

# Geochemistry Data Report - NOCS Well 7122/6-2


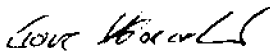


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**Table 1. Number of analyses performed**

Analysis	Cuttings	SWC	Core	Fluid	Gas	Mud	Total
Lithology	25	2	19				46
Headspace	24						24
Gas composition					21		21
Stable isotopes of gas	24				21		45
Stable isotopes of fractions	2		5	3			10
TOC/Rock-Eval	17	1	19				37
Thermal extr. GC	5		14				19
Pyrolysis GC	2		3				5
Iatroscan	3		7	3			13
Extraction	3		7			7	17
Asphaltenes	2		5	3			10
MPLC	3		7	3		7	20
Density/Topping				3			3
GC of Whole Oil				3			3
GC of EOM fraction						7	7
GC of Saturated hydrocarbons	3		7	3			13
GC of Aromatic hydrocarbons	3		7	3			13
GC-MS of Saturated hydrocarbons	2		5	3			10
GC-MS of Aromatic hydrocarbons	2		5	3			10
Vitrinite reflectance	14	1	4				19



**Table 2. Gas Composition (volume-%)**

Well	Sample type	Lower Depth (m)	APT ID	C1%	C2%	C3%	iC4%	nC4%	iC5%	nC5%	CO2%	Sum C1-C5	Wetness	iC4/nC4	ppm
7122/6-2	DCG	1800	37732	70.0	11.9	9.0	2.5	1.7	0.81	0.26	3.7	96.2	26.4	1.5	34355
7122/6-2	DCG	1920	37733	41.7	3.8	6.8	1.0	3.2	0.93	1.0	41.1	58.4	26.2	0.32	10014
7122/6-2	DCG	2010	37734	26.3	15.6	30.1	4.6	15.3	3.2	3.3	0.91	98.5	71.4	0.30	274219
7122/6-2	HS	2040	38244	44.9	22.7	21.3	2.4	5.8	1.1	0.92	0.78	99.1	53.7	0.41	441613
7122/6-2	OCC	2040	38245	3.9	17.2	41.6	6.5	20.3	4.5	4.2	1.1	98.2	95.7	0.32	29802
7122/6-2	Gas-bag	2052	37809	82.7	8.5	5.4	0.58	1.5	0.29	0.33	0.62	99.3	16.2	0.38	41145
7122/6-2	Gas-bag	2055	37810	73.8	7.8	5.0	0.55	1.4	0.29	0.32	10.5	89.2	16.7	0.38	7775
7122/6-2	HS	2070	38246	38.8	16.3	20.3	5.2	11.1	3.8	3.5	0.08	99.0	57.7	0.46	132298
7122/6-2	OCC	2070	38247	5.8	11.4	22.0	5.3	21.8	11.1	15.5	1.4	92.8	91.2	0.24	10565
7122/6-2	Gas-bag	2086	37811	71.7	11.1	9.0	1.2	3.3	0.76	0.87	1.8	98.0	25.6	0.36	17869
7122/6-2	DCG	2100	37735	26.0	16.5	22.9	5.6	13.1	5.9	7.0	0.80	96.9	69.1	0.43	44420
7122/6-2	DCG	2160	37736	66.7	19.2	7.4	1.5	1.2	0.62	1.1	2.2	97.7	30.5	1.2	57548
7122/6-2	DCG	2190	37737	63.2	19.0	8.2	1.7	1.5	0.63	0.30	5.4	94.5	32.4	1.1	50628
7122/6-2	DCG	2250	37738	65.4	17.0	7.4	1.2	1.6	0.68	0.41	6.1	93.8	29.5	0.75	32110
7122/6-2	DCG	2310	37739	59.4	16.5	7.8	1.3	1.8	0.68	0.44	11.8	87.9	31.6	0.69	25804
7122/6-2	Gas-bag	2312	37812	88.3	4.5	1.2	0.18	0.25	0.06	0.07	5.4	94.5	6.5	0.71	14105
7122/6-2	Gas-bag	2366	37813	85.5	4.7	1.4	0.21	0.28	0.07	0.06	7.7	92.1	7.1	0.76	10187
7122/6-2	DCG	2370	37740	70.1	11.9	9.0	2.6	1.8	0.81	0.26	3.6	96.3	26.5	1.5	34456
7122/6-2	Gas-bag	2392	37814	87.8	5.1	1.5	0.25	0.34	0.11	0.10	4.7	95.2	7.6	0.73	15432
7122/6-2	Gas	2393.40	39183	91.4	5.4	1.8	0.33	0.42	0.14	0.12	0.36	99.6	8.0	0.77	956643
7122/6-2	DCG	2400	37741	69.3	16.0	5.6	1.3	1.4	1.1	0.55	4.5	95.2	25.9	0.90	56438
7122/6-2	DCG	2430	37742	32.7	14.5	11.1	2.2	4.1	2.0	1.7	30.6	68.4	49.4	0.52	6247
7122/6-2	Gas-bag	2442	37815	88.4	4.8	1.9	0.28	0.43	0.12	0.10	3.9	96.0	7.7	0.66	20121
7122/6-2	Gas-bag	2452	37816	89.9	5.1	2.1	0.32	0.48	0.12	0.09	1.9	98.1	8.2	0.67	40788
7122/6-2	Gas	2452.40	39182	90.4	5.4	2.5	0.42	0.59	0.17	0.13	0.37	99.6	8.9	0.71	958111
7122/6-2	DCG	2460	37743	45.6	14.9	15.3	2.4	6.1	3.1	3.2	6.4	90.6	45.9	0.40	4292
7122/6-2	DCG	2490	37744	61.4	16.6	10.3	2.3	3.4	2.3	1.4	1.3	97.8	34.7	0.70	45307
7122/6-2	DCG	2520	37745	56.4	16.8	13.1	2.6	3.7	1.7	1.7	3.6	96.0	39.1	0.71	24215
7122/6-2	Gas-bag	2528	37817	94.0	3.1	1.2	0.18	0.27	0.07	0.06	1.1	98.9	4.8	0.68	67310
7122/6-2	Gas-bag	2532	37818	91.1	3.8	1.8	0.31	0.48	0.14	0.12	2.2	97.7	6.5	0.64	27704



Well	Sample type	Lower Depth (m)	APT ID	C1%	C2%	C3%	iC4%	nC4%	iC5%	nC5%	CO2%	Sum C1-C5	Wetness	iC4/nC4	ppm
7122/6-2	Gas	2533.40	39181	93.0	3.6	1.9	0.38	0.54	0.17	0.13	0.29	99.7	6.4	0.70	979845
7122/6-2	Gas-bag	2540	37819	92.4	3.4	1.3	0.20	0.32	0.09	0.08	2.1	97.8	5.3	0.64	28552
7122/6-2	DCG	2550	37746	40.3	12.0	17.4	6.8	9.4	5.5	3.5	3.8	94.9	53.1	0.72	23838
7122/6-2	DCG	2580	37747	39.0	18.6	18.2	3.5	6.0	2.3	2.3	9.4	89.8	54.3	0.58	14059
7122/6-2	Gas-bag	2582	37820	86.5	5.8	2.4	0.35	0.59	0.16	0.15	3.9	96.0	9.5	0.60	16364
7122/6-2	DCG	2610	37748	41.3	16.4	18.0	4.0	7.1	2.3	2.1	7.9	91.3	52.5	0.57	13989
7122/6-2	Gas-bag	2621	37821	85.0	5.7	2.5	0.37	0.70	0.19	0.20	5.2	94.6	9.9	0.53	12253
7122/6-2	DCG	2640	37749	45.7	13.2	16.5	3.9	7.8	2.8	3.3	5.6	93.1	47.6	0.50	13134
7122/6-2	DCG	2700	37750	43.5	19.1	18.5	3.5	6.1	2.2	1.4	5.4	94.2	52.0	0.57	33396
7122/6-2	Gas-bag	2716	37822	87.4	6.4	3.0	0.46	0.76	0.20	0.16	1.5	98.4	10.9	0.60	43417
7122/6-2	DCG	2730	37751	51.5	18.4	15.4	3.6	5.4	2.2	1.3	1.9	97.8	45.4	0.67	94327
7122/6-2	DCG	2820	37752	49.8	17.9	13.1	1.9	3.4	1.1	1.3	11.0	88.6	42.2	0.57	18406
7122/6-2	DCG	2910	37753	49.2	16.2	3.2	0.42	0.74	0.37	0.42	29.1	70.5	29.5	0.57	11211
7122/6-2	DCG	3000	37754	31.0	14.7	18.5	3.9	8.6	3.9	3.0	15.0	83.7	59.6	0.46	22203
7122/6-2	DCG	3060	37755	20.8	11.6	27.2	7.4	15.5	5.7	4.9	5.5	93.1	74.8	0.47	78481

**Table 3. Gas Isotopes ( $\delta^{13}\text{C}$  (‰ PDB) &  $\delta\text{D}$  (‰ SMOW))**

Well	Sample type	Lower Depth (m)	APT ID	C1 $\delta^{13}\text{C}$	C2 $\delta^{13}\text{C}$	C3 $\delta^{13}\text{C}$	i-C4 $\delta^{13}\text{C}$	n-C4 $\delta^{13}\text{C}$	CO2 $\delta^{13}\text{C}$	C1 $\delta\text{D}$
7122/6-2	DCG	1800	37732	-49.8	-34.8	-28.8	-27.5	-28.6	-23.0	
7122/6-2	DCG	1920	37733	-48.8	-34.8	-32.6			-21.8	
7122/6-2	DCG	2010	37734	-46.3	-37.6	-38.8	-34.8	-37.5	-19.8	
7122/6-2	HS	2040	38244	-45.7	-37.0	-36.0	-33.1	-34.6	-21.2	
7122/6-2	OCC	2040	38245		-36.8	-35.8	-33.0	-34.4		
7122/6-2	Gas-bag	2052	37809	-47.3	-35.2	-32.8		-31.4		-206.0
7122/6-2	Gas-bag	2055	37810	-47.0	-35.2	-32.8				-211.0
7122/6-2	HS	2070	38246	-43.9	-35.9	-34.2	-31.3	-32.6		
7122/6-2	OCC	2070	38247		-36.3	-34.1	-30.8	-33.5		
7122/6-2	Gas-bag	2086	37811	-46.9	-35.2	-32.7		-31.4		-203.0
7122/6-2	DCG	2100	37735	-44.6	-36.0	-33.9	-31.7	-32.6		
7122/6-2	DCG	2160	37736	-45.7	-35.9	-30.7	-28.8		-16.3	
7122/6-2	DCG	2190	37737	-42.8	-33.2	-30.0	-28.8	-25.0	-16.7	
7122/6-2	DCG	2250	37738	-44.4	-31.6	-27.9			-19.3	
7122/6-2	DCG	2310	37739	-41.8	-30.3	-27.6		-26.5	-16.1	
7122/6-2	Gas-bag	2312	37812	-45.4	-30.8				-15.7	-191.0
7122/6-2	Gas-bag	2366	37813	-44.0	-30.5				-15.5	-193.0
7122/6-2	DCG	2370	37740	-43.2	-30.2	-27.8			-16.5	
7122/6-2	Gas-bag	2392	37814	-45.2	-30.9	-28.1			-16.9	-193.0
7122/6-2	Gas	2393.40	39183	-44.1	-32.2	-31.1		-30.5		-171.0
7122/6-2	DCG	2400	37741	-14.3	-23.3	-24.9				
7122/6-2	DCG	2430	37742	-42.1	-31.0	-29.1				
7122/6-2	Gas-bag	2442	37815	-43.9	-32.4	-29.7			-15.8	-191.0
7122/6-2	Gas-bag	2452	37816	-44.7	-32.9	-29.9		-29.3	-15.6	-161.0
7122/6-2	Gas	2452.40	39182	-43.3	-34.1	-32.2		-32.2		-168.0
7122/6-2	DCG	2460	37743	-42.7	-32.5	-30.0				
7122/6-2	DCG	2490	37744	-44.5	-33.6	-30.3	-29.9	-29.1	-17.7	
7122/6-2	DCG	2520	37745	-41.8	-33.0	-29.9	-29.5	-27.1	-17.5	
7122/6-2	Gas-bag	2528	37817	-42.1	-33.4	-29.9				-179.0



Well	Sample type	Lower Depth (m)	APT ID	C1 $\delta^{13}C$	C2 $\delta^{13}C$	C3 $\delta^{13}C$	i-C4 $\delta^{13}C$	n-C4 $\delta^{13}C$	CO2 $\delta^{13}C$	C1 $\delta D$
7122/6-2	Gas-bag	2532	37818	-42.5	-33.3	-30.1			-16.5	-183.0
7122/6-2	Gas	2533.40	39181	-41.7	-35.1	-32.5		-32.0		-152.0
7122/6-2	Gas-bag	2540	37819	-42.7	-33.4	-30.1			-17.3	-178.0
7122/6-2	DCG	2550	37746	-41.6	-33.0	-30.5	-29.9	-33.9	-17.0	
7122/6-2	DCG	2580	37747	-42.9	-32.3	-29.7	-28.4		-14.7	
7122/6-2	Gas-bag	2582	37820	-44.8	-31.5	-29.8			-16.7	-201.0
7122/6-2	DCG	2610	37748	-43.8	-31.3	-30.0	-28.0	-26.2	-15.2	
7122/6-2	Gas-bag	2621	37821	-44.9	-31.5	-29.5			-15.8	-211.0
7122/6-2	DCG	2640	37749	-43.6	-31.3	-29.4	-28.3	-30.4	-16.7	
7122/6-2	DCG	2700	37750	-44.0	-31.9	-30.1	-28.9	-30.6	-18.2	
7122/6-2	Gas-bag	2716	37822	-46.8	-33.2	-30.3		-28.8	-16.5	-203.0
7122/6-2	DCG	2730	37751	0.0						
7122/6-2	DCG	2820	37752	-43.8	-31.4	-28.5	-27.9	-27.4	-17.2	
7122/6-2	DCG	2910	37753	-44.7	-30.2	-26.6			-16.7	
7122/6-2	DCG	3000	37754	-45.2	-31.9	-30.8	-31.5	-31.0	-17.0	
7122/6-2	DCG	3060	37755	-45.7	-34.1	-32.8	-32.0	-33.5	-17.6	



**Table 4. Lithology Description**

Well	Sample type	Lower Depth (m)	APT ID	%	Lithology	Attributes
7122/6-2	DC	1140	37763	100 %	CLYST	gy
7122/6-2	DC	1310	37764	100 %	CLYST	gy
7122/6-2	DC	1460	37765	100 %	CLYST	gy- md drk gy
7122/6-2	DC	1610	37766	100 %	CLYST	gy-md drk gy
7122/6-2	DC	1730	37767A	100%	CLYST	gy-md drk gy, pyr
7122/6-2	DC	1730	37767B	trace	LST	pl y brn, Marl
7122/6-2	DC	1869	37768A	100%	CLYST	gy-md drk gy- drk brn gy
7122/6-2	DC	1869	37768B	trace	SLST	lt brn gy
7122/6-2	DC	1869	37768C	trace	LST	pl y brn, Marl
7122/6-2	DC	1911	37769A	70%	CLYST	rd brn
7122/6-2	DC	1911	37769B	25%	CLYST	lt gy, calc
7122/6-2	DC	1911	37769C	5%	CLYST	md drk gy
7122/6-2	DC	1959	37770A	100%	CLYST	brn gy
7122/6-2	DC	1959	37770B	trace	CLYST	lt gy
7122/6-2	DC	1986	37771	100 %	CLYST	brn gy
7122/6-2	DC	1995	37772	100 %	CLYST	brn gy- md drk gy
7122/6-2	DC	2013	37773	100 %	CLYST	brn gy - md drk gy
7122/6-2	DC	2037	37774	100 %	CLYST	drk brn gy
7122/6-2	DC	2052	37775A	70%	CONTAM	Cement, rust
7122/6-2	DC	2052	37775B	20%	CLYST	lt gy- gy
7122/6-2	DC	2052	37775C	10%	SST	op- mlky w, f, l
7122/6-2	DC	2055	37776A	60%	CONTAM	Cement, rust, lignite?
7122/6-2	DC	2055	37776B	15%	CLYST	lgy- md drk gy
7122/6-2	DC	2055	37776C	5%	CLYST	brn rd- brn
7122/6-2	DC	2055	37776D	20%	SST	op-mlky w, f, l
7122/6-2	DC	2058	37777A	40%	CONTAM	Cement, rust, lignite?
7122/6-2	DC	2058	37777B	10%	CLYST	gy- md drk gy
7122/6-2	DC	2058	37777C	50%	SST	op-mlky w, f, l
7122/6-2	DC	2202	37778A	80%	CLYST	gy
7122/6-2	DC	2202	37778B	20%	SLST	lt gy w



Well	Sample type	Lower Depth (m)	APT ID	%	Lithology	Attributes
7122/6-2	DC	2304	37779A	70%	CLYST	gy, slty
7122/6-2	DC	2304	37779B	20%	SLST	lt gy w
7122/6-2	DC	2304	37779C	10%	CLYST	rd brn-brn- drk brn
7122/6-2	DC	2358	37780A	40%	CLYST	gy
7122/6-2	DC	2358	37780B	30%	CLYST	rd brn- brn gy
7122/6-2	DC	2358	37780C	30%	SLST	l gy w- lt gy
7122/6-2	DC	2388	37781A	50%	CLYST	gy- md drk gy
7122/6-2	DC	2388	37781B	50%	SLST	lt gy w- lt gy
7122/6-2	DC	2388	37781C	trace	CLYST	rd brn - brn
7122/6-2	COCH	2452.19	37785	100 %	SST	op- lt gy, f-md, hrd, mic
7122/6-2	COCH	2453.17	37786	100 %	SST	op- lt gy, f-md, hrd
7122/6-2	COCH	2453.75	37787	100 %	CLYST	lt gy, calc
7122/6-2	COCH	2464.50	37788	100 %	CLYST	drk gy- gy blk, carb
7122/6-2	COCH	2466.50	37789	100 %	SST	op- pl gy, f-md, st?
7122/6-2	COCH	2469.96	37790	100 %	CLYST	drk gy - gy blk, carb
7122/6-2	COCH	2474.12	37791	100 %	CLYST	gy-md drk gy, lam, slty
7122/6-2	COCH	2476.32	37792	100 %	SST	lt gy, f, hrd, calc
7122/6-2	COCH	2478.24	37793	100 %	CLYST	drk gy
7122/6-2	COCH	2479.60	37794	100 %	SST	gy, hrd, calc
7122/6-2	COCH	2484.62	37795	100 %	SST	op- lt gy, f-md, hrd, mic
7122/6-2	COCH	2487.62	37796	100 %	SST	md drk gy- brn gy., hrd, carb
7122/6-2	COCH	2489.65	37797	100 %	SST	md drk gy, f-md, hrd, st?
7122/6-2	COCH	2489.70	37798	100 %	SST	gy- md drk gy, f-md, cly
7122/6-2	COCH	2489.86	37799	100 %	CLYST	drk gy
7122/6-2	COCH	2492.51	37800	100 %	SST	gy, f, hrd, cly, st?
7122/6-2	COCH	2494.15	37801	100 %	CLYST	drk gy
7122/6-2	COCH	2502.21	37802	100 %	SST	op- lt gy, f, mic
7122/6-2	COCH	2506.09	37803	100 %	SST	op - lt gy, f
7122/6-2	DC	2535	38791A	60%	SST	lt gy w, f
7122/6-2	DC	2535	38791B	40%	CLYST	gy- md drk gy
7122/6-2	DC	2664	38792A	90%	SST	op- lt gy w, f



Well	Sample type	Lower Depth (m)	APT ID	%	Lithology	Attributes
7122/6-2	DC	2664	38792B	10%	CLYST	gy - md drk gy
7122/6-2	DC	2835	37782A	80%	CLYST	gy- brn gy, slty
7122/6-2	DC	2835	37782B	20%	SLST	lt gy w- lt gy
7122/6-2	DC	2835	37782C	trace	CLYST	rd brn
7122/6-2	DC	2835	37782D	trace	CHK	pl ol gy
7122/6-2	SWC	2862	38798	100 %	CLYST	md drk gy
7122/6-2	DC	2934	37783A	80%	CLYST	lt brn gy- gy
7122/6-2	DC	2934	37783B	10%	CLYST	rd brn
7122/6-2	DC	2934	37783C	10%	SLST	lt gy w
7122/6-2	DC	3027	37784A	90%	CLYST	gy- brn gy- md drk gy
7122/6-2	DC	3027	37784B	10%	SLST	lt gy w
7122/6-2	DC	3039	38790A	90%	CLYST	gy - md drk gy
7122/6-2	DC	3039	38790B	10%	SLST	op- lt gy w
7122/6-2	SWC	3059	38799	100 %	CLYST	md drk gy - drk gy, slty



