

3.3

FMT pressures

One FMT-run (Run 2A) was performed in the well, in 8 1/2" hole. Pressure measurements at thirteen different depths were performed. All measurements were good.

The interpretation of the FMT-pressure points from 2049.0 m RKB to 2612 m RKB gives a water gradient of 1.027 g/cc (figure 3.3).

All pretest pressure points are summarized in table and a graphical presentation with the gradient interpretation is presented in Figure 3.3.

One segregated sample was taken at 2049.0 m RKB. The sampling time for the 10 litre chamber was 55 second and for the 4 litre gallon chamber 22 second. The 10 litre chamber contained 9.6 litres of water/mudfiltrate with a water density of 1.03 g/cc and the 4 litre chamber contained 4 litres of water/mudfiltrate.

FMT PRESSURES 6507/8-6

RUN no.	Depth m MD RKB	Hyd. pres. kPa	Form. pres. kPa	Form. pres. g/cc	Comment
2A	2049.0	24831	20774	1.0335	Very good
2A	2052.0	24865	20807	1.0336	Very good
2A	2099.0	25427	21283	1.0336	Very good
2A	2104.0	25486	21333	1.0336	Good
2A	2114.0	25607	21434	1.0335	Very good
2A	2119.0	25685	21486	1.0336	Very good
2A	2172.0	26304	22015	1.0332	Fair
2A	2322.0	28107	23521	1.0326	Good
2A	2352.0	28471	23826	1.0326	Very good
2A	2399.0	29035	24299	1.0325	Very good
2A	2429.0	29393	24605	1.0326	Very good
2A	2478.0	29984	25101	1.0326	Very good
2A	2612.0	31582	26349	1.0283	Good

Table 3.3.1: Pretest pressure points

TOTAL MATERIAL COST AND CONSUMPTION

OPERATOR: STATOIL

WELL: 6507/8-6

Product	Unit size	Unit price NOK	36" sect.	Cost NOK	26" sect.	Cost NOK	17 1/2" sect.	Cost NOK	12 1/4" sect.	Cost NOK	8 1/2" sect.	Cost NOK	P & A	Cost NOK	Total consumed	Total cost NOK
Barite	M.T	715,00	93	66 495,00	23	16 445,00	192	137 280,00	143	102 245,00	32	22 880,00	72	51 480,00	555	396 825,00
Bentonite	M.T.	1 970,00	19	37 430,00	5	9 850,00									24	47 280,00
XCD polymer	kg	73,01					125	9 126,25							125	9 126,25
Celpol LV	kg	28,00					9225	258 300,00	2525	70 700,00	6250	175 000,00			18000	504 000,00
Celpol Reg	kg	28,00					3000	84 000,00	50	1 400,00	2975	83 300,00	600	16 800,00	6625	185 500,00
Bentonite	kg	2,45							125	306,25					125	306,25
Gypsum	kg	1,62					12550	20 331,00	3050	4 941,00	5400	8 748,00			21000	34 020,00
CMC EHV	kg	14,56	2250	32 760,00	3250	47 320,00									5500	80 080,00
Lime	kg	2,30	110	253,00	20	46,00	550	1 265,00	220	506,00	280	644,00	20	46,00	1200	2 760,00
Ancocide	kg	16,22					1230	19 950,60	245	3 973,90	475	7 704,50	100	1 622,00	2050	33 251,00
Ironite Sponge	kg	24,81					522	12 950,82					113,4	2 813,45	635,4	15 764,27
Mica	kg	3,92											75	294,00	75	294,00
Soda ash	kg	2,31	125	288,75	25	57,75							25	57,75	175	404,25
Bicarbonate	kg	2,31					300	693,00	450	1 039,50	100	231,00	25	57,75	875	2 021,25
Citric Acid	kg	13,00					200	2 600,00	425	5 525,00	300	3 900,00	225	2 925,00	1150	14 950,00
Total cost	NOK			137 226,75		73 718,75		546 496,67		190 636,65		302 407,50		76 095,95		1 326 582,27
Hole drilled	m			65		239		935		299		931		N/A		2469
Cost per metre	NOK			2 111,18		308,45		584,49		637,58		324,82		N/A		537,30
Total days				3		4		14		6		10		5		42
Cost per day	NOK			45 742,25		18 429,69		39 035,48		31 772,78		30 240,75		15 219,19		31 585,29
Mud mixed	m3			460		411		790		210		365		142		2378
Cost per m3	NOK			298,32		179,36		691,77		907,79		828,51		535,89		557,86

Total cost and consumption

Anchor Drilling Fluids				MUD PROPERTIES SUMMARY																								Anchor Drilling Fluids						
WELL NO: 6507/8-6				AREA: HALTENBANKEN																														
DAY no.	DATE 1993	DEPTH mtrs	HOLE SIZE inch	MW S.G.	F.VIS s/qt	VG-METER READINGS					30	6	3	AV	PV	YP	GEL 10sec Pa	GEL 10min Pa	pH	API ml	HTHP ml	CI- mg/l	Pf ml	Mf ml	TOT. H mg/l	Ca++ mg/l	SOLIDS vol%	OIL vol%	SAND vol%	MBT kg/m3	Excess Gyp kg/m3	HGS kg/m3	LGS kg/m3	Bacteria Test org./ml
1	28-aug	381	36	1,03	100+																													
2	29-aug	435	36	1,03	100+																													
3	30-aug	446	36	1,03	100+																													
4	31-aug	468	9 7/8	1,03	100+																													
5	1-sep	685	9 7/8	1,03	100+																													
6	2-sep	685	26	1,20											6,5																			
7	3-sep	685	26	1,20											6,5																			
8	4-sep	685	17 1/2	MIXING MUD																														
9	5-sep	954	17 1/2	1,30	62	46	27	19	11	8	6	3	2	23	19	4	1	1	8,4	3		19000			4800	3360	10	0	TR	14	6,9	356	15	
10	6-sep	1365	17 1/2	1,30	65	51	32	22	13	10	7	2	1	25,5	19	6,5	1	1,5	8,4	2,5		19000	0	0,9	4940	3240	12	0	0,5	18	8,2	246	135	NEG.
11	7-sep	1620	17 1/2	1,29	72	57	35	26	16	11	7	3	2	28,5	22	6,5	1,5	4	8,4	2,6		19000	0	0,6	4900	3200	13	0	0,5	25	7,1	204	188	NEG.
12	8-sep	1620	17 1/2	1,29	68	46	28	21	13	10	7	3	2	23	18	5	1,5	6	8,4	2,8		19000	0	0,6	4900	3200	13	0	0,5	28	7,1	204	188	
13	9-sep	1620	17 1/2	1,29	68	46	28	21	13	10	7	3	2	23	18	5	1,5	6	8,3	2,8		19000	0	0,6	4900	3200	13	0	0,5	28	7,1	204	188	
14	10-sep	1620	17 1/2	1,29	68	46	28	21	13	10	7	3	2	23	18	5	1,5	6	8,4	2,7		19000	0,05	0,6	4900	3200	13	0	0,5	28	7,1	204	188	
15	11-sep	1620	17 1/2	1,29	60	40	24	18	10	8	6	3	2	20	16	4	1	3,5	8,5	2,7		20000	0,05	0,4	4600	3000	13	0	0,5	30	6	204	187	
16	12-sep	1620	17 1/2	1,29	65	49	30	24	14	10	7	3	2	24,5	19	5,5	1,5	4	8,5	2,7		20000	0,05	0,4	4600	3100	13	0	0,5	30	6	204	187	NEG.
17	13-sep	1620	17 1/2	1,29	65	50	31	24	14	10	7	3	2	25	19	6	1,5	4	8,4	2,7		20000	0,05	0,4	4600	3000	13	0	0,5	30	6	204	187	NEG.
18	14-sep	1620	17 1/2	1,30	70	50	31	24	14	10	7	3	2	25	19	6	1,5	4	8,4	2,7		20000	0,05	0,4	4600	3000	13	0	0,5	30	6	230	170	
19	15-sep	1620	17 1/2	1,30	70	51	31	24	14	10	7	3	2	25,5	20	5,5	1,5	4	8,4	2,7		20000	0,05	0,4	4600	3000	13	0	0,5	30	6	230	170	
20	16-sep	1620	17 1/2	1,30	89	54	34	26	16	12	8	4	3	27	20	7	1,5	5,5	7,7	2,6		20000	0	0,35	4400	3000	13	0	0,5	28	7,3	230	170	TR.
21	17-sep	1620	17 1/2	1,30	81	58	36	27	17	12	8	4	3	29	22	7	1,5	5,5	7,6	2,7		21000	0	0,3	4400	3000	13	0	0,5	28	7,3	229	169	10^5
22	18-sep	1620	12 1/4	1,30	78	49	30	23	14	11	7	3	2	24,5	19	5,5	1	5	7,6	2,5		21000	0	0,4	4300	2600	13	0	0,5	28	7,6	229	169	10^4
23	19-sep	1708	12 1/4	1,30	78	49	30	23	14	11	7	3	2	24,5	19	5,5	1,5	6	9,7	2,4	18	21000	0	0,45	4200	3400	16	0	1,25	31	7,6	366	163	10^3
24	20-sep	1708	12 1/4	1,30	78	49	30	23	14	11	7	3	2	24,5	19	5,5	1,5	5,5	8,5	2,7	17	21000	0	0,4	4400	3200	16	0	1	34	7,7	366	163	10^5
25	21-sep	1919	12 1/4	1,45	71	62	37	28	17	12	8	4	3	31	25	6	1,5	6	8,5	2,7	17,6	21000	0	0,4	4400	3200	17	0	1	35	7,9	455	134	10^3
26	22-sep	1919	12 1/4	1,45	72	61	36	27	17	12	8	4	3	30,5	25	5,5	1,5	6	8,1	2,5	18	21000	0	0,35	4000	3200	17	0	1	35	8,3	455	134	10^5
27	23-sep	1919	12 1/4	1,40	70	59	35	26	17	12	8	4	3	29,5	24	5,5	1,5	6	8,1	2,6	17,5	21000	0	0,4	4000	3300	16	0	0,5	34	8,2	366	163	10^5
28	24-sep	2050	8 1/2	1,20	80	57	35	26	16	11	7	3	2	28,5	22	6,5	1,5	2	8,5	2,6	14	21000	0	0,3	4400	4100	8	0	0,5	21	9,2	176	71	10^4
29	25-sep	2072	8 1/2	1,20	82	55	34	25	15	10	6	3	2	27,5	21	6,5	1,5	2	8,4	2,4	14	20000	0	0,3	4400	4050	8	0	0,5	23	8,5	176	71	10^3
30	26-sep	2286	8 1/2	1,20	84	58	36	26	16	11	7	3	2	29	22	7	1,5	2,5	8,3	2,4	14	20000	0	0,3	4100	3800	8	0	0,75	21	8,1	176	71	10^3
31	27-sep	2390	8 1/2	1,20	79	53	32	23	14	10	6	3	2	26,5	21	5,5	1,5	2	8,2	2,4	13,5	20000	0	0,3	3840	3680	8	0	0,75	19	7,5	176	71	10^4
32	28-sep	2690	8 1/2	1,20	83	54	32	22	13	9	6	3	2	27	22	5	1,5	2	7,9	2,4	13	20000	0	0,3	3760	3460	8	0	0,75	17	7,1	176	71	10^4
33	29-sep	2850	8 1/2	1,20	84	57	34	23	14	10	6	3	2	28,5	23	5,5	1,5	2	7,9	2,4	13	20000	0	0,35	3840	3540	8	0	0,5	22	6,9	177	72	10^4
34	30-sep	2850	8 1/2	1,20	85	51	30	22	13	10	6	3	2	25,5	21	4,5	1,5	2	7,8	2,3	12,5	20000	0	0,3	3820	3480	8	0	0,25	23	6,6	177	72	10^4
35	1-okt	2850	8 1/2	1,20	85	51	30	22	13	10	6	3	2	25,5	21	4,5	1,5	2	7,8	2,3	12,5	20000	0	0,3	3820	3480	8	0	0,25	23	6,6	177	72	10^3
36	2-okt	2850	8 1/2	1,20	85	51	30	22	13	10	6	3	2	25,5	21	4,5	1,5	2	7,8	2,3	12,5	20000	0	0,3	3820	3480	8	0	0,25	23	6,6	177	72	10^3
37	3-okt	2850	8 1/2	1,20	85	51	30	22	13	10	6	3	2	25,5	21	4,5	1,5	2	7,8	2,3	12,5	20000	0	0,3	3820	3480	8	0	0,25	23	6,6	177	72	

**GEOCHEMICAL REPORT FOR
WELL NOCS 6507/8-6**

BA-94-7361

14 APR. 1994

REGISTERET

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1.2 Analytical Program

The analytical program for well NOCS 6507/8-6 was based on the samples selected by Statoil for screening and detailed follow-up analysis. The number of samples for the individual analyses are listed below:

<u>Analysis type</u>	<u>No of samples</u>	<u>Figures</u>	<u>Tables</u>
Headspace/Occluded gas	11	2a-d	1a-c
Lithology description	65	3	2
TOC	40	3	2, 3
Rock-Eval pyrolysis	55	4-7, 9, 10, 19	3
Visual kerogen microscopy	14	8	4, 11
Soxhlet Extraction of organic matter	18	11	5a-d
Iatroscan	18	12	6
MPLC/HPLC separation	12	11	5a-d
EOM GC	6	14a-c	
Saturated hydrocarbon GC	12	13, 15a-c	7
Aromatic hydrocarbon GC	12	16a-b	8a-b
GC-MS of saturated and aromatic HC	12	17a-d	9a-k
GC-MS of EOM	6	17	9a-k
Isotope composition C ₁₅ + fractions	4	18	10a-b
Kerogen Isotope	2	18	10a-b

Abbreviations

List of abbreviations used for lithology description (sorted alphabetically)

ang	= angular
bar	= Baryte (mud additive)
bit	= bituminous
bl	= blue/blueish
blk	= black
br	= brittle
brn	= brown/brownish
Ca	= Carbonate (limestone/chalk/dolomite/siderite)
calc	= calcareous
carb	= carbonaceous
cem	= cement used as additive (under "cont") or to describe cemented S/Sst
Chert	= Chert
chk	= Chalk/chalky
cly	= clayey/shaly
cngl	= conglomeratic
Coal	= Coal
Coal-ad	= Coal-like additive (e.g. chromlignosulfonate)
Congl	= Conglomerat
Cont	= Contamination(s)
crs	= coarse grained
dd	= dried drilling mud
dol	= Dolomite/dolomitic
drk	= dark (colour)
dsk	= dusk/dusky (colour)
evap	= Salt/Gypsum/Halite (natural "Other" or as additive "Cont")
f	= fine grained
fe	= ferruginous
fib	= fibres (mud additive/contamination)
fis	= fissile
fos	= fossiliferous
glauc	= glauconite/glauconitic
gn	= green/greenish
gy	= grey/greyish
hd	= hard
ign	= Igneous (material derived from igneous source)
Kaolin	= Kaolin(ite)
kln	= kaolinitic
l	= loose
lam	= laminated/laminae
lt	= light (colour)
m	= medium (colour or grain size)
Marl	= Marl (calcareous claystone/mudstone)
mic	= micaceous
Mica-ad	= Mica used as mud additive

mrl	= marly
No Mat.	= No material left over after washing
ns	= nutshells (mud additive)
ol	= olive
ool	= Oolite/oolitic
or	= orange
Other	= Other lithology/mineral, specified after this word
pi	= pink/pinkish
pl	= pale (colour)
prp	= paint/rust/plastic contaminations/additives
pu	= purple
pyr	= Pyrite/pyritic
red	= red/reddish
rnd	= round/rounded
s	= sandy
sft	= soft
S/Sst	= Sand and/or sandstone
Sh/Clst	= Shale and/or claystone
sid	= Siderite/sideritic
sil	= siliceous/cherty
slt	= silty
Sltst	= siltstone
st	= stained (with natural oil or oil-like additive)
tar-ad	= Tar-like additive (e.g. "Black Magic")
trbfgs	= turbodrilled fragments
Tuff	= Tuff
tuff	= tuffaceous
v col	= various colours
w	= white
wx	= waxy
y	= yellow/yellowish

Experimental

Headspace Gas Analysis

The analysis is performed using a Perkin Elmer 8310 gas chromatograph with a 50 m Plot fused silica $\text{Al}_2\text{O}_3/\text{KCL}$ column, loop injector and flame ionization detector. Nitrogen is used as carrier gas and the column is run from 70°C to 200°C, at a rate of 12°C/min. Final hold time is 5 min.

