

BA-93-561-1

15 JAN 1993

REGISTER

GEOLOGISKE

Geochemical Report for Well NOCS 17/12-3

Author: Geir Hansen

Geolab Nor A/S
P.O. Box 5740 Fossegrenda
7002 Trondheim
Norway

Date : 04.01.93

Chapter 1

INTRODUCTION

The well NOCS 17/12-3, analysed on behalf of Norsk Agip, is located west of the Bream oil field, just south-west of the Egersund Basin, at 58°11'32.84" N, 03°51'44.06" E. The well was drilled by Phillips in 1979-80 to a total depth of 2730 m in the Triassic and plugged/abandoned as a dry well. The water depth at the location is 112 m and the Kelly Bushing Elevation was 25 m. All depths given are relative to KB unless otherwise specified. The location of the well is shown in Figure 1.

The objective of analysing this well, which is part of a larger study, is to evaluate the thermal maturity trend throughout the well.

Lithological description and vitrinite reflectance were performed on samples from the interval 470 - 2720 m, covered by 116 cuttings samples. The analyses were conducted by Geolab and the report is divided into chapters according to the various analytical methods used. Within the chapters the results are mainly discussed in a stratigraphic context.

1.1 General Comments

The cuttings samples, collected at the Norwegian Petroleum Directorate, were washed and described and selected lithologies picked before analyses commenced.

1.2 Analytical Program

In accordance with the contract and sample availability the following analytical programme was executed for well NOCS 17/12-3 in the interval 470 - 2720 m.

<u>Analysis type</u>	<u>No of sample</u>	<u>Figures</u>	<u>Tables</u>
Lithology description	116	2	1
Vitrinite reflectance	20	3	2

Appendix 1

Tables

- 1-

Table 1 : Lithology description for well NOCS 17/12-3

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
470.00						0001
				35 Sh/Clst: lt gy to lt brn gy		0001-1L
				35 S/Sst : lt gy w, f, crs, l		0001-3L
				30 Other : gn gy to gy gn, glauc		0001-2L
				tr Sh/Clst: or brn		0001-4L
520.00						0002
				55 Cont : cem, dd		0002-4L
				25 Other : gn gy to gy gn, glauc		0002-1L
				15 Meta : m gy to drk gy, crs		0002-3L
				5 S/Sst : lt gy w to gy w, crs, l		0002-2L
570.00						0003
				80 Cont : cem, dd		0003-4L
				10 Other : gn gy to gy gn, glauc		0003-1L
				5 S/Sst : lt gy w to gy w, crs, l		0003-2L
				5 Meta : m gy to drk gy, crs		0003-3L
				tr Ca : or gy		0003-5L
620.00						0004
				75 Other : gn gy to gy gn, glauc		0004-1L
				20 Sh/Clst: pl y brn to drk y brn, pyr		0004-4L
				5 Ca : w to or gy, fos		0004-3L
				tr Cont : cem, dd		0004-2L
670.00						0005
				80 Sh/Clst: pl y brn to drk y brn, pyr, fos		0005-4L
				10 Other : gn gy to gy gn, glauc		0005-1L
				5 Cont : prp, dd		0005-2L
				5 Ca : w to or gy, fos		0005-3L

- 2-

Table 1 : Lithology description for well NOCS 17/12-3

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
720.00						0006
				60 Other : gn gy to gy gn, glauc		0006-1L
				30 Sh/Clst: pl y brn to drk y brn, pyr, fos		0006-4L
				5 Cont : prp, dd, cem		0006-2L
				5 S/Sst : lt gy w, crs, l		0006-5L
				tr Ca : w to or gy, fos		0006-3L
770.00						0007
				50 Sh/Clst: m gy to drk gy		0007-3L
				40 Sh/Clst: pl ol to lt y gn		0007-2L
				10 Other : gn gy to gy gn, glauc		0007-1L
800.00						0008
				55 Sh/Clst: m gy to drk gy		0008-3L
				45 Sh/Clst: pl ol to lt y gn		0008-2L
				tr Other : gn gy to gy gn, glauc		0008-1L
				tr Marl : or gy		0008-4L
830.00						0009
				45 Ca : w, fos		0009-1L
				45 Chert : gy w, hd		0009-2L
				5 Sh/Clst: lt gy to m gy		0009-3L
				5 Sh/Clst: pl ol		0009-4L
860.00						0010
				50 Chert : gy w, hd		0010-2L
				45 Ca : w, fos		0010-1L
				5 Sh/Clst: lt gy to m gy		0010-3L

