Fluid Samples

An **MDT** sample was attempted at 3407 m without success. A further attempt was made at 3314.5m in order to get a quality formation water sample. About 2 pints (ca 1 litre) of OBM distillate filtrate fraction was recovered. This was confirmed using chromatograph fingerprinting analysis conducted by Geoquest Laboratories as seen in figures 4.1 and 4.2. Figure 4.1 shows a chromatogram done on the Ancovert mud and figure 4.2 shows a chromatogram done on the MDT sample.

4.3.1 .MDT Pressure Results

2/8-15 T2 (NØKKEN) WIRELINE MDT SUMMARY.

Schlumberger records

No.	Depth	Pre.Hyd	Post.Hyd	Formation	TVDBRT	Post Hyd	Formation	Perm.	Remarks	Temp.
	m		psig	psig	m	ppge	ppge	md/cp		deg C
1	3194.9	7784.7	7774	6871.0	3194.4	14.27	12.61	0.62	Unstable temp	
2	3215.0	7832.1	7820.5	6911.4	3214.5	14.26	12.60	0.50	Unstable temp	
3	3218.1	7826.4	7818.4	6904.6	3217.5	14.24	12.58	1.49	Unstable temp	
4	3262.6	7934.6	7925.5	6986.1	3262.0	14.24	12.55	0.66	Unstable temp	
5	3271.6	7953.5	7945.4	6989.8	3270.9	14.24	12.53	1.32		
6	3277.4	7957.1	7959.0	6987.9	3276.9	14.24	12.50	1.90		
7	3280.0	7966.9	7964.8	6990.0	3279.4	14.24	12.49	2.67	Good test	
8	3302.0	8034.0	8023.5	7035.1	3301.9	14.24	12.49	1.09		
9	3311.0	8048.1	8041.7	7035.8	3310.4	14.24	12.46	3.89		
10	3315.4	8052.7	8050.1	7042.1	3314.7	14.24	12.45	2.87		
11	3322.0	8070.7	8067	7061.8	3321.3	14.24	12.46	0.92		
12	3326.0	8079.7	8077.2	7067.2	3325.3	14.24	12.46	2.08	Sticky	
13	3367.5	8192.4	8182.9	7153.4	3366.7	14.25	12.45	1.09	Sticky	
14	3371.0	8192.2	8182.5	7151.5	3370.2	14.23	12.44	0.80		
15	3375.0	8216.3	8199.8	7160.2	3374.2	14.24	12.44	0.71	Slow	
16	3380.0	8212.8	8204.9	7175.9	3379.2	14.23	12.45	0.91	Unstable	
17	3391.0	8236.2	8231.4	7190.9	3390.2	14.23	12.43	1.31	Unstable	
18	3398.0	8255.2	8249.6	7199.5	3397.2	14.23	12.42	1.25		
19	3404.0	8269.3	8263.3	7206.0	3403.2	14.23	12.41	1.46		
10	3315.4	8052.7	8050.1	7042.1	3314.7	14.24	12.45	2.87		
20	3408.0	8275.2	8272.7	7212.8	3407.2	14.23	12.41	2.97	Good	
21	3412.5	8286.7	8284.0	7221.2	3412.5	14.23	12.40	0.80		
22	3424.5	8320.0	8313.9	7236.6	3423.6	14.23	12.39	1.76		
23	3516.1	8565.9	8553.2	7386.2	3514.9	14.26	12.32	0.25	Slow	
24	3518.6	8559.3	8550.3	7392.4	3517.4	14.25	12.32	0.18	Slow	
25	3558.1	8662.4	8650.8	7457.1	3556.7	14.26	12.29	0.26		

