Table 7A: Variation in Triterpane Distribution (peak height) SIR for Well NOCS 6608/10-4

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Ratio6	Ratio7	Ratio8	Ratio9	Rat.10	Rat.11	Rat.12	Rat.13	Rat.14	Sample
2693.25	S/Sst	1.09	0.52	0.15	0.59	0.37	0.08	0.13	0.23	0.12	0.22	0.88	0.39	0.18	42.42	0066-1
2584.00	S/Sst	1.06	0.52	0.11	0.45	0.31	0.06	0.06	0.13	0.05	0.04	0.93	0.32	0.08	62.92	0023-1

List of Triterpane Distribution Ratios

Ratio 1: 27Tm / 27Ts

Ratio 2: 27Tm / 27Tm+27Ts

Ratio 3: 27Tm / 27Tm+30aß+30ßa

Ratio 4: 29aß / 30aß

Ratio 5: 29aß / 29aß+30aß

Ratio 6: 30d / 30aß

Ratio 7: 28aß / 30aß

Ratio 8: 28aß / 29aß

Ratio 9: 28aß / 28aß+30aß

Ratio 10: 24/3 / 30aß

Ratio 11: 30aß / 30aß+30ßa

Ratio 12: 29aß+29ßa / 29aß+29ßa+30aß+30ßa

Ratio 13: 29ßa+30ßa / 29aß+30aß

Ratio 14: 32aßS / 32aßS+32aßR (%)

Table 7B: Variation in Steranes Distribution (peak height) SIR for Well NOCS 6608/10-4

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Ratio6	Ratio7	Ratio8	Ratio9	Ratio10	Sample
2562.00	S/Sst	1.00	-	-	1.96	-	1.00	0.79	-	-	-	0036-1
2567.00	Sh/Clst	1.00	-	66.68	-	1.00	0.35	0.35	0.50	-	1.00	0037-1
2571.00	Sh/Clst	0.56	-	69.41	1.11	1.00	0.40	0.34	0.53	-	1.13	0038-1
2571.75	S/Sst	0.78	51.80	80.06	0.77	0.79	0.29	0.21	0.67	1.07	4.17	0039-1
2572.00	S/Sst	0.78	51.43	75.40	0.79	0.75	0.42	0.31	0.61	1.06	3.16	0040-1
2573.00	S/Sst	0.81	46.62	80.82	0.78	0.82	0.49	0.37	0.68	0.87	3.95	0041-1
2576.25	S/Sst	0.84	48.11	79.09	0.92	0.80	0.56	0.43	0.65	0.93	3.64	0042-1
2577.25	S/Sst	0.82	48.30	81.60	0.86	0.82	0.48	0.37	0.69	0.93	4.29	0043-1
2578.25	S/Sst	0.78	47.59	81.66	0.73	0.82	0.38	0.28	0.69	0.91	4.25	0044-1
2581.75	S/Sst	0.78	49.60	80.11	0.72	0.80	0.33	0.24	0.67	0.98	3.99	0045-1
2584.50	S/Sst	0.82	46.64	80.98	0.83	0.82	0.39	0.29	0.68	0.87	3.99	0046-1
2585.00	S/Sst	0.79	49.67	78.15	0.81	0.78	0.36	0.26	0.64	0.99	3.55	0047-1
2586.00	S/Sst	0.79	51.41	80.59	0.82	0.80	0.39	0.29	0.67	1.06	4.27	0048-1
2587.00	S/Sst	0.78	48.25	79.95	0.78	0.81	0.35	0.25	0.67	0.93	3.85	0049-1

Table 7B: Variation in Sterane Distribution (peak height) SIR for Well NOCS 6608/10-4

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Ratio6	Ratio7	Ratio8	Ratio9	Ratio10	Sample
2587.75	S/Sst	0.79	46.82	79.83	0.77	0.81	0.39	0.28	0.66	0.88	3.72	0050-1
2589.25	S/Sst	0.79	47.80	79.38	0.77	0.80	0.42	0.32	0.66	0.92	3.69	0051-1
2592.25	S/Sst	0.77	48.17	79.72	0.75	0.80	0.31	0.22	0.66	0.93	3.79	0052-1
2595.00	S/Sst	0.81	49.66	82.72	0.76	0.83	0.41	0.30	0.71	0.99	4.75	0053-1
2597.25	S/Sst	0.80	48.33	80.09	0.82	0.81	0.42	0.31	0.67	0.94	3.89	0054-1
2599.25	S/Sst	0.81	54.02	80.17	0.72	0.79	0.34	0.25	0.67	1.18	4.40	0055-1
2599.75	S/Sst	0.74	22.87	72.16	0.69	0.85	0.68	0.60	0.56	0.30	1.68	0056-1
2600.25	S/Sst	0.79	47.07	78.67	0.79	0.80	0.34	0.24	0.65	0.89	3.48	0057-1
2600.50	S/Sst	0.78	47.24	78.67	0.74	0.80	0.34	0.25	0.65	0.90	3.49	0058-1
2601.00	S/Sst	0.81	40.29	72.37	0.76	0.76	0.58	0.46	0.57	0.67	2.19	0059-1
2602.00	S/Sst	0.65	37.64	71.96	0.92	0.77	0.48	0.40	0.56	0.60	2.06	0060-1
2602.75	S/Sst	0.55	35.05	68.37	0.62	0.76	0.48	0.40	0.52	0.54	1.66	0061-1
2603.25	S/Sst	0.64	-	74.85	0.69	1.00	0.56	0.51	0.60	-	1.49	0062-1
2604.25	Sh/Clst	0.77	13.57	68.88	0.72	0.89	0.60	0.51	0.53	0.16	1.28	0063-1
2615.50	S/Sst	0.63	44.53	72.63	0.83	0.75	0.41	0.31	0.57	0.80	2.39	0064-1

Table 7B: Variation in Sterane Distribution (peak height) SIR for Well NOCS 6608/10-4

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Ratio6	Ratio7	Ratio8	Ratio9	Ratio10	Sample
2687.50	S/Sst	0.68	35.41	54.88	0.86	0.63	0.50	0.40	0.38	0.55	0.94	0065-1
2693.25	S/Sst	0.67	57.89	67.08	1.06	0.64	0.47	0.34	0.50	1.37	2.42	0066-1
2584.00	S/Sst	0.80	42.22	79.17	0.87	0.82	0.37	0.28	0.66	0.73	3.29	0023-1

List of Sterane Distribution Ratios

Ratio 1: 27dßS / 27dßS+27aaR

Ratio 2: 29aaS / 29aaS+29aaR (%)

Ratio 3: 2*(29ßßR+29ßßS) / (29aaS+29aaR + 2*(29ßßR+29ßßS)) (%)

Ratio 4: 27dßS+27dßR+27daS+27daR / 29dßS+29dßR+29daS+29daR

Ratio 5: 29ßßR+29ßßS / 29ßßR+29ßßS+29aaS

Ratio 6: 21a+22a / 21a+22a+29aaS+29ßßR+29ßßS+29aaR

Ratio 7: 21a+22a / 21a+22a+28daR+28aaS+29daR+29aaS+29ßßR+29ßßS+29aaR

Ratio 8: 29ßßR+29ßßS / 29aaS+29ßßR+29ßßS+29aaR

Ratio 9: 29aaS / 29aaR

Ratio 10: 29ßßR+29ßßS / 29aaR

Table 7C: Raw triterpane data (peak height) m/z 191 SIR for Well NOCS 6608/10-4

Depth unit of measure: m

Depth	Lithology	23/3	24/3	25/3	24/4	26/3	27Ts	27Tm	28aß	25nor30aß	Sample
		29aß	29Ts	30d	29ßa	30O	30aß	30ßa	30G	31aßS	
		31aßR	32aßS	32aßR	33aßS	33aßR	34aßS	34aßR	35aßS	35aßR	
2562.00	S/Sst	59.4	24.6	16.8	16.3	17.1	18.7	32.1	10.7	11.8	0036-1
		51.8	22.6	9.9	11.9	0.0	97.4	38.1	0.0	27.7	
		48.9	15.1	25.9	0.0	0.0	0.0	0.0	0.0	0.0	
2567.00	Sh/Clst	15.1	11.0	6.6	12.4	0.0	16.5	50.1	0.0	0.0	0037-1
		62.1	20.6	11.4	36.1	0.0	93.1	46.1	0.0	74.8	
		85.2	13.4	30.6	8.8	15.5	29.7	9.1	0.0	0.0	
2571.00	Sh/Clst	20.8	14.3	11.6	28.7	6.7	24.1	59.9	20.1	15.3	0038-1
		71.3	36.3	17.0	23.5	0.0	216.9	42.8	0.0	50.0	
		72.4	15.9	26.7	12.4	12.3	41.4	10.2	6.8	21.1	
2571.75	S/Sst	262.3	177.8	84.9	313.8	50.6	564.1	600.4	360.4	244.1	0039-1
		1923.1	567.2	275.8	204.5	0.0	4019.7	359.3	0.0	1120.6	
		689.7	643.1	407.7	426.0	235.9	299.2	121.5	126.9	75.6	
2572.00	S/Sst	18.3	21.3	9.8	21.8	6.5	41.3	51.9	21.7	16.6	0040-1
		187.8	46.4	16.6	17.3	0.0	543.7	27.4	0.0	89.8	
		52.4	53.4	30.6	44.2	23.6	26.0	13.1	14.8	9.7	