- 3-

Table 1 : Lithology description for well NOCS 17/12-3

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
890.00						0011
				55 Chert : gy w, hd		0011-2L
				40 Ca : w, fos		0011-1L
				5 Sh/Clst: lt gy to m gy		0011-3L
				tr Cont : prp		0011-4L
930.00						0012
				40 Sh/Clst: y gy		0012-5L
				35 Chert : gy w, hd		0012-2L
				15 Ca : w, fos		0012-1L
				10 Sh/Clst: m gy		0012-3L
				tr Cont : prp		0012-4L
960.00						0013
				55 Sh/Clst: y gy		0013-5L
				25 Ca : w, fos		0013-1L
				20 Chert : gy w to lt brn gy, hd		0013-2L
				tr Sh/Clst: m gy		0013-3L
				tr Cont : prp		0013-4L
990.00						0014
				55 Sh/Clst: y gy to lt gy		0014-4L
				30 Ca : w, fos		0014-1L
				15 Chert : gy w to lt brn gy, hd		0014-2L
				tr Sh/Clst: m gy		0014-3L
1020.00						0015
				45 Ca : w, fos		0015-1L
				40 Sh/Clst: y gy to lt gy, kln		0015-4L
				10 Chert : gy w to lt brn gy, hd		0015-2L
				5 Sh/Clst: m gy		0015-3L

- 4 -

Table 1 : Lithology description for well NOCS 17/12-3

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
1060.00						0016
				80 Ca : w, fos		0016-1L
				20 Sh/Clst: y gy to lt gy, kln		0016-3L
				tr Chert : gy w to lt brn gy, hd		0016-2L
1090.00						0017
				85 Ca : w, fos		0017-1L
				15 Sh/Clst: y gy to lt gy, kln		0017-3L
				tr Chert : gy w to lt brn gy, hd		0017-2L
1120.00						0018
				85 Ca : w, fos		0018-1L
				15 Sh/Clst: y gy to lt gy, kln		0018-3L
				tr Chert : gy w to lt brn gy, hd		0018-2L
1150.00						0019
				70 Ca : w, fos		0019-1L
				30 Sh/Clst: y gy to lt gy, kln		0019-3L
				tr Chert : gy w to lt brn gy, hd		0019-2L
1180.00						0020
				60 Ca : w, fos		0020-1L
				40 Sh/Clst: y gy to lt gy, kln		0020-3L
				tr Chert : gy w to lt brn gy, hd		0020-2L
1210.00						0021
				75 Ca : w, fos		0021-1L
				25 Sh/Clst: y gy to lt gy, kln		0021-3L
				tr Chert : gy w to lt brn gy, hd		0021-2L

- 5-

Table 1 : Lithology description for well NOCS 17/12-3

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
1250.00						0022
			50	Ca	: w	0022-1L
			50	Sh/Clst:	y gy to lt gy to m gy	0022-3L
			tr	Chert	: gy w to lt brn gy, hd	0022-2L
1270.00						0023
			60	Ca	: w, kln	0023-1L
			35	Sh/Clst:	y gy to lt gy, kln	0023-2L
			5	Sh/Clst:	m gy to pl y brn	0023-3L
1320.00						0024
			100	Cont	: cem, prp	0024-1L
1350.00						0025
			100	Cont	: cem, prp	0025-1L
1380.00						0026
			50	Other	: gy gn to dsk y gn, glauc	0026-1L
			50	Cont	: cem, prp, dd	0026-2L
1410.00						0027
			70	Other	: gy gn to dsk y gn, glauc	0027-1L
			30	Cont	: cem, prp, dd	0027-2L
1440.00						0028
			50	Sh/Clst:	m gy	0028-3L
			30	Other	: gy gn to dsk y gn, glauc	0028-1L
			20	Cont	: prp	0028-2L

