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Source Rock Analysis of Cretaceous Sections Well 7117/9-1 and 7117/9-2

by

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Resyme/Konklusjon/Anbelaling
Summary/Conclusion Recommendation

The Cretaceous sections from two wells at Senjaryggen have been analysed by Rock-Eval pyrolysis and TOC.

Emneord/Key words
Source rock evaluation, Rock-Eval TOC.

Emnekategori/Subject category
Petroleum Geochemistry

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Table 1. Source rock data, Well 7117/9-1

0 DEPTH m		2 S1 kg/tonn	3 S2 kg/tonn	4 S3 kg/tonn	5 PI	6 OI	7 HI	8 Tmax C	9 TOC %
1	2048	0.03	0.25	1.03	0.11	87.3	21.2	409	1.180
2	2058	0.01	0.24	0.91	0.04	78.4	20.7	412	1.165
3	2075	0.06	0.12	1.37	0.33	123.4	10.8	285	1.110
4	2085	0.02	0.22	0.96	0.08	96.0	22.0	409	1.000
5	2110	0.08	0.40	0.97	0.17	86.6	35.7	402	1.120
6	2120	0.02	0.30	0.81	0.06	72.3	26.8	412	1.120
7	2150	0.04	0.32	0.92	0.11	85.2	29.6	414	1.075
8	2160	0.00	0.21	0.88	0.00	72.7	17.4	413	1.210
9	2170	0.02	0.27	0.85	0.07	88.5	28.1	409	0.960
10	2190	0.02	0.30	0.72	0.06	66.7	27.8	416	1.080
11	2200	0.01	0.31	0.84	0.03	73.7	27.2	422	1.140
12	2210	0.01	0.30	0.71	0.03	64.5	27.3	422	1.100
13	2220	0.01	0.26	0.74	0.04	64.9	22.8	422	1.140
14	2235	0.01	0.25	0.72	0.04	67.3	23.4	420	1.070
15	2248	0.02	0.36	0.76	0.05	67.9	32.1	420	1.120
16	2255	0.02	0.28	0.82	0.07	78.1	26.7	413	1.050
17	2265	0.01	0.29	0.85	0.03	22.7	66.4	420	1.280
18	2280	0.01	0.28	0.84	0.03	70.6	23.5	418	1.190
19	2290	0.02	0.25	0.85	0.07	69.1	20.3	420	1.230
20	2300	0.02	0.29	0.91	0.06	79.1	25.2	423	1.150
21	2308	0.02	0.36	1.33	0.05	85.8	23.2	422	1.550
22	2325	0.00	0.18	1.38	0.00	101.5	13.2	399	1.360
23	2335	0.03	0.43	1.13	0.07	77.9	29.7	419	1.450
24	2345	0.02	0.39	0.82	0.05	70.7	33.6	419	1.160
25	2355	0.02	0.34	0.73	0.06	55.7	26.0	423	1.310
26	2373	0.05	0.30	0.98	0.14	98.0	30.0	411	1.000
27	2383	0.05	0.25	1.05	0.17	100.0	23.8	330	1.050
28	2393	0.02	0.40	0.63	0.05	59.4	37.7	422	1.060
29	2415	0.02	0.28	0.62	0.07	53.9	24.3	422	1.150
30	2425	0.03	0.36	0.76	0.08	62.3	29.5	423	1.220
31	2435	0.07	0.22	0.90	0.24	84.1	20.6	380	1.070
32	2445	0.01	0.30	0.60	0.03	50.0	25.0	423	1.200
33	2458	0.01	0.47	0.72	0.02	67.3	43.9	422	1.070
34	2468	0.04	0.33	0.61	0.11	58.7	31.7	421	1.040
35	2478	0.05	0.35	0.65	0.13	58.0	31.2	422	1.120
36	2485	0.04	0.22	0.66	0.15	56.9	19.0	426	1.160
37	2505	0.02	0.23	0.69	0.08	65.7	21.9	421	1.050
38	2515	0.07	0.30	0.83	0.19	78.3	28.3	370	1.060
39	2525	0.07	0.32	0.65	0.18	60.2	29.6	423	1.080
40	2535	0.04	1.15	0.78	0.03	71.6	105.5	443	1.090
41	2545	0.07	0.37	0.64	0.16	52.9	30.6	420	1.215
42	2555	0.05	0.38	0.72	0.12	56.7	29.9	424	1.270
43	2565	0.04	0.36	0.57	0.10	47.1	29.8	422	1.210
44	2595	0.03	0.27	0.57	0.10	66.3	31.4	424	0.860
45	2605	0.07	0.21	0.62	0.25	18.3	53.9	425	1.150
46	2615	0.03	0.29	0.56	0.09	63.6	33.0	420	0.880
47	2625	0.00	0.25	0.69	0.00	58.0	21.0	425	1.190
48	2640	0.00	0.32	0.72	0.00	65.5	29.1	428	1.105
49	2650	0.03	0.38	0.80	0.07	67.8	32.2	429	1.180
50	2660	0.00	0.18	0.87	0.00	87.0	18.0	425	1.005
51	2685	0.01	0.23	0.43	0.04	40.6	21.7	423	1.060
52	2695	0.01	0.21	0.53	0.05	55.8	22.1	422	0.950
53	2703	0.00	0.20	0.45	0.00	50.0	22.2	424	0.900
54	2730	0.21	1.03	0.94	0.17	200.0	219.1	465	0.470

Table 1. Cont.

