4.9 Drilling fluid summary

Interval Discussion

The first Dowell IDF engineer arrived on the rig on 14th June 1997. The rig was on location 19th June 1997 and the well was spuded 21st June 1997.
Prior to spudding the well 215 m3 of hi-vis bentonite mud was made up. The bentonite was prehydrated in drill water at a concentration at 100 kg/m3 and cut back with sea water to +/ - 60 kg/m3. The funnel viscosity was at plus 100 seconds.
The formation was hard from start to TD. The average ROP was 36.4 m/hr and the section was drilled in 22 hr.
The 30" casing was then set at 194 m and cemented with out any problems.

The planned cost for the section was NOK 85883.00. The actual cost was NOK 95442.00
A couple of problems resulted in higher than programmed cost.

Faulty weight indicators on the bulk surge tanks resulted in some bentonite being vented overboard through vent lines.

Although initial drill water was sweet the second batch to come on board had a chloride content of 16,000 mg/l and this inhibited the hydrating of the bentonite somewhat.

Conclusions and recommendations

Due to the logistical problem of transporting and hydrating large quantities of bentonite, the use of guar gum or PAC for hi-vis sweeps while drilling should be considered. Bentonite, albeit in reduced quantities, should however be retained on board for building weighted displacement fluid.

Surge tank calibration should be checked and a procedure instituted to reduce the likelihood of inadvertently venting bulk materials to the sea.

Interval Discussion

Prior to drilling the 17 ½" section a total of 338 m^3 of mud was prepared. This included 55 m^3 of 1.7 sg kill mud. While weighting up the kill mud a contamination problem was identified. It appears that bentonite had got into the barite tank.
During the drilling of the section a further 146 m^3 of spud mud was built.

The section was drilled with sea water with returns to the sea bed. Two 5 m^3 pills of hi-vis bentonite spud mud were pumped every stand.

The section was completed without problem though the hole was tight when the pipe was pulled.

Towards TD, when any potential danger from shallow gas was past, the kill mud was cut back to 1.2 sg for use as a displacement fluid. The displacement fluid was then treated with Aquapac to bring the fluid loss down. Idvis was used to increase the viscosity.

As the 13 3/8" casing was run it was filled with spud mud. This was done in case the tight hole on the trip out necessitated the casing being pumped down.

The casing was set and cemented without problem and 50 m3 of spud mud was kept for use when drilling out the cement on the next section.

Cutting back the kill mud and using it as the displacement mud at TD represented a saving over the prognosed costs. This was also helped by tighter control of bulk barite and bentonite once the calibration problem had been identified during the previous section. Also less bentonite mud was used for sweeps.

Conclusions and recommendations

The mud system performed well. The same recommendations concerning the possible use of guar gum/PAC Regular and calibration of the surge tanks apply to this section as well as to the last.

Conclusions and recommendations

The mud properties were stable trough this section, with only small depletion of KCl level. The cavings that came over the shakers were dry and hard, also after several days of logging. If drilling in this formation in future, it may be considered to lower the KCl level to avoid drying out the formation, and then prevent some of the problem with cavings.

Schlumberger
Dowell

DRILLING FLUIDS SERVICES

MudCADE*

Administration Data					
Well Name	15/5-6S	Location	NORWAY	Date & Time	21-Jun-97 23:59
Operator	STATOIL	Contractor/Rig	Dolphin Drilling	Interval	36. In
Operator Rep.	Jerry Jackson	Contractor Rep.	Steinar Erlingsen	Dowell Eng.	Leif Tore Haukås/Rune Næss
Analysis Type	WBM	Fluid System	BENTONITE	Spud Date	20-Jun-1997

DRILLING FLUIDS PROPERTIES RECORD - From 19-Jun-1997 00:01 to 21-Jun-1997 23:59

Property Name	Units	1	2	3
Date		20-Jun-97	20-Jun-97	21-Jun-97
Time		23:43	23:44	22:00
Sample loc.		Pit 3	Pit 10	Pit 3
MD	m	194.	194.	194.
TVD	m	194.	194.	194.
Hole Angle	deg			
Flow. Temp.	degC			
Density	g/cm3	1.09	1.2	1.1
Gradient	kPa/m	10.7	11.8	10.8
Funnel Visc.	s	100	100	100
600 rpm		0	0	0
300 rpm		0	0	0
6 rpm				
3 rpm		0	0	0
Plastic Visc.	cP	0	0	0
Yield Point	Pa	0.	0.	0.
10 sec. Gel	Pa			
10 min. Gel	Pa			
30 min. Gel	Pa			
n-annulus		0.	0.	0.
K-annulus	Pa·s^n	0.	0.	0.
API Filtrate	mL			
API Cake	mm			
HTHP Filtrate	mL			
HTHP Cake	mm			
HTHP Temp.	degC			
Pm	mL			
Pf	mL			
Mf	mL			
pH				
Total Hard.	mg/L			
Ca2+	mg/L			
Mg2+	mg/L			
K+	g/L			
Cl-	g/L			
KCl	g/L			
Excess Lime	kg/m3			
Sand %	%			
Oil %	%			
Brine %	%			

* Mark of Schlumberger

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DRILLING FLUIDS SERVICES

MudCADE*

Administration Data					
Well Name	15/6-6S	Location	NORWAY	Date & Time	24-Jun-97 23:59
Operator	STATOIL	Contractor/Rig	Dolphin Drilling	Interval	17.5 in
Operator Rep.	Jerry Jackson	Contractor Rep.	Steinar Erlingsen	Dowell Eng.	Leif Tore Haukås/Rune Næss
Analysis Type	WBM	Fluid System	BENTONITE	Spud Date	20-Jun-1997

DRILLING FLUIDS PROPERTIES RECORD - From 21-Jun-1997 23:59 to 24-Jun-1997 23:59

Property Name	Units	1	2	3	4
Date		22-Jun-97	22-Jun-97	23-Jun-97	24-Jun-97
Time		22:00	22:30	22:00	22:00
Sample loc.		Pit 3	Pit 10	Active S	Active S
MD	m	629.	629.	629.	0.
TVD	m			629.	
Hole Angle	deg				
Flow. Temp.	degC				
Density	g/cm3	1.1	1.7	1.2	1.1
Gradient	kPa/m	10.8	16.7	11.8	10.8
Funnel Visc.	s	100	100	62	100
600 rpm		0	0	0	0
300 rpm		0	0	0	0
6 rpm					
3 rpm		0	0	0	0
Plastic Visc.	cP	0	0	0	0
Yield Point	Pa	0.	0.	0.	0.
10 sec. Gel	Pa				
10 min. Gel	Pa				
30 min. Gel	Pa				
n-annulus		0.	0.	0.	0.
K-annulus	Pa·s^n	0.	0.	0.	0.
API Filtrate	mL			5.	
API Cake	mm			2.	
HTHP Filtrate	mL				
HTHP Cake	mm				
HTHP Temp.	degC				
Pm	mL				
Pf	mL				
Mf	mL				
pH					
Total Hard.	mg/L			0.	
Ca2+	mg/L			0.	
Mg2+	mg/L			0.	
K+	g/L				
Cl-	g/L				
KCl	g/L				
Excess Lime	kg/m3			0.	
Sand %	%				
Oil %	%				
Brine %	%				

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DRILLING FLUIDS SERVICES

MudCADE*

Administration Data						
Well Name	15/5-6S	Location	NORWAY	Date & Time	14-Jul-97 23:59
Operator	STATOIL	Contractor/Rig	Dolphin Drilling	Interval	8.5 in
Operator Rep.	Jerry Jackson	Contractor Rep.	Steinar Erlingsen	Dowell Eng.	Leif Tore Haukås/Rune Næss
Analysis Type	WBM	Fluid System	QUADRILL	Spud Date	20-Jun-1997

DRILLING FLUIDS PROPERTIES RECORD - From 24-Jun-1997 23:59 to 24-Oct-1997 13:22

Property Name	Units	1	2	3	4	5	6	7	8	9	10	11	12	13
Date		26-Jun-97	26-Jun-97	27-Jun-97	27-Jun-97	28-Jun-97	28-Jun-97	28-Jun-97	29-Jun-97	30-Jun-97	30-Jun-97	01-Jul-97	02-Jul-97	03-Jul-97
Time		03:46	15:30	14:00	21:30	04:30	10:30	21:00	20:00	03:00	13:30	22:00	12:00	04:00
Sample loc.		Active S	Active S	Active S	FlowLine	Active S	FlowLine	Active S	Active S	FlowLine	FlowLine	Active S	Active S	FlowLine
MD	m	1002.	1006.	1318.	1530.	1830.	2037.	2180.	2250.	2460.	2664.	2725.	2725.	2725.
TVD	m	1002.	1006.	1318.	1530.	1830.	2037.	2180.		2460.		2725.	2725.	2725.
Hole Angle	deg						1.6							
Flow. Temp.	degC				30.	32.				37.				
Density	g/cm3	1.08	1.08	1.26	1.25	1.26	1.25	1.25	1.25	1.26	1.25	1.35	1.4	1.4
Gradient	kPa/m	10.6	10.6	12.4	12.3	12.4	12.3	12.3	12.3	12.4	12.3	13.2	13.7	13.7
Funnel Visc.	s	45	48	63	60	61	60	56	54	53	45	54	45	54
600 rpm		25	28	52	60	62	57	54	61	58	54	64	71	78
300 rpm		19	21	37	42	44	41	39	45	43	40	44	50	58
200 rpm		14		30	35	37	35	33	37	36	34	37	40	47
100 rpm		13		21	25	27	26	24	27	27	26	27	29	34
6 rpm		3	3	7	8	9	10	8	10	10	9	8	9	10
3 rpm		2	2	6	7	8	8	7	8	8	7	7	7	8
Plastic Visc.	cP	6	7	15	18	18	16	15	16	15	14	20	21	20
Yield Point	Pa	6.2	6.7	10.5	11.5	12.4	12.	11.5	13.9	13.4	12.4	11.5	13.9	18.2
10 sec. Gel	Pa	1.	1.	4.	5.	4.	4.	4.	4.	5.	3.5	4.	3.5	4.5
10 min. Gel	Pa	2.	2.	7.	8.	9.	7.	6.	7.	7.	5.5	6.	5.	6.5
n-annulus		0.489	0.511	0.395	0.389	0.37	0.355	0.373	0.375	0.365	0.378	0.399	0.427	0.43
K-annulus	Pa·s^n	0.46	0.444	1.61	1.896	2.235	2.292	1.947	2.217	2.253	1.929	1.865	1.783	2.027
API Filtrate	mL	6.	5.	3.	2.9	3.	3.5	3.2	3.8	3.1	3.6	3.5	2.8	2.5
API Cake	mm	1.	1.	1.	1.	1.	1.	1.	1.	1.5	1.	1.	1.	1.
Pm	mL	0.5	0.5	0.35	0.	0.1	0.05	0.12	0.05	0.1	0.05	0.2	0.05	0.8
Pf	mL	0.3	0.3	0.15	0.1	0.1	0.	0.1	0.05	0.1	0.05	0.1	0.05	0.1
Mf	mL	0.9	0.9	0.6	0.5	0.5	0.4	0.45	0.45	0.5	0.45	0.5	0.5	0.3
pH		9.5	9.5	8.8	8.5	8.3	8.	8.	8.	8.	7.6	8.3	7.9	8.9
Total Hard.	mg/L	160.3	160.3	400.8	440.9	601.2	721.4	841.6	921.8	881.7	921.8	801.6	721.4	721.4
Ca2+	mg/L	40.1	40.1	160.3	200.4	300.6	400.8	440.9	480.9	480.9	521.	400.8	400.8	360.7
Mg2+	mg/L	72.9	72.9	145.8	145.8	182.3	194.4	243.1	267.4	243.1	243.	243.1	194.4	218.7
K+	g/L	61.2	61.	65.4	69.1	72.8	75.	68.6	68.	66.	64.	64.4	63.	63.9
Cl-	g/L	55.	55.	59.	62.	65.	55.	60.	59.	59.	55.	61.	60.	60.
KCl	g/L	116.	116.	124.	131.	138.	129.	130.	125.	125.	122.	122.	120.	121.
Excess Lime	kg/m3	0.2	0.2	0.2	0.	0.	0.	0.	0.	0.	0.	0.1	0.	0.5
Sand %	%	0.	0.	0.3	0.5	0.7	0.3	0.2	0.3	0.4	0.	0.5	0.	0.1
Water %	%	91.	91.5	85.	84.	83.	83.	83.	83.	83.	83.	80.	80.	78.5
Brine %	%	95.4	95.9	89.4	88.6	87.8	87.5	87.4	87.3	87.3	87.1	84.2	84.1	82.5
Polyol %	%	4.	4.	4.	4.	4.	4.	4.	4.	4.	4.	4.	4.	4.
Corr. Solids %	%	0.6	0.1	6.6	7.4	8.2	8.5	8.6	8.7	8.7	8.9	11.8	11.9	13.5

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DRILLING FLUIDS SERVICES

MudCADE*

Administration Data					
Well Name	15/5-6S	Location	NORWAY	Date & Time	14-Jul-97 23:59
Operator	STATOIL	Contractor/Rig	Dolphin Drilling	Interval	8.5 in
Operator Rep.	Jerry Jackson	Contractor Rep.	Steinar Erlingsen	Dowell Eng.	Leif Tore Haukås/Rune Næss
Analysis Type	WBM	Fluid System	QUADRILL	Spud Date	20-Jun-1997