- 6-

Table 1 : Lithology description for well NOCS 17/12-3

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
1470.00						0029
				75 S/Sst : gy w to lt gy, f, l		0029-2L
				25 Sh/Clst: m gy		0029-1L
1510.00						0030
				60 Cont : ns		0030-3L
				35 S/Sst : gy w to lt gy, f, l		0030-2L
				5 Sh/Clst: m gy		0030-1L
1540.00						0031
				75 S/Sst : gy w to lt gy, f, l		0031-2L
				25 Sh/Clst: m gy		0031-1L
1570.00						0032
				75 S/Sst : gy w to lt gy, f, l		0032-2L
				25 Sh/Clst: m gy		0032-1L
1590.00						0033
				75 S/Sst : gy w to lt gy, f, l		0033-2L
				25 Sh/Clst: m gy		0033-1L
				tr Cont : ns		0033-3L
1620.00						0034
				100 Cont : ns		0034-2L
				tr Sh/Clst: m gy		0034-1L

- 7 -

Table 1 : Lithology description for well NOCS 17/12-3

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample	
Int Cvd	TOC%	%	Lithology description				
1640.00						0035	
		80	Cont	: ns		0035-2L	
		20	Sh/Clst:	m gy to drk gy		0035-1L	
1670.00						0036	
		60	Cont	: ns		0036-2L	
		40	Sh/Clst:	m gy to drk gy		0036-1L	
1710.00						0037	
		100	Cont	: ns		0037-1L	
		tr	Sh/Clst:	m gy to drk gy		0037-2L	
1740.00						0038	
		75	Cont	: ns		0038-1L	
		25	Sh/Clst:	m gy		0038-2L	
1770.00						0039	
		50	Cont	: ns		0039-1L	
		25	Sh/Clst:	m gy		0039-2L	
		25	S/Sst	: lt gy, f, l		0039-3L	
1800.00						0040	
		45	S/Sst	: gy w to lt gy, f, l		0040-1L	
		30	Sh/Clst:	lt gy to m gy		0040-2L	
		25	Cont	: ns, prp		0040-3L	

- 8 -

Table 1 : Lithology description for well NOCS 17/12-3

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
1830.00						00-1
				45 Cont : ns, prp		0041-3L
				30 Sh/Clst: lt gy to m gy		0041-2L
				25 S/Sst : gy w to lt gy, f, l		0041-1L
1860.00						0042
				80 Sh/Clst: m gy		0042-1L
				20 Cont : ns, prp		0042-2L
1880.00						0043
				70 Sh/Clst: m gy		0043-1L
				30 Cont : ns, prp		0043-2L
				tr Ca : lt or gy, fos		0043-3L
1920.00						0044
				90 Sh/Clst: m gy		0044-1L
				10 Cont : ns, prp		0044-2L
				tr Ca : lt or gy, fos		0044-3L
1950.00						0045
				100 Sh/Clst: m gy		0045-1L
				tr Cont : ns, prp		0045-2L
				tr Ca : lt or gy, fos		0045-3L
1960.00						0046
				100 Sh/Clst: m gy, slt		0046-1L
				tr Cont : ns, prp		0046-2L
				tr Ca : lt or gy, fos		0046-3L

- 9 -

Table 1 : Lithology description for well NOCS 17/12-3

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
1970.00						0047
			95	Sh/Clst: m gy, slt		0047-1L
			5	Marl : lt brn		0047-2L
			tr	Cont : ns, cem		0047-3L
1980.00						0048
			100	Sh/Clst: m gy, slt		0048-1L
			tr	Marl : lt brn		0048-2L
			tr	Cont : ns, cem		0048-3L
1990.00						0049
			100	Sh/Clst: m gy, slt		0049-1L
			tr	Cont : ns, cem		0049-2L
2000.00						0050
			95	Sh/Clst: m gy, slt		0050-1L
			5	Marl : m brn		0050-3L
			tr	Cont : ns, cem		0050-2L
2010.00						0051
			95	Sh/Clst: m gy, slt		0051-1L
			5	Marl : m brn		0051-3L
			tr	Cont : ns, cem		0051-2L
2020.00						0052
			95	Sh/Clst: m gy, slt		0052-1L
			5	Cont : ns		0052-2L

- 10-

Table 1 : Lithology description for well NOCS 17/12-3

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
2030.00						0053
			100	Sh/Clst: m gy, slt		0053-1L
			tr	Cont : ns		0053-2L
2080.00						0054
			100	Sh/Clst: m gy, slt		0054-1L
			tr	Cont : ns		0054-2L
2090.00						0055
			100	Sh/Clst: m gy to drk gy		0055-1L
			tr	Cont : prp		0055-2L
2100.00						0056
			100	Sh/Clst: m gy to drk gy		0056-1L
			tr	Cont : ns, prp		0056-2L
2110.00						0057
			100	Sh/Clst: m gy to drk gy		0057-1L
			tr	Cont : ns, prp		0057-2L
2120.00						0058
			100	Sh/Clst: m gy to drk gy		0058-1L
			tr	Cont : ns, prp		0058-2L
2130.00						0059
			100	Sh/Clst: m gy to drk gy, slt		0059-1L
			tr	Cont : ns, prp		0059-2L
			tr	Coal : blk, wx		0059-3L

