/33000	2.70	6.70	5.20				11			61	39	28	17	3	2	KCL/POLYMER	
890424	2120	1.28	23	8	1	2	11.8	4.0		34000/34000	2.90	7.10	5.80				0	13	87	62	39	28	16	3	2	KCL/POLYMER	
890425	2144	1.28	20	6	1	2	8.8	3.8		32000/32000	1.90	2.40	5.80				0	13	87	52	32	23	14	2	1	KCL/POLYMER	
890426	2218	1.28	23	8	1	2	8.7	4.0	11.0	26000/26000	0.70	1.30	4.00				0	13	87	63	40	30	18	3	2	KCL/POLYMER	
890427	2241	1.28	21	7	1	2	8.7	3.5	11.0	27000/27000	0.70	1.40	3.80				0	13	87	56	35	25	15	2	1	KCL/POLYMER	
890428	2269	1.28	24	8	1	2	8.8	3.6	11.4	26000/26000	0.70	1.30	3.60				0	13	87	64	40	30	18	3	2	KCL/POLYMER	
890429	2306	1.28	24	7	1	2	8.8	3.1	12.4	27000/27000	0.70	1.20	3.60				0	13	87	62	38	29	18	3	2	KCL/POLYMER	
890430	2316	1.28	22	6	1	2	8.8	2.8	10.0	28000/28000	0.70	0.95	3.10				0	13	87	56	34	25	15	2	1	KCL/POLYMER	
890501	2350	1.28	24	8	1	2	8.8	3.4	11.0	26000/26000	0.70	1.00	3.40				0	13	87	64	40	30	18	3	2	KCL/POLYMER	
890502	2350	1.28	24	8	1	2	8.8	3.6	11.4	26000/26000	0.80	1.20	3.40				0	13	87	65	41	30	17	3	2	KCL/POLYMER	
890503	2350	1.28	24	9	1	2	8.8	3.6	11.4	26000/26000	0.80	1.20	3.60				0	13	87	65	41	30	17	3	2	KCL/POLYMER	
890504	2350	1.28	23	8	1	2	8.8	3.6	11.2	25000/25000	0.70	1.20	3.40				0	13	87	62	39	30	17	3	2	KCL/POLYMER	
890505	2319	1.28	23	8	1	2	9.0	3.6	11.6	25000/25000	0.80	1.40	3.60				0	13	87	61	38	29	16	3	2	KCL/POLYMER	
890506	2313	1.28	25	11	2	9	9.5	3.8	11.8	26000/26000	0.50	1.50	1.60				0	13	87	71	46	35	23	5	4	KCL/POLYMER	
890706	2308	1.25	15	10	2	5	10.5			8000/8000	1.90	2.90	4.20				0	11	89	50	35	28	19	4	3	POLYMER	
890707	2308	1.25	15	10	2	5	10.5			8000/8000	1.90	2.90	4.20				0	11	89	50	35	28	19	4	2	POLYMER	
890708	2308	1.25	15	10	2	5	10.5			8000/8000	1.90	2.90	4.20				0	11	89	50	35	28	19	4	2	POLYMER	
890709	2308	1.26	0	0																							POLYMER
890710	2308	1.26	0	0																							POLYMER

TABLE B-10: DAILY MUD PROPERTIES

Daily mud properties

Date
6-11-1989

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System : BORE

Norsk Hydro Well: 35/9-1
Mud Contractor: M-I, Norge
Data: "Mid depth" from table 3, otherwise from table 14.

14.

