

Table 1 : Lithology description for well NOCS 34/8-1

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
3455.00						0252
				75 Sh/Clst: lt gy to lt brn gy to brn gy to lt ol gy, wx		0252-3L
				20 S/Sst : w, crs, l, f, kln		0252-1L
				5 Cont : prp		0252-2L
3460.00						0253
				35 S/Sst : w, crs, l, f, kln		0253-1L
				35 Sh/Clst: lt gy to lt brn gy to brn gy to lt ol gy, wx		0253-3L
				30 Cont : prp, Coal-ad		0253-2L
				tr Ca : lt or		0253-4L
3465.00						0254
				55 Sh/Clst: lt gy to lt brn gy to brn gy to lt ol gy, wx		0254-3L
				25 S/Sst : w, crs, l, f, kln		0254-1L
				15 Cont : prp, Coal-ad		0254-2L
				5 Ca : lt or		0254-4L
3470.00						0255
				45 Sh/Clst: lt gy to lt brn gy to brn gy to lt ol gy, wx		0255-3L
				40 Cont : prp, Coal-ad		0255-2L
				10 S/Sst : w, crs, l, f, kln		0255-1L
				5 Ca : lt or		0255-4L
3475.00						0256
				45 Sh/Clst: lt gy to lt brn gy to pl brn to lt ol gy		0256-3L
				40 Cont : prp, Coal-ad		0256-2L
				15 S/Sst : w to lt gy, crs, l, f, kln		0256-1L
				tr Ca : lt or		0256-4L

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Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample	
Int Cvd	TOC%	%	Lithology description				
3480.00						0257	
		80	Sh/Clst:	m brn to pl brn to brn gy to lt ol gy to m gy		0257-3L	
		10	S/Sst	: w to lt gy, crs, l, f, kln		0257-1L	
		10	Cont	: prp, Coal-ad		0257-2L	
3485.00						0258	
		90	Sh/Clst:	m brn to pl brn to brn gy to lt ol gy to m gy		0258-3L	
		10	S/Sst	: w to lt gy, crs, l, f, kln		0258-1L	
		tr	Cont	: prp, Coal-ad		0258-2L	
3490.00						0259	
		80	Sh/Clst:	m brn to pl brn to brn gy to m gy		0259-3L	
		15	S/Sst	: w to lt gy, crs, l, f, kln		0259-1L	
		5	Cont	: prp		0259-2L	
3495.00						0260	
		85	Sh/Clst:	m brn to pl brn to brn gy to m gy		0260-3L	
		10	S/Sst	: w to lt gy, crs, l, f, kln		0260-1L	
		5	Cont	: prp, Coal-ad		0260-2L	
3510.00						0261	
		60	S/Sst	: w, crs, l, kln		0261-1L	
		30	Sh/Clst:	m brn to pl brn to brn gy to m gy		0261-2L	
		5	Ca	: w to lt or		0261-3L	
		5	Cont	: Coal-ad, prp, fib		0261-4L	

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Depth	Type	Grp	Frm	Age	Trb	Sample	
Int	Cvd	TOC%	Lithology description				
3512.00	ccp		100	S/Sst		0262 0262-1L	
3514.00	ccp		100	S/Sst		0263 0263-1L	
3516.00	ccp		100	Sh/Clst:		0264 0264-1L	
3518.00	ccp		100	Sh/Clst:		0265 0265-1L	
3520.00	ccp		100	S/Sst		0266 0266-1L	
3525.00			95	Sh/Clst:		0267 0267-1L	
			5	S/Sst		0267-2L	
				tr Cont		0267-3L	
3530.00			100	Sh/Clst:		0268 0268-1L	
				tr S/Sst		0268-2L	
				tr Cont		0268-3L	

Table 1 : Lithology description for well NOCS 34/8-1

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample	
Int Cvd	TOC%	%	Lithology description				
3535.00						0269	
		90	Sh/Clst:	m brn to pl brn to gy brn to pl y brn		0269-1L	
		5	S/Sst	: w to lt gy, crs, l, kln		0269-2L	
		5	Cont	: prp		0269-3L	
		tr	Ca	: w to lt or		0269-4L	
3545.00						0270	
		95	Sh/Clst:	m brn to pl brn to gy brn to pl y brn		0270-1L	
		5	S/Sst	: w to lt gy, crs, l, kln		0270-2L	
		tr	Cont	: prp		0270-3L	
3550.00						0271	
		90	Sh/Clst:	m brn to pl brn to gy brn to pl y brn		0271-1L	
		5	S/Sst	: w to lt gy, crs, l, kln		0271-2L	
		5	Kaolin	: w		0271-4L	
		tr	Cont	: prp		0271-3L	
3555.00						0272	
		55	Sh/Clst:	m brn to pl brn to gy brn to pl y brn		0272-1L	
		40	S/Sst	: w to lt gy, crs, l, kln		0272-2L	
		5	Kaolin	: w		0272-4L	
		tr	Cont	: prp		0272-3L	
3565.00						0273	
		50	Sh/Clst:	m brn to pl brn to gy brn		0273-1L	
		40	S/Sst	: w, crs, l, f, kln		0273-2L	
		10	Kaolin	: w		0273-4L	
		tr	Cont	: prp		0273-3L	

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Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
3568.00						0274
				55 Sh/Clst: m brn to pl brn to gy brn		0274-1L
				35 S/Sst : w, crs, l, f, kln		0274-2L
				10 Kaolin : w		0274-4L
				tr Cont : prp		0274-3L
3575.00						0275
				80 S/Sst : w, crs, l, f, kln		0275-2L
				15 Sh/Clst: m brn to pl brn to gy brn		0275-1L
				5 Kaolin : w		0275-3L
3587.00						0276
				90 S/Sst : w, crs, l, f, kln		0276-2L
				5 Sh/Clst: m brn to pl brn to gy brn		0276-1L
				5 Kaolin : w		0276-3L
				tr Cont : prp		0276-4L
3595.00						0277
				75 Sh/Clst: m brn to pl brn to gy brn		0277-1L
				10 S/Sst : w to lt gy, crs, l, f, kln		0277-2L
				10 Cont : prp, Coal-ad		0277-4L
				5 Kaolin : w		0277-3L
3600.00						0278
				65 S/Sst : w to lt gy, crs, l, f, kln		0278-2L
				15 Sh/Clst: m brn to pl brn to gy brn		0278-1L
				15 Cont : prp, Coal-ad		0278-4L
				5 Kaolin : w		0278-3L

Table 1 : Lithology description for well NOCS 34/8-1

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
3605.00						0279
				90 S/Sst : w to lt gy, crs, l, f, kln		0279-2L
				5 Sh/Clst: m brn to pl brn to gy brn		0279-1L
				5 Cont : prp, Coal-ad		0279-4L
				tr Kaolin : w		0279-3L
3610.00						0280
				65 S/Sst : w to lt gy, crs, l, f, kln		0280-2L
				20 Sh/Clst: m brn to pl brn to gy brn		0280-1L
				10 Cont : prp, Coal-ad		0280-4L
				5 Kaolin : w		0280-3L

