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GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

SUMMARY REPORT
GEOCHEMICAL ANALYSIS
WELL NOCS 2/8-12

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ANALYSES AT GEOLAB NOR A/S

Analyses performed at Geolab Nor A/S, Trondheim consisted of the following:

1. Thermal extraction/pyrolysis gas chromatography of eighteen cuttings and sidewall core samples from the interval between 3030 and 4025 m, performed at AMOCO's request for stratigraphic purposes. These analyses were performed before and during the GHM operational period on the rig.

2. Rock-Eval and TOC of fourteen samples from the Jurassic interval between 4001 and 4904 m. These analyses were performed on cuttings samples during and after the operational period of the GHM.

   In addition, the production indices of selected samples were calculated from the GHM data for the intervals 3360 - 5279 m.

3. Vitrinite reflectance analysis of ten claystone samples from the interval 4001 - 4904 m.

Thermal Extraction

Thermal extraction gas chromatography was performed on eighteen cuttings and sidewall core samples from the Cretaceous over the interval 3030 - 4025 m. These consisted of one light yellow-brown to medium grey siltstone, three light/medium/greenish grey claystones, ten white/light grey carbonates, one medium grey marl and three dark brown to brownish black claystones.

Since no Rock-Eval or GHM analyses were performed on these samples (i.e. S_1 in mg HC/g rock is unknown), only

SUMMARY

Analysis of cuttings and core chips using the Geofina Hydrocarbon Meter (GHM) was performed on the rig Dyvi Stena, well 2/8-12 between 17.01. and 19.04, 1989. In addition selected analyses (thermal extraction/pyrolysis gas chromatography, Rock-Eval/TOC and vitrinite reflectance) and the calculation of production indices from the GHM data were carried out at Geolab Nor between January and May 1989. The analysed interval is from 3030 - 5300 m (TD).

INTRODUCTION

On-rig geochemistry was performed on board Dyvi Stena by Geolab Nor A/S on behalf of AMOCO Norge. The on-rig geochemistry was performed using a Geofina Hydrocarbon Meter (GHM) operated by Geolab Nor personnel. The GHM was first installed in the Geology Office, but was at request moved to the Chief Engineers Office. The GHM was installed on the rig in December 1988 and was dismantled in April 1989. Geolab Nor personnel were on board during drilling operations and conducted continuous analysis during drilling (average 1 sample each second hour drilling, sample collection, sample preparation and data preparation included). While drilling, morning reports were issued by Geolab Nor personnel to the on duty geologist. These reports consisted of a short written interpretation of the analytical data and, where necessary, selected typical chromatograms (chromatograms of the free hydrocarbons or S_1-peak, also called thermal extracts in the text) and/or pyrograms (chromatograms of pyrolysis products of kerogen or S_2-peak).

The following Geolab Nor personnel were on board:

Bakken, Kjell Arne
Brehme, Berit
Ferriday, Ian Lester
Holmedal, Anne-Lise
Moe, Rita Peggy

The instrument was installed by:

Hall, Keith

In addition to the on-rig geochemistry, some samples were analysed at Geolab Nor's laboratories. These analyses were partly GHM analyses, partly Rock-Eval and partly Vitrinite Reflectance analyses. All these data are included in the

report.

Only selected GHM chromatograms and pyrograms are included in the report. The chromatograms and pyrograms are issued in separate volumes in only two copies, in agreement with AMOCO. This was done in order to reduce the volume of the report to a manageable size.

Table 1 : Pyrolysis GC Data (S2 peak) as Percentage of Total Area for Well NOCS 2/8-12

