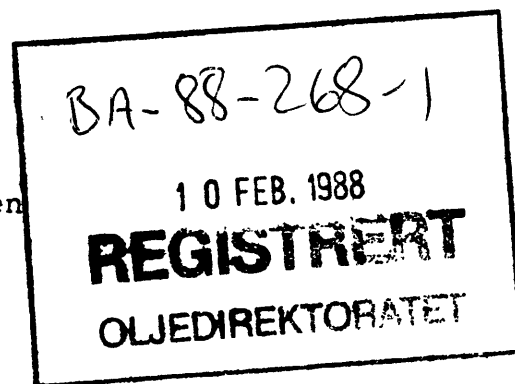


PRE-CRETACEOUS HYDROCARBON POTENTIAL
OF THE NORWEGIAN CENTRAL GRABEN

GEOCHEMICAL ANALYSIS

Well NOCS 2/2-2

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INTRODUCTION

This well from the Norwegian sector is situated in the eastern part of the Central Graben. The total drilled depth was 3122 m. Samples were collected between 990 m and 3122 m from the Norwegian Petroleum Directorate in Stavanger.

A total of seventy-six samples were described. The analysed section of this well is from 1420 m to 3122 m with samples from 2785 m taken at a sampling interval of 5 m. Samples for maturity were selected from 990 m. A careful selection of suitable samples was made for screening analysis. Seventy-four samples were selected for this analysis and from the data obtained the samples were chosen for follow-up analysis. These were:

Thermal extraction - pyrolysis - gas chromatography	20 samples
Extraction, MPLC fractionation, saturated and aromatic hydrocarbon gas chromatography	6 samples
Vitrinite reflectance microscopy	20 samples
Visual kerogen analysis	12 samples

Tables listing in detail which samples were analysed and the results and logs are given in the appendix. No log data were available for this well. Formation tops were supplied by Saga Petroleum. These formation tops were only available after the completion of the analyses and caved material might have been analysed in some instances.

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

Depth unit of measure: m

Depth	Type		Trb	Sample
Int	Cvd	TOC%	%	Lithology description
990.00				001
			90	Sh/Clst: brn gy to m drk gy, mic
			5	Ca : w, chk
			5	Sh/Clst: lt brn gy to pl y brn, calc
				001-1L
				001-2L
				001-3L
1170.00				002
			95	Sh/Clst: brn gy, calc, mic
			5	Sh/Clst: lt brn to m brn, calc
			tr	Ca : w to gy y
				002-1L
				002-2L
				002-3L
1320.00				003
			100	Sh/Clst: brn gy, mic
			tr	Ca : m brn, dol
				003-1L
				003-2L
1420.00				004
	1.38		100	Sh/Clst: brn gy, slt, mic
			tr	Ca : pl y brn, dol
				004-1L
				004-2L
1530.00				005
	8.49		50	Sh/Clst: brn blk, slt, mic
			50	Sh/Clst: brn gy to ol gy, slt, mic
			tr	Ca : pl y brn, dol
				005-1L
				005-2L
				005-3L
1690.00				006
	3.02		100	Sh/Clst: brn gy, brn blk, ol gy, slt, mic
			tr	Sh/Clst: lt ol gy, calc, slt, mic
			tr	Ca : drk y brn
				006-1L
				006-2L
				006-3L

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

Depth unit of measure: m

Depth	Type		Trb	Sample		
Int	Cvd	TOC%	%	Lithology description		
1780.00						007
			95	Sh/Clst: brn gy to brn blk, slt, mic		007-1L
			5	Sh/Clst: ol gy		007-2L
			tr	Ca : w		007-3L
1900.00						008
			95	Sh/Clst: brn gy to brn blk, slt, mic		008-1L
			5	Sh/Clst: ol gy		008-2L
			tr	Ca : w		008-3L
2020.00						009
			50	Sh/Clst: brn gy to brn blk, slt, mic		009-1L
			30	S/Sst : lt brn gy to lt ol gy, calc, slt, mic, glauc, f, cem		009-2L
			20	Ca : pl y brn to pl or		009-3L
2140.00						010
	1.26		100	Sh/Clst: brn gy, ol gy to lt ol gy, mic		010-1L
			tr	Coal : blk		010-2L
2260.00						011
			95	Sh/Clst: brn gy to brn blk, ol gy, slt, mic		011-1L
			5	Coal : blk		011-2L
			tr	Sh/Clst: gn gy, wx		011-3L
2380.00						012
	1.67		70	Sh/Clst: brn gy to m gy, slt, mic		012-1L
			25	Sh/Clst: gn gy to lt ol gy, gy red		012-2L
			5	Ca : w, gy pi to pl y brn		012-3L

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

Depth unit of measure: m

Depth	Type		Trb	Sample
Int Cvd	TOC%	%		
Lithology description				
2500.00				013
	1.77	50	S/Sst : w to lt ol gy, mic, glauc, cem, l	013-1L
		30	Sh/Clst: brn gy, m gy to m drk gy, slt, mic	013-2L
		15	Sh/Clst: gn gy to gy red, slt, mic	013-4L
		5	Coal : blk	013-3L
2650.00				014
		75	Ca : w, st, chk	014-1L
		15	Sh/Clst: brn gy, brn blk, m gy to m drk gy, slt, mic	014-3L
		10	sltst : lt ol gy, calc, mic, glauc	014-2L
2725.00				015
		95	Ca : w to gy pi, st, chk	015-1L
		5	sltst : lt ol gy, mic, glauc	015-2L
		tr	Sh/Clst: brn gy to m drk gy, slt, mic, st	015-3L
		tr	Sh/Clst: gn gy, calc	015-4L
2730.00				016
		90	Ca : w to gy pi, st, chk	016-1L
		5	Sh/Clst: brn gy to m drk gy, slt, mic, st	016-3L
		5	Sh/Clst: lt ol gy, slt, mic, st	016-4L
		tr	sltst : lt ol gy, mic, glauc, st	016-2L
		tr	Sh/Clst: gn gy	016-5L
		tr	Cont : Coal-ad, tar-ad	016-6L
2735.00				017
	0.10	90	Ca : w to gy pi, st, chk	017-1L
		5	sltst : lt ol gy, s, mic, glauc, st	017-2L
		5	Sh/Clst: brn gy to m drk gy, slt, mic, st	017-3L
		tr	Sh/Clst: lt ol gy, slt, mic, st	017-4L
		tr	Sh/Clst: gn gy	017-5L
		tr	Cont : Coal-ad, tar-ad	017-6L

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

Depth unit of measure: m

Depth	Type		Trb	Sample
Int	Cvd	TOC%	%	Lithology description
2740.00				018
	2.43		55 Ca	: w to gy pi, st, chk 018-1L
			30 Sh/Clst:	brn gy, ol gy, m drk gy, calc 018-4L
			15 Sltst	: lt ol gy to m gy, calc, s, mic, glauc 018-2L
			tr Cont	: Coal-ad 018-3L
			tr Cont	: Coal-ad, tar-ad 018-6L
2745.00				019
			75 Ca	: w to gy pi, st, chk 019-1L
			20 Sh/Clst:	Coal-ad 019-3L
			5 Sltst	: brn gy, lt ol gy to m gy, calc, s, mic, glauc 019-2L
			tr Sh/Clst:	gn gy 019-4L
			tr Cont	: Coal-ad, tar-ad 019-6L
2750.00				020
			75 Ca	: w to gy pi, st, chk 020-1L
			20 Sh/Clst:	Coal-ad 020-3L
			5 Sltst	: brn gy, lt ol gy to m gy, calc, s, mic, glauc 020-2L
			tr Sh/Clst:	gn gy 020-4L
			tr Cont	: Coal-ad, tar-ad 020-6L
2755.00				021
			70 Ca	: w to gy pi, st, chk 021-1L
			15 Sltst	: brn gy, lt ol gy to m gy, calc, s, mic, glauc 021-2L
			15 Sh/Clst:	Coal-ad 021-3L
			tr Sh/Clst:	gn gy 021-4L
			tr Cont	: Coal-ad, tar-ad 021-6L

