6.4 Mud report

36" hole, 30" csg.:

The 36" hole was drilled with sea water with returns to the seabed. Pumped viscous pills around on connections. At T.D. the hole was circulated full with 1.44 rd viscous mud. After the hole was reamed, 1.44 rd viscous mud was circulated. Spotted 16 m^3 1.26 rd mud on bottom.

26" hole, 20" csg.:

The riser was run before the 17½" pilot hole was drilled. Drilled to 288 m. Pumped a viscous slurry around periodically, adding sea water for volume control. Drilled ahead, pumping a 1.3 rd sea water mud mixed with gel, caustic soda, lime and soda ash. Pumped high viscosity pills around every survey when drilling further on. Circulated 23.9 m^3 of 1.06 rd high viscosity mud around to clean the hole, and displaced hole with 120 m^3 of 1.06 rd mud. Lost circulation. Added 3.4 ton of mica to 100 m^3 of mud and drilled ahead. Regained full circulation gradually. Ran all solids control equipment and circulated bottoms up to reduce weight from 1.32 rd to 1.1 rd. Displaced the riser with sea water prior to run 20" casing. Materials used in this interval were bentonite, caustic, soda ash, lime, mica and nut plug.

17½" hole, 13-3/8" csg.:

Drilled out of the 20" casing with 1.03 rd mud. Lost 14 m^3 mud into the formation while drilling at 859 m. Added lost circulation material (L.C.M.)

and regained circulation. Had lost circulation while drilling from 1031 m to 1097 m. Pumped mud with L.C.M. and gel pills, adding sea water to maintain volume. Stabilized losses. Pumped several L.C.M. pills and gel pills on bottom and regained full return. Pumped 41 m^3 mud with L.C.M. mud prior to pull out of the hole for bit change. Added sea water, gel slugs Drispac and drilling detergent to the system prior to drilling further on. Started to control fluid loss at 1434 m (15 cc). Started raising the p.H. and adjusted the rheology by adding Spersene. Observed massive shale cavings at 2027 m. Added Soltex to stabilize the wellbore, and thinners to control the rheology. Water dilution was needed continuously to maintain the volume. The viscosity increased due to cuttings. Added drill water for weight control, Spersene/ xp-20 to lower gel strength, lime to control pf and CMC to control the water loss. The mud density was kept at 1.16 rd, and Hi-Vis C.M.C. added to raise the yield point prior to the logging job. The chloride content was reduced from 16000 to 4500 ppm. Materials used in this interval were barite, gel, Spersene, xp-20, caustic, C.M.C., Drispac, lime, L.C.M., Soltex, soda ash, D.D. and pipe lax. Fluid losses were reduced from 15.0 cc to 4.0 cc.

12-1/4" hole, 9-5/8" csg.: Drilled out with the mud density of 1.20 rd. Weighted the mud to 1.5 rd, using barite, bentonite, Spersene, xp-20 and caustic. Ran degasser, desilter and silt separator but shut down the desilter

after 3 hours due to losses from desilter. Had to raise the mud weight to 1.53 rd while reaming from 2711 m to 2735 m due to poor hole cleaning. Added bit lube and caustic soda to maintain pH at 10.5 - 11.5. Circulated and weighted the mud up to 1.60 rd at 2836 m. Lost 7 m^3 over shaker due to trip gas and gelled mud. Raised mud weight due to gas increase to 1.73 rd. Added thinners to control rheology due to increasing temperatures barite to maintain weight. Added Soltex when large amounts of shale and clay were coming over the shaker. Drilled ahead, adding chemicals for solids control, temperature, pH and pf. Ran silt separator and degasser at all times. Drilled ahead from 3783 m, got high solids content, high penetration rate and high gel, added chemicals and water. Ran desilter for 8 hours because of these problems and due to drilling fine claystone. Weighted the mud up to 1.80 rd at 3888 m, circulated and conditioned the mud while reaming to T.D. Materials used in this interval were barite, bentonite, Spersene, xp-20, caustic, CMC, Drispac, lime, Soltex, bit lube and Resinex. The chloride content varied from 6500 to 4000 ppm. Fluid losses varied from 13 cc to 22 cc (HT-HP).

8-3/8" hole, 7" liner:

Drilled out of the shoe with mud density of 1.91 rd. Treated the mud for cement contamination, gels and fluid loss. Raised the mud weight up to 2.01 rd due to gas, and added xp-20 to control the HP-HT filtrate. Raised the mud weight up to 2.04 rd.

Treated mud for rheology and fluid loss. Raised the mud weight up to 2.11 rd due to connection gas increase, and treated mud for temperature control, fluid loss, viscosity and volume. Treated mud lightly with Spersene, xp-20 and caustic prior to running 7" liner. Materials used in this interval were barite, bentonite, Spersene, xp-20, caustic soda, Resinex, Drispac, lime, soda ash and bit lube. The chloride content varied from 6800 to 5500 ppm. Fluid losses varied from 19.2 cc to 13.6 cc (HT-HP)

6" hole, 4½" liner:

Drilled out of the 7" liner shoe with the mud density of 2.11 rd. Controlled the calcium content and added zinc carbonaate while drilling from 4511 m. Treated the mud to control the pf, Ca^{++} and HP-HT water loss and temperature stability, by added gel, lime, Resinex and thinners. Added resinex to reduce HP-HT fluid loss to 10 cc or less, and raised the temperature stability to 350°F. Reduced the mud weight to 2.06 rd, due to stuck pipe. Worked pipe free. Raised the mud weight to 2.09 rd. Added Resinex and bit lube while fishing for junk. Lost 143 m^3 of mud. Added barite when the mud weight dropped to 2.02 rd after the BOP test. Circulated and conditioned the mud for logging. Made wiper trip, treated the mud with lime, caustic, Spersene and xp-20. Materials used in this inverval were barite, bentonite, xp-20, Spersene,

Resinex, Soltex, caustic soda, lime, Magcolube, zinc carb., Magconol, aluminum stearat and soda ash. The chloride content varied from 6500 - 5500 ppm. Fluid losses varied from 36 cc to 5.6 cc (HT-HP).

Table A-4

WELL DATA SHEET

MAG-945-A

OPERATOR: Norsk Hydro,	SURVEY SEC. T R	CASING SIZE / DEPTH / DRLG. DAYS	BIT SIZE
WELL: Well 30/7-7	FIELD: 30	SURFACE: 20" 764m 4	17 1/2" +26
CONTRACTOR: Wilhelmson	COUNTY	INTERMEDIATE: 13 3/8" 2681m 19	17 1/2"
ENGINEER	STATE: North Sea COUNTRY: Norway	PRODUCTION: 9 5/8" 3877 36	12 1/4"

DATE	DEPTH	kg cm³ WT.	VISCOSITY SEC.	VISCOSITY CPS.	CORR. UNITS PV	CORR. UNITS YP	GELS 0	GELS 10	pH BECK X / STRIP	FLUID LOSS 100 PSI API	FLUID LOSS 500 PSI 300 °F HT-HP	CL X / CACL / NACL	ALKALINITY PF	ALKALINITY PM	ALKALINITY MF	CA ppm	Mg ppm	RETORT % OIL	RETORT % SOL	RETORT % WATER	ACTIVITY As	ACTIVITY Am	RATIO OIL	RATIO H_2O	# Bbl CEC
Dec. 18	0	1.03	180						11.5																
19	185	1.04	190																						
20	185	1.04	42																						
21	350	1.13	30	8	3	5	1	3	7.0			15000				1200			7	93					
22	721	1.06	120	23	12	11	12	37	9.5			22000				260			3	97					
23	764	1.04	47	32	18	14	10	52	9.0			22000				300			3	97					
24	781	1.04	45	26	15	11	9	46	9.0			22000				300			3	97					
25	781	1.04	45	26	15	11	9	46	9.0			22000				300			3	97					
26	781	1.04	45	25	15	10	10	49	9.0			22000				300			3	97					
27	781	1.04	36	11	8	3	5	12	9.5			15000				200			3	97					
28	800	1.03	38	16	6	10	11	27	11.0			16000				NIL			2	98					
29	935	1.07	31	20	18	3	1	4	7.5			19000				1000			3	97					
30	1202	1.09	36	27	20	7	2	6	7.5			14000				600			4	96					
31	1434	1.08	41	12.5	7	5	2	6	7.5	15		13000	.2			1100			4	96					30
Jan 1	1635	1.08	45	15	6	8	6	12	9.0	16		13000	.3			480			4	96					35
2	1635	1.12	47	20	15	5	5	44	9.0	6.6		10500	.3			220		3	11	86					27
3	1650	1.12	47	20	15	10	9	88	9.0	6.6		10500	.3			220		2.5	11	86.5					27
4	1822	1.09	43	17	10	14	6	44	9.0	6.5		10000	.2		.6	200		2.5	6	92.5					26
5	1822	1.09	49	20	14	12	10	88	9.0	7.2		9524	.2	9	.5	160		3	6	91					32.5
6	1822	1.109	52	18.5	12	13	7	74	10.0	6.2		9223	1.0	2.4	1.2	120		5	6	89					32.5
7	1822	1.109	42	16.5	12	9	6	81	10.0	6.8		9524	.5	1.0	1.0	80		3.5	6	90.5					32.5
8	1822	1.109	46	18	12	12	10	86	10.5	5.4		9524	.9	2.0	1.0	80		3.5	6	90.5					32.5
9	2027	1.10	48	23	14	18	4	48	9.5	6.0		8020	.3	1.0	.7	80		3	8	89					35
10	2235	1.12	45	18	12	14	7	69	10.5	6.4		6015	.7	2.0	1.2	60		2	8	90					37.5
11	2339	1.139	48	22.5	14	17	5	60	10.5	6.2		5514	.5	1.4	1.4	40		3	8	89					35
12	2503	1.14	46	32	24	16	3	20	11.0	5.0		4800	1.1	2.3	1.8	90		3	8	89					30
13	2546	1.14	42	27	20	14	2	11	11.5	4.8		4500	1.5	2.3	1.8	150		3	8	89					28

DATE SPUD: 18/12/78 DATE T.D.: B.H.T. COMPLETION FLUID TYPE: COST:

PACKER MUD TYPE: COST:

Sp

WELL DATA SHEET

MAG-545-A

OPERATOR: Norsk Hydro	SURVEY SEC. T R	CASING SIZE: 30"	DEPTH: 184	DRLG. DAYS: 1	BIT SIZE: 36"
WELL: 30/7-7	FIELD: 30	SURFACE: 20"	764	4	17 1/2+36"
CONTRACTOR: Wilhelmson	COUNTY	INTERMEDIATE: 13 3/8	2681	19	17 1/2
ENGINEER	STATE: N. Sea COUNTRY: Norway	PRODUCTION			

DATE	DEPTH	R.D WT.	VISCOSITY SEC.	VISCOSITY CPS.	CORR. 115°F PASCALS PV	PASCALS YP	GELS 0	GELS 10	pH BECK ☒ STRIP ☐	FLUID LOSS 100 PSI API	FLUID LOSS 500 PSI 300 °F HT-HP	CL ☒ CACL ☐ NACL ☐	ALKALINITY PF	ALKALINITY PM	ALKALINITY MF	CA ppm	Mg ppm	RETORT % OIL	RETORT % SOL	RETORT % WATER	ACTIVITY As	ACTIVITY Am	RATIO OIL	RATIO H_2O	# Bbl CEC
14/1/79	2620	1.14	43	27	18	9	3	8	10.5	4.8	-	4500	.9	2	1.2	200	-	4	7	89					25
15	2702	1.16	42	29	20	9	2	6	11.0	4.8	-	5000	.9	1.8	1.4	250	-	4	9	87					22
16	2702	1.16	55	29	16	13	3	7	11.0	3.8	-	4500	1.1	2.0	1.5	200	-	4	9	87					22
17	2702	1.16	55	30	20	10	2	6	10.5	3.8	-	4500	.9	2.0	1.3	200	-	4	9	87					22
18	2681	1.16	55	32	20	12	3	10	10.5	4.0	-	4500	.9	1.5	1.1	200	-	4	9	87					22
19	2681	1.16	45	25	18	7	2	6	9.0	4.0	-	4500	.7	1.4	1.2	200	-	3	8	89					22
		13 3/8 Casing																							
20	2681	1.24	39	15	12	3	2	11	9.8	5.2	-	4000	.4	.9	1.2	250	-	4	10	86					18
21	2716	1.49	43	25	20	5	2	21	9.9	4.6	-	4200	.5	.9	1.3	230	-	3	20	77					19
22	2734	1.53	44	25	18	7	4	30	11.2	4.6	22	4300	.7	.9	1.8	210	-	3	21	76					20
23	2834	1.53	45	25	19	6	4	31	10.5	4.5	22	4300	.6	.9	1.4	200	-	3	20	77					18
24	2854	1.60	42	27	20	7	3	20	11.0	4.8	21.4	4200	.7	1.2	1.8	180	-	2	23	75					17
25	2888	1.70	52	36	25	11	3	22	10.0	4.4	20	4200	.4	.8	1.0	200	-	2	23	75					17
26	2922	1.70	45	38	26	8	3	25	10.0	4.4	20	5000	.4	.6	1.0	150	-	2	25	73					20
27	3071	1.70	46	35	26	7	3	10	11.0	4.6	18	4600	.4	.5	1.2	200	-	2	25	73					18
28	3075	1.70	48	33	25	8	3	10	11.0	4.2	18	4800	.4	1.0	1.3	200	-	2	24	74					18
29	3097	1.73	46	29	25	9	3	12	10.8	3.5	16	4800	.5	1.3	1.3	250	-	2	26	72					20
30	3156	1.73	42	25	24	6	2	10	11.3	4.0	15	4800	.6	1.4	2.1	115	-	2	24	74					18
31	3204	1.73	42	28	20	6	2	7	10.3	4.0	14	4500	.2	.9	.6	300	-	2	25	73					18
1/2/79	3252	1.73	45	35	28	7	3	10	11.0	4.0	15	4700	.3	1.4	1.5	200	-	2	24	74					18
2	3278	1.73	45	32	28	7	3	10	10.5	4.0	15	4700	.3		1.8	200	-	2	24	74					18
3	3298	1.73	43	22.5	18	4.5	2	6	11.0	4.4	17	4600	.5		1.9	200	-	2	25	73					21
4	3321	1.73	42	21.5	18	7	3	9	10.5	4.2	16	4600	.5		1.6	200	-	1	25	74					21
5	3361	1.73	41	22.5	17	5.5	2	5	11.0	4.2	17	4700	.7		2.1	200	-	1	25	74					21
6	3380	1.73	44	33	24	9	5	14	10.0	4.4	14	4600	.5		1.8	200		1	26	73					25
7	3414	1.73	43	24	18	6	4	12	11.5	4.4	15	4600	.7		2.1	200		1	26	73					25

DATE SPUD: 18-12-78 DATE T.D.: B.H.T. COMPLETION FLUID TYPE: COST:

PACKER MUD TYPE: COST:

WELL DATA SHEET

MAG-545-A

OPERATOR: Norsk Hydro	SURVEY SEC. T R	CASING SIZE: 30"	DEPTH: 184	DRLG. DAYS: 1	BIT SIZE: 36
WELL: 30/7-7	FIELD: 30	SURFACE: 20	764	4	17½-36"
CONTRACTOR: Wilhelmson	COUNTY	INTERMEDIATE: 13 3/8	2681	19	17½
ENGINEER	STATE: N. Sea COUNTRY: Norway	PRODUCTION			

DATE	DEPTH	RD WT.	VISCOSITY SEC.	VISCOSITY CPS.	CORR. 115°F PV	CORR. 115°F YP	GELS 0	GELS 10	pH BECK ☐ STRIP ☒	FLUID LOSS 100 PSI API	FLUID LOSS 500 PSI 300 °F HT-HP	CL ☒ CACL ☐ NACL ☐	ALKALINITY PF	ALKALINITY PM	ALKALINITY MF	CA ppm	Mg ppm	RETORT % OIL	RETORT % SOL	RETORT % WATER	ACTIVITY As	ACTIVITY Am	RATIO OIL	RATIO H_2O	± Bbl CEC	
					Pascals																					
8/2	3483	1.73	44	30	21	7	2	6	10.5	4.8	17.0	4600	.5		1.8	200	-	Tr.	28	72					24	Dr
9	3490	1.75	46	33	26	7	2	7	10.5	4.5	17	4500	.5	1.3	1.6	200	-	Tr.	28	72					22	
10	3540	1.75	46	29	22	6	2	8	11.5	4.2	15	4500	.8	1.5	2.0	280	-	1	27	72					24	
11	3583	1.75	46	33	28	5	2	8	11.5	4.4	15	4600	.6	2.4	1.9	300	-	1	27	72					22	
12	3630	1.75	44	32	25	7	2	5	10.3	4.6	16	4000	.3	1.4	1.2	350	-	1	28	71					26	
13	3673	1.75	48	36	27	9	3	9	11.7	4.2	15	4000	1.2	2.8	2.3	250	-	1	27	72					25	Lo
14	3673	1.75	55	38	30	8	3	9	11.5	4.8	16	4000	.6	.9	1.4	200	-	1	28	71					25	
15	3708	1.75	48	33	26	7	2	8	10.5	4.8	15	4300	.4	1.5	1.2	300	-	1	27	72					24	
16	3740	1.75	53	41	28	13	8	23	10.0	5.0	15	4300	.2	1.4	1.4	300	-	1	27	72					24	
17	3750	1.75	48	42	28	12	5.5	18	10.0	5.0	14	4300	.2		1.4	300	-	-1	27	72					25	
18	3792	1.75	53	43.5	27	16.5	9	36	10.5	4.4	13	4300	.4		1.8	250		Tr.	29	71					25	
19	3812	1.75	50	38	26	12	8	28	10.5	4.4	13	4300	.4		1.9	250		Tr.	28	72					24	
20	3857	1.75	53	37.5	24	9	6	12	10.0	4.8	14.6	4300	.3		1.8	250		Tr.	29	71					22	
21	3863	1.75	53	37	24	13	5.5	20	10.0	4.8	15.0	4400	.3		1.8	300		Tr.	29	71					22	
22	3862	1.75	55	37.5	21	11.5	7.5	15	9.5	4.8	15.0	4400	.2		1.2	300		Tr.	29	71					22	
23	3862	1.75	55	37.5	21	11.5	7.5	15	9.5	4.8	15.0	4400	.2		1.2	300		Tr.	29	71					22	
24	3862	1.75	60	42	28	14	10	32	9.5	4.8	15.0	4400	.2		1.4	300		Tr.	29	71					22	
25	3866	1.75	50	27.5	18	9	2	9	10.5	5.6	17.0	4500	.3		1.8	300		Tr.	29	71					20	
26	3888	1.80	46	31	27	7.5	4.5	18	9.5	5.6	17.3	4500	.3		1.3	300		Tr.	31	69					21	
27	3888	1.80	44	30	20	11	5	23	9.5	5.9	18.1	4400	.2		1.6	300		Tr.	32	68					20	
28	3888	1.80	45	31.5	22	9.5	4.5	16	9.0	5.4	-	4400	.4		1.6	300		Tr.	32	68					19	
1/3	3888	1.80	70	30	19	11	3.5	19	11.0	5.6	17.6	4400	1.0	2.2	3.6	240		Tr.	33	67					19	
2	3888	1.80	76	31	22	10	3.5	20	11.0	5.8	17.6	5200	.9	1.9	3.6	200		Tr.	33	67					19	
3	3888	1.80	46	25	18	7	2	19	11.0	5.6	17.2	5500	.8	2.4	3.1	200		Tr.	33	67					19	
4	3888	1.80	53	26	19	6.5	2	16	10.5	5.6	17.2	6000	.75	1.5	3.4	200		Tr.	33	67					19	
5	3888	1.80	94	33	25	9	2	21	10.5	5.6	17.6	6000	.7	1.5	3.4	160		Tr.	33	67					19	
6	3888	1.80	45	26	20	6.5	2	10	11.0	5.8	18.0	6000	1.1	2.6	3.6	120		Tr.	33	67					19	

DATE SPUD: DATE T.D.: B.H.T. COMPLETION FLUID TYPE: COST:

PACKER MUD TYPE: COST:

WELL DATA SHEET

MAG-545-A

OPERATOR: Norsk Hydro	SURVEY SEC. T R	CASING SIZE	DEPTH	DRLG. DAYS	BIT SIZE
WELL: 30/7-7	FIELD: 30	SURFACE	13 3/8	2681	19	17½
CONTRACTOR: Wilhelmsen	COUNTY	INTERMEDIATE	9 5/8	3877'	36	12 1/4
ENGINEER	STATE: N. Sea COUNTRY: Norway	PRODUCTION			

DATE	DEPTH	WT.	VISCOSITY SEC.	VISCOSITY CPS.	CORR. 115°F PV	CORR. 115°F YP	GELS 0	GELS 10	pH (BECK ☐ STRIP ☐)	FLUID LOSS 100 PSI API	FLUID LOSS 500 PSI 300 °F HT-HP	CL ☐ CACL ☐ NACL ☐	ALKALINITY PF	ALKALINITY PM	ALKALINITY MF	CA ppm	Mg ppm	RETORT % OIL	RETORT % SOL	RETORT % WATER	ACTIVITY As	ACTIVITY Am	RATIO OIL	RATIO H_2O	# Bbl CEC
7/3	3888	1.80	52	25	19	6½	2	12	11.0	5.9	18.0	6000	1.1	2.4	3.9	200		0	33	67					19
8	3888	1.80	60	25	19	6½	2	14	11.0	5.9	18.0	6500	1.1	2.3	3.4	200		0	33	67					19
9	3888	1.80	54	26	19	7	2	16	10.5	5.9	18.2	6500	.8	2.0	3.5	160		0	32	68					19
10	3888	1.80	52	25	19	6½	2	14	10.0	5.9	18.2	6500	.7	1.8	3.1	360		0	31	69					19
11	3888	1.80	44	25	19	6½	2	13	10.0	5.9	18.2	6500	.7	1.8	3.1	300		0	31	69					19
12	3888	1.80	52	26	20	6	2	12	10.0	5.9	18.2	6500	.7	1.7	3.1	360		0	31	69					19
13	3888	1.80	49	26	19	6½	2	14	10.5	5.9	18.2	6500	.8	1.9	3.1	360		0	31	69					19
14	3888	1.77	44	25	18	7	1	12	10.5	5.9	18.2	6800	.8	1.9	3.1	360		0	29	71					19
15	3888	1.77	44	25	18	7	1	12	9.5	5.9	18.0	6800	.8		2.8	360		0	29	71					19
16	3888	1.77	44	25	18	7	1	12	9.5	5.9	18.0	6800	.8		2.8	360		0	29	71					19
17	3888	1.85	48	20	14	6	3	-	11.0	6.2	19.2	6000	.4		2.8	300		0	32	68					19
18	3896	1.91	45	21	21	4.5	4.5	-	11.0	6.2	18.0	6000	.7		3.2	350		0	32	68					18
19	3896	1.92	58	27	22	5	4	21	11.0	6.2	19.0	6000	.9		3.4	350		0	32	68					18
20	3895	1.92	58	27	22	5	4	21	11.0	6.2	19.0	6000	.9		3.4	350		0	32	68					18
21	3895	1.91	52	20	14	6	5	31	11.0	6.2	19.0	6000	.9		3.6	350		0	32	68					18
22	3919	1.92	47	30	23	7	2	15	11.0	5.6	15.0	5600	1.2		3.6	350		0	32	68					20
23	3962	2.01	46	34	27	7	3	10	10.5	5	14.0	5500	1.0	2.2	2.8	300		0	32	68					20
24	3977	2.01	46	29	24	5	2	10	10.5	5	16.0	5500	1.2	3.5	3.4	350		0	34	66					18
25	4018	2.01	46	30	24	6	2	10	10.5	5	15.0	5500	1.3	3.2	3.0	300		0	33	67					18
26	4018	2.01	46	32	25	7	3	10	10.5	5.4	18.0	5500	1.4	3	3.2	300		0	33	67					18
27	4068	2.04	43	32	26	6	2	9	10.0	5.2	16.0	6300	.8	2	2.1	300		0	33	67					18
28	4168	2.04	43	32	26	6	2	9	10.0	5.2	16.0	6300	.8	2	2.1	300		0	33	67					18
29	4260	2.04	44	32	26	6	2	10	10.9	5	16.0	6500	1.3	3	3.0	350		0	34	66					16
30	4278	2.04	49	33	28	6	3.5	20	11.0	5.2	16.4	6500	1.3	2.5	3.2	350		0	34	66					16
31	4359	2.04	44	30	26	5	2	10	11.5	5.0	16.0	6500	1.4	2.8	3.1	350		0	34	66					15
1/4/79	4440	2.04	48	33	28	8	3	18	11.5	5.0	15.8	6500	1.6	2.9	3.4	350		0	35	65					15