Two cm^3 of headspace gas are removed from each sample can for chromatographic analysis of the C_1 to C_7 range of hydrocarbons.

Occluded Gas Analysis

The gas chromatograph used for this analysis is identical to that used for headspace gas analysis and is operated under the same conditions.

The canned samples are washed in thermostat-controlled water to remove drilling contaminants and sieved on a 2 mm mesh sieve to remove large, caved rock fragments. An aliquot (ca 25 mg) of sieved sample is crushed with 25 cm^3 water in an airtight ball mill. After crushing, 2 cm^3 of the released gas are removed from the ball mill for gas chromatographic analysis.

Total Organic Carbon (TOC) and Total Carbon Analysis

This analysis is performed using a LECO CS244 Carbon Analyser.

Hand-picked lithologies from cuttings samples are crushed with a mortar and pestle and approximately 200 mg (50 mg for coals) are accurately weighed into LECO crucibles. The samples are then treated three times with 10 % hydrochloric acid to remove oxidized (carbonate) carbon, and washed four times with distilled water. The samples are dried on a hotplate at 60 - 70°C before analysis of total organic carbon.

Total carbon is also analysed on the same instrument using approximately 200 mg of untreated crushed whole rock. Oxidized (carbonate) carbon is calculated by weight difference.

Total organic carbon can also be analysed on the Rock-Eval II Pyrolyser during the normal run of the instrument.

Rock-Eval Pyrolysis

This analysis is performed by using a Rock-Eval II Pyrolyser. Approximately 100 mg crushed whole rock is analysed. The sample is first heated at 300°C for three min in an atmosphere of helium to release the free hydrocarbons present (S1 peak) and then pyrolysed by increasing the temperature from 300°C to 600°C (temp. gradient 25°C/min) (S2 peak). Both the S1 and S2 yields are measured using a flame ionization detector (FID). In the temperature interval between 300°C and 390°C, the released gases are split and a proportion passed through a carbon dioxide trap, which is connected to a thermal conductivity detector (TCD). The value obtained from the TCD corresponds to the amount of oxygen contained in the kerogen of the sample and is reported as the S3 peak.

The Rock-Eval II Pyrolyser also analyses the TOC of each sample during the normal run of the instrument.

Iatroscan

Saturates, aromatics, polars and asphaltenes are qualitatively and quantitatively assessed using Iatroscan TLC-FID and employing Chromarod S-III rods. The crushed approx. 3 g. rock samples are extracted for a period of 24 hours with frequent manual shaking of the samples, using a mixture of DCM/MeOH. 1-3 µl of the solution is spotted on the pre-activated rods, using an auto-spotter. The rods are developed in n-hexane (35 mins.) as mobile phase, followed by toluene (14 mins.) and DCM/MeOH (4 mins.) with 2 minutes air drying between every stage. The developed rods are introduced in a 60°C oven for 90 seconds. The rods are analysed using Iatroscan and

data collected and processed using Multichrom data system.

Thermal Extraction/Pyrolysis Gas Chromatography

The instrument used for this analysis is a Varian 3400 Gas Chromatograph interfaced to a pyrolysis oven (the pyrolyser). Up to 15 mg of whole rock sample is loaded on the pyrolyser and heated isothermally, at 300°C, for 4 min, during which time thermal extraction of the free hydrocarbons occurs (equivalent to the S1 peak of the Rock-Eval). The released gases pass to a 25 m OV1 column with a liquid nitrogen-cooled trap.

After 4 min the pyrolysis oven is temperature programmed up to 530°C, at a rate of 37°C/min, causing bound hydrocarbons to be released from the kerogen (equivalent to the S2 peak of the Rock-Eval). The released gases pass to a 25 m OV1 column with a liquid nitrogen-cooled trap.

The temperature program of the gas chromatograph oven, in which the columns are housed is -10°C to 290°C at a rate of 6°C/min.

Both the columns are linked to a FID.

Solvent Extraction of Organic Matter (EOM)

The samples are extracted using a Tecator Soxtec HT-System. Carefully weighed samples are taken in a pre-extracted thimble. Some activated copper is added to the extraction cup and dichloromethane/methanol (93/7) is used as an extraction solvent. The samples are boiled for 1 hour and then rinsed for 2 hours. If the samples contain more than 10 % TOC, then the whole procedure is repeated once. The resulting solution is filtered and the solvent removed by rotary evaporation (200 mb, 30°C). The amount of EOM is gravimetrically established.

Removal of Asphaltenes

The EOM is dissolved in tetrahydrofuran in a flask and n-pentane is added to precipitate the asphaltenes. The solution is then stored in the dark and at ambient temperature for at least 8 hours. The solution is then filtered (Baker 10-spe system) and the precipitated asphaltenes returned to the original flask by dissolution in dichloromethane. The solvent is removed by rotary evaporation at 200 mB and 30°C.

Chromatographic Separation of deasphalted EOM

Chromatographic separation is performed using an MPLC system developed by the company. The EOM (minus asphaltene) is injected into the MPLC and separated using hexane as an eluent. The saturated and aromatic hydrocarbon fractions are collected and the solvent removed using a rotary evaporator at 30°C. The fractions are then transferred to small pre-weighed vials and evaporated to dryness in a stream of nitrogen. The vials are re-weighed to obtain the weights of both the saturated and the aromatic fractions. The weight of the NSO fraction which is retained on the column, is obtained by weight difference.

Gas Chromatographic Analyses

Saturated hydrocarbon fractions:

The instrument used for this analysis is a PERKIN ELMER 8320 Gas Chromatograph equipped with an FID detector and an OV1 column. The carrier gas is helium and the temperature program runs from 80°C to 300°C at a rate of 4°C/min. Final hold time is 20 mins. The saturated hydrocarbon fraction is diluted by 1:30 and a 1 microlitre aliquot of this is injected into the instrument.

Aromatic hydrocarbon fractions:

The instrument used is a Varian 3400 Gas Chromatograph with a 25 m SE 54 capillary column, split injector and a column splitter leading to FID and FPD detectors, which allows simultaneous analysis of co-eluting hydrocarbons and sulphur compounds. The carrier gas is helium and the temperature program runs from 40°C to 290°C at a rate of 4°C/min. Final hold time is 10 mins. The aromatic hydrocarbon fraction is diluted by 1:30 and a 1 microlitre aliquot of this is injected into the instrument.

Whole Oil/Whole Extract

Whole oil chromatograms are determined on a Perkin Elmer Sigma 2000 gas chromatograph fitted with a split injector, 25 m SE54 capillary column and effluent splitter connected to FID and FPD detectors allowing simultaneous determination of hydrocarbons and sulphur compounds. Approximately 0.1 microlitres of whole oil are injected and the temperature program on the chromatograph runs from -10°C to 300°C at 4°C/min.

Vitrinite Reflectance Analysis

Samples to be analysed for vitrinite reflectance are ground to small granules (if necessary) using a pestle and mortar and are then mounted in a fast setting resin. The resin blocks are first ground flat using a coarse corundum paper to expose the rock granule surfaces and then with three finer grades of corundum paper to improve these surfaces and reduce scratches. The blocks are finally polished on a rotating Selvyt-covered lap using three grades of diamond suspension fluid. An appropriate lubricant is used when necessary.

Reflectance measurements are made under oil immersion at 546 nm using a Zeiss Universal Photo microscope II equipped with a HP 9000 series computer system. The polished blocks are mounted on the microscope stage and scanned manually in order to locate and measure particles of vitrinite. An attempt is made to obtain readings from 15-20 individual particles per sample, but this is not always possible in samples with low amounts of phytoclasts.

Visual Kerogen Microscopy

Kerogen concentrates are obtained from samples prepared by HCl and HF digestion followed by zinc bromide flotation to remove pyrite and other heavy mineral residues. The cleaned concentrates are mounted on slides by smearing, these being analysed

microscopically in transmitted white light and UV light (530 nm barrier filter) to determine the Spore Colour or Thermal Alteration Indices (SCI or TAI) and the colour and intensity of spore fluorescence. The spore colour index, backed by spore fluorescence, is used as an alternative maturity parameter to verify the results obtained from vitrinite reflectance.

Fluorescence Colour	Colour Index	Corresp. Vitrinite Reflectance
Green	1	0.2 %
Green/yellow	2	0.2-0.3 %
Yellow	3	0.3 %
Yellow/orange	4	0.4 %
Light orange	5	0.5 %
Moderate-orange	6	0.6 %
Dark orange	7	0.8 %
Dark orange/red	8	1.0 %
Spore fluorescence extinction	9	1.3 %

NB. This table only provides a rudimentary correlation as vitrinite reflectance and spore fluorescence colour are both independently affected by factors such as depositional environment and catenetic history.

Combined Gas Chromatography - Mass Spectrometry (GC-MS)

The GC-MS analyses are performed on a VG TS250 system interfaced to a Hewlett Packard 5890 gas chromatograph. The GC is fitted with a fused silica SE54 capillary column (40 m x 0.22 mm i.d.) directly into the ion source. Helium (12 psi) is used as carrier gas and the injections are performed in splitless mode. The GC oven is programmed from 45°C to 150°C at 35°C/min, at which point the programme rate is 2°C/min up to 310°C where the column is held isothermally for 15 min. For the aromatic hydrocarbons, the GC oven is programmed from 50°C to 310°C at 5°C/min. and held isothermally at 310°C for 15 min. The mass spectrometer is operated in electron impact (EI) mode at 70 eV electron energy, a trap current of 500 uA and a source temperature of 220°C. The instrument resolution used is 2500 (10 % value).

The data system used is a VG PDP11/73 for acquiring data, and a Vax station 3100 for peak processing the data. The samples are analysed in multiple ion detection

mode (MID) at a scan cycle time of approximately 1.1 sec.

Calculation of peak ratios is performed from peak heights in the appropriate mass fragmentograms.

Saturated Fractions

Terpanes

The most commonly used fragment ions for detection of terpanes are M/Z 163 for detection of 25,28,30 trisnormoretane or 25,28,30 trisnorhopane, M/Z 177 for detection of demethylated hopanes or moretanes, M/Z 191 for detection of tricyclic, tetracyclic- and pentacyclic terpanes and M/Z 205 for methylated hopanes or moretanes. The molecular ions M/Z 370 and 384 are also recorded for identification of C₂₇ and C₂₈ triterpanes respectively.

Steranes

The most commonly used fragment ions for detection of steranes are M/Z 149 to distinguish between 5 α and 5 β steranes, M/Z 189 and 259 for detection of rearranged steranes, M/Z 217 for detection of rearranged and normal steranes and M/Z 218 for detection of 14 β (H) 17 β (H) steranes.

The M/Z 231 fragment ion is used to detect possible aromatic contamination of the saturated fraction. It is also used for detection of methyl steranes.

Aromatic Fractions

Alkyl-substituted Benzenes

The M/Z 106 fragment ion is often used to detect the alkyl-substituted benzenes. It is especially useful for the detection of di-substituted benzenes. M/Z 134 can also be used for the detection of C₄-alkylbenzenes, but benzothiophene will also give a signal with this fragment ion.

Naphthalenes

Methyl naphthalenes are normally detected by the M/Z 142 fragment ion, while C₂-naphthalenes are detected by M/Z 156 and C₃-naphthalenes by M/Z 170.

Benzothiophenes and Dibenzothiophenes

Benzothiophene can be detected, as mentioned above, by M/Z 134. The M/Z 184 fragment ion is used to detect the dibenzothiophenes. The M/Z 198 and M/Z 212 fragment ions are used for methyl-substituted dibenzothiophenes and dimethyl-substituted dibenzothiophenes respectively.

Phenanthrenes

Phenanthrene is detected using the M/Z 178 fragment ion. Anthracene will, if present, also give a signal in the M/Z 178 fragment ion. Methyl-substituted phenanthrenes give signals in the M/Z 192 fragment ion, while the M/Z 206 fragment ion shows the dimethyl-substituted phenanthrenes and the M/Z 220 fragment ion shows the C₃ substituted phenanthrenes.

Aromatic Steranes

Monoaromatic steranes are detected using the M/Z 253 fragment ion, while the triaromatic steranes are detected using the M/Z 231 fragment ion.

Mass Fragmentograms representing Terpanes
(M/Z 163, 177, 191, 205, 370, 384, 398, 412 and 426)

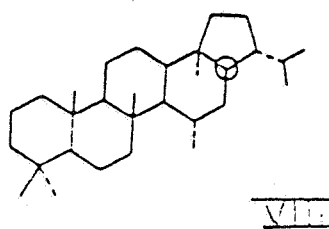
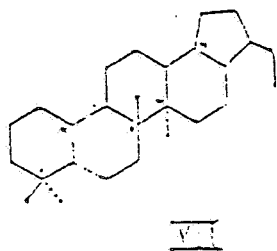
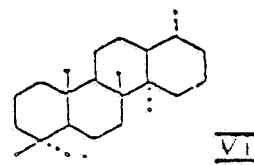
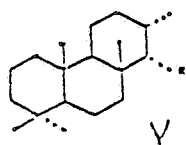
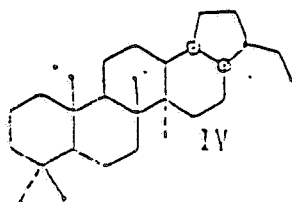
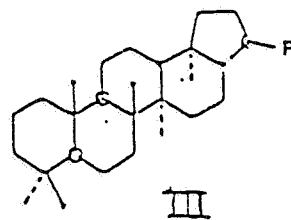
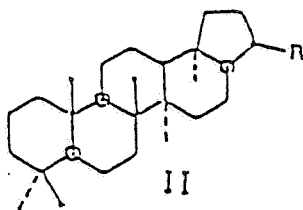
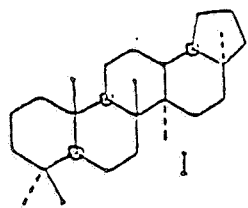
Peak Identification: (α and β refer to hydrogen atoms at C-17 and C-21 respectively unless indicated otherwise).

