



Institutt for energiteknikk

<b>Addressz</b> KJELLER HALDEN N-2007 Kjeller, Norway N-1751 Halden, Norway <b>Telephone</b> +47 63 80 60 00 +47 69 18 31 00 <b>Telex</b> 76 361 isotp n 76 335 energ n <b>Telefax</b> +47 63 81 55 53		<b>Availability</b> Private Confidential	
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	<b>Report title</b>  VITRINITE REFLECTANCE WELL 6506/12-9S OFFSHORE NORWAY	<b>Date of last revision</b>	
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<b>Prepared by</b>	Kristine Aasgaard	1993-12-13	<i>Kristine Aasgaard</i>
	Torbjørn Throndsen	1993-12-13	<i>Torbjørn Throndsen</i>
<b>Reviewed by</b>			
<b>Approved by</b>	Henning Qvale	1993-12-13	

mean values are calculated for both this population and other populations. A quality rating is given to the true population. The results are listed in table 1.

The results are presented as vitrinite reflectance versus depth plots on linear and semilogarithmic scales (figure 1). A vitrinite reflectance versus depth trend is interpreted manually on the linear plot and transferred to the semilogarithmic plot. The interpreted trend is also listed in table 2.

## 4 Results

Except for one sample, the sample quality for this well proved to be poor due to abundant low-reflecting material and staining. However, it has still been possible to establish a fairly reliable vitrinite reflectance versus depth trend between 4000 and 4900 mRKB.





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**SECTOR FOR GEOTECHNOLOGY**

**Geochemistry Department**

**Grading**

<b>Title</b>		
GEOCHEMICAL EVALUATION OF CORE#3, WELL 6506/12-9S, SMØRBUKK FIELD		
<b>Requested by</b> ANDERS REHKOPFF PETEK RESU	<b>Project</b>	
<b>Date</b> 17.10.94	<b>No. of pages</b>	<b>No. of enclosures</b>


**Key words**  
hydrocarbon type and saturation

**Abstract**

Geochemical analyses have been carried out on core #3 (4415-4434 mRKB) in (4379-4436 mRKB) of well 6506/12-9S, Smørbukk Field.

BA-94.2269-1

<b>Prepared by</b> Ingun Skjevrak
<b>Text operator</b> Ingun Skjevrak

**Approved by**  
18.10.94   
Trygve Meyer, Dept. Manager

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<b>REPORT:</b>  DATA REPORT ON WELL NOCS 6506/12-9S	
<b>CLIENTS:</b>  STATOIL	
<b>RESPONSIBLE SCIENTIST:</b>  Monica Østbye Hansen	
<b>RESPONSIBLE TECHNICIAN:</b>  Ingrid Børseth	
<b>DATE:</b> 04.10.94	<b>GEOLAB PROJECT:</b> 62162

Table 1 : Lithology description for well NOCS 6506/12-9S

Depth unit of measure: m

Depth	Type		Trb	Sample
Int Cvd	TOC%	% Lithology description		
4415.00	cpg			0062
		100 S/Sst : lt gy, f, crs, hd		0062-1L
4415.50	ccp			0061
		100 S/Sst : lt gy, f, crs, hd		0061-1L
4416.00	cpg			0063
		100 S/Sst : lt gy, f, crs, hd		0063-1L
4416.50	cpg			0064
		100 S/Sst : lt gy to m gy, f, crs, hd		0064-1L
4417.00	cpg			0065
		100 S/Sst : lt gy to m gy, f, crs, hd		0065-1L
4418.00	cpg			0066
		100 S/Sst : lt gy to m gy, f, crs, hd		0066-1L
4418.50	cpg			0067
		100 S/Sst : lt gy to m gy, f, crs, hd		0067-1L

Table 1 : Lithology description for well NOCS 6506/12-9S

Depth unit of measure: m

Depth	Type	Int Cvd	TOC%	%	Lithology description	Trb	Sample
4419.00	cpg			100	S/Sst : lt gy to m gy, f, crs, hd		0068 0068-1L
4419.75	ccp			100	S/Sst : lt gy, f, crs, hd, cem		0069 0069-1L
4420.00	cpg			100	S/Sst : lt gy, f, crs, hd, cem		0070 0070-1L
4420.52	ccp			100	S/Sst : lt gy to m gy, f, crs, hd, cem		0071 0071-1L
4421.00	cpg			100	S/Sst : lt gy to m gy, f, crs, hd, cem		0072 0072-1L
4421.50	cpg			100	S/Sst : lt gy to m gy, f, crs, hd, cem, mic		0073 0073-1L
4422.00	cpg			100	S/Sst : lt gy to m gy, f, crs, hd, cem, mic		0074 0074-1L