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Date	Mid. depth m, MD	Mud Dens. (SG)	FV cp	YP Pa	GEL		pH	100 psi (cc)	HP/HT (cc)	Cl- inn/out mg/l	Alkalinity			Ca++ inn/out mg/l	Oil %	Sol %	H2O %	V.G. meter at 115 gr. F						Mud Type	
					0 Pa	10 Pa					Pf	Pm	Mf					600 rpm	300 rpm	200 rpm	100 rpm	6 rpm	3 rpm		
890711	2308	1.25	18	9	1	3	10.5			8000/8000	1.50	2.80	4.30					11	50	40	31	22	7	6	POLYMER
890712	2308	1.25	16	8	1	3	10.5			8000/8000	1.50	2.80	3.50					11	49	33	22	15	4	3	POLYMER
890713	2280	1.25	18	16	4	9	10.5				1.40	2.10	3.10					11	69	51	42	30	9	6	POLYMER
890714	2280	1.25	18	16	4	9	10.5				1.40	2.10	3.10					11	69	57	42	30	9	6	POLYMER
890715	2280	1.25	19	16	4	9	10.5				1.40	2.10	3.00					11	70	51	42	30	10	7	POLYMER
890716	2280	1.25	19	16	4	9	10.5				1.40	2.10	3.00					11	70	51	42	30	10	7	POLYMER
890717	2280	1.25	18	15	3	6	10.2				1.30	2.00	3.00					11	67	49	37	25	9	7	POLYMER
890718	2224	1.25	19	18	4	9	10.0	4.9		8000/8000	0.90	1.70	2.50					11	75	56	48	36	11	8	POLYMER
890719	2224	1.25	18	17	4	8	10.0	5.0		8000/8000	0.90	1.70	2.50					11	71	53	46	34	11	8	POLYMER
890720	2224	1.25	18	17	4	8	10.0	5.0		8000/8000	0.90	1.70	2.50					11	71	53	46	34	10	7	POLYMER
890721	2224	1.25	18	18	4	8	10.0	5.0		8000/8000	0.90	1.70	2.50					11	71	53	46	34	11	8	POLYMER
890722	2224	1.25	18	18	4	8	10.0	5.0		8000/8000	0.90	1.70	2.50					11	71	53	46	35	11	8	POLYMER
890723	2224	1.25	18	15	3	6	10.0	5.2		8000/8000	0.90	1.70	2.50					11	66	48	37	26	8	6	POLYMER
890724	1715	1.25	18	15	3	6	10.0	5.2		8000/8000	0.90	1.70	2.50					11	66	48	37	26	8	6	POLYMER
890725	437	1.25	18	15	3	6	10.0	5.2		8000/8000	0.90	1.70	2.50					11	66	48	37	26	8	6	POLYMER

TABLE B-11: MUD CONSUMPTION

((((ooo)	M u d c o n s u m p t i o n ----- System : BORE	Date 5/11-1989
Norsk Hydro	Well: 35/9-1 Mud company: M-I,Norge	13
		Actual used

Drilling of 36 " hole		

	MAGCOGEL Kg	19000
	CAUSTIC 1	200
Drilling of 26 " hole		

	MAGCOGEL Kg	60000
	CAUSTIC 1	870
Drilling of 17 1/2" hole		

	GYPSUM Kg	1091
	KCL POWDER Kg	17464
	MAGCOBAR Kg	47000
	MAGCOGEL Kg	1000
	MAGCOPOL LV Kg	7416
	MAGCOPOL REG Kg	7211
	POLY PLUS Kg	341
	SOD BICARBONATE Kg	5579
	XANTHAN GUM Kg	717
	CONQOR 404 1	50
	KCL BRINE 1	444000
Drilling of 8 1/2" hole		

	GYPSUM Kg	5613
	KCL-POWDER Kg	4319
	MAGCOBAR Kg	77000
	MAGCOPOL LV Kg	2584
	MAGCOPOL REG Kg	1168
	SOD BICARBONATE Kg	9324
	XC-POLYMER Kg	671
	CONQOR 404 1	278
	OILEX 1	208
	OS-1L 1	208
Test no. 3		

