

SECTOR FOR PETROLEUM TECHNOLOGY

Geological laboratories

Grading

Title GEOCHEMICAL EVALUATION OF WELL 6507/8-4		
Requested by CHRISTIAN HERMANRUD LET	Project KRISTIANSUND	
Date 28.01 1991	No. of pages	No. of enclosures

Key words
 Organic Geochemistry, source rocks, maturity, hydrocarbon characterisation, cap rock sealing capacity, migrated hydrocarbons-source rock correlation, biodegradation, oils, condensate

Abstract
 This study has been performed in accordance with Statoil Standard Guide for organic geochemistry at GEOLAB NOR.

BA 91-367-1
 18 FEB. 1991
 REGISTRERT
 OLJEDIREKTORATET

<p>Prepared by Ingun Skjevrak Trygve Meyer GEOLAB NOR</p>
<p>Text operator</p>

Approved by

6/2-91 *Magne Skarestad*
 Magne Skarestad
 Avd. leder

6/2-91 *Trygve Meyer*
 Trygve Meyer
 Seksjonsleder

GEOCHEMISTRY

Well NOCS 6507/8-4

Client : STATOIL

Authors: Ian L. Ferriday
Kjell Arne Bakken

Geolab Nor A/S
Hornebergveien 5
7038 Trondheim
Norway

Date : 17.12.90

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

Project: 6507/8-4
 Well: NOCS 6507/8-4
 Depth unit of measure: m

Depth	C1	C2	C3	iC4	nC4	C5+	sum C1-C4	sum C2-C4	%wet ness	iC4 --- nC4
1754.00	145474	682	1111	460	95	378	147822	2348	1.6	4.84
1804.00	66639	348	602	265	47	200	67901	1262	1.9	5.64
1854.00	91	1	1	1	-	1	94	3	3.2	-
1904.00	18627	288	198	63	43	133	19219	592	3.1	1.47
1950.00	32720	1159	103	54	24	114	34060	1340	3.9	2.25
2000.00	147	6	2	1	2	8	158	11	7.0	0.50
2050.00	293	35	9	13	20	240	370	77	20.8	0.65
2100.00	27880	1266	308	438	734	2726	30626	2746	9.0	0.60
2116.00	17702	2100	580	155	228	463	20765	3063	14.8	0.68
2130.00	1615	478	342	92	155	252	2682	1067	39.8	0.59
2145.00	532	226	139	35	61	88	993	461	46.4	0.57
2175.00	167	57	115	37	73	367	449	282	62.8	0.51
2205.00	2864	1888	439	53	76	72	5320	2456	46.2	0.70
2235.00	1	-	-	-	-	-	1	-	-	-
2250.00	2	5	4	1	2	1	14	12	85.7	0.50
2265.00	-	-	-	-	-	-	-	-	-	-
2295.00	413	200	59	14	22	150	708	295	41.7	0.64
2325.00	26612	8452	1418	190	179	139	36851	10239	27.8	1.06
2340.00	18020	5320	702	110	89	108	24241	6221	25.7	1.24
2355.00	3990	1893	502	91	106	171	6582	2592	39.4	0.86
2370.00	25751	6308	780	97	107	335	33043	7292	22.1	0.91
2385.00	1716	593	117	19	25	188	2470	754	30.5	0.76
2400.00	3391	1236	93	11	9	50	4740	1349	28.5	1.22

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

Project: 6507/8-4

Well: NOCS 6507/8-4

Depth unit of measure: m

Depth	C1	C2	C3	iC4	nC4	C5+	sum C1-C4	sum C2-C4	%wet ness	iC4 --- nC4
2415.00	6259	2108	207	29	28	134	8631	2372	27.5	1.04
2430.00	6874	2554	267	34	32	181	9761	2887	29.6	1.06
2445.00	1017	202	35	7	6	25	1267	250	19.7	1.17
2460.00	674	162	32	6	6	44	880	206	23.4	1.00
2475.00	4842	924	160	24	27	82	5977	1135	19.0	0.89
2490.00	2129	397	58	8	10	31	2602	473	18.2	0.80
2505.00	1592	293	53	8	9	37	1955	363	18.6	0.89
2521.00	3848	849	202	32	39	88	4970	1122	22.6	0.82
2542.00	6437	649	143	22	25	59	7276	839	11.5	0.88

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

Project: 6507/8-4
 Well: NOCS 6507/8-4
 Depth unit of measure: m

Depth	C1	C2	C3	iC4	nC4	C5+	sum C1-C4	sum C2-C4	%wet ness	iC4 --- nC4
1754.00	108	1	1	-	-	1	110	2	1.8	-
1804.00	91	1	1	1	-	3	94	3	3.2	-
1854.00	58	3	2	1	1	5	65	7	10.8	1.00
1904.00	74	3	2	1	1	11	81	7	8.6	1.00
1950.00	76	5	2	1	1	7	85	9	10.6	1.00
2000.00	42	2	1	-	-	2	45	3	6.7	-
2050.00	21	1	1	-	-	37	23	2	8.7	-
2100.00	16	1	1	1	2	104	21	5	23.8	0.50
2116.00	143	40	30	10	21	201	244	101	41.4	0.48
2130.00	56	5	8	4	12	142	85	29	34.1	0.33
2145.00	53	65	129	44	106	289	397	344	86.7	0.42
2175.00	66	11	82	25	54	95	238	172	72.3	0.46
2205.00	257	1039	564	91	139	97	2090	1833	87.7	0.65
2235.00	279	455	231	38	52	43	1055	776	73.6	0.73
2250.00	149	300	300	66	111	110	926	777	83.9	0.59
2265.00	167	78	63	12	26	40	346	179	51.7	0.46
2295.00	155	80	61	11	19	31	326	171	52.5	0.58
2325.00	192	534	288	46	76	63	1136	944	83.1	0.61
2340.00	119	107	73	16	21	22	336	217	64.6	0.76
2355.00	2	2	2	-	1	1	7	5	71.4	-
2370.00	200	291	117	18	29	34	655	455	69.5	0.62
2385.00	132	42	26	5	11	27	216	84	38.9	0.45
2400.00	229	1361	288	43	34	36	1955	1726	88.3	1.26

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

Project: 6507/8-4

Well: NOCS 6507/8-4

Depth unit of measure: m

Depth	C1	C2	C3	iC4	nC4	C5+	sum	sum	%wet ness	iC4
							C1-C4	C2-C4		nC4
2415.00	120	250	78	13	16	32	477	357	74.8	0.81
2430.00	124	72	36	6	9	18	247	123	49.8	0.67
2445.00	174	14	7	1	2	11	198	24	12.1	0.50
2460.00	84	11	7	1	3	16	106	22	20.8	0.33
2475.00	96	29	20	4	8	18	157	61	38.9	0.50
2490.00	152	19	11	2	4	16	188	36	19.2	0.50
2505.00	115	8	4	1	2	11	130	15	11.5	0.50
2521.00	120	13	11	3	6	17	153	33	21.6	0.50
2542.00	183	17	13	3	8	22	224	41	18.3	0.38

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

Project: 6507/8-4

Well: NOCS 6507/8-4

Depth unit of measure: m

Depth	C1	C2	C3	iC4	nC4	C5+	sum C1-C4	sum C2-C4	%wet ness	iC4 --- nC4
1754.00	145582	683	1112	460	95	379	147932	2350	1.6	4.84
1804.00	66730	349	603	266	47	203	67995	1265	1.9	5.66
1854.00	149	4	3	2	1	6	159	10	6.3	2.00
1904.00	18701	291	200	64	44	144	19300	599	3.1	1.45
1950.00	32796	1164	105	55	25	121	34145	1349	4.0	2.20
2000.00	189	8	3	1	2	10	203	14	6.9	0.50
2050.00	314	36	10	13	20	277	393	79	20.1	0.65
2100.00	27896	1267	309	439	736	2830	30647	2751	9.0	0.60
2116.00	17845	2140	610	165	249	664	21009	3164	15.1	0.66
2130.00	1671	483	350	96	167	394	2767	1096	39.6	0.57
2145.00	585	291	268	79	167	377	1390	805	57.9	0.47
2175.00	233	68	197	62	127	462	687	454	66.1	0.49
2205.00	3121	2927	1003	144	215	169	7410	4289	57.9	0.67
2235.00	280	455	231	38	52	43	1056	776	73.5	0.73
2250.00	151	305	304	67	113	111	940	789	83.9	0.59
2265.00	167	78	63	12	26	40	346	179	51.7	0.46
2295.00	568	280	120	25	41	181	1034	466	45.1	0.61
2325.00	26804	8986	1706	236	255	202	37987	11183	29.4	0.93
2340.00	18139	5427	775	126	110	130	24577	6438	26.2	1.15
2355.00	3992	1895	504	91	107	172	6589	2597	39.4	0.85
2370.00	25951	6599	897	115	136	369	33698	7747	23.0	0.85
2385.00	1848	635	143	24	36	215	2686	838	31.2	0.67