Table 1 : Lithology description for well NOCS 6506/12-9S

Depth unit of measure: m

Depth	Type	Trb	Sample
Int Cvd	TOC%	%	Lithology description
4422.50	cpg		0075
		100 S/Sst	: lt gy to m gy, f, crs, hd, cem 0075-1L
4423.00	cpg		0076
		100 S/Sst	: lt gy to m gy, f, crs, hd, cem 0076-1L
4423.76	ccp		0077
		100 S/Sst	: lt gy to m gy, f, crs, hd, cem 0077-1L
4424.00	cpg		0078
		100 S/Sst	: lt gy, f, crs, hd, cem, mic 0078-1L
4424.50	cpg		0079
		100 S/Sst	: lt gy to m gy, f, crs, hd, cem, mic 0079-1L
4425.00	cpg		0080
		100 S/Sst	: lt gy to m gy, f, crs, hd, cem, mic 0080-1L
4425.50	cpg		0081
		100 S/Sst	: lt gy to m gy, f, crs, hd, cem, mic 0081-1L



Table 1 : Lithology description for well NOCS 6506/12-9S

Depth unit of measure: m

Depth	Type	Int Cvd	TOC%	%	Lithology description	Trb	Sample
-----	-----	-----	-----	-----	-----	-----	-----
4426.00	cpg			100	S/Sst : lt gy, f, crs, hd, cem		0082 0082-1L
4426.47	ccp			100	S/Sst : lt gy, f, crs, hd, cem		0083 0083-1L
4427.00	cpg			100	S/Sst : lt gy to m gy, f, crs, hd, cem		0084 0084-1L
4427.32	ccp			100	S/Sst : lt gy to m gy, f, crs, hd, cem		0085 0085-1L
4428.00	cpg			100	S/Sst : lt gy to m gy, f, crs, hd, cem, mic		0086 0086-1L
4428.50	cpg			100	S/Sst : lt gy to m gy, f, crs, hd, cem, mic		0087 0087-1L
4429.00	cpg			100	S/Sst : lt gy to m gy, f, crs, hd, cem, mic		0088 0088-1L

Table 1 : Lithology description for well NOCS 6506/12-9S

Depth unit of measure: m

Depth	Type		Trb	Sample
Int Cvd	TOC%	% Lithology description		
4429.25	ccp			0089
		100 S/Sst : lt gy to m gy, f, crs, hd, cem, mic		0089-1L
4430.00	cpg			0090
		100 S/Sst : lt gy, f, hd, cem		0090-1L
4430.50	cpg			0091
		100 S/Sst : lt gy, f, hd, cem		0091-1L
4431.00	cpg			0092
		100 S/Sst : lt gy, f, hd, cem		0092-1L
4431.63	ccp			0093
		100 S/Sst : lt gy, f, hd, cem		0093-1L
4432.00	cpg			0094
		100 S/Sst : lt gy, f, slt, hd		0094-1L
4432.48	ccp			0095
		100 S/Sst : lt gy, f, slt, cly, hd		0095-1L
4433.00	cpg			0096
		100 S/Sst : lt gy, f, slt, hd		0096-1L

Table 1 : Lithology description for well NOCS 6506/12-9S

Depth unit of measure: m

Depth	Type			Trb	Sample
-----	-----			---	-----
Int Cvd	TOC%	%	Lithology description		
-----	-----	-----	-----		
4433.29	ccp				0097
		100	S/Sst : lt gy, f, slt, mic, hd		0097-1L
4434.04	ccp				0098
		100	S/Sst : lt gy, f, slt, mic, cly, hd		0098-1L

