

**CENTRAL GRABEN
EXPLORATION STUDY**

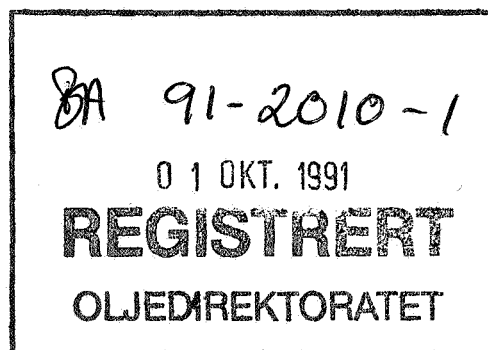
**Geochemical Analysis
of well NOCS 2/7-12**

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Date : Oct/Nov 1990



INTRODUCTION

This well is from the Norwegian sector of the North Sea to the west of the EKOFISK field.

A total of 26 samples were collected from the Norwegian Petroleum Directorate in Stavanger. All the samples were washed and described (1679 - 1831 m RKB). The analysed interval is from 1679 - 1831 m RKB, the sample interval being 6 m.

A careful selection was made of suitable samples for screening analysis, i.e. TOC and Rock-Eval analyses. Twenty-three (23) samples were selected for these analyses and from the data obtained a number of samples were chosen for further analysis as follows:

Thermal extraction - pyrolysis - gas chromatography	17 samples
Extraction, MPLC fractionation, saturated and aromatic hydrocarbon gas chromatography	2 samples
Vitrinite reflectance microscopy	6 samples
Visual kerogen analysis	7 samples
Stable carbon isotope analysis of C ₁₅ + fractions	2 samples
Gas chromatography - mass spectrometry	2 samples

Table 1 : Lithology description for well 2/7-12

Depth unit of measure: m

Depth	Type		Trb	Sample	
Int	Cvd	TOC%	%	Lithology description	
1685.00					027
	2.09	90	Sh/Clst:	brn gy to gn gy to y gy to lt ol gy to m gy, calc, slt	027-1L
		10	Ca	: brn gy to gn gy to lt ol gy to m gy	027-2L
			tr S/Sst	: lt ol gy	027-3L
1691.00					002
	1.44	90	Sh/Clst:	brn gy to gn gy to y gy to lt ol gy to m gy, calc, slt	002-2L
		10	Cont	: evap	002-1L
			tr Ca	: drk gy	002-3L
1697.00					003
	2.07	50	Cont	: evap	003-1L
		50	Sh/Clst:	brn gy to gn gy to y gy to lt ol gy to m gy, calc, slt	003-2L
			tr Ca	: brn gy to m gy	003-3L
1703.00					004
	2.61	80	Sh/Clst:	y gy to ol gy to pl y brn to dsk y brn, calc, slt	004-1L
		20	Cont	: evap	004-2L
1709.00					005
	1.98	95	Sh/Clst:	brn gy to gn gy to ol gy to dsk y brn	005-2L
		5	Ca	: m gy to dsk y brn	005-1L
			tr Cont	: Mica-ad, dd, evap	005-3L

Table 1 : Lithology description for well 2/7-12

Depth unit of measure: m

Depth	Type		Trb	Sample
Int Cvd	TOC%	% Lithology description		
1716.00				006
	1.98	70 Sh/Clst: brn gy to ol gy to dsk y brn, mic 20 Cont : evap 10 Other : w, evap		006-3L 006-1L 006-2L
1719.00				007
	2.02	70 Sh/Clst: brn gy to ol gy to dsk y brn, mic 20 Cont : evap 10 Other : w, evap		007-3L 007-1L 007-2L
1725.00				008
	0.04	50 Sh/Clst: brn gy to ol gy to dsk y brn, mic 30 Other : w, evap 20 Cont : fib, evap tr S/Sst : w to lt ol gy tr Ca : m gy		008-3L 008-1L 008-2L 008-4L 008-5L
1731.00				009
	2.75	50 Sh/Clst: brn gy to ol gy to dsk y brn, mic 30 Other : w, evap 20 Cont : fib, evap tr S/Sst : w to lt ol gy tr Ca : m gy		009-3L 009-1L 009-2L 009-4L 009-5L
1737.00				010
	2.31	85 Sh/Clst: lt ol gy to pl y brn to dsk y brn, mic 5 Ca : drk gy 5 Other : w, evap 5 Cont : Mica-ad, hd, evap		010-4L 010-1L 010-2L 010-3L

