

List of Triterpane Distribution Ratios

Ratio 1: $27Tm / 27Ts$

Ratio 2: $27Tm / 27Tm+27Ts$

Ratio 3: $27Tm / 27Tm+30a\beta+30\beta a$

Ratio 4: $29a\beta / 30a\beta$

Ratio 5: $29a\beta / 29a\beta+30a\beta$

Ratio 6: $30d / 30a\beta$

Ratio 7: $28a\beta / 30a\beta$

Ratio 8: $28a\beta / 29a\beta$

Ratio 9: $28a\beta / 28a\beta+30a\beta$

Ratio 10: $24/3 / 30a\beta$

Ratio 11: $30a\beta / 30a\beta+30\beta a$

Ratio 12: $29a\beta+29\beta a / 29a\beta+29\beta a+30a\beta+30\beta a$

Ratio 13: $29\beta a+30\beta a / 29a\beta+30a\beta$

Ratio 14: $32a\beta S / 32a\beta S+32a\beta R$ (%)

Table 12b: Variation in Sterane Distribution (peak height) SIR for Well NOCS 6406/12-2

Depth unit of measure: m

<u>Depth</u>	<u>Lithology</u>	<u>Ratio1</u>	<u>Ratio2</u>	<u>Ratio3</u>	<u>Ratio4</u>	<u>Ratio5</u>	<u>Ratio6</u>	<u>Ratio7</u>	<u>Ratio8</u>	<u>Ratio9</u>	<u>Ratio10</u>	<u>Sample</u>
3731.16	Sltst	0.84	54.27	79.29	1.63	0.78	0.55	0.37	0.66	1.19	4.19	0012-1
3733.53	Sltst	0.84	55.05	79.74	1.71	0.78	0.58	0.39	0.66	1.22	4.38	0013-1
3735.67	Sltst	0.85	53.45	81.78	1.63	0.81	0.52	0.34	0.69	1.15	4.82	0015-1
3738.17	Sltst	0.84	50.44	79.79	1.57	0.80	0.50	0.33	0.66	1.02	3.98	0016-1
3741.78	Sltst	0.85	50.27	80.84	1.49	0.81	0.50	0.33	0.68	1.01	4.24	0017-1
3744.18	Sltst	0.85	54.51	81.85	1.60	0.81	0.58	0.40	0.69	1.20	4.96	0018-1
3747.11	Sltst	0.85	52.53	81.80	1.64	0.81	0.50	0.33	0.69	1.11	4.73	0019-1
3750.63	Sltst	0.82	54.79	81.67	1.56	0.80	0.55	0.38	0.69	1.21	4.93	0020-1
3753.42	Sltst	0.83	56.00	81.38	1.47	0.80	0.52	0.36	0.69	1.27	4.97	0021-1
3755.84	Sltst	0.83	48.59	80.07	1.45	0.81	0.51	0.35	0.67	0.95	3.91	0022-1
3810.80	Sltst	0.78	48.77	77.29	1.49	0.78	0.61	0.45	0.63	0.95	3.32	0023-1
3810.80	S/Sst	0.85	50.13	80.59	1.55	0.81	0.56	0.39	0.67	1.01	4.16	0023-2
3813.58	Sltst	0.86	47.30	79.41	1.38	0.80	0.40	0.26	0.66	0.90	3.66	0025-1
3813.58	S/Sst	0.87	52.33	83.16	1.39	0.83	0.31	0.18	0.71	1.10	5.18	0025-2

List of Sterane Distribution Ratios

Ratio 1: $27d\beta S / 27d\beta S + 27aaR$

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

Ratio 3: $2 * (29\beta\beta R + 29\beta\beta S) / (29aaS + 29aaR + 2 * (29\beta\beta R + 29\beta\beta S))$ (%)

Ratio 4: $27d\beta S + 27d\beta R + 27daS + 27daR / 29d\beta S + 29d\beta R + 29daS + 29daR$

Ratio 5: $29\beta\beta R + 29\beta\beta S / 29\beta\beta R + 29\beta\beta S + 29aaS$

Ratio 6: $21a + 22a / 21a + 22a + 29aaS + 29\beta\beta R + 29\beta\beta S + 29aaR$

Ratio 7: $21a + 22a / 21a + 22a + 28daR + 28aaS + 29daR + 29aaS + 29\beta\beta R + 29\beta\beta S + 29aaR$

Ratio 8: $29\beta\beta R + 29\beta\beta S / 29aaS + 29\beta\beta R + 29\beta\beta S + 29aaR$

Ratio 9: $29aaS / 29aaR$

Ratio 10: $29\beta\beta R + 29\beta\beta S / 29aaR$

Table 12c: Variation in Triaromatic Sterane Distribution (peak height) for Well NOCS 6406/12-2

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Sample
3731.16	Sltst	0.54	0.50	0.25	0.26	0.33	0012-1
3733.53	Sltst	0.77	0.75	0.50	0.51	0.58	0013-1
3735.67	Sltst	0.75	0.74	0.46	0.46	0.53	0015-1
3738.17	Sltst	0.79	0.78	0.52	0.52	0.59	0016-1
3741.78	Sltst	0.79	0.78	0.53	0.53	0.62	0017-1
3744.18	Sltst	0.77	0.78	0.53	0.51	0.60	0018-1
3747.11	Sltst	0.83	0.81	0.58	0.59	0.65	0019-1
3750.63	Sltst	0.76	0.77	0.51	0.49	0.59	0020-1
3753.42	Sltst	0.77	0.78	0.53	0.49	0.60	0021-1
3755.84	Sltst	0.77	0.77	0.53	0.50	0.60	0022-1
3810.80	Sltst	0.88	0.86	0.65	0.67	0.72	0023-1
3810.80	S/Sst	0.78	0.75	0.52	0.53	0.62	0023-2
3813.58	Sltst	0.89	0.86	0.67	0.71	0.74	0025-1

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 12c: Variation in Triaromatic Sterane Distribution (peak height) for Well NOCS 6406/12-2

Depth unit of measure: m

<u>Depth</u>	<u>Lithology</u>	<u>Ratio1</u>	<u>Ratio2</u>	<u>Ratio3</u>	<u>Ratio4</u>	<u>Ratio5</u>	<u>Sample</u>
3813.58	S/Sst	0.74	0.71	0.46	0.46	0.55	0025-2

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 12d: Variation in Monoaromatic Sterane Distribution (peak height) for Well NOCS 6406/12-2

Depth unit of measure: m

<u>Depth</u>	<u>Lithology</u>	<u>Ratio1</u>	<u>Ratio2</u>	<u>Ratio3</u>	<u>Ratio4</u>	<u>Sample</u>
3731.16	Sltst	0.21	0.13	0.13	0.11	0012-1
3733.53	Sltst	0.86	0.73	0.76	0.66	0013-1
3735.67	Sltst	0.89	0.76	0.72	0.52	0015-1
3738.17	Sltst	0.86	0.74	0.76	0.68	0016-1
3741.78	Sltst	0.94	0.82	0.88	0.78	0017-1
3744.18	Sltst	0.76	0.48	0.63	0.47	0018-1
3747.11	Sltst	0.92	0.82	0.85	0.79	0019-1
3750.63	Sltst	0.92	0.70	0.70	0.45	0020-1
3753.42	Sltst	0.93	0.70	0.75	0.50	0021-1
3755.84	Sltst	0.86	0.42	0.70	0.49	0022-1
3810.80	Sltst	0.79	0.54	0.58	0.38	0023-1
3810.80	S/Sst	0.84	0.70	0.59	0.44	0023-2
3813.58	Sltst	0.63	0.50	0.50	0.46	0025-1
3813.58	S/Sst	0.84	0.70	0.75	0.66	0025-2

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

Table 12e: Aromatisation of Steranes (peak height) for Well NOCS 6406/12-2

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Sample
3731.16	Sltst	0.54	0.84	0012-1
3733.53	Sltst	0.08	0.99	0013-1
3735.67	Sltst	0.01	1.00	0015-1
3738.17	Sltst	0.09	0.99	0016-1
3741.78	Sltst	0.03	1.00	0017-1
3744.18	Sltst	0.07	0.99	0018-1
3747.11	Sltst	0.03	1.00	0019-1
3750.63	Sltst	0.04	1.00	0020-1
3753.42	Sltst	0.04	0.99	0021-1
3755.84	Sltst	0.03	1.00	0022-1
3810.80	Sltst	0.11	0.98	0023-1
3810.80	S/Sst	0.15	0.96	0023-2
3813.58	Sltst	0.15	0.98	0025-1

$$\text{Ratio1: } \frac{\text{C1+D1+E1+F1+G1+H1+I1}}{\text{C1+D1+E1+F1+G1+H1+I1} + \text{c1+d1+e1+f1+g1}}$$

$$\text{Ratio2: } \text{g1} / \text{g1} + \text{I1}$$

Table 12e: Aromatisation of Steranes (peak height) for Well NOCS 6406/12-2

Depth unit of measure: m

<u>Depth</u>	<u>Lithology</u>	<u>Ratio1</u>	<u>Ratio2</u>	<u>Sample</u>
3813.58	S/Sst	0.04	0.99	0025-2

$$\text{Ratio1: } \frac{\text{C1+D1+E1+F1+G1+H1+I1}}{\text{C1+D1+E1+F1+G1+H1+I1} + \text{c1+d1+e1+f1+g1}}$$

