

STORD BASIN GAS
EXPLORATION STUDY

Geochemical Analysis
of Well NOCS 18/10-1

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INTRODUCTION

This well is situated in the centre of the Egersund Sub-Basin of the Norwegian-Danish Basin to the south-east of the Sele High.

A total of 168 samples was collected from the Norwegian Petroleum Directorate (NPD) in Stavanger. These samples covered the depth range 1880 m to 2800 m (Cretaceous to Jurassic, Bryne Formation) and were at approximately 6 to 10 m intervals. A careful selection of samples was made for screening analysis (TOC and Rock-Eval pyrolysis). 99 samples were chosen for this analysis. On the basis of the Rock-Eval results, samples were chosen for further analysis as indicated below.

Thermal extraction - pyrolysis gas chromatography	31 samples
Extraction, MPLC fractionation, saturated and aromatic hydrocarbon gas chromatography	6 samples
Vitrinite reflectance microscopy	16 samples
Visual kerogen analysis	10 samples
Gas chromatography - Mass spectrometry	4 samples

The results of these analyses are given in tables 1 to 8.

Figure 1 shows litho-variations based on wireline logs and some of the screening data for the analysed section of the well.

Table 1 : Lithology description for well NOCS 18/10-1

Depth unit of measure: m

Depth	Type		Trb	Sample
Int Cvd	TOC%	% Lithology description		
2260.00				056
	1.86	100 Sh/Clst: ol gy, m gy, drk gy, calc, slt tr Cont : Coal-ad, prp, fib		056-1 056-2
2270.00				057
	1.96	100 Sh/Clst: ol gy, calc, slt tr Cont : prp, dd, tar-ad		057-1 057-2
2280.00				058
	2.04	100 Sh/Clst: ol gy, calc, slt tr Cont : prp, dd, tar-ad		058-1 058-2
2290.00				059
	2.25	95 Sh/Clst: ol gy, slt 5 Cont : prp, dd, fib, tar-ad		059-1 059-2
2300.00				060
	3.57	95 Sh/Clst: ol gy, slt 5 Cont : prp, dd, fib, tar-ad tr Ca : w		060-1 060-2 060-3
2310.00				061
	4.53	95 Sh/Clst: ol gy, slt 5 Cont : prp, dd, fib, tar-ad tr Ca : w		061-1 061-2 061-3
2320.00				062
	2.10	100 Sh/Clst: ol gy, slt tr Cont : prp, dd, fib, tar-ad tr Ca : w		062-1 062-2 062-3

Table 1 : Lithology description for well NOCS 18/10-1

Depth unit of measure: m

Depth	Type		Trb	Sample
Int Cvd	TOC%	% Lithology description		
2330.00				063
	2.38	85 Sh/Clst: ol gy to m drk gy, slt		063-1
		10 Cont : Coal-ad, prp, dd, fib, tar-ad		063-2
		5 Sltst : brn, calc		063-4
		tr Ca : w		063-3
2332.00				064
	2.29	75 Sh/Clst: ol gy to m drk gy, slt		064-1
		20 Cont : Coal-ad, prp, dd, fib, tar-ad		064-2
		5 Sltst : brn, calc		064-4
		tr Ca : w		064-3
2339.00				065
	2.31	65 Sh/Clst: ol gy to m drk gy, slt		065-1
		30 Cont : Coal-ad, prp, dd, fib, tar-ad		065-2
		5 Sltst : brn, calc		065-4
		tr Ca : w		065-3
2343.00				066
	2.38	60 Sh/Clst: ol gy to m drk gy, slt		066-1
		30 Cont : Coal-ad, cem, prp, dd, fib, tar-ad		066-2
		5 Ca : w		066-3
		5 Sltst : brn, calc		066-4
2350.00				067
	2.50	70 Sh/Clst: ol gy to m drk gy, slt		067-1
		20 Cont : Coal-ad, cem, prp, dd, fib, tar-ad		067-2
	6.12	10 Sltst : brn, calc		067-4
		tr Ca : w		067-3

Table 1 : Lithology description for well NOCS 18/10-1

Depth unit of measure: m

Depth	Type		Trb	Sample
Int Cvd	TOC%	% Lithology description		
2354.00				068
	2.58	70 Sh/Clst: ol gy to m drk gy, slt		068-1
		30 Cont : Coal-ad, cem, prp, dd, fib, tar-ad		068-2
		tr Ca : w		068-3
2358.00				069
	3.46	80 Sh/Clst: ol gy to m drk gy, mic		069-1
		10 Cont : Coal-ad, cem, prp, dd, fib, tar-ad		069-2
		10 Ca : w to dsk y brn, dol		069-3
2366.00				070
	3.17	80 Sh/Clst: ol gy to drk gy, mic		070-1
		10 Cont : Coal-ad, cem, prp, dd, fib, tar-ad		070-2
		10 Ca : w to dsk y brn, dol		070-3
2374.00				071
	2.79	80 Sh/Clst: drk gy to brn blk, mic		071-1
		10 Cont : Coal-ad, cem, prp, dd, fib, tar-ad		071-2
		10 Ca : w to dsk y brn, dol		071-3
2382.00				072
	3.14	80 Sh/Clst: drk gy to brn blk, mic		072-1
		10 Cont : Coal-ad, cem, prp, dd, fib, tar-ad		072-2
		10 Ca : w to dsk y brn, dol		072-3

Table 1 : Lithology description for well NOCS 18/10-1

Depth unit of measure: m

Depth	Type		Trb	Sample	
Int	Cvd	TOC%	%	Lithology description	
2391.00				073	
	2.92	90	Sh/Clst:	drk gy to brn blk, mic	073-1
		5	Ca	: w to dsk y brn, dol	073-2
		5	Cont	: Coal-ad, cem, prp, dd, fib, tar-ad	073-3
2395.00				074	
	2.32	80	Sh/Clst:	drk gy to brn blk, mic	074-1
		10	Ca	: w to dsk y brn, dol	074-2
		10	Cont	: Coal-ad, cem, prp, dd, fib, tar-ad	074-3
2400.00				075	
	4.22	90	Sh/Clst:	drk gy to brn blk, mic	075-1
		5	Ca	: w to dsk y brn, dol	075-2
		5	Cont	: Coal-ad, cem, prp, dd, fib, tar-ad	075-3
		tr	Other	: pyr	075-4
2410.00				076	
	4.20	50	Sh/Clst:	gy blk to brn blk, mic	076-1
	1.56	40	Ca	: dsk y brn, dol	076-2
		10	Cont	: Coal-ad, prp, fib, evap	076-3
		tr	Coal		076-4
2420.00				077	
	63.43	100	Coal		077-1
		tr	Ca	: dsk y brn, dol	077-2

Table 1 : Lithology description for well NOCS 18/10-1

Depth unit of measure: m

Depth	Type		Trb	Sample
Int Cvd	TOC%	%		
Lithology description				
2496.00				078
	2.81	40	Sh/Clst: lt gy to m gy, drk gy to brn	078-3
	69.50	30	Coal	078-1
	0.31	30	S/Sst : w, lt gy, rnd, ang	078-2
		tr	Cont : fib, tar-ad	078-4
2500.00				079
	0.19	90	S/Sst : w, f, crs, rnd, ang	079-1
	4.99	5	Sh/Clst: m drk gy	079-2
		5	Cont : Coal-ad, bar, fib, tar-ad	079-3
2504.00				080
		70	S/Sst : w, f, crs, rnd, ang	080-1
	4.99	20	Sh/Clst: m drk gy	080-2
		10	Cont : Coal-ad, bar, fib, tar-ad	080-3
		tr	Ca	080-4
2510.00				081
		60	S/Sst : w, f, crs, rnd, ang	081-1
	5.04	30	Sh/Clst: m drk gy	081-2
		10	Cont : Coal-ad, bar, fib, tar-ad	081-3
2516.00				082
	0.17	40	S/Sst : w, f, crs, rnd, ang	082-1
	3.85	40	Sh/Clst: m drk gy	082-2
		20	Cont : Coal-ad, bar, fib, tar-ad	082-3
2520.00				083
	6.91	80	Sh/Clst: drk gy to blk, carb	083-2
		20	S/Sst : w, f, crs, rnd, ang	083-1
		tr	Cont : Coal-ad, bar, fib, tar-ad	083-3
		tr	Ca	083-4