Table 2 : Rock-Eval table for well NOCS 34/8-1

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
450.00	cut	Sh/Clst: lt gy	0.08	0.09	3.69	0.02	0.18	50	2050	0.2	0.47	422	0281-1L
1040.00	cut	Sh/Clst: lt gy	0.21	0.82	1.56	0.53	0.74	111	211	1.0	0.20	426	0297-2L
1520.00	cut	Sh/Clst: lt ol gy to lt ol brn	0.04	0.52	0.56	0.93	0.42	124	133	0.6	0.07	414	0048-1L
2000.00	cut	Sh/Clst: lt gy to lt gn gy	0.04	0.14	0.56	0.25	0.34	41	165	0.2	0.22	420	0063-1L
2240.00	cut	Sh/Clst: lt gy to m gy	0.12	0.25	0.39	0.64	0.43	58	91	0.4	0.32	424	0071-1L
2490.00	cut	Sh/Clst: lt gy to m gy	0.25	0.69	1.18	0.58	0.69	100	171	0.9	0.27	432	0079-1L
2768.10	ccp	S/Sst : lt or gy to lt gy	0.74	0.26	0.11	2.36	0.14	186	79	1.0	0.74	499	0090-1L
2776.00	ccp	S/Sst : lt or gy to lt gy	0.78	0.54	0.34	1.59	0.16	338	213	1.3	0.59	517	0094-1L
2781.90	ccp	S/Sst : lt or gy to lt gy	0.99	0.25	0.33	0.76	0.16	156	206	1.2	0.80	425	0096-1L
2788.00	ccp	S/Sst : lt or gy to lt gy	0.88	0.18	0.19	0.95	0.14	129	136	1.1	0.83	416	0099-1L
2793.64	ccp	S/Sst : lt gy to lt brn gy	0.74	0.88	0.25	3.52	0.20	440	125	1.6	0.46	498	0102-1L
2800.00	ccp	S/Sst : lt gy to lt or gy	0.78	0.35	0.06	5.83	0.20	175	30	1.1	0.69	483	0105-1L
2806.00	ccp	S/Sst : lt gy to m gy	1.43	2.54	1.30	1.95	1.56	163	83	4.0	0.36	431	0108-1L
2812.00	ccp	S/Sst : lt gy to lt or gy	1.14	0.87	0.20	4.35	0.56	155	36	2.0	0.57	428	0111-1L
2818.00	ccp	Coal : blk	29.64	134.64	2.85	47.24	55.15	244	5	164.3	0.18	431	0114-1L

Table 2 : Rock-Eval table for well NOCS 34/8-1

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
2825.90	ccp	S/Sst : w to lt or	0.50	0.22	0.42	0.52	0.18	122	233	0.7	0.69	432	0117-1L
2840.00	ccp	Sh/Clst: brn gy to gy brn	3.15	18.54	0.42	44.14	5.87	316	7	21.7	0.15	430	0120-1L
2846.00	ccp	S/Sst : lt or gy	0.85	0.99	1.05	0.94	0.47	211	223	1.8	0.46	431	0123-1L
2852.00	ccp	S/Sst : lt or gy to lt gy	2.12	0.65	0.13	5.00	0.31	210	42	2.8	0.77	418	0126-1L
2858.00	ccp	S/Sst : lt brn gy	10.70	5.56	0.40	13.90	1.58	352	25	16.3	0.66	359	0129-1L
2864.00	ccp	S/Sst : lt brn gy	4.97	1.39	0.15	9.27	0.60	232	25	6.4	0.78	348	0132-1L
2870.00	ccp	S/Sst : m gy to drk y brn	3.67	2.31	0.10	23.10	0.80	289	13	6.0	0.61	424	0135-1L
2876.00	ccp	S/Sst : lt gy to lt brn gy	0.82	0.42	0.09	4.67	0.16	263	56	1.2	0.66	426	0138-1L
2881.85	ccp	S/Sst : lt gy to lt brn gy	0.63	0.53	0.09	5.89	0.15	353	60	1.2	0.54	546	0141-1L
2888.00	ccp	S/Sst : w to lt or	0.41	0.30	0.10	3.00	0.09	333	111	0.7	0.58	436	0144-1L
2894.00	ccp	S/Sst : lt or gy to lt brn gy	2.86	0.58	0.13	4.46	0.34	171	38	3.4	0.83	420	0147-1L
2900.00	ccp	S/Sst : lt or gy to lt gy	5.59	2.09	0.06	34.83	0.73	286	8	7.7	0.73	417	0150-1L
2906.00	ccp	S/Sst : lt or gy to lt gy	1.38	1.28	0.19	6.74	0.33	388	58	2.7	0.52	424	0153-1L
2912.00	ccp	S/Sst : lt or gy	1.33	1.18	0.17	6.94	0.30	393	57	2.5	0.53	423	0156-1L
2918.00	ccp	S/Sst : lt or gy	1.90	1.20	0.15	8.00	0.32	375	47	3.1	0.61	416	0159-1L

Table 2 : Rock-Eval table for well NOCS 34/8-1

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
2924.00	ccp	S/Sst : lt or gy	1.52	0.52	0.13	4.00	0.23	226	57	2.0	0.75	419	0162-1L
2930.00	ccp	S/Sst : lt or gy	1.92	1.17	0.17	6.88	0.30	390	57	3.1	0.62	419	0165-1L
2936.00	ccp	S/Sst : lt or gy	1.46	0.89	0.10	8.90	0.22	405	45	2.4	0.62	423	0168-1L
2942.00	ccp	S/Sst : lt or gy	0.64	0.24	0.14	1.71	0.12	200	117	0.9	0.73	408	0171-1L
2947.70	ccp	S/Sst : lt brn gy to lt gy	1.53	1.93	0.35	5.51	0.38	508	92	3.5	0.44	564	0174-1L
2954.00	ccp	bulk	1.07	2.17	0.47	4.62	1.12	194	42	3.2	0.33	438	0177-0B
2960.00	ccp	Sh/Clst: brn gy to brn blk	2.74	13.66	0.74	18.46	4.35	314	17	16.4	0.17	434	0180-1L
2966.00	ccp	Sh/Clst: drk gy to brn blk	0.66	8.49	1.23	6.90	2.39	355	51	9.1	0.07	444	0184-1L
2974.00	ccp	bulk	0.63	7.63	0.35	21.80	1.78	429	20	8.3	0.08	443	0188-0B
3044.00	ccp	S/Sst : lt gy to m gy	0.30	0.79	0.07	11.29	0.31	255	23	1.1	0.28	439	0201-1L
3050.00	ccp	S/Sst : lt gy to m gy to drk gy	0.13	0.65	0.04	16.25	0.35	186	11	0.8	0.17	433	0204-1L
3056.00	ccp	S/Sst : w to lt gy	0.22	1.39	0.16	8.69	0.49	284	33	1.6	0.14	436	0207-1L
3062.00	ccp	bulk	0.45	3.23	0.51	6.33	0.83	389	61	3.7	0.12	437	0210-0B
3294.35	ccp	S/Sst : lt gy	0.09	0.57	0.27	2.11	0.12	475	225	0.7	0.14	592	0212-1L
3302.00	ccp	S/Sst : lt gy to m gy	0.15	0.44	0.32	1.38	0.43	102	74	0.6	0.25	436	0219-1L

Table 2 : Rock-Eval table for well NOCS 34/B-1

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
3310.00	ccp	S/Sst : lt gy to m gy	0.11	0.32	0.07	4.57	0.25	128	28	0.4	0.26	433	0224-1L
3316.00	ccp	Sltst : m gy to drk	0.17	0.50	0.04	12.50	0.39	128	10	0.7	0.25	435	0227-1L
3410.00	cut	S/Sst : w	0.01	0.02	-	-	0.01	200	-	-	0.33	481	0244-1L
3465.00	cut	Sh/Clst: lt gy to lt brn gy to brn gy to lt ol gy	1.51	0.56	0.27	2.07	0.37	151	73	2.1	0.73	346	0254-3L
3495.00	cut	Sh/Clst: m brn to pl brn to brn gy to m gy	1.19	0.42	0.45	0.93	0.32	131	141	1.6	0.74	343	0260-3L
3516.00	ccp	Sh/Clst: m gy to drk gy	0.14	0.31	-	-	0.36	86	-	0.5	0.31	408	0264-1L
3595.00	cut	Sh/Clst: m brn to pl brn to gy brn	3.18	0.29	0.96	0.30	0.48	60	200	3.5	0.92	333	0277-1L