DATE SPUD: DATE T.D.: B.H.T. COMPLETION FLUID TYPE: COST:

PACKER MUD TYPE: COST:

WELL DATA SHEET

MAG-545-A

OPERATOR: Norsk Hydro	SURVEY SEC. T R	CASING SIZE	DEPTH / DRLG. DAYS / BIT SIZE
WELL: 30/7 - 7	FIELD: 30	SURFACE	13 3/8 / 2681 / 19 / 17 1/2
CONTRACTOR: W. Wilhelmson	COUNTY	INTERMEDIATE	9 5/8 / 3877 - 36 / 12 1/4
ENGINEER	STATE: North Sea COUNTRY: Norway	PRODUCTION	7" / 4500 / 12 / 8 3/8

DATE	DEPTH	R.D. WT.	VISCOSITY SEC.	VISCOSITY CPS.	CORR. 115°F PV	CORR. 115°F YP	GELS 0	GELS 10	pH BECK ☒ STRIP ☐	FLUID LOSS 100 PSI API	FLUID LOSS 500 PSI 300 °F HT-HP	CL ☒ CACL ☐ NACL ☐	ALKALINITY PF	ALKALINITY PM	ALKALINITY MF	CA ppm	Mg ppm	RETORT % OIL	RETORT % SOL	RETORT % WATER	ACTIVITY As	ACTIVITY Am	RATIO OIL	RATIO H_2O	# Bbl CEC
						Pascal																			
2/4/79	4506	2.09	47	35	27	8	3	28	11.5	5.2	16.2	6500	1.2		3.2	350		0	37	63					14
3	4509	2.11	45	32	25	7	3	11	11.5	5.0	15.0	6600	1.6		3.4	350		0	37	63					15
4	4509	2.11	47	32	25	7.5	3	12	11.0	5.1	15.0	6600	1.0		2.8	350		0	37	63					14
5	4509	2.11	48	36	27	9	3.5	28	11.5	5.2	15.2	6600	1.1		2.9	350		0	37	63					14
6	4509	2.11	48	26	22	4.5	2	11	11.5	5.0	16.1	6600	1.4		2.9	350		0	37	63					14
7	4509	2.11	48	27	22	5	3	14	11.0	5.0	16.0	6600	1.2		2.8	350		0	37	63					14
8	4509	2.11	55	28	18	10.5	3	22	11.0	5.1	16.2	6600	1.2		2.8	350		0	38	63					15
9	4509	2.11	60	34	22	12	4	25	10.5	5.1	16.2	6600	1.2		2.8	350		0	37	63					16
10	4509	2.11	47	22.5	18	4.5	2	9	11.5	3.6	13.6	6600	1.2		3.4	350		0	38	62					16
11	4509	2.11	47	23.5	18	5.5	2	10	11.5	3.8	14.6	6600	1.2	2.4	3.0	350		0	37	63					15
12	4509	2.11	47	23.5	18	11	2	11	11.0	4.0	15.1	6600	.9		3.2	350		0	38	62					15
13	4509	2.11	51	29	24	6	1	2	10.0	3.8	14.8	6500	.5	1.1	1.5	280		0	38	62					15
14	4509	2.11	48	27	22	5	1	2	10.0	4.0	14.8	6500	.5	1.1	2.5	320		0	36	64					17
15	4509	2.11	50	28	23	5	1	2	11.0	5.4	15.2	8000	1.0	2.4	3.9	440		0	36	64					17
16	4509	2.11	55	36	24	7	2	6	11.5	5.2	15.0	7000	1.0	2.5	2.5	120		0	35	65					18
17	4509	2.11	55	36	24	7	1	11	11.5	5.4	12.0	6500	1.2	2.6	3.2	320		0	36	64					20
18	4509	2.11	50	26	24	4	1	6	12.0	5.8	13.4	7000	2.2	5.8	4.6	320		0	35	65					20
19	4511	2.11	49	30	25	5	1	5	12.0	5.9	13.2	6500	2.2	5.8	4.6	350		0	35	65					20
20	4538	2.11	49	23	23	4	1	5	11.5	4.8	14	6500	2.3	2.8	3.6	380		0	36	64					20
21	4543	2.11	48	30	25	5	1	6	11.5	4.8	13.5	6800	3	2.8	4.6	400		0	36	64					20
22	4571	2.11	47	29	25	4	1	5	11.5	4.2	14	6400	1.3	2.5	3.2	250		0	35	65					20
23	4573	2.11	48	29	25	4	1	5	11.5	4.0	12.0	6400	1.3	2.5	3.2	250		0	35	65					20
24	4573	2.11	48	29	25	4	1	5	11.5	4.0	12.0	6400	1.3	2.5	3.2	250		0	35	65					20
25	4573	2.11	48	29	25	4	1	5	11.5	4.0	12.0	6400	1.3	2.5	3.2	250		0	35	65					20
26	4573	2.11	47	29	25	4	1	5	11.5	4.0	12	6400	1.3	2.5	3.2	250		0	35	65					20

DATE SPUD: DATE T.D.: B.H.T. COMPLETION FLUID TYPE: COST:

PACKER MUD TYPE: COST:

WELL DATA SHEET

MAG-545-A

OPERATOR	SURVEY SEC. T R	CASING SIZE DEPTH DRLG. DAYS BIT SIZE
Hydro		SURFACE 13 3/8 2681 19 17 1/2
WELL 30/7 - 7	FIELD 30	
CONTRACTOR Wilhelmson	COUNTY	INTERMEDIATE 9 5/8 3877 12 1/4
ENGINEER	STATE N. Sea COUNTRY Norway	PRODUCTION 7" 4500 8 3/8

DATE	DEPTH	R.D. WT.	VISCOSITY SEC.	VISCOSITY CPS.	CORR. 115°F PV	CORR. 115°F YP	GELS Pascals 0	GELS Pascals 10	pH BECK ☒ STRIP ☐	FLUID LOSS 100 PSI API	FLUID LOSS 500 PSI 300 °F HT-HP	CL ☒ CACL ☐ NACL ☐	ALKALINITY PF	ALKALINITY PM	ALKALINITY MF	CA ppm	Mg ppm	RETORT % OIL	RETORT % SOL	RETORT % WATER	ACTIVITY As	ACTIVITY Am	RATIO OIL	RATIO H_2O	± Bbl CEC
27/4/79	4573	2.11	48	29	25	4	1	5	11.5	4.0	12.0	6400	1.3	2.5	3.2	250		0	35	65					20
		No additions to mud during period																							
4/5/79	4580	2.11	52	26	25	1	1	3	10.5	10	36	6500	1.3	2.0	3.0	320	25	0	35	65					20
5	4584	2.11	50	27	25	2	1	3	10.5	8	25	6200	.9	1.8	2.4	280	25	0	35	65					18
6	4634	2.11	52	27	25	2	1	4	10.5	6	18	6000	.7	1.8	2.4	400	10	0	34	66					24
7	4653	2.11	60	30	31	2	1	3	10.8	4.2	15	6200	.5	1.0	1.0	900	25	0	35	65					25
8	4697	2.11	52	30	27	3	2	5	11.0	4.8	15	6500	1.6	2.0	2.6	700	25	0	35	65					22
9	4725	2.11	51	38	35	3	2	5	11.1	5.0	14	6500	1.2	2.0	1.9	680	48	1	33	64					20
10	4758	2.11	57	36	33	3	2	5	10.4	4.8	14	6500	.6	2.0	1.9	480	25	1	34	65					20
11	4767	2.11	51	27	23	4.5	1.5	4.5	10.0	4.8	14	6500	.5	2.0	1.8	480	25	1	34	65					20
12	4776	2.11	55	36	32	4	2	4	10.7	4.4	14	6500	.7	2.4	2.1	480	30	1	35	64					20
13	4825	2.11	54	34	31	4	2	5	10.5	4.4	13	6500	.9	2.4	2.3	520	-	1	35	64					20
14	4906	2.11	55	31	28	3.5	2	4	10.8	4.6	13.2	6500	.8	2.3	2.8	540	30	1	35	64					21
15	4928	2.11	55	31	28	3.5	2	4	10.4	4.6	13.4	6500	.7	2.1	2.6	600	30	1	35	64					20
16	4959	2.11	60	30	28	2	2	4	10.8	3.2	12.6	6500	1.4	2.6	3.8	650	25	1	36	63					20
17	4968	2.11	54	32	30	2	2	6	10.8	3.0	11.8	6500	1.6	2.8	3.6	600	25	1	37	62					19
18	4968	2.11	55	32	30	2	2	6	10.8	3.0	11.5	6500	1.5	2.4	3.5	550	25	1	37	62					20
19	4968	2.11	59	35	32	3	2	7	10.5	3.0	10.5	6500	.9	1.8	3.0	600	48	1	36	63					20
20	4970	2.09	54	35	34	3	2	5	9.4	2.0	9.0	6500	.4	1.2	1.8	500	25	1	36	63					18
21	5038	2.06	52	25	25	2	2	4	9.7	2.0	8.0	5500	.9	2.3	2.4	440	25	3	34	63					21
22	5048	2.09	54	29	27	2	2	5	9.7	2.0	8.0	5500	.8	2.0	2.2	440	25	3	34	63					21
23	5060	2.09	54	32	30	2	2	6	9.9	2.0	6.0	5800	.8	1.8	2.4	400	30	3	34	63					21
24	5060	2.09	54	32	30	2	2	6	9.9	2.0	6.0	5800	.8	1.8	2.4	400	30	3	34	63					21
25	5060	2.09	72	24	34	6	2	6	9.8	2.0	5.6	5600	.6	1.6	2.2	400	30	3	34	64					21
26	5068	2.09	58	31	29	2	1.5	6	9.7	2.0	5.8	6000	.8	1.6	2.4	400	40	3	35	62					22
27	5122	2.09	55	31	28	3	1.5	4	9.4	2.2	6.2	5700	.8	1.8	2.4	380	40	3	35	62					19
28	5126	2.09	61	31	30	3	2	6	10.2	2.0	6.0	5800	.9	2.2	2.6	440	30	3	35	62					19

DATE SPUD: 18/12/78 DATE T.D.: 4 June, 79 B.H.T. 380°F COMPLETION FLUID TYPE: none COST:

PACKER MUD TYPE: none COST:

WELL DATA SHEET

MAG-545-A

OPERATOR: Norsk Hydro	SURVEY SEC. T R	CASING SIZE DEPTH DRLG. DAYS	BIT SIZE
WELL: 30/7 - 7	FIELD: Block no. 30	SURFACE: 13 3/8 2681m 19	17 1/2
CONTRACTOR: W. Wilhelmson - T. Seeker	COUNTY	INTERMEDIATE: 9 5/8 3877m	12 1/4
ENGINEER	STATE: N. Sea COUNTRY: Norway	PRODUCTION: 7" 4500m	8 3/8

DATE	DEPTH	WT.	VISCOSITY SEC.	VISCOSITY CPS.	CORR. 115°F Pascals PV	YP	GELS 0	GELS 10	pH BECK ☒ STRIP ☐	FLUID LOSS 100 PSI API	FLUID LOSS 500 PSI 300 °F HT-HP	CL ☒ CACL ☐ NACL ☐	ALKALINITY PF	ALKALINITY PM	ALKALINITY MF	CA ppm	Mg ppm	RETORT % OIL	RETORT % SOL	RETORT % WATER	ACTIVITY As	ACTIVITY Am	RATIO OIL	RATIO H_2O	# BHI CEC
29/5/79	5127	2.09	57	32	29	2	2	5	10.0	2.0	6.0	6000	.9	2.0	2.8	400	30	3	35	62					19
30	5127	2.09	60	34	31	3	3	7	9.8	2.0	6.2	6000	.6	1.9	2.2	400	30	3	35	62					19
31	5127	2.09	60	33	30	3	3	8	9.6	2.0	6.2	6000	.5	1.4	1.8	400	30	3	35	62					19
1/6/79	5127	2.09	60	33	33	3	3	8	9.6	2.0	6.2	6000	.5	1.4	1.8	400	30	3	35	62					19
2	5127	2.09	51	26	24	1.5	1	4	10.5	2.0	6.0	6000	1.6	1.8	3.2	360	-	2	35	63					18
3	5127	2.09	52	28	26	2	1	6	10.5	2.0	6.0	6000	1.2	1.6	3.0	360	-	2	35	63					18
4	5127	2.09	62	28	26	2	1	6	10.5	2.0	6.0	6000	1.2	1.6	3.0	360	-	2	35	63					18
5	5127	2.09	55	26	27	1.5	1.5	5	9.5	2.2	6.2	6000	.7	1.0	3.4	340	-	3	35	62					18
6	4805	2.09	55	26	27	1.5	1.5	5	9.4	2.2	6.2	6000	.6	1.0	3.0	340	-	3	35	62					18
7	4805	2.09	55	26	28	1.5	1	5	10.3	2.0	6.0	6000	1.8	1.6	3.2	400	-	3	35	62					18
8	4805	2.09	55	29	28	1.5	1	5	10.2	2.0	6.0	6000	1.6	1.4	3.0	400	-	3	35	62					18
9	4805	2.09	54	30	28	2	1	5	10.5	2.0	6.0	6000	1.4	1.6	3.0	400	-	3	35	62					18
10	4800	2.09	55	30	28	2	1	5	10.5	2.0	6.0	6000	1.3	1.5	3.0	400	-	3	35	62					18
11	4800	2.09	55	27	25	2	1	5	10.4	2.2	6.5	6000	1.2	1.5	2.8	400	-	3	35	62					18
12	4800	2.09	54	29	27	2	1	5	10.2	2.2	6.8	6000	1.0	1.3	2.6	400	-	3	35	62					18
13	4800	2.09	55	27	25	2	1	5	10.0	2.4	6.8	6000	.9	1.2	2.2	400	-	3	35	62					18
14	4800	2.09	54	30	27	3	1	5	10.0	2.4	6.8	6000	.9	1.2	2.2	400	-	3	35	62					18
15	4800	2.09	54	26	26	2	2	5	10.5	2.4	6.8	6000	.9	1.0	2.9	400	-	3	35	62					18
16	4800	2.09	54	28	26	2	2	5	10.2	2.6	7.2	6000	.8	1.0	2.4	400	-	3	35	62					18
17	4725	2.09	56	29	27	2	1	5	10.0	3.2	7.4	6000	.6	1.0	1.9	400	-	3	35	62					18
18	4725	2.09	54	28	26	2	2	5	10.0	3.0	7.8	6000	.6	1.0	1.9	400	-	3	35	62					18
19	4725	2.09	56	28	25	3	2	5	9.9	4.5	9.0	6000	.5	.9	1.5	400	-	3	35	62					18
20	4725	2.09	58	30	26	4	2	7	9.8	5.0	9.0	6000	.4	.9	1.3	400	-	3	35	62					18
21	4725	2.09	66	41	33	8	4	8	9.5	4.8	10.0	6000	.4	.6	1.2	400	-	3	35	62					24
22	4725	2.09	66	41	33	8	4	8	9.5	4.8	9.5	6000	.4	.6	1.2	400	-	3	35	62					24
23	4725	2.09	64	39	32	7	4	9	9.3	4.8	10.0	6000	.3	-	1.3	400		3	35	62					24
24	4725	2.09	64	39	32	7	4	9	9.3	4.8	10.0	6000	.4	.5	1.2	400		3	35	62					24

DATE SPUD: DATE T.D.: B.H.T. COMPLETION FLUID TYPE: COST:

PACKER MUD TYPE: COST:

WELL DATA SHEET

MAG-545-A

OPERATOR: Norsk Hydro	SURVEY SEC. T R	CASING SIZE DEPTH DRLG. DAYS BIT SIZE	
WELL: 30/7 - 7	FIELD: Block 30	SURFACE: 13 3/8 3877 meters	12 1/4
CONTRACTOR: W. Wilhelmson, T. Seeker	COUNTY	INTERMEDIATE: 7 4500 meters	8 3/8
ENGINEER	STATE: N. Sea COUNTRY: Norway	PRODUCTION: 4 1/2 4800 meters	6

DATE	DEPTH	WT.	VISCOSITY SEC.	VISCOSITY CPS.	CORR. 115°F PV	CORR. 115°F YP	GELS Pascals 0	GELS Pascals 10	pH BECK ☒ STRIP ☐	FLUID LOSS 100 PSI API	FLUID LOSS 500 PSI 300 °F HT-HP	CL ☒ CACL ☐ NACL ☐	ALKALINITY PF	ALKALINITY PM	ALKALINITY MF	CA ppm	Mg ppm	RETORT % OIL	RETORT % SOL	RETORT % WATER	ACTIVITY A_s	ACTIVITY A_m	RATIO OIL	RATIO H_2O	# Bbl CEC
25/6/79	4775	2.09	64	34	32	7	4	9	9.3	4.8	10.0	6000	.4	.5	1.2	400	-	3	35	62					24
26	4775	2.09	64	41	34	8	5	12	8.5	3.3	7.8	5500	.4		3.2	400	-	3	35	62					20
27	4775	2.09	56	26	24	2	1.5	15	8,2	3.8	9.2	5300	.2		3.6	400	-	2	35	63					20
28	3730	2.09	52	26	26	2	1	12	8.0	3.8	9.0	5800	.6		3.2	400		2	35	63					14
29	260	1.14	46		14	12	12	64	10.0	N/C	N/C	600	.4		3.6	40		nil	7	93					-
30	Well	Complete																							

DATE SPUD: DATE T.D.: B.H.T. COMPLETION FLUID TYPE: COST:

PACKER MUD TYPE: COST:

3. FORMATION FLUID

During the production test neither hydrocarbons nor formation water were flowing at surface. Consequently representative samples of reservoir fluid could not be obtained.

Hydrocarbon samples were, however, taken to be analysed from

- the mud when reversing out
- trapped gas underneath the ARP-N valve when pulling the test string.

When the water cushion had been circulated out gas bubbles were observed in the mud. 3 mud samples were taken, 2 at atmospheric conditions and 1 at 13.2 bar. Gas liberated from the pressurized sample was analysed by Core-lab. Results are given in Table C.2.

When the string was pulled, some gas was trapped underneath the ARP-N valve. This was led through the Exlog chromatograph. The results from the first run indicated 10% CO_2 and 90% HC. However, the HC-concentration was too high for the equipment to distinguish between the various HC components. After dilution with air the gas was led through the chromatopraph once more to give the hydrocarbon composition presented in Table. C.3. Note that the CO_2 had been taken out during the first run. This confirms the results from the Core-lab analysis and that light hydrocarbons had been produced into the wellbore. But still the question remains whether it was as free gas or associated with water.

No sample of formation water was obtained.

4. PRODUCTION TEST

A production test was run in the interval 4735-4763 m RKB. Details of the operation are given in reports from Halliburton (Ref. 2) and Baker (Ref. 3). Some additional information regarding the sequence of events are outlined as follows with reference to Fig. C.4.

A - APR-valve opended for first 5 minutes clean up flow. A (very) weak flow was observed through the drain downstream of the choke manifold.

B - APR-valve closed for 1,5 hrs build-up.

C - APR-valve opened for main flow. At this stage approximately 0.16 m^3 of mud had been pumped into the tubing in order to pressurize above APR-valve. This amount was flown back through a needle valve of surface prior to leeding the flow through the choke mainifold.

D - Flow through coke manifold on 6/64", 8/64", 10/64" and 12/64". Baker estimated rate to be 127 m^3/d, which is probably too optimistic as the choke tended to plug up.

E - Choke started plugging.

F - Choke was plugged and formation build-up recorded.

G - Increased choke size to 16/64".

H - Well shut in at surface. Probably plugged section between formation and pressure recorder.

I - Tried to open up any bottom hole plugging by injecting into formation. The tubing was pressurized several times, but the pressure bled off.

J - Bottomhole plugging probably opened and with the surface choke closed, formation build-up was recorded.

K - Opened choke for flow on 16/64". Baker estimated flow rates to be 95,4 m^3, 40 m^3/d, 24 m^3/d, 37 m^3/d and 68 m^3/d at successive time intervals. These rates are more or less optimistic as the choke tended to plug up.

L - The well was shut in at the coke manifold and the coke taken apart. It was plugged by a thick material resembling valve sealing compound.

M - Opened choke for flow on 48/64". Weak flow of water.

N - Shut in master valve at surface tree.

O - Opened choke for flow on 16/64". Only a small trickle of water came from the well.

P - Tried for the last time to inject into formation hoping to open up any plugged section. Pumped down 0.6 m^3 and 0.6 m^3 came in return when bleeding off. At this stage a leak occured between tubing and annulus and the test was aborted.

During the test there was no flow of formation fluid to the surface. The analysis of the samples discussed in section 3 proves that formation fluid entered the wellbore and that hydrocarbons were present. The flow rates given in the Baker report are, however, probably misleading and too optimistic as they are estimated from wellhead pressures in periods when the choke tended to plug up. Also the duration of the flow periods is considerably reduced when the plugging is taken into consideration.

As no reliable flow rate measurements are available, it is impossible to evaluate formation properties from the test. What is evident from the very low flow rates is that the formation is very tight, probably less than 0.1 md. This is confirmed by the results of the core analysis.

Also the test was not conclusive in determination of the static reservoir pressure. The lack of rate measurements make the application of standard build-up analysis doubtful. If, however, the pressure is extrapolated beyond the last points assumed to represent formation build-up (Point G, C or K in Fig. C.4), initial pressure is no higher than 650 bar. On the other hand extrapolation of the fall-off pressure prior to the test (Fig. C.3) indicate a static reservoir pressure in the range of 950 bar.

RFT measurements were not performed due to hole conditions (high mud weight, temperature, slim hole including dogleg) and the fear of getting stuck.

TABLE C.2

Gas analysis from sample of pressurized mud, Core-lab.

Component	Mole percent
Co_2	0.59
N_2	5.93
C_1	89.86
C_2	2.39
C_3	0.43
iC_4	0.06
nC_4	0.02
iC_5	0.03
nC_5	0.03
C_6	0.47
C_{7+}	0.19

Calculated gas gravity (air 1.00)	0.619
Calculated gross heating value	1001 BTU/cuft of dry gas at 14.73 psia and 60°F.

TABLE C 3.

Gas analysis from sample of trapped gas, Exlog.

Component	Mole percent
C_1	93.3%
C_2	5.4%
C_3	0.8%
iC_4	0.2%
nC_4	0.2%

Saga Petroleum a.s.

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Title

GEOCHEMICAL DATA REPORT FOR WELL 30/7-7

Authors(s)

IDAR HORSTAD

Abstract

Three samples from the cored interval in well 30/7-7 have been analysed by Iatroscan (TLC-FID). Vitrinite reflectance was measured on two core samples.

NOT INCLUDED IN WELL TRADE.

Key Words

30/7-7, geochemistry, Iatroscan (TLC-FID), vitrinite reflectance

Classification: ☐ Free ☒ Saga and partners ☐ Internal ☐ Confidential ☐ Strictly confidential

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1 Objectives

The objective of this study was to characterise the extractable hydrocarbons in three core samples and measure the vitrinite reflectance in two core samples from well 30/7-7.

2 General well information

The well was drilled by Norsk Hydro as operator of licence 040 from 18/12-78 to 1/7-79 and reached a total depth of 5127 mRKB. The KB of the rig was 25 metres and the water depth was 110 metres.

3 Samples and analytical scheme

Five samples were picked from the cored interval in the well on the 28th of April 1992 at NPD's store in Stavanger. Three of the samples (4758.6, 4762.3 and 4765.2 mRKB core depth) were analysed by Iatroscan (TLC-FID). The vitrinite reflectance was measured on two samples (4766.2 and 4766.5 mRKB core depth).

4 Vitrinite reflectance

Two samples were analysed at IFE, Kjeller, Norway.

Measured vitrinite reflectance on samples from 30/7-7

Depth mRKB	Lithology	VR%	Standard dev.	No. readings	Quality
4766.2	Claystone	2.24	0.11	16	Good
4766.5	Claystone	2.02	0.26	20	Good

5 TOC and Rock Eval

No samples were analysed.

