4.2 Formation Multi-Test (FMT) Analysis

Pressure data were read from the FMT raw data log. They were then coded for test results, test and permeability qualities. A summary of all the data is given in Appendix IV. The data were analysed and the least square fit method was used for the calculation of oil and water gradients.

Test specifications

Test date:	August 14, 1994
Tool type:	Atlas wireline FMT pump through tool
Equipment. no:	HSL 8747
Gauge no.:	152967/2174XA (Serial/Series no.)
Accuracy of probe:	+ / - 1 psi
Replatability:	+ / - 1 psi
Number of runs:	3 (4A, B, C)
Max, well deviation:	38°
Fluid samples:	One sample from 2066.82 m TVD SS (Obs. no. 15) PVT-analysis report; Geco A.S : PVT Analyses FMT-sample, well 25/8-5S.

6. DRILL STEM TESTING

A dual flow, dual shut-in drill stem test was carried through with Dyvi Stena in the period 14-18 September 1994. A 31 meter interval (2118-2149 m MD RKB) was perforated and the liquids were flowed through a 5 1/2" modified drillpipe test string. The test periods, flow rates and cumulative production are summarized in Table 6.1.

Table 6.1 Test Period Summary

	Duration	Flowrate	Cum.Prod
Initial flow	3 min.	2434 STB/d	6 STB
Initial Build-up	2.5 hrs	-	-
Main Flow	24 hrs	6750 STB/d [1)]	6111 STB
Main Build-up	56 hrs	-	-

Note: 1) Average, stabilized rate at 128/64 inch choke

During the main flow period, five PVT sets (each set consisting of a 550 cc oil bottle and a 20 liter gas bottle) and a total of 1275 l dead oil were collected at the separator. After the main build-up, the well was re-opened and two 600 cc bottom hole samples were taken. A complete summary of on-site analysis of produced liquids, separator- and bottom hole sampling is provided in "Sampling Report, Well 25/8-5S, Test no.1" from European Logging Services, October 1994.

Four memory pressure/temperature gauges were run in the test string, in addition to a wireline gauge that was hung in the hole during the initial flow, initial build-up and main flow. At the start of the main build up this gauge was pulled so that the down hole LPRN valve could be closed. The preliminary results from analysis of main build-up pressure data and the main results from PVT analysis of the bottom hole sample are summarized in Table 6.2. No boundaries were interpreted during the test. A complete description of the test is found in Well 25/8-5S, Well Test Report.

Table 6.2 Summary of test results

Parameter	Value
Tested interval (m MD RKB)	2117-2150
Perforated interval (m MD RKB)	2118-2149
Initial Reservoir Pressure [1] (psia)	2894
Initial Reservoir Temperature (°C)	82
Formation Permeability (mD)	900
Skin	-0.8
Radius of Investigation (m)	1300
Productivity Index (bbl/d/psia)	50
Viscosity at reservoir conditions (cp)	1.4
Density at standard conditions (°API)	37
Formation Volume Factor (RB/STB)	1.15
GOR (scf/STB)	214

Notes: 1) at 2135 m MD RKB

PRODUCTION TEST SUMMARY

WELL: 25/8-5S
TEST NO: 1

TEST DATA:

1.	Interval mmdrkb	2118	2149		
2.	Produced Fluid	oil			
3.a	Cumulative Production (water)		0		
3.b	Cumulative Production (Oil)		6111	STB	
4.	Stabilized Rate		6750	STB	
5.	Length of Flow Period		24,1	Hours	
6.	Choke Size		128/64	inch	
7.	Gravity of Oil or Condensate		0,84	gr/cc	37 API
8.	GOR		214	SCF/STB	
9.	Oil / Water / Sediments %		0		
10.	Chlorides		38500	mg/l	
11	H2S		0		
12.	CO2		0,5		
13.	Stabilized Flowing Wellhead Pressure		423	psia	
14.	Stabilized Flowing Wellhead Temperature		99	F	
15.	Wellhead Pressure at End of Buildup		2894	psia	at 2135m mdrlb
16.	Initial Reservoir Pressure		2897	psia	
17.	Final Flowing Pressure		2753	psia	at 2135m mdrkb (sro gauge)
18.	Productivity Index (bbl/d/psia)		50		
19.	Maximum Bottom-hole Temperature		178,5	F	at 2135m mdrkb (sro gauge)
20.	Samples Taken: @ Data Header	dead oil	separator		
		PVT oil			
		PVT gas			
		BHS			
		Separator	water		
		compl.	brine		
		mud			

Elli 25/8-5S - FMT wireline pressure data for the Heimdal reservoir

Run No.	Test No.	Obs. No.	MD RKB (m)	TVD RKB (m)	TVD SS (m)	Hydro-static P Before (psig)	Formation P (psig)	Hydro-static P After (psig)	Temp. (°C)	Comments
4A	1	6	2117.5	2078.42	2053.42					No seal
4A	2	7	2118.0	2078.98	2053.98					No seal
4A	3	8	2118.7	2079.56	2054.56	4549.18	2862.54	4549.03	50.2	
4A	4	9	2120.5	2081.06	2056.06	4552.80	2862.97	4552.80	55.4	Large drawdown
4A	5	10	2124.0	2083.97	2058.97	4632.56				No seal
4A	6	11	2125.7	2085.39	2060.39	4639.61				No seal
4A	7	12	2128.0	2087.30	2062.30	4566.14	2869.35	4566.29	56.9	Stable but lost seal
4A	8	13	2129.0	2088.13	2063.13	4568.03	2873.12	4567.30	57.2	Low perm., large drawdown
4A	9	14	2131.5	2090.21	2065.21	4649.76				No seal
4A	10	15	2133.6	2091.95	2066.95	4575.71	2875.44	4576.00	57.9	Filled 4 l chamber in 50 s
4A	11	16	2134.5	2092.70	2067.70					No seal
4A	12	17	2135.0	2093.12	2068.12					No seal
4A	13	18	2134.0	2092.28	2067.28	4577.45	2875.44	4576.73	58.5	Large drawdown
4A	14	19	2136.5	2094.36	2069.36	4581.80	2878.78	4581.80	58.7	Low perm.
4A	15	20	2138.0	2095.60	2070.60	4584.99	2879.07	4584.70	58.8	
4A	16	21	2140.0	2097.26	2072.26	4588.76	2880.66	4588.47	58.9	
4A	17	22	2143.0	2099.75	2074.75	4593.40	2882.84	4593.40	59.0	
4A	18	23	2145.6	2101.91	2076.91	4598.91	2891.83	4599.06	59.1	Low perm.
4A	19	24	2146.5	2102.65	2077.65	4601.09	2887.48	4600.80	59.3	
4A	20	25	2147.5	2103.48	2078.48	4602.83	2887.91	4602.25	59.5	
4A	21	26	2148.5	2104.31	2079.31	4604.57	2889.07	4604.42	59.6	