Table 3 : Pyrolysis GC Data (S2 peak) as Percentage of Total Area for Well NOCS 34/8-1

Depth unit of measure: m

Depth	Typ	Lithology	C1	C2-C5	C6-C14	C15+	S2 from Rock-Eval	Sample
2490.00	cut	Sh/Clst: lt gy to m gy	24.59	24.34	44.14	6.94	0.69	0079-1L
2768.10	ccp	S/Sst : lt or gy to lt gy	12.10	29.67	52.69	5.54	0.26	0090-1L
2781.90	ccp	S/Sst : lt or gy to lt gy	12.88	29.51	51.17	6.43	0.25	0096-1L
2800.00	ccp	S/Sst : lt gy to lt or gy	18.47	22.43	53.64	5.46	0.35	0105-1L
2812.00	ccp	S/Sst : lt gy to lt or gy	23.04	22.68	47.72	6.55	0.87	0111-1L
2840.00	ccp	Sh/Clst: brn gy to gy brn	6.93	1.81	55.00	36.26	18.54	0120-1L
2852.00	ccp	S/Sst : lt or gy to lt gy	22.98	17.08	50.51	9.43	0.65	0126-1L
2870.00	ccp	S/Sst : m gy to drk y brn	16.47	31.12	41.26	11.16	2.31	0135-1L
2888.00	ccp	S/Sst : w to lt or	6.83	29.10	51.86	12.20	0.30	0144-1L
2900.00	ccp	S/Sst : lt or gy to lt gy	4.09	27.44	52.23	16.24	2.09	0150-1L
2918.00	ccp	S/Sst : lt or gy	5.06	29.15	51.51	14.29	1.20	0159-1L
2936.00	ccp	S/Sst : lt or gy	10.08	25.17	51.67	13.08	0.89	0168-1L
2947.70	ccp	S/Sst : lt brn gy to lt gy	7.88	26.76	51.22	14.14	1.93	0174-1L
2960.00	ccp	Sh/Clst: brn gy to brn blk	10.83	20.51	31.50	37.16	13.66	0180-1L

Table 3 : Pyrolysis GC Data (S2 peak) as Percentage of Total Area for Well NOCS 34/8-1

Depth unit of measure: m

Depth	Typ	Lithology	C1	C2-C5	C6-C14	C15+	S2 from Rock-Eval	Sample
2966.00	ccp	Sh/Clst: drk gy to brn blk	5.44	15.32	38.90	40.34	8.49	0184-1L
3056.00	ccp	S/Sst : w to lt gy	6.08	0.56	71.22	22.14	1.39	0207-1L
3302.00	ccp	S/Sst : lt gy to m gy	4.94	0.14	81.95	12.97	0.44	0219-1L

Table 4 a: Weight of EOM and Chromatographic Fraction for well NOCS 34/8-1

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
2768.10	ccp	S/Sst : lt or gy to lt gy	11.6	12.1	6.0	2.0	0.9	3.2	8.0	4.1	0.20	0090-1L
2800.00	ccp	S/Sst : lt gy to lt or gy	10.0	12.9	5.4	2.1	1.0	4.4	7.5	5.4	0.28	0105-1L
2840.00	ccp	Sh/Clst: brn gy to gy brn	7.9	47.8	5.6	9.9	6.2	26.1	15.5	32.3	7.94	0120-1L
2852.00	ccp	S/Sst : lt or gy to lt gy	9.4	28.1	12.5	3.9	2.0	9.7	16.4	11.7	0.32	0126-1L
2870.00	ccp	S/Sst : m gy to drk y brn	11.1	56.1	19.4	6.6	4.3	25.8	26.0	30.1	0.74	0135-1L
2900.00	ccp	S/Sst : lt or gy to lt gy	9.4	90.0	40.1	13.1	3.7	33.1	53.2	36.8	0.77	0150-1L
2936.00	ccp	S/Sst : lt or gy	10.6	25.4	11.1	3.8	1.6	8.9	14.9	10.5	0.27	0168-1L
2966.00	ccp	Sh/Clst: drk gy to brn blk	7.5	8.2	3.3	1.8	1.3	1.8	5.1	3.1	2.60	0184-1L

Table 4 b: Concentration of EOM and Chromatographic Fraction (wt ppm rock) for well NOCS 34/8-1

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
2768.10	ccp	S/Sst : lt or gy to lt gy	1042	516	172	77	275	689	353	0090-1L
2800.00	ccp	S/Sst : lt gy to lt or gy	1288	539	209	99	439	749	539	0105-1L
2840.00	ccp	Sh/Clst: brn gy to gy brn	6065	710	1256	786	3312	1967	4098	0120-1L
2852.00	ccp	S/Sst : lt or gy to lt gy	2992	1331	415	212	1033	1746	1246	0126-1L
2870.00	ccp	S/Sst : m gy to drk y brn	5035	1741	592	385	2315	2333	2701	0135-1L
2900.00	ccp	S/Sst : lt or gy to lt gy	9574	4265	1393	393	3521	5659	3914	0150-1L
2936.00	ccp	S/Sst : lt or gy	2393	1046	358	150	838	1404	989	0168-1L
2966.00	ccp	Sh/Clst: drk gy to brn blk	1094	440	240	173	240	680	413	0184-1L

Table 4 c: Concentration of EOM and Chromatographic Fraction (mg/g TOC(e)) for well NOCS 34/8-1

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
2768.10	ccp	S/Sst : lt or gy to lt gy	521.10	258.40	86.13	38.76	137.81	344.53	176.57	0090-1L
2800.00	ccp	S/Sst : lt gy to lt or gy	460.25	192.66	74.93	35.68	156.99	267.59	192.66	0105-1L
2840.00	ccp	Sh/Clst: brn gy to gy brn	76.40	8.95	15.82	9.91	41.72	24.77	51.62	0120-1L
2852.00	ccp	S/Sst : lt or gy to lt gy	935.17	416.00	129.79	66.56	322.82	545.79	389.38	0126-1L
2870.00	ccp	S/Sst : m gy to drk y brn	680.53	235.33	80.06	52.16	312.97	315.40	365.13	0135-1L
2900.00	ccp	S/Sst : lt or gy to lt gy	1243.44	554.02	180.99	51.12	457.31	735.01	508.43	0150-1L
2936.00	ccp	S/Sst : lt or gy	886.65	387.48	132.65	55.85	310.68	520.12	366.53	0168-1L
2966.00	ccp	Sh/Clst: drk gy to brn blk	42.11	16.95	9.24	6.68	9.24	26.19	15.92	0184-1L

Table 4 d: Composition of material extracted from the rock (%) for well NOCS 34/8-1