**Table 5. TOC and Rock-Eval data**

Well	Sample type	Lower Depth (m)	APT ID	S1 (mg/g)	S2 (mg/g)	S3 (mg/g)	Tmax (°C)	PP (mg/g)	PI (wt ratio)	HI (mg HC/g TOC)	OI (mg CO <sub>2</sub> /g TOC)	TOC (%)
7122/6-2	DC	1869	37768	0.73	8.03	0.86	436	8.76	0.08	180	19	4.45
7122/6-2	DC	1959	37770	1.51	14.74	0.74	434	16.25	0.09	382	19	3.86
7122/6-2	DC	1986	37771	2.34	21.20	0.50	433	23.54	0.10	457	11	4.64
7122/6-2	DC	1995	37772	2.32	20.61	0.60	434	22.93	0.10	445	13	4.63
7122/6-2	DC	2013	37773	4.90	34.55	0.41	432	39.45	0.12	445	5	7.76
7122/6-2	DC	2037	37774	8.21	43.45	0.87	433	51.66	0.16	391	8	11.12
7122/6-2	DC	2052	37775	0.60	4.10	3.62	432	4.70	0.13			
7122/6-2	DC	2055	37776	0.43	1.70	1.23	431	2.13	0.20			
7122/6-2	DC	2058	37777	1.38	3.64	1.86	432	5.02	0.27			
7122/6-2	DC	2358	37780	0.23	1.84	0.64	342	2.07	0.11	317	110	0.58
7122/6-2	DC	2388	37781	0.27	1.88	0.67	337	2.15	0.13	376	134	0.50
7122/6-2	COCH	2452.19	37785	0.12	0.48	0.21	451	0.60	0.20			
7122/6-2	COCH	2453.17	37786	1.53	0.74	0.20	284	2.27	0.67			
7122/6-2	COCH	2453.75	37787	0.04	0.28	0.90	341	0.32	0.13			
7122/6-2	COCH	2464.50	37788	9.61	162.75	1.26	435	172.36	0.06	274	2	59.41
7122/6-2	COCH	2466.50	37789	0.25	0.50	0.22	328	0.75	0.33			
7122/6-2	COCH	2469.96	37790	6.74	141.01	0.38	439	147.75	0.05	479	1	29.45
7122/6-2	COCH	2474.12	37791	0.04	0.29	0.56	443	0.33	0.12			
7122/6-2	COCH	2476.32	37792	0.08	0.40	0.95	340	0.48	0.17			
7122/6-2	COCH	2478.24	37793	0.12	1.75	0.53	441	1.87	0.06	203	62	0.86
7122/6-2	COCH	2479.60	37794	0.10	0.44	1.29	438	0.54	0.19			
7122/6-2	COCH	2484.62	37795	0.03	0.14	0.18	328	0.17	0.18			
7122/6-2	COCH	2487.62	37796	0.31	3.77	0.20	442	4.08	0.08			
7122/6-2	COCH	2489.65	37797	1.90	2.88	0.17	432	4.78	0.40			
7122/6-2	COCH	2489.70	37798	2.36	2.55	0.14	429	4.91	0.48			
7122/6-2	COCH	2489.86	37799	0.51	16.63	0.33	447	17.14	0.03	502	10	3.31
7122/6-2	COCH	2492.51	37800	0.06	0.21	0.12	441	0.27	0.22			
7122/6-2	COCH	2494.15	37801	0.04	0.36	0.40	333	0.40	0.10	75	83	0.48
7122/6-2	COCH	2502.21	37802	0.15	0.12	0.26	292	0.27	0.56			
7122/6-2	COCH	2506.09	37803	0.19	0.42	0.28	325	0.61	0.31			



Well	Sample type	Lower Depth (m)	APT ID	S1 (mg/g)	S2 (mg/g)	S3 (mg/g)	Tmax (°C)	PP (mg/g)	PI (wt ratio)	HI (mg HC/g TOC)	OI (mg CO2/g TOC)	TOC (%)
7122/6-2	DC	2535	38791	0.60	1.81	0.73	331	2.41	0.25			
7122/6-2	DC	2664	38792	0.39	1.77	1.06	330	2.16	0.18			
7122/6-2	DC	2835	37782	0.25	1.66	0.72	340	1.91	0.13	221	96	0.75
7122/6-2	DC	2934	37783	0.23	1.63	0.55	339	1.86	0.12	217	73	0.75
7122/6-2	DC	3027	37784	0.38	2.41	0.46	451	2.79	0.14	259	49	0.93
7122/6-2	DC	3039	38790	0.79	2.95	0.55	338	3.74	0.21	257	48	1.15
7122/6-2	SWC	3059	38799	0.27	1.86	0.55	451	2.13	0.13	158	47	1.18

**Table 6. Thermal Extraction GC (peak area)**

Well	Sample type	Lower Depth (m)	APT ID	n-C10	n-C11	n-C12	n-C13	n-C14	n-C15	n-C16	n-C17	Pr	n-C18	Ph	n-C19	n-C20	n-C21	n-C22	n-C23	n-C24
7122/6-2	DC	2052	37775	0.00e0	0.00e0	9.13e2	2.95e3	2.42e3	1.67e3	2.38e3	2.46e3	9.50e2	4.67e3	1.48e3	9.99e2	1.31e3	1.50e3	2.66e3	3.30e3	3.65e3
7122/6-2	DC	2055	37776	3.98e4	3.01e4	3.04e4	5.38e4	5.94e4	7.44e4	7.43e4	9.93e4	9.69e4	8.33e4	6.43e4	9.61e4	1.01e5	9.66e4	9.20e4	7.26e4	6.00e4
7122/6-2	DC	2058	37777	7.42e4	4.56e4	4.22e4	5.48e4	6.71e4	5.76e4	9.74e4	1.34e5	0.00e0	1.26e5	7.79e4	1.25e5	1.41e5	1.41e5	1.15e5	1.01e5	8.59e4
7122/6-2	COCH	2452.19	37785	7.54e3	7.34e3	1.30e4	3.33e4	2.67e4	1.98e4	1.14e4	5.80e3	1.60e4	3.69e3	6.27e3	1.05e3	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2453.17	37786	1.39e3	2.38e3	1.22e4	6.66e4	1.58e5	3.23e5	5.74e5	6.52e5	6.81e5	4.88e5	6.88e5	3.18e5	2.05e5	4.78e4	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2453.75	37787	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2466.50	37789	5.15e3	1.37e4	3.62e4	7.80e4	8.66e4	8.52e4	6.86e4	5.36e4	9.37e4	3.28e4	4.40e4	2.55e4	1.82e4	1.05e4	5.56e3	0.00e0	0.00e0
7122/6-2	COCH	2469.96	37790	3.05e4	2.46e4	2.43e4	0.00e0	2.00e4	1.64e4	1.70e4	1.33e4	0.00e0	1.03e4	5.80e3	1.02e4	1.12e4	9.54e3	8.75e3	8.93e3	6.00e3
7122/6-2	COCH	2474.12	37791	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2479.60	37794	6.61e3	7.34e3	1.53e4	2.23e4	1.73e4	2.17e4	8.87e3	0.00e0	4.28e4	0.00e0	2.67e4	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2484.62	37795	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2487.62	37796	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	2.00e-1	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2489.65	37797	8.75e3	1.67e4	5.65e4	1.64e5	3.41e5	6.27e5	9.37e5	1.39e6	3.21e5	1.75e6	1.13e5	2.45e6	2.70e6	3.16e6	2.65e6	2.71e6	2.00e6
7122/6-2	COCH	2489.70	37798	3.95e3	1.19e4	9.33e4	3.15e5	5.69e5	8.22e5	1.02e6	1.33e6	2.88e5	1.53e6	9.63e4	2.00e6	2.09e6	2.39e6	1.96e6	1.94e6	1.43e6
7122/6-2	COCH	2492.51	37800	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2502.21	37802	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2506.09	37803	0.00e0	0.00e0	2.61e3	1.80e4	1.94e4	2.04e4	2.53e4	1.62e4	5.03e4	4.83e3	3.82e4	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	DC	2535	38791	0.00e0	6.38e3	2.66e4	1.64e5	1.25e5	3.46e4	2.47e4	1.45e4	5.80e3	7.77e3	2.02e3	2.98e3	1.26e3	1.34e3	6.63e2	0.00e0	0.00e0
7122/6-2	DC	2664	38792	1.45e4	3.32e4	6.43e4	1.46e5	1.26e5	4.76e4	3.42e4	2.20e4	1.03e4	1.84e4	2.96e3	1.69e4	1.41e4	1.11e4	7.33e3	6.31e3	4.18e3



Table 6. continued, Thermal Extraction GC (peak area)

Well	Sample type	Lower Depth (m)	APT ID	n-C25	n-C26	n-C27	n-C28	n-C29	n-C30	n-C31	n-C32	n-C33	n-C34	n-C35	n-C36
7122/6-2	DC	2052	37775	3.33e3	3.55e3	5.23e3	3.93e3	2.78e3	1.42e3	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	DC	2055	37776	4.38e4	3.39e4	2.63e4	1.78e4	1.08e4	5.44e3	1.91e3	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	DC	2058	37777	6.25e4	4.57e4	3.38e4	2.36e4	1.61e4	8.70e3	4.95e3	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2452.19	37785	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2453.17	37786	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2453.75	37787	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2466.50	37789	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2469.96	37790	6.45e3	4.50e3	4.30e3	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2474.12	37791	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2479.60	37794	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2484.62	37795	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2487.62	37796	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2489.65	37797	2.05e6	1.61e6	1.81e6	1.21e6	1.28e6	5.62e5	4.75e5	1.44e5	1.10e4	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2489.70	37798	1.47e6	1.09e6	1.06e6	5.88e5	4.61e5	1.63e5	4.73e4	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2492.51	37800	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2502.21	37802	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2506.09	37803	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	DC	2535	38791	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	DC	2664	38792	3.12e3	1.93e3	9.48e2	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0



**Table 7. Pyrolysis GC (peak area)**

Well	Sample type	Lower Depth (m)	APT ID	%C1(UCM)	%C2-C5 (UCM)	%C6-C14 (UCM)	%C15+ (UCM)	%C1 (X-UCM)	%C2-C5 (X-UCM)	%C6-C14 (X-UCM)	%C15+ (X-UCM)	C1	C2-C5	C6-C14	C15+	C6-C14 (UCM)	C15+ (UCM)	n-Heptene	Tol	n-Octene
7122/6-2	DC	1986	37771	5.21	20.89	31.19	42.71	9.11	36.53	42.02	12.34	4.71e6	1.89e7	2.17e7	6.38e6	2.82e7	3.87e7	1.37e6	4.75e5	3.15e5
7122/6-2	DC	2037	37774	4.99	19.72	30.54	44.75	8.81	34.82	42.55	13.82	5.43e6	2.14e7	2.62e7	8.51e6	3.32e7	4.87e7	1.03e6	7.31e5	4.08e5
7122/6-2	COCH	2464.50	37788	10.34	15.24	24.88	49.55	18.22	26.86	35.28	19.65	1.57e7	2.32e7	3.04e7	1.69e7	3.78e7	7.53e7	3.36e5	1.04e6	2.13e5
7122/6-2	COCH	2469.96	37790	5.60	12.36	25.19	56.85	11.61	25.61	39.20	23.58	4.57e6	1.01e7	1.54e7	9.28e6	2.05e7	4.64e7	2.59e5	2.25e5	2.04e5
7122/6-2	COCH	2489.86	37799	3.64	17.60	33.50	45.26	5.48	26.50	42.62	25.40	5.28e6	2.55e7	4.10e7	2.44e7	4.86e7	6.56e7	1.78e6	6.62e5	1.22e6

Table 7. continued, Pyrolysis GC (peak area)

Well	Sample type	Lower Depth (m)	APT ID	mp-Xyl	Weight (mg)	Comment
7122/6-2	DC	1986	37771	4.01e5	0.0	
7122/6-2	DC	2037	37774	5.46e5	0.1	
7122/6-2	COCH	2464.50	37788	9.48e5	0.0	
7122/6-2	COCH	2469.96	37790	2.19e5	0.0	
7122/6-2	COCH	2489.86	37799	4.33e5	0.0	



**Table 8. Extraction, Asphaltene precipitation and Iatroscan data**

Well	Sample type	Lower Depth (m)	APT ID	Rock weight (g)	EOM (mg)	EOM (mg/kg Rock)	SAT (wt% of EOM/Oil)	ARO (wt% of EOM/Oil)	POL (wt% of EOM/Oil)	ASP (wt% of EOM/Oil)	HC (wt% of EOM/Oil)
7122/6-2	Mud	1200	37756	9.459	162	17127					
7122/6-2	DC	1986	37771	5.135	52	10127	15.8	23.7	60.5		39.5
7122/6-2	Mud	2000	37757	7.324	184	25123					
7122/6-2	DC	2037	37774	2.856	58	20305	10.8	32.3	37.9	19.0	43.1
7122/6-2	DC	2055	37776	5.850	11	1880	11.6	6.7	66.5	15.2	18.3
7122/6-2	Mud	2060	37758	7.274	142	19522					
7122/6-2	Mud	2300	37759	6.800	123	18088					
7122/6-2	Oil	2393.40	39180T				88.8	9.5	1.7		98.3
7122/6-2	Oil	2452.40	39179T				89.2	8.2	2.6		97.4
7122/6-2	COCH	2453.17	37786	3.398	9	2648	83.9	2.8	8.3	4.9	86.8
7122/6-2	Mud	2460	37760	8.102	147	18144					
7122/6-2	COCH	2464.50	37788	2.367	56	23658	4.5	80.2	15.3		84.7
7122/6-2	COCH	2466.50	37789	11.188	13	1162	14.8	11.7	48.7	24.8	26.5
7122/6-2	COCH	2469.96	37790	2.125	23	10823	8.3	21.8	14.3	55.6	30.1
7122/6-2	COCH	2489.65	37797	12.674	73	5760	81.8	13.5	4.6		95.4
7122/6-2	COCH	2489.70	37798	9.657	58	6006	76.1	14.6	3.7	5.6	90.7
7122/6-2	COCH	2489.86	37799	5.165	36	6971	45.6	21.3	24.4	8.6	66.9
7122/6-2	Oil	2533.40	39178T				84.2	12.5	2.3	1.0	96.7
7122/6-2	Mud	2600	37761	8.943	170	19008					
7122/6-2	Mud	3070	37762	9.432	174	18448					

**Table 9. Density and topping**

Well	Sample type	Lower Depth (m)	APT ID	Density (g/cm <sup>3</sup> )	°API	Topped oil
7122/6-2	Oil	2393.40	39180	0.751	56.9	37.6
7122/6-2	Oil	2452.40	39179	0.747	57.9	36.7
7122/6-2	Oil	2533.40	39178	0.791	47.5	52.2



**Table 10. GC of Whole Oil (parameters)**

Well	Sample type	Lower Depth (m)	APT ID	A	B	X	W	C	I	F	H	U	R	S
7122/6-2	Oil	2393.40	39180	0.23	0.53	0.46	2.53	0.76	2.22	0.60	22.02	1.82	2.60	11.90
7122/6-2	Oil	2452.40	39179	0.18	0.73	0.74	2.06	0.68	1.67	0.50	19.10	1.46	2.39	14.02
7122/6-2	Oil	2533.40	39178	0.16	0.70	0.72	1.74	0.69	1.73	0.51	19.22	1.44	2.34	13.31

- A: Benz/n-C<sub>6</sub>
- B: Tol/n-C<sub>7</sub>
- X: m+p-Xyl/n-C<sub>8</sub>
- W: Benz\*10/CyC<sub>6</sub>
- C: (n-C<sub>6</sub>+n-C<sub>7</sub>)/(CyC<sub>6</sub>+MCyC<sub>6</sub>)
- I: (2-MC<sub>6</sub>+3-MC<sub>6</sub>)/(c1,3-DMCyC<sub>5</sub>+t1,3-DMCyC<sub>5</sub>+t1,2-DMCyC<sub>5</sub>)
- F: n-C<sub>7</sub>/MCyC<sub>6</sub>
- H: n-C<sub>7</sub>\*100/(CyC<sub>6</sub>+2-MC<sub>6</sub>+3-MC<sub>6</sub>+c1,3-DMCyC<sub>5</sub>+t1,3-DMCyC<sub>5</sub>+t1,2-DMCyC<sub>5</sub>+n-C<sub>7</sub>+MCyC<sub>6</sub>)
- U: CyC<sub>6</sub>/MCyC<sub>5</sub>
- R: n-C<sub>7</sub>/2-MC<sub>6</sub>
- S: n-C<sub>6</sub>/2,2-DMC<sub>4</sub>

**Table 11. GC of Whole Oil (peak area)**

Well	Sample type	Lower Depth (m)	APT ID	IS 2,2,4-TMC5	n-C3	i-C4	n-C4	i-C5	n-C5	2,2-DMC4	CyC5	2,3-DMC4	2-MC5	3-MC5	n-C6	2,2-DMC5	MCyC5	2,4-DMC5	2,2,3-TMC4	Benz
7122/6-2	Oil	2393.40	39180	7.12e4	1.58e4	3.04e4	8.62e4	1.78e5	2.10e5	2.83e4	1.88e4	4.28e4	1.87e5	1.19e5	3.37e5	1.93e4	1.66e5	2.57e4	7.53e3	7.68e4
7122/6-2	Oil	2452.40	39179	6.81e4	2.02e4	4.08e4	1.32e5	2.37e5	2.72e5	2.33e4	3.00e4	4.27e4	2.08e5	1.30e5	3.27e5	1.56e4	2.02e5	2.36e4	5.14e3	6.05e4
7122/6-2	Oil	2533.40	39178	6.72e4	1.62e4	3.17e4	9.61e4	1.68e5	1.88e5	1.73e4	2.12e4	3.07e4	1.47e5	9.17e4	2.30e5	1.09e4	1.44e5	1.71e4	3.89e3	3.61e4

Table 11. continued, GC of Whole Oil (peak area)

Well	Sample type	Lower Depth (m)	APT ID	3,3-DMC5	CyC6	2-MC6	2,3-DMC5	1,1-DMCyC5	3-MC6	c-1,3-DMCyC5	t-1,3-DMCyC5	3-EC5	t-1,2-DMCyC5	n-C7	c-1,2-DMCyC5	MCyC6	1,1,3-TMCyC5	ECyC5	2,5-DMC6	2,2,3-TMC5/ 2,4-DMC6
7122/6-2	Oil	2393.40	39180	1.24e4	3.03e5	1.53e5	3.88e4	2.63e4	1.49e5	3.95e4	3.63e4	8.36e3	5.99e4	3.97e5	0.00e0	6.65e5	2.75e4	2.54e4	2.44e4	2.75e4
7122/6-2	Oil	2452.40	39179	8.79e3	2.94e5	1.39e5	3.44e4	3.08e4	1.40e5	4.87e4	4.52e4	7.55e3	7.29e4	3.33e5	0.00e0	6.70e5	3.55e4	2.41e4	2.14e4	2.48e4
7122/6-2	Oil	2533.40	39178	6.44e3	2.07e5	1.00e5	2.44e4	2.19e4	1.00e5	3.40e4	3.16e4	5.49e3	5.07e4	2.35e5	0.00e0	4.63e5	2.52e4	1.64e4	1.54e4	1.78e4

Table 11. continued, GC of Whole Oil (peak area)

Well	Sample type	Lower Depth (m)	APT ID	c-1,1,2,4-TMCyC5	3,3-DMC6	t,c-1,2,3-TMCyC5	2,3,4-TMC5	Tol	2,3-DMC6	2-MC7	4-MC7	3-MC7	c-1,3-DMCyC6	t-1,4-DMCyC6	1,1-DMCyC6	t-1,2-DMCyC6	n-C8	E-CyC6	i-C9	E-Benz
7122/6-2	Oil	2393.40	39180	1.55e4	9.90e3	1.27e4	1.34e3	2.10e5	2.38e4	1.32e5	4.48e4	1.08e5	1.28e5	5.43e4	9.31e3	5.02e4	3.86e5	1.02e5	2.47e4	3.76e4
7122/6-2	Oil	2452.40	39179	2.66e4	7.80e3	2.25e4	9.00e2	2.43e5	2.49e4	1.31e5	4.04e4	9.00e4	1.50e5	6.42e4	1.01e4	5.95e4	3.16e5	1.05e5	3.84e4	3.18e4
7122/6-2	Oil	2533.40	39178	1.82e4	5.62e3	1.52e4	6.43e2	1.64e5	1.71e4	9.15e4	2.92e4	6.77e4	1.06e5	4.40e4	6.52e3	3.93e4	2.17e5	6.70e4	2.47e4	1.93e4