Elli 25/8-5S - FMT wireline pressure data for the Heimdal reservoir

Run No.	Test No.	Obs. No.	MD RKB (m)	TVD RKB (m)	TVD SS (m)	Hydro-static P Before (psig)	Formation P (psig)	Hydro-static P After (psig)	Temp. (°C)	Comments
4A	22	27	2149.0	2104.72	2079.72	4605.73	2891.54	4605.58	59.8	Large drawdown
4A	23	28	2170.0	2122.06	2097.06	4723.11				No seal
4A	24	30	2171.5	2123.30	2098.30	4646.18	2913.43	4646.04	60.8	
4A	25	31	2176.2	2127.16	2102.16	4655.61	2919.09	4655.03	61.0	
4A	26	32	2178.0	2128.65	2103.65	4658.36	2921.41	4658.51	61.2	
4A	27	33	2187.0	2136.04	2111.04	4753.54				No seal
4A	28	34	2189.7	2138.25	2113.25	4679.39	2935.18	4679.39	61.8	
4A	29	35	2192.0	2140.13	2115.13	4683.30	2937.94	4683.45	62.2	
4A	30	36	2197.2	2144.38	2119.38	4693.45	2944.17	4693.31	62.4	
4A	31	37	2201.2	2147.64	2122.64	4700.12	2948.52	4699.98	62.6	
4A	32	38	2167.0	2119.59	2094.59	4638.35	2500.33	4638.79	62.9	Low perm., building 0.3 psi/s
4A	33	39	2160.0	2113.81	2088.81	4625.74	2505.40	4625.74	63.0	Low perm., building 4.0 psi/s
4A	34	40	2156.3	2110.76	2085.76	4619.5	2483.22	4618.92	63.0	Low perm., building 1.0 psi/s
4B	35	44	2171.5	2123.30	2098.30	4647.05	2914.74	4646.62	60.9	
4C	36	47	2176.2	2127.16	2102.16	4655.75	2919.81	4655.32	61.6	
4C	37	48	2201.2	2147.64	2122.64	4700.56	2949.10	4700.70	62.3	
4C	38	52	2192.5	2140.54	2115.54	4684.75	2939.10	4684.61	64.1	
4C	39	62	2178.0	2128.65	2103.65	4658.36	2921.84	4657.93	65.9	

DRILLING FLUID PROGRAM NB!

7.1 DRILLING FLUID DATA

Hole size in	Interval RKB mMD	Mud System	Mud weight range ppg	Mud weight range (g/cm3)	PV	YP	pH	Fluid Loss cc/30 Min.	Remarks
36	150-270	Seawater/ Gel Sweeps	8.6 - 8.7	1.03 - 1.04	----	----	----	----	Seawater w/Hi-vis gel pills. Displace at least 2 hole volumes with gel mud prior to running 30" casing.
9-7/8 Pilot 17-1/2" HO	270-1215 270-1215	Seawater/ Gel Sweeps	8.6 - 8.7	1.03 - 1.04	----	----	----	----	Seawater w/Hi-vis gel pills. Displace with gel mud prior to opening hole and prior to running 20"x13-3/8" casing.
12-1/4	1215-2740	KCl/polymer KCl 60-70 lb/bbl Glycol: 3.0-3.5 % vol. XC Polymer: 0.5-1.5 lb/bbl PAC: 2.0-5.0 lb/bbl Soda Ash: 0.2-0.5 lb/bbl	10-12.5	1.20-1.50	5-15	20-30	8-9	3-5	
8-1/2	2740-3310	KCl/polymer KCl 40-60 lb/bbl Glycol: 3.0-3.5 % vol. XC Polymer: 0.5-1.5 lb/bbl PAC: 2.0-5.0 lb/bbl Soda Ash: 0.2-0.5 lb/bbl	11.0-12.5	1.32-1.44	10-20	15-25	8-9	2-3	

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WATER BASED FLUID PROPERTIES SUMMARY