0 DEPTH m		2 S1 kg/tonn	3 S2 kg/tonn	4 S3 kg/tonn	5 PI	6 OI	7 HI	8 Tmax C	9 TOC %
55	2750	0.08	0.83	1.08	0.09	124.1	95.4	469	0.870
56	2788	0.00	0.27	0.81	0.00	84.4	28.1	427	0.960
57	2798	0.01	0.31	0.54	0.03	65.1	37.3	423	0.830
58	2820	0.00	0.32	0.51	0.00	49.0	30.8	428	1.045
59	2830	0.02	0.31	0.76	0.06	80.9	33.0	430	0.940
60	2840	0.00	0.30	0.54	0.00	52.4	29.1	422	1.030
61	2850	0.06	0.65	0.94	0.08	101.1	69.9	460	0.930
62	2888	0.01	0.23	0.51	0.04	54.8	24.7	426	0.930
63	2898	0.02	0.29	0.68	0.06	66.0	28.2	431	1.030
64	2910	0.01	0.23	0.39	0.04	44.3	26.1	426	0.880
65	2920	0.05	0.28	0.40	0.15	45.5	31.8	426	0.880
66	2940	0.01	0.19	0.29	0.05	33.0	21.6	427	0.880
67	2970	0.01	0.13	0.64	0.07	72.7	14.8	444	0.880
68	2980	0.01	0.14	0.71	0.07	78.0	15.4	298	0.910
69	3000	0.01	0.18	0.80	0.05	89.9	20.2	445	0.895
70	3013	0.02	0.19	0.88	0.10	98.9	21.3	408	0.890
71	3030	0.03	0.16	0.90	0.16	92.8	16.5	442	0.970
72	3040	0.02	0.13	0.62	0.13	61.4	12.9	366	1.010
73	3060	0.03	0.22	1.10	0.12	103.8	20.8	444	1.060
74	3070	0.00	0.12	0.67	0.00	65.0	11.7	374	1.035
75	3090	0.01	0.14	0.57	0.07	62.0	15.2	435	0.920
76	3100	0.01	0.20	0.38	0.05	39.6	20.8	431	0.960
77	3120	0.01	0.18	0.46	0.05	50.5	19.8	433	0.910
78	3130	0.00	0.15	0.67	0.00	73.6	16.5	358	0.910
79	3150	0.02	0.14	0.55	0.12	59.1	15.1	326	0.930
80	3160	0.03	0.19	0.50	0.14	50.0	19.0	421	1.000
81	3180	0.03	0.17	0.82	0.15	85.4	17.7	393	0.960
82	3190	0.01	0.15	0.43	0.06	46.7	16.3	432	0.920
83	3200	0.01	0.22	0.44	0.04	46.8	23.4	426	0.940

Table 2. Source rock data, Well 7117/9-2

0	DEPTH m	2 S1 kg/tonn	3 S2 kg/tonn	4 S3 kg/tonn	5 PI	6 OI	7 HI	8 Tmax C	9 TOC %
1	1395.0	0.07	0.00	0.43	1.00	95.6	0.0	441	0.450
2	1405.0	0.05	0.01	0.47	0.83	97.9	2.1	418	0.480
3	1415.0	0.04	0.00	0.60	1.00	127.6	0.0	440	0.470
4	1425.0	0.06	0.20	0.56	0.23	121.7	43.5	258	0.460
5	1435.0	0.11	0.29	0.74	0.28	148.0	58.0	247	0.500
6	1445.0	0.05	0.32	0.65	0.14	86.2	57.1	398	0.560
7	1455.0	0.07	0.45	0.63	0.13	101.6	72.6	389	0.620
8	1465.0	0.13	0.68	0.68	0.16	70.1	70.1	411	0.970
9	1475.0	0.05	0.57	0.89	0.08	97.8	62.6	408	0.910
10	1485.0	0.09	0.66	0.79	0.12	76.7	64.1	405	1.030
11	1495.0	0.10	0.76	1.02	0.12	77.9	58.0	415	1.310
12	1505.0	0.07	0.71	0.78	0.09	51.3	46.7	415	1.520
13	1515.0	0.07	0.74	0.83	0.09	53.2	47.4	416	1.560
14	1525.0	0.03	0.47	0.92	0.06	61.7	31.5	416	1.490
15	1535.0	0.13	0.68	0.89	0.16	57.1	43.6	421	1.560
16	1545.0	0.07	0.60	0.91	0.10	58.7	38.7	420	1.550
17	1555.0	0.07	0.64	0.72	0.10	50.3	44.8	420	1.430
18	1565.0	0.05	0.60	0.81	0.08	54.0	40.0	421	1.500
19	1575.0	0.03	0.57	0.77	0.05	45.8	33.9	420	1.680
20	1585.0	0.05	0.57	0.77	0.08	48.7	36.1	421	1.580
21	1595.0	0.08	0.81	0.86	0.09	51.5	48.5	419	1.670
22	1605.0	0.12	0.70	1.08	0.15	70.1	45.5	422	1.540
23	1615.0	0.04	0.63	0.95	0.06	69.3	46.0	414	1.370
24	1625.0	0.06	0.70	0.70	0.08	49.6	49.6	418	1.410
25	1640.0	0.04	0.61	0.61	0.06	30.0	30.0	424	2.030
26	1650.0	0.05	0.58	0.61	0.08	42.4	40.3	421	1.445
27	1660.0	0.05	0.62	0.68	0.07	45.3	41.3	419	1.500
28	1670.0	0.05	0.61	0.64	0.08	47.4	45.2	421	1.350
29	1680.0	0.03	0.50	0.75	0.06	56.4	37.6	420	1.330
30	1690.0	0.05	0.68	0.94	0.07	64.8	46.9	418	1.450
31	1700.0	0.04	0.58	0.76	0.06	51.4	39.2	421	1.480
32	1710.0	0.03	0.52	0.58	0.05	42.0	37.7	421	1.380
33	1720.0	0.04	0.57	0.79	0.07	42.9	31.0	421	1.840
34	1730.0	0.03	0.52	0.62	0.05	45.3	38.0	421	1.370
35	1740.0	0.03	0.44	0.56	0.06	46.3	36.4	416	1.210
36	1750.0	0.06	0.69	0.81	0.08	61.4	52.3	418	1.320
37	1760.0	0.03	0.65	0.78	0.04	51.0	42.5	422	1.530
38	1770.0	0.09	0.88	0.83	0.09	52.5	55.7	421	1.585
39	1780.0	0.01	0.59	0.75	0.02	48.7	38.3	421	1.540
40	1790.0	0.05	0.86	0.80	0.05	53.7	57.7	426	1.490
41	1800.0	0.02	0.70	0.64	0.03	42.7	46.7	425	1.500
42	1810.0	0.06	0.57	1.42	0.10	92.2	37.0	422	1.540
43	1820.0	0.02	0.41	1.01	0.05	65.2	26.5	423	1.550
44	1830.0	0.02	0.56	0.75	0.03	46.0	34.4	423	1.630
45	1840.0	0.02	0.38	1.41	0.05	87.6	23.6	415	1.610
46	1850.0	0.02	0.27	1.28	0.07	88.9	18.7	422	1.440
47	1860.0	0.03	0.49	0.71	0.06	48.3	33.3	421	1.470
48	1870.0	0.10	0.68	0.82	0.13	59.9	49.6	384	1.370
49	1880.0	0.08	0.80	0.83	0.09	52.2	50.3	425	1.590
50	1890.0	0.03	0.53	0.88	0.05	60.7	36.6	418	1.450
51	1900.0	0.03	0.27	1.33	0.10	93.7	19.0	325	1.420
52	1910.0	0.03	0.50	0.76	0.06	55.9	36.8	422	1.360
53	1920.0	0.03	0.37	0.86	0.08	49.1	21.1	426	1.750
54	1930.0	0.02	0.35	0.66	0.05	50.0	26.5	424	1.320