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

Depth unit of measure: m

Depth	Type		Trb	Sample
Int Cvd	TOC%	%		
Lithology description				
2760.00				022
	2.06	50 Ca	: w to gy pi, st, chk	022-1L
		25 Sh/Clst:	brn gy, ol gy, m gy to drk gy, calc, mic	022-3L
		15 Sh/Clst:	gn gy, m brn, calc, slt	022-4L
		10 Cont	: Coal-ad, dd	022-5L
		tr Sltst	: brn gy, lt ol gy to m gy, calc, s, mic, glauc	022-2L
		tr Cont	: Coal-ad, tar-ad	022-6L
2765.00				023
		50 Ca	: w to gy pi, st, chk	023-1L
		20 Cont	: Coal-ad, dd	023-5L
		15 Sh/Clst:	brn gy, ol gy, m gy to drk gy, calc, mic	023-3L
		15 Sh/Clst:	gn gy, m brn, calc, slt	023-4L
		tr Sltst	: brn gy, lt ol gy to m gy, calc, s, mic, glauc	023-2L
		tr Cont	: Coal-ad, tar-ad	023-6L
2770.00				024
		40 Cont	: Coal-ad, dd, tar-ad	024-4L
		30 Ca	: w to gy pi, st, chk	024-1L
	1.72	20 Sltst	: brn gy to m gy, calc, mic, glauc, st	024-2L
		10 Sh/Clst:	brn gy to ol gy, m gy to drk gy, mic, st	024-3L
2780.00				025
		50 Cont	: Coal-ad, dd, tar-ad	025-4L
		25 Ca	: w to gy pi, st, chk	025-1L
		20 Sh/Clst:	brn gy, ol gy, m gy to drk gy, calc, slt, mic, glauc, st	025-2L
		5 Sh/Clst:	gn gy, calc, slt, mic, st	025-3L

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

Depth unit of measure: m

Depth	Type		Trb	Sample
Int Cvd	TOC%	% Lithology description		
2785.00				026
	1.99	40 Cont : Coal-ad, dd, tar-ad		026-4L
		30 Sh/Clst: brn gy, ol gy, m gy to drk gy, calc, slt, mic, glauc, st		026-2L
		25 Ca : w to gy pi, st, chk		026-1L
		5 Sh/Clst: gn gy, calc, slt, mic, st		026-3L
2790.00				027
	0.09	55 Sh/Clst: gy red to drk y brn, calc, mic, st		027-4L
	1.12	30 Sh/Clst: brn gy to ol gy, m gy to m gn, calc, mic, st		027-3L
		10 Ca : w to gy pi, st, chk		027-1L
		5 Sltst : lt brn gy to lt ol gy, calc, mic, st		027-2L
		tr Cont : Coal-ad, tar-ad		027-5L
2800.00				028
		35 Sh/Clst: gy red, gn gy, m brn, drk y brn, calc, slt, mic, st		028-4L
	1.26	25 Sh/Clst: brn gy to ol gy, m gy to m gn, calc, mic, st		028-3L
		20 Ca : w to gy pi, st, chk		028-1L
	0.44	20 Sltst : brn gy, gn gy, ol gy to lt ol gy, calc, mic, glauc, st		028-2L
		tr Cont : Coal-ad, tar-ad		028-5L
2805.00				029
		35 Sh/Clst: gy red, gn gy, m brn, drk y brn, calc, slt, mic, st		029-4L
	0.99	25 Sh/Clst: brn gy to ol gy, m gy to m gn, calc, mic, st		029-3L
		20 Ca : w to gy pi, st, chk		029-1L
		20 Sltst : brn gy, gn gy, ol gy to lt ol gy, calc, mic, glauc, st		029-2L
		tr Cont : Coal-ad, tar-ad		029-5L

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

Depth unit of measure: m

Depth	Type	Trb	Sample
Int Cvd	TOC%	%	Lithology description
2810.00			030
	0.98	40	Sh/Clst: gy red, gn gy, m brn, drk y brn, calc, slt, mic, st
		35	Sh/Clst: brn gy, ol gy, m gy to drk gy, calc, slt, mic, st
		15	Ca : w to gy pi, st, fis
		10	Cont : Coal-ad, tar-ad
2815.00			031
	0.66	45	Sh/Clst: brn gy, ol gy, m gy to drk gy, calc, slt, mic, st
	0.14	45	Sh/Clst: gy red, gn gy, m brn, drk y brn, calc, slt, mic, st
		10	S/Sst : w, l
		tr	Ca : w to gy pi, st, chk
		tr	Cont : Coal-ad, tar-ad
2820.00			032
	0.51	35	Sh/Clst: brn gy, ol gy, m gy to drk gy, calc, slt, mic, st
		35	Sh/Clst: gy red, gn gy, m brn, drk y brn, calc, slt, mic, st
		20	S/Sst : w, l
		5	Ca : w to gy pi, st, chk
		5	Cont : Coal-ad, tar-ad
2825.00			033
	0.37	75	Sh/Clst: ol gy to m drk gy, calc, mic, st
		20	Sh/Clst: m brn to drk red brn, calc, mic, st
		5	Sh/Clst: gn gy, calc
		tr	Ca : w to gy pi, st, chk
		tr	Ca : pl y brn
		tr	S/Sst : w, l
		tr	Cont : Coal-ad, tar-ad

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

Depth unit of measure: m

Depth	Type	Trb	Sample
Int Cvd	TOC%	%	Lithology description
2831.00			034
	0.42	65	Sh/Clst: ol gy to m drk gy, calc, mic, st
		20	Sh/Clst: m brn to drk red brn, calc, mic, st
		10	S/Sst : w, l
		5	Sh/Clst: gn gy, calc
		tr Ca	: w to gy pi, st, chk
		tr Ca	: pl y brn
		tr Cont	: Coal-ad, tar-ad
			034-2L
			034-3L
			034-6L
			034-4L
			034-1L
			034-5L
			034-7L
2837.00			035
	0.95	60	Sh/Clst: ol gy to lt ol gy, m gy to m drk gy, calc, mic, st
	0.14	40	Sh/Clst: m brn to drk red brn, calc, mic, st
		tr Ca	: w to gy pi, st, chk
		tr Sh/Clst	: gn gy, calc
		tr S/Sst	: w, l
			035-2L
			035-3L
			035-1L
			035-4L
			035-5L
2843.00			036
	0.42	75	Sh/Clst: ol gy to m drk gy, calc, mic, st
		25	Sh/Clst: lt ol gy, calc, mic, st
		tr Ca	: w to gy pi, st, chk
		tr Ca	: pl y brn, st
		tr Other	: pyr
			036-2L
			036-3L
			036-1L
			036-4L
			036-5L
2849.00			037
	0.37	80	Sh/Clst: ol gy to m drk gy, calc, mic, st
		15	Sh/Clst: m brn to drk red brn, calc, mic, st
		5	S/Sst : w, l
		tr Ca	: w to gy pi, st, chk
		tr Ca	: pl y brn, st
		tr Other	: pyr
		tr Cont	: Coal-ad, tar-ad
			037-2L
			037-3L
			037-4L
			037-1L
			037-5L
			037-6L
			037-7L

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

Depth unit of measure: m

Depth	Type		Trb	Sample
Int Cvd	TOC%	% Lithology description		
2855.00				038
	0.37	80 Sh/Clst: ol gy to m drk gy, calc, mic, st		038-2L
		15 Sh/Clst: m brn to drk red brn, calc, mic, st		038-3L
		5 Sh/Clst: y brn to drk y brn, calc, mic		038-4L
		tr Ca : w to pl y brn, calc		038-1L
		tr Other : pyr		038-5L
		tr Cont : Coal-ad, tar-ad		038-6L
		tr Cont : Coal-ad, tar-ad		038-7L
2861.00				039
	0.39	70 Sh/Clst: ol gy to m drk gy, calc, mic, st		039-2L
		20 Cont : Coal-ad, tar-ad		039-5L
		5 Sh/Clst: m brn to drk red brn, calc, mic, st		039-3L
		5 Sh/Clst: lt brn gy to lt ol gy, calc, slt, st		039-4L
		tr Ca : w to pl y brn, calc		039-1L
2867.00				040
	0.81	95 Sh/Clst: ol gy to m drk gy, calc, mic, st		040-2L
		5 Sh/Clst: m brn to drk red brn, calc, mic, st		040-3L
		tr Ca : w to pl y brn, calc		040-1L
		tr Sh/Clst: lt ol gy, calc, slt, mic, glauc, st		040-4L
		tr Cont : Coal-ad, tar-ad		040-5L
		tr Ca : or gy, cly		040-6L
2873.00				041
	0.46	75 Sh/Clst: ol gy to lt ol gy, m drk gy, calc, mic, st		041-2L
	0.19	15 Sh/Clst: m brn to drk red brn, calc, mic, st		041-3L
		5 S/Sst : w, l		041-4L
		5 Ca : or gy to drk y brn, calc		041-6L
		tr Ca : w to pl y brn, calc		041-1L
		tr Sh/Clst: gn gy		041-5L
		tr Cont : Coal-ad, tar-ad		041-7L