DATE	LOC	DEPTH m	WT ppg	FV s/qt	PV cp	YP	GELS 0 – 10		API cc/30m	HTHP FL	CAKE /32	pH	Pf	Mf	Cl mg/l	Ca mg/l	K+ mg/l	SOLIDS %	SAND %	TEMP F°	REMARKS
07/21/94	IN		9.50	150																	
07/22/94	IN	273	9.50	150																	
07/23/94	IN	352	9.50	150																	
07/24/94	IN	811	9.50	150																	
07/25/94	IN	1170	9.50	150																	
07/26/94	IN	1170	9.50	200																	
07/28/94	OTH	1170	10.00	86	28	32	3	3	6.8		2	8.2	0.10		100000	320		8.5		66	
07/29/94	OTH	1170	10.00	86	28	32	3	3	6.8		2	8.2	0.10		100000	320		8.5		66	
07/30/94	OTH	1170	10.00	84	28	32	3	3	6.8		2	8.2	0.10		100000	320		8.5			
07/31/94	IN	1331	10.30	100	32	36	4	7	3.8		2	9.2	0.10	0.10	96000	600		10.0	0.10	82	
08/01/94	OUT	1755	11.50	100	48	45	5	8	3.2	17.4	2	8.8		0.10	100000	1000		15.5	1.00	98	
08/02/94	IN	1983	12.50	80	42	30	3	6	4.2	20.6	2	8.2		0.10	104000	1280		20.0	0.50	109	
08/03/94	OUT	2008	12.50	70	42	38	6	11	3.8		2	8.1			104000	1360		20.0	0.50	106	
08/04/94	OUT	2094	12.50	72	39	42	7	11	3.6		2	8.0			102000	1320		21.0	0.50	114	
08/05/94	OUT	2136	12.50	81	38	41	7	10	3.2		2	7.9			104000	1280		21.0	1.00	91	
08/06/94	OUT	2150	12.50	78	33	34	4	7	3.4		2	8.3			106000	1320		21.0	1.50	95	
08/07/94	OUT	2234	12.50	59	34	32	6	8	3.2	14.2	2	8.0			106000	1000		21.0	1.50	120	
08/08/94	OUT	2261	12.50	62	34	33	6	8	3.4	14.6	1	7.9		0.10	106000	560		21.0	1.00	110	
08/09/94	OUT	2300	12.50	58	31	32	6	9	3.4	14.2	1	7.8		0.10	108000	560		20.5	0.50	109	
08/10/94	IN	2301	12.50	63	32	32	6	9	3.4	14.6	1	8.0	0.01	0.10	109000	560		21.5	0.50	93	
08/11/94	IN	2301	12.50	69	33	36	7	8	3.3	14.6	1	8.0		0.10	109000	480		21.5	0.50	67	
08/12/94	IN	2301	12.50	66	35	32	7	8	3.9	14.6		8.0		0.01	117000	310		22.0	0.10	78	
08/13/94	IN	2301	12.50	70	35	38	7	10	3.0	14.8		7.9		0.01	110000	320		21.5	0.10	54	
08/14/94	IN	2301	12.50	77	31	30	6	10	3.2	14.8	1	7.9			110000	330		21.5		56	
08/15/94	OUT	2301	12.55	67	30	30	6	10	3.0	14.8	1	8.0			110000	330		21.5	0.20	78	
08/16/94	OUT	2301	12.55	66	31	35	8	6	3.2	14.8	1	7.9			105000	520		22.0	0.10	110	
08/17/94	IN	2301	12.55	76	32	34	6	9	3.2	15.0	1	7.9			106000	520		22.0	0.10		
08/18/94	IN	2301	12.60	76	34	34	6	10	3.4	15.1	1	7.9		0.10	108000	550		22.0	0.10		
08/19/94	OUT	2335	10.15	61	19	19	5	7	3.0	13.8	1	9.8			107000	900		11.0	0.50	93	
08/20/94	OUT	2485	10.20	62	25	25	5	7	3.0	13.2	1	8.5		0.02	109000	820		13.0	0.50	100	
08/21/94	IN	2492	10.25	63	25	25	5	7	3.0	13.6	1	8.4		0.01	108000	620	0	12.0	0.50		
08/22/94	OUT	2615	10.30	61	22	23	5	7	3.0	13.2	1	8.2		0.02	107000	200	0	14.0	0.70	91	
08/23/94	OUT	2700	10.25	67	30	27	6	7	3.0	13.4	1	8.3			112000	560	0	13.5	0.70	111	
08/24/94	OUT	2712	10.15	71	28	29	6	8	3.4		1	8.3		0.15	116000	240		12.5	0.50	109	
08/25/94	OTH	2758	10.10	76	30	26	6	8	3.2	12.0	1	8.1			118000	320		12.0	0.50	75	
08/26/94	OUT	2879	10.50	59	31	23	5	6	2.6	12.4	1	8.4		0.10	112000	440	0	14.5	0.50	118	
08/27/94	OTH	3015	10.55	55	27	22	5	6	2.8	12.0	1	8.3		0.10	120000	360		13.0	0.50	75	
08/28/94	OUT	3015	10.85	60	29	22	5	6	3.0	12.4	1	8.4		0.10	114000	320	0	15.0	0.50	118	
08/29/94	OTH	3052	11.00	59	25	22	5	6	2.8	12.2	1	8.9	0.10	0.10	116000	240		16.0	0.50	85	
08/30/94	OTH	3061	11.10	65	25	22	4	5	3.0	12.4	1	8.4		0.10	118000	360	0	16.0	0.50	75	
08/31/94	OUT	3061	11.00	55	21	22	5	6	3.3	12.2	1	8.3		0.10	118000	320		16.0	0.20	95	
09/01/94	OUT	3110	11.80	55	25	28	6	8	3.0	12.0	1	8.3		0.20	120000	160	0	18.0	0.70	118	
09/02/94	OUT	3144	11.95	63	26	28	6	10	3.2	11.4	1	8.3		0.10	118000	200	0	18.5	0.70	118	
09/03/94	OUT	3352	11.80	51	25	22	5	7	3.4	11.6	1	8.2		0.10	118000	240	0	18.0	0.70	129	
09/04/94	OUT	3395	11.80	52	28	25	6	10	3.4	11.4	1	8.5		0.10	120000	160		18.0	0.50	126	
09/05/94	OTH	3395	11.80	68	28	25	6	10	3.4	11.4	1	8.5		0.10	120000	160		18.0	0.50		
09/06/94	OTH	3395	11.80	68	28	25	6	10	3.4	11.4	1	8.5		0.10	120000	160		18.0	0.50		
09/07/94	OTH	3395	11.80	69	28	25	6	10	3.4	11.4	2	8.5		0.10	120000	160	70	18.0	0.50		Displace to brine via SW.
09/08/94	OTH	3395	8.60																		
09/09/94	OTH	3395	8.60												31000						

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25/8-5S

WATER BASED FLUID PROPERTIES SUMMARY

DATE	LOC	DEPTH m	WT ppg	FV s/qt	PV cp	YP	GELS 0 – 10	API cc/30m	HTHP FL	CAKE /32	pH	Pf	Mf	Cl mg/l	Ca mg/l	K+ mg/l	SOLIDS %	SAND %	TEMP F°	REMARKS
09/10/94	OTH	3395	8.65											31000						
09/11/94	OTH	3395	8.65											31000			1.5			
09/12/94	OTH	3395	8.65											31000			1.5			
09/13/94	OTH	3395	8.65											31000						
09/14/94	OTH	3395	8.65											31000			1.5			
09/15/94	OTH	3395	8.65											31000			1.5			
09/16/94	OTH	3395	8.65											31000			1.5			
09/17/94	OTH	3395	8.65											31000			1.5			
09/18/94	OTH	3395	8.65											31000			1.5			
09/19/94	OTH	3395	9.60											31000						

GEOLAB NOR

Geochemical Report for

Well NOCS 25/8-5S

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Date : 01.11.94

Please note all depths are measured depths.

Chapter 1

INTRODUCTION

1.1 General Comments

The samples supplied by Esso were washed, described and actual lithologies picked before analyses commenced. Both screening and follow-up analyses were performed over the depth range 1700 - 3395 m, covered by 28 cuttings samples and one oil-test sample.

1.2 Analytical Program

Analysis type	No of samples	Figures	Tables
Lithology description	28	1	1
TOC	35	1	1,2
Rock-Eval pyrolysis	35	2-5	2
Thermal extraction GC (GHM, S_1)	12	6a-b	
Pyrolysis GC (GHM, S_2)	4	7a-b,8	3
Soxhlet Extraction of organic matter	10		4a
MPLC separation	11		4b-d
Whole oil Gas Chromatography	1	9a	
Saturated hydrocarbon GC	11	9b-d	5
Vitrinite reflectance	15	10	6
Visual kerogen microscopy	8	11	6,7
Isotope composition C_{15}+ fractions	5	12,13	8a-b
GC - MS of saturated HC	5	14a-d	9a-d

1.3 Stratigraphy

No stratigraphy for the well NOCS 25/8-5S was supplied by the client, Esso Norge AS.

Table 1 : Lithology description for well NOCS 25/8-5S

Depth unit of measure: m

Depth		Type			Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
1700.00						0001
		1.13	100	Sh/Clst: m gy to brn gy, slt		0001-1L
1800.00						0002
		0.77	100	Sh/Clst: m gy, slt		0002-1L
			tr	Marl : lt or gy		0002-2L
1900.00						0003
		0.39	100	Sh/Clst: m gy to brn gy, slt		0003-1L
			tr	Marl : lt or gy		0003-2L
2000.00						0004
		0.77	100	Sh/Clst: lt gy to m gy to lt brn gy		0004-1L
			tr	Marl : lt or gy		0004-2L
2100.00						0005
		1.35	100	Sh/Clst: lt gy to m gy to lt brn gy		0005-1L
			tr	Marl : lt or gy		0005-2L
			tr	Cont : prp		0005-3L
2200.00						0006
		0.68	70	S/Sst : lt gy w, f, crs, l		0006-2L
		0.77	30	Sh/Clst: lt gy to lt brn gy to pl gy gn		0006-1L