DRILLING FLUIDS PROPERTIES RECORD - From 24-Jun-1997 23:59 to 14-Jul-1997 13:17

Property Name	Units	14	15	16	17	18	19	20	21	22	23	24	25	26
Date		03-Jul-97	04-Jul-97	06-Jul-97	06-Jul-97	07-Jul-97	07-Jul-97	08-Jul-97	08-Jul-97	09-Jul-97	10-Jul-97	11-Jul-97	12-Jul-97	13-Jul-97
Time		14:57	10:37	01:45	10:47	05:00	14:34	03:00	15:24	22:00	22:49	20:42	21:25	12:10
Sample loc.		Active S	Active S	Active S	Active S	Active S	Active S	FlowLine	Active S	Active S	Active S	Active S	Active S	Active S
MD	m	2725.	2725.	2725.	2725.	2725.	2725.	2725.	2725.	2725.	2725.	2725.	2725.	2725.
TVD	m	2725.	2725.	2725.	2725.	2725.	2725.	2725.	2725.	2725.	2725.			2725.
Hole Angle	deg													
Flow. Temp.	degC													
Density	g/cm3	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.5	1.5	1.5	1.5	1.5	1.5
Gradient	kPa/m	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.7	14.7	14.7	14.7	14.7	14.7
Funnel Visc.	s	66	67	56	51	52	50	52	54	54	54	51	52	53
600 rpm		77	78	79	77	79	73	72	82	81	81	78	80	82
300 rpm		54	54	56	55	56	52	51	58	57	57	52	56	55
200 rpm		44	45	46	45	45	43	42	48	48	48	42	46	45
100 rpm		32	32	33	32	32	31	30	35	35	35	29	32	33
6 rpm		10	10	9	9	9	9	8	10	10	10	9	10	10
3 rpm		8	7	7	7	6	7	6	8	8	8	7	8	7
Plastic Visc.	cP	23	22	23	22	23	21	21	24	24	24	24	24	27
Yield Point	Pa	14.8	15.3	15.8	15.8	15.8	14.8	14.4	16.3	15.8	15.8	13.4	15.3	13.4
10 sec. Gel	Pa	7.	4.	3.5	3.5	3.5	3.5	3.5	4.5	4.5	4.5	4.	4.5	4.5
10 min. Gel	Pa	10.	6.	5.5	6.5	5.5	6.	4.5	6.5	6.5	6.5	5.	6.	6.
n-annulus		0.415	0.444	0.452	0.448	0.485	0.435	0.465	0.43	0.426	0.426	0.435	0.423	0.448
K-annulus	Pa·s^n	2.079	1.735	1.713	1.723	1.39	1.758	1.437	2.027	2.039	2.039	1.758	2.052	1.723
API Filtrate	mL	2.8	2.8	2.8	2.9	2.8	2.8	2.2	2.7	2.6	2.6	2.8	2.8	2.9
API Cake	mm	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
Pm	mL	0.1	0.1	0.1	0.1	0.05	0.05	0.15	0.17	0.15	0.15	0.15	0.15	1.6
Pf	mL	0.05	0.05	0.05	0.05	0.02	0.02	0.1	0.08	0.1	0.1	0.1	0.1	0.64
Mf	mL	0.2	0.2	0.2	0.18	0.5	0.5	0.5	0.85	0.75	0.75	0.75	0.75	2.25
pH		8.4	8.2	8.2	8.	8.	8.1	8.3	8.	8.	8.	9.	8.	9.8
Total Hard.	mg/L	721.4	721.4	681.3	681.3	681.7	681.7	561.1	621.2	601.2	581.1	581.1	561.1	220.4
Ca2+	mg/L	400.8	400.8	360.7	360.7	400.8	400.8	200.4	260.5	240.5	240.5	240.5	240.5	160.3
Mg2+	mg/L	194.4	194.4	194.4	194.4	291.7	291.7	218.7	218.7	218.7	206.6	206.6	194.4	36.5
K+	g/L	64.4	63.3	63.9	62.3	61.4	63.5	63.9	65.	65.	65.	65.	65.	63.9
Cl-	g/L	65.	65.	64.	63.	68.	65.	69.	68.	69.	69.	69.	68.	64.
KCl	g/L	122.	120.	121.	118.	115.	119.	121.	122.	122.	122.	122.	122.	121.
Excess Lime	kg/m3	0.	0.	0.	0.	0.	0.	0.1	0.1	0.1	0.1	0.1	0.1	0.8
Sand %	%	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Water %	%	78.	78.	78.	78.	77.5	77.5	77.5	76.	76.	76.	76.	76.	76.
Brine %	%	82.2	82.2	82.2	82.1	81.6	81.7	81.8	80.2	80.3	80.3	80.3	80.2	80.1
Polyol %	%	4.	4.	4.	4.	4.	4.	4.	4.	4.	4.	4.	4.	4.
Corr. Solids %	%	13.8	13.8	13.8	13.9	14.4	14.3	14.2	15.8	15.7	15.7	15.7	15.8	15.9

INTERPRETATION REPORT

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REF(S)
Ger Van Graas
ORDER NO: G97-26
CONTRACT NO: DTJ 020215

TITLE

GEOCHEMICAL ANALYSIS OF NOCS WELLS 15/5-6 and 15/5-5

AUTHOR(S)

Peter Barry Hall

GEOLAB PROJECT NO.	DATE
62390	26.11.97
PROJECT MANAGER	QA RESPONSIBLE
Peter Barry Hall, Snr. Scientist	Kjell Arne Bakken, Snr. Scientist
REPORT NO./FILE	PAGE 1 of 1

1.2 Analytical Program

The analytical program for 15/5-5, 15/5-6 and the 15/5-6 muds and resin samples is listed below (numbers of analysed samples for 15/5-5 and 15/5-6 muds and resin sample are in separate brackets with 15/5-5 first). Detailed analytical programs can be found in Tables 1a-c. The samples from well 15/5-5 were analysed to enable a better comparison between the analytical data from 15/5-6 (this report) and the data obtained by Norsk Hydro on well 15/5-5 (Rein et al., 1996).

Analysis type	No of samples	Figures	Tables
Rock-Eval analysis	18(0)(2)	2.1a-b	5a-b
Iatroscan analysis	11(2)(2)	2.2a-d	8f-g
Thermal Extraction GC (GHM - S_1)	16(2)(3)	3.1a-c	
Pyrolysis GC (GHM - S_2)	0(2)(0)		6
Solvent Extraction	11(2)(2)		8a
Deasphaltening and MPLC	11(2)(2)	3.3	8a-e
Saturated Hydrocarbon GC	11(2)(2)	3.4a-f	9a-b
Aromatic Hydrocarbon GC	11(2)(2)	3.5a-d	9ca-9cb
Carbon isotope analysis of C_{15}+ fractions	10(2)(2)	3.6	10a-b
GC-MS, saturated hydrocarbons	10(2)(2)	3.7a-n	11a-i
GC-MS, aromatic hydrocarbons	10(2)(2)	3.7o	12a-e

Data tables can be found in separate appendices for 15/5-5, 15/5-6 and 15/5-6 muds.
For the results section Norsk Hydro is referred to as NH and Geolab Nor as GLN

Table 1 Analytical Program 15/5-5

GEOLAB NOR

PROJECT: Statoil 15/5-6									DATABASE CODE: 8390												P84		
Date:		26/11/97																					
Client Contact: Ger van Graas																							
Scientist: PBH																							
Technician: UWS																							
Sample type key c = Cuttings s = SWC p = Conv core/ plug m = mud o = oil/gas														bo = base oil R = Reservoir S = Source									
Sample Depth (m)	Sample Type	Sample Code	HS & Occ Gas	Washing	Gas isotope canned samples (A)	Lithology Description	Picking for screening	Leco TOC	RockEval	Thermal Extraction GC	Pyrolysis GC	TE and PY GC	Picking for Extraction	MINI Extraction	Iatroscan	SOXTEC Extraction	MPLC & Deasp	Sat GC (Q)	Aro GC (Non Q)	Sat GCMS (Q)	Aro GCMS (Non Q)	Isotope of EOM/fraction
		Table nos.						5	6			6			8	8	8	9	9	11	12	10
2161.5	ccp	P84/0001-0										x			x	x	x	x	x	x	x	x
2169.8	ccp	P84/0002-0										x			x	x	x	x	x	x	x	x
Total			0	0	0	0	0	0	0	0	0	2	0	0	2	2	2	2	2	2	2	2

Table 6 : Pyrolysis GC Data (S2 peak) as Percentage of Total Area for Well NOCS 15/5-5

Depth unit of measure: m

Depth	Typ	Lithology	C1	C2-C5	C6-C14	C15+	S2 from Rock-Eval	Sample
2161.50	ccp	bulk	5.42	26.21	46.99	21.37	-	0001-0B
2169.80	ccp	bulk	3.58	27.42	52.82	16.17	-	0002-0B

Table 8a: MPLC Bulk Composition: Weight of EOM and Fraction for well NOCS 15/5-5

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
2161.50	ccp	bulk	9.9	217.8	106.4	55.5	14.9	41.0	161.9	55.9	1.51	0001-0B
2169.80	ccp	bulk	11.3	224.4	108.7	57.7	19.2	38.8	166.3	58.1	1.46	0002-0B

Table 8b: MPLC Bulk Composition: Concentration of EOM and Fraction (wt ppm rock) for well NOCS 15/5-5

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
2161.50	ccp	bulk	22022	10759	5611	1510	4141	16370	5651	0001-0B
2169.80	ccp	bulk	19928	9651	5121	1706	3449	14773	5155	0002-0B

Table 8c: MPLC Bulk Composition: Concentration of EOM and Fraction (mg/g TOC(e)) for well NOCS 15/5-5

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
2161.50	ccp	bulk	1458.43	712.52	371.64	100.02	274.24	1084.16	374.26	0001-0B
2169.80	ccp	bulk	1365.00	661.06	350.82	116.85	236.26	1011.88	353.12	0002-0B

Table 8d: MPLC Bulk Composition: Material extracted from the rock (%) for well NOCS 15/5-5

Depth unit of measure: m

Depth	Typ	Lithology	Sat	Aro	Asph	NSO	Total	HC	Non-HC	Recov. MPLC	Recov. Asph	Sample
2161.50	ccp	bulk	48.86	25.48	6.86	18.80	100.00	74.34	25.66	0.43	0.98	0001-0B
2169.80	ccp	bulk	48.43	25.70	8.56	17.31	100.00	74.13	25.87	0.42	0.98	0002-0B

Table 8e: MPLC Bulk Composition: Ratios for well NOCS 15/5-5

Depth unit of measure: m

Depth	Typ	Lithology	Sat Aro	HC Non-HC	Asp NSO	Sample
2161.50	ccp	bulk	1.92	2.90	0.36	0001-0B
2169.80	ccp	bulk	1.88	2.87	0.49	0002-0B

Table 8F: Iatroscan TLC Bulk Composition: Absolute yields in mg/g rock for well NOCS 15/5-5

Depth unit of measure: m

Depth	Typ	Lithology	Sat HC	Aro HC	NSO	Asp	HC	Non-HC	EOM	Sample
2161.50	ccp	bulk	12.54	3.60	4.37	1.51	16.14	5.88	22.02	0001-0B
2169.80	ccp	bulk	10.58	3.73	3.92	1.71	14.30	5.62	19.93	0002-0B

Table 8G: Iatroscan TLC Bulk Composition: Rel. percentages of sep. fractions for well NOCS 15/5-5

Depth unit of measure: m

Depth	Typ	Lithology	Sat HC	Aro HC	NSO	Asp	Total	HC	Non-HC	Recov. Iatr.	Recov. Asp	Sample
2161.50	ccp	bulk	56.92	16.36	19.86	6.86	100.00	73.28	26.72	0.58	0.98	0001-0B
2169.80	ccp	bulk	53.09	18.69	19.66	8.56	100.00	71.78	28.22	0.57	0.98	0002-0B

Table 9A: Quantitative Analysis of Saturated Fraction for well 15/5-5

sample	nC15 mg/g sat	nC16 mg/g sat	iC18 mg/g sat	nC17 mg/g sat	Pr mg/g sat	nC18 mg/g sat	Ph mg/g sat	nC19 mg/g sat	nC20 mg/g sat	nC21 mg/g sat	nC22 mg/g sat	nC23 mg/g sat	nC24 mg/g sat	nC25 mg/g sat	nC26 mg/g sat	nC27 mg/g sat	nC28 mg/g sat	nC29 mg/g sat	nC30 mg/g sat	nC31 mg/g sat	nC32 mg/g sat	nC33 mg/g sat	nC34 mg/g sat
2161.50m	6.26	7.17	2.80	7.46	4.96	6.92	4.86	6.21	6.24	5.75	5.72	5.56	6.06	5.69	5.51	4.18	4.22	4.14	3.74	3.78	3.72	3.17	3.27
2169.80m	6.07	6.22	2.37	6.21	4.14	5.45	3.91	4.85	4.83	4.33	4.56	4.65	5.44	5.17	4.76	3.86	3.87	3.64	3.14	2.87	2.27	2.11	1.39

Table 9B: Saturated Hydrocarbon Ratios (peak area) for well NOCS 15/5-5

Depth unit of measure: m

Depth	Typ	Lithology	Pristane / nC17	Pristane / Phytane	Pristane/nC17 / Phytane/nC18	Phytane / nC18	CPI1	nC17 / nC17+nC27	Sample
2161.50	ccp	bulk	0.66	1.02	0.95	0.70	0.97	0.64	0001-0B
2169.80	ccp	bulk	0.67	1.06	0.93	0.72	1.00	0.62	0002-0B

Table 9Ca: Aromatic Hydrocarbon Ratios (peak area) for well NOCS 15/5-5

Depth unit of measure: m

Depth	Typ	Lithology	MNR	DMNR	BPhR	2/1MP	MPI1	MPI2	Rc	DBT/P	4/1MDBT	(3+2) /1MDBT	Sample
2161.50	ccp	bulk	0.66	0.88	0.11	1.40	0.89	1.02	0.93	0.36	2.97	0.74	0001-0B
2169.80	ccp	bulk	0.96	0.90	0.16	1.30	0.85	0.95	0.91	0.38	2.69	0.48	0002-0B

Table 9Cb: Aromatic Hydrocarbon Ratios (peak area) for well NOCS 15/5-5

Depth unit of measure: m

Depth	Typ	Lithology	F1	F2	Sample
2161.50	ccp	bulk	0.51	0.29	0001-0B
2169.80	ccp	bulk	0.49	0.28	0002-0B

Table 10A: Tabulation of carbon isotope data for EOM/EOM - fractions for well NOCS 15/5-5

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Saturated	Aromatic	NSO	Asphaltenes	Kerogen	Sample
2161.50	ccp	bulk	-29.74	-29.93	-29.48	-29.45	-29.48	-	0001-0
2169.80	ccp	bulk	-29.58	-29.88	-29.44	-29.41	-29.38	-	0002-0

Table 10B: Tabulation of cv values from carbon isotope data for well NOCS 15/5-5

Depth unit of measure: m

Depth	Typ	Lithology	Saturated	Aromatic	cv value	Interpretation	Sample
2161.50	ccp	bulk	-29.93	-29.48	-1.37	Marine	0001-0
2169.80	ccp	bulk	-29.88	-29.44	-1.41	Marine	0002-0