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

Depth unit of measure: m

Depth	Type		Trb	Sample
Int Cvd	TOC%	% Lithology description		
2885.00				042
	0.47	95 Sh/Clst: ol gy to lt ol gy, m drk gy, calc, mic, st		042-1L
		5 Sh/Clst: m brn to drk red brn, calc, mic, st		042-2L
		tr Ca : or gy to drk y brn, dol		042-3L
		tr Cont : Coal-ad, tar-ad		042-4L
		tr Ca : w, st, chk		042-5L
2891.00				043
	0.47	95 Sh/Clst: ol gy to lt ol gy, m drk gy, calc, mic, st		043-1L
		5 Sh/Clst: m brn to drk red brn, calc, mic, st		043-2L
		tr Ca : or gy to drk y brn, dol		043-3L
		tr Cont : Coal-ad, tar-ad		043-4L
		tr Ca : w, st, chk		043-5L
2897.00				044
	0.41	100 Sh/Clst: ol gy to lt ol gy, m drk gy, calc, mic, st		044-1L
		tr Sh/Clst: m brn to drk red brn, calc, mic, st		044-2L
		tr Ca : or gy to drk y brn, dol		044-3L
		tr Cont : Coal-ad, tar-ad		044-4L
		tr Ca : w, st, chk		044-5L
		tr Other : pyr		044-6L
2903.00				045
	0.52	100 Sh/Clst: ol gy to lt ol gy, m drk gy, calc, mic, st		045-1L
		tr Sh/Clst: m brn to drk red brn, calc, mic, st		045-2L
		tr Ca : or gy to drk y brn, dol		045-3L
		tr Cont : Coal-ad, tar-ad		045-4L
		tr Ca : w, st, chk		045-5L
		tr Other : pyr		045-6L

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

Depth unit of measure: m

Depth	Type		Trb	Sample	
-----	-----		----	-----	
Int	Cvd	TOC%	%	Lithology description	
----	----	-----	-----	-----	
2909.00				046	
	cvd	0.51	95	Sh/Clst: ol gy to lt ol gy, m drk gy, calc, mic, st	046-1L
			5	Cont : m brn to drk red brn, calc, mic, st	046-2L
			tr	Sh/Clst: m brn to drk red brn, calc, mic, st	046-3L
			tr	Ca : w to pl y brn	046-4L
2915.00				076	
		39.42	90	Coal : blk to brn blk, cly	076-1L
			10	Sh/Clst: ol gy to lt ol gy, m drk gy, calc, mic, st	076-2L
			tr	S/Sst : w, calc, cem	076-3L
2921.00				048	
	cvd	0.57	60	Sh/Clst: ol gy to lt ol gy, m drk gy, calc, mic, st	048-2L
			40	Coal : blk to brn blk, cly	048-1L
			tr	Sh/Clst: gy red to m brn, calc, mic, st	048-3L
			tr	S/Sst : w, calc, cem	048-4L
			tr	Ca : lt ol gy	048-5L
			tr	Cont : Coal-ad, tar-ad	048-6L
2945.00				049	
	cvd	3.62	70	Sh/Clst: gy blk, brn blk, ol gy, m drk gy, calc, mic, st	049-2L
			15	Sh/Clst: gy red to m brn, calc, mic, st	049-3L
			10	Coal : blk to brn blk, cly	049-1L
			5	Ca : y gy to lt ol gy, cly, mic, st	049-4L
			tr	Ca : or, dsk brn, st, chk	049-5L
			tr	Cont : Coal-ad, prp	049-6L

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

Depth unit of measure: m

Depth	Type		Trb	Sample
Int Cvd	TOC%	%		
Lithology description				
2951.00				050
	4.69	55	Sh/Clst: gy blk, brn gy to brn blk, ol gy, m drk gy, carb, slt, mic, st	050-2L
		15	Coal : blk to brn blk, cly	050-1L
		15	S/Sst : w to y gy, st, cem, kln	050-4L
	0.66	10	Sh/Clst: y gy to lt ol gy, calc	050-5L
		5	Ca : w to gy pi, pl y brn	050-3L
		tr	Sh/Clst: gy pi to m brn, calc	050-6L
		tr	Sltst : y gy to lt ol gy	050-7L
2957.00				051
	5.23	60	Sh/Clst: gy blk, brn blk to brn gy, ol gy, lt brn gy, lt ol gy, m drk gy, carb, slt, mic, st	051-2L
		20	Coal : blk to brn blk, cly	051-1L
		15	S/Sst : w to y gy, st, cem, kln	051-4L
cvd		5	Ca : w to gy pi, pl y brn	051-3L
		tr	Sh/Clst: y gy to lt ol gy, calc	051-5L
		tr	Sh/Clst: gy pi to m brn, calc	051-6L
		tr	Sltst : y gy to lt ol gy	051-7L
2963.00				052
	2.21	40	Sh/Clst: gy blk, brn blk to brn gy, ol gy, lt brn gy, lt ol gy, m drk gy, carb, slt, mic, st	052-2L
	25.13	35	Coal : blk to brn blk, cly	052-1L
		25	S/Sst : w to y gy, st, cem, kln	052-4L
		tr	Ca : w to gy pi, pl y brn	052-3L
		tr	Sh/Clst: y gy to lt ol gy, calc	052-5L
		tr	Sh/Clst: gy pi to m brn, calc	052-6L
		tr	Sltst : y gy to lt ol gy	052-7L

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

Depth unit of measure: m

Depth	Type		Trb	Sample	
Int	Cvd	TOC%	%	Lithology description	
2972.00					053
		3.74	35	Sh/Clst: brn gy to brn blk, ol gy, m gy to m drk gy, calc, carb, slt, mic, st	053-2L
			35	S/Sst : w to y gy, st, cem, kln	053-3L
			25	Coal : blk to brn blk, cly	053-1L
	cvd		5	Sh/Clst: y gy to lt ol gy, calc	053-4L
			tr	Ca : w to pl y brn, st, chk	053-5L
			tr	Sh/Clst: gy pi to m brn, calc	053-6L
			tr	Sltst : y gy to lt ol gy	053-7L
2978.00					054
		0.08	75	S/Sst : w to y gy, st, cem, l, kln	054-3L
			15	Sh/Clst: brn gy to brn blk, ol gy, m gy to m drk gy, calc, carb, slt, mic, st	054-2L
			10	Coal : blk to brn blk, cly	054-1L
			tr	Sh/Clst: y gy to lt ol gy, calc	054-4L
			tr	Ca : w to pl y brn, st, chk	054-5L
			tr	Sh/Clst: gy pi to m brn, calc	054-6L
			tr	Sltst : y gy to lt ol gy	054-7L
2984.00					055
			70	S/Sst : w to y gy, st, cem, l, kln	055-3L
		30.46	10	Coal : blk to brn blk, cly	055-1L
			10	Sh/Clst: brn gy to brn blk, ol gy, m gy to m drk gy, calc, carb, slt, mic, st	055-2L
	cvd		5	Sh/Clst: y gy to lt ol gy, calc	055-4L
			5	Sh/Clst: gn gy	055-5L
			tr	Other : pyr	055-6L
			tr	Sltst : y gy to lt ol gy	055-7L

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

Depth unit of measure: m

Depth	Type		Trb	Sample	
Int	Cvd	TOC%	%	Lithology description	
2990.00					056
		0.17	65	S/Sst : w to y gy, st, cem, l, kln	056-3L
		1.75	15	Sh/Clst: brn gy to brn blk, ol gy to ol blk, calc, carb, slt, mic, st	056-2L
			10	Coal : blk to brn blk, cly	056-1L
	cvd		5	Sh/Clst: y gy to lt ol gy, calc, slt, mic, st	056-4L
	cvd		5	Ca : w to gy pi, st, chk	056-5L
			tr	Other : pyr	056-6L
			tr	Sltst : y gy to lt ol gy	056-7L
2996.00					057
			40	S/Sst : w to y gy, st, cem, l, kln	057-3L
		56.39	25	Coal : blk to brn blk, cly	057-1L
		2.74	20	Sh/Clst: brn gy to brn blk, ol gy to ol blk, calc, carb, slt, mic, st	057-2L
			10	Sh/Clst: gy red, drk y brn, calc	057-4L
	cvd		5	Ca : y gy, cly	057-5L
			tr	Sh/Clst: gn gy	057-6L
			tr	Other : pyr	057-7L
3001.00					058
		0.21	45	S/Sst : w to y gy, st, cem, l, kln	058-4L
		1.03	30	Sh/Clst: brn gy, ol gy, drk gn gy, m drk gy, calc, carb, slt, mic, st	058-3L
			15	Coal : blk to brn blk, cly	058-1L
			5	Sh/Clst: brn blk, carb, st	058-2L
			5	Sh/Clst: gy red to pl red, calc	058-5L
			tr	Ca : w to y gy, s, cly	058-6L
			tr	Other	058-7L