	MACOBAR Kg	13000
	XANTHAN Kg	186
Test no. 2		

	MACOBAR Kg	17000
	MAGCOPOL REG Kg	183
	XANTHAN Kg	352
Test no. 1		

	BENTONITE Kg	5000

((((ooo) ----- Norsk Hydro	M u d c o n s u m p t i o n ----- System : BORE Well: 35/9-1 Mud company: M-I,Norge	Date 5/11-1989 13
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		Actual used
MACOBAR	Kg	90000
MAGCOPOL REG	Kg	1040
SOD BICARB	Kg	1878
XANTHAN	Kg	456
CONQOR 404	l	208

ADDRESS KJELLER N-2007 Kjeller, Norway HALDEN TELEPHONE +47 6 806000 N-1751 Halden, Norway TELEX 74 573 energ n +47 9 183100 TELEFAX +47 6 815553 76 335 energ n		AVAILABILITY Private Confidential
REPORT TYPE	REPORT NO. IFE/KR/F-89/122	DATE 1989-09-11
	REPORT TITLE REPORT ON STABLE ISOTOPES ($\delta^{13}C$, δD , $\delta^{18}O$) ON NATURAL GAS SAMPLES FROM WELL 35/9-1, DST 1, DST 2 AND DST 3	DATE OF LAST REV.
		REV. NO.
	CLIENT Norsk Hydro A/S	NUMBER OF PAGES 5
CLIENT REF. KO3049-00/UID11701		NUMBER OF ISSUES 20
SUMMARY The gas components $C_1 - C_5$ and CO_2 have been separated from natural gas samples from well 35/9-1, DST 1, DST 2, and DST 3, and the $\delta^{13}C$ values of methane, ethane, propane, the butanes and CO_2 have been measured. The isotopic composition of hydrogen from CH_4 has also been measured.		DISTRIBUTION Hydro (14) Andresen, B. Råheim, A. Thronsen, T. File (3)
KEYWORDS		
NAME	DATE	SIGNATURE
PREPARED BY Björg Andresen	1989-09-11	<i>Björg Andresen</i>
REVIEWED BY Torbjørn Thronsen	1989-09-11	<i>Torbjørn Thronsen</i>
APPROVED BY Arne Råheim	1989-09-11	<i>Arne Råheim</i>

1 INTRODUCTION

Three gas samples from well 35/9-1, DST 1, DST 2 and DST 3 were received and analysed August/September 1989.

On the samples C₁ - C₅ and CO₂ are quantified, and the $\delta^{13}\text{C}$ value is measured on methane, ethane, propane, the butanes and CO₂. The δD value is also measured on methane.

2 ANALYTICAL PROCEDURE

The natural gas has been quantified and separated into the different gas components by a Carlo Erba 4200 instrument.

The hydrocarbon gas components were oxidized in separate CuO-ovens in order to prevent cross contamination. The combustion products CO₂ and H₂O were frozen into collection vessels and separated.

The water was reduced with zinc metal in sealed tubes to prepare hydrogen for isotopic analysis. The isotopic measurements were performed on a Finnigan Mat 251 and Finnigan Delta mass spectrometer. IFE's value on NBS 22 is $-29.77 \pm .06$ ‰ PDB.

3 RESULTS

The volume composition of the gas samples is given in table 1. The results have been normalized to 100%. The stable isotope results are given in table 2.

The uncertainty on the $\delta^{13}\text{C}$ value is estimated to be ± 0.3 ‰ PDB and includes all the different analytical steps. The uncertainty on the δD value is likewise estimated to be ± 5 ‰.

Table 1 Volume composition of gas samples from well 35/9-1.

SAMPLE	IFE no.	C ₁ %	C ₂ %	C ₃ %	iC ₄ %	nC ₄ %	iC ₅ %	nC ₅ %	CO ₂ %	Σ C ₁ - C ₅	WET- NESS	iC ₄ / nC ₄
DST 1	8415	77.8	12.9	5.4	0.69	1.8	0.30	0.30	0.81	99.2	0.22	0.39
DST 2	8386	74.8	14.7	5.9	0.75	1.9	0.41	0.45	1.1	98.9	0.24	0.40
DST 3	8416	80.6	10.4	4.7	0.66	1.7	0.61	0.58	0.69	99.3	0.19	0.38

Table 2 Isotopic composition of gas samples from well 35/9-1.