Table 11. continued, GC of Whole Oil (peak area)

Well	Sample type	Lower Depth (m)	APT ID	m-Xyl	p-Xyl	4-MC8	2-MC8	3-MC8	o-Xyl	n-C9	i-C10	n-C10	i-C11	n-C11	n-C12	i-C13	i-C14	n-C13	i-C15	n-C14
7122/6-2	Oil	2393.40	39180	1.46e5	3.13e4	4.67e4	6.40e4	7.01e4	5.02e4	2.96e5	4.04e4	2.34e5	3.81e4	1.86e5	1.55e5	3.73e4	3.73e4	1.19e5	2.70e4	9.29e4
7122/6-2	Oil	2452.40	39179	1.85e5	4.97e4	3.74e4	5.13e4	6.19e4	6.31e4	2.33e5	4.85e4	1.84e5	5.11e4	1.49e5	1.28e5	4.65e4	5.00e4	9.87e4	3.38e4	7.52e4
7122/6-2	Oil	2533.40	39178	1.21e5	3.47e4	2.60e4	3.53e4	4.14e4	4.04e4	1.52e5	2.91e4	1.13e5	3.05e4	8.69e4	7.51e4	2.62e4	3.51e4	7.30e4	2.23e4	6.45e4

Table 11. continued, GC of Whole Oil (peak area)

Well	Sample type	Lower Depth (m)	APT ID	i-C16	n-C15	n-C16	i-C18	n-C17	i-C19	n-C18	i-C20	n-C19	n-C20	n-C21	n-C22	n-C23	n-C24	n-C25	n-C26	n-C27
7122/6-2	Oil	2393.40	39180	3.65e4	7.14e4	5.07e4	1.95e4	3.82e4	2.75e4	2.66e4	1.19e4	2.25e4	1.35e4	8.71e3	6.36e3	4.40e3	3.05e3	2.09e3	1.33e3	7.81e2
7122/6-2	Oil	2452.40	39179	4.24e4	6.18e4	4.33e4	2.44e4	3.31e4	3.64e4	2.29e4	1.64e4	2.15e4	1.22e4	7.37e3	4.77e3	2.89e3	1.67e3	1.05e3	7.17e2	6.97e2
7122/6-2	Oil	2533.40	39178	3.12e4	5.16e4	4.05e4	2.07e4	3.57e4	3.24e4	2.81e4	1.62e4	3.15e4	2.34e4	1.95e4	1.84e4	1.64e4	1.51e4	1.50e4	1.49e4	1.54e4

Table 11. continued, GC of Whole Oil (peak area)

Well	Sample type	Lower Depth (m)	APT ID	n-C28	n-C29	n-C30	n-C31	n-C32	n-C33	n-C34	n-C35	n-C36
7122/6-2	Oil	2393.40	39180	4.92e2	3.43e2	1.56e2	1.60e2	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	Oil	2452.40	39179	4.73e2	4.58e2	4.68e2	4.18e2	3.21e2	3.04e2	0.00e0	0.00e0	0.00e0
7122/6-2	Oil	2533.40	39178	1.29e4	1.37e4	1.17e4	1.19e4	9.27e3	8.01e3	6.19e3	4.36e3	3.33e3

**Table 12. GC of Whole Oil (amounts in ng/g)**

Well	Sample type	Lower Depth (m)	APT ID	IS 2,2,4-TMC5	n-C3	i-C4	n-C4	i-C5	n-C5	2,2-DMC4	CyC5	2,3-DMC4	2-MC5	3-MC5	n-C6	2,2-DMC5	MCyC5	2,4-DMC5	2,2,3-TMC4	Benz
7122/6-2	Oil	2393.40	39180	7.04e6	1.60e6	3.06e6	8.67e6	1.78e7	2.10e7	2.82e6	1.83e6	4.26e6	1.86e7	1.18e7	3.35e7	1.91e6	1.62e7	2.54e6	7.45e5	6.93e6
7122/6-2	Oil	2452.40	39179	6.17e6	1.88e6	3.77e6	1.22e7	2.17e7	2.49e7	2.13e6	2.68e6	3.89e6	1.90e7	1.18e7	2.98e7	1.41e6	1.80e7	2.14e6	4.67e5	5.01e6
7122/6-2	Oil	2533.40	39178	6.76e6	1.67e6	3.24e6	9.84e6	1.71e7	1.91e7	1.75e6	2.09e6	3.11e6	1.49e7	9.29e6	2.33e7	1.10e6	1.42e7	1.73e6	3.92e5	3.32e6

Table 12. continued, GC of Whole Oil (amounts in ng/g)

Well	Sample type	Lower Depth (m)	APT ID	3,3-DMC5	CyC6	2-MC6	2,3-DMC5	1,1-DMCyC5	3-MC6	c-1,3-DMCyC5	t-1,3-DMCyC5	3-EC5	t-1,2-DMCyC5	n-C7	c-1,2-DMCyC5	MCyC6	1,1,3-TMCyC5	ECyC5	2,5-DMC6	2,2,3-TMC5/ 2,4-DMC6
7122/6-2	Oil	2393.40	39180	1.23e6	2.95e7	1.51e7	3.85e6	2.55e6	1.48e7	3.84e6	3.52e6	8.28e5	5.81e6	3.93e7	0.00e0	6.46e7	2.67e6	2.47e6	2.42e6	2.72e6
7122/6-2	Oil	2452.40	39179	7.99e5	2.62e7	1.27e7	3.13e6	2.75e6	1.27e7	4.34e6	4.03e6	6.86e5	6.49e6	3.03e7	0.00e0	5.97e7	3.17e6	2.14e6	1.94e6	2.25e6
7122/6-2	Oil	2533.40	39178	6.50e5	2.05e7	1.01e7	2.46e6	2.16e6	1.01e7	3.36e6	3.13e6	5.53e5	5.01e6	2.37e7	0.00e0	4.58e7	2.49e6	1.62e6	1.55e6	1.79e6

Table 12. continued, GC of Whole Oil (amounts in ng/g)

Well	Sample type	Lower Depth (m)	APT ID	c-1,1,2,4-TMCyC5	3,3-DMC6	t,c-1,2,3-TMCyC5	2,3,4-TMC5	To1	2,3-DMC6	2-MC7	4-MC7	3-MC7	c-1,3-DMCyC6	t-1,4-DMCyC6	1,1-DMCyC6	t-1,2-DMCyC6	n-C8	E-CyC6	i-C9	E-Benz
7122/6-2	Oil	2393.40	39180	1.51e6	9.79e5	1.23e6	1.32e5	1.92e7	2.35e6	1.30e7	4.43e6	1.06e7	1.25e7	5.28e6	9.04e5	4.88e6	3.82e7	9.95e6	2.44e6	3.46e6
7122/6-2	Oil	2452.40	39179	2.37e6	7.07e5	2.00e6	8.16e4	2.03e7	2.26e6	1.19e7	3.67e6	8.16e6	1.34e7	5.72e6	8.97e5	5.30e6	2.86e7	9.34e6	3.48e6	2.69e6
7122/6-2	Oil	2533.40	39178	1.80e6	5.66e5	1.50e6	6.47e4	1.52e7	1.72e6	9.21e6	2.94e6	6.81e6	1.05e7	4.36e6	6.45e5	3.88e6	2.19e7	6.63e6	2.48e6	1.81e6



Table 12. continued, GC of Whole Oil (amounts in ng/g)

Well	Sample type	Lower Depth (m)	APT ID	m-Xyl	p-Xyl	4-MC8	2-MC8	3-MC8	o-Xyl	n-C9	i-C10	n-C10	i-C11	n-C11	n-C12	i-C13	i-C14	n-C13	i-C15	n-C14
7122/6-2	Oil	2393.40	39180	1.34e7	2.88e6	4.61e6	6.31e6	6.91e6	4.62e6	2.92e7	3.98e6	2.31e7	3.75e6	1.83e7	1.52e7	3.66e6	3.66e6	1.17e7	2.65e6	9.11e6
7122/6-2	Oil	2452.40	39179	1.56e7	4.19e6	3.38e6	4.64e6	5.60e6	5.33e6	2.11e7	4.38e6	1.66e7	4.61e6	1.35e7	1.15e7	4.19e6	4.50e6	8.89e6	3.04e6	6.76e6
7122/6-2	Oil	2533.40	39178	1.13e7	3.25e6	2.61e6	3.54e6	4.16e6	3.78e6	1.52e7	2.92e6	1.13e7	3.06e6	8.70e6	7.52e6	2.62e6	3.50e6	7.30e6	2.23e6	6.44e6

Table 12. continued, GC of Whole Oil (amounts in ng/g)

Well	Sample type	Lower Depth (m)	APT ID	i-C16	n-C15	n-C16	i-C18	n-C17	i-C19	n-C18	i-C20	n-C19	n-C20	n-C21	n-C22	n-C23	n-C24	n-C25	n-C26	n-C27
7122/6-2	Oil	2393.40	39180	3.58e6	7.01e6	4.97e6	1.91e6	3.74e6	2.70e6	2.60e6	1.17e6	2.20e6	1.32e6	8.52e5	6.21e5	4.30e5	2.98e5	2.04e5	1.30e5	7.62e4
7122/6-2	Oil	2452.40	39179	3.81e6	5.56e6	3.90e6	2.19e6	2.97e6	3.26e6	2.05e6	1.47e6	1.93e6	1.09e6	6.61e5	4.28e5	2.59e5	1.50e5	9.42e4	6.43e4	6.24e4
7122/6-2	Oil	2533.40	39178	3.11e6	5.15e6	4.04e6	2.06e6	3.56e6	3.22e6	2.80e6	1.61e6	3.14e6	2.33e6	1.94e6	1.83e6	1.64e6	1.50e6	1.49e6	1.48e6	1.53e6

Table 12. continued, GC of Whole Oil (amounts in ng/g)

Well	Sample type	Lower Depth (m)	APT ID	n-C28	n-C29	n-C30	n-C31	n-C32	n-C33	n-C34	n-C35	n-C36
7122/6-2	Oil	2393.40	39180	4.80e4	3.35e4	1.52e4	1.56e4	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	Oil	2452.40	39179	4.23e4	4.10e4	4.19e4	3.74e4	2.87e4	2.72e4	0.00e0	0.00e0	0.00e0
7122/6-2	Oil	2533.40	39178	1.28e6	1.36e6	1.16e6	1.18e6	9.21e5	7.96e5	6.14e5	4.33e5	3.31e5

**Table 13. GC of EOM and saturated compounds (parameters)**

Well	Sample type	Lower Depth (m)	APT ID	CPI 1	Pr/n-C17	Ph/n-C18	(Pr/n-C17)/ (Ph/n-C18)	Pr/Ph	n-C17/ (n-C17+C27)
7122/6-2	Mud	1200	37756	5.03	0.30	0.76	0.40	0.84	1.00
7122/6-2	DC	1986	37771	1.41	3.52	1.59	2.22	2.77	0.48
7122/6-2	Mud	2000	37757	4.61	0.38	0.96	0.40	0.85	1.00
7122/6-2	DC	2037	37774	1.13	1.89	1.83	1.03	1.13	0.63
7122/6-2	DC	2055	37776	1.09	0.91	0.75	1.21	1.07	0.54
7122/6-2	Mud	2060	37758	5.08	0.44	0.87	0.51	0.94	1.00
7122/6-2	Mud	2300	37759	5.60	0.48	0.56	0.85	1.49	1.00
7122/6-2	Oil	2393.40	39180T	1.33	0.71	0.48	1.50	2.17	0.98
7122/6-2	Oil	2452.40	39179T	1.67	1.10	0.76	1.45	2.03	0.99
7122/6-2	COCH	2453.17	37786	1.34	1.03	1.50	0.68	0.95	0.94
7122/6-2	Mud	2460	37760	4.83	0.45	0.72	0.63	1.10	1.00
7122/6-2	COCH	2464.50	37788	1.37	1.67	0.36	4.63	4.93	0.61
7122/6-2	COCH	2466.50	37789	1.20	1.11	0.77	1.43	1.59	0.85
7122/6-2	COCH	2469.96	37790	1.26	2.50	0.38	6.54	6.40	0.36
7122/6-2	COCH	2489.65	37797	1.29	0.23	0.07	3.33	2.57	0.34
7122/6-2	COCH	2489.70	37798	1.28	0.21	0.06	3.26	2.77	0.39
7122/6-2	COCH	2489.86	37799	1.27	0.18	0.06	3.06	2.77	0.52
7122/6-2	Oil	2533.40	39178T	1.11	0.91	0.61	1.50	1.81	0.68
7122/6-2	Mud	2600	37761	4.18	0.42	0.69	0.61	1.29	1.00
7122/6-2	Mud	3070	37762	6.24	0.38	0.75	0.51	1.11	0.95





**Table 14. GC of EOM and saturated compounds (peak area)**

Well	Sample type	Lower Depth (m)	APT ID	n-C10	n-C11	n-C12	i-C13	i-C14	n-C13	i-C15	n-C14	i-C16	n-C15	n-C16	i-C18	n-C17	Pr	n-C18	Ph	n-C19
7122/6-2	Mud	1200	37756	0.00e0	0.00e0	5.27e3	2.07e2	0.00e0	1.39e4	1.00e3	1.87e4	0.00e0	9.38e3	7.64e3	1.81e3	4.40e3	1.32e3	2.08e3	1.58e3	8.93e2
7122/6-2	DC	1986	37771	5.52e3	7.07e3	7.27e3	4.53e3	3.63e3	9.47e3	4.35e3	9.92e3	8.79e3	9.54e3	8.32e3	9.53e3	1.08e4	3.81e4	8.67e3	1.38e4	1.03e4
7122/6-2	Mud	2000	37757	0.00e0	0.00e0	5.56e3	1.88e2	0.00e0	1.42e4	9.77e2	2.17e4	0.00e0	1.24e4	7.20e3	1.74e3	4.63e3	1.78e3	2.18e3	2.09e3	1.26e3
7122/6-2	DC	2037	37774	6.06e3	9.85e3	1.16e4	1.01e4	8.78e3	1.40e4	1.03e4	1.43e4	1.30e4	1.49e4	1.42e4	1.48e4	1.50e4	2.83e4	1.37e4	2.50e4	1.35e4
7122/6-2	DC	2055	37776	7.70e2	7.16e2	8.14e2	3.72e2	3.67e2	2.67e3	5.78e2	3.24e3	1.28e3	2.84e3	3.92e3	2.16e3	4.71e3	4.29e3	5.31e3	3.99e3	6.14e3
7122/6-2	Mud	2060	37758	0.00e0	0.00e0	7.90e3	4.68e2	0.00e0	1.29e4	1.54e3	2.19e4	3.08e2	1.27e4	1.00e4	1.97e3	6.12e3	2.72e3	3.36e3	2.91e3	2.04e3
7122/6-2	Mud	2300	37759	0.00e0	0.00e0	4.87e3	4.37e2	0.00e0	8.91e3	1.08e3	1.61e4	0.00e0	8.02e3	6.80e3	1.36e3	4.53e3	2.16e3	2.60e3	1.45e3	1.65e3
7122/6-2	Oil	2393.40	39180T	3.80e5	3.65e5	3.03e5	8.45e4	5.89e4	2.48e5	5.05e4	1.95e5	7.14e4	1.51e5	1.10e5	4.33e4	8.50e4	6.07e4	5.86e4	2.79e4	4.31e4
7122/6-2	Oil	2452.40	39179T	3.95e5	3.78e5	3.13e5	1.32e5	9.78e4	2.61e5	8.39e4	2.11e5	1.12e5	1.74e5	1.31e5	7.83e4	1.09e5	1.19e5	7.78e4	5.88e4	5.98e4
7122/6-2	COCH	2453.17	37786	0.00e0	0.00e0	2.59e2	0.00e0	3.07e2	3.11e3	1.45e3	9.37e3	6.95e3	2.37e4	4.65e4	2.72e4	5.57e4	5.72e4	4.00e4	6.00e4	2.53e4
7122/6-2	Mud	2460	37760	0.00e0	0.00e0	6.70e3	7.21e2	0.00e0	1.19e4	1.67e3	1.93e4	0.00e0	1.31e4	1.03e4	2.29e3	6.62e3	3.01e3	3.83e3	2.74e3	2.11e3
7122/6-2	COCH	2464.50	37788	5.25e3	5.90e3	6.45e3	1.64e3	1.93e3	7.79e3	1.80e3	7.71e3	3.94e3	6.18e3	5.28e3	2.61e3	5.00e3	8.37e3	4.70e3	1.70e3	4.88e3
7122/6-2	COCH	2466.50	37789	4.85e2	1.24e3	3.79e3	8.65e2	1.46e3	1.00e4	3.09e3	1.29e4	7.33e3	1.34e4	1.34e4	9.14e3	1.42e4	1.57e4	1.27e4	9.87e3	1.26e4
7122/6-2	COCH	2469.96	37790	8.27e3	1.06e4	1.27e4	4.53e3	6.97e3	1.64e4	6.64e3	1.77e4	1.49e4	1.87e4	1.91e4	1.25e4	2.21e4	5.54e4	2.27e4	8.66e3	2.64e4
7122/6-2	COCH	2489.65	37797	0.00e0	4.56e2	3.90e3	9.52e2	2.83e3	1.63e4	5.08e3	3.83e4	1.58e4	7.46e4	1.23e5	1.89e4	2.02e5	4.55e4	2.62e5	1.77e4	3.63e5
7122/6-2	COCH	2489.70	37798	0.00e0	3.06e2	5.70e3	1.41e3	4.66e3	3.11e4	8.44e3	7.52e4	2.60e4	1.34e5	1.88e5	2.49e4	2.69e5	5.63e4	3.18e5	2.03e4	4.14e5
7122/6-2	COCH	2489.86	37799	9.00e3	1.31e4	2.24e4	3.29e3	5.26e3	4.77e4	6.72e3	7.06e4	1.81e4	9.47e4	1.16e5	1.31e4	1.51e5	2.72e4	1.67e5	9.82e3	2.05e5
7122/6-2	Oil	2533.40	39178T	1.60e5	1.75e5	1.61e5	6.52e4	4.93e4	1.73e5	4.74e4	1.60e5	7.27e4	1.37e5	1.17e5	6.35e4	1.09e5	9.91e4	9.05e4	5.48e4	8.43e4
7122/6-2	Mud	2600	37761	0.00e0	0.00e0	9.94e3	1.01e3	0.00e0	1.64e4	2.74e3	2.58e4	0.00e0	2.06e4	1.74e4	4.32e3	1.04e4	4.38e3	4.93e3	3.39e3	3.29e3
7122/6-2	Mud	3070	37762	1.77e3	2.23e3	9.01e3	1.06e3	2.39e3	1.81e4	2.94e3	2.92e4	0.00e0	2.35e4	1.95e4	4.62e3	1.27e4	4.82e3	5.82e3	4.34e3	4.40e3



Table 14. continued, GC of EOM and saturated compounds (peak area)