Table 2a: Rock-Eval table for well NOCS 6506/12-9S

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
4415.00	cpg	S/Sst : lt gy	0.32	0.05	0.02	2.50	-	-	-	0.4	0.86	386	0062-1L
4415.50	ccp	S/Sst : lt gy	0.44	0.06	0.03	2.00	-	-	-	0.5	0.88	396	0061-1L
4416.00	cpg	S/Sst : lt gy	0.34	0.09	0.10	0.90	-	-	-	0.4	0.79	444	0063-1L
4416.50	cpg	S/Sst : lt gy to m gy	0.85	0.23	0.13	1.77	-	-	-	1.1	0.79	391	0064-1L
4417.00	cpg	S/Sst : lt gy to m gy	0.41	0.11	0.08	1.38	-	-	-	0.5	0.79	420	0065-1L
4418.00	cpg	S/Sst : lt gy to m gy	0.51	0.15	0.11	1.36	-	-	-	0.7	0.77	335	0066-1L
4418.50	cpg	S/Sst : lt gy to m gy	0.25	0.07	0.03	2.33	-	-	-	0.3	0.78	334	0067-1L
4419.00	cpg	S/Sst : lt gy to m gy	0.73	0.19	0.12	1.58	-	-	-	0.9	0.79	367	0068-1L
4419.75	ccp	S/Sst : lt gy	0.39	0.07	0.20	0.35	-	-	-	0.5	0.85	357	0069-1L
4420.00	cpg	S/Sst : lt gy	0.25	0.04	0.01	4.00	-	-	-	0.3	0.86	341	0070-1L
4420.52	ccp	S/Sst : lt gy to m gy	0.49	0.12	0.09	1.33	-	-	-	0.6	0.80	401	0071-1L
4421.00	cpg	S/Sst : lt gy to m gy	0.26	0.06	0.03	2.00	-	-	-	0.3	0.81	414	0072-1L
4421.50	cpg	S/Sst : lt gy to m gy	0.24	0.07	0.03	2.33	-	-	-	0.3	0.77	394	0073-1L
4422.00	cpg	S/Sst : lt gy to m gy	0.37	0.07	0.02	3.50	-	-	-	0.4	0.84	457	0074-1L
4422.50	cpg	S/Sst : lt gy to m gy	0.29	0.08	0.05	1.60	-	-	-	0.4	0.78	438	0075-1L

Table 2a: Rock-Eval table for well NOCS 6506/12-9S

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
4423.00	cpg	S/Sst : lt gy to m gy	0.34	0.09	0.07	1.29	-	-	-	0.4	0.79	393	0076-1L
4423.76	ccp	S/Sst : lt gy to m gy	0.41	0.14	0.10	1.40	-	-	-	0.6	0.75	417	0077-1L
4424.00	cpg	S/Sst : lt gy	0.31	0.04	0.01	4.00	-	-	-	0.3	0.89	396	0078-1L
4424.50	cpg	S/Sst : lt gy to m gy	0.25	0.06	0.02	3.00	-	-	-	0.3	0.81	445	0079-1L
4425.00	cpg	S/Sst : lt gy to m gy	0.32	0.06	0.01	6.00	-	-	-	0.4	0.84	456	0080-1L
4425.50	cpg	S/Sst : lt gy to m gy	0.40	0.11	0.03	3.67	-	-	-	0.5	0.78	348	0081-1L
4426.00	cpg	S/Sst : lt gy	0.45	0.12	0.04	3.00	-	-	-	0.6	0.79	390	0082-1L
4426.47	ccp	S/Sst : lt gy	0.63	0.13	0.02	6.50	-	-	-	0.8	0.83	426	0083-1L
4427.00	cpg	S/Sst : lt gy to m gy	0.62	0.24	0.01	24.00	-	-	-	0.9	0.72	397	0084-1L
4427.32	ccp	S/Sst : lt gy to m gy	0.50	0.13	0.02	6.50	-	-	-	0.6	0.79	396	0085-1L
4428.00	cpg	S/Sst : lt gy to m gy	0.33	0.13	0.02	6.50	-	-	-	0.5	0.72	444	0086-1L
4428.50	cpg	S/Sst : lt gy to m gy	0.56	0.12	0.03	4.00	-	-	-	0.7	0.82	426	0087-1L
4429.00	cpg	S/Sst : lt gy to m gy	0.49	0.12	0.10	1.20	-	-	-	0.6	0.80	392	0088-1L
4429.25	ccp	S/Sst : lt gy to m gy	0.73	0.20	0.13	1.54	-	-	-	0.9	0.78	398	0089-1L
4430.00	cpg	S/Sst : lt gy	0.49	0.11	0.04	2.75	-	-	-	0.6	0.82	342	0090-1L