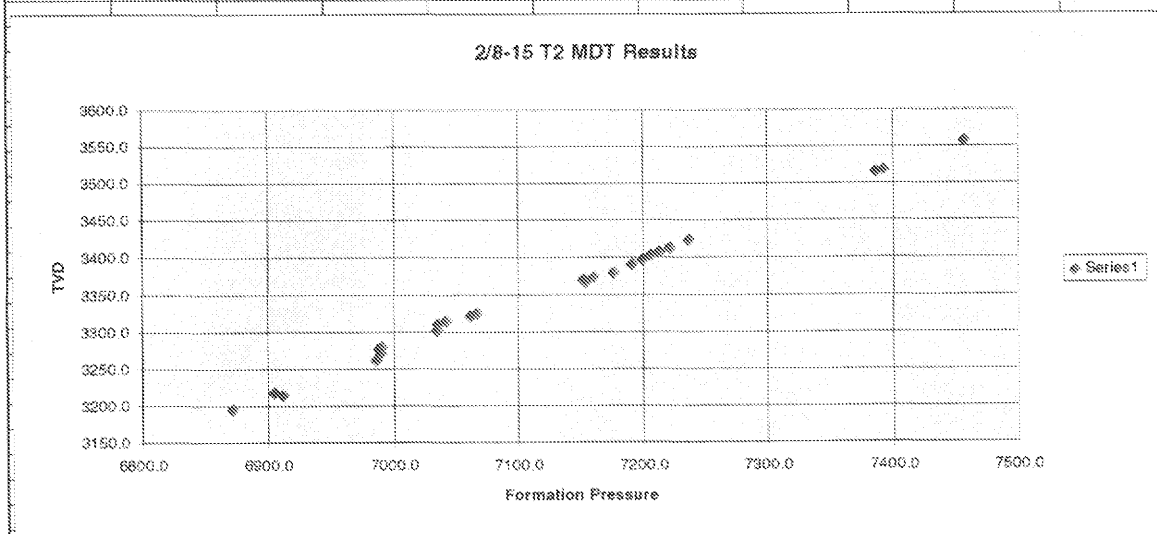


Figure 4.1 Chromatogram Fingerprint for Ancovert Mud

File : C:\HPCHEM\1\DATA\AMOCO\AMO82C.D
Operator : hkh
Acquired : 24 Jan 96 8:35 am using AcqMethod FINGPRI
Instrument : HP 5972A
Sample Name: ancovert mud
Misc Info :
Vial Number: 1