Table 1 : Lithology description for well NOCS 18/10-1

Depth unit of measure: m

Depth	Type		Trb	Sample
Int Cvd	TOC%	% Lithology description		
2524.00				084
	5.39	40 S/Sst : w, f, crs, rnd, ang 40 Cont : Coal-ad, bar, fib, tar-ad 20 Sh/Clst: m drk gy to drk gy		084-1 084-3 084-2
2530.00				085
	6.10	40 Cont : Coal-ad, bar, fib, tar-ad 30 S/Sst : w, f, crs, rnd, ang 30 Sh/Clst: m drk gy to drk gy		085-3 085-1 085-2
2536.00				086
	4.61	50 S/Sst : brn, red, w 40 Sh/Clst: m drk gy to drk gy 10 Cont : Coal-ad, bar, fib, tar-ad tr Ca : lt brn		086-1 086-2 086-3 086-4
2540.00				087
		90 S/Sst : brn, red, w, rnd, ang, l 10 Cont : Coal-ad, Mica-ad, bar, fib, tar-ad tr Sh/Clst: m drk gy to drk gy		087-1 087-3 087-2
2544.00				088
	23.37	50 S/Sst : brn, red, w, rnd, ang, l 40 Cont : Coal-ad, Mica-ad, bar, fib, tar-ad 5.88 10 Sh/Clst: m drk gy to drk gy		088-1 088-3 088-2
2550.00				089
		90 S/Sst : brn, gn, red, w, rnd, ang, l 5 Sh/Clst: m drk gy to drk gy 5 Cont : Coal-ad, Mica-ad, bar, fib, tar-ad tr Ca tr Other : glauc		089-1 089-2 089-3 089-4 089-5

Table 1 : Lithology description for well NOCS 18/10-1

Depth unit of measure: m

Depth		Type		Trb	Sample
Int	Cvd	TOC%	%	Lithology description	
					090
			85	S/Sst : brn, gn, red, w, rnd, ang, l	090-1
			10	Cont : Coal-ad, Mica-ad, bar, fib, tar-ad	090-3
			5	Sh/Clst: m drk gy to drk gy	090-2
					091
			85	S/Sst : brn, gn, red, w, rnd, ang, l	091-1
			10	Cont : Coal-ad, Mica-ad, bar, fib, tar-ad	091-3
			5	Sh/Clst: m drk gy to drk gy	091-2
			tr	Other : pyr	091-4
					092
			75	S/Sst : brn, gn, red, w, mic, rnd, ang, l	092-1
			15	Cont : Coal-ad, Mica-ad, bar, fib, tar-ad	092-3
		5.19	10	Sh/Clst: m drk gy to drk gy	092-2
					093
			50	S/Sst : brn, gn, red, w	093-1
			40	Cont : Coal-ad, cem, prp, dd, fib, tar-ad	093-2
		4.39	10	Sh/Clst: m drk gy to drk gy	093-3
			tr	Sltst	093-4
					094
			50	Cont : Coal-ad, cem, prp, dd, fib, tar-ad	094-2
			30	S/Sst : brn, gn, red, w	094-1
		3.80	20	Sh/Clst: m drk gy to drk gy	094-3
			tr	Sltst	094-4

Table 1 : Lithology description for well NOCS 18/10-1

Depth unit of measure: m

Depth	Type	Trb	Sample
Int Cvd	TOC%	%	Lithology description
2580.00			095
		80 S/Sst	: brn, gn, red, w, crs, ang, l 095-1
		20 Cont	: cem, tar-ad 095-2
		tr Sh/Clst:	m drk gy to drk gy 095-3
		tr Ca	095-4
2586.00			096
		80 S/Sst	: brn, gn, red, w, crs, ang, l 096-1
		15 Cont	: Mica-ad, cem, fib, tar-ad 096-2
		5 Sh/Clst:	drk gy 096-3
		tr Ca	096-4
		tr Other	: pyr 096-5
2590.00			097
		60 S/Sst	: brn, gn, red, w, crs, ang, l 097-1
		30 Cont	: Mica-ad, cem, fib, tar-ad 097-2
2.80		10 Sh/Clst:	drk gy 097-3
		tr Ca	097-4
		tr Other	: pyr, mic, glauc 097-5
		tr Sltst	097-6
2596.00			098
		60 S/Sst	: gn, w, red brn, ang, l 098-1
		20 Cont	: Mica-ad, cem, fib, tar-ad 098-2
3.80		20 Sh/Clst:	drk gy 098-3
		tr Sh/Clst:	red brn 098-4
		tr Other	: pyr, mic, glauc 098-5
		tr Ca	098-6
2600.00			099
		70 S/Sst	: gn, w, red brn, ang, l 099-1
		20 Cont	: Mica-ad, cem, fib, tar-ad 099-2
3.34		10 Sh/Clst:	drk gy 099-3
		tr Sh/Clst:	red brn 099-4
		tr Ca	099-5

Table 1 : Lithology description for well NOCS 18/10-1

Depth unit of measure: m

Depth	Type		Trb	Sample
Int Cvd	TOC%	% Lithology description		
2604.00				100
	4.54	70 S/Sst : gn, w, red brn, ang, l 20 Cont : Mica-ad, cem, fib, tar-ad 10 Sh/Clst: drk gy		100-1 100-2 100-3
2610.00				101
	4.06	80 S/Sst : gn, w, red brn, ang, l 10 Cont : Mica-ad, cem, fib, tar-ad 10 Sh/Clst: drk gy		101-1 101-2 101-3
2620.00				102
	5.85	80 S/Sst : gn, w, red brn, ang, l 10 Cont : Mica-ad, cem, fib, tar-ad 10 Sh/Clst: drk gy tr Sltst : lt brn gy tr Ca		102-1 102-2 102-3 102-4 102-5
2624.00				103
		95 S/Sst : gn, w, red brn, crs, ang, l 5 Sh/Clst: drk gy tr Cont : Mica-ad, cem, fib, tar-ad		103-1 103-3 103-2
2630.00				104
		90 S/Sst : gn, w, red brn, crs, ang, l 10 Cont : Mica-ad, cem, fib, tar-ad tr Sh/Clst: drk gy tr Sltst : lt brn gy		104-1 104-2 104-3 104-4
2636.00				105
		90 S/Sst : gn, w, red brn, crs, ang, l 5 Cont : Mica-ad, cem, fib, tar-ad 5 Sh/Clst: drk gy tr Sltst : lt brn gy		105-1 105-2 105-3 105-4