Table 1 : Lithology description for well 2/7-12

Depth unit of measure: m

Depth	Type		Trb	Sample		
Int	Cvd	TOC%	%	Lithology description		
1743.00						011
	2.96	70	Sh/Clst:	lt ol gy to pl y brn to dsk y brn, mic		011-2L
		30	Cont	: Mica-ad, fib, evap		011-1L
1749.00						012
	3.52	100	Sh/Clst:	pl y brn to dsk y brn, calc, mic		012-1L
			tr Ca	: m gy to drk gy		012-2L
			tr S/Sst	: m gy		012-3L
			tr Sltst	: brn gy to m gy		012-4L
1755.00						013
	3.63	90	Sh/Clst:	m gy to pl y brn to dsk y brn, calc, mic		013-2L
		10	Ca	: drk gy to drk y brn		013-1L
			tr Cont	: Mica-ad, dd, evap		013-3L
			tr Other	: w, evap		013-4L
1761.00						014
		80	Sh/Clst:	brn gy to lt ol gy to pl y brn to dsk y brn, calc, mic		014-2L
	0.38	20	Ca	: brn gy to drk gy to drk y brn to dsk y brn		014-1L
			tr Cont	: dd		014-3L
			tr Other	: evap		014-4L
1767.00						015
	2.99	80	Sh/Clst:	brn gy to lt ol gy to pl y brn to dsk y brn, calc, mic		015-2L
		20	Ca	: brn gy to drk gy to drk y brn to dsk y brn		015-1L
			tr Cont	: dd		015-3L
			tr Other	: evap		015-4L

Table 1 : Lithology description for well 2/7-12

Depth unit of measure: m

Depth	Type		Trb	Sample
Int Cvd	TOC%	%		
Lithology description				
1773.00				016
	0.38	80	Sh/Clst: brn gy to lt ol gy to pl y brn to dsk y brn, calc, mic	016-2L
		20	Ca : brn gy to drk gy to drk y brn to dsk y brn	016-1L
			tr Cont : dd	016-3L
			tr Other : evap	016-4L
1780.00				017
	2.10	80	Sh/Clst: brn gy to lt ol gy to pl y brn to dsk y brn, calc, mic	017-2L
		20	Ca : brn gy to drk gy to drk y brn to dsk y brn	017-1L
			tr Cont : dd	017-3L
			tr Other : evap	017-4L
1786.00				018
	0.54	80	Sh/Clst: brn gy to lt ol gy to pl y brn to dsk y brn, calc, mic	018-2L
		20	Ca : brn gy to drk gy to drk y brn to dsk y brn	018-1L
			tr Cont : dd	018-3L
			tr Other : evap	018-4L
1792.00				019
	3.00	90	Sh/Clst: brn gy to lt ol gy to pl y brn to dsk y brn, calc, mic	019-2L
		10	Ca : brn gy to drk gy to drk y brn to dsk y brn	019-1L
			tr Cont : dd	019-3L
			tr Other : w, evap	019-4L
			tr S/Sst : y gy	019-5L

Table 1 : Lithology description for well 2/7-12

Depth unit of measure: m

Depth	Type		Trb	Sample
Int Cvd	TOC%	% Lithology description		
1798.00				020
	2.99	100 Sh/Clst: brn gy to lt ol gy to pl y brn to dsk y brn, calc, mic		020-1L
		tr Other : pyr		020-2L
		tr Cont : Mica-ad, dd, fib, evap		020-3L
1804.00				021
		90 Cont : Mica-ad, dd, fib		021-2L
	2.37	10 Sh/Clst: brn gy to pl y brn, calc, mic		021-1L
1810.00				022
		100 Cont : Mica-ad, dd, fib		022-1L
1816.00				023
	3.44	100 Sh/Clst: brn gy to pl y brn, calc, mic		023-1L
		tr Cont : Mica-ad, dd, fib		023-2L
		tr Other : evap		023-3L
1822.00				024
		100 Cont : Mica-ad, dd, fib		024-1L
1828.00				025
		90 Cont : Mica-ad, dd, fib		025-2L
	2.70	10 Sh/Clst: brn gy to pl y brn, calc, mic		025-1L