$$\text{Ratio2: } \text{g1} / \text{g1} + \text{I1}$$

Table 12f: Raw triterpane data (peak height) m/z 191 SIR for Well NOCS 6406/12-2

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	300	30aß	30ßa	30G	31aßS	
		31aßR	32aßS	32aßR	33aßS	33aßR	34aßS	34aßR	35aßS	35aßR	
3731.16	Sltst	8749.4 21876.8 15585.4	5923.1 12968.0 15086.4	2997.8 7558.1 10166.5	4433.8 1418.8 9990.0	1679.7 0.0 7154.9	14782.2 63299.0 6773.0	7495.2 5281.6 4364.8	1197.3 0.0 5061.4	1371.3 22327.8 3104.6	0012-1
3733.53	Sltst	7418.5 15895.8 11880.3	4834.3 9532.4 10974.9	2512.7 5684.3 7232.6	3400.1 1033.7 7505.7	1288.7 0.0 5277.7	10827.8 45805.6 4550.8	6389.1 3561.7 2970.6	888.3 0.0 3733.8	878.1 16567.3 2149.2	0013-1
3735.67	Sltst	5928.4 14657.3 11903.9	4304.6 8802.1 11491.7	2145.4 5585.4 7885.5	3132.3 920.6 7698.8	1093.2 0.0 5457.8	9225.5 41894.7 5140.5	6068.6 3388.3 3169.7	816.2 0.0 3956.9	968.4 17430.2 2268.6	0015-1
3738.17	Sltst	9509.5 23780.8 22098.0	7324.5 15380.3 21689.6	3701.3 9183.7 14384.8	5305.3 1633.2 14833.3	2036.6 0.0 10193.4	14964.2 72039.9 9399.2	10478.5 5337.7 5881.3	1702.5 0.0 7602.9	1870.4 32811.8 4655.5	0016-1
3741.78	Sltst	7902.7 19248.6 17463.5	6580.8 12533.1 15977.3	3187.6 7059.7 10705.5	4902.7 1224.4 10695.2	1680.1 0.0 7760.8	13767.5 58427.5 6771.8	8765.2 3991.0 4368.2	1024.6 0.0 5572.9	1193.0 24979.6 3425.6	0017-1

Table 12f: Raw triterpane data (peak height) m/z 191 SIR for Well NOCS 6406/12-2

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	300	30aß	30ßa	30G	31aßS	
		31aßR	32aßS	32aßR	33aßS	33aßR	34aßS	34aßR	35aßS	35aßR	
3744.18	Sltst	4933.4	4357.1	1938.1	3240.7	952.5	9189.0	4749.0	544.0	711.5	0018-1
		10908.4	7856.1	4831.9	734.4	0.0	33300.0	2388.7	0.0	14996.5	
		10176.6	9699.9	6466.4	6808.3	4648.0	3909.2	2383.9	3687.8	2175.4	
3747.11	Sltst	6641.2	6323.3	2755.2	3715.5	1383.0	10784.9	6213.4	686.1	756.5	0019-1
		13781.6	10246.7	5686.4	1005.5	0.0	42506.2	2907.7	0.0	19373.7	
		13146.0	12819.7	8724.4	8926.2	5984.6	5044.3	3212.0	4873.0	3017.8	
3750.63	Sltst	6055.5	5859.8	2516.7	4112.9	1200.6	11501.9	5446.9	558.4	611.6	0020-1
		12270.6	9979.6	5907.1	861.0	0.0	38605.3	2593.4	0.0	17072.8	
		11979.4	12047.4	7989.3	8008.8	5733.2	4688.2	2916.8	4780.7	3020.6	
3753.42	Sltst	4806.6	4817.5	1842.6	3237.0	973.2	8732.3	5016.2	460.6	580.7	0021-1
		9780.5	7537.9	4484.0	673.9	0.0	28723.1	1877.4	0.0	12941.6	
		8957.4	8754.5	6007.4	7075.0	4933.6	3669.2	2260.3	4479.4	2434.7	
3755.84	Sltst	8365.4	8567.4	3485.0	5493.9	1747.2	14876.0	7802.0	739.0	894.0	0022-1
		15903.7	13901.1	8071.7	1175.1	0.0	52677.2	3523.4	0.0	23045.2	
		15578.1	16134.0	10686.3	10817.8	7484.6	6163.6	3940.8	6516.7	4209.3	

Table 12f: Raw triterpane data (peak height) m/z 191 SIR for Well NOCS 6406/12-2

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	300	30aß	30ßa	30G	31aßS	
		31aßR	32aßS	32aßR	33aßS	33aßR	34aßS	34aßR	35aßS	35aßR	
3810.80	Sltst	3644.3 7016.0 5318.6	2899.9 2911.6 6197.3	1168.5 4341.3 4066.1	1703.7 574.4 4791.7	647.8 0.0 3090.5	2298.8 19921.7 3043.2	3552.6 1658.7 1810.2	614.5 0.0 2930.8	542.3 8034.6 1585.2	0023-1
3810.80	S/Sst	1974.1 2508.0 1551.9	1343.7 818.9 1702.8	502.9 931.4 1088.1	528.1 135.5 1335.8	237.3 0.0 872.6	745.9 6727.2 827.9	925.5 451.7 487.0	98.6 0.0 780.0	113.1 2343.3 418.4	0023-2
3813.58	Sltst	19426.4 29020.9 20374.5	15264.9 15932.0 21883.5	8743.7 18649.4 15212.9	7344.6 2809.8 18070.4	4367.5 0.0 13028.6	12633.7 77915.9 13747.6	11662.3 6994.0 9287.1	2747.3 0.0 13660.1	2459.7 28587.6 8172.1	0025-1
3813.58	S/Sst	4797.3 7627.3 6396.0	4058.4 4197.1 6190.0	2613.9 4948.3 4093.9	1523.0 591.8 5699.5	1216.6 0.0 4086.1	3651.7 21631.0 4522.1	2771.3 1892.8 2726.4	666.1 0.0 4455.1	685.5 9122.0 2588.5	0025-2

Table 12g: Raw sterane data (peak height) m/z 217 SIR for Well NOCS 6406/12-2

Depth unit of measure: m

Depth	Lithology	21a	22a	27d β S	27d β R	27daS	27daR	28d β S	28d β R	28daS*	Sample
		29d β S*	28daR*	27aaR	29d β R	29daS	28aaS	29daR*	28 β β S		
		28aaR	29aaS	29 β β R	29 β β S	29aaR					
3731.16	Sltst	6494.4	3305.8	12463.3	8500.5	3156.9	3924.8	5093.9	3370.1	3267.5	0012-1
		6333.0	4195.2	2357.1	6019.1	1659.8	1553.7	3148.1	2792.5		
		719.3	1507.6	2695.6	2623.3	1270.4					
3733.53	Sltst	5459.0	2701.1	9393.0	6261.9	2277.9	2765.1	3868.9	2516.1	2540.9	0013-1
		4314.9	3209.9	1762.3	4112.8	1211.4	1128.1	2463.0	2177.4		
		531.7	1079.1	1944.9	1912.5	881.1					
3735.67	Sltst	4675.9	2308.8	9060.7	6153.8	2283.5	2753.5	4126.9	2584.9	2365.2	0015-1
		4679.5	3180.5	1560.6	4001.7	1147.8	1126.7	2582.2	2329.6		
		430.9	1057.0	2229.0	2209.2	920.7					
3738.17	Sltst	8207.3	4387.8	15570.8	10473.0	4054.2	4476.1	6902.5	4391.7	4090.6	0016-1
		7908.4	5762.3	2882.3	7084.2	2077.9	2353.4	4890.4	4527.4		
		1034.2	2150.0	4172.1	4244.4	2113.0					
3741.78	Sltst	7678.8	4051.8	13550.7	8737.2	3414.5	3872.1	5602.8	3682.2	3531.5	0017-1
		7119.4	5120.0	2420.3	6308.9	1807.4	2011.1	4624.1	4052.7		
		932.0	1864.4	3956.8	3866.9	1844.1					

* 28daS coel with 27aaS, 29d β S coel with 27 β β R, 28daR coel with 27 β β S, 29daR coel with 28 β β R

Table 12g: Raw sterane data (peak height) m/z 217 SIR for Well NOCS 6406/12-2

Depth unit of measure: m

Depth	Lithology	21a	22a	27d β S	27d β R	27daS	27daR	28d β S	28d β R	28daS*	Sample
		29d β S*	28daR*	27aaR	29d β R	29daS	28aaS	29daR*	28 β S		
		28aaR	29aaS	29 β R	29 β S	29aaR					
3744.18	Sltst	5817.6	3071.6	9348.0	6057.2	2263.9	2644.4	3621.3	2404.2	2346.1	0018-1
		5119.3	3526.4	1705.2	4253.3	1108.1	976.3	2254.7	1993.0		
		318.7	1094.2	2231.5	2295.5	913.0					
3747.11	Sltst	5602.3	2996.5	11421.7	7704.4	2891.8	3264.1	4273.2	3011.3	2789.3	0019-1
		5759.3	4066.7	1991.7	5074.4	1397.4	1382.5	3195.9	2853.3		
		522.2	1408.5	3076.9	2947.5	1272.7					
3750.63	Sltst	5527.1	2848.1	8886.5	6100.9	2348.2	2646.7	3467.9	2349.5	2387.6	0020-1
		4959.2	3395.2	1916.3	4438.1	1231.8	1091.9	2219.1	2110.4		
		433.5	1176.6	2442.7	2342.4	970.8					
3753.42	Sltst	5777.1	2817.0	8911.2	6496.5	2596.6	2877.1	3829.9	2513.5	2459.7	0021-1
		5363.7	3606.2	1884.1	4739.0	1571.3	1251.8	2572.8	2402.1		
		507.4	1417.8	2721.4	2811.6	1114.1					
3755.84	Sltst	7252.1	3426.1	10828.7	7597.3	2871.8	3287.7	4385.6	2882.6	3027.3	0022-1
		6224.7	4277.3	2228.4	5636.7	1755.5	1708.8	3328.4	3122.9		
		659.4	1657.2	3431.6	3418.6	1753.1					