Table 1 : Lithology description for well NOCS 18/10-1

Depth unit of measure: m

Depth	Type		Trb	Sample
Int Cvd	TOC%	% Lithology description		
2640.00				106
		90 S/Sst : gn, w, red brn, crs, ang, 1		106-1
		5 Cont : Mica-ad, cem, fib, tar-ad		106-2
		5 Sh/Clst: drk gy		106-3
		tr Sltst : lt brn gy		106-4
2644.00				107
		90 S/Sst : gn, w, red brn, crs, ang, 1		107-1
		5 Cont : Mica-ad, cem, fib, tar-ad		107-2
		5 Sh/Clst: drk gy		107-3
		tr Sltst : lt brn gy		107-4
		tr Sh/Clst: red, slt, s		107-5
2650.00				108
		90 S/Sst : gn, w, red brn, crs, ang, 1		108-1
		5 Cont : Mica-ad, cem, fib, tar-ad		108-2
		5 Sh/Clst: drk gy		108-3
		tr Sltst : lt brn gy		108-4
		tr Sh/Clst: red, slt, s		108-5
2656.00				109
		90 S/Sst : gn, w, red brn, crs, ang, 1		109-1
		5 Sh/Clst: drk gy		109-3
		5 Sh/Clst: red brn, slt, s		109-4
		tr Cont : Mica-ad, cem, fib, tar-ad		109-2
2660.00				110
	0.26	90 S/Sst : gn, w, red brn, crs, ang, 1		110-1
		10 Sh/Clst: red brn, slt, s		110-4
		tr Cont : Mica-ad, cem, fib, tar-ad		110-2
		tr Sh/Clst: drk gy		110-3

Table 1 : Lithology description for well NOCS 18/10-1

Depth unit of measure: m

Depth	Type		Trb	Sample
Int Cvd	TOC%	% Lithology description		
2664.00				111
		85 S/Sst : gn, w, red brn, crs, ang, l		111-1
		10 Cont : Mica-ad, cem, fib, tar-ad		111-2
		5 Sh/Clst: red brn, slt, s		111-4
		tr Sh/Clst: drk gy		111-3
2670.00				112
		80 S/Sst : gn, w, red brn, crs, ang, l		112-1
		10 Cont : Mica-ad, cem, fib, tar-ad		112-2
	0.33	10 Sh/Clst: red brn, slt, s		112-4
		tr Sh/Clst: drk gy		112-3
2676.00				113
		90 S/Sst : gn, w, red brn, crs, ang, l		113-1
		10 Cont : Mica-ad, cem, fib, tar-ad		113-2
		tr Sh/Clst: drk gy		113-3
		tr Sh/Clst: red brn, slt, s		113-4
2680.00				114
		85 S/Sst : pi, w, rnd, ang, l		114-1
	0.07	10 Sltst : red brn		114-2
		5 Sh/Clst: drk gy		114-3
		tr Cont : Mica-ad, prp, fib, tar-ad		114-4
2684.00				115
		85 S/Sst : pi, w, rnd, ang, l		115-1
		5 Sltst : red brn		115-2
		5 Sh/Clst: drk gy		115-3
		5 Cont : Mica-ad, prp, fib, tar-ad		115-4

Table 1 : Lithology description for well NOCS 18/10-1

Depth unit of measure: m

Depth	Type	Trb	Sample
Int Cvd	TOC%		

	%	Lithology description	

2690.00			116
	90	S/Sst : pi, w, rnd, ang, l	116-1
	5	Sltst : red brn	116-2
	5	Cont : Coal-ad, Mica-ad, prp, fib, tar-ad	116-4
	tr	Sh/Clst: drk gy	116-3
2696.00			117
	90	S/Sst : pi, w, rnd, ang, l	117-1
	5	Sltst : red brn	117-2
	5	Cont : Coal-ad, Mica-ad, prp, fib, tar-ad	117-4
	tr	Sh/Clst: drk gy	117-3
2700.00			118
	80	S/Sst : pi, w, rnd, ang, l	118-1
	20	Cont : Coal-ad, Mica-ad, prp, fib, tar-ad	118-4
	tr	Sltst : red brn	118-2
	tr	Sh/Clst: drk gy	118-3
2704.00			119
	85	S/Sst : pi, w, rnd, ang, l	119-1
	5	Sh/Clst: red brn, slt, s	119-2
	5	Sh/Clst: drk gy	119-3
	5	Cont : Coal-ad, Mica-ad, prp, fib, tar-ad	119-4
2710.00			120
	100	S/Sst : pi, w, rnd, ang, l	120-1
	tr	Sh/Clst: drk gy	120-2
	tr	Cont : Coal-ad, Mica-ad, prp, fib, tar-ad	120-3
	tr	Sltst : dsk y brn	120-4

Table 1 : Lithology description for well NOCS 18/10-1

Depth unit of measure: m

Depth	Type	Trb	Sample
Int Cvd	TOC%	%	Lithology description
2716.00			121
		100	S/Sst : pi, w, rnd, ang, l
		tr	Sh/Clst: drk gy
		tr	Cont : Coal-ad, Mica-ad, prp, fib, tar-ad
		tr	Sltst : dsk y brn
2720.00			122
	0.19	90	S/Sst : pi, w, rnd, ang, l
		10	Sh/Clst: red brn
		tr	Sh/Clst: drk gy
		tr	Cont : Coal-ad, Mica-ad, prp, fib, tar-ad
		tr	Sltst : dsk y brn
2724.00			123
		75	S/Sst : pi, w, rnd, ang, l
		10	Cont : Coal-ad, Mica-ad, prp, fib, tar-ad
	0.23	10	Sh/Clst: red brn
		5	Sh/Clst: drk gy
2730.00			124
		90	S/Sst : pi, w, rnd, ang, l
		5	Cont : Coal-ad, Mica-ad, prp, fib, tar-ad
		5	Sh/Clst: red brn
		tr	Sh/Clst: drk gy
		tr	Sltst
2736.00			125
		80	S/Sst : pi, w, rnd, ang, l
		10	Cont : Coal-ad, Mica-ad, prp, fib, tar-ad
		5	Sh/Clst: drk gy
		5	Sh/Clst: red brn

Table 1 : Lithology description for well NOCS 18/10-1

Depth unit of measure: m

Depth	Type		Trb	Sample
Int Cvd	TOC%	% Lithology description		
2740.00				126
		80 S/Sst : pi, w, rnd, ang, l		126-1
		10 Sh/Clst: drk gy		126-2
		5 Sh/Clst: red brn		126-4
		5 Coal		126-5
		tr Cont : fib		126-3
2744.00				127
		90 S/Sst : pi, w, rnd, ang, l		127-1
		5 Cont : Coal-ad, Mica-ad, fib, tar-ad		127-3
		5 Sh/Clst: red brn		127-4
		tr Sh/Clst: drk gy		127-2
2750.00				128
		85 S/Sst : pi, w, rnd, ang, l		128-1
		10 Cont : Coal-ad, Mica-ad, fib, tar-ad		128-3
		5 Sltst : red brn, cly		128-4
		tr Sh/Clst: drk gy		128-2
2756.00				129
		95 S/Sst : pi, w, rnd, ang, l		129-1
		5 Sh/Clst: v col		129-2
		tr Cont : Coal-ad, Mica-ad, fib, tar-ad		129-3
2760.00				130
		95 S/Sst : pi, w, rnd, ang, l		130-1
		5 Sltst : red brn, cly		130-2
		tr Cont : Coal-ad, Mica-ad, fib, tar-ad		130-3
		tr Sh/Clst: drk gy		130-4