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

Project: 6507/8-4

Well: NOCS 6507/8-4

Depth unit of measure: m

Depth	C1	C2	C3	iC4	nC4	C5+	sum C1-C4	sum C2-C4	%wet ness	iC4 ---- nC4
2400.00	3620	2597	381	54	43	86	6695	3075	45.9	1.26
2415.00	6379	2358	285	42	44	166	9108	2729	30.0	0.95
2430.00	6998	2626	303	40	41	199	10008	3010	30.1	0.98
2445.00	1191	216	42	8	8	36	1465	274	18.7	1.00
2460.00	758	173	39	7	9	60	986	228	23.1	0.78
2475.00	4938	953	180	28	35	100	6134	1196	19.5	0.80
2490.00	2281	416	69	10	14	47	2790	509	18.2	0.71
2505.00	1707	301	57	9	11	48	2085	378	18.1	0.82
2521.00	3968	862	213	35	45	105	5123	1155	22.6	0.78
2542.00	6620	666	156	25	33	81	7500	880	11.7	0.76

Table 3 : Rock-Eval table for well NOCS 6507/8-4

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
1464.00	cut	bulk	0.02	-	-	-	0.10	-	-	-	1.00	-	0032-0B
1574.00	cut	bulk	0.02	0.06	0.61	0.10	0.19	32	321	0.1	0.25	387	0008-0B
1624.00	cut	bulk	0.04	0.14	0.49	0.29	0.26	54	188	0.2	0.22	416	0009-0B
1721.00	swc	Sh/Clst: lt ol gy	0.09	0.46	1.41	0.33	0.63	73	224	0.6	0.16	421	0083-1L
1810.00	swc	Sh/Clst: m gy to gn gy	0.25	1.02	0.89	1.15	1.19	86	75	1.3	0.20	401	0084-1L
1840.00	swc	Sh/Clst: lt brn gy to drk y brn	0.12	0.59	0.64	0.92	0.69	86	93	0.7	0.17	406	0085-1L
1850.00	cut	Sh/Clst: lt brn gy to pl y brn	0.24	1.32	0.56	2.36	1.12	118	50	1.6	0.15	415	0013-1L
1858.00	swc	Sh/Clst: lt gy to lt bl gy	0.07	0.12	0.14	0.86	0.15	80	93	0.2	0.37	355	0086-1L
1870.00	cut	Sh/Clst: lt brn gy to pl y brn	0.23	1.25	0.65	1.92	1.17	107	56	1.5	0.16	414	0014-1L
1890.00	cut	bulk	0.14	2.38	0.32	7.44	0.75	317	43	2.5	0.06	424	0015-0B
1900.00	cut	bulk	0.05	0.44	0.89	0.49	0.60	73	148	0.5	0.10	424	0017-0B
1920.00	swc	Sh/Clst: dsk brn to brn blk	0.07	1.18	1.20	0.98	2.03	58	59	1.3	0.06	428	0087-1L
1940.00	swc	Sh/Clst: dsk y gn to lt brn gn	0.01	0.12	0.23	0.52	0.15	80	153	0.1	0.08	470	0088-1L
1950.00	cut	bulk	0.07	0.88	0.94	0.94	1.06	83	89	0.9	0.07	431	0018-0B
1960.00	cut	Sh/Clst: lt gy to lt brn gy to m bl gy	0.03	0.11	0.83	0.13	0.32	34	259	0.1	0.21	417	0019-1L

Table 3 : Rock-Eval table for well NOCS 6507/8-4

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
1962.00	swc	Sh/Clst: ol gy to brn blk	0.02	0.05	0.40	0.13	0.07	71	571	0.1	0.29	339	0089-1L
1970.00	swc	Sh/Clst: ol gy to brn blk	0.06	0.26	0.11	2.36	0.40	65	28	0.3	0.19	405	0090-1L
1980.00	cut	Sh/Clst: lt gy to lt brn gy to m bl gy to drk gy to dsk brn	0.05	0.33	0.71	0.46	0.56	59	127	0.4	0.13	422	0020-1L
1986.00	swc	Sh/Clst: lt ol gy to ol gy to drk gy	0.02	0.08	0.01	8.00	0.12	67	8	0.1	0.20	455	0091-1L
1990.00	cut	Sh/Clst: lt gy to lt brn gy to m bl gy to drk gy to dsk brn	0.12	0.78	0.60	1.30	0.87	90	69	0.9	0.13	416	0021-1L
2000.00	swc	Sh/Clst: lt ol gy to ol gy	0.02	0.18	0.01	18.00	0.19	95	5	0.2	0.10	503	0092-1L
2010.00	swc	Sh/Clst: gn blk to brn blk	-	0.16	0.02	8.00	0.17	94	12	0.2	-	518	0093-1L
2014.00	swc	Sh/Clst: gn blk to brn blk	0.04	0.21	0.15	1.40	0.46	46	33	0.3	0.16	393	0094-1L
2020.00	swc	Sh/Clst: brn blk	0.06	0.19	1.84	0.10	0.54	35	341	0.3	0.24	407	0095-1L
2030.00	swc	Sh/Clst: brn blk	0.04	0.23	0.15	1.53	0.21	110	71	0.3	0.15	455	0096-1L
2035.00	cut	Sh/Clst: lt gy to lt bl gy to brn gy	0.06	0.35	0.63	0.56	0.48	73	131	0.4	0.15	418	0023-1L
2040.00	swc	Sh/Clst: brn blk	0.06	0.50	0.26	1.92	0.81	62	32	0.6	0.11	421	0097-1L

Table 3 : Rock-Eval table for well NOCS 6507/8-4

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
2050.00	swc	bulk	0.06	0.28	0.75	0.37	0.55	51	136	0.3	0.18	414	0098-0B
2065.00	cut	Sh/Clst: lt gy to lt bl gy to pl y brn to gn gy	0.05	0.24	0.86	0.28	0.44	55	195	0.3	0.17	415	0035-1L
2070.00	swc	bulk	0.06	0.53	0.53	1.00	0.85	62	62	0.6	0.10	425	0099-0B
2080.00	cut	Sh/Clst: lt gy to lt bl gy to drk gy	0.03	0.19	0.74	0.26	0.49	39	151	0.2	0.14	419	0027-1L
2100.00	cut	Sh/Clst: lt gy to lt bl gy to drk gy	0.07	0.40	0.54	0.74	0.69	58	78	0.5	0.15	421	0028-1L
2104.00	cut	Sh/Clst: m gy	0.09	0.56	0.28	2.00	0.88	64	32	0.7	0.14	431	0030-1L
2116.00	cut	Sh/Clst: m gy	0.04	0.54	0.35	1.54	0.93	58	38	0.6	0.07	432	0031-1L
2122.00	cut	Sh/Clst: m gy	0.08	0.55	0.29	1.90	0.96	57	30	0.6	0.13	426	0036-1L
2129.87	ccp	Coal : blk	0.74	42.77	13.88	3.08	48.80	88	28	43.5	0.02	418	0042-1L
2130.89	ccp	bulk	0.83	0.27	0.17	1.59	0.30	90	57	1.1	0.75	410	0044-0B
2135.88	ccp	Sh/Clst: drk gy to blk	0.35	8.10	4.00	2.03	19.20	42	21	8.5	0.04	435	0046-1L
2140.00	ccp	S/Sst : m y brn	27.31	6.54	0.27	24.22	2.28	287	12	33.8	0.81	369	0047-1L
2150.00	ccp	S/Sst : m y brn	28.69	5.98	0.23	26.00	2.10	285	11	34.7	0.83	412	0048-1L

Table 3 : Rock-Eval table for well NOCS 6507/8-4

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
2160.06	ccp	S/Sst : m y brn	21.36	3.80	0.20	19.00	1.45	262	14	25.2	0.85	399	0049-1L
2170.05	ccp	S/Sst : m y brn	20.48	4.10	0.30	13.67	1.55	265	19	24.6	0.83	408	0050-1L
2178.32	ccp	Sh/Clst: brn blk	0.54	2.22	1.22	1.82	4.13	54	30	2.8	0.20	432	0051-1L
2180.00	ccp	Sh/Clst: lt gy	1.64	0.58	0.51	1.14	0.72	81	71	2.2	0.74	368	0052-1L
2181.02	ccp	Sh/Clst: brn blk	5.03	67.60	6.43	10.51	28.90	234	22	72.6	0.07	421	0053-1L
2184.62	ccp	Sh/Clst: m gy to brn gy to brn blk	0.14	0.54	0.65	0.83	1.89	29	34	0.7	0.21	423	0054-1L
2186.62	ccp	Sh/Clst: brn blk	-	-	-	-	7.64	-	-	-	-	-	0055-1L
2188.90	ccp	Sh/Clst: brn blk	2.77	47.68	10.24	4.66	32.60	146	31	50.5	0.05	447	0056-1L
2191.00	ccp	Sh/Clst: m gy to brn gy	0.13	1.86	0.51	3.65	1.56	119	33	2.0	0.07	431	0057-1L
2198.84	ccp	Sh/Clst: m gy to drk gy to brn blk	1.14	4.67	5.31	0.88	4.60	102	115	5.8	0.20	422	0059-1L
2204.06	ccp	S/Sst : m y brn	22.41	3.23	0.34	9.50	1.68	192	20	25.6	0.87	423	0060-1L
2204.94	ccp	Sh/Clst: m gy to brn blk	0.79	5.59	1.27	4.40	4.97	112	26	6.4	0.12	424	0061-1L
2207.97	ccp	Coal : blk	4.71	97.54	10.00	9.75	45.80	213	22	102.3	0.05	425	0062-1L
2211.98	ccp	Sh/Clst: m gy	0.05	0.27	0.40	0.68	1.31	21	31	0.3	0.16	431	0063-1L
2216.53	ccp	Coal : blk	1.60	100.80	10.00	10.08	44.90	224	22	102.4	0.02	423	0064-1L