* 28daS coel with 27aaS, 29d β S coel with 27 β R, 28daR coel with 27 β S, 29daR coel with 28 β R

Table 12g: Raw sterane data (peak height) m/z 217 SIR for Well NOCS 6406/12-2

Depth unit of measure: m

Depth	Lithology	21a	22a	27d β S	27d β R	27daS	27daR	28d β S	28d β R	28daS*	Sample
		29d β S*	28daR*	27aaR	29d β R	29daS	28aaS	29daR*	28 β β S		
		28aaR	29aaS	29 β β R	29 β β S	29aaR					
3810.80	Slst	2257.3	1036.8	2525.8	1733.0	781.1	730.7	1175.2	640.1	894.0	0023-1
		1609.5	881.6	730.6	1244.2	333.6	367.3	694.0	644.5		
		218.0	378.3	661.0	658.9	397.4					
3810.80	S/Sst	750.0	330.1	1658.4	1042.0	306.1	402.4	640.0	350.1	405.7	0023-2
		1014.2	412.5	303.6	696.3	172.5	133.9	323.3	289.8		
		69.1	138.5	293.7	279.6	137.8					
3813.58	Slst	10355.3	4657.2	30438.9	19817.8	8040.5	8798.8	13204.5	8573.5	7708.1	0025-1
		20219.9	9188.0	5018.4	15469.9	5206.7	3463.2	7745.1	6701.6		
		1514.5	3653.4	7806.9	7086.9	4070.4					
3813.58	S/Sst	1853.7	822.3	10824.2	7554.6	2685.0	3405.5	5028.7	3048.7	2784.0	0025-2
		7980.4	3010.6	1643.4	5635.3	1576.1	961.9	2426.6	2055.6		
		475.0	899.2	2225.8	2018.1	819.2					

* 28daS coel with 27aaS, 29d β S coel with 27 β β R, 28daR coel with 27 β β S, 29daR coel with 28 β β R

Table 12h: Raw triaromatic sterane data (peak height) m/z 231 for Well NOCS 6406/12-2

Depth unit of measure: m

Depth	Lithology	a1	b1	c1	d1	e1	f1	g1	Sample
3731.16	Sltst	142136.4	122461.4	97036.9	293995.5	136779.6	140876.3	121112.5	0012-1
3733.53	Sltst	160284.5	143031.8	35142.2	117099.0	52535.7	57229.7	47139.5	0013-1
3735.67	Sltst	104339.5	101697.2	23578.6	91844.9	39675.9	47496.4	35376.0	0015-1
3738.17	Sltst	98202.4	91477.3	17334.8	66955.1	28456.9	35277.2	25508.3	0016-1
3741.78	Sltst	146724.1	134494.0	25648.2	90337.3	43096.7	50205.1	38181.8	0017-1
3744.18	Sltst	248927.1	261850.4	48146.7	163925.7	79739.6	89680.0	73497.6	0018-1
3747.11	Sltst	9940.6	8587.3	1236.8	5342.4	2336.5	2683.6	2004.9	0019-1
3750.63	Sltst	221239.1	229702.4	42285.9	151691.5	76750.5	84936.2	69913.9	0020-1
3753.42	Sltst	217299.0	234426.2	38644.6	143353.1	74972.6	82334.4	65962.3	0021-1
3755.84	Sltst	168430.8	174770.7	29186.8	111034.0	56311.0	62273.5	50805.8	0022-1
3810.80	Sltst	127873.1	108915.7	16115.0	48908.9	21447.7	23235.1	18187.8	0023-1
3810.80	S/Sst	43053.6	36712.7	8776.3	26322.8	13153.9	12905.5	11918.6	0023-2
3813.58	Sltst	16647.5	12719.3	1537.5	5726.6	2465.1	2427.5	2028.2	0025-1
3813.58	S/Sst	9674.8	8278.0	1985.7	7942.2	4121.4	3832.3	3351.3	0025-2

Table 12i: Raw monoaromatic sterane data (peak height) m/z 253 for Well NOCS 6406/12-2

Depth unit of measure: m

Depth	Lithology	A1	B1	C1	D1	E1	F1	G1	H1	I1	Sample
3731.16	Sltst	72288.6	40274.2	155044.2	121909.1	271104.8	46620.5	199318.6	120467.5	22745.3	0012-1
3733.53	Sltst	34690.9	15437.0	4220.4	3307.9	5686.8	1477.5	5156.4	4763.1	643.6	0013-1
3735.67	Sltst	2049.2	779.6	231.4	96.3	246.4	77.2	539.8	1365.1	101.4	0015-1
3738.17	Sltst	23822.8	11016.2	2501.7	2123.5	3817.1	1140.6	3670.7	2929.5	372.9	0016-1
3741.78	Sltst	19859.1	5316.6	1005.6	535.7	1201.0	350.7	1442.9	2243.5	180.5	0017-1
3744.18	Sltst	23667.8	6907.7	5831.5	3684.7	7598.0	2304.0	6531.7	7218.1	719.7	0018-1
3747.11	Sltst	983.4	407.8	85.9	45.4	90.1	27.2	83.6	45.6	0.0	0019-1
3750.63	Sltst	10744.5	2210.8	2872.5	1568.5	925.9	1136.3	3686.2	5050.2	333.9	0020-1
3753.42	Sltst	15681.5	2549.7	3875.4	1774.3	1105.2	1680.6	4051.9	5739.7	371.5	0021-1
3755.84	Sltst	8631.3	1027.4	310.6	541.7	1404.5	439.9	2346.2	4651.2	226.9	0022-1
3810.80	Sltst	7441.1	2245.4	1691.4	814.9	1924.1	546.0	3487.0	6696.8	321.5	0023-1
3810.80	S/Sst	7010.7	3103.4	549.9	2298.0	1299.9	1386.7	3671.4	3216.8	449.2	0023-2
3813.58	Sltst	1364.9	798.4	125.3	326.2	805.4	245.5	535.1	413.9	43.9	0025-1
3813.58	S/Sst	1187.0	551.4	174.8	95.0	230.8	80.0	156.4	114.7	29.8	0025-2

Table 12j: Raw triterpane data (peak height) m/z 177 SIR for Well NOCS 6406/12-2

Depth unit of measure: m

<u>Depth</u>	<u>Lithology</u>	<u>25nor28aß</u>	<u>25nor30aß</u>	<u>Sample</u>
3731.16	Sltst	698.9	835.3	0012-1
3733.53	Sltst	457.2	636.0	0013-1
3735.67	Sltst	521.3	532.7	0015-1
3738.17	Sltst	843.7	1016.0	0016-1
3741.78	Sltst	714.0	825.3	0017-1
3744.18	Sltst	391.7	576.1	0018-1
3747.11	Sltst	547.1	601.1	0019-1
3750.63	Sltst	405.8	529.8	0020-1
3753.42	Sltst	496.1	585.1	0021-1
3755.84	Sltst	567.6	678.4	0022-1
3810.80	Sltst	169.2	231.3	0023-1
3810.80	S/Sst	110.7	99.8	0023-2
3813.58	Sltst	1963.0	1471.2	0025-1
3813.58	S/Sst	589.0	504.4	0025-2

Table 12k: Raw sterane data (peak height) m/z 218 SIR for Well NOCS 6406/12-2

Depth unit of measure: m

Depth	Lithology	27 β BR	27 β BS	28 β BR	28 β BS	29 β BR	29 β BS	30 β BR	30 β BS	Sample
3731.16	Sltst	6298.2	5530.0	4599.7	4399.1	4032.0	4396.9	1475.0	1619.5	0012-1
3733.53	Sltst	5112.8	4474.0	3516.1	3568.6	2870.4	3300.7	1092.6	1125.8	0013-1
3735.67	Sltst	5185.9	4575.7	3964.7	3971.9	3443.6	3739.1	1101.7	1210.6	0015-1
3738.17	Sltst	9484.7	8124.5	7291.3	7184.9	6542.5	7078.5	2527.8	2581.5	0016-1
3741.78	Sltst	8166.3	7241.3	6888.0	6565.4	6194.4	6589.4	1975.2	2141.9	0017-1
3744.18	Sltst	5453.3	4772.7	3344.9	3449.9	3637.5	3947.3	1281.3	1332.5	0018-1
3747.11	Sltst	6504.0	5433.4	4798.9	4695.2	4848.8	5031.4	1492.5	1678.8	0019-1
3750.63	Sltst	5258.9	4592.0	3177.8	3292.5	3682.9	4051.9	1075.2	1207.5	0020-1
3753.42	Sltst	5454.0	4682.0	3552.8	3698.7	4191.9	4809.2	1545.6	1677.8	0021-1
3755.84	Sltst	6329.5	5464.3	4570.8	4696.3	5427.2	5743.5	1806.2	1916.7	0022-1
3810.80	Sltst	1310.8	1152.5	1049.2	1103.2	1041.1	1106.1	218.6	225.1	0023-1
3810.80	S/Sst	680.4	516.0	465.0	516.2	482.6	576.9	90.5	94.7	0023-2
3813.58	Sltst	11731.9	10719.3	9380.6	10079.0	11976.5	12162.2	2592.7	2838.9	0025-1
3813.58	S/Sst	3937.3	3372.8	2860.7	3154.0	3340.6	3704.6	700.4	705.8	0025-2



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1 Introduction

This report gives the result of routine vitrinite reflectance analyses on 29 samples covering the interval from 1080 to 4363 mRKB in well 6406/12-2 offshore Norway.