27Ts	18 α trisnorneohopane (T_s)	$C_{27}H_{44}$	(I)
27Tm	17 α trisnorhopane (T_m)	$C_{27}H_{46}$	(II, R=H)
28 $\alpha\beta$	Bisnorhopane	$C_{28}H_{48}$	(IV)
25nor30 $\alpha\beta^*$	norhopane	$C_{29}H_{50}$	
29 $\alpha\beta$	$\alpha\beta$ norhopane	$C_{29}H_{50}$	(II, R= C_2H_5)
29Ts	norneohopane	$C_{29}H_{50}$	
29 $\beta\alpha$	$\beta\alpha$ norhopane	$C_{29}H_{50}$	(III, R= C_2H_5)
30 $\alpha\beta$	$\alpha\beta$ hopane	$C_{30}H_{52}$	(II, R=i- C_3H_7)
30O	Oleanane	$C_{30}H_{52}$	
30 $\beta\alpha$	$\beta\alpha$ hopane	$C_{30}H_{52}$	(III, R=i- C_3H_7)
31 $\alpha\beta$ S	22S $\alpha\beta$ homohopane	$C_{31}H_{54}$	(II, R=i- C_4H_9)
31 $\alpha\beta$ R	22R $\alpha\beta$ homohopane	$C_{31}H_{54}$	(II, R=i- C_4H_9)
30G	gammacerane	$C_{30}H_{52}$	
31 $\beta\alpha$	$\beta\alpha$ homohopane	$C_{31}H_{54}$	(III, R=i- C_4H_9)
32 $\alpha\beta$ S	22S $\alpha\beta$ bishomohopane	$C_{32}H_{56}$	(II, R=i- C_5H_{11})
32 $\alpha\beta$ R	22R $\alpha\beta$ bishomohopane	$C_{32}H_{56}$	(II, R=i- C_5H_{11})
33 $\alpha\beta$ S	22S $\alpha\beta$ trishomohopane	$C_{33}H_{56}$	(II, R=i- C_5H_{11})
33 $\alpha\beta$ R	22R $\alpha\beta$ trishomohopane	$C_{33}H_{58}$	(II, R=i- C_6H_{13})
34 $\alpha\beta$ S	22S $\alpha\beta$ tetrakishomohopane	$C_{34}H_{60}$	(II, R=i- C_7H_{15})
34 $\alpha\beta$ R	22R $\alpha\beta$ tetrakishomohopane	$C_{34}H_{60}$	(II, R=i- C_7H_{15})
35 $\alpha\beta$ S	22S $\alpha\beta$ pentakishomohopane	$C_{35}H_{62}$	(II, R=i- C_8H_{17})
35 $\alpha\beta$ R	22R $\alpha\beta$ pentakishomohopane	$C_{35}H_{62}$	(II, R=i- C_8H_{17})
23/3	Tricyclic terpane	$C_{23}H_{42}$	(V, R=i- C_4H_9)
24/3	Tricyclic terpane	$C_{24}H_{44}$	(V, R=i- C_5H_{11})
25/3	Tricyclic terpane (17R, 17S)	$C_{25}H_{66}$	(V, R=i- C_6H_{13})
24/4	Tetracyclic terpane	$C_{24}H_{42}$	(VI)
26/3	Tricyclic terpane (17R, 17S)	$C_{26}H_{48}$	(V, R=i- C_7H_{15})

21/3	Tricyclic terpane	$C_{21}H_{38}$	(V, R=C ₂ H ₅)
22/3	Tricyclic terpane	$C_{22}H_{40}$	(V, R=C ₃ H ₇)
25nor28 $\alpha\beta$ *	25,28,30-trisnorhopane/moretane	$C_{27}H_{46}$	(VII)
30d	$\alpha\beta$ diahopane	$C_{30}H_{52}$	(VIII)

* Also identified and quantified in M/Z 177 fragmentograms

STRUCTURES REPRESENTING TERPANES



Mass Fragmentograms representing Steranes

(M/Z 149, 189, 217, 218, 259, 372, 386, 400 and 414)

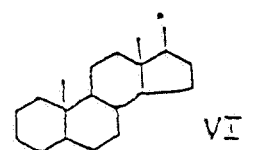
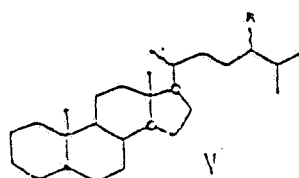
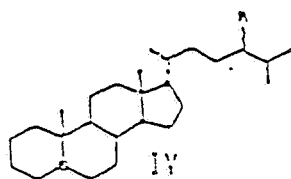
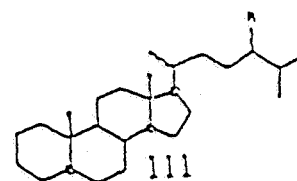
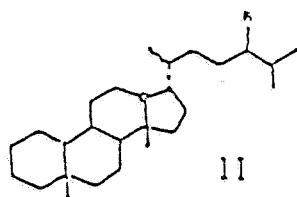
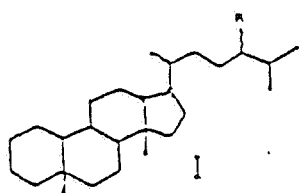
Peak Identifications: α and β refer to hydrogen atoms at C-5, C-14 and C-17 in regular steranes and at C-13 and C-17 in diasteranes.

21 α	5 α sterane	C ₂₁ H ₃₆	(VI, R=C ₂ H ₅)
22 α	5 α sterane	C ₂₂ H ₃₈	(VI, R=C ₃ H ₇)
27d β S	20S $\beta\alpha$ diacholestane	C ₂₇ H ₄₈	(I, R=H)
27d α R	20R $\beta\alpha$ diacholestane	C ₂₇ H ₄₈	(I, R=H)
27d α S	20S $\alpha\beta$ diacholestane	C ₂₇ H ₄₈	(II, R=H)
27d α R	20R $\alpha\beta$ diacholestane	C ₂₇ H ₄₈	(II, R=H)
28d β S	20S $\beta\alpha$ 24-methyl-diacholestane	C ₂₈ H ₅₀	(I, R=CH ₃)
28d β R	20R $\beta\alpha$ 24-methyl-diacholestane	C ₂₈ H ₅₀	(I, R=CH ₃)
28d α R	20R $\alpha\beta$ 24-methyl-diacholestane	C ₂₈ H ₅₀	(II, R=CH ₃)
27 $\alpha\alpha$ S	+ 20S $\alpha\alpha\alpha$ cholestane	C ₂₇ H ₄₈	(III, R=H)
29d β S	20S $\beta\alpha$ 24-ethyl-diacholestane	C ₂₉ H ₅₂	(II, R=C ₂ H ₅)
27 $\beta\beta$ R*	+ 20R $\alpha\beta\beta$ cholestane	C ₂₇ H ₄₈	(IV, R=H)
27 $\beta\beta$ S*	20S $\alpha\beta\beta$ cholestane	C ₂₇ H ₄₈	(IV, R=H)
28d α S	+ 20S $\alpha\beta$ 24-methyl-diacholestane	C ₂₈ H ₅₀	(II, R=CH ₃)
27 $\alpha\alpha$ R	20R $\alpha\alpha\alpha$ cholestane	C ₂₇ H ₄₈	(III, R=H)
29d β R	20R $\beta\alpha$ 24-ethyl-diacholestane	C ₂₉ H ₅₂	(I, R=C ₂ H ₅)
29d α R	20R $\alpha\beta$ 24-ethyl-diacholestane	C ₂₉ H ₅₂	(II, R=C ₂ H ₅)
28 $\alpha\alpha$ S	20S $\alpha\alpha\alpha$ 24-methyl-cholestane	C ₂₈ H ₅₀	(III, R=CH ₃)
28 $\beta\beta$ R*	20R $\alpha\beta\beta$ 24-methyl-cholestane	C ₂₈ H ₅₀	(IV, R=CH ₃)
29d α S	+ 20S $\alpha\beta$ 24-ethyl-diacholestane	C ₂₉ H ₅₂	(II, R=C ₂ H ₅)
28 $\beta\beta$ S*	20S $\alpha\beta\beta$ 24-methyl-cholestane	C ₂₈ H ₅₀	(IV, R=CH ₃)
28 $\alpha\alpha$ R	20R $\alpha\alpha\alpha$ 24-methyl-cholestane	C ₂₈ H ₅₀	(III, R=CH ₃)
29 $\alpha\alpha$ S	20S $\alpha\alpha\alpha$ 24-ethyl-cholestane	C ₂₉ H ₅₂	(III, R=C ₂ H ₅)
29 $\beta\beta$ R*	20R $\alpha\beta\beta$ 24-ethyl-cholestane	C ₂₉ H ₅₂	(IV, R=C ₂ H ₅)
29 $\beta\beta$ S*	20S $\alpha\beta\beta$ 24-ethyl-cholestane	C ₂₉ H ₅₂	(IV, R=C ₂ H ₅)
29 $\alpha\alpha$ R	20R $\alpha\alpha\alpha$ 24-ethyl-cholestane	C ₂₉ H ₅₂	(III, R=C ₂ H ₅)
M30 $\alpha\alpha$	$\alpha\alpha$ 4-methyl-24-ethyl-cholestane	C ₃₀ H ₅₄	

M30D	$\alpha\alpha$ 4,23,24-trimethyl-cholestane	$C_{30}H_{54}$	
30 $\alpha\alpha$ S	20S $\alpha\alpha\alpha$ 24-propyl-cholestane	$C_{30}H_{54}$	(N, R= C_3H_7)
30 $\beta\beta$ R*	20R $\alpha\beta\beta$ 24-propyl-cholestane	$C_{30}H_{54}$	(V, R= C_3H_7)
30 $\beta\beta$ S*	20S $\alpha\beta\beta$ 24-propyl-cholestane	$C_{30}H_{54}$	(N, R= C_3H_7)
30 $\alpha\alpha$ R	20R $\alpha\alpha\alpha$ -24-propyl-cholestane	$C_{30}H_{54}$	(N, R= C_3H_7)

* Compounds identified and quantified in M/Z 218 fragmentograms

STRUCTURES REPRESENTING STERANES

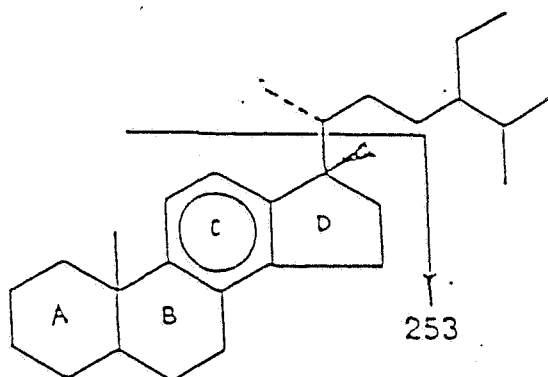


Mass Fragmentograms representing Monoaromatic Steranes (M/Z 253)

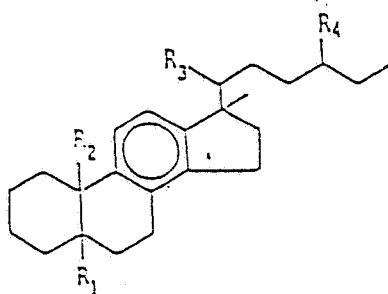
Description of C-ring monoaromatic steroid hydrocarbons

Peak	R ₁	Substituents		R ₄	Abbreviation of Compound
R ₂	R ₃				
A1					C ₂₁ M
B1					C ₂₂ MA
C1	β(H)	CH ₃	S(CH ₃)	H	βSC ₂₇ MA
	β(H)	CH ₃	R(CH ₃)	H	βRC ₂₇ MA
D1	CH ₃	H	R(CH ₃)	H	RC ₂₇ DMA
	α(H)	CH ₃	S(CH ₃)	H	αSC ₂₇ MA
E1	β(H)	CH ₃	S(CH ₃)	CH ₃	βSC ₂₈ MA
	CH ₃	H	S(CH ₃)	CH ₃	SC ₂₈ DMA
F1	α(H)	CH ₃	R(CH ₃)	H	αRC ₂₇ MA
	α(H)	CH ₃	S(CH ₃)	CH ₃	αSC ₂₈ MA
	β(H)	CH ₃	R(CH ₃)	CH ₃	βRC ₂₈ MA
G1	CH ₃	H	R(CH ₃)	CH ₃	RC ₂₈ DMA
	β(H)	CH ₃	S(CH ₃)	C ₂ H ₅	βSC ₂₉ MA
	CH ₃	H	S(CH ₃)	C ₂ H ₅	SC ₂₉ DMA
	α(H)	CH ₃	R(CH ₃)	CH ₃	αRC ₂₈ MA
H1	β(H)	CH ₃	R(CH ₃)	C ₂ H ₅	βRC ₂₉ MA
	CH ₃	H	R(CH ₃)	C ₂ H ₅	RC ₂₉ DMA
I1	α(H)	CH ₃	R(CH ₃)	C ₂ H ₅	αRC ₂₉ MA

STRUCTURES REPRESENTING MONOAROMATIC STERANES



I

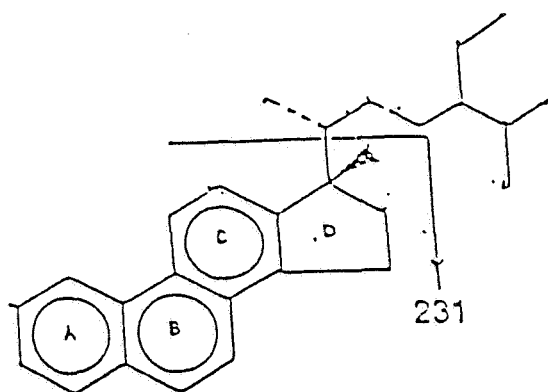


Mass Fragmentograms representing Triaromatic Steranes
(M/Z 231)

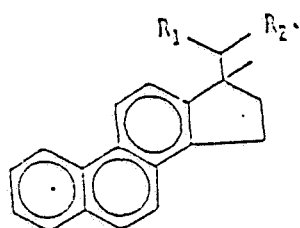
Description of ABC-ring triaromatic steroid hydrocarbons

Peak	Substituents		Abbreviation of Compound
	R ₁	R ₂	
a1	CH ₃	H	C ₂₀ TA
b1	CH ₃	CH ₃	C ₂₁ TA
c1	S(CH ₃)	C ₆ H ₁₋₃	SC ₂₆ TA
d1	R(CH ₃)	C ₆ H ₁₃	RC ₂₆ TA
	S(CH ₃)	C ₇ H ₁₅	SC ₂₇ TA
e1	S(CH ₃)	C ₈ H ₁₇	SC ₂₈ TA
f1	S(CH ₃)	C ₇ H ₁₅	RC ₂₇ TA
g1	R(CH ₃)	C ₈ H ₁₇	RC ₂₈ TA

STRUCTURES REPRESENTING TRIAROMATIC STERANES



II



Stable Carbon Isotope Ratio Mass Spectrometry

Carbon isotope analysis is performed on a dual inlet VG SIRA 10 instrument. The combustion of the samples is performed by a Carlo Erba EA 1108 element analyser directly connected to the inlet system of the mass spectrometer.

The combustion temperature is 1020°C and the carrier gas used was Helium. After the combustion H₂O and CO₂ are trapped in individual cool traps. The CO₂ gas is then heated up before admission into the mass spectrometer. The whole operation is controlled by an IBM PC50 computer system.

δ-values

The isotope ratios are given as δ-values in ‰ versus the PDB-standard:

$$\delta^{13}\text{C} = (\text{R sample} - \text{R standard} / \text{R standard}) \times 1000$$
$$\text{R} = {}^{13}\text{C}/{}^{12}\text{C}$$

The PDB-standard (a marine chalk of the Pee Dee-formation, USA) was created by Craig 1957. All results of ¹³C/¹²C-analysis of organic matter today are calculated (Craig correction) against this international standard.

Reproducibility

The precision of the combustion system and the mass spectrometer is controlled by determination of an international calibrated standard, NBS22 oil and a house standard carbon. Replicate analyses are also performed on samples.

APPENDIX 1:
TABLES

- 1 -

Table 1a: C1 to C7 hydrocarbons, in HEADSPACE gas
(μ l gas/kg rock)

Project: NOCS 6507/8-6

Well: NOCS 6507/8-6

Depth unit of measure: m

* Indicated values in ml gas/kg rock

Depth	C1	C2	C3	iC4	nC4	C5+	sum C1-C4	sum C2-C4	%wet ness	iC4 --- nC4
1800.00	9569	45	26	7	3	6	9650	81	0.8	2.33
1850.00	3608	116	3	1	-	2	3728	120	3.2	-
1900.00	2973	163	21	1	1	1	3159	186	5.9	1.00
1950.00	3748	65	1	-	-	-	3814	66	1.7	-
2000.00	42183	619	30	3	2	1	42837	654	1.5	1.50
2050.00	93991	11971	1100	27	19	1	107108	13117	12.3	1.42
2091.00	2562	324	127	12	20	8	3045	483	15.9	0.60
2106.00	24123	2355	707	44	56	11	27285	3162	11.6	0.79
2136.00	10173	1330	494	50	71	19	12118	1945	16.1	0.70
2226.00	26746	6284	2144	97	96	11	35367	8621	24.4	1.01
2352.00	11181	892	76	2	1	1	12152	971	8.0	2.00

- 1 -

Table 1b: C1 to C7 hydrocarbons in CUTTINGS gas
(μ l gas/kg rock)

Project: NOCS 6507/8-6

Well: NOCS 6507/8-6

Depth unit of measure: m

* Indicated values in ml gas/kg source rock

Depth	C1	C2	C3	iC4	nC4	C5+	sum C1-C4	sum C2-C4	%wet ness	iC4 --- nC4
1800.00	34	3	2	1	1	3	41	7	17.1	1.00
1850.00	19	2	1	-	-	1	22	3	13.6	-
1900.00	24	4	2	-	1	2	31	7	22.6	-
1950.00	30	-	-	-	-	1	30	-	-	-
2000.00	2	-	-	-	-	-	2	-	-	-
2050.00	1098	1153	357	15	11	2	2634	1536	58.3	1.36
2091.00	177	56	96	17	36	20	382	205	53.7	0.47
2106.00	268	232	290	33	51	11	874	606	69.3	0.65
2136.00	207	13	11	1	5	7	237	30	12.7	0.20
2226.00	118	75	181	20	31	10	425	307	72.2	0.65
2352.00	1842	1683	540	18	14	7	4097	2255	55.0	1.29

- 1 -

Table 1c: C1 to C7 hydrocarbons in HEADSPACE and CUTTINGS gas
(μ l gas/kg rock)