Table 2a: Rock-Eval table for well NOCS 6506/12-9S

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
4430.50	cpg	S/Sst : lt gy	0.33	0.06	0.01	6.00	-	-	-	0.4	0.85	-	0091-1L
4431.00	cpg	S/Sst : lt gy	0.31	0.08	0.05	1.60	-	-	-	0.4	0.79	364	0092-1L
4431.63	ccp	S/Sst : lt gy	0.42	0.19	0.14	1.36	-	-	-	0.6	0.69	396	0093-1L
4432.00	cpg	S/Sst : lt gy	0.11	0.04	0.13	0.31	-	-	-	0.2	0.73	340	0094-1L
4432.48	ccp	S/Sst : lt gy	0.09	0.10	0.02	5.00	-	-	-	0.2	0.47	442	0095-1L
4433.00	cpg	S/Sst : lt gy	0.07	0.01	-	-	-	-	-	0.1	0.88	-	0096-1L
4433.29	ccp	S/Sst : lt gy	0.07	0.05	0.02	2.50	-	-	-	0.1	0.58	323	0097-1L
4434.04	ccp	S/Sst : lt gy	0.10	0.12	0.04	3.00	-	-	-	0.2	0.45	456	0098-1L

Table 2b: Values for Rock-Eval standard BLACK VEN MARL

Well NOCS 6506/12-9S

TMax	S1	S2	S3
419	0.52	19.16	1.84
422	0.44	18.65	1.94

Table 3a: Results of TLC-FID analysis: Absolute yields in mg/g rock for well NOCS 6506/12-9S

Depth unit of measure: m

Depth	S Tp	F Tp	Lithology	Sat HC	Aro HC	Resins	Asp	Tot HC	Tot Pol	Tot EOM	Sample	
4415.00	cp	L	SANDSTONE/SAND	0.149	0.000	0.089	0.003	0.149	0.092	0.241	0062-1	L
4416.00	cp	L	SANDSTONE/SAND	0.139	0.000	0.080	0.003	0.139	0.083	0.222	0063-1	L
4417.00	cp	L	SANDSTONE/SAND	0.132	0.000	0.087	0.002	0.132	0.089	0.221	0065-1	L
4418.00	cp	L	SANDSTONE/SAND	0.219	0.000	0.113	0.003	0.219	0.116	0.335	0066-1	L
4419.00	cp	L	SANDSTONE/SAND	0.410	0.049	0.021	0.002	0.459	0.023	0.482	0068-1	L
4420.00	cp	L	SANDSTONE/SAND	0.079	0.036	0.086	0.000	0.115	0.086	0.201	0070-1	L
4421.00	cp	L	SANDSTONE/SAND	0.063	0.000	0.120	0.002	0.063	0.122	0.185	0072-1	L
4422.00	cp	L	SANDSTONE/SAND	0.129	0.000	0.162	0.003	0.129	0.165	0.294	0074-1	L
4423.00	cp	L	SANDSTONE/SAND	0.198	0.031	0.126	0.000	0.228	0.126	0.354	0076-1	L
4424.00	cp	L	SANDSTONE/SAND	0.210	0.016	0.132	0.000	0.226	0.132	0.358	0078-1	L
4425.00	cp	L	SANDSTONE/SAND	0.094	0.000	0.073	0.000	0.094	0.073	0.167	0080-1	L
4426.00	cp	L	SANDSTONE/SAND	0.166	0.078	0.078	0.001	0.245	0.079	0.324	0082-1	L
4427.00	cp	L	SANDSTONE/SAND	0.186	0.000	0.085	0.000	0.186	0.085	0.270	0084-1	L
4428.00	cp	L	SANDSTONE/SAND	0.143	0.000	0.077	0.000	0.143	0.077	0.220	0086-1	L
4429.00	cp	L	SANDSTONE/SAND	0.219	0.000	0.134	0.004	0.219	0.139	0.358	0088-1	L
4430.00	cp	L	SANDSTONE/SAND	0.617	0.000	0.134	0.008	0.617	0.142	0.759	0090-1	L



Table 3a: Results of TIC-FID analysis: Absolute yields in mg/g rock for well NOCS 6506/12-9S