6 Iatroscan (TLC-FID)

Three samples were analysed, and the results are tabulated in Table 1.

7 GC-FID

No samples were analysed.

8 GC/MS

No samples were analysed.

9 Stable carbon isotopes

No samples were analysed.

Tab. 1

0 WELL NAME	1 NATIONALITY	2 SAMPLE NAME	3 U.DEPTH	4 L.DEPTH	5 SAMPLE TYPE	6 LITHOLOGY	7 WEIGHT OF ROCK (g)
1 30/7-7	NOR	SAGA	4758.6	4758.6	CCP	SST	2.67
2 30/7-7	NOR	SAGA	4762.3	4762.3	CCP	SST	2.90
3 30/7-7	NOR	SAGA	4765.2	4765.2	CCP	SST	2.86

0 WELL NAME	8 EOM (mg/g)	9 SAT (mg/g)	10 ARO (mg/g)	11 POL (mg/g)
1 30/7-7	0.02	0	0	0.02
2 30/7-7	0.03	0	0	0.03
3 30/7-7	0.03	0	0	0.03

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NORTH VIKING GRABEN
GEOCHEMICAL STUDY

GC-MS ANALYSIS

Well no. 30/7-7 NOCS

Client: Fina Exploration Norway

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Date: 01.03.87

Table 1: Variation in Triterpane Distribution for Well NOCS 30/7-7

Depth unit of measure: m

Depth	Lithology	B/A	B/B+A	B B+E+F	C/E	C/C+E	X/E	Z/E	Z/C	Z/Z+E	Q/E	E/E+F	C+D C+D+E+F	D+F/C+E	J1 J1+J2%	Sample
3912.00	bulk	0.29	0.22	0.36	0.53	0.35	0.94	-	-	-	0.66	0.97	0.37	0.06	61.82	284-0
3922.00	Sh/Clst	0.27	0.21	0.29	0.57	0.36	1.16	-	-	-	0.89	0.58	0.29	0.54	64.66	079-1
3940.00	Sh/Clst	0.31	0.24	0.45	1.06	0.52	0.13	-	-	-	1.25	0.91	0.51	0.09	61.81	082-1
3976.00	Sh/Clst	0.83	0.45	0.33	1.09	0.52	0.03	-	-	-	0.70	0.93	0.52	0.06	65.85	087-1
4008.00	bulk	0.36	0.27	0.34	0.90	0.47	0.56	-	-	-	0.67	0.94	0.47	0.06	68.97	287-0
4564.00	Sh/Clst	1.01	0.50	0.26	0.93	0.48	0.13	-	-	-	0.52	0.92	0.48	0.08	65.84	183-1
4772.00	Sh/Clst	0.76	0.43	0.26	0.95	0.49	0.02	-	-	-	0.04	0.94	0.49	0.07	64.94	217-1
4852.00	Sh/Clst	0.87	0.47	0.19	0.91	0.48	0.03	-	-	-	0.18	0.92	0.47	0.07	64.80	230-1

Table 2: Variation in Sterane Distribution for Well NOCS 30/7-7

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Ratio6	Ratio7	Sample
3912.00	bulk	1.00	57.06	78.41	0.75	0.76	0.57	0.44	284-0
3922.00	Sh/Clst	0.91	59.61	79.87	0.88	0.77	0.70	0.59	079-1
3940.00	Sh/Clst	0.91	50.79	78.46	0.87	0.78	0.70	0.61	082-1
3976.00	Sh/Clst	0.55	53.10	72.74	0.84	0.72	0.39	0.28	087-1
4008.00	bulk	0.80	55.33	76.49	0.97	0.75	0.55	0.51	287-0
4564.00	Sh/Clst	0.64	53.85	71.91	0.94	0.70	0.43	0.34	183-1
4772.00	Sh/Clst	0.51	49.91	70.06	0.68	0.70	0.29	0.22	217-1
4852.00	Sh/Clst	0.45	50.18	69.12	0.77	0.69	0.16	0.14	230-1

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

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Table 3: Aromatisation of Steranes for Well NOCS 30/7-7

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Sample
3912.00	bulk	-	-	284-0
3922.00	Sh/Clst	-	1.00	079-1
3940.00	Sh/Clst	-	-	082-1
3976.00	Sh/Clst	-	1.00	087-1
4008.00	bulk	-	-	287-0
4564.00	Sh/Clst	-	-	183-1
4772.00	Sh/Clst	-	1.00	217-1
4852.00	Sh/Clst	-	1.00	230-1

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

Ratio2: g1 / g1 + I1

Table 4: Variation in Triaromatic Sterane Distribution for Well NOCS 30/7-7

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Sample
3912.00	bulk	1.00	1.00	1.00	1.00	1.00	284-0
3922.00	Sh/Clst	0.97	0.97	0.88	0.88	0.88	079-1
3940.00	Sh/Clst	1.00	1.00	1.00	1.00	1.00	082-1
3976.00	Sh/Clst	0.54	0.58	0.33	0.28	0.46	087-1
4008.00	bulk	1.00	1.00	1.00	1.00	1.00	287-0
4564.00	Sh/Clst	1.00	1.00	1.00	1.00	1.00	183-1
4772.00	Sh/Clst	0.46	0.41	0.26	0.24	0.44	217-1
4852.00	Sh/Clst	0.54	0.52	0.32	0.29	0.48	230-1

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 5: Variation in Monoaromatic Sterane Distribution for Well NOCS 30/7-7

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Sample
3912.00	bulk	-	-	-	-	284-0
3922.00	Sh/Clst	-	-	-	-	079-1
3940.00	Sh/Clst	-	-	-	-	082-1
3976.00	Sh/Clst	-	-	-	-	087-1
4008.00	bulk	-	-	-	-	287-0
4564.00	Sh/Clst	-	-	-	-	183-1
4772.00	Sh/Clst	-	-	-	-	217-1
4852.00	Sh/Clst	-	-	-	-	230-1

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

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GEOCHEMICAL ANALYSIS REPORT
WELL NOCS 30/7-7

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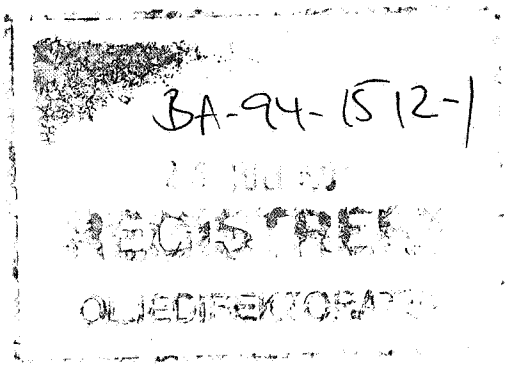

INTRODUCTION

A total of 281 samples was collected from the Norwegian Petroleum Directorate in Stavanger. All of the samples (2100 - 5126 m TD RKB) were washed and described (bar one sample). The analysed interval is from 3825 - 5126 m (TD) and the sample interval in the Jurassic sequence is 2 m.

A careful selection of suitable samples was made for screening analysis i.e. TOC and Rock-Eval analysis. One hundred and seventy one (171) samples were chosen for this analysis. Based on the results from this work, a number of samples were chosen for further analysis as follows:

Thermal extraction - pyrolysis - gas chromatography	39 samples
Extraction, MPLC fractionation, saturated and aromatic hydrocarbon gas chromatography	28 samples
Vitrinite reflectance microscopy	19 samples
Visual kerogen analysis	28 samples
Gas chromatography - mass spectrometry	8 samples
Isotope analysis of C_{15}+ fractions	8 samples

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Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
2105.00								001
			95	Sh/Clst: gn gy, pyr, mic				001-1
			5	Sltst : pl y brn				001-2
2130.00								002
			95	Sh/Clst: gn gy, pyr, mic				002-1
			5	Sltst : pl y brn				002-2
			tr	Sh/Clst: m red brn, drk red brn				002-3
			tr	Other : pyr				002-4
2155.00								003
			90	Sh/Clst: gn gy, pyr, mic				003-1
			10	Sh/Clst: m red brn, drk red brn				003-2
			tr	Sltst : pl y brn				003-3
2180.00								004
			60	Sh/Clst: gn gy, pyr, mic				004-1
			35	Sh/Clst: lt gy, m gy				004-2
			5	Sltst : pl y brn				004-3
2205.00								005
			50	Sh/Clst: gn gy, pyr, mic				005-1
			40	Sh/Clst: lt gy, m gy				005-2
			10	Sh/Clst: m red brn, drk red brn				005-3
2230.00								006
			50	Sh/Clst: lt gy to m lt gy				006-1
			40	Sh/Clst: gn gy, lt gn gy				006-2
			10	S/Sst : w, l				006-3
			tr	Other : pyr				006-4

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Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth Int	Depth Cvd	Type TOC%	%	Grp Frm Age Lithology description	Trb	Sample
2255.00						007
			60	Sh/Clst: lt gy to m lt gy		007-1
			30	Sh/Clst: gn gy, lt gn gy		007-2
			10	S/Sst : w, l		007-3
2280.00						008
			60	Sh/Clst: lt gy to m lt gy		008-1
			30	Sh/Clst: gn gy, lt gn gy		008-2
			10	S/Sst : w, l		008-3
			tr	Sh/Clst: m red brn, drk red brn		008-4
			tr	Other : pyr		008-5
2305.00						009
			60	Sh/Clst: gn gy, lt gn gy		009-1
			40	Sh/Clst: lt gy to m lt gy		009-2
			tr	Sh/Clst: m red brn, drk red brn		009-3
2330.00						010
			50	Sh/Clst: lt gy to m lt gy		010-1
			40	Sh/Clst: gn gy, lt gn gy		010-2
			10	Sh/Clst: m red brn, drk red brn		010-3
			tr	S/Sst : w, l		010-4
			tr	Other : pyr		010-5
2355.00						011
			60	Sh/Clst: lt gy to m lt gy		011-1
			40	Sh/Clst: gn gy, lt gn gy		011-2
			tr	S/Sst : w, l		011-3
			tr	Other : pyr		011-4

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
2380.00								012
			45	Sh/Clst: lt gy to m lt gy				012-1
			45	Sh/Clst: gn gy, lt gn gy				012-2
			10	S/Sst : w, l				012-3
2405.00								277
			50	Sh/Clst: gn gy, lt gn gy				277-1
			45	Sh/Clst: lt gy to m lt gy				277-2
			5	S/Sst : w, l				277-3
2430.00								013
			85	Sh/Clst: gn gy, lt gn gy				013-1
			10	Sh/Clst: lt gy to m lt gy				013-2
			5	S/Sst : w, pyr, l				013-3
2455.00								014
			60	Sh/Clst: gn gy, lt gn gy				014-1
			30	Sh/Clst: lt gy to m lt gy				014-2
			10	S/Sst : w, pyr, l				014-3
	cvd		tr	Sh/Clst: m red brn to drk red brn				014-4
			tr	Other : pyr				014-5
			tr	Coal				014-7
2480.00								015
			70	Sh/Clst: gn gy				015-1
			20	Sh/Clst: lt gy, m gy, carb				015-2
			10	S/Sst : w, pyr, l				015-3
2505.00								016
			80	Sh/Clst: lt gy, m gy, carb				016-1
			15	Sh/Clst: gn gy				016-2
			5	S/Sst : w, pyr, l				016-3
	cvd		tr	Sh/Clst: m red brn to drk red brn				016-4
			tr	Other : pyr				016-5

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A.S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth Int	Depth Cvd	Type TOC%	%	Grp	Frm	Age	Trb	Sample	Lithology description
2530.00								017	
			100					017-1	Sh/Clst: gn gy to m lt gy, pyr
			tr					017-2	Ca : lt gy
			tr					017-3	S/Sst : w, pyr, l
			tr					017-4	Other : pyr
2555.00								018	
			60					018-1	Sh/Clst: gn gy, m lt gy
			40					018-2	Ca : w, pl y brn
			tr					018-3	S/Sst : w, pyr, l
			tr					018-4	Cont : Coal-ad
2580.00								019	
			50					019-1	Sh/Clst: gn gy to m lt gy
			50					019-2	Ca : w, pl y brn
			tr					019-3	S/Sst : w, pyr, l
2605.00								020	
			50					020-1	Sh/Clst: gn gy to m lt gy
			50					020-2	Ca : w, pl y brn
			tr					020-3	S/Sst : w, pyr, l
			tr					020-4	Other : pyr
2630.00								021	
			70					021-1	Sh/Clst: gn gy to m lt gy
			30					021-2	Ca : w, pl y brn
			tr					021-3	S/Sst : w, l
			tr					021-4	Other : pyr
			tr					021-5	Cont : Coal-ad

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GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
2655.00								022
			70	Sh/Clst:	gn gy to m lt gy			022-1
			30	Ca	: w, pl y brn			022-2
			tr	S/Sst	: w, l			022-3
			tr	Other	: pyr			022-4
			tr	Cont	: Coal-ad			022-5
2680.00								023
			70	Sh/Clst:	gn gy to m lt gy			023-1
			30	Ca	: w, pl y brn			023-2
			tr	S/Sst	: w, l			023-3
			tr	Other	: pyr			023-4
			tr	Cont	: Coal-ad			023-5
2705.00								024
			95	Sh/Clst:	lt gy to m lt gy			024-1
			5	Ca	: w to brn			024-2
			tr	S/Sst	: w, l			024-3
2725.00								025
			95	Sh/Clst:	lt gy to m lt gy			025-1
			5	Ca	: w to brn			025-2
			tr	S/Sst	: w, l			025-3
			tr	Cont	: w, prp			025-4
2750.00								026
			95	Sh/Clst:	lt gy to m lt gy			026-1
			5	Ca	: w to brn			026-2
			tr	S/Sst	: w, l			026-3
			tr	Cont	: prp			026-4

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
2780.00								027
			85	Sh/Clst:	lt gy to m lt gy			027-1
			15	Sh/Clst:	lt brn, slt			027-2
			tr	Ca	: w to brn			027-3
			tr	S/Sst	: w, l			027-4
			tr	Other	: pyr, glauc			027-5
			tr	Cont	: Coal-ad, prp			027-6
2805.00								028
			60	Sh/Clst:	lt gy to m lt gy			028-2
			35	Sh/Clst:	lt brn, slt			028-3
			5	Ca	: w to brn			028-4
			tr	S/Sst	: w, l			028-5
			tr	Other	: pyr			028-6
			tr	Cont	: Coal-ad, Mica-ad			028-7
2830.00								029
			90	Sh/Clst:	gn gy, lt gy			029-3
			10	Sh/Clst:	lt brn, slt			029-4
			tr	Ca	: w to brn			029-5
	cvd		tr	S/Sst	: w, l			029-6
			tr	Other	: pyr			029-7
			tr	Cont	: prp			029-8
2855.00								030
			100	Sh/Clst:	gn gy, lt gy			030-4
			tr	Sh/Clst:	lt brn, slt			030-5
			tr	S/Sst	: w, l			030-6
			tr	Other	: pyr			030-7
			tr	Cont	: st, Coal-ad, prp			030-8

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
2880.00								031
			100	Sh/Clst:		gn gy, lt gy		031-4
			tr	Sh/Clst:		lt brn, slt		031-5
	cvd		tr	S/Sst	:	w, l		031-6
			tr	Other	:	pyr		031-7
			tr	Cont	:	st, Coal-ad, prp		031-8
2905.00								032
			100	Sh/Clst:		gn gy, lt gy		032-4
			tr	Sh/Clst:		lt brn, slt		032-5
	cvd		tr	S/Sst	:	w, l		032-6
			tr	Other	:	pyr		032-7
			tr	Cont	:	st, Coal-ad, prp		032-8
2930.00								033
			100	Sh/Clst:		gn gy to lt gy		033-4
			tr	Sh/Clst:		lt brn, slt		033-5
	cvd		tr	S/Sst	:	w		033-6
			tr	Other	:	pyr		033-7
			tr	Cont	:	st, Coal-ad, prp		033-8
2955.00								034
			100	Cont	:	Mica-ad		034-1
			tr	Sh/Clst:		gn gy to lt gy		034-2
			tr	Sh/Clst:		lt brn, slt		034-3
	cvd		tr	S/Sst	:	w		034-4
2980.00								035
			90	Sh/Clst:		lt gy to m gy		035-1
			10	Sltst	:	brn gy		035-2
	cvd		tr	S/Sst	:	w		035-3
			tr	Other	:	glauc		035-4
			tr	Cont	:	Mica-ad, prp		035-5

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth Int	Depth Cvd	Type TOC%	%	Grp	Frm	Age	Trb	Sample	Lithology description
3005.00								036	
			100	Sh/Clst		lt to m gy		036-1	
			tr	Cont		: Mica-ad, dd		036-2	
3025.00								037	
			100	Sh/Clst		lt gy to m gy		037-1	
	cvd		tr	S/Sst		: w		037-2	
			tr	Ca		: drk y brn, dol		037-3	
			tr	Cont		: Coal-ad, Mica-ad, prp		037-4	
3055.00								038	
			100	Sh/Clst		lt gy to m gy		038-1	
			tr	Sltst		: lt brn gy		038-2	
	cvd		tr	S/Sst		: w		038-3	
			tr	Cont		: Coal-ad, Mica-ad, prp		038-4	
3080.00								039	
			100	Sh/Clst		lt gy to m gy		039-1	
			tr	Sh/Clst		gy red		039-2	
			tr	Ca		: drk y brn, dol		039-3	
			tr	Cont		: Coal-ad, Mica-ad, prp		039-4	
3105.00								040	
			100	Sh/Clst		lt gy to m gy		040-1	
			tr	Sh/Clst		gy red		040-2	
			tr	Sltst		: lt brn gy		040-3	
			tr	Ca		: drk y brn, dol		040-4	
			tr	Cont		: Mica-ad, prp		040-5	

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
3130.00								041
			100	Sh/Clst:		lt gy to m gy		041-1
			tr	Sh/Clst:		gy red		041-2
			tr	Cont	:	Coal-ad		041-3
3155.00								042
			100	Sh/Clst:		lt gy to m gy		042-1
			tr	Sh/Clst:		gy red		042-2
			tr	Cont	:	Coal-ad, dd		042-3
3180.00								043
			80	Sh/Clst:		lt gy to m gy		043-1
			20	Sltst	:	lt brn gy		043-2
			tr	Cont	:	Coal-ad		043-3
3205.00								044
			90	Sh/Clst:		lt gy to m gy		044-1
			10	Sltst	:	lt brn gy		044-2
			tr	Cont	:	Coal-ad		044-3
3230.00								045
			90	Sh/Clst:		lt gy to m gy		045-1
			10	Sltst	:	lt brn gy		045-2
			tr	Cont	:	Coal-ad, Mica-ad		045-3
3255.00								046
			100	Sh/Clst:		gn gy, lt gy		046-1
	cvd		tr	Other	:	glauc		046-2
			tr	Cont	:	Coal-ad		046-3

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
3280.00								047
			95	Sh/Clst: gn gy, lt gy				047-1
			5	Sltst : lt brn gy				047-2
			tr	Cont : Coal-ad				047-3
3305.00								048
			95	Sh/Clst: gn gy, lt gy				048-1
			5	Sltst : lt brn gy				048-2
			tr	Cont : Coal-ad, Mica-ad				048-3
3330.00								049
			95	Sh/Clst: gn gy, lt gy				049-1
			5	Sltst : lt brn gy				049-2
			tr	Cont : Coal-ad, Mica-ad				049-3
3355.00								050
			100	Sh/Clst: gn gy, lt gy				050-1
			tr	Sltst : lt brn gy				050-2
			tr	Other : pyr				050-3
			tr	Cont : Coal-ad				050-4
3380.00								051
			100	Sh/Clst: gn gy, lt gy				051-1
			tr	Sltst : lt brn gy				051-2
			tr	Other : pyr				051-3
			tr	Cont : Coal-ad				051-4
3405.00								052
			90	Sh/Clst: gn gy, lt gy				052-1
			10	Sltst : lt brn gy				052-2
			tr	Cont : Coal-ad, Mica-ad				052-3

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A.S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
3430.00								053
			95	Sh/Clst: gn gy, lt gy				053-1
			5	Sltst : lt brn gy				053-2
			tr	Cont : Coal-ad, prp				053-3
3455.00								054
			100	Sh/Clst: gn gy, lt gy				054-1
			tr	Sltst : lt brn gy				054-2
			tr	Cont : Coal-ad, prp, dd				054-3
3480.00								055
			100	Sh/Clst: gn gy, lt gy				055-1
			tr	Sltst : lt brn gy				055-2
			tr	Cont : Coal-ad, prp, dd				055-3
3505.00								056
			100	Sh/Clst: gn gy, lt gy				056-1
			tr	Sltst : lt brn gy				056-2
			tr	Cont : Coal-ad, prp, dd				056-3
3530.00								057
			100	Sh/Clst: gn gy, lt gy				057-1
			tr	Sltst : lt brn gy				057-2
			tr	Cont : Coal-ad, Mica-ad				057-3
3580.00								058
			100	Sh/Clst: lt gy, slt, s				058-1
			tr	Cont : Coal-ad, Mica-ad, dd				058-2

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth Int	Depth Cvd	Type TOC%	%	Grp	Frm	Age	Trb	Sample	Lithology description
3605.00								059	
			90					059-1	Ca : y gy, lt ol gy
			10					059-2	Sh/Clst: lt gy, slt, s
			tr					059-3	Other : pyr
			tr					059-4	Cont : Coal-ad
3630.00								060	
			90					060-1	Sh/Clst: gn gy, lt gy
			10					060-2	Sh/Clst: red brn
			tr					060-3	Cont : Coal-ad, Mica-ad, prp
3655.00								061	
			100					061-1	Sh/Clst: lt gy to m gy, calc
			tr					061-2	Other : pyr
			tr					061-3	Cont : Coal-ad, Mica-ad, prp
3680.00								062	
			100					062-1	Sh/Clst: lt gy to m gy, st
			tr					062-2	Cont : Coal-ad, Mica-ad
3705.00								063	
			50					063-2	Sh/Clst: lt gy to m gy
			30					063-3	Sh/Clst: brn gy to lt brn
			20					063-5	Sh/Clst: blk, m gy
3730.00								064	
			95					064-1	Sh/Clst: gn gy to m gy
			5					064-2	Sh/Clst: brn gy to lt brn
			tr					064-3	Sh/Clst: blk to drk gy

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A.S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
3755.00								065
			90	Sh/Clst:	gn gy to m gy			065-1
			10	Sh/Clst:	brn gy to lt brn			065-2
			tr	Sh/Clst:	blk to drk gy			065-3
			tr	Other	: pyr			065-4
			tr	Cont	: Coal-ad			065-5
3780.00								066
			60	Sh/Clst:	gn gy, m gy			066-1
			40	Sh/Clst:	lt brn gy, mrl			066-2
			tr	Other	: pyr			066-3
			tr	Cont	: Mica-ad			066-4
3805.00								067
			70	Sh/Clst:	gn gy, m gy			067-1
			30	S/Sst	: w, l			067-2
			tr	Other	: pyr			067-3
			tr	Cont	: Coal-ad			067-4
3830.00								068
			90	Sh/Clst:	gn gy, m gy			068-1
			10	Sh/Clst:	red brn			068-2
			tr	Other	: pyr			068-3
			tr	Cont	: Coal-ad, prp			068-4
3855.00								069
			80	Sh/Clst:	gn gy, m gy			069-1
			20	Cont	: Coal-ad			069-4
			tr	S/Sst	: w, l			069-2
			tr	Ca	: dsk y brn			069-3

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
3865.00								070
			100	Sh/Clst:		gn gy, drk gy		070-1
			tr	S/Sst	:	w, l		070-2
			tr	Ca	:	dsk y brn		070-3
			tr	Other	:	pyr		070-4
			tr	Cont	:	Coal-ad		070-5
3875.00								071
			95	Sh/Clst:		gn gy, drk gy		071-1
			5	Sltst	:	red brn, lt brn		071-2
			tr	Other	:	pyr		071-3
			tr	Cont	:	Coal-ad, Mica-ad		071-4
3878.00								072
		1.50	80	Sh/Clst:		m gy to drk gy		072-1
			20	Sh/Clst:		lt gy brn, m gy brn		072-2
			tr	S/Sst	:	w, l		072-3
			tr	Ca	:	dsk y brn		072-4
			tr	Other	:	pyr		072-5
3884.00								073
	cvd		50	Sh/Clst:		brn blk to m gy		073-1
			50	Ca	:	w, m gy, cly		073-2
			tr	Cont	:	prp		073-3
3890.00								074
			100	Cont	:	cem, prp		074-1
3896.00								278
			100	Cont	:	cem, prp		278-1