Depth unit of measure: m

Depth	Typ	Lithology	Sat	Aro	Asph	NSO	HC	Non-HC	Sat	HC	Sample
			EOM	EOM	EOM	EOM	EOM	EOM	Aro	Non-HC	
2768.10	ccp	S/Sst : lt or gy to lt gy	49.59	16.53	7.44	26.45	66.12	33.88	300.00	195.12	0090-1L
2800.00	ccp	S/Sst : lt gy to lt or gy	41.86	16.28	7.75	34.11	58.14	41.86	257.14	138.89	0105-1L
2840.00	ccp	Sh/Clst: brn gy to gy brn	11.72	20.71	12.97	54.60	32.43	67.57	56.57	47.99	0120-1L
2852.00	ccp	S/Sst : lt or gy to lt gy	44.48	13.88	7.12	34.52	58.36	41.64	320.51	140.17	0126-1L
2870.00	ccp	S/Sst : m gy to drk y brn	34.58	11.76	7.66	45.99	46.35	53.65	293.94	86.38	0135-1L
2900.00	ccp	S/Sst : lt or gy to lt gy	44.56	14.56	4.11	36.78	59.11	40.89	306.11	144.57	0150-1L
2936.00	ccp	S/Sst : lt or gy	43.70	14.96	6.30	35.04	58.66	41.34	292.11	141.90	0168-1L
2966.00	ccp	Sh/Clst: drk gy to brn blk	40.24	21.95	15.85	21.95	62.20	37.80	183.33	164.52	0184-1L

Table 5 : Saturated Hydrocarbon Ratios for well NOCS 34/8-1

Depth unit of measure: m

Depth	Typ	Lithology	Pristane	Pristane	Pristane + Phytane	Phytane	CPI	Sample
			nC17	Phytane	nC17 + nC18	nC18		
2768.10	ccp	S/Sst : lt or gy to lt gy	0.70	1.58	0.59	0.48	1.04	0090-1L
2800.00	ccp	S/Sst : lt gy to lt or gy	1.00	2.41	0.74	0.45	1.07	0105-1L
2840.00	ccp	Sh/Clst: brn gy to gy brn	0.46	2.23	0.37	0.26	1.29	0120-1L
2852.00	ccp	S/Sst : lt or gy to lt gy	0.68	1.49	0.56	0.44	1.02	0126-1L
2870.00	ccp	S/Sst : m gy to drk y brn	0.49	1.45	0.40	0.32	1.04	0135-1L
2900.00	ccp	S/Sst : lt or gy to lt gy	0.69	1.49	0.56	0.44	1.03	0150-1L
2936.00	ccp	S/Sst : lt or gy	0.71	1.44	0.58	0.46	1.07	0168-1L
2966.00	ccp	Sh/Clst: drk gy to brn blk	0.48	2.10	0.45	0.39	1.34	0184-1L

Table 6 : Aromatic Hydrocarbon Ratios for well NOCS 34/8-1

Depth unit of measure: m

Depth	Typ	Lithology	MNR	DMNR	BPhR	2/1MP	MPI1	MPI2	Rc	DBT/P	4/1MDBT	(3+2) /1MDBT	Sample
2768.10	ccp	S/Sst : lt or gy to lt gy	-	1.54	-	0.84	0.81	0.69	0.89	-	-	-	0090-1L
2800.00	ccp	S/Sst : lt gy to lt or gy	-	1.37	-	0.69	0.64	0.57	0.78	-	-	-	0105-1L
2840.00	ccp	Sh/Clst: brn gy to gy brn	1.09	1.87	0.48	0.74	0.61	0.65	0.77	0.11	-	30.95	0120-1L
2852.00	ccp	S/Sst : lt or gy to lt gy	-	1.38	-	0.78	0.82	0.72	0.89	-	-	-	0126-1L
2870.00	ccp	S/Sst : m gy to drk y brn	0.53	1.70	-	0.77	0.71	0.68	0.83	-	-	-	0135-1L
2900.00	ccp	S/Sst : lt or gy to lt gy	-	0.35	-	0.85	0.93	0.78	0.96	-	-	-	0150-1L
2936.00	ccp	S/Sst : lt or gy	-	1.14	-	0.77	0.83	0.71	0.90	-	-	-	0168-1L
2966.00	ccp	Sh/Clst: drk gy to brn blk	0.96	2.00	0.35	0.80	0.56	0.61	0.74	0.14	11.70	0.92	0184-1L

Table 7 : Thermal Maturity Data for well NOCS 34/8-1

Depth unit of measure: m

Depth	Typ	Lithology	Vitrinite Reflectance (%)	Number of Readings	Standard Deviation	Spore Fluorescence Colour	SCI	T _{max} (°C)	Sample
1010.00	cut	bulk	0.34	3	0.02	-	-	-	0296-0B
1040.00	cut	Sh/Clst: lt gy	-	-	-	-	3.5-4.0	426	0297-2L
1290.00	cut	bulk	0.24	4	0.05	-	-	-	0305-0B
1490.00	cut	bulk	NDP	-	-	-	-	-	0047-0B
1700.00	cut	bulk	NDP	-	-	-	-	-	0054-0B
1910.00	cut	bulk	NDP	-	-	-	-	-	0060-0B
2150.00	cut	bulk	0.54	6	0.04	-	-	-	0068-0B
2370.00	cut	bulk	0.52	3	0.06	-	-	-	0075-0B
2555.00	cut	bulk	0.48	2	0.10	-	-	-	0081-0B
2818.00	ccp	bulk	0.47	11	0.02	-	-	-	0114-0B
2818.00	ccp	Coal : blk	-	-	-	-	6.5(??)	431	0114-1L
2840.00	ccp	Sh/Clst: brn gy to gy brn	-	-	-	-	6.0	430	0120-1L
2960.00	ccp	bulk	0.45	4	0.04	-	-	-	0180-0B
2960.00	ccp	Sh/Clst: brn gy to brn blk	-	-	-	-	5.5-6.0	434	0180-1L

Table 7 : Thermal Maturity Data for well NOCS 34/8-1

Depth unit of measure: m

Depth	Typ Lithology	Vitrinite Reflectance (%)	Number of Readings	Standard Deviation	Spore Fluorescence Colour	SCI	T _{max} (°C)	Sample
2966.00	ccp Sh/Clst: drk gy to brn blk	-	-	-	-	6.0	444	0184-1L
3064.00	ccp bulk	0.27	5	0.02	-	-	-	0211-0B
3270.00	cut bulk	0.50	4	0.05	-	-	-	0337-0B
3316.00	ccp Sltst : m gy to drk	-	-	-	-	6.5	435	0227-1L
3355.00	cut bulk	0.52	5	0.06	-	-	-	0233-0B
3516.00	ccp bulk	NDP	-	-	-	-	-	0264-0B
3516.00	ccp Sh/Clst: m gy to drk gy	-	-	-	-	6.5-7.0(??)	408	0264-1L

Table 8 : Visual Kerogen Composition Data for well NOCS 34/8-1

Depth unit of measure: m

Depth	Typ	Lithology	LIP %	A m l	L i p / t	S o p / o c	C u t l l	R e g i s t r a t i o n	D i n c r t l	A B I T %	I N F u s i o n	S e m F u e l	I n t D r e n o	M i c c l e t	S B I %	V I T R %	T e l l i n	C o l l e t	V i t D r V	A m o r t V	B i t V	Sample
1040.00	cut	Sh/Clst: lt gy	30	*	**	*	*	*	*	10	*	*	*			60	**	*				0297-2L
2818.00	ccp	Coal : blk	TR			*	**	*	?	15	*					85	*	*		*		0114-1L
2840.00	ccp	Sh/Clst: brn gy to gy brn	35	*	*	**	*	*		5	*					60	**	*				0120-1L
2960.00	ccp	Sh/Clst: brn gy to brn blk	40	*	*	**	**	*		5	*					55	**	*		*		0180-1L
2966.00	ccp	Sh/Clst: drk gy to brn blk	45		**	*	**			15	*					40	**	*				0184-1L
3316.00	ccp	Sltst : m gy to drk	10		*	**	*	*	*	40	*	**				50	*		**			0227-1L
3516.00	ccp	Sh/Clst: m gy to drk gy	TR	*	**	*		*	*	70	*	**				30			*			0264-1L