Depth unit of measure: m

Depth	Typ	Lithology	C1	C2-C5	C6-C14	C15+	S2 from Rock-Eval	Sample
3030.00	cut	Sltst : lt y brn to m gy	9.60	34.97	41.07	14.36	-	0007-3L
3030.00	cut	Sh/Clst: lt gy to m gy, gn gy	15.30	31.13	50.46	3.11	-	0007-4L
3060.00	cut	Ca : w	3.94	35.42	53.82	6.82	-	0009-5L
3065.00	swc	Ca : w to lt gy	27.26	18.69	49.49	4.57	-	0002-1L
3099.00	cut	Ca : w	12.69	19.22	58.49	9.59	-	0011-5L
3141.00	cut	Ca : w	6.97	31.76	57.42	3.85	-	0013-5L
3159.00	cut	Ca : w	5.78	24.76	64.14	5.32	-	0014-4L
3191.00	swc	Ca : w	7.67	27.56	57.38	7.40	-	0003-1L
3210.00	swc	Ca : w	7.76	22.37	62.66	7.21	-	0004-1L
3245.00	swc	Ca : lt gy	10.44	22.54	55.34	11.67	-	0005-1L
3252.00	cut	Ca : w	10.47	17.93	66.57	5.02	-	0020-4L
3261.00	cut	Sh/Clst: lt gy to m gy to gn gy, lt y brn	9.48	24.00	50.75	15.78	-	0021-3L
3261.00	cut	Ca : w	9.67	19.46	56.10	14.77	-	0021-4L
3320.00	cut	Sh/Clst: lt gy to m gy to gn gy, lt y brn	9.01	39.43	47.39	4.17	-	0024-3L

Table 1 : Pyrolysis GC Data (S2 peak) as Percentage of Total Area for Well NOCS 2/8-12

Depth unit of measure: m

Depth	Typ	Lithology	C1	C2-C5	C6-C14	C15+	S2 from Rock-Eval	Sample
3358.00	swc	Marl : m gy	4.77	14.18	41.36	39.69	-	0001-1L
4019.00	cut	Sh/Clst: drk brn to brn blk	2.03	13.89	37.64	46.44	-	0041-1L
4022.00	cut	Sh/Clst: drk brn to brn blk	1.25	8.23	39.88	50.64	-	0042-1L
4025.00	cut	Sh/Clst: drk brn to brn blk	5.56	13.19	35.97	45.28	-	0043-1L

Table 2 : Rock-Eval table for well NOCS 2/8-12

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
4001.00	cut	Sh/Clst: brn blk	4.82	26.10	0.84	31.07	7.18	364	12	30.9	0.16	441	0030-2L
4028.00	cut	Sh/Clst: drk gy	3.70	14.35	0.44	32.61	4.32	332	10	18.1	0.20	440	0026-1L
4032.00	cut	Sh/Clst: drk gy	2.75	9.93	0.82	12.11	3.89	255	21	12.7	0.22	438	0027-1L
4100.00	cut	Sh/Clst: ol blk	3.87	8.95	0.88	10.17	3.44	260	26	12.8	0.30	443	0031-1L
4199.00	cut	Sh/Clst: ol blk	5.35	12.39	1.06	11.69	5.49	226	19	17.7	0.30	441	0032-1L
4292.00	cut	Sh/Clst: ol blk	3.19	12.49	1.05	11.90	6.80	184	15	15.7	0.20	446	0033-1L
4366.00	cut	Sh/Clst: m gy to drk gy	3.47	8.19	0.84	9.75	4.40	186	19	11.7	0.30	439	0028-1L
4400.00	cut	Sh/Clst: ol blk	1.57	3.88	0.96	4.04	3.11	125	31	5.5	0.29	443	0034-1L
4484.00	cut	Sh/Clst: ol blk	2.63	6.87	0.79	8.70	3.32	207	24	9.5	0.28	443	0035-1L
4609.00	cut	Sh/Clst: m gy to drk gy	1.80	5.31	0.51	10.41	2.84	187	18	7.1	0.25	441	0029-1L
4610.00	cut	Sh/Clst: ol blk	2.11	5.63	0.77	7.31	2.68	210	29	7.7	0.27	447	0036-1L
4709.00	cut	Sh/Clst: ol blk to drk gy	1.68	4.35	0.86	5.06	2.42	180	36	6.0	0.28	443	0037-1L
4823.00	cut	Sh/Clst: brn gy to drk gy	3.01	8.31	0.90	9.23	2.86	291	31	11.3	0.27	441	0038-3L
4904.00	cut	Sh/Clst: ol blk	3.12	8.71	0.74	11.77	3.29	265	22	11.8	0.26	442	0039-1L