Project: NOCS 6507/8-6

Well: NOCS 6507/8-6

Depth unit of measure: m * Indicated values in ml gas/kg source rock

Depth	C1	C2	C3	iC4	nC4	C5+	sum C1-C4	sum C2-C4	%wet ness	iC4 --- nC4
1800.00	9603	48	28	8	4	9	9691	88	0.9	2.00
1850.00	3627	118	4	1	-	3	3750	123	3.3	-
1900.00	2997	167	23	1	2	3	3190	193	6.1	0.50
1950.00	3778	65	1	-	-	1	3844	66	1.7	-
2000.00	42185	619	30	3	2	1	42839	654	1.5	1.50
2050.00	95089	13124	1457	42	30	3	109742	14653	13.4	1.40
2091.00	2739	380	223	29	56	28	3427	688	20.1	0.52
2106.00	24391	2587	997	77	107	22	28159	3768	13.4	0.72
2136.00	10380	1343	505	51	76	26	12355	1975	16.0	0.67
2226.00	26864	6359	2325	117	127	21	35792	8928	24.9	0.92
2352.00	13023	2575	616	20	15	8	16249	3226	19.9	1.33

- 1 -

Table 2 : Lithology description for well NOCS 6507/8-6

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
1722.10	swc					0001
	0.85	100	S/Sst	: m gy gn to m gy brn, glauc, f		0001-1L
1797.60	swc					0002
	0.57	100	Sh/Clst:	m drk gy		0002-1L
1800.00						0049
		85	Sh/Clst:	m gn gy to m gy		0049-1L
		15	Sltst	: m lt brn gy		0049-2L
1850.00						0050
		90	Sh/Clst:	m gn gy		0050-1L
		10	Sltst	: m gn gy, glauc		0050-2L
		tr	Other	: y, pyr		0050-3L
1877.50	swc					0003
	0.66	100	Sh/Clst:	lt gn gy to m ol gy		0003-1L
1900.00						0051
		55	Sh/Clst:	m gy		0051-1L
		40	Sh/Clst:	lt gn gy		0051-2L
		5	Sh/Clst:	brn		0051-3L
		tr	Other	: y, pyr		0051-4L

- 2 -

Table 2 : Lithology description for well NOCS 6507/8-6

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
1912.00	swc					0004
	0.56	100	Sh/Clst:	drk gy, slt		0004-1L
1915.00	swc					0005
	1.28	100	Sh/Clst:	m ol gy, slt		0005-1L
1917.70	swc					0006
	0.88	100	Sh/Clst:	m ol gy to m gn gy		0006-1L
1943.00	swc					0007
	0.12	100	Sh/Clst:	m gn gy to m ol gy		0007-1L
1948.00	swc					0008
	0.30	100	Sh/Clst:	lt gy gn, slt		0008-1L
1950.00						0052
		75	Sh/Clst:	m lt gn gy, calc		0052-1L
		15	Sh/Clst:	m gy		0052-2L
		9	Ca	: w to lt brn gy		0052-3L
		1	Other	: y, pyr		0052-4L
1957.00	swc					0009
	0.53	100	Sh/Clst:	drk gy to m drk gy		0009-1L

- 3 -

Table 2 : Lithology description for well NOCS 6507/8-6

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
1958.00	swc					0010
		0.74	100	Sh/Clst: drk gy		0010-1L
1962.00	swc					0011
		0.94	100	Sh/Clst: drk gy		0011-1L
1967.50	swc					0012
		0.78	100	Sh/Clst: drk gy		0012-1L
1974.00	swc					0013
		9.83	100	Sh/Clst: drk gy to blk		0013-1L
1976.00	swc					0014
		7.05	100	Sh/Clst: drk gy to blk		0014-1L
1978.00	swc					0015
		8.80	100	Sh/Clst: drk gy to blk, carb		0015-1L
1986.50	swc					0016
		7.38	100	Sh/Clst: drk gy to blk, carb		0016-1L
1993.50	swc					0017
		5.87	100	Sh/Clst: drk gy to blk		0017-1L

- 4 -

Table 2 : Lithology description for well NOCS 6507/8-6

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int Cvd	TOC%	%	Lithology description			
1995.00	swc					0018
	0.77	60	Slst	: lt y gy		0018-2L
	7.06	40	Sh/Clst:	drk gy to blk		0018-1L
2000.00						0053
		90	Sh/Clst:	drk gy to blk		0053-1L
		5	Sh/Clst:	m lt gn gy		0053-2L
		5	Ca	: w to lt brn gy		0053-3L
2001.00	swc					0019
	7.13	100	Sh/Clst:	drk gy to blk		0019-1L
2005.00	swc					0020
	7.77	100	Sh/Clst:	drk gy to blk		0020-1L
2008.00	swc					0021
	7.06	100	Sh/Clst:	drk gy to blk		0021-1L
2012.00	swc					0022
	7.14	100	Sh/Clst:	drk gy to blk		0022-1L
2019.00	swc					0023
	2.42	100	Sh/Clst:	drk gy to m gn gy		0023-1L

- 5 -

Table 2 : Lithology description for well NOCS 6507/8-6

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
2025.00	swc					0024
		9.13	100	Sh/Clst: drk gy to blk		0024-1L
2031.50	swc					0025
		3.08	70	Cont : lt brn gy, dd		0025-2L
			30	Sh/Clst: m drk gy		0025-1L
2036.00	swc					0026
		1.13	50	S/Sst : m drk brn gy		0026-2L
			49	Sh/Clst: drk gy to blk		0026-1L
			1	Other : y, pyr		0026-3L
2037.00						0060
		9.35	75	Sh/Clst: drk gy to blk		0060-1L
			20	S/Sst : w to lt brn gy, l		0060-2L
			5	Sh/Clst: m bl gy to m gn gy		0060-3L
			tr Ca	: w		0060-4L
2042.50	swc					0027
		5.64	90	Sh/Clst: drk gy to blk		0027-1L
			10	S/Sst : m drk brn gy		0027-2L
2044.00	swc					0028
			100	S/Sst : lt y gy		0028-1L

- 6 -

Table 2 : Lithology description for well NOCS 6507/8-6

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int Cvd	TOC%	%	Lithology description			
2050.00						0054
		55	Sh/Clst:	drk gy to blk		0054-1L
		40	S/Sst	: w		0054-2L
		5	Ca	: w to lt y gy		0054-3L
2052.00	swc					0029
		55	S/Sst	: w		0029-1L
		40	Cont	: lt y gy		0029-2L
		5	Sh/Clst:	drk gy		0029-3L
2054.22	ccp					0030
	1.89	100	Sh/Clst:	m bl gy		0030-1L
2056.04	ccp					0031
	1.18	100	Sltst	: m bl gy, cly		0031-1L
2056.50	ccp					0032
	1.75	100	Sh/Clst:	m bl gy, slt		0032-1L
2058.29	ccp					0033
		100	Sltst	: lt gn gy, cly, calc		0033-1L
2069.00	swc					0034
		100	S/Sst	: w		0034-1L

- 7 -

Table 2 : Lithology description for well NOCS 6507/8-6

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
2089.00	swc					0035
		1.52	100	Sh/Clst: drk gy to blk		0035-1L
2091.00						0055
			100	S/Sst : w, l		0055-1L
				tr Sh/Clst: drk gy		0055-2L
2092.00	swc					0036
		1.24	100	Sh/Clst: drk gy to blk		0036-1L
2102.50	swc					0037
			100	S/Sst : w		0037-1L
2106.00						0056
			40	Sh/Clst: m bl gy to m gn gy		0056-2L
			30	Sh/Clst: drk gy to blk		0056-1L
			30	S/Sst : w to lt brn gy		0056-3L
2110.00	swc					0038
			99	S/Sst : w		0038-1L
			1	Cont : m gy brn, dd		0038-2L
2122.00	swc					0039
			100	S/Sst : lt gy to w		0039-1L

- 8 -

Table 2 : Lithology description for well NOCS 6507/8-6

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int	Cvd	TOC%	%	Lithology description		
2126.50	swc					0040
			100	S/Sst : lt gy to w, f		0040-1L
2136.00						0057
			100	S/Sst : w, l		0057-1L
			tr	Sh/Clst: m bl gy to m gn gy		0057-2L
			tr	Other : w, mic		0057-3L
2169.00						0063
			95	S/Sst : w to lt brn gy, l		0063-1L
			5	Sh/Clst: m drk brn gy to m drk gy		0063-2L
			tr	Other : y, pyr		0063-3L
2207.00	swc					0041
	0.65		100	S/Sst : lt gy to w, f, cly		0041-1L
2226.00						0058
			60	S/Sst : w, l		0058-1L
			15	Sh/Clst: m bl gy to m gn gy		0058-2L
			15	Sh/Clst: drk gy		0058-3L
			9	Ca : w		0058-4L
			1	Other : y, pyr		0058-5L
2229.00						0061
			90	S/Sst : w to lt brn gy, l		0061-1L
			10	Sh/Clst: drk gy to m gn gy		0061-2L
			tr	Ca : w		0061-3L
			tr	Other : y, pyr		0061-4L

- 9 -

Table 2 : Lithology description for well NOCS 6507/8-6

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int Cvd	TOC%	%	Lithology description			
2330.00	swc					0042
	7.57	90	Sh/Clst: drk gy to blk			0042-1L
		10	S/Sst : lt gy to w			0042-2L
2352.00						0059
		98	S/Sst : w, l			0059-1L
		2	Sh/Clst: drk gy			0059-2L
		tr	Other : y, pyr			0059-3L
2353.00	swc					0043
		100	S/Sst : lt y gy to w			0043-1L
2393.00	swc					0044
		100	S/Sst : lt y gy to w			0044-1L
2408.00	swc					0045
		100	S/Sst : lt y gy to w			0045-1L
2469.00						0064
	53.40	95	Coal : blk			0064-1L
		5	Sh/Clst: m drk brn gy to m drk gy			0064-2L
2522.00	swc					0046
	2.14	100	Sh/Clst: drk gy			0046-1L

- 10 -

Table 2 : Lithology description for well NOCS 6507/8-6

Depth unit of measure: m

Depth	Type	Grp	Frm	Age	Trb	Sample
Int Cvd	TOC%	%	Lithology description			
2590.00	swc					0047
	1.26	100	Sh/Clst: m drk brn gy, slt			0047-1L
2610.00	swc					0048
		100	S/Sst : w			0048-1L
2688.00						0062
	1.12	50	Sh/Clst: m drk brn gy to m drk gy			0062-2L
		30	S/Sst : w to lt brn gy, l			0062-1L
		10	Sh/Clst: drk gy			0062-3L
		10	Slstst : lt y gy			0062-4L
		tr	Other : y, pyr			0062-5L
2736.00						0065
	0.40	90	S/Sst : w, l			0065-1L
		9	Sh/Clst: m drk brn gy to m drk gy			0065-2L
		1	Coal : blk			0065-3L

Table 3 : Rock-Eval table for well NOCS 6507/8-6

Page: 1

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
1722.10	swc	S/Sst : m gy gn to m gy brn	0.10	0.55	0.97	0.57	0.85	65	114	0.7	0.15	399	0001-1L
1797.60	swc	Sh/Clst: m drk gy	0.17	0.40	0.30	1.33	0.57	70	53	0.6	0.30	365	0002-1L
1877.50	swc	Sh/Clst: lt gn gy to m ol gy	0.14	0.55	1.16	0.47	0.66	83	176	0.7	0.20	410	0003-1L
1912.00	swc	Sh/Clst: drk gy	0.06	0.18	0.34	0.53	0.56	32	61	0.2	0.25	400	0004-1L
1915.00	swc	Sh/Clst: m ol gy	0.17	0.85	0.72	1.18	1.28	66	56	1.0	0.17	394	0005-1L
1917.70	swc	Sh/Clst: m ol gy to m gn gy	0.11	0.55	0.98	0.56	0.88	63	111	0.7	0.17	401	0006-1L
1943.00	swc	Sh/Clst: m gn gy to m ol gy	0.02	0.09	0.57	0.16	0.12	75	475	0.1	0.18	413	0007-1L
1948.00	swc	Sh/Clst: lt gy gn	0.02	0.15	0.45	0.33	0.30	50	150	0.2	0.12	476	0008-1L
1957.00	swc	Sh/Clst: drk gy to m drk gy	0.07	0.23	0.34	0.68	0.53	43	64	0.3	0.23	419	0009-1L
1958.00	swc	Sh/Clst: drk gy	0.07	0.47	0.84	0.56	0.74	64	114	0.5	0.13	403	0010-1L
1962.00	swc	Sh/Clst: drk gy	0.10	0.50	1.12	0.45	0.94	53	119	0.6	0.17	409	0011-1L
1967.50	swc	Sh/Clst: drk gy	0.10	0.42	0.37	1.14	0.78	54	47	0.5	0.19	406	0012-1L
1974.00	swc	Sh/Clst: drk gy to blk	1.16	25.09	2.40	10.45	9.83	255	24	26.3	0.04	408	0013-1L
1976.00	swc	Sh/Clst: drk gy to blk	0.87	13.50	2.06	6.55	7.05	191	29	14.4	0.06	406	0014-1L
1978.00	swc	Sh/Clst: drk gy to blk	1.48	25.81	1.83	14.10	8.80	293	21	27.3	0.05	409	0015-1L

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Table 3 : Rock-Eval table for well NOCS 6507/8-6

Page: 2

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
1986.50	swc	Sh/Clst: drk gy to blk	1.33	21.59	1.61	13.41	7.38	293	22	22.9	0.06	399	0016-1L
1993.50	swc	Sh/Clst: drk gy to blk	0.54	11.13	1.73	6.43	5.87	190	29	11.7	0.05	409	0017-1L
1995.00	swc	Sh/Clst: drk gy to blk	0.97	17.38	1.60	10.86	7.06	246	23	18.3	0.05	410	0018-1L
1995.00	swc	Sltst : lt y gy	0.10	0.79	0.45	1.76	0.77	103	58	0.9	0.11	401	0018-2L
2001.00	swc	Sh/Clst: drk gy to blk	1.02	16.48	1.58	10.43	7.13	231	22	17.5	0.06	407	0019-1L
2005.00	swc	Sh/Clst: drk gy to blk	0.98	25.66	1.86	13.80	7.77	330	24	26.6	0.04	411	0020-1L
2008.00	swc	Sh/Clst: drk gy to blk	0.80	14.61	1.28	11.41	7.06	207	18	15.4	0.05	406	0021-1L
2012.00	swc	Sh/Clst: drk gy to blk	0.50	7.32	1.13	6.48	7.14	103	16	7.8	0.06	416	0022-1L
2019.00	swc	Sh/Clst: drk gy to m gn gy	0.19	2.61	1.76	1.48	2.42	108	73	2.8	0.07	416	0023-1L
2025.00	swc	Sh/Clst: drk gy to blk	1.32	38.78	2.00	19.39	9.13	425	22	40.1	0.03	412	0024-1L
2031.50	swc	Sh/Clst: m drk gy	0.78	5.06	4.17	1.21	3.08	164	135	5.8	0.13	417	0025-1L
2036.00	swc	Sh/Clst: drk gy to blk	0.03	0.94	0.50	1.88	1.13	83	44	1.0	0.03	428	0026-1L
2037.00	cut	Sh/Clst: drk gy to blk	0.51	25.43	1.81	14.05	9.35	272	19	25.9	0.02	411	0060-1L
2042.50	swc	Sh/Clst: drk gy to blk	0.25	6.53	2.48	2.63	5.64	116	44	6.8	0.04	427	0027-1L
2044.00	swc	S/Sst : lt y gy	0.03	0.40	0.33	1.21	-	-	-	0.4	0.07	598	0028-1L

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Table 3 : Rock-Eval table for well NOCS 6507/8-6