Table 9a : Tabulation of carbon isotope data for EOM/Oil - fractions or Oils for well NOCS 34/8-1

Depth unit of measure: m

<u>Depth</u>	<u>Typ</u>	<u>Lithology</u>	<u>EOM/Oil</u>	<u>Saturated</u>	<u>Aromatic</u>	<u>NSO</u>	<u>Asphaltenes</u>	<u>Kerogen</u>	<u>Sample</u>
2768.10	ccp		-28.94	-29.60	-28.31	-28.65	-27.62	-	0090-1
2852.00	ccp		-28.95	-29.49	-28.43	-28.33	-28.32	-	0126-1
2900.00	ccp		-28.99	-29.30	-28.46	-28.40	-28.64	-	0150-1
2936.00	ccp		-28.96	-29.47	-29.36	-28.66	-28.71	-	0168-1
2966.00	ccp		-	-28.15	-28.49	-26.28	-25.31	-	0184-1

Table 9b : Tabulation of cv values from carbon isotope data for well NOCS 34/8-1

Depth unit of measure: m

<u>Depth</u>	<u>Typ</u>	<u>Lithology</u>	<u>Saturated</u>	<u>Aromatic</u>	<u>cv value</u>	<u>Sample</u>
2768.10	ccp		-29.60	-28.31	0.39	0090-1
2852.00	ccp		-29.49	-28.43	-0.15	0126-1
2900.00	ccp		-29.30	-28.46	-0.70	0150-1
2936.00	ccp		-29.47	-29.36	-2.27	0168-1
2966.00	ccp		-28.15	-28.49	-3.68	0184-1

Table 10A: Variation in Triterpane Distribution (peak height) for Well NOCS 34/8-1

Depth unit of measure: m

Depth	Lithology	B/A	B/B+A	B		C/E	C/C+E	X/E	Z/E	Z/C	Z/Z+E	Q/E	C+D		J1		Sample
				B+E+F									E/E+F	C+D+E+F	D+F/C+E	J1+J2%	
2768.10	S/Sst	0.46	0.31	0.10	0.35	0.26	0.18	0.10	0.29	0.09	0.22	0.92	0.27	0.10	59.00	0090-1	
2852.00	S/Sst	0.38	0.27	0.10	0.39	0.28	0.22	0.12	0.30	0.10	0.13	0.91	0.29	0.11	63.01	0126-1	
2900.00	S/Sst	0.28	0.22	0.07	0.31	0.24	0.20	0.11	0.34	0.10	0.10	0.91	0.25	0.11	60.30	0150-1	
2936.00	S/Sst	0.55	0.35	0.10	0.39	0.28	0.13	0.16	0.41	0.14	0.10	0.91	0.30	0.12	61.71	0168-1	
2966.00	Sh/Clst	3.48	0.78	0.18	0.54	0.35	0.04	0.03	0.05	0.03	0.03	0.80	0.34	0.24	57.92	0184-1	

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Ratio6	Ratio7	Ratio8	Ratio9	Ratio10	Sample
2768.10	S/Sst	0.85	60.00	78.09	1.46	0.75	0.52	0.37	0.64	1.50	4.45	0090-1
2852.00	S/Sst	0.83	49.44	74.76	1.24	0.75	0.39	0.28	0.60	0.98	2.93	0126-1
2900.00	S/Sst	0.83	49.92	75.28	1.28	0.75	0.45	0.31	0.60	1.00	3.04	0150-1
2936.00	S/Sst	0.71	43.60	74.07	1.04	0.77	0.33	0.23	0.59	0.77	2.53	0168-1
2966.00	Sh/Clst	0.58	32.94	60.27	0.64	0.70	0.37	0.32	0.43	0.49	1.13	0184-1

Ratio1: $a / a + j$ Ratio2: $q / q + t * 100\%$ Ratio3: $2(r + s) / (q + t + 2(r + s)) * 100\%$ Ratio4: $a + b + c + d / h + k + l + n$ Ratio5: $r + s / r + s + q$ Ratio6: $u + v / u + v + q + r + s + t$ Ratio7: $u + v / u + v + i + m + n + q + r + s + t$ Ratio8: $r + s / q + r + s + t$ Ratio9: q / t Ratio10: $r + s / t$

Table 10C: Variation in Triaromatic Sterane Distribution for Well NOCS 34/8-1

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Sample
2768.10	S/Sst	1.00	1.00	1.00	1.00	1.00	0090-1
2852.00	S/Sst	0.72	0.72	0.47	0.44	0.61	0126-1
2900.00	S/Sst	0.74	0.66	0.46	0.46	0.62	0150-1
2936.00	S/Sst	0.51	0.48	0.27	0.27	0.38	0168-1
2966.00	Sh/Clst	1.00	1.00	1.00	1.00	1.00	0184-1

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: $a1 / a1 + d1$

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>
2768.10	S/Sst	0.65	0.44	0.51	0.42	0090-1
2852.00	S/Sst	0.58	0.46	0.43	0.39	0126-1
2900.00	S/Sst	0.56	0.45	0.40	0.35	0150-1
2936.00	S/Sst	0.47	0.36	0.32	0.28	0168-1
2966.00	Sh/Clst	0.58	0.42	0.32	0.23	0184-1

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 10E: Aromatisation of Steranes for Well NOCS 34/8-1

Depth unit of measure: m

<u>Depth</u>	<u>Lithology</u>	<u>Ratio1</u>	<u>Ratio2</u>	<u>Sample</u>
2768.10	S/Sst	1.00	-	0090-1
2852.00	S/Sst	0.47	0.85	0126-1
2900.00	S/Sst	0.43	0.85	0150-1
2936.00	S/Sst	0.37	0.94	0168-1
2966.00	Sh/Clst	1.00	-	0184-1

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

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

Table 10F: Raw GCMS triterpane data (peak height) for Well NOCS 34/8-1

Depth unit of measure: m

Depth	Lithology	p	q	r	s	t	a	b	z	c	Sample
		x	d	e	f	g	h	i	j1		
		j2	k1	k2	l1	l2	m1	m2			
2768.10	S/Sst	132.15	92.57	35.75	56.39	23.16	117.52	53.78	43.15	147.28	0090-1
		77.18	20.22	424.88	34.73	158.27	111.10	22.58	121.17		
		84.21	100.22	33.72	62.58	39.97	55.62	40.95			
2852.00	S/Sst	114.74	82.04	44.03	60.69	35.86	207.18	78.06	75.24	252.16	0126-1
		139.44	34.82	642.14	64.11	247.04	168.67	37.99	196.80		
		115.51	156.15	103.48	107.21	69.03	76.89	70.05			
2900.00	S/Sst	94.81	74.87	34.13	60.21	30.97	220.28	62.04	77.06	226.37	0150-1
		144.08	31.27	719.84	70.69	287.62	182.69	31.45	215.08		
		141.60	184.40	113.84	123.18	86.55	98.39	75.13			
2936.00	S/Sst	127.97	93.81	46.07	72.87	30.34	218.50	119.62	153.41	378.42	0168-1
		124.24	71.33	977.52	91.82	327.42	237.33	48.75	249.05		
		154.51	232.82	140.59	134.75	88.79	115.35	76.85			
2966.00	Sh/Clst	102.53	63.48	21.92	120.25	9.15	191.96	668.59	62.00	1288.07	0184-1
		99.86	285.94	2380.80	611.59	1155.54	831.36	476.80	447.18		
		324.87	211.68	150.86	162.79	114.25	47.56	43.53			