- 11-

Table 1 : Lithology description for well NOCS 17/12-3

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample	
Int Cvd	TOC%	%	Lithology description				
2150.00						0060	
		100	Sh/Clst: m gy to drk gy, slt			0060-1L	
		tr	Cont : ns, prp			0060-2L	
2160.00						0061	
		95	Sh/Clst: m gy to drk gy			0061-1L	
		5	Marl : or gy to m brn			0061-2L	
		tr	Cont : prp			0061-3L	
2170.00						0062	
		95	Sh/Clst: m gy to drk gy			0062-1L	
		5	Sh/Clst: m brn to m y brn, mrl			0062-2L	
2180.00						0064	
		100	Sh/Clst: m gy to drk gy			0064-1L	
		tr	Sh/Clst: or gy to m brn, mrl			0064-2L	
2190.00						0065	
		100	Sh/Clst: m gy to drk gy			0065-1L	
		tr	Cont : prp, ns			0065-2L	
2200.00						0066	
		100	Sh/Clst: m gy to drk gy to gy blk			0066-1L	
		tr	Cont : prp, ns			0066-2L	

- 12-

Table 1 : Lithology description for well NOCS 17/12-3

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
2220.00						0067
			100	Sh/Clst: m gy to drk gy to gy blk		0067-1L
2230.00						0068
			100	Sh/Clst: m gy to drk gy to gy blk		0068-1L
2240.00						0069
			100	Sh/Clst: m gy to drk gy		0069-1L
2250.00						0070
			100	Sh/Clst: m gy to drk gy to gy blk		0070-1L
2260.00						0071
			100	Sh/Clst: m gy to drk gy to gy blk		0071-1L
2270.00						0072
			100	Sh/Clst: drk gy to gy blk		0072-1L
2280.00						0073
			100	Sh/Clst: drk gy to gy blk		0073-1L
				tr Cont : dd		0073-2L
2290.00						0074
			100	Sh/Clst: m gy to drk gy		0074-1L
				tr Cont : dd		0074-2L

- 13-

Table 1 : Lithology description for well NOCS 17/12-3

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
2300.00						0075
				95 Sh/Clst: m gy to drk gy		0075-1L
				5 Cont : ns, prp		0075-2L
2310.00						0076
				100 Sh/Clst: m gy to drk gy		0076-1L
				tr Cont : prp		0076-2L
				tr Sltst : lt gy		0076-3L
2320.00						0077
				100 Sh/Clst: m gy to drk gy to gy blk		0077-1L
				tr Cont : prp, ns		0077-2L
				tr Sltst : lt gy		0077-3L
2330.00						0078
				100 Sh/Clst: m gy to drk gy to gy blk		0078-1L
				tr Cont : prp, dd		0078-2L
2340.00						0079
				100 Sh/Clst: m gy to drk gy		0079-1L
				tr Cont : prp, dd		0079-2L
2350.00						0080
				100 Sh/Clst: m gy to drk gy to brn blk		0080-1L
				tr Cont : prp		0080-2L
				tr Sh/Clst: or gy, mrl		0080-3L

- 14-

Table 1 : Lithology description for well NOCS 17/12-3

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
2360.00						0081
			100	Sh/Clst: m gy to drk gy to brn blk		0081-1L
				tr Sh/Clst: or gy, mrl		0081-2L
				tr Ca : w to lt or, fos		0081-3L
2370.00						0082
			100	Sh/Clst: m gy to drk gy to brn blk		0082-1L
				tr Cont : ns, prp		0082-2L
2380.00						0083
			95	Sh/Clst: m gy to drk gy to brn blk		0083-1L
			5	Ca : lt or		0083-3L
				tr Cont : ns, prp		0083-2L
2390.00						0084
			65	Sh/Clst: m gy to drk gy		0084-1L
			20	Sltst : lt gy w to lt gy pi		0084-3L
			15	Sh/Clst: or gy, mrl		0084-4L
				tr Ca : lt or		0084-2L
2400.00						0085
			45	Sh/Clst: m gy to drk gy		0085-1L
			40	Sh/Clst: brn blk		0085-2L
			10	Ca : w to lt or gy, mrl		0085-3L
			5	Sltst : lt gy w		0085-4L
2410.00						0086
			50	Sh/Clst: m gy to drk gy		0086-1L
			30	Sh/Clst: brn blk, mic		0086-2L
			10	Marl : lt or to or gy		0086-3L
			5	Sltst : lt gy w		0086-4L
			5	Coal : blk, wx		0086-5L