2 Material

2.1 Samples

The material was provided from the client as 27 unwashed cuttings and 2 core chips. The sample positions are indicated in figure 1.

2.2 Geological information and casing points

Information on stratigraphy in well 6406/12-2 was not provided from the client.

3 Analytical techniques

3.1 Preparation

The cuttings samples were washed and then treated with hydrochloric and hydrofluoric acid prior to further preparation. The aim was to avoid soft and expanding mineral phases in order to ensure good polishing quality. After the acid treatment, each sample was split in two and one part was extracted for 2-3 hours in dichloromethane. Two samples, 4270m and 4363m, were extracted before acid treatment because of very greasy mud. The two core chips were not extracted.

The sample material resulting from the acid treatment and the extracted material were embedded in an epoxy resin to make briquettes, ground flat and polished using 0.25 micron diamond paste and magnesium oxide as the two final steps.

3.2 Analysis

The analytical equipment being used was a Zeiss MPM 03 photometer microscope equipped with an Epiplan-Neofluar 40/0.90 oil objective. The sensitive measuring spot was kept constant for all measurements at about 2.5 micron in diameter. The measurements were made through a green band pass filter (546 nm) and in oil immersion (refractive index 1.515 at 18°C). The readings were made without a polarizer and using a stationary stage. This procedure is called measurement of random reflectance (%Rm). The photometer is calibrated daily against a standard of known reflectance (%Rm= 0.588) and routinely (daily) checked against two other standards of significant different reflectances (%Rm=0.879 and 1.696). A deviation from these values of less than ± 0.01 and ± 0.02 respectively is considered as acceptable. The calibration is routinely checked during the course of measurements at least every hour, and a deviation of less than ± 0.005 is considered as acceptable.

For each sample at least 20 points were measured if possible, and quality ratings are given to various important aspects which may affect the measurements. The aspects are abundance of vitrinite, uncertainties in the identification of indigenous vitrinite, type of vitrinite, particle size, particle surface quality and abundance of pyrite.

3.3 Presentation of results

The raw data from the measurements are presented in appendix for each sample both as tabulated data and histograms. A true vitrinite population is selected among the readings based on observations made during the measurements, and arithmetic mean values are calculated for this population and other populations. A quality rating is given to the true population. The results are listed in table 1a and 1b (extracted samples).

The results are presented as vitrinite reflectance versus depth plots on linear and semilogarithmic scales (figure 1). A vitrinite reflectance versus depth trend is interpreted manually on the linear plot and transferred to the semilogarithmic plot. The interpreted trend is also listed in table 2a and 2b (extracted samples).

Table 1a Vitrinite reflectance data

Well
6406/12-2

IFE no.	Depth, mRKB	Sample type	Lithology	%Rm	Std. dev.	N	Quality	Preparation
960071	1080	cut	clst/sst	0.30	0.03	25	G	HF
960072	1200	cut	clst	0.28	0.03	24	M	HF
960073	1300	cut	clst	0.27	0.04	22	M	HF
960074	1410	cut	clst	0.30	0.04	26	M	HF
960075	1510	cut	clst	0.31	0.03	23	M	HF
960076	1610	cut	clst	0.30	0.04	24	M	HF
960077	1710	cut	clst	0.32	0.02	25	M	HF
960078	1810	cut	clst	0.33	0.03	23	M	HF
960079	1910	cut	clst	0.31	0.03	20	M	HF
960080	2020	cut	clst	0.34	0.05	28	P	HF
960081	2110	cut	clst	0.38	0.05	14	M	HF
960082	2220	cut	clst	0.41	0.04	14	M	HF
960083	2300	cut	clst	0.51	0.07	25	M	HF
960084	2460	cut	clst	0.51	0.06	21	M	HF
960085	2610	cut	clst/slst	0.50	0.05	6	P	HF
960086	2760	cut	clst/slst	0.57	0.07	8	M	HF
960087	2900	cut	clst/slst	0.58	0.10	12	M	HF
960088	3000	cut	clst/slst	0.60	0.08	18	M	HF
960089	3230	cut	clst/slst	0.64	0.04	14	M	HF
960090	3310	cut	clst	0.70	0.11	4	P	HF
960091	3490	cut	clst/slst	0.71	0.10	7	P	HF
960092	3620	cut	clst/slst	0.88	0.03	3	P	HF
960047	3731.16	core	clst/slst	.41/.66	0.03/0.07	9/10	P	bulk
960048	3755.84	core	clst	0.84	0.06	9	P	bulk
960093	3901	cut	clst/slst	0.86	0.06	19	M	HF
960094	4015	cut	clst/sst	0.96	0.10	4	P	HF
960095	4150	cut	clst/sst	0.99	0.10	4	P	HF
960096	4270	cut	clst					HF
960097	4363	cut	clst					HF

G	Good quality	P	Poor quality	st	HC-staining	HF	HF-treated
M	Moderate quality	X	Not vitrinite	Barren	Barren of vitrinite	Bulk	Bulk rock

Table 1b Vitrinite reflectance data, extracted samples

Well
6406/12-2

IFE no.	Depth, mRKB	Sample type	Lithology	%Rm	Std. dev.	N	Quality	Preparation
960071	1080	cut	clst/sst	0.30	0.04	23	M	HF
960072	1200	cut	clst	0.27	0.03	23	M	HF
960073	1300	cut	clst	0.25	0.04	23	M	HF
960074	1410	cut	clst	0.30	0.05	22	M	HF
960075	1510	cut	clst	0.28	0.03	23	M	HF
960076	1610	cut	clst	0.29	0.03	21	M	HF
960077	1710	cut	clst	0.27	0.04	21	M	HF
960078	1810	cut	clst	0.27	0.06	24	M	HF
960079	1910	cut	clst	0.28	0.03	20	M	HF
960080	2020	cut	clst	0.29	0.03	20	M	HF
960081	2110	cut	clst	0.31	0.06	5	P	HF
960082	2220	cut	clst	0.41	0.03	12	M	HF
960083	2300	cut	clst	0.50	0.05	18	M	HF
960084	2460	cut	clst	0.45	0.10	27	M	HF
960085	2610	cut	clst/slst	0.42	0.06	7	P	HF
960086	2760	cut	clst/slst	0.52	0.03	11	M	HF
960087	2900	cut	clst/slst	0.56	0.07	14	M	HF
960088	3000	cut	clst/slst	0.53	0.03	5	P	HF
960089	3230	cut	clst/slst	0.65	0.11	20	M	HF
960090	3310	cut	clst	0.72	0.07	9	P	HF
960091	3490	cut	clst/slst	0.69	0.06	15	M	HF
960092	3620	cut	clst/slst	0.90	0.00	1	P	HF
960047	3731.16	core	clst/slst					bulk
960048	3755.84	core	clst					bulk
960093	3901	cut	clst/slst	0.90	0.04	16	M	HF
960094	4015	cut	clst/sst	0.96	0.08	10	M	HF
960095	4150	cut	clst/sst	1.06	0.08	8	M	HF
960096	4270	cut	clst	1.20	0.12	23	P	HF
960097	4363	cut	clst	1.17	0.13	22	M	HF

G	Good quality	P	Poor quality	st	HC-staining	HF	HF-treated
M	Moderate quality	X	Not vitrinite	Barren	Barren of vitrinite	Bulk	Bulk rock

1 Introduction

The well was drilled using Anco 2000 with 5% glycol in the 12 1/4" hole (906m MD RKB to 2308m MD RKB) and an oil-based mud system in the 8 1/2" hole (2308m MD RKB to TD at 4367m MD RKB), and was classified as dry. Weak fluorescence was reported in occasional core samples from 3735 to 4003m MD RKB. Cores were taken using the Baker Hughes gel coring system.

Mudrock lithology is described here as "claystone" ("clst") for convenience. Note that the original geochemical data report (Appendix 1 in Patience, 1996) described all mudrocks as "siltstone", whilst the follow-up data report (Appendix 1 in this report) refers to them as "sh/clst", even though they are the same in both cases. The term "claystone" is used in the text and figures here in order to distinguish them from the sandstones, and to facilitate location of the relevant samples and associated data in Appendix 1, and is not meant to indicate that this lithological description is correct.