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

Depth unit of measure: m

Depth	Type		Trb	Sample
Int Cvd	TOC%	%		
Lithology description				
3008.00				059
	0.30	50	Sh/Clst: gy red to pl red, calc	059-5L
		20	S/Sst : w to y gy, st, cem, l, kln	059-4L
		15	Sh/Clst: brn gy, ol gy, drk gn gy, m drk gy, calc, carb, slt, mic, st	059-3L
		5	Coal : blk to brn blk, cly	059-1L
		5	Sh/Clst: brn blk, carb, st	059-2L
		5	Ca : w, gy pi, y gy, s, cly	059-6L
		tr	Other	059-7L
3014.00				060
	0.22	40	S/Sst : w to y gy, st, cem, l, kln	060-4L
	1.11	30	Sh/Clst: brn gy, ol gy, drk gn gy, m drk gy, calc, carb, slt, mic, st	060-3L
		20	Sh/Clst: gy red to pl red, calc	060-5L
		5	Coal : blk to brn blk, cly	060-1L
		5	Ca : w, gy pi, y gy	060-6L
		tr	Sh/Clst: brn blk, carb, st	060-2L
		tr	Other	060-7L
3032.00				061
		60	Sh/Clst: gy red to pl red, calc	061-5L
	1.16	20	Sh/Clst: brn gy, ol gy, drk gn gy, m drk gy, calc, carb, slt, mic, st	061-3L
		10	Sh/Clst: brn blk, carb, st	061-2L
		10	S/Sst : w to y gy, st, cem, l, kln	061-4L
		tr	Coal : blk to brn blk, cly	061-1L
		tr	Ca : w, gy pi, y gy	061-6L
		tr	Other	061-7L
3038.00				062
		50	Cont : Coal-ad, tar-ad	062-7L
		30	Sh/Clst: gy red to pl red, calc	062-5L
		10	Sh/Clst: brn gy, ol gy, drk gn gy, m drk gy, calc, carb, slt, mic, st	062-3L
		5	Sh/Clst: brn blk, carb, st	062-2L
		5	S/Sst : w to y gy, st, cem, l, kln	062-4L
		tr	Coal : blk to brn blk, cly	062-1L
		tr	Ca : w, gy pi, y gy	062-6L

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

Depth unit of measure: m

Depth	Type		Trb	Sample
Int Cvd	TOC%	%		
Lithology description				
3044.00				063
	0.10	60	S/Sst : gy red to y gy, calc, mic, glauc, st, cem, l, kln	063-3L
		25	Sh/Clst: gy red to dsk red, calc, mic, st	063-4L
		15	Sh/Clst: brn gy, ol gy, lt brn gy, drk gn gy, m drk gy, calc, slt, mic, st	063-2L
		tr	Sh/Clst: brn blk, carb	063-1L
3050.00				064
		40	S/Sst : gy red to y gy, calc, mic, glauc, st, cem, l, kln	064-3L
	0.38	20	Sh/Clst: brn gy, ol gy, lt brn gy, drk gn gy, m drk gy, calc, slt, mic, st	064-2L
		20	Sh/Clst: red blk to dsk red, calc, mic, st	064-5L
		10	Sh/Clst: gn gy to drk gn gy, calc, wx, st	064-4L
		10	Sh/Clst: y gy, calc, mic, st	064-6L
		tr	Sh/Clst: brn blk, carb	064-1L
3056.00				065
	0.13	35	Sh/Clst: red blk to dsk red, calc, mic, st	065-5L
	0.43	25	Sh/Clst: brn gy, ol gy, lt brn gy, drk gn gy, m drk gy, calc, slt, mic, st	065-2L
		20	Sh/Clst: gn gy to drk gn gy, calc, wx, st	065-4L
		15	S/Sst : gy red to y gy, calc, mic, glauc, st, cem, l, kln	065-3L
		5	Sh/Clst: y gy, calc, mic, st	065-6L
		tr	Sh/Clst: brn blk, carb	065-1L
		tr	Ca : w, chk	065-7L
		tr	Cont : Coal-ad, tar-ad	065-8L

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

Depth unit of measure: m

Depth	Type		Trb	Sample
Int Cvd	TOC%	% Lithology description	---	-----
3068.00				066
	0.40	55 Sh/Clst: brn gy, gn gy, ol gy, drk gy, drk gn gy, m drk gy, calc, carb, slt, mic, st		066-2L
		25 Sh/Clst: gn gy to drk gn gy, calc, wx, st		066-4L
		10 S/Sst : gy red to y gy, calc, mic, glauc, st, cem, l, kln		066-3L
		10 Sh/Clst: y gy to lt gn gy, calc, mic, st		066-5L
		tr Sh/Clst: blk to brn blk, carb		066-1L
		tr Ca : w to gy pi, chk		066-6L
		tr Cont : Coal-ad, tar-ad		066-7L
		tr Cont : Coal-ad, tar-ad		066-8L
3074.00				067
	0.11	35 S/Sst : gy red to y gy, calc, mic, glauc, st, cem, l, kln		067-3L
	0.11	35 Sh/Clst: gn gy, m brn, red blk, dsk red, calc, mic, st		067-4L
		20 Sh/Clst: brn gy to brn blk, m drk gy, calc, carb, mic, st		067-2L
		5 Coal : blk		067-1L
		5 Sh/Clst: y gy to lt ol gy, calc, mic, st		067-5L
		tr Ca : w to gy pi, chk		067-6L
		tr Cont : Coal-ad, tar-ad		067-7L
		tr Cont : Coal-ad, tar-ad		067-8L
3080.00				068
	0.22	35 Sh/Clst: gn gy, m brn, red blk, dsk red, calc, mic, st		068-4L
		30 S/Sst : gy red to y gy, calc, mic, glauc, st, cem, l, kln		068-3L
		20 Cont : Coal-ad, tar-ad		068-6L
		15 Sh/Clst: brn gy to brn blk, ol gy, m drk gy, calc, carb, mic, st		068-2L
		tr Coal : blk		068-1L
		tr Sh/Clst: y gy to lt ol gy, calc, mic, st		068-5L
		tr Ca : w to gy pi, chk		068-7L

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

Depth unit of measure: m

Depth	Type		Trb	Sample		
Int	Cvd	TOC%	%	Lithology description		
3086.00						069
	0.40	35	Sh/Clst:	brn gy, ol gy, m gy to drk gy, calc, carb, mic, st		069-2L
		35	Sh/Clst:	gn gy, m brn, red blk, dsk red, calc, mic, st		069-4L
		25	S/Sst :	gy red to y gy, calc, mic, glauc, st, cem, l, kln		069-3L
		5	Sh/Clst:	y gy to lt ol gy, calc, mic, st		069-5L
		tr	Coal :	blk		069-1L
		tr	Ca :	w to gy pi, chk		069-6L
3092.00						070
	0.41	40	Sh/Clst:	brn gy, gn gy, ol gy, m drk gy, calc, mic, st		070-1L
	0.54	40	Sh/Clst:	m gy, calc, pyr, mic, st		070-2L
		20	S/Sst :	gy red to y gy, calc, mic, glauc, st, cem, l, kln		070-3L
		tr	Sh/Clst:	y gy to lt ol gy, calc, mic, st		070-4L
		tr	Ca :	w to pl brn		070-5L
		tr	Ca :	w to gy pi, chk		070-6L
3098.00						071
	0.27	55	Sh/Clst:	brn gy, gn gy, ol gy, m drk gy, calc, mic, st		071-1L
		35	Sh/Clst:	gy red to m gy, calc, mic, st		071-2L
		5	S/Sst :	gy red to y gy, calc, mic, glauc, st, cem, l, kln		071-3L
		5	Sh/Clst:	blk to brn blk, carb		071-7L
		tr	Sh/Clst:	y gy to lt ol gy, calc, mic, st		071-4L
		tr	Ca :	w to gy pi		071-5L
		tr	Coal :	blk		071-6L