Table 1 : Lithology description for well NOCS 25/8-5S

Depth unit of measure: m

Depth		Type			Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
2300.00						0007
		0.41	75	S/Sst : lt gy w to gy w, f, crs, l		0007-2L
		0.73	25	Sh/Clst: lt gy to lt brn gy to pl gy gn		0007-1L
			tr	Cont : prp		0007-3L
2400.00						0008
		0.16	75	S/Sst : lt gy w to gy w, f, crs, l		0008-2L
		0.85	15	Sh/Clst: lt gy to lt brn gy to pl gy gn		0008-1L
			10	Kaolin : w		0008-3L
			tr	Cont : prp		0008-4L
2500.00						0009
		0.25	55	S/Sst : lt gy w to gy w, f, crs, l		0009-2L
		0.71	45	Sh/Clst: lt gy to lt brn gy to pl gy gn		0009-1L
			tr	Kaolin : w		0009-3L
			tr	Cont : prp		0009-4L
2600.00						0010
		0.74	50	Sh/Clst: lt gy to m gy		0010-1L
		0.15	45	S/Sst : lt gy w to gy w, f, crs, l, cem		0010-2L
			5	Kaolin : w		0010-3L
			tr	Ca : lt or gy		0010-4L
2700.00						0011
		0.10	85	Ca : lt or gy to gy w		0011-3L
			15	Sh/Clst: m gy		0011-1L
			tr	S/Sst : lt gy w to gy w, crs, l		0011-2L

Table 1 : Lithology description for well NOCS 25/8-5S

Depth unit of measure: m

Depth		Type			Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
2800.00						0012
		0.07	80	Ca : lt or gy to gy w		0012-2L
			20	Sh/Clst: m gy		0012-1L
2830.00						0013
		1.37	60	Sh/Clst: m gy to brn gy to dsk brn, slt		0013-1L
			40	Ca : lt or gy to gy w		0013-2L
			tr	Cont : prp		0013-3L
2850.00						0014
		1.14	70	Sh/Clst: m gy to brn gy to dsk brn, slt		0014-1L
			30	Ca : lt or gy to gy w		0014-2L
			tr	Cont : prp		0014-3L
			tr	S/Sst : lt gy w to gy w, f, crs, cem, l		0014-4L
2870.00						0015
		1.24	40	Sh/Clst: m gy to brn gy, slt		0015-1L
			40	S/Sst : lt gy w to gy w, f, crs, cem, l		0015-4L
			10	Ca : lt or gy to gy w		0015-2L
			10	Coal : dsk brn to drk brn to brn blk		0015-5L
			tr	Cont : prp		0015-3L
2890.00						0016
		60.70	45	Coal : dsk brn to drk brn to brn blk to blk, wx		0016-5L
			30	S/Sst : lt gy w to gy w, f, crs, l		0016-4L
			15	Sh/Clst: m gy to brn gy		0016-1L
			10	Ca : lt or gy to gy w		0016-2L
			tr	Cont : prp		0016-3L

Table 1 : Lithology description for well NOCS 25/8-5S

Depth unit of measure: m

Depth		Type			Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
2910.00						0017
			55	S/Sst : lt gy w to gy w, f, crs, l, cem		0017-4L
		0.78	30	Sh/Clst: lt gy to m gy to lt gn gy		0017-1L
			10	Ca : lt or gy to gy w		0017-2L
			5	Coal : dsk brn to drk brn to brn blk to blk, wx		0017-5L
			tr	Cont : prp		0017-3L
2930.00						0018
		0.50	40	S/Sst : lt gy w to gy w, f, crs, l, cem		0018-4L
		56.80	35	Coal : dsk brn to drk brn to brn blk to blk, wx		0018-5L
		0.82	20	Sh/Clst: lt gy to m gy to lt gn gy		0018-1L
			5	Ca : lt or gy to gy w		0018-2L
			tr	Cont : prp		0018-3L
2950.00						0019
		0.77	65	Sh/Clst: lt gy to m gy to lt gn gy		0019-1L
			25	S/Sst : lt gy w to gy w to lt brn gy, f, crs, l, cem		0019-4L
			10	Coal : dsk brn to drk brn to brn blk to blk, wx		0019-5L
			tr	Ca : lt or gy to gy w		0019-2L
			tr	Cont : prp		0019-3L
2970.00						0020
			60	S/Sst : lt gy w to gy w to lt brn gy, f, crs, l, cem		0020-4L
		0.68	35	Sh/Clst: lt gy to m gy to lt gn gy		0020-1L
			5	Cont : prp		0020-3L
			tr	Ca : lt or gy to gy w		0020-2L
			tr	Coal : dsk brn to drk brn to brn blk to blk, wx		0020-5L

Table 1 : Lithology description for well NOCS 25/8-5S

Depth unit of measure: m

Depth		Type				Trb	Sample
Int	Cvd	TOC%	%	Lithology description			
2990.00							0021
			50	S/Sst	: lt gy w to gy w to lt brn gy, f, crs, l, cem		0021-4L
		0.75	45	Sh/Clst	: lt gy to m gy to lt gn gy		0021-1L
			5	Cont	: prp		0021-3L
			tr	Ca	: lt or gy to gy w		0021-2L
3010.00							0022
		0.70	65	Sh/Clst	: m gy		0022-1L
			30	Sltst	: lt gy to lt brn gy		0022-5L
			5	Cont	: prp		0022-3L
			tr	Ca	: lt or gy to gy w		0022-2L
			tr	S/Sst	: gy w to lt brn gy, f, crs, l, cem		0022-4L
			tr	Coal	: blk, wx		0022-6L
3030.00							0023
		1.83	75	Sh/Clst	: m gy to brn gy		0023-1L
			20	Sltst	: lt gy to lt brn gy		0023-4L
			5	Cont	: prp		0023-3L
			tr	Ca	: lt or gy to gy w		0023-2L
3050.00							0024
		1.33	35	Sh/Clst	: m gy to brn gy		0024-1L
			35	S/Sst	: lt gy w to gy w, f, crs, l		0024-4L
			30	Sltst	: lt gy to lt brn gy		0024-3L
			tr	Cont	: prp		0024-2L
3100.00							0025
		2.03	95	Sh/Clst	: m gy to brn gy, slt		0025-1L
			5	S/Sst	: lt gy w to gy w, f, crs, l		0025-3L
			tr	Cont	: prp		0025-2L

Table 1 : Lithology description for well NOCS 25/8-5S

Depth unit of measure: m

Depth		Type			Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
3200.00						0026
		2.93	80	Sh/Clst: m gy to brn gy, slt		0026-1L
			15	S/Sst : lt gy w to gy w, f, crs, l		0026-3L
			5	Cont : prp		0026-2L
3300.00						0027
		0.27	55	S/Sst : lt gy w to gy w, f, crs, l		0027-3L
			30	Sh/Clst: m gy to brn gy, slt		0027-1L
			15	Cont : prp		0027-2L
3395.00						0028
		0.39	65	S/Sst : lt gy w to gy w, f, crs, l		0028-3L
			20	Cont : prp		0028-2L
			15	Sh/Clst: m gy to brn gy, slt		0028-1L