SAMPLE	IFE no.	C ₁ δ ¹³ C PDB	C ₁ δ D SMOW	C ₂ δ ¹³ C PDB	C ₃ δ ¹³ C PDB	iC ₄ δ ¹³ C PDB	nC ₄ δ ¹³ C PDB	CO ₂ δ ¹³ C PDB	CO ₂ δ ¹⁸ O PDB
DST 1	8415	-43.5	-193	-30.8	-27.7	-26.1	-27.7	-16.0	-9.6
DST 2	8386	-43.4	-195	-30.9	-28.0	-26.5	-26.7	-20.5	-6.7
DST 3	8416	-43.1	-200	-30.5	-27.7	-25.9	-27.3	-26.8	-8.1

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Title
 PETROLEUM GEOCHEMISTRY
 WELL 35/9-1
 DATA REPORT

BA-90-986-1
 21 MAI 1990
REGISTERET
 OLJEDIREKTORATET

Summary/Conclusion/Recommendation

This is a report of the geochemical 'raw' data of well 35/9-1.

The data is described and evaluated in a previous report: 'Petroleum Geochemistry', Well 35/9-1, Norsk Hydro, 01.01.90.

Keywords

Source rocks, maturity, migrated hydrocarbons, biomarkers.

Pages-Appendix 153	Amendment no.	Revision no.	Revision date
Quadrant/Block-Well 35/9	Project no. KA 559A	Licens no. PL 153	Date 09.05.90
Sector	Geosection		
Section			Bas.mod/Petrol. geochem.
Authors			N. Telnæs J.B. Olsen
Controlled			
Accepted			<i>Tove E. Rødal</i>
Approved			<i>CR Dahl</i>

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- Table 3.3.:** Extraction ratios.
- Table 3.4.:** Molecular parameters from GC of alkane fraction.

Table 2.1. VITRINITE REFLECTANCE DATA WELL 35/9-1
Average values

Petroleum Geochemistry Group
Research Center Bergen



Depth	Population I	Population II	Population III	SCI
2041.50	0.41 (21)			
2045.50	0.42 (20)			
2057.50	0.43 (22)			
2059.00	0.43 (23)			
2065.00	0.45 (20)			
2140.00	0.45 (21)			
2142.00	0.40 (22)			
2146.00	0.42 (21)			
2152.00	0.43 (21)			
2165.00	0.46 (22)			
2175.00	0.43 (22)			
2190.00	0.46 (21)			
2202.00	0.45 (21)			
2230.70	0.49 (22)			
2233.90	0.51 (23)			
2244.60	0.47 (22)			
2256.90	0.50 (23)			
2264.50	0.49 (24)			

BIOMARKERRATIOS WELL: 35/9-1

M/Z 191

M/Z 217

SAMPLE	A	B	C	D	E	F	G
2045.5m	1.04	0.31	0.27	0.21	53	28	42
2048.5m	1.05	0.30	0.25	0.21	51	28	44
2053.5m	1.00	0.30	0.29	0.20	55	31	47
2057.5m	0.96	0.28	0.28	0.20	51	27	42
2063.0m	1.09	0.29	0.26	0.20	53	27	43
2105.0m	1.00	0.31	0.23	0.17	55	31	45
2129.5m	1.28	0.29	0.25	0.17	49	28	49
2139.6m	1.27	0.30	0.25	0.17	55	30	46
2146.0m	0.83	0.31	0.20	0.23	47	26	43
2177.0m	1.65	0.37	0.17	0.23	50	23	36
2200.0m	0.48	0.45	0.14	0.22	53	28	43
2230.7m	1.33	0.30	0.15	0.17	54	29	47
2233.0m	2.00	0.29	0.16	0.12	62	49	57
2233.9m	1.74	0.26	0.15	0.18	55	41	52
2237.0m	1.73	0.27	0.20	0.12	60	46	61
2244.1m	2.05	0.27	0.19	0.14	61	44	52
2253.0m	2.25	0.31	0.12	0.12	63	51	63
2256.9m	2.31	0.28	0.12	0.13	59	42	57
2264.5m	1.79	0.26	0.14	0.15	57	39	54
2274.5m	0.17	0.30	0.10	0.22	50	22	32
2280.5m	2.78	0.28	0.12	0.10	61	55	62
2288.5m	2.64	0.27	0.12	0.10	61	48	64