Table 3 : Production index based on GHM data from well NOCS 2/8-12

Depth (m)	S1-area	S2-area	Production index
3360m	7007568	1876523	0.79
3369m	21382140	68700590	0.24
3378m	659636	1336733	0.33
3402m	117944	201046	0.37
3406m	108543	574584	0.16
3444m	95717	79454	0.55
3448m	66740	88154	0.43
3494m	61947	41648	0.60
3507m	50476	33894	0.60
3530m	291395	234093	0.55
3542m	180955	250801	0.42
3562m	165096	574593	0.22
3581m	14298070	----	1.0
3592m	71960	39113	0.65
3612m	294266	348324	0.46
3637m	158613	154399	0.51
3659m	210388	148297	0.59
3677m	57616	73713	0.44
3686m	34034	45752	0.43
3710m	127652	174076	0.42
3734m	66199	142841	0.32
3768m	134061	128069	0.51
3786m	129114	166924	0.44
3803m	47142	77168	0.38
3830m	134628	339936	0.28
3861m	56508	60909	0.48

Table 3 : Production index based on GHM data from well NOCS 2/8-12

Depth (m)	S1-area	S2-area	Production index
3904m	629935	698087	0.47
3941m	31307	88265	0.26
3979m	101799	163271	0.41
4001m	19038	209617	0.08
4016m	247016	2457165	0.09
4037m	5193950	27322590	0.16
4073m	30264090	11698360	0.72
4110m	17049970	10335930	0.62
4140m	17294340	4153719	0.81
4191m	24302420	10737550	0.69
4248m	1542131	18700670	0.08
4256m	15207880	10885920	0.58
4282m	21061840	----	1.0
4328m	12154730	20072960	0.38
4335m	12124890	----	1.0
4378m	2603814	380044	0.87
4383m	8544710	2164279	0.80
4427m	10872200	906971	0.92
4439m	6201221	2665621	0.70
4471m	5550095	715101	0.01
4489m	2292943	974161	0.70
4511m	6846024	2787434	0.71
4517m	7751166	2389560	0.76
4559m	1847474	465744	0.80
4587m	572477	151111	0.79
4612m	5311001	1046565	0.84
4636m	3601628	505596	0.89

Table 3 : Production index based on GHM data from well NOCS 2/8-12

Depth (m)	S1-area	S2-area	Production index
4664m	805624	757039	0.95
4676m	992440	54241	0.95
4709m	10580860	557768	0.95
4734m	805624	757039	0.58
4762m	82844070	15186760	0.85
4774m	163747700	50357980	0.76
4796m	194268300	39803390	0.83
4807m	115649400	31274990	0.79
4823m	84498960	14225860	0.86
4840m	215133000	42657570	0.83
4861m	73985610	26273080	0.74
4894m	300815900	34684540	0.90
4900m	221165300	----	1.0
4929m	184715200	22804200	0.89
4951m	192235300	41891560	0.82
4970m	126867600	----	1.0
4990m	41514890	8436802	0.83
5023m	10114750	1394027	0.89
5080m	26394610	6119197	0.81
5107m	16056900	----	1.0
5136m	22260090	854687	0.96
5173m	88390020	105997200	0.45
5208m	----	----	0.0
5226m	----	----	0.0
5237m	----	----	0.0
5260m	----	----	0.0
5279m	----	----	0.0

Table 4 : Thermal Maturity Data for well NOCS 2/8-12

Depth unit of measure: m

Depth	Typ	Lithology	Vitrinite Reflectance (%)	Number of Readings	Standard Deviation	Spore Fluorescence Colour	SCI	Tmax (°C)	Sample
4001.00	cut	bulk	0.69	3	0.04	6-7 (?)	-	-	0030-0B
4100.00	cut	bulk	0.70	1	0.00	6 (??)	-	-	0031-0B
4199.00	cut	bulk	0.77	1	0.00	6-7	-	-	0032-0B
4292.00	cut	bulk	0.78	4	0.13	6-7	-	-	0033-0B
4400.00	cut	bulk	0.78	2	0.13	7	-	-	0034-0B
4484.00	cut	bulk	0.83	7	0.10	6-7	-	-	0035-0B
4610.00	cut	bulk	0.78	15	0.08	6-7	-	-	0036-0B
4709.00	cut	bulk	0.81	3	0.16	7	-	-	0037-0B
4823.00	cut	bulk	0.84	4	0.10	7-8	-	-	0038-0B
4904.00	cut	bulk	0.92	11	0.12	7-8	-	-	0039-0B

LIST OF ANALYSED SAMPLES

Samples marked with "*" were analysed at Geolab Nor's laboratories and not on board Dyvi Stena. The word "claystone" is used as a synonym for claystone and shale.. In addition to the analysed samples a number of standard and blanc runs were performed. These are not listed and chromatograms/pyrograms are not enclosed.