Table 11a: Variation in Triterpane Distribution (peak height) SIR for Well NOCS 15/5-5

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Ratio6	Ratio7	Ratio8	Ratio9	Rat.10	Rat.11	Rat.12	Rat.13	Rat.14	Sample
2161.50	bulk	0.42	0.30	0.07	0.31	0.24	0.07	0.21	0.67	0.17	0.08	0.94	0.25	0.08	57.97	0001-0
2169.80	bulk	0.43	0.30	0.07	0.33	0.25	0.06	0.21	0.64	0.18	0.09	0.94	0.26	0.08	59.60	0002-0

List of Triterpane Distribution Ratios

Ratio 1: 27Tm / 27Ts

Ratio 2: 27Tm / 27Tm+27Ts

Ratio 3: 27Tm / 27Tm+30aß+30ßa

Ratio 4: 29aß / 30aß

Ratio 5: 29aß / 29aß+30aß

Ratio 6: 30d / 30aß

Ratio 7: 28aß / 30aß

Ratio 8: 28aß / 29aß

Ratio 9: 28aß / 28aß+30aß

Ratio 10: 24/3 / 30aß

Ratio 11: 30aß / 30aß+30ßa

Ratio 12: 29aß+29ßa / 29aß+29ßa+30aß+30ßa

Ratio 13: 29ßa+30ßa / 29aß+30aß

Ratio 14: 32aßS / 32aßS+32aßR (%)

Table 11b: Variation in Sterane Distribution (peak height) SIR for Well NOCS 15/5-5

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Ratio6	Ratio7	Ratio8	Ratio9	Ratio10	Sample
2161.50	bulk	0.75	49.31	79.50	1.38	0.80	0.37	0.23	0.66	0.97	3.82	0001-0
2169.80	bulk	0.77	49.65	80.22	1.43	0.80	0.40	0.26	0.67	0.99	4.03	0002-0

List of Sterane Distribution Ratios

Ratio 1: 27dßS / 27dßS+27aaR

Ratio 2: 29aaS / 29aaS+29aaR (%)

Ratio 3: 2*(29ßßR+29ßßS) / (29aaS+29aaR + 2*(29ßßR+29ßßS)) (%)

Ratio 4: 27dßS+27dßR+27daR+27daS / 29dßS+29dßR+29daR+29daS

Ratio 5: 29ßßR+29ßßS / 29ßßR+29ßßS+29aaS

Ratio 6: 21a+22a / 21a+22a+29aaS+29ßßR+29ßßS+29aaR

Ratio 7: 21a+22a / 21a+22a+28daS+28aaS+29daR+29aaS+29ßßR+29ßßS+29aaR

Ratio 8: 29ßßR+29ßßS / 29aaS+29ßßR+29ßßS+29aaR

Ratio 9: 29aaS / 29aaR

Ratio 10: 29ßßR+29ßßS / 29aaR

Table 11c: Raw triterpane data (peak height) for Well NOCS 15/5-5

Depth unit of measure: m

Depth	Lithology	23/3	24/3	25/3	24/4	26/3	27Ts	27Tm	28aß	25nor30aß	Sample
		29aß	29Ts	30d	29ßa	30O	30aß	30ßa	30G	31aßS	
		31aßR	32aßS	32aßR	33aßS	33aßR	34aßS	34aßR	35aßS	35aßR	
2161.50	bulk	6224.4	5652.2	3060.4	3556.6	1950.1	13094.0	5562.5	15536.9	0.0	0001-0
		23307.1	15388.6	5109.6	3331.5	0.0	74573.0	4670.5	3228.9	35886.6	
		21270.1	22571.7	16365.4	17471.3	11830.7	9527.7	6323.4	11514.1	6579.3	
2169.80	bulk	4564.7	4263.5	2150.2	2634.1	1392.4	9312.1	4024.2	10569.7	0.0	0002-0
		16426.4	10356.5	3089.8	2138.6	0.0	49394.0	3016.2	2336.6	23502.9	
		14530.5	14887.4	10092.5	11554.7	7641.6	6488.4	3952.2	7281.3	4156.9	

Table 11d: Raw sterane data (peak height) m/z 217 SIR for Well NOCS 15/5-5

Depth unit of measure: m

Depth	Lithology	21a	22a	27dßS	27dßR	27daR	27daS	28dßS	28dßR	28daR*	Sample
		29dßS*	28daS*	27aaR	29dßR	29daR	28aaS	29daS*	28ßßS		
		28aaR	29aaS	29ßßR	29ßßS	29aaR					
2161.50	bulk	10362.6	3335.0	18806.9	12633.6	4568.9	5363.2	8143.1	5490.5	6086.3	0001-0
		11490.1	11195.2	6111.0	8407.0	3093.1	3671.6	7010.5	9007.7		
		2489.7	3868.7	7971.2	7238.1	3977.0					
2169.80	bulk	8237.4	2412.5	13575.1	9496.5	3194.4	3264.8	5458.8	3694.3	3920.9	0002-0
		8065.2	8044.7	3964.9	5722.0	2081.8	2390.4	4842.2	6280.3		
		1623.1	2594.7	5555.7	5043.0	2631.7					

* 28daR coel with 27aaS, 29dßS coel with 27ßßR, 28daS coel with 27ßßS, 29daS coel with 28ßßR

Table 11e: Raw sterane data (peak height) m/z 218 SIR for Well NOCS 15/5-5

Depth unit of measure: m

Depth	Lithology	27ßßR	27ßßS	28ßßR	28ßßS	29ßßR	29ßßS	30ßßR	30ßßS	Sample
2161.50	bulk	14472.7	15317.4	11081.4	13782.7	12000.9	12074.8	4042.3	3899.2	0001-0
2169.80	bulk	10483.9	11269.3	7709.6	9632.2	8027.5	8228.7	2527.3	2558.6	0002-0

Table 11f: Raw triterpane data (peak height) m/z 177 SIR for Well NOCS 15/5-5

Depth unit of measure: m

Depth	Lithology	25nor28aß	25nor30aß	Sample
2161.50	bulk	1589.2	0.0	0001-0
2169.80	bulk	1083.5	0.0	0002-0

Table 11g: Amount of triterpanes (ppb) for Well NOCS 15/5-5

Depth unit of measure: m

Depth	Lithology	23/3	24/3	25/3	24/4	26/3	27Ts	27Tm	28aß	25nor30aß	Sample
		29aß	29Ts	30d	29ßa	30O	30aß	30ßa	30G	31aßS	
		31aßR	32aßS	32aßR	33aßS	33aßR	34aßS	34aßR	35aßS	35aßR	
2161.50	bulk	51589.5	46847.2	25365.5	29478.5	16162.8	108527.2	46103.3	128774.2	0.0	0001-0
		193176.2	127545.6	42349.9	27612.3	0.0	618083.8	38710.6	26761.9	297438.8	
		176293.0	187081.3	135641.4	144807.3	98056.4	78968.3	52410.6	95432.1	54531.2	
2169.80	bulk	53739.1	50193.1	25314.2	31011.0	16392.0	109628.4	47375.5	124434.0	0.0	0002-0
		193383.4	121923.6	36374.9	25176.6	0.0	581500.0	35508.3	27508.6	276692.3	
		171063.2	175264.6	118816.4	136029.9	89962.4	76385.8	46528.6	85719.9	48937.6	

Table 11h: Amount of steranes (ppb) m/z 217 SIR for Well NOCS 15/5-5

Depth unit of measure: m

Depth	Lithology	21a	22a	27dßS	27dßR	27daR	27daS	28dßS	28dßR	28daR*	Sample
		29dßS*	28daS*	27aaR	29dßR	29daR	28aaS	29daS*	28ßßS		
		28aaR	29aaS	29ßßR	29ßßS	29aaR					
2161.50	bulk	85888.0	27641.6	155877.2	104711.0	37868.2	44451.9	67492.3	45506.9	50445.3	0001-0
		95233.6	92789.3	50649.8	69679.4	25636.9	30431.6	58105.5	74658.6		
		20635.4	32065.3	66067.7	59991.4	32962.2					
2169.80	bulk	96976.6	28401.6	159815.2	111799.2	37606.7	38435.4	64264.9	43491.9	46159.8	0002-0
		94949.1	94707.5	46677.7	67363.2	24508.1	28141.9	57006.2	73936.3		
		19108.3	30546.4	65405.3	59369.1	30982.6					

* 28daR coel with 27aaS, 29dßS coel with 27ßßR, 28daS coel with 27ßßS, 29daS coel with 28ßßR

Table 11i: Amount of standard and weight of sample for Well NOCS 15/5-5

Depth unit of measure: m

Depth	Lithology	Standard	Amount	Weight	Sample
2161.50	bulk	3038.0	0.700	27.8	0001-0
2169.80	bulk	2146.6	0.700	27.7	0002-0

Table 12a: Variation in Triaromatic Sterane Distribution (peak height) for Well NOCS 15/5-5

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Sample
2161.50	bulk	0.50	0.49	0.27	0.25	0.33	0001-0
2169.80	bulk	0.57	0.50	0.29	0.29	0.38	0002-0

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 12b: Variation in Monoaromatic Sterane Distribution (peak height) for Well NOCS 15/5-5

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Sample
2161.50	bulk	0.36	0.26	0.24	0.20	0001-0
2169.80	bulk	0.41	0.31	0.27	0.23	0002-0

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 12c: Aromatisation of Steranes (peak height) for Well NOCS 15/5-5

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Sample
2161.50	bulk	0.42	0.93	0001-0
2169.80	bulk	0.41	0.94	0002-0

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

Ratio2: g1 / g1 + I1

Table 12d: Raw triaromatic sterane data (peak height) m/z 231 for Well NOCS 15/5-5

Depth unit of measure: m

Depth	Lithology	a1	b1	c1	d1	e1	f1	g1	Sample
2161.50	bulk	52002.7	49917.4	21826.8	104057.8	54847.4	53620.0	52103.5	0001-0
2169.80	bulk	127903.7	98241.7	47182.8	204626.9	104519.4	104232.1	98314.1	0002-0

Table 12e: Raw monoaromatic sterane data (peak height) m/z 253 for Well NOCS 15/5-5

Depth unit of measure: m

Depth	Lithology	A1	B1	C1	D1	E1	F1	G1	H1	I1	Sample
2161.50	bulk	31498.8	19810.5	36003.8	30793.7	56902.1	12449.4	42676.0	23707.8	3707.2	0001-0
2169.80	bulk	71190.9	46284.9	74705.0	55035.3	103738.9	24001.8	84728.6	44912.8	6537.6	0002-0

GEOLAB NOR

PROJECT: Statoil 15/5-6									DATABASE CODE: 8390											P83		
Date:		26/11/97																				
Client Contact: Ger van Graas																						
Scientist: PBH																						
Technician: UWS																						
Sample type key c = Cuttings s = SWC p = Conv core/ plug m = mud o = oil/gas													bo = base oil R = Reservoir S = Source									

Sample Depth (m)	Sample Type	Sample Code	HS & Occ Gas	Washing	Gas isotope canned samples (A)	Lithology Description	Picking for screening	Leco TOC	RockEval	Thermal Extraction GC	Pyrolysis GC	TE and PY GC	Picking for Extraction	MINI Extraction	Iatroscan	SOXTEC Extraction	MPLC & Deasp	Sat GC (Q)	Aro GC (Non Q)	Sat GCMS (Q)	Aro GCMS (Non Q)	Isotope of EOM/fraction
		Table nos.						5c	5c						8	8	8	9	9	11	12	10
2172	s	P83/0001-0						x	x	x					x	x	x	x	x	x	x	x
2175	s	P83/0002-0						x	x	x					x	x	x	x	x	x	x	x
2179	s	P83/0003-0						x	x	x												
2180.4	p	P83/0004-0						x	x	x					x	x	x	x	x	x	x	x
2180.97	p	P83/0005-0						x	x	x												
2181.85	p	P83/0006-0						x	x	x					x	x	x	x	x	x	x	x
2182.2	p	P83/0007-0						x	x	x					x	x	x	x	x	x	x	x
2182.5	p	P83/0008-0						x	x	x					x	x	x	x	x	x	x	x
2182.75	p	P83/0009-0						x	x	x					x	x	x	x	x	x	x	x
2183.05	p	P83/0010-0						x	x	x					x	x	x	x	x	x	x	x
2183.4	p	P83/0011-0						x	x	x												
2184.02	p	P83/0012-0						x	x	x					x	x	x	x	x	x	x	x
2184.75	p	P83/0013-0						x	x	x					x	x	x	x	x			
2185.15	p	P83/0014-0						x	x	x					x	x	x	x	x	x	x	x
2187.05	p	P83/0015-0						x	x													
2190.75	p	P83/0016-0						x	x	x												
2193.5	p	P83/0017-0						x	x													
2197.35	p	P83/0018-0						x	x	x												
Total			0	0	0	0	0	18	18	16	0	0	0	0	11	11	11	11	11	10	10	10

Table 5A: Rock-Eval table for well NOCS 15/5-6

Depth unit of measure: m

Depth	Typ	Form	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
2172.00	swc		bulk	7.17	4.17	0.99	4.21	0.84	496	118	11.3	0.63	372	0001-0B
2175.00	swc		bulk	10.57	7.45	1.00	7.45	2.24	333	45	18.0	0.59	395	0002-0B
2179.00	swc		bulk	8.25	4.25	2.36	1.80	0.85	500	278	12.5	0.66	371	0003-0B
2180.40	ccp		bulk	14.02	6.97	0.54	12.91	1.63	428	33	21.0	0.67	417	0004-0B
2180.97	ccp		bulk	9.46	3.16	0.26	12.15	1.00	316	26	12.6	0.75	404	0005-0B
2181.85	ccp		bulk	16.24	6.74	0.72	9.36	1.61	419	45	23.0	0.71	411	0006-0B
2182.20	ccp		bulk	16.68	7.40	0.18	41.11	1.67	443	11	24.1	0.69	406	0007-0B
2182.50	ccp		bulk	16.19	8.50	0.23	36.96	1.87	455	12	24.7	0.66	419	0008-0B
2182.75	ccp		bulk	13.14	6.24	0.19	32.84	1.06	589	18	19.4	0.68	417	0009-0B
2183.05	ccp		bulk	11.40	5.12	0.64	8.00	1.20	427	53	16.5	0.69	399	0010-0B
2183.40	ccp		bulk	7.44	3.66	0.60	6.10	0.79	461	76	11.1	0.67	385	0011-0B
2184.02	ccp		bulk	7.21	4.33	0.22	19.68	1.15	377	19	11.5	0.62	410	0012-0B
2184.75	ccp		bulk	0.22	0.82	0.34	2.41	0.11	732	304	1.0	0.21	420	0013-0B
2185.15	ccp		bulk	0.37	1.27	0.20	6.35	0.13	955	150	1.6	0.23	464	0014-0B
2187.05	ccp		bulk	0.16	1.04	0.24	4.33	0.06	1763	407	1.2	0.13	462	0015-0B
2190.75	ccp		bulk	0.19	1.54	0.27	5.70	0.07	2200	386	1.7	0.11	475	0016-0B