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
2219.93	ccp	S/Sst : m y brn	27.81	7.16	0.44	16.27	4.01	179	11	35.0	0.80	408	0065-1L
2222.18	ccp	Sh/Clst: drk gy to brn blk	1.28	20.36	2.27	8.97	10.70	190	21	21.6	0.06	423	0066-1L
2223.05	ccp	bulk	2.08	51.82	5.26	9.85	25.90	200	20	53.9	0.04	417	0067-0B
2231.87	ccp	Coal : blk	1.09	49.71	3.73	13.33	19.90	250	19	50.8	0.02	427	0069-1L
2239.75	ccp	bulk	22.29	4.43	0.52	8.52	2.32	191	22	26.7	0.83	405	0070-0B
2244.62	ccp	Coal : blk	2.90	68.18	9.09	7.50	34.90	195	26	71.1	0.04	429	0071-1L
2247.73	ccp	bulk	26.34	5.08	0.30	16.93	2.10	242	14	31.4	0.84	412	0072-0B
2249.92	ccp	Coal : blk	0.46	3.41	1.65	2.07	6.50	52	25	3.9	0.12	436	0073-1L
2255.55	ccp	S/Sst : lt gy to lt brn gy	1.54	0.44	0.22	2.00	0.44	100	50	2.0	0.78	411	0075-1L
2260.87	ccp	Sltst : m gy	0.07	0.08	0.89	0.09	0.27	30	330	0.2	0.47	366	0076-1L
2280.00	ccp	Sltst : m gy to drk gy	4.66	1.71	0.44	3.89	0.87	197	51	6.4	0.73	379	0077-1L
2285.92	ccp	bulk	0.16	8.31	2.17	3.83	12.10	69	18	8.5	0.02	414	0078-0B
2288.48	ccp	Coal : blk	0.83	40.66	7.50	5.42	31.70	128	24	41.5	0.02	425	0079-1L
2291.17	ccp	Coal : blk	0.36	31.81	7.45	4.27	34.90	91	21	32.2	0.01	435	0080-1L
2307.97	ccp	Sh/Clst: lt gy to drk gy	0.02	0.23	0.62	0.37	1.04	22	60	0.3	0.08	434	0081-1L

Depth unit of measure: m

Depth	Typ	Lithology	S1	S2	S3	S2/S3	TOC	HI	OI	PP	PI	Tmax	Sample
2371.00	cut	bulk	0.17	14.13	3.96	3.57	12.60	112	31	14.3	0.01	434	0037-0B
2521.00	cut	bulk	0.43	20.21	2.07	9.76	11.80	171	18	20.6	0.02	421	0038-0B
2536.00	cut	bulk	0.99	50.72	4.78	10.61	28.50	178	17	51.7	0.02	421	0040-0B
2545.00	cut	bulk	0.11	7.88	1.58	4.99	6.91	114	23	8.0	0.01	427	0041-0B

Table 4 : Pyrolysis GC Data (S2 peak) as Percentage of Total Area for Well NOCS 6507/8-4

Depth unit of measure: m

Depth	Typ	Lithology	C1	C2-C5	C6-C14	C15+	S2 from Rock-Eval	Sample
1850.00	cut	Sh/Clst: lt brn gy to pl y brn	4.65	23.95	59.21	12.18	1.32	0013-1L
1890.00	cut	S/Sst : dsk brn to drk gy to dsk y brn	4.32	19.29	50.26	26.13	2.38	0015-1L
2181.02	ccp	Sh/Clst: brn blk	7.32	8.87	31.32	52.50	67.60	0053-1L
2207.97	ccp	Coal : blk	6.19	10.54	26.70	56.57	97.54	0062-1L

Table 5 a: Weight of EOM and Chromatographic Fraction for well NOCS 6507/8-4

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
1850.00	cut	Sh/Clst: lt brn gy to pl y brn	7.6	1.4	0.3	0.3	0.2	0.6	0.6	0.8	1.12	0013-1L
1890.00	cut	Sh/Clst: dsk brn to drk gy to dsk y brn	8.4	1.3	0.3	0.5	0.2	0.3	0.8	0.5	0.75	0015-1L
2130.89	ccp	bulk	13.9	22.8	8.3	9.0	0.9	4.6	17.3	5.5	0.30	0044-0B
2140.00	ccp	S/Sst : m y brn	12.2	426.2	313.5	48.6	7.8	56.3	362.1	64.1	2.28	0047-1L
2150.00	ccp	S/Sst : m y brn	15.3	517.6	377.9	90.1	8.0	41.6	468.0	49.6	2.10	0048-1L
2160.06	ccp	S/Sst : m y brn	11.0	337.6	247.3	30.5	13.5	46.3	277.8	59.8	1.45	0049-1L
2170.05	ccp	S/Sst : m y brn	17.2	455.2	335.0	42.4	22.3	55.5	377.4	77.8	1.55	0050-1L
2180.00	ccp	Sh/Clst: lt gy	6.3	29.1	20.6	4.6	0.8	3.1	25.2	3.9	0.72	0052-1L
2181.02	ccp	Sh/Clst: brn blk	5.1	32.4	2.3	16.1	5.2	8.8	18.4	14.0	28.90	0053-1L
2191.00	ccp	Sh/Clst: m gy to brn gy	10.9	7.4	1.1	1.7	0.7	3.9	2.8	4.6	1.56	0057-1L
2204.06	ccp	S/Sst : m y brn	11.2	327.9	239.5	32.1	13.9	42.4	271.6	56.3	1.68	0060-1L
2207.97	ccp	Coal : blk	4.6	55.6	7.1	19.0	6.0	23.5	26.1	29.5	45.80	0062-1L
2211.98	ccp	Sh/Clst: m gy	12.0	14.3	0.8	0.6	0.3	12.6	1.4	12.9	1.31	0063-1L

Table 5 a: Weight of EOM and Chromatographic Fraction for well NOCS 6507/8-4

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
2219.93	ccp	S/Sst : m y brn	13.8	450.8	340.2	47.9	4.2	58.5	388.1	62.7	4.01	0065-1L
2222.18	ccp	Sh/Clst: drk gy to brn blk	10.5	14.1	2.5	3.2	2.7	5.7	5.7	8.4	10.70	0066-1L
2231.87	ccp	Coal : blk	8.0	29.5	4.6	6.9	5.0	13.0	11.5	18.0	19.90	0069-1L
2239.75	ccp	bulk	12.8	289.0	214.5	33.2	1.8	39.5	247.7	41.3	2.32	0070-0B
2244.62	ccp	Coal : blk	4.4	31.1	3.7	14.3	12.7	0.4	18.0	13.1	34.90	0071-1L
2247.73	ccp	bulk	10.9	387.1	279.2	43.4	7.6	56.9	322.6	64.5	2.09	0072-0B
2255.55	ccp	S/Sst : lt gy to lt brn gy	10.7	32.7	17.8	10.5	0.8	3.6	28.3	4.4	0.44	0075-1L
2280.00	ccp	Sltst : m gy to drk gy	12.8	2.1	1.1	0.3	0.4	0.3	1.4	0.7	0.87	0077-1L

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
1850.00	cut	Sh/Clst: lt brn gy to pl y brn	184	39	39	26	78	78	105	0013-1L
1890.00	cut	Sh/Clst: dsk brn to drk gy to dsk y brn	155	35	59	23	35	95	59	0015-1L
2130.89	ccp	bulk	1637	596	646	64	330	1242	395	0044-0B
2140.00	ccp	S/Sst : m y brn	34905	25675	3980	638	4610	29656	5249	0047-1L
2150.00	ccp	S/Sst : m y brn	33874	24731	5896	523	2722	30628	3246	0048-1L
2160.06	ccp	S/Sst : m y brn	30718	22502	2775	1228	4212	25277	5441	0049-1L
2170.05	ccp	S/Sst : m y brn	26449	19465	2463	1295	3224	21929	4520	0050-1L
2180.00	ccp	Sh/Clst: lt gy	4619	3269	730	126	492	4000	619	0052-1L
2181.02	ccp	Sh/Clst: brn blk	6365	451	3163	1021	1728	3614	2750	0053-1L
2191.00	ccp	Sh/Clst: m gy to brn gy	677	100	155	64	356	256	420	0057-1L
2204.06	ccp	S/Sst : m y brn	29329	21422	2871	1243	3792	24293	5035	0060-1L
2207.97	ccp	Coal : blk	12086	1543	4130	1304	5108	5673	6413	0062-1L
2211.98	ccp	Sh/Clst: m gy	1188	66	49	24	1047	116	1072	0063-1L