Table 1 : Lithology description for well NOCS 18/10-1

Depth unit of measure: m

Depth	Type		Trb	Sample
Int Cvd	TOC%	% Lithology description		
2764.00				131
		95 S/Sst : pi, w, rnd, ang, l		131-1
		5 Sltst : red brn, cly		131-2
		tr Cont : Coal-ad, Mica-ad, fib, tar-ad		131-3
		tr Sh/Clst: drk gy		131-4
2770.00				132
		95 S/Sst : pi, w, rnd, ang, l		132-1
		5 Sltst : red brn, cly		132-2
		tr Cont : Coal-ad, Mica-ad, fib, tar-ad		132-3
		tr Sh/Clst: drk gy		132-4
2776.00				133
		95 S/Sst : pi, w, rnd, ang, l		133-1
		5 Sltst : red brn, cly		133-2
		tr Cont : Coal-ad, Mica-ad, fib, tar-ad		133-3
		tr Sh/Clst: drk gy		133-4
2780.00				134
	0.25	85 S/Sst : pi, w, rnd, ang, l		134-1
		10 Sltst : red brn, cly		134-2
		5 Sh/Clst: drk gy		134-4
		tr Cont : Coal-ad, Mica-ad, fib, tar-ad		134-3
2784.00				135
		85 S/Sst : pi, w, rnd, ang, l		135-1
		10 Sltst : red brn, cly		135-2
		5 Sh/Clst: drk gy		135-4
		tr Cont : Coal-ad, Mica-ad, fib, tar-ad		135-3

Table 1 : Lithology description for well NOCS 18/10-1

Depth unit of measure: m

Depth	Type	Trb	Sample
Int Cvd	TOC%	%	Lithology description
2790.00			136
	0.13	85 S/Sst : pi, w, rnd, ang, l	136-1
		10 Sltst : red brn, cly	136-2
		5 Sh/Clst: drk gy	136-4
		tr Cont : Coal-ad, Mica-ad, fib, tar-ad	136-3
2796.00			137
		90 S/Sst : pi, w, rnd, ang, l	137-1
		5 Sltst : red brn, cly	137-2
		5 Sh/Clst: drk gy	137-4
		tr Cont : Coal-ad, Mica-ad, fib, tar-ad	137-3
2800.00			138
		85 S/Sst : pi, w, rnd, ang, l	138-1
		10 Cont : Coal-ad, Mica-ad, fib, tar-ad	138-2
		5 Sh/Clst: v col	138-3
		tr Other : pyr	138-4

Table 2 : Rock-Eval table for well NOCS 18/10-1

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
1880.00	cut	Sh/Clst: lt gy	0.24	0.40	0.72	0.56	0.61	66	118	0.6	0.38	423	018-1
1880.00	cut	Sltst : lt brn, lt brn gy	0.12	0.20	3.96	0.05	0.45	44	880	0.3	0.38	414	018-2
1890.00	cut	Sh/Clst: lt gy	0.20	0.41	0.68	0.60	0.52	79	131	0.6	0.33	425	019-1
1890.00	cut	Sltst : lt brn, lt brn gy	0.06	0.19	4.56	0.04	0.34	56	1341	0.3	0.24	479	019-2
1900.00	cut	Sh/Clst: lt gn gy	0.13	0.27	0.53	0.51	0.45	60	118	0.4	0.32	424	020-1
1910.00	cut	Sh/Clst: lt gn gy	0.11	0.31	0.56	0.55	0.42	74	133	0.4	0.26	421	021-1
1910.00	cut	Sltst : lt brn red	0.03	0.25	5.40	0.05	0.30	83	1800	0.3	0.11	438	021-2
1920.00	cut	Sh/Clst: lt gn gy	0.16	0.32	0.77	0.42	0.45	71	171	0.5	0.33	423	022-1
1920.00	cut	Sltst : lt brn red	0.06	0.29	5.68	0.05	0.38	76	1495	0.3	0.17	479	022-2
1930.00	cut	Sh/Clst: lt gn gy	0.18	0.31	0.64	0.48	0.45	69	142	0.5	0.37	424	023-1
1940.00	cut	Sh/Clst: lt gn gy	0.14	0.29	0.57	0.51	0.46	63	124	0.4	0.33	423	024-1
1950.00	cut	Sh/Clst: lt gn gy	0.23	0.45	0.83	0.54	0.53	85	157	0.7	0.34	424	025-1
1970.00	cut	Sh/Clst: lt gn gy	0.14	0.32	0.67	0.48	0.53	60	126	0.5	0.30	422	026-1
1980.00	cut	Sh/Clst: lt gn gy	0.21	0.47	0.74	0.64	0.57	82	130	0.7	0.31	427	027-1
1990.00	cut	Sh/Clst: lt gn gy	0.23	0.37	0.97	0.38	0.63	59	154	0.6	0.38	423	028-1

Table 2 : Rock-Eval table for well NOCS 18/10-1

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
1990.00	cut	Sltst : brn, red, or	0.16	0.20	6.96	0.03	0.57	35	1221	0.4	0.44	445	028-2
2000.00	cut	Sh/Clst: lt gn gy	0.24	0.49	0.63	0.78	0.56	88	113	0.7	0.33	427	029-1
2010.00	cut	Sh/Clst: lt gn gy	0.29	0.62	0.70	0.89	0.64	97	109	0.9	0.32	426	030-1
2020.00	cut	Sh/Clst: lt gn gy	0.33	0.72	0.80	0.90	0.67	107	119	1.1	0.31	427	031-1
2025.00	cut	Sh/Clst: m gy	0.34	0.90	0.84	1.07	0.86	105	98	1.2	0.27	430	032-1
2030.00	cut	Sh/Clst: m gy	0.33	1.05	0.95	1.11	0.89	118	107	1.4	0.24	428	033-1
2040.00	cut	Sh/Clst: gn gy, lt gy to m gy	0.39	1.15	0.72	1.60	0.92	125	78	1.5	0.25	429	034-1
2050.00	cut	Sh/Clst: m gy to m drk gy	0.36	1.30	0.72	1.81	0.95	137	76	1.7	0.22	429	035-1
2060.00	cut	Sh/Clst: m gy to m drk gy	0.34	1.34	0.75	1.79	0.96	140	78	1.7	0.20	430	036-1
2070.00	cut	Sh/Clst: m gy to m drk gy	0.34	1.25	0.88	1.42	0.93	134	95	1.6	0.21	429	037-1
2080.00	cut	Sh/Clst: m gy to m drk gy	0.31	1.10	0.91	1.21	0.87	126	105	1.4	0.22	428	038-1
2090.00	cut	Sh/Clst: m gy to m drk gy	0.40	1.35	1.00	1.35	0.14	964	714	1.8	0.23	429	039-1
2100.00	cut	Sh/Clst: m gy to m drk gy	0.41	1.14	0.64	1.78	0.98	116	65	1.5	0.26	427	040-1
2110.00	cut	Sh/Clst: m gy to m drk gy	0.33	1.08	0.68	1.59	0.97	111	70	1.4	0.23	426	041-1
2120.00	cut	Sh/Clst: m gy to m drk gy	0.36	1.15	0.75	1.53	0.94	122	80	1.5	0.24	430	042-1