Table 5A: Rock-Eval table for well NOCS 15/5-6

Depth unit of measure: m

Depth	Typ	Form	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
2193.50	ccp		bulk	0.31	1.17	0.32	3.66	0.73	161	44	1.5	0.21	456	0017-0B
2197.35	ccp		bulk	0.14	1.24	0.26	4.77	2.07	60	13	1.4	0.10	478	0018-0B

Table 5B: Rock-Eval table for well RE,STD

Depth unit of measure: m

Depth	Typ	Form	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
1.00	std		bulk	0.41	19.64	2.01	9.77	-	-	-	20.0	0.02	417	0182-0B

Table 8a: MPLC Bulk Composition: Weight of EOM and Fraction for well NOCS 15/5-6

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
2172.00	swc	bulk	10.0	119.9	10.1	6.7	91.0	12.1	16.8	103.1	1.33	0001-0B
2175.00	swc	bulk	7.7	139.4	48.8	32.6	35.9	22.1	81.4	58.0	2.38	0002-0B
2180.40	ccp	bulk	10.0	205.7	112.4	39.4	16.1	37.8	151.8	53.9	1.35	0004-0B
2181.85	ccp	bulk	9.3	222.5	100.3	60.9	25.7	35.6	161.2	61.3	1.52	0006-0B
2182.20	ccp	bulk	4.3	100.4	39.8	40.6	5.1	14.9	80.4	20.0	1.60	0007-0B
2182.50	ccp	bulk	9.0	214.2	105.6	62.4	6.9	39.4	168.0	46.2	1.53	0008-0B
2182.75	ccp	bulk	4.6	94.2	44.2	23.8	10.8	15.3	68.0	26.2	1.32	0009-0B
2183.05	ccp	bulk	9.3	140.6	58.5	32.9	25.1	24.1	91.4	49.2	1.02	0010-0B
2184.02	ccp	bulk	4.9	56.7	25.6	15.9	4.0	11.2	41.5	15.2	0.98	0012-0B
2184.75	ccp	bulk	4.6	2.5	0.6	0.7	0.8	0.4	1.3	1.2	0.08	0013-0B
2185.15	ccp	bulk	7.3	5.6	1.6	1.3	1.6	1.1	2.9	2.7	0.08	0014-0B

Table 8b: MPLC Bulk Composition: Concentration of EOM and Fraction (wt ppm rock) for well NOCS 15/5-6

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
2172.00	swc	bulk	12038	1010	673	9140	1212	1684	10353	0001-0B
2175.00	swc	bulk	18198	6374	4249	4691	2883	10623	7574	0002-0B
2180.40	ccp	bulk	20508	11201	3930	1603	3773	15132	5376	0004-0B
2181.85	ccp	bulk	24002	10823	6568	2768	3841	17391	6610	0006-0B
2182.20	ccp	bulk	23348	9258	9438	1194	3458	18696	4652	0007-0B
2182.50	ccp	bulk	23747	11709	6913	760	4364	18622	5124	0008-0B
2182.75	ccp	bulk	20389	9577	5151	2341	3319	14728	5660	0009-0B
2183.05	ccp	bulk	15102	6282	3532	2698	2588	9814	5287	0010-0B
2184.02	ccp	bulk	11595	5241	3242	810	2300	8484	3110	0012-0B
2184.75	ccp	bulk	541	122	153	173	91	275	265	0013-0B
2185.15	ccp	bulk	767	219	182	219	146	401	365	0014-0B

Table 8c: MPLC Bulk Composition: Concentration of EOM and Fraction (mg/g TOC(e)) for well NOCS 15/5-6

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
2172.00	swc	bulk	905.12	76.00	50.66	687.27	91.19	126.66	778.46	0001-0B
2175.00	swc	bulk	764.64	267.82	178.55	197.12	121.16	446.37	318.27	0002-0B
2180.40	ccp	bulk	1519.15	829.75	291.14	118.76	279.50	1120.89	398.25	0004-0B
2181.85	ccp	bulk	1579.09	712.06	432.13	182.14	252.75	1144.19	434.90	0006-0B
2182.20	ccp	bulk	1459.30	578.63	589.89	74.63	216.14	1168.53	290.78	0007-0B
2182.50	ccp	bulk	1552.11	765.32	451.85	49.71	285.23	1217.17	334.94	0008-0B
2182.75	ccp	bulk	1544.67	725.56	390.24	177.37	251.49	1115.81	428.86	0009-0B
2183.05	ccp	bulk	1480.59	615.93	346.30	264.59	253.77	962.23	518.37	0010-0B
2184.02	ccp	bulk	1183.17	534.84	330.91	82.71	234.71	865.75	317.42	0012-0B
2184.75	ccp	bulk	676.41	153.32	191.65	216.45	114.99	344.97	331.44	0013-0B
2185.15	ccp	bulk	958.90	273.97	228.31	273.97	182.65	502.28	456.62	0014-0B

Table 8d: MPLC Bulk Composition: Material extracted from the rock (%) for well NOCS 15/5-6

Depth unit of measure: m

Depth	Typ	Lithology	Sat	Aro	Asph	NSO	Total	HC	Non-HC	Recov. MPLC	Recov. Asph	Sample
2172.00	swc	bulk	8.40	5.60	75.93	10.08	100.00	13.99	86.01	1.15	0.99	0001-0B
2175.00	swc	bulk	35.03	23.35	25.78	15.84	100.00	58.38	41.62	0.93	1.00	0002-0B
2180.40	ccp	bulk	54.62	19.16	7.82	18.40	100.00	73.78	26.22	0.81	1.00	0004-0B
2181.85	ccp	bulk	45.09	27.37	11.53	16.01	100.00	72.46	27.54	0.87	1.01	0006-0B
2182.20	ccp	bulk	39.65	40.42	5.11	14.81	100.00	80.07	19.93	1.08	1.00	0007-0B
2182.50	ccp	bulk	49.31	29.11	3.20	18.38	100.00	78.42	21.58	0.88	0.96	0008-0B
2182.75	ccp	bulk	46.97	25.26	11.48	16.28	100.00	72.24	27.76	0.95	0.99	0009-0B
2183.05	ccp	bulk	41.60	23.39	17.87	17.14	100.00	64.99	35.01	0.91	0.98	0010-0B
2184.02	ccp	bulk	45.20	27.97	6.99	19.84	100.00	73.17	26.83	1.02	0.94	0012-0B
2184.75	ccp	bulk	22.67	28.33	32.00	17.00	100.00	51.00	49.00	2.00	0.80	0013-0B
2185.15	ccp	bulk	28.57	23.81	28.57	19.05	100.00	52.38	47.62	1.73	0.59	0014-0B

Table 8e: MPLC Bulk Composition: Ratios for well NOCS 15/5-6

Depth unit of measure: m

Depth	Typ	Lithology	Sat / Aro	HC / Non-HC	Asp / NSO	Sample
2172.00	swc	bulk	1.50	0.16	7.54	0001-0B
2175.00	swc	bulk	1.50	1.40	1.63	0002-0B
2180.40	ccp	bulk	2.85	2.81	0.42	0004-0B
2181.85	ccp	bulk	1.65	2.63	0.72	0006-0B
2182.20	ccp	bulk	0.98	4.02	0.35	0007-0B
2182.50	ccp	bulk	1.69	3.63	0.17	0008-0B
2182.75	ccp	bulk	1.86	2.60	0.71	0009-0B
2183.05	ccp	bulk	1.78	1.86	1.04	0010-0B
2184.02	ccp	bulk	1.62	2.73	0.35	0012-0B
2184.75	ccp	bulk	0.80	1.04	1.88	0013-0B
2185.15	ccp	bulk	1.20	1.10	1.50	0014-0B

Table 8F: Iatroscan TLC Bulk Composition: Absolute yields in mg/g rock for well NOCS 15/5-6

Depth unit of measure: m

Depth	Typ	Lithology	Sat HC	Aro HC	NSO	Asp	HC	Non-HC	EOM	Sample
2172.00	swc	bulk	1.38	0.69	0.83	9.14	2.07	9.97	12.04	0001-0B
2175.00	swc	bulk	6.50	4.16	2.85	4.69	10.65	7.54	18.20	0002-0B
2180.40	ccp	bulk	9.40	6.06	3.44	1.60	15.47	5.04	20.51	0004-0B
2181.85	ccp	bulk	10.53	6.57	4.13	2.77	17.10	6.90	24.00	0006-0B
2182.20	ccp	bulk	10.65	7.55	3.95	1.19	18.21	5.14	23.35	0007-0B
2182.50	ccp	bulk	11.90	6.70	4.39	0.76	18.60	5.15	23.75	0008-0B
2182.75	ccp	bulk	9.60	5.03	3.42	2.34	14.63	5.76	20.39	0009-0B
2183.05	ccp	bulk	6.02	3.95	2.43	2.70	9.97	5.13	15.10	0010-0B
2184.02	ccp	bulk	5.62	3.22	1.94	0.81	8.85	2.75	11.60	0012-0B
2184.75	ccp	bulk	0.14	0.02	0.20	0.17	0.17	0.37	0.54	0013-0B
2185.15	ccp	bulk	0.17	0.03	0.35	0.22	0.19	0.57	0.77	0014-0B

Table 8G: Iatroscan TLC Bulk Composition: Rel. percentages of sep. fractions for well NOCS 15/5-6

Depth unit of measure: m

Depth	Typ	Lithology	Sat HC	Aro HC	NSO	Asp	Total	HC	Non-HC	Recov. Iatr.	Recov. Asp	Sample
2172.00	swc	bulk	11.47	5.70	6.91	75.93	100.00	17.16	82.84	0.73	0.99	0001-0B
2175.00	swc	bulk	35.72	22.83	15.67	25.78	100.00	58.55	41.45	0.96	1.00	0002-0B
2180.40	ccp	bulk	45.85	29.57	16.77	7.82	100.00	75.42	24.58	1.06	1.00	0004-0B
2181.85	ccp	bulk	43.87	27.39	17.21	11.53	100.00	71.25	28.75	0.93	1.01	0006-0B
2182.20	ccp	bulk	45.62	32.35	16.91	5.11	100.00	77.97	22.03	1.15	1.00	0007-0B
2182.50	ccp	bulk	50.12	28.21	18.47	3.20	100.00	78.33	21.67	0.91	0.96	0008-0B
2182.75	ccp	bulk	47.09	24.65	16.77	11.48	100.00	71.74	28.26	0.44	0.99	0009-0B
2183.05	ccp	bulk	39.89	26.16	16.08	17.87	100.00	66.05	33.95	0.88	0.98	0010-0B
2184.02	ccp	bulk	48.49	27.80	16.72	6.99	100.00	76.29	23.71	0.85	0.94	0012-0B
2184.75	ccp	bulk	26.73	4.22	37.04	32.00	100.00	30.96	69.04	0.39	0.80	0013-0B
2185.15	ccp	bulk	21.51	3.69	46.22	28.57	100.00	25.20	74.80	0.58	0.59	0014-0B

Table 9A: Quantitative Analysis of Saturated Fraction for well 15/5-6

sample	nC15 mg/g sat	nC16 mg/g sat	iC18 mg/g sat	nC17 mg/g sat	Pr mg/g sat	nC18 mg/g sat	Ph mg/g sat	nC19 mg/g sat	nC20 mg/g sat	nC21 mg/g sat	nC22 mg/g sat	nC23 mg/g sat	nC24 mg/g sat	nC25 mg/g sat	nC26 mg/g sat	nC27 mg/g sat	nC28 mg/g sat	nC29 mg/g sat	nC30 mg/g sat	nC31 mg/g sat	nC32 mg/g sat	nC33 mg/g sat	nC34 mg/g sat
2172.00m	3.02	3.83	2.15	4.23	3.38	4.19	3.10	4.56	3.71	3.05	3.15	2.59	2.71	2.38	2.21	1.78	1.68	1.53	1.30	1.29	1.13	0.97	0.86
2175.00m	8.15	9.42	5.19	9.82	7.45	9.31	7.04	10.09	8.55	6.97	6.96	6.03	6.48	5.99	5.01	3.81	4.07	3.47	3.57	2.23	2.06	1.76	1.80
2180.40m	9.28	9.52	4.61	9.14	6.25	7.75	5.39	8.30	6.75	5.70	5.56	4.74	4.96	4.75	3.98	3.23	2.74	2.46	2.12	1.88	1.40	1.08	1.08
2181.85m	10.36	10.57	5.22	10.12	6.98	8.58	6.18	9.04	7.20	5.77	5.72	4.88	5.12	4.69	4.11	3.28	3.20	2.81	2.39	1.86	1.70	1.51	1.60
2182.20m	10.47	11.66	5.91	11.44	7.96	10.22	7.40	10.63	8.87	6.98	7.12	6.01	6.13	5.68	5.00	4.05	4.03	3.45	3.44	2.87	2.30	2.08	2.07
2182.50m	10.76	10.93	5.28	10.43	7.16	9.16	6.55	9.66	7.77	6.22	6.19	5.37	5.40	4.83	4.34	3.21	3.17	2.88	3.07	2.47	1.74	1.59	1.59
2182.75m	9.85	10.86	5.35	10.61	7.33	9.33	6.71	9.69	7.87	6.19	6.23	5.25	5.44	4.83	4.19	3.30	3.01	2.71	2.62	2.31	1.70	1.54	1.59
2183.05m	10.21	10.89	5.32	10.64	7.36	9.52	6.75	9.73	8.17	6.27	6.32	5.24	5.42	5.06	4.31	3.40	3.16	2.75	2.31	2.19	1.48	1.36	1.44
2184.02m	5.79	7.87	4.09	8.54	6.04	7.87	5.71	7.43	6.84	5.62	5.93	5.16	5.54	5.18	4.44	3.55	3.31	2.90	2.84	2.57	1.99	1.94	1.90
2184.75m	0.15	0.69	0.59	1.82	1.32	2.33	1.68	2.94	2.53	2.06	2.14	1.66	1.83	1.45	1.20	1.15	0.99	1.03	0.86	1.02	0.75	0.83	0.73
2185.15m	0.31	0.91	0.60	2.16	1.74	3.02	2.06	2.63	3.44	2.90	3.12	2.39	2.49	2.18	1.74	1.61	1.51	1.74	1.46	1.94	1.38	1.45	1.47