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A.S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
3902.00								075
		4.01	50	Sh/Clst: brn blk, m gy				075-1
			50	Cont : Mica-ad, cem, prp				075-2
3908.00								076
			80	Cont : Mica-ad, cem, prp				076-2
		4.68	20	Sh/Clst: brn blk, m gy				076-1
3912.00								077
			80	Cont : Mica-ad, cem, prp				077-2
		4.72	20	Sh/Clst: brn blk, m drk gy				077-1
3916.00								078
		4.96	50	Sh/Clst: brn blk, m drk gy				078-1
			50	Cont : Mica-ad, prp				078-2
3922.00								079
		3.87	50	Sh/Clst: brn blk, m drk gy				079-1
			50	Cont : Mica-ad, prp				079-2
3928.00								080
		4.00	50	Sh/Clst: brn blk, m drk gy				080-1
			50	Cont : Mica-ad, prp				080-2
3934.00								081
		3.84	50	Sh/Clst: brn blk, m drk gy				081-1
			50	Cont : Mica-ad, prp				081-2

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth Int	Depth Cvd	Type TOC%	%	Lithology description	Grp	Frm	Age	Trb	Sample
3940.00									082
		3.99	50	Sh/Clst: brn blk, m drk gy					082-1
			30	Cont : Mica-ad, cem, prp					082-3
			20	Ca : dsk y brn, dol					082-2
3946.00									279
		3.19	70	Sh/Clst: brn blk, drk gy					279-1
			20	Cont : cem, prp					279-3
			10	Ca : dsk y brn					279-2
3952.00									083
		4.22	70	Sh/Clst: brn blk, drk gy					083-1
			20	Cont : cem, prp					083-3
			10	Ca : dsk y brn					083-2
3958.00									084
		4.02	50	Sh/Clst: brn blk, drk gy					084-1
			50	Ca : dsk y brn, dol					084-2
3966.00									085
		3.74	70	Sh/Clst: brn blk, drk gy, mic					085-1
			20	Ca : dsk y brn, dol					085-2
			10	Cont : Mica-ad, cem, prp					085-4
			tr	Ca : w, m gy, cly					085-3
			tr	Other : pyr					085-5
3968.00									086
		4.31	70	Sh/Clst: brn blk, drk gy, mic					086-1
			20	Ca : drk y brn, dol					086-2
			10	Cont : Mica-ad, cem, prp					086-4
			tr	Ca : w, m gy, cly					086-3
			tr	Other : pyr					086-5

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
3976.00								087
		3.88	70	Sh/Clst	:	brn blk, drk gy, mic		087-1
			20	Ca	:	drk y brn, dol		087-2
			10	Cont	:	Mica-ad, cem, prp		087-4
			tr	Ca	:	w, m gy, cly		087-3
3982.00								088
		3.51	90	Sh/Clst	:	brn blk, drk gy, mic		088-1
			10	Ca	:	drk y brn, dol		088-2
3988.00								089
		4.02	90	Sh/Clst	:	brn blk, drk gy, mic		089-1
			10	Ca	:	drk y brn, dol		089-2
			tr	Cont	:	prp, fib		089-3
3994.00								090
		4.13	90	Sh/Clst	:	brn blk, drk gy, mic		090-1
			10	Ca	:	drk y brn, dol		090-2
			tr	Cont	:	Mica-ad, prp, fib		090-3
4000.00								091
		3.88	80	Sh/Clst	:	brn blk, drk gy, mic		091-1
			20	Ca	:	drk y brn, dol		091-2
			tr	Cont	:	prp		091-3
4008.00								092
		4.26	80	Sh/Clst	:	brn blk, drk gy, mic		092-1
			10	Ca	:	drk y brn		092-2
			10	Cont	:	prp		092-3
			tr	Other	:	pyr		092-4

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GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth	Type		Grp	Frm	Age	Trb	Sample
Int Cvd	TOC%	%	Lithology description				
4014.00							093
	4.07	80	Sh/Clst: brn blk, drk gy, mic				093-1
		10	Ca : drk y brn				093-2
		10	Cont : prp				093-3
		tr	Other : pyr				093-4
4020.00							094
	3.76	100	Sh/Clst: brn blk, drk gy, mic				094-1
		tr	Ca : drk y brn				094-2
		tr	Sltst : lt gy to m gy				094-3
		tr	Cont : Coal-ad, prp, fib				094-4
		tr	Other : pyr				094-5
4026.00							095
	3.75	90	Sh/Clst: brn blk, drk gy, mic				095-1
		10	Ca : drk y brn				095-2
		tr	Sltst : lt gy to m gy				095-3
		tr	Cont : Coal-ad, prp, fib				095-4
		tr	Other : pyr				095-5
4032.00							096
	3.75	70	Sh/Clst: brn blk, drk gy, mic				096-1
		30	Ca : drk y brn				096-2
		tr	Sltst : lt gy to m gy				096-3
		tr	Cont : Coal-ad, prp, fib				096-4
		tr	Other : pyr				096-5
4038.00							097
	3.53	70	Sh/Clst: brn blk, drk gy, mic				097-1
		15	Ca : drk y brn				097-2
		15	Sltst : lt gy to m gy, calc				097-3
		tr	Cont : prp, fib				097-4

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
4046.00								098
		3.86	80	Sh/Clst: brn blk, drk gy, mic				098-1
			20	Ca : drk y brn				098-2
			tr	Sltst : lt gy to m gy, calc				098-3
			tr	Cont : prp, fib				098-4
4050.00								099
		4.04	80	Sh/Clst: brn blk, drk gy, mic				099-1
			10	Ca : drk y brn				099-2
			10	Sltst : m y brn				099-3
			tr	Cont : prp, fib				099-4
4056.00								100
		4.35	70	Sh/Clst: brn blk, drk gy, mic				100-1
			20	Ca : drk y brn				100-2
			10	Cont : Coal-ad				100-3
4062.00								101
		4.50	60	Sh/Clst: brn blk, drk gy, mic				101-1
			20	Ca : drk y brn				101-2
			20	Cont : Coal-ad, prp, fib				101-3
4066.00								102
		4.19	60	Sh/Clst: brn blk, drk gy, mic				102-1
			20	Ca : drk y brn				102-2
			20	Cont : Coal-ad, prp, fib				102-3
4074.00								103
		3.25	40	Sh/Clst: brn blk, drk gy, mic				103-1
			30	Cont : Coal-ad, prp, fib				103-4
			20	Sltst : m y brn, calc				103-2
			10	Ca : drk y brn				103-3

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GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth Int	Depth Cvd	Type TOC%	%	Grp	Frm	Age	Trb	Sample	Lithology description
4078.00								104	
		5.05	40					104-1	Sh/Clst: brn blk, drk gy, mic
			30					104-4	Cont : Coal-ad, prp, fib
			20					104-2	Sltst : m y brn, calc
			10					104-3	Ca : drk y brn
4084.00								105	
		3.51	30					105-1	Sh/Clst: brn blk, drk gy, mic
			30					105-2	Sltst : m y brn, calc
			30					105-4	Cont : Coal-ad, prp, fib
			10					105-3	Ca : drk y brn
4090.00								106	
		3.57	35					106-1	Sh/Clst: brn blk, drk gy, mic
			35					106-2	Sltst : m y brn, calc
			20					106-4	Cont : Coal-ad, prp, fib
			10					106-3	Ca : drk y brn
4098.00								107	
			60					107-1	Sltst : m y brn, calc
			20					107-2	Sh/Clst: brn blk, drk gy, mic
			10					107-3	Ca : drk y brn
			10					107-4	Cont : Coal-ad, prp, fib
			tr					107-5	Other : pyr
4104.00								108	
		3.92	80					108-1	Sltst : m y brn, calc
			10					108-2	Ca : drk y brn
			10					108-3	Sh/Clst: brn blk, drk gy, mic
			tr					108-4	Cont : Coal-ad, prp, fib

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Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
4110.00								109
		3.61	60	Sh/Clst: brn blk, drk gy, mic				109-1
			30	Sltst : m y brn, calc				109-2
			10	Ca : drk y brn				109-3
			tr	Cont : Coal-ad, prp, fib				109-4
4116.00								110
		4.72	60	Sh/Clst: brn blk, drk gy, mic				110-1
			20	Sltst : m y brn, calc				110-2
			10	Ca : drk y brn				110-3
			10	Cont : Coal-ad, prp, fib				110-4
			tr	Other : pyr				110-5
4122.00								111
		3.48	60	Sh/Clst: brn blk, drk gy, mic				111-1
			20	Sltst : m y brn, calc				111-2
			10	Ca : drk y brn				111-3
			10	Cont : Coal-ad, prp, fib				111-4
			tr	Other : pyr				111-5
4128.00								112
		5.05	100	Sh/Clst: brn blk, drk gy, mic				112-1
			tr	Sltst : m y brn, calc				112-2
			tr	Cont : Coal-ad				112-3
			tr	Other : pyr				112-4
4136.00								113
		4.77	100	Sh/Clst: brn blk, drk gy, mic				113-1
			tr	Sltst : m y brn, calc				113-2
			tr	Cont : Coal-ad				113-3
			tr	Other : pyr				113-4

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
4140.00								114
		4.03	100	Sh/Clst: brn blk, drk gy, slt, mic				114-1
			tr	Cont : Mica-ad				114-2
4146.00								115
		3.82	100	Sh/Clst: brn blk, drk gy, slt, mic				115-1
			tr	Cont : Mica-ad				115-2
4152.00								116
		2.59	60	Sh/Clst: brn gy				116-1
		2.59	40	Sh/Clst: brn blk, drk gy				116-2
4158.00								117
		2.62	60	Sh/Clst: brn gy				117-1
		3.72	40	Sh/Clst: brn blk, drk gy				117-2
4164.00								118
		2.64	50	Sh/Clst: brn gy				118-1
		3.88	50	Sh/Clst: brn blk, drk gy				118-2
4170.00								119
		4.10	80	Sh/Clst: gy, calc				119-1
		2.18	20	Sh/Clst: lt brn gy				119-2
			tr	Cont : Coal-ad				119-3
			tr	Other : pyr				119-4
4176.00								120
		2.34	60	Sh/Clst: lt brn gy				120-1
		3.09	30	Sh/Clst: brn blk, m gy				120-2
			10	Ca : w, lt gy				120-3

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A.S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
4182.00								121
		2.19	60	Sh/Clst: brn gy				121-1
			40	Sh/Clst: brn blk, m gy				121-2
			tr	Ca : w, lt gy				121-3
			tr	Cont : Coal-ad, Mica-ad				121-4
4188.00								122
			60	Sh/Clst: brn gy				122-1
			40	Sh/Clst: brn blk, m gy				122-2
			tr	Ca : w, lt gy				122-3
			tr	Cont : Coal-ad, Mica-ad				122-4
4194.00								123
		2.92	80	Sh/Clst: brn blk to m gy				123-1
			20	Sh/Clst: brn gy				123-2
			tr	Ca : w, lt gy				123-3
			tr	Cont : fib				123-4
4198.00								124
			60	Sh/Clst: lt brn gy, slt				124-1
		2.30	40	Sh/Clst: brn blk to lt gy				124-2
4208.00								125
		4.35	70	Sh/Clst: brn blk to m gy				125-1
			30	Sh/Clst: lt brn gy, slt				125-2
4216.00								126
		4.35	70	Sh/Clst: brn blk to m gy				126-1
			30	Sh/Clst: lt brn gy, slt				126-2

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth Int	Depth Cvd	Type TOC%	%	Grp	Frm	Age	Trb	Sample	Lithology description
4220.00								127	
		4.90	80	Sh/Clst:		m gy to drk gy		127-1	
			20	Sh/Clst:		lt brn gy, slt		127-2	
			tr	Ca		: w to lt gy		127-3	
4226.00								128	
		3.17	100	Sh/Clst:		lt gy to drk gy		128-1	
			tr	Sh/Clst:		lt brn gy, slt		128-2	
			tr	Ca		: w to lt gy		128-3	
4232.00								129	
		3.34	80	Sh/Clst:		drk gy		129-1	
			20	Sh/Clst:		lt brn gy, calc, slt		129-2	
4238.00								130	
		3.77	80	Sh/Clst:		drk gy		130-1	
			20	Sh/Clst:		lt brn gy, calc, slt		130-2	
4244.00								131	
		3.34	70	Sh/Clst:		drk gy		131-1	
		2.39	30	Sh/Clst:		lt brn gy, calc, slt		131-2	
4250.00								132	
		3.12	90	Sh/Clst:		drk gy		132-1	
			10	Sh/Clst:		lt brn gy, calc, slt		132-2	
4254.00								133	
		3.21	100	Sh/Clst:		blk to brn gy		133-1	

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth	Type		Grp	Frm	Age	Trb	Sample
Int Cvd	TOC%	%	Lithology description				
4262.00							134
	2.93	100	Sh/Clst:		blk to brn gy		134-1
		tr	Cont	:	Coal-ad		134-2
4268.00							135
	1.88	100	Sh/Clst:		blk to brn gy		135-1
		tr	Cont	:	Coal-ad		135-2
4274.00							136
	1.45	100	Sh/Clst:		lt gy to drk gy		136-1
4280.00							137
	2.30	100	Sh/Clst:		lt gy to drk gy		137-1
4286.00							138
	1.59	95	Sh/Clst:		lt brn gy to drk gy		138-1
		5	Cont	:	Coal-ad		138-2
4292.00							139
	1.98	100	Sh/Clst:		lt brn gy to drk gy		139-1
		tr	Cont	:	Coal-ad		139-2
4298.00							140
	2.10	95	Sh/Clst:		lt brn gy to drk gy		140-1
		5	Cont	:	Coal-ad		140-2

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
4302.00								141
		1.50	100	Sh/Clst:	lt brn gy to drk gy			141-1
			tr	Cont :	Coal-ad			141-2
4310.00								142
		1.43	100	Sh/Clst:	lt gy to drk gy			142-1
			tr	Cont :	Coal-ad			142-2
			tr	Sh/Clst:	lt brn gy			142-3
	cvd		tr	Sh/Clst:	red			142-4
4316.00								143
		2.48	100	Sh/Clst:	lt gy to drk gy			143-1
			tr	Cont :	Coal-ad			143-2
			tr	Sh/Clst:	lt brn gy			143-3
	cvd		tr	Sh/Clst:	red			143-4
4322.00								144
		1.63	100	Sh/Clst:	lt gy, drk gy			144-1
			tr	Cont :	Coal-ad			144-2
			tr	Sh/Clst:	lt brn gy			144-3
	cvd		tr	Sh/Clst:	red			144-4
4328.00								145
		2.25	100	Sh/Clst:	lt gy to drk gy			145-1
			tr	Cont :	Coal-ad			145-2
			tr	Sh/Clst:	lt brn gy			145-3
	cvd		tr	Sh/Clst:	red			145-4
4334.00								280
		2.45	100	Sh/Clst:	lt gy to drk gy			280-1
			tr	Cont :	Coal-ad			280-2
			tr	Sh/Clst:	lt brn gy			280-3
	cvd		tr	Sh/Clst:	red			280-4

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
4340.00								146
		2.51	100	Sh/Clst:		lt gy to drk gy		146-1
			tr	Cont	:	Coal-ad		146-2
			tr	Sh/Clst:		lt brn gy		146-3
	cvd		tr	Sh/Clst:		red		146-4
4344.00								213
	cvd		70	Sh/Clst:		m gy		213-1
			20	Cont	:	Coal-ad		213-2
			5	Cont	:	Mica-ad, dd, fib		213-3
			5	Sltst				213-4
4346.00								147
		2.20	90	Sh/Clst:		lt gy to drk gy		147-1
			10	Sh/Clst:		lt brn gy		147-2
4352.00								148
		2.38	90	Sh/Clst:		lt gy to drk gy		148-1
			10	Sh/Clst:		lt brn gy		148-2
4358.00								149
		2.88	100	Sh/Clst:		lt gy to drk gy, slt, mic		149-1
4366.00								150
		2.57	100	Sh/Clst:		lt gy to drk gy, slt, mic		150-1
			tr	Sh/Clst:		blk, carb		150-2

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A.S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
4370.00								151
		1.97	100	Sh/Clst:		lt gy to drk gy, slt, mic		151-1
			tr	Sh/Clst:		blk, carb		151-2
4376.00								152
		2.44	100	Sh/Clst:		lt gy to drk gy, slt, mic		152-1
			tr	Sh/Clst:		brn gy		152-2
			tr	Ca				152-3
			tr	S/Sst	:	l		152-4
4382.00								153
			100	Sh/Clst:		gy, brn gy, drk gy, calc, slt, mic		153-1
4382.00								228
		2.26	95	Sh/Clst:		lt gy to drk gy		228-1
			5	S/Sst	:	slt		228-2
			tr	Cont	:	Mica-ad		228-3
			tr	Other	:	pyr		228-4
4384.00								212
	cvd		90	Sh/Clst:		m gy		212-1
			5	Cont	:	Coal-ad		212-2
			5	Cont	:	Mica-ad, dd, fib		212-3
4388.00								154
		2.22	100	Sh/Clst:		gy, brn gy, drk gy, calc, slt, mic		154-1
			tr	Cont	:	Coal-ad		154-2

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
4394.00								155
		2.29	85	Sh/Clst:		gy, brn gy, drk gy, calc, slt, mic		155-1
			15	Sltst	:	lt brn gy		155-2
			tr	Ca				155-3
			tr	S/Sst	:	l		155-4
4400.00								156
		2.10	100	Sh/Clst:		brn gy, m gy, drk gy, slt		156-1
			tr	S/Sst	:	l		156-2
			tr	Ca				156-3
			tr	Cont	:	prp		156-4
4406.00								157
		2.29	100	Sh/Clst:		brn gy, m gy, drk gy, slt		157-1
			tr	S/Sst	:	l		157-2
			tr	Ca				157-3
			tr	Cont	:	prp		157-4
4412.00								158
		2.59	100	Sh/Clst:		brn gy, m gy, drk gy, slt		158-1
			tr	S/Sst	:	l		158-2
			tr	Ca				158-3
			tr	Cont	:	Coal-ad, prp		158-4
4418.00								159
		2.24	100	Sh/Clst:		brn gy, m gy, drk gy, slt		159-1
			tr	S/Sst	:	l		159-2
			tr	Ca				159-3
			tr	Cont	:	Coal-ad, prp		159-4

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
4424.00								160
		2.19	95	Sh/Clst: gy, brn, brn gy, slt				160-1
			5	Cont : Coal-ad				160-2
			tr	Cont : Mica-ad, prp				160-3
4430.00								161
		2.42	60	Sh/Clst: gy, brn, brn gy, slt				161-1
			40	Cont : Coal-ad				161-2
			tr	Cont : Mica-ad, prp				161-3
4436.00								162
		2.53	85	Sh/Clst: gy, brn, brn gy, slt				162-1
			15	Cont : Coal-ad				162-2
4442.00								163
		2.17	90	Sh/Clst: gy, brn, brn gy, slt				163-1
			10	Cont : Coal-ad				163-2
4448.00								164
		2.20	100	Sh/Clst: gy, brn, brn gy, slt				164-1
			tr	Cont : Coal-ad, Mica-ad, prp				164-2
4454.00								165
		2.51	100	Sh/Clst: gy, brn, brn gy, slt				165-1
4460.00								166
		2.38	95	Sh/Clst: gy, brn, brn gy, slt				166-1
			5	Sltst : lt brn gy				166-2
			tr	Cont : Coal-ad, Mica-ad, prp				166-3

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth	Type		Grp	Frm	Age	Trb	Sample
Int Cvd	TOC%	%	Lithology description				
4466.00							167
	2.20	95	Sh/Clst: gy, brn, brn gy, slt				167-1
		5	Sltst : lt brn gy				167-2
		tr	Cont : Coal-ad				167-3
4472.00							168
	2.12	95	Sh/Clst: gy, brn, brn gy, slt				168-1
		5	Sltst : lt brn gy				168-2
4476.00							169
	2.20	100	Sh/Clst: gy, brn, brn gy, slt				169-1
		tr	Sltst : lt brn gy				169-2
		tr	Cont : Coal-ad				169-3
4484.00							170
	2.37	95	Sh/Clst: gy, brn, brn gy, slt				170-1
		5	Sltst : lt brn gy				170-2
		tr	Cont : Coal-ad				170-3
4490.00							171
	2.51	95	Sh/Clst: lt gy to m drk gy				171-1
		5	Sltst : lt brn gy				171-2
		tr	Cont : Coal-ad				171-3
4496.00							172
	2.22	95	Sh/Clst: lt gy to m drk gy				172-1
		5	Sltst : lt brn gy				172-2
		tr	Cont : Coal-ad				172-3

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
4500.00								173
		2.36	95	Sh/Clst:		lt gy to m drk gy		173-1
			5	Sltst	:	lt brn gy		173-2
			tr	Cont	:	Coal-ad		173-3
4510.00								174
		2.45	50	Sh/Clst:		lt gy to m drk gy		174-1
			50	Cont	:	cem		174-2
4516.00								175
		2.26	50	Sh/Clst:		lt gy to m drk gy		175-1
			50	Cont	:	cem		175-2
4522.00								176
	cvd	2.34	50	Sh/Clst:		lt gy to m drk gy		176-1
			30	Cont	:	cem, prp, fib		176-3
			20	Cont	:	Coal-ad		176-2
4528.00								177
		2.13	50	Sh/Clst:		drk gy, calc, mic		177-1
			30	Cont	:	Coal-ad		177-2
			20	Cont	:	cem, prp, fib		177-3
4534.00								178
		2.23	75	Sh/Clst:		drk gy, calc, mic		178-1
			15	Cont	:	cem, prp, fib		178-2
			10	Cont	:	Coal-ad		178-3

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A.S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type			Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description					
4540.00									179
		2.10	90	Sh/Clst: drk gy, calc, mic					179-1
			10	Cont : Coal-ad, fib					179-2
4546.00									180
		2.09	90	Sh/Clst: drk gy, calc, mic					180-1
			10	Cont : Coal-ad, prp, fib					180-2
4552.00									181
		2.35	95	Sh/Clst: drk gy, calc, mic					181-1
			5	Cont : Coal-ad, prp, fib					181-2
4558.00									182
		2.30	90	Sh/Clst: drk gy, calc, mic					182-1
			10	Cont : prp, fib					182-2
4564.00									183
		1.98	100	Sh/Clst: blk, lt gy, drk gy					183-1
			tr	Cont : Coal-ad, prp, dd					183-2
4570.00									184
		2.21	100	Sh/Clst: blk, lt gy, drk gy					184-1
			tr	Cont : Coal-ad, prp, dd					184-2
4576.00									185
		1.99	100	Sh/Clst: blk, lt gy, drk gy					185-1
			tr	Cont : Coal-ad, cem, prp, dd					185-2

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
4582.00								186
		2.36	90	Sh/Clst:		blk, lt gy, drk gy		186-1
			10	Cont	:	Coal-ad, prp, dd		186-2
4588.00								187
		2.63	90	Sh/Clst:		blk, m gy, drk gy, calc, mic		187-1
			10	Cont	:	Coal-ad, cem, prp, dd, fib		187-2
4594.00								188
		2.43	90	Sh/Clst:		blk, m gy, drk gy, calc, mic		188-1
			10	Cont	:	Coal-ad, cem, prp, dd, fib		188-2
4600.00								189
		2.62	90	Sh/Clst:		blk, m gy, drk gy, calc, mic		189-1
			5	Cont	:	Coal-ad		189-2
			5	Cont	:	prp, fib		189-3
4606.00								190
			95	Cont	:	Coal-ad		190-1
			5	Sh/Clst:		blk, m gy, drk gy, calc, mic		190-2
			tr	Cont	:	fib		190-3
4612.00								191
		2.66	60	Sh/Clst:		blk, m gy, drk gy, calc, mic		191-1
			30	Cont	:	Coal-ad		191-2
			10	Cont	:	Mica-ad, prp, fib		191-3