Table 2 : Rock-Eval table for well NOCS 18/10-1

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
2130.00	cut	Sh/Clst: m gy to m drk gy	0.37	1.06	0.89	1.19	0.96	110	93	1.4	0.26	429	043-1
2140.00	cut	Sh/Clst: gn gy, lt gy to m gy	0.30	1.21	0.90	1.34	0.96	126	94	1.5	0.20	428	044-1
2150.00	cut	Sh/Clst: gn gy, lt gy to m gy	0.46	1.20	0.83	1.45	0.94	128	88	1.7	0.28	429	045-1
2150.00	cut	Sltst : lt brn	0.09	0.34	3.01	0.11	0.30	113	1003	0.4	0.21	458	045-2
2160.00	cut	Sh/Clst: gn gy, lt gy to m gy	0.25	0.76	0.96	0.79	0.79	96	122	1.0	0.25	429	046-1
2170.00	cut	Sh/Clst: m drk gy to drk gy	0.18	0.84	0.78	1.08	0.83	101	94	1.0	0.18	430	047-1
2180.00	cut	Sh/Clst: m drk gy to drk gy	0.31	0.93	0.86	1.08	0.95	98	91	1.2	0.25	429	048-1
2190.00	cut	Sh/Clst: m drk gy to drk gy	0.41	1.24	1.05	1.18	1.02	122	103	1.6	0.25	429	049-1
2200.00	cut	Sh/Clst: drk gy	0.41	1.37	0.88	1.56	1.14	120	77	1.8	0.23	430	050-1
2210.00	cut	Sh/Clst: drk gy	0.34	1.11	0.96	1.16	1.03	108	93	1.5	0.23	429	051-1
2220.00	cut	Sh/Clst: m lt gy to drk gy	0.31	1.18	0.93	1.27	1.05	112	89	1.5	0.21	430	052-1
2230.00	cut	Sh/Clst: m lt gy to drk gy	0.30	1.34	0.75	1.79	1.14	118	66	1.6	0.18	430	053-1
2240.00	cut	Sh/Clst: ol gy to drk gy, m lt gy	0.31	1.29	0.73	1.77	1.10	117	66	1.6	0.19	429	054-1
2250.00	cut	Sh/Clst: ol gy to drk gy, m lt gy	0.82	3.25	0.68	4.78	1.95	167	35	4.1	0.20	426	055-1
2260.00	cut	Sh/Clst: ol gy, m gy, drk gy	0.74	3.56	0.64	5.56	1.86	191	34	4.3	0.17	431	056-1

Table 2 : Rock-Eval table for well NOCS 18/10-1

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
2270.00	cut	Sh/Clst: ol gy	0.71	3.74	0.61	6.13	1.96	191	31	4.4	0.16	429	057-1
2280.00	cut	Sh/Clst: ol gy	0.72	3.61	0.73	4.95	2.04	177	36	4.3	0.17	426	058-1
2290.00	cut	Sh/Clst: ol gy	0.56	5.39	0.58	9.29	2.25	240	26	5.9	0.09	427	059-1
2300.00	cut	Sh/Clst: ol gy	0.62	10.46*	0.81	12.91	3.57	293	23	11.1	0.06	423	060-1
2310.00	cut	Sh/Clst: ol gy	0.99	12.41	1.19	10.43	4.53	274	26	13.4	0.07	421	061-1
2320.00	cut	Sh/Clst: ol gy	0.32	4.20	1.17	3.59	2.10	200	56	4.5	0.07	428	062-1
2330.00	cut	Sh/Clst: ol gy to m drk gy	0.66	5.31	1.10	4.83	2.38	223	46	6.0	0.11	428	063-1
2332.00	cut	Sh/Clst: ol gy to m drk gy	0.55	4.77	0.93	5.13	2.29	208	41	5.3	0.10	429	064-1
2339.00	cut	Sh/Clst: ol gy to m drk gy	0.61	5.25	0.85	6.18	2.31	227	37	5.9	0.10	431	065-1
2343.00	cut	Sh/Clst: ol gy to m drk gy	0.68	3.46	0.70	4.94	2.38	145	29	4.1	0.16	430	066-1
2350.00	cut	Sh/Clst: ol gy to m drk gy	0.57	3.74	0.64	5.84	2.50	150	26	4.3	0.13	432	067-1
2350.00	cut	Sltst : brn	0.77	6.43	1.78	3.61	6.12	105	29	7.2	0.11	426	067-4
2354.00	cut	Sh/Clst: ol gy to m drk gy	0.62	3.72	0.87	4.28	2.58	144	34	4.3	0.14	432	068-1
2358.00	cut	Sh/Clst: ol gy to m drk gy	0.66	4.38	0.87	5.03	3.46	127	25	5.0	0.13	431	069-1
2366.00	cut	Sh/Clst: ol gy to drk gy	0.72	5.06	1.02	4.96	3.17	160	32	5.8	0.12	428	070-1

Table 2 : Rock-Eval table for well NOCS 18/10-1

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
2374.00	cut	Sh/Clst: drk gy to brn blk	0.70	4.25	1.28	3.32	2.79	152	46	4.9	0.14	430	071-1
2382.00	cut	Sh/Clst: drk gy to brn blk	0.82	4.92	1.33	3.70	3.14	157	42	5.7	0.14	430	072-1
2391.00	cut	Sh/Clst: drk gy to brn blk	0.73	5.17	1.58	3.27	2.92	177	54	5.9	0.12	433	073-1
2395.00	cut	Sh/Clst: drk gy to brn blk	0.81	5.96	1.58	3.77	2.32	257	68	6.8	0.12	429	074-1
2400.00	cut	Sh/Clst: drk gy to brn blk	1.32	11.67	1.79	6.52	4.22	277	42	13.0	0.10	426	075-1
2410.00	cut	Sh/Clst: gy blk to brn blk	0.88	7.29	1.35	5.40	4.20	174	32	8.2	0.11	428	076-1
2410.00	cut	Ca : dsk y brn	0.29	0.44	3.13	0.14	1.56	28	201	0.7	0.40	421	076-2
2420.00	cut	Coal	19.09	186.59	12.95	14.41	63.43	294	20	205.7	0.09	425	077-1
2496.00	cut	Coal	15.25	208.47	12.54	16.62	69.50	300	18	223.7	0.07	421	078-1
2496.00	cut	S/Sst : w, lt gy	0.05	0.35	0.35	1.00	0.31	113	113	0.4	0.13	430	078-2
2496.00	cut	Sh/Clst: lt gy to m gy, drk gy to brn	0.72	6.13	0.89	6.89	2.81	218	32	6.9	0.11	429	078-3
2500.00	cut	S/Sst : w	0.05	-	0.75	-	0.19	-	395	0.1	1.00	420	079-1
2500.00	cut	Sh/Clst: m drk gy	1.13	7.26	1.05	6.91	4.99	145	21	8.4	0.13	429	079-2
2504.00	cut	Sh/Clst: m drk gy	0.64	9.97	1.06	9.41	4.99	200	21	10.6	0.06	426	080-2
2510.00	cut	Sh/Clst: m drk gy	0.91	8.99	1.14	7.89	5.04	178	23	9.9	0.09	428	081-2

Table 2 : Rock-Eval table for well NOCS 18/10-1

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
2516.00	cut	S/Sst : w	0.05	0.18	0.74	0.24	0.17	106	435	0.2	0.22	421	082-1
2516.00	cut	Sh/Clst: m drk gy	0.87	6.80	0.94	7.23	3.85	177	24	7.7	0.11	428	082-2
2520.00	cut	Sh/Clst: drk gy to blk	0.81	15.65	1.84	8.51	6.91	226	27	16.5	0.05	432	083-2
2524.00	cut	Sh/Clst: m drk gy to drk gy	1.14	7.90	1.78	4.44	5.39	147	33	9.0	0.13	428	084-2
2530.00	cut	Sh/Clst: m drk gy to drk gy	1.18	9.86	1.72	5.73	6.10	162	28	11.0	0.11	429	085-2
2536.00	cut	Sh/Clst: m drk gy to drk gy	1.02	8.18	1.60	5.11	4.61	177	35	9.2	0.11	428	086-2
2544.00	cut	Sh/Clst: m drk gy to drk gy	1.09	10.58	2.11	5.01	5.88	180	36	11.7	0.09	428	088-2
2544.00	cut	Cont	1.13	23.77	24.96	0.95	23.37	102	107	24.9	0.05	427	088-3
2564.00	cut	Sh/Clst: m drk gy to drk gy	1.40	8.63	2.17	3.98	5.19	166	42	10.0	0.14	429	092-2
2570.00	cut	Sh/Clst: m drk gy to drk gy	1.00	8.97	1.78	5.04	4.39	204	41	10.0	0.10	425	093-3
2576.00	cut	Sh/Clst: m drk gy to drk gy	1.04	6.63	1.94	3.42	3.80	174	51	7.7	0.14	430	094-3
2590.00	cut	Sh/Clst: drk gy	0.95	4.88	0.55	8.87	2.80	174	20	5.8	0.16	430	097-3
2596.00	cut	Sh/Clst: drk gy	1.15	6.07	0.93	6.53	3.80	160	24	7.2	0.16	430	098-3
2600.00	cut	Sh/Clst: drk gy	0.87	5.95	1.04	5.72	3.34	178	31	6.8	0.13	429	099-3
2604.00	cut	Sh/Clst: drk gy	0.82	8.62	1.21	7.12	4.54	190	27	9.4	0.09	430	100-3