Table 9B: Saturated Hydrocarbon Ratios (peak area) for well NOCS 15/5-6

Depth unit of measure: m

Depth	Typ	Lithology	Pristane / nC17	Pristane / Phytane	Pristane/nC17 / Phytane/nC18	Phytane / nC18	CPI1	nC17 / nC17+nC27	Sample
2172.00	swc	bulk	0.80	1.09	1.08	0.74	0.99	0.70	0001-0B
2175.00	swc	bulk	0.76	1.06	1.00	0.76	0.93	0.72	0002-0B
2180.40	ccp	bulk	0.68	1.16	0.98	0.70	1.05	0.74	0004-0B
2181.85	ccp	bulk	0.69	1.13	0.96	0.72	0.98	0.76	0006-0B
2182.20	ccp	bulk	0.70	1.08	0.96	0.72	0.97	0.74	0007-0B
2182.50	ccp	bulk	0.69	1.09	0.96	0.72	0.96	0.76	0008-0B
2182.75	ccp	bulk	0.69	1.09	0.96	0.72	1.00	0.76	0009-0B
2183.05	ccp	bulk	0.69	1.09	0.98	0.71	1.04	0.76	0010-0B
2184.02	ccp	bulk	0.71	1.06	0.98	0.72	1.00	0.71	0012-0B
2184.75	ccp	bulk	0.72	0.78	1.00	0.72	1.09	0.61	0013-0B
2185.15	ccp	bulk	0.81	0.84	1.18	0.68	1.13	0.57	0014-0B

Table 9Ca: Aromatic Hydrocarbon Ratios (peak area) for well NOCS 15/5-6

Depth unit of measure: m

Depth	Typ	Lithology	MNR	DMNR	BPhR	2/1MP	MPI1	MPI2	Rc	DBT/P	4/1MDBT	(3+2) /1MDBT	Sample
2172.00	swc	bulk	0.51	0.83	0.13	-	-	-	-	-	-	-	0001-0B
2175.00	swc	bulk	1.10	1.44	0.22	1.16	0.72	0.76	0.83	0.41	1.91	0.45	0002-0B
2180.40	ccp	bulk	1.15	1.27	0.16	1.24	0.84	0.81	0.90	0.31	2.32	0.40	0004-0B
2181.85	ccp	bulk	1.20	1.05	0.18	1.47	0.86	0.99	0.92	0.25	-	-	0006-0B
2182.20	ccp	bulk	1.12	0.75	0.08	1.30	0.77	0.88	0.86	-	-	-	0007-0B
2182.50	ccp	bulk	1.25	1.01	0.08	1.39	0.85	0.87	0.91	0.32	1.73	0.51	0008-0B
2182.75	ccp	bulk	0.95	0.85	0.12	1.48	0.80	0.93	0.88	0.26	-	-	0009-0B
2183.05	ccp	bulk	1.19	1.15	0.14	1.46	0.85	0.91	0.91	0.32	2.39	1.13	0010-0B
2184.02	ccp	bulk	-	0.72	-	1.45	0.85	0.96	0.91	0.27	1.75	0.90	0012-0B
2184.75	ccp	bulk	-	-	-	-	-	-	-	-	-	-	0013-0B
2185.15	ccp	bulk	-	-	-	0.56	0.51	0.40	0.71	-	-	-	0014-0B

Table 9Cb: Aromatic Hydrocarbon Ratios (peak area) for well NOCS 15/5-6

Depth unit of measure: m

Depth	Typ	Lithology	F1	F2	Sample
2172.00	swc	bulk	-	-	0001-0B
2175.00	swc	bulk	0.46	0.24	0002-0B
2180.40	ccp	bulk	0.50	0.24	0004-0B
2181.85	ccp	bulk	0.52	0.30	0006-0B
2182.20	ccp	bulk	0.49	0.28	0007-0B
2182.50	ccp	bulk	0.51	0.26	0008-0B
2182.75	ccp	bulk	0.54	0.31	0009-0B
2183.05	ccp	bulk	0.51	0.27	0010-0B
2184.02	ccp	bulk	0.50	0.28	0012-0B
2184.75	ccp	bulk	-	-	0013-0B
2185.15	ccp	bulk	0.36	0.14	0014-0B

Table 10A: Tabulation of carbon isotope data for EOM/EOM - fractions for well NOCS 15/5-6

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Saturated	Aromatic	NSO	Asphaltenes	Kerogen	Sample
2172.00	swc	bulk	-29.20	-29.18	-29.33	-28.97	-29.17	-	0001-0
2175.00	swc	bulk	-29.28	-29.81	-29.64	-29.23	-28.87	-	0002-0
2180.40	ccp	bulk	-29.63	-29.85	-29.64	-29.41	-29.37	-	0004-0
2181.85	ccp	bulk	-29.53	-29.85	-29.65	-29.66	-29.20	-	0006-0
2182.20	ccp	bulk	-29.77	-29.95	-29.54	-29.43	-29.49	-	0007-0
2182.50	ccp	bulk	-29.68	-29.79	-29.57	-29.42	-29.39	-	0008-0
2182.75	ccp	bulk	-29.79	-29.87	-29.56	-29.48	-29.37	-	0009-0
2183.05	ccp	bulk	-29.52	-29.25	-29.66	-29.56	-29.45	-	0010-0
2184.02	ccp	bulk	-29.69	-29.25	-29.79	-29.58	-29.23	-	0012-0
2185.15	ccp	bulk	-	-28.78	*-	-29.25	-28.19	-	0014-0

* Sample too small to be measured.

Table 10B: Tabulation of cv values from carbon isotope data for well NOCS 15/5-6

Depth unit of measure: m

Depth	Typ	Lithology	Saturated	Aromatic	cv value	Interpretation	Sample
2172.00	swc	bulk	-29.18	-29.33	-2.94	Marine	0001-0
2175.00	swc	bulk	-29.81	-29.64	-2.03	Marine	0002-0
2180.40	ccp	bulk	-29.85	-29.64	-1.93	Marine	0004-0
2181.85	ccp	bulk	-29.85	-29.65	-1.95	Marine	0006-0
2182.20	ccp	bulk	-29.95	-29.54	-1.46	Marine	0007-0
2182.50	ccp	bulk	-29.79	-29.57	-1.93	Marine	0008-0
2182.75	ccp	bulk	-29.87	-29.56	-1.70	Marine	0009-0
2183.05	ccp	bulk	-29.25	-29.66	-3.49	Marine	0010-0
2184.02	ccp	bulk	-29.25	-29.79	-3.78	Marine	0012-0
2185.15	ccp	bulk	-28.78	*-	-	Terrigenous	0014-0

* Sample too small to be measured.

Table 11a: Variation in Triterpane Distribution (peak height) SIR for Well NOCS 15/5-6

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Ratio6	Ratio7	Ratio8	Ratio9	Rat.10	Rat.11	Rat.12	Rat.13	Rat.14	Sample
2172.00	bulk	0.60	0.38	0.10	0.43	0.30	0.06	0.24	0.57	0.20	0.11	0.93	0.31	0.09	59.49	0001-0
2175.00	bulk	0.52	0.34	0.08	0.36	0.26	0.07	0.26	0.72	0.21	0.08	0.94	0.27	0.08	59.19	0002-0
2180.40	bulk	0.50	0.33	0.08	0.35	0.26	0.07	0.26	0.74	0.21	0.07	0.94	0.27	0.09	59.60	0004-0
2181.85	bulk	0.48	0.32	0.07	0.36	0.26	0.07	0.25	0.70	0.20	0.07	0.94	0.28	0.08	59.07	0006-0
2182.20	bulk	0.50	0.33	0.07	0.35	0.26	0.07	0.26	0.74	0.20	0.08	0.94	0.27	0.09	58.51	0007-0
2182.50	bulk	0.51	0.34	0.08	0.36	0.27	0.07	0.26	0.72	0.21	0.08	0.94	0.28	0.09	59.23	0008-0
2182.75	bulk	0.51	0.34	0.08	0.35	0.26	0.07	0.25	0.71	0.20	0.07	0.94	0.27	0.08	58.93	0009-0
2183.05	bulk	0.51	0.34	0.08	0.35	0.26	0.07	0.26	0.73	0.20	0.08	0.94	0.27	0.09	59.70	0010-0
2184.02	bulk	0.53	0.34	0.08	0.35	0.26	0.06	0.25	0.71	0.20	0.07	0.94	0.27	0.08	59.34	0012-0
2185.15	bulk	0.41	0.29	0.06	0.39	0.28	0.03	0.17	0.45	0.15	0.11	0.97	0.28	0.04	60.89	0014-0

List of Triterpane Distribution Ratios

Ratio 1: 27Tm / 27Ts

Ratio 2: 27Tm / 27Tm+27Ts

Ratio 3: 27Tm / 27Tm+30aß+30ßa

Ratio 4: 29aß / 30aß

Ratio 5: 29aß / 29aß+30aß

Ratio 6: 30d / 30aß

Ratio 7: 28aß / 30aß

Ratio 8: 28aß / 29aß

Ratio 9: 28aß / 28aß+30aß

Ratio 10: 24/3 / 30aß

Ratio 11: 30aß / 30aß+30ßa

Ratio 12: 29aß+29ßa / 29aß+29ßa+30aß+30ßa

Ratio 13: 29ßa+30ßa / 29aß+30aß

Ratio 14: 32aßS / 32aßS+32aßR (%)

Table 11b: Variation in Sterane Distribution (peak height) SIR for Well NOCS 15/5-6

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Ratio6	Ratio7	Ratio8	Ratio9	Ratio10	Sample
2172.00	bulk	0.71	46.76	79.66	1.34	0.81	0.39	0.25	0.66	0.88	3.68	0001-0
2175.00	bulk	0.79	50.86	78.89	1.38	0.79	0.33	0.21	0.65	1.03	3.80	0002-0
2180.40	bulk	0.78	49.94	79.25	1.36	0.79	0.33	0.21	0.66	1.00	3.82	0004-0
2181.85	bulk	0.79	49.41	79.55	1.39	0.80	0.35	0.22	0.66	0.98	3.84	0006-0
2182.20	bulk	0.77	49.51	79.42	1.41	0.80	0.34	0.22	0.66	0.98	3.82	0007-0
2182.50	bulk	0.79	49.44	79.52	1.45	0.80	0.37	0.24	0.66	0.98	3.84	0008-0
2182.75	bulk	0.76	47.72	79.63	1.32	0.80	0.32	0.20	0.66	0.91	3.74	0009-0
2183.05	bulk	0.74	49.70	80.39	1.33	0.80	0.35	0.22	0.67	0.99	4.08	0010-0
2184.02	bulk	0.79	49.11	79.49	1.36	0.80	0.33	0.21	0.66	0.96	3.81	0012-0
2185.15	bulk	0.66	48.70	85.10	1.86	0.85	0.63	0.44	0.74	0.95	5.57	0014-0

List of Sterane Distribution Ratios

Ratio 1: 27dßS / 27dßS+27aaR

Ratio 2: 29aaS / 29aaS+29aaR (%)

Ratio 3: 2*(29ßßR+29ßßS) / (29aaS+29aaR + 2*(29ßßR+29ßßS)) (%)

Ratio 4: 27dßS+27dßR+27daR+27daS / 29dßS+29dßR+29daR+29daS

Ratio 5: 29ßßR+29ßßS / 29ßßR+29ßßS+29aaS

Ratio 6: 21a+22a / 21a+22a+29aaS+29ßßR+29ßßS+29aaR

Ratio 7: 21a+22a / 21a+22a+28daS+28aaS+29daR+29aaS+29ßßR+29ßßS+29aaR

Ratio 8: 29ßßR+29ßßS / 29aaS+29ßßR+29ßßS+29aaR

Ratio 9: 29aaS / 29aaR

Ratio 10: 29ßßR+29ßßS / 29aaR

Table 11c: Raw triterpane data (peak height) for Well NOCS 15/5-6

Depth unit of measure: m

Depth	Lithology	23/3	24/3	25/3	24/4	26/3	27Ts	27Tm	28aß	25nor30aß	Sample
		29aß	29Ts	30d	29ßa	30O	30aß	30ßa	30G	31aßS	
		31aßR	32aßS	32aßR	33aßS	33aßR	34aßS	34aßR	35aßS	35aßR	
2172.00	bulk	8772.9	6148.0	3202.0	4314.5	2208.6	10444.6	6283.0	13165.2	0.0	0001-0
		23224.2	11799.2	3457.7	3170.3	0.0	53974.0	3891.4	2869.0	25857.3	
		17165.8	16453.4	11204.6	12829.9	8217.0	6729.0	4448.2	7796.3	4450.7	
2175.00	bulk	9779.9	8656.1	4687.5	5683.1	3135.7	19686.3	10207.4	28775.5	0.0	0002-0
		39745.0	24465.5	7798.8	4959.6	0.0	111041.8	7436.1	5092.5	56936.7	
		35382.0	36245.8	24993.1	28140.8	18304.7	15689.6	9932.7	17808.0	10668.7	
2180.40	bulk	8339.9	7443.4	4100.3	5177.1	2816.0	17810.3	8960.6	26352.4	0.0	0004-0
		35560.1	22639.4	7127.3	4942.5	0.0	100861.9	6682.3	4637.6	50579.4	
		32317.1	33298.5	22570.3	25773.0	17031.6	14211.0	8912.0	16780.6	9623.2	
2181.85	bulk	8403.6	7436.8	4147.3	5219.3	2799.9	18284.1	8773.5	25843.8	0.0	0006-0
		36820.2	22590.0	6829.9	4911.3	0.0	102187.0	6567.1	5174.3	50751.2	
		31646.3	32695.3	22657.9	26096.3	16559.2	13865.0	8988.6	15756.5	9259.6	
2182.20	bulk	9006.8	8361.7	4329.7	5470.9	3007.3	19425.8	9644.2	28635.9	0.0	0007-0
		38642.4	23722.0	7602.4	5473.5	0.0	111460.4	7528.5	5095.3	55749.4	
		34962.9	34748.0	24643.0	27850.2	18539.0	15580.1	10018.6	17980.8	10252.7	