- 15-

Table 1 : Lithology description for well NOCS 17/12-3

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
2420.00						0087
				85 Sh/Clst: m gy to drk gy		0087-1L
				10 Sh/Clst: brn blk, mic		0087-3L
				5 Marl : lt or to or gy		0087-2L
2430.00						0088
				95 Sh/Clst: m gy to drk gy to brn blk		0088-1L
				5 Ca : w to or gy		0088-2L
				tr Sltst : lt gy w to lt or		0088-3L
2440.00						0089
				95 Sh/Clst: m gy to drk gy to brn gy		0089-1L
				5 Sh/Clst: brn blk to blk, carb		0089-3L
				tr Sltst : lt gy w to lt or		0089-2L
2450.00						0090
				50 Sh/Clst: pl y brn to drk y brn, wx		0090-4L
				40 Sh/Clst: m gy to drk gy		0090-1L
				5 Sltst : lt gy w to lt or		0090-2L
				5 Coal : brn blk to blk, wx		0090-3L
				tr Marl : or gy		0090-5L
2460.00						0091
				60 Sh/Clst: pl y brn to drk y brn, wx		0091-3L
				25 Sh/Clst: m gy to drk gy to brn blk		0091-1L
				10 Sltst : lt gy w to lt or		0091-2L
				5 Kaolin : w		0091-4L

- 16-

Table 1 : Lithology description for well NOCS 17/12-3

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
2470.00						0092
				60 Sh/Clst: pl y brn to drk y brn		0092-3L
				25 Sh/Clst: m gy to drk gy to brn blk		0092-1L
				10 Sltst : lt gy w to lt or		0092-2L
				5 Kaolin : w		0092-4L
				tr Coal : blk, wx		0092-5L
2480.00						0093
				45 Sh/Clst: m gy to drk gy to brn blk		0093-1L
				25 Sh/Clst: pl y brn to drk y brn		0093-3L
				20 Sltst : lt gy w to lt or		0093-2L
				10 Kaolin : w		0093-4L
2490.00						0094
				45 S/Sst : lt gy w, f, slt, crs, l		0094-2L
				35 Sh/Clst: pl y brn to drk y brn		0094-3L
				15 Sh/Clst: m gy to drk gy to brn blk		0094-1L
				5 Kaolin : w		0094-4L
2500.00						0095
				50 S/Sst : lt gy w, f, slt, crs, l		0095-2L
				30 Sh/Clst: pl y brn to drk y brn, wx		0095-3L
				15 Sh/Clst: m gy to drk gy to brn blk		0095-1L
				5 Kaolin : w		0095-4L
2510.00						0096
				70 S/Sst : lt gy w, f, slt, crs, l		0096-2L
				15 Sh/Clst: pl y brn to drk y brn, wx		0096-3L
				10 Sh/Clst: m gy to drk gy to brn blk		0096-1L
				5 Kaolin : w		0096-4L

- 17-

Table 1 : Lithology description for well NOCS 17/12-3

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
2520.00						0097
				80 S/Sst : lt gy w, f, slt, crs, l		0097-2L
				10 Sh/Clst: m gy to drk gy to brn blk		0097-1L
				10 Sh/Clst: pl y brn to drk y brn, wx		0097-3L
				tr Kaolin : w		0097-4L
2530.00						0098
				70 S/Sst : lt gy w, f, slt, crs, l		0098-2L
				15 Sh/Clst: m gy to drk gy to brn blk		0098-1L
				10 Sh/Clst: pl y brn to drk y brn, wx		0098-3L
				5 Cont : dd		0098-5L
				tr Kaolin : w		0098-4L
2540.00						0099
				55 S/Sst : lt gy w, f, slt, crs, l		0099-2L
				15 Sh/Clst: m gy to drk gy to brn blk		0099-1L
				15 Sh/Clst: pl y brn to drk y brn, wx		0099-3L
				15 Cont : dd		0099-5L
				tr Kaolin : w		0099-4L
2550.00						0100
				65 S/Sst : lt gy w, f, slt, crs, l		0100-2L
				25 Sh/Clst: m gy to drk gy to gy blk, mic		0100-1L
				5 Sh/Clst: pl y brn to drk y brn, wx		0100-3L
				5 Cont : dd		0100-5L
				tr Kaolin : w		0100-4L
2560.00						0101
				95 Sh/Clst: brn blk, wx, carb		0101-1L
				5 Sh/Clst: pl y brn to drk y brn, wx		0101-2L
				tr Kaolin : w		0101-3L