Depth of sample	Main lithology	Notes
3030 m	Siltstone	*
3030 m	Claystone	*
3060 m	Carbonate	*
3065 m	Carbonate	*, side-wall core
3099 m	Carbonate	*
3141 m	Carbonate	*
3159 m	Carbonate	*
3191 m	Carbonate	*, side-wall core
3210 m	Carbonate	*, side-wall core
3245 m	Carbonate	*, side-wall core
3252 m	Carbonate	*
3261 m	Claystone	*
3261 m	Carbonate	*
3320 m	Claystone	*
3358 m	Marl	*, side-wall core
3360 m	Claystone	
3362 m	Claystone	
3363 m	Claystone	
3364.5 m	Marl	
3366 m	Claystone/Marl	
3369 m	Claystone/Marl	
3372 m	Claystone/Marl	
3378 m	Claystone/Marl	
3382 m	Claystone/Marl	
3387 m	Claystone/Marl	
3392 m	Marl	
3397 m	Marl	

3402 m	Marl	
3406 m	Marl	
3411 m	Marl	
3415 m	Marl	
3421 m	Marl	
3427 m	Marl	S_2 failed
3433 m	Claystone/Marl	
3439 m	Claystone/Marl	
3444 m	Claystone	
3448 m	Claystone	
3454 m	Claystone	
3460 m	Claystone	
3465 m	Claystone	
3470 m	Claystone	
3474 m	Claystone	
3479 m	Claystone	
3486 m	Claystone	
3491 m	Claystone	
3494 m	Claystone	
3498 m	Claystone	
3502 m	Claystone	
3507 m	Claystone	
3511 m	Claystone	
3517 m	Claystone	
3522 m	Claystone	
3526 m	Claystone	
3530 m	Claystone	
3533 m	Claystone	
3538 m	Claystone	
3542 m	Claystone	
3547 m	Claystone	
3549 m	Claystone	
3553 m	Claystone	
3557 m	Claystone	
3561 m	Claystone	
3562.5 m	Claystone	
3565 m	Claystone	
3569 m	Claystone	S_2 flame out

3574 m	Claystone	
3578.5 m	Marl/Claystone	
3578.5 m	Claystone	
3581 m	Marl/Claystone	
3585 m	Marl/Claystone	S_2 flame out
3589 m	Claystone	
3592 m	Claystone	
3596 m	Claystone	
3600 m	Claystone	S_2 flame out
3603 m	Claystone	re-boot computer
3607 m	Claystone	re-boot computer
3610 m	Claystone	
3612 m	Claystone	
3615 m	Claystone	
3621 m	Claystone	
3626 m	Claystone	
3629 m	Claystone	
3633 m	Claystone	
3637 m	Claystone	
3641 m	Claystone	
3647 m	Claystone	
3649 m	Claystone	
3653 m	Claystone	
3656 m	Claystone	
3659 m	Claystone	
3662 m	Claystone	
3665 m	Claystone	
3668 m	Claystone	S_2 flame out
3673 m	Claystone	
3675 m	Claystone	
3677 m	Claystone	
3680 m	Claystone	cooling failed partly
3683 m	Claystone	
3686 m	Claystone	
3689 m	Claystone	
3694 m	Claystone	S_2 flame out
3699 m	Claystone	
3702 m	Claystone	