Table 7C: Raw triterpane data (peak height) m/z 191 SIR for Well NOCS 6608/10-4

Depth unit of measure: m

Depth	Lithology	23/3	24/3	25/3	24/4	26/3	27Ts	27Tm	28aß	25nor30aß	Sample
		29aß	29Ts	30d	29ßa	30O	30aß	30ßa	30G	31aßS	
		31aßR	32aßS	32aßR	33aßS	33aßR	34aßS	34aßR	35aßS	35aßR	
2573.00	S/Sst	118.7	9.8	33.5	99.3	18.7	184.0	194.8	84.9	59.4	0041-1
		680.6	161.1	67.2	60.5	0.0	1521.6	79.2	0.0	365.3	
		223.2	175.2	96.5	124.1	56.2	78.7	27.2	29.8	19.5	
2576.25	S/Sst	115.3	84.7	24.9	97.5	18.2	136.5	162.5	63.1	37.7	0042-1
		562.6	121.3	53.8	37.0	0.0	1225.9	55.7	0.0	246.4	
		147.9	129.8	67.5	81.3	33.0	60.5	26.3	21.1	18.6	
2577.25	S/Sst	239.7	153.7	57.9	181.7	29.9	352.0	379.1	159.3	113.5	0043-1
		1148.0	307.0	126.9	97.5	0.0	2523.9	173.3	0.0	630.9	
		349.8	291.1	172.8	172.9	92.9	134.9	46.9	46.2	29.4	
2578.25	S/Sst	183.3	130.4	50.1	161.8	31.7	339.3	369.4	182.5	132.2	0044-1
		1213.1	294.8	140.2	114.2	0.0	2514.1	194.8	0.0	661.5	
		390.9	373.7	218.6	225.8	109.1	167.9	75.0	69.5	44.1	
2581.75	S/Sst	255.6	160.3	78.6	232.6	39.6	470.0	558.1	283.9	191.4	0045-1
		1660.2	447.1	241.5	187.0	0.0	3495.2	299.0	0.0	964.8	
		592.3	531.5	337.6	345.1	174.6	275.4	107.5	111.3	87.2	

Table 7C: Raw triterpane data (peak height) m/z 191 SIR for Well NOCS 6608/10-4

Depth unit of measure: m

Depth	Lithology	23/3	24/3	25/3	24/4	26/3	27Ts	27Tm	28aß	25nor30aß	Sample
		29aß	29Ts	30d	29ßa	30O	30aß	30ßa	30G	31aßS	
		31aßR	32aßS	32aßR	33aßS	33aßR	34aßS	34aßR	35aßS	35aßR	
2584.50	S/Sst	178.3	110.6	44.2	160.3	28.3	321.5	363.4	171.3	128.8	0046-1
		1115.8	308.0	149.1	115.2	0.0	2425.3	176.5	0.0	593.2	
		410.9	369.2	206.2	222.0	111.5	165.6	63.5	70.3	55.5	
2585.00	S/Sst	222.7	143.1	71.1	199.5	38.5	437.8	462.6	252.1	166.5	0047-1
		1467.2	436.1	199.0	169.8	0.0	3128.4	242.4	0.0	816.4	
		514.5	451.0	296.5	306.0	156.4	210.4	88.3	99.6	66.7	
2586.00	S/Sst	253.7	160.6	66.4	237.5	33.1	412.3	449.0	215.7	156.5	0048-1
		1324.1	390.3	178.5	144.8	0.0	2916.1	202.6	0.0	756.6	
		478.1	451.7	235.7	252.8	130.0	168.7	79.8	77.9	53.5	
2587.00	S/Sst	392.3	240.2	103.9	363.6	70.4	690.8	831.8	413.9	319.1	0049-1
		2342.2	744.2	346.7	266.6	0.0	4830.0	448.3	0.0	1400.6	
		881.0	869.2	505.3	544.2	290.1	321.9	166.0	167.9	125.1	
2587.75	S/Sst	264.1	163.2	65.8	230.4	42.0	431.5	496.7	263.3	171.0	0050-1
		1533.6	443.9	207.3	167.5	0.0	3413.7	271.1	0.0	943.5	
		590.3	538.0	330.4	316.8	178.9	192.3	98.4	93.7	65.8	

Table 7C: Raw triterpane data (peak height) m/z 191 SIR for Well NOCS 6608/10-4

Depth unit of measure: m

Depth	Lithology	23/3	24/3	25/3	24/4	26/3	27Ts	27Tm	28aß	25nor30aß	Sample
		29aß	29Ts	30d	29ßa	30O	30aß	30ßa	30G	31aßS	
		31aßR	32aßS	32aßR	33aßS	33aßR	34aßS	34aßR	35aßS	35aßR	
2589.25	S/Sst	246.2	130.0	56.2	191.7	37.3	357.3	413.3	196.7	116.6	0051-1
		1262.8	343.5	156.8	134.2	0.0	2760.5	198.1	0.0	707.9	
		435.5	393.3	232.6	235.2	110.5	109.9	62.9	66.2	43.6	
2592.25	S/Sst	419.3	261.9	123.1	453.7	85.2	857.3	903.6	491.7	352.6	0052-1
		2693.9	804.2	422.7	334.9	0.0	5508.4	515.3	0.0	1612.6	
		1042.3	952.4	609.9	636.7	370.8	378.3	209.0	181.9	128.4	
2595.00	S/Sst	185.6	119.9	51.8	159.0	27.7	314.8	338.8	160.9	107.6	0053-1
		1098.2	300.8	141.4	86.4	0.0	2509.3	168.6	0.0	619.7	
		363.2	347.8	208.8	216.6	116.2	120.9	63.5	66.0	48.0	
2597.25	S/Sst	153.6	106.2	41.3	130.8	26.0	265.2	299.6	160.6	94.1	0054-1
		1014.7	246.2	139.1	77.5	0.0	2195.7	131.7	0.0	557.1	
		356.2	264.4	175.6	165.2	86.5	100.5	53.6	63.1	34.7	
2599.25	S/Sst	124.0	101.8	44.9	130.0	31.0	293.3	353.0	173.8	112.9	0055-1
		1071.6	305.4	116.7	94.6	0.0	2327.2	145.8	0.0	598.5	
		348.4	360.1	180.2	200.3	95.6	104.1	58.8	53.2	37.7	

Table 7C: Raw triterpane data (peak height) m/z 191 SIR for Well NOCS 6608/10-4

Depth unit of measure: m

Depth	Lithology	23/3	24/3	25/3	24/4	26/3	27Ts	27Tm	28aß	25nor30aß	Sample
		29aß	29Ts	30d	29ßa	30O	30aß	30ßa	30G	31aßS	
		31aßR	32aßS	32aßR	33aßS	33aßR	34aßS	34aßR	35aßS	35aßR	
2599.75	S/Sst	472.1	239.1	77.4	543.9	33.9	629.0	1129.5	3659.4	267.6	0056-1
		2058.3	519.2	223.6	535.7	0.0	3785.3	822.5	0.0	1016.7	
		1335.0	341.4	560.6	160.6	222.4	97.0	124.3	50.7	52.2	
2600.25	S/Sst	475.9	273.2	152.0	455.9	81.8	840.9	949.6	559.6	396.4	0057-1
		2718.2	845.0	434.4	334.8	0.0	5411.2	557.5	0.0	1596.3	
		1088.6	922.2	598.3	623.5	358.4	338.1	212.4	203.8	120.1	
2600.50	S/Sst	352.3	238.7	100.9	332.1	63.5	607.5	728.1	401.2	255.1	0058-1
		2064.5	644.8	338.2	267.9	0.0	4272.9	442.0	0.0	1162.0	
		783.4	712.6	450.5	474.1	274.1	281.5	166.8	135.1	98.6	
2601.00	S/Sst	21.4	14.3	6.2	24.1	4.5	28.2	67.3	206.4	18.5	0059-1
		141.6	27.3	12.5	31.7	0.0	363.9	47.6	0.0	72.4	
		73.6	28.3	36.7	17.6	17.2	13.2	15.3	7.9	0.0	
2602.00	S/Sst	120.6	65.0	39.4	73.0	16.4	73.8	186.4	422.9	51.4	0060-1
		367.7	88.9	50.2	78.5	0.0	883.8	163.9	0.0	210.7	
		262.4	108.1	151.8	52.1	55.1	157.9	36.9	21.6	31.7	