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
4618.00								192
			50	Cont	:	Coal-ad		192-2
			40	Sh/Clst	:	blk, m gy, drk gy, calc, mic		192-1
			10	Cont	:	Mica-ad, prp, fib		192-3
4624.00								193
		2.80	50	Sh/Clst	:	blk, m gy, drk gy, calc, mic		193-1
			40	Cont	:	Coal-ad		193-2
			10	Cont	:	Mica-ad, prp, fib		193-3
4630.00								194
			85	Cont	:	Coal-ad		194-1
			10	Sh/Clst	:	blk, m gy, drk gy, calc, mic		194-2
			5	Sltst				194-3
4634.00								195
			95	Cont	:	Coal-ad		195-1
			5	Sh/Clst	:	blk, m gy, drk gy, calc, mic		195-2
4642.00								196
			80	Cont	:	Coal-ad		196-1
			10	Sh/Clst	:	blk, m gy, drk gy, calc, mic		196-2
			10	Cont	:	Mica-ad, dd, fib		196-3
4650.00								197
		1.94	80	Sh/Clst	:	blk, m gy, drk gy, calc, mic		197-1
			15	Cont	:	Coal-ad		197-2
			5	Cont	:	Mica-ad, dd, fib		197-3
			tr	Other	:	glauc		197-4

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
4654.00								198
		2.49	90	Sh/Clst: blk, m gy, drk gy, calc, mic				198-1
			5	Cont : Coal-ad				198-2
			5	Cont : Mica-ad, prp, dd, fib				198-3
			tr	Sltst				198-4
4660.00								199
		2.23	70	Sh/Clst: blk, m gy, drk gy, calc, mic				199-1
			20	Cont : Coal-ad				199-2
			10	Cont : prp, dd, fib				199-3
4668.00								200
		2.22	75	Sh/Clst: blk, m gy, drk gy, calc, mic				200-1
			15	Cont : Coal-ad				200-2
			10	Cont : Mica-ad, prp, dd, fib				200-3
4672.00								201
		2.29	90	Sh/Clst: blk, m gy, drk gy, calc, mic				201-1
			5	Cont : Coal-ad				201-2
			5	Cont : Mica-ad, prp, dd, fib				201-3
4678.00								202
		2.42	80	Sh/Clst: blk, m gy, drk gy, calc, mic				202-1
			10	Cont : Coal-ad				202-2
			10	Cont : Mica-ad, prp, dd, fib				202-3
			tr	Sltst				202-4
4686.00								203
		2.29	80	Sh/Clst: blk, m gy, drk gy, calc, mic				203-1
			15	Cont : Coal-ad				203-2
			5	Cont : Mica-ad, prp, fib				203-3

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
4690.00								204
		2.20	75	Sh/Clst: blk, m gy, drk gy, calc, mic				204-1
			15	Cont : Coal-ad				204-2
			10	Cont : Mica-ad, prp, fib				204-3
4698.00								205
			90	Cont : Coal-ad				205-1
			10	Sh/Clst: blk, m gy, drk gy, calc, mic				205-2
			tr	Cont : prp, dd, fib				205-3
4702.00								206
			90	Cont : Coal-ad				206-1
			10	Sh/Clst: blk, m gy, drk gy, calc, mic				206-2
			tr	Cont : prp, dd, fib				206-3
4708.00								207
		2.16	80	Sh/Clst: m gy, drk gy, slt				207-1
			10	Cont : Coal-ad				207-2
			5	Sltst				207-3
			5	Cont : dd, fib				207-4
4714.00								208
		1.95	90	Sh/Clst: m gy				208-1
			5	Cont : Coal-ad				208-2
			5	Sltst				208-3
			tr	Cont : Mica-ad, dd, fib				208-4
4720.00								209
			80	Cont : Coal-ad				209-1
			15	Sh/Clst: m gy				209-2
			5	Cont : Mica-ad, dd, fib				209-3

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A.S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
4726.00								210
		2.77	90	Sh/Clst: m gy				210-1
			5	Cont : Coal-ad				210-2
			5	Cont : prp, dd, fib				210-3
4734.00								211
		2.51	85	Sh/Clst: m gy				211-1
			10	Cont : Coal-ad				211-2
			5	Cont : Mica-ad, dd, fib				211-3
4738.00								281
	cvd	2.76	90	Sh/Clst: m gy				281-1
			5	Cont : Coal-ad				281-2
			5	Cont : Mica-ad, dd, fib				281-3
4744.00								282
	cvd	2.39	70	Sh/Clst: m gy				282-1
			20	Cont : Coal-ad				282-2
			5	Cont : Mica-ad, dd, fib				282-3
			5	Sltst				282-4
4750.00								214
		2.57	70	Sh/Clst: m gy				214-1
			20	Cont : Coal-ad				214-2
			10	S/Sst				214-3
4756.00								215
			50	S/Sst				215-2
			40	Sh/Clst: m gy				215-1
			10	Cont : Coal-ad				215-3
			tr	Cont : Mica-ad, dd, fib				215-5

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
4768.00								216
			60	S/Sst				216-1
			20	Sh/Clst:	m gy			216-2
			20	Cont	: Coal-ad			216-3
			tr	Cont	: cem, prp, dd			216-4
4772.00								217
		2.70	80	Sh/Clst:	m gy			217-1
			15	Cont	: Coal-ad, prp			217-3
			5	Sh/Clst:	calc, slt			217-2
4778.00								218
		2.46	80	Sh/Clst:	m gy			218-1
			10	S/Sst				218-2
			10	Cont	: Coal-ad, prp			218-3
4784.00								219
		2.48	90	Sh/Clst:	m gy			219-1
			5	Cont	: Coal-ad			219-2
			5	S/Sst	: carb			219-3
4790.00								220
	cvd		95	Sh/Clst:	lt gy to drk gy			220-1
			5	Cont	: Coal-ad			220-2
			tr	S/Sst				220-3
4796.00								221
		2.41	90	Sh/Clst:	lt gy to drk gy			221-1
			5	Cont	: Coal-ad			221-2
			5	S/Sst				221-3

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
4802.00								222
		2.50	95	Sh/Clst: lt gy to drk gy				222-1
			5	Cont : Coal-ad				222-2
	cvd		tr	S/Sst				222-3
4808.00								223
		2.34	95	Sh/Clst: lt gy to drk gy				223-1
			5	Cont : Coal-ad				223-2
	cvd		tr	S/Sst				223-3
4814.00								224
		2.43	95	Sh/Clst: lt gy to drk gy				224-1
			5	Cont : Coal-ad				224-2
	cvd		tr	S/Sst				224-3
4818.00								225
		2.49	95	Sh/Clst: lt gy to drk gy				225-1
			5	Cont : Coal-ad				225-2
	cvd		tr	S/Sst				225-3
4826.00								226
		2.38	95	Sh/Clst: lt gy to drk gy				226-1
			5	Cont : Coal-ad				226-2
	cvd		tr	S/Sst				226-3
4832.00								227
		2.38	100	Sh/Clst: lt gy to drk gy				227-1

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
4838.00								283
		2.46	95	Sh/Clst: lt gy to drk gy				283-1
			5	S/Sst : slt				283-2
			tr	Cont : Mica-ad				283-3
			tr	Other : pyr				283-4
4846.00								229
		2.17	95	Sh/Clst: lt gy to drk gy				229-1
			5	S/Sst : slt				229-2
			tr	Cont : Mica-ad				229-3
			tr	Other : pyr				229-4
4852.00								230
		2.40	100	Sh/Clst: lt gy to drk gy				230-1
			tr	S/Sst : slt				230-2
4860.00								231
		2.21	95	Sh/Clst: lt gy to drk gy				231-1
	cvd		5	S/Sst : l				231-2
4866.00								232
		2.19	95	Sh/Clst: lt gy to drk gy				232-1
	cvd		5	S/Sst : l				232-2
4870.00								233
			95	Sh/Clst: blk, lt gy to drk gy				233-1
	cvd		5	S/Sst : l				233-2

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
4876.00								234
			100	Sh/Clst: blk, drk gy, carb				234-1
	cvd		tr	S/Sst				234-2
4882.00								235
			100	Sh/Clst: lt gy to m drk gy, calc, mic				235-1
			tr	Cont : Coal-ad, dd, fib				235-2
4888.00								236
	cvd	2.35	95	Sh/Clst: lt gy to m drk gy				236-1
			5	S/Sst				236-2
			tr	Cont : dd, fib				236-3
4894.00								237
	cvd	2.81	90	Sh/Clst: drk gy				237-1
			10	S/Sst : w, lt brn				237-2
4902.00								238
	cvd	2.41	80	Sh/Clst: drk gy				238-1
			20	Cont : Coal-ad, dd				238-2
			tr	S/Sst : w, lt brn				238-3
4906.00								239
	cvd	2.78	80	Sh/Clst: drk gy				239-1
			10	S/Sst : w, lt brn				239-2
			10	Cont : Coal-ad				239-3

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
4912.00								240
	cvd		50	Sh/Clst: drk gy				240-1
			40	S/Sst : w, lt brn				240-2
			10	Cont : Coal-ad				240-3
4918.00								241
			50	S/Sst : w, lt brn				241-1
	cvd		30	Sh/Clst: m gy				241-2
			20	Coal				241-3
4924.00								242
			60	S/Sst : ang, l				242-1
	cvd		30	Sh/Clst: m gy				242-2
			10	Coal				242-3
4930.00								243
			60	S/Sst : lt brn				243-1
	cvd		40	Sh/Clst: m gy				243-2
4936.00								244
			50	S/Sst : lt brn				244-1
	cvd		40	Sh/Clst: m gy				244-2
			10	Cont : Coal-ad				244-3
4942.00								245
		0.16	85	S/Sst : w, lt brn, ang, l				245-1
	cvd		10	Sh/Clst: m gy				245-2
			5	Cont : Coal-ad				245-3

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
4948.00								246
			85	S/Sst	:	w, lt brn, ang, l		246-1
	cvd		10	Sh/Clst	:	m gy		246-2
			5	Cont	:	Coal-ad		246-3
4954.00								247
			75	S/Sst	:	w, lt brn, ang, l		247-1
	cvd		20	Sh/Clst	:	m gy		247-2
			5	Cont	:	Coal-ad		247-3
4960.00								248
		0.11	95	S/Sst	:	w, lt brn, ang, l		248-1
	cvd		5	Sh/Clst	:	m gy		248-2
			tr	Cont	:	Coal-ad		248-3
4966.00								249
			95	S/Sst	:	w, lt brn, ang, l		249-1
	cvd		5	Sh/Clst	:	m gy		249-2
			tr	Cont	:	Coal-ad		249-3
4972.00								250
			70	S/Sst	:	w, lt brn, ang, l		250-1
	cvd		20	Sh/Clst	:	m gy		250-2
			10	Cont	:	Coal-ad, dd		250-3
4978.00								251
		2.40	70	Sh/Clst	:	m gy		251-1
			20	S/Sst	:	w, lt brn, ang, l		251-2
			10	Cont	:	Coal-ad		251-3

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A.S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
4982.00								252
			75	Sh/Clst: m gy				252-1
			20	Cont : Coal-ad, dd				252-3
			5	S/Sst : w, lt brn, ang, l				252-2
4990.00								253
			40	Sh/Clst: m gy				253-1
			40	Cont : Coal-ad, dd				253-3
			20	S/Sst : w, lt brn, ang, l				253-2
4996.00								254
	cvd	2.45	60	Sh/Clst: m gy				254-1
			20	S/Sst : w, lt brn, ang, l				254-2
			20	Cont : Coal-ad, dd				254-3
5002.00								255
			60	Cont : slt				255-3
	cvd		30	Sh/Clst: m gy, drk gy				255-1
			10	Cont : Coal-ad				255-2
5008.00								256
			55	Cont : slt				256-4
	cvd		30	Sh/Clst: m gy, drk gy				256-1
			10	Cont : Coal-ad				256-2
			5	S/Sst				256-3
5014.00								257
			50	Cont : slt				257-3
	cvd		40	Sh/Clst: m gy, drk gy				257-1
			10	Cont : Coal-ad				257-2

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth	Type		Grp	Frm	Age	Trb	Sample
Int Cvd	TOC%	%	Lithology description				
5022.00							258
cvd	2.45	60	Sh/Clst:		m gy, drk gy		258-1
		30	Cont	:	slt		258-3
		10	Cont	:	Coal-ad		258-2
5026.00							259
cvd		60	Sh/Clst:		m gy to drk gy		259-1
		30	Cont	:	slt		259-3
		10	Cont	:	Coal-ad		259-2
5032.00							260
int		50	Sh/Clst:		m gy to drk gy		260-1
int		40	Sltst	:	red brn		260-3
		10	Cont	:	Coal-ad		260-2
5038.00							261
int		60	S/Sst				261-3
int	2.21	35	Sh/Clst:		m gy to drk gy		261-1
		5	Cont	:	Coal-ad		261-2
5042.00							262
int		60	S/Sst				262-2
int		30	Sh/Clst:		m gy to drk gy		262-1
		10	Cont	:	Coal-ad, dd		262-3
5050.00							263
		90	Sh/Clst:		m gy to drk gy		263-1
		10	Cont	:	Coal-ad, prp, dd		263-2

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A.S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
5056.00								264
int			50	Sh/Clst: m gy to drk gy				264-1
int			50	S/Sst				264-2
			tr	Cont : Coal-ad, Mica-ad, fib				264-3
5062.00								265
		2.77	95	Sh/Clst: blk, drk gy				265-1
			5	Cont : Coal-ad, fib				265-2
5066.00								266
int			50	Sh/Clst: blk, drk gy				266-1
int			50	S/Sst : cem, ang				266-2
			tr	Cont : Coal-ad, prp, fib				266-3
5076.00								267
int			50	S/Sst : cem, ang				267-2
int			45	Sh/Clst: blk, drk gy				267-1
			5	Cont : Coal-ad, prp, fib				267-3
5080.00								268
int			50	S/Sst				268-2
int			45	Sh/Clst: drk gy, mic				268-1
			5	Cont : Coal-ad, prp, fib				268-3
5086.00								269
int		2.74	50	Sh/Clst: drk gy, mic				269-1
int			50	S/Sst				269-2
			tr	Cont : Coal-ad, prp, fib				269-3

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
5092.00								270
int			50	Sh/Clst: drk gy, mic				270-1
int			50	S/Sst				270-2
			tr	Cont : Coal-ad, prp, fib				270-3
5098.00								271
int			50	S/Sst : slt				271-2
int			45	Sh/Clst: lt gy, m drk gy				271-1
			5	Cont : Coal-ad, Mica-ad, fib				271-3
5104.00								272
int			50	S/Sst				272-2
int			45	Sh/Clst: m gy, drk gy				272-1
			5	Cont : Coal-ad, Mica-ad, fib				272-3
5110.00								273
int		2.28	50	Sh/Clst: m drk gy				273-1
int			50	S/Sst				273-2
			tr	Cont : Coal-ad, prp				273-3
5116.00								274
int			50	Sh/Clst: m drk gy				274-1
int			50	S/Sst				274-2
			tr	Cont : Coal-ad, prp				274-3
5122.00								275
		0.42	65	Sh/Clst: lt gy, drk gy				275-1
			30	S/Sst				275-2
			5	Cont : Coal-ad				275-3

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A/S

Table 1 : Lithology description for well NOCS 30/7-7

Depth unit of measure: m

Depth		Type		Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description				
5126.00								276
int			50	S/Sst				276-2
int		3.96	40	Sh/Clst:	lt gy, drk gy			276-1
			10	Cont	: Coal-ad			276-3
			tr	Cont	: prp			276-4

Table 2: Rock-Eval table for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
3830.00	cut	Sh/Clst: gn gy, m gy	0.83	0.27	-	-	-	-	-	1.1	0.75	340	068-1
3855.00	cut	Sh/Clst: gn gy, m gy	0.74	0.23	0.12	1.92	-	-	-	1.0	0.76	351	069-1
3865.00	cut	Sh/Clst: gn gy, drk gy	0.47	0.20	-	-	-	-	-	0.7	0.70	345	070-1
3875.00	cut	Sh/Clst: gn gy, drk gy	0.63	0.19	0.09	2.11	-	-	-	0.8	0.77	389	071-1
3878.00	cut	Sh/Clst: m gy to drk gy	0.28	0.45	0.30	1.50	1.50	30	20	0.7	0.38	437	072-1
3902.00	cut	Sh/Clst: brn blk, m gy	1.97	3.94	0.73	5.40	4.01	98	18	5.9	0.33	437	075-1
3908.00	cut	Sh/Clst: brn blk, m gy	2.41	5.64	0.91	6.20	4.68	121	19	8.1	0.30	440	076-1
3912.00	cut	Sh/Clst: brn blk, m drk gy	2.17	4.85	1.20	4.04	4.72	103	25	7.0	0.31	438	077-1
3916.00	cut	Sh/Clst: brn blk, m drk gy	2.13	4.94	1.23	4.02	4.96	100	25	7.1	0.30	441	078-1
3922.00	cut	Sh/Clst: brn blk, m drk gy	1.84	3.77	1.52	2.48	3.87	97	39	5.6	0.33	436	079-1
3928.00	cut	Sh/Clst: brn blk, m drk gy	2.07	4.00	1.48	2.70	4.00	100	37	6.1	0.34	443	080-1
3934.00	cut	Sh/Clst: brn blk, m drk gy	2.47	4.49	1.77	2.54	3.84	117	46	7.0	0.35	448	081-1
3940.00	cut	Sh/Clst: brn blk, m drk gy	2.02	3.88	1.62	2.40	3.99	97	41	5.9	0.34	445	082-1
3946.00	cut	Sh/Clst: brn blk, drk gy	2.00	3.34	1.61	2.07	3.19	105	50	5.3	0.37	447	279-1
3952.00	cut	Sh/Clst: brn blk, drk gy	2.42	4.63	1.72	2.69	4.22	110	41	7.1	0.34	445	083-1

Table 2: Rock-Eval table for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
3958.00	cut	Sh/Clst: brn blk, drk gy	2.50	4.55	1.82	2.50	4.02	113	45	7.1	0.35	447	084-1
3966.00	cut	Sh/Clst: brn blk, drk gy	2.27	3.99	1.76	2.27	3.74	107	47	6.3	0.36	444	085-1
3968.00	cut	Sh/Clst: brn blk, drk gy	2.68	4.97	1.66	2.99	4.31	115	39	7.7	0.35	445	086-1
3976.00	cut	Sh/Clst: brn blk, drk gy	4.16	6.49	1.79	3.63	3.88	167	46	10.6	0.39	448	087-1
3982.00	cut	Sh/Clst: brn blk, drk gy	2.63	4.07	1.79	2.27	3.51	116	51	6.7	0.39	450	088-1
3988.00	cut	Sh/Clst: brn blk, drk gy	2.61	4.36	1.73	2.52	4.02	108	43	7.0	0.37	447	089-1
3994.00	cut	Sh/Clst: brn blk, drk gy	2.56	3.89	1.20	3.24	4.13	94	29	6.5	0.40	448	090-1
4000.00	cut	Sh/Clst: brn blk, drk gy	2.43	4.36	1.45	3.01	3.88	112	37	6.8	0.36	447	091-1
4008.00	cut	Sh/Clst: brn blk, drk gy	2.06	4.13	1.71	2.42	4.26	97	40	6.2	0.33	440	092-1
4014.00	cut	Sh/Clst: brn blk, drk gy	1.90	3.21	1.82	1.76	4.07	79	45	5.1	0.37	444	093-1
4020.00	cut	Sh/Clst: brn blk, drk gy	2.59	3.61	1.70	2.12	3.76	96	45	6.2	0.42	446	094-1
4026.00	cut	Sh/Clst: brn blk, drk gy	1.76	3.54	1.69	2.09	3.75	94	45	5.3	0.33	440	095-1
4032.00	cut	Sh/Clst: brn blk, drk gy	2.25	4.08	1.59	2.57	3.75	109	42	6.3	0.36	445	096-1
4038.00	cut	Sh/Clst: brn blk, drk gy	2.15	3.66	1.57	2.33	3.53	104	44	5.8	0.37	446	097-1
4046.00	cut	Sh/Clst: brn blk, drk gy	1.84	3.05	1.75	1.74	3.86	79	45	4.9	0.38	436	098-1

Table 2: Rock-Eval table for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
4050.00	cut	Sh/Clst: brn blk, drk gy	2.15	3.75	1.73	2.17	4.04	93	43	5.9	0.36	442	099-1
4056.00	cut	Sh/Clst: brn blk, drk gy	2.12	3.81	1.74	2.19	4.35	88	40	5.9	0.36	441	100-1
4062.00	cut	Sh/Clst: brn blk, drk gy	2.31	4.01	1.81	2.22	4.50	89	40	6.3	0.37	441	101-1
4066.00	cut	Sh/Clst: brn blk, drk gy	2.16	4.02	1.80	2.23	4.19	96	43	6.2	0.35	442	102-1
4074.00	cut	Sh/Clst: brn blk, drk gy	2.17	3.06	1.71	1.79	3.25	94	53	5.2	0.41	448	103-1
4078.00	cut	Sh/Clst: brn blk, drk gy	2.07	4.36	1.75	2.49	5.05	86	35	6.4	0.32	440	104-1
4084.00	cut	Sh/Clst: brn blk, drk gy	2.03	4.02	1.44	2.79	3.51	115	41	6.1	0.34	441	105-1
4090.00	cut	Sh/Clst: brn blk, drk gy	1.96	3.21	1.50	2.14	3.57	90	42	5.2	0.38	445	106-1
4104.00	cut	Sltst : m y brn	1.89	3.80	1.73	2.20	3.92	97	44	5.7	0.33	443	108-1
4110.00	cut	Sh/Clst: brn blk, drk gy	2.01	3.49	1.92	1.82	3.61	97	53	5.5	0.37	447	109-1
4116.00	cut	Sh/Clst: brn blk, drk gy	1.95	3.57	1.95	1.83	4.72	76	41	5.5	0.35	447	110-1
4122.00	cut	Sh/Clst: brn blk, drk gy	1.84	3.13	1.99	1.57	3.48	90	57	5.0	0.37	446	111-1
4128.00	cut	Sh/Clst: brn blk, drk gy	2.60	4.99	1.10	4.54	5.05	99	22	7.6	0.34	459	112-1
4136.00	cut	Sh/Clst: brn blk, drk gy	1.97	3.44	1.08	3.19	4.77	72	23	5.4	0.36	451	113-1
4140.00	cut	Sh/Clst: brn blk, drk gy	1.95	3.89	1.38	2.82	4.03	97	34	5.8	0.33	455	114-1

Table 2: Rock-Eval table for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
4146.00	cut	Sh/Clst: brn blk, drk gy	2.24	4.34	1.27	3.42	3.82	114	33	6.6	0.34	458	115-1
4152.00	cut	Sh/Clst: brn gy	1.58	2.14	1.50	1.43	2.59	83	58	3.7	0.42	459	116-1
4152.00	cut	Sh/Clst: brn blk, drk gy	2.17	3.62	1.22	2.97	2.59	140	47	5.8	0.37	459	116-2
4158.00	cut	Sh/Clst: brn gy	1.22	1.49	1.69	0.88	2.62	57	65	2.7	0.45	452	117-1
4158.00	cut	Sh/Clst: brn blk, drk gy	2.17	3.27	0.93	3.52	3.72	88	25	5.4	0.40	460	117-2
4164.00	cut	Sh/Clst: brn gy	1.16	1.37	1.45	0.94	2.64	52	55	2.5	0.46	455	118-1
4164.00	cut	Sh/Clst: brn blk, drk gy	2.18	3.81	0.77	4.95	3.88	98	20	6.0	0.36	456	118-2
4170.00	cut	Sh/Clst: gy	2.21	3.11	0.98	3.17	4.10	76	24	5.3	0.42	458	119-1
4170.00	cut	Sh/Clst: lt brn gy	0.93	1.13	2.28	0.50	2.18	52	105	2.1	0.45	470	119-2
4176.00	cut	Sh/Clst: lt brn gy	1.42	2.26	1.24	1.82	2.34	97	53	3.7	0.39	459	120-1
4176.00	cut	Sh/Clst: brn blk, m gy	2.09	3.68	0.75	4.91	3.09	119	24	5.8	0.36	459	120-2
4182.00	cut	Sh/Clst: brn gy	0.99	0.95	2.33	0.41	2.19	43	106	1.9	0.51	459	121-1
4194.00	cut	Sh/Clst: brn blk to m gy	2.19	3.27	0.66	4.95	2.92	112	23	5.5	0.40	458	123-1
4198.00	cut	Sh/Clst: brn blk to lt gy	2.23	3.24	0.83	3.90	2.30	141	36	5.5	0.41	463	124-2
4208.00	cut	Sh/Clst: brn blk to m gy	2.41	3.72	0.75	4.96	4.35	86	17	6.1	0.39	459	125-1