Fig 4.1

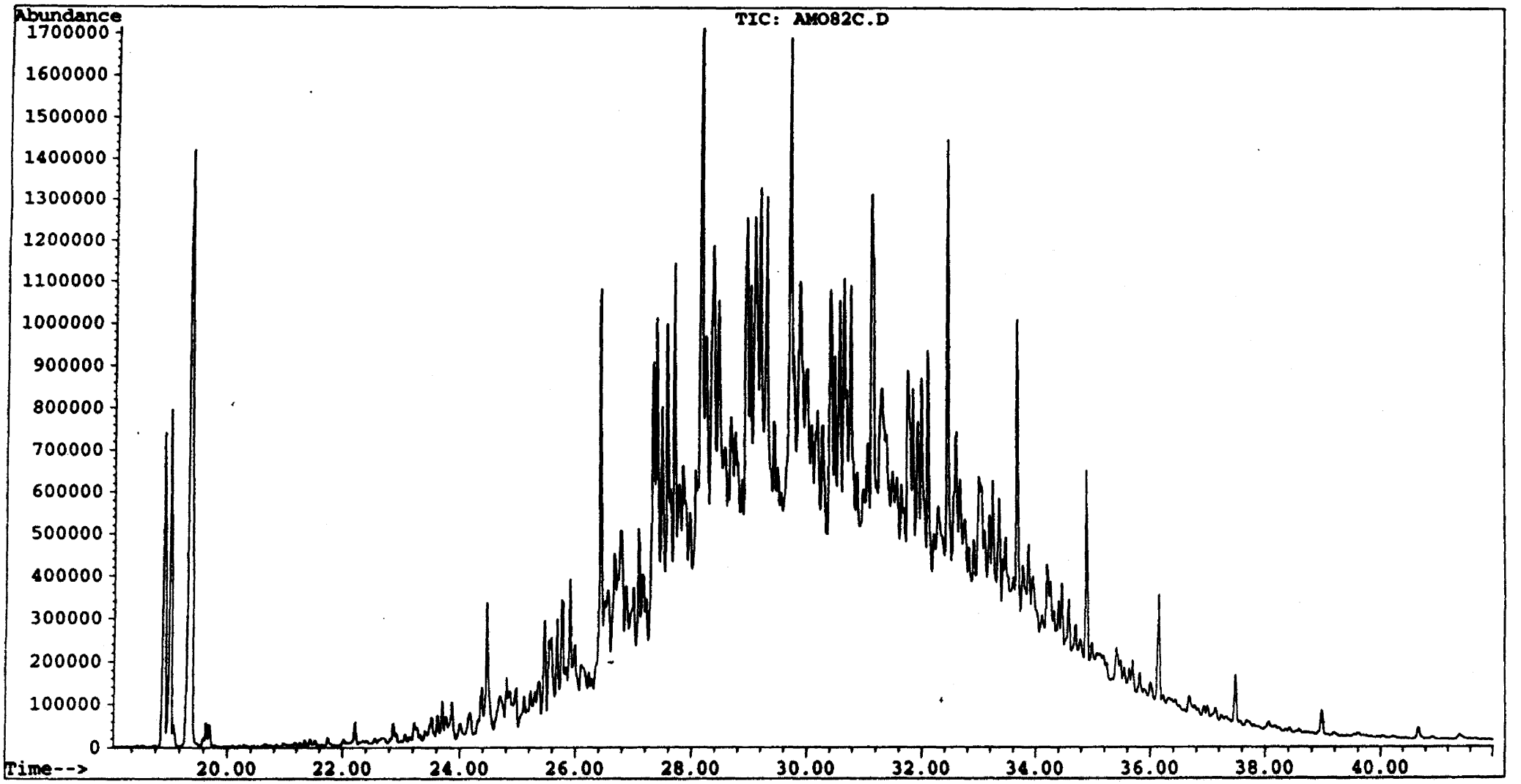
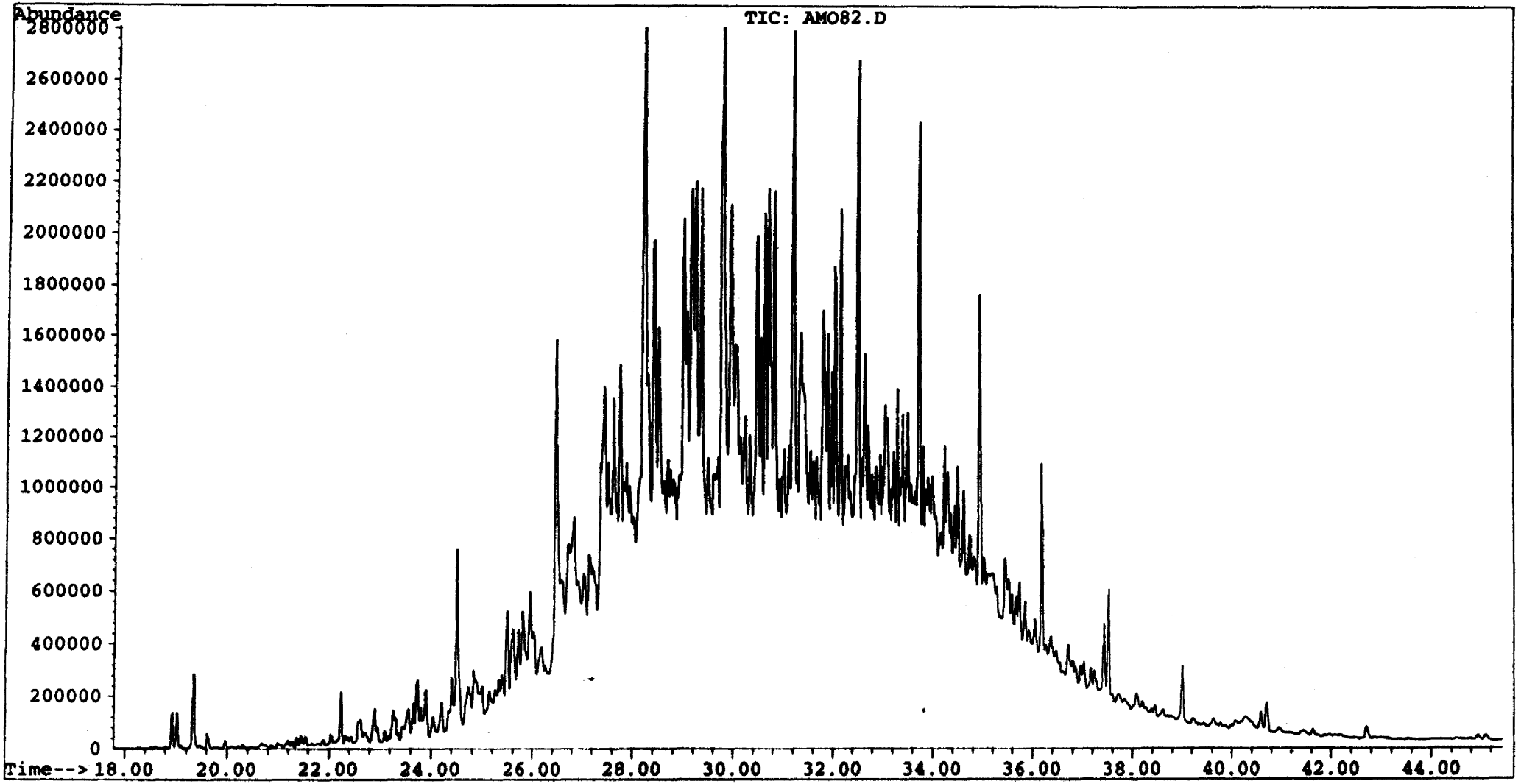