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

Depth unit of measure: m

Depth	Type		Trb	Sample
Int Cvd	TOC%	%		
Lithology description				
3104.00				072
	0.13	70	Other : w, calc, st, evap	072-1L
	0.38	20	Sh/Clst: brn gy, ol gy, m drk gy, calc, mic, st	072-2L
		10	Sh/Clst: red blk to m brn, calc, mic, st	072-3L
		tr	S/Sst : y gy, calc, st, cem, l, kln	072-4L
		tr	Sh/Clst: gn gy, calc	072-5L
		tr	Sh/Clst: y gy to lt ol gy, calc, mic, st	072-6L
		tr	Coal : blk	072-7L
3110.00				073
	1.07	55	Other : w, calc, st, evap	073-1L
		25	Sh/Clst: brn gy, ol gy, m drk gy, calc, mic, st	073-2L
		15	Sh/Clst: red blk to m brn, calc, mic, st	073-3L
		5	S/Sst : y gy to lt ol gy, calc, mic, st	073-4L
		tr	Sh/Clst: gn gy, calc	073-5L
		tr	S/Sst : y gy to pl red, calc, st, cem, l, kln	073-6L
		tr	Coal : blk	073-7L
3116.00				075
	1.33	60	Other : w, calc, st, evap	075-1L
		25	Sh/Clst: brn gy, ol gy, m drk gy, calc, mic, st	075-2L
		10	Sh/Clst: red blk to m brn, calc, mic, st	075-3L
		5	Sh/Clst: gn gy, calc	075-4L
3122.00				074
	1.33	70	Other : w, calc, st, evap	074-1L
		20	Sh/Clst: brn gy, ol gy, m drk gy, calc, mic, st	074-2L
		10	Sh/Clst: red blk to m brn, calc, mic, st	074-3L
		tr	Sh/Clst: gn gy, calc	074-4L

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

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
1420.00	cut	Sh/Clst: brn gy	0.09	0.96	0.66	1.45	1.38	70	48	1.0	0.09	422	004-1L
1530.00	cut	Sh/Clst: brn blk	0.20	9.10	2.89	3.15	8.49	107	34	9.3	0.02	425	005-1L
1690.00	cut	Sh/Clst: brn gy, brn blk, ol gy	0.08	3.23	1.11	2.91	3.02	107	37	3.3	0.02	431	006-1L
2140.00	cut	Sh/Clst: brn gy, ol gy to lt ol gy	0.08	1.36	0.22	6.18	1.26	108	17	1.4	0.06	427	010-1L
2380.00	cut	Sh/Clst: brn gy to m gy	0.15	2.75	0.37	7.43	1.67	165	22	2.9	0.05	426	012-1L
2500.00	cut	Sh/Clst: brn gy, m gy to m drk gy	0.17	2.65	0.25	10.60	1.77	150	14	2.8	0.06	428	013-2L
2735.00	cut	Ca : w to gy pi	0.01	0.01	0.24	0.04	0.10	10	240	-	0.50	472	017-1L
2740.00	cut	Sh/Clst: brn gy, ol gy, m drk gy	0.21	4.44	0.51	8.71	2.43	183	21	4.7	0.05	422	018-4L
2760.00	cut	Sh/Clst: brn gy, ol gy, m gy to drk gy	0.21	2.95	0.63	4.68	2.06	143	31	3.2	0.07	427	022-3L
2770.00	cut	Sltst : brn gy to m gy	0.34	2.49	0.46	5.41	1.72	145	27	2.8	0.12	426	024-2L
2785.00	cut	Sh/Clst: brn gy, ol gy, m gy to drk gy	0.27	3.52	0.86	4.09	1.99	177	43	3.8	0.07	427	026-2L
2790.00	cut	Sh/Clst: brn gy to ol gy, m gy to m gn	0.10	0.53	0.56	0.95	1.12	47	50	0.6	0.16	425	027-3L
2790.00	cut	Sh/Clst: gy red to drk y brn	-	-	0.47	-	0.09	-	522	-	-	431	027-4L
2800.00	cut	Sltst : brn gy, gn gy, ol gy to lt ol gy	-	-	0.22	-	0.44	-	50	-	-	464	028-2L

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

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
2800.00	cut	Sh/Clst: brn gy to ol gy, m gy to m gn	0.08	0.88	0.53	1.66	1.26	70	42	1.0	0.08	429	028-3L
2805.00	cut	Sh/Clst: brn gy to ol gy, m gy to m gn	0.04	0.28	0.57	0.49	0.99	28	58	0.3	0.13	424	029-3L
2810.00	cut	Sh/Clst: brn gy, ol gy, m gy to drk gy	0.03	0.39	0.57	0.68	0.98	40	58	0.4	0.07	425	030-2L
2815.00	cut	Sh/Clst: brn gy, ol gy, m gy to drk gy	0.02	0.02	0.48	0.04	0.66	3	73	-	0.50	433	031-2L
2815.00	cut	Sh/Clst: gy red, gn gy, m brn, drk y brn	0.02	-	0.44	-	0.14	-	314	-	1.00	462	031-3L
2820.00	cut	Sh/Clst: brn gy, ol gy, m gy to drk gy	-	0.02	0.40	0.05	0.51	4	78	-	-	300	032-2L
2825.00	cut	Sh/Clst: ol gy to m drk gy	-	-	0.33	-	0.37	-	89	-	-	300	033-2L
2831.00	cut	Sh/Clst: ol gy to m drk gy	-	-	0.34	-	0.42	-	81	-	-	300	034-2L
2837.00	cut	Sh/Clst: ol gy to lt ol gy, m gy to m drk gy	0.03	0.31	0.41	0.76	0.95	33	43	0.3	0.09	427	035-2L
2837.00	cut	Sh/Clst: m brn to drk red brn	-	-	0.38	-	0.14	-	271	-	-	350	035-3L
2843.00	cut	Sh/Clst: ol gy to m drk gy	0.02	0.02	0.21	0.10	0.42	5	50	-	0.50	300	036-2L
2849.00	cut	Sh/Clst: ol gy to m drk gy	0.02	0.02	0.22	0.09	0.37	5	59	-	0.50	300	037-2L

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

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
2855.00	cut	Sh/Clst: ol gy to m drk gy	0.02	0.02	0.17	0.12	0.37	5	46	-	0.50	300	038-2L
2861.00	cut	Sh/Clst: ol gy to m drk gy	-	-	0.27	-	0.39	-	69	-	-	428	039-2L
2867.00	cut	Sh/Clst: ol gy to m drk gy	0.04	0.14	0.42	0.33	0.81	17	52	0.2	0.22	423	040-2L
2873.00	cut	Sh/Clst: ol gy to lt ol gy, m drk gy	0.02	0.02	0.22	0.09	0.46	4	48	-	0.50	359	041-2L
2873.00	cut	Sh/Clst: m brn to drk red brn	-	-	0.59	-	0.19	-	311	-	-	299	041-3L
2885.00	cut	Sh/Clst: ol gy to lt ol gy, m drk gy	0.01	0.05	0.25	0.20	0.47	11	53	0.1	0.17	389	042-1L
2891.00	cut	Sh/Clst: ol gy to lt ol gy, m drk gy	0.02	0.02	0.24	0.08	0.47	4	51	-	0.50	472	043-1L
2897.00	cut	Sh/Clst: ol gy to lt ol gy, m drk gy	-	-	0.19	-	0.41	-	46	-	-	266	044-1L
2903.00	cut	Sh/Clst: ol gy to lt ol gy, m drk gy	0.03	0.20	0.24	0.83	0.52	38	46	0.2	0.13	425	045-1L
2909.00	cut	Sh/Clst: ol gy to lt ol gy, m drk gy	0.01	0.17	0.23	0.74	0.51	33	45	0.2	0.06	424	046-1L
2915.00	cut	Coal : blk to brn blk	4.61	63.84	1.53	41.73	39.42	162	4	68.4	0.07	432	076-1L
2921.00	cut	Sh/Clst: ol gy to lt ol gy, m drk gy	0.01	0.03	0.23	0.13	0.57	5	40	-	0.25	433	048-2L

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

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
2945.00	cut	Sh/Clst: gy blk, brn blk, ol gy, m drk gy	0.81	16.10	0.24	67.08	3.62	445	7	16.9	0.05	430	049-2L
2951.00	cut	Sh/Clst: gy blk, brn gy to brn blk, ol gy, m drk gy	0.98	19.33	0.33	58.58	4.69	412	7	20.3	0.05	429	050-2L
2951.00	cut	Sh/Clst: y gy to lt ol gy	0.02	0.25	0.31	0.81	0.66	38	47	0.3	0.07	429	050-5L
2957.00	cut	gy st: gy blk, brn blk to brn gy, ol gy, lt brn gy, lt ol gy, m drk	1.62	26.35	0.26	101.35	5.23	504	5	28.0	0.06	429	051-2L
2963.00	cut	Coal : blk to brn blk	2.22	45.87	1.58	29.03	25.13	183	6	48.1	0.05	430	052-1L
2963.00	cut	gy st: gy blk, brn blk to brn gy, ol gy, lt brn gy, lt ol gy, m drk	0.21	5.30	0.35	15.14	2.21	240	16	5.5	0.04	428	052-2L
2972.00	cut	Sh/Clst: brn gy to brn blk, ol gy, m gy to m drk gy	0.90	14.97	0.36	41.58	3.74	400	10	15.9	0.06	428	053-2L
2978.00	cut	S/Sst : w to y gy	-	-	0.11	-	0.08	-	138	-	-	432	054-3L
2984.00	cut	Coal : blk to brn blk	3.12	31.87	1.66	19.20	30.46	105	5	35.0	0.09	435	055-1L
2990.00	cut	Sh/Clst: brn gy to brn blk, ol gy to ol blk	0.23	4.05	0.19	21.32	1.75	231	11	4.3	0.05	426	056-2L
2990.00	cut	S/Sst : w to y gy	-	-	0.14	-	0.17	-	82	-	-	461	056-3L