Table 2 : Rock-Eval table for well NOCS 18/10-1

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
2610.00	cut	Sh/Clst: drk gy	1.01	7.76	1.62	4.79	4.06	191	40	8.8	0.12	427	101-3
2620.00	cut	Sh/Clst: drk gy	1.19	9.73	2.29	4.25	5.85	166	39	10.9	0.11	427	102-3
2660.00	cut	Sh/Clst: red brn	0.11	0.11	1.97	0.06	0.26	42	758	0.2	0.50	389	110-4
2670.00	cut	Sh/Clst: red brn	0.20	0.14	0.45	0.31	0.33	42	136	0.3	0.59	357	112-4
2680.00	cut	Sltst : red brn	0.03	0.04	0.23	0.17	0.07	57	329	0.1	0.43	348	114-2
2720.00	cut	Sh/Clst: red brn	0.15	0.07	0.22	0.32	0.19	37	116	0.2	0.68	345	122-5
2724.00	cut	Sh/Clst: red brn	0.16	0.07	0.30	0.23	0.23	30	130	0.2	0.70	344	123-4
2780.00	cut	Sltst : red brn	0.22	0.12	0.22	0.55	0.25	48	88	0.3	0.65	343	134-2
2790.00	cut	Sltst : red brn	0.13	0.06	0.19	0.32	0.13	46	146	0.2	0.68	348	136-2

Table 3 a: Weight of EOM and Chromatographic Fraction' for well NOCS 18/10-1

Depth unit of measure: m

Depth	Typ	Lithology	Rock Extracted (g)	EOM (mg)	Sat (mg)	Aro (mg)	Asph (mg)	NSO (mg)	HC (mg)	Non-HC (mg)	TOC(e) (%)	Sample
2290.00	com	* Composite sample - see table 3 e *	10.7	25.2	3.7	2.5	0.5	18.5	6.2	19.0	3.69	140-0
2310.00	com	* Composite sample - see table 3 e *	9.3	23.9	2.4	1.9	0.8	18.8	4.3	19.6	5.22	141-0
2339.00	com	* Composite sample - see table 3 e *	3.7	9.2	1.0	0.5	0.2	7.5	1.5	7.7	2.55	142-0
2366.00	com	* Composite sample - see table 3 e *	1.0	6.8	0.4	0.4	0.5	5.5	0.8	6.0	3.14	143-0
2400.00	com	* Composite sample - see table 3 e *	1.4	13.5	1.3	0.6	0.3	11.3	1.9	11.6	4.24	139-0
2604.00	com	* Composite sample - see table 3 e *	0.7	5.7	0.5	0.4	0.4	4.4	0.9	4.8	4.84	144-0

Table 3 b: Concentration of EOM and Chromatographic Fraction (wt ppm rock) for well NOCS 18/10-1

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
2290.00	com	* Composite sample - see table 3 e *	2359	346	234	46	1732	580	1779	140-0
2310.00	com	* Composite sample - see table 3 e *	2583	259	205	86	2032	464	2118	141-0
2339.00	com	* Composite sample - see table 3 e *	2520	273	136	54	2054	410	2109	142-0
2366.00	com	* Composite sample - see table 3 e *	7083	416	416	520	5729	833	6250	143-0
2400.00	com	* Composite sample - see table 3 e *	9642	928	428	214	8071	1357	8285	139-0
2604.00	com	* Composite sample - see table 3 e *	8507	746	597	597	6567	1343	7164	144-0

Table 3 c: Concentration of EOM and Chromatographic Fraction (mg/g TOC(e)) for well NOCS 18/10-1

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
2290.00	com	* Composite sample - see table 3 e *	63.94	9.39	6.34	1.27	46.94	15.73	48.21	140-0
2310.00	com	* Composite sample - see table 3 e *	49.50	4.97	3.93	1.66	38.94	8.91	40.59	141-0
2339.00	com	* Composite sample - see table 3 e *	98.85	10.74	5.37	2.15	80.58	16.12	82.73	142-0
2366.00	com	* Composite sample - see table 3 e *	225.58	13.27	13.27	16.59	182.46	26.54	199.04	143-0
2400.00	com	* Composite sample - see table 3 e *	227.43	21.90	10.11	5.05	190.36	32.01	195.42	139-0
2604.00	com	* Composite sample - see table 3 e *	175.77	15.42	12.34	12.34	135.69	27.75	148.02	144-0

Table 3 d: Composition of material extracted from the rock (%) for well NOCS 18/10-1

Depth unit of measure: m

Depth	Typ	Lithology	Sat	Aro	Asph	NSO	HC	Non-HC	Sat	HC	Sample
			EOM	EOM	EOM	EOM	EOM	EOM	EOM	Aro	
2290.00	com	* Composite sample - see table 3 e *	14.68	9.92	1.98	73.41	24.60	75.40	148.00	32.63	140-0
2310.00	com	* Composite sample - see table 3 e *	10.04	7.95	3.35	78.66	17.99	82.01	126.32	21.94	141-0
2339.00	com	* Composite sample - see table 3 e *	10.87	5.43	2.17	81.52	16.30	83.70	200.00	19.48	142-0
2366.00	com	* Composite sample - see table 3 e *	5.88	5.88	7.35	80.88	11.76	88.24	100.00	13.33	143-0
2400.00	com	* Composite sample - see table 3 e *	9.63	4.44	2.22	83.70	14.07	85.93	216.67	16.38	139-0
2604.00	com	* Composite sample - see table 3 e *	8.77	7.02	7.02	77.19	15.79	84.21	125.00	18.75	144-0

Table 3 e: List of composite samples appearing in the extraction tables for well NOCS 18/10-1

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>
2270.00	2290.00	com	140-0	is composed of:	2270.00	cut	Sh/Clst: ol gy, calc, slt	057-1
					2280.00	cut	Sh/Clst: ol gy, calc, slt	058-1
					2290.00	cut	Sh/Clst: ol gy, slt	059-1
2300.00	2310.00	com	141-0	is composed of:	2300.00	cut	Sh/Clst: ol gy, slt	060-1
					2310.00	cut	Sh/Clst: ol gy, slt	061-1
2330.00	2339.00	com	142-0	is composed of:	2330.00	cut	Sh/Clst: ol gy to m drk gy, slt	063-1
					2332.00	cut	Sh/Clst: ol gy to m drk gy, slt	064-1
					2339.00	cut	Sh/Clst: ol gy to m drk gy, slt	065-1
2354.00	2366.00	com	143-0	is composed of:	2354.00	cut	Sh/Clst: ol gy to m drk gy, slt	068-1
					2358.00	cut	Sh/Clst: ol gy to m drk gy, mic	069-1
					2366.00	cut	Sh/Clst: ol gy to drk gy, mic	070-1
2395.00	2400.00	com	139-0	is composed of:	2395.00	cut	Sh/Clst: drk gy to brn blk, mic	074-1
					2400.00	cut	Sh/Clst: drk gy to brn blk, mic	075-1
2500.00	2604.00	com	144-0	is composed of:	2500.00	cut	Sh/Clst: m drk gy	079-2
					2504.00	cut	Sh/Clst: m drk gy	080-2
					2510.00	cut	Sh/Clst: m drk gy	081-2
					2524.00	cut	Sh/Clst: m drk gy to drk gy	084-2
					2530.00	cut	Sh/Clst: m drk gy to drk gy	085-2
					2536.00	cut	Sh/Clst: m drk gy to drk gy	086-2
					2544.00	cut	Sh/Clst: m drk gy to drk gy	088-2
					2590.00	cut	Sh/Clst: drk gy	097-3
					2596.00	cut	Sh/Clst: drk gy	098-3
					2600.00	cut	Sh/Clst: drk gy	099-3