Table 7C: Raw triterpane data (peak height) m/z 191 SIR for Well NOCS 6608/10-4

Depth unit of measure: m

Depth	Lithology	23/3	24/3	25/3	24/4	26/3	27Ts	27Tm	28aß	25nor30aß	Sample
		29aß	29Ts	30d	29ßa	30O	30aß	30ßa	30G	31aßS	
		31aßR	32aßS	32aßR	33aßS	33aßR	34aßS	34aßR	35aßS	35aßR	
2602.75	S/Sst	62.6	30.9	18.1	29.1	0.0	32.2	80.9	467.1	20.5	0061-1
		151.1	32.2	15.2	62.4	0.0	229.2	89.7	0.0	78.8	
		140.9	24.4	68.2	26.0	30.8	41.1	20.1	0.0	0.0	
2603.25	S/Sst	23.6	0.0	11.5	31.8	11.9	29.8	68.0	180.2	22.5	0062-1
		119.2	25.7	17.6	42.7	0.0	186.5	70.9	0.0	71.0	
		93.2	26.9	38.2	16.3	30.4	49.7	14.8	11.3	16.8	
2604.25	Sh/Clst	1931.2	836.0	379.1	479.4	130.3	303.2	2976.1	122.4	108.5	0063-1
		3278.8	451.5	416.7	1783.5	0.0	6987.7	2547.7	0.0	3845.0	
		5767.0	519.4	1438.7	121.4	331.0	65.2	151.1	32.1	51.5	
2615.50	S/Sst	135.9	89.2	42.1	69.8	26.0	128.0	119.3	113.9	48.3	0064-1
		417.6	118.0	57.5	50.1	0.0	789.5	82.7	0.0	173.1	
		155.2	132.9	100.2	76.1	66.5	86.3	38.0	40.9	47.4	
2687.50	S/Sst	33.5	14.2	10.4	14.4	0.0	24.2	19.7	0.0	0.0	0065-1
		69.1	26.6	6.6	13.6	0.0	83.9	14.9	0.0	25.3	
		26.8	17.4	15.9	12.1	11.7	12.8	0.0	0.0	0.0	

Table 7C: Raw triterpane data (peak height) m/z 191 SIR for Well NOCS 6608/10-4

Depth unit of measure: m

Depth	Lithology	23/3	24/3	25/3	24/4	26/3	27Ts	27Tm	28aß	25nor30aß	Sample
		29aß	29Ts	30d	29ßa	30O	30aß	30ßa	30G	31aßS	
		31aßR	32aßS	32aßR	33aßS	33aßR	34aßS	34aßR	35aßS	35aßR	
2693.25	S/Sst	60.2	33.1	16.7	26.5	14.2	27.7	30.2	20.0	16.7	0066-1
		89.1	34.0	11.4	21.5	0.0	149.9	21.2	0.0	44.8	
		46.4	26.4	35.8	23.8	16.7	18.2	0.0	0.0	0.0	
2584.00	S/Sst	176.3	118.1	51.9	230.0	57.1	383.1	407.6	169.7	0.0	0023-1
		1330.0	0.0	178.1	145.8	0.0	2961.2	209.4	0.0	807.7	
		501.5	467.2	275.3	286.0	156.9	165.6	80.8	100.8	56.3	

Table 7D: Raw sterane data (peak height) m/z 217 SIR for Well NOCS 6608/10-4

Depth unit of measure: m

Depth	Lithology	21a	22a	27dßS	27dßR	27daS	27daR	28dßS	28dßR	28daS*	Sample
		29dßS*	28daR*	27aaR	29dßR	29daS	28aaS	29daR*	28ßßS		
		28aaR	29aaS	29ßßR	29ßßS	29aaR					
2562.00	S/Sst	27.0	12.4	10.6	0.0	13.4	0.0	11.5	8.8	15.1	0036-1
		12.2	10.2	0.0	0.0	0.0	0.0	0.0	0.0		
		0.0	0.0	0.0	0.0	0.0					
2567.00	Sh/Clst	13.7	0.0	12.1	0.0	0.0	0.0	0.0	0.0	14.0	0037-1
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
		0.0	0.0	12.7	0.0	12.7					
2571.00	Sh/Clst	32.2	0.0	25.9	19.5	0.0	0.0	0.0	0.0	12.5	0038-1
		23.7	15.0	21.2	17.3	0.0	0.0	0.0	0.0		
		0.0	0.0	25.5	0.0	22.5					
2571.75	S/Sst	382.2	156.4	583.1	335.9	123.0	151.7	295.6	180.5	193.7	0039-1
		673.7	333.6	167.2	497.0	126.2	96.3	258.2	361.5		
		76.2	224.6	465.8	405.0	209.1					
2572.00	S/Sst	47.4	17.1	42.2	24.1	9.1	9.7	18.0	12.8	20.4	0040-1
		43.5	24.7	11.8	33.6	9.8	8.9	21.4	25.2		
		8.1	18.4	27.9	26.9	17.4					

* 28daS coel with 27aaS, 29dßS coel with 27ßßR, 28daR coel with 27ßßS, 29daR coel with 28ßßR

Table 7D: Raw sterane data (peak height) m/z 217 SIR for Well NOCS 6608/10-4

Depth unit of measure: m

Depth	Lithology	21a	22a	27dßS	27dßR	27daS	27daR	28dßS	28dßR	28daS*	Sample
		29dßS*	28daR*	27aaR	29dßR	29daS	28aaS	29daR*	28ßßS		
		28aaR	29aaS	29ßßR	29ßßS	29aaR					
2573.00	S/Sst	227.8	72.9	196.6	104.5	35.2	31.8	81.2	42.2	56.4	0041-1
		213.2	107.6	46.7	151.8	37.9	31.3	68.8	107.8		
		22.2	46.7	117.2	94.0	53.5					
2576.25	S/Sst	247.0	80.9	172.9	100.5	38.4	28.1	69.0	38.4	45.9	0042-1
		172.0	96.3	33.2	109.4	31.1	30.0	55.2	90.8		
		15.5	42.1	94.0	71.6	45.4					
2577.25	S/Sst	397.9	135.7	335.0	212.7	60.8	63.2	159.0	84.0	96.3	0043-1
		358.6	176.4	74.7	243.2	61.0	41.9	119.9	188.1		
		43.9	87.2	207.7	192.6	93.3					
2578.25	S/Sst	319.5	115.4	316.1	195.2	58.7	72.1	166.6	95.0	104.0	0044-1
		374.1	204.5	86.8	273.0	79.7	67.5	148.5	209.9		
		44.0	103.7	264.4	220.9	114.2					

* 28daS coel with 27aaS, 29dßS coel with 27ßßR, 28daR coel with 27ßßS, 29daR coel with 28ßßR

Table 7D: Raw sterane data (peak height) m/z 217 SIR for Well NOCS 6608/10-4

Depth unit of measure: m

Depth	Lithology	21a	22a	27dßS	27dßR	27daS	27daR	28dßS	28dßR	28daS*	Sample
		29dßS*	28daR*	27aaR	29dßR	29daS	28aaS	29daR*	28ßßS		
		28aaR	29aaS	29ßßR	29ßßS	29aaR					
2581.75	S/Sst	400.2	141.9	504.2	296.2	101.2	109.8	251.1	147.3	175.8	0045-1
		602.2	324.7	145.9	447.7	123.4	96.5	222.9	351.7		
		78.3	181.8	392.5	345.3	184.7					
2584.50	S/Sst	318.7	103.7	324.9	207.3	76.8	67.2	152.4	92.7	115.3	0046-1
		371.4	193.9	71.5	255.5	63.5	51.5	125.6	192.7		
		38.3	100.3	245.4	212.6	114.8					
2585.00	S/Sst	385.0	133.0	461.5	272.8	91.3	74.6	210.1	126.0	149.9	0047-1
		493.5	258.1	120.7	341.8	98.0	79.2	180.4	261.7		
		52.9	164.3	313.5	278.0	166.4					
2586.00	S/Sst	410.5	147.7	419.5	252.5	92.5	78.0	186.8	110.8	147.7	0048-1
		445.8	238.2	109.0	333.6	79.1	77.7	172.0	222.5		
		56.5	144.8	325.7	258.9	136.8					
2587.00	S/Sst	629.5	260.1	769.7	480.8	164.3	168.1	378.3	212.6	256.4	0049-1
		864.5	454.0	214.7	636.7	166.1	146.6	352.5	466.7		
		94.2	271.7	601.7	521.3	291.4					