3706 m	Claystone	
3710 m	Claystone	
3714 m	Claystone	
3717 m	Claystone	
3723 m	Claystone	
3727 m	Claystone	
3731 m	Claystone	S_2 flame out
3734 m	Claystone	
3739 m	Claystone	
3745 m	Claystone	
3755 m	Claystone	
3759 m	Claystone	
3766 m	Claystone	
3765 m	Claystone	
3768 m	Claystone	
3774 m	Claystone	
3777 m	Limestone	
3786 m	Marl	
3786 m	Claystone	
3792 m	Claystone/Limestone	
3803 m	Claystone/Limestone	
3808 m	Claystone/Limestone	
3816 m	Claystone/Limestone	
3820 m	Claystone/Limestone	
3825 m	Claystone/Limestone	
3830 m	Limestone	
3836 m	Limestone	S_2 flame out
3841 m	Limestone	
3847 m	Limestone	
3852 m	Limestone	
3855 m	Limestone	
3861 m	Limestone	
3866 m	Claystone	
3871 m	Limestone	
3877 m	Limestone	
3884 m	Limestone	
3890 m	Limestone	
3896 m	Limestone	

3904 m	Limestone	
3910 m	Marl	
3916 m	Limestone	
3921 m	Limestone	
3927 m	Claystone	
3937 m	Claystone	
3941 m	Claystone	
3949 m	Claystone	
3955 m	Limestone	
3962 m	Limestone	
3967 m	Limestone	
3973 m	Limestone	
3979 m	Limestone	
3987 m	Limestone	
3996 m	Claystone	
4001 m	Claystone	
4008 m	Claystone	
4016 m	Claystone	
4019 m	Claystone	*, "Mandal Fm."
4022 m	Claystone	
4022 m	Claystone	*, "Mandal Fm."
4025 m	Claystone	
4025 m	Claystone	*, "Mandal Fm."
4027 m	Claystone	
4028 m	Claystone	
4032 m	Claystone	
4037 m	Claystone	
4048 m	Claystone	
4052 m	Claystone	
4063 m	Claystone	
4073 m	Claystone	
4083 m	Claystone	
4088 m	Claystone	
4096 m	Claystone	
4104 m	Claystone	
4110 m	Claystone	
4117 m	Claystone	
4123 m	Claystone	

4129 m	Claystone	
4132 m	Claystone	
4140 m	Claystone	
4148 m	Claystone	
4155 m	Claystone	
4163 m	Claystone	
4172 m	Claystone	
4182 m	Claystone	
4191 m	Claystone	
4198 m	Claystone	
4209 m	Claystone	
4216 m	Claystone	
4225 m	Claystone	failed
4229 m	Claystone	
4236 m	Claystone	
4248 m	Claystone	
4256 m	Claystone	
4264 m	Claystone	
4269 m	Claystone	
4278 m	Claystone	
4282 m	Claystone	
4293 m	Claystone	
4297 m	Claystone	failed
4307 m	Claystone	
4310 m	Claystone	
4318 m	Claystone	
4328 m	Claystone	
4335 m	Claystone	
4343 m	Claystone	
4348 m	Claystone	
4355 m	Claystone	
4366 m	Claystone	
4378 m	Claystone	
4383 m	Claystone	
4395 m	Claystone	
4402 m	Claystone	
4410 m	Claystone	
4419 m	Claystone	

4427 m	Claystone
4439 m	Claystone
4442 m	Claystone
4456 m	Claystone
4461 m	Claystone
4466 m	Carbonate
4471 m	Carbonate
4479 m	Carbonate
4484 m	Carbonate/Claystone
4489 m	Carbonate/Claystone
4493 m	Claystone
4499 m	Claystone
4511 m	Claystone
4517 m	Claystone
4522 m	Claystone
4529 m	Claystone
4538 m	Claystone
4545 m	Claystone
4552 m	Claystone
4559 m	Claystone
4567 m	Claystone
4578 m	Claystone
4587 m	Claystone
4598 m	Claystone
4609 m	Claystone
4612 m	Claystone
4618 m	Claystone
4630 m	Claystone
4636 m	Claystone
4644 m	Claystone
4657 m	Claystone
4664 m	Claystone
4676 m	Claystone
4694 m	Claystone
4701 m	Claystone
4709 m	Claystone
4716 m	Claystone
4723 m	Claystone