Well	Sample type	Lower Depth (m)	APT ID	n-C20	n-C21	n-C22	n-C23	n-C24	n-C25	n-C26	n-C27	n-C28	n-C29	n-C30	n-C31	n-C32	n-C33	n-C34	n-C35	n-C36
7122/6-2	Mud	1200	37756	0.00e0	7.25e2	5.85e2	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	6.55e3	1.30e3	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	DC	1986	37771	9.20e3	9.87e3	9.66e3	1.13e4	9.60e3	1.16e4	8.56e3	1.19e4	6.74e3	9.28e3	4.98e3	4.89e3	3.72e3	3.06e3	3.07e3	1.30e3	7.67e2
7122/6-2	Mud	2000	37757	0.00e0	8.14e2	1.37e3	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	6.08e3	1.56e3	1.11e3	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	DC	2037	37774	1.40e4	1.20e4	1.22e4	1.08e4	1.10e4	1.00e4	8.64e3	8.61e3	6.18e3	6.33e3	4.43e3	3.80e3	2.55e3	2.49e3	3.36e3	9.58e2	7.33e2
7122/6-2	DC	2055	37776	7.38e3	7.28e3	7.28e3	6.66e3	6.35e3	5.76e3	4.62e3	4.06e3	3.16e3	2.86e3	2.08e3	1.78e3	1.39e3	9.24e2	1.29e3	5.60e2	5.46e2
7122/6-2	Mud	2060	37758	0.00e0	1.60e3	1.20e3	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	6.31e3	1.76e3	2.63e3	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	Mud	2300	37759	0.00e0	1.36e3	1.58e3	0.00e0	4.98e2	0.00e0	0.00e0	0.00e0	0.00e0	6.00e3	1.08e3	2.52e3	3.86e2	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	Oil	2393.40	39180T	3.18e4	2.13e4	1.51e4	1.06e4	7.28e3	5.58e3	2.91e3	1.48e3	7.29e2	3.85e2	1.19e2	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	Oil	2452.40	39179T	4.49e4	2.79e4	1.75e4	1.03e4	5.55e3	4.08e3	1.56e3	7.20e2	3.18e2	1.99e2	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2453.17	37786	2.02e4	1.03e4	6.04e3	4.28e3	4.27e3	5.73e3	3.36e3	3.27e3	2.60e3	3.36e3	2.45e3	2.88e3	1.93e3	2.01e3	1.33e3	9.00e2	6.17e2
7122/6-2	Mud	2460	37760	0.00e0	1.76e3	1.99e3	0.00e0	5.71e2	0.00e0	0.00e0	0.00e0	0.00e0	5.61e3	1.33e3	3.25e3	4.50e2	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2464.50	37788	4.62e3	4.46e3	4.29e3	4.50e3	3.79e3	4.50e3	3.05e3	3.25e3	1.66e3	1.53e3	8.10e2	6.37e2	3.96e2	3.02e2	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2466.50	37789	1.19e4	9.31e3	7.49e3	5.91e3	4.61e3	4.58e3	2.98e3	2.59e3	2.01e3	2.09e3	1.49e3	1.34e3	9.12e2	6.44e2	5.17e2	4.28e2	0.00e0
7122/6-2	COCH	2469.96	37790	2.32e4	2.52e4	2.68e4	3.11e4	3.09e4	3.83e4	3.38e4	3.97e4	2.90e4	3.20e4	1.93e4	1.75e4	9.16e3	8.37e3	4.15e3	3.64e3	1.44e3
7122/6-2	COCH	2489.65	37797	4.04e5	4.86e5	4.22e5	4.49e5	3.60e5	4.14e5	3.48e5	3.97e5	2.89e5	3.73e5	2.24e5	2.17e5	1.20e5	1.07e5	5.94e4	4.64e4	3.37e4
7122/6-2	COCH	2489.70	37798	4.42e5	5.21e5	4.50e5	4.78e5	3.83e5	4.38e5	3.71e5	4.16e5	3.01e5	3.91e5	2.35e5	2.29e5	1.26e5	1.12e5	6.21e4	4.88e4	3.55e4
7122/6-2	COCH	2489.86	37799	2.08e5	2.33e5	1.92e5	1.92e5	1.46e5	1.60e5	1.32e5	1.39e5	9.75e4	1.21e5	7.06e4	6.54e4	3.57e4	3.04e4	1.58e4	1.17e4	8.45e3
7122/6-2	Oil	2533.40	39178T	7.95e4	6.92e4	6.34e4	5.92e4	5.55e4	6.42e4	5.39e4	5.13e4	4.53e4	4.53e4	3.96e4	3.63e4	2.50e4	2.20e4	1.74e4	1.28e4	7.71e3
7122/6-2	Mud	2600	37761	0.00e0	2.33e3	2.63e3	0.00e0	8.52e2	0.00e0	0.00e0	0.00e0	0.00e0	7.64e3	2.13e3	4.65e3	7.55e2	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	Mud	3070	37762	0.00e0	2.95e3	3.73e3	0.00e0	0.00e0	0.00e0	0.00e0	6.71e2	0.00e0	7.14e3	2.19e3	8.10e3	8.48e2	0.00e0	3.46e3	0.00e0	0.00e0



**Table 15. GC of EOM and saturated compounds (peak area)**

Well	Sample type	Lower Depth (m)	APT ID	n-C10	n-C11	n-C12	i-C13	i-C14	n-C13	i-C15	n-C14	i-C16	n-C15	n-C16	i-C18	n-C17	Pr	n-C18	Ph	n-C19
7122/6-2	Mud	1200	37756	0.00e0	0.00e0	3.86e4	1.52e3	0.00e0	1.02e5	7.35e3	1.37e5	0.00e0	6.87e4	5.60e4	1.33e4	3.22e4	9.66e3	1.52e4	1.15e4	6.55e3
7122/6-2	DC	1986	37771	2.90e5	3.72e5	3.82e5	2.38e5	1.91e5	4.98e5	2.29e5	5.22e5	4.62e5	5.01e5	4.38e5	5.01e5	5.69e5	2.00e6	4.56e5	7.24e5	5.40e5
7122/6-2	Mud	2000	37757	0.00e0	0.00e0	3.62e4	1.23e3	0.00e0	9.22e4	6.37e3	1.41e5	0.00e0	8.09e4	4.69e4	1.13e4	3.02e4	1.16e4	1.42e4	1.36e4	8.21e3
7122/6-2	DC	2037	37774	3.58e5	5.82e5	6.87e5	5.97e5	5.19e5	8.31e5	6.06e5	8.48e5	7.66e5	8.80e5	8.37e5	8.76e5	8.85e5	1.67e6	8.07e5	1.48e6	8.01e5
7122/6-2	DC	2055	37776	1.24e5	1.15e5	1.31e5	5.97e4	5.90e4	4.29e5	9.28e4	5.21e5	2.05e5	4.57e5	6.29e5	3.47e5	7.56e5	6.89e5	8.54e5	6.41e5	9.86e5
7122/6-2	Mud	2060	37758	0.00e0	0.00e0	6.29e4	3.72e3	0.00e0	1.03e5	1.22e4	1.74e5	2.45e3	1.01e5	7.96e4	1.57e4	4.87e4	2.16e4	2.67e4	2.31e4	1.62e4
7122/6-2	Mud	2300	37759	0.00e0	0.00e0	4.87e4	4.37e3	0.00e0	8.90e4	1.08e4	1.61e5	0.00e0	8.01e4	6.80e4	1.36e4	4.53e4	2.16e4	2.59e4	1.45e4	1.65e4
7122/6-2	Oil	2393.40	39180T	4.17e7	4.01e7	3.33e7	9.28e6	6.46e6	2.73e7	5.54e6	2.14e7	7.84e6	1.65e7	1.20e7	4.75e6	9.33e6	6.66e6	6.44e6	3.06e6	4.74e6
7122/6-2	Oil	2452.40	39179T	2.77e7	2.65e7	2.20e7	9.26e6	6.86e6	1.83e7	5.89e6	1.48e7	7.82e6	1.22e7	9.16e6	5.49e6	7.62e6	8.37e6	5.46e6	4.13e6	4.19e6
7122/6-2	COCH	2453.17	37786	0.00e0	0.00e0	3.85e4	0.00e0	4.57e4	4.63e5	2.15e5	1.39e6	1.03e6	3.52e6	6.90e6	4.04e6	8.27e6	8.50e6	5.94e6	8.92e6	3.76e6
7122/6-2	Mud	2460	37760	0.00e0	0.00e0	5.70e4	6.12e3	0.00e0	1.02e5	1.42e4	1.64e5	0.00e0	1.11e5	8.76e4	1.94e4	5.63e4	2.56e4	3.25e4	2.33e4	1.80e4
7122/6-2	COCH	2464.50	37788	3.93e5	4.41e5	4.82e5	1.23e5	1.44e5	5.83e5	1.34e5	5.77e5	2.95e5	4.63e5	3.95e5	1.95e5	3.75e5	6.26e5	3.52e5	1.27e5	3.65e5
7122/6-2	COCH	2466.50	37789	5.99e4	1.54e5	4.68e5	1.07e5	1.81e5	1.24e6	3.81e5	1.60e6	9.06e5	1.66e6	1.66e6	1.13e6	1.75e6	1.94e6	1.58e6	1.22e6	1.56e6
7122/6-2	COCH	2469.96	37790	6.13e5	7.84e5	9.42e5	3.35e5	5.16e5	1.22e6	4.92e5	1.32e6	1.11e6	1.38e6	1.42e6	9.29e5	1.64e6	4.11e6	1.68e6	6.42e5	1.96e6
7122/6-2	COCH	2489.65	37797	0.00e0	2.21e4	1.89e5	4.61e4	1.37e5	7.92e5	2.46e5	1.86e6	7.68e5	3.62e6	5.98e6	9.16e5	9.79e6	2.20e6	1.27e7	8.57e5	1.76e7
7122/6-2	COCH	2489.70	37798	0.00e0	1.49e4	2.78e5	6.86e4	2.27e5	1.52e6	4.11e5	3.67e6	1.27e6	6.53e6	9.16e6	1.21e6	1.31e7	2.74e6	1.55e7	9.91e5	2.01e7
7122/6-2	COCH	2489.86	37799	4.42e5	6.44e5	1.10e6	1.62e5	2.58e5	2.34e6	3.30e5	3.47e6	8.90e5	4.65e6	5.68e6	6.43e5	7.43e6	1.33e6	8.21e6	4.82e5	1.01e7
7122/6-2	Oil	2533.40	39178T	9.05e6	9.94e6	9.13e6	3.69e6	2.79e6	9.77e6	2.68e6	9.08e6	4.12e6	7.78e6	6.62e6	3.60e6	6.17e6	5.61e6	5.12e6	3.11e6	4.78e6
7122/6-2	Mud	2600	37761	0.00e0	0.00e0	6.33e4	6.41e3	0.00e0	1.05e5	1.75e4	1.64e5	0.00e0	1.31e5	1.11e5	2.75e4	6.63e4	2.79e4	3.14e4	2.16e4	2.09e4
7122/6-2	Mud	3070	37762	1.02e4	1.28e4	5.17e4	6.05e3	1.37e4	1.04e5	1.68e4	1.67e5	0.00e0	1.35e5	1.11e5	2.65e4	7.26e4	2.76e4	3.34e4	2.49e4	2.52e4



Table 15. continued, GC of EOM and saturated compounds (peak area)

Well	Sample type	Lower Depth (m)	APT ID	n-C20	n-C21	n-C22	n-C23	n-C24	n-C25	n-C26	n-C27	n-C28	n-C29	n-C30	n-C31	n-C32	n-C33	n-C34	n-C35	n-C36
7122/6-2	Mud	1200	37756	0.00e0	5.32e3	4.29e3	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	4.80e4	9.55e3	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	DC	1986	37771	4.84e5	5.19e5	5.08e5	5.94e5	5.05e5	6.08e5	4.50e5	6.24e5	3.55e5	4.88e5	2.62e5	2.57e5	1.95e5	1.61e5	1.62e5	6.85e4	4.03e4
7122/6-2	Mud	2000	37757	0.00e0	5.31e3	8.93e3	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	3.96e4	1.02e4	7.25e3	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	DC	2037	37774	8.25e5	7.07e5	7.23e5	6.41e5	6.53e5	5.92e5	5.11e5	5.09e5	3.66e5	3.74e5	2.62e5	2.25e5	1.51e5	1.47e5	1.98e5	5.66e4	4.33e4
7122/6-2	DC	2055	37776	1.19e6	1.17e6	1.17e6	1.07e6	1.02e6	9.25e5	7.42e5	6.52e5	5.08e5	4.60e5	3.35e5	2.86e5	2.23e5	1.49e5	2.07e5	8.99e4	8.78e4
7122/6-2	Mud	2060	37758	0.00e0	1.27e4	9.53e3	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	5.02e4	1.40e4	2.09e4	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	Mud	2300	37759	0.00e0	1.36e4	1.58e4	0.00e0	4.97e3	0.00e0	0.00e0	0.00e0	0.00e0	6.00e4	1.08e4	2.51e4	3.85e3	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	Oil	2393.40	39180T	3.49e6	2.34e6	1.65e6	1.16e6	7.99e5	6.13e5	3.19e5	1.63e5	8.00e4	4.22e4	1.30e4	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	Oil	2452.40	39179T	3.15e6	1.96e6	1.23e6	7.21e5	3.89e5	2.86e5	1.09e5	5.05e4	2.23e4	1.39e4	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2453.17	37786	3.00e6	1.53e6	8.98e5	6.36e5	6.35e5	8.51e5	4.99e5	4.87e5	3.86e5	5.00e5	3.63e5	4.27e5	2.87e5	2.98e5	1.98e5	1.34e5	9.16e4
7122/6-2	Mud	2460	37760	0.00e0	1.50e4	1.69e4	0.00e0	4.85e3	0.00e0	0.00e0	0.00e0	0.00e0	4.77e4	1.13e4	2.76e4	3.83e3	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2464.50	37788	3.45e5	3.34e5	3.21e5	3.37e5	2.84e5	3.37e5	2.28e5	2.43e5	1.24e5	1.15e5	6.06e4	4.76e4	2.96e4	2.26e4	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2466.50	37789	1.47e6	1.15e6	9.27e5	7.31e5	5.70e5	5.66e5	3.68e5	3.20e5	2.48e5	2.59e5	1.84e5	1.66e5	1.13e5	7.96e4	6.39e4	5.29e4	0.00e0
7122/6-2	COCH	2469.96	37790	1.72e6	1.87e6	1.98e6	2.31e6	2.29e6	2.84e6	2.50e6	2.94e6	2.15e6	2.37e6	1.43e6	1.29e6	6.79e5	6.20e5	3.08e5	2.70e5	1.07e5
7122/6-2	COCH	2489.65	37797	1.96e7	2.35e7	2.04e7	2.18e7	1.74e7	2.01e7	1.69e7	1.92e7	1.40e7	1.81e7	1.09e7	1.05e7	5.81e6	5.18e6	2.88e6	2.25e6	1.64e6
7122/6-2	COCH	2489.70	37798	2.15e7	2.54e7	2.19e7	2.33e7	1.87e7	2.13e7	1.81e7	2.03e7	1.47e7	1.91e7	1.14e7	1.11e7	6.12e6	5.47e6	3.02e6	2.38e6	1.73e6
7122/6-2	COCH	2489.86	37799	1.02e7	1.15e7	9.40e6	9.45e6	7.19e6	7.85e6	6.48e6	6.81e6	4.79e6	5.95e6	3.47e6	3.21e6	1.75e6	1.49e6	7.77e5	5.73e5	4.15e5
7122/6-2	Oil	2533.40	39178T	4.50e6	3.92e6	3.59e6	3.35e6	3.15e6	3.64e6	3.05e6	2.90e6	2.57e6	2.57e6	2.25e6	2.05e6	1.42e6	1.25e6	9.86e5	7.26e5	4.37e5
7122/6-2	Mud	2600	37761	0.00e0	1.48e4	1.68e4	0.00e0	5.43e3	0.00e0	0.00e0	0.00e0	0.00e0	4.87e4	1.36e4	2.96e4	4.81e3	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	Mud	3070	37762	0.00e0	1.69e4	2.14e4	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0	4.09e4	1.26e4	4.64e4	4.86e3	0.00e0	1.98e4	0.00e0	0.00e0

**Table 16. GC of aromatic compounds (peak area)**

Well	Sample type	Lower Depth (m)	APT ID	2-MN	1-MN	P	3-MP	2-MP	9-MP	1-MP
7122/6-2	DC	1986	37771	57982	41478	14415	8256	7267	11163	9177
7122/6-2	DC	2037	37774	45911	42095	17729	7421	9263	15016	12298
7122/6-2	DC	2055	37776	12157	11042	7809	4208	4773	7233	5845
7122/6-2	Oil	2393.40	39180T	65948	41859	1903	640	0	835	329
7122/6-2	Oil	2452.40	39179T	124940	72303	3579	1130	521	1668	1056
7122/6-2	COCH	2453.17	37786	0	0	0	0	0	0	0
7122/6-2	COCH	2464.50	37788	97214	95242	92414	14867	17827	31399	23961
7122/6-2	COCH	2466.50	37789	5727	5361	5737	1226	1141	2621	2172
7122/6-2	COCH	2469.96	37790	100861	100411	97937	16072	20033	33021	27041
7122/6-2	COCH	2489.65	37797	3619	5469	6422	2911	2159	5150	3373
7122/6-2	COCH	2489.70	37798	2617	4020	4666	2261	1753	4051	2646
7122/6-2	COCH	2489.70	37798	14757	16407	15747	4866	4621	8889	5937
7122/6-2	Oil	2533.40	39178T	108589	54371	7977	4942	4593	7163	5459

**Table 17. GC of aromatic compounds (amounts in ng/g)**

Well	Sample type	Lower Depth (m)	APT ID	2-MN	1-MN	P	3-MP	2-MP	9-MP	1-MP
7122/6-2	DC	1986	37771	925576	662122	230107	131792	116003	178194	146499
7122/6-2	DC	2037	37774	743228	681455	287008	120134	149958	243089	199092
7122/6-2	DC	2055	37776	702434	637990	451230	243166	275772	417937	337742
7122/6-2	Oil	2393.40	39180T	2152858	1366481	62127	20896	0	27268	10753
7122/6-2	Oil	2452.40	39179T	3141409	1817938	89983	28410	13095	41937	26556
7122/6-2	COCH	2453.17	37786	0	0	0	0	0	0	0
7122/6-2	COCH	2464.50	37788	3021016	2959750	2871864	462007	553977	975756	744610
7122/6-2	COCH	2466.50	37789	641695	600761	642849	137346	127833	293730	243395
7122/6-2	COCH	2469.96	37790	3567247	3551345	3463824	568449	708513	1167873	956383
7122/6-2	COCH	2489.65	37797	104080	157270	184693	83713	62096	148105	97005
7122/6-2	COCH	2489.70	37798	89408	137351	159417	77247	59909	138431	90423
7122/6-2	COCH	2489.70	37798	642411	714229	685507	211815	201172	386938	258429
7122/6-2	Oil	2533.40	39178T	2032746	1017810	149318	92517	85970	134084	102197



**Table 18. GCMS SIR of saturated compounds (parameters)**

Well	Sample type	Lower Depth (m)	APT ID	%23:3	%28αβ	%30D	%27Ts	%22S	%29Ts	%20S	%ββ	%27dβS	%C27	%C29	28/29	24:4/23:3
7122/6-2	DC	2037	37774	4.63	23.68	5.45	30.13	61.00	14.17	55.05	60.19	60.98	38.72	34.49	0.73	1.11
7122/6-2	DC	2055	37776	14.60	7.13	9.24	52.83	60.19	18.63	55.87	57.83	57.68	38.07	36.60	0.67	0.71
7122/6-2	Oil	2393.40	39180	44.20	10.83	7.81	53.41	56.43	17.73	51.26	54.72	54.63	37.20	32.88	0.63	0.23
7122/6-2	Oil	2452.40	39179	55.90	8.63	9.00	46.23	56.42	20.16	52.05	57.03	56.83	31.02	40.74	0.65	0.15
7122/6-2	COCH	2453.17	37786	84.06	9.08	7.90	57.27	61.31	20.70	58.35	59.21	67.85	42.32	34.22	0.67	0.14
7122/6-2	COCH	2466.50	37789	17.39	3.87	11.42	32.36	60.03	12.32	56.04	56.66	52.49	17.36	62.58	0.34	0.36
7122/6-2	COCH	2469.96	37790	1.37	1.54	9.91	3.87	60.50	3.16	54.60	47.10	45.12	12.11	72.38	0.20	2.83
7122/6-2	COCH	2489.70	37798	3.30	1.39	16.18	43.94	58.15	20.81	58.70	56.03	66.92	26.22	46.74	0.53	1.82
7122/6-2	COCH	2489.86	37799	4.33	1.26	15.71	42.29	59.62	21.30	61.99	53.32	61.52	26.66	46.88	0.53	1.90
7122/6-2	Oil	2533.40	39178	10.78	8.14	18.96	61.00	57.02	20.34	52.79	60.00	61.16	28.05	45.75	0.59	0.56

%23:3	$23:3/(23:3+30\alpha\beta)*100$
%28αβ	$28\alpha\beta/(28\alpha\beta+30\alpha\beta)*100$
%30D	$30D/(30D+30\alpha\beta)*100$
%27Ts	$27Ts/(27Ts+27Tm)*100$
%22S	$(32\alpha\beta S/(32\alpha\beta S+32\alpha\beta R))*100$
%29Ts	$(29Ts/29Ts+30\alpha\beta)*100$
%20S	$(29\alpha\alpha S/29\alpha\alpha S+29\alpha\alpha R)*100$

%ββ	$(29\beta\beta(R+S)/(29\beta\beta(R+S)+29\alpha\alpha(R+S))*100$
%27dβS	$27d\beta S/(27d\beta S+27\alpha\alpha(R+S))*100$
%C27	$(27\beta\beta(R+S)/(27\beta\beta(R+S)+28\beta\beta(R+S)+29\beta\beta(R+S))*100$
%C29	$(29\beta\beta(R+S)/(27\beta\beta(R+S)+28\beta\beta(R+S)+29\beta\beta(R+S))*100$
28/29	$(28\alpha\alpha(R+S)+28\beta\beta(R+S))/(29\alpha\alpha(R+S)+29\beta\beta(R+S))$
24:4/23:3	24:4/23:3