Table 1 : Lithology description for well 2/7-12

Depth unit of measure: m

Depth	Type		Trb	Sample
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Int Cvd	TOC%	% Lithology description		
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1831.00				026
		100 Cont : Mica-ad, dd, fib		026-1L

Table 2 : Rock-Eval table for well 2/7-12

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
1685.00	cut	Sh/Clst: brn gy to gn gy to y gy to lt ol gy to m gy	1.17	3.55	0.40	8.88	2.09	170	19	4.7	0.25	428	027-1L
1691.00	cut	Sh/Clst: brn gy to gn gy to y gy to lt ol gy to m gy	1.14	2.14	0.53	4.04	1.44	149	37	3.3	0.35	426	002-2L
1697.00	cut	Sh/Clst: brn gy to gn gy to y gy to lt ol gy to m gy	1.21	3.33	0.69	4.83	2.07	161	33	4.5	0.27	426	003-2L
1703.00	cut	Sh/Clst: y gy to ol gy to pl y brn to dsk y brn	1.21	4.06	1.20	3.38	2.61	156	46	5.3	0.23	430	004-1L
1709.00	cut	Sh/Clst: brn gy to gn gy to ol gy to dsk y brn	0.60	3.23	0.81	3.99	1.98	163	41	3.8	0.16	427	005-2L
1716.00	cut	Sh/Clst: brn gy to ol gy to dsk y brn	0.35	2.85	0.88	3.24	1.98	144	44	3.2	0.11	429	006-3L
1719.00	cut	Sh/Clst: brn gy to ol gy to dsk y brn	1.11	3.46	0.96	3.60	2.02	171	48	4.6	0.24	429	007-3L
1725.00	cut	Other : w	0.02	0.01	0.27	0.04	0.04	25	675	-	0.67	432	008-1L
1731.00	cut	Sh/Clst: brn gy to ol gy to dsk y brn	1.34	4.66	0.61	7.64	2.75	169	22	6.0	0.22	428	009-3L
1737.00	cut	Sh/Clst: lt ol gy to pl y brn to dsk y brn	1.15	3.76	0.84	4.48	2.31	163	36	4.9	0.23	429	010-4L
1743.00	cut	Sh/Clst: lt ol gy to pl y brn to dsk y brn	1.47	5.67	1.32	4.30	2.96	192	45	7.1	0.21	430	011-2L

Table 2 : Rock-Eval table for well 2/7-12

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
1749.00	cut	Sh/Clst: pl y brn to dsk y brn	1.00	6.15	0.96	6.41	3.52	175	27	7.2	0.14	429	012-1L
1755.00	cut	Sh/Clst: m gy to pl y brn to dsk y brn	1.41	6.41	1.18	5.43	3.63	177	33	7.8	0.18	430	013-2L
1761.00	cut	Ca : brn gy to drk gy to drk y brn to dsk y brn	0.08	0.25	0.61	0.41	0.38	66	161	0.3	0.24	428	014-1L
1767.00	cut	Sh/Clst: brn gy to lt ol gy to pl y brn to dsk y brn	0.87	4.93	0.92	5.36	2.99	165	31	5.8	0.15	429	015-2L
1773.00	cut	Ca : brn gy to drk gy to drk y brn to dsk y brn	0.05	0.14	0.68	0.21	0.38	37	179	0.2	0.26	429	016-1L
1780.00	cut	Sh/Clst: brn gy to lt ol gy to pl y brn to dsk y brn	0.81	2.82	1.04	2.71	2.10	134	50	3.6	0.22	429	017-2L
1786.00	cut	Ca : brn gy to drk gy to drk y brn to dsk y brn	0.13	0.50	0.76	0.66	0.54	93	141	0.6	0.21	431	018-1L
1792.00	cut	Sh/Clst: brn gy to lt ol gy to pl y brn to dsk y brn	1.19	4.52	1.64	2.76	3.00	151	55	5.7	0.21	432	019-2L
1798.00	cut	Sh/Clst: brn gy to lt ol gy to pl y brn to dsk y brn	1.62	5.62	1.85	3.04	2.99	188	62	7.2	0.22	429	020-1L
1804.00	cut	Sh/Clst: brn gy to pl y brn	2.09	6.21	1.82	3.41	2.37	262	77	8.3	0.25	428	021-1L
1816.00	cut	Sh/Clst: brn gy to pl y brn	4.37	7.02	3.73	1.88	3.44	204	108	11.4	0.38	427	023-1L