A = Ts/Tm

B = Norhopan/
Norh.+Hopane

C = Bisnorhop/
Bisnh.+Norhp

D = Moretane/
Hopane

E = %22S

F = %aaa20S

G = %abb

Table 3.1. SOURCE ROCK SCREENING DATA WELL 35/9-1



Depth (m)	% Lithology	Sample	S1 Kg/t	S2 Kg/t	S3 Kg/t	TOC %	HI	OI	PI	Tmax Deg.c	Company
2043.80	100 SH	CORE	0.9	3.0	0.7	1.4	218	54	0.23	432	F-BG
2045.50	100 SH	CORE	1.4	6.0	0.8	2.2	275	38	0.19	430	F-BG
2048.50	100 SST	CORE	0.1	0.3	0.4	0.1	333	444	0.32	598	F-BG
2049.50	100 SST	CORE	0.1	0.4	0.2	0.1	489	200	0.21	598	F-BG
2051.50		CORE	0.9	3.2	0.6	1.4	226	39	0.22	434	F-BG
2052.00	100 SST	CORE	0.1	0.4	0.1	0.1	557	200	0.19	499	F-BG
2053.50	100 SST	CORE	0.1	0.2	0.1	0.1	288	175	0.36	439	F-BG
2057.50	100 SH	CORE	0.6	1.4	0.3	0.7	192	43	0.28	432	F-BG
2059.00	100 SH	CORE	0.9	3.1	0.3	1.2	254	26	0.22	432	F-BG
2063.00	100 SH	CORE	1.3	5.6	0.4	2.0	278	22	0.19	431	F-BG
2065.00	100 SH	CORE	0.9	3.9	0.5	1.5	266	32	0.19	432	F-BG
2092.00		DC	0.1	0.6	1.9	0.8	76	234	0.13	436	F-BG
2096.00	100 SST	CORE	0.4	0.9	0.3	0.5	177	52	0.31	431	F-BG
2097.50	100 SST	CORE	0.1	0.8	0.2	0.1	844	167	0.14	589	F-BG
2100.00	100 SST	CORE	0.1	1.6	0.3	0.2	790	155	0.08	590	F-BG
2102.50	100 SST	CORE	0.2	0.1	0.3	0.1	186	357	0.57	423	F-BG
2104.00	100 SST	CORE	0.2	0.2	0.3	0.1	164	273	0.47	485	F-BG
2105.00		DC	0.1	0.9	0.2	0.1	662	131	0.12	596	F-BG

Table 3.1. SOURCE ROCK SCREENING DATA WELL 35/9-1 (cont'd)