**Table 19. GCMS SIR of saturated compounds (peak height)**

m/e			177				191													
Well	Sample type	Lower Depth (m)	APT ID	25nor28 $\alpha\beta$	25nor29 $\alpha\beta$	25nor30 $\alpha\beta$	25nor31 $\alpha\beta$	19/3	20/3	21/3	23/3	24/3	25/3R	25/3S	24/4	26/3R	26/3S	28/3R	28/3S	29/3R
7122/6-2	DC	2037	37774	1.50e6	1.30e5	0.00e0	1.54e6	3.61e5	4.61e5	6.43e5	1.02e6	1.03e6	3.77e5	3.79e5	1.13e6	2.57e5	2.32e5	3.00e5	2.87e5	3.72e5
7122/6-2	DC	2055	37776	5.83e4	4.07e4	0.00e0	1.26e5	7.27e4	1.04e5	1.39e5	2.86e5	2.01e5	7.48e4	7.96e4	2.04e5	7.63e4	6.25e4	6.23e4	5.65e4	6.05e4
7122/6-2	Oil	2393.40	39180	0.00e0	4.37e4	2.02e4	1.43e4	1.06e5	8.90e4	8.66e4	1.05e5	6.41e4	2.68e4	2.51e4	2.44e4	2.33e4	2.16e4	1.89e4	1.83e4	2.07e4
7122/6-2	Oil	2452.40	39179	0.00e0	2.80e4	1.60e4	1.49e4	2.03e5	1.68e5	1.95e5	1.59e5	1.09e5	2.77e4	2.85e4	2.46e4	2.43e4	2.37e4	1.29e4	1.19e4	1.06e4
7122/6-2	COCH	2453.17	37786	8.83e4	6.81e4	3.70e4	9.09e4	2.04e6	3.15e6	4.08e6	6.11e6	2.94e6	6.07e5	6.14e5	8.65e5	2.83e5	2.65e5	9.91e4	8.79e4	9.06e4
7122/6-2	COCH	2466.50	37789	2.47e4	2.18e4	0.00e0	7.83e4	8.26e4	1.01e5	1.39e5	2.27e5	1.40e5	5.37e4	4.72e4	8.16e4	5.43e4	5.25e4	4.16e4	3.73e4	4.15e4
7122/6-2	COCH	2469.96	37790	1.35e5	7.74e4	0.00e0	1.49e6	6.40e5	5.36e5	2.76e5	2.95e5	1.40e5	6.20e4	5.40e4	8.33e5	4.90e4	4.97e4	8.12e4	3.33e4	2.54e4
7122/6-2	COCH	2489.70	37798	6.00e5	7.32e5	0.00e0	7.70e6	3.24e6	3.03e6	3.57e6	3.54e6	1.60e6	5.58e5	6.31e5	6.43e6	8.72e5	7.83e5	7.30e5	5.15e5	4.70e5
7122/6-2	COCH	2489.86	37799	4.47e5	3.90e5	0.00e0	3.86e6	3.36e6	2.51e6	2.75e6	2.40e6	1.00e6	3.22e5	3.50e5	4.56e6	4.61e5	3.76e5	3.72e5	2.24e5	1.96e5
7122/6-2	Oil	2533.40	39178	1.97e5	6.73e5	3.61e5	6.89e5	4.08e5	4.50e5	6.09e5	9.42e5	8.06e5	3.59e5	3.71e5	5.26e5	4.93e5	4.59e5	6.15e5	6.01e5	7.02e5

Table 19. continued, GCMS SIR of saturated compounds (peak height)

m/e			191																	
Well	Sample type	Lower Depth (m)	APT ID	29/3S	27Ts	27Tm	30/3R	30/3S	28 $\alpha\beta$	25nor30 $\alpha\beta$	29 $\alpha\beta$	29Ts	30d	29 $\beta\alpha$	30O	30 $\alpha\beta$	30 $\beta\alpha$	31 $\alpha\beta$ S	31 $\alpha\beta$ R	30G
7122/6-2	DC	2037	37774	3.98e5	2.38e6	5.52e6	3.10e5	2.58e5	6.53e6	0.00e0	9.86e6	3.47e6	1.21e6	6.62e5	0.00e0	2.10e7	1.52e6	1.10e7	7.41e6	6.82e5
7122/6-2	DC	2055	37776	6.95e4	4.50e5	4.02e5	5.57e4	5.27e4	1.29e5	0.00e0	9.37e5	3.83e5	1.70e5	8.34e4	0.00e0	1.67e6	1.70e5	7.59e5	5.47e5	8.33e4
7122/6-2	Oil	2393.40	39180	2.14e4	3.89e4	3.39e4	1.77e4	2.31e4	1.61e4	2.60e4	9.61e4	2.85e4	1.12e4	1.72e4	0.00e0	1.32e5	1.75e4	3.65e4	3.02e4	1.05e4
7122/6-2	Oil	2452.40	39179	1.11e4	3.46e4	4.02e4	8.80e3	1.27e4	1.18e4	2.07e4	8.91e4	3.16e4	1.24e4	1.44e4	0.00e0	1.25e5	2.11e4	4.80e4	3.35e4	1.24e4
7122/6-2	COCH	2453.17	37786	9.17e4	4.29e5	3.20e5	5.57e4	5.88e4	1.16e5	0.00e0	1.07e6	3.02e5	9.93e4	8.38e4	0.00e0	1.16e6	1.35e5	4.90e5	3.51e5	8.48e4
7122/6-2	COCH	2466.50	37789	3.87e4	1.73e5	3.62e5	3.66e4	3.46e4	4.34e4	0.00e0	8.80e5	1.51e5	1.39e5	9.29e4	0.00e0	1.08e6	2.43e5	4.90e5	3.52e5	6.27e4
7122/6-2	COCH	2469.96	37790	5.17e4	3.10e5	7.69e6	0.00e0	0.00e0	3.33e5	0.00e0	2.02e7	6.94e5	2.34e6	2.20e6	0.00e0	2.13e7	5.66e6	8.68e6	6.08e6	3.61e5
7122/6-2	COCH	2489.70	37798	5.92e5	1.30e7	1.66e7	7.90e5	8.77e5	1.46e6	0.00e0	5.71e7	2.73e7	2.00e7	9.26e6	0.00e0	1.04e8	2.08e7	3.91e7	2.64e7	5.25e6
7122/6-2	COCH	2489.86	37799	3.27e5	8.26e6	1.13e7	4.55e5	4.34e5	6.78e5	0.00e0	3.12e7	1.43e7	9.88e6	4.89e6	0.00e0	5.30e7	1.13e7	1.85e7	1.28e7	2.49e6
7122/6-2	Oil	2533.40	39178	7.13e5	2.10e6	1.34e6	5.59e5	6.46e5	6.91e5	5.20e5	3.70e6	1.99e6	1.82e6	5.27e5	0.00e0	7.79e6	1.23e6	2.96e6	2.09e6	5.77e5





Table 19. continued, GCMS SIR of saturated compounds (peak height)

Well	Sample type	Lower Depth (m)	APT ID	191									217							
				m/e	31β $\alpha$	32 $\alpha$ βS	32 $\alpha$ βR	33 $\alpha$ βS	33 $\alpha$ βR	34 $\alpha$ βS	34 $\alpha$ βR	35 $\alpha$ βS	35 $\alpha$ βR	21 $\alpha\alpha$	21ββ	22 $\alpha\alpha$	22ββ	27 $\alpha$ βS	27 $\alpha$ βR	27 $\alpha\alpha$ R
7122/6-2	DC	2037	37774	8.12e5	6.91e6	4.42e6	4.41e6	2.96e6	3.36e6	2.25e6	3.27e6	2.02e6	1.86e6	1.29e6	1.14e6	8.25e5	3.18e6	1.84e6	7.84e5	1.04e6
7122/6-2	DC	2055	37776	8.56e4	4.75e5	3.14e5	3.07e5	1.98e5	2.26e5	1.53e5	1.82e5	1.28e5	1.39e5	1.86e5	1.27e5	1.17e5	3.26e5	1.93e5	7.71e4	1.01e5
7122/6-2	Oil	2393.40	39180	1.16e4	2.12e4	1.63e4	1.39e4	8.99e3	9.38e3	0.00e0	0.00e0	0.00e0	5.88e4	3.76e4	3.17e4	1.23e4	2.46e4	1.49e4	6.85e3	7.96e3
7122/6-2	Oil	2452.40	39179	1.50e4	3.06e4	2.36e4	2.42e4	1.75e4	0.00e0	0.00e0	0.00e0	0.00e0	7.92e4	4.86e4	4.60e4	1.34e4	2.63e4	1.59e4	5.46e3	7.50e3
7122/6-2	COCH	2453.17	37786	6.38e4	2.90e5	1.83e5	1.66e5	1.06e5	9.97e4	6.23e4	8.22e4	5.88e4	3.00e6	2.71e6	2.04e6	9.64e5	5.87e5	3.35e5	1.19e5	1.40e5
7122/6-2	COCH	2466.50	37789	1.03e5	3.03e5	2.02e5	1.35e5	8.00e4	8.11e4	4.79e4	4.77e4	3.60e4	5.35e4	7.34e4	4.10e4	3.17e4	5.51e4	3.08e4	1.47e4	2.08e4
7122/6-2	COCH	2469.96	37790	2.24e6	4.44e6	2.90e6	1.96e6	1.27e6	1.15e6	7.15e5	4.09e5	2.93e5	1.40e5	1.52e5	6.47e4	5.55e4	1.57e5	1.05e5	6.24e4	6.20e4
7122/6-2	COCH	2489.70	37798	8.14e6	2.27e7	1.63e7	1.34e7	9.02e6	8.35e6	5.52e6	3.45e6	2.65e6	3.01e5	3.10e5	2.26e5	1.18e5	2.19e6	1.29e6	5.35e5	7.58e5
7122/6-2	COCH	2489.86	37799	3.94e6	1.03e7	6.98e6	5.35e6	3.64e6	3.24e6	2.17e6	1.38e6	1.06e6	2.34e5	2.93e5	1.51e5	9.91e4	9.61e5	6.00e5	2.48e5	3.37e5
7122/6-2	Oil	2533.40	39178	9.68e5	1.93e6	1.45e6	1.26e6	8.54e5	9.07e5	6.04e5	5.70e5	4.37e5	3.23e5	3.18e5	2.53e5	1.37e5	8.69e5	5.32e5	2.34e5	3.22e5

Table 19. continued, GCMS SIR of saturated compounds (peak height)

Well	Sample type	Lower Depth (m)	APT ID	217																
				m/e	28 $\alpha$ βS#1	28 $\alpha$ βS#2	28 $\alpha$ βR#1	28 $\alpha$ βR#2	28 $\alpha\alpha$ R	27 $\alpha\alpha$ S	27ββR+29 $\alpha$ βS	27ββS	28 $\alpha\alpha$ S	27 $\alpha\alpha$ R	29 $\alpha$ βR	29 $\alpha\alpha$ R	28 $\alpha\alpha\alpha$ S	29 $\alpha\alpha$ S	28ββR	28ββS
7122/6-2	DC	2037	37774	1.26e6	1.21e6	6.96e5	8.81e5	5.61e5	1.00e6	1.91e6	1.29e6	4.93e5	1.03e6	1.40e6	8.97e5	3.69e5	8.04e5	9.34e5	1.16e6	5.11e5
7122/6-2	DC	2055	37776	1.36e5	1.30e5	7.49e4	9.54e4	5.61e4	1.02e5	2.10e5	1.30e5	4.03e4	1.38e5	1.48e5	1.01e5	3.75e4	8.30e4	1.03e5	1.41e5	6.00e4
7122/6-2	Oil	2393.40	39180	1.42e4	1.02e4	6.82e3	6.69e3	5.52e3	7.98e3	1.43e4	7.57e3	5.72e3	1.24e4	1.11e4	7.25e3	0.00e0	0.00e0	6.76e3	8.97e3	5.30e3
7122/6-2	Oil	2452.40	39179	9.99e3	1.05e4	5.02e3	7.48e3	4.29e3	6.27e3	1.71e4	7.82e3	0.00e0	1.37e4	1.08e4	7.06e3	0.00e0	5.13e3	7.16e3	9.15e3	5.85e3
7122/6-2	COCH	2453.17	37786	1.81e5	1.70e5	9.44e4	1.07e5	6.70e4	1.36e5	2.33e5	1.56e5	4.69e4	1.42e5	1.58e5	9.52e4	3.70e4	6.95e4	1.02e5	1.21e5	5.60e4
7122/6-2	COCH	2466.50	37789	2.59e4	2.51e4	1.26e4	1.96e4	1.14e4	1.66e4	5.95e4	2.24e4	7.50e3	3.32e4	4.12e4	3.02e4	9.68e3	2.46e4	2.74e4	3.70e4	1.78e4
7122/6-2	COCH	2469.96	37790	2.05e5	2.38e5	1.21e5	2.04e5	1.66e5	1.07e5	1.51e6	1.42e5	1.34e5	8.33e4	8.88e5	4.91e5	0.00e0	7.00e5	3.61e5	2.93e5	2.36e5
7122/6-2	COCH	2489.70	37798	1.05e6	1.18e6	7.21e5	7.88e5	5.39e5	5.40e5	2.62e6	5.70e5	7.74e5	5.44e5	1.68e6	1.49e6	4.84e5	1.06e6	8.05e5	6.50e5	3.70e5
7122/6-2	COCH	2489.86	37799	4.30e5	4.84e5	2.76e5	3.26e5	2.64e5	3.03e5	1.06e6	3.06e5	3.85e5	2.98e5	6.59e5	7.76e5	2.58e5	4.31e5	4.61e5	3.20e5	1.87e5
7122/6-2	Oil	2533.40	39178	4.40e5	4.54e5	2.81e5	3.26e5	2.00e5	2.60e5	1.00e6	3.44e5	1.72e5	2.91e5	6.97e5	4.77e5	1.17e5	3.88e5	3.08e5	4.85e5	1.78e5



Table 19. continued, GCMS SIR of saturated compounds (peak height)

m/e		217						218											
Well	Sample type	Lower Depth (m)	APT ID	29aaS	29bbR	29bbS	29aaR	30aaS	30bbR	30bbS	30aaR	27bbR	27bbS	28bbR	28bbS	29bbR	29bbS	30bbR	30bbS
7122/6-2	DC	2037	37774	8.92e5	1.21e6	1.24e6	7.28e5	4.20e5	4.26e5	3.05e5	2.54e5	2.37e6	2.24e6	1.49e6	1.70e6	2.02e6	2.09e6	5.66e5	5.45e5
7122/6-2	DC	2055	37776	1.20e5	1.49e5	1.46e5	9.50e4	5.06e4	4.22e4	3.35e4	2.73e4	2.74e5	2.42e5	1.60e5	1.83e5	2.50e5	2.46e5	5.02e4	5.31e4
7122/6-2	Oil	2393.40	39180	7.73e3	8.68e3	9.54e3	7.35e3	0.00e0	0.00e0	0.00e0	0.00e0	1.41e4	1.31e4	1.08e4	1.11e4	1.28e4	1.13e4	3.40e3	2.69e3
7122/6-2	Oil	2452.40	39179	7.66e3	1.01e4	9.45e3	7.06e3	4.38e3	0.00e0	0.00e0	0.00e0	1.11e4	9.66e3	9.31e3	9.60e3	1.44e4	1.29e4	0.00e0	0.00e0
7122/6-2	COCH	2453.17	37786	1.12e5	1.51e5	1.27e5	7.98e4	3.60e4	2.63e4	2.11e4	1.23e4	3.25e5	2.72e5	1.57e5	1.74e5	2.54e5	2.28e5	2.83e4	3.07e4
7122/6-2	COCH	2466.50	37789	6.53e4	7.72e4	7.51e4	5.12e4	2.85e4	0.00e0	0.00e0	0.00e0	3.88e4	3.19e4	3.60e4	4.56e4	1.31e5	1.24e5	1.14e4	1.02e4
7122/6-2	COCH	2469.96	37790	1.27e6	1.12e6	9.58e5	1.06e6	5.67e5	8.35e4	0.00e0	0.00e0	4.77e5	1.13e5	3.42e5	4.14e5	1.83e6	1.70e6	4.22e4	0.00e0
7122/6-2	COCH	2489.70	37798	1.12e6	1.33e6	1.11e6	7.90e5	1.38e6	7.00e5	1.42e5	0.00e0	1.13e6	7.89e5	9.56e5	1.02e6	1.75e6	1.67e6	5.00e5	1.19e5
7122/6-2	COCH	2489.86	37799	6.64e5	6.57e5	5.66e5	4.07e5	8.04e5	3.52e5	8.91e4	0.00e0	5.77e5	4.20e5	4.94e5	4.95e5	8.81e5	8.73e5	2.42e5	6.48e4
7122/6-2	Oil	2533.40	39178	3.92e5	5.81e5	5.34e5	3.51e5	1.70e5	2.06e5	1.67e5	8.67e4	6.16e5	5.14e5	4.52e5	6.04e5	9.44e5	8.99e5	2.47e5	2.12e5



**Table 20. GCMS SIR of saturated compounds (amounts in ng/g)**

Well	Sample type	Lower Depth (m)	APT ID	177				191												
				25nor28αβ	25nor29αβ	25nor30αβ	25nor31αβ	19/3	20/3	21/3	23/3	24/3	25/3R	25/3S	24/4	26/3R	26/3S	28/3R	28/3S	29/3R
7122/6-2	DC	2037	37774	1.43e4	1.24e3	0.00e0	1.47e4	3.45e3	4.41e3	6.15e3	9.76e3	9.90e3	3.61e3	3.63e3	1.08e4	2.45e3	2.22e3	2.87e3	2.74e3	3.55e3
7122/6-2	DC	2055	37776	1.81e3	1.27e3	0.00e0	3.91e3	2.26e3	3.23e3	4.32e3	8.91e3	6.27e3	2.33e3	2.48e3	6.36e3	2.38e3	1.95e3	1.94e3	1.76e3	1.89e3
7122/6-2	Oil	2393.40	39180	0.00e0	1.92e3	8.92e2	6.30e2	4.68e3	3.92e3	3.81e3	4.61e3	2.82e3	1.18e3	1.11e3	1.07e3	1.03e3	9.53e2	8.31e2	8.04e2	9.10e2
7122/6-2	Oil	2452.40	39179	0.00e0	7.12e2	4.07e2	3.77e2	5.16e3	4.28e3	4.95e3	4.03e3	2.76e3	7.05e2	7.23e2	6.24e2	6.16e2	6.02e2	3.29e2	3.03e2	2.68e2
7122/6-2	COCH	2453.17	37786	2.54e3	1.96e3	1.06e3	2.61e3	5.87e4	9.07e4	1.17e5	1.76e5	8.45e4	1.75e4	1.77e4	2.49e4	8.14e3	7.61e3	2.85e3	2.53e3	2.61e3
7122/6-2	COCH	2466.50	37789	7.00e2	6.18e2	0.00e0	2.22e3	2.34e3	2.87e3	3.95e3	6.43e3	3.97e3	1.52e3	1.34e3	2.31e3	1.54e3	1.49e3	1.18e3	1.06e3	1.18e3
7122/6-2	COCH	2469.96	37790	1.94e3	1.11e3	0.00e0	2.14e4	9.18e3	7.69e3	3.96e3	4.23e3	2.01e3	8.91e2	7.75e2	1.20e4	7.04e2	7.13e2	1.17e3	4.78e2	3.65e2
7122/6-2	COCH	2489.70	37798	3.41e3	4.16e3	0.00e0	4.37e4	1.84e4	1.72e4	2.03e4	2.01e4	9.07e3	3.17e3	3.58e3	3.65e4	4.95e3	4.44e3	4.14e3	2.92e3	2.67e3
7122/6-2	COCH	2489.86	37799	2.92e3	2.55e3	0.00e0	2.52e4	2.20e4	1.64e4	1.80e4	1.57e4	6.54e3	2.11e3	2.29e3	2.98e4	3.01e3	2.46e3	2.43e3	1.46e3	1.28e3
7122/6-2	Oil	2533.40	39178	2.09e3	7.13e3	3.82e3	7.29e3	4.32e3	4.77e3	6.44e3	9.98e3	8.54e3	3.80e3	3.93e3	5.57e3	5.22e3	4.86e3	6.51e3	6.37e3	7.43e3

Table 20. continued, GCMS SIR of saturated compounds (amounts in ng/g)