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

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
2996.00	cut	Coal : blk to brn blk	2.59	36.23	25.45	1.42	56.39	64	45	38.8	0.07	431	057-1L
2996.00	cut	Sh/Clst: brn gy to brn blk, ol gy to ol blk	0.57	10.25	0.41	25.00	2.74	374	15	10.8	0.05	426	057-2L
3001.00	cut	Sh/Clst: brn gy, ol gy, drk gn gy, m drk gy	0.10	1.66	0.25	6.64	1.03	161	24	1.8	0.06	429	058-3L
3001.00	cut	S/Sst : w to y gy	-	0.02	0.21	0.10	0.21	10	100	-	-	435	058-4L
3008.00	cut	Sh/Clst: gy red to pl red	0.02	-	0.56	-	0.30	-	187	-	1.00	384	059-5L
3014.00	cut	Sh/Clst: brn gy, ol gy, drk gn gy, m drk gy	0.19	1.84	0.24	7.67	1.11	166	22	2.0	0.09	428	060-3L
3014.00	cut	S/Sst : w to y gy	0.02	0.03	0.24	0.13	0.22	14	109	0.1	0.40	364	060-4L
3032.00	cut	Sh/Clst: brn gy, ol gy, drk gn gy, m drk gy	0.16	1.92	0.29	6.62	1.16	166	25	2.1	0.08	432	061-3L
3044.00	cut	S/Sst : gy red to y gy	0.01	-	0.16	-	0.10	-	160	-	1.00	430	063-3L
3050.00	cut	Sh/Clst: brn gy, ol gy, lt brn gy, drk gn gy, m drk gy	0.02	0.02	0.36	0.06	0.38	5	95	-	0.50	299	064-2L
3056.00	cut	Sh/Clst: brn gy, ol gy, lt brn gy, drk gn gy, m drk gy	0.02	0.04	0.34	0.12	0.43	9	79	0.1	0.33	299	065-2L
3056.00	cut	Sh/Clst: red blk to dsk red	0.01	-	0.35	-	0.13	-	269	-	1.00	293	065-5L

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

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
3068.00	cut	Sh/Clst: brn gy, gn gy, ol gy, drk gy, drk gn gy, m drk gy	0.03	-	0.26	-	0.40	-	65	-	1.00	299	066-2L
3074.00	cut	S/Sst : gy red to y gy	-	0.02	0.16	0.13	0.11	18	145	-	-	423	067-3L
3074.00	cut	Sh/Clst: gn gy, m brn, red blk, dsk red	-	-	0.26	-	0.11	-	236	-	-	431	067-4L
3080.00	cut	Sh/Clst: gn gy, m brn, red blk, dsk red	0.01	0.02	0.41	0.05	0.22	9	186	-	0.33	-	068-4L
3086.00	cut	Sh/Clst: brn gy, ol gy, m gy to drk gy	0.02	0.02	0.33	0.06	0.40	5	83	-	0.50	378	069-2L
3092.00	cut	Sh/Clst: brn gy, gn gy, ol gy, m drk gy	0.02	0.04	0.24	0.17	0.41	10	59	0.1	0.33	299	070-1L
3092.00	cut	Sh/Clst: m gy	0.07	0.17	0.26	0.65	0.54	31	48	0.2	0.29	423	070-2L
3098.00	cut	Sh/Clst: brn gy, gn gy, ol gy, m drk gy	0.02	-	0.18	-	0.27	-	67	-	1.00	298	071-1L
3104.00	cut	Other : w	0.06	0.04	0.46	0.09	0.13	31	354	0.1	0.60	342	072-1L
3104.00	cut	Sh/Clst: brn gy, ol gy, m drk gy	0.02	0.07	0.26	0.27	0.38	18	68	0.1	0.22	432	072-2L
3110.00	cut	Sh/Clst: brn gy, ol gy, m drk gy	0.08	1.43	0.35	4.09	1.07	134	33	1.5	0.05	429	073-2L
3116.00	cut	Sh/Clst: brn gy, ol gy, m drk gy	0.10	2.73	0.23	11.87	1.33	205	17	2.8	0.04	432	075-2L

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

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
3122.00	cut	Sh/Clst: brn gy, ol gy, m drk gy	0.13	2.64	0.26	10.15	1.33	198	20	2.8	0.05	430	074-2L

Table 3 a: Weight of EOM and Chromatographic Fraction for well NOCS 2/2-2

Depth unit of measure: m

Depth	Typ	Lithology	Rock Extracted (g)	EOM (mg)	Sat (mg)	Aro (mg)	Asph (mg)	NSO (mg)	HC (mg)	Non-HC (mg)	TOC(e) (%)	Sample
2915.00	cut	Coal : blk to brn blk	3.2	73.5	4.3	10.3	6.8	52.1	14.6	58.9	46.80	076-1L
2951.00	com	Composite sample - see table 3 e	9.9	7.6	1.1	0.5	0.9	5.1	1.6	6.0	1.55	077-0B
2957.00	cut	gy st: gy blk, brn blk to brn gy, ol gy, lt brn gy, lt ol gy, m drk	2.9	3.0	0.5	0.1	0.4	2.0	0.6	2.4	0.97	051-2L
2972.00	cut	Sh/Clst: brn gy to brn blk, ol gy, m gy to m drk gy	2.6	7.1	1.2	1.1	0.7	4.1	2.3	4.8	3.84	053-2L
2990.00	cut	Sh/Clst: brn gy to brn blk, ol gy to ol blk	1.4	3.6	0.4	0.5	0.8	1.9	0.9	2.7	2.69	056-2L
3122.00	com	Composite sample - see table 3 e	4.1	5.3	0.6	0.4	0.8	3.5	1.0	4.3	0.82	078-0B

Table 3 b: Concentration of EOM and Chromatographic Fraction (wt ppm rock) for well NOCS 2/2-2

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
2915.00	cut	Coal : blk to brn blk	22897	1339	3208	2118	16230	4548	18348	076-1L
2951.00	com	Composite sample - see table 3 e	770	111	50	91	516	162	607	077-0B
2957.00	cut	gy st: gy blk, brn blk to brn gy, ol gy, lt brn gy, lt ol gy, m drk	1023	170	34	136	682	204	819	051-2L
2972.00	cut	Sh/Clst: brn gy to brn blk, ol gy, m gy to m drk gy	2762	466	428	272	1595	894	1867	053-2L
2990.00	cut	Sh/Clst: brn gy to brn blk, ol gy to ol blk	2517	279	349	559	1328	629	1888	056-2L
3122.00	com	Composite sample - see table 3 e	1308	148	98	197	864	246	1061	078-0B

Table 3 c: Concentration of EOM and Chromatographic Fraction (mg/g TOC(e)) for well NOCS 2/2-2

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
2915.00	cut	Coal : blk to brn blk	48.93	2.86	6.86	4.53	34.68	9.72	39.21	076-1L
2951.00	com	Composite sample - see table 3 e	49.68	7.19	3.27	5.88	33.34	10.46	39.22	077-0B
2957.00	cut	gy st: gy blk, brn blk to brn gy, ol gy, lt brn gy, lt ol gy, m drk	105.56	17.59	3.52	14.07	70.37	21.11	84.44	051-2L
2972.00	cut	Sh/Clst: brn gy to brn blk, ol gy, m gy to m drk gy	71.94	12.16	11.15	7.09	41.55	23.31	48.64	053-2L
2990.00	cut	Sh/Clst: brn gy to brn blk, ol gy to ol blk	93.59	10.40	13.00	20.80	49.39	23.40	70.19	056-2L
3122.00	com	Composite sample - see table 3 e	159.59	18.07	12.04	24.09	105.39	30.11	129.48	078-0B

Table 3 d: Composition of material extracted from the rock (%) for well NOCS 2/2-2

Depth unit of measure: m

Depth	Typ	Lithology	Sat	Aro	Asph	NSO	HC	Non-HC	Sat	HC	Sample
			EOM	EOM	EOM	EOM	EOM	EOM	Aro	Non-HC	
2915.00	cut	Coal : blk to brn blk	5.85	14.01	9.25	70.88	19.86	80.14	41.75	24.79	076-1L
2951.00	com	Composite sample - see table 3 e	14.47	6.58	11.84	67.11	21.05	78.95	220.00	26.67	077-0B
2957.00	cut	gy st: gy blk, brn blk to brn gy, ol gy, lt brn gy, lt ol gy, m drk	16.67	3.33	13.33	66.67	20.00	80.00	500.00	25.00	051-2L
2972.00	cut	Sh/Clst: brn gy to brn blk, ol gy, m gy to m drk gy	16.90	15.49	9.86	57.75	32.39	67.61	109.09	47.92	053-2L
2990.00	cut	Sh/Clst: brn gy to brn blk, ol gy to ol blk	11.11	13.89	22.22	52.78	25.00	75.00	80.00	33.33	056-2L
3122.00	com	Composite sample - see table 3 e	11.32	7.55	15.09	66.04	18.87	81.13	150.00	23.26	078-0B

Depth unit of measure: m

NOTE: Depths shown in tables 3 a to d correspond to the composite samples' lower depth.