Page: 3

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
2052.00	swc	S/Sst : w	0.16	0.44	1.75	0.25	-	-	-	0.6	0.27	420	0029-1L
2054.22	ccp	Sh/Clst: m bl gy	0.12	1.04	0.46	2.26	1.89	55	24	1.2	0.10	424	0030-1L
2056.04	ccp	Sltst : m bl gy	0.36	1.39	0.55	2.53	1.18	118	47	1.8	0.21	597	0031-1L
2056.50	ccp	Sh/Clst: m bl gy	0.17	1.63	0.52	3.13	1.75	93	30	1.8	0.09	425	0032-1L
2058.29	ccp	Sltst : lt gn gy	0.06	0.07	1.15	0.06	-	-	-	0.1	0.46	457	0033-1L
2069.00	swc	S/Sst : w	0.16	1.27	0.88	1.44	-	-	-	1.4	0.11	419	0034-1L
2089.00	swc	Sh/Clst: drk gy to blk	0.20	1.88	0.57	3.30	1.52	124	38	2.1	0.10	422	0035-1L
2092.00	swc	Sh/Clst: drk gy to blk	0.26	1.45	0.54	2.69	1.24	117	44	1.7	0.15	426	0036-1L
2102.50	swc	S/Sst : w	0.08	0.23	0.25	0.92	-	-	-	0.3	0.26	593	0037-1L
2110.00	swc	S/Sst : w	0.11	0.40	0.56	0.71	-	-	-	0.5	0.22	484	0038-1L
2122.00	swc	S/Sst : lt gy to w	0.24	0.84	0.91	0.92	-	-	-	1.1	0.22	472	0039-1L
2126.50	swc	S/Sst : lt gy to w	0.08	0.60	0.21	2.86	-	-	-	0.7	0.12	510	0040-1L
2169.00	cut	S/Sst : w to lt brn gy	0.02	-	0.61	-	-	-	-	-	1.00	-	0063-1L
2207.00	swc	S/Sst : lt gy to w	0.17	0.79	1.29	0.61	0.65	122	198	1.0	0.18	422	0041-1L
2229.00	cut	S/Sst : w to lt brn gy	0.01	0.12	0.70	0.17	-	-	-	0.1	0.08	434	0061-1L

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Table 3 : Rock-Eval table for well NOCS 6507/8-6

Page: 4

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
2330.00	swc	Sh/Clst: drk gy to blk	1.05	14.05	3.27	4.30	7.57	186	43	15.1	0.07	419	0042-1L
2353.00	swc	S/Sst : lt y gy to w	0.06	0.66	0.43	1.53	-	-	-	0.7	0.08	481	0043-1L
2393.00	swc	S/Sst : lt y gy to w	0.06	0.51	0.43	1.19	-	-	-	0.6	0.11	529	0044-1L
2408.00	swc	S/Sst : lt y gy to w	0.11	0.92	0.45	2.04	-	-	-	1.0	0.11	470	0045-1L
2469.00	cut	Coal : blk	2.40	113.17	5.00	22.63	53.40	212	9	115.6	0.02	424	0064-1L
2522.00	swc	Sh/Clst: drk gy	0.28	2.35	0.68	3.46	2.14	110	32	2.6	0.11	447	0046-1L
2590.00	swc	Sh/Clst: m drk brn gy	0.36	1.47	1.68	0.88	1.26	117	133	1.8	0.20	425	0047-1L
2610.00	swc	S/Sst : w	0.09	0.62	0.46	1.35	-	-	-	0.7	0.13	462	0048-1L
2688.00	cut	Sh/Clst: m drk brn gy to m drk gy	0.05	0.86	0.31	2.77	1.12	77	28	0.9	0.05	432	0062-2L
2736.00	cut	S/Sst : w	0.01	0.15	0.05	3.00	0.40	38	13	0.2	0.06	400	0065-1L

Table 3b: Values for Rock-Eval standard BLACK VEN MARL

Well NOCS 6507/8-6

TMax	S1	S2	S3
422	0.46	18.26	1.81
420	0.45	17.76	2.33
421	0.48	19.01	2.15

Table 4: Visual Kerogen Composition Data, Well NOCS 6507/8-6

Depth Units: m

Depth	Spl	Lith	Amorphous			Algal/Phytoplankton						Herbaceous				Woody				Coaly			
			AM%	FA	HA	AP%	Cy	Ta	Bo	Di	De	HE%	SP	Cu	De	WO%	FL	NF	De	CO%	FS	De	Fraction
1877.5	swc	Sh/Clst	tr	*	**	5	*			?	*	80	*	*		10	*	*		5	*		0003-1L
1962.0	swc	Sh/Clst	45		*	tr	*			*	*	tr	*	*		15	*	**		40	*	**	0011-1L
1974.0	swc	Sh/Clst	75		*	tr	*					tr	*			15	*	**		10	*	**	0013-1L
1993.5	swc	Sh/Clst	45		*	20	*			*		5	*			20	*	**		10	*	**	0017-1L
2005.0	swc	Sh/Clst	60		*	15	*			*	**	5	*	**		10	*	**		10	*	**	0020-1L
2012.0	swc	Sh/Clst	35		*	5	*				**	tr	*	**		15	*	*		45	**	*	0022-1L
2025.0	swc	Sh/Clst	70		*	5					**	5	*	**		10	*	**		10	*	**	0024-1L
2042.5	swc	Sh/Clst	15		*	5	*			*		30	**	*		20	**	*		30	**	*	0027-1L
2050.0	cut	Sh/Clst	60		*	5	*			*	**	5	*	**		10	*	**		20	*	**	0054-1L
2056.5	ccp	Sh/Clst	10		*	5	*				*	20	**	*		45	*			20	**	*	0032-1L
2089.0	swc	Sh/Clst	30		*	tr	*			*	*	25	**	*		25	*	**		20	*	**	0035-1L
2330.0	swc	Sh/Clst	40	*	*	5	*			*	*	10	*	*	*	25	*			20	**	*	0042-1L
2469.0	cut	Coal	tr		*	tr	*					5	*			85	*			10	*		0064-1L
2522.0	swc	Sh/Clst	tr		*	tr	*					30	**	*	**	45	**	*		25	**	*	0046-1L

Table 5 a: Weight of EOM and Chromatographic Fraction for well NOCS 6507/8-6

Page: 1

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
1877.50	swc	Sh/Clst: lt gn gy to m ol gy	1.6	2.2	-	-	0.1	-	-	-	0.66	0003-1L
1962.00	swc	Sh/Clst: drk gy	4.6	1.1	0.3	0.2	0.5	0.2	0.5	0.6	0.94	0011-1L
1974.00	swc	Sh/Clst: drk gy to blk	5.4	13.3	0.3	0.5	8.8	3.6	0.8	12.4	9.83	0013-1L
1993.50	swc	Sh/Clst: drk gy to blk	2.9	4.4	0.3	0.6	3.2	0.3	0.9	3.5	5.87	0017-1L
2005.00	swc	Sh/Clst: drk gy to blk	3.5	10.3	0.3	0.8	6.0	3.2	1.1	9.2	7.77	0020-1L
2012.00	swc	Sh/Clst: drk gy to blk	3.5	5.9	0.3	0.6	2.6	2.4	0.9	5.0	7.14	0022-1L
2025.00	swc	Sh/Clst: drk gy to blk	4.7	13.2	0.3	0.8	7.2	4.9	1.1	12.1	9.13	0024-1L
2042.50	swc	Sh/Clst: drk gy to blk	2.7	1.3	0.3	0.3	0.4	0.3	0.6	0.7	5.64	0027-1L
2050.00	cut	Sh/Clst: drk gy to blk	4.7	9.4	0.3	0.5	5.3	3.3	0.8	8.6	8.52	0054-1L
2052.00	swc	S/Sst : w	2.0	2.0	-	-	0.1	-	-	-	1.09	0029-1L
2056.50	ccp	Sh/Clst: m bl gy	10.3	5.0	0.8	1.5	0.8	1.9	2.3	2.7	1.82	0032-1L
2089.00	swc	Sh/Clst: drk gy to blk	5.9	1.8	0.3	0.4	0.7	0.3	0.8	1.0	1.52	0035-1L
2122.00	swc	S/Sst : lt gy to w	2.1	2.2	-	-	0.3	-	-	-	0.63	0039-1L
2207.00	swc	S/Sst : lt gy to w	1.7	1.2	-	-	0.1	-	-	-	0.65	0041-1L

Table 5 a: Weight of EOM and Chromatographic Fraction for well NOCS 6507/8-6

Page: 2

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
2330.00	swc	Sh/Clst: drk gy to blk	1.4	2.4	0.3	0.4	1.2	0.5	0.8	1.7	7.57	0042-1L
2408.00	swc	S/Sst : lt y gy to w	4.3	1.5	-	-	0.1	-	-	-	0.23	0045-1L
2469.00	cut	Coal : blk	1.1	19.2	0.3	1.3	15.1	2.5	1.6	17.6	53.40	0064-1L
2522.00	swc	Sh/Clst: drk gy	1.2	1.8	-	-	0.2	-	-	-	2.14	0046-1L

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Table 5 b: Concentration of EOM and Chromatographic Fraction (wt ppm rock) for well NOCS 6507/8-6

Page: 1

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
1877.50	swc	Sh/Clst: lt gn gy to m ol gy	1375	-	-	62	-	-	-	0003-1L
1962.00	swc	Sh/Clst: drk gy	237	64	32	107	32	97	140	0011-1L
1974.00	swc	Sh/Clst: drk gy to blk	2468	61	92	1639	674	154	2314	0013-1L
1993.50	swc	Sh/Clst: drk gy to blk	1496	102	204	1088	102	306	1190	0017-1L
2005.00	swc	Sh/Clst: drk gy to blk	2915	90	225	1692	906	316	2598	0020-1L
2012.00	swc	Sh/Clst: drk gy to blk	1700	86	172	749	691	259	1440	0022-1L
2025.00	swc	Sh/Clst: drk gy to blk	2830	68	173	1547	1040	242	2587	0024-1L
2042.50	swc	Sh/Clst: drk gy to blk	477	110	110	147	110	220	257	0027-1L
2050.00	cut	Sh/Clst: drk gy to blk	2004	70	106	1125	702	176	1827	0054-1L
2052.00	swc	S/Sst : w	1005	-	-	50	-	-	-	0029-1L
2056.50	ccp	Sh/Clst: m bl gy	483	77	145	77	183	222	261	0032-1L
2089.00	swc	Sh/Clst: drk gy to blk	295	50	75	118	50	126	168	0035-1L
2122.00	swc	S/Sst : lt gy to w	1057	-	-	144	-	-	-	0039-1L
2207.00	swc	S/Sst : lt gy to w	722	-	-	60	-	-	-	0041-1L

Table 5 b: Concentration of EOM and Chromatographic Fraction (wt ppm rock) for well NOCS 6507/8-6

Page: 2

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
2330.00	swc	Sh/Clst: drk gy to blk	1764	220	330	882	330	551	1213	0042-1L
2408.00	swc	S/Sst : lt y gy to w	350	-	-	23	-	-	-	0045-1L
2469.00	cut	Coal : blk	17587	284	1146	13853	2302	1431	16155	0064-1L
2522.00	swc	Sh/Clst: drk gy	1475	-	-	163	-	-	-	0046-1L

Table 5 c: Concentration of EOM and Chromatographic Fraction (mg/g TOC(e)) for well NOCS 6507/8-6

Page: 1

Depth unit of measure: m

Depth	Typ Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
1877.50	swc Sh/Clst: lt gn gy to m ol gy	-	-	-	-	-	-	-	0003-1L
1962.00	swc Sh/Clst: drk gy	25.27	6.89	3.45	11.49	3.45	10.34	14.93	0011-1L
1974.00	swc Sh/Clst: drk gy to blk	25.11	0.62	0.95	16.68	6.86	1.57	23.54	0013-1L
1993.50	swc Sh/Clst: drk gy to blk	25.50	1.74	3.48	18.54	1.74	5.22	20.28	0017-1L
2005.00	swc Sh/Clst: drk gy to blk	37.52	1.16	2.91	21.78	11.67	4.07	33.45	0020-1L
2012.00	swc Sh/Clst: drk gy to blk	23.81	1.21	2.42	10.49	9.69	3.63	20.18	0022-1L
2025.00	swc Sh/Clst: drk gy to blk	31.00	0.75	1.90	16.95	11.40	2.66	28.35	0024-1L
2042.50	swc Sh/Clst: drk gy to blk	8.47	1.96	1.96	2.61	1.96	3.91	4.56	0027-1L
2050.00	cut Sh/Clst: drk gy to blk	23.52	0.82	1.25	13.21	8.24	2.07	21.45	0054-1L
2052.00	swc S/Sst : w	-	-	-	-	-	-	-	0029-1L
2056.50	ccp Sh/Clst: m bl gy	26.57	4.25	7.97	4.25	10.10	12.22	14.35	0032-1L
2089.00	swc Sh/Clst: drk gy to blk	19.42	3.33	4.99	7.77	3.33	8.32	11.09	0035-1L
2122.00	swc S/Sst : lt gy to w	-	-	-	-	-	-	-	0039-1L
2207.00	swc S/Sst : lt gy to w	-	-	-	-	-	-	-	0041-1L

Table 5 c: Concentration of EOM and Chromatographic Fraction (mg/g TOC(e)) for well NOCS 6507/8-6

Page: 2

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
2330.00	swc	Sh/Clst: drk gy to blk	23.31	2.91	4.37	11.66	4.37	7.28	16.03	0042-1L
2408.00	swc	S/Sst : lt y gy to w	-	-	-	-	-	-	-	0045-1L
2469.00	cut	Coal : blk	32.93	0.53	2.15	25.94	4.31	2.68	30.25	0064-1L
2522.00	swc	Sh/Clst: drk gy	-	-	-	-	-	-	-	0046-1L

Table 5d: Composition of material extracted from the rock (%) for well NOCS 6507/8-6

Depth unit of measure: m

Depth	Typ	Lithology	Sat	Aro	Asph	NSO	HC	Non-HC	Sat	HC	Sample
			EOM	EOM	EOM	EOM	EOM	EOM	Aro	Non-HC	
1877.50	swc	Sh/Clst: lt gn gy to m ol gy	-	-	-	-	-	-	-	-	0003-1L
1962.00	swc	Sh/Clst: drk gy	27.27	13.64	45.45	13.64	40.91	59.09	2.00	69.23	0011-1L
1974.00	swc	Sh/Clst: drk gy to blk	2.48	3.77	66.42	27.33	6.25	93.75	0.66	6.67	0013-1L
1993.50	swc	Sh/Clst: drk gy to blk	6.82	13.64	72.73	6.82	20.45	79.55	0.50	25.71	0017-1L
2005.00	swc	Sh/Clst: drk gy to blk	3.10	7.75	58.04	31.10	10.85	89.15	0.40	12.17	0020-1L
2012.00	swc	Sh/Clst: drk gy to blk	5.08	10.17	44.07	40.68	15.25	84.75	0.50	18.00	0022-1L
2025.00	swc	Sh/Clst: drk gy to blk	2.43	6.14	54.66	36.77	8.57	91.43	0.40	9.37	0024-1L
2042.50	swc	Sh/Clst: drk gy to blk	23.08	23.08	30.77	23.08	46.15	53.85	1.00	85.71	0027-1L
2050.00	cut	Sh/Clst: drk gy to blk	3.50	5.31	56.16	35.03	8.81	91.19	0.66	9.66	0054-1L
2052.00	swc	S/Sst : w	-	-	-	-	-	-	-	-	0029-1L
2056.50	ccp	Sh/Clst: m bl gy	16.00	30.00	16.00	38.00	46.00	54.00	0.53	85.19	0032-1L
2089.00	swc	Sh/Clst: drk gy to blk	17.14	25.71	40.00	17.14	42.86	57.14	0.67	75.00	0035-1L
2122.00	swc	S/Sst : lt gy to w	-	-	-	-	-	-	-	-	0039-1L
2207.00	swc	S/Sst : lt gy to w	-	-	-	-	-	-	-	-	0041-1L

Table 5 d: Composition of material extracted from the rock (%) for well NOCS 6507/8-6

Depth unit of measure: m

Depth	Typ	Lithology	Sat	Aro	Asph	NSO	HC	Non-HC	Sat	HC	Sample
			EOM	EOM	EOM	EOM	EOM	EOM	Aro	Non-HC	
2330.00	swc	Sh/Clst: drk gy to blk	12.50	18.75	50.00	18.75	31.25	68.75	0.67	45.45	0042-1L
2408.00	swc	S/Sst : lt y gy to w	-	-	-	-	-	-	-	-	0045-1L
2469.00	cut	Coal : blk	1.62	6.52	78.77	13.09	8.14	91.86	0.25	8.86	0064-1L
2522.00	swc	Sh/Clst: drk gy	-	-	-	-	-	-	-	-	0046-1L

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Table 6: Results of TLC-FID analysis: Rel. percentages of sep. fractions for well NOCS 6507/8-6