Table 2: Rock-Eval table for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
4216.00	cut	Sh/Clst: brn blk to m gy	2.73	3.26	0.39	8.36	4.35	75	9	6.0	0.46	452	126-1
4220.00	cut	Sh/Clst: m gy to drk gy	2.54	5.19	0.64	8.11	4.90	106	13	7.7	0.33	458	127-1
4226.00	cut	Sh/Clst: lt gy to drk gy	2.18	2.82	0.82	3.44	3.17	89	26	5.0	0.44	464	128-1
4232.00	cut	Sh/Clst: drk gy	2.27	2.23	1.00	2.23	3.34	67	30	4.5	0.50	460	129-1
4238.00	cut	Sh/Clst: drk gy	1.82	3.08	0.96	3.21	3.77	82	25	4.9	0.37	455	130-1
4244.00	cut	Sh/Clst: drk gy	2.44	2.49	0.77	3.23	3.34	75	23	4.9	0.49	463	131-1
4244.00	cut	Sh/Clst: lt brn gy	1.36	1.25	2.49	0.50	2.39	52	104	2.6	0.52	462	131-2
4250.00	cut	Sh/Clst: drk gy	2.10	2.68	0.65	4.12	3.12	86	21	4.8	0.44	457	132-1
4254.00	cut	Sh/Clst: blk to brn gy	2.33	2.43	0.69	3.52	3.21	76	21	4.8	0.49	465	133-1
4262.00	cut	Sh/Clst: blk to brn gy	1.79	2.19	0.80	2.74	2.93	75	27	4.0	0.45	466	134-1
4268.00	cut	Sh/Clst: blk to brn gy	1.33	1.07	0.55	1.95	1.88	57	29	2.4	0.55	467	135-1
4274.00	cut	Sh/Clst: lt gy to drk gy	1.55	1.19	0.51	2.33	1.45	82	35	2.7	0.57	466	136-1
4280.00	cut	Sh/Clst: lt gy to drk gy	1.62	1.60	0.54	2.96	2.30	70	23	3.2	0.50	459	137-1
4286.00	cut	Sh/Clst: lt brn gy to drk gy	1.25	1.10	0.45	2.44	1.59	69	28	2.4	0.53	466	138-1
4292.00	cut	Sh/Clst: lt brn gy to drk gy	1.33	1.14	0.53	2.15	1.98	58	27	2.5	0.54	465	139-1

Table 2: Rock-Eval table for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
4298.00	cut	Sh/Clst: lt brn gy to drk gy	1.46	1.07	0.59	1.81	2.10	51	28	2.5	0.58	465	140-1
4302.00	cut	Sh/Clst: lt brn gy to drk gy	1.31	1.22	0.52	2.35	1.50	81	35	2.5	0.52	466	141-1
4310.00	cut	Sh/Clst: lt gy to drk gy	1.45	1.54	0.03	51.33	1.43	108	2	3.0	0.48	455	142-1
4316.00	cut	Sh/Clst: lt gy to drk gy	1.42	1.54	0.08	19.25	2.48	62	3	3.0	0.48	456	143-1
4322.00	cut	Sh/Clst: lt gy, drk gy	1.46	1.32	0.18	7.33	1.63	81	11	2.8	0.53	466	144-1
4328.00	cut	Sh/Clst: lt gy to drk gy	1.63	1.36	0.36	3.78	2.25	60	16	3.0	0.55	468	145-1
4334.00	cut	Sh/Clst: lt gy to drk gy	1.35	1.39	0.43	3.23	2.45	57	18	2.7	0.49	458	280-1
4340.00	cut	Sh/Clst: lt gy to drk gy	1.09	1.32	0.33	4.00	2.51	53	13	2.4	0.45	454	146-1
4346.00	cut	Sh/Clst: lt gy to drk gy	1.16	1.04	0.38	2.74	2.20	47	17	2.2	0.53	462	147-1
4352.00	cut	Sh/Clst: lt gy to drk gy	1.12	1.04	0.53	1.96	2.38	44	22	2.2	0.52	452	148-1
4358.00	cut	Sh/Clst: lt gy to drk gy	1.27	1.64	0.51	3.22	2.88	57	18	2.9	0.44	455	149-1
4366.00	cut	Sh/Clst: lt gy to drk gy	1.09	1.41	0.59	2.39	2.57	55	23	2.5	0.44	457	150-1
4370.00	cut	Sh/Clst: lt gy to drk gy	0.92	0.87	0.56	1.55	1.97	44	28	1.8	0.51	454	151-1
4376.00	cut	Sh/Clst: lt gy to drk gy	1.04	1.06	0.55	1.93	2.44	43	23	2.1	0.50	455	152-1
4382.00	cut	Sh/Clst: lt gy to drk gy	1.04	1.05	0.50	2.10	2.26	46	22	2.1	0.50	456	228-1

Table 2: Rock-Eval table for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
4388.00	cut	Sh/Clst: gy, brn gy, drk gy	1.24	1.13	0.53	2.13	2.22	51	24	2.4	0.52	454	154-1
4394.00	cut	Sh/Clst: gy, brn gy, drk gy	1.27	1.21	0.63	1.92	2.29	53	28	2.5	0.51	457	155-1
4400.00	cut	Sh/Clst: brn gy, m gy, drk gy	1.19	0.92	0.51	1.80	2.10	44	24	2.1	0.56	454	156-1
4406.00	cut	Sh/Clst: brn gy, m gy, drk gy	1.00	1.08	0.49	2.20	2.29	47	21	2.1	0.48	451	157-1
4412.00	cut	Sh/Clst: brn gy, m gy, drk gy	1.48	1.41	0.59	2.39	2.59	54	23	2.9	0.51	455	158-1
4418.00	cut	Sh/Clst: brn gy, m gy, drk gy	1.23	1.11	0.63	1.76	2.24	50	28	2.3	0.53	457	159-1
4424.00	cut	Sh/Clst: gy, brn, brn gy	1.18	1.04	0.59	1.76	2.19	47	27	2.2	0.53	456	160-1
4430.00	cut	Sh/Clst: gy, brn, brn gy	1.54	1.19	0.55	2.16	2.42	49	23	2.7	0.56	456	161-1
4436.00	cut	Sh/Clst: gy, brn, brn gy	1.41	1.12	0.52	2.15	2.53	44	21	2.5	0.56	456	162-1
4442.00	cut	Sh/Clst: gy, brn, brn gy	1.40	0.95	0.52	1.83	2.17	44	24	2.3	0.60	457	163-1
4448.00	cut	Sh/Clst: gy, brn, brn gy	1.15	0.90	0.54	1.67	2.20	41	25	2.0	0.56	459	164-1
4454.00	cut	Sh/Clst: gy, brn, brn gy	1.42	1.11	0.40	2.78	2.51	44	16	2.5	0.56	450	165-1
4460.00	cut	Sh/Clst: gy, brn, brn gy	1.26	1.29	0.48	2.69	2.38	54	20	2.5	0.49	454	166-1
4466.00	cut	Sh/Clst: gy, brn, brn gy	1.10	0.97	0.46	2.11	2.20	44	21	2.1	0.53	457	167-1
4472.00	cut	Sh/Clst: gy, brn, brn gy	1.05	0.98	0.44	2.23	2.12	46	21	2.0	0.52	457	168-1

Table 2: Rock-Eval table for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
4476.00	cut	Sh/Clst: gy, brn, brn gy	0.97	0.88	0.38	2.32	2.20	40	17	1.9	0.52	459	169-1
4484.00	cut	Sh/Clst: gy, brn, brn gy	0.96	0.96	0.49	1.96	2.37	41	21	1.9	0.50	456	170-1
4490.00	cut	Sh/Clst: lt gy to m drk gy	1.12	0.99	0.39	2.54	2.51	39	16	2.1	0.53	455	171-1
4496.00	cut	Sh/Clst: lt gy to m drk gy	0.84	0.97	0.35	2.77	2.22	44	16	1.8	0.46	458	172-1
4500.00	cut	Sh/Clst: lt gy to m drk gy	1.02	1.05	0.42	2.50	2.36	44	18	2.1	0.49	457	173-1
4510.00	cut	Sh/Clst: lt gy to m drk gy	0.84	0.65	0.42	1.55	2.45	27	17	1.5	0.56	471	174-1
4516.00	cut	Sh/Clst: lt gy to m drk gy	0.92	0.75	0.37	2.03	2.26	33	16	1.7	0.55	473	175-1
4522.00	cut	Sh/Clst: lt gy to m drk gy	0.83	0.57	0.29	1.97	2.34	24	12	1.4	0.59	473	176-1
4528.00	cut	Sh/Clst: drk gy	0.72	0.47	0.41	1.15	2.13	22	19	1.2	0.61	474	177-1
4534.00	cut	Sh/Clst: drk gy	0.78	0.46	0.35	1.31	2.23	21	16	1.2	0.63	470	178-1
4540.00	cut	Sh/Clst: drk gy	0.66	0.47	0.39	1.21	2.10	22	19	1.1	0.58	471	179-1
4546.00	cut	Sh/Clst: drk gy	0.66	0.46	0.34	1.35	2.09	22	16	1.1	0.59	474	180-1
4552.00	cut	Sh/Clst: drk gy	1.14	0.98	0.38	2.58	2.35	42	16	2.1	0.54	458	181-1
4558.00	cut	Sh/Clst: drk gy	0.97	0.90	0.50	1.80	2.30	39	22	1.9	0.52	360	182-1
4564.00	cut	Sh/Clst: blk, lt gy, drk gy	0.63	0.45	0.80	0.56	1.98	23	40	1.1	0.58	468	183-1

Table 2: Rock-Eval table for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
4570.00	cut	Sh/Clst: blk, lt gy, drk gy	0.74	0.51	0.79	0.65	2.21	23	36	1.3	0.59	468	184-1
4576.00	cut	Sh/Clst: blk, lt gy, drk gy	0.46	0.42	0.78	0.54	1.99	21	39	0.9	0.52	469	185-1
4582.00	cut	Sh/Clst: blk, lt gy, drk gy	1.26	1.91	0.85	2.25	2.36	81	36	3.2	0.40	377	186-1
4588.00	cut	Sh/Clst: blk, m gy, drk gy	0.56	0.40	0.74	0.54	2.63	15	28	1.0	0.58	470	187-1
4594.00	cut	Sh/Clst: blk, m gy, drk gy	0.75	0.67	0.79	0.85	2.43	28	33	1.4	0.53	472	188-1
4600.00	cut	Sh/Clst: blk, m gy, drk gy	1.01	0.80	0.74	1.08	2.62	31	28	1.8	0.56	410	189-1
4612.00	cut	Sh/Clst: blk, m gy, drk gy	0.85	0.55	0.63	0.87	2.66	21	24	1.4	0.61	466	191-1
4624.00	cut	Sh/Clst: blk, m gy, drk gy	0.69	0.40	0.70	0.57	2.80	14	25	1.1	0.63	471	193-1
4650.00	cut	Sh/Clst: blk, m gy, drk gy	0.99	0.68	0.72	0.94	1.94	35	37	1.7	0.59	473	197-1
4654.00	cut	Sh/Clst: blk, m gy, drk gy	0.75	0.50	0.74	0.68	2.49	20	30	1.3	0.60	469	198-1
4660.00	cut	Sh/Clst: blk, m gy, drk gy	0.80	0.49	0.68	0.72	2.23	22	30	1.3	0.62	472	199-1
4668.00	cut	Sh/Clst: blk, m gy, drk gy	0.88	0.64	0.56	1.14	2.22	29	25	1.5	0.58	472	200-1
4672.00	cut	Sh/Clst: blk, m gy, drk gy	0.92	0.60	-	-	2.29	26	-	1.5	0.61	472	201-1
4678.00	cut	Sh/Clst: blk, m gy, drk gy	0.74	0.47	0.77	0.61	2.42	19	32	1.2	0.61	472	202-1
4686.00	cut	Sh/Clst: blk, m gy, drk gy	0.86	0.50	0.64	0.78	2.29	22	28	1.4	0.63	472	203-1

Table 2: Rock-Eval table for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
4690.00	cut	Sh/Clst: blk, m gy, drk gy	0.98	0.59	0.60	0.98	2.20	27	27	1.6	0.62	473	204-1
4708.00	cut	Sh/Clst: m gy, drk gy	1.31	0.66	0.79	0.84	2.16	31	37	2.0	0.66	423	207-1
4714.00	cut	Sh/Clst: m gy	1.01	0.74	1.61	0.46	1.95	38	83	1.8	0.58	509	208-1
4726.00	cut	Sh/Clst: m gy	1.81	1.96	0.63	3.11	2.77	71	23	3.8	0.48	392	210-1
4734.00	cut	Sh/Clst: m gy	1.33	0.68	0.54	1.26	2.51	27	22	2.0	0.66	409	211-1
4738.00	cut	Sh/Clst: m gy	1.89	1.70	0.68	2.50	2.76	62	25	3.6	0.53	391	281-1
4744.00	cut	Sh/Clst: m gy	1.45	0.59	0.56	1.05	2.39	25	23	2.0	0.71	359	282-1
4750.00	cut	Sh/Clst: m gy	1.39	0.57	0.43	1.33	2.57	22	17	2.0	0.71	466	214-1
4772.00	cut	Sh/Clst: m gy	3.06	3.15	0.52	6.06	2.70	117	19	6.2	0.49	387	217-1
4778.00	cut	Sh/Clst: m gy	1.06	0.46	0.53	0.87	2.46	19	22	1.5	0.70	467	218-1
4784.00	cut	Sh/Clst: m gy	1.52	1.63	0.52	3.13	2.48	66	21	3.2	0.48	392	219-1
4796.00	cut	Sh/Clst: lt gy to drk gy	1.02	0.63	0.48	1.31	2.41	26	20	1.6	0.62	469	221-1
4802.00	cut	Sh/Clst: lt gy to drk gy	1.07	0.53	0.42	1.26	2.50	21	17	1.6	0.67	466	222-1
4808.00	cut	Sh/Clst: lt gy to drk gy	0.95	0.61	0.42	1.45	2.34	26	18	1.6	0.61	470	223-1
4814.00	cut	Sh/Clst: lt gy to drk gy	0.98	0.52	0.42	1.24	2.43	21	17	1.5	0.65	465	224-1

Table 2: Rock-Eval table for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
4818.00	cut	Sh/Clst: lt gy to drk gy	1.08	0.66	0.53	1.25	2.49	27	21	1.7	0.62	417	225-1
4826.00	cut	Sh/Clst: lt gy to drk gy	0.85	0.47	0.43	1.09	2.38	20	18	1.3	0.64	468	226-1
4832.00	cut	Sh/Clst: lt gy to drk gy	0.87	0.51	0.39	1.31	2.38	21	16	1.4	0.63	470	227-1
4838.00	cut	Sh/Clst: lt gy to drk gy	1.01	0.62	0.39	1.59	2.46	25	16	1.6	0.62	468	283-1
4846.00	cut	Sh/Clst: lt gy to drk gy	0.88	0.54	0.43	1.26	2.17	25	20	1.4	0.62	470	229-1
4852.00	cut	Sh/Clst: lt gy to drk gy	1.15	1.05	0.46	2.28	2.40	44	19	2.2	0.52	387	230-1
4860.00	cut	Sh/Clst: lt gy to drk gy	0.96	0.56	0.49	1.14	2.21	25	22	1.5	0.63	469	231-1
4866.00	cut	Sh/Clst: lt gy to drk gy	0.83	0.52	0.46	1.13	2.19	24	21	1.4	0.61	465	232-1
4888.00	cut	Sh/Clst: lt gy to m drk gy	1.32	0.92	0.39	2.36	2.35	39	17	2.2	0.59	365	236-1
4894.00	cut	Sh/Clst: drk gy	1.36	1.00	0.46	2.17	2.81	36	16	2.4	0.58	383	237-1
4902.00	cut	Sh/Clst: drk gy	1.72	1.07	0.43	2.49	2.41	44	18	2.8	0.62	381	238-1
4906.00	cut	Sh/Clst: drk gy	1.51	0.66	0.34	1.94	2.78	24	12	2.2	0.70	408	239-1
4942.00	cut	S/Sst : w, lt brn	0.10	0.11	0.03	3.67	0.16	69	19	0.2	0.48	327	245-1
4960.00	cut	S/Sst : w, lt brn	0.08	0.07	-	-	0.11	64	-	0.2	0.53	327	248-1
4978.00	cut	Sh/Clst: m gy	1.55	0.70	0.34	2.06	2.40	29	14	2.3	0.69	365	251-1

Table 2: Rock-Eval table for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
4996.00	cut	Sh/Clst: m gy	1.60	0.85	0.33	2.58	2.45	35	13	2.5	0.65	375	254-1
5022.00	cut	Sh/Clst: m gy, drk gy	2.68	0.97	0.34	2.85	2.45	40	14	3.7	0.73	365	258-1
5038.00	cut	Sh/Clst: m gy to drk gy	1.28	0.51	0.35	1.46	2.21	23	16	1.8	0.72	466	261-1
5062.00	cut	Sh/Clst: blk, drk gy	1.76	0.84	0.31	2.71	2.77	30	11	2.6	0.68	393	265-1
5086.00	cut	Sh/Clst: drk gy	2.00	0.84	0.34	2.47	2.74	31	12	2.8	0.70	394	269-1
5110.00	cut	Sh/Clst: m drk gy	1.55	0.62	0.31	2.00	2.28	27	14	2.2	0.71	408	273-1
5122.00	cut	Sh/Clst: lt gy, drk gy	0.22	0.31	0.28	1.11	0.42	74	67	0.5	0.42	416	275-1
5126.00	cut	Sh/Clst: lt gy, drk gy	7.04	6.54	0.46	14.22	3.96	165	12	13.6	0.52	399	276-1

Table 3 : Pyrolysis GC Data (S2 peak) as Percentage of Total Area for Well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	C1	C2-C5	C6-C14	C15+	S2 from Rock-Eval	Sample
3902.00	cut	Sh/Clst: brn blk, m gy	2.74	41.13	48.88	7.25	3.94	0075-1L
3908.00	cut	Sh/Clst: brn blk, m gy	4.34	31.68	47.51	16.47	5.64	0076-1L
3912.00	cut	Sh/Clst: brn blk, m drk gy	4.11	39.40	48.37	8.12	4.85	0077-1L
3916.00	cut	Sh/Clst: brn blk, m drk gy	3.91	38.67	46.59	10.84	4.94	0078-1L
3922.00	cut	Sh/Clst: brn blk, m drk gy	5.12	39.20	47.66	8.02	3.77	0079-1L
3928.00	cut	Sh/Clst: brn blk, m drk gy	4.91	40.58	46.71	7.80	4.00	0080-1L
3940.00	cut	Sh/Clst: brn blk, m drk gy	4.03	44.46	45.98	5.53	3.88	0082-1L
3952.00	cut	Sh/Clst: brn blk, drk gy	5.22	42.63	44.49	7.66	4.63	0083-1L
3966.00	cut	Sh/Clst: brn blk, drk gy	2.95	41.52	46.82	8.72	3.99	0085-1L
3976.00	cut	Sh/Clst: brn blk, drk gy	3.82	40.39	45.50	10.29	6.49	0087-1L
3988.00	cut	Sh/Clst: brn blk, drk gy	5.71	40.76	44.49	9.03	4.36	0089-1L
3994.00	cut	Sh/Clst: brn blk, drk gy	5.93	44.21	43.76	6.10	3.89	0090-1L
4008.00	cut	Sh/Clst: brn blk, drk gy	4.35	44.65	45.53	5.46	4.13	0092-1L
4032.00	cut	Sh/Clst: brn blk, drk gy	3.82	41.51	46.25	8.43	4.08	0096-1L

Table 3 : Pyrolysis GC Data (S2 peak) as Percentage of Total Area for Well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	C1	C2-C5	C6-C14	C15+	S2 from Rock-Eval	Sample
4050.00	cut	Sh/Clst: brn blk, drk gy	4.85	44.02	44.65	6.48	3.75	0099-1L
4084.00	cut	Sh/Clst: brn blk, drk gy	6.03	43.48	43.83	6.67	4.02	0105-1L
4104.00	cut	Sltst : m y brn	5.20	40.00	45.48	9.32	3.80	0108-1L
4116.00	cut	Sh/Clst: brn blk, drk gy	2.21	46.41	45.98	5.39	3.57	0110-1L
4146.00	cut	Sh/Clst: brn blk, drk gy	5.67	49.98	41.04	3.31	4.34	0115-1L
4198.00	cut	Sh/Clst: brn blk to lt gy	6.62	43.45	42.86	7.07	3.24	0124-2L
4220.00	cut	Sh/Clst: m gy to drk gy	10.36	36.94	39.84	12.85	5.19	0127-1L
4274.00	cut	Sh/Clst: lt gy to drk gy	7.44	47.83	39.68	5.04	1.19	0136-1L
4322.00	cut	Sh/Clst: lt gy, drk gy	6.87	50.30	39.15	3.68	1.32	0144-1L
4370.00	cut	Sh/Clst: lt gy to drk gy	4.45	54.74	37.15	3.66	0.87	0151-1L
4412.00	cut	Sh/Clst: brn gy, m gy, drk gy	3.01	18.63	66.21	12.14	1.41	0158-1L
4460.00	cut	Sh/Clst: gy, brn, brn gy	1.72	52.53	42.10	3.66	1.29	0166-1L
4500.00	cut	Sh/Clst: lt gy to m drk gy	8.88	61.56	28.79	0.77	1.05	0173-1L
4552.00	cut	Sh/Clst: drk gy	6.52	50.23	39.68	3.57	0.98	0181-1L

Table 3 : Pyrolysis GC Data (S2 peak) as Percentage of Total Area for Well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	C1	C2-C5	C6-C14	C15+	S2 from Rock-Eval	Sample
4582.00	cut	Sh/Clst: blk, lt gy, drk gy	5.44	31.39	41.47	21.70	1.91	0186-1L
4726.00	cut	Sh/Clst: m gy	1.51	44.93	44.33	9.24	1.96	0210-1L
4738.00	cut	Sh/Clst: m gy	5.69	47.82	41.52	4.98	1.70	0281-1L
4772.00	cut	Sh/Clst: m gy	1.04	33.96	49.25	15.75	3.15	0217-1L
4818.00	cut	Sh/Clst: lt gy to drk gy	5.39	56.42	35.01	3.18	0.66	0225-1L
4902.00	cut	Sh/Clst: drk gy	3.48	47.07	40.83	8.62	1.07	0238-1L
4996.00	cut	Sh/Clst: m gy	8.56	51.24	36.52	3.69	0.85	0254-1L
5022.00	cut	Sh/Clst: m gy, drk gy	0.10	44.08	41.02	14.81	0.97	0258-1L
5086.00	cut	Sh/Clst: drk gy	0.08	50.62	43.18	6.12	0.84	0269-1L
5122.00	cut	Sh/Clst: lt gy, drk gy	12.77	35.97	45.96	5.31	0.31	0275-1L
5126.00	cut	Sh/Clst: lt gy, drk gy	1.82	35.01	47.93	15.24	6.54	0276-1L