Depth (m)	% Lithology	Sample	S1 Kg/t	S2 Kg/t	S3 Kg/t	TOC %	HI	OI	PI	Tmax Deg.c	Company
2105.00	100 SST	CORE	0.2	0.4	1.3	0.3	125	409	0.38	424	F-BG
2107.00	100 SST	CORE	0.1	0.1	0.2	0.1	133	300	0.60	422	F-BG
2109.00	100 SST	CORE	0.2	0.1	0.3	0.1	100	264	0.61	431	F-BG
2111.00	100 SST	CORE	0.1	0.3	0.3	0.1	500	417	0.30	599	F-BG
2112.00		DC	0.2	0.3	1.0	0.2	142	404	0.33	428	F-BG
2114.00	100 SST	CORE	0.1	0.4	0.3	0.1	667	433	0.23	598	F-BG
2116.00	100 SST	CORE	0.1	0.2	0.3	0.1	300	640	0.40	590	F-BG
2117.00	100 SST	CORE	0.1	0.2	0.2	0.0	450	525	0.36	596	F-BG
2120.00		DC	0.1	0.8	0.2	0.1	780	240	0.14	594	F-BG
2120.00	100 SST	CORE	0.1	0.4	0.9	0.2	240	587	0.23	510	F-BG
2121.00	100 SST	CORE	0.2	0.6	0.3	0.1	644	356	0.24	598	F-BG
2123.00	100 SST	CORE	0.2	0.2	0.3	0.1	214	357	0.50	494	F-BG
2124.50	100 SST	CORE	0.2	0.2	0.2	0.1	300	317	0.45	593	F-BG
2127.00		DC	0.1	0.4	0.9	0.3	115	273	0.21	443	F-BG
2127.50	100 SST	CORE	0.2	0.1	0.2	0.1	138	250	0.58	418	F-BG
2129.50	100 SST	CORE	0.3	0.8	0.2	0.3	296	63	0.26	597	F-BG
2133.50	100 SST	CORE	0.2	0.5	0.1	0.1	544	156	0.26	595	F-BG
2137.00	100 SH	CORE	0.9	2.4	0.2	1.2	205	15	0.26	431	F-BG
2139.60	100 SH	CORE	1.4	9.1	0.3	2.1	428	15	0.13	429	F-BG

Table 3.1. SOURCE ROCK SCREENING DATA WELL 35/9-1 (cont'd)



Depth (m)	% Lithology	Sample	S1 Kg/t	S2 Kg/t	S3 Kg/t	TOC %	HI	OI	PI	Tmax Deg.c	Company
2140.00		DC	0.5	1.2	1.6	1.0	122	161	0.27	433	F-BG
2142.00	100 SH	CORE	0.7	2.7	0.5	1.0	256	46	0.21	434	F-BG
2143.00	100 SH	CORE	0.4	1.2	0.2	0.6	192	31	0.27	431	F-BG
2146.00	100 SH	CORE	0.6	1.7	0.3	1.1	154	29	0.27	434	F-BG
2147.00		DC	0.2	0.7	1.2	1.0	73	126	0.23	430	F-BG
2155.00		DC	0.5	1.5	1.3	1.0	140	129	0.24	434	F-BG
2162.00		DC	0.3	1.5	1.8	1.2	126	156	0.15	433	F-BG
2170.00		DC	0.4	1.8	1.4	1.1	156	123	0.17	431	F-BG
2177.00		DC	0.5	2.5	1.0	1.4	174	71	0.15	437	F-BG
2185.00		DC	0.5	3.1	1.2	1.7	182	73	0.14	439	F-BG
2185.00		DC	0.5	3.1	1.2	1.7	184	72	0.14	438	F-BG
2192.00		DC	0.4	1.8	1.3	1.1	163	120	0.17	439	F-BG
2192.00		DC	0.4	1.9	1.2	1.1	167	106	0.17	439	F-BG
2200.00		DC	0.5	3.4	1.5	1.6	214	92	0.12	438	F-BG
2210.00		DC	0.4	3.5	2.0	1.8	201	114	0.11	441	F-BG
2227.60	100 SST	CORE	0.1	0.3	0.1	0.1	533	200	0.20	594	F-BG
2229.30	100 SST	CORE	0.1	0.8	0.1	0.1	800	140	0.10	594	F-BG
2230.70	100 COAL	CORE	14.2	73.0		26.9	272		0.16	429	F-BG
2233.00	100 SST	CORE	0.1	1.9	0.1	0.2	808	58	0.07	482	F-BG

Table 3.1. SOURCE ROCK SCREENING DATA WELL 35/9-1 (cont'd)