Table 11c: Raw triterpane data (peak height) for Well NOCS 15/5-6

Depth unit of measure: m

Depth	Lithology	23/3	24/3	25/3	24/4	26/3	27Ts	27Tm	28aß	25nor30aß	Sample
		29aß	29Ts	30d	29ßa	30O	30aß	30ßa	30G	31aßS	
		31aßR	32aßS	32aßR	33aßS	33aßR	34aßS	34aßR	35aßS	35aßR	
2182.50	bulk	6821.8	6131.2	3299.9	3907.9	2136.3	13274.1	6719.5	19212.0	0.0	0008-0
		26709.9	16456.3	5103.5	3713.5	0.0	74021.0	5040.8	3900.0	37259.6	
		23690.8	23378.2	16094.7	18799.3	12249.7	10071.8	6508.0	11606.1	6929.5	
2182.75	bulk	9997.5	8829.0	4853.9	6115.6	3340.0	22076.4	11178.2	31538.0	0.0	0009-0
		44218.7	27896.6	8295.4	5301.8	0.0	126596.7	8150.7	6386.4	64292.1	
		39685.7	39111.8	27259.0	31757.3	20733.1	16747.5	11021.2	19095.0	11504.8	
2183.05	bulk	8204.1	7427.7	4075.6	4746.2	2651.1	16859.8	8677.9	24562.8	0.0	0010-0
		33485.0	20704.2	6355.8	4667.9	0.0	95410.6	6439.3	4964.3	47305.4	
		29060.2	30549.3	20625.4	24024.7	15289.9	12767.6	8156.8	14436.5	8434.0	
2184.02	bulk	7200.5	6472.3	3476.4	4327.7	2427.0	15259.2	8035.8	22481.0	0.0	0012-0
		31731.7	19216.9	5158.9	3845.7	0.0	89405.4	5594.0	3845.4	44522.7	
		27729.3	28193.6	19314.4	22148.2	14776.2	12145.9	7433.9	13706.7	7977.4	
2185.15	bulk	1399.7	856.1	282.6	326.6	115.0	1319.3	536.2	1343.4	0.0	0014-0
		3011.6	1326.2	206.2	181.5	0.0	7793.1	236.2	124.1	3182.9	
		1941.1	1652.5	1061.4	1048.1	582.6	375.9	203.3	491.7	188.4	

Table 11d: Raw sterane data (peak height) m/z 217 SIR for Well NOCS 15/5-6

Depth unit of measure: m

Depth	Lithology	21a	22a	27dßS	27dßR	27daR	27daS	28dßS	28dßR	28daR*	Sample
		29dßS*	28daS*	27aaR	29dßR	29daR	28aaS	29daS*	28ßßS		
		28aaR	29aaS	29ßßR	29ßßS	29aaR					
2172.00	bulk	9254.1	3094.6	14429.4	11502.1	3467.1	3692.5	5915.4	4203.1	5121.0	0001-0
		9567.0	8905.7	5984.1	6640.4	2503.5	2999.6	5954.3	6880.1		
		2154.5	3023.9	6745.7	5917.8	3443.3					
2175.00	bulk	14817.3	5304.7	31834.7	21252.0	7526.5	7872.8	12196.9	8658.4	9453.7	0002-0
		19133.6	16734.5	8504.4	13112.5	5061.8	6261.1	12221.2	15064.5		
		4954.8	7371.4	14325.1	12754.4	7123.2					
2180.40	bulk	14311.0	4973.1	28620.8	18882.6	6946.4	7308.5	11594.4	7964.7	8619.9	0004-0
		17288.6	15521.2	7952.3	12050.7	4568.3	5811.9	11437.2	13708.7		
		4486.7	6623.9	13176.1	12154.6	6639.2					
2181.85	bulk	14809.1	5069.5	29077.7	19764.5	6965.0	7439.0	11579.8	7967.2	8545.4	0006-0
		17572.2	15716.3	7886.5	12028.0	4619.9	5620.5	11329.2	13591.3		
		4149.1	6154.5	12676.2	11546.0	6300.5					
2182.20	bulk	15640.4	5417.3	32781.8	21604.2	7526.7	8180.1	13334.3	8703.7	9802.1	0007-0
		19300.7	18193.4	9704.1	13978.7	5052.2	5025.3	11485.9	14217.0		
		4259.4	6785.3	13896.3	12557.4	6920.9					

* 28daR coel with 27aaS, 29dßS coel with 27ßßR, 28daS coel with 27ßßS, 29daS coel with 28ßßR

Table 11d: Raw sterane data (peak height) m/z 217 SIR for Well NOCS 15/5-6

Depth unit of measure: m

Depth	Lithology	21a	22a	27dßS	27dßR	27daR	27daS	28dßS	28dßR	28daR*	Sample
		29dßS*	28daS*	27aaR	29dßR	29daR	28aaS	29daS*	28ßßS		
		28aaR	29aaS	29ßßR	29ßßS	29aaR					
2182.50	bulk	12241.0	3913.5	22640.4	15888.6	5293.1	5778.4	9256.2	6061.8	6588.1	0008-0
		13126.8	12541.4	6004.1	9500.4	3423.9	4207.3	8256.3	10260.3		
		2860.5	4622.9	9707.3	8440.2	4727.3					
2182.75	bulk	16841.1	5790.9	35924.0	23685.3	8851.9	9373.7	14096.7	10245.4	11556.0	0009-0
		23237.5	20988.2	11619.8	15969.4	5690.1	6797.2	13890.2	15936.6		
		4439.0	7634.6	16142.7	15133.3	8362.7					
2183.05	bulk	14431.7	4854.1	27270.0	19444.3	7089.6	7654.7	11379.2	8073.3	9280.9	0010-0
		18184.3	16665.9	9351.5	12674.0	4624.9	5658.6	10729.5	13074.2		
		3737.2	5897.1	12793.8	11529.5	5967.5					
2184.02	bulk	12103.1	4073.1	25791.7	16892.7	6101.6	6724.7	10663.8	7170.5	7784.2	0012-0
		15637.8	14375.6	7039.7	11066.9	4153.4	5112.8	9974.5	12091.5		
		3348.1	5510.5	11687.9	10063.8	5711.3					
2185.15	bulk	1932.6	259.8	2175.5	1619.6	313.8	310.4	676.3	320.5	399.4	0014-0
		1067.8	923.4	1111.5	708.3	143.7	183.1	450.7	602.2		
		106.2	160.2	516.5	422.5	168.7					

* 28daR coel with 27aaS, 29dßS coel with 27ßßR, 28daS coel with 27ßßS, 29daS coel with 28ßßR

Table 11e: Raw sterane data (peak height) m/z 218 SIR for Well NOCS 15/5-6

Depth unit of measure: m

Depth	Lithology	27ßßR	27ßßS	28ßßR	28ßßS	29ßßR	29ßßS	30ßßR	30ßßS	Sample
2172.00	bulk	12473.4	12075.6	9139.5	10504.6	10047.3	9954.5	2759.5	2760.7	0001-0
2175.00	bulk	26731.7	25509.7	19952.7	22857.0	21065.8	20825.0	6806.2	6717.9	0002-0
2180.40	bulk	23888.3	23159.9	18194.0	21208.3	18656.1	19084.2	6471.0	6457.9	0004-0
2181.85	bulk	23792.0	23245.3	18158.7	21129.4	18820.8	19118.8	6477.6	6349.7	0006-0
2182.20	bulk	26666.2	25935.1	20258.2	23397.4	21170.7	21543.4	7161.9	7371.9	0007-0
2182.50	bulk	18243.3	18170.8	13512.8	15868.3	14097.8	13648.6	4823.8	4663.1	0008-0
2182.75	bulk	29556.8	30109.8	23051.2	25930.8	24023.1	24852.0	8040.7	8399.0	0009-0
2183.05	bulk	23715.6	23638.7	17962.4	21039.1	19541.8	19443.2	6071.2	6236.9	0010-0
2184.02	bulk	21365.1	21155.2	15846.8	18188.3	17362.3	17022.9	5594.4	5525.5	0012-0
2185.15	bulk	1464.5	1415.3	867.1	1114.8	905.8	868.0	110.6	107.1	0014-0

Table 11f: Raw triterpane data (peak height) m/z 177 SIR for Well NOCS 15/5-6

Depth unit of measure: m

Depth	Lithology	25nor28aß	25nor30aß	Sample
2172.00	bulk	2462.7	978.1	0001-0
2175.00	bulk	2805.9	0.0	0002-0
2180.40	bulk	2446.1	0.0	0004-0
2181.85	bulk	2345.3	0.0	0006-0
2182.20	bulk	1917.1	0.0	0007-0
2182.50	bulk	1805.1	0.0	0008-0
2182.75	bulk	3093.0	0.0	0009-0
2183.05	bulk	2243.8	0.0	0010-0
2184.02	bulk	2571.2	0.0	0012-0
2185.15	bulk	135.9	0.0	0014-0

Table 11g: Amount of triterpanes (ppb) for Well NOCS 15/5-6

Depth unit of measure: m

Depth	Lithology	23/3	24/3	25/3	24/4	26/3	27Ts	27Tm	28aß	25nor30aß	Sample
		29aß	29Ts	30d	29ßa	30O	30aß	30ßa	30G	31aßS	
		31aßR	32aßS	32aßR	33aßS	33aßR	34aßS	34aßR	35aßS	35aßR	
2172.00	bulk	84527.4	59236.1	30851.9	41570.7	21280.4	100634.9	60537.1	126847.5	0.0	0001-0
		223767.2	113686.8	33315.2	30546.0	0.0	520044.3	37493.7	27643.5	249137.9	
		165393.6	158530.1	107957.2	123617.0	79171.4	64834.7	42858.6	75118.3	42883.4	
2175.00	bulk	55991.2	49557.3	26836.6	32536.5	17952.2	112706.6	58439.0	164744.0	0.0	0002-0
		227546.0	140068.6	44649.2	28394.4	0.0	635730.5	42573.0	29155.2	325971.0	
		202567.2	207512.3	143089.0	161110.2	104797.0	89825.4	56865.9	101953.4	61080.1	
2180.40	bulk	55696.2	49709.3	27382.8	34574.3	18806.1	118942.2	59841.8	175989.2	0.0	0004-0
		237480.7	151192.2	47597.9	33007.3	0.0	673585.1	44626.2	30971.3	337784.0	
		215823.2	222376.9	150731.3	172119.5	113742.0	94905.4	59517.2	112065.6	64266.4	
2181.85	bulk	57289.7	50699.2	28273.6	35581.8	19087.6	124647.9	59811.9	176184.6	0.0	0006-0
		251014.2	154002.6	46561.2	33481.6	0.0	696639.1	44769.7	35274.6	345986.3	
		215741.9	222893.2	154465.5	177906.1	112888.7	94521.9	61278.0	107416.4	63125.6	
2182.20	bulk	58885.4	54668.0	28307.3	35768.3	19661.4	127003.8	63052.7	187218.2	0.0	0007-0
		252639.9	155091.7	49703.9	35784.8	0.0	728715.6	49220.8	33312.4	364483.2	
		228583.5	227178.6	161113.1	182081.4	121205.8	101860.7	65500.4	117556.3	67031.3	

Table 11g: Amount of triterpanes (ppb) for Well NOCS 15/5-6

Depth unit of measure: m

Depth	Lithology	23/3	24/3	25/3	24/4	26/3	27Ts	27Tm	28aß	25nor30aß	Sample
		29aß	29Ts	30d	29ßa	30O	30aß	30ßa	30G	31aßS	
		31aßR	32aßS	32aßR	33aßS	33aßR	34aßS	34aßR	35aßS	35aßR	
2182.50	bulk	57352.8	51547.0	27743.4	32855.0	17960.3	111598.9	56492.5	161520.6	0.0	0008-0
		224557.7	138353.2	42906.3	31220.7	0.0	622315.6	42379.8	32788.8	313252.3	
		199175.2	196547.0	135312.7	158051.5	102986.8	84676.9	54714.4	97575.7	58258.4	
2182.75	bulk	46552.2	41111.3	22601.7	28476.3	15552.1	102795.8	52049.9	146852.7	0.0	0009-0
		205898.9	129896.9	38626.5	24687.0	0.0	589481.7	37952.7	29737.5	299368.2	
		184791.6	182119.3	126928.0	147874.0	96541.2	77982.7	51318.7	88913.7	53570.8	
2183.05	bulk	51241.6	46392.5	25455.8	29644.3	16558.2	105303.4	54200.9	153415.3	0.0	0010-0
		209142.3	129315.0	39697.4	29154.7	0.0	595920.5	40218.8	31006.2	295462.1	
		181505.8	190806.0	128823.2	150054.6	95498.3	79744.4	50946.1	90168.1	52677.6	
2184.02	bulk	60009.5	53940.0	28972.1	36066.9	20226.7	127170.7	66970.9	187357.4	0.0	0012-0
		264453.0	160153.8	42994.7	32049.9	0.0	745107.3	46620.7	32047.5	371053.1	
		231096.3	234966.1	160967.0	184584.0	123145.6	101223.9	61954.0	114231.7	66483.9	
2185.15	bulk	21176.0	12951.6	4275.2	4941.0	1739.9	19959.3	8112.1	20323.0	0.0	0014-0
		45561.6	20062.9	3119.6	2745.1	0.0	117897.9	3573.0	1878.1	48151.9	
		29365.8	25000.0	16057.0	15855.7	8814.0	5687.5	3075.8	7439.2	2850.6	