Table 2 : Rock-Eval table for well NOCS 25/8-5S

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
1700.00	cut	Sh/Clst: m gy to brn gy	0.20	1.35	0.65	2.08	1.13	119	58	1.6	0.13	425	0001-1L
1800.00	cut	Sh/Clst: m gy	0.17	0.96	0.51	1.88	0.77	125	66	1.1	0.15	422	0002-1L
1900.00	cut	Sh/Clst: m gy to brn gy	0.18	0.53	0.44	1.20	0.39	136	113	0.7	0.25	343	0003-1L
2000.00	cut	Sh/Clst: lt gy to m gy to lt brn gy	0.20	0.98	0.36	2.72	0.77	127	47	1.2	0.17	422	0004-1L
2100.00	cut	Sh/Clst: lt gy to m gy to lt brn gy	0.67	3.22	0.50	6.44	1.35	239	37	3.9	0.17	428	0005-1L
2200.00	cut	Sh/Clst: lt gy to lt brn gy to pl gy gn	0.57	1.88	1.09	1.72	0.77	244	142	2.5	0.23	346	0006-1L
2200.00	cut	S/Sst : lt gy w	0.54	1.20	0.72	1.67	0.68	176	106	1.7	0.31	348	0006-2L
2300.00	cut	Sh/Clst: lt gy to lt brn gy to pl gy gn	1.55	2.64	1.22	2.16	0.73	362	167	4.2	0.37	338	0007-1L
2300.00	cut	S/Sst : lt gy w to gy w	0.65	1.17	0.70	1.67	0.41	285	171	1.8	0.36	345	0007-2L
2400.00	cut	Sh/Clst: lt gy to lt brn gy to pl gy gn	0.28	1.75	2.83	0.62	0.85	206	333	2.0	0.14	409	0008-1L
2400.00	cut	S/Sst : lt gy w to gy w	0.13	0.15	0.67	0.22	0.16	94	419	0.3	0.46	342	0008-2L
2500.00	cut	Sh/Clst: lt gy to lt brn gy to pl gy gn	0.95	3.12	1.53	2.04	0.71	439	215	4.1	0.23	350	0009-1L

Table 2 : Rock-Eval table for well NOCS 25/8-5S

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
2500.00	cut	S/Sst : lt gy w to gy w	0.29	0.63	1.00	0.63	0.25	252	400	0.9	0.32	351	0009-2L
2600.00	cut	Sh/Clst: lt gy to m gy	0.76	2.37	1.43	1.66	0.74	320	193	3.1	0.24	354	0010-1L
2600.00	cut	S/Sst : lt gy w to gy w	0.20	0.40	0.89	0.45	0.15	267	593	0.6	0.33	352	0010-2L
2700.00	cut	Ca : lt or gy to gy w	0.09	0.08	0.84	0.10	0.10	80	840	0.2	0.53	342	0011-3L
2800.00	cut	Ca : lt or gy to gy w	0.09	0.08	0.71	0.11	0.07	114	1014	0.2	0.53	341	0012-2L
2830.00	cut	Sh/Clst: m gy to brn gy to dsk brn	0.23	2.33	0.43	5.42	1.37	170	31	2.6	0.09	428	0013-1L
2850.00	cut	Sh/Clst: m gy to brn gy to dsk brn	0.78	2.95	1.10	2.68	1.14	259	96	3.7	0.21	353	0014-1L
2870.00	cut	Sh/Clst: m gy to brn gy	1.05	4.23	1.02	4.15	1.24	341	82	5.3	0.20	358	0015-1L
2890.00	cut	Coal : dsk brn to drk brn to brn blk to blk	33.44	191.55	11.89	16.11	60.70	316	20	225.0	0.15	429	0016-5L
2910.00	cut	Sh/Clst: lt gy to m gy to lt gn gy	0.89	3.41	1.14	2.99	0.78	437	146	4.3	0.21	357	0017-1L
2930.00	cut	Sh/Clst: lt gy to m gy to lt gn gy	0.83	3.05	0.98	3.11	0.82	372	120	3.9	0.21	351	0018-1L
2930.00	cut	S/Sst : lt gy w to gy w	0.68	1.60	0.98	1.63	0.50	320	196	2.3	0.30	356	0018-4L
2930.00	cut	Coal : dsk brn to drk brn to brn blk to blk	32.30	154.15	11.84	13.02	56.80	271	21	186.4	0.17	434	0018-5L
2950.00	cut	Sh/Clst: lt gy to m gy to lt gn gy	0.99	3.37	1.30	2.59	0.77	438	169	4.4	0.23	358	0019-1L

Table 2 : Rock-Eval table for well NOCS 25/8-5S

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
2970.00	cut	Sh/Clst: lt gy to m gy to lt gn gy	1.00	3.08	1.18	2.61	0.68	453	174	4.1	0.25	352	0020-1L
2990.00	cut	Sh/Clst: lt gy to m gy to lt gn gy	1.20	3.73	1.30	2.87	0.75	497	173	4.9	0.24	357	0021-1L
3010.00	cut	Sh/Clst: m gy	0.73	2.62	1.04	2.52	0.70	374	149	3.3	0.22	356	0022-1L
3030.00	cut	Sh/Clst: m gy to brn gy	1.05	5.14	1.03	4.99	1.83	281	56	6.2	0.17	432	0023-1L
3050.00	cut	Sh/Clst: m gy to brn gy	0.99	4.95	1.09	4.54	1.33	372	82	5.9	0.17	356	0024-1L
3100.00	cut	Sh/Clst: m gy to brn gy	0.85	5.35	0.82	6.52	2.03	264	40	6.2	0.14	430	0025-1L
3200.00	cut	Sh/Clst: m gy to brn gy	1.09	6.88	0.89	7.73	2.93	235	30	8.0	0.14	430	0026-1L
3300.00	cut	S/Sst : lt gy w to gy w	0.06	0.37	0.60	0.62	0.27	137	222	0.4	0.14	368	0027-3L
3395.00	cut	S/Sst : lt gy w to gy w	0.08	0.20	0.50	0.40	0.39	51	128	0.3	0.29	426	0028-3L

Table 3 : Pyrolysis GC Data (S2 peak) as Percentage of Total Area for Well NOCS 25/8-5S

Depth unit of measure: m

Depth	Typ	Lithology	C1	C2-C5	C6-C14	C15+	S2 from Rock-Eval	Sample
2500.00	cut	Sh/Clst: lt gy to lt brn gy to pl gy gn	2.78	67.99	27.70	1.53	3.12	0009-1L
2870.00	cut	Sh/Clst: m gy to brn gy	4.16	46.15	40.85	8.84	4.23	0015-1L
2930.00	cut	Coal : dsk brn to drk brn to brn blk to blk	9.42	13.65	23.52	53.42	154.15	0018-5L
3100.00	cut	Sh/Clst: m gy to brn gy	4.43	23.35	38.12	34.09	5.35	0025-1L