Table 2. Cont.

0 DEPTH m		2 S1 kg/tonn	3 S2 kg/tonn	4 S3 kg/tonn	5 PI	6 OI	7 HI	8 Tmax C	9 TOC %
55	1940.0	0.01	0.35	1.07	0.03	70.4	23.0	423	1.525
56	1950.0	0.02	0.27	1.02	0.07	66.2	17.5	431	1.540
57	1960.0	0.03	0.67	0.82	0.04	53.6	43.8	422	1.530
58	1970.0	0.06	0.53	0.53	0.10	36.1	36.1	428	1.470
59	1980.0	0.04	0.58	0.63	0.06	41.7	38.4	431	1.510
60	1990.0	0.05	0.54	1.28	0.08	79.5	33.5	410	1.610
61	2000.0	0.07	0.82	0.88	0.08	62.9	58.6	423	1.405
62	2010.0	0.09	0.92	0.81	0.09	56.6	64.3	422	1.430
63	2016.0	0.06	0.86	0.66	0.07	44.3	57.7	424	1.490
64	2025.0	0.05	1.90	1.04	0.03	61.9	113.1	445	1.680
65	2035.0	0.06	0.61	1.20	0.09	77.9	39.6	409	1.540
66	2045.0	0.06	0.57	1.72	0.10	104.2	34.8	408	1.645
67	2055.0	0.04	0.66	0.60	0.06	37.3	41.0	433	1.610
68	2065.0	0.03	0.55	0.77	0.05	49.4	35.3	428	1.560
69	2075.0	0.03	0.51	0.73	0.06	45.3	31.7	428	1.610
70	2085.0	0.02	0.40	0.66	0.05	44.3	26.8	429	1.490
71	2095.0	0.03	0.24	1.28	0.11	87.1	16.3	438	1.470
72	2105.0	0.04	0.46	0.70	0.08	49.6	32.9	427	1.405
73	2115.0	0.04	0.44	0.66	0.08	50.8	33.8	428	1.300
74	2127.0	0.01	0.42	0.73	0.02	51.0	29.4	429	1.430
75	2135.0	0.01	0.45	0.82	0.02	61.7	33.8	428	1.330
76	2142.0	0.01	0.23	1.59	0.04	111.2	16.1	427	1.430
77	2150.0	0.02	0.26	1.58	0.07	105.3	17.3	431	1.500
78	2157.0	0.03	0.29	0.87	0.09	61.3	20.4	421	1.420
79	2169.5	0.07	0.07	0.29	0.50	38.2	9.2	358	0.760
80	2177.0	0.02	0.21	0.63	0.09	54.3	18.1	423	1.160
81	2185.0	0.04	0.28	0.66	0.12	51.2	21.7	424	1.290
82	2192.0	0.02	0.24	0.52	0.08	42.6	19.7	423	1.220
83	2202.0	0.03	0.29	0.53	0.09	36.1	19.7	427	1.470
84	2212.0	0.05	0.29	0.61	0.15	47.7	22.7	422	1.280
85	2220.0	0.07	0.34	0.69	0.17	50.7	25.0	423	1.360
86	2227.0	0.03	0.32	0.64	0.09	46.7	23.4	423	1.370
87	2235.0	0.04	0.38	0.67	0.10	46.9	26.6	424	1.435
88	2242.0	0.07	0.30	0.54	0.19	40.9	22.7	429	1.320
89	2250.0	0.06	0.27	0.55	0.18	45.1	22.1	422	1.220
90	2257.0	0.05	0.24	0.63	0.17	52.5	20.0	423	1.200
91	2262.0	0.06	0.32	0.64	0.16	53.3	26.7	423	1.200
92	2270.0	0.03	0.29	0.75	0.09	56.8	22.0	425	1.320
93	2277.0	0.02	0.43	0.87	0.04	63.0	31.2	435	1.380
94	2285.0	0.02	0.28	0.66	0.07	46.8	19.9	424	1.410
95	2292.0	0.04	0.34	0.69	0.11	48.3	23.8	422	1.430
96	2305.0	0.05	0.18	0.48	0.22	40.0	15.0	433	1.200
97	2312.0	0.03	0.23	0.60	0.12	47.2	18.1	424	1.275
98	2320.0	0.03	0.29	0.78	0.09	60.0	22.3	421	1.300
99	2327.0	0.01	0.28	0.68	0.03	51.5	21.2	422	1.320
100	2335.0	0.03	0.29	0.68	0.09	53.1	22.7	423	1.280
101	2341.0	0.04	0.25	0.46	0.14	29.7	16.1	440	1.550
102	2350.0	0.03	0.22	0.68	0.12	50.7	16.4	428	1.345
103	2357.0	0.02	0.28	0.61	0.07	43.3	19.9	423	1.410
104	2367.5	0.03	0.26	0.42	0.10	26.9	16.7	428	1.560
105	2375.0	0.07	0.24	0.62	0.23	43.4	16.8	417	1.430
106	2382.0	0.02	0.26	0.58	0.07	40.0	17.9	723	1.450
107	2390.0	0.05	0.22	0.61	0.19	46.2	16.7	411	1.320
108	2397.0	0.07	0.23	0.67	0.23	50.4	17.3	389	1.330