Figure 4.2 Chromatogram Fingerprint for MDT fluid sample from 3314.5 m

File : C:\HPCHEM\1\DATA\AMOCO\AMO82.D
Operator : hkh
Acquired : 15 Jan 96 3:24 pm using AcqMethod FINGPRI
Instrument : HP 5972A
Sample Name: 2\815 mdt ba048 dyp 3214,5 m
Misc Info :
Vial Number: 1

Fig 4.2



834-L2

3/ GEOLAB NOR

Data Report

Well NOCS 2/8-15T2

Responsible: Kjell Arne Bakken
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QA ; Ian L. Ferriday	**Client Contact:** Kjell Øygard
Geolab Nor Proj.: 62267	**Client Ref.:** NO L 960680216 C8.27.20 ST

GEOLAB NOR

Table 1 : Lithology description for well NOCS 2/8-15 T2

Depth unit of measure: m

Depth		Type			Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
3404.57		ccp				0001
		0.23	100	Ca : w to lt y gy, chk		0001-1L
3408.60		ccp				0002
		0.15	100	Ca : w to lt y gy, chk		0002-1L

Table 2 : Rock-Eval table for well NOCS 2/8-15 T2

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
3404.57	ccp	Ca : w to lt y gy	18.19	0.49	0.50	0.98	0.23	213	217	18.7	0.97	341	0001-1L
3408.60	ccp	Ca : w to lt y gy	26.49	0.22	0.39	0.56	0.15	147	260	26.7	0.99	337	0002-1L

Table 3 a: Weight of EOM and Chromatographic Fraction for well NOCS 2/8-15 T2

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
3404.57	ccp	Ca : w to lt y gy	10.3	197.3	125.2	4.7	0.8	66.5	129.9	67.4	0.23	0001-1L
3408.60	ccp	Ca : w to lt y gy	10.1	267.8	243.1	8.2	0.8	15.7	251.3	16.5	0.15	0002-1L

Table 3 b: Concentration of EOM and Chromatographic Fraction (wt ppm rock) for well NOCS 2/8-15 T2

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
3404.57	ccp	Ca : w to lt y gy	19194	12182	458	81	6471	12641	6553	0001-1L
3408.60	ccp	Ca : w to lt y gy	26643	24189	811	77	1565	25000	1642	0002-1L

Table 3 c: Concentration of EOM and Chromatographic Fraction (mg/g TOC(e)) for well NOCS 2/8-15 T2

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
3404.57	ccp	Ca : w to lt y gy	8345.46	5296.90	199.20	35.53	2813.82	5496.11	2849.35	0001-1L
3408.60	ccp	Ca : w to lt y gy	17676.6	16046.2	541.29	51.74	1043.45	16587.1	1095.19	0002-1L

Table 3 d: Composition of material extracted from the rock (%) for well NOCS 2/8-15 T2