Well	Sample type	Lower Depth (m)	APT ID	191																
				29/3S	27Ts	27Tm	30/3R	30/3S	28αβ	25nor30αβ	29αβ	29Ts	30d	29βα	30O	30αβ	30βα	31αβS	31αβR	30G
7122/6-2	DC	2037	37774	3.81e3	2.28e4	5.28e4	2.96e3	2.46e3	6.24e4	0.00e0	9.43e4	3.32e4	1.16e4	6.33e3	0.00e0	2.01e5	1.45e4	1.05e5	7.09e4	6.52e3
7122/6-2	DC	2055	37776	2.16e3	1.40e4	1.25e4	1.74e3	1.64e3	4.00e3	0.00e0	2.92e4	1.19e4	5.31e3	2.60e3	0.00e0	5.21e4	5.30e3	2.36e4	1.70e4	2.60e3
7122/6-2	Oil	2393.40	39180	9.43e2	1.71e3	1.49e3	7.79e2	1.02e3	7.08e2	1.15e3	4.23e3	1.26e3	4.94e2	7.58e2	0.00e0	5.82e3	7.70e2	1.61e3	1.33e3	4.63e2
7122/6-2	Oil	2452.40	39179	2.82e2	8.79e2	1.02e3	2.24e2	3.23e2	3.01e2	5.26e2	2.26e3	8.03e2	3.14e2	3.67e2	0.00e0	3.18e3	5.35e2	1.22e3	8.51e2	3.15e2
7122/6-2	COCH	2453.17	37786	2.64e3	1.23e4	9.19e3	1.60e3	1.69e3	3.33e3	0.00e0	3.09e4	8.69e3	2.86e3	2.41e3	0.00e0	3.33e4	3.89e3	1.41e4	1.01e4	2.44e3
7122/6-2	COCH	2466.50	37789	1.10e3	4.91e3	1.03e4	1.04e3	9.79e2	1.23e3	0.00e0	2.50e4	4.29e3	3.94e3	2.63e3	0.00e0	3.05e4	6.89e3	1.39e4	9.98e3	1.78e3
7122/6-2	COCH	2469.96	37790	7.42e2	4.45e3	1.10e5	0.00e0	0.00e0	4.79e3	0.00e0	2.89e5	9.96e3	3.36e4	3.16e4	0.00e0	3.05e5	8.13e4	1.25e5	8.73e4	5.18e3
7122/6-2	COCH	2489.70	37798	3.36e3	7.39e4	9.42e4	4.49e3	4.98e3	8.31e3	0.00e0	3.24e5	1.55e5	1.14e5	5.26e4	0.00e0	5.89e5	1.18e5	2.22e5	1.50e5	2.98e4
7122/6-2	COCH	2489.86	37799	2.14e3	5.40e4	7.37e4	2.98e3	2.84e3	4.44e3	0.00e0	2.04e5	9.38e4	6.46e4	3.20e4	0.00e0	3.46e5	7.41e4	1.21e5	8.36e4	1.63e4
7122/6-2	Oil	2533.40	39178	7.55e3	2.23e4	1.42e4	5.92e3	6.84e3	7.32e3	5.50e3	3.92e4	2.11e4	1.93e4	5.58e3	0.00e0	8.26e4	1.31e4	3.13e4	2.21e4	6.12e3



Table 20. continued, GCMS SIR of saturated compounds (amounts in ng/g)

Well	Sample type	Lower Depth (m)	APT ID	191									217							
				m/e	31β $\alpha$	32 $\alpha$ βS	32 $\alpha$ βR	33 $\alpha$ βS	33 $\alpha$ βR	34 $\alpha$ βS	34 $\alpha$ βR	35 $\alpha$ βS	35 $\alpha$ βR	21 $\alpha\alpha$	21ββ	22 $\alpha\alpha$	22ββ	27 $\alpha$ βS	27 $\alpha$ βR	27 $\alpha\alpha$ R
7122/6-2	DC	2037	37774	7.77e3	6.61e4	4.22e4	4.21e4	2.83e4	3.21e4	2.15e4	3.13e4	1.93e4	1.78e4	1.24e4	1.09e4	7.89e3	3.04e4	1.76e4	7.50e3	9.91e3
7122/6-2	DC	2055	37776	2.67e3	1.48e4	9.78e3	9.58e3	6.17e3	7.03e3	4.75e3	5.67e3	4.00e3	4.34e3	5.79e3	3.96e3	3.65e3	1.01e4	6.01e3	2.40e3	3.15e3
7122/6-2	Oil	2393.40	39180	5.13e2	9.32e2	7.19e2	6.14e2	3.96e2	4.13e2	0.00e0	0.00e0	0.00e0	2.59e3	1.65e3	1.40e3	5.41e2	1.08e3	6.58e2	3.01e2	3.51e2
7122/6-2	Oil	2452.40	39179	3.81e2	7.76e2	6.00e2	6.14e2	4.44e2	0.00e0	0.00e0	0.00e0	0.00e0	2.01e3	1.23e3	1.17e3	3.39e2	6.67e2	4.04e2	1.39e2	1.91e2
7122/6-2	COCH	2453.17	37786	1.83e3	8.35e3	5.27e3	4.77e3	3.04e3	2.87e3	1.79e3	2.36e3	1.69e3	8.63e4	7.80e4	5.86e4	2.77e4	1.69e4	9.64e3	3.42e3	4.03e3
7122/6-2	COCH	2466.50	37789	2.93e3	8.58e3	5.71e3	3.82e3	2.27e3	2.30e3	1.36e3	1.35e3	1.02e3	1.52e3	2.08e3	1.16e3	8.98e2	1.56e3	8.72e2	4.17e2	5.90e2
7122/6-2	COCH	2469.96	37790	3.21e4	6.37e4	4.16e4	2.82e4	1.83e4	1.65e4	1.03e4	5.87e3	4.21e3	2.01e3	2.18e3	9.29e2	7.96e2	2.25e3	1.51e3	8.95e2	8.89e2
7122/6-2	COCH	2489.70	37798	4.62e4	1.29e5	9.27e4	7.62e4	5.12e4	4.74e4	3.13e4	1.96e4	1.50e4	1.71e3	1.76e3	1.28e3	6.68e2	1.24e4	7.30e3	3.04e3	4.30e3
7122/6-2	COCH	2489.86	37799	2.58e4	6.74e4	4.56e4	3.50e4	2.38e4	2.12e4	1.42e4	9.05e3	6.95e3	1.53e3	1.92e3	9.89e2	6.48e2	6.28e3	3.93e3	1.62e3	2.20e3
7122/6-2	Oil	2533.40	39178	1.03e4	2.04e4	1.54e4	1.33e4	9.05e3	9.60e3	6.40e3	6.04e3	4.63e3	3.42e3	3.37e3	2.68e3	1.45e3	9.20e3	5.63e3	2.48e3	3.41e3

Table 20. continued, GCMS SIR of saturated compounds (amounts in ng/g)

Well	Sample type	Lower Depth (m)	APT ID	217																
				m/e	28 $\alpha$ βS#1	28 $\alpha$ βS#2	28 $\alpha$ βR#1	28 $\alpha$ βR#2	28 $\alpha\alpha$ R	27 $\alpha\alpha$ S	27ββR+29 $\alpha$ βS	27ββS	28 $\alpha\alpha$ S	27 $\alpha\alpha$ R	29 $\alpha$ βR	29 $\alpha\alpha$ R	28 $\alpha\alpha\alpha$ S	29 $\alpha\alpha$ S	28ββR	28ββS
7122/6-2	DC	2037	37774	1.20e4	1.16e4	6.66e3	8.42e3	5.37e3	9.61e3	1.83e4	1.23e4	4.72e3	9.83e3	1.34e4	8.58e3	3.53e3	7.69e3	8.93e3	1.11e4	4.89e3
7122/6-2	DC	2055	37776	4.24e3	4.04e3	2.33e3	2.97e3	1.75e3	3.16e3	6.53e3	4.05e3	1.26e3	4.28e3	4.62e3	3.15e3	1.17e3	2.59e3	3.21e3	4.39e3	1.87e3
7122/6-2	Oil	2393.40	39180	6.25e2	4.49e2	3.00e2	2.94e2	2.43e2	3.52e2	6.32e2	3.33e2	2.52e2	5.48e2	4.89e2	3.19e2	0.00e0	0.00e0	2.98e2	3.95e2	2.33e2
7122/6-2	Oil	2452.40	39179	2.54e2	2.68e2	1.28e2	1.90e2	1.09e2	1.59e2	4.35e2	1.99e2	0.00e0	3.48e2	2.74e2	1.79e2	0.00e0	1.30e2	1.82e2	2.32e2	1.49e2
7122/6-2	COCH	2453.17	37786	5.19e3	4.89e3	2.71e3	3.09e3	1.93e3	3.92e3	6.69e3	4.48e3	1.35e3	4.08e3	4.53e3	2.74e3	1.06e3	2.00e3	2.94e3	3.48e3	1.61e3
7122/6-2	COCH	2466.50	37789	7.34e2	7.10e2	3.58e2	5.56e2	3.24e2	4.70e2	1.69e3	6.33e2	2.13e2	9.42e2	1.17e3	8.55e2	2.74e2	6.96e2	7.76e2	1.05e3	5.04e2
7122/6-2	COCH	2469.96	37790	2.94e3	3.42e3	1.74e3	2.93e3	2.39e3	1.54e3	2.17e4	2.04e3	1.92e3	1.20e3	1.27e4	7.05e3	0.00e0	1.01e4	5.18e3	4.21e3	3.39e3
7122/6-2	COCH	2489.70	37798	5.98e3	6.67e3	4.09e3	4.47e3	3.06e3	3.07e3	1.49e4	3.23e3	4.39e3	3.09e3	9.52e3	8.43e3	2.75e3	6.01e3	4.57e3	3.69e3	2.10e3
7122/6-2	COCH	2489.86	37799	2.81e3	3.16e3	1.80e3	2.13e3	1.73e3	1.98e3	6.93e3	2.00e3	2.52e3	1.95e3	4.31e3	5.07e3	1.69e3	2.82e3	3.01e3	2.09e3	1.22e3
7122/6-2	Oil	2533.40	39178	4.66e3	4.80e3	2.98e3	3.45e3	2.12e3	2.76e3	1.06e4	3.64e3	1.82e3	3.09e3	7.38e3	5.06e3	1.24e3	4.11e3	3.26e3	5.13e3	1.89e3



Table 20. continued, GCMS SIR of saturated compounds (amounts in ng/g)

m/e		217							218										
Well	Sample type	Lower Depth (m)	APT ID	29aaS	29bbR	29bbS	29aaR	30aaS	30bbR	30bbS	30aaR	27bbR	27bbS	28bbR	28bbS	29bbR	29bbS	30bbR	30bbS
7122/6-2	DC	2037	37774	8.53e3	1.15e4	1.19e4	6.97e3	4.02e3	4.08e3	2.92e3	2.43e3	2.27e4	2.14e4	1.42e4	1.63e4	1.93e4	2.00e4	5.42e3	5.21e3
7122/6-2	DC	2055	37776	3.74e3	4.65e3	4.54e3	2.96e3	1.58e3	1.31e3	1.05e3	8.50e2	8.53e3	7.53e3	5.00e3	5.69e3	7.79e3	7.66e3	1.56e3	1.65e3
7122/6-2	Oil	2393.40	39180	3.40e2	3.82e2	4.20e2	3.24e2	0.00e0	0.00e0	0.00e0	0.00e0	6.22e2	5.79e2	4.78e2	4.88e2	5.62e2	4.99e2	1.50e2	1.19e2
7122/6-2	Oil	2452.40	39179	1.95e2	2.56e2	2.40e2	1.79e2	1.11e2	0.00e0	0.00e0	0.00e0	2.82e2	2.46e2	2.36e2	2.44e2	3.65e2	3.28e2	0.00e0	0.00e0
7122/6-2	COCH	2453.17	37786	3.21e3	4.34e3	3.65e3	2.29e3	1.04e3	7.56e2	6.07e2	3.53e2	9.34e3	7.82e3	4.50e3	5.01e3	7.31e3	6.56e3	8.14e2	8.83e2
7122/6-2	COCH	2466.50	37789	1.85e3	2.19e3	2.13e3	1.45e3	8.08e2	0.00e0	0.00e0	0.00e0	1.10e3	9.04e2	1.02e3	1.29e3	3.70e3	3.52e3	3.22e2	2.90e2
7122/6-2	COCH	2469.96	37790	1.82e4	1.60e4	1.38e4	1.52e4	8.14e3	1.20e3	0.00e0	0.00e0	6.84e3	1.63e3	4.91e3	5.94e3	2.62e4	2.44e4	6.06e2	0.00e0
7122/6-2	COCH	2489.70	37798	6.37e3	7.52e3	6.30e3	4.48e3	7.83e3	3.97e3	8.03e2	0.00e0	6.41e3	4.48e3	5.43e3	5.81e3	9.93e3	9.50e3	2.84e3	6.78e2
7122/6-2	COCH	2489.86	37799	4.34e3	4.29e3	3.70e3	2.66e3	5.25e3	2.30e3	5.83e2	0.00e0	3.78e3	2.75e3	3.23e3	3.24e3	5.76e3	5.71e3	1.58e3	4.24e2
7122/6-2	Oil	2533.40	39178	4.15e3	6.15e3	5.66e3	3.71e3	1.80e3	2.18e3	1.77e3	9.18e2	6.52e3	5.45e3	4.79e3	6.39e3	1.00e4	9.52e3	2.62e3	2.25e3

**Abbreviations of saturated biomarkers**

17 $\alpha$ (H), 21 $\beta$ (H)-25,28,30-trisnorhopane	25nor28 $\alpha\beta$	17 $\alpha$ (H), 21 $\beta$ (H), 22(R)-trishomohopane	33 $\alpha\beta$ R
17 $\alpha$ , 21 $\beta$ -25,30-bisnorhopane	25nor29 $\alpha\beta$	17 $\alpha$ (H), 21 $\beta$ (H), 22(S)-tetrakishomohopane	34 $\alpha\beta$ S
17 $\alpha$ (H), 21 $\beta$ (H)-25-norhopane	25nor30 $\alpha\beta$	17 $\alpha$ (H), 21 $\beta$ (H), 22(R)-tetrakishomohopane	34 $\alpha\beta$ R
17 $\alpha$ , 21 $\beta$ , 22(R/S)-25-norhomohopane	25nor31 $\alpha\beta$	17 $\alpha$ (H), 21 $\beta$ (H), 22(S)-pentakishomohopane	35 $\alpha\beta$ S
C <sub>19</sub> H <sub>34</sub> tricyclic terpane	19/3	17 $\alpha$ (H), 21 $\beta$ (H), 22(R)-pentakishomohopane	35 $\alpha\beta$ R
C <sub>20</sub> H <sub>36</sub> tricyclic terpane	20/3	C21-5 $\alpha$ (H), 14 $\alpha$ (H), 17 $\alpha$ (H)-pregnane	21 $\alpha\alpha$
C <sub>21</sub> H <sub>38</sub> tricyclic terpane	21/3	C21-5 $\alpha$ (H), 14 $\beta$ (H), 17 $\beta$ (H)-pregnane	21 $\beta\beta$
C <sub>23</sub> H <sub>42</sub> tricyclic terpane	23/3	C22-5 $\alpha$ (H), 14 $\alpha$ (H), 17 $\alpha$ (H)-pregnane	22 $\alpha\alpha$
C <sub>24</sub> H <sub>44</sub> tricyclic terpane	24/3	C22-5 $\alpha$ (H), 14 $\beta$ (H), 17 $\beta$ (H)-pregnane	22 $\beta\beta$
C <sub>25</sub> H <sub>46</sub> tricyclic terpane	25/3R	13 $\beta$ (H), 17 $\alpha$ (H), 20(S)-cholestane (diasterane)	27d $\beta$ S
C <sub>25</sub> H <sub>46</sub> tricyclic terpane	25/3S	13 $\beta$ (H), 17 $\alpha$ (H), 20(R)-cholestane (diasterane)	27d $\beta$ R
C <sub>24</sub> H <sub>42</sub> tetracyclic terpane	24/4	13 $\alpha$ (H), 17 $\beta$ (H), 20(R)-cholestane (diasterane)	27d $\alpha$ R
C <sub>26</sub> H <sub>48</sub> tricyclic terpane	26/3R	13 $\alpha$ (H), 17 $\beta$ (H), 20(S)-cholestane (diasterane)	27d $\alpha$ S
C <sub>26</sub> H <sub>48</sub> tricyclic terpane	26/3S	24-methyl-13 $\beta$ (H), 17 $\alpha$ (H), 20(S)-cholestane (diasterane)	28d $\beta$ S
C <sub>28</sub> H <sub>52</sub> tricyclic terpane	28/3R	24-methyl-13 $\beta$ (H), 17 $\alpha$ (H), 20(R)-cholestane (diasterane)	28d $\beta$ R
C <sub>28</sub> H <sub>52</sub> tricyclic terpane	28/3S	24-methyl-13 $\alpha$ (H), 17 $\beta$ (H), 20(R)-cholestane (diasterane)	28d $\alpha$ R
C <sub>29</sub> H <sub>54</sub> tricyclic terpane	29/3R	5 $\alpha$ (H), 14 $\alpha$ (H), 17 $\alpha$ (H), 20(S)-cholestane	27 $\alpha\alpha$ S
C <sub>29</sub> H <sub>54</sub> tricyclic terpane	29/3S	5 $\alpha$ (H), 14 $\beta$ (H), 17 $\beta$ (H), 20(R)-cholestane	27 $\beta\beta$ R
18 $\alpha$ (H)-22,29,30-trisnorneohopane	27Ts	24-ethyl-13 $\beta$ (H), 17 $\alpha$ (H), 20(S)-cholestane (diasterane)	29d $\beta$ S
17 $\alpha$ (H)-22,29,30-trisnorhopane	27Tm	5 $\alpha$ (H), 14 $\beta$ (H), 17 $\beta$ (H), 20(S)-cholestane	27 $\beta\beta$ S
C <sub>30</sub> H <sub>56</sub> tricyclic terpane	30/3R	24-methyl-13 $\alpha$ (H), 17 $\beta$ (H), 20(S)-cholestane (diasterane)	28d $\alpha$ S
C <sub>30</sub> H <sub>56</sub> tricyclic terpane	30/3S	5 $\alpha$ (H), 14 $\alpha$ (H), 17 $\alpha$ (H), 20(R)-cholestane	27 $\alpha\alpha$ R
17 $\alpha$ (H), 21 $\beta$ (H)-28,30-bisnorhopane	28 $\alpha\beta$	24-ethyl-13 $\beta$ (H), 17 $\alpha$ (H), 20(R)-cholestane (diasterane)	29d $\beta$ R
17 $\alpha$ (H), 21 $\beta$ (H)-30-norhopane	29 $\alpha\beta$	24-ethyl-13 $\alpha$ (H), 17 $\beta$ (H), 20(R)-cholestane (diasterane)	29d $\alpha$ R
18 $\alpha$ (H)-30-norneohopane	29Ts	24-methyl-5 $\alpha$ (H), 14 $\alpha$ (H), 17 $\alpha$ (H), 20(S)-cholestane	28 $\alpha\alpha$ S
15 $\alpha$ -methyl-17 $\alpha$ (H)-27-norhopane (diahopane)	30d	24-ethyl-13 $\alpha$ (H), 17 $\beta$ (H), 20(S)-cholestane (diasterane)	29d $\alpha$ S
17 $\beta$ (H), 21 $\alpha$ (H)-30-norhopane (normoretane)	29 $\beta\alpha$	24-methyl-5 $\alpha$ (H), 14 $\beta$ (H), 17 $\beta$ (H), 20(R)-cholestane	28 $\beta\beta$ R
18 $\alpha$ (H)-oleanane	30O	24-methyl-5 $\alpha$ (H), 14 $\beta$ (H), 17 $\beta$ (H), 20(S)-cholestane	28 $\beta\beta$ S
17 $\alpha$ (H), 21 $\beta$ (H)-hopane	30 $\alpha\beta$	24-methyl-5 $\alpha$ (H), 14 $\alpha$ (H), 17 $\alpha$ (H), 20(R)-cholestane	28 $\alpha\alpha$ R
17 $\beta$ (H), 21 $\alpha$ (H)-hopane (moretane)	30 $\beta\alpha$	24-ethyl-5 $\alpha$ (H), 14 $\alpha$ (H), 17 $\alpha$ (H), 20(S)-cholestane	29 $\alpha\alpha$ S
17 $\alpha$ (H), 21 $\beta$ (H), 22(S)-homohopane	31 $\alpha\beta$ S	24-ethyl-5 $\alpha$ (H), 14 $\beta$ (H), 17 $\beta$ (H), 20(R)-cholestane	29 $\beta\beta$ R
17 $\alpha$ (H), 21 $\beta$ (H), 22(R)-homohopane	31 $\alpha\beta$ R	24-ethyl-5 $\alpha$ (H), 14 $\beta$ (H), 17 $\beta$ (H), 20(S)-cholestane	29 $\beta\beta$ S
Gammacerane	30G	24-ethyl-5 $\alpha$ (H), 14 $\alpha$ (H), 17 $\alpha$ (H), 20(R)-cholestane	29 $\alpha\alpha$ R
17 $\beta$ (H), 21 $\alpha$ (H)-homohopane	31 $\beta\alpha$	24-propyl-5 $\alpha$ (H), 14 $\alpha$ (H), 17 $\alpha$ (H), 20(S)-cholestane	30 $\alpha\alpha$ S
17 $\alpha$ (H), 21 $\beta$ (H), 22(S)-bishomohopane	32 $\alpha\beta$ S	24-propyl-5 $\alpha$ (H), 14 $\beta$ (H), 17 $\beta$ (H), 20(R)-cholestane	30 $\beta\beta$ R
17 $\alpha$ (H), 21 $\beta$ (H), 22(R)-bishomohopane	32 $\alpha\beta$ R	24-propyl-5 $\alpha$ (H), 14 $\beta$ (H), 17 $\beta$ (H), 20(S)-cholestane	30 $\beta\beta$ S
17 $\alpha$ (H), 21 $\beta$ (H), 22(S)-trishomohopane	33 $\alpha\beta$ S	24-propyl-5 $\alpha$ (H), 14 $\alpha$ (H), 17 $\alpha$ (H), 20(R)-cholestane	30 $\alpha\alpha$ R