Depth unit of measure: m

<u>Depth</u>	<u>S Tp</u>	<u>F Tp</u>	<u>Lithology</u>	<u>Sat HC</u>	<u>Aro HC</u>	<u>Resins</u>	<u>Asp</u>	<u>Tot HC</u>	<u>Tot Pol</u>	<u>Tot EOM</u>	<u>Sample</u>	
4431.00	cpg	L	SANDSTONE/SAND	0.192	0.028	0.101	0.003	0.220	0.104	0.324	0092-1	L
4432.00	cpg	L	SANDSTONE/SAND	0.140	0.000	0.111	0.003	0.140	0.114	0.254	0094-1	L
4433.00	cpg	L	SANDSTONE/SAND	0.024	0.000	0.087	0.003	0.024	0.090	0.113	0096-1	L
4434.04	ccp	L	SANDSTONE/SAND	0.000	0.000	0.068	0.000	0.000	0.068	0.068	0098-1	L

Table 3b: Results of TIC-FID analysis: Rel. percentages of sep. fractions for well NOCS 6506/12-9S

Depth unit of measure: m

<u>Depth</u>	<u>S Tp</u>	<u>F Tp</u>	<u>Lithology</u>	<u>Sat HC</u>	<u>Aro HC</u>	<u>Resins</u>	<u>Asp</u>	<u>Tot HC</u>	<u>Tot Pol</u>	<u>Sample</u>	
4415.00	cpg	L	SANDSTONE/SAND	61.92	0.00	36.97	1.11	61.92	38.08	0062-1	L
4416.00	cpg	L	SANDSTONE/SAND	62.60	0.00	36.01	1.39	62.60	37.40	0063-1	L
4417.00	cpg	L	SANDSTONE/SAND	59.69	0.00	39.53	0.79	59.69	40.31	0065-1	L
4418.00	cpg	L	SANDSTONE/SAND	65.49	0.00	33.74	0.77	65.49	34.51	0066-1	L
4419.00	cpg	L	SANDSTONE/SAND	85.00	10.21	4.36	0.43	95.21	4.79	0068-1	L
4420.00	cpg	L	SANDSTONE/SAND	39.52	17.77	42.71	0.00	57.29	42.71	0070-1	L
4421.00	cpg	L	SANDSTONE/SAND	33.97	0.00	64.93	1.10	33.97	66.03	0072-1	L
4422.00	cpg	L	SANDSTONE/SAND	43.86	0.00	54.97	1.17	43.86	56.14	0074-1	L
4423.00	cpg	L	SANDSTONE/SAND	55.74	8.61	35.66	0.00	64.34	35.66	0076-1	L
4424.00	cpg	L	SANDSTONE/SAND	58.72	4.48	36.80	0.00	63.20	36.80	0078-1	L
4425.00	cpg	L	SANDSTONE/SAND	56.43	0.00	43.31	0.26	56.43	43.57	0080-1	L
4426.00	cpg	L	SANDSTONE/SAND	51.39	24.24	24.10	0.28	75.62	24.38	0082-1	L
4427.00	cpg	L	SANDSTONE/SAND	68.65	0.00	31.35	0.00	68.65	31.35	0084-1	L
4428.00	cpg	L	SANDSTONE/SAND	64.83	0.00	35.17	0.00	64.83	35.17	0086-1	L
4429.00	cpg	L	SANDSTONE/SAND	61.26	0.00	37.53	1.21	61.26	38.74	0088-1	L
4430.00	cpg	L	SANDSTONE/SAND	81.30	0.00	17.68	1.02	81.30	18.70	0090-1	L

Table 3b: Results of TIC-FID analysis: Rel. percentages of sep. fractions for well NOCS 6506/12-9S

Depth unit of measure: m

<u>Depth</u>	<u>S Tp</u>	<u>F Tp</u>	<u>Lithology</u>	<u>Sat HC</u>	<u>Aro HC</u>	<u>Resins</u>	<u>Asp</u>	<u>Tot HC</u>	<u>Tot Pol</u>	<u>Sample</u>	
4431.00	cpq	L	SANDSTONE/SAND	59.17	8.74	31.09	1.00	67.91	32.09	0092-1	L
4432.00	cpq	L	SANDSTONE/SAND	55.20	0.00	43.73	1.08	55.20	44.80	0094-1	L
4433.00	cpq	L	SANDSTONE/SAND	20.88	0.00	76.71	2.41	20.88	79.12	0096-1	L
4434.04	ccp	L	SANDSTONE/SAND	0.00	0.00	100.00	0.00	0.00	100.00	0098-1	L