Depth (m)	% Lithology	Sample	S1 Kg/t	S2 Kg/t	S3 Kg/t	TOC %	HI	OI	PI	Tmax Deg.c	Company
2233.90	100 COAL	CORE	36.3	158.5		63.5	249		0.19	416	F-BG
2235.00	100 SST	CORE	0.1	1.1		0.0	5500		0.08	381	F-BG
2237.00	100 SST	CORE	0.1	1.1	0.1	0.2	675	56	0.08	527	F-BG
2244.10	100 SST	CORE	0.1	0.3		0.0	1000		0.29	374	F-BG
2244.60	100 COAL	CORE	39.4	169.4		64.9	261		0.19	415	F-BG
2246.50	100 SST	CORE	0.1	0.2		0.0	800		0.38	423	F-BG
2249.00	100 SH	CORE	0.5	2.4	0.4	1.3	187	29	0.18	439	F-BG
2253.00	100 SH	CORE	0.8	3.1	0.4	1.3	242	29	0.20	441	F-BG
2256.90	100 SH	CORE	10.7	36.4		16.9	215		0.23	425	F-BG
2264.50	100 SH	CORE	1.9	5.5		4.6	120		0.26	433	F-BG
2267.60	100 SST	CORE	0.5	0.5		0.1	650		0.50	428	F-BG
2269.80	100 SST	CORE	0.5	0.6		0.1	622		0.47	418	F-BG
2274.50	100 SH	CORE	1.8	7.2	0.6	3.4	210	17	0.20	431	F-BG
2275.50	100 SST	CORE	0.3	0.1		0.0	350		0.68	396	F-BG
2277.20	100 SST	CORE	0.3	0.2		0.0	550		0.56	406	F-BG
2280.50	100 SST	CORE	10.4	0.8		0.9	87		0.93	411	F-BG
2281.50	100 SST	CORE	9.8	0.7		0.9	80		0.94	374	F-BG
2284.50	100 SST	CORE	3.5	0.5		0.3	161		0.87	411	F-BG
2287.00	100 SST	CORE	4.5	1.4		0.5	281		0.77	421	F-BG

Table 3.1. SOURCE ROCK SCREENING DATA WELL 35/9-1 (cont'd)



Depth (m)	% Lithology	Sample	S1 Kg/t	S2 Kg/t	S3 Kg/t	TOC %	HI	OI	PI	Tmax Deg.c	Company
2288.50	100 SST	CORE	11.9	0.5		1.0	49		0.96	415	F-BG
2289.30	100 SST	CORE	10.2	0.8		0.9	90		0.93	389	F-BG
2294.50	100 SST	CORE	1.0	0.2		0.1	170		0.85	413	F-BG

Table 3.2. SOURCE ROCK EXTRACTION DATA I WELL 35/9-1



Depth(m)	EOM(mg)	EOM(%)	Hydrocarbons			Non Hydrocarbons		
			SAT(%)	ARO(%)	TOTAL(%)	NSO(%)	ASPH(%)	TOTAL(%)
2045.50	41.60	0.21	29	27	56	8	37	44
2048.50	26.50	0.10	57	10	67	10	23	33
2053.50	7.60	0.03	49	8	57	3	40	43
2057.50	33.10	0.17	29	31	60	7	33	40
2063.00	31.90	0.18	16	20	36	5	59	64
2105.00	7.50	0.04	46	24	70	2	28	30
2121.00	13.00							
2129.50	18.00	0.09	3	3	5	1	94	95
2139.60	55.50	0.26	39	38	77	7	16	23
2146.00	35.90	0.19	22	43	65	5	31	35
2185.00	31.20							
2230.70	12.00	1.30	31	10	41	2	57	59
2233.00	7.40	0.04	24	36	59	1	39	40
2233.90	17.70	1.55	25	31	55	6	38	45
2237.00	5.20	0.03	49	12	61	1	39	39
2244.60	31.20	2.44	27	42	69	6	25	31
2253.00	28.50	0.16	30	35	65	12	23	35
2256.90	74.50	1.12	27	27	54	12	33	46