Table 10G: Raw GCMS sterane data (peak height) for Well NOCS 34/8-1

Depth unit of measure: m

Depth	Lithology	u	v	a	b	c	d	e	f	g	Sample	
		h	i	j	k	l	m	n	o			
		p	q	r	s	t						
2768.10	S/Sst	127.28	70.23	235.31	147.11	59.58	58.29	97.33	52.36	40.27	0090-1	
		168.52	82.52	42.05	91.49	30.95	22.86	52.02	65.37			
		19.84	38.59	63.25	51.37	25.73						
2852.00	S/Sst	137.64	78.38	301.41	193.96	78.09	73.71	153.08	83.92	68.98	0126-1	
		237.44	105.02	60.69	152.46	54.86	34.49	78.57	103.27			
		37.54	66.28	111.68	86.92	67.79						
2900.00	S/Sst	157.25	92.39	324.84	197.38	86.29	77.71	150.40	96.24	78.08	0150-1	
		244.83	118.47	66.03	159.41	48.87	35.40	83.96	114.72			
		42.26	61.32	94.26	92.75	61.52						
2936.00	S/Sst	188.05	100.92	322.29	203.25	79.79	91.41	174.38	89.27	114.53	0168-1	
		306.01	173.10	131.09	173.15	58.28	72.52	133.60	166.65			
		83.40	105.60	196.59	149.34	136.58						
2966.00	Sh/Clst	181.54	63.08	157.90	97.92	41.35	45.13	70.69	41.35	103.84	0184-1	
		266.82	47.42	115.65	160.49	67.60	17.42	37.63	43.52			
		46.41	79.68	111.37	72.09	162.24						

Depth unit of measure: m

Depth	Lithology	a1	b1	c1	d1	e1	f1	g1	Sample
2768.10	S/Sst	458.58	335.34	0.00	0.00	0.00	0.00	0.00	0090-1
2852.00	S/Sst	681.18	677.48	191.54	443.42	351.61	268.20	261.58	0126-1
2900.00	S/Sst	2870.53	1964.67	500.05	1759.94	1185.78	1188.94	995.96	0150-1
2936.00	S/Sst	1328.02	1183.87	1005.35	2145.45	1213.83	1024.15	1290.66	0168-1
2966.00	Sh/Clst	871.09	460.10	0.00	0.00	0.00	0.00	0.00	0184-1

Table 10I: Raw GCMS monoaromatic sterane data (peak height) for Well NOCS 34/8-1

Depth unit of measure: m

Depth	Lithology	a1	b1	c1	d1	e1	f1	g1	h1	i1	Sample
2768.10	S/Sst	320.61	134.62	104.21	88.37	169.42	44.84	143.02	61.10	11.74	0090-1
2852.00	S/Sst	527.86	333.12	227.81	149.26	386.10	93.06	303.07	166.78	45.00	0126-1
2900.00	S/Sst	1367.14	885.62	745.12	476.45	1092.90	266.76	982.07	451.00	174.19	0150-1
2936.00	S/Sst	917.53	577.35	583.38	514.61	1027.06	211.85	949.41	472.07	89.28	0168-1
2966.00	Sh/Clst	445.76	232.08	242.43	218.08	321.15	94.46	624.07	500.16	287.60	0184-1



Norsk Hydro

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Rapport/Report

Fortrolig/ Confidential <input checked="" type="checkbox"/>	Tittel/Forfatter(e) Title/Author(s)	Sign.
Fordeling/Distribution Statoil (1) Saga (1) Elf Aquitaine (1) Conoco (1) Olje- direktoratet (1) Arkiv, Bg. (1)	ROUTINE PETROLEUM GEOCHEMISTRY WELL 34/8-1 <div style="border: 2px solid black; padding: 10px; width: fit-content; margin: auto;"> <p>87-0116-BA</p> <p>26 JAN. 1987</p> <p>REGISTRERT</p> <p>OLJEDIREKTORATET</p> </div>	
Resymé Konklusjon Anbefaling Summary Conclusion Recommendation		

5515 11-85 10.000 Reklametrykk Grafisk A.s

Emneord/Key words Source rock evaluation Maturity studies		Emnekategori/Subject category Petroleum Geochemistry	
Divisjon Seksjon Avdeling Divisjon Section Dept. F. Geology	Kvadrant Blokk - Bronn Quadrant Block - Well 34/8	Dato/Date 17.12.86 Side/Pages - Appendix 13	
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1. INTRODUCTION

The present study on Well 34/8-1 (location Fig. 1.1) has been carried out by three different institutions:

- Well site screening by "Oil Show Analyser" (pyrolysis and TOC) has been done by Exlog, LTD, England.
- Follow up analyses on selected SWC samples have been carried out by IKU and Petroleum Geochemistry Group, Norsk Hydro Research Centre.
- This report has been compiled by Petroleum Geochemistry Group, Norsk Hydro Research Centre.

SWC samples for follow up analysis have been selected on basis of well site screening data. In this way, horizons and samples likely contaminated by migrated hydrocarbons and with low hydrocarbon content, were avoided.

The selected samples and the follow up analyses executed on the individual samples are listed in Table 1.1.

It should be noted that lignite and Miltemp (malic acid anhydrite-sulphonate-styrene) were added to the mud and circulated at 3368 m.

2. SOURCE ROCK IDENTIFICATION AND EVALUATION

2.1 Rock Eval Pyrolysis and Total Organic Carbon (TOC)

This well has been screened "well site" by "Oil Show Analyser" giving both the traditional Rock Eval parameters and TOC results. A report from this work is given in Appendix I.

T A B L E S

Table 1.1. Samples and analyses

Sample depth (m)	Sample type	Dom. lith.	Rock Eval	TOC	EOM	Group sep.	Ro	GC	GC MS	Py GC	Kerogen typing
1057.5	SWC		•	•	•	TLC	•	•	•		•
1161.0	SWC		•	•	•	TLC	•	•	•		•
1271.0	SWC		•	•	•	TLC	•	•	•		•
1380.0	SWC		•	•	•	TLC	•	•	•		•
1422.5	SWC		•	•	•	TLC	•	•	•		•
1649.0	SWC		•	•	•	TLC	•	•	•		•
1782.0	SWC		•	•	•	TLC	•	•	•		•
1786.0	SWC		•	•	•	TLC	•	•	•		•
1815.0	SWC		•	•	•	TLC	•	•	•		•
1844.0	SWC		•	•	•	TLC	•	•	•		•
1955.0	SWC		•	•	•	TLC	•	•	•		•
2064.0	SWC		•	•	•	TLC	•	•	•		•
2107.0	SWC		•	•	•	TLC	•	•	•		•
2205.0	SWC		•	•	•	TLC	•	•	•		•
2320.0	SWC		•	•	•	TLC	•	•	•		•
2400.0						TLC	•				•
2445.5	SWC		•	•	•	MPLC	•	•	•		•
2511.0							•				•
2550.0	SWC		•	•	•	MPLC	•	•			•
2606.5	SWC		•	•	•	MPLC	•	•			•
2656.0							•				•
2764.0	SWC		•	•	•	MPLC		•	•	•	•
2765.0	SWC		•	•	•	MPLC	•	•	•	•	•
2765.5	SWC		•	•	•	MPLC	•	•	•	•	•
2766.0	SWC		•	•	•	MPLC		•	•	•	•
2839.0							•				•
2954.0	SWC		•	•	•	MPLC	•		•	•	•
2967.0	SWC		•	•	•	MPLC	•	•	•	•	•

Table 1.1. Cont.