Table 4a: Variation in Triterpane Distribution (peak height) SIR for Well NOCS 6506/12-9S

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
4415.00	S/Sst	0.46	0.31	0.13	0.44	0.31	0.23	0.19	0.44	0.16	0.22	0.93	0.32	0.10	60.19	0062-1
4420.00	S/Sst	0.39	0.28	0.21	0.45	0.31	0.26	0.25	0.57	0.20	0.38	0.94	0.33	0.09	61.44	0070-1
4425.00	S/Sst	0.37	0.27	0.16	0.41	0.29	0.23	0.21	0.51	0.17	0.30	0.93	0.31	0.09	60.92	0080-1
4430.00	S/Sst	0.40	0.28	0.17	0.49	0.33	0.26	0.24	0.48	0.19	0.33	0.93	0.34	0.08	60.77	0090-1
4434.04	S/Sst	12.35	0.93	0.41	1.10	0.52	0.10	0.10	0.09	0.09	0.13	0.84	0.48	0.09	48.63	0098-1

List of Triterpane Distribution Ratios

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Ratio 1:  $27Tm / 27Ts$

Ratio 2:  $27Tm / 27Tm+27Ts$

Ratio 3:  $27Tm / 27Tm+30a\beta+30\beta a$

Ratio 4:  $29a\beta / 30a\beta$

Ratio 5:  $29a\beta / 29a\beta+30a\beta$

Ratio 6:  $30d / 30a\beta$

Ratio 7:  $28a\beta / 30a\beta$

Ratio 8:  $28a\beta / 29a\beta$

Ratio 9:  $28a\beta / 28a\beta+30a\beta$

Ratio 10:  $24/3 / 30a\beta$

Ratio 11:  $30a\beta / 30a\beta+30\beta a$

Ratio 12:  $29a\beta+29\beta a / 29a\beta+29\beta a+30a\beta+30\beta a$

Ratio 13:  $29\beta a+30\beta a / 29a\beta+30a\beta$

Ratio 14:  $32a\beta S / 32a\beta S+32a\beta R (\%)$

Table 4b: Variation in Sterane Distribution (peak height) SIR for Well NOCS 6506/12-9S

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Ratio6	Ratio7	Ratio8	Ratio9	Ratio10	Sample
4415.00	S/Sst	0.82	48.88	79.47	1.23	0.80	0.41	0.27	0.66	0.96	3.79	0062-1
4420.00	S/Sst	0.82	66.43	79.93	1.31	0.75	0.49	0.31	0.67	1.98	5.93	0070-1
4425.00	S/Sst	0.84	53.47	79.16	1.33	0.78	0.42	0.29	0.66	1.15	4.08	0080-1
4430.00	S/Sst	0.84	54.87	81.26	1.36	0.80	0.40	0.26	0.68	1.22	4.80	0090-1
4434.04	S/Sst	1.00	-	77.71	0.51	1.00	0.38	0.33	0.64	-	1.74	0098-1

List of Sterane Distribution Ratios

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Ratio 1:  $27dBS / (27dBS + 27aaR)$

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

Ratio 3:  $2 * (29BBR + 29BBS) / (29aaS + 29aaR + 2 * (29BBR + 29BBS))$  (%)

Ratio 4:  $(27dBS + 27dBR + 27daS + 27daR) / (29dBS + 29dBR + 29daS + 29daR)$

Ratio 5:  $(29BBR + 29BBS) / (29BBR + 29BBS + 29aaS)$

Ratio 6:  $(21a + 22a) / (21a + 22a + 29aaS + 29BBR + 29BBS + 29aaR)$

Ratio 7:  $(21a + 22a) / (21a + 22a + 28daR + 28aaS + 29daR + 29aaS + 29BBR + 29BBS + 29aaR)$

Ratio 8:  $(29BBR + 29BBS) / (29aaS + 29BBR + 29BBS + 29aaR)$

Ratio 9:  $29aaS / 29aaR$

Ratio 10:  $(29BBR + 29BBS) / 29aaR$

Table 4c: Variation in Triaromatic Sterane Distribution (peak height) for Well NOCS 6506/12-9S