Table 2. Cont.

0 DEPTH m		2 S1 kg/tonn	3 S2 kg/tonn	4 S3 kg/tonn	5 PI	6 OI	7 HI	8 Tmax C	9 TOC %
109	2405.0	0.06	0.31	0.79	0.16	59.0	23.1	421	1.340
110	2412.0	0.09	0.42	0.89	0.18	60.1	28.4	420	1.480
111	2420.0	0.04	0.30	0.57	0.12	38.5	20.3	426	1.480
112	2427.0	0.06	0.45	0.74	0.12	48.4	29.4	424	1.530
113	2435.0	0.05	0.31	0.87	0.14	61.7	22.0	421	1.410
114	2442.0	0.03	0.11	0.88	0.21	59.1	7.4	373	1.490
115	2450.0	0.01	0.09	0.66	0.10	46.2	6.3	343	1.430
116	2457.0	0.03	0.16	0.77	0.16	50.3	10.5	268	1.530
117	2465.0	0.04	0.19	0.78	0.17	50.6	12.3	276	1.540
118	2474.5	0.16	0.20	0.59	0.44	37.3	12.7	329	1.580
119	2485.0	0.02	0.17	0.80	0.11	49.1	10.4	441	1.630
120	2492.0	0.05	0.29	0.89	0.15	54.6	17.8	417	1.630
121	2500.0	0.05	0.23	0.93	0.18	55.0	13.6	417	1.690
122	2507.0	0.11	0.18	0.69	0.38	37.3	9.7	359	1.850
123	2515.0	0.03	0.24	0.98	0.11	57.6	14.1	327	1.700
124	2522.0	0.03	0.25	1.16	0.11	65.9	14.2	371	1.760
125	2529.5	0.07	0.25	0.72	0.22	37.7	13.1	419	1.910
126	2537.0	0.04	0.24	0.83	0.14	50.0	14.5	359	1.660
127	2545.0	0.03	0.20	0.98	0.13	55.1	11.2	334	1.780
128	2552.0	0.02	0.19	0.93	0.10	45.6	9.3	435	2.450
129	2559.5	0.05	0.15	0.60	0.25	33.5	8.4	399	1.790
130	2567.0	0.07	0.28	0.83	0.20	50.0	16.9	363	1.660
131	2575.0	0.03	0.18	0.73	0.14	43.7	10.8	371	1.670
132	2582.0	0.03	0.27	0.81	0.10	50.0	16.7	424	1.620
133	2590.0	0.06	0.19	0.77	0.24	42.8	10.6	438	1.800
134	2599.0	0.04	0.12	0.42	0.25	18.8	5.4	465	2.230
135	2607.0	0.05	0.15	0.89	0.25	48.9	8.2	415	1.820
136	2615.0	0.08	0.22	0.77	0.27	41.6	11.9	334	1.850
137	2622.0	0.04	0.08	1.05	0.33	57.1	4.3	441	1.840
138	2630.0	0.06	0.22	0.75	0.21	43.9	12.9	407	1.710
139	2637.0	0.04	0.20	0.93	0.17	49.7	10.7	334	1.870
140	2645.0	0.02	0.25	0.77	0.07	44.5	14.5	409	1.730
141	2655.5	0.03	0.14	0.50	0.18	26.2	7.3	301	1.910
142	2662.0	0.05	0.14	0.53	0.26	34.2	9.0	392	1.550
143	2670.0	0.04	0.18	0.55	0.18	33.5	11.0	351	1.640
144	2680.0	0.03	0.12	0.67	0.20	37.0	6.6	326	1.810
145	2690.0	0.03	0.19	0.65	0.14	39.4	11.5	354	1.650
146	2700.0	0.01	0.18	0.85	0.05	47.0	9.9	415	1.810
147	2706.0	0.07	0.27	0.68	0.21	30.1	11.9	426	2.260
148	2712.0	0.05	0.24	0.79	0.17	42.5	12.9	418	1.860
149	2720.5	0.08	0.35	0.61	0.19	33.3	19.1	408	1.830
150	2730.0	0.10	0.50	0.83	0.17	39.5	23.8	424	2.100
151	2737.0	0.08	0.46	0.68	0.15	32.9	22.2	429	2.070
152	2745.0	0.05	0.37	0.61	0.12	29.0	17.6	432	2.100
153	2752.0	0.06	0.49	0.59	0.11	26.7	22.2	433	2.210
154	2760.0	0.15	0.76	0.37	0.16	15.5	31.8	437	2.390
155	2767.0	0.10	0.60	0.58	0.14	28.4	29.4	433	2.040
156	2775.0	0.07	0.38	0.40	0.16	22.1	21.0	436	1.810
157	2782.0	0.09	0.45	0.45	0.17	24.7	24.7	433	1.825
158	2790.0	0.07	0.52	0.64	0.12	31.2	25.4	435	2.050
159	2795.0	0.19	0.84	0.48	0.18	19.4	34.0	448	2.470
160	2805.0	0.08	0.54	0.84	0.13	41.4	26.6	433	2.030
161	2812.0	0.08	0.70	0.91	0.10	38.2	29.4	436	2.380
162	2823.0	0.13	0.76	0.41	0.15	13.1	24.4	444	3.120

Table 2. Cont.