* 28daS coel with 27aaS, 29dßS coel with 27ßßR, 28daR coel with 27ßßS, 29daR coel with 28ßßR

Table 7D: Raw sterane data (peak height) m/z 217 SIR for Well NOCS 6608/10-4 Page: 4

Depth unit of measure: m

Depth	Lithology	21a	22a	27dßS	27dßR	27daS	27daR	28dßS	28dßR	28daS*	Sample
		29dßS*	28daR*	27aaR	29dßR	29daS	28aaS	29daR*	28ßßS		
		28aaR	29aaS	29ßßR	29ßßS	29aaR					
2587.75	S/Sst	461.2	150.9	524.3	307.0	90.8	107.8	225.3	119.8	162.0	0050-1
		563.1	299.7	137.9	424.8	118.5	97.2	228.8	322.1		
		69.3	153.2	362.4	284.9	174.0					
2589.25	S/Sst	418.4	157.5	395.4	216.1	67.8	81.2	180.4	81.5	140.5	0051-1
		435.2	216.0	105.2	305.0	87.4	72.9	158.2	233.2		
		53.6	127.6	290.3	223.4	139.3					
2592.25	S/Sst	655.8	257.9	849.2	546.8	205.5	205.0	452.9	235.4	342.0	0052-1
		1040.0	539.4	256.6	743.6	224.7	192.7	408.5	554.6		
		113.6	327.2	685.1	650.1	352.0					
2595.00	S/Sst	312.3	111.4	326.1	168.4	61.6	68.9	157.4	72.9	94.7	0053-1
		358.8	196.8	76.7	271.6	73.4	51.8	119.8	199.9		
		38.5	90.7	240.5	196.4	91.9					
2597.25	S/Sst	293.0	94.9	277.6	172.2	66.6	58.2	128.4	66.5	81.3	0054-1
		320.1	164.0	68.1	214.0	65.3	53.3	104.5	182.9		
		31.9	85.0	180.2	173.6	90.9					

* 28daS coel with 27aaS, 29dßS coel with 27ßßR, 28daR coel with 27ßßS, 29daR coel with 28ßßR

Table 7D: Raw sterane data (peak height) m/z 217 SIR for Well NOCS 6608/10-4

Depth unit of measure: m

Depth	Lithology	21a	22a	27dßS	27dßR	27daS	27daR	28dßS	28dßR	28daS*	Sample
		29dßS*	28daR*	27aaR	29dßR	29daS	28aaS	29daR*	28ßßS		
		28aaR	29aaS	29ßßR	29ßßS	29aaR					
2599.25	S/Sst	225.8	89.3	294.2	155.0	50.7	52.0	122.8	61.2	92.4	0055-1
		323.2	188.2	69.3	259.9	70.5	55.0	114.9	203.7		
		47.8	109.3	222.6	186.3	93.0					
2599.75	S/Sst	1281.3	503.5	415.3	269.9	104.4	88.6	155.6	86.2	104.0	0056-1
		576.9	204.4	149.3	452.2	136.4	37.1	110.4	145.3		
		59.9	82.6	277.9	190.4	278.7					
2600.25	S/Sst	696.9	282.5	904.0	541.6	208.2	204.3	470.2	246.5	317.2	0057-1
		987.8	553.7	247.5	758.5	196.0	172.5	394.9	585.1		
		122.4	314.4	636.8	594.7	353.5					
2600.50	S/Sst	549.8	216.0	643.1	411.2	137.0	143.2	340.5	190.9	244.4	0058-1
		778.1	405.7	185.1	562.5	177.7	120.5	287.3	427.9		
		97.5	244.0	487.6	464.7	272.5					
2601.00	S/Sst	66.6	14.1	34.1	19.0	8.2	8.6	11.3	11.9	10.9	0059-1
		44.4	18.9	8.0	27.9	9.5	7.2	10.6	16.9		
		6.1	10.4	21.1	12.6	15.4					

* 28daS coel with 27aaS, 29dßS coel with 27ßßR, 28daR coel with 27ßßS, 29daR coel with 28ßßR

Table 7D: Raw sterane data (peak height) m/z 217 SIR for Well NOCS 6608/10-4

Depth unit of measure: m

Depth	Lithology	21a	22a	27dßS	27dßR	27daS	27daR	28dßS	28dßR	28daS*	Sample
		29dßS*	28daR*	27aaR	29dßR	29daS	28aaS	29daR*	28ßßS		
		28aaR	29aaS	29ßßR	29ßßS	29aaR					
2602.00	S/Sst	114.9	50.5	87.5	55.6	37.2	28.9	35.5	32.9	34.5	0060-1
		107.5	43.4	46.6	63.0	36.4	0.0	20.3	41.1		
		23.7	29.8	63.5	38.1	49.4					
2602.75	S/Sst	56.6	26.7	25.8	21.0	20.8	10.7	18.4	15.3	19.0	0061-1
		45.5	17.2	20.9	35.8	25.9	0.0	19.2	17.6		
		0.0	15.0	36.8	9.3	27.7					
2603.25	S/Sst	47.1	24.0	28.6	14.9	10.7	0.0	22.1	14.0	16.7	0062-1
		29.6	12.2	16.2	24.1	24.8	0.0	0.0	0.0		
		0.0	0.0	15.9	17.6	22.5					
2604.25	Sh/Clst	1485.9	563.7	825.4	598.5	277.4	245.7	297.8	199.1	185.7	0063-1
		1215.3	334.5	247.7	931.2	355.4	73.2	185.2	152.8		
		97.0	88.7	438.0	284.9	564.5					
2615.50	S/Sst	124.9	46.5	95.8	51.0	46.5	32.5	50.6	33.3	54.0	0064-1
		124.1	68.0	56.4	65.7	29.2	24.5	52.1	65.6		
		36.5	46.4	78.7	59.4	57.7					

* 28daS coel with 27aaS, 29dßS coel with 27ßßR, 28daR coel with 27ßßS, 29daR coel with 28ßßR

Table 7D: Raw sterane data (peak height) m/z 217 SIR for Well NOCS 6608/10-4

Depth unit of measure: m

Depth	Lithology	21a	22a	27dßS	27dßR	27daS	27daR	28dßS	28dßR	28daS*	Sample
		29dßS*	28daR*	27aaR	29dßR	29daS	28aaS	29daR*	28ßßS		
		28aaR	29aaS	29ßßR	29ßßS	29aaR					
2687.50	S/Sst	25.4	12.5	17.7	11.5	0.0	0.0	0.0	0.0	0.0	0065-1
		12.2	10.1	8.5	11.1	0.0	0.0	10.4	18.9		
		7.9	8.2	7.2	6.9	15.0					
2693.25	S/Sst	27.8	21.5	28.5	14.0	11.4	9.7	14.1	11.9	0.0	0066-1
		22.5	18.5	14.2	17.8	0.0	0.0	19.8	20.6		
		11.9	16.2	17.3	11.2	11.8					
2584.00	S/Sst	313.1	126.2	379.8	241.2	86.4	81.1	169.4	107.5	137.2	0023-1
		377.5	215.7	97.4	317.7	73.3	56.3	132.9	208.9		
		49.0	108.4	268.1	219.6	148.3					

* 28daS coel with 27aaS, 29dßS coel with 27ßßR, 28daR coel with 27ßßS, 29daR coel with 28ßßR

Table 7E: Raw sterane data (peak height) m/z 218 SIR for Well NOCS 6608/10-4

Depth unit of measure: m

Depth	Lithology	27ßßR	27ßßS	28ßßR	28ßßS	29ßßR	29ßßS	30ßßR	30ßßS	Sample
2562.00	S/Sst	18.8	0.0	20.4	0.0	17.3	0.0	0.0	17.2	0036-1
2567.00	Sh/Clst	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0037-1
2571.00	Sh/Clst	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0038-1
2571.75	S/Sst	459.2	342.4	324.4	420.1	546.7	522.1	94.9	162.8	0039-1
2572.00	S/Sst	35.3	35.5	28.3	32.9	43.3	41.3	13.6	15.2	0040-1
2573.00	S/Sst	131.3	115.9	87.0	115.4	141.7	131.6	30.5	30.9	0041-1
2576.25	S/Sst	112.6	98.1	66.8	95.3	114.8	114.9	21.7	26.1	0042-1
2577.25	S/Sst	237.4	192.8	134.0	191.3	261.5	231.1	48.1	46.4	0043-1
2578.25	S/Sst	251.3	201.1	157.5	212.1	293.5	281.5	58.6	61.8	0044-1
2581.75	S/Sst	371.2	292.7	265.7	325.6	490.0	434.8	90.4	87.3	0045-1
2584.50	S/Sst	240.2	189.4	155.1	228.1	293.7	275.6	48.3	55.5	0046-1
2585.00	S/Sst	320.7	270.2	205.4	281.8	372.4	414.5	81.8	78.1	0047-1
2586.00	S/Sst	297.9	241.3	201.4	238.8	345.9	323.3	68.2	60.4	0048-1
2587.00	S/Sst	588.6	468.1	396.3	488.6	674.4	717.1	130.6	132.7	0049-1
2587.75	S/Sst	361.8	313.2	232.3	344.9	422.3	397.2	92.1	78.2	0050-1