4734 m	Claystone	
4742 m	Sandstone	less than 1% of lith.
4744 m	Claystone	
Oil15	"Oilsample"	
4747 m	Claystone	
4750 m	Claystone	
4753 m	Claystone	
4758 m	Claystone	
4762 m	Claystone	
4767 m	Cement	
4774 m	Claystone	
4779 m	Claystone	
4785 m	Claystone	
4791 m	Claystone	
4796 m	Claystone	
4801 m	Claystone	cooling failed
4807 m	Claystone	cooling failed
4812 m	Claystone	S_1 flame out
4816 m	Claystone	S_2 flame out
4823 m	Claystone	
4831 m	Claystone	
4840 m	Claystone	
4845 m	Claystone	
4853 m	Claystone	
4861 m	Claystone	
4867 m	Claystone	
4872 m	Claystone	
4877 m	Claystone	
4887 m	Claystone	
4894 m	Claystone	
4900 m	Claystone	
4905 m	Claystone	
4910 m	Claystone	
4915 m	Claystone	
4921 m	Claystone	
4929 m	Claystone	
4936 m	Claystone	
4944 m	Claystone	

4951 m	Claystone	
4958 m	Claystone	
4964 m	Claystone	
4970 m	Claystone	
4977 m	Claystone	
4984 m	Claystone	
4990 m	Claystone	
4999 m	Claystone	
5015 m	Siltstone	
5023 m	Sandstone	
5030 m	Siltstone	
5037 m	Siltstone	
5054 m	Siltstone	
5062 m	Siltstone	
5072 m	Siltstone	
5080 m	Siltstone	
5094 m	Siltstone	
5107 m	Siltstone	
5114 m	Claystone	
5123 m	Siltstone	
5136 m	Siltstone	
5144 m	Claystone	
5165 m	Claystone	
5173 m	Claystone	S_1 flame out
5185 m	Sandstone	
5195 m	Sandstone	
5208 m	Sandstone	
5226 m	Sandstone	
5226 m	Carbargillite	
Lignite	Mud additive	S_1 flame out
5228.5 m	Sandstone	first run
5228.5 m	Sandstone	second run
5231.5 m	Sandstone	
5233.95 m	Sandstone	
5236.95 m	Sandstone	
5238.95 m	Claystone	
5239.95 m	Sandstone	
5243.58 m	Sandstone	

5249 m	Sandstone
5260 m	Sandstone
5268 m	Sandstone
5279 m	Sandstone
5300 m	Sandstone

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 2/8-12

Depth unit of measure: m

Depth		Type			Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
3021.00						0006
			80	Cont : Coal-ad		0006-1L
			15	Sh/Clst: lt gy to m gy, gn gy		0006-3L
			5	Sh/Clst: gy red		0006-2L
3030.00						0007
			70	Sh/Clst: lt gy to m gy, gn gy		0007-4L
			15	Sltst : lt y brn to m gy, s		0007-3L
			10	Sh/Clst: gy red		0007-2L
			5	Cont : Coal-ad, prp, dd		0007-1L
3039.00						0008
			50	Cont : Coal-ad, prp, dd		0008-1L
			45	Sh/Clst: lt gy to m gy, gn gy		0008-4L
			5	Sh/Clst: gy red		0008-2L
			tr	Sltst : lt y brn to m gy, s		0008-3L
			tr	Ca : w to lt gy		0008-5L
			tr	Other : pyr		0008-6L
3060.00						0009
			90	Ca : w, chk		0009-5L
			10	Sh/Clst: lt gy to m gy, gn gy, calc		0009-4L
			tr	Cont : Coal-ad		0009-1L
			tr	Sh/Clst: gy red		0009-2L
			tr	Sltst : lt y brn to m gy, s		0009-3L
			tr	Other : pyr		0009-6L

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Table 1 : Lithology description for well NOCS 2/8-12