0 DEPTH m		2 S1 kg/tonn	3 S2 kg/tonn	4 S3 kg/tonn	5 PI	6 OI	7 HI	8 Tmax C	9 TOC %
109	2405.0	0.06	0.31	0.79	0.16	59.0	23.1	421	1.340
110	2412.0	0.09	0.42	0.89	0.18	60.1	28.4	420	1.480
111	2420.0	0.04	0.30	0.57	0.12	38.5	20.3	426	1.480
112	2427.0	0.06	0.45	0.74	0.12	48.4	29.4	424	1.530
113	2435.0	0.05	0.31	0.87	0.14	61.7	22.0	421	1.410
114	2442.0	0.03	0.11	0.88	0.21	59.1	7.4	373	1.490
115	2450.0	0.01	0.09	0.66	0.10	46.2	6.3	343	1.430
116	2457.0	0.03	0.16	0.77	0.16	50.3	10.5	268	1.530
117	2465.0	0.04	0.19	0.78	0.17	50.6	12.3	276	1.540
118	2474.5	0.16	0.20	0.59	0.44	37.3	12.7	329	1.580
119	2485.0	0.02	0.17	0.80	0.11	49.1	10.4	441	1.630
120	2492.0	0.05	0.29	0.89	0.15	54.6	17.8	417	1.630
121	2500.0	0.05	0.23	0.93	0.18	55.0	13.6	417	1.690
122	2507.0	0.11	0.18	0.69	0.38	37.3	9.7	359	1.850
123	2515.0	0.03	0.24	0.98	0.11	57.6	14.1	327	1.700
124	2522.0	0.03	0.25	1.16	0.11	65.9	14.2	371	1.760
125	2529.5	0.07	0.25	0.72	0.22	37.7	13.1	419	1.910
126	2537.0	0.04	0.24	0.83	0.14	50.0	14.5	359	1.660
127	2545.0	0.03	0.20	0.98	0.13	55.1	11.2	334	1.780
128	2552.0	0.02	0.19	0.93	0.10	45.6	9.3	435	2.450
129	2559.5	0.05	0.15	0.60	0.25	33.5	8.4	399	1.790
130	2567.0	0.07	0.28	0.83	0.20	50.0	16.9	363	1.660
131	2575.0	0.03	0.18	0.73	0.14	43.7	10.8	371	1.670
132	2582.0	0.03	0.27	0.81	0.10	50.0	16.7	424	1.620
133	2590.0	0.06	0.19	0.77	0.24	42.8	10.6	438	1.800
134	2599.0	0.04	0.12	0.42	0.25	18.8	5.4	465	2.230
135	2607.0	0.05	0.15	0.89	0.25	48.9	8.2	415	1.820
136	2615.0	0.08	0.22	0.77	0.27	41.6	11.9	334	1.850
137	2622.0	0.04	0.08	1.05	0.33	57.1	4.3	441	1.840
138	2630.0	0.06	0.22	0.75	0.21	43.9	12.9	407	1.710
139	2637.0	0.04	0.20	0.93	0.17	49.7	10.7	334	1.870
140	2645.0	0.02	0.25	0.77	0.07	44.5	14.5	409	1.730
141	2655.5	0.03	0.14	0.50	0.18	26.2	7.3	301	1.910
142	2662.0	0.05	0.14	0.53	0.26	34.2	9.0	392	1.550
143	2670.0	0.04	0.18	0.55	0.18	33.5	11.0	351	1.640
144	2680.0	0.03	0.12	0.67	0.20	37.0	6.6	326	1.810
145	2690.0	0.03	0.19	0.65	0.14	39.4	11.5	354	1.650
146	2700.0	0.01	0.18	0.85	0.05	47.0	9.9	415	1.810
147	2706.0	0.07	0.27	0.68	0.21	30.1	11.9	426	2.260
148	2712.0	0.05	0.24	0.79	0.17	42.5	12.9	418	1.860
149	2720.5	0.08	0.35	0.61	0.19	33.3	19.1	408	1.830
150	2730.0	0.10	0.50	0.83	0.17	39.5	23.8	424	2.100
151	2737.0	0.08	0.46	0.68	0.15	32.9	22.2	429	2.070
152	2745.0	0.05	0.37	0.61	0.12	29.0	17.6	432	2.100
153	2752.0	0.06	0.49	0.59	0.11	26.7	22.2	433	2.210
154	2760.0	0.15	0.76	0.37	0.16	15.5	31.8	437	2.390
155	2767.0	0.10	0.60	0.58	0.14	28.4	29.4	433	2.040
156	2775.0	0.07	0.38	0.40	0.16	22.1	21.0	436	1.810
157	2782.0	0.09	0.45	0.45	0.17	24.7	24.7	433	1.825
158	2790.0	0.07	0.52	0.64	0.12	31.2	25.4	435	2.050
159	2795.0	0.19	0.84	0.48	0.18	19.4	34.0	448	2.470
160	2805.0	0.08	0.54	0.84	0.13	41.4	26.6	433	2.030
161	2812.0	0.08	0.70	0.91	0.10	38.2	29.4	436	2.380
162	2823.0	0.13	0.76	0.41	0.15	13.1	24.4	444	3.120

Table 2. Cont.