Depth unit of measure: m

<u>Depth</u>	<u>Lithology</u>	<u>Ratio1</u>	<u>Ratio2</u>	<u>Ratio3</u>	<u>Ratio4</u>	<u>Ratio5</u>	<u>Sample</u>
4415.00	S/Sst	0.87	0.88	0.74	0.70	0.83	0062-1
4420.00	S/Sst	1.00	1.00	0.95	1.00	0.91	0070-1
4425.00	S/Sst	1.00	1.00	0.96	1.00	0.91	0080-1
4430.00	S/Sst	1.00	1.00	0.95	0.95	0.94	0090-1
4434.04	S/Sst	-	-	-	-	-	0098-1

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 4d: Variation in Monoaromatic Sterane Distribution (peak height) for Well NOCS 6506/12-9S

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Sample
4415.00	S/Sst	0.85	0.72	0.74	0.65	0062-1
4420.00	S/Sst	0.92	0.86	0.83	0.81	0070-1
4425.00	S/Sst	1.00	1.00	0.91	0.93	0080-1
4430.00	S/Sst	0.92	0.87	0.81	0.79	0090-1
4434.04	S/Sst	-	-	-	-	0098-1

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 4e: Aromatisation of Steranes (peak height) for Well NOCS 6506/12-9S

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Sample
4415.00	S/Sst	0.40	0.74	0062-1
4420.00	S/Sst	0.64	-	0070-1
4425.00	S/Sst	0.37	-	0080-1
4430.00	S/Sst	0.65	-	0090-1
4434.04	S/Sst	-	-	0098-1

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

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

Table 4f: Raw triterpane data (peak height) m/z 191 SIR for Well NOCS 6506/12-9S

Depth unit of measure: m

Depth	Lithology	23/3	24/3	25/3	24/4	26/3	27Ts	27Tm	28aβ	25nor30aβ	Sample
		29aβ	29Ts	30d	29βa	300	30aβ	30βa	30G	31aβS	
		31aβR	32aβS	32aβR	33aβS	33aβR	34aβS	34aβR	35aβS	35aβR	
4415.00	S/Sst	1525.2 2630.8 1286.0	1341.9 1935.4 1452.5	505.1 1386.7 960.8	922.7 393.4 1141.8	350.2 0.0 609.2	2174.2 5977.6 891.0	991.9 466.1 478.8	1148.5 0.0 832.5	365.7 2196.3 624.6	0062-1
4420.00	S/Sst	1250.4 1315.4 472.3	1121.7 1164.5 567.2	482.6 754.4 356.0	796.1 207.5 369.4	342.2 0.0 244.5	2094.7 2939.3 203.4	825.7 182.9 129.5	745.7 0.0 232.2	251.2 950.6 123.6	0070-1
4425.00	S/Sst	829.6 1051.8 421.2	753.3 971.9 548.8	297.3 596.4 352.1	551.1 149.7 302.0	192.9 0.0 208.4	1368.6 2542.9 251.8	510.1 184.0 149.9	534.3 0.0 236.4	173.2 850.6 118.8	0080-1
4430.00	S/Sst	2738.4 3899.9 1691.0	2608.3 3761.1 1990.4	1077.3 2089.6 1285.0	1655.3 388.7 1272.6	751.1 0.0 675.7	4274.4 7887.7 718.8	1700.9 597.5 409.2	1878.1 0.0 625.9	687.6 2786.4 444.6	0090-1
4434.04	S/Sst	50.1 279.9 46.4	31.9 23.8 55.1	20.0 24.4 58.2	43.9 0.0 44.3	0.0 0.0 39.9	16.8 253.7 37.1	207.6 46.7 39.7	25.2 0.0 0.0	0.0 79.4 0.0	0098-1