Table 5 b: Concentration of EOM and Chromatographic Fraction (wt ppm rock) for well NOCS 6507/8-4

Depth unit of measure: m

Depth	Typ Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
2219.93	ccp S/Sst : m y brn	32761	24723	3481	305	4251	28204	4556	0065-1L
2222.18	ccp Sh/Clst: drk gy to brn blk	1346	238	305	257	544	544	802	0066-1L
2231.87	ccp Coal : blk	3673	572	859	622	1618	1432	2241	0069-1L
2239.75	ccp bulk	22507	16705	2585	140	3076	19291	3216	0070-0B
2244.62	ccp Coal : blk	7116	846	3272	2906	91	4118	2997	0071-1L
2247.73	ccp bulk	35579	25661	3988	698	5229	29650	5928	0072-0B
2255.55	ccp S/Sst : lt gy to lt brn gy	3067	1669	984	75	337	2654	412	0075-1L
2280.00	ccp Slst : m gy to drk gy	163	85	23	31	23	109	54	0077-1L

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
1850.00	cut	Sh/Clst: lt brn gy to pl y brn	16.45	3.52	3.52	2.35	7.05	7.05	9.40	0013-1L
1890.00	cut	Sh/Clst: dsk brn to drk gy to dsk y brn	20.71	4.78	7.96	3.19	4.78	12.74	7.96	0015-1L
2130.89	ccp	bulk	545.98	198.75	215.52	21.55	110.15	414.27	131.70	0044-0B
2140.00	ccp	S/Sst : m y brn	1530.96	1126.13	174.58	28.02	202.24	1300.70	230.25	0047-1L
2150.00	ccp	S/Sst : m y brn	1613.06	1177.70	280.79	24.93	129.64	1458.49	154.57	0048-1L
2160.06	ccp	S/Sst : m y brn	2118.54	1551.88	191.40	84.72	290.55	1743.28	375.26	0049-1L
2170.05	ccp	S/Sst : m y brn	1706.44	1255.83	158.95	83.60	208.06	1414.78	291.65	0050-1L
2180.00	ccp	Sh/Clst: lt gy	641.53	454.14	101.41	17.64	68.34	555.56	85.98	0052-1L
2181.02	ccp	Sh/Clst: brn blk	22.03	1.56	10.94	3.53	5.98	12.51	9.52	0053-1L
2191.00	ccp	Sh/Clst: m gy to brn gy	43.40	6.45	9.97	4.11	22.87	16.42	26.98	0057-1L
2204.06	ccp	S/Sst : m y brn	1745.78	1275.13	170.90	74.01	225.74	1446.03	299.75	0060-1L
2207.97	ccp	Coal : blk	26.39	3.37	9.02	2.85	11.15	12.39	14.00	0062-1L
2211.98	ccp	Sh/Clst: m gy	90.74	5.08	3.81	1.90	79.95	8.88	81.86	0063-1L

Table 5 c: Concentration of EOM and Chromatographic Fraction (mg/g TOC(e)) for well NOCS 6507/8-4

Depth unit of measure: m

Depth	Typ	Lithology	EOM	Sat	Aro	Asph	NSO	HC	Non-HC	Sample
2219.93	ccp	S/Sst : m y brn	817.00	616.55	86.81	7.61	106.02	703.37	113.63	0065-1L
2222.18	ccp	Sh/Clst: drk gy to brn blk	12.59	2.23	2.86	2.41	5.09	5.09	7.50	0066-1L
2231.87	ccp	Coal : blk	18.46	2.88	4.32	3.13	8.14	7.20	11.26	0069-1L
2239.75	ccp	bulk	970.16	720.07	111.45	6.04	132.60	831.52	138.64	0070-0B
2244.62	ccp	Coal : blk	20.39	2.43	9.38	8.33	0.26	11.80	8.59	0071-1L
2247.73	ccp	bulk	1702.35	1227.84	190.86	33.42	250.23	1418.70	283.65	0072-0B
2255.55	ccp	S/Sst : lt gy to lt brn gy	697.17	379.50	223.86	17.06	76.75	603.36	93.81	0075-1L
2280.00	ccp	Sltst : m gy to drk gy	18.83	9.86	2.69	3.59	2.69	12.55	6.28	0077-1L

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	
1850.00	cut	Sh/Clst: lt brn gy to pl y brn	21.43	21.43	14.29	42.86	42.86	57.14	100.00	75.00	0013-1L
1890.00	cut	Sh/Clst: dsk brn to drk gy to dsk y brn	23.08	38.46	15.38	23.08	61.54	38.46	60.00	160.00	0015-1L
2130.89	ccp	bulk	36.40	39.47	3.95	20.18	75.88	24.12	92.22	314.55	0044-0B
2140.00	ccp	S/Sst : m y brn	73.56	11.40	1.83	13.21	84.96	15.04	645.06	564.90	0047-1L
2150.00	ccp	S/Sst : m y brn	73.01	17.41	1.55	8.04	90.42	9.58	419.42	943.55	0048-1L
2160.06	ccp	S/Sst : m y brn	73.25	9.03	4.00	13.71	82.29	17.71	810.82	464.55	0049-1L
2170.05	ccp	S/Sst : m y brn	73.59	9.31	4.90	12.19	82.91	17.09	790.09	485.09	0050-1L
2180.00	ccp	Sh/Clst: lt gy	70.79	15.81	2.75	10.65	86.60	13.40	447.83	646.15	0052-1L
2181.02	ccp	Sh/Clst: brn blk	7.10	49.69	16.05	27.16	56.79	43.21	14.29	131.43	0053-1L
2191.00	ccp	Sh/Clst: m gy to brn gy	14.86	22.97	9.46	52.70	37.84	62.16	64.71	60.87	0057-1L
2204.06	ccp	S/Sst : m y brn	73.04	9.79	4.24	12.93	82.83	17.17	746.11	482.42	0060-1L
2207.97	ccp	Coal : blk	12.77	34.17	10.79	42.27	46.94	53.06	37.37	88.47	0062-1L
2211.98	ccp	Sh/Clst: m gy	5.59	4.20	2.10	88.11	9.79	90.21	133.33	10.85	0063-1L

Table 5 d: Composition of material extracted from the rock (%) for well NOCS 6507/8-4

Depth unit of measure: m

Depth	Typ	Lithology	Sat	Aro	Asph	NSO	HC	Non-HC	Sat	HC	Sample
			EOM	EOM	EOM	EOM	EOM	EOM	EOM	Aro	
2219.93	ccp	S/Sst : m y brn	75.47	10.63	0.93	12.98	86.09	13.91	710.23	618.98	0065-1L
2222.18	ccp	Sh/Clst: drk gy to brn blk	17.73	22.70	19.15	40.43	40.43	59.57	78.13	67.86	0066-1L
2231.87	ccp	Coal : blk	15.59	23.39	16.95	44.07	38.98	61.02	66.67	63.89	0069-1L
2239.75	ccp	bulk	74.22	11.49	0.62	13.67	85.71	14.29	646.08	599.76	0070-0B
2244.62	ccp	Coal : blk	11.90	45.98	40.84	1.29	57.88	42.12	25.87	137.40	0071-1L
2247.73	ccp	bulk	72.13	11.21	1.96	14.70	83.34	16.66	643.32	500.16	0072-0B
2255.55	ccp	S/Sst : lt gy to lt brn gy	54.43	32.11	2.45	11.01	86.54	13.46	169.52	643.18	0075-1L
2280.00	ccp	Sltst : m gy to drk gy	52.38	14.29	19.05	14.29	66.67	33.33	366.67	200.00	0077-1L

Table 6 : Saturated Hydrocarbon Ratios for well NOCS 6507/8-4

Depth unit of measure: m

Depth	Typ	Lithology	Pristane	Pristane	Pristane + Phytane	Phytane	CPI	Sample
			nC17	Phytane	nC17 + nC18	nC18		
1850.00	cut	Sh/Clst: lt brn gy to pl y brn	0.70	1.53	0.67	0.62	2.69	0013-1L
1890.00	cut	Sh/Clst: dsk brn to drk gy to dsk y brn	0.56	0.80	0.60	0.63	2.64	0015-1L
2140.00	ccp	S/Sst : m y brn	-	-	-	-	-	0047-1L
2150.00	ccp	S/Sst : m y brn	-	-	-	-	-	0048-1L
2160.06	ccp	S/Sst : m y brn	-	-	-	-	-	0049-1L
2170.05	ccp	S/Sst : m y brn	-	-	-	-	-	0050-1L
2181.02	ccp	Sh/Clst: brn blk	2.92	4.53	2.47	1.46	2.03	0053-1L
2204.06	ccp	S/Sst : m y brn	-	-	-	-	-	0060-1L
2207.97	ccp	Coal : blk	-	-	-	-	-	0062-1L
2219.93	ccp	S/Sst : m y brn	-	-	-	-	-	0065-1L
2222.18	ccp	Sh/Clst: drk gy to brn blk	0.80	3.58	0.69	0.46	1.32	0066-1L
2231.87	ccp	Coal : blk	2.52	7.23	1.63	0.46	1.93	0069-1L
2244.62	ccp	Coal : blk	7.53	6.30	5.29	1.84	1.21	0071-1L