Table 2 : Rock-Eval table for well 2/7-12

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
1828.00	cut	Sh/Clst: brn gy to pl y brn	3.61	5.47	3.04	1.80	2.70	203	113	9.1	0.40	426	025-1L

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
1731.00	com	Composite sample - see table 3 e	7.1	30.4	9.6	3.4	1.0	16.4	13.0	17.4	2.43	028-0B
1798.00	com	Composite sample - see table 3 e	0.7	9.9	4.2	1.7	0.6	3.4	5.9	4.0	4.61	029-0B

Table 3 b: Concentration of EOM and Chromatographic Fraction (wt ppm rock) for well 2/7-12

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
1731.00	com	Composite sample - see table 3 e	4287	1354	473	141	2318	1827	2459	028-0B
1798.00	com	Composite sample - see table 3 e	13943	5915	2394	845	4788	8309	5633	029-0B

Table 3 c: Concentration of EOM and Chromatographic Fraction (mg/g TOC(e)) for well 2/7-12

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
1731.00	com	Composite sample - see table 3 e	176.45	55.72	19.50	5.80	95.42	75.22	101.23	028-0B
1798.00	com	Composite sample - see table 3 e	302.47	128.32	51.94	18.33	103.88	180.26	122.21	029-0B

Table 3 d: Composition of material extracted from the rock (%) for well 2/7-12

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	
1731.00	com	Composite sample - see table 3 e	31.58	11.05	3.29	54.08	42.63	57.37	285.71	74.31	028-0B
1798.00	com	Composite sample - see table 3 e	42.42	17.17	6.06	34.34	59.60	40.40	247.06	147.50	029-0B

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>
1719.00	1731.00	com	028-0B	is composed of:	1719.00	cut	Sh/Clst: brn gy to ol gy to dsk y brn, mic	007-3L
					1731.00	cut	Sh/Clst: brn gy to ol gy to dsk y brn, mic	009-3L
1767.00	1798.00	com	029-0B	is composed of:	1767.00	cut	Sh/Clst: brn gy to lt ol gy to pl y brn to dsk y brn, calc, mic	015-2L
					1780.00	cut	Sh/Clst: brn gy to lt ol gy to pl y brn to dsk y brn, calc, mic	017-2L
					1792.00	cut	Sh/Clst: brn gy to lt ol gy to pl y brn to dsk y brn, calc, mic	019-2L
					1798.00	cut	Sh/Clst: brn gy to lt ol gy to pl y brn to dsk y brn, calc, mic	020-1L

Table 4 : Saturated Hydrocarbon Ratios for well 2/1-12

Depth unit of measure: m

Depth	Typ	Lithology	Pristane	Pristane	Pristane + Phytane	Phytane	CPI	Sample
			nC17	Phytane	nC17 + nC18	nC18		
1731.00	com	bulk	0.75	1.15	0.71	0.67	1.33	028-0B
1798.00	com	bulk	0.58	1.09	0.57	0.57	1.15	029-0B