Table 7E: Raw sterane data (peak height) m/z 218 SIR for Well NOCS 6608/10-4

Depth unit of measure: m

Depth	Lithology	27ßßR	27ßßS	28ßßR	28ßßS	29ßßR	29ßßS	30ßßR	30ßßS	Sample
2589.25	S/Sst	268.3	216.2	184.7	261.6	298.6	300.9	67.0	63.1	0051-1
2592.25	S/Sst	675.0	538.1	508.9	609.0	788.0	775.7	161.0	155.1	0052-1
2595.00	S/Sst	218.2	198.5	170.9	203.8	269.8	291.3	49.5	48.1	0053-1
2597.25	S/Sst	217.3	160.5	137.6	179.3	245.7	229.0	44.8	42.7	0054-1
2599.25	S/Sst	213.6	176.7	136.9	194.9	257.1	244.2	44.2	50.7	0055-1
2599.75	S/Sst	232.6	173.7	128.2	169.8	279.0	234.5	29.8	30.7	0056-1
2600.25	S/Sst	692.1	548.9	482.9	608.8	724.1	767.7	155.1	166.4	0057-1
2600.50	S/Sst	506.7	391.7	351.9	437.3	589.6	576.7	108.7	121.9	0058-1
2601.00	S/Sst	22.5	19.0	13.1	22.8	23.3	23.0	6.5	7.7	0059-1
2602.00	S/Sst	63.8	58.3	34.0	52.2	71.2	78.7	24.1	22.1	0060-1
2602.75	S/Sst	26.1	0.0	18.8	19.9	27.0	11.8	0.0	0.0	0061-1
2603.25	S/Sst	21.0	16.4	22.0	27.0	20.5	19.6	0.0	0.0	0062-1
2604.25	Sh/Clst	404.5	237.9	181.6	168.5	431.8	353.8	15.5	19.5	0063-1
2615.50	S/Sst	65.4	63.4	55.2	76.3	87.2	85.5	21.4	31.2	0064-1
2687.50	S/Sst	17.3	12.5	19.8	12.2	15.7	13.8	11.3	11.3	0065-1

Table 7E: Raw sterane data (peak height) m/z 218 SIR for Well NOCS 6608/10-4

Depth unit of measure: m

Depth	Lithology	27ßßR	27ßßS	28ßßR	28ßßS	29ßßR	29ßßS	30ßßR	30ßßS	Sample
2693.25	S/Sst	24.7	20.0	15.5	14.8	16.9	16.2	9.8	0.0	0066-1
2584.00	S/Sst	276.8	253.9	191.5	244.9	321.7	317.4	73.0	70.1	0023-1

Table 7F: Raw triterpane data (peak height) m/z 177 SIR for Well NOCS 6608/10-4

Depth unit of measure: m

Depth	Lithology	25nor28aß	25nor30aß	Sample
2562.00	S/Sst	9.7	13.4	0036-1
2567.00	Sh/Clst	0.0	8.3	0037-1
2571.00	Sh/Clst	0.0	10.9	0038-1
2571.75	S/Sst	364.9	170.2	0039-1
2572.00	S/Sst	28.8	14.5	0040-1
2573.00	S/Sst	98.3	48.5	0041-1
2576.25	S/Sst	82.8	33.5	0042-1
2577.25	S/Sst	169.6	92.6	0043-1
2578.25	S/Sst	220.0	105.4	0044-1
2581.75	S/Sst	330.9	154.2	0045-1
2584.50	S/Sst	192.4	95.1	0046-1
2585.00	S/Sst	279.2	132.0	0047-1
2586.00	S/Sst	255.5	121.0	0048-1
2587.00	S/Sst	479.9	228.7	0049-1
2587.75	S/Sst	312.3	131.2	0050-1

Table 7F: Raw triterpane data (peak height) m/z 177 SIR for Well NOCS 6608/10-4

Depth unit of measure: m

Depth	Lithology	25nor28aß	25nor30aß	Sample
2589.25	S/Sst	223.6	114.4	0051-1
2592.25	S/Sst	575.7	302.0	0052-1
2595.00	S/Sst	198.3	83.4	0053-1
2597.25	S/Sst	164.0	80.5	0054-1
2599.25	S/Sst	215.9	86.2	0055-1
2599.75	S/Sst	7909.1	153.5	0056-1
2600.25	S/Sst	827.3	276.6	0057-1
2600.50	S/Sst	608.1	185.4	0058-1
2601.00	S/Sst	752.5	8.7	0059-1
2602.00	S/Sst	1066.6	43.0	0060-1
2602.75	S/Sst	1553.1	19.0	0061-1
2603.25	S/Sst	594.5	15.2	0062-1
2604.25	Sh/Clst	140.6	40.7	0063-1
2615.50	S/Sst	147.1	50.4	0064-1
2687.50	S/Sst	14.5	10.5	0065-1

Table 7F: Raw triterpane data (peak height) m/z 177 SIR for Well NOCS 6608/10-4

Depth unit of measure: m

Depth	Lithology	25nor28aß	25nor30aß	Sample
2693.25	S/Sst	24.7	13.1	0066-1
2584.00	S/Sst	217.2	99.0	0023-1

TABLES FOR OILS

Table 1a: Weight of Oil and Chromatographic Fraction for NOCS 6608/10-4

Well	Description	Whole oil (g)	Light (mg)	Topped (mg)	Sat (mg)	Aro (mg)	Asph (mg)	NSO (mg)	HC (mg)	Non-HC (%)	Sample
NOCS 6608/10-4	DST 2	-	49.7	49.7	33.5	11.1	2.0	3.2	44.6	5.2	K27/0032
NOCS 6608/10-4	DST 3A+B	-	48.8	48.8	32.4	10.1	2.7	3.6	42.5	6.3	K27/0031
NOCS 6608/10-4	FMT 1A	-	38.9	38.9	26.4	7.8	1.4	3.3	34.2	4.7	K27/0033
NOCS 6608/10-4	FMT 1B	-	30.6	30.6	20.3	5.8	1.7	2.9	26.1	4.6	K27/0034

Table 1b: Composition of the oil fraction (%) for NOCS 6608/10-4

Well	Description	Sat / T.Oil	Aro / T.Oil	Asph / T.Oil	NSO / T.Oil	HC / T.Oil	Non-HC / T.Oil	Sat / Aro	HC / Non-HC	Sample
NOCS 6608/10-4	DST 2	67.30	22.33	4.02	6.34	89.64	10.36	301.35	865.05	K27/0032
NOCS 6608/10-4	DST 3A+B	66.46	20.62	5.54	7.38	87.08	12.92	322.39	673.81	K27/0031
NOCS 6608/10-4	FMT 1A	67.87	20.05	3.60	8.48	87.92	12.08	338.46	727.66	K27/0033
NOCS 6608/10-4	FMT 1B	66.07	19.09	5.55	9.30	85.15	14.85	346.15	573.63	K27/0034

Table 2: Saturated Hydrocarbon Ratios for NOCS 6608/10-4

Well	Description	Pristane / nC17	Pristane / Phytane	Pristane/nC17 / Phytane/nC18	Phytane / nC18	CPI1	nC17 / nC17+nC27	Sample
NOCS 6608/10-4	DST 2	0.58	1.99	1.95	0.30	1.13	0.76	K27/0032
NOCS 6608/10-4	DST 3A+B	0.57	1.97	1.88	0.30	1.11	0.77	K27/0031
NOCS 6608/10-4	FMT 1A	0.60	1.97	1.92	0.31	1.13	0.75	K27/0033
NOCS 6608/10-4	FMT 1B	0.59	2.01	1.96	0.30	1.11	0.77	K27/0034

Table 3a: Aromatic Hydrocarbon Ratios for NOCS 6608/10-4

Well	Description	MHR	DMNR	BPhR	2/1MP	MPI1	MPI2	Rc	DBT/P	4/1MDBT	(3+2) /1MDBT	Sample
NOCS 6608/10-4	DST 2	1.45	2.26	0.49	1.18	0.81	0.85	0.89	0.36	11.53	2.28	K27/0032
NOCS 6608/10-4	DST 3A+B	1.47	2.18	0.42	1.20	0.85	0.87	0.91	0.48	10.98	2.25	K27/0031
NOCS 6608/10-4	FMT 1A	1.47	2.15	0.41	1.15	0.86	0.85	0.92	0.47	9.86	2.01	K27/0033
NOCS 6608/10-4	FMT 1B	1.42	2.06	0.34	1.19	0.83	0.83	0.90	0.45	9.92	1.85	K27/0034