Table 4 a: Weight of EOM and Chromatographic Fraction for well NOCS 30/7-7

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
3912.00	com	Composite sample - see table 4 e	2.2	16.7	4.1	1.9	2.8	7.9	6.0	10.7	4.70	0284-0B
3916.00	cut	Sh/Clst: brn blk, m drk gy	2.2	14.3	2.9	1.6	3.1	6.7	4.5	9.8	5.00	0078-1L
3922.00	cut	Sh/Clst: brn blk, m drk gy	6.6	29.9	10.7	4.2	3.7	11.3	14.9	15.0	4.40	0079-1L
3928.00	cut	Sh/Clst: brn blk, m drk gy	1.3	19.4	1.6	0.4	2.1	15.3	2.0	17.4	4.90	0080-1L
3934.00	cut	Sh/Clst: brn blk, m drk gy	3.4	18.3	5.3	1.8	3.9	7.3	7.1	11.2	4.30	0081-1L
3940.00	cut	Sh/Clst: brn blk, m drk gy	3.1	19.0	5.5	2.4	3.0	8.1	7.9	11.1	4.40	0082-1L
3946.00	cut	Sh/Clst: brn blk, drk gy	4.4	25.3	6.1	2.2	3.6	13.4	8.3	17.0	4.30	0279-1L
3958.00	com	Composite sample - see table 4 e	2.2	31.1	3.1	1.6	1.8	24.6	4.7	26.4	5.90	0285-0B
3966.00	cut	Sh/Clst: brn blk, drk gy	3.0	35.5	5.9	2.3	0.6	26.7	8.2	27.3	6.70	0085-1L
3968.00	cut	Sh/Clst: brn blk, drk gy	1.5	15.6	2.5	0.8	2.3	10.0	3.3	12.3	6.10	0086-1L
3976.00	cut	Sh/Clst: brn blk, drk gy	8.1	78.9	7.2	11.4	3.4	56.9	18.6	60.3	5.80	0087-1L
3982.00	cut	Sh/Clst: brn blk, drk gy	2.7	43.9	5.8	2.0	1.9	34.2	7.8	36.1	5.60	0088-1L
3994.00	com	Composite sample - see table 4 e	4.3	25.6	9.0	3.6	5.6	7.4	12.6	13.0	5.30	0286-0B
4008.00	com	Composite sample - see table 4 e	7.5	38.3	13.8	5.4	5.6	13.5	19.2	19.1	6.30	0287-0B

Table 4 a: Weight of EOM and Chromatographic Fraction for well NOCS 30/7-7

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
4032.00	cut	Sh/Clst: brn blk, drk gy	7.9	37.9	15.6	6.2	6.8	9.3	21.8	16.1	5.80	0096-1L
4038.00	cut	Sh/Clst: brn blk, drk gy	6.8	37.7	14.5	6.1	11.1	6.0	20.6	17.1	6.20	0097-1L
4050.00	cut	Sh/Clst: brn blk, drk gy	5.4	28.1	10.6	4.1	9.8	3.6	14.7	13.4	6.60	0099-1L
4056.00	cut	Sh/Clst: brn blk, drk gy	5.2	7.8	2.4	1.2	4.2	-	3.6	4.2	3.50	0100-1L
4062.00	cut	Sh/Clst: brn blk, drk gy	10.0	48.3	16.4	8.3	9.1	14.5	24.7	23.6	6.70	0101-1L
4066.00	cut	Sh/Clst: brn blk, drk gy	7.3	34.2	12.0	5.2	5.3	11.7	17.2	17.0	6.90	0102-1L
4564.00	cut	Sh/Clst: blk, lt gy, drk gy	6.7	7.5	2.5	1.1	0.9	3.0	3.6	3.9	3.30	0183-1L
4668.00	cut	Sh/Clst: blk, m gy, drk gy	3.1	16.7	5.6	2.9	2.3	5.9	8.5	8.2	6.10	0200-1L
4772.00	cut	Sh/Clst: m gy	6.6	53.5	24.7	12.5	2.5	13.8	37.2	16.3	3.50	0217-1L
4852.00	cut	Sh/Clst: lt gy to drk gy	10.0	26.8	11.2	4.1	7.8	3.7	15.3	11.5	3.50	0230-1L
4978.00	cut	Sh/Clst: m gy	3.1	11.2	4.6	1.6	4.0	1.0	6.2	5.0	3.20	0251-1L
4996.00	cut	Sh/Clst: m gy	3.3	6.8	2.6	1.8	0.9	1.5	4.4	2.4	3.20	0254-1L
5022.00	cut	Sh/Clst: m gy, drk gy	8.2	41.9	13.9	6.0	0.3	21.7	19.9	22.0	3.40	0258-1L
5038.00	cut	Sh/Clst: m gy to drk gy	9.1	21.6	9.5	3.8	0.1	8.2	13.3	8.3	3.40	0261-1L

Table 4 b: Concentration of EOM and Chromatographic Fraction (wt ppm rock) for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
3912.00	com	Composite sample - see table 4 e	7590	1863	863	1272	3590	2727	4863	0284-0B
3916.00	cut	Sh/Clst: brn blk, m drk gy	6500	1318	727	1409	3045	2045	4454	0078-1L
3922.00	cut	Sh/Clst: brn blk, m drk gy	4530	1621	636	560	1712	2257	2272	0079-1L
3928.00	cut	Sh/Clst: brn blk, m drk gy	14923	1230	307	1615	11769	1538	13384	0080-1L
3934.00	cut	Sh/Clst: brn blk, m drk gy	5382	1558	529	1147	2147	2088	3294	0081-1L
3940.00	cut	Sh/Clst: brn blk, m drk gy	6129	1774	774	967	2612	2548	3580	0082-1L
3946.00	cut	Sh/Clst: brn blk, drk gy	5749	1386	500	818	3045	1886	3863	0279-1L
3958.00	com	Composite sample - see table 4 e	14136	1409	727	818	11181	2136	12000	0285-0B
3966.00	cut	Sh/Clst: brn blk, drk gy	11833	1966	766	200	8900	2733	9100	0085-1L
3968.00	cut	Sh/Clst: brn blk, drk gy	10400	1666	533	1533	6666	2200	8200	0086-1L
3976.00	cut	Sh/Clst: brn blk, drk gy	9740	888	1407	419	7024	2296	7444	0087-1L
3982.00	cut	Sh/Clst: brn blk, drk gy	16259	2148	740	703	12666	2888	13370	0088-1L
3994.00	com	Composite sample - see table 4 e	5953	2093	837	1302	1720	2930	3023	0286-0B
4008.00	com	Composite sample - see table 4 e	5106	1840	720	746	1799	2560	2546	0287-0B

Table 4 b: Concentration of EOM and Chromatographic Fraction (wt ppm rock) for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
4032.00	cut	Sh/Clst: brn blk, drk gy	4797	1974	784	860	1177	2759	2037	0096-1L
4038.00	cut	Sh/Clst: brn blk, drk gy	5544	2132	897	1632	882	3029	2514	0097-1L
4050.00	cut	Sh/Clst: brn blk, drk gy	5203	1962	759	1814	666	2722	2481	0099-1L
4056.00	cut	Sh/Clst: brn blk, drk gy	1500	461	230	807	-	692	807	0100-1L
4062.00	cut	Sh/Clst: brn blk, drk gy	4830	1640	830	910	1449	2470	2360	0101-1L
4066.00	cut	Sh/Clst: brn blk, drk gy	4684	1643	712	726	1602	2356	2328	0102-1L
4564.00	cut	Sh/Clst: blk, lt gy, drk gy	1119	373	164	134	447	537	582	0183-1L
4668.00	cut	Sh/Clst: blk, m gy, drk gy	5387	1806	935	741	1903	2741	2645	0200-1L
4772.00	cut	Sh/Clst: m gy	8106	3742	1893	378	2090	5636	2469	0217-1L
4852.00	cut	Sh/Clst: lt gy to drk gy	2679	1120	410	780	369	1530	1149	0230-1L
4978.00	cut	Sh/Clst: m gy	3612	1483	516	1290	322	2000	1612	0251-1L
4996.00	cut	Sh/Clst: m gy	2060	787	545	272	454	1333	727	0254-1L
5022.00	cut	Sh/Clst: m gy, drk gy	5109	1695	731	36	2646	2426	2682	0258-1L
5038.00	cut	Sh/Clst: m gy to drk gy	2373	1043	417	10	901	1461	912	0261-1L

Table 4 c: Concentration of EOM and Chromatographic Fraction (mg/g TOC(e)) for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
3912.00	com	Composite sample - see table 4 e	161.51	39.65	18.38	27.08	76.40	58.03	103.48	0284-0B
3916.00	cut	Sh/Clst: brn blk, m drk gy	130.00	26.36	14.55	28.18	60.91	40.91	89.09	0078-1L
3922.00	cut	Sh/Clst: brn blk, m drk gy	102.96	36.85	14.46	12.74	38.91	51.31	51.65	0079-1L
3928.00	cut	Sh/Clst: brn blk, m drk gy	304.55	25.12	6.28	32.97	240.19	31.40	273.16	0080-1L
3934.00	cut	Sh/Clst: brn blk, m drk gy	125.17	36.25	12.31	26.68	49.93	48.56	76.61	0081-1L
3940.00	cut	Sh/Clst: brn blk, m drk gy	139.30	40.32	17.60	21.99	59.38	57.92	81.38	0082-1L
3946.00	cut	Sh/Clst: brn blk, drk gy	133.72	32.24	11.63	19.03	70.82	43.87	89.85	0279-1L
3958.00	com	Composite sample - see table 4 e	239.60	23.88	12.33	13.87	189.52	36.21	203.39	0285-0B
3966.00	cut	Sh/Clst: brn blk, drk gy	176.62	29.35	11.44	2.99	132.84	40.80	135.82	0085-1L
3968.00	cut	Sh/Clst: brn blk, drk gy	170.49	27.32	8.74	25.14	109.29	36.07	134.43	0086-1L
3976.00	cut	Sh/Clst: brn blk, drk gy	167.94	15.33	24.27	7.24	121.12	39.59	128.35	0087-1L
3982.00	cut	Sh/Clst: brn blk, drk gy	290.34	38.36	13.23	12.57	226.19	51.59	238.76	0088-1L
3994.00	com	Composite sample - see table 4 e	112.33	39.49	15.80	24.57	32.47	55.29	57.04	0286-0B
4008.00	com	Composite sample - see table 4 e	81.06	29.21	11.43	11.85	28.57	40.63	40.42	0287-0B

Table 4 c: Concentration of EOM and Chromatographic Fraction (mg/g TOC(e)) for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
4032.00	cut	Sh/Clst: brn blk, drk gy	82.71	34.05	13.53	14.84	20.30	47.58	35.14	0096-1L
4038.00	cut	Sh/Clst: brn blk, drk gy	89.42	34.39	14.47	26.33	14.23	48.86	40.56	0097-1L
4050.00	cut	Sh/Clst: brn blk, drk gy	78.84	29.74	11.50	27.50	10.10	41.25	37.60	0099-1L
4056.00	cut	Sh/Clst: brn blk, drk gy	42.86	13.19	6.59	23.08	-	19.78	23.08	0100-1L
4062.00	cut	Sh/Clst: brn blk, drk gy	72.09	24.48	12.39	13.58	21.64	36.87	35.22	0101-1L
4066.00	cut	Sh/Clst: brn blk, drk gy	67.90	23.82	10.32	10.52	23.23	34.15	33.75	0102-1L
4564.00	cut	Sh/Clst: blk, lt gy, drk gy	33.92	11.31	4.98	4.07	13.57	16.28	17.64	0183-1L
4668.00	cut	Sh/Clst: blk, m gy, drk gy	88.31	29.61	15.34	12.16	31.20	44.95	43.36	0200-1L
4772.00	cut	Sh/Clst: m gy	231.60	106.93	54.11	10.82	59.74	161.04	70.56	0217-1L
4852.00	cut	Sh/Clst: lt gy to drk gy	76.57	32.00	11.71	22.29	10.57	43.71	32.86	0230-1L
4978.00	cut	Sh/Clst: m gy	112.90	46.37	16.13	40.32	10.08	62.50	50.40	0251-1L
4996.00	cut	Sh/Clst: m gy	64.39	24.62	17.05	8.52	14.20	41.67	22.73	0254-1L
5022.00	cut	Sh/Clst: m gy, drk gy	150.29	49.86	21.52	1.08	77.83	71.38	78.91	0258-1L
5038.00	cut	Sh/Clst: m gy to drk gy	69.81	30.70	12.28	0.32	26.50	42.99	26.83	0261-1L

Table 4 d: Composition of material extracted from the rock (%) for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	Sat EOM	Aro EOM	Asph EOM	NSO EOM	HC EOM	Non-HC EOM	Sat Aro	HC Non-HC	Sample
3912.00	com	Composite sample - see table 4 e	24.55	11.38	16.77	47.31	35.93	64.07	215.79	56.07	0284-0B
3916.00	cut	Sh/Clst: brn blk, m drk gy	20.28	11.19	21.68	46.85	31.47	68.53	181.25	45.92	0078-1L
3922.00	cut	Sh/Clst: brn blk, m drk gy	35.79	14.05	12.37	37.79	49.83	50.17	254.76	99.33	0079-1L
3928.00	cut	Sh/Clst: brn blk, m drk gy	8.25	2.06	10.82	78.87	10.31	89.69	400.00	11.49	0080-1L
3934.00	cut	Sh/Clst: brn blk, m drk gy	28.96	9.84	21.31	39.89	38.80	61.20	294.44	63.39	0081-1L
3940.00	cut	Sh/Clst: brn blk, m drk gy	28.95	12.63	15.79	42.63	41.58	58.42	229.17	71.17	0082-1L
3946.00	cut	Sh/Clst: brn blk, drk gy	24.11	8.70	14.23	52.96	32.81	67.19	277.27	48.82	0279-1L
3958.00	com	Composite sample - see table 4 e	9.97	5.14	5.79	79.10	15.11	84.89	193.75	17.80	0285-0B
3966.00	cut	Sh/Clst: brn blk, drk gy	16.62	6.48	1.69	75.21	23.10	76.90	256.52	30.04	0085-1L
3968.00	cut	Sh/Clst: brn blk, drk gy	16.03	5.13	14.74	64.10	21.15	78.85	312.50	26.83	0086-1L
3976.00	cut	Sh/Clst: brn blk, drk gy	9.13	14.45	4.31	72.12	23.57	76.43	63.16	30.85	0087-1L
3982.00	cut	Sh/Clst: brn blk, drk gy	13.21	4.56	4.33	77.90	17.77	82.23	290.00	21.61	0088-1L
3994.00	com	Composite sample - see table 4 e	35.16	14.06	21.88	28.91	49.22	50.78	250.00	96.92	0286-0B
4008.00	com	Composite sample - see table 4 e	36.03	14.10	14.62	35.25	50.13	49.87	255.56	100.52	0287-0B

Table 4 d: Composition of material extracted from the rock (%) for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	Sat / EOM	Aro / EOM	Asph / EOM	NSO / EOM	HC / EOM	Non-HC / EOM	Sat / Aro	HC / Non-HC	Sample
4032.00	cut	Sh/Clst: brn blk, drk gy	41.16	16.36	17.94	24.54	57.52	42.48	251.61	135.40	0096-1L
4038.00	cut	Sh/Clst: brn blk, drk gy	38.46	16.18	29.44	15.92	54.64	45.36	237.70	120.47	0097-1L
4050.00	cut	Sh/Clst: brn blk, drk gy	37.72	14.59	34.88	12.81	52.31	47.69	258.54	109.70	0099-1L
4056.00	cut	Sh/Clst: brn blk, drk gy	30.77	15.38	53.85	-	46.15	53.85	200.00	85.71	0100-1L
4062.00	cut	Sh/Clst: brn blk, drk gy	33.95	17.18	18.84	30.02	51.14	48.86	197.59	104.66	0101-1L
4066.00	cut	Sh/Clst: brn blk, drk gy	35.09	15.20	15.50	34.21	50.29	49.71	230.77	101.18	0102-1L
4564.00	cut	Sh/Clst: blk, lt gy, drk gy	33.33	14.67	12.00	40.00	48.00	52.00	227.27	92.31	0183-1L
4668.00	cut	Sh/Clst: blk, m gy, drk gy	33.53	17.37	13.77	35.33	50.90	49.10	193.10	103.66	0200-1L
4772.00	cut	Sh/Clst: m gy	46.17	23.36	4.67	25.79	69.53	30.47	197.60	228.22	0217-1L
4852.00	cut	Sh/Clst: lt gy to drk gy	41.79	15.30	29.10	13.81	57.09	42.91	273.17	133.04	0230-1L
4978.00	cut	Sh/Clst: m gy	41.07	14.29	35.71	8.93	55.36	44.64	287.50	124.00	0251-1L
4996.00	cut	Sh/Clst: m gy	38.24	26.47	13.24	22.06	64.71	35.29	144.44	183.33	0254-1L
5022.00	cut	Sh/Clst: m gy, drk gy	33.17	14.32	0.72	51.79	47.49	52.51	231.67	90.45	0258-1L
5038.00	cut	Sh/Clst: m gy to drk gy	43.98	17.59	0.46	37.96	61.57	38.43	250.00	160.24	0261-1L

Table 4 e: List of composite samples appearing in the extraction tables for well NOCS 30/7-7

Depth unit of measure: m

NOTE: Depths shown in tables 4 a to d correspond to the composite samples' lower depth.

Upper depth	Lower depth	Typ	Sample	Depth	Typ	Lithology	Sample
3908.00	3912.00	com	0284-0B is composed of:	3908.00	cut	Sh/Clst: brn blk, m gy	0076-1L
				3912.00	cut	Sh/Clst: brn blk, m drk gy	0077-1L
3952.00	3958.00	com	0285-0B is composed of:	3952.00	cut	Sh/Clst: brn blk, drk gy	0083-1L
				3958.00	cut	Sh/Clst: brn blk, drk gy	0084-1L
3988.00	3994.00	com	0286-0B is composed of:	3988.00	cut	Sh/Clst: brn blk, drk gy, mic	0089-1L
				3994.00	cut	Sh/Clst: brn blk, drk gy, mic	0090-1L
4000.00	4008.00	com	0287-0B is composed of:	4000.00	cut	Sh/Clst: brn blk, drk gy, mic	0091-1L
				4008.00	cut	Sh/Clst: brn blk, drk gy, mic	0092-1L

Table 5 : Saturated Hydrocarbon Ratios for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	Pristane / nC17	Pristane / Phytane	Pristane + Phytane / nC17 + nC18	Phytane / nC18	CPI	Sample
3912.00	com	bulk	0.30	1.40	0.28	-	1.10	0284-0B
3916.00	cut	Sh/Clst: brn blk, m drk gy	0.30	1.50	0.29	-	1.10	0078-1L
3922.00	cut	Sh/Clst: brn blk, m drk gy	0.30	1.50	0.30	-	1.20	0079-1L
3928.00	cut	Sh/Clst: brn blk, m drk gy	0.30	1.40	0.27	-	1.10	0080-1L
3934.00	cut	Sh/Clst: brn blk, m drk gy	0.30	1.20	0.31	-	1.10	0081-1L
3940.00	cut	Sh/Clst: brn blk, m drk gy	0.30	1.40	0.26	-	1.10	0082-1L
3946.00	cut	Sh/Clst: brn blk, drk gy	0.40	1.30	0.41	-	1.10	0279-1L
3958.00	com	bulk	0.30	1.40	0.28	-	1.10	0285-0B
3966.00	cut	Sh/Clst: brn blk, drk gy	0.30	1.00	0.28	-	1.00	0085-1L
3968.00	cut	Sh/Clst: brn blk, drk gy	0.30	1.20	0.29	-	1.10	0086-1L
3976.00	cut	Sh/Clst: brn blk, drk gy	0.40	1.20	0.38	-	1.00	0087-1L
3982.00	cut	Sh/Clst: brn blk, drk gy	0.30	1.20	0.28	-	1.10	0088-1L
3994.00	com	bulk	0.30	1.10	0.29	-	1.10	0286-0B
4008.00	com	bulk	0.40	1.50	0.35	-	1.10	0287-0B

Table 5 : Saturated Hydrocarbon Ratios for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	Pristane / nC17	Pristane / Phytane	Pristane + Phytane / nC17 + nC18	Phytane / nC18	CPI	Sample
4032.00	cut	Sh/Clst: brn blk, drk gy	0.30	1.20	0.30	-	1.10	0096-1L
4038.00	cut	Sh/Clst: brn blk, drk gy	0.30	1.20	0.30	-	1.10	0097-1L
4050.00	cut	Sh/Clst: brn blk, drk gy	0.30	1.30	0.27	-	1.10	0099-1L
4056.00	cut	Sh/Clst: brn blk, drk gy	0.30	1.20	0.31	-	1.00	0100-1L
4062.00	cut	Sh/Clst: brn blk, drk gy	0.40	1.30	0.36	-	1.10	0101-1L
4066.00	cut	Sh/Clst: brn blk, drk gy	0.30	1.40	0.28	-	1.20	0102-1L
4564.00	cut	Sh/Clst: blk, lt gy, drk gy	0.30	1.30	0.31	-	1.10	0183-1L
4668.00	cut	Sh/Clst: blk, m gy, drk gy	0.30	1.40	0.28	-	1.10	0200-1L
4772.00	cut	Sh/Clst: m gy	0.30	1.30	0.27	-	0.90	0217-1L
4852.00	cut	Sh/Clst: lt gy to drk gy	0.50	1.20	0.44	-	1.00	0230-1L
4978.00	cut	Sh/Clst: m gy	0.30	1.10	0.30	-	1.10	0251-1L
4996.00	cut	Sh/Clst: m gy	0.30	1.50	0.30	-	1.10	0254-1L
5022.00	cut	Sh/Clst: m gy, drk gy	0.30	1.40	0.33	-	1.40	0258-1L
5038.00	cut	Sh/Clst: m gy to drk gy	0.40	1.40	0.33	-	1.20	0261-1L

Table 6 : Aromatic Hydrocarbon Ratios for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	MNR	DMNR	BPhR	2/1MP	MPI1	MPI2	Rc	DBT/P	4/1MDBT	(3+2) /1MDBT	Sample
3912.00	com	bulk	-	0.60	0.22	1.03	0.73	0.80	0.84	0.11	28.40	4.00	0284-0B
3916.00	cut	Sh/Clst: brn blk, m drk gy	-	-	-	1.04	0.77	0.87	0.86	0.10	7.90	4.20	0078-1L
3922.00	cut	Sh/Clst: brn blk, m drk gy	-	0.72	-	1.06	0.73	0.86	0.84	0.10	28.40	4.20	0079-1L
3928.00	cut	Sh/Clst: brn blk, m drk gy	-	-	-	-	-	-	0.40	-	10.00	2.10	0080-1L
3934.00	cut	Sh/Clst: brn blk, m drk gy	-	-	-	1.20	0.81	0.98	0.89	0.13	8.30	4.40	0081-1L
3940.00	cut	Sh/Clst: brn blk, m drk gy	1.30	0.88	0.26	1.12	0.78	0.92	0.87	0.10	14.00	6.30	0082-1L
3946.00	cut	Sh/Clst: brn blk, drk gy	1.33	0.88	0.29	1.25	0.77	0.89	0.86	0.12	12.70	5.00	0279-1L
3958.00	com	bulk	-	0.75	-	1.15	0.75	0.88	0.85	0.12	14.00	5.00	0285-0B
3966.00	cut	Sh/Clst: brn blk, drk gy	-	0.80	0.20	1.12	0.75	0.86	0.85	0.15	9.30	3.60	0085-1L
3968.00	cut	Sh/Clst: brn blk, drk gy	-	-	-	1.20	0.77	0.90	0.86	0.14	10.70	3.50	0086-1L
3976.00	cut	Sh/Clst: brn blk, drk gy	1.29	0.88	0.26	1.13	0.76	0.89	0.86	0.16	7.80	3.30	0087-1L
3982.00	cut	Sh/Clst: brn blk, drk gy	1.30	0.88	0.27	1.09	0.72	0.84	0.83	0.15	9.50	4.10	0088-1L
3994.00	com	bulk	1.44	0.92	0.35	1.16	0.76	0.88	0.86	0.14	11.70	3.50	0286-0B
4008.00	com	bulk	1.37	0.82	0.37	1.13	0.74	0.87	0.84	0.15	-	4.50	0287-0B
4032.00	cut	Sh/Clst: brn blk, drk gy	1.38	0.86	0.36	1.07	0.71	0.84	0.83	0.15	-	4.60	0096-1L