Table 4g: Raw sterane data (peak height) m/z 217 SIR for Well NOCS 6506/12-9S

Depth unit of measure: m

Depth	Lithology	21a	22a	27dBS	27dBR	27daS	27daR	28dBS	28dBR	28daS*	Sample
		29dBS*	28daR*	27aaR	29dBR	29daS	28aaS	29daR*	28BBS		
		28aaR	29aaS	29BBR	29BBS	29aaR					
4415.00	S/Sst	1925.8 1965.2 357.7	688.4 1787.9 625.7	2942.1 664.9 1292.2	2064.0 1792.6 1185.9	768.6 558.5 654.4	712.5 472.5	1621.2 938.8	936.3 1522.1	837.4	0062-1
4420.00	S/Sst	1682.9 1657.8 277.4	587.1 1478.1 533.7	2679.8 572.4 887.2	1670.5 1326.8 712.9	592.2 533.5 269.8	567.8 443.2	1248.6 703.2	708.9 1383.6	538.0	0070-1
4425.00	S/Sst	1046.1 1005.0 148.3	377.8 963.0 357.3	1568.4 295.1 675.7	1068.1 918.5 593.6	372.1 269.2 310.9	421.0 225.2	777.8 384.0	414.2 858.1	353.9	0080-1
4430.00	S/Sst	3027.5 3711.8 431.6	1101.2 3112.1 1085.6	6107.3 1128.5 2254.2	3952.7 3402.6 2035.4	1542.7 970.8 892.9	1422.0 800.3	3015.6 1479.7	1718.8 2781.3	1293.7	0090-1
4434.04	S/Sst	51.8 46.0 0.0	40.2 35.9 0.0	32.4 67.4	0.0 0.0 27.6	0.0 36.0 54.5	21.3 23.6	25.2 0.0	44.1 0.0	30.2 30.7	0098-1

\* 28daS coel with 27aaS, 29dBS coel with 27BBR, 28daR coel with 27BBS, 29daR coel with 28BBR

Table 4h: Raw triaromatic sterane data (peak height) m/z 231 for Well NOCS 6506/12-9S

Depth unit of measure: m

Depth	Lithology	a1	b1	c1	d1	e1	f1	g1	Sample
4415.00	S/Sst	1399.7	1605.6	145.0	286.3	230.6	153.5	213.9	0062-1
4420.00	S/Sst	1462.8	1484.0	0.0	149.2	0.0	0.0	0.0	0070-1
4425.00	S/Sst	934.6	1068.3	0.0	93.2	0.0	0.0	0.0	0080-1
4430.00	S/Sst	2215.0	2412.5	0.0	133.3	123.0	0.0	0.0	0090-1
4434.04	S/Sst	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0098-1

Table 4i: Raw monoaromatic sterane data (peak height) m/z 253 for Well NOCS 6506/12-9S

Depth unit of measure: m

Depth	Lithology	A1	B1	C1	D1	E1	F1	G1	H1	I1	Sample
4415.00	S/Sst	883.9	404.1	100.6	70.9	154.5	63.2	161.4	74.2	74.3	0062-1
4420.00	S/Sst	705.3	411.6	0.0	50.7	65.5	0.0	84.0	69.9	0.0	0070-1
4425.00	S/Sst	527.5	257.6	0.0	0.0	0.0	0.0	55.0	0.0	0.0	0080-1
4430.00	S/Sst	1201.2	665.3	60.4	67.8	100.8	0.0	173.5	83.1	0.0	0090-1
4434.04	S/Sst	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0098-1

Table 4j: Raw sterane data (peak height) m/z 218 SIR for Well NOCS 6506/12-9S

Depth unit of measure: m

Depth	Lithology	27 $\beta$ BR	27 $\beta$ BS	28 $\beta$ BR	28 $\beta$ BS	29 $\beta$ BR	29 $\beta$ BS	30 $\beta$ BR	30 $\beta$ BS	Sample
4415.00	S/Sst	1322.7	1535.4	937.0	1458.2	1357.6	1198.0	397.7	433.6	0062-1
4420.00	S/Sst	971.1	1169.5	717.4	1183.2	795.7	680.0	207.2	193.6	0070-1
4425.00	S/Sst	645.3	745.5	464.1	776.8	623.3	593.5	198.0	195.4	0080-1
4430.00	S/Sst	2518.4	2578.8	1793.9	2339.0	2394.2	1910.5	650.6	676.0	0090-1
4434.04	S/Sst	31.3	34.8	31.5	43.5	42.1	30.4	12.4	12.6	0098-1

Table 4k: Raw triterpane data (peak height) m/z 177 SIR for Well NOCS 6506/12-9S

Depth unit of measure: m

Depth	Lithology	25nor28aß	25nor30aß	Sample
4415.00	S/Sst	1773.2	432.3	0062-1
4420.00	S/Sst	1407.1	235.0	0070-1
4425.00	S/Sst	974.7	223.9	0080-1
4430.00	S/Sst	3382.3	584.8	0090-1
4434.04	S/Sst	0.0	0.0	0098-1