Table 6 : Saturated Hydrocarbon Ratios for well NOCS 6507/8-4

Depth unit of measure: m

Depth	Typ	Lithology	Pristane	Pristane	Pristane + Phytane	Phytane	CPI	Sample
			nC17	Phytane	nC17 + nC18	nC18		
2247.73	ccp	bulk	-	-	-	-	-	0072-0B
2255.55	ccp	S/Sst : lt gy to lt brn gy	-	-	-	-	-	0075-1L
2280.00	ccp	Sltst : m gy to drk gy	-	-	-	-	-	0077-1L

Depth unit of measure: m

Depth	Typ	Lithology	MNR	DMNR	BPhR	2/1MP	MPI1	MPI2	Rc	DBT/P	4/1MDBT	(3+2) /1MDBT	Sample
1850.00	cut	Sh/Clst: lt brn gy to pl y brn	-	-	-	-	-	-	-	-	-	-	0013-1L
1890.00	cut	Sh/Clst: dsk brn to drk gy to dsk y brn	-	-	-	-	-	-	-	-	-	-	0015-1L
2140.00	ccp	S/Sst : m y brn	-	2.74	-	0.67	0.34	0.43	0.60	0.56	8.20	1.59	0047-1L
2150.00	ccp	S/Sst : m y brn	-	-	-	0.64	0.55	0.61	0.73	-	-	-	0048-1L
2160.06	ccp	S/Sst : m y brn	-	1.44	-	0.94	0.70	0.70	0.82	0.57	8.59	1.75	0049-1L
2170.05	ccp	S/Sst : m y brn	-	2.33	-	0.97	0.79	0.80	0.87	0.52	8.10	1.60	0050-1L
2181.02	ccp	Sh/Clst: brn blk	-	1.99	-	0.85	0.63	0.70	0.78	0.14	12.14	1.88	0053-1L
2204.06	ccp	S/Sst : m y brn	-	1.94	-	0.92	0.75	0.75	0.85	0.55	7.67	1.58	0060-1L
2207.97	ccp	Coal : blk	-	2.06	-	0.70	0.44	0.47	0.66	0.26	9.34	1.39	0062-1L
2219.93	ccp	S/Sst : m y brn	-	2.62	-	0.90	0.80	0.79	0.88	-	5.90	1.22	0065-1L
2222.18	ccp	Sh/Clst: drk gy to brn blk	1.09	1.56	-	0.43	0.23	0.25	0.54	-	7.59	1.70	0066-1L
2231.87	ccp	Coal : blk	0.93	2.22	-	-	-	-	-	-	-	-	0069-1L
2244.62	ccp	Coal : blk	-	-	-	0.84	0.50	0.56	0.70	0.30	7.90	1.54	0071-1L
2247.73	ccp	bulk	-	-	-	0.99	0.82	0.81	0.89	-	6.45	1.36	0072-0B

Table 7 : Aromatic Hydrocarbon Ratios for well NOCS 6507/8-4

Depth unit of measure: m

Depth	Typ	Lithology	MNR	DMNR	BPhR	2/1MP	MPI1	MPI2	Rc	DBT/P	4/1MDBT	(3+2) /1MDBT	Sample
2255.55	ccp	S/Sst : lt gy to lt brn gy	-	-	-	-	1.08	0.89	1.05	-	4.48	1.12	0075-1L
2280.00	ccp	Sltst : m gy to drk gy	-	-	-	0.99	0.35	0.71	0.61	0.44	5.19	1.24	0077-1L

Depth unit of measure: m

Depth	Typ Lithology	Vitrinite Reflectance (%)	Number of Readings	Standard Deviation	Spore Fluorescence Colour	SCI	T _{max} (°C)	Sample
594.00	cut bulk	0.33	1	0.00	-	-	-	0001-0B
684.00	cut bulk	NDP	-	-	-	-	-	0002-0B
784.00	cut bulk	NDP	-	-	-	-	-	0003-0B
894.00	cut bulk	NDP	-	-	-	-	-	0004-0B
984.00	cut bulk	0.36	2	0.02	-	-	-	0005-0B
1084.00	cut bulk	0.28	1	0.00	-	-	-	0006-0B
1184.00	cut bulk	NDP	-	-	-	-	-	0007-0B
1344.00	cut bulk	NDP	-	-	-	-	-	0033-0B
1424.00	cut bulk	NDP	-	-	-	-	-	0034-0B
1574.00	cut bulk	NDP	-	-	-	-	387	0008-0B
1674.00	cut bulk	0.30	1	0.00	-	-	-	0010-0B
1721.00	swc bulk	0.32	8	0.07	-	-	-	0083-0B
1784.00	cut bulk	0.25	1	0.00	-	-	-	0011-0B
1820.00	cut bulk	0.32	10	0.04	-	-	-	0012-0B

Table 8 : Thermal Maturity Data for well NOCS 6507/8-4

Depth unit of measure: m

Depth	Typ Lithology	Vitrinite Reflectance (%)	Number of Readings	Standard Deviation	Spore Fluorescence Colour	SCI	T _{max} (°C)	Sample
1840.00	swc bulk	NDP	-	-	-	-	-	0085-0B
1900.00	cut bulk	0.33	9	0.08	-	-	424	0017-0B
1920.00	swc bulk	0.30	10	0.06	-	-	-	0087-0B
1962.00	swc bulk	0.28	3	0.01	-	-	-	0089-0B
2050.00	swc bulk	0.34	11	0.05	-	-	414	0098-0B
2100.00	cut bulk	0.39	13	0.06	-	-	-	0028-0B
2135.22	ccp bulk	0.35	10	0.03	-	-	-	0045-0B
2135.88	ccp bulk	0.41	10	0.04	-	-	-	0046-0B
2181.02	ccp bulk	0.35	11	0.04	-	-	-	0053-0B
2181.02	ccp Sh/Clst: brn blk	-	-	-	-	4.0-4.5	421	0053-1L
2207.97	ccp bulk	0.37	12	0.04	-	-	-	0062-0B
2207.97	ccp Coal : blk	-	-	-	-	4.0-4.5	425	0062-1L
2285.92	ccp bulk	0.37	13	0.05	-	-	423	0078-0B
2307.97	ccp bulk	0.34	1	0.00	-	-	-	0081-0B

Table 8 : Thermal Maturity Data for well NOCS 6507/8-4

Depth unit of measure: m

Depth	Typ	Lithology	Vitrinite Reflectance (%)	Number of Readings	Standard Deviation	Spore Fluorescence Colour	SCI	T _{max} (°C)	Sample
2371.00	cut	bulk	0.36	10	0.03	-	-	434	0037-0B
2533.00	cut	bulk	0.36	12	0.04	-	-	-	0039-0B

Table 9 : Visual Kerogen Composition Data for well NOCS 6507/B-4

Depth unit of measure: m

Depth	Typ	Lithology	L	A	L	S	C		D	A	B	I	S	I	M	S	V	C	V	A	
			%	L	t	l	l	n	e	l	t	L	%	n	s	t	n	o	I	%	n
2181.02	ccp	Sh/Clst: brn blk	50	*	*	*	*	*				TR	*				50	**	*		
2207.97	ccp	Coal : blk	30	*	*	**	*	*				5	*				65	**	*		

Table 10a : Tabulation of carbon isotope data for EOM/EOM - fractions or Oils for well NOCS 6507/8-4

Depth unit of measure: m

Depth	Typ	Lithology	EOM/Oil	Saturated	Aromatic	NSO	Asphaltenes	Kerogen	Sample
2140.00	ccp		-28.76	-29.45	-28.03	-29.03	-29.51	-	0047-1L
2160.06	ccp		-28.85	-29.09	-27.86	-29.21	-29.11	-	0049-1L
2181.02	ccp		-27.28	-31.72	-26.58	-27.84	-26.64	-25.41	0053-1L
2207.97	ccp		-28.71	# -31.86	-27.60	# -27.85	-27.92	-25.90	0062-1L
2219.93	ccp		-28.89	# -29.73	-28.02	# -29.50	-29.09	-	0065-1L
2244.62	ccp		-28.65	# -30.02	-27.81	# -29.64	-27.61	-	0071-1L
2255.55	ccp		-28.76	-29.15	-28.23	-29.01	-29.14	-	0075-1L
				-29.99		-28.69			

Sample rerun gave same result.