Table 5 : Aromatic Hydrocarbon Ratios for well 2/7-12

Depth unit of measure: m

Depth	Typ	Lithology	MNR	DMNR	BPhR	2/1MP	MPI1	MPI2	DBT/P	4/1MDBT	(3+2)/1MDBT	Sample
1731.00	com	bulk	1.05	1.79	0.14	0.92	0.75	0.75	-	14.25	0.89	028-0B
1798.00	com	bulk	-	1.40	-	0.73	0.62	0.61	0.13	14.01	0.93	029-0B

Table 6: Pyrolysis GC Data (S2 peak) as Percentage of Total Area for Well 2/7-12

Depth unit of measure: m

Depth	Typ	Lithology	C1	C2-C5	C6-C14	C15+	S2 from Rock-Eval	Sample
1685.00	cut	Sh/Clst: brn gy to gn gy to y gy to lt ol gy to m gy	3.29	17.96	46.10	32.66	3.55	027-1L
1697.00	cut	Sh/Clst: brn gy to gn gy to y gy to lt ol gy to m gy	3.67	19.25	45.37	31.71	3.33	003-2L
1703.00	cut	Sh/Clst: y gy to ol gy to pl y brn to dsk y brn	4.11	16.80	42.84	36.25	4.06	004-1L
1709.00	cut	Sh/Clst: brn gy to gn gy to ol gy to dsk y brn	3.62	19.13	47.18	30.07	3.23	005-2L
1716.00	cut	Sh/Clst: brn gy to ol gy to dsk y brn	4.84	19.88	48.26	27.02	2.85	006-3L
1719.00	cut	Sh/Clst: brn gy to ol gy to dsk y brn	3.57	18.55	45.57	32.31	3.46	007-3L
1731.00	cut	Sh/Clst: brn gy to ol gy to dsk y brn	3.64	16.84	43.49	36.04	4.66	009-3L
1737.00	cut	Sh/Clst: lt ol gy to pl y brn to dsk y brn	3.66	17.69	44.96	33.70	3.76	010-4L
1749.00	cut	Sh/Clst: pl y brn to dsk y brn	4.45	16.04	40.90	38.61	6.15	012-1L
1755.00	cut	Sh/Clst: m gy to pl y brn to dsk y brn	4.03	16.01	38.47	41.49	6.41	013-2L

Table 6: Pyrolysis GC Data (S2 peak) as Percentage of Total Area for Well 2/7-12

Depth unit of measure: m

Depth	Typ	Lithology	C1	C2-C5	C6-C14	C15+	S2 from Rock-Eval	Sample
1767.00	cut	Sh/Clst: brn gy to lt ol gy to pl y brn to dsk y brn	4.41	16.97	42.81	35.80	4.93	015-2L
1780.00	cut	Sh/Clst: brn gy to lt ol gy to pl y brn to dsk y brn	4.41	19.74	48.14	27.72	2.82	017-2L
1792.00	cut	Sh/Clst: brn gy to lt ol gy to pl y brn to dsk y brn	4.39	17.66	43.19	34.77	4.52	019-2L
1798.00	cut	Sh/Clst: brn gy to lt ol gy to pl y brn to dsk y brn	3.98	15.28	40.90	39.84	5.62	020-1L
1804.00	cut	Sh/Clst: brn gy to pl y brn	3.17	16.48	41.91	38.44	6.21	021-1L
1816.00	cut	Sh/Clst: brn gy to pl y brn	3.21	14.49	41.65	40.65	7.02	023-1L
1828.00	cut	Sh/Clst: brn gy to pl y brn	2.97	14.62	40.31	42.11	5.47	025-1L