Table 11h: Amount of steranes (ppb) m/z 217 SIR for Well NOCS 15/5-6

Depth unit of measure: m

Depth	Lithology	21a	22a	27dßS	27dßR	27daR	27daS	28dßS	28dßR	28daR*	Sample
		29dßS*	28daS*	27aaR	29dßR	29daR	28aaS	29daS*	28ßßS		
		28aaR	29aaS	29ßßR	29ßßS	29aaR					
2172.00	bulk	89164.2	29817.1	139028.9	110823.5	33406.0	35577.3	56995.3	40496.9	49341.2	0001-0
		92179.3	85806.8	57657.4	63980.6	24121.5	28901.0	57369.8	66290.1		
		20758.6	29135.3	64995.6	57018.9	33176.3					
2175.00	bulk	84831.3	30370.2	182258.3	121670.9	43090.3	45072.7	69828.9	49570.8	54124.0	0002-0
		109542.4	95807.4	48688.8	75071.0	28979.6	35845.8	69968.2	86246.6		
		28366.9	42202.1	82013.2	73020.7	40781.5					
2180.40	bulk	95573.1	33211.5	191138.3	126103.2	46390.3	48808.1	77430.7	53190.6	57565.9	0004-0
		115458.2	103655.4	53107.9	80478.3	30508.3	38813.7	76380.7	91550.6		
		29963.7	44236.5	87994.0	81171.8	44338.3					
2181.85	bulk	100957.8	34560.0	198231.0	134740.4	47482.5	50713.7	78942.7	54314.8	58256.3	0006-0
		119795.1	107142.7	53764.8	81998.3	31495.4	38316.6	77234.6	92656.2		
		28285.4	41957.3	86417.4	78712.8	42952.5					
2182.20	bulk	102255.1	35417.8	214323.4	141245.6	49209.0	53480.3	87178.4	56904.1	64085.1	0007-0
		126186.1	118946.5	63444.1	91391.3	33030.5	32854.7	75093.3	92948.9		
		27847.6	44361.5	90852.6	82099.1	45248.4					

* 28daR coel with 27aaS, 29dßS coel with 27ßßR, 28daS coel with 27ßßS, 29daS coel with 28ßßR

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Table 11h: Amount of steranes (ppb) m/z 217 SIR for Well NOCS 15/5-6

Depth unit of measure: m

Depth	Lithology	21a	22a	27dßS	27dßR	27daR	27daS	28dßS	28dßR	28daR*	Sample
		29dßS*	28daS*	27aaR	29dßR	29daR	28aaS	29daS*	28ßßS		
		28aaR	29aaS	29ßßR	29ßßS	29aaR					
2182.50	bulk	102913.9	32902.3	190344.1	133580.4	44500.6	48580.3	77819.9	50963.6	55388.2	0008-0
		110361.1	105439.3	50478.6	79872.8	28785.9	35372.0	69413.0	86261.3		
		24048.9	38866.1	81612.1	70959.5	39743.4					
2182.75	bulk	78418.4	26964.8	167275.4	110287.9	41217.6	43647.6	65639.6	47706.2	53809.3	0009-0
		108202.4	97729.1	54106.1	74359.5	26495.1	31650.1	64678.2	74206.6		
		20669.7	35549.4	75166.6	70466.2	38940.0					
2183.05	bulk	90138.3	30317.8	170324.5	121446.5	44280.5	47810.3	71072.5	50424.7	57967.2	0010-0
		113576.1	104093.0	58407.9	79160.0	28886.4	35342.6	67014.7	81659.5		
		23341.9	36832.5	79908.1	72011.8	37272.0					
2184.02	bulk	100867.3	33945.0	214948.4	140784.4	50850.8	56043.7	88872.1	59759.0	64874.0	0012-0
		130325.8	119806.9	58669.2	92232.1	34614.2	42610.4	83127.9	100770.8		
		27902.9	45924.6	97407.4	83871.9	47598.5					
2185.15	bulk	29238.0	3930.1	32912.7	24502.3	4747.3	4695.8	10231.3	4847.9	6042.8	0014-0
		16154.0	13969.3	16815.2	10715.8	2173.9	2770.4	6817.7	9110.8		
		1606.9	2423.3	7814.2	6391.8	2552.3					

* 28daR coel with 27aaS, 29dßS coel with 27ßßR, 28daS coel with 27ßßS, 29daS coel with 28ßßR

Table 11i: Amount of standard and weight of sample for Well NOCS 15/5-6

Depth unit of measure: m

Depth	Lithology	Standard	Amount	Weight	Sample
2172.00	bulk	16144.7	0.700	4.5	0001-0
2175.00	bulk	5822.3	0.700	21.0	0002-0
2180.40	bulk	3677.8	0.700	28.5	0004-0
2181.85	bulk	3919.1	0.700	26.2	0006-0
2182.20	bulk	4166.1	0.700	25.7	0007-0
2182.50	bulk	3072.4	0.700	27.1	0008-0
2182.75	bulk	5989.3	0.700	25.1	0009-0
2183.05	bulk	4810.1	0.700	23.3	0010-0
2184.02	bulk	6042.7	0.700	13.9	0012-0
2185.15	bulk	77116.9	0.700	0.6	0014-0

Table 12a: Variation in Triaromatic Sterane Distribution (peak height) for Well NOCS 15/5-6

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Sample
2172.00	bulk	0.51	0.46	0.25	0.24	0.34	0001-0
2175.00	bulk	0.52	0.52	0.28	0.26	0.36	0002-0
2180.40	bulk	0.49	0.48	0.25	0.24	0.33	0004-0
2181.85	bulk	0.48	0.43	0.23	0.23	0.31	0006-0
2182.20	bulk	0.48	0.45	0.24	0.23	0.32	0007-0
2182.50	bulk	0.49	0.46	0.25	0.24	0.33	0008-0
2182.75	bulk	0.49	0.45	0.24	0.23	0.32	0009-0
2183.05	bulk	0.49	0.45	0.24	0.23	0.32	0010-0
2184.02	bulk	0.46	0.41	0.22	0.22	0.30	0012-0
2185.15	bulk	0.53	0.50	0.28	0.27	0.37	0014-0

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 12b: Variation in Monoaromatic Sterane Distribution (peak height) for Well NOCS 15/5-6

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Sample
2172.00	bulk	0.33	0.24	0.22	0.19	0001-0
2175.00	bulk	0.34	0.23	0.23	0.19	0002-0
2180.40	bulk	0.35	0.25	0.24	0.20	0004-0
2181.85	bulk	0.36	0.26	0.24	0.19	0006-0
2182.20	bulk	0.36	0.26	0.24	0.20	0007-0
2182.50	bulk	0.37	0.26	0.25	0.20	0008-0
2182.75	bulk	0.36	0.26	0.24	0.20	0009-0
2183.05	bulk	0.35	0.25	0.23	0.19	0010-0
2184.02	bulk	0.34	0.24	0.22	0.18	0012-0
2185.15	bulk	0.29	0.20	0.19	0.17	0014-0

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 12c: Aromatisation of Steranes (peak height) for Well NOCS 15/5-6

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Sample
2172.00	bulk	0.46	0.90	0001-0
2175.00	bulk	0.43	0.93	0002-0
2180.40	bulk	0.42	0.94	0004-0
2181.85	bulk	0.41	0.93	0006-0
2182.20	bulk	0.42	0.94	0007-0
2182.50	bulk	0.43	0.94	0008-0
2182.75	bulk	0.42	0.93	0009-0
2183.05	bulk	0.43	0.93	0010-0
2184.02	bulk	0.43	0.93	0012-0
2185.15	bulk	0.50	0.89	0014-0

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

Ratio2: g1 / g1 + I1

Table 12d: Raw triaromatic sterane data (peak height) m/z 231 for Well NOCS 15/5-6

Depth unit of measure: m

Depth	Lithology	a1	b1	c1	d1	e1	f1	g1	Sample
2172.00	bulk	61904.0	52382.0	26284.6	122488.9	64984.6	66911.5	60658.1	0001-0
2175.00	bulk	84956.6	84046.3	36473.1	149396.5	79755.5	83826.6	77825.0	0002-0
2180.40	bulk	137632.2	128813.2	63040.5	281422.8	146320.1	156203.7	142175.1	0004-0
2181.85	bulk	141131.1	113656.5	62823.8	309037.5	159334.2	168368.6	150981.0	0006-0
2182.20	bulk	105586.5	94787.5	49353.4	223278.9	114296.2	120937.7	113679.6	0007-0
2182.50	bulk	123892.4	108873.2	56037.4	255354.1	130803.5	136685.7	127221.0	0008-0
2182.75	bulk	133844.9	114473.8	60914.7	286816.1	149097.7	156997.5	138643.1	0009-0
2183.05	bulk	138911.5	119383.0	64761.5	290005.5	150367.2	162529.5	143344.3	0010-0
2184.02	bulk	100542.1	80449.6	47811.5	232636.1	123154.5	126474.5	117004.5	0012-0
2185.15	bulk	15527.2	13871.9	6232.3	26501.8	14407.3	14708.7	13695.8	0014-0

Table 12e: Raw monoaromatic sterane data (peak height) m/z 253 for Well NOCS 15/5-6

Depth unit of measure: m

Depth	Lithology	A1	B1	C1	D1	E1	F1	G1	H1	I1	Sample
2172.00	bulk	40356.5	25440.7	47595.7	41434.0	81078.2	15807.5	60387.0	34462.7	6647.3	0001-0
2175.00	bulk	49248.4	28440.4	53739.5	44488.1	95837.9	18529.0	68371.7	35457.6	5771.1	0002-0
2180.40	bulk	92031.0	55432.2	95826.7	76695.6	169680.7	33953.9	129092.5	62002.4	9370.9	0004-0
2181.85	bulk	89389.0	54091.4	108285.7	85845.3	156611.5	33963.6	126752.6	70501.3	10601.0	0006-0
2182.20	bulk	71726.1	44006.0	81719.8	63058.8	124895.7	26662.3	97559.2	49687.6	7511.7	0007-0
2182.50	bulk	84512.8	50733.4	96535.1	72287.5	145023.8	30493.0	114457.9	58999.2	8813.4	0008-0
2182.75	bulk	90561.9	54716.4	104346.6	87493.9	159363.6	31365.2	123194.6	69309.7	10259.7	0009-0
2183.05	bulk	91182.1	57205.8	103388.4	89850.1	171767.3	34949.4	130774.5	71166.9	10958.7	0010-0
2184.02	bulk	68652.0	42297.8	86610.2	73443.0	132013.0	28545.0	105728.1	57740.3	8897.9	0012-0
2185.15	bulk	9406.8	5856.4	11973.4	9141.0	23440.6	4359.4	16996.8	9105.6	1647.9	0014-0

Table 1 Analytical Program for 15/5-6 mud samples

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PROJECT: Statoil 15/5-6									DATABASE CODE: 8390											P85		
Date:		26/11/97																				
Client Contact: Ger van Graas																						
Scientist: PBH																						
Technician: UWS																						
Sample type key c = Cuttings s = SWC p = Conv core/ plug m = mud o = oil/gas													bo = base oil R = Reservoir S = Source									
Sample Depth (m)	**Sample Type**	**Sample Code**	HS & Occ Gas	Washing	Gas isotope canned samples (A)	Lithology Description	Picking for screening	Leco TOC	RockEval	Thermal Extraction GC	Pyrolysis GC	TE and PY GC	Picking for Extraction	MINI Extraction	Iatroscan	SOXTEC Extraction	MPLC & Deasp	Sat GC (Q)	Aro GC (Non Q)	Sat GCMS (Q)	Aro GCMS (Non Q)	Isotope of EOM/fraction
		Table nos.						5	5						8	8	8	9	9	11	12	10
2181	m	P85/0001-0								x					x	x	x	x	x	x	x	x
2200	m	P85/0002-0								x					x	x	x	x	x	x	x	x
-	res	P85/0003-0						x	x	x												
Total			0	0	0	0	0	1	1	3	0	0	0	0	2	2	2	2	2	2	2	2

res = resin mud additive

Table 5A: Rock-Eval table for well NOCS 15/5-6 MUD

Depth unit of measure: m

Depth	Typ	Form	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
3.00	res		bulk	0.29	0.56	0.53	1.06	0.09	629	596	0.9	0.34	432	0003-0B

Table 5B: Rock-Eval table for well RE,STD

Depth unit of measure: m

Depth	Typ	Form	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
1.00	std		bulk	0.41	19.64	2.01	9.77	-	-	-	20.0	0.02	417	0182-0B

Table 8a: MPLC Bulk Composition: Weight of EOM and Fraction for well NOCS 15/5-6 MUD

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
2181.00	mud	bulk	-	513.6	19.1	3.8	250.3	240.4	22.9	490.7	-	0001-0B
2200.00	mud	bulk	-	548.9	7.8	7.8	315.9	217.5	15.5	533.4	-	0002-0B

150 ml mud was extracted with several aliquots of DCM (total 350 ml) in a separatory funnel.

Table 8b: MPLC Bulk Composition: Concentration of EOM and Fraction (wt ppm rock) for well NOCS 15/5-6 MUD

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
2181.00	mud	bulk	-	-	-	-	-	-	-	0001-0B
2200.00	mud	bulk	-	-	-	-	-	-	-	0002-0B

Table 8c: MPLC Bulk Composition: Concentration of EOM and Fraction (mg/g TOC(e)) for well NOCS 15/5-6 MUD

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
2181.00	mud	bulk	-	-	-	-	-	-	-	0001-0B
2200.00	mud	bulk	-	-	-	-	-	-	-	0002-0B

Table 8d: MPLC Bulk Composition: Material extracted from the rock (%) for well NOCS 15/5-6 MUD

Depth unit of measure: m

Depth	Typ	Lithology	Sat	Aro	Asph	NSO	Total	HC	Non-HC	Recov. MPLC	Recov. Asph	Sample
2181.00	mud	bulk	3.71	0.74	48.73	46.81	100.00	4.46	95.54	1.09	0.52	0001-0B
2200.00	mud	bulk	1.41	1.41	57.55	39.62	100.00	2.83	97.17	0.98	0.59	0002-0B

Table 8e: MPLC Bulk Composition: Ratios for well NOCS 15/5-6 MUD

Depth unit of measure: m

Depth	Typ	Lithology	Sat / Aro	HC / Non-HC	Asp / NSO	Sample
2181.00	mud	bulk	5.00	0.05	1.04	0001-0B
2200.00	mud	bulk	1.00	0.03	1.45	0002-0B

Table 8f Iatroscan TLC Bulk Composition: Absolute yields in mg EOM for well NOCS 15/5-6 muds

Depth	Type	Lithology	Sat HC	Aro HC	NSO	Asp	HC	Non-HC	EOM	Sample
2181	mud	bulk	39.5	4.7	219.2	250.2	44.2	469.4	513.6	0001-0B
2200	mud	bulk	35.9	3.7	193.4	315.9	39.6	509.3	548.9	0002-0B

NSO is Pol 1 but in muds (mainly glycol extracted from the mud) Asphaltenes also include glycol

Table 8g: Iatroscan TLC Bulk Composition: Rel. percentages of sep. fractions for well NOCS 15/5-6 MUD