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
3404.57	ccp	Ca : w to lt y gy	63.47	2.39	0.43	33.72	65.86	34.14	2659.02	192.89	0001-1L
3408.60	ccp	Ca : w to lt y gy	90.79	3.05	0.29	5.87	93.83	6.17	2979.17	1521.87	0002-1L

Table 4: Saturated Hydrocarbon Ratios for well NOCS 2/8-15 T2

Depth unit of measure: m

Depth	Typ	Lithology	Pristane / nC17	Pristane / Phytane	Pristane/nC17 / Phytane/nC18	Phytane / nC18	CPI1	nC17 / nC17+nC27	Sample
3404.57	ccp	Ca : w to lt y gy	0.36	1.33	1.36	0.26	1.42	0.92	0001-1L
3408.60	ccp	Ca : w to lt y gy	0.31	1.29	1.21	0.26	-	1.00	0002-1L

Table 5a: Variation in Triterpane Distribution (peak height) SIR for Well NOCS 2/8-15 T2

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
3404.57	Ca	0.59	0.37	0.21	0.81	0.45	0.16	-	-	-	0.69	0.82	0.46	0.26	46.11	0001-1

ist of Triterpane Distribution Ratios

atio 1: 27Tm / 27Ts

atio 2: 27Tm / 27Tm+27Ts

atio 3: 27Tm / 27Tm+30aß+30ßa

atio 4: 29aß / 30aß

atio 5: 29aß / 29aß+30aß

atio 6: 30d / 30aß

atio 7: 28aß / 30aß

atio 8: 28aß / 29aß

atio 9: 28aß / 28aß+30aß

atio 10: 24/3 / 30aß

atio 11: 30aß / 30aß+30ßa

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

atio 13: 29ßa+30ßa / 29aß+30aß

atio 14: 32aßS / 32aßS+32aßR (%)

Table 5b: Variation in Sterane Distribution (peak height) SIR for Well NOCS 2/8-15 T2

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Ratio6	Ratio7	Ratio8	Ratio9	Ratio10	Sample
3404.57	Ca	0.76	62.57	73.73	2.09	0.69	0.61	0.46	0.58	1.67	3.75	0001-1

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+27daS+27daR / 29dßS+29dßR+29daS+29daR

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

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

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

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

Ratio 9: 29aaS / 29aaR

Ratio 10: 29ßßR+29ßßS / 29aaR

Table 5c: Raw triterpane data (peak height) m/z 191 SIR for Well NOCS 2/8-15 T2

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	
3404.57	Ca	243.9	101.2	71.7	110.4	42.7	83.4	49.2	0.0	0.0	0001-1
		119.4	52.7	23.6	36.2	0.0	147.4	32.4	0.0	78.2	
		62.4	46.1	53.9	0.0	0.0	0.0	0.0	0.0	0.0	

Table 5d: Raw sterane data (peak height) m/z 217 SIR for Well NOCS 2/8-15 T2

Depth unit of measure: m

Depth	Lithology	21a	22a	27dßS	27dßR	27daS	27daR	28dßS	28dßR	28daS*	Sample
		29dßS*	28daR*	27aaR	29dßR	29daS*	28aaS	29daR	28ßßS		
		28aaR	29aaS	29ßßR	29ßßS	29aaR					
3404.57	Ca	124.9	68.9	160.3	84.2	44.7	38.6	61.2	34.9	40.5	0001-1
		60.3	44.2	50.7	49.5	0.0	17.8	46.8	43.9		
		0.0	31.6	37.7	33.2	18.9					

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

Table 5e: Raw sterane data (peak height) m/z 218 SIR for Well NOCS 2/8-15 T2

Depth unit of measure: m

Depth	Lithology	27ßßR	27ßßS	28ßßR	28ßßS	29ßßR	29ßßS	30ßßR	30ßßS	Sample
3404.57	Ca	61.0	56.8	36.5	49.6	42.8	33.5	23.3	23.5	0001-1

Table 5f: Raw triterpane data (peak height) m/z 177 SIR for Well NOCS 2/8-15 T2

Depth unit of measure: m

Depth	Lithology	25nor28aß	25nor30aß	Sample
3404.57	Ca	0.0	0.0	0001-1