0 DEPTH m		2 S1 kg/tonn	3 S2 kg/tonn	4 S3 kg/tonn	5 PI	6 OI	7 HI	8 Tmax C	9 TOC %
163	2830.0	0.12	0.83	0.72	0.13	30.1	34.7	433	2.390
164	2837.0	0.11	0.65	0.64	0.14	28.3	28.8	437	2.260
165	2845.5	0.21	0.71	0.45	0.23	17.2	27.2	440	2.610
166	2852.0	0.13	0.72	0.89	0.15	35.0	28.3	436	2.540
167	2860.0	0.12	0.68	0.92	0.15	35.8	26.5	434	2.570
168	2870.0	0.07	0.64	0.63	0.10	25.2	25.6	436	2.490
169	2880.0	0.10	0.58	0.43	0.15	23.2	31.4	434	1.850
170	2891.0	0.12	0.89	0.41	0.12	14.5	31.4	449	2.830
171	2900.0	0.10	0.67	0.57	0.13	24.2	28.4	442	2.360
172	2907.0	0.10	0.57	0.48	0.15	20.7	24.6	438	2.320
173	2915.5	0.15	0.82	0.40	0.15	16.0	32.8	448	2.500
174	2925.0	0.15	0.83	0.75	0.15	31.5	34.9	442	2.385
175	2932.0	0.15	0.77	0.49	0.16	23.2	36.5	436	2.110
176	2940.0	0.12	0.64	0.50	0.16	22.2	28.4	438	2.250
177	2952.0	0.22	0.69	0.49	0.24	21.1	29.7	449	2.320
178	2960.0	0.16	0.67	0.74	0.19	35.6	32.2	439	2.080
179	2967.0	0.16	0.75	0.46	0.18	21.5	35.0	439	2.140
180	2975.0	0.14	0.66	0.50	0.17	23.5	31.0	437	2.130
181	2985.0	0.17	1.02	1.42	0.14	54.8	39.4	438	2.590
182	2992.0	0.10	0.97	1.10	0.09	41.2	36.3	437	2.670
183	2997.5	0.19	0.88	0.37	0.18	11.7	27.8	441	3.160
184	3007.0	0.14	0.92	0.59	0.13	24.1	37.6	442	2.450
185	3015.0	0.08	0.65	0.73	0.11	33.2	29.5	441	2.205
186	3022.0	0.06	0.35	0.82	0.15	40.2	17.2	445	2.040
187	3030.0	0.08	0.33	0.99	0.20	44.8	14.9	429	2.210
188	3037.0	0.12	0.33	0.79	0.27	38.3	16.0	423	2.060
189	3042.0	0.16	0.48	0.66	0.25	28.1	20.4	433	2.350
190	3050.0	0.11	0.53	0.67	0.17	30.9	24.4	431	2.170
191	3060.0	0.12	0.46	0.78	0.21	36.3	21.4	431	2.150
192	3070.0	0.13	0.48	0.63	0.21	29.2	22.2	428	2.160
193	3075.0	0.13	0.44	0.79	0.23	35.1	19.6	431	2.250
194	3084.0	0.07	0.32	0.36	0.18	21.1	18.7	403	1.710
195	3095.0	0.06	0.36	0.61	0.14	30.3	17.9	431	2.010
196	3105.0	0.14	0.37	0.63	0.27	35.4	20.8	414	1.785
197	3115.0	0.04	0.27	0.83	0.13	43.9	14.3	427	1.890
198	3125.0	0.08	0.25	0.33	0.24	28.9	21.9	414	1.140
199	3139.0	0.10	0.23	0.37	0.30	30.1	18.7	349	1.230
200	3150.0	0.13	0.50	1.11	0.21	54.4	24.5	415	2.040
201	3475.1	0.18	0.84	0.46	0.18	16.3	29.8	440	2.825
202	3676.8	0.37	1.00	0.77	0.27	24.4	31.6	458	3.160

IKU

ADDITIONAL ANALYSES

WELL 7117/9-2

Norsk Hydro A/S

10 additional samples from well 7117/9-2 from the interval 1410-2910m have undergone lithological description, are picked and then analysed for TOC content. Three of the samples, from 1710m, 1800m and 2910m, consist of two different, equally important lithologies, and two TOC-measurements are undertaken on these samples (A and B). The data are presented in table 1.

Lithology and Total Organic Carbon measurements

TABLE NO.: 1.
WELL NO.: 7117/9-2

Sample	Depth (m)	TOC	Lithology
A-6093	1410	0.45	98% Claystone, light grey, with some irregular grey laminae
A-6099	1500	0.27	95% Claystone, light grey, slightly bioturbated 3% Claystone, grey, laminated
A-6113	1710	2.31 0.46	50% Siltstone, grey 40% Sandstone, very fine grained 10% Claystone, light grey (caved)
A-6119	1800	2.10 0.74	50% Siltstone/Claystone, grey 10% Sandstone, very fine grained 40% Claystone, light grey (caved)
A-6126	1905	2.08	75% Siltstone, grey 8% Sandstone, very fien grianed 18% Claystone, light grey (caved)
A-7791	2100	2.0	98% Claystone, silty, grey, slightly bioturbated
A-7806	2310	1.51	98% Siltstone/Claystone, grey, slightly bioturbated, grading up into very fine Sandstone
A-7826	2610	1.65	90% Siltstone/Claystone, grey 10% Sandstone, very fine and greenish grey Mudstone traces of siderite and calcite crystals
A-7832	2700	1.47	98% Claystone/Siltstone, grey
A-7846	2910	1.84 3.07	50% Siltstone/Claystone, grey 50% Claystone/Siltstone, grey to dark grey

IKU

Visual Kerogen Analysis

TABLE NO.: 2.
WELL NO.: 7117/9-2

Sample	Depth (m)	Composition of residue	Particle size	Preservation palynomorphs	Thermal maturation index	Remarks
A-7785	2010	W, P, S, Cut, WR!/Am, Cy	F-M-L	fair	1/1+	Abundant structured woody particles.
A-7798	2205	W, S, P, WR!/Am, Cy	F-M-L	fair to good	1/1+, 2+	Some grey amorphous material embedding inorganic compounds. Abundant structured woody material and fairly dark angular coaly fragments. Abundant bisaccate pollen and spores.
A-7812	2400	W, P, S, Cut, WR!/Am, Cy	F-M-L	fair	1/1+, 1+	Abundant acid resistant minerals. Structured fairly dark woody material dominates as at 2010m.