- 18-

Table 1 : Lithology description for well NOCS 17/12-3

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
2570.00						0102
				40 Sh/Clst: brn blk, wx, carb		0102-1L
				35 S/Sst : lt gy w to gy w, f, crs, l		0102-4L
				25 Sh/Clst: brn gy to pl y brn to drk y brn		0102-2L
				tr Kaolin : w		0102-3L
2580.00						0103
				45 Sh/Clst: brn gy to pl y brn to drk y brn		0103-2L
				35 S/Sst : lt gy w to gy w, f, crs, l		0103-4L
				20 Sh/Clst: brn blk, wx, carb		0103-1L
				tr Kaolin : w		0103-3L
2590.00						0104
				75 Sh/Clst: brn gy to pl y brn to drk y brn		0104-2L
				20 Sh/Clst: brn blk, wx, carb		0104-1L
				5 S/Sst : lt gy w to gy w, f, crs, l		0104-4L
				tr Kaolin : w		0104-3L
2600.00						0105
				45 S/Sst : lt gy w to gy w, f, crs, l		0105-4L
				35 Sh/Clst: pl y brn to drk y brn		0105-2L
				20 Sh/Clst: brn gy to drk gy, mic		0105-1L
				tr Kaolin : w		0105-3L
				tr Cont : prp, fib		0105-5L
2610.00						0106
				65 S/Sst : lt gy w to gy w, f, crs, l		0106-4L
				30 Sh/Clst: brn gy to drk gy, mic		0106-1L
				5 Sh/Clst: pl y brn to drk y brn		0106-2L
				tr Kaolin : w		0106-3L

- 19-

Table 1 : Lithology description for well NOCS 17/12-3

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
2620.00						0107
				40 S/Sst : lt gy w to gy w, f, crs, 1		0107-4L
				35 Sh/Clst: pl y brn to drk y brn		0107-2L
				20 Sh/Clst: brn gy to drk gy, mic		0107-1L
				5 Kaolin : w		0107-3L
2630.00						0108
				45 Sh/Clst: pl y brn to drk y brn		0108-2L
				25 Sh/Clst: brn gy to drk gy, mic		0108-1L
				25 S/Sst : lt gy w to gy w, f, crs, 1		0108-4L
				5 Kaolin : w		0108-3L
2640.00						0109
				25 Sh/Clst: brn gy to drk gy		0109-1L
				25 Sh/Clst: pl y brn to drk y brn		0109-2L
				25 S/Sst : lt gy w to gy w, f, crs, 1		0109-4L
				25 Sh/Clst: drk red brn to drk brn		0109-5L
				tr Kaolin : w		0109-3L
2650.00						0110
				45 S/Sst : lt gy w to gy w, f, crs, 1		0110-4L
				30 Sh/Clst: drk red brn to drk brn		0110-5L
				15 Sh/Clst: brn gy to drk gy		0110-1L
				10 Sh/Clst: pl y brn to drk y brn		0110-2L
				tr Kaolin : w		0110-3L
2660.00						0111
				40 S/Sst : lt gy w to gy w, f, crs, 1		0111-4L
				40 Sh/Clst: drk red brn to drk brn		0111-5L
				15 Sh/Clst: brn gy to drk gy		0111-1L
				5 Sh/Clst: pl y brn to drk y brn		0111-2L
				tr Kaolin : w		0111-3L