Table 6 : Aromatic Hydrocarbon Ratios for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	MNR	DMNR	BPhR	2/1MP	MPI1	MPI2	Rc	DBT/P	4/1MDBT	(3+2) /1MDBT	Sample
4038.00	cut	Sh/Clst: brn blk, drk gy	1.43	0.88	0.34	1.12	0.74	0.86	0.84	0.15	10.10	3.60	0097-1L
4050.00	cut	Sh/Clst: brn blk, drk gy	1.36	0.86	0.31	1.07	0.71	0.82	0.83	0.15	10.10	3.80	0099-1L
4056.00	cut	Sh/Clst: brn blk, drk gy	-	0.72	0.20	1.72	0.96	1.12	0.98	0.19	9.30	2.70	0100-1L
4062.00	cut	Sh/Clst: brn blk, drk gy	1.46	0.77	0.35	1.12	0.77	0.90	0.86	0.14	-	6.00	0101-1L
4066.00	cut	Sh/Clst: brn blk, drk gy	1.38	1.14	0.35	1.12	0.74	0.89	0.84	0.16	-	4.60	0102-1L
4564.00	cut	Sh/Clst: blk, lt gy, drk gy	-	-	-	1.61	0.94	1.09	0.96	0.22	8.90	3.00	0183-1L
4668.00	cut	Sh/Clst: blk, m gy, drk gy	1.32	0.84	0.27	1.11	0.76	0.85	0.86	0.15	9.80	3.40	0200-1L
4772.00	cut	Sh/Clst: m gy	1.73	0.91	0.38	1.62	0.99	1.21	0.99	0.31	5.30	2.70	0217-1L
4852.00	cut	Sh/Clst: lt gy to drk gy	1.57	0.91	0.35	1.63	0.91	1.06	0.95	-	10.80	2.90	0230-1L
4978.00	cut	Sh/Clst: m gy	1.34	0.90	0.29	1.88	1.05	1.36	1.03	-	4.30	3.30	0251-1L
4996.00	cut	Sh/Clst: m gy	-	0.81	-	1.66	1.11	1.36	1.07	-	9.60	2.70	0254-1L
5022.00	cut	Sh/Clst: m gy, drk gy	1.69	0.89	0.37	1.81	1.04	1.35	1.02	-	4.60	2.50	0258-1L
5038.00	cut	Sh/Clst: m gy to drk gy	1.50	0.87	0.27	1.83	0.93	1.10	0.96	-	8.80	2.60	0261-1L

Table 7 : Thermal Maturity Data for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	Vitrinite Reflectance (%)	Number of Readings	Standard Deviation	Spore Fluorescence Colour	SCI	Tmax (°C)	Sample
2255.00	cut	bulk	0.59	8	0.07	6	-	-	0007-0B
2530.00	cut	bulk	0.55	3	0.02	6	-	-	0017-0B
2705.00	cut	bulk	0.66	8	0.03	6+7	-	-	0024-0B
2805.00	cut	bulk	0.71	12	0.07	7	-	-	0028-0B
2980.00	cut	bulk	NDP	-	-	0	-	-	0035-0B
3305.00	cut	bulk	0.69	7	0.09	7	-	-	0048-0B
3505.00	cut	bulk	NDP	-	-	0	-	-	0056-0B
3655.00	cut	bulk	NDP	-	-	0	-	-	0061-0B
3780.00	cut	bulk	0.87	4	0.04	0	-	-	0066-0B
3878.00	cut	bulk	0.96	13	0.10	0	-	-	0072-0B
3908.00	cut	Sh/Clst: brn blk, m gy	-	-	-	-	NDP	440	0076-1L
3916.00	cut	Sh/Clst: brn blk, m drk gy	-	-	-	-	8/9	441	0078-1L
3928.00	cut	Sh/Clst: brn blk, m drk gy	-	-	-	-	NDP	443	0080-1L
3940.00	cut	Sh/Clst: brn blk, m drk gy	-	-	-	-	8.5	445	0082-1L

Table 7 : Thermal Maturity Data for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	Vitrinite Reflectance (%)	Number of Readings	Standard Deviation	Spore Fluorescence Colour	SCI	Tmax (°C)	Sample
3952.00	cut	bulk	0.92	14	0.07	0	-	-	0083-0B
3952.00	cut	Sh/Clst: brn blk, drk gy	-	-	-	-	NDP	445	0083-1L
3966.00	cut	Sh/Clst: brn blk, drk gy	-	-	-	-	NDP	444	0085-1L
3976.00	cut	Sh/Clst: brn blk, drk gy	-	-	-	-	NDP	448	0087-1L
3988.00	cut	Sh/Clst: brn blk, drk gy	-	-	-	-	8	447	0089-1L
3994.00	cut	Sh/Clst: brn blk, drk gy	-	-	-	-	8?	448	0090-1L
4008.00	cut	Sh/Clst: brn blk, drk gy	-	-	-	-	NDP	440	0092-1L
4032.00	cut	Sh/Clst: brn blk, drk gy	-	-	-	-	8/8.5	445	0096-1L
4038.00	cut	Sh/Clst: brn blk, drk gy	-	-	-	-	NDP	446	0097-1L
4050.00	cut	Sh/Clst: brn blk, drk gy	-	-	-	-	NDP	442	0099-1L
4056.00	cut	bulk	0.89	12	0.06	0	-	-	0100-0B
4084.00	cut	Sh/Clst: brn blk, drk gy	-	-	-	-	4-5	441	0105-1L
4116.00	cut	Sh/Clst: brn blk, drk gy	-	-	-	-	NDP	447	0110-1L
4146.00	cut	Sh/Clst: brn blk, drk gy	-	-	-	-	NDP	458	0115-1L

Table 7 : Thermal Maturity Data for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	Vitrinite Reflectance (%)	Number of Readings	Standard Deviation	Spore Fluorescence Colour	SCI	Tmax (°C)	Sample
4194.00	cut	bulk	1.17	20	0.06	0	-	-	0123-0B
4198.00	cut	Sh/Clst: brn blk to lt gy	-	-	-	-	NDP	463	0124-2L
4220.00	cut	Sh/Clst: m gy to drk gy	-	-	-	-	9?	458	0127-1L
4274.00	cut	Sh/Clst: lt gy to drk gy	-	-	-	-	NDP	466	0136-1L
4322.00	cut	Sh/Clst: lt gy, drk gy	-	-	-	-	NDP	466	0144-1L
4340.00	cut	bulk	0.99	19	0.08	0	-	-	0146-0B
4370.00	cut	Sh/Clst: lt gy to drk gy	-	-	-	-	9/9.5	454	0151-1L
4412.00	cut	Sh/Clst: brn gy, m gy, drk gy	-	-	-	-	NDP	455	0158-1L
4460.00	cut	Sh/Clst: gy, brn, brn gy	-	-	-	-	NDP	454	0166-1L
4484.00	cut	bulk	1.10	24	0.13	0	-	-	0170-0B
4500.00	cut	Sh/Clst: lt gy to m drk gy	-	-	-	-	9	457	0173-1L
4564.00	cut	Sh/Clst: blk, lt gy, drk gy	-	-	-	-	9/10	468	0183-1L
4654.00	cut	bulk	1.20	15	0.12	0	-	-	0198-0B
4772.00	cut	Sh/Clst: m gy	-	-	-	-	9/10	387	0217-1L

Table 7 : Thermal Maturity Data for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	Vitrinite Reflectance (%)	Number of Readings	Standard Deviation	Spore Fluorescence Colour	SCI	Tmax (°C)	Sample
4784.00	cut	bulk	1.37	18	0.15	0	-	-	0219-0B
4918.00	cut	bulk	1.75	20	0.09	0	-	-	0241-0B
5062.00	cut	Sh/Clst: blk, drk gy	-	-	-	-	10	393	0265-1L
5086.00	cut	bulk	1.55	17	0.11	0	-	-	0269-0B
5126.00	cut	Sh/Clst: lt gy, drk gy	-	-	-	-	10	399	0276-1L

Table 8 : Visual Kerogen Composition Data for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	LIPT %	Amor L	LipDet	Sp/Pol	Cutic l	Resine	Algae	Dinoflt	Acrit	Bit L	INERT %	Fusin	Semfus	Inert	Micrin	Sclero	Bit I	VITR %	Telin	Collin	VitDet	Amor V	Bit V	Sample
3908.00	cut	Sh/Clst: brn blk, m gy	TR?		*								30	*	*	*				70	*		*			0076-1L
3916.00	cut	Sh/Clst: brn blk, m drk gy	TR?		?	?							40	*	*					60	*		*	*		0078-1L
3928.00	cut	Sh/Clst: brn blk, m drk gy	TR?		*								40	*	*	*				60	*		*			0080-1L
3940.00	cut	Sh/Clst: brn blk, m drk gy	TR?										50	*	*					50			*	*		0082-1L
3952.00	cut	Sh/Clst: brn blk, drk gy	?										50	*	*	?				50	*		*	*		0083-1L
3966.00	cut	Sh/Clst: brn blk, drk gy	?										50	*	*	?				50	*		*	*		0085-1L
3976.00	cut	Sh/Clst: brn blk, drk gy	?										30	*	*	?				70	*		*	*		0087-1L
3988.00	cut	Sh/Clst: brn blk, drk gy	5		*	*							20	*	*	*				75	*		*	*		0089-1L
3994.00	cut	Sh/Clst: brn blk, drk gy	5		*	?							25	*	*					70	*		*	*		0090-1L
4008.00	cut	Sh/Clst: brn blk, drk gy	5		*								25	*	*	*				70	*		*	*		0092-1L
4032.00	cut	Sh/Clst: brn blk, drk gy	5		*	*							30	*	*	*				65	*		*	*		0096-1L
4038.00	cut	Sh/Clst: brn blk, drk gy	5		*								30	*	*	*				65	*		*	*		0097-1L

Table 8 : Visual Kerogen Composition Data for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	LIPT %	AmorL	LipDet	Sp/Pol	Cuticl	Resin	Algae	Dinofl	Acrit	BitL	INERT %	Fusin	SemFus	IntDet	Micrino	Sclero	BitI	VITR %	Tellin	Collin	VitDet	AmorV	BitV	Sample
4050.00	cut	Sh/Clst: brn blk, drk gy	5		*								25	*	*	*				70	*		*	*		0099-1L
4084.00	cut	Sh/Clst: brn blk, drk gy	60	*	*	*			?	*			20	*	*	*				20	*		*	*		0105-1L
4116.00	cut	Sh/Clst: brn blk, drk gy	5		*								15		*	*				80	?		*	*		0110-1L
4146.00	cut	Sh/Clst: brn blk, drk gy	TR?		*								40	*	*	*				60	?		*	*		0115-1L
4198.00	cut	Sh/Clst: brn blk to lt gy	TR?		*								25	*	*	*				75	*		*	*		0124-2L
4220.00	cut	Sh/Clst: m gy to drk gy	TR			*							50	*	*	*				50	*		*			0127-1L
4274.00	cut	Sh/Clst: lt gy to drk gy	?										40	*	*	*				60			*	*		0136-1L
4322.00	cut	Sh/Clst: lt gy, drk gy	?										40	*	*	*				60			*	*		0144-1L
4370.00	cut	Sh/Clst: lt gy to drk gy	10		*	*							30	*	*	*				60			*	*		0151-1L
4412.00	cut	Sh/Clst: brn gy, m gy, drk gy	?										30	?	*	*				70	?		*	*		0158-1L
4460.00	cut	Sh/Clst: gy, brn, brn gy	TR?										30	?	*	*				70	*		*	*		0166-1L
4500.00	cut	Sh/Clst: lt gy to m drk gy	5		*	*							30	?	*	*				65			*	*		0173-1L

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A.S

Table 8 : Visual Kerogen Composition Data for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	LIPT %	AmorL	LipDet	Sp/Pol	Cuticl	Resin	Algae	Dinofl	Acrit	BitL	INERT %	Fusin	SemFus	IntDet	Micrin	Sclero	BitI	VITR %	Telin	Collin	VitDet	AmorV	BitV	Sample
4564.00	cut	Sh/Clst: blk, lt gy, drk gy	5		?	*							25		*	*				70			*	*		0183-1L
4772.00	cut	Sh/Clst: m gy	TR			*							25		*	*				75			*	*		0217-1L
5062.00	cut	Sh/Clst: blk, drk gy	5		?	*							20		*	*				75			*	*		0265-1L
5126.00	cut	Sh/Clst: lt gy, drk gy	5		?	*							25		*	*				70			*	*		0276-1L

GEOLAB NOR
GEOCHEMICAL LABORATORIES OF NORWAY A.S

Table 9 : Tabulation of carbon isotope data for EOM/EOM - fractions or Oils for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology	EOM/Oil	Saturated	Aromatic	NSO	Asphaltenes	Kerogen	Sample
3912.00	com	Composite sample	-	-27.19	-25.89	-26.20	-25.84	-	0284-0B
3922.00	cut		-	-27.51	-25.67	-26.23	-25.81	-	0079-1L
3940.00	cut		-	-27.17	-25.14	-25.46	-24.77	-	0082-1L
3976.00	cut		-	-27.64	-26.54	-27.04	-25.47	-	0087-1L
4008.00	com	Composite sample	-	-27.38	-25.53	-25.92	-25.02	-	0287-0B
4564.00	cut		-	-27.30	-25.71	-26.01	-25.62	-	0183-1L
4772.00	cut		-	-28.11	-27.25	-28.02	-25.94	-	0217-1L
4852.00	cut		-	-28.40	-26.94	-27.31	-25.71	-	0230-1L

Table 9B : Tabulation of cv values from carbon isotope data for well NOCS 30/7-7

Depth unit of measure: m

Depth	Typ	Lithology		Saturated	Aromatic	cv value	Sample
3912.00	com	Composite sample		-27.19	-25.89	-0.34	0284-0B
3922.00	cut			-27.51	-25.67	0.96	0079-1L
3940.00	cut			-27.17	-25.14	1.28	0082-1L
3976.00	cut			-27.64	-26.54	-0.64	0087-1L
4008.00	com	Composite sample		-27.38	-25.53	0.94	0287-0B
4564.00	cut			-27.30	-25.71	0.34	0183-1L
4772.00	cut			-28.11	-27.25	-1.03	0217-1L
4852.00	cut			-28.40	-26.94	0.40	0230-1L

Table 10A: Variation in Triterpane Distribution for Well NOCS 30/7-7

Depth unit of measure: m

Depth	Lithology	B/A	B/B+A	B B+E+F	C/E	C/C+E	X/E	Z/E	Z/C	Z/Z+E	Q/E	E/E+F	C+D C+D+E+F	D+F/C+E	J1 J1+J2%	Sample
3912.00	bulk	0.29	0.22	0.36	0.53	0.35	0.94	-	-	-	0.66	0.97	0.37	0.06	61.82	284-0
3922.00	Sh/Clst	0.27	0.21	0.29	0.57	0.36	1.16	-	-	-	0.89	0.58	0.29	0.54	64.66	079-1
3940.00	Sh/Clst	0.31	0.24	0.45	1.06	0.52	0.13	-	-	-	1.25	0.91	0.51	0.09	61.81	082-1
3976.00	Sh/Clst	0.83	0.45	0.33	1.09	0.52	0.03	-	-	-	0.70	0.93	0.52	0.06	65.85	087-1
4008.00	bulk	0.36	0.27	0.34	0.90	0.47	0.56	-	-	-	0.67	0.94	0.47	0.06	68.97	287-0
4564.00	Sh/Clst	1.01	0.50	0.26	0.93	0.48	0.13	-	-	-	0.52	0.92	0.48	0.08	65.84	183-1
4772.00	Sh/Clst	0.76	0.43	0.26	0.95	0.49	0.02	-	-	-	0.04	0.94	0.49	0.07	64.94	217-1
4852.00	Sh/Clst	0.87	0.47	0.19	0.91	0.48	0.03	-	-	-	0.18	0.92	0.47	0.07	64.80	230-1

Table *10B*: Variation in Sterane Distribution for Well NOCS 30/7-7

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Ratio6	Ratio7	Sample
3912.00	bulk	1.00	57.06	78.41	0.75	0.76	0.57	0.44	284-0
3922.00	Sh/Clst	0.91	59.61	79.87	0.88	0.77	0.70	0.59	079-1
3940.00	Sh/Clst	0.91	50.79	78.46	0.87	0.78	0.70	0.61	082-1
3976.00	Sh/Clst	0.55	53.10	72.74	0.84	0.72	0.39	0.28	087-1
4008.00	bulk	0.80	55.33	76.49	0.97	0.75	0.55	0.51	287-0
4564.00	Sh/Clst	0.64	53.85	71.91	0.94	0.70	0.43	0.34	183-1
4772.00	Sh/Clst	0.51	49.91	70.06	0.68	0.70	0.29	0.22	217-1
4852.00	Sh/Clst	0.45	50.18	69.12	0.77	0.69	0.16	0.14	230-1

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

Table 10c: Aromatisation of Steranes for Well NOCS 30/7-7

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Sample
3912.00	bulk	-	-	284-0
3922.00	Sh/Clst	-	1.00	079-1
3940.00	Sh/Clst	-	-	082-1
3976.00	Sh/Clst	-	1.00	087-1
4008.00	bulk	-	-	287-0
4564.00	Sh/Clst	-	-	183-1
4772.00	Sh/Clst	-	1.00	217-1
4852.00	Sh/Clst	-	1.00	230-1

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

Ratio2: g1 / g1 + I1

Table 10: Variation in Monoaromatic Sterane Distribution for Well NOCS 30/7-7

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Sample
3912.00	bulk	-	-	-	-	284-0
3922.00	Sh/Clst	-	-	-	-	079-1
3940.00	Sh/Clst	-	-	-	-	082-1
3976.00	Sh/Clst	-	-	-	-	087-1
4008.00	bulk	-	-	-	-	287-0
4564.00	Sh/Clst	-	-	-	-	183-1
4772.00	Sh/Clst	-	-	-	-	217-1
4852.00	Sh/Clst	-	-	-	-	230-1

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: Variation in Triaromatic Sterane Distribution for Well NOCS 30/7-7

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Sample
3912.00	bulk	1.00	1.00	1.00	1.00	1.00	284-0
3922.00	Sh/Clst	0.97	0.97	0.88	0.88	0.88	079-1
3940.00	Sh/Clst	1.00	1.00	1.00	1.00	1.00	082-1
3976.00	Sh/Clst	0.54	0.58	0.33	0.28	0.46	087-1
4008.00	bulk	1.00	1.00	1.00	1.00	1.00	287-0
4564.00	Sh/Clst	1.00	1.00	1.00	1.00	1.00	183-1
4772.00	Sh/Clst	0.46	0.41	0.26	0.24	0.44	217-1
4852.00	Sh/Clst	0.54	0.52	0.32	0.29	0.48	230-1

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 10F: Raw GCMS triterpane data (peak height) for Well NOCS 30/7-7

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			
3912.00	bulk	43.10	21.19	12.59	9.76	4.20	64.51	18.39	0.00	16.97	0284-0
		30.09	2.25	31.92	0.83	7.75	6.36	0.00	6.38		
		3.94	0.00	0.00	0.00	0.00	0.00	0.00			
3922.00	Sh/Clst	71.81	40.18	20.93	20.83	9.16	120.79	32.46	0.00	25.95	0079-1
		52.33	5.71	45.19	32.80	13.60	11.56	0.00	10.87		
		5.94	0.00	0.00	0.00	0.00	0.00	0.00			
3940.00	Sh/Clst	33.48	16.25	9.70	6.54	3.96	37.74	11.68	0.00	13.88	0082-1
		1.70	1.06	13.04	1.28	4.10	3.43	0.00	2.46		
		1.52	0.00	0.00	0.00	0.00	0.00	0.00			
3976.00	Sh/Clst	1416.76	615.20	548.68	270.75	230.38	571.37	473.89	0.00	956.52	0087-1
		28.41	49.98	878.66	67.01	220.93	170.28	0.00	139.61		
		72.41	0.00	0.00	0.00	0.00	0.00	0.00			
4008.00	bulk	37.97	15.88	8.99	8.02	4.16	36.35	13.17	0.00	21.33	0287-0
		13.35	1.26	23.81	1.65	6.51	5.84	0.00	4.60		
		2.07	0.00	0.00	0.00	0.00	0.00	0.00			

Table 10F: Raw GCMS triterpane data (peak height) for Well NOCS 30/7-7

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			
4564.00	Sh/Clst	7.08	3.31	2.89	1.85	0.95	2.47	2.49	0.00	5.91	0183-1
		0.85	0.46	6.35	0.56	1.77	1.24	0.00	1.33		
		0.69	0.00	0.00	0.00	0.00	0.00	0.00			
4772.00	Sh/Clst	869.26	43.77	429.60	104.29	291.84	596.70	455.04	0.00	1159.46	0217-1
		29.01	77.55	1219.69	83.15	296.98	226.48	0.00	186.50		
		100.67	0.00	0.00	0.00	0.00	0.00	0.00			
4852.00	Sh/Clst	150.42	84.16	74.35	50.15	31.23	136.70	119.20	0.00	414.04	0230-1
		13.07	26.33	455.67	37.94	125.39	97.48	0.00	97.30		
		52.85	0.00	0.00	0.00	0.00	0.00	0.00			

Table 10G: Raw GCMS sterane data (peak height) for Well NOCS 30/7-7

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					
3912.00	bulk	23.50	2.10	15.20	8.70	2.68	6.43	7.16	6.16	5.74	0284-0
		20.14	6.75	0.00	12.73	4.72	0.00	6.66	5.14		
		1.68	3.96	5.70	6.90	2.98					
3922.00	Sh/Clst	68.60	20.98	35.41	22.81	7.55	7.86	0.00	14.59	11.35	0079-1
		40.17	18.42	3.68	27.16	9.50	0.00	6.99	2.91		
		3.46	7.60	11.83	13.46	5.15					
3940.00	Sh/Clst	19.61	5.71	10.69	6.16	2.13	0.91	1.26	3.04	2.92	0082-1
		11.14	3.87	1.05	7.07	2.86	0.00	1.86	1.56		
		1.32	1.93	3.34	3.58	1.87					
3976.00	Sh/Clst	411.44	96.17	313.44	225.15	188.08	172.21	110.84	128.65	249.52	0087-1
		536.74	272.07	255.29	248.70	80.00	0.00	198.46	172.62		
		108.65	182.93	229.84	229.84	161.57					
4008.00	bulk	18.48	1.08	10.78	6.60	1.79	3.30	2.66	3.51	2.88	0287-0
		9.83	0.00	2.70	7.96	2.54	0.00	2.79	2.15		
		1.44	3.32	4.12	5.64	2.68					

Table 10G: Raw GCMS sterane data (peak height) for Well NOCS 30/7-7

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					
4564.00	Sh/Clst	2.21	0.98	1.52	0.96	0.29	0.80	0.71	0.49	1.11	0183-1
		2.18	1.29	0.86	0.52	0.31	0.00	0.78	0.74		
		0.54	0.98	1.23	1.10	0.84					
4772.00	Sh/Clst	322.99	49.33	314.46	200.15	61.94	129.63	94.71	113.31	275.41	0217-1
		533.71	278.31	296.25	263.40	75.65	0.00	170.09	163.68		
		119.54	206.90	242.53	242.64	207.68					
4852.00	Sh/Clst	48.74	10.15	59.02	40.90	17.19	34.78	29.67	24.90	69.15	0230-1
		65.32	0.00	71.05	66.22	19.68	0.00	44.98	34.25		
		34.09	72.97	78.37	84.40	72.46					

Table 10H: Raw GCMS monoaromatic sterane data (peak height) for Well NOCS 30/7-7

Depth unit of measure: m

Depth	Lithology	a1	b1	c1	d1	e1	f1	g1	h1	i1	Sample
3912.00	bulk	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0284-0
3922.00	Sh/Clst	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0079-1
3940.00	Sh/Clst	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0082-1
3976.00	Sh/Clst	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0087-1
4008.00	bulk	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0287-0
4564.00	Sh/Clst	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0183-1
4772.00	Sh/Clst	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0217-1
4852.00	Sh/Clst	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0230-1

Table 10I: Raw GCMS trioaromatic sterane data (peak height) for Well NOCS 30/7-7

Depth unit of measure: m

Depth	Lithology	a1	b1	c1	d1	e1	f1	g1	Sample
3912.00	bulk	18.00	20.00	0.00	0.00	0.00	0.00	0.00	0284-0
3922.00	Sh/Clst	38.00	33.00	0.00	5.00	3.00	1.00	1.00	0079-1
3940.00	Sh/Clst	5.00	7.00	0.00	0.00	0.00	0.00	0.00	0082-1
3976.00	Sh/Clst	26.00	30.00	14.00	31.00	29.00	16.00	22.00	0087-1
4008.00	bulk	10.00	9.00	0.00	0.00	0.00	0.00	0.00	0287-0
4564.00	Sh/Clst	10.00	9.00	0.00	0.00	0.00	0.00	0.00	0183-1
4772.00	Sh/Clst	67.00	54.00	42.00	87.00	87.00	41.00	79.00	0217-1
4852.00	Sh/Clst	74.00	68.00	40.00	81.00	80.00	35.00	63.00	0230-1