Table 10b : Tabulation of cv values from carbon isotope data for well NOCS 6507/8-4

Depth unit of measure: m

Depth	Typ	Lithology	Saturated	Aromatic	cv value	Sample
2140.00	ccp		-29.45	-28.03	0.63	0047-1L
2160.06	ccp		-29.09	-27.86	0.10	0049-1L
2181.02	ccp		-31.72	-26.58	9.59	0053-1L
2207.97	ccp		-29.73	-27.60	2.29	0062-1L
2219.93	ccp		-29.15	-28.02	-0.10	0065-1L
2244.62	ccp		-31.48	-27.81	6.26	0071-1L
2255.55	ccp		-29.99	-28.23	1.55	0075-1L

Table 11A: Variation in Triterpane Distribution (peak height) for Well NOCS 6507/8-4

Depth unit of measure: m

Depth	Lithology	B/A	B/B+A	B		C/E	C/C+E	X/E	Z/E	Z/C	Z/Z+E	Q/E	E/E+F	C+D		J1		Sample
				B+E+F										C+D+E+F	D+F/C+E	J1+J2%		
1850.00	Sh/Clst	1.82	0.65	0.11	1.78	0.64	0.05	0.05	0.03	0.05	0.14	0.48	0.55	0.66	46.41		0013-1	
1890.00	Sh/Clst	2.55	0.72	0.12	0.60	0.38	-	0.07	0.12	0.06	0.25	0.57	0.39	0.80	41.66		0015-1	
2140.00	S/Sst	0.42	0.30	0.11	0.38	0.28	0.13	0.13	0.33	0.11	0.19	0.94	0.28	0.08	59.15		0047-1	
2150.00	S/Sst	0.41	0.29	0.10	0.38	0.27	0.14	0.11	0.30	0.10	0.17	0.93	0.28	0.08	61.32		0048-1	
2160.06	S/Sst	0.32	0.24	0.09	0.38	0.27	0.14	0.13	0.33	0.11	0.23	0.94	0.28	0.07	60.02		0049-1	
2170.05	S/Sst	0.40	0.29	0.11	0.38	0.27	0.13	0.12	0.32	0.11	0.24	0.94	0.27	0.06	60.51		0050-1	
2181.02	Sh/Clst	0.81	0.45	0.09	4.04	0.80	0.04	0.61	0.15	0.38	-	0.36	0.63	0.46	7.86		0053-1	
2204.06	S/Sst	0.39	0.28	0.11	0.40	0.28	0.14	0.13	0.32	0.11	0.23	0.93	0.29	0.08	59.60		0060-1	
2207.97	Coal	0.91	0.48	0.08	3.03	0.75	0.02	1.09	0.36	0.52	0.02	0.41	0.59	0.48	-		0062-1	
2219.93	S/Sst	0.43	0.30	0.12	0.38	0.27	0.16	0.14	0.36	0.12	0.27	0.94	0.28	0.07	61.81		0065-1	
2222.18	Sh/Clst	1.14	0.53	0.08	2.96	0.75	0.04	0.25	0.08	0.20	-	0.38	0.57	0.56	10.11		0066-1	
2231.87	Coal	0.92	0.48	0.08	3.25	0.76	0.02	0.45	0.14	0.31	-	0.35	0.58	0.61	11.45		0069-1	
2244.62	Coal	0.85	0.46	0.08	4.25	0.81	0.05	0.91	0.22	0.48	-	0.34	0.63	0.51	5.56		0071-1	
2247.73	bulk	0.40	0.29	0.12	0.37	0.27	0.15	0.13	0.36	0.12	0.25	0.93	0.28	0.09	61.35		0072-0	

Table 11A: Variation in Triterpane Distribution (peak height) for Well NOCS 6507/8-4

Depth unit of measure: m

Depth	Lithology	B/A	B/B+A	B		C/E	C/C+E	X/E	Z/E	Z/C	Z/Z+E	Q/E	E/E+F	C+D		J1		Sample
				B+E+F										C+D+E+F	D+F/C+E	J1+J2%		
2255.55	S/Sst	0.45	0.31	0.12		0.38	0.28	0.15	0.20	0.52	0.17	0.22	0.95	0.27	0.05	61.06	0075-1	
2280.00	Sitst	0.52	0.34	0.12		0.43	0.30	0.13	0.12	0.27	0.10	0.26	0.90	0.31	0.13	56.11	0077-1	

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Ratio6	Ratio7	Ratio8	Ratio9	Ratio10	Sample
1850.00	Sh/Clst	0.41	11.37	42.64	0.83	0.77	0.43	0.33	0.27	0.13	0.42	0013-1
1890.00	Sh/Clst	0.21*	9.93	46.54	0.84	0.81	0.58	0.48	0.30	0.11	0.48	0015-1
2140.00	S/Sst	0.89	52.40	76.20	1.38	0.75	0.47	0.35	0.62	1.10	3.36	0047-1
2150.00	S/Sst	0.88	49.31	76.18	1.28	0.76	0.41	0.29	0.62	0.97	3.15	0048-1
2160.06	S/Sst	0.90	46.47	76.35	1.45	0.78	0.50	0.37	0.62	0.87	3.02	0049-1
2170.05	S/Sst	0.91	51.00	76.57	1.44	0.76	0.51	0.38	0.62	1.04	3.33	0050-1
2181.02	Sh/Clst	0.22	13.25	58.19	0.14	0.84	0.31	0.23*	0.41	0.15	0.80	0053-1
2204.06	S/Sst	0.90	51.96	76.74	1.49	0.76	0.53	0.39	0.62	1.08	3.43	0060-1
2207.97	Coal	0.55	16.59	64.72	0.44	0.85	0.41	0.29*	0.48	0.20	1.10	0062-1
2219.93	S/Sst	0.89	55.21	77.86	1.42	0.76	0.52	0.39	0.64	1.23	3.93	0065-1
2222.18	Sh/Clst	0.51	21.14	58.75	0.25	0.77	0.33	0.22*	0.42	0.27	0.90	0066-1
2231.87	Coal	0.26	17.66	63.67	0.19	0.83	0.33	0.24*	0.47	0.21	1.06	0069-1

Ratio1: $a / a + j$ Ratio2: $g / q + t * 100\%$ Ratio3: $2(r + s) / (q + t + 2(r + s)) * 100\%$ Ratio4: $a + b + c + d / h + k + l + n$ Ratio5: $r + s / r + s + q$ Ratio6: $u + v / u + v + q + r + s + t$ Ratio7: $u + v / u + v + i + m + n + q + r + s + t$ Ratio8: $r + s / q + r + s + t$ Ratio9: q / t Ratio10: $r + s / t$

* Uncertain measurement, due to coelution problem.

Table 11B: Variation in Sterane Distribution (peak height) for Well NOCS 6507/B-4

Depth unit of measure: m

Depth	Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Ratio6	Ratio7	Ratio8	Ratio9	Ratio10	Sample
2244.62	Coal	0.55	22.92	65.91	0.38	0.81	0.48	0.25*	0.49	0.30	1.25	0071-1
2247.73	bulk	0.90	54.95	78.78	1.41	0.77	0.50	0.37	0.65	1.22	4.12	0072-0
2255.55	S/Sst	0.90	51.99	77.02	1.37	0.76	0.49	0.36	0.63	1.08	3.49	0075-1
2280.00	Sltst	0.88	53.94	78.54	1.45	0.77	0.55	0.42	0.65	1.17	3.97	0077-1

Ratio1: $a / a + j$
 Ratio2: $g / q + t * 100\%$
 Ratio3: $2(r + s) / (q + t + 2(r + s)) * 100\%$
 Ratio4: $a + b + c + d / h + k + l + n$
 Ratio5: $r + s / r + s + q$

Ratio6: $u + v / u + v + q + r + s + t$
 Ratio7: $u + v / u + v + i + m + n + q + r + s + t$
 Ratio8: $r + s / q + r + s + t$
 Ratio9: q / t
 Ratio10: $r + s / t$

* Uncertain measurement, due to coelution problem.

Depth unit of measure: m

Depth	Lithology	p	q	r	s	t	a	b	z	c	Sample
		x	d	e	f	g	h	i	j1		
		j2	k1	k2	l1	l2	m1	m2			
1850.00	Sh/Clst	64.90	23.68	23.15	20.34	7.09	24.34	44.39	9.01	309.66	0013-1
		8.71	132.83	173.49	186.12	47.22	488.28*	247.21*	19.09		
		22.04	267.09*	9.19	5.82	3.23	7.16	4.34			
1890.00	Sh/Clst	25.73	9.48	5.59	4.11	1.77	3.39	8.63	2.60	22.60	0015-1
		0.00	19.43	37.44	28.80	8.30	93.74*	49.47*	3.02		
		4.23	60.14*	2.44	1.35	1.36	2.46	0.00			
2140.00	S/Sst	67.96	64.64	32.52	36.99	17.21	106.89	44.78	43.15	130.60	0047-1
		43.85	13.11	343.25	22.62	145.90	98.60	13.86	104.33		
		72.06	67.81	44.88	51.29	34.39	44.66	33.43			
2150.00	S/Sst	61.31	68.21	35.97	54.33	19.07	121.32	49.15	46.19	152.37	0048-1
		55.92	15.53	401.85	28.56	170.35	110.04	15.87	127.65		
		80.52	91.52	59.83	67.14	41.86	58.95	38.25			
2160.06	S/Sst	78.72	74.15	35.05	47.71	19.43	110.57	35.69	41.45	123.95	0049-1
		45.03	12.98	327.98	20.82	132.70	86.47	16.65	98.01		
		65.28	65.49	39.27	46.28	30.61	40.49	22.57			

* Uncertain measurement, due to coelution problem.