Page: 1

Depth unit of measure: m

Depth	S Tp	F Tp	Lithology	Sat HC	Aro HC	Resins	Asp	Tot HC	Tot Pol	Sample	
1877.50	swc	L	SHALE/CLAYSTONE	68.22	0.00	30.23	1.55	68.22	31.78	0003-1	L
1962.00	swc	L	SHALE/CLAYSTONE	36.30	2.22	60.00	1.48	38.52	61.48	0011-1	L
1974.00	swc	L	SHALE/CLAYSTONE	7.79	5.40	85.73	1.08	13.19	86.81	0013-1	L
1993.50	swc	L	SHALE/CLAYSTONE	11.34	3.63	84.13	0.91	14.97	85.03	0017-1	L
2005.00	swc	L	SHALE/CLAYSTONE	10.08	7.44	82.02	0.47	17.52	82.48	0020-1	L
2012.00	swc	L	SHALE/CLAYSTONE	13.45	4.39	81.58	0.58	17.84	82.16	0022-1	L
2025.00	swc	L	SHALE/CLAYSTONE	11.76	17.23	70.10	0.91	28.99	71.01	0024-1	L
2042.50	swc	L	SHALE/CLAYSTONE	40.29	7.77	51.46	0.49	48.06	51.94	0027-1	L
2050.00	cut	L	SHALE/CLAYSTONE	3.63	18.16	77.07	1.14	21.79	78.21	0054-1	L
2052.00	swc	L	SANDSTONE/SAND	60.37	13.41	26.22	0.00	73.78	26.22	0029-1	L
2056.50	ccp	L	SHALE/CLAYSTONE	49.07	0.00	50.00	0.93	49.07	50.93	0032-1	L
2089.00	swc	L	SHALE/CLAYSTONE	33.83	6.47	59.70	0.00	40.30	59.70	0035-1	L
2122.00	swc	L	SANDSTONE/SAND	61.63	21.32	15.12	1.94	82.95	17.05	0039-1	L
2207.00	swc	L	SANDSTONE/SAND	45.78	21.69	31.33	1.20	67.47	32.53	0041-1	L
2330.00	swc	L	SHALE/CLAYSTONE	24.09	9.24	64.36	2.31	33.33	66.67	0042-1	L
2408.00	swc	L	SANDSTONE/SAND	35.77	16.06	47.45	0.73	51.82	48.18	0045-1	L

Table 6: Results of TLC-FID analysis: Rel. percentages of sep. fractions for well NOCS 6507/8-6

Page: 2

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>	
2469.00	cut	L	COAL	15.49	35.76	47.71	1.04	51.25	48.75	0064-1	L
2522.00	swc	L	SHALE/CLAYSTONE	23.53	16.18	59.56	0.74	39.71	60.29	0046-1	L

Table 7: Saturated Hydrocarbon Ratios for well NOCS 6507/8-6

Page: 1

Depth unit of measure: m

Depth	Typ	Lithology	Pristane	Pristane	Pristane/nC17	Phytane	CPI1	nC17	Sample
			nC17	Phytane	Phytane/nC18	nC18		nC17+nC27	
1962.00	swc	Sh/Clst: drk gy	0.97	1.33	0.93	1.04	1.48	0.55	0011-1L
1974.00	swc	Sh/Clst: drk gy to blk	1.96	0.68	0.48	4.09	1.10	0.34	0013-1L
1993.50	swc	Sh/Clst: drk gy to blk	-	-	-	-	0.76	0.50	0017-1L
2005.00	swc	Sh/Clst: drk gy to blk	1.47	0.93	0.84	1.76	0.79	0.51	0020-1L
2012.00	swc	Sh/Clst: drk gy to blk	1.07	1.30	1.00	1.07	0.68	0.51	0022-1L
2025.00	swc	Sh/Clst: drk gy to blk	2.81	0.44	0.33	8.62	0.87	0.41	0024-1L
2042.50	swc	Sh/Clst: drk gy to blk	-	-	-	1.11	-	1.00	0027-1L
2050.00	cut	Sh/Clst: drk gy to blk	-	0.69	-	-	0.97	-	0054-1L
2056.50	ccp	Sh/Clst: m bl gy	0.65	1.93	0.94	0.70	1.26	0.86	0032-1L
2089.00	swc	Sh/Clst: drk gy to blk	0.82	1.81	1.02	0.80	1.53	0.53	0035-1L
2330.00	swc	Sh/Clst: drk gy to blk	-	-	-	-	1.11	0.59	0042-1L
2469.00	cut	Coal : blk	3.44	5.09	5.08	0.68	2.18	0.23	0064-1L

Table 8a: Aromatic Hydrocarbon Ratios for well NOCS 6507/8-6

Page: 1

Depth unit of measure: m

Depth	Typ	Lithology	MNR	DMNR	BPhR	2/1MP	MPI1	MPI2	Rc	DBT/P	4/1MDBT	(3+2) /1MDBT	Sample
1962.00	swc	Sh/Clst: drk gy	-	-	-	-	-	-	-	-	-	-	0011-1L
1974.00	swc	Sh/Clst: drk gy to blk	-	-	-	-	-	-	-	-	-	-	0013-1L
1993.50	swc	Sh/Clst: drk gy to blk	-	-	-	-	-	-	-	-	-	-	0017-1L
2005.00	swc	Sh/Clst: drk gy to blk	-	-	-	-	-	-	-	-	-	-	0020-1L
2012.00	swc	Sh/Clst: drk gy to blk	-	-	-	-	-	-	-	-	-	-	0022-1L
2025.00	swc	Sh/Clst: drk gy to blk	-	-	-	-	-	-	-	-	-	-	0024-1L
2042.50	swc	Sh/Clst: drk gy to blk	-	-	-	-	-	-	-	-	-	-	0027-1L
2050.00	cut	Sh/Clst: drk gy to blk	-	-	-	-	-	-	-	-	-	-	0054-1L
2056.50	ccp	Sh/Clst: m bl gy	-	-	-	-	-	-	-	-	-	-	0032-1L
2089.00	swc	Sh/Clst: drk gy to blk	-	-	-	-	-	-	-	-	-	-	0035-1L
2330.00	swc	Sh/Clst: drk gy to blk	-	-	-	-	-	-	-	-	-	-	0042-1L
2469.00	cut	Coal : blk	0.62	0.67	-	-	0.76	0.96	0.86	0.16	2.79	0.83	0064-1L

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Table 8b: Aromatic Hydrocarbon Ratios for well NOCS 6507/8-6

Page: 1

Depth unit of measure: m

Depth	Typ	Lithology	F1	F2	Sample
1962.00	swc	Sh/Clst: drk gy	-	-	0011-1L
1974.00	swc	Sh/Clst: drk gy to blk	-	-	0013-1L
1993.50	swc	Sh/Clst: drk gy to blk	-	-	0017-1L
2005.00	swc	Sh/Clst: drk gy to blk	-	-	0020-1L
2012.00	swc	Sh/Clst: drk gy to blk	-	-	0022-1L
2025.00	swc	Sh/Clst: drk gy to blk	-	-	0024-1L
2042.50	swc	Sh/Clst: drk gy to blk	-	-	0027-1L
2050.00	cut	Sh/Clst: drk gy to blk	-	-	0054-1L
2056.50	ccp	Sh/Clst: m bl gy	-	-	0032-1L
2089.00	swc	Sh/Clst: drk gy to blk	-	-	0035-1L
2330.00	swc	Sh/Clst: drk gy to blk	-	-	0042-1L
2469.00	cut	Coal : blk	1.00	0.63	0064-1L

Table 9A: Variation in Triterpane Distribution (peak height) SIR for Well NOCS 6507/8-6

Page: 1

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
1877.50	Sh/Clst	1.18	0.54	0.24	0.98	0.49	0.07	0.11	0.11	0.10	0.34	0.86	0.49	0.16	51.61	0003-1
1962.00	Sh/Clst	3.04	0.75	0.18	0.90	0.47	0.03	0.06	0.07	0.06	0.12	0.63	0.46	0.53	48.15	0011-1
1974.00	Sh/Clst	7.35	0.88	0.16	0.68	0.40	0.02	0.26	0.39	0.21	0.04	0.47	0.38	1.04	19.96	0013-1
1993.50	Sh/Clst	6.46	0.87	0.20	0.82	0.45	0.02	0.30	0.37	0.23	0.18	0.55	0.46	0.85	19.11	0017-1
2005.00	Sh/Clst	7.81	0.89	0.23	0.79	0.44	0.02	14.62	18.61	0.94	0.04	0.60	0.49	0.83	26.84	0020-1
2012.00	Sh/Clst	4.16	0.81	0.23	1.02	0.50	0.03	14.04	13.77	0.93	0.13	0.63	0.54	0.70	29.32	0022-1
2025.00	Sh/Clst	7.46	0.88	0.20	0.99	0.50	-	19.22	19.47	0.95	0.07	0.63	0.49	0.57	26.28	0024-1
2042.50	Sh/Clst	2.28	0.70	0.23	1.04	0.51	0.04	1.91	1.84	0.66	0.22	0.73	0.51	0.38	50.51	0027-1
2050.00	Sh/Clst	10.00	0.91	0.18	0.87	0.46	-	6.38	7.35	0.86	0.02	0.49	0.44	0.96	13.99	0054-1
2052.00	S/Sst	1.14	0.53	0.19	0.80	0.44	0.07	0.24	0.30	0.19	0.12	0.85	0.45	0.19	53.10	0029-1
2056.50	Sh/Clst	2.35	0.70	0.21	0.75	0.43	0.06	0.48	0.64	0.32	0.12	0.68	0.44	0.51	38.73	0032-1
2089.00	Sh/Clst	2.83	0.74	0.27	0.87	0.47	0.05	0.30	0.35	0.23	0.13	0.69	0.47	0.46	40.80	0035-1
2122.00	S/Sst	1.16	0.54	0.19	0.94	0.48	0.07	0.14	0.15	0.12	0.29	0.88	0.48	0.13	53.78	0039-1
2207.00	S/Sst	1.36	0.58	0.21	0.89	0.47	0.05	0.17	0.19	0.14	1.94	0.85	0.47	0.17	43.36	0041-1
2330.00	Sh/Clst	2.86	0.74	0.19	0.72	0.42	0.05	3.99	5.52	0.80	0.10	0.68	0.43	0.48	42.26	0042-1

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Table 9A: Variation in Triterpane Distribution (peak height) SIR for Well NOCS 6507/8-6

Page: 2

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
2408.00	S/Sst	1.19	0.54	0.19	0.75	0.43	0.09	0.21	0.28	0.17	0.27	0.88	0.44	0.16	46.72	0045-1
2469.00	Coal	5.93	0.86	0.19	0.53	0.35	0.07	0.11	0.21	0.10	0.01	0.63	0.41	0.75	15.75	0064-1
2522.00	Sh/Clst	1.55	0.61	0.16	0.58	0.37	0.05	0.12	0.21	0.11	0.20	0.79	0.39	0.31	34.49	0046-1

List of Triterpane Distribution Ratios

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

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Table 9B: Variation in Sterane Distribution (peak height) SIR for Well NOCS 6507/8-6

Page: 1

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Ratio6	Ratio7	Ratio8	Ratio9	Ratio10	Sample
1877.50	Sh/Clst	0.67	36.91	75.45	1.07	0.81	0.49	0.35	0.61	0.58	2.44	0003-1
1962.00	Sh/Clst	0.28	11.65	59.04	0.68	0.86	0.36	0.28	0.42	0.13	0.82	0011-1
1974.00	Sh/Clst	0.06	—	54.76	0.18	1.00	0.12	0.10	0.38	—	0.61	0013-1
1993.50	Sh/Clst	0.18	4.63	45.95	0.56	0.90	0.35	0.26	0.30	0.05	0.45	0017-1
2005.00	Sh/Clst	0.07	4.44	92.53	0.27	0.99	0.04	0.04	0.86	0.05	6.48	0020-1
2012.00	Sh/Clst	0.39	—	88.17	0.70	1.00	0.13	0.12	0.79	—	3.73	0022-1
2025.00	Sh/Clst	0.08	1.09	90.88	0.53	1.00	0.04	0.03	0.83	0.01	5.04	0024-1
2042.50	Sh/Clst	0.52	18.90	71.32	0.88	0.87	0.33	0.26	0.55	0.23	1.53	0027-1
2050.00	Sh/Clst	0.03	0.33	85.24	0.14	1.00	0.05	0.05	0.74	—	2.90	0054-1
2052.00	S/Sst	0.69	36.04	75.34	1.11	0.81	0.32	0.23	0.60	0.56	2.39	0029-1
2056.50	Sh/Clst	0.50	17.06	59.40	0.93	0.81	0.39	0.32	0.42	0.21	0.88	0032-1
2089.00	Sh/Clst	0.55	24.52	68.63	1.08	0.82	0.43	0.34	0.52	0.32	1.45	0035-1
2122.00	S/Sst	0.78	37.09	77.70	1.26	0.82	0.53	0.41	0.64	0.59	2.77	0039-1
2207.00	S/Sst	0.88	35.63	76.29	2.43	0.82	0.88	0.81	0.62	0.55	2.50	0041-1
2330.00	Sh/Clst	0.34	8.21	74.88	0.70	0.95	0.25	0.21	0.60	0.09	1.62	0042-1

Table 9B: Variation in Sterane Distribution (peak height) SIR for Well NOCS 6507/8-6

Page: 2

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Ratio6	Ratio7	Ratio8	Ratio9	Ratio10	Sample
2408.00	S/Sst	0.74	36.63	77.10	1.19	0.82	0.50	0.38	0.63	0.58	2.66	0045-1
2469.00	Coal	0.48	17.56	73.17	0.10	0.89	0.17	0.11	0.58	0.21	1.65	0064-1
2522.00	Sh/Clst	0.69	20.78	71.18	0.90	0.86	0.51	0.39	0.55	0.26	1.56	0046-1

List of Sterane Distribution Ratios

Ratio 1: $27\text{d}\beta\text{S} / 27\text{d}\beta\text{S} + 27\text{aaR}$

Ratio 2: $29\text{aaS} / 29\text{aaS} + 29\text{aaR} (\%)$

Ratio 3: $2 \cdot (29\beta\beta\text{R} + 29\beta\beta\text{S}) / (29\text{aaS} + 29\text{aaR} + 2 \cdot (29\beta\beta\text{R} + 29\beta\beta\text{S})) (\%)$

Ratio 4: $27\text{d}\beta\text{S} + 27\text{d}\beta\text{R} + 27\text{daS} + 27\text{daR} / 29\text{d}\beta\text{S} + 29\text{d}\beta\text{R} + 29\text{daS} + 29\text{daR}$

Ratio 5: $29\beta\beta\text{R} + 29\beta\beta\text{S} / 29\beta\beta\text{R} + 29\beta\beta\text{S} + 29\text{aaS}$

Ratio 6: $21\text{a} + 22\text{a} / 21\text{a} + 22\text{a} + 29\text{aaS} + 29\beta\beta\text{R} + 29\beta\beta\text{S} + 29\text{aaR}$

Ratio 7: $21\text{a} + 22\text{a} / 21\text{a} + 22\text{a} + 28\text{daR} + 28\text{aaS} + 29\text{daR} + 29\text{aaS} + 29\beta\beta\text{R} + 29\beta\beta\text{S} + 29\text{aaR}$

Ratio 8: $29\beta\beta\text{R} + 29\beta\beta\text{S} / 29\text{aaS} + 29\beta\beta\text{R} + 29\beta\beta\text{S} + 29\text{aaR}$

Ratio 9: $29\text{aaS} / 29\text{aaR}$

Ratio 10: $29\beta\beta\text{R} + 29\beta\beta\text{S} / 29\text{aaR}$

Table 9C: Variation in Triaromatic Sterane Distribution (peak height) for Well NOCS 6507/8-6

Page: 1

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Sample
1877.50	Sh/Clst	0.64	0.61	0.41	0.42	0.56	0003-1
1962.00	Sh/Clst	0.18	0.20	0.12	0.09	0.19	0011-1
1974.00	Sh/Clst	0.10	0.11	0.12	0.07	0.37	0013-1
1993.50	Sh/Clst	0.10	0.09	0.12	0.07	0.39	0017-1
2005.00	Sh/Clst	0.05	0.06	0.07	0.04	0.35	0020-1
2012.00	Sh/Clst	0.08	0.08	0.10	0.06	0.40	0022-1
2025.00	Sh/Clst	0.09	0.08	0.09	0.06	0.27	0024-1
2042.50	Sh/Clst	0.18	0.17	0.17	0.12	0.42	0027-1
2050.00	Sh/Clst	0.09	0.08	0.10	0.06	0.36	0054-1
2052.00	S/Sst	0.62	0.61	0.47	0.43	0.62	0029-1
2056.50	Sh/Clst	0.24	0.24	0.21	0.15	0.44	0032-1
2089.00	Sh/Clst	0.45	0.49	0.37	0.28	0.55	0035-1
2122.00	S/Sst	0.83	0.79	0.65	0.65	0.76	0039-1