Depth unit of measure: m

Depth		Type			Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
3065.00		swc				0002
			100	Ca : w to lt gy		0002-1L
3081.00						0010
			95	Ca : w, chk		0010-5L
			5	Cont : Coal-ad		0010-1L
			tr	Sh/Clst: gy red		0010-2L
			tr	Sltst : lt y brn to m gy, s		0010-3L
			tr	Sh/Clst: lt gy to m gy, gn gy, calc		0010-4L
3099.00						0011
			100	Ca : w, chk		0011-5L
			tr	Cont : Coal-ad		0011-1L
			tr	Sh/Clst: gy red		0011-2L
			tr	Sltst : lt y brn to m gy, s		0011-3L
			tr	Sh/Clst: lt gy to m gy, gn gy, calc		0011-4L
3120.00						0012
			80	Ca : w, chk		0012-5L
			20	Cont : Coal-ad		0012-1L
			tr	Sh/Clst: gy red		0012-2L
			tr	Sltst : lt y brn to m gy, s		0012-3L
			tr	Sh/Clst: lt gy to m gy, gn gy, calc		0012-4L
3141.00						0013
			100	Ca : w, chk		0013-5L
			tr	Cont : Coal-ad		0013-1L
			tr	Sh/Clst: gy red		0013-2L
			tr	Sltst : lt y brn to m gy, s		0013-3L
			tr	Sh/Clst: lt gy to m gy, gn gy, calc		0013-4L

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GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 2/8-12

Depth unit of measure: m

Depth Int	Depth Cvd	Type TOC%	%	Lithology description	Trb	Sample
3159.00						0014
			100	Ca : w, chk		0014-4L
			tr	Cont : Coal-ad, ns		0014-1L
			tr	Sh/Clst: gy red		0014-2L
			tr	Sh/Clst: lt gy to m gy, gn gy, calc		0014-3L
3171.00						0015
			75	Ca : w, chk		0015-4L
			15	Cont : Coal-ad, ns, fib		0015-1L
			10	Marl : lt gy to m gy		0015-3L
			tr	Sh/Clst: gy red		0015-2L
3191.00	swc					0003
			90	Ca : w, chk		0003-1L
			10	Cont : dd		0003-2L
3201.00						0016
			90	Cont : Coal-ad, Mica-ad, ns, fib		0016-1L
			10	Sh/Clst: m gy to gn gy		0016-3L
			tr	Sh/Clst: gy red		0016-2L
			tr	Ca : w, chk		0016-4L
3210.00	swc					0004
			100	Ca : w, chk		0004-1L
			tr	Cont : dd		0004-2L
3222.00						0018
			80	Ca : w, st, chk		0018-4L
			15	Sh/Clst: lt gy to m gy to gn gy, calc		0018-3L
			5	Cont : st, Coal-ad, Mica-ad, ns, fib		0018-1L
			tr	Sh/Clst: gy red		0018-2L

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GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 2/8-12

Depth unit of measure: m

Depth		Type			Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
3240.00						0017
			95	Ca : w, st, chk		0017-4L
			5	Cont : st, Coal-ad, ns, fib		0017-1L
			tr	Sh/Clst: gy red		0017-2L
			tr	Sh/Clst: lt gy to m gy to gn gy, calc		0017-3L
3245.00		swc				0005
			100	Ca : lt gy		0005-1L
			tr	Cont : dd		0005-2L
3246.00						0019
			70	Ca : w, st, chk		0019-4L
			25	Sh/Clst: lt gy to m gy to gn gy, calc		0019-3L
			5	Cont : st, Coal-ad, ns, fib		0019-1L
			tr	Sh/Clst: gy red		0019-2L
			tr	Other : pyr		0019-5L
3252.00						0020
			60	Ca : w, chk		0020-4L
			40	Sh/Clst: lt gy to m gy to gn gy, lt y brn		0020-3L
			tr	Cont : Coal-ad, Mica-ad, prp, ns, fib		0020-1L
			tr	Sh/Clst: gy red		0020-2L
			tr	Other : pyr		0020-5L
3261.00						0021
			50	Sh/Clst: lt gy to m gy to gn gy, lt y brn, calc		0021-3L
			25	Ca : w, st, chk		0021-4L
			20	Cont : st, Coal-ad, dd, fib		0021-1L
			5	Ca : m gy to drk gy		0021-6L
			tr	Sh/Clst: gy red		0021-2L
			tr	Other : pyr		0021-5L

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GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 2/8-12