Table 4 a: Weight of EOM and Chromatographic Fraction for well NOCS 25/8-5S

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
2100.00	cut	Sh/Clst: lt gy to m gy to lt brn gy	12.5	8.3	2.0	2.0	1.2	3.2	3.9	4.3	1.29	0005-1L
2149.00	oil	bulk	-	58.8	36.6	17.3	0.4	4.5	53.8	4.9	-	0029-0B
2300.00	cut	Sh/Clst: lt gy to lt brn gy to pl gy gn	12.4	4.3	0.8	0.8	0.5	2.3	1.5	2.8	0.68	0007-1L
2500.00	cut	Sh/Clst: lt gy to lt brn gy to pl gy gn	9.1	5.8	0.6	0.9	0.8	3.5	1.5	4.3	0.69	0009-1L
2830.00	cut	Sh/Clst: m gy to brn gy to dsk brn	0.7	2.7	0.8	0.8	0.6	0.6	1.5	1.2	2.47	0013-1L
2870.00	cut	Sh/Clst: m gy to brn gy	13.4	21.4	2.8	4.1	4.1	10.4	6.9	14.4	1.53	0015-1L
2890.00	cut	Coal : dsk brn to drk brn to brn blk to blk	1.9	136.4	3.6	10.1	109.4	13.3	13.7	122.8	69.40	0016-5L
2930.00	cut	Sh/Clst: lt gy to m gy to lt gn gy	11.2	14.1	0.9	0.8	2.2	10.2	1.6	12.4	0.75	0018-1L
2990.00	cut	Sh/Clst: lt gy to m gy to lt gn gy	11.6	10.4	1.6	1.8	1.0	6.0	3.5	7.0	0.90	0021-1L
3030.00	cut	Sh/Clst: m gy to brn gy	10.9	9.8	1.8	2.4	2.7	2.9	4.2	5.5	2.17	0023-1L
3200.00	cut	Sh/Clst: m gy to brn gy	12.7	24.2	3.2	3.0	1.4	16.7	6.2	18.1	1.50	0026-1L

Table 4 b: Concentration of EOM and Chromatographic Fraction (wt ppm rock) for well NOCS 25/8-5S

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
2100.00	cut	Sh/Clst: lt gy to m gy to lt brn gy	658	155	155	95	251	311	347	0005-1L
2149.00	oil	bulk	-	-	-	-	-	-	-	0029-0B
2300.00	cut	Sh/Clst: lt gy to lt brn gy to pl gy gn	342	60	60	40	181	120	221	0007-1L
2500.00	cut	Sh/Clst: lt gy to lt brn gy to pl gy gn	635	66	99	88	381	165	469	0009-1L
2830.00	cut	Sh/Clst: m gy to brn gy to dsk brn	3802	1056	1056	845	845	2112	1690	0013-1L
2870.00	cut	Sh/Clst: m gy to brn gy	1599	213	303	307	775	516	1082	0015-1L
2890.00	cut	Coal : dsk brn to drk brn to brn blk to blk	71041	1875	5234	56979	6953	7109	63932	0016-5L
2930.00	cut	Sh/Clst: lt gy to m gy to lt gn gy	1256	80	67	196	912	147	1109	0018-1L
2990.00	cut	Sh/Clst: lt gy to m gy to lt gn gy	903	142	155	86	519	298	605	0021-1L
3030.00	cut	Sh/Clst: m gy to brn gy	898	165	221	248	262	387	511	0023-1L
3200.00	cut	Sh/Clst: m gy to brn gy	1908	248	236	110	1313	485	1423	0026-1L

Table 4 c: Concentration of EOM and Chromatographic Fraction (mg/g TOC(e)) for well NOCS 25/8-5S

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
2100.00	cut	Sh/Clst: lt gy to m gy to lt brn gy	51.08	12.07	12.07	7.43	19.50	24.15	26.93	0005-1L
2149.00	oil	bulk	-	-	-	-	-	-	-	0029-0B
2300.00	cut	Sh/Clst: lt gy to lt brn gy to pl gy gn	50.40	8.89	8.89	5.93	26.68	17.79	32.61	0007-1L
2500.00	cut	Sh/Clst: lt gy to lt brn gy to pl gy gn	92.08	9.61	14.41	12.81	55.25	24.02	68.06	0009-1L
2830.00	cut	Sh/Clst: m gy to brn gy to dsk brn	153.96	42.77	42.77	34.21	34.21	85.53	68.43	0013-1L
2870.00	cut	Sh/Clst: m gy to brn gy	104.53	13.95	19.83	20.07	50.67	33.78	70.74	0015-1L
2890.00	cut	Coal : dsk brn to drk brn to brn blk to blk	102.37	2.70	7.54	82.10	10.02	10.24	92.12	0016-5L
2930.00	cut	Sh/Clst: lt gy to m gy to lt gn gy	167.56	10.73	8.94	26.24	121.65	19.68	147.88	0018-1L
2990.00	cut	Sh/Clst: lt gy to m gy to lt gn gy	100.44	15.86	17.30	9.61	57.67	33.16	67.28	0021-1L
3030.00	cut	Sh/Clst: m gy to brn gy	41.41	7.65	10.19	11.47	12.10	17.84	23.57	0023-1L
3200.00	cut	Sh/Clst: m gy to brn gy	127.23	16.56	15.77	7.36	87.54	32.33	94.90	0026-1L

Table 4 d: Composition of material extracted from the rock (%) for well NOCS 25/8-5S

Depth unit of measure: m

Depth	Typ	Lithology	Sat / EOM	Aro / EOM	Asph / EOM	NSO / EOM	HC / EOM	Non-HC / EOM	Sat / Aro	HC / Non-HC	Sample
2100.00	cut	Sh/Clst: lt gy to m gy to lt brn gy	23.64	23.64	14.55	38.18	47.27	52.73	100.00	89.66	0005-1L
2149.00	oil	bulk	62.30	29.36	0.68	7.66	91.66	8.34	212.17	1098.98	0029-0B
2300.00	cut	Sh/Clst: lt gy to lt brn gy to pl gy gn	17.65	17.65	11.76	52.94	35.29	64.71	100.00	54.55	0007-1L
2500.00	cut	Sh/Clst: lt gy to lt brn gy to pl gy gn	10.43	15.65	13.91	60.00	26.09	73.91	66.67	35.29	0009-1L
2830.00	cut	Sh/Clst: m gy to brn gy to dsk brn	27.78	27.78	22.22	22.22	55.56	44.44	100.00	125.00	0013-1L
2870.00	cut	Sh/Clst: m gy to brn gy	13.35	18.97	19.20	48.48	32.32	67.68	70.37	47.75	0015-1L
2890.00	cut	Coal : dsk brn to drk brn to brn blk to blk	2.64	7.37	80.21	9.79	10.01	89.99	35.82	11.12	0016-5L
2930.00	cut	Sh/Clst: lt gy to m gy to lt gn gy	6.41	5.34	15.66	72.60	11.74	88.26	120.00	13.31	0018-1L
2990.00	cut	Sh/Clst: lt gy to m gy to lt gn gy	15.79	17.22	9.57	57.42	33.01	66.99	91.67	49.29	0021-1L
3030.00	cut	Sh/Clst: m gy to brn gy	18.46	24.62	27.69	29.23	43.08	56.92	75.00	75.68	0023-1L
3200.00	cut	Sh/Clst: m gy to brn gy	13.02	12.40	5.79	68.80	25.41	74.59	105.00	34.07	0026-1L