**Table 21. GCMS SIR of aromatic compounds (parameters)**

Well	Sample type	Lower Depth (m)	APT ID	AROM2	Crack1	Crack2	MSAro1	MSAro2	MSAro3	MSAro4	MSAro5	MSAro6	MSAro7	MSAro8	MSAro9
7122/6-2	DC	2037	37774	0.73	0.41	0.21	0.24	2.24	0.38	1.12	3.73	0.89	0.98	1.56	0.68
7122/6-2	DC	2055	37776	0.84	0.82	0.65	0.40	4.47	0.40	1.18	3.86	1.51	0.48	7.57	0.75
7122/6-2	Oil	2393.40	39180	0.09	1.00	1.00	0.87	10.35	0.53	1.52	7.17	0.92	0.04	33.78	
7122/6-2	Oil	2452.40	39179	0.23	1.00	1.00	0.94	5.58	0.48	1.71	9.35	0.28	0.05	12.87	
7122/6-2	COCH	2453.17	37786	0.31	0.71	0.58	0.20	3.88	0.37	0.93	2.29	0.89	0.06	2.85	0.38
7122/6-2	COCH	2466.50	37789	0.88	0.83	0.68	0.54	3.62	0.39	1.39	5.69	0.39	0.06	3.15	0.86
7122/6-2	COCH	2469.96	37790	0.93	0.63	0.46	0.38	2.79	0.39	1.05	2.42	0.26	0.08	2.77	0.87
7122/6-2	COCH	2489.70	37798	0.83	0.42	0.24	0.15	3.02	0.42	0.89	1.88	0.43	0.05	3.22	0.76
7122/6-2	COCH	2489.86	37799	0.91	0.68	0.46	0.30	2.40	0.41	0.93	2.13	0.34	0.05	5.23	0.87
7122/6-2	Oil	2533.40	39178	0.65	0.67	0.47	0.39	6.75	0.51	1.87	9.59	1.06	0.06	7.80	0.64

AROM2:  $(C_{20}TA+C_{21}TA+SC_{26}TA+RC_{26}TA+SC_{27}TA+SC_{28}TA+RC_{27}TA+RC_{28}TA)/(C_{20}TA+C_{21}TA+SC_{26}TA+RC_{26}TA+SC_{27}TA+SC_{28}TA+RC_{27}TA+RC_{28}TA+C_{21}MA+C_{22}MA+\beta SC_{27}MA+\beta RC_{27}MA+\beta RC_{27}DMA+\alpha SC_{27}MA+\beta SC_{28}MA+\beta SC_{28}DMA+\alpha RC_{27}DMA+\alpha SC_{27}DMA+\alpha RC_{27}MA+\alpha SC_{28}MA+\alpha SC_{29}MA+\alpha RC_{29}MA)$

Crack1:  $(C_{20}TA)/(C_{20}TA+RC_{28}TA)$

Crack2:  $(C_{20}TA+C_{21}TA)/(C_{20}TA+C_{21}TA+SC_{26}TA+RC_{26}TA+SC_{27}TA+SC_{28}TA+RC_{27}TA+RC_{28}TA)$

MSAro1:  $(C_{21}MA+C_{22}MA)/(C_{21}MA+C_{22}MA+\beta SC_{27}MA+\beta RC_{27}MA+\beta RC_{27}DMA+\alpha SC_{27}MA+\beta SC_{28}MA+\beta SC_{28}DMA+\alpha RC_{27}DMA+\alpha SC_{27}DMA+\alpha RC_{27}MA+\alpha SC_{28}MA+\alpha SC_{29}MA+\alpha RC_{29}MA)$

MSAro2: 4-MDBT/1-MDBT

MSAro3:  $(2-MP+3-MP)/(1-MP+2-MP+3-MP+9-MP)$

MSAro4: 2-MN/1-MN

MSAro5:  $(2,6-DMN+2,7-DMN)/1,5-DMN$

MSAro6: 4-MDBT/DBT

MSAro7: DBT/P

MSAro8: 3-MP/Retene

MSAro9:  $RC_{28}TA/(RC_{28}TA+\alpha RC_{28}MA+\beta RC_{29}MA+\beta RC_{29}DMA)$

**Table 22. GCMS SIR of aromatic compounds (peak height)**

m/e			142							156							170				
Well	Sample type	Lower Depth (m)	APT ID	2-MN	1-MN	2-EN	1-EN	2,6-DMN	2,7-DMN	1,3- + 1,7-DMN	1,6-DMN	2,3- + 1,4-DMN	1,5-DMN	1,2-DMN	1,8-DMN	1,3,7-TMN	1,3,6-TMN	1,3,5- + 1,4,6-TMN	2,3,6-TMN	1,2,7-TMN	
7122/6-2	DC	2037	37774	4.06e8	3.63e8	4.91e7	3.50e7	7.05e7	7.29e7	1.66e8	1.70e8	7.50e7	3.84e7	5.74e7	2.04e5	3.00e7	4.44e7	4.66e7	3.08e7	2.10e7	
7122/6-2	DC	2055	37776	5.65e7	4.80e7	5.08e6	2.94e6	1.43e7	1.76e7	3.51e7	3.17e7	1.27e7	8.27e6	6.34e6	3.33e4	8.62e6	1.24e7	1.10e7	8.97e6	3.09e6	
7122/6-2	Oil	2393.40	39180	2.12e8	1.39e8	1.46e7	1.13e7	3.30e7	3.99e7	7.56e7	4.59e7	2.03e7	1.02e7	8.94e6	2.07e5	1.62e7	1.92e7	1.44e7	1.02e7	3.86e6	
7122/6-2	Oil	2452.40	39179	3.92e8	2.29e8	2.37e7	1.19e7	6.65e7	7.47e7	1.19e8	8.00e7	3.10e7	1.51e7	1.10e7	1.42e5	2.65e7	3.07e7	1.95e7	1.84e7	3.79e6	
7122/6-2	COCH	2453.17	37786	4.64e5	4.97e5	5.13e4	6.68e4	1.14e5	1.37e5	2.71e5	2.52e5	1.12e5	1.09e5	5.27e4	0.00e0	7.31e4	1.04e5	8.99e4	5.72e4	3.93e4	
7122/6-2	COCH	2466.50	37789	3.40e7	2.44e7	3.25e6	2.20e6	1.06e7	1.36e7	2.20e7	1.60e7	6.54e6	4.26e6	2.67e6	3.27e4	6.14e6	8.06e6	5.35e6	5.35e6	1.31e6	
7122/6-2	COCH	2469.96	37790	8.95e8	8.50e8	5.63e7	4.78e7	5.24e7	6.71e7	1.76e8	1.44e8	1.07e8	4.94e7	6.12e7	7.14e5	2.07e7	3.44e7	2.59e7	3.04e7	1.02e7	
7122/6-2	COCH	2489.70	37798	1.09e7	1.21e7	1.66e6	1.76e6	2.16e6	2.87e6	7.88e6	6.06e6	3.61e6	2.68e6	2.40e6	1.33e4	2.12e6	3.00e6	2.73e6	2.13e6	1.01e6	
7122/6-2	COCH	2489.86	37799	7.79e7	8.35e7	6.53e6	6.14e6	7.99e6	1.01e7	2.84e7	2.20e7	1.42e7	8.51e6	9.44e6	4.69e4	5.38e6	8.06e6	7.17e6	6.09e6	3.12e6	
7122/6-2	Oil	2533.40	39178	3.91e8	2.09e8	2.50e7	9.32e6	8.80e7	9.93e7	1.53e8	1.08e8	4.07e7	1.95e7	1.30e7	1.06e5	4.16e7	5.12e7	3.13e7	3.40e7	5.93e6	

Table 22. continued, GCMS SIR of aromatic compounds (peak height)

m/e			170			178		192		206										
Well	Sample type	Lower Depth (m)	APT ID	1,6,7 + 1,2,6-TMN	1,2,4-TMN	1,2,5-TMN	P	3-MP	2-MP	9-MP	1-MP	2-EP+9-EP+3,6-DMP	1-EP	2,6- + 2,7- + 3,5-DMP	1,3- + 2,10- + 3,9- + 3,10-DMP	1,6- + 2,5- + 2,9-DMP	1,7-DMP	2,3-DMP	1,9- + 4,9- + 4,10-DMP	1,8-DMP
7122/6-2	DC	2037	37774	4.82e7	1.45e7	6.20e7	1.64e8	6.20e7	6.64e7	1.11e8	9.59e7	1.32e7	1.19e7	5.84e6	5.53e7	2.67e7	3.80e7	9.44e6	1.91e7	1.09e7
7122/6-2	DC	2055	37776	1.02e7	1.64e6	7.06e6	4.26e7	1.54e7	1.97e7	2.96e7	2.36e7	2.52e6	3.79e6	2.38e6	1.91e7	9.42e6	1.09e7	2.96e6	5.68e6	2.67e6
7122/6-2	Oil	2393.40	39180	1.13e7	1.78e6	5.73e6	3.54e6	1.30e6	1.00e6	1.28e6	7.75e5	2.24e5	2.28e5	1.14e5	7.51e5	3.01e5	1.63e5	1.09e5	1.62e5	3.65e4
7122/6-2	Oil	2452.40	39179	1.50e7	1.37e6	5.55e6	8.80e6	1.54e6	1.39e6	1.87e6	1.25e6	1.87e5	1.75e5	9.43e4	6.44e5	2.77e5	2.02e5	1.33e5	1.75e5	4.98e4
7122/6-2	COCH	2453.17	37786	9.36e4	1.21e4	6.06e4	3.47e5	2.63e4	3.27e4	5.83e4	4.33e4	5.84e3	5.17e3	4.34e3	2.69e4	1.65e4	1.36e4	6.22e3	1.02e4	4.01e3
7122/6-2	COCH	2466.50	37789	5.29e6	5.10e5	2.51e6	3.23e7	5.47e6	5.84e6	1.02e7	7.24e6	1.05e6	1.34e6	7.94e5	4.73e6	2.28e6	2.17e6	1.18e6	1.58e6	6.55e5
7122/6-2	COCH	2469.96	37790	4.88e7	4.88e6	4.99e7	9.23e8	1.27e8	1.68e8	2.46e8	2.18e8	1.78e7	2.25e7	1.21e7	7.36e7	4.15e7	4.77e7	2.76e7	3.24e7	1.55e7
7122/6-2	COCH	2489.70	37798	4.58e6	4.73e5	4.90e6	2.24e7	5.72e6	5.89e6	9.40e6	6.43e6	1.12e6	1.17e6	6.51e5	4.47e6	1.98e6	2.13e6	1.14e6	1.46e6	6.76e5
7122/6-2	COCH	2489.86	37799	1.31e7	1.30e6	1.45e7	1.10e8	2.12e7	2.47e7	3.91e7	2.78e7	3.52e6	3.86e6	2.25e6	1.53e7	7.14e6	7.82e6	4.11e6	5.21e6	2.61e6
7122/6-2	Oil	2533.40	39178	2.56e7	2.41e6	8.04e6	2.95e7	1.39e7	1.32e7	1.57e7	1.09e7	2.52e6	3.66e6	1.90e6	1.14e7	4.89e6	4.26e6	1.94e6	2.61e6	9.55e5



Table 22. continued, GCMS SIR of aromatic compounds (peak height)

m/e				206	219	184	198			253										
Well	Sample type	Lower Depth (m)	APT ID	1,2-DMP	Retene	DBT	4-MDBT	(3+2)-MDBT	1-MDBT	C21MA	C22MA	βSC27MA	βSC27DMA	βRC27MA+ βRC27DMA	αSC27MA	βSC28MA+ βSC28DMA+ αRC27DMA	αSC27DMA	αRC27MA	αSC28MA	βRC28MA+ βRC28DMA
7122/6-2	DC	2037	37774	1.25e7	3.98e7	1.60e8	1.42e8	7.47e7	6.35e7	3.15e6	2.21e6	3.40e5	6.63e6	5.35e6	4.15e5	8.64e6	1.39e6	3.28e5	5.29e5	5.84e6
7122/6-2	DC	2055	37776	2.10e6	2.03e6	2.06e7	3.10e7	1.29e7	6.92e6	7.72e4	5.06e4	8.06e3	5.37e4	4.34e4	7.38e3	9.06e4	1.29e4	6.00e3	1.11e4	5.73e4
7122/6-2	Oil	2393.40	39180	2.68e4	3.84e4	1.38e5	1.28e5	5.02e4	1.23e4	1.97e4	1.13e4	8.90e2	2.38e3	1.25e3	0.00e0	2.42e3	0.00e0	0.00e0	0.00e0	1.64e3
7122/6-2	Oil	2452.40	39179	5.25e4	1.20e5	4.80e5	1.35e5	7.14e4	2.42e4	1.30e4	6.76e3	0.00e0	1.03e3	0.00e0	0.00e0	1.21e3	0.00e0	0.00e0	0.00e0	1.56e3
7122/6-2	COCH	2453.17	37786	4.57e3	9.24e3	2.11e4	1.87e4	5.31e3	4.82e3	3.57e3	3.16e3	2.62e3	5.20e3	4.76e3	1.77e3	9.82e3	1.61e3	1.84e3	1.81e3	5.76e3
7122/6-2	COCH	2466.50	37789	7.38e5	1.74e6	1.88e6	7.27e5	3.62e5	2.01e5	1.30e4	1.18e4	3.06e3	3.27e3	3.30e3	0.00e0	4.35e3	0.00e0	1.61e3	1.77e3	4.48e3
7122/6-2	COCH	2469.96	37790	1.97e7	4.60e7	7.42e7	1.94e7	1.28e7	6.94e6	1.26e5	8.41e4	0.00e0	1.97e4	2.84e4	1.30e4	7.00e4	3.54e4	0.00e0	5.13e4	6.02e4
7122/6-2	COCH	2489.70	37798	8.07e5	1.78e6	1.11e6	4.81e5	3.06e5	1.59e5	7.11e4	5.31e4	2.51e4	1.33e5	1.06e5	4.01e4	2.23e5	6.89e4	3.31e4	6.71e4	1.64e5
7122/6-2	COCH	2489.86	37799	3.21e6	4.04e6	5.31e6	1.81e6	1.30e6	7.56e5	5.87e4	4.52e4	1.37e4	4.67e4	3.63e4	1.55e4	7.47e4	2.54e4	1.47e4	2.07e4	5.62e4
7122/6-2	Oil	2533.40	39178	7.72e5	1.79e6	1.90e6	2.01e6	1.19e6	2.98e5	9.37e4	7.19e4	1.65e4	3.93e4	3.53e4	1.92e4	7.17e4	2.02e4	1.67e4	3.50e4	4.68e4

Table 22. continued, GCMS SIR of aromatic compounds (peak height)

m/e				253		231								
Well	Sample type	Lower Depth (m)	APT ID	bSC29MA+ bSC29DMA	aSC29MA	aRC28MA+ bRC29MA+ bRC29DMA	aRC29MA	C20TA	C21TA	SC26TA	RC26TA+ SC27TA	SC28TA	RC27TA	RC28TA
7122/6-2	DC	2037	37774	6.55e6	2.56e5	4.56e6	1.67e5	6.73e6	6.13e6	4.42e6	1.68e7	8.37e6	8.44e6	9.59e6
7122/6-2	DC	2055	37776	5.64e4	6.31e3	3.87e4	5.28e3	5.52e5	5.64e5	6.38e4	2.01e5	1.05e5	1.03e5	1.19e5
7122/6-2	Oil	2393.40	39180	1.93e3	0.00e0	1.20e3	0.00e0	2.39e3	1.20e3	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	Oil	2452.40	39179	1.63e3	0.00e0	0.00e0	0.00e0	4.32e3	1.97e3	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2453.17	37786	7.23e3	1.55e3	4.00e3	1.54e3	5.99e3	2.80e3	1.58e3	2.27e3	0.00e0	0.00e0	2.47e3
7122/6-2	COCH	2466.50	37789	8.17e3	3.34e3	4.80e3	3.40e3	1.47e5	8.45e4	1.59e4	2.24e4	2.91e4	1.29e4	2.93e4
7122/6-2	COCH	2469.96	37790	2.48e5	9.10e4	1.74e5	6.05e4	2.05e6	1.14e6	2.82e5	6.91e5	1.14e6	4.10e5	1.21e6
7122/6-2	COCH	2489.70	37798	3.53e5	7.04e4	2.39e5	7.53e4	5.66e5	3.67e5	2.73e5	7.90e5	8.27e5	3.75e5	7.71e5
7122/6-2	COCH	2489.86	37799	1.25e5	2.17e4	7.22e4	2.38e4	1.06e6	6.53e5	1.95e5	5.56e5	5.01e5	2.59e5	5.01e5
7122/6-2	Oil	2533.40	39178	7.50e4	2.44e4	5.87e4	2.17e4	2.16e5	1.55e5	4.48e4	1.07e5	1.05e5	5.12e4	1.04e5



**Table 23. GCMS SIR of aromatic compounds (amounts in ng/g)**

m/e			142							156							170						
Well	Sample type	Lower Depth (m)	APT ID	2-MN	1-MN	2-EN	1-EN	2,6-DMN	2,7-DMN	1,3- + 1,7-DMN	1,6-DMN	2,3- + 1,4-DMN	1,5-DMN	1,2-DMN	1,8-DMN	1,3,7-TMN	1,3,6-TMN	1,3,5- + 1,4,6-TMN	2,3,6-TMN	1,2,7-TMN			
7122/6-2	DC	2037	37774	1.13e6	1.01e6	1.36e5	9.69e4	1.95e5	2.02e5	4.59e5	4.71e5	2.08e5	1.06e5	1.59e5	5.64e2	8.31e4	1.23e5	1.29e5	8.53e4	5.83e4			
7122/6-2	DC	2055	37776	6.33e5	5.38e5	5.70e4	3.29e4	1.60e5	1.97e5	3.94e5	3.56e5	1.43e5	9.27e4	7.11e4	3.74e2	9.67e4	1.39e5	1.23e5	1.01e5	3.46e4			
7122/6-2	Oil	2393.40	39180	1.13e6	7.42e5	7.79e4	6.05e4	1.76e5	2.13e5	4.03e5	2.45e5	1.08e5	5.42e4	4.77e4	1.10e3	8.63e4	1.03e5	7.69e4	5.42e4	2.06e4			
7122/6-2	Oil	2452.40	39179	1.76e6	1.03e6	1.07e5	5.33e4	2.99e5	3.36e5	5.33e5	3.60e5	1.39e5	6.79e4	4.93e4	6.38e2	1.19e5	1.38e5	8.75e4	8.26e4	1.70e4			
7122/6-2	COCH	2453.17	37786	1.31e4	1.41e4	1.45e3	1.89e3	3.24e3	3.87e3	7.67e3	7.13e3	3.16e3	3.10e3	1.49e3	0.00e0	2.07e3	2.93e3	2.54e3	1.62e3	1.11e3			
7122/6-2	COCH	2466.50	37789	5.65e5	4.06e5	5.39e4	3.65e4	1.77e5	2.26e5	3.66e5	2.67e5	1.09e5	7.08e4	4.44e4	5.43e2	1.02e5	1.34e5	8.88e4	8.88e4	2.18e4			
7122/6-2	COCH	2469.96	37790	4.38e6	4.16e6	2.76e5	2.34e5	2.57e5	3.29e5	8.63e5	7.05e5	5.24e5	2.42e5	2.99e5	3.50e3	1.02e5	1.69e5	1.27e5	1.49e5	5.01e4			
7122/6-2	COCH	2489.70	37798	1.19e5	1.33e5	1.83e4	1.93e4	2.37e4	3.16e4	8.65e4	6.65e4	3.96e4	2.95e4	2.64e4	1.46e2	2.33e4	3.30e4	3.00e4	2.34e4	1.11e4			
7122/6-2	COCH	2489.86	37799	5.27e5	5.65e5	4.42e4	4.16e4	5.41e4	6.84e4	1.92e5	1.49e5	9.60e4	5.76e4	6.39e4	3.17e2	3.64e4	5.46e4	4.85e4	4.12e4	2.11e4			
7122/6-2	Oil	2533.40	39178	1.34e6	7.15e5	8.58e4	3.20e4	3.02e5	3.40e5	5.25e5	3.70e5	1.40e5	6.69e4	4.47e4	3.63e2	1.43e5	1.75e5	1.07e5	1.16e5	2.03e4			