Table 11C: Raw GCMS triterpane data (peak height) for Well NOCS 6507/8-4

Depth unit of measure: m

Depth	Lithology	p	q	r	s	t	a	b	z	c	Sample
		x	d	e	f	g	h	i	jl		
		j2	k1	k2	l1	l2	m1	m2			
2170.05	S/Sst	73.56	71.23	29.91	37.10	16.62	96.16	38.77	35.69	111.73	0050-1
		39.88	5.66	295.83	18.31	127.23	84.25	12.45	89.40		
		58.35	64.96	41.84	44.76	31.03	41.59	24.04			
2181.02	Sh/Clst	0.00	0.00	0.00	0.00	0.00	359.35	289.68	610.14	4056.29	0053-1
		30.60	563.09	1004.76	1759.76	57.70	587.97	1668.95*	21.85		
		256.24	1212.37*	83.29	0.00	0.00	0.00	0.00			
2204.06	S/Sst	74.13	69.26	32.65	37.82	16.32	102.38	39.81	39.07	121.11	0060-1
		42.53	10.13	304.97	21.94	129.21	85.11	12.02	92.24		
		62.53	69.58	43.55	46.10	30.65	42.13	31.68			
2207.97	Coal	92.73	51.46	0.00	0.00	0.00	475.83	432.67	2318.67	6455.90	0062-1
		40.34	1035.00	2132.82	3057.11	135.30	1072.55	3171.67*	0.00		
		0.00	1831.10*	0.00	0.00	0.00	0.00	0.00			
2219.93	S/Sst	81.71	76.22	36.66	39.58	16.03	94.90	40.64	38.43	106.47	0065-1
		46.65	11.87	283.20	17.07	115.07	76.80	10.33	84.77		
		52.38	62.32	36.08	40.63	23.79	36.44	22.60			

* Uncertain measurement, due to coelution problem.

Table 11C: Raw GCMS triterpane data (peak height) for Well NOCS 6507/8-4

Depth unit of measure: m

Depth	Lithology	p	q	r	s	t	a	b	z	c	Sample
		x	d	e	f	g	h	i	j1		
		j2	k1	k2	l1	l2	m1	m2			
2222.18	Sh/Clst	0.00	0.00	0.00	0.00	0.00	383.51	437.06	473.14	5655.83	0066-1
		71.04	1118.97	1910.26	3144.22	129.21	1083.00	2734.00*	55.80		
		496.32	1689.97*	0.00	0.00	0.00	0.00	0.00			
2231.87	Coal	0.00	0.00	0.00	0.00	0.00	582.00	533.77	1011.12	7256.31	0069-1
		34.82	1553.95	2234.95	4241.95	114.85	1767.39	4372.10*	79.73		
		616.36	2563.49*	0.00	0.00	0.00	0.00	0.00			
2244.62	Coal	0.00	0.00	0.00	0.00	0.00	405.92	344.80	1222.86	5686.48	0071-1
		66.63	1022.13	1338.95	2582.72	153.88	736.67	2260.94*	25.12		
		426.93	1630.59*	0.00	0.00	0.00	0.00	0.00			
2247.73	bulk	98.45	91.20	42.87	46.57	25.17	130.74	52.91	48.07	134.77	0072-0
		54.47	15.88	364.32	27.08	145.88	99.71	15.61	107.27		
		67.59	73.34	44.79	53.26	32.50	50.70	27.60			
2255.55	S/Sst	139.60	121.13	59.00	68.09	28.86	184.31	82.65	111.69	214.70	0075-1
		83.03	6.73	561.46	32.59	244.34	167.87	15.14	178.90		
		114.07	126.70	70.60	89.23	55.44	84.09	55.18			

* Uncertain measurement, due to coelution problem.

Table 11C: Raw GCMS triterpane data (peak height) for Well NOCS 6507/8-4

Depth unit of measure: m

Depth	Lithology	p	q	r	s	t	a	b	z	c	Sample
		x	d	e	f	g	h	i	j1		
		j2	k1	k2	l1	l2	m1	m2			
2280.00	sltst	152.96	118.74	57.89	61.55	31.47	131.65	69.07	51.75	193.07	0077-1
		57.76	28.91	449.69	51.56	179.11	173.74	80.77	120.30		
		94.09	84.89	57.27	53.50	35.28	49.13	37.02			

Depth unit of measure: m

Depth	Lithology	u	v	a	b	c	d	e	f	g	Sample
		h	i	j	k	l	m	n	o		
		p	q	r	s	t					
1850.00	Sh/Clst	51.14 35.11 11.59	20.62 17.50 7.87	27.78 39.48 18.41	15.51 13.89 7.31	7.04 9.40 61.34	8.37 22.32	13.18 12.24	7.43 9.95	18.61	0013-1
1890.00	Sh/Clst	20.60 9.08 4.89	6.41 2.79 1.36	7.34 26.90* 4.41	3.81 3.38 1.55	1.31 1.20 12.33	2.21 2.61	2.39 3.78	2.24 2.19	9.92*	0015-1
2140.00	S/Sst	95.55 123.26 12.06	39.35 55.51 30.18	173.15 21.75 51.41	110.61 81.79 40.78	45.81 33.99 27.42	47.29 15.48	80.35 34.10	51.86 41.73	33.03	0047-1
2150.00	S/Sst	81.00 141.93 9.67	36.89 60.77 31.82	187.90 25.65 59.85	122.38 93.47 43.35	50.67 37.10 32.71	42.83 13.65	85.58 42.52	59.44 51.28	41.91	0048-1
2160.06	S/Sst	103.89 126.23 13.88	41.66 57.69 25.45	102.99 20.73 50.64	115.84 79.77 37.79	48.50 30.52 29.32	45.76 11.72	83.69 34.62	57.74 46.05	35.85	0049-1

* Uncertain measurement, due to coelution problem.

Table 11D: Raw GCMS sterane data (peak height) for Well NOCS 6507/8-4

Depth unit of measure: m

Depth	Lithology	u	v	a	b	c	d	e	f	g	Sample
		h	i	j	k	l	m	n	o		
		p	q	r	s	t					
2170.05	S/Sst	100.21	36.29	161.33	103.54	39.45	40.05	73.79	45.80	30.50	0050-1
		108.70	51.23	16.00	69.27	30.09	9.91	30.72	40.07		
		2.09	25.06	45.99	34.29	24.08					
2181.02	Sh/Clst	150.03	244.81	19.18	14.81	17.92	0.00	33.15	21.60	633.30*	0053-1
		41.30	183.07*	67.85	65.04	78.03	104.91	196.79	75.68		
		161.46	67.15	219.08	133.49	439.47					
2204.06	S/Sst	107.72	41.99	172.89	110.35	44.10	44.69	81.11	48.68	31.00	0060-1
		113.96	50.06	19.52	74.34	30.51	17.37	30.42	42.45		
		10.60	26.27	47.44	35.97	24.29					
2207.97	Coal	372.25	239.99	112.74	70.24	38.98	33.43	86.70	37.70	1198.56*	0062-1
		86.67	257.25*	92.71	93.53	135.66	131.90	258.70	102.75		
		186.47	75.43	257.23	159.82	379.33					
2219.93	S/Sst	119.14	45.59	176.46	111.89	45.79	43.50	81.31	51.15	34.66	0065-1
		122.10	56.06	20.72	75.17	31.96	14.34	35.79	42.85		
		12.84	30.07	52.49	43.29	24.39					

* Uncertain measurement, due to coelution problem.

Depth unit of measure: m

Depth	Lithology	u	v	a	b	c	d	e	f	g	Sample
		h	i	j	k	l	m	n	o		
		p	q	r	s	t					
2222.18	Sh/Clst	124.75	298.49	59.06	43.57	26.38	26.62	69.63	29.87	1308.95*	0066-1
		32.41	180.79*	56.08	83.79	133.47	86.28	367.20	83.15		
		312.67	104.58	182.73	169.55	390.12					
2231.87	Coal	181.15	462.06	28.77	47.64	25.74	0.00	84.70	22.31	746.58*	0069-1
		24.52	254.06*	80.22	61.09	109.90	172.54	341.34	139.00		
		297.12	120.72	346.17	252.90	563.05					
2244.62	Coal	250.81	505.08	139.19	90.69	55.51	21.34	113.48	69.70	942.30*	0071-1
		139.06	626.89*	112.43	118.89	214.77	503.54	333.80	299.24		
		307.47	94.92	230.55	169.89	319.23					
2247.73	bulk	143.65	53.34	226.61	144.64	56.11	58.21	105.38	69.28	46.56	0072-0
		155.15	71.73	24.26	101.02	41.17	20.79	46.66	61.07		
		13.86	38.66	73.48	57.10	31.69					
2255.55	S/Sst	195.34	74.82	308.48	201.79	80.62	80.96	144.39	99.83	63.35	0075-1
		234.42	106.75	34.67	145.59	48.20	25.30	63.05	90.09		
		19.81	53.94	93.99	79.89	49.81					

* Uncertain measurement, due to coelution problem.