Table 5: Saturated Hydrocarbon Ratios for well NOCS 25/8-5S

Depth unit of measure: m

Depth	Typ	Lithology	Pristane / nC17	Pristane / Phytane	Pristane/nC17 / Phytane/nC18	Phytane / nC18	CPI1	nC17 / nC17+nC27	Sample
2100.00	cut	Sh/Clst: lt gy to m gy to lt brn gy	4.63	2.04	2.50	1.85	1.09	0.69	0005-1L
2149.00	oil	bulk	0.52	1.96	1.56	0.33	1.08	0.78	0029-0B
2300.00	cut	Sh/Clst: lt gy to lt brn gy to pl gy gn	2.46	3.20	2.63	0.93	1.73	0.60	0007-1L
2500.00	cut	Sh/Clst: lt gy to lt brn gy to pl gy gn	4.23	2.33	4.57	0.93	0.95	0.48	0009-1L
2830.00	cut	Sh/Clst: m gy to brn gy to dsk brn	1.71	2.03	1.67	1.02	1.19	0.85	0013-1L
2870.00	cut	Sh/Clst: m gy to brn gy	2.13	2.97	2.44	0.87	1.27	0.84	0015-1L
2890.00	cut	Coal : dsk brn to drk brn to brn blk to blk	20.62	12.43	10.80	1.91	1.42	0.61	0016-5L
2930.00	cut	Sh/Clst: lt gy to m gy to lt gn gy	5.51	8.62	5.08	1.08	1.36	0.81	0018-1L
2990.00	cut	Sh/Clst: lt gy to m gy to lt gn gy	2.53	3.77	2.95	0.86	1.41	0.76	0021-1L
3030.00	cut	Sh/Clst: m gy to brn gy	2.08	3.69	2.93	0.71	1.44	0.77	0023-1L
3200.00	cut	Sh/Clst: m gy to brn gy	2.17	3.79	2.82	0.77	1.37	0.80	0026-1L

Table 6 : Thermal Maturity Data for well NOCS 25/8-5S

Depth unit of measure: m

Depth	Typ	Lithology	Vitrinite Reflectance (%)	Number of Readings	Standard Deviation	Spore Fluorescence Colour	SCI	Tmax (°C)	Sample
1700.00	cut	Sh/Clst: m gy to brn gy	0.32	7	0.02	-	4.5-5.0	425	0001-1L
1800.00	cut	Sh/Clst: m gy	0.37	11	0.05	-	-	422	0002-1L
1900.00	cut	Sh/Clst: m gy to brn gy	0.38	4	0.01	-	-	343	0003-1L
2000.00	cut	Sh/Clst: lt gy to m gy to lt brn gy	0.59	1	0.00	-	-	422	0004-1L
2100.00	cut	Sh/Clst: lt gy to m gy to lt brn gy	0.31	5	0.03	-	5.0-5.5	428	0005-1L
2400.00	cut	Sh/Clst: lt gy to lt brn gy to pl gy gn	0.47	2	0.01	-	5.0(?)	409	0008-1L
2500.00	cut	Sh/Clst: lt gy to lt brn gy to pl gy gn	0.48	4	0.02	-	-	350	0009-1L
2600.00	cut	Sh/Clst: lt gy to m gy	0.76	5	0.08	-	5.5(?)	354	0010-1L
2830.00	cut	Sh/Clst: m gy to brn gy to dsk brn	0.45	11	0.07	-	5.5	428	0013-1L
2890.00	cut	Coal : dsk brn to drk brn to brn blk to blk	-	-	-	-	5.5	429	0016-5L
3030.00	cut	Sh/Clst: m gy to brn gy	0.53	18	0.05	-	5.5	432	0023-1L

Table 6 : Thermal Maturity Data for well NOCS 25/8-5S

Depth unit of measure: m

Depth	Typ	Lithology	Vitrinite Reflectance (%)	Number of Readings	Standard Deviation	Spore Fluorescence Colour	SCI	Tmax (°C)	Sample
3100.00	cut	Sh/Clst: m gy to brn gy	0.46	6	0.08	-	-	430	0025-1L
3200.00	cut	Sh/Clst: m gy to brn gy	0.53	12	0.04	-	5.5-6.0	430	0026-1L

Table 7 : Visual Kerogen Composition Data for well NOCS 25/8-5S

Depth unit of measure: m

Depth	Typ	Lithology	LIPT %	Amor L	LipDet	Sp/Pol	Cuticl	Reslne	Algae	Dinoflt	Acrit	BitL	INERT %	Fusin	Semfus	Intdet	Micrsc	Sclero	BitI	VITR %	Telin	Colinn	Voiddet	Amorv	Bitv	Sample
1700.00	cut	Sh/Clst: m gy to brn gy	80	**	*	*			*	*			10	*		**				10	*		**			0001-1L
2100.00	cut	Sh/Clst: lt gy to m gy to lt brn gy	95	**	*	**			*	*			5			*				TR			*			0005-1L
2400.00	cut	Sh/Clst: lt gy to lt brn gy to pl gy gn	85	**	*	*			*	*			10			*				5	*		**			0008-1L
2600.00	cut	Sh/Clst: lt gy to m gy	80	**	*	*			*	*			15	*		**				5			*			0010-1L
2830.00	cut	Sh/Clst: m gy to brn gy to dsk brn	55	*	*	*			*				20		**	*				25	*		*			0013-1L
2890.00	cut	Coal : dsk brn to drk brn to brn blk to blk	10	*		*	*		?				15		*					75	**	*		*		0016-5L
3030.00	cut	Sh/Clst: m gy to brn gy	55	**	*	**	*		*				30		**	*				15	**	*	*			0023-1L
3200.00	cut	Sh/Clst: m gy to brn gy	50	**	*	**	*		*				30		**	*				20	**	*	*			0026-1L

Table 8A: Tabulation of carbon isotope data for EOM/EOM - fractions for well NOCS 25/8-5S

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Saturated	Aromatic	NSO	Asphaltenes	Kerogen	Sample
2149.00	oil	bulk	-	-28.60	-27.41	-	-	-	0029-0
2300.00	cut	Sh/Clst	-	-29.11	-25.82	-	-	-	0007-1
2830.00	cut	Sh/Clst	-	-28.81	-27.60	-	-	-	0013-1
2890.00	cut	Coal	-	-27.71	-25.43	-	-	-	0016-5
2990.00	cut	Sh/Clst	-	-28.47	-27.10	-	-	-	0021-1