Depth unit of measure: m

Depth	Typ	Lithology	Sat HC	Aro HC	NSO	Asp	Total	HC	Non-HC	Recov. Iatr.	Recov. Asp	Sample
2181.00	mud	bulk	7.69	0.91	42.67	48.73	100.00	8.60	91.40	0.42	0.52	0001-0B
2200.00	mud	bulk	6.54	0.68	35.23	57.55	100.00	7.22	92.78	0.41	0.59	0002-0B

Table 9A: Quantitative Analysis of Saturated Fraction for well 15/5-6 MUD

sample	nC15 mg/g sat	nC16 mg/g sat	iC18 mg/g sat	nC17 mg/g sat	Pr mg/g sat	nC18 mg/g sat	Ph mg/g sat	nC19 mg/g sat	nC20 mg/g sat	nC21 mg/g sat	nC22 mg/g sat	nC23 mg/g sat	nC24 mg/g sat	nC25 mg/g sat	nC26 mg/g sat	nC27 mg/g sat	nC28 mg/g sat	nC29 mg/g sat	nC30 mg/g sat	nC31 mg/g sat	nC32 mg/g sat	nC33 mg/g sat	nC34 mg/g sat
2181.00m mud	10.46	13.43	7.27	14.20	8.00	10.18	5.45	8.30	6.95	5.73	4.52	3.20	2.79	2.02	1.49	0.93	0.84	0.73	0.47	0.41	0.32	0.00	0.00
2200.00m mud	14.76	27.33	16.55	34.16	19.24	29.10	14.71	21.46	18.02	15.19	12.13	7.64	7.21	4.88	3.92	2.76	2.11	2.17	1.32	0.00	0.00	0.00	0.00

Table 9B: Saturated Hydrocarbon Ratios (peak area) for well NOCS 15/5-6 MUD

Depth unit of measure: m

Depth	Typ	Lithology	Pristane / nC17	Pristane / Phytane	Pristane/nC17 / Phytane/nC18	Phytane / nC18	CPI1	nC17 / nC17+nC27	Sample
2181.00	mud	bulk	0.56	1.47	1.05	0.54	1.02	0.94	0001-0B
2200.00	mud	bulk	0.56	1.31	1.11	0.51	1.00	0.93	0002-0B

Table 9Ca: Aromatic Hydrocarbon Ratios (peak area) for well NOCS 15/5-6 MUD

Depth unit of measure: m

Depth	Typ	Lithology	MNR	DMNR	BPhR	2/1MP	MPI1	MPI2	Rc	DBT/P	4/1MDBT	(3+2) /1MDBT	Sample
2181.00	mud	bulk	-	-	-	-	-	-	-	-	-	-	0001-0B
2200.00	mud	bulk	-	-	-	-	-	-	-	-	-	-	0002-0B

Table 9Cb: Aromatic Hydrocarbon Ratios (peak area) for well NOCS 15/5-6 MUD

Depth unit of measure: m

Depth	Typ	Lithology	F1	F2	Sample
2181.00	mud	bulk	-	-	0001-0B
2200.00	mud	bulk	-	-	0002-0B

Table 10A: Tabulation of carbon isotope data for EOM/EOM - fractions for well NOCS 15/5-6 MUD

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Saturated	Aromatic	NSO	Asphaltenes	Kerogen	Sample
2181.00	mud	bulk	-29.00	-28.23	-27.68	-28.25	-28.51	-	0001-0
2200.00	mud	bulk	-28.85	-27.88	-28.09	-27.94	-28.75	-	0002-0

Table 10B: Tabulation of cv values from carbon isotope data for well NOCS 15/5-6 MUD

Depth unit of measure: m

Depth	Typ	Lithology	Saturated	Aromatic	cv value	Interpretation	Sample
2181.00	mud	bulk	-28.23	-27.68	-1.68	Marine	0001-0
2200.00	mud	bulk	-27.88	-28.09	-3.47	Marine	0002-0

Table 11a: Variation in Triterpane Distribution (peak height) SIR for Well NOCS 15/5-6 MUD

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Ratio6	Ratio7	Ratio8	Ratio9	Rat.10	Rat.11	Rat.12	Rat.13	Rat.14	Sample
2181.00	bulk	0.99	0.50	0.23	0.82	0.45	0.05	0.27	0.33	0.21	0.31	0.91	0.46	0.13	58.95	0001-0
2200.00	bulk	0.93	0.48	0.23	0.83	0.45	0.05	0.25	0.30	0.20	0.40	0.91	0.46	0.13	59.67	0002-0

List of Triterpane Distribution Ratios

Ratio 1: 27Tm / 27Ts

Ratio 2: 27Tm / 27Tm+27Ts

Ratio 3: 27Tm / 27Tm+30aß+30ßa

Ratio 4: 29aß / 30aß

Ratio 5: 29aß / 29aß+30aß

Ratio 6: 30d / 30aß

Ratio 7: 28aß / 30aß

Ratio 8: 28aß / 29aß

Ratio 9: 28aß / 28aß+30aß

Ratio 10: 24/3 / 30aß

Ratio 11: 30aß / 30aß+30ßa

Ratio 12: 29aß+29ßa / 29aß+29ßa+30aß+30ßa

Ratio 13: 29ßa+30ßa / 29aß+30aß

Ratio 14: 32aßS / 32aßS+32aßR (%)

Table 11b: Variation in Sterane Distribution (peak height) SIR for Well NOCS 15/5-6 MUD

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Ratio6	Ratio7	Ratio8	Ratio9	Ratio10	Sample
2181.00	bulk	0.57	44.94	78.39	1.15	0.80	0.46	0.32	0.64	0.82	3.29	0001-0
2200.00	bulk	0.50	47.62	78.39	1.17	0.79	0.53	0.37	0.64	0.91	3.46	0002-0

List of Sterane Distribution Ratios

Ratio 1: 27dßS / 27dßS+27aaR

Ratio 2: 29aaS / 29aaS+29aaR (%)

Ratio 3: 2*(29ßßR+29ßßS) / (29aaS+29aaR + 2*(29ßßR+29ßßS)) (%)

Ratio 4: 27dßS+27dßR+27daR+27daS / 29dßS+29dßR+29daR+29daS

Ratio 5: 29ßßR+29ßßS / 29ßßR+29ßßS+29aaS

Ratio 6: 21a+22a / 21a+22a+29aaS+29ßßR+29ßßS+29aaR

Ratio 7: 21a+22a / 21a+22a+28daS+28aaS+29daR+29aaS+29ßßR+29ßßS+29aaR

Ratio 8: 29ßßR+29ßßS / 29aaS+29ßßR+29ßßS+29aaR

Ratio 9: 29aaS / 29aaR

Ratio 10: 29ßßR+29ßßS / 29aaR

Table 11c: Raw triterpane data (peak height) m/z 191 SIR for Well NOCS 15/5-6 MUD

Depth unit of measure: m

Depth	Lithology	23/3	24/3	25/3	24/4	26/3	27Ts	27Tm	28aß	25nor30aß	Sample
		29aß	29Ts	30d	29ßa	30O	30aß	30ßa	30G	31aßS	
		31aßR	32aßS	32aßR	33aßS	33aßR	34aßS	34aßR	35aßS	35aßR	
2181.00	bulk	12369.6	6620.0	4011.4	6350.2	2974.3	7093.6	7037.1	5684.4	5060.7	0001-0
		17397.7	5786.4	1112.0	2696.0	1203.8	21249.8	2146.0	1553.0	8626.8	
		7182.0	4797.7	3341.1	3549.8	2094.4	2046.1	1219.4	1964.8	1272.1	
2200.00	bulk	6021.7	3149.0	1787.8	2710.0	1350.5	2795.3	2610.3	1954.6	2100.4	0002-0
		6510.2	2188.0	405.7	1000.1	477.9	7875.7	814.4	584.9	3127.6	
		2559.1	1825.5	1233.6	1342.4	857.1	795.5	487.4	792.4	538.6	

Table 11d: Raw sterane data (peak height) m/z 217 SIR for Well NOCS 15/5-6 MUD

Depth unit of measure: m

Depth	Lithology	21a	22a	27dßS	27dßR	27daR	27daS	28dßS	28dßR	28daR*	Sample
		29dßS*	28daS*	27aaR	29dßR	29daR	28aaS	29daS*	28ßßS		
		28aaR	29aaS	29ßßR	29ßßS	29aaR					
2181.00	bulk	7440.5	3201.6	7392.5	5151.3	1809.3	2060.9	3332.3	2121.4	3268.8	0001-0
		5960.9	5075.0	5464.3	3905.2	1181.6	1504.3	3273.3	3729.5		
		1445.2	1968.9	4392.5	3552.7	2412.5					
2200.00	bulk	3777.4	1420.2	3061.9	2449.0	854.7	925.2	1426.5	919.0	1438.8	0002-0
		2470.8	2130.1	3116.3	1681.1	632.9	829.4	1463.2	1564.0		
		636.5	772.4	1603.5	1338.4	849.5					

* 28daR coel with 27aaS, 29dßS coel with 27ßßR, 28daS coel with 27ßßS, 29daS coel with 28ßßR

Table 11e: Raw sterane data (peak height) m/z 218 SIR for Well NOCS 15/5-6 MUD

Depth unit of measure: m

Depth	Lithology	27ßßR	27ßßS	28ßßR	28ßßS	29ßßR	29ßßS	30ßßR	30ßßS	Sample
2181.00	bulk	8387.8	7713.8	5419.5	6091.7	6447.4	6120.4	1109.7	1236.3	0001-0
2200.00	bulk	3205.4	2669.9	1998.1	2232.6	2250.6	2278.4	343.0	393.3	0002-0

Table 11f: Raw triterpane data (peak height) m/z 177 SIR for Well NOCS 15/5-6 MUD

Depth unit of measure: m

Depth	Lithology	25nor28aß	25nor30aß	Sample
2181.00	bulk	6458.3	4135.3	0001-0
2200.00	bulk	2213.7	1594.4	0002-0

Table 11g: Amount of triterpanes (ppb) m/z 191 SIR for Well NOCS 15/5-6 MUD

Depth unit of measure: m

Depth	Lithology	23/3	24/3	25/3	24/4	26/3	27Ts	27Tm	28aß	25nor30aß	Sample
		29aß	29Ts	30d	29ßa	30O	30aß	30ßa	30G	31aßS	
		31aßR	32aßS	32aßR	33aßS	33aßR	34aßS	34aßR	35aßS	35aßR	
2181.00	bulk	116543.4	62372.2	37794.7	59830.1	28023.2	66834.4	66301.4	53556.5	47680.8	0001-0
		163915.9	54518.0	10477.3	25400.9	11341.8	200209.5	20219.3	14631.8	81279.2	
		67667.3	45202.4	31479.0	33445.6	19732.9	19277.6	11489.2	18511.8	11985.4	
2200.00	bulk	225363.0	117853.2	66907.2	101422.9	50542.9	104613.3	97691.9	73152.1	78608.0	0002-0
		243647.6	81887.9	15184.5	37429.8	17884.3	294750.7	30477.5	21889.1	117052.6	
		95773.5	68319.6	46169.0	50239.9	32075.9	29770.1	18242.1	29656.2	20158.2	

Table 11h: Amount of steranes (ppb) m/z 217 SIR for Well NOCS 15/5-6 MUD

Depth unit of measure: m

Depth	Lithology	21a	22a	27dßS	27dßR	27daR	27daS	28dßS	28dßR	28daR*	Sample
		29dßS*	28daS*	27aaR	29dßR	29daR	28aaS	29daS*	28ßßS		
		28aaR	29aaS	29ßßR	29ßßS	29aaR					
2181.00	bulk	70101.9	30164.5	69649.8	48534.5	17046.9	19417.1	31396.4	19987.6	30797.8	0001-0
		56161.9	47815.7	51483.4	36793.3	11132.5	14173.3	30839.7	35138.2		
		13616.3	18550.9	41384.8	33472.8	22729.9					
2200.00	bulk	141369.5	53152.8	114591.2	91653.9	31985.8	34624.0	53386.7	34393.1	53848.1	0002-0
		92469.9	79717.8	116629.4	62915.1	23686.3	31040.3	54759.1	58533.3		
		23821.9	28906.3	60012.3	50088.6	31793.9					

* 28daR coel with 27aaS, 29dßS coel with 27ßßR, 28daS coel with 27ßßS, 29daS coel with 28ßßR

Table 11i: Amount of standard and weight of sample for Well NOCS 15/5-6 MUD

Depth unit of measure: m

Depth	Lithology	Standard	Amount	Weight	Sample
2181.00	bulk	148592.7	0.700	0.5	0001-0
2200.00	bulk	187039.6	0.700	0.1	0002-0

Table 12a: Variation in Triaromatic Sterane Distribution (peak height) for Well NOCS 15/5-6 MUD

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Sample
2181.00	bulk	0.42	0.36	0.20	0.20	0.29	0001-0
2200.00	bulk	0.37	0.37	0.22	0.18	0.36	0002-0

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 12b: Variation in Monoaromatic Sterane Distribution (peak height) for Well NOCS 15/5-6 MUD

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Sample
2181.00	bulk	0.26	0.19	0.17	0.14	0001-0
2200.00	bulk	0.25	0.18	0.16	0.15	0002-0

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 12c: Aromatisation of Steranes (peak height) for Well NOCS 15/5-6 MUD

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Sample
2181.00	bulk	0.78	0.64	0001-0
2200.00	bulk	0.70	0.76	0002-0

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

GEOLAB NOR

Table 12d: Raw triaromatic sterane data (peak height) m/z 231 for Well NOCS 15/5-6 MUD

Depth unit of measure: m

Depth	Lithology	a1	b1	c1	d1	e1	f1	g1	Sample
2181.00	bulk	5712.5	4552.2	3183.3	14160.4	8044.7	7448.0	8039.6	0001-0
2200.00	bulk	694.2	710.4	703.4	1221.1	969.3	947.3	1193.2	0002-0

Table 12e: Raw monoaromatic sterane data (peak height) m/z 253 for Well NOCS 15/5-6 MUD

Depth unit of measure: m

Depth	Lithology	A1	B1	C1	D1	E1	F1	G1	H1	I1	Sample
2181.00	bulk	14715.2	9783.2	21742.5	19034.1	41111.6	6767.9	33306.6	19514.3	4619.1	0001-0
2200.00	bulk	1207.1	816.8	1612.4	1489.1	3614.0	500.7	2696.0	1536.5	368.9	0002-0