<u>Upper depth</u>	<u>Lower depth</u>	<u>Typ</u>	<u>Sample</u>	<u>Depth</u>	<u>Typ</u>	<u>Lithology</u>	<u>Sample</u>
2945.00	2951.00	com	077-0B is composed of:	2945.00	cut	Sh/Clst: gy blk, brn blk, ol gy, m drk gy, calc, mic, st	049-2L
				2951.00	cut	Sh/Clst: gy blk, brn gy to brn blk, ol gy, m drk gy, carb, slt, mic, st	050-2L
3110.00	3122.00	com	078-0B is composed of:	3110.00	cut	Sh/Clst: brn gy, ol gy, m drk gy, calc, mic, st	073-2L
				3116.00	cut	Sh/Clst: brn gy, ol gy, m drk gy, calc, mic, st	075-2L
				3122.00	cut	Sh/Clst: brn gy, ol gy, m drk gy, calc, mic, st	074-2L

Table 4 : Saturated Hydrocarbon Ratios for well NOCS 2/2-2

Depth unit of measure: m

Depth	Typ	Lithology	Pristane nC17	Pristane Phytane	Pristane + Phytane nC17 + nC18	Phytane nC18	CPI	Sample
2915.00	cut	Coal : blk to brn blk	7.45	6.92	4.27	1.08	1.58	076-1L
2951.00	com	bulk	1.14	2.37	0.86	0.54	1.45	077-0B
2957.00	cut	gy st: gy blk, brn blk to brn gy, ol gy, lt brn gy, lt ol gy, m drk	0.91	2.04	0.70	0.48	1.39	051-2L
2972.00	cut	Sh/Clst: brn gy to brn blk, ol gy, m gy to m drk gy	1.42	1.92	1.21	0.95	1.35	053-2L
2990.00	cut	Sh/Clst: brn gy to brn blk, ol gy to ol blk	1.10	2.80	0.83	0.48	1.70	056-2L
3122.00	com	bulk	1.05	2.09	0.91	0.71	1.39	078-0B

Table 5 : Aromatic Hydrocarbon Ratios for well NOCS 2/2-2

Depth unit of measure: m

Depth	Typ	Lithology	MNR	DMNR	BPhR	2/1MP	MPI1	MPI2	DBT/P	4/1MDBT	(3+2)/1MDBT	Sample
2915.00	cut	Coal : blk to brn blk	1.36	1.88	0.02	0.68	0.58	0.59	0.20	0.57	0.27	076-1L
2951.00	com	bulk	0.86	2.06	0.03	0.64	0.57	0.53	-	1.18	0.31	077-0B
2957.00	cut	gy st: gy blk, brn blk to brn gy, ol gy, lt brn gy, lt ol gy, m drk	-	-	-	0.72	0.65	0.63	0.18	1.09	0.36	051-2L
2972.00	cut	Sh/Clst: brn gy to brn blk, ol gy, m gy to m drk gy	-	0.71	-	0.57	0.61	0.47	0.22	0.44	0.19	053-2L
2990.00	cut	Sh/Clst: brn gy to brn blk, ol gy to ol blk	-	-	-	0.66	0.61	0.58	0.15	1.18	-	056-2L
3122.00	com	bulk	-	-	-	0.71	0.96	0.55	0.22	1.17	0.47	078-0B

Table 6 : Thermal Maturity Data for well NOCS 2/2-2

Depth unit of measure: m

Depth	Typ Lithology	Vitrinite Reflectance (%)	Number of Readings	Standard Deviation	Spore Fluorescence Colour	SCI	T _{max} (°C)	Sample
990.00	cut bulk	0.39	1	0.00	3+4	-	-	001-0B
1170.00	cut bulk	0.38	4	0.04	4	-	-	002-0B
1320.00	cut bulk	0.39	8	0.03	4	-	-	003-0B
1420.00	cut bulk	0.42	1	0.00	4	-	-	004-0B
1530.00	cut bulk	0.37	20	0.04	3+4	-	-	005-0B
1530.00	cut Sh/Clst: brn blk	-	-	-	-	3?	425	005-1L
1690.00	cut bulk	0.39	7	0.06	3+4	-	-	006-0B
1690.00	cut Sh/Clst: brn gy, brn blk, ol gy	-	-	-	-	3? 3.5?	431	006-1L
1780.00	cut bulk	0.39	19	0.04	4	-	-	007-0B
1900.00	cut bulk	0.39	11	0.03	4+5	-	-	008-0B
2020.00	cut bulk	0.41	21	0.08	5	-	-	009-0B
2140.00	cut bulk	0.45	10	0.06	4+5	-	-	010-0B
2140.00	cut Sh/Clst: brn gy, ol gy to lt ol gy	-	-	-	-	3.5	427	010-1L
2260.00	cut bulk	0.47	7	0.08	5	-	-	011-0B

Table 6 : Thermal Maturity Data for well NOCS 2/2-2

Depth unit of measure: m

Depth	Typ Lithology	Vitrinite Reflectance (%)	Number of Readings	Standard Deviation	Spore Fluorescence Colour	SCI	T _{max} (°C)	Sample
2380.00	cut bulk	0.51	12	0.07	4+5	-	-	012-0B
2380.00	cut Sh/Clst: brn gy to m gy	-	-	-	-	3.5	426	012-1L
2500.00	cut bulk	0.47	19	0.07	5	-	-	013-0B
2500.00	cut Sh/Clst: brn gy, m gy to m drk gy	-	-	-	-	3.5	428	013-2L
2650.00	cut bulk	0.64	3	0.03	4+5	-	-	014-0B
2740.00	cut Sh/Clst: brn gy, ol gy, m drk gy	-	-	-	-	3.5	422	018-4L
2760.00	cut Sh/Clst: brn gy, ol gy, m gy to drk gy	-	-	-	-	3.5	427	022-3L
2765.00	cut bulk	0.60	15	0.07	4	-	-	023-0B
2770.00	cut Sltst : brn gy to m gy	-	-	-	-	3.5	426	024-2L
2800.00	cut Sh/Clst: brn gy to ol gy, m gy to m gn	-	-	-	-	4?	429	028-3L
2825.00	cut bulk	NDP	-	-	0	-	-	033-0B
2915.00	cut bulk	0.65	22	0.05	5+6	-	-	076-0B
2945.00	cut Sh/Clst: gy blk, brn blk, ol gy, m drk gy	-	-	-	-	4.5?	430	049-2L

Table 6 : Thermal Maturity Data for well NOCS 2/2-2

Depth unit of measure: m

Depth	Typ	Lithology	Vitrinite Reflectance (%)	Number of Readings	Standard Deviation	Spore Fluorescence Colour	SCI	T _{max} (°C)	Sample
2951.00	cut	Sh/Clst: gy blk, brn gy to brn blk, ol gy, m drk gy	-	-	-	-	4 - 4.5?	429	050-2L
2957.00	cut	gy st: gy blk, brn blk to brn gy, ol gy, lt brn gy, lt ol gy, m drk	-	-	-	-	4.5?	429	051-2L
2963.00	cut	gy st: gy blk, brn blk to brn gy, ol gy, lt brn gy, lt ol gy, m drk	-	-	-	-	4.5? 5?	428	052-2L
2972.00	cut	Sh/Clst: brn gy to brn blk, ol gy, m gy to m drk gy	-	-	-	-	NDP	428	053-2L
2990.00	cut	Sh/Clst: brn gy to brn blk, ol gy to ol blk	-	-	-	-	NDP	426	056-2L
2996.00	cut	bulk	0.63	1	0.00	5	-	-	057-0B
2996.00	cut	Sh/Clst: brn gy to brn blk, ol gy to ol blk	-	-	-	-	4? 4.5?	426	057-2L
3001.00	cut	Sh/Clst: brn gy, ol gy, drk gn gy, m drk gy	-	-	-	-	4.5?	429	058-3L
3014.00	cut	Sh/Clst: brn gy, ol gy, drk gn gy, m drk gy	-	-	-	-	NDP	428	060-3L