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: $a1 / a1 + d1$

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Table 9C: Variation in Triaromatic Sterane Distribution (peak height) for Well NOCS 6507/8-6

Page: 2

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Sample
2207.00	S/Sst	0.76	0.72	0.59	0.57	0.74	0041-1
2330.00	Sh/Clst	0.18	0.24	0.22	0.13	0.46	0042-1
2408.00	S/Sst	0.75	0.73	0.54	0.52	0.66	0045-1
2469.00	Coal	-	1.00	0.41	-	-	0064-1
2522.00	Sh/Clst	0.71	0.74	0.58	0.54	0.70	0046-1

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 9D: Variation in Monoaromatic Sterane Distribution (peak height) for Well NOCS 6507/8-6

Page: 1

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Sample
1877.50	Sh/Clst	0.30	0.21	0.14	0.14	0003-1
1962.00	Sh/Clst	0.13	0.09	0.06	0.06	0011-1
1974.00	Sh/Clst	0.19	0.10	0.10	0.06	0013-1
1993.50	Sh/Clst	0.25	0.11	0.12	0.07	0017-1
2005.00	Sh/Clst	0.24	0.13	0.10	0.05	0020-1
2012.00	Sh/Clst	0.28	0.16	0.13	0.07	0022-1
2025.00	Sh/Clst	0.17	0.10	0.07	0.04	0024-1
2042.50	Sh/Clst	0.12	0.07	0.06	0.04	0027-1
2050.00	Sh/Clst	0.19	0.11	0.09	0.05	0054-1
2052.00	S/Sst	0.26	0.17	0.12	0.10	0029-1
2056.50	Sh/Clst	0.14	0.09	0.07	0.05	0032-1
2089.00	Sh/Clst	0.40	0.24	0.22	0.15	0035-1
2122.00	S/Sst	0.32	0.23	0.16	0.12	0039-1
2207.00	S/Sst	0.38	0.34	0.19	0.18	0041-1

Ratio1: A1 / A1 + E1

Ratio2: B1 / B1 + E1

Ratio3: A1 / A1 + E1 + G1

Ratio4: A1+B1 / A1+B1+Cl+D1+E1+F1+G1+H1+I1

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Table 9D: Variation in Monoaromatic Sterane Distribution (peak height) for Well NOCS 6507/8-6

Page: 2

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Sample
2330.00	Sh/Clst	0.37	0.23	0.17	0.10	0042-1
2408.00	S/Sst	0.35	0.23	0.31	0.16	0045-1
2469.00	Coal	0.45	0.32	0.12	0.08	0064-1
2522.00	Sh/Clst	0.38	0.30	0.14	0.10	0046-1

Ratio1: A1 / A1 + E1
Ratio2: B1 / B1 + E1

Ratio3: A1 / A1 + E1 + G1
Ratio4: A1+B1 / A1+B1+Cl+D1+E1+F1+G1+H1+I1

Table 9E: Aromatisation of Steranes (peak height) for Well NOCS 6507/8-6

Page: 1

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Sample
1877.50	Sh/Clst	0.74	0.49	0003-1
1962.00	Sh/Clst	0.73	0.62	0011-1
1974.00	Sh/Clst	0.86	0.42	0013-1
1993.50	Sh/Clst	0.84	0.44	0017-1
2005.00	Sh/Clst	0.73	0.50	0020-1
2012.00	Sh/Clst	0.72	0.53	0022-1
2025.00	Sh/Clst	0.89	0.25	0024-1
2042.50	Sh/Clst	0.88	0.38	0027-1
2050.00	Sh/Clst	0.85	0.40	0054-1
2052.00	S/Sst	0.88	0.29	0029-1
2056.50	Sh/Clst	0.84	0.37	0032-1
2089.00	Sh/Clst	0.86	0.32	0035-1
2122.00	S/Sst	0.80	0.38	0039-1

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

Ratio2: $g1 / g1 + i1$

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Table 9E: Aromatisation of Steranes (peak height) for Well NOCS 6507/8-6

Page: 2

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Sample
2207.00	S/Sst	0.89	0.24	0041-1
2330.00	Sh/Clst	0.85	0.31	0042-1
2408.00	S/Sst	0.62	0.45	0045-1
2469.00	Coal	0.94	-	0064-1
2522.00	Sh/Clst	0.85	0.20	0046-1

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

Ratio2: $g1 / g1 + I1$

Table 9F: Raw triterpane data (peak height) m/z 191 SIR for Well NOCS 6507/8-6

Page: 1

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	
1877.50	Sh/Clst	12229.9 18108.9 7657.5	6236.6 5664.7 4254.7	2527.3 1307.3 3988.7	4063.7 2704.0 2635.9	1438.9 0.0 1597.2	5584.8 18497.0 2149.9	6603.7 2979.7 1176.0	2063.8 0.0 1354.6	0.0 6899.6 990.5	0003-1
1962.00	Sh/Clst	398361.6 1431828.0 1545405.0	186646.9 210109.3 162771.4	102792.6 52437.0 175288.8	163888.9 669245.2 136311.5	44938.3 0.0 73548.9	185801.0 1585550.0 53846.6	564011.3 920987.0 36610.9	96542.7 0.0 39363.0	46701.8 432915.7 29461.0	0011-1
1974.00	Sh/Clst	13757.4 120658.9 64147.0	7401.8 0.0 5443.4	6122.6 3749.0 21834.4	11854.6 109068.1 0.0	2397.9 0.0 9485.6	10162.2 177760.4 0.0	74708.4 202583.6 4155.2	46715.6 0.0 0.0	13594.5 10527.2 9632.6	0013-1
1993.50	Sh/Clst	277842.1 646246.5 570014.3	145316.8 87877.4 30421.6	75781.6 16183.5 128760.4	68559.3 559614.5 30649.2	25962.9 0.0 55078.4	54244.5 787868.4 0.0	350626.9 656055.5 0.0	236014.9 0.0 0.0	45284.1 72220.2 0.0	0017-1
2005.00	Sh/Clst	640.6 5787.9 6059.2	286.5 844.4 367.3	292.6 164.3 1001.2	669.8 6129.7 688.7	156.3 0.0 603.2	477.6 7370.8 138.1	3729.5 4850.7 288.9	107740.0 0.0 163.6	1481.9 801.0 259.2	0020-1

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Table 9F: Raw triterpane data (peak height) m/z 191 SIR for Well NOCS 6507/8-6

Page: 2

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	
2012.00	Sh/Clst	55713.1	28948.4	0.0	25181.6	5776.4	24063.2	100156.7	3011899.0	0.0	0022-1
		218664.8	32802.2	6113.3	174906.4	0.0	214546.6	126535.7	0.0	26520.4	
		113833.7	13708.8	33042.9	13061.7	13494.8	4628.9	6022.2	10093.0	8738.8	
2025.00	Sh/Clst	51265.5	28619.0	17605.8	21908.3	9423.8	23719.5	176868.4	8308063.0	124187.0	0024-1
		426744.7	89848.7	0.0	229789.5	0.0	432246.8	258664.8	0.0	20293.8	
		138418.8	11882.7	33335.6	0.0	29514.7	0.0	10775.5	0.0	16575.8	
2042.50	Sh/Clst	166920.0	74351.1	28187.4	50342.4	16192.8	61120.0	139523.9	658167.6	41699.1	0027-1
		358504.2	87881.5	13050.6	135408.4	0.0	343732.9	128205.4	0.0	91623.1	
		147460.2	50036.9	49030.1	49864.1	25881.3	17800.0	12482.4	15500.6	11628.5	
2050.00	Sh/Clst	61310.4	30820.7	43791.4	62125.8	11924.0	57869.3	578683.0	8422768.0	331457.3	0054-1
		1146544.0	190720.6	0.0	982259.5	0.0	1320538.0	1390501.0	0.0	52416.0	
		761726.6	23841.6	146621.4	0.0	78347.0	0.0	25487.4	0.0	46151.7	
2052.00	S/Sst	13381.1	8163.4	4223.2	10222.1	2863.0	16468.9	18742.5	15904.9	0.0	0029-1
		53848.4	20156.4	4975.9	11068.6	0.0	67508.9	11545.7	0.0	25090.3	
		23881.7	15043.8	13286.6	11538.1	7158.5	7747.6	4069.4	5402.9	728.8	

Table 9F: Raw triterpane data (peak height) m/z 191 SIR for Well NOCS 6507/8-6

Page: 3

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	
2056.50	Sh/Clst	15899.8 44423.0 36144.5	7323.5 14911.3 6499.0	3648.7 3833.8 10279.5	5725.5 24391.7 6922.9	1822.8 0.0 4407.5	9851.1 59613.6 2241.4	23193.2 28480.0 2042.2	28325.4 0.0 2074.9	6286.9 13673.3 1473.2	0032-1
2089.00	Sh/Clst	14610.7 51557.4 48650.7	7426.4 51557.4 7405.7	6227.0 2677.1 10743.5	9110.9 24231.7 9351.6	2578.9 0.0 4897.4	10938.9 58927.1 2580.7	30966.2 26240.0 2061.7	17963.9 0.0 1910.0	4215.2 15403.6 1595.5	0035-1
2122.00	S/Sst	84134.7 146949.2 52007.5	44908.4 40255.3 34419.8	17381.2 10522.0 29577.6	24327.8 18409.7 22343.2	8863.1 0.0 13361.2	36751.0 157162.7 14935.6	42647.7 21227.9 7953.8	21801.6 0.0 9820.0	0.0 61468.0 7016.8	0039-1
2207.00	S/Sst	162261.4 41777.1 17048.1	91156.6 10970.7 7611.8	35279.9 2566.7 9944.7	14622.3 6916.9 5828.5	12972.9 0.0 3247.7	11018.9 46942.0 4289.3	15004.9 8172.2 1957.4	7924.5 0.0 0.0	0.0 15152.9 0.0	0041-1
2330.00	Sh/Clst	71572.0 256293.1 129484.7	34138.8 82016.5 28133.3	17069.2 17370.5 38439.2	34768.8 129076.0 32989.2	7612.0 0.0 20401.5	42811.6 354503.4 9332.4	122443.8 166772.0 8184.5	1414544.0 0.0 9727.9	0.0 54313.9 10945.8	0042-1

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Table 9F: Raw triterpane data (peak height) m/z 191 SIR for Well NOCS 6507/8-6

Page: 4

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	
2408.00	S/Sst	47523.5	24302.8	10002.9	11836.0	5151.2	19746.8	23460.2	18689.8	0.0	0045-1
		66466.0	22036.2	7612.9	12284.0	0.0	88679.4	12110.1	0.0	29034.9	
		25758.8	18298.9	20871.4	12608.9	6744.6	8916.0	4863.1	0.0	0.0	
2469.00	Coal	30674.2	14792.1	26881.2	57587.4	19344.4	96730.1	573402.4	170451.0	186918.9	0064-1
		812793.4	263345.3	101236.5	853648.9	0.0	1521252.0	906790.3	0.0	67167.2	
		661023.1	28583.2	152880.6	0.0	43297.3	0.0	16656.6	0.0	2334.5	
2522.00	Sh/Clst	25981.1	14432.9	5564.5	4987.2	2432.7	10881.6	16879.6	8806.6	0.0	0046-1
		41339.6	22421.8	3367.0	16052.9	0.0	71122.5	19221.7	0.0	10796.7	
		21351.6	5978.8	11357.5	5934.0	2205.4	9978.2	1898.6	0.0	0.0	

Table 9G: Raw sterane data (peak height) m/z 217 SIR for Well NOCS 6507/8-6

Page: 1

Depth unit of measure: m

Depth	Lithology	21a	22a	27d β S	27d β R	27daS	27daR	28d β S	28d β R	28daS*	Sample
		29d β S*	28daR*	27aaR	29d β R	29daS	28aaS	29daR*	28 $\beta\beta$ S		
		28aaR	29aaS	29 $\beta\beta$ R	29 $\beta\beta$ S	29aaR					
1877.50	Sh/Clst	5103.3 3727.4 787.7	1689.1 2701.1 1044.8	4161.8 2096.2 2376.2	2745.1 2188.7 1974.1	1016.9 746.7 1786.1	1162.4 844.9	2574.1 1809.3	1404.0 1940.5	2043.2	0003-1
1962.00	Sh/Clst	209450.8 144977.0 175530.9	85323.5 85046.9 35891.3	98518.3 248880.7 145341.5	63999.7 59436.4 76761.6	31220.3 23631.6 272258.4	41502.0 28668.0	52196.9 116138.1	32554.0 61006.0	137346.7	0011-1
1974.00	Sh/Clst	14213.5 11959.6 29591.7	5816.9 5553.2 0.0	2791.5 44726.9 49573.3	2073.3 7703.0 6483.1	1458.6 3440.2 92637.8	2091.1 2550.0	2433.0 23525.6	2259.0 4716.0	5762.2	0013-1
1993.50	Sh/Clst	175564.1 58394.5 62703.0	81903.4 192681.9 15209.2	38462.9 175461.4 117388.3	22185.9 24014.8 22376.0	11710.9 14476.2 313555.9	15145.0 17305.0	19407.0 60472.7	13046.9 21477.7	46360.4	0017-1
2005.00	Sh/Clst	94958.3 102257.1 55624.3	30818.6 56620.2 16888.3	23003.1 313313.7 2035248.0	16679.3 26285.0 321254.7	11275.6 27841.2 363814.9	11691.9 24040.8	18676.4 73747.2	12055.6 38412.4	34283.0	0020-1

* 28daS coel with 27aaS, 29d β S coel with 27 $\beta\beta$ R, 28daR coel with 27 $\beta\beta$ S, 29daR coel with 28 $\beta\beta$ R

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Table 9G: Raw sterane data (peak height) m/z 217 SIR for Well NOCS 6507/8-6

Page: 2

Depth unit of measure: m

Depth	Lithology	21a	22a	27d β S	27d β R	27daS	27daR	28d β S	28d β R	28daS*	Sample
		29d β S*	28daR*	27aaR	29d β R	29daS	28aaS	29daR*	28 β β S		
		28aaR	29aaS	29 β β R	29 β β S	29aaR					
2012.00	Sh/Clst	34441.4 16446.1 10793.7	15305.0 11711.1 0.0	11878.4 18529.7 212064.3	7219.0 6639.4 60598.0	3914.4 2122.4 73146.2	4363.4 3416.8	8224.6 14073.3	4261.7 7300.1	8943.2	0022-1
2025.00	Sh/Clst	44806.0 30332.6 61284.8	19214.5 15005.6 3153.9	13795.3 148513.3 1438868.0	9669.3 0.0 0.0	5279.0 0.0 285568.9	7501.2 10486.4	7394.1 37612.0	6792.7 12319.3	12752.3	0024-1
2042.50	Sh/Clst	69128.2 46439.4 19575.7	28834.7 34818.9 16546.7	44397.0 41798.5 71222.4	27274.6 23823.2 37615.3	11735.6 8429.5 70991.4	13528.7 10345.7	22168.7 31579.4	11463.1 25900.9	25320.3	0027-1
2050.00	Sh/Clst	93804.6 81609.2 111640.1	27716.6 85452.1 1773.9	8281.9 263434.8 1202402.0	9234.8 40769.3 372967.0	6800.1 22433.9 543760.3	10472.5 16915.8	14886.8 104182.4	10541.2 28636.1	40092.4	0054-1
2052.00	S/Sst	8389.4 10377.1 2773.3	3457.4 7258.7 3541.4	12506.3 5508.7 8127.4	7723.3 5920.5 6880.0	3046.8 1985.2 6285.5	3151.5 2295.5	6963.7 5588.3	3661.7 5185.8	5021.2	0029-1

* 28daS coel with 27aaS, 29d β S coel with 27 β β R, 28daR coel with 27 β β S, 29daR coel with 28 β β R