Table 8B: Tabulation of cv values from carbon isotope data for well NOCS 25/8-5S

Depth unit of measure: m

Depth	Typ	Lithology	Saturated	Aromatic	cv value	Sample
2149.00	oil	bulk	-28.60	-27.41	-0.14	0029-0
2300.00	cut	Sh/Clst	-29.11	-25.82	4.68	0007-1
2830.00	cut	Sh/Clst	-28.81	-27.60	-0.03	0013-1
2890.00	cut	Coal	-27.71	-25.43	2.00	0016-5
2990.00	cut	Sh/Clst	-28.47	-27.10	0.22	0021-1

Table 9A: Variation in Triterpane Distribution (peak height) SIR for Well NOCS 25/8-5S

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
2149.00	oil	0.46	0.32	0.12	0.36	0.26	0.13	0.07	0.20	0.07	0.11	0.94	0.27	0.07	63.49	0029-0
2300.00	Sh/Clst	3.60	0.78	0.15	0.55	0.36	0.04	0.15	0.28	0.13	0.02	0.79	0.39	0.34	37.50	0007-1
2890.00	Coal	43.93	0.98	0.29	0.39	0.28	0.02	0.01	0.03	0.01	-	0.80	0.28	0.25	56.47	0016-5
2990.00	Sh/Clst	12.18	0.92	0.24	0.54	0.35	0.03	0.02	0.03	0.02	0.01	0.77	0.37	0.33	52.03	0021-1

List of Triterpane Distribution Ratios

Ratio 1: B / A

Ratio 2: B / B+A

Ratio 3: B / B+E+F

Ratio 4: C / E

Ratio 5: C / C+E

Ratio 6: X / E

Ratio 7: Z / E

Ratio 8: Z / C

Ratio 9: Z / Z+E

Ratio 10: Q / E

Ratio 11: E / E+F

Ratio 12: C+D / C+D+E+F

Ratio 13: D+F / C+E

Ratio 14: J1 / J1+J2 (%)

Table 9B: Variation in Sterane Distribution (peak height) SIR for Well NOCS 25/8-5S

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Ratio6	Ratio7	Ratio8	Ratio9	Ratio10	Sample
2149.00	oil	0.86	50.10	77.22	1.27	0.77	0.42	0.29	0.63	1.00	3.40	0029-0
2300.00	Sh/Clst	0.32	18.80	39.33	0.61	0.63	0.18	0.14	0.24	0.23	0.40	0007-1
2830.00	Sh/Clst	0.47	24.18	46.03	1.47	0.64	0.21	0.16	0.30	0.32	0.56	0013-1
2890.00	Coal	0.31	32.45	55.00	0.11	0.65	0.22	0.17	0.38	0.48	0.90	0016-5
2990.00	Sh/Clst	0.49	24.23	45.42	1.09	0.63	0.24	0.18	0.29	0.32	0.55	0021-1

List of Sterane Distribution Ratios

Ratio 1: a / a+j

Ratio 2: q / q+t (%)

Ratio 3: 2*(r+s) / (q+t + 2*(r+s)) (%)

Ratio 4: a+b+c+d / h+k+l+n

Ratio 5: r+s / r+s+q

Ratio 6: u+v / u+v+q+r+s+t

Ratio 7: u+v / u+v+i+m+n+q+r+s+t

Ratio 8: r+s / q+r+s+t

Ratio 9: q / t

Ratio 10: r+s / t

Table 9C: Raw triterpane data (peak height) m/z 191 SIR for Well NOCS 25/8-5S

Depth unit of measure: m

Depth	Lithology	P	Q	R	S	T	A	B	Z	C	Sample
		X	D	E	F	G	H	I	J1	J2	
		K1	K2	L1	L2	M1	M2				
2149.00	oil	201.4	125.7	76.8	107.7	38.8	346.5	159.9	82.4	411.1	0029-0
		145.7	45.8	1140.8	70.1	358.0	222.2	41.8	226.7	130.4	
		144.1	83.6	55.8	42.1	42.6	39.6				
2300.00	Sh/Clst	3744.9	1833.4	1143.2	2896.9	521.9	4966.5	17882.8	12566.6	45232.3	0007-1
		3497.6	21458.5	81723.9	22086.0	18556.7	50304.0	14446.1	7662.2	12770.1	
		4090.4	5600.4	3034.1	2985.0	0.0	0.0				
2830.00	Sh/Clst	11902.5	5347.6	5283.2	5867.4	1697.3	10808.7	60981.5	4907.1	99610.4	0013-1
		8959.8	27171.5	234109.9	44510.6	97748.0	64839.0	26087.4	41495.8	34266.3	
		37687.8	31116.3	26263.5	22028.7	31384.8	25176.8				
2890.00	Coal	1568.8	0.0	0.0	9315.7	316.6	3147.4	138256.8	2917.7	103370.3	0016-5
		6159.5	27958.8	267232.6	65936.8	124120.9	75661.6	36600.1	53155.0	40970.8	
		19466.7	14459.5	14402.7	9900.5	8259.5	5403.3				
2990.00	Sh/Clst	5732.1	2680.5	1631.2	7048.0	718.6	7013.1	85447.7	3723.6	111851.1	0021-1
		5917.4	43993.4	206399.2	61100.1	81804.9	60315.1	32168.3	23275.0	21460.1	
		14233.3	11925.3	9005.9	7432.3	9098.2	7358.8				

Table 9D: Raw sterane data (peak height) m/z 217 SIR for Well NOCS 25/8-5S

Depth unit of measure: m

Depth	Lithology	u	v	a	b	c	d	e	f	g	Sample
		h	i	j	k	l	m	n	o		
		p	q	r	s	t					
2149.00	oil	261.2	83.5	603.2	319.0	96.7	114.3	170.3	123.4	112.4	0029-0
		441.3	176.9	96.2	255.3	79.5	71.4	116.9	144.6		
		61.2	87.5	168.7	127.2	87.1					
2300.00	Sh/Clst	3236.2	806.3	2687.3	2100.0	1530.9	1306.6	1678.5	1232.7	2397.3	0007-1
		4037.8	2594.8	5829.5	3718.6	1901.7	1584.6	2848.7	2456.4		
		4162.7	2646.8	3213.5	1349.7	11430.4					
2830.00	Sh/Clst	17613.0	3636.7	46940.8	32518.4	13030.8	15002.7	17594.7	12320.5	21423.3	0013-1
		31058.1	16659.8	52814.8	24237.6	9245.9	9639.2	8614.1	10955.5		
		21891.7	13510.0	16126.9	7697.9	42363.6					
2890.00	Coal	10122.0	1042.7	1682.1	1477.7	1217.6	1163.6	5189.2	3040.4	3797.6	0016-5
		23432.6	6380.7	3770.3	15504.9	7035.9	3636.3	3234.0	5998.5		
		2936.5	8198.4	9677.2	5760.3	17067.6					
2990.00	Sh/Clst	10033.3	2172.2	16269.2	11288.6	4903.7	6044.7	7135.4	4542.9	7955.4	0021-1
		14821.6	7988.4	17046.3	11526.2	4532.6	4039.4	4409.5	6180.1		
		8207.6	6482.2	7711.3	3421.1	20272.0					