Table 7 : Thermal Maturity Data for well NOCS 2/7-12

Depth unit of measure: m

Depth	Typ Lithology	Vitrinite Reflectance (%)	Number of Readings	Standard Deviation	Spore Fluorescence Colour	SCI	T _{max} (°C)	Sample
1685.00	cut bulk	0.45	20	0.07	5	-	-	027-0B
1685.00	cut Sh/Clst: brn gy to gn gy to y gy to lt ol gy to m gy	-	-	-	-	3 - 3.5	428	027-1L
1697.00	cut Sh/Clst: brn gy to gn gy to y gy to lt ol gy to m gy	-	-	-	-	3 - 3.5	426	003-2L
1709.00	cut bulk	0.41	4	0.04	0	-	-	005-0B
1709.00	cut Sh/Clst: brn gy to gn gy to ol gy to dsk y brn	-	-	-	-	3.5	427	005-2L
1719.00	cut Sh/Clst: brn gy to ol gy to dsk y brn	-	-	-	-	3.5	429	007-3L
1731.00	cut Sh/Clst: brn gy to ol gy to dsk y brn	-	-	-	-	3.5 - 4	428	009-3L
1743.00	cut bulk	0.44	20	0.07	0	-	-	011-0B
1755.00	cut Sh/Clst: m gy to pl y brn to dsk y brn	-	-	-	-	NDF	430	013-2L
1786.00	cut bulk	0.41	18	0.04	0	-	-	018-0B
1804.00	cut Sh/Clst: brn gy to pl y brn	-	-	-	-	3.5 - 4	428	021-1L

Table 7: Thermal Maturity Data for well NOCS 2/7-12

Depth unit of measure: m

Depth	Typ	Lithology	Vitrinite Reflectance (%)	Number of Readings	Standard Deviation	Spore Fluorescence Colour	SCI	T _{max} (°C)	Sample
1810.00	cut	bulk	0.46	8	0.03	0	-	-	022-0B
1816.00	cut	bulk	0.42	16	0.05	0	-	-	023-0B

Table 8: Visual Kerogen Composition Data for well 2/7-12

Depth unit of measure: m

Depth	Typ	Lithology	L	A	L	S	C	R	A	D	I	F	S	I	M	S	V	C	V	A	Sample
			%	L	t	l	l	n	e	l	t	L	%	n	s	t	n	o	I	%	
1685.00	cut	Sh/Clst: brn gy to gn gy to y gy to lt ol gy to m gy	10	**	*			?	*		20		*				70	**	*		027-1L
1697.00	cut	Sh/Clst: brn gy to gn gy to y gy to lt ol gy to m gy	15	*	*				*		10		*				75	*	*		003-2L
1709.00	cut	Sh/Clst: brn gy to gn gy to ol gy to dsk y brn	10	*	*				*		30	*	*				60	*	*		005-2L
1719.00	cut	Sh/Clst: brn gy to ol gy to dsk y brn	10	*	*				*		30	*	*				60	*	*		007-3L
1731.00	cut	Sh/Clst: brn gy to ol gy to dsk y brn	10	*	*				*		15	*	*				75	*	*	**	009-3L
1755.00	cut	Sh/Clst: m gy to pl y brn to dsk y brn	5	*	*				*		10		*				85	*	*		013-2L
1804.00	cut	Sh/Clst: brn gy to pl y brn	5	**	*				*		10	*	*				85	*	*		021-1L

Table 9A : Tabulation of carbon isotope data for EOM/EOM - fractions or Oils for well NOCS 2/7-12

Depth unit of measure: m

Depth	Typ	Lithology	EOM/Oil	Saturated	Aromatic	NSO	Asphaltenes	Kerogen	Sample
1731.00	com	Composite sample	-	-28.29	-26.75	-26.81	-26.70	-	0036-0
1798.00	com	Composite sample	-	-28.71	-27.98	-27.49	-27.71	-	0037-0

Table 9B : Tabulation of cv values from carbon isotope data for well NOCS 2/7-12

Depth unit of measure: m

<u>Depth</u>	<u>Typ</u>	<u>Lithology</u>	<u>Saturated</u>	<u>Aromatic</u>	<u>cv value</u>	<u>Sample</u>
1731.00	com	Composite sample	-28.29	-26.75	0.54	0036-0
1798.00	com	Composite sample	-28.71	-27.98	-1.13	0037-0

Table 10A: Variation in Triterpane Distribution (peak height) for Well NOCS 2/7-12