Table 9G: Raw sterane data (peak height) m/z 217 SIR for Well NOCS 6507/8-6

Page: 3

Depth unit of measure: m

Depth	Lithology	21a	22a	27d β S	27d β R	27daS	27daR	28d β S	28d β R	28daS*	Sample
		29d β S*	28daR*	27aaR	29d β R	29daS	28aaS	29daR*	28 β β S		
		28aaR	29aaS	29 β β R	29 β β S	29aaR					
2056.50	Sh/Clst	9548.8 4467.2 2876.9	3462.6 3651.0 1980.2	4767.8 4752.0 5192.0	3242.4 2992.5 3301.0	1441.7 1074.4 9628.0	1575.5 952.2	2800.4 3282.6	1614.2 2449.3	2131.7	0032-1
2089.00	Sh/Clst	11850.2 5415.8 2648.1	4306.4 4734.7 2546.7	6556.9 5384.9 6890.9	4268.8 2961.3 4470.9	1766.9 1235.8 7840.4	2059.0 1460.6	3873.5 3960.2	1838.5 3114.7	3403.1	0035-1
2122.00	S/Sst	43724.8 25414.1 4727.7	18905.6 17028.4 7400.2	34796.3 9688.3 18569.0	20816.4 15254.4 16190.8	9584.9 4868.0 12553.7	9359.1 4479.1	15365.0 13586.9	8657.1 12214.8	9942.2	0039-1
2207.00	S/Sst	69806.4 7503.3 1576.9	36430.9 5404.9 1944.1	19864.9 2706.3 4690.6	10292.0 3636.4 4087.2	5223.2 1561.9 3511.8	5075.6 1457.8	6353.7 3980.7	3479.3 3338.2	3460.8	0041-1
2330.00	Sh/Clst	51914.8 29781.9 26067.9	20788.3 22745.6 7265.3	23712.3 45619.8 98296.3	14833.6 16719.9 33534.9	5931.7 5165.9 81195.0	7875.9 4556.3	12808.3 22690.8	7915.5 13170.3	14111.8	0042-1

* 28daS coel with 27aaS, 29d β S coel with 27 β β R, 28daR coel with 27 β β S, 29daR coel with 28 β β R

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Table 9G: Raw sterane data (peak height) m/z 217 SIR for Well NOCS 6507/8-6

Page: 4

Depth unit of measure: m

Depth	Lithology	21a	22a	27d β S	27d β R	27daS	27daR	28d β S	28d β R	28daS*	Sample
		29d β S*	28daR*	27aaR	29d β R	29daS	28aaS	29daR*	28 β BS		
		28aaR	29aaS	29 β BR	29 β BS	29aaR					
2408.00	S/Sst	24594.9 15007.0 3297.7	9261.7 9433.5 4661.1	18459.1 6340.0 12049.6	11361.9 8295.7 9375.9	5998.6 2955.3 8062.8	5194.9 3129.3	9686.1 8331.3	5683.4 7288.6	6905.9	0045-1
2469.00	Coal	61099.5 56051.5 100238.1	15563.8 55557.3 28764.8	17172.7 18522.9 88204.1	0.0 40063.4 135214.8	10301.3 37135.8 135077.4	0.0 27469.3	0.0 137886.4	16046.6 0.0	145365.3	0064-1
2522.00	Sh/Clst	12402.3 3799.3 3645.4	5376.3 3263.3 1576.3	5024.5 2262.9 4419.3	2954.6 2198.8 4945.5	1295.6 711.5 6007.6	1330.6 2128.9	2992.1 5090.6	1669.6 2531.8	3617.7	0046-1

* 28daS coel with 27aaS, 29d β S coel with 27 β BR, 28daR coel with 27 β BS, 29daR coel with 28 β BR

Table 9H: Raw triaromatic sterane data (peak height) m/z 231 for Well NOCS 6507/8-6

Page: 1

Depth unit of measure: m

Depth	Lithology	a1	b1	c1	d1	e1	f1	g1	Sample
1877.50	Sh/Clst	880.8	777.8	409.7	701.9	405.1	332.5	501.1	0003-1
1962.00	Sh/Clst	7062.1	8087.8	7593.0	29989.8	24578.9	17856.9	31479.4	0011-1
1974.00	Sh/Clst	27516.0	29217.5	13072.8	46136.3	62511.8	50361.2	244195.6	0013-1
1993.50	Sh/Clst	32845.9	29985.3	13929.4	51988.1	67819.4	53598.7	294590.3	0017-1
2005.00	Sh/Clst	64197.8	65819.8	33091.3	120729.6	228118.8	172861.0	1121669.0	0020-1
2012.00	Sh/Clst	24473.9	23129.8	10319.7	37002.2	77037.3	47972.7	275226.0	0022-1
2025.00	Sh/Clst	25268.5	21731.9	18875.4	69643.2	70371.8	58736.8	250068.3	0024-1
2042.50	Sh/Clst	15686.2	14422.4	5223.3	21579.4	28601.2	18178.3	69163.9	0027-1
2050.00	Sh/Clst	51551.4	49175.1	23327.4	92790.0	123011.7	99873.1	550902.2	0054-1
2052.00	S/Sst	2159.9	2013.1	518.2	1308.8	848.6	648.1	1311.4	0029-1
2056.50	Sh/Clst	8566.7	8597.8	3070.5	10836.7	13319.2	8675.6	26795.5	0032-1
2089.00	Sh/Clst	9759.0	11248.0	2536.8	7969.3	7905.1	4894.5	11838.9	0035-1
2122.00	S/Sst	17125.5	13635.7	2153.5	5419.7	3228.5	2464.8	3567.7	0039-1
2207.00	S/Sst	2496.8	2020.6	377.5	867.7	557.0	535.5	787.0	0041-1
2330.00	Sh/Clst	14938.0	20780.0	4734.1	17551.0	20486.9	17439.6	66601.8	0042-1

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Table 9H: Raw triaromatic sterane data (peak height) m/z 231 for Well NOCS 6507/8-6

Page: 2

Depth unit of measure: m

Depth	Lithology	a1	b1	c1	d1	e1	f1	g1	Sample
2408.00	S/Sst	10077.6	8800.3	2061.6	5202.9	3105.0	2704.3	3310.7	0045-1
2469.00	Coal	0.0	88336.0	0.0	51663.7	47983.4	26682.6	0.0	0064-1
2522.00	Sh/Clst	3259.9	3705.0	802.3	1364.3	847.3	597.7	1334.2	0046-1

Table 9I: Raw monoaromatic sterane data (peak height) m/z 253 for Well NOCS 6507/8-6

Page: 1

Depth unit of measure: m

Depth	Lithology	A1	B1	C1	D1	E1	F1	G1	H1	I1	Sample
1877.50	Sh/Clst	639.5	383.6	801.9	867.1	1486.3	273.0	2427.4	140.6	526.3	0003-1
1962.00	Sh/Clst	11953.0	7946.0	9783.4	12032.7	81202.4	6022.1	94842.0	84681.0	19407.7	0011-1
1974.00	Sh/Clst	118319.4	52522.2	265167.6	248892.1	489305.9	37700.4	584903.5	643554.8	344031.6	0013-1
1993.50	Sh/Clst	148289.0	52794.9	184045.4	189886.6	440645.3	40308.8	613867.1	659887.0	368414.8	0017-1
2005.00	Sh/Clst	173844.5	78756.5	245216.0	339112.6	541223.1	66923.4	1027096.0	1325376.0	1104208.0	0020-1
2012.00	Sh/Clst	61559.4	30179.6	65225.6	60897.5	154555.2	17135.0	266766.0	334313.4	245336.7	0022-1
2025.00	Sh/Clst	102894.9	55935.9	236758.2	261755.7	501252.9	41810.1	919871.4	1196311.0	735723.4	0024-1
2042.50	Sh/Clst	30567.5	16211.8	112254.3	90966.9	217222.2	16459.5	252523.3	239942.5	111623.6	0027-1
2050.00	Sh/Clst	199201.4	99064.3	408395.7	429470.7	839928.6	31235.8	1265221.0	1453480.0	811244.9	0054-1
2052.00	S/Sst	2248.6	1340.8	3325.2	3996.3	6332.6	1187.8	10109.2	5961.3	3274.2	0029-1
2056.50	Sh/Clst	10072.8	5602.8	29361.4	25114.0	60036.2	5101.8	76197.5	78413.7	45673.4	0032-1
2089.00	Sh/Clst	25896.8	12213.3	24542.4	20945.5	38187.9	3869.7	53984.8	51541.2	25273.5	0035-1
2122.00	S/Sst	5753.7	3657.7	6760.0	7922.5	12307.3	2942.7	19008.9	11147.0	5826.0	0039-1
2207.00	S/Sst	3028.9	2506.8	2367.2	3253.5	4917.6	993.5	7629.4	4050.7	2539.1	0041-1
2330.00	Sh/Clst	56456.5	29023.5	52232.2	47094.1	95527.5	15752.0	174207.6	204354.2	145423.8	0042-1

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Table 9I: Raw monoaromatic sterane data (peak height) m/z 253 for Well NOCS 6507/8-6

Page: 2

Depth unit of measure: m

Depth	Lithology	A1	B1	C1	D1	E1	F1	G1	H1	I1	Sample
2408.00	S/Sst	3298.9	1840.3	3046.5	3921.0	6218.7	1420.0	1150.6	7456.2	3975.1	0045-1
2469.00	Coal	98899.8	57876.1	37431.9	17164.8	121418.4	33479.4	618955.1	591319.6	452488.5	0064-1
2522.00	Sh/Clst	1923.2	1315.7	1352.5	1454.9	3093.8	532.2	9006.3	7030.9	5467.0	0046-1

Table 9J: Raw sterane data (peak height) m/z 218 SIR for Well NOCS 6507/8-6

Page: 1

Depth unit of measure: m

Depth	Lithology	27 β 3R	27 β 3S	28 β 3R	28 β 3S	29 β 3R	29 β 3S	30 β 3R	30 β 3S	Sample
1877.50	Sh/Clst	2998.7	2493.0	1775.9	1967.8	2148.1	2051.3	416.4	338.1	0003-1
1962.00	Sh/Clst	103988.2	77081.0	79434.5	62800.8	101500.7	82324.1	19895.5	27408.7	0011-1
1974.00	Sh/Clst	7116.2	3230.3	10698.7	3537.7	20552.0	5405.9	5822.7	12320.5	0013-1
1993.50	Sh/Clst	50361.3	50404.8	40011.9	19493.1	54616.8	23954.7	24463.4	24878.1	0017-1
2005.00	Sh/Clst	102022.5	43269.9	53611.9	30007.2	579799.8	43821.4	37036.4	59265.0	0020-1
2012.00	Sh/Clst	13779.9	8568.4	9658.8	6772.5	60217.6	13759.3	4072.7	7358.0	0022-1
2025.00	Sh/Clst	27622.5	12996.4	26881.8	11213.2	416801.8	21342.5	24167.0	29873.5	0024-1
2042.50	Sh/Clst	40249.6	31716.8	27335.0	26323.6	50873.2	37630.4	7299.9	11042.8	0027-1
2050.00	Sh/Clst	63659.8	31366.4	60846.1	22176.0	329809.4	43421.3	51249.6	64404.7	0054-1
2052.00	S/Sst	8086.6	6342.9	5290.8	5331.3	7422.1	7691.7	1653.8	1908.0	0029-1
2056.50	Sh/Clst	3151.0	2661.4	2334.6	2158.9	4000.9	3352.1	1003.1	1762.6	0032-1
2089.00	Sh/Clst	5083.4	4117.2	3366.1	3468.6	5745.3	4813.5	1413.7	2015.9	0035-1
2122.00	S/Sst	19802.8	16070.9	12683.8	12510.3	17909.1	17744.0	2855.6	3285.7	0039-1
2207.00	S/Sst	6832.1	5337.1	3659.9	3673.7	4357.5	4312.5	831.9	864.2	0041-1
2330.00	Sh/Clst	22786.1	17451.6	16718.2	14065.7	40341.5	28129.1	7548.2	16148.2	0042-1

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Table 9J: Raw sterane data (peak height) m/z 218 SIR for Well NOCS 6507/8-6

Page: 2

Depth unit of measure: m

Depth	Lithology	27 β 3 β R	27 β 3 β S	28 β 3 β R	28 β 3 β S	29 β 3 β R	29 β 3 β S	30 β 3 β R	30 β 3 β S	Sample
2408.00	S/Sst	11699.9	9442.9	7989.4	8080.2	11471.7	10672.6	1858.2	2134.9	0045-1
2469.00	Coal	22459.7	16692.0	51065.0	25188.4	84611.8	116993.0	16941.3	122688.7	0064-1
2522.00	Sh/Clst	2819.1	2465.9	2805.6	2220.3	3538.2	4531.9	1574.1	8204.5	0046-1

Table 9K: Raw triterpane data (peak height) m/z 177 SIR for Well NOCS 6507/8-6

Page: 1

Depth unit of measure: m

Depth	Lithology	25nor28aß	25nor30aß	Sample
1962.00	Sh/Clst	70176.8	30880.4	0011-1
1974.00	Sh/Clst	2772.2	3992.1	0013-1
1993.50	Sh/Clst	636865.0	13966.0	0017-1
2005.00	Sh/Clst	46951.0	0.0	0020-1
2012.00	Sh/Clst	13892.0	0.0	0022-1
2025.00	Sh/Clst	19646.0	0.0	0024-1
2042.50	Sh/Clst	23139.0	15125.0	0027-1
2050.00	Sh/Clst	261990.0	94062.0	0054-1
2056.50	Sh/Clst	3264.3	3943.6	0032-1
2089.00	Sh/Clst	3009.5	1901.9	0035-1
2330.00	Sh/Clst	34938.0	35365.0	0042-1
2469.00	Coal	322280.0	124600.0	0064-1

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Table 10A: Tabulation of carbon isotope data for EOM/EOM - fractions for well NOCS 6507/8-6

Page: 1

Depth unit of measure: m

Depth	Typ	Lithology	EOM*	EOM	Saturated	Aromatic	NSO	Asphaltenes	Kerogen	Sample
2025.00	swc	Sh/Clst	-28.02	-26.97	-	-27.29	-27.86	-25.79	-25.14	0024-1
2052.00	swc	S/Sst	-28.77	-	-	-	-	-	-	0029-1
2122.00	swc	S/Sst	-28.83	-	-	-	-	-	-	0039-1
2469.00	cut	Coal	-28.29	-27.30	-	-27.60	-28.14	-26.85	-25.88	0064-1

EOM* Is EOM without ASF.

Table 10B: Tabulation of cv values from carbon isotope data for well NOCS 6507/8-6

Page: 1

Depth unit of measure: m

Depth	Typ	Lithology	Saturated	Aromatic	cv value	Sample
2025.00	swc	Sh/Clst	-	-27.29	-72.23	0024-1
2052.00	swc	S/Sst	-	-	-	0029-1
2122.00	swc	S/Sst	-	-	-	0039-1
2469.00	cut	Coal	-	-27.60	-72.92	0064-1

Table 11: Thermal Maturity Data for well NOCS 6507/8-6

Page: 1

Depth, unit of measure: m

Depth	Typ Lithology	Vitrinite Reflectance (%)	Number of Readings	Standard Deviation	Spore Fluorescence Colour	SCI	T _{max} (°C)	Sample
1877.50	swc Sh/Clst: lt gn gy to m ol gy	-	-	-	-	3.0	410	0003-1L
1962.00	swc Sh/Clst: drk gy	-	-	-	-	3.5-4.0	409	0011-1L
1974.00	swc Sh/Clst: drk gy to blk	-	-	-	-	3.0-3.5	408	0013-1L
1993.50	swc Sh/Clst: drk gy to blk	-	-	-	-	3.5-4.0	409	0017-1L
2005.00	swc Sh/Clst: drk gy to blk	-	-	-	-	4.0(?)	411	0020-1L
2012.00	swc Sh/Clst: drk gy to blk	-	-	-	-	4.0(?)	416	0022-1L
2025.00	swc Sh/Clst: drk gy to blk	-	-	-	-	4.5	412	0024-1L
2042.50	swc Sh/Clst: drk gy to blk	-	-	-	-	5.0	427	0027-1L
2050.00	cut Sh/Clst: drk gy to blk	-	-	-	-	5.0	-	0054-1L
2056.50	ccp Sh/Clst: m bl gy	-	-	-	-	5.0-5.5	425	0032-1L
2089.00	swc Sh/Clst: drk gy to blk	-	-	-	-	5.5	422	0035-1L
2330.00	swc Sh/Clst: drk gy to blk	-	-	-	-	5.5	419	0042-1L
2469.00	cut Coal : blk	-	-	-	-	6.0	424	0064-1L
2522.00	swc Sh/Clst: drk gy	-	-	-	-	5.5-6.0	447	0046-1L