A total of 16 core samples and one drilling mud sample were analysed according to the analytical programme in Table 1 in Appendix 1. 8 of the samples were sandstone lithologies, 7 were claystone and one was described as "bulk" (essentially claystone) in some tables in the data report. Data were integrated with those from the earlier standard study in the figures here. The drilling mud samples is abbreviated to "DM" in the figures.

The analytical work was performed in accordance with the guidelines given in "The Norwegian Industry Guide to Organic Geochemical Analyses (1993)". The analyses were carried out by Geolab Nor.

Table 1. Biomarker parameters for all samples

Well	Bottom depth mRKB	Sample type	Sample codes	20S	bb	22S	Ts/Tm	Ttx	30D/H	30ab	%C27	%C28	%C29	C30	Dia/reg
6406/12-2	3731.6	core-plug		0.54	0.66	0.60	1.97	5.33	0.12	0.92	40	31	29	0.11	3.73
6406/12-2	3733.53	core-plug		0.55	0.66	0.60	1.69	5.50	0.12	0.93	42	31	27	0.10	3.64
6406/12-2	3735.67	core-plug		0.53	0.69	0.59	1.52	6.07	0.13	0.93	39	32	29	0.09	3.88
6406/12-2	3738.17	core-plug		0.50	0.66	0.60	1.43	5.62	0.13	0.93	39	32	30	0.11	3.74
6406/12-2	3741.78	core-plug		0.50	0.68	0.60	1.57	5.77	0.12	0.94	37	32	31	0.10	3.74
6406/12-2	3744.18	core-plug		0.55	0.69	0.60	1.93	6.58	0.15	0.93	42	28	31	0.11	3.80
6406/12-2	3747.11	core-plug		0.53	0.69	0.60	1.74	5.66	0.13	0.94	38	30	32	0.10	4.00
6406/12-2	3750.63	core-plug		0.55	0.69	0.60	2.11	6.86	0.15	0.94	41	27	32	0.09	3.48
6406/12-2	3753.42	core-plug		0.56	0.69	0.59	1.74	6.65	0.16	0.94	38	27	34	0.12	3.55
6406/12-2	3755.84	core-plug		0.49	0.67	0.60	1.91	6.87	0.15	0.94	37	29	35	0.12	3.51
6406/12-2	3760	mud	DM	0.39	0.61	0.67	1.39	1.22	0.06	0.93	37	29	34		0.39
6406/12-2	3809.95	core-chip	sst	0.40	0.63	0.61	1.21	3.37	0.13	0.91	35	31	35	0.08	1.18
6406/12-2	3809.95	core-chip	clst	0.45	0.60	0.57	1.09	3.71	0.26	0.90	32	31	37	0.10	2.31
6406/12-2	3810.53	core-chip	sst	0.46	0.65	0.61	1.18	2.53	0.13	0.90	36	30	33	0.08	1.41
6406/12-2	3810.53	core-chip	clst	0.48	0.64	0.60	1.18	4.63	0.22	0.90	34	31	35	0.10	2.88
6406/12-2	3810.8	core-plug	sst	0.50	0.67	0.61	0.81	6.87	0.14	0.94	37	30	33	0.06	3.81
6406/12-2	3810.8	core-plug	clst	0.49	0.63	0.60	0.65	7.56	0.22	0.92	36	32	32	0.07	2.62
6406/12-2	3810.83	core-chip	sst	0.37	0.63	0.58	1.19	3.05	0.14	0.90	35	30	35	0.08	1.55
6406/12-2	3810.83	core-chip	clst	0.45	0.63	0.58	1.06	4.53	0.26	0.89	34	30	35	0.10	2.53
6406/12-2	3811.41	core-chip	sst	0.44	0.63	0.59	1.00	2.67	0.12	0.91	39	29	32	0.06	1.74
6406/12-2	3811.41	core-chip	clst	0.45	0.59	0.59	0.69	4.28	0.16	0.89	35	32	33	0.09	1.99
6406/12-2	3812.4	core-chip	sst	0.32	0.56	0.58	1.09		0.11	0.90	34	33	33		3.66
6406/12-2	3812.4	core-chip	clst	0.45	0.62	0.59	1.22	4.68	0.25	0.90	35	31	35	0.11	2.11
6406/12-2	3812.97	core-chip	sst	0.39	0.65	0.60	1.32	4.28	0.15	0.90	39	29	32	0.08	1.83
6406/12-2	3812.97	core-chip	clst	0.43	0.62	0.59	1.33	4.56	0.25	0.90	33	33	34	0.10	2.30
6406/12-2	3813.27	core-chip	sst	0.45	0.63	0.57	1.08	3.49	0.14	0.89	38	32	30	0.07	1.45
6406/12-2	3813.27	core-chip	clst		0.62		1.18		0.00	1.00					1.46
6406/12-2	3813.58	core-plug	sst	0.52	0.71	0.60	1.32	8.36	0.23	0.92	36	30	35	0.07	4.15
6406/12-2	3813.58	core-plug	clst	0.47	0.66	0.59	1.08	6.64	0.24	0.92	34	29	37	0.08	3.95
6406/12-2	3814.6	core-chip	clst	0.42	0.58	0.59	0.65	4.00	0.19	0.90	32	32	37	0.10	1.30
6406/12-2	3814.68	core-chip	sst	0.48	0.65	0.59	0.75	3.68	0.13	0.88	35	32	33	0.08	2.17

see following pages for description of parameters

Table 1. Biomarker parameters for all samples

Well	Bottom depth mRKB	Sample type	Sample codes	28ab/H	H/S	ppmH	ppmS	3R/H	4R/H	35/34H	29/30H	Dem/H	O/H	G/H
6406/12-2	3731.6	core-plug		0.019	7.31			0.14	0.07	0.73	0.35	0.02	0.02	0.01
6406/12-2	3733.53	core-plug		0.019	6.84			0.16	0.07	0.78	0.35	0.02	0.02	0.02
6406/12-2	3735.67	core-plug		0.019	6.13			0.14	0.07	0.75	0.35	0.02	0.02	
6406/12-2	3738.17	core-plug		0.024	5.95			0.13	0.07	0.80	0.33	0.03	0.03	0.00
6406/12-2	3741.78	core-plug		0.018	5.12			0.14	0.08	0.81	0.33	0.02	0.02	0.01
6406/12-2	3744.18	core-plug		0.016	5.13			0.15	0.10	0.93	0.33	0.02	0.02	0.01
6406/12-2	3747.11	core-plug		0.016	5.18			0.16	0.09	0.96	0.32	0.02	0.02	
6406/12-2	3750.63	core-plug		0.014	6.22			0.16	0.11	1.03	0.32	0.02	0.02	0.02
6406/12-2	3753.42	core-plug		0.016	4.41			0.17	0.11	1.17	0.34	0.02	0.02	0.00
6406/12-2	3755.84	core-plug		0.014	6.22			0.16	0.10	1.06	0.30	0.02	0.02	0.01
6406/12-2	3760	mud	DM	0.000	5.74			1.49	0.30	1.00	0.56	0.00	0.00	0.05
6406/12-2	3809.95	core-chip	sst	0.000	8.05			0.47	0.15	1.21	0.44	0.05	0.05	0.01
6406/12-2	3809.95	core-chip	clst	0.038	15.56			0.16	0.08	1.18	0.33	0.05	0.05	
6406/12-2	3810.53	core-chip	sst	0.000	8.69			0.55	0.18	1.17	0.44	0.06	0.06	0.03
6406/12-2	3810.53	core-chip	clst	0.040	2.73			0.38	0.13	1.13	0.38	0.05	0.05	0.02
6406/12-2	3810.8	core-plug	sst	0.015	7.07			0.29	0.08	0.91	0.37	0.02	0.02	0.01
6406/12-2	3810.8	core-plug	clst	0.031	11.22			0.18	0.09	0.93	0.35	0.03	0.03	0.00
6406/12-2	3810.83	core-chip	sst	0.000	10.73			0.38	0.13	1.18	0.40	0.05	0.05	0.00
6406/12-2	3810.83	core-chip	clst	0.052	8.71			0.21	0.10	1.08	0.36	0.06	0.06	0.01
6406/12-2	3811.41	core-chip	sst	0.000	8.10			0.67	0.20	1.07	0.50	0.05	0.05	
6406/12-2	3811.41	core-chip	clst	0.000	11.24			0.18	0.08	1.08	0.35	0.00	0.00	
6406/12-2	3812.4	core-chip	sst	0.000	9.83			0.22	0.09	1.24	0.33	0.00	0.00	
6406/12-2	3812.4	core-chip	clst	0.050	10.43			0.18	0.08	1.14	0.32	0.05	0.05	0.01
6406/12-2	3812.97	core-chip	sst	0.000	8.65			0.52	0.17	1.15	0.42	0.57	0.57	0.00
6406/12-2	3812.97	core-chip	clst	0.049	12.87			0.21	0.07	1.12	0.32	0.05	0.05	
6406/12-2	3813.27	core-chip	sst	0.000	5.70			0.40	0.14	1.07	0.46	0.00	0.00	
6406/12-2	3813.27	core-chip	clst	0.000				0.18	0.10		0.75	0.00	0.00	0.20
6406/12-2	3813.58	core-plug	sst	0.031	4.32			0.22	0.07	0.97	0.35	0.03	0.03	0.02
6406/12-2	3813.58	core-plug	clst	0.035	4.59			0.25	0.09	0.95	0.37	0.03	0.03	0.01
6406/12-2	3814.6	core-chip	clst	0.051	19.81			0.08	0.05	1.09	0.32	0.05	0.05	
6406/12-2	3814.68	core-chip	sst	0.000	4.72			0.28	0.11	1.20	0.40	0.00	0.00	

see following pages for description of parameters

Derivation of biomarker ratios reported in Table 1.