Table 6 : Thermal Maturity Data for well NOCS 2/2-2

Depth unit of measure: m

Depth	Typ	Lithology	Vitrinite Reflectance (%)	Number of Readings	Standard Deviation	Spore Fluorescence Colour	SCI	Tmax (°C)	Sample
3032.00	cut	Sh/Clst: brn gy, ol gy, drk gn gy, m drk gy	-	-	-	-	NDP	432	061-3L
3068.00	cut	bulk	0.54	4	0.03	5	-	-	066-0B
3110.00	cut	Sh/Clst: brn gy, ol gy, m drk gy	-	-	-	-	3 4.5? 5?	429	073-2L
3116.00	cut	Sh/Clst: brn gy, ol gy, m drk gy	-	-	-	-	NDP	432	075-2L
3122.00	cut	bulk	0.69	3	0.06	4+5	-	-	074-0B
3122.00	cut	Sh/Clst: brn gy, ol gy, m drk gy	-	-	-	-	NDP	430	074-2L

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

Depth unit of measure: m

Depth	Typ	Lithology	L I P T %	A m o r t L	L i p D e t	S i p P o l	C u t o l	R e s i n e	A l g a l	D i n o f i t	A B i t L	I N E R T %	F u s i n	S e m F u s	I n t e n	M i c r o i	S c l e t I	V I T R %	T e l l i n	C o l l i n	V i t e n	A m o r t V	B i t V	Sample
1530.00	cut	Sh/Clst: brn blk	5		*	*						5		*				90	*	*				005-1L
1690.00	cut	Sh/Clst: brn gy, brn blk, ol gy	5		*	*						5		*				90	*	*				006-1L
2140.00	cut	Sh/Clst: brn gy, ol gy to lt ol gy	10		*	*						10		*				80		*				010-1L
2380.00	cut	Sh/Clst: brn gy to m gy	10		*	*						10		*				80		**	*			012-1L
2500.00	cut	Sh/Clst: brn gy, m gy to m drk gy	15		*	**						25		*	*			60	*	*				013-2L
2740.00	cut	Sh/Clst: brn gy, ol gy, m drk gy	15		*	**						15		*				70		*				018-4L
2760.00	cut	Sh/Clst: brn gy, ol gy, m gy to drk gy	10		*	*						10		*				80	?	*	*			022-3L
2770.00	cut	Sltst : brn gy to m gy	20		*	**		*	*			10		*	*			70		*	*			024-2L
2800.00	cut	Sh/Clst: brn gy to ol gy, m gy to m gn	10		*	*						20		*	*			70		*	*			028-3L
2945.00	cut	Sh/Clst: gy blk, brn blk, ol gy, m drk gy	50		*	**	**		*	*		20		*	*			30	*	*	*			049-2L
2951.00	cut	Sh/Clst: gy blk, brn gy to brn blk, ol gy, m drk gy	50		*	**	**		*	*		20		*	*			30	*	*	*			050-2L
2957.00	cut	gy st: gy blk, brn blk to brn gy, ol gy, lt brn gy, lt ol gy, m drk	70		*	**	*		*			10	?	*	*			20	*	*	*			051-2L

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

Depth unit of measure: m

Depth	Typ	Lithology	L	A	L	S	C	D	I	S	I	M	S	V	C	V	A	Sample										
			I	m	i	p	u	R	A	A	B	N	F	e	n	c	B		I	T	e	l	D	r				
			P	o	p	/	t	e	l	n	c	r	i	R	s	F	D	r	e	t	R	I	n	n	t	V	V	
			T	r	D	P	i	s	g	o	r	t	T	i	u	s	e	t	n	o	I	%	n	n	t	V	V	
			%	L	t	l	l	n	e	l	t	L	%	n	s	t	n	o	I	%	n	n	t	V	V			
2963.00	cut	gy st: gy blk, brn blk to brn gy, ol gy, lt brn gy, lt ol gy, m drk	50	*	*	**		**					10	*	*					40	*	*	*				052-2L	
2972.00	cut	Sh/Clst: brn gy to brn blk, ol gy, m gy to m drk gy	40	*	*	*		*					10	*	**					50		**	*				053-2L	
2990.00	cut	Sh/Clst: brn gy to brn blk, ol gy to ol blk	25		*	*		**	*				10	*	**					65	*	**	*				056-2L	
2996.00	cut	Sh/Clst: brn gy to brn blk, ol gy to ol blk	60	*	*	**		**					10		*					30		*	*				057-2L	
3001.00	cut	Sh/Clst: brn gy, ol gy, drk gn gy, m drk gy	15		*	**							15	*	*					70	*	*	*				058-3L	
3014.00	cut	Sh/Clst: brn gy, ol gy, drk gn gy, m drk gy	NDP										NDP							NDP							060-3L	
3032.00	cut	Sh/Clst: brn gy, ol gy, drk gn gy, m drk gy	30		*	*							20	*	*					50	*	*					061-3L	
3110.00	cut	Sh/Clst: brn gy, ol gy, m drk gy	20		*	*		*					10		*					70		*	?				073-2L	
3116.00	cut	Sh/Clst: brn gy, ol gy, m drk gy	40	*	*	*		?					10		*					50		*	*				075-2L	
3122.00	cut	Sh/Clst: brn gy, ol gy, m drk gy	40	*	*	*		?					10		*					50		*	*				074-2L	

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

Depth unit of measure: m

Depth	Typ	Lithology	C1	C2-C5	C6-C14	C15+	S2 from Rock-Eval	Sample
1530.00	cut	Sh/Clst: brn blk	5.96	18.25	46.15	29.64	9.10	005-1L
2380.00	cut	Sh/Clst: brn gy to m gy	4.32	20.15	49.98	25.55	2.75	012-1L
2740.00	cut	Sh/Clst: brn gy, ol gy, m drk gy	3.81	18.82	45.09	32.29	4.44	018-4L
2770.00	cut	Sltst : brn gy to m gy	4.81	20.29	45.40	29.50	2.49	024-2L
2785.00	cut	Sh/Clst: brn gy, ol gy, m gy to drk gy	13.05	10.79	52.96	23.21	3.52	026-2L
2915.00	cut	Coal : blk to brn blk	8.23	14.78	29.01	47.98	63.84	076-1L
2945.00	cut	Sh/Clst: gy blk, brn blk, ol gy, m drk gy	3.20	14.66	34.31	47.83	16.10	049-2L
2951.00	cut	Sh/Clst: gy blk, brn gy to brn blk, ol gy, m drk gy	3.24	10.65	32.57	53.53	19.33	050-2L
2957.00	cut	Sh/Clst: gy blk, brn blk to brn gy, ol gy, lt brn gy, lt ol gy, m drk gy	3.68	13.75	39.72	42.85	26.35	051-2L
2963.00	cut	Coal : blk to brn blk	8.74	17.36	24.60	49.30	45.87	052-1L
2963.00	cut	Sh/Clst: gy blk, brn blk to brn gy, ol gy, lt brn gy, lt ol gy, m drk gy	5.83	13.34	42.31	38.52	5.30	052-2L

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

Depth unit of measure: m

Depth	Typ	Lithology	C1	C2-C5	C6-C14	C15+	S2 from Rock-Eval	Sample
2972.00	cut	Sh/Clst: brn gy to brn blk, ol gy, m gy to m drk gy	3.35	13.91	38.76	43.99	14.97	053-2L
2984.00	cut	Coal : blk to brn blk	9.94	19.13	21.94	49.00	31.87	055-1L
2990.00	cut	Sh/Clst: brn gy to brn blk, ol gy to ol blk	5.31	26.44	52.74	15.51	4.05	056-2L
2996.00	cut	Sh/Clst: brn gy to brn blk, ol gy to ol blk	3.09	13.98	33.08	49.85	10.25	057-2L
3001.00	cut	Sh/Clst: brn gy, ol gy, drk gn gy, m drk gy	5.79	29.88	54.66	9.68	1.66	058-3L
3014.00	cut	Sh/Clst: brn gy, ol gy, drk gn gy, m drk gy	7.19	38.91	45.62	8.28	1.84	060-3L
3110.00	cut	Sh/Clst: brn gy, ol gy, m drk gy	5.30	27.83	56.24	10.64	1.43	073-2L
3116.00	cut	Sh/Clst: brn gy, ol gy, m drk gy	5.56	26.20	53.23	15.01	2.73	075-2L
3122.00	cut	Sh/Clst: brn gy, ol gy, m drk gy	3.79	19.71	49.22	27.28	2.64	074-2L