ABBREVATIONS

Am	Amorphous	Cy	Cysts, algae	W	Woody material	F	Fine
He	Herbaceous	P	Pollen grains	C	Coal	M	Medium
Cut	Cuticles	S	Spores	R!	Reworked	L	Large

IKU

Visual Kerogen Analysis

TABLE NO.: 2.
WELL NO.: 7117/9-2

Sample	Depth (m)	Composition of residue	Particle size	Preservation palynomorphs	Thermal maturation index	Remarks
A-7826	2610	W, S, P, Cut, WR!/Am, Cy	F-M-L	fair to poor	1/1+, 1+	Grey amorphous material with embedded acid resistant minerals. Poorly sorted sample.
A-7839	2805	W, WR!, P, S, Cut/Am, Cy	F-M	poor	2-, 2-/2	Laminated aggregates. Dark angular woody particles and structured woody particles dominate.
A-7853	3015	W, WR!, S, P, Cut/Am	F-M-L		2-/2	Aggregates of granulate grey amorphous material. Acid resistant minerals embedded. Irregular woody dark fragments dominate.

ABBREVATIONS

Am	Amorphous	Cy	Cysts, algae	W	Woody material	F	Fine
He	Herbaceous	P	Pollen grains	C	Coal	M	Medium
Cut	Cuticles	S	Spores	R!	Reworked	L	Large

T A B L E 3.

TABULATION OF MATURITY DATA

IKU No.	DEPTH (m/ft)	VITRINITE REFLECTANCE Ro(%) and Counts			MATURATION INDEX (TAI)	FLUOR-ESCENCE
A 6106	1605	0.30(1)	0.50(22)		N.A.	5
A 7785	2010	0.49(22)			1/1+ *	5/6
A 7798	2205	0.49(5)	0.69(5)		1/1+,2+ *	5/6
A 7812	2400	N.A.			1/1+,1+ *	
A 7819	2500	0.66(11)			N.A.	5/6
A 7826	2610	N.A.			1/1+,1+ *	
A 7832	2700	0.79(20)*			N.A.	6/7
A 7839	2805	0.81(16)			2-,2-/2 *	6
A 7846(B)	2910	0.67(9)*			N.A.	6
A 7846(A)	2910	0.86(21)*			N.A.	7
A 7853	3015	0.74(11)	0.97(2)		2-/2 *	6/7
A 7860	3120	0.83(13)*			N.A.	6
A 7866	3210	0.87(4)			N.A.	6/7
A 8231	3315	1.02(16)			N.A.	7
A 8244	3510	0.99(3)	1.29(5)		2-/2 2 3-	6/7
A 8395	3600	1.02(8)	1.31(2)		2-/2 2 3-	6/7
B 632	3677	1.18(9)	1.43(6)		2-/2 2 3-	6/7
A 8406	3780	1.41(16)			2-/2 2 3-	7
A 8415	3915	1.25(11)	1.52(2)		2-/2 2 3-	7
A 8421	4005	0.88(10)	1.34(1)		2-/2 2 3-	6
A 8434	4200	1.25(6)	1.46(2)		2-/2 2 3-	
B 640	4388.10	0.82(1)	1.34(13)	1.73(2)	2-/2 2 3-	
A 8454	4500	0.83(1)	1.29(2)	1.53(3)	2-/2 2 3-	6/7
A 8461	4605	1.22(1)	1.67(1)		2-/2 2 3-	
A 8572	4800	1.65(13)			2-/2 2	

T A B L E 3.

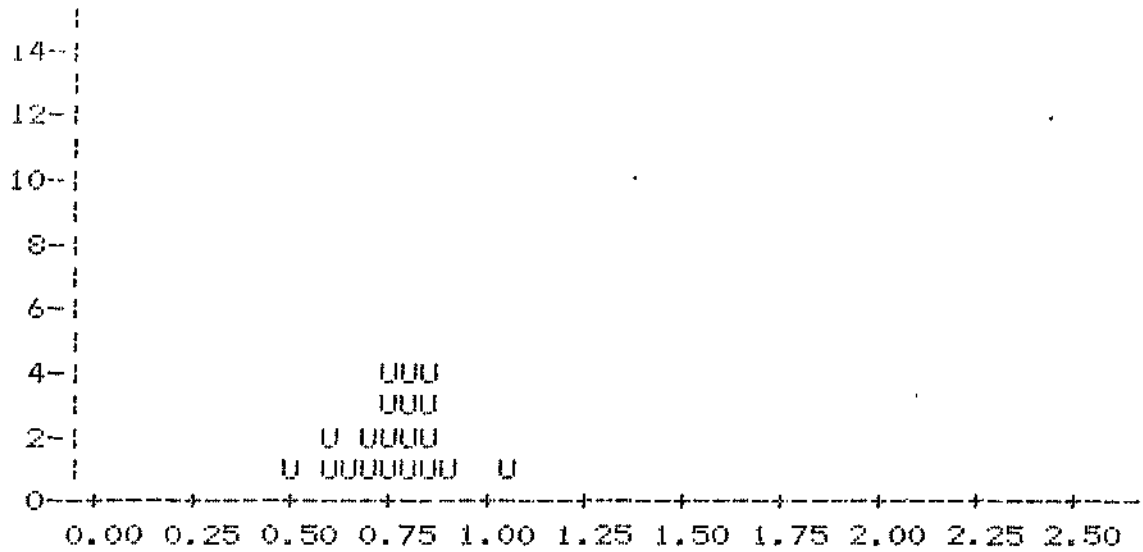
TABULATION OF MATURITY DATA

IKU No.	DEPTH (m/ft)	VITRINITE REFLECTANCE Ro(%) and Counts	MATURATION INDEX (TAI)	FLUOR-ESCENCE
B 548	4870	1.52(1) 1.87(9) 2.50(1)	2-/2 2	
		–	3-	
A 8586	5010	1.30(8) 1.90(1)	2-/2 2	8
		–	3-	