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%		
1731.00	Sh/Clst	1.62	0.62	0.15		0.53	0.34	-	-	-	-	0.19	0.86	0.39	0.25	36.05		0036-0
1798.00	Sh/Clst	0.54	0.35	0.19		0.60	0.37	0.16	0.06	0.10	0.05	0.39	0.91	0.39	0.12	58.16		0037-0

Table 10B: Variation in Sterane Distribution (peak height) for Well NOCS 2/7-12

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>Ratio6</u>	<u>Ratio7</u>	<u>Ratio8</u>	<u>Ratio9</u>	<u>Ratio10</u>	<u>Sample</u>
1731.00	Sh/Clst	0.18	3.99	28.27	1.39	0.83	0.61	0.55	0.16	0.04	0.21	0036-0
1798.00	Sh/Clst	0.85	41.43	84.59	1.58	0.87	0.68	0.53	0.73	0.71	4.69	0037-0

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: $u + v / u + v + i + m + n + q + r + s + t$

Ratio8: $r + s / q + r + s + t$

Ratio9: q / t

Ratio10: $r + s / t$

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>
1731.00	Sh/Clst	0.96	0.93	0.74	0.80	0.82	0036-0
1798.00	Sh/Clst	0.89	0.86	0.71	0.73	0.80	0037-0

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: $a1 / a1 + d1$

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>
1731.00	Sh/Clst	0.41	0.23	0.26	0.21	0036-0
1798.00	Sh/Clst	0.61	0.44	0.45	0.41	0037-0

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

Table 10E: Aromatisation of Steranes for Well NOCS 2/7-12

Depth unit of measure: m

<u>Depth</u>	<u>Lithology</u>	<u>Ratio1</u>	<u>Ratio2</u>	<u>Sample</u>
1731.00	Sh/Clst	0.76	0.40	0036-0
1798.00	Sh/Clst	0.36	0.92	0037-0

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

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

Table 10F: Raw GCMS triterpane data (peak height) for Well NOCS 2/7-12

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			
1731.00	Sh/Clst	105.00	38.01	7.93	26.22	4.47	25.85	41.78	0.00	106.25	0036-0
		0.00	43.78	201.98	31.91	40.12	75.78	15.35	8.63		
		15.31	4.93	5.30	2.52	2.38	1.95	1.80			
1798.00	Sh/Clst	108.75	39.22	22.37	31.93	11.76	48.40	26.28	5.85	60.62	0037-0
		15.78	9.71	101.13	9.73	40.04	29.12	5.12	22.20		
		15.97	15.87	7.29	7.62	6.29	6.98	4.34			

Table 10G: Raw GCMS sterane data (peak height) for Well NOCS 2/7-12

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					
1731.00	Sh/Clst	146.64	42.19	22.39	12.15	5.37	12.43	6.74	4.40	28.12	0036-0
		9.31	6.88	103.24	3.97	6.01	5.78	18.36	6.31		
		72.23	4.11	20.29	0.00	98.87					
1798.00	Sh/Clst	67.70	21.11	53.75	31.14	10.02	10.12	16.29	11.01	6.85	0037-0
		27.94	16.65	9.44	16.53	7.40	5.48	14.55	15.35		
		5.65	4.69	17.26	13.82	6.63					

Table 10H: Raw GCMS trioaromatic sterane data (peak height) for Well NOCS 2/7-12

Depth unit of measure: m

Depth	Lithology	a1	b1	c1	d1	e1	f1	g1	Sample
1731.00	Sh/Clst	215.68	139.35	22.39	47.31	26.24	19.14	10.13	0036-0
1798.00	Sh/Clst	312.62	236.87	32.81	78.28	39.56	40.27	37.58	0037-0

Table 10I: Raw GCMS monoaromatic sterane data (peak height) for Well NOCS 2/7-12

Depth unit of measure: m

Depth	Lithology	a1	b1	c1	d1	e1	f1	g1	h1	i1	Sample
1731.00	Sh/Clst	75.26	31.47	33.50	28.12	106.65	10.64	112.91	85.18	15.39	0036-0
1798.00	Sh/Clst	59.21	29.76	15.20	17.54	38.52	8.88	33.86	12.00	3.35	0037-0