Sample depth (m)	Sample type	Dom. lith.	Rock Eval	TOC	EOM	Group sep.	Ro	GC	GC MS	Py GC	Kerogen typing
2979.0	SWC		•	•	•	MPLC	•	•	•	•	•
3020.9	SWC		•	•	•	MPLC	•	•	•	•	•
3033.0	SWC		•	•	•	MPLC	•	•	•	•	•
3079.0	SWC						•				•
3195.0	SWC						•				•
3419.1	SWC						•				•
3550.0	SWC						•				•
3595.0	SWC						•				•

Table 2.2.1 Source Rock Extraction Data I

DEPTH m	ROCK g	EOM %	EOM ppm	SAT %	ARO %	TOTAL HC %	TOTAL non HC %	SEP METHOD
1057.5	1.0	0.167	1667	23.5	23.5	47.0	52.9	TLC
1161.0	4.0	0.107	1072	25.6	16.3	41.9	58.1	TLC
1271.0	7.7	0.390	3899	1.7	1.7	3.4	96.7	TLC
1380.0	6.3	0.054	544	17.6	8.8	26.4	73.5	TLC
1422.5	8.0	0.024	237	15.8	21.1	36.9	63.2	TLC
1649.0	7.7	0.109	1091	12.1	7.1	19.2	80.7	TLC
1782.0	2.0	0.103	1026	25.0	40.0	65.0	35.0	TLC
1786.0	5.6	0.050	502	21.4	17.9	39.3	60.7	TLC
1815.0	8.1	0.122	1222	10.1	0.0	10.1	89.9	TLC
1844.0	6.4	0.052	517	24.2	15.2	39.4	60.6	TLC
1955.0	5.2	0.034	344	22.2	16.7	38.9	61.1	TLC
2064.0	7.8	0.022	218	29.4	17.6	47.0	52.9	TLC
2107.0	4.6	0.254	2538	2.6	9.4	12.0	88.0	TLC
2205.0	4.1	0.098	976	7.5	17.5	25.0	75.0	TLC
2320.0	4.0	0.075	746	26.7	20.0	46.7	53.3	TLC
2445.5	1.5	0.130	1299	20.5	43.8	64.3	35.7	MPLC
2550.0	2.0	0.199	1990	20.8	42.6	63.4	36.6	MPLC
2764.0	0.5	0.696	6957	32.5	10.1	42.6	57.4	MPLC
2765.0	0.7	0.370	3699	23.5	46.7	70.2	29.8	MPLC
2765.5	1.3	0.307	3071	27.5	11.8	39.3	60.7	MPLC
2766.0	0.3	1.000	10000	17.7	48.5	66.2	33.8	MPLC
2954.0	1.5	4.123	41234	12.9	38.0	50.9	49.1	MPLC
2967.0	0.8	0.288	2875	10.9	23.0	33.9	66.1	MPLC
3020.9	2.0	0.113	1127	24.2	8.5	32.7	67.3	MPLC
3033.0	2.0	0.101	1007	9.6	16.2	25.8	74.2	MPLC

Table 2.2.2 Source Rock Extraction Data II

DEPTH m	TOC %	<u>EOM %</u> TOC %	<u>SAT %</u> TOC %	<u>SAT %</u> ARO %	<u>HC %</u> non HC %
1057.5	0.80	0.21	29.38	1.00	0.89
1161.0	1.34	0.08	19.10	1.57	0.72
1271.0	1.67	0.23	1.02	1.00	0.04
1380.0	1.71	0.03	10.29	2.00	0.36
1422.5	1.64	0.01	9.63	0.75	0.58
1649.0	1.00	0.11	12.10	1.70	0.24
1782.0	0.48	0.21	52.08	0.63	1.86
1786.0	1.10	0.05	19.45	1.20	0.65
1815.0	0.30	0.41	33.67		0.11
1844.0	1.33	0.04	18.20	1.03	0.65
1955.0	0.34	0.10	65.29	1.36	0.64
2064.0	0.39	0.56	75.38	17.29	0.89
2107.0	0.65	0.39	4.00	0.30	0.14
2205.0	0.78	0.13	9.62	0.36	0.33
2320.0	0.64	0.12	41.72	3.76	0.88
2445.5	0.86	0.15	23.84	0.51	1.80
2550.0	0.92	0.22	22.60	1.16	1.73
2764.0	4.80	0.13	6.77	2.14	0.74
2765.0	3.20	0.12	7.34	1.41	2.36
2765.5	3.55	0.08	7.75	1.56	0.65
2766.0	2.03	0.41	8.71	1.88	1.96
2954.0	78.31	0.05	0.10	0.47	1.04
2967.0	1.94	0.15	5.62	0.55	0.51
3020.9	1.36	0.08	17.79	0.57	0.49
3033.0	1.10	0.06	8.70	0.43	0.35

Table 2.3.1 Saturated Fractions, molecular data

Depth m	Pr/n-C17	Pr/Ph	CPI-1	CPI-3
1057.5	0.71	0.71	1.39	1.08
1161.0	0.76	1.02	1.29	0.95
1271.0	0.77	0.88	1.49	1.65
1380.0	1.06	1.21	1.89	1.81
1422.5	0.75	0.75	1.77	1.61
1649.0	0.70	0.97	1.50	1.26
1782.0	0.77	1.07	0.96	0.68
1786.0	1.55	1.71	1.07	0.71
1815.0	0.69	0.84	0.89	0.58
1844.0	1.52	1.22	0.98	0.64
1955.0	0.95	1.10	1.01	0.80
2064.0	0.74	1.15	1.17	0.91
2107.0	1.02	1.67	1.31	1.30
2205.0	1.06	1.61	1.46	1.78
2320.0	0.82	1.37	1.22	1.32
2445.5	0.68	0.44	0.90	0.98
2550.0	0.94	1.38	0.99	1.05
2606.5			0.94	1.03
2764.0	1.22	1.94	1.01	1.06
2765.0	1.01	1.30	1.05	1.05
2765.5	1.25	1.84	1.00	1.07
2766.0	0.63	1.03	1.00	1.01
2954.0				
2967.0	1.22	2.28	1.07	1.06
2979.0			1.11	1.30
3020.9	0.82	1.85	1.01	1.02
3033.0	0.83	1.20	1.10	1.32

Table 2.7.1
Kerogen composition
Spore and pollen colouration



Visual Kerogen Analysis

TABLE NO.:
WELL NO.: 34/8-1

Sample	Depth (m)	Composition of residue	Particle size	Preservation palynomorphs	Thermal maturation index	Remarks
C-3069	1057.50 SWC	*W(50%),WR!(10%),Am(35%) P,S,Cy	F-M	fair to good	1+	*Small residue. Grey amorphous fluffy aggregates embed biodegraded and structured woody material and well preserved dinoflagellate cysts.
C-3070	1161 SWC	Am,Algal/Bact(15%),W(?)	F	poor		Loose, amorphous pyritic aggregates with granulate texture (algal/bact remains). Occasional fragments of strongly biodegraded wood. Wood probably formed one major input to the samples. Very thinwalled pollen.