DATE : 27 - 1 - 84.

IKU

IKU A7832 2685.0M 7117/9-2

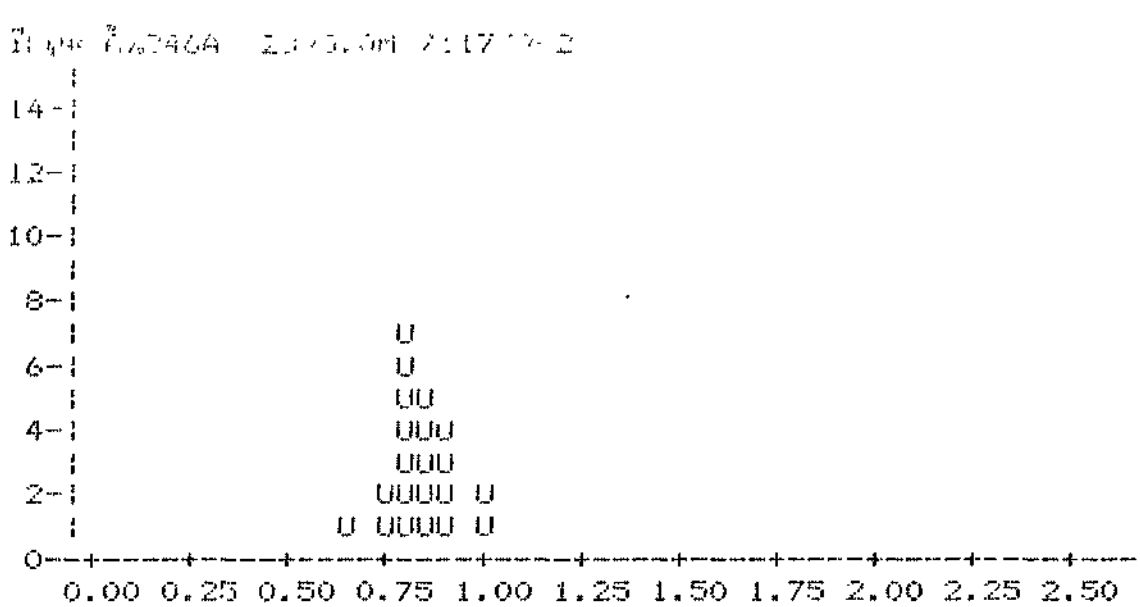


PP	LOW	HIGH	LIT	#VAL	MEAN	STDV
Y	0.53	2.00	ALL	20	0.79	0.12
			OVERALL	20	0.79	0.12

ORDERED VALUES FOLLOW:

0.53U 0.63U 0.64U 0.66U 0.73U 0.73U 0.75U 0.76U 0.78U 0.79U 0.80U 0.81U 0.83U
0.83U 0.85U 0.87U 0.88U 0.88U 0.91U 1.09U

Fig. 1a: Histograms from vitrinite reflectance analysis.



PP	LOW	HIGH	LIT	#VAL	MEAN	STDV
Y	0.63	1.02	ALL	21	0.86	0.08
			OVERALL	21	0.86	0.08

ORDERED VALUES FOLLOW:

0.68U 0.78U 0.79U 0.80U 0.80U 0.81U 0.81U 0.82U 0.83U 0.84U 0.85U 0.88U 0.88U
0.89U 0.89U 0.91U 0.92U 0.92U 0.93U 1.00U 1.01U

Fig. 1b: Histogram from vitrinite reflectance analysis.

```
IKU 67846B 3095.00 7117/2-2
    |
 14-|
    |
 12-|
    |
 10-|
    |
  8-|
    |
  6-|
    |
  4-|
    |
  2-|           U U
    |          UUUUUU  U
  0--+----+----+----+----+----+----+----+----+----+----+---
    0.00 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.00 2.25 2.50

PP LOW HIGH LIT #VAL MEAN STDV
Y 0.54 1.00 ALL     9 0.67 0.12
          OVERALL   9 0.67 0.12

ORDERED VALUES FOLLOW:

 0.54U 0.57U 0.58U 0.60U 0.66U 0.66U 0.71U 0.79U 0.93U
```

Fig. 1c: Histogram from vitrinite reflectance analysis.

IKU

```
14-|
   |
12-|
   |
10-|
   |
 8-|
   |
 6-|
   |
 4-|                  U
   |               U  U
 2-|               UU UU
   |               UU UU UU
 0-+----+----+----+----+----+----+----+----+----+----+----
   0.00 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.00 2.25 2.50
```

PP	LOW	HIGH	LIT	#VAL	MEAN	STDV
Y	0.67	1.09	ALL	13	0.84	0.13
			OVERALL	13	0.84	0.13

ORDERED VALUES FOLLOW:

0.67U 0.68U 0.68U 0.73U 0.74U 0.85U 0.85U 0.86U 0.86U 0.91U 0.94U 1.01U 1.08U

Fig. 1d: Histogram from vitrinite reflectance analysis.