Table 3 e: List of composite samples appearing in the extraction tables for well NOCS 18/10-1

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>
				2604.00	cut	Sh/Clst: drk gy	100-3

Table 4 : Saturated Hydrocarbon Ratios for well NOCS 18/10-1

Depth unit of measure: m

Depth	Typ	Lithology	Pristane	Pristane	Pristane + Phytane	Phytane	CPI	Sample
			nC17	Phytane	nC17 + nC18	nC18		
2290.00	com	bulk	1.10	1.10	1.27	1.47	1.30	140-0
2310.00	com	bulk	1.10	1.20	1.20	1.35	1.30	141-0
2339.00	com	bulk	1.00	1.60	0.89	0.79	1.50	142-0
2366.00	com	bulk	0.80	1.80	0.71	0.55	1.30	143-0
2400.00	com	bulk	1.10	2.60	0.87	0.60	1.20	139-0
2604.00	com	bulk	0.90	2.00	0.76	0.61	1.50	144-0

Table 5 : Aromatic Hydrocarbon Ratios for well NOCS 18/10-1

Depth unit of measure: m

Depth	Typ	Lithology	MNR	DMNR	BPhR	2/1MP	MPI1	MPI2	DBT/P	4/1MDBT	(3+2)/1MDBT	Sample
2290.00	com	bulk	0.91	2.40	-	0.78	0.78	0.56	0.39	0.53	0.34	140-0
2310.00	com	bulk	0.56	1.59	-	-	0.89	-	0.69	0.24	0.22	141-0
2339.00	com	bulk	0.92	2.32	-	-	0.68	0.31	0.67	0.81	0.58	142-0
2366.00	com	bulk	0.96	2.52	-	0.78	0.57	0.43	0.49	-	-	143-0
2400.00	com	bulk	1.19	2.47	-	0.67	0.58	0.38	0.36	1.04	0.43	139-0
2604.00	com	bulk	0.92	2.20	-	0.71	0.52	0.48	0.29	1.70	0.65	144-0

Table 6 : Thermal Maturity Data for well NOCS 18/10-1

Depth unit of measure: m

Depth	Typ Lithology	Vitrinite Reflectance (%)	Number of Readings	Standard Deviation	Spore Fluorescence Colour	SCI	T _{max} (°C)	Sample
1880.00	cut bulk	0.31	21	0.05	0	-	-	018-0
1930.00	cut bulk	0.34	10	0.05	3	-	-	023-0
1990.00	cut bulk	0.30	14	0.05	3	-	-	028-0
2050.00	cut bulk	0.34	15	0.05	3	-	-	035-0
2060.00	cut Sh/Clst: m gy to m drk gy	-	-	-	-	3.5	430	036-1
2110.00	cut bulk	0.34	3	0.10	3	-	-	041-0
2140.00	cut Sh/Clst: gn gy, lt gy to m gy	-	-	-	-	3.5 - 4	428	044-1
2170.00	cut bulk	0.30	12	0.03	3	-	-	047-0
2220.00	cut bulk	0.36	8	0.05	3	-	-	052-0
2260.00	cut Sh/Clst: ol gy, m gy, drk gy	-	-	-	-	3.5 - 4	431	056-1
2280.00	cut bulk	0.37	6	0.04	3+4	-	-	058-0
2300.00	cut Sh/Clst: ol gy	-	-	-	-	3.5 - 4	423	060-1
2330.00	cut bulk	0.36	15	0.06	3+4	-	-	063-0
2339.00	cut Sh/Clst: ol gy to m drk gy	-	-	-	-	3 - 5	431	065-1

Table 6 : Thermal Maturity Data for well NOCS 18/10-1

Depth unit of measure: m

Depth	Typ Lithology	Vitrinite Reflectance (%)	Number of Readings	Standard Deviation	Spore Fluorescence Colour	SCI	T _{max} (°C)	Sample
2382.00	cut bulk	0.45	15	0.07	4	-	-	072-0
2400.00	cut Sh/Clst: drk gy to brn blk	-	-	-	-	4	426	075-1
2420.00	cut bulk	0.47	39	0.05	4	-	-	077-0
2496.00	cut bulk	0.45	19	0.04	4+5	-	-	078-0
2496.00	cut Sh/Clst: lt gy to m gy, drk gy to brn	-	-	-	-	NDP	429	078-3
2520.00	cut Sh/Clst: drk gy to blk	-	-	-	-	4.5? - 5?	432	083-2
2570.00	cut Sh/Clst: m drk gy to drk gy	-	-	-	-	4.5	425	093-3
2580.00	cut bulk	0.48	7	0.04	0	-	-	095-0
2610.00	cut Sh/Clst: drk gy	-	-	-	-	4.5?	427	101-3
2656.00	cut bulk	0.53	14	0.04	0	-	-	109-0
2724.00	cut bulk	0.48	6	0.04	5	-	-	123-0
2784.00	cut bulk	0.49	14	0.04	0	-	-	135-0

Table 7 : Visual Kerogen Composition Data for well NOCS 18/10-1

Depth unit of measure: m

Depth	Typ	Lithology	L I P T %	A m o r l %	L i p e o l %	S / P o l %	C u i c l n e	R e s i d u e	D i s s o l v e d	A r o m a t i c	B i t u m e n	I n e r t %	S u f u r e	F u n c t i o n a l	M e t h o d s	S c r e e n i n g	B i t u m e n	V I T R %	T e l l u r i e	C o l l o i d e n t i f i c a t i o n	V o l u m e	A r o m a t i c	B i t u m e n	Sample	
2060.00	cut	Sh/Clst: m gy to m drk gy	20	**	*				?			10		*					70	*	*	*			036-1
2140.00	cut	Sh/Clst: gn gy, lt gy to m gy	10	*	*							20	*	**					70	*	**	*			044-1
2260.00	cut	Sh/Clst: ol gy, m gy, drk gy	10	**	*				?			10	*	*					80		**	*			056-1
2300.00	cut	Sh/Clst: ol gy	15	**	*							5		*					80		*	*			060-1
2339.00	cut	Sh/Clst: ol gy to m drk gy	30?	*	**	*			*			30?	*	**	*				40?	*	*	*			065-1
2400.00	cut	Sh/Clst: drk gy to brn blk	15	**	*							25	*	**	*				60	*	*	*	**		075-1
2496.00	cut	Sh/Clst: lt gy to m gy, drk gy to brn	10	*	*							10	*						80	*	*	*			078-3
2520.00	cut	Sh/Clst: drk gy to blk	30	*	**							30	**	*					40	*	*	**	*		083-2
2570.00	cut	Sh/Clst: m drk gy to drk gy	30	*	**							30	**	*					40	*	*	**	*		093-3
2610.00	cut	Sh/Clst: drk gy	30	*	**	?	*		*			30	*	**	*				40	*	*	**	*		101-3