Table 11D: Raw GCMS sterane data (peak height) for Well NOCS 6507/8-4

Depth unit of measure: m

Depth	Lithology	u	v	a	b	c	d	e	f	g	Sample
		h	i	j	k	l	m	n	o		
		p	q	r	s	t					
2280.00	Sltst	187.95	70.36	246.60	148.71	58.81	62.40	107.23	69.51	50.13	0077-1
		168.60	77.34	32.49	105.42	35.44	21.83	46.81	60.50		
		13.85	39.96	72.43	63.16	34.12					

Table 12a: Quantification C₂-C₈ - Peak Areas

	6507/8-4 DST2	6507/8-4 DST3	6507/8-4 DST4
Peaks	Area	Area	Area
isobutane	360674	364889	2283204
n-butane	799338	839513	6704629
isopentane	687850	781161	9862729
n-pentane	768846	900651	13307315
2,3 dimethylbutane	93317	121205	1721384
2-methylpentane	433704	526008	10130700
3-methylpentane	257203	340547	6033138
n-hexane	1196528	17295328	16702359
methylcyclopentane	545297	722502	13223608
benzene	79720	128028	2028354
cyclohexane	705270	911832	20072176
2-methylhexane	523984	654192	15629402
3-methylhexane	224113	282440	7686709
1,3 cis dimethylcyclopentane	132662	170617	4373436
1,2 trans dimethylcyclopentane	117161	151696	3798210
1,3 trans dimethylcyclopentane	209619	269604	6990012
n-heptane	465858	597042	17700186
methylcyclohexane	845800	1136444	31667252
toluene	143144	178226	5065682

Table 12b: Quantification, Whole Oil

Sample	Area C2-C8	Area C8+	% C2-C8	% C8+
6507/8-4 Dst2	1529650	33330528	4.4	95.6
6507/8-4 Dst3	3166967	20950790	13.1	86.9
6507/8-4 Dst4	30889673	21983697	58.4	41.6

Table 12c: Topping Quantification

Sample	Wt(mg)	Removed in topping (%)	C ₁₅₊ (%)
DST 2	41.5	2.6	97.4
DST 3	34.6	3.1	96.9
DST 4	706.0	43.6	56.4

Table 13a: Weight of EOM and Chromatographic Fraction for well NOCS 6507/8-4 OILS.STATOI

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
DST 2	oil		-	75.8	45.8	20.9	3.2	5.9	66.7	9.1	-	0001-0B
DST 3	oil		-	89.6	65.4	12.8	3.3	8.1	78.2	11.4	-	0002-0B
DST 4	oil		-	81.8	61.4	14.4	2.2	3.8	75.8	6.0	-	0003-0B

Depth unit of measure: m

Depth	Typ	Lithology	Sat	Aro	Asph	NSO	HC	Non-HC	Sat	HC	Sample
			EOM	EOM	EOM	EOM	EOM	EOM	EOM	Aro	
	DST 2	oil	60.42	27.57	4.22	7.78	87.99	12.01	219.14	732.97	0001-0B
	DST 3	oil	72.99	14.29	3.68	9.04	87.28	12.72	510.94	685.97	0002-0B
	DST 4	oil	75.06	17.60	2.69	4.65	92.67	7.33	426.39	1263.33	0003-0B

Table 14 : Saturated Hydrocarbon Ratios for well NOCS 6507/8-4 OILS.STATOI

Depth unit of measure: m

Depth	Typ	Lithology	Pristane	Pristane	Pristane + Phytane	Phytane	CPI	Sample
			nC17	Phytane	nC17 + nC18	nC18		
DST 2	oil		-	-	-	-	-	0001-0B
DST 3	oil		-	-	-	-	-	0002-0B
DST 4	oil		-	-	-	-	-	0003-0B

Depth unit of measure: m

Depth	Typ	Lithology	MNR	DMNR	BPhR	2/1MP	MPI1	MPI2	Rc	DBT/P	4/1MDBT (3+2) /1MDBT	Sample	
DST 2	oil		-	2.13	-	0.95	0.64	0.72	0.78	0.45	4.77	1.20	0001-0B
DST 3	oil		-	2.58	-	1.00	0.73	0.75	0.84	0.60	7.52	1.59	0002-0B
DST 4	oil		-	2.17	-	-	-	-	-	-	4.87	1.21	0003-0B

Table 16a : Tabulation of carbon isotope data for EOM/EOM - fractions or Oils for well NOCS 6507/8-4 OILS.STATOI

Depth unit of measure: m

Depth	Typ	Lithology	EOM/Oil	Saturated	Aromatic	NSO	Asphaltenes	Kerogen	Sample
DST 2	oil		-28.71	-29.29	-28.19	-29.20	-29.35	-	0001-0B
DST 3	oil		-28.67	-29.05	-28.08	-29.38	-29.31	-	0002-0B
DST 4	oil		-27.85	-29.14	-27.22	* -34.44	* -30.93	-	0003-0B

* Unreliable data. Could not rerun due to lack of material.

Table 16b : Tabulation of cv values from carbon isotope data for well NOCS 6507/8-4 OILS.STATOI

Depth unit of measure: m

Depth Typ Lithology	Saturated	Aromatic	cv value	Sample
DST 2 oil	-29.29	-28.19	-0.13	0001-0B
DST 3 oil	-29.05	-28.08	-0.49	0002-0B
DST 4 oil	-29.14	-27.22	1.65	0003-0B

Table 17A: Variation in Triterpane Distribution (peak height) for Well NOCS 6507/8-4 OILS.STATOI

Depth unit of measure: m

Depth	Lithology	B/A	B/B+A	B		C/E	C/C+E	X/E	Z/E	Z/C	Z/Z+E	Q/E	E/E+F	C+D		J1		Sample
				B+E+F										C+D+E+F	D+F/C+E	J1+J2%		
DST 2	oil	0.40	0.28	0.11		0.39	0.28	0.13	0.12	0.31	0.11	0.23	0.93	0.29	0.08	61.02		0001-0
DST 3	oil	0.39	0.28	0.11		0.39	0.28	0.14	0.12	0.30	0.11	0.21	0.93	0.28	0.08	58.95		0002-0
DST 4	oil	-	-	-		0.42	0.29	-	-	-	-	2.10	1.00	0.29	-	-		0003-0

Depth unit of measure: m

Depth Lithology	Ratio1	Ratio2	Ratio3	Ratio4	Ratio5	Ratio6	Ratio7	Ratio8	Ratio9	Ratio10	Sample
DST 2 oil:	0.91	50.73	76.84	1.48	0.77	0.47	0.35	0.62	1.03	3.37	0001-0
DST 3 oil:	0.89	51.48	77.14	1.42	0.77	0.48	0.36	0.63	1.06	3.48	0002-0
DST 4 oil:	0.92	-	-	2.64	-	1.00	0.95	-	-	-	0003-0

Ratio1: $a / a + j$ Ratio2: $q / q + t * 100\%$ Ratio3: $2(r + s) / (q + t + 2(r + s)) * 100\%$ Ratio4: $a + b + c + d / h + k + l + n$ Ratio5: $r + s / r + s + q$ Ratio6: $u + v / u + v + q + r + s + t$ Ratio7: $u + v / u + v + i + m + n + q + r + s + t$ Ratio8: $r + s / q + r + s + t$ Ratio9: q / t Ratio10: $r + s / t$

Table 17C: Raw GCMS triterpane data (peak height) for Well NOCS 6507/B-4 OILS.STATOI

Depth unit of measure: m

Depth Lithology	p	q	r	s	t	a	b	z	c	Sample	
	x	d	e	f	g	h	i	j1			
	j2	k1	k2	l1	l2	m1	m2				
DST 2 oil	89.05 47.73 71.46	83.59 12.49 79.54	41.00 356.91 46.57	45.54 25.61 53.37	19.91 157.31 33.21	115.54 96.76 49.14	45.87 19.53 29.82	44.08 111.87	140.43	0001-0	
DST 3 oil	75.73 44.18 66.86	67.00 11.25 66.72	32.63 312.38 42.15	37.12 22.78 48.37	14.18 135.59 30.50	101.05 90.58 41.52	39.48 14.14 26.51	36.72 96.02	122.00	0002-0	
DST 4 oil	13.49 0.00 0.00	10.90 0.00 0.00	4.66 0.00 0.00	2.89 5.19 0.00	1.15 0.00 0.00	2.73 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	2.17	0003-0

Table 17D: Raw GCMS sterane data (peak height) for Well NOCS 6507/8-4 OILS.STATOI

Depth unit of measure: m

Depth Lithology	u	v	a	b	c	d	e	f	g	Sample
	h	i	j	k	l	m	n	o		
	p	q	r	s	t					
DST 2 oil	105.19	46.24	208.82	127.37	59.31	51.50	91.92	58.80	36.45	0001-0
	135.40	58.70	20.54	86.42	38.77	16.19	40.70	50.31		
	12.60	32.43	58.62	47.43	31.50					
DST 3 oil	91.54	39.94	170.00	107.58	40.35	41.25	76.25	52.02	34.11	0002-0
	113.14	54.37	21.20	78.47	32.73	12.61	28.67	44.21		
	10.99	27.16	49.25	39.76	25.60					
DST 4 oil	24.58	7.06	10.29	5.47	1.48	2.05	3.18	2.28	1.45	0003-0
	4.07	1.60	0.87	2.07	1.17	0.00	0.00	0.00		
	0.00	0.00	0.00	0.00	0.00					