

TABLE 2A
CONCENTRATION (VOL. PPM OF ROCK) OF C₁ - C₇ HYDROCARBONS IN AIR SPACE GAS

GEOCHEM SAMPLE NUMBER	DEPTH	C ₁ Methane	C ₂ Ethane	C ₃ Propane	iC ₄ Isobutane	nC