Table 3.2. SOURCE ROCK EXTRACTION DATA I WELL 35/9-1 (cont'd)



Depth(m)	EOM(mg)	EOM(%)	Hydrocarbons			Non Hydrocarbons		
			SAT(%)	ARO(%)	TOTAL(%)	NSO(%)	ASPH(%)	TOTAL(%)
2264.50	28.90	0.35	41	24	65	5	30	35
2274.50	32.70	0.23	18	16	34	33	33	66
2280.50	175.90	1.17	13	71	84	15	1	16
2288.50	248.70	1.40	72	18	90	8	2	10

Table 3.3. SOURCE ROCK EXTRACTION DATA II WELL 35/9-1



Depth(m)	TOC (%)	EOM(%) / TOC(%)	SAT(%) / TOC(%)	SAT(%) / ARO(%)	HC/non HC
2045.50	2.19	0.10	13.29	1.09	1.27
2048.50				5.83	2.04
2053.50				6.25	1.35
2057.50	0.74	0.23	39.73	0.96	1.51
2063.00	2.01	0.09	7.86	0.78	0.57
2105.00	0.32	0.13	143.44	1.93	2.31
2129.50	0.27	0.33	9.26	1.00	0.05
2139.60	2.13	0.12	18.45	1.04	3.40
2146.00	1.13	0.17	19.38	0.51	1.84
2230.70	26.85	0.05	1.15	3.02	0.70
2233.00	0.24	0.17	97.92	0.65	1.47
2233.90	63.54	0.02	0.39	0.80	1.24
2237.00	0.16	0.19	308.13	4.29	1.55
2244.60	64.88	0.04	0.41	0.63	2.22
2253.00	1.29	0.12	23.33	0.86	1.88
2256.90	16.91	0.07	1.59	0.98	1.19
2264.50	4.57	0.08	8.93	1.71	1.84
2274.50	3.42	0.07	5.38	1.16	0.52

Table 3.3. SOURCE ROCK EXTRACTION DATA II WELL 35/9-1 (cont'd)



Depth(m)	TOC (%)	EOM(%) / TOC(%)	SAT(%) / TOC(%)	SAT(%) / ARO(%)	HC / non HC
2280.50	0.92	1.27	13.70	0.18	5.20
2288.50	1.02	1.37	70.29	3.90	9.19

Table 3.4. SATURATED FRAC., MOLECULAR RATIOS WELL 35/9-1



Depth	Pr/n-C17	Pr/Ph	CPI-I	CPI-II	n-C15+/Total	n-C20/n-C25
2045.50	0.40	2.30	1.80	1.10		
2048.50	0.60	2.50	1.80	1.00		
2053.50	0.60	2.40	1.70	1.00		
2057.50	0.50	2.50	1.50	1.00		
2063.00	0.50	2.60	1.80	1.10		
2105.00	0.50	2.50	1.80	1.10		
2129.50	0.50	2.70	1.80	1.00		
2139.60	0.40	2.30	1.80	1.10		
2146.00	0.50	2.40	1.80	1.00		
2177.00	0.57	2.06	1.78	1.07		
2200.00	0.96	3.46				
2230.70	0.30	2.40	1.70	1.00		
2233.00	0.50	2.30	1.80	1.10		
2233.90	0.30	2.10	1.80	1.00		
2237.00	0.60	2.10	1.80	1.10		
2244.10	0.29	2.20	1.73	1.08		
2253.00	0.50	2.20	1.70	1.00		
2256.90	0.40	2.30	1.70	1.00		

Table 3.4. SATURATED FRAC., MOLECULAR RATIOS WELL 35/9-1 (cont'd)

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HYDRO

Depth	Pr/n-C17	Pr/Ph	CPI-I	CPI-II	n-C15+/Total	n-C20/n-C25
2264.50	0.40	2.50	1.60	1.00		
2274.50	1.50	4.30	2.10	1.30		
2280.50	0.60	2.10	1.70	1.00		
2288.50	0.60	2.20	1.70	1.00		