Depth unit of measure: m

Depth		Type			Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
3285.00						0022
			85	Cont : st, Coal-ad, Mica-ad, fib		0022-1L
			15	Sh/Clst: lt gy to m gy to gn gy, lt y brn, calc		0022-3L
			tr	Sh/Clst: gy red		0022-2L
			tr	Ca : w, st, chk		0022-4L
			tr	Other : pyr		0022-5L
			tr	Ca : m gy to drk gy		0022-6L
3300.00						0023
			95	Cont : st, Coal-ad, Mica-ad, fib		0023-1L
			5	Sh/Clst: lt gy to m gy to gn gy, lt y brn, calc		0023-3L
			tr	Sh/Clst: gy red		0023-2L
			tr	Ca : w, st, chk		0023-4L
3320.00						0024
			80	Cont : Coal-ad, Mica-ad, ns, fib		0024-1L
			20	Sh/Clst: lt gy to m gy to gn gy, lt y brn, calc		0024-3L
			tr	Sh/Clst: gy red		0024-2L
			tr	Ca : w, st, chk		0024-4L
3340.00						0025
			100	Cont : Coal-ad, Mica-ad, prp, ns, fib		0025-1L
			tr	Sh/Clst: gy red		0025-2L
			tr	Sh/Clst: lt gy to m gy to gn gy, lt y brn, calc		0025-3L
			tr	Ca : w, st, chk		0025-4L

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GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 2/8-12

Depth unit of measure: m

Depth		Type			Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
3358.00		swc				0001
			100	Marl : m gy		0001-1L
4001.00						0030
			50	Sh/Clst: ol gy to lt ol gy, calc		0030-1L
		7.18	50	Sh/Clst: brn blk, slt		0030-2L
			tr	Other : pyr		0030-3L
			tr	Sh/Clst: red brn, calc		0030-4L
			tr	Cont : bar		0030-5L
4019.00						0041
			100	Sh/Clst: drk brn to brn blk		0041-1L
4022.00						0042
			100	Sh/Clst: drk brn to brn blk		0042-1L
4025.00						0043
			100	Sh/Clst: drk brn to brn blk		0043-1L
4028.00						0026
		4.32	100	Sh/Clst: drk gy		0026-1L
4032.00						0027
		3.89	100	Sh/Clst: drk gy		0027-1L

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Table 1 : Lithology description for well NOCS 2/8-12

Depth unit of measure: m

Depth		Type			Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
4100.00						0031
		3.44	90	Sh/Clst: ol blk		0031-1L
			10	Cont : Coal-ad, prp, bar		0031-2L
4199.00						0032
		5.49	95	Sh/Clst: ol blk		0032-1L
			5	Cont : Coal-ad, prp, bar		0032-2L
4292.00						0033
		6.80	95	Sh/Clst: ol blk		0033-1L
			5	Cont : Coal-ad, prp, bar		0033-2L
4366.00						0028
		4.40	100	Sh/Clst: m gy to drk gy		0028-1L
4400.00						0034
		3.11	90	Sh/Clst: ol blk		0034-1L
			10	Cont : Coal-ad, prp, bar		0034-2L
4484.00						0035
			50	Ca : ol blk to dsk y brn, dol		0035-3L
		3.32	45	Sh/Clst: ol blk		0035-1L
			5	Cont : Coal-ad, prp, bar		0035-2L
4609.00						0029
		2.84	60	Sh/Clst: m gy to drk gy, slt, s		0029-1L
			40	Ca : drk gy to brn blk, dol		0029-2L

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Table 1 : Lithology description for well NOCS 2/8-12

Depth unit of measure: m

Depth		Type			Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
4610.00						0036
		2.68	85	Sh/Clst: ol blk		0036-1L
			15	Cont : Coal-ad, prp, bar		0036-2L
4709.00						0037
		2.42	85	Sh/Clst: ol blk to drk gy		0037-1L
			15	Cont : Coal-ad, prp, bar		0037-2L
4823.00						0038
			50	Cont : Coal-ad, prp, bar		0038-2L
		2.86	30	Sh/Clst: brn gy to drk gy		0038-3L
			20	Sh/Clst: ol blk		0038-1L
4904.00						0039
		3.29	60	Sh/Clst: ol blk		0039-1L
			20	Cont : Coal-ad, prp, bar		0039-2L
			20	Sh/Clst: brn gy to drk gy		0039-3L