<u>Ratio</u>	<u>Derivation</u>	<u>m/z</u>
Triterpanes		
22S	$32\alpha\beta\text{S}/(32\alpha\beta\text{S}+32\alpha\beta\text{R})$	191
Ts/Tm	$27\text{Ts}/27\text{Tm}$	191
TtX	$30\text{d}/29\beta\alpha$	191
30D/H	$30\text{d}/30\alpha\beta$	191
29/30H	$29\alpha\beta/30\alpha\beta$	191
$30\alpha\beta/30\beta\alpha$	$30\alpha\beta/(30\alpha\beta+30\beta\alpha)$	191
$28\alpha\beta/\text{H}$	$28\alpha\beta/30\alpha\beta$	191
3R/H	$(23/3)/30\alpha\beta$	191
4R/H	$(24/4)/30\alpha\beta$	191
35/34H	$(35\alpha\beta\text{R}+35\alpha\beta\text{S})/(34\alpha\beta\text{R}+34\alpha\beta\text{S})$	191
Dem/H	$25\text{nor}30\alpha\beta/30\alpha\beta$	191
O/H	$30\text{O}/30\alpha\beta$	191
G/H	$30\text{G}/30\alpha\beta$	191
ppmH ⁺	$\text{ppm } 27\text{Ts}+27\text{Tm}+29\alpha\beta+29\beta\alpha+30\alpha\beta+30\beta\alpha+31\alpha\beta\text{S}+31\alpha\beta\text{R}+32\alpha\beta\text{S}+32\alpha\beta\text{R}+33\alpha\beta\text{S}+33\alpha\beta\text{R}+34\alpha\beta\text{S}+34\alpha\beta\text{R}+35\alpha\beta\text{S}+35\alpha\beta\text{R}$	191
Steranes		
20S	$29\alpha\alpha\text{S}/(29\alpha\alpha\text{R}+29\alpha\alpha\text{S})$	217
$\beta\beta$	$(29\beta\beta\text{R}+29\beta\beta\text{S})/(29\beta\beta\text{R}+29\beta\beta\text{S}+29\alpha\alpha\text{R}+29\alpha\alpha\text{S})$	217
%C27	$100*(27\beta\beta\text{R}+27\beta\beta\text{S})/(27\beta\beta\text{R}+27\beta\beta\text{S}+28\beta\beta\text{R}+28\beta\beta\text{S}+29\beta\beta\text{R}+29\beta\beta\text{S})$	218
%C28	$100*(28\beta\beta\text{R}+28\beta\beta\text{S})/(27\beta\beta\text{R}+27\beta\beta\text{S}+28\beta\beta\text{R}+28\beta\beta\text{S}+29\beta\beta\text{R}+29\beta\beta\text{S})$	218
%C29	$100*(29\beta\beta\text{R}+29\beta\beta\text{S})/(27\beta\beta\text{R}+27\beta\beta\text{S}+28\beta\beta\text{R}+28\beta\beta\text{S}+29\beta\beta\text{R}+29\beta\beta\text{S})$	218
C30/st	$(30\beta\beta\text{R}+30\beta\beta\text{S})/(27\beta\beta\text{R}+27\beta\beta\text{S}+28\beta\beta\text{R}+28\beta\beta\text{S}+29\beta\beta\text{R}+29\beta\beta\text{S})$	218
Dia/reg	$(27\text{d}\beta\text{R}+27\text{d}\beta\text{S})/(27\alpha\alpha\text{R}+27\alpha\alpha\text{S})$	217
ppmS ⁺	$\text{ppm } 27\beta\beta\text{R}+27\beta\beta\text{S}+28\beta\beta\text{R}+28\beta\beta\text{S}+29\beta\beta\text{R}+29\beta\beta\text{S}$	218
H/S	$\text{Intensities}(27\text{Ts}+27\text{Tm}+29\alpha\beta+29\beta\alpha+30\alpha\beta+30\beta\alpha+31\alpha\beta\text{S}+31\alpha\beta\text{R}+32\alpha\beta\text{S}+32\alpha\beta\text{R}+33\alpha\beta\text{S}+33\alpha\beta\text{R}+34\alpha\beta\text{S}+34\alpha\beta\text{R}+35\alpha\beta\text{S}+35\alpha\beta\text{R})/\text{Intensities}(27\beta\beta\text{R}+27\beta\beta\text{S}+28\beta\beta\text{R}+28\beta\beta\text{S}+29\beta\beta\text{R}+29\beta\beta\text{S})$	

* ppm calculated from comparison with m/z 219 intensity for D2-cholestane

Biomarker codes used in derivation of ratios

<u>Compound name</u>	<u>Old code</u>	<u>NEW CODE</u>
Triterpanes		
C ₂₃ H ₄₂ tricyclic terpane	P	23/3
C ₂₄ H ₄₄ tricyclic terpane	Q	24/3
C ₂₅ H ₄₆ tricyclic terpane ¹	R	25/3
C ₂₄ H ₄₂ tetracyclic terpane	S	24/4
C ₂₆ H ₄₈ tricyclic terpane ²	T	26/3
18 α (H)-22,29,30-trisnorneohopane	27A	27Ts
17 α (H)-22,29,30-trisnorhopane	27B	27Tm
17 α (H), 21 β (H)-25,28,30-trisnorhopane		25nor28 $\alpha\beta$
17 α (H), 21 β (H)-28,30-bisnorhopane	28A	28 $\alpha\beta$
17 α (H), 21 β (H)-25-norhopane		25nor30 $\alpha\beta$ ³
17 α (H), 21 β (H)-30-norhopane	C29A	29 $\alpha\beta$
18 α (H)-30-norneohopane		29Ts
15 α -methyl-17 α (H)-27-norhopane (TtX)	X	30D
17 β (H), 21 α (H)-30-norhopane (normoretane)	C29B	29 $\beta\alpha$
18 α (H)-oleanane		30O
17 α (H), 21 β (H)-hopane	C30A	30 $\alpha\beta$
17 β (H), 21 α (H)-hopane (moretane)	C30B	30 $\beta\alpha$
Gammacerane		
17 α (H), 21 β (H), 22(S)-homohopane	C31S	31 $\alpha\beta$ S
17 α (H), 21 β (H), 22(R)-homohopane	C31R	31 $\alpha\beta$ R
17 α (H), 21 β (H), 22(S)-bishomohopane	C32S	32 $\alpha\beta$ S
17 α (H), 21 β (H), 22(R)-bishomohopane	C32R	32 $\alpha\beta$ R
17 α (H), 21 β (H), 22(S)-trishomohopane	C33S	33 $\alpha\beta$ S
17 α (H), 21 β (H), 22(R)-trishomohopane	C33R	33 $\alpha\beta$ R
17 α (H), 21 β (H), 22(S)-tetrakishomohopane	C34S	34 $\alpha\beta$ S
17 α (H), 21 β (H), 22(R)-tetrakishomohopane	C34R	34 $\alpha\beta$ R
17 α (H), 21 β (H), 22(S)-pentakishomohopane	C35S	35 $\alpha\beta$ S
17 α (H), 21 β (H), 22(R)-pentakishomohopane	C35R	35 $\alpha\beta$ R

1 may be broad peak or doublet 2 may be doublet 3 listed in Statoil spreadsheets as "nor30" for convenience
Steranes