- 20-

Table 1 : Lithology description for well NOCS 17/12-3

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
2670.00						0112
				40 S/Sst : lt gy w to gy w, f, crs, l		0112-4L
				30 Sh/Clst: m gy to drk gy to gy blk		0112-1L
				20 Sh/Clst: pl y brn to drk y brn		0112-2L
				10 Sh/Clst: drk red brn to drk brn		0112-3L
2680.00						0113
				50 S/Sst : lt gy w to gy w, f, crs, l		0113-4L
				35 Sh/Clst: drk red brn to drk brn		0113-3L
				10 Sh/Clst: m gy to drk gy to gy blk		0113-1L
				5 Sh/Clst: pl y brn to drk y brn		0113-2L
2690.00						0114
				65 S/Sst : lt gy w to gy w, f, crs, l		0114-4L
				25 Sh/Clst: drk red brn to drk brn		0114-3L
				10 Sh/Clst: m gy to drk gy to gy blk		0114-1L
				tr Sh/Clst: pl y brn to drk y brn		0114-2L
2700.00						0115
				50 Sh/Clst: drk red brn to drk brn		0115-3L
				40 S/Sst : lt gy w to gy w, f, crs, l		0115-4L
				10 Sh/Clst: m gy to drk gy to gy blk		0115-1L
				tr Sh/Clst: pl y brn to drk y brn		0115-2L
2710.00						0116
				50 S/Sst : lt gy w to gy w, f, crs, l		0116-3L
				35 Sh/Clst: drk red brn to drk brn		0116-2L
				15 Sh/Clst: m gy to drk gy to gy blk		0116-1L

- 21-

Table 1 : Lithology description for well NOCS 17/12-3

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int Cvd	TOC%	%	Lithology description			
2720.00						0117
		90	S/Sst	: lt gy w to gy w, f, crs, l		0117-3L
		5	Sh/Clst:	m gy to drk gy to gy blk		0117-1L
		5	Sh/Clst:	drk red brn to drk brn		0117-2L

Depth unit of measure: m

Depth	Typ	Lithology	Vitrinite Reflectance (%)	Number of Readings	Standard Deviation	Spore Fluorescence Colour	SCI	T _{max} (°C)	Sample
470.00	cut	Sh/Clst: lt gy to lt brn gy	0.23	5	0.02	2	-	-	0001-1L
670.00	cut	Sh/Clst: pl y brn to drk y brn	0.30	20	0.04	3	-	-	0005-4L
770.00	cut	Sh/Clst: m gy to drk gy	0.31	20	0.05	3	-	-	0007-3L
800.00	cut	Sh/Clst: m gy to drk gy	0.37	12	0.03	3-4	-	-	0008-3L
930.00	cut	Sh/Clst: y gy	0.35	20	0.05	3+4	-	-	0012-5L
1020.00	cut	Sh/Clst: y gy to lt gy	0.33	11	0.04	3-4	-	-	0015-4L
1120.00	cut	bulk	NDP	-	-	3	-	-	0018-0B
1180.00	cut	Sh/Clst: y gy to lt gy	0.39	3	0.03	3+4	-	-	0020-3L
1270.00	cut	bulk	0.42	2	0.02	3-4	-	-	0023-0B
1670.00	cut	Sh/Clst: m gy to drk gy	0.41	9	0.04	3+4	-	-	0036-1L
1860.00	cut	Sh/Clst: m gy	0.39	5	0.04	4-6	-	-	0042-1L
1950.00	cut	Sh/Clst: m gy	0.41	20	0.03	4	-	-	0045-1L
2030.00	cut	Sh/Clst: m gy	0.40	9	0.05	4	-	-	0053-1L
2130.00	cut	Sh/Clst: m gy to drk gy	0.43	3	0.02	4	-	-	0059-1L

Table 2 : Thermal Maturity Data for well NOCS 17/12-3

Depth unit of measure: m

Depth	Typ Lithology	Vitrinite Reflectance (%)	Number of Readings	Standard Deviation	Spore Fluorescence Colour	SCI	T _{max} (°C)	Sample
2240.00	cut Sh/Clst: m gy to drk gy	0.44	10	0.05	4	-	-	0069-1L
2340.00	cut Sh/Clst: m gy to drk gy	0.45	15	0.04	4	-	-	0079-1L
2440.00	cut Sh/Clst: m gy to drk gy to brn gy	0.46	20	0.04	4	-	-	0089-1L
2540.00	cut Sh/Clst: pl y brn to drk y brn	0.48	20	0.06	5	-	-	0099-3L
2650.00	cut Sh/Clst: brn gy to drk gy	0.49	20	0.06	4-6	-	-	0110-1L
2700.00	cut Sh/Clst: drk red brn to drk brn	NDP	-	-	0	-	-	0115-3L