Table 23. continued, GCMS SIR of aromatic compounds (amounts in ng/g)

m/e			170			178		192		206										
Well	Sample type	Lower Depth (m)	APT ID	1,6,7 + 1,2,6-TMN	1,2,4-TMN	1,2,5-TMN	P	3-MP	2-MP	9-MP	1-MP	2-EP+9-EP+3,6-DMP	1-EP	2,6- + 2,7- + 3,5-DMP	1,3- + 2,10- + 3,9- + 3,10-DMP	1,6- + 2,5- + 2,9-DMP	1,7-DMP	2,3-DMP	1,9- + 4,9- + 4,10-DMP	1,8-DMP
7122/6-2	DC	2037	37774	1.33e5	4.01e4	1.72e5	4.37e5	1.66e5	1.77e5	2.97e5	2.56e5	3.52e4	3.19e4	1.56e4	1.48e5	7.12e4	1.02e5	2.52e4	5.11e4	2.92e4
7122/6-2	DC	2055	37776	1.15e5	1.84e4	7.91e4	4.07e5	1.47e5	1.88e5	2.83e5	2.25e5	2.41e4	3.63e4	2.27e4	1.82e5	9.01e4	1.04e5	2.83e4	5.43e4	2.55e4
7122/6-2	Oil	2393.40	39180	6.05e4	9.49e3	3.05e4	3.53e4	1.29e4	9.96e3	1.27e4	7.72e3	2.23e3	2.27e3	1.14e3	7.48e3	2.99e3	1.62e3	1.09e3	1.61e3	3.63e2
7122/6-2	Oil	2452.40	39179	6.76e4	6.15e3	2.49e4	7.36e4	1.29e4	1.17e4	1.57e4	1.04e4	1.56e3	1.47e3	7.90e2	5.39e3	2.32e3	1.69e3	1.11e3	1.47e3	4.17e2
7122/6-2	COCH	2453.17	37786	2.65e3	3.41e2	1.71e3	8.04e3	6.09e2	7.58e2	1.35e3	1.00e3	1.35e2	1.20e2	1.00e2	6.22e2	3.83e2	3.16e2	1.44e2	2.35e2	9.27e1
7122/6-2	COCH	2466.50	37789	8.79e4	8.47e3	4.17e4	4.63e5	7.84e4	8.36e4	1.45e5	1.04e5	1.50e4	1.91e4	1.14e4	6.77e4	3.27e4	3.10e4	1.69e4	2.27e4	9.38e3
7122/6-2	COCH	2469.96	37790	2.39e5	2.39e4	2.44e5	4.40e6	6.07e5	7.99e5	1.17e6	1.04e6	8.51e4	1.07e5	5.79e4	3.51e5	1.98e5	2.27e5	1.31e5	1.54e5	7.37e4
7122/6-2	COCH	2489.70	37798	5.03e4	5.19e3	5.38e4	1.45e5	3.69e4	3.80e4	6.06e4	4.15e4	7.23e3	7.54e3	4.20e3	2.88e4	1.28e4	1.37e4	7.33e3	9.41e3	4.36e3
7122/6-2	COCH	2489.86	37799	8.85e4	8.79e3	9.79e4	6.93e5	1.33e5	1.55e5	2.46e5	1.75e5	2.21e4	2.43e4	1.42e4	9.61e4	4.49e4	4.92e4	2.59e4	3.28e4	1.64e4
7122/6-2	Oil	2533.40	39178	8.77e4	8.26e3	2.76e4	1.55e5	7.32e4	6.95e4	8.26e4	5.73e4	1.33e4	1.92e4	1.00e4	5.98e4	2.57e4	2.24e4	1.02e4	1.38e4	5.02e3

Table 23. continued, GCMS SIR of aromatic compounds (amounts in ng/g)

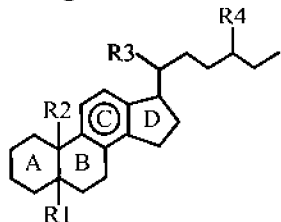
m/e	206	219	184	198	253															
Well	Sample type	Lower Depth (m)	APT ID	1,2-DMP	Retene	DBT	4-MDBT	(3+2)-MDBT	1-MDBT	C21MA	C22MA	βSC27MA	βSC27DMA	βRC27MA+ βRC27DMA	αSC27MA	βSC28MA+ βSC28DMA+ αRC27DMA	αSC27DMA	αRC27MA	αSC28MA	βRC28MA+ βRC28DMA
7122/6-2	DC	2037	37774	3.35e4	1.06e5	4.27e5	3.79e5	1.99e5	1.70e5	7.08e3	4.97e3	7.65e2	1.49e4	1.20e4	9.32e2	1.94e4	3.12e3	7.36e2	1.19e3	1.31e4
7122/6-2	DC	2055	37776	2.01e4	1.94e4	1.96e5	2.96e5	1.23e5	6.61e4	7.89e2	5.17e2	8.23e1	5.48e2	4.43e2	7.53e1	9.25e2	1.32e2	6.12e1	1.13e2	5.85e2
7122/6-2	Oil	2393.40	39180	2.67e2	3.83e2	1.37e3	1.27e3	4.99e2	1.23e2	6.11e2	3.51e2	2.75e1	7.37e1	3.87e1	0.00e0	7.48e1	0.00e0	0.00e0	0.00e0	5.09e1
7122/6-2	Oil	2452.40	39179	4.40e2	1.00e3	4.02e3	1.13e3	5.97e2	2.03e2	3.31e2	1.72e2	0.00e0	2.62e1	0.00e0	0.00e0	3.09e1	0.00e0	0.00e0	0.00e0	3.97e1
7122/6-2	COCH	2453.17	37786	1.06e2	2.14e2	4.88e2	4.32e2	1.23e2	1.11e2	1.14e2	1.01e2	8.35e1	1.66e2	1.52e2	5.67e1	3.14e2	5.15e1	5.89e1	5.78e1	1.84e2
7122/6-2	COCH	2466.50	37789	1.06e4	2.49e4	2.70e4	1.04e4	5.19e3	2.88e3	1.92e2	1.75e2	4.52e1	4.84e1	4.87e1	0.00e0	6.42e1	0.00e0	2.38e1	2.61e1	6.62e1
7122/6-2	COCH	2469.96	37790	9.37e4	2.19e5	3.54e5	9.23e4	6.11e4	3.31e4	4.34e2	2.89e2	0.00e0	6.76e1	9.77e1	4.45e1	2.40e2	1.22e2	0.00e0	1.76e2	2.07e2
7122/6-2	COCH	2489.70	37798	5.21e3	1.15e4	7.14e3	3.11e3	1.97e3	1.03e3	4.14e2	3.09e2	1.46e2	7.73e2	6.17e2	2.34e2	1.30e3	4.01e2	1.93e2	3.91e2	9.53e2
7122/6-2	COCH	2489.86	37799	2.02e4	2.54e4	3.34e4	1.14e4	8.18e3	4.75e3	3.47e2	2.67e2	8.09e1	2.76e2	2.15e2	9.17e1	4.42e2	1.50e2	8.68e1	1.22e2	3.32e2
7122/6-2	Oil	2533.40	39178	4.06e3	9.39e3	1.00e4	1.06e4	6.26e3	1.57e3	6.28e2	4.83e2	1.10e2	2.64e2	2.37e2	1.28e2	4.81e2	1.35e2	1.12e2	2.35e2	3.14e2

Table 23. continued, GCMS SIR of aromatic compounds (amounts in ng/g)

m/e	253	231												
Well	Sample type	Lower Depth (m)	APT ID	bSC29MA+ bSC29DMA	aSC29MA	aRC28MA+ bRC29MA+ bRC29DMA	aRC29MA	C20TA	C21TA	SC26TA	RC26TA+ SC27TA	SC28TA	RC27TA	RC28TA
7122/6-2	DC	2037	37774	1.47e4	5.74e2	1.02e4	3.75e2	1.51e4	1.38e4	9.94e3	3.77e4	1.88e4	1.89e4	2.15e4
7122/6-2	DC	2055	37776	5.75e2	6.44e1	3.95e2	5.40e1	5.63e3	5.76e3	6.51e2	2.06e3	1.07e3	1.05e3	1.21e3
7122/6-2	Oil	2393.40	39180	5.98e1	0.00e0	3.72e1	0.00e0	7.41e1	3.71e1	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	Oil	2452.40	39179	4.14e1	0.00e0	0.00e0	0.00e0	1.10e2	5.02e1	0.00e0	0.00e0	0.00e0	0.00e0	0.00e0
7122/6-2	COCH	2453.17	37786	2.31e2	4.94e1	1.28e2	4.93e1	1.91e2	8.93e1	5.05e1	7.23e1	0.00e0	0.00e0	7.90e1
7122/6-2	COCH	2466.50	37789	1.21e2	4.93e1	7.09e1	5.03e1	2.17e3	1.25e3	2.35e2	3.32e2	4.29e2	1.91e2	4.32e2
7122/6-2	COCH	2469.96	37790	8.51e2	3.13e2	5.99e2	2.08e2	7.05e3	3.92e3	9.69e2	2.37e3	3.90e3	1.41e3	4.15e3
7122/6-2	COCH	2489.70	37798	2.06e3	4.10e2	1.39e3	4.38e2	3.29e3	2.14e3	1.59e3	4.60e3	4.81e3	2.18e3	4.49e3
7122/6-2	COCH	2489.86	37799	7.39e2	1.29e2	4.27e2	1.41e2	6.26e3	3.87e3	1.15e3	3.29e3	2.96e3	1.53e3	2.96e3
7122/6-2	Oil	2533.40	39178	5.03e2	1.64e2	3.94e2	1.46e2	1.45e3	1.04e3	3.01e2	7.17e2	7.01e2	3.44e2	6.99e2

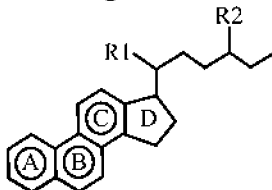
## Abbreviation of aromatic biomarkers

### C-ring monoaromatic steroid



R <sub>1</sub>	Substituents			Label
	R <sub>2</sub>	R <sub>3</sub>	R <sub>4</sub>	
				C <sub>21</sub> MA
				C <sub>22</sub> MA
β(H)	CH <sub>3</sub>	S(CH <sub>3</sub> )	H	βSC <sub>27</sub> MA
β(CH <sub>3</sub> )	H	S(CH <sub>3</sub> )	H	βSC <sub>27</sub> DMA
β(CH <sub>3</sub> )	H	R(CH <sub>3</sub> )	H	βRC <sub>27</sub> DMA+
β(H)	CH <sub>3</sub>	R(CH <sub>3</sub> )	H	βRC <sub>27</sub> MA
α(H)	CH <sub>3</sub>	S(CH <sub>3</sub> )	H	αSC <sub>27</sub> MA
β(H)	CH <sub>3</sub>	S(CH <sub>3</sub> )	CH <sub>3</sub>	βSC <sub>28</sub> MA+
α(CH <sub>3</sub> )	H	R(CH <sub>3</sub> )	H	αRC <sub>27</sub> DMA+
β(CH <sub>3</sub> )	H	S(CH <sub>3</sub> )	CH <sub>3</sub>	βSC <sub>28</sub> DMA
α(CH <sub>3</sub> )	H	S(CH <sub>3</sub> )	CH <sub>3</sub>	αSC <sub>27</sub> DMA
α(H)	CH <sub>3</sub>	R(CH <sub>3</sub> )	H	αRC <sub>27</sub> MA
α(H)	CH <sub>3</sub>	S(CH <sub>3</sub> )	CH <sub>3</sub>	αSC <sub>28</sub> MA
β(H)	CH <sub>3</sub>	R(CH <sub>3</sub> )	CH <sub>3</sub>	βRC <sub>28</sub> MA+
β(CH <sub>3</sub> )	H	R(CH <sub>3</sub> )	CH <sub>3</sub>	βRC <sub>28</sub> DMA
β(H)	CH <sub>3</sub>	S(CH <sub>3</sub> )	C <sub>2</sub> H <sub>5</sub>	βSC <sub>29</sub> MA+
β(CH <sub>3</sub> )	H	S(CH <sub>3</sub> )	C <sub>2</sub> H <sub>5</sub>	βSC <sub>29</sub> DMA
α(H)	CH <sub>3</sub>	S(CH <sub>3</sub> )	C <sub>2</sub> H <sub>5</sub>	αSC <sub>29</sub> MA
α(H)	CH <sub>3</sub>	R(CH <sub>3</sub> )	CH <sub>3</sub>	αRC <sub>28</sub> MA+
β(H)	CH <sub>3</sub>	R(CH <sub>3</sub> )	C <sub>2</sub> H <sub>5</sub>	βRC <sub>29</sub> MA+
β(CH <sub>3</sub> )	H	R(CH <sub>3</sub> )	C <sub>2</sub> H <sub>5</sub>	βRC <sub>29</sub> DMA
α(H)	CH <sub>3</sub>	R(CH <sub>3</sub> )	C <sub>2</sub> H <sub>5</sub>	αRC <sub>29</sub> MA

### ABC-ring triaromatic steroids



Substituents		Label
R <sub>1</sub>	R <sub>2</sub>	
CH <sub>3</sub>	H	C <sub>20</sub> TA
CH <sub>3</sub>	CH <sub>3</sub>	C <sub>21</sub> TA
S(CH <sub>3</sub> )	C <sub>6</sub> H <sub>13</sub>	SC <sub>26</sub> TA
R(CH <sub>3</sub> )	C <sub>6</sub> H <sub>13</sub>	RC <sub>26</sub> TA+
S(CH <sub>3</sub> )	C <sub>7</sub> H <sub>15</sub>	SC <sub>27</sub> TA
S(CH <sub>3</sub> )	C <sub>8</sub> H <sub>17</sub>	SC <sub>28</sub> TA
R(CH <sub>3</sub> )	C <sub>7</sub> H <sub>15</sub>	RC <sub>27</sub> TA
R(CH <sub>3</sub> )	C <sub>8</sub> H <sub>17</sub>	RC <sub>28</sub> TA

### Polycyclic aromatic hydrocarbons and sulphur compounds

MN	Methylnaphthalene
EN	Ethylnaphthalene
DMN	Dimethylnaphthalene
TMN	Trimethylnaphthalene
P	Phenanthrene
MP	Methylphenanthrene
EP	Ethylphenanthrene
DMP	Dimethylphenanthrene
DBT	Dibenzothiophene
MDBT	Methyldibenzothiophene

**Table 24. Isotopes of fractions,  $\delta^{13}\text{C}$  (‰ PDB)**

Well	Sample type	Lower Depth (m)	APT ID	$\delta^{13}\text{C-Oil/EOM}$	$\delta^{13}\text{C-Sat}$	$\delta^{13}\text{C-Aro}$	$\delta^{13}\text{C-Pol}$	$\delta^{13}\text{C-Asp}$
7122/6-2	DC	2037	37774	-29.6	-30.1	-28.4	-30.4	-28.4
7122/6-2	DC	2055	37776	-30.3	-30.1	-28.1	-31.2	-29.5
7122/6-2	Oil	2393.40	39180	-29.6	-30.2	-27.2	-34.2	*
7122/6-2	Oil	2452.40	39179	-30.5	-31.2	-27.9	-33.6	*
7122/6-2	COCH	2453.17	37786	-29.3	-29.1	-30.5	-30.0	-29.7
7122/6-2	COCH	2466.50	37789	-30.5	-31.3	-28.5	-31.5	-28.7
7122/6-2	COCH	2469.96	37790	-25.6	-28.0	-25.4	-26.6	-25.2
7122/6-2	COCH	2489.70	37798	-32.4	-33.4	-30.7	-30.9	-32.2
7122/6-2	COCH	2489.86	37799	-31.1	-32.8	-29.8	-30.5	-28.8
7122/6-2	Oil	2533.40	39178	-30.1	-30.6	-28.6	-32.9	-29.4

\*: Too low amounts for isotopic measurements

**Table 25. Vitrinite Reflectance**

Well	Sample type	Lower Depth (m)	APT ID	Sample prep.	%Lithology	%Ro	Std. dev.	No. of measurements	Quality rating	Overall quality	Comment
7122/6-2	DC	1140	37763	Bulk	slst	0.44	0.08	5	-0000-	M	See data sheet
7122/6-2	DC	1310	37764	Bulk	slst	0.47	0.05	7	-0000-	M	See data sheet
7122/6-2	DC	1460	37765	Bulk	slst	0.57	0.01	5	-0000-	M	See data sheet
7122/6-2	DC	1610	37766	Bulk	slst	0.60	0.04	3	-0000-	M	See data sheet
7122/6-2	DC	1730	37767	Bulk	sh	0.65	0.04	3	-00000	M	See data sheet
7122/6-2	DC	1869	37768	Bulk	sh	0.59	0.05	6	-00-00	St	See data sheet
7122/6-2	DC	1911	37769	Bulk	lst	0.78	0.00	1	--+00-	P	See data sheet
7122/6-2	DC	1959	37770	Bulk	sh	0.39	0.04	5	-0-000	St	See data sheet
7122/6-2	DC	2037	37774	Bulk	sh	0.73	0.01	2	00-000	St	See data sheet
7122/6-2	DC	2202	37778	Bulk	slst	0.72	0.00	1	-00000	M	See data sheet
7122/6-2	DC	2304	37779	Bulk	sh	0.64	0.00	1	-0-00-	M	See data sheet
7122/6-2	DC	2388	37781	Bulk	slst	0.72	0.05	13	+00000	G	See data sheet
7122/6-2	COCH	2464.50	37788	Bulk	Coal	0.78	0.06	16	000000	G	See data sheet
7122/6-2	COCH	2469.96	37790	Bulk	coal	0.63	0.03	20	000000	G	Good quality coal sample.
7122/6-2	COCH	2478.24	37793	Bulk	slst	0.72	0.04	12	00+000	G	See data sheet
7122/6-2	COCH	2489.86	37799	Bulk	sh	0.66	0.07	10	00-000	G	See data sheet
7122/6-2	DC	2835	37782	Bulk	sh	0.80	0.05	7	000000	G	See data sheet
7122/6-2	SWC	2862	38798	Bulk	slst	0.76	0.07	19	000000	G	See data sheet
7122/6-2	DC	2934	37783	Bulk	slst	0.81	0.06	5	000+00	M	See data sheet

Legend to Vitrinite reflectance data

Lithology code		Sample quality		Sample preparation	
sst	Sandstone	G	Good	HF	Sample treatment with hydrofluoric acid prior to analysis
slst	Siltstone	M	Moderate		
clyst	Claystone	P	Poor	Bulk	Sample treated as bulk rock
sh	Shale	st	Hydrocarbon staining		
lst	Limestone				
coal	Coal				

Sample description and measurement evaluation (perfect sample characterised as: 000000)

Sign order	Parameter	Sign	Sign legend:
1	Abundance of vitrinite	-o	- May give too low vitrinite reflectance sample value
2	Identification of vitrinite	-o+	o Reliable vitrinite reflectance sample value
3	Type of vitrinite	-o+	+ May give too high vitrinite reflectance sample value
4	Vitrinite fragment size	-o	
5	Vitrinite surface quality	-o	
6	Abundance of pyrite	o+	