Table: 8 Pyrolysis GC Data on Non-Extracted Rock (S2 Peak) as Percentage of Total Area for Well 18/10-1

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Depth unit of measure: m

Depth	Typ	Lithology	C1	C2-C5	C6-C14	C15+	Sample
1880.00	cut	Sltst : lt brn, lt brn gy	15.64	19.63	50.27	14.46	018-2
1900.00	cut	Sh/Clst: lt gn gy	9.98	42.91	29.87	17.24	020-1
2020.00	cut	Sh/Clst: lt gn gy	6.22	33.77	35.80	24.21	031-1
2050.00	cut	Sh/Clst: m gy to m drk gy	7.04	17.04	49.02	26.90	035-1
2100.00	cut	Sh/Clst: m gy to m drk gy	6.80	32.07	51.34	9.79	040-1
2150.00	cut	Sh/Clst: gn gy, lt gy to m gy	3.37	21.20	62.58	12.86	045-1
2190.00	cut	Sh/Clst: m drk gy to drk gy	6.44	30.84	53.28	9.44	049-1
2230.00	cut	Sh/Clst: m lt gy to drk gy	9.54	21.70	59.21	9.55	053-1
2260.00	cut	Sh/Clst: ol gy, m gy, drk gy	6.60	25.75	54.15	13.49	056-1
2280.00	cut	Sh/Clst: ol gy	5.91	23.35	53.04	17.70	058-1
2300.00	cut	Sh/Clst: ol gy	1.79	12.56	41.93	43.71	060-1
2310.00	cut	Sh/Clst: ol gy	1.18	10.13	36.89	51.80	061-1
2330.00	cut	Sh/Clst: ol gy to m drk gy	3.38	18.30	44.19	34.12	063-1
2343.00	cut	Sh/Clst: ol gy to m drk gy	3.09	29.02	54.49	13.40	066-1
2350.00	cut	Sltst : brn	7.04	21.17	45.68	26.11	067-4

Table: 8 Pyrolysis GC Data on Non-Extracted Rock (S2 Peak) as Percentage of Total Area for Well 18/10-1

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Depth unit of measure: m

<u>Depth</u>	<u>Typ</u>	<u>Lithology</u>	<u>C1</u>	<u>C2-C5</u>	<u>C6-C14</u>	<u>C15+</u>	<u>Sample</u>
2354.00	cut	Sh/Clst: ol gy to m drk gy	1.45	20.83	51.72	26.00	068-1
2366.00	cut	Sh/Clst: ol gy to drk gy	1.67	18.15	48.03	32.16	070-1
2382.00	cut	Sh/Clst: drk gy to brn blk	4.47	24.35	50.46	20.72	072-1
2395.00	cut	Sh/Clst: drk gy to brn blk	1.71	17.83	49.45	31.01	074-1
2410.00	cut	Sh/Clst: gy blk to brn blk	1.16	17.52	44.80	36.52	076-1
2420.00	cut	Coal	9.68	9.20	29.01	52.11	077-1
2496.00	cut	Sh/Clst: lt gy to m gy, drk gy to brn	2.02	17.25	42.66	38.06	078-3
2504.00	cut	Sh/Clst: m drk gy	1.49	11.61	37.19	49.17	080-2
2520.00	cut	Sh/Clst: drk gy to blk	2.38	8.64	38.51	50.47	083-2
2530.00	cut	Sh/Clst: m drk gy to drk gy	3.10	18.19	43.62	35.09	085-2
2544.00	cut	Sh/Clst: m drk gy to drk gy	8.50	21.00	41.37	29.12	088-2
2564.00	cut	Sh/Clst: m drk gy to drk gy	2.76	16.07	40.97	40.21	092-2
2576.00	cut	Sh/Clst: m drk gy to drk gy	10.09	25.72	43.67	20.52	094-3

Table: 8 Pyrolysis GC Data on Non-Extracted Rock (S2 Peak) as Percentage of Total Area for Well 18/10-1

Depth unit of measure: m

Depth	Typ	Lithology	C1	C2-C5	C6-C14	C15+	Sample
2596.00	cut	Sh/Clst: drk gy	4.71	20.28	46.94	28.08	098-3
2604.00	cut	Sh/Clst: drk gy	3.65	19.79	46.97	29.59	100-3
2620.00	cut	Sh/Clst: drk gy	5.13	17.09	42.64	35.15	102-3

Table 1: Variation in Triterpane Distribution for Well NOCS 18/10-1

Depth unit of measure: m

Depth	Lithology	B/A	B/B+A	B		C/E	C/C+E	X/E	Z/E	Z/C	Z/Z+E	Q/E	E/E+F	C+D		J1		Sample
				B+E+F										C+D+E+F	D+F/C+E	J1+J2%		
2290.00	bulk	1.86	0.65	0.20	0.39	0.28	0.07	-	-	-	0.04	0.83	0.34	0.31	31.25	140-0		
2339.00	bulk	3.45	0.78	0.26	0.61	0.38	0.05	-	-	-	0.12	0.76	0.40	0.35	23.53	142-0		
2400.00	bulk	2.53	0.72	0.34	0.93	0.48	-	-	-	-	0.36	0.80	0.48	0.25	50.00	139-0		
2604.00	bulk	0.67	0.40	0.19	0.72	0.42	0.04	-	-	-	0.09	0.68	0.41	0.45	34.78	144-0		

Table 2: Variation in Sterane Distribution for Well NOCS 18/10-1

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Ratio6	Ratio7	Sample
2290.00	bulk	0.23	11.84	54.22	0.76	0.83	0.08	0.07	140-0
2339.00	bulk	0.28	13.64	58.88	0.78	0.84	0.14	0.12	142-0
2400.00	bulk	0.34	36.84	71.07	0.80	0.77	0.28	0.24	139-0
2604.00	bulk	0.42	30.61	71.01	0.58	0.80	0.38	0.35	144-0

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 3: Aromatisation of Steranes for Well NOCS 18/10-1

Depth unit of measure: m

<u>Depth</u>	<u>Lithology</u>	<u>Ratio1</u>	<u>Ratio2</u>	<u>Sample</u>
2290.00	bulk	0.76	0.27	140-0
2339.00	bulk	1.00	-	142-0
2400.00	bulk	1.00	-	139-0
2604.00	bulk	-	-	144-0

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

Ratio2: $g1 / g1 + I1$

Table 4: Variation in Triaromatic Sterane Distribution for Well NOCS 18/10-1

Depth unit of measure: m

<u>Depth</u>	<u>Lithology</u>	<u>Ratio1</u>	<u>Ratio2</u>	<u>Ratio3</u>	<u>Ratio4</u>	<u>Ratio5</u>	<u>Sample</u>
2290.00	bulk	0.69	0.50	0.22	0.32	0.31	140-0
2339.00	bulk	-	-	-	-	-	142-0
2400.00	bulk	-	-	-	-	-	139-0
2604.00	bulk	-	-	-	-	-	144-0

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 18/10-1

Depth unit of measure: m

<u>Depth</u>	<u>Lithology</u>	<u>Ratio1</u>	<u>Ratio2</u>	<u>Ratio3</u>	<u>Ratio4</u>	<u>Sample</u>
2290.00	bulk	0.24	0.29	0.14	0.11	140-0
2339.00	bulk	0.29	0.35	0.13	0.13	142-0
2400.00	bulk	-	-	-	-	139-0
2604.00	bulk	-	-	-	-	144-0

Ratio1: $A1 / A1 + E1$
Ratio2: $B1 / B1 + E1$

Ratio3: $A1 / A1 + E1 + G1$
Ratio4: $A1+B1 / A1+B1+C1+D1+E1+F1+G1+H1+I1$