Table 3b: Aromatic Hydrocarbon Ratios for NOCS 6608/10-4

Well	Description	F1	F2	Sample
NOCS 6608/10-4	DST 2	0.51	0.26	K27/0032
NOCS 6608/10-4	DST 3A+B	0.52	0.26	K27/0031
NOCS 6608/10-4	FMT 1A	0.52	0.25	K27/0033
NOCS 6608/10-4	FMT 1B	0.51	0.26	K27/0034

List of Triterpane Distribution Ratios

Ratio 1: 27Tm / 27Ts

Ratio 2: 27Tm / 27Tm+27Ts

Ratio 3: 27Tm / 27Tm+30aß+30ßa

Ratio 4: 29aß / 30aß

Ratio 5: 29aß / 29aß+30aß

Ratio 6: 30d / 30aß

Ratio 7: 28aß / 30aß

Ratio 8: 28aß / 29aß

Ratio 9: 28aß / 28aß+30aß

Ratio 10: 24/3 / 30aß

Ratio 11: 30aß / 30aß+30ßa

Ratio 12: 29aß+29ßa / 29aß+29ßa+30aß+30ßa

Ratio 13: 29ßa+30ßa / 29aß+30aß

Ratio 14: 32aßS / 32aßS+32aßR (%)

Table 4a: Variation in Triterpane Distribution (peak height) SIR for NOCS 6608/10-4

Well	Descript.	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Ratio6	Ratio7	Ratio8	Ratio9	Rat.10	Rat.11	Rat.12	Rat.13	Rat.14	Sample
NOCS 6608/10-	DST 2	1.14	0.53	0.12	0.49	0.33	0.04	0.06	0.12	0.06	0.04	0.95	0.33	0.06	64.91	K27/0032
NOCS 6608/10-	DST 3A+B	1.15	0.53	0.13	0.48	0.32	0.06	0.08	0.16	0.07	0.03	0.93	0.33	0.09	61.28	K27/0031
NOCS 6608/10-	FMT 1A	1.12	0.53	0.13	0.51	0.34	0.06	0.08	0.16	0.07	0.05	0.93	0.34	0.08	63.48	K27/0033
NOCS 6608/10-	FMT 1B	1.17	0.54	0.13	0.48	0.33	0.06	0.08	0.16	0.07	0.06	0.93	0.33	0.08	64.87	K27/0034

List of Sterane Distribution Ratios

Ratio 1: 27dßS / 27dßS+27aaR

Ratio 2: 29aaS / 29aaS+29aaR (%)

Ratio 3: 2*(29ßßR+29ßßS) / (29aaS+29aaR + 2*(29ßßR+29ßßS)) (%)

Ratio 4: 27dßS+27dßR+27daS+27daR / 29dßS+29dßR+29daS+29daR

Ratio 5: 29ßßR+29ßßS / 29ßßR+29ßßS+29aaS

Ratio 6: 21a+22a / 21a+22a+29aaS+29ßßR+29ßßS+29aaR

Ratio 7: 21a+22a / 21a+22a+28daR+28aaS+29daR+29aaS+29ßßR+29ßßS+29aaR

Ratio 8: 29ßßR+29ßßS / 29aaS+29ßßR+29ßßS+29aaR

Ratio 9: 29aaS / 29aaR

Ratio 10: 29ßßR+29ßßS / 29aaR

Table 4b: Variation in Sterane Distribution (peak height) SIR for NOCS 6608/10-4

Well	Descript.	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Ratio6	Ratio7	Ratio8	Ratio9	Ratio10	Sample
NOCS 6608/10-4	DST 2	0.84	55.31	82.93	0.77	0.81	0.43	0.33	0.71	1.24	5.44	K27/0032
NOCS 6608/10-4	DST 3A+B	0.83	50.04	79.36	0.75	0.79	0.30	0.22	0.66	1.00	3.85	K27/0031
NOCS 6608/10-4	FMT 1A	0.81	53.10	80.32	0.76	0.79	0.37	0.28	0.67	1.13	4.35	K27/0033
NOCS 6608/10-4	FMT 1B	0.81	48.50	79.77	0.76	0.80	0.39	0.29	0.66	0.94	3.83	K27/0034

Table 4c: Aromatisation of Steranes (peak height) for NOCS 6608/10-4

Well	Descript.	Ratio1	Ratio2	Sample
NOCS 6608/10-4	DST 2	0.45	0.92	K27/0032
NOCS 6608/10-4	DST 3A+B	0.48	0.83	K27/0031
NOCS 6608/10-4	FMT 1A	0.50	0.82	K27/0033
NOCS 6608/10-4	FMT 1B	0.48	0.89	K27/0034

Ratio1: $\frac{C_{21}D_{14}E_{14}F_{14}G_{14}H_{14}I_{14}}{C_{21}D_{14}E_{14}F_{14}G_{14}H_{14}I_{14} + C_{14}H_{14}I_{14}I_{14}g_1}$ Ratio2: g1 / g1 + I1

Table 4d: Variation in Triaromatic Sterane Distribution (peak height) for NOCS 6608/10-4

Well	Descript.	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Sample
NOCS 6608/10-4	DST 2	0.62	0.60	0.38	0.35	0.48	K27/0032
NOCS 6608/10-4	DST 3A+B	0.56	0.58	0.33	0.29	0.41	K27/0031
NOCS 6608/10-4	FMT 1A	0.51	0.53	0.29	0.25	0.37	K27/0033
NOCS 6608/10-4	FMT 1B	0.55	0.56	0.33	0.29	0.42	K27/0034

Ratio1: a1 / a1 + g1
Ratio2: b1 / b1 + g1
Ratio3: a1 + b1 / a1 + b1 + c1 + d1 + e1 + f1 + g1
Ratio4: a1 / a1 + e1 + f1 + g1
Ratio5: a1 / a1 + d1

Table 4e: Variation in Monoaromatic Sterane Distribution (peak height) for NOCS 6608/10-4

Well	Descript.	Ratio1	Ratio2	Ratio3	Ratio4	Sample
NOCS 6608/10-4	DST 2	0.37	0.40	0.24	0.26	K27/0032
NOCS 6608/10-4	DST 3A+B	0.29	0.35	0.17	0.22	K27/0031
NOCS 6608/10-4	FMT 1A	0.26	0.32	0.15	0.16	K27/0033
NOCS 6608/10-4	FMT 1B	0.53	0.40	0.36	0.31	K27/0034

Ratio1: A1 / A1 + E1
Ratio2: B1 / B1 + E1

Ratio3: A1 / A1 + E1 + G1
Ratio4: A1+B1 / A1+B1+C1+D1+E1+F1+G1+H1+I1

List of Hopanes / Steranes Distribution Ratios

$$Ratio1 = \frac{30a\beta}{29aaS+29\beta\beta R+29\beta\beta S+29aaR}$$

$$Ratio2 = \frac{27Ts+27Tm+28a\beta+29a\beta+30a\beta+31a\beta S+31a\beta R+32a\beta S+32a\beta R+33a\beta S+33a\beta R+34a\beta S+34a\beta R+35a\beta S+35a\beta R}{28daS+29d\beta S+27\beta\beta S+27aaR+28aaS+28\beta\beta R+28\beta\beta S+28aaR+29aaS+29\beta\beta R+29\beta\beta S+29aaR}$$

$$Ratio3 = \frac{27Ts+27Tm+28a\beta+29a\beta+30a\beta+31a\beta S+31a\beta R+32a\beta S+32a\beta R+33a\beta S+33a\beta R+34a\beta S+34a\beta R+35a\beta S+35a\beta R}{21a+22a+28daS+29d\beta S+27\beta\beta S+27aaR+28aaS+28\beta\beta R+28\beta\beta S+28aaR+29aaS+29\beta\beta R+29\beta\beta S+29aaR}$$

$$Ratio4 = \frac{27Ts+27Tm+28a\beta+29a\beta+30a\beta+31a\beta S+31a\beta R+32a\beta S+32a\beta R+33a\beta S+33a\beta R+34a\beta S+34a\beta R+35a\beta S+35a\beta R}{27aaR+28aaS+28\beta\beta S+28aaR+29aaS+29\beta\beta R+29\beta\beta S+29aaR}$$

$$Ratio5 = \frac{27Ts+27Tm+28a\beta+29a\beta+30a\beta+31a\beta S+31a\beta R+32a\beta S+32a\beta R+33a\beta S+33a\beta R+34a\beta S+34a\beta R+35a\beta S+35a\beta R}{27aaR+28aaS+28\beta\beta S+28aaR+29aaS+29\beta\beta R+29\beta\beta S+29aaR+21a+22a}$$

$$Ratio6 = \frac{27Ts+27Tm+28a\beta+29a\beta+30a\beta+30\beta a+31a\beta S+31a\beta R+32a\beta S+32a\beta R+33a\beta S+33a\beta R+34a\beta S+34a\beta R+35a\beta S+35a\beta R}{27d\beta S+27d\beta R+27daS+27daR+28d\beta S+28d\beta R+28daS+29d\beta S+27\beta\beta S+27aaR+29d\beta R+29daS+28aaS+28\beta\beta R+28\beta\beta S+28aaR+29aaS+29\beta\beta R+29\beta\beta S+29aaR}$$

Table 4f: Hopanes / Steranes distribution (peak height) SIR for NOCS 6608/10-4

Well	Descript.	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Ratio6	Sample
NOCS 6608/10-4	DST 2	4.16	4.00	3.12	7.05	4.71	2.43	K27/0032
NOCS 6608/10-4	DST 3A+B	3.39	3.75	3.22	6.48	5.05	2.29	K27/0031
NOCS 6608/10-4	FMT 1A	3.27	3.32	2.74	6.01	4.34	2.05	K27/0033
NOCS 6608/10-4	FMT 1B	3.58	3.73	3.02	6.61	4.67	2.29	K27/0034

Table 4h: Raw sterane data (peak height) m/z 217 SIR for NOCS 6608/10-4

Well	Descript.	21a	22a	27dßS	27dßR	27daS	27daR	28dßS	28dßR	28daS*	Sample
		29dßS*	28daR*	27aaR	29dßR	29daS	28aaS	29daR*	28ßßS		
		28aaR	29aaS	29ßßR	29ßßS	29aaR					
NOCS 6608/10-	DST 2	261.4	62.5	209.5	137.1	37.3	37.6	94.5	55.0	53.3	K27/0032
		256.3	111.5	39.0	180.2	35.0	33.5	76.6	135.4		
		16.7	69.2	163.4	140.5	55.9					
NOCS 6608/10-	DST 3A+B	274.0	81.2	395.8	231.8	65.2	72.9	202.3	96.4	113.1	K27/0031
		457.9	191.8	79.1	326.6	82.1	61.2	151.8	234.4		
		41.6	143.2	287.6	262.7	143.0					
NOCS 6608/10-	FMT 1A	345.3	110.1	395.3	234.2	56.9	72.5	183.5	88.4	125.8	K27/0033
		460.3	219.2	95.3	321.3	73.6	60.1	148.7	212.3		
		47.3	133.7	279.5	234.6	118.1					
NOCS 6608/10-	FMT 1B	328.7	119.6	329.6	220.0	64.2	70.0	167.0	85.3	113.2	K27/0034
		398.9	177.0	76.5	288.9	60.3	52.9	147.1	215.3		
		34.7	114.5	244.4	221.0	121.6					

* 28daS coel with 27aaS, 29dßS coel with 27ßßR, 28daR coel with 27ßßS, 29daR coel with 28ßßR

Table 4i: Raw triterpane data (peak height) m/z 191 SIR for NOCS 6608/10-4

Well	Descript.	23/3	24/3	25/3	24/4	26/3	27Ts	27Tm	28aß	25nor30aß	Sample
		29ßß	29Ts	30d	29ßa	30O	30aß	30ßa	30G	31aßS	
		31aßR	32aßS	32aßR	33aßS	33aßR	34aßS	34aßR	35aßS	35aßR	
NOCS 6608/10-	DST 2	134.1	80.2	23.8	106.3	0.0	230.6	262.1	107.2	0.0	K27/0032
		870.9	0.0	80.0	58.6	0.0	1784.9	103.1	0.0	419.2	
		268.3	228.1	123.4	116.7	54.2	55.8	35.8	32.5	15.1	
NOCS 6608/10-	DST 3A+B	177.2	89.2	33.3	169.7	17.2	385.7	443.3	218.3	0.0	K27/0031
		1356.5	0.0	168.6	137.7	0.0	2839.7	219.6	0.0	793.0	
		515.7	467.8	295.6	282.9	153.2	153.6	80.5	81.5	54.5	
NOCS 6608/10-	FMT 1A	233.5	123.4	44.5	177.2	21.7	368.3	412.9	201.5	0.0	K27/0033
		1268.0	0.0	162.3	120.7	0.0	2502.2	189.9	0.0	702.7	
		445.2	391.8	225.4	221.1	107.3	104.4	55.7	56.9	32.3	
NOCS 6608/10-	FMT 1B	283.1	141.0	54.6	157.7	25.1	355.8	414.7	195.0	0.0	K27/0034
		1215.3	0.0	142.6	124.7	0.0	2510.6	190.9	0.0	692.6	
		460.9	423.0	229.1	248.1	113.2	127.1	60.8	64.4	32.2	

Table 4j: Raw monoaromatic sterane data (peak height) m/z 253 for NOCS 6608/10-4

Well	Descript.	A1	B1	C1	D1	E1	F1	G1	H1	I1	Sample
NOCS 6608/10-	DST 2	322.9	367.6	334.8	203.2	543.1	109.9	473.2	241.7	43.1	K27/0032
NOCS 6608/10-	DST 3A+B	475.9	626.7	135.2	513.6	1141.8	281.9	1122.7	645.2	161.1	K27/0031
NOCS 6608/10-	FMT 1A	518.5	690.8	938.9	701.3	1486.2	387.0	1469.3	898.4	252.3	K27/0033
NOCS 6608/10-	FMT 1B	907.6	533.4	483.9	347.3	792.3	193.1	806.6	446.2	81.5	K27/0034

Table 4k: Raw triaromatic sterane data (peak height) m/z 231 for NOCS 6608/10-4

Well	Descript.	a1	b1	c1	d1	e1	f1	g1	Sample
NOCS 6608/10-4	DST 2	755.0	701.0	183.0	831.1	582.9	343.5	469.9	K27/0032
NOCS 6608/10-4	DST 3A1B	1024.7	1114.8	404.1	1483.3	1043.7	670.2	796.0	K27/0031
NOCS 6608/10-4	FMT 1A	1197.2	1338.3	593.0	2008.3	1443.4	955.3	1164.2	K27/0033
NOCS 6608/10-4	FMT 1B	815.6	862.1	275.7	1109.2	814.9	510.7	675.1	K27/0034

Table 41: Raw sterane data (peak height) m/z 218 SIR for NOCS 6608/10-4

Well	Descript.	27ßßR	27ßßS	28ßßR	28ßßS	29ßßR	29ßßS	30ßßR	30ßßS	Sample
NOCS 6608/10-	DST 2	140.6	114.4	97.7	127.7	179.6	186.7	22.6	25.2	K27/0032
NOCS 6608/10-	DST 3A+B	294.6	194.5	191.7	243.8	331.0	337.6	48.5	52.1	K27/0031
NOCS 6608/10-	FMT 1A	288.2	195.5	172.1	212.9	315.7	309.2	44.9	41.7	K27/0033
NOCS 6608/10-	FMT 1B	279.9	171.4	165.0	205.0	294.2	306.7	40.4	40.6	K27/0034

Table 4m: Raw triterpane data (peak height) m/z 177 SIR for NOCS 6608/10-4

Well	Descript.	25nor28αß	25nor30αß	Sample
NOCS 6608/10-	DST 2	144.3	58.0	K27/0032
NOCS 6608/10-	DST 3A+B	231.4	115.6	K27/0031
NOCS 6608/10-	FMT 1A	225.6	96.5	K27/0033
NOCS 6608/10-	FMT 1B	218.7	97.8	K27/0034

Mottatt [illegible]

Institutt for energiteknikk

ISOTOPANALYSE AV EKSTRAKTER OG FRAKSJONER, BRØNN 6608/10-4, BESTILLING DTJ013572

ANALYSEPROSEDYRE

Prøven er løst i kjent mengde diklormetan og 2 -4 mg (eller så mye som mulig) av prøven er overført til en glassampulle. Løsningsmiddelet er dampet av ved 50°C i 1 time, ampullene er tilsatt CuO og gjensmeltet under vakuum. Prøvene er forbrent ved 550°C i 1 time (Zofer, 1980). Forbrenningsproduktene CO_2 og H_2O er separert og $^{13}C/^{12}C$ forholdet bestemt på et Finnigan MAT 251 massespektrometer.

For hver 10. prøve er en intern laboratoriestandard analysert. Spredning i isotopverdiene for standarden er ± 0.1‰.

IFEs verdi på NBS 22 er -29.77 ± 0.06 ‰ PDB.

RESULTATER

Resultatene av isotopanalysen er gitt i tabellen.

Prøver med resultater i parantes skulle gjerne vært analysert på nytt, men dette har ikke vært mulig pga. lite prøvemateriale. nd er ikke bestemt pga. for lite prøvemateriale. Alle prøver markert med - i tabellen, er ikke mottatt for isotopanalyse.

Sofer, Z. (1980). Preparation of carbon dioxide for stable isotope analysis of petroleum fractions. *Analytical Chemistry*, 52, 1389-1391.

Karbon isotopsammensetning av ekstrakter og fraksjoner, brønn 6608/10-4, bestilling DTJ013572.

Sample	IFE no.	EOM/ whole oil $\delta^{13}C$ ‰ PDB	SAT $\delta^{13}C$ ‰ PDB	ARO $\delta^{13}C$ ‰ PDB	NSO $\delta^{13}C$ ‰ PDB	ASF $\delta^{13}C$ ‰ PDB
2335.0	14070	-29.2	-30.6	-30.9	-30.1	-28.9
2345.0	14071	-26.9	-29.5	-28.7	-27.1	-26.8
2355.0	14072	-26.6	-28.6	(-30.9)	-27.9	-26.2
2360.0	14073	-26.8	(-31.6)	-28.0	-27.0	-26.3
2480.0	14074	-26.8	-	-	-	-26.3
2500.0	14075	-	-	-	-	-27.9
2573.5	14076	-27.9	-28.3	-26.9	-27.9	-27.9
2584.0	14077	-28.0	-28.6	-27.3	-27.9	-27.8
2596.3	14078	-27.9	-28.5	-27.3	-28.3	-27.5
2602.5	14079	-	-	-	-	-26.3
2610.5	14080	-	-	-	-	-27.7
2673.9	14081	-26.5	(-31.3)	-27.4	nd	-26.2
2687.0	14082	-	-	-	-	-26.6
6608/10-4 DST 2	14084	-27.8	-28.9	-27.6	-27.6	-27.8
6608/10-4 FMT 1B	14085	-27.8	-28.8	-27.0	-27.9	-27.7
6608/10-4 DST 3A+B	14086	-27.8	-28.2	-26.8	-27.9	-27.8
6608/10-4 FMT 1A	14087	-28.0	-28.3	-27.2	-27.8	-27.7

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Isotopanalyser, oljefraksjoner brønn 6608/10-4, ordre nr. DTJ 013896

Vedlagt følger rapport for $\delta^{13}C$ isotopanalyser på 28 fraksjoner og ekstrakter fra brønn 6608/10-4.

Vennlig hilsen

Inger Johansen

Inga Johansen

Institutt for energiteknikk

ISOTOPANALYSE AV EKSTRAKTER OG FRAKSJONER, BRØNN 6608/10-4, BESTILLING DTJ013896

ANALYSEPROSEDYRE

Prøven er løst i kjent mengde diklormetan og 2 -4 mg (eller så mye som mulig) av prøven er overført til en glassampulle. Løsningsmiddelet er dampet av ved 50°C i 1 time, ampullene er tilsatt CuO og gjensmeltet under vakuum. Prøvene er forbrent ved 550°C i 1 time (Zofer, 1980). Forbrenningsproduktene CO_2 og H_2O er separert og $^{13}C/^{12}C$ forholdet bestemt på et Finnigan MAT 251 massespektrometer.

For hver 10. prøve er en intern laboratoriestandard analysert. Spredning i isotopverdiene for standarden er ± 0.1‰.

IFEs verdi på NBS 22 er -29.77 ± 0.06 ‰ PDB.

RESULTATER

Resultatene av isotopanalysen er gitt i tabellen.

Prøver med resultater i parantes skulle gjerne vært analysert på nytt, men dette har ikke vært mulig pga. lite prøvemateriale. nd er ikke bestemt pga. for lite prøvemateriale. Alle prøver markert med - i tabellen, er ikke mottatt for isotopanalyse.

Sofer, Z. (1980). Preparation of carbon dioxide for stable isotope analysis of petroleum fractions. *Analytical Chemistry*, **52**, 1389-1391.

Karbon isotopsammensetning av ekstrakter og fraksjoner, brønn 6608/10-4, bestilling DTJ013896.

Sample	IFE no.	EOM/ whole oil $\delta^{13}C$ ‰ PDB	SAT $\delta^{13}C$ ‰ PDB	ARO $\delta^{13}C$ ‰ PDB	NSO $\delta^{13}C$ ‰ PDB	ASF $\delta^{13}C$ ‰ PDB
2572	14174	-27.7	-28.1	-26.3	-27.7	-27.6
2581.75	14175	-27.8	-28.0	-26.4	-27.8	-28.0
2587.75	14176	-27.6	-28.5	-26.2	-27.7	-28.3
2595	14177	-27.9	-28.3	-26.5	-27.8	-27.7
2600.5	14178	-27.9	-28.3	-26.7	-27.8	-27.8
2562	14179	-27.5				
2615.5	14180	-28.5				
2687.5	14181	-28.5				

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SUMMARY

Three gas samples from well 6608/10-4 were received and analysed during May and June 1994.

On the samples C_1 - C_5 and CO_2 are quantified. The $\delta^{13}C$ value is measured on methane, ethane, propane, the butanes and CO_2 . In addition the δD value is measured on methane.

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1 INTRODUCTION

Three gas samples from well 6608/10-4; Test 2, Test 3A/3B and Run 3 Upper tank, 2605.2m were received and analysed during May and June 1994.

On the samples C_1 - C_5 and CO_2 are quantified. The $\delta\ ^{13}C$ value is measured on methane, ethane, propane, the butanes and CO_2. In addition the δ D value is measured on methane.

2 ANALYTICAL PROCEDURE

The natural gas samples have been quantified and separated into the different gas components by a Carlo Erba 4200 gas chromatograph.

The hydrocarbon gas components were oxidised in separate CuO-ovens in order to prevent cross contamination. The combustion products CO_2 and H_2O were frozen into collection vessels and separated.

The combustion water was reduced with zinc metal in a sealed quarts tube to prepare hydrogen for isotopic analysis. The isotopic measurements were performed on a Finnigan MAT 251 and Finnigan Delta mass spectrometer.

IFEs value on NBS 22 is 29.77 ± .06‰ PDB.

3 RESULTS

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

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

The $\delta\ ^{13}C$ values of methane, ethane and propane are plotted in James maturity diagram (James, 1983), Figure 1. The molecular composition related to the carbon isotope variations in methane are plotted in Figure 2 (Schoell, 1983), the carbon and hydrogen variations in

methane in Figure 3 (Schoell, 1983) and the carbon isotope variations in ethane related to the carbon isotope variations in methane in Figure 4 (Schoell, 1983).

Table 1: Volume composition of gas samples from well 6608/10-4.

Sample	IFE no	C_1 %	C_2 %	C_3 %	iC_4 %	nC_4 %	iC_5 %	nC_5 %	CO_2 %	ΣC_1-C_5	Wet-ness	iC_4/ nC_4/
Test 2	14164	87.5	7.1	2.7	0.39	0.6	0.11	0.09	1.6	98.4	0.11	0.67
Test 3A/3B	14165	95.5	2.9	0.7	0.07	0.1	0.02	0.02	0.7	99.3	0.04	0.61
Run 3 Upper tank, 2605.2m	14166	93.6	4.1	1.5	0.24	0.3	0.08	0.07	0.1	99.9	0.06	0.74

Table 2: Isotopic composition of gas samples from well 6608/10-4.

Sample	IFE no	C_1 $\delta^{13}C$ ‰ PDB	C_1 δD ‰ SMOW	C_2 $\delta^{13}C$ ‰ PDB	C_3 $\delta^{13}C$ ‰ PDB	iC_4 $\delta^{13}C$ ‰ PDB	nC_4 $\delta^{13}C$ ‰ PDB	CO_2 $\delta^{13}C$ ‰ PDB	CO_2 $\delta^{18}O$ ‰ PDB
Test 2	14164	-36.7	-210	-27.8	-27.1	-25.4	-27.2	-14.0	-13.5
Test 3A/3B	14165	-36.6	-208	-28.1	-27.8	-26.6	-28.3	-23.9	-2.7
Run 3 Upper tank, 2605.2m	14166	-37.6	-173	-27.3	-26.6	-24.2	-26.5	-13.2	-3.9

4 REFERENCES

James, A.T. (1983). Correlation of natural gas by use of carbon isotopic distribution between hydrocarbon components. *The American Association of Petroleum Geologists Bulletin*, **67**, 1176-1191.

Robert, P. (1985). Methods and means of paleothermal analysis. *Organic Methamorphism and Geothermal History*, Elf-Aquitaine and D. Reidel Publishing Company.