ABBREVIATIONS

Am Amorphous
He Herbaceous
Cut Cuticles

Cy Cysts, algae
P Pollen grains
S Spores

W Woody material
C Coal
R! Reworked

F Fine
M Medium
L Large



Visual Kerogen Analysis

TABLE NO.:
WELL NO.: 34/8-1

Sample	Depth (m)	Composition of residue	Particle size	Preservation palynomorphs	Thermal maturation index	Remarks
C-3071	1271 swc	Am,Algal/Bact(60%),W(40%) P,Cy,Resin	F-M	variable	1/1+	Similar to the C-3070 but more of palynomorphs. Biodegraded woody material easier to distinguish. Some resin.
C-3072	1380 swc	Am,Algal/Bact(60%),W(40%) P,Cy	F-M	variable		Similar to the C-3070 and C-3071. Very strong degradation of wall material, also in palynomorphs (thinwalled). Light refraction strong in algal/bact remains.
C-3073	1422.5 swc	Am,Algal/Bact(75%),W(20%) Cy(5%),P	F-M	variable	1/1+	Loose pyritic granulate aggregates. Dominantly amorphous material embedding algal/bacterial remains degraded wood and very thinwalled palynomorphs.

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Sample	Depth (m)	Composition of residue	Particle size	Preservation palynomorphs	Thermal maturation index	Remarks
C-3074	1649 swc	Am,Algal/Bact(75%),W(20%) S,P,Cy	F-M	variable	1+2-,2-	Pyritic aggregates firmer than above, granulate. Palynomorph walls thicker - better preserved. Woody particles seem to include more of former structured remains.
C-3075	1782 swc	*Am,Algal/Bact(60%),W(40%)	F-M	variable	1+2-	*Small residue disturbed by acid resistant minerals. Structure and composition similar to the above: Amorphous strongly biodegraded material.
C-3076	1786 swc	Am,Algal/Bact(90%),W(10%) Cy	F-M	variable	1+2-	Granular aggregates of degraded material. Some Botryococcus, Tyttodiscus

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Sample	Depth (m)	Composition of residue	Particle size	Preservation palynomorphs	Thermal maturation index	Remarks
C-3077	1815 swc	*Am, Algal/Bact(90%), W(10%) Cy, S	F-M	variable	2	*Aggregates of mixed inorganic/organic. Well preserved cysts, stained. Spores fairly dark (oxidising environment) used for colour evaluation.
C-3078	1844 swc	**Am, W, WR!	F	-	N.D.P.	** Degraded grey amorphous sheets/aggregates, but dominance of black minerals (hematite). No confident evaluation of composition.

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Visual Kerogen Analysis

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Sample	Depth (m)	Composition of residue	Particle size	Preservation palynomorphs	Thermal maturation index	Remarks
C-3079	1955 SWC	**Am,W,WR!,P,S,Cy	F	Variable	2-,2-/2	**As C-3078 above. Palynomorphs more abundant. Cysts partly well preserved Triporatic Angiosperm pollen.
C-3080	2064 SWC	**Am,W,P,S,WR!,Cy	F	variable	2-,2-/2	**Grey amorphous aggregates as in C-3078. Pollen, spores and woody fragments.
C-3081	2107 SWC	**Am,W,WR!,Cy,S	F-M	fair to poor	2-/2,1+/2-	Residue rich in minerals. Grey amorphous material as aggregates of mixed organic/inorganic. Black minerals (hematite?) disturb. Very variable colouring.

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Sample	Depth (m)	Composition of residue	Particle size	Preservation palynomorphs	Thermal maturation index	Remarks
C-3082	2205 SWC	**Am,W,WR!,Cy	F-M	fair	-	**Grey amorphous material and minerals. Very thinwalled pale cysts in sieved residue.
C-3083	2320	**Am,W,WR!,Cy,S,P	F-M	fair to poor	2-/2,2	**As for C-3082.

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Sample	Depth (m)	Composition of residue	Particle size	Preservation palynomorphs	Thermal maturation index	Remarks
C-3943	2400	R!W(40%),W(30%),Am(20%), Algal (10%),Cy,P	F-M	Fair-poor	1+	Grey amorphous.
C-3944	2445.50	R!W(30%),W(40%),Am(20%) Algal(10%),Cy,P	F-M	Fair-poor	1+	Grey amorphous. Fluffy aggregates. Grey etched woody. Pyrite framboids. Palynomorphs stained. Pollen rare.
C-3945	2511	R!W(30%),W(40%),Am(20%) Algal(10%),Cy,P	F	Fair-poor	1+	As for C-3944 above.
C-3946	2550	R!W(20%),W(50%),Am(20%) Algal(10%),Cy,P	F-M	Fair-good	1+/2-	As for C-3944 above but the sieved residue is richer in brown degraded and structured wood fragments. Palynomorphs have fresher colours. Pollen rare, poorly preserved.

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Sample	Depth (m)	Composition of residue	Particle size	Preservation palynomorphs	Thermal maturation index	Remarks
C-3948	2606.50	*R!W(50%),W(40%),Am Algal,Cy,P	F-M	Fair-poor	1+2- - 2	*Grey amorphous very small residue. Tentatively, composition similar to C-3946.
C-3947	2655	*R!W(30%),W(40%),Am(30%) Algal,Cy,P	F-M	Fair	1+2- - 2	Grey, amorphous and woody material dominate. Black (opaque) minerals as framboids and other amorphous mineral particles prevent confident evaluation of the amount of woody black material. Pale grey stained cysts.
C-3949	2764	R!W(10%),W(55%), Am/Algal(30%),Cy,P	F-M	Variable	2-/2,2	Biodegradation.

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Sample	Depth (m)	Composition of residue	Particle size	Preservation palynomorphs	Thermal maturation index	Remarks
C-3950	2765	R!W(5%),W(70%), Am/Algal(20%),P(5%)	F-M	Variable	2	Poorly sorted material. Variably coloured. Structured woody material dominates. Pollen dominant palynomorph group. Biodegradation.
C-3951	2765.50	WR!(5%),W(75%), Am/Algal(10%),P,S(10%)	F-M-L	Variable	2-,2	Variably coloured. Structured woody material. Some rounded fragments of unstructured wood. Moderately sorted sample.
C-3952	2766	WR!(5%),W(75%), Am/Algal(15%),P,S(5%)	F-M	Fair to poor	1+,2	Pyritic fluffy amorphous aggregates of degraded material (woody). Wood variably coloured structured and nonstructured. Very pale thin walled pollen. Bisaccates dominate.

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Visual Kerogen Analysis

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Sample	Depth (m)	Composition of residue	Particle size	Preservation palynomorphs	Thermal maturation index	Remarks
C-3953	2839.50	WR!(5%),W(40%),Cut(40%), P,S(15%)	F-M-L	Variable	1+/2-	Poorly sorted assemblage of mostly terrestrial origin. Varied pollen and spores. Tasmanites.
C-3956	2954	Coal fragments	-	-	-	Probably mostly vitrinite.
C-3954	2967 Cu	WR!,W(15%),Algal(70%) Am(5%),P,S	F-M	Fair	1+	<u>Botryococcus</u> dominates. Some grey amorphous.
C-3955	2979	WR!,W(55%),Cut(15%),Algal (20%),Am(5%),P,S	F-M-L	Variable	1+	<u>Botryococcus</u> as above and fragmented. Strongly degraded granular amorphous. Poorly sorted terrestrial material. Palynomorphs and cuticles mostly pale colours.

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