13 β (H), 17 α (H), 20(S)-cholestane (diasterane)	27a	27d β S
13 β (H), 17 α (H), 20(R)-cholestane (diasterane)	27b	27d β R
13 α (H), 17 β (H), 20(R)-cholestane (diasterane)	27c	27d α R
13 α (H), 17 β (H), 20(S)-cholestane (diasterane)	27d	27d α S
5 α (H), 14 α (H), 17 α (H), 20(S)-cholestane	27e	27 $\alpha\alpha$ S
5 α (H), 14 β (H), 17 β (H), 20(R)-cholestane	27f	27 $\beta\beta$ R
5 α (H), 14 β (H), 17 β (H), 20(S)-cholestane	27g	27 $\beta\beta$ S
5 α (H), 14 α (H), 17 α (H), 20(R)-cholestane	27h	27 $\alpha\alpha$ R
24-methyl-13 β (H), 17 α (H), 20(S)-cholestane (diasterane)	28a	28d β S
24-methyl-13 β (H), 17 α (H), 20(R)-cholestane (diasterane)	28b	28d β R
24-methyl-13 α (H), 17 β (H), 20(R)-cholestane (diasterane)	28c	28d α R
24-methyl-13 α (H), 17 β (H), 20(S)-cholestane (diasterane)	28d	28d α S
24-methyl-5 α (H), 14 α (H), 17 α (H), 20(S)-cholestane	28e	28 $\alpha\alpha$ S
24-methyl-5 α (H), 14 β (H), 17 β (H), 20(R)-cholestane	28f	28 $\beta\beta$ R
24-methyl-5 α (H), 14 β (H), 17 β (H), 20(S)-cholestane	28g	28 $\beta\beta$ S
24-methyl-5 α (H), 14 α (H), 17 α (H), 20(R)-cholestane	28h	28 $\alpha\alpha$ R
24-ethyl-13 β (H), 17 α (H), 20(S)-cholestane (diasterane)	29a	29d β S
24-ethyl-13 β (H), 17 α (H), 20(R)-cholestane (diasterane)	29b	29d β R
24-ethyl-13 α (H), 17 β (H), 20(R)-cholestane (diasterane)	29c	29d α R
24-ethyl-13 α (H), 17 β (H), 20(S)-cholestane (diasterane)	29d	29d α S
24-ethyl-5 α (H), 14 α (H), 17 α (H), 20(S)-cholestane	29e	29 $\alpha\alpha$ S
24-ethyl-5 α (H), 14 β (H), 17 β (H), 20(R)-cholestane	29f	29 $\beta\beta$ R
24-ethyl-5 α (H), 14 β (H), 17 β (H), 20(S)-cholestane	29g	29 $\beta\beta$ S
24-ethyl-5 α (H), 14 α (H), 17 α (H), 20(R)-cholestane	29h	29 $\alpha\alpha$ R
24-propyl-5 α (H), 14 α (H), 17 α (H), 20(S)-cholestane	30e	30 $\alpha\alpha$ S
24-propyl-5 α (H), 14 β (H), 17 β (H), 20(R)-cholestane	30f	30 $\beta\beta$ R
24-propyl-5 α (H), 14 β (H), 17 β (H), 20(S)-cholestane	30g	30 $\beta\beta$ S
24-propyl-5 α (H), 14 α (H), 17 α (H), 20(R)-cholestane	30h	30 $\alpha\alpha$ R
4-methyl-14 α (H), 17 α (H)-cholestanes		M28 $\alpha\alpha$
4,24-dimethyl-14 α (H), 17 α (H)-cholestanes		M29 $\alpha\alpha$
4-methyl-24-ethyl-14 α (H), 17 α (H)-cholestanes		M30 $\alpha\alpha$
4,23,24-trimethyl-14 α (H), 17 α (H)-cholestanes (dinosteranes)		M30D

Table 1. ANALYTICAL PROGRAM

Sample Depth & Type c= Cutt s= SWC p= Conv core/ plug m= Mud R= Reservoir S= Source	F r a c t i o n	H S & O c c G a s	L e c c O T O C	R o c k E v a l	T h e r m E x t G C	P y r o l y s i s G C	E x t r a c t i o n	M P L C & D e a s p	I a t r o s c a n	E O M G C	S a t G C Q u a n.	A r o G C	S a t G C M S Q u a n.	A r o G C M S	B u l k C I s o t	V i s K e r o g e n	V i t R e f l e c t
3760.00 mR	039						X	X	X		X	X	X		X		
3809.95 pS	0302L		X	X	X	X	X	X	X		X	X	X		X	X	
3809.95 pR	0301L		X	X	X		X	X	X		X	X	X		X		
3810.53 pS	0312L		X	X	X	X	X	X	X		X	X	X		X	X	
3810.53 pR	0311L		X	X	X		X	X	X		X	X	X		X		
3810.83 pS	0322L		X	X	X	X	X	X	X		X	X	X		X	X	
3810.83 pR	0321L		X	X	X		X	X	X		X	X	X		X		
3811.41 pS	0332L		X	X	X	X	X	X	X		X	X	X		X	X	
3811.41 pR	0331L		X	X	X		X	X	X		X	X	X		X		
3812.40 pS	0342L		X	X	X	X	X	X	X		X	X	X		X	X	
3812.40 pR	0341L		X	X	X		X	X	X		X	X	X		X		
3812.97 pS	0352L		X	X	X	X	X	X	X		X	X	X		X	X	
3812.97 pR	0351L		X	X	X		X	X	X		X	X	X		X		
3813.27 pS	0362L		X	X	X	X	X	X	X		X	X	X		X	X	
3813.27 pR	0361L		X	X	X		X	X	X		X	X	X		X		
3814.60 pS	0372L		X	X	X	X	X	X	X		X	X	X		X	X	
3814.68 pR	0381L		X	X	X		X	X	X		X	X	X		X		
3812.40 pR*	0341L			X	X												
3813.27 pR*	0361L			X	X												
3813.27 pS*	0362L			X	X												
3813.58 sS*	0251L			X	X												
3813.58 sR*	0252L			X	X												

* Samples for reanalysis (Ref.: DTJ 020034 and DTJ 020215/G96-4)

Table5a Rock-Eval table for well NOCS 6406/12-2

Page: 1

Depth unit of measure: m

Depth	Typ	Form	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
3809.95	ccp		bulk	0.50	4.09	0.44	9.30	1.71	239	26	4.6	0.11	438	0030-0B
3809.95	ccp		S/Sst : lt gy	0.79	0.13	0.36	0.36	0.14	93	257	0.9	0.86	542	0030-1L
3810.53	ccp		S/Sst : lt gy	0.67	0.16	0.33	0.48	0.13	123	254	0.8	0.81	469	0031-1L
3810.53	ccp		Sh/Clst: drk gy	1.07	4.89	0.52	9.40	2.69	182	19	6.0	0.18	435	0031-2L
3810.83	ccp		S/Sst : lt gy	0.51	0.20	0.43	0.47	0.21	95	205	0.7	0.72	435	0032-1L
3810.83	ccp		Sh/Clst: drk gy	0.69	7.18	0.46	15.61	2.82	255	16	7.9	0.09	436	0032-2L
3811.41	ccp		S/Sst : lt gy	0.98	0.09	0.59	0.15	0.19	47	311	1.1	0.92	353	0033-1L
3811.41	ccp		Sh/Clst: drk gy	1.00	9.36	0.69	13.57	3.64	257	19	10.4	0.10	437	0033-2L
3812.40	ccp		S/Sst : lt gy to m gy	1.22	0.21	0.32	0.66	0.24	88	133	1.4	0.85	387	0034-1L
3812.40	ccp		Sh/Clst: drk gy	0.67	4.62	0.55	8.40	2.26	204	24	5.3	0.13	438	0034-2L
3812.97	ccp		S/Sst : lt gy	0.39	0.09	0.43	0.21	0.17	53	253	0.5	0.81	403	0035-1L
3812.97	ccp		Sh/Clst: drk gy	1.70	7.43	0.62	11.98	3.35	222	19	9.1	0.19	436	0035-2L
3813.27	ccp		S/Sst : lt gy	1.26	0.24	0.60	0.40	0.24	100	250	1.5	0.84	353	0036-1L
3813.27	ccp		Sh/Clst: drk gy	1.23	4.20	0.37	11.35	1.85	227	20	5.4	0.23	432	0036-2L
3814.60	ccp		Sh/Clst: drk gy	0.69	7.38	0.42	17.57	3.03	244	14	8.1	0.09	438	0037-2L
3814.68	ccp		S/Sst : lt gy	2.22	0.36	0.41	0.88	0.34	106	121	2.6	0.86	361	0038-1L

Table 5b Rock-Eval reanalysis of NOCS 6406/12-2 samples														
Depth	Type	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample	
3812.40 m	ccp	S/Sst	1.44	0.33	0.36	0.92	---	---	---	1.77	0.81	387	0034-1L	
3813.27 m	ccp	S/Sst	1.32	0.38	0.65	0.58	---	---	---	1.70	0.78	347	0036-1L	
3813.27 m	ccp	Sh/Clst	1.11	4.10	0.71	5.77	---	---	---	5.21	0.21	438	0036-2L	
3813.58 m	swc	Sltst	1.68	11.59	0.40	28.97	---	---	---	13.27	0.13	436	0025-1L	
3813.58 m	swc	S/Sst	4.14	1.89	0.22	8.59	---	---	---	6.03	0.69	437	0025-2L	

Table 5 c: Rock-Eval table for well RE, STD

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
1.00	std	bulk	0.52	17.41	1.91	9.12	-	-	-	17.9	0.03	421	0078-0B

Table 6 : Pyrolysis GC Data (S2 peak) as Percentage of Total Area for Well NOCS 6406/12-2

Depth unit of measure: m

Depth	Typ	Lithology	C1	C2-C5	C6-C14	C15+	S2 from Rock-Eval	Sample
3809.95	ccp	Sh/Clst: drk gy	9.95	29.11	37.48	23.46	-	0030-2L
3810.53	ccp	Sh/Clst: drk gy	10.09	24.55	35.42	29.94	-	0031-2L
3810.83	ccp	Sh/Clst: drk gy	9.84	25.16	36.39	28.61	-	0032-2L
3811.41	ccp	Sh/Clst: drk gy	7.33	20.60	36.60	35.47	-	0033-2L
3812.40	ccp	Sh/Clst: drk gy	9.52	28.07	37.65	24.77	-	0034-2L
3812.97	ccp	Sh/Clst: drk gy	7.02	17.81	33.25	41.91	-	0035-2L
3813.27	ccp	Sh/Clst: drk gy	6.46	21.12	35.40	37.02	-	0036-2L
3814.60	ccp	Sh/Clst: drk gy	8.48	23.10	36.14	32.28	-	0037-2L

Table 7: Visual Kerogen Composition Data for well NOCS 6406/12-2

Page: 1

Depth unit of measure: m

Depth	Typ	Lithology	Amorphous			Algal/Phytoplankton					Herbaceous				Woody				Coaly			SCI	Sample	
			AM%	FA	HA	AP%	Cy	Ta	Bo	Di	De	HE%	SP	Cu	De	WO%	FL	NF	De	CO%	FS	De		
3809.95	ccp	Sh/Clst	TR	**	*	TR	*				*	45	*	**	*	20		*	*	35	**	*	5.5-6.0	0030-2L
3810.53	ccp	Sh/Clst	35	**	*	TR	*				*	25	*	**	*	35		*	*	30	**	*	5.5-6.0	0031-2L
3810.83	ccp	Sh/Clst	35	*	*	TR	*				*	15	*	*	*	25		*	*	25	*	*	6.5(?)	0032-2L
3811.41	ccp	Sh/Clst	40	*	*	TR	*				*	20	*	*	**	15		*	*	25	*	*	6.0-6.5	0033-2L
3812.40	ccp	Sh/Clst	10	**	*	TR	*				*	50	*	**	*	25		**	*	35	**	*	6.0-6.5	0034-2L
3812.97	ccp	Sh/Clst	15	**	*	TR	*		*	*	*	35	*	**	**	20		*	*	30	*	**	6.5	0035-2L
3813.27	ccp	Sh/Clst	30	**	*	TR	*				*	15	*	**	**	25		**	*	30	**	*	6.5	0036-2L
3814.60	ccp	Sh/Clst	40	**	*	TR	*		?	*	*	20	*	**	*	15		*	*	25	*	**	6.5	0037-2L

Table 8 a: Weight of EOM and Chromatographic Fraction for well NOCS 6406/12-2

Page: 1

Depth unit of measure: m

Depth	Typ	Lithology	Rock Extracted (g)	EOM (mg)	Sat (mg)	Aro (mg)	Asph (mg)	NSO (mg)	HC (mg)	Non-HC (mg)	TOC (e) (%)	Sample
3760.00	mud	bulk	11.5	1415.5	1127.2	53.7	204.6	30.0	1181.0	234.5	8.91	0039-0B
3809.95	ccp	S/Sst : lt gy	10.9	9.9	7.2	1.7	0.8	0.2	8.9	1.0	0.14	0030-1L
3809.95	ccp	Sh/Clst: drk gy	7.2	15.2	3.3	3.9	7.5	0.5	7.2	8.0	1.71	0030-2L
3810.53	ccp	S/Sst : lt gy	10.5	13.1	8.5	2.8	1.3	0.5	11.3	1.8	0.13	0031-1L
3810.53	ccp	Sh/Clst: drk gy	9.3	10.1	3.5	2.6	3.2	0.9	6.1	4.0	2.69	0031-2L
3810.83	ccp	S/Sst : lt gy	10.4	12.9	5.3	3.7	2.8	1.0	9.0	3.9	0.21	0032-1L
3810.83	ccp	Sh/Clst: drk gy	10.8	31.8	9.5	6.5	11.8	4.0	16.0	15.8	2.82	0032-2L
3811.41	ccp	S/Sst : lt gy	11.1	13.1	7.2	2.0	1.6	2.3	9.2	3.9	0.19	0033-1L
3811.41	ccp	Sh/Clst: drk gy	6.0	20.5	3.7	3.9	9.7	3.1	7.7	12.8	3.64	0033-2L
3812.40	ccp	S/Sst : lt gy to m gy	9.3	17.0	0.2	0.5	15.4	0.9	0.7	16.3	0.24	0034-1L
3812.40	ccp	Sh/Clst: drk gy	11.1	26.2	8.6	5.2	9.4	2.9	13.8	12.4	2.26	0034-2L
3812.97	ccp	S/Sst : lt gy	11.4	10.4	4.5	1.8	0.8	3.3	6.3	4.1	0.17	0035-1L
3812.97	ccp	Sh/Clst: drk gy	11.4	10.3	2.4	0.8	6.1	1.1	3.2	7.1	3.35	0035-2L
3813.27	ccp	S/Sst : lt gy	12.4	21.8	9.0	2.7	1.8	8.4	11.7	10.1	0.24	0036-1L
3813.27	ccp	Sh/Clst: drk gy	13.3	26.0	1.2	11.3	8.2	5.3	12.6	13.4	1.85	0036-2L

Table 8 a: Weight of EOM and Chromatographic Fraction for well NOCS 6406/12-2

Depth unit of measure: m

Depth	Typ	Lithology	Rock Extracted (g)	EOM (mg)	Sat (mg)	Aro (mg)	Asph (mg)	NSO (mg)	HC (mg)	Non-HC (mg)	TOC (e) (%)	Sample
3814.60	ccp	Sh/Clst: drk gy	10.2	22.4	2.7	4.1	12.5	3.2	6.8	15.6	3.03	0037-2L
3814.68	ccp	S/Sst : lt gy	10.9	41.0	26.6	8.0	1.6	4.7	34.7	6.3	0.34	0038-1L

Table 8 b: Concentration of EOM and Chromatographic Fraction (wt ppm rock) for well NOCS 6406/12-2

Page: 1

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
3760.00	mud	bulk	123086	98020	4672	17790	2604	102692	20394	0039-0B
3809.95	ccp	S/Sst : lt gy	911	659	160	73	18	819	92	0030-1L
3809.95	ccp	Sh/Clst: drk gy	2099	461	533	1033	71	994	1104	0030-2L
3810.53	ccp	S/Sst : lt gy	1250	809	270	126	43	1079	170	0031-1L
3810.53	ccp	Sh/Clst: drk gy	1090	374	280	341	93	655	435	0031-2L
3810.83	ccp	S/Sst : lt gy	1245	511	358	274	101	869	375	0032-1L
3810.83	ccp	Sh/Clst: drk gy	2941	880	603	1086	370	1483	1457	0032-2L
3811.41	ccp	S/Sst : lt gy	1174	643	180	144	206	824	350	0033-1L
3811.41	ccp	Sh/Clst: drk gy	3405	621	654	1611	518	1275	2129	0033-2L
3812.40	ccp	S/Sst : lt gy to m gy	1820	20	56	1653	89	77	1743	0034-1L
3812.40	ccp	Sh/Clst: drk gy	2362	775	469	852	265	1245	1117	0034-2L
3812.97	ccp	S/Sst : lt gy	914	396	158	68	291	554	359	0035-1L
3812.97	ccp	Sh/Clst: drk gy	899	207	68	530	92	276	622	0035-2L
3813.27	ccp	S/Sst : lt gy	1765	726	217	142	678	944	821	0036-1L
3813.27	ccp	Sh/Clst: drk gy	1956	91	853	615	396	944	1012	0036-2L

Table 8 b: Concentration of EOM and Chromatographic Fraction (wt ppm rock) for well NOCS 6406/12-2

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
3814.60	ccp	Sh/Clst: drk gy	2189	264	396	1218	308	661	1527	0037-2L
3814.68	ccp	S/Sst : lt gy	3751	2435	735	149	430	3171	580	0038-1L

Table 8 c: Concentration of EOM and Chromatographic Fraction (mg/g TOC(e)) for well NOCS 6406/12-2

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Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
3760.00	mud	bulk	1381.45	1100.11	52.44	199.67	29.23	1152.55	228.90	0039-0B
3809.95	ccp	S/Sst : lt gy	651.14	470.93	114.44	52.62	13.15	585.37	65.77	0030-1L
3809.95	ccp	Sh/Clst: drk gy	122.77	26.98	31.18	60.42	4.20	58.16	64.62	0030-2L
3810.53	ccp	S/Sst : lt gy	961.54	622.43	207.72	97.62	33.76	830.15	131.39	0031-1L
3810.53	ccp	Sh/Clst: drk gy	40.55	13.93	10.44	12.69	3.49	24.37	16.18	0031-2L
3810.83	ccp	S/Sst : lt gy	592.94	243.61	170.53	130.54	48.26	414.14	178.80	0032-1L
3810.83	ccp	Sh/Clst: drk gy	104.32	31.23	21.39	38.54	13.15	52.62	51.70	0032-2L
3811.41	ccp	S/Sst : lt gy	618.36	338.92	94.88	76.00	108.57	433.80	184.56	0033-1L
3811.41	ccp	Sh/Clst: drk gy	93.55	17.07	17.98	44.27	14.24	35.05	58.50	0033-2L
3812.40	ccp	S/Sst : lt gy to m gy	758.39	8.48	23.64	688.79	37.47	32.12	726.27	0034-1L
3812.40	ccp	Sh/Clst: drk gy	104.53	34.31	20.79	37.70	11.73	55.10	49.43	0034-2L
3812.97	ccp	S/Sst : lt gy	538.05	233.33	93.12	40.35	171.25	326.45	211.60	0035-1L
3812.97	ccp	Sh/Clst: drk gy	26.85	6.20	2.06	15.82	2.76	8.26	18.59	0035-2L
3813.27	ccp	S/Sst : lt gy	735.49	302.63	90.76	59.38	282.73	393.39	342.11	0036-1L
3813.27	ccp	Sh/Clst: drk gy	105.75	4.92	46.12	33.27	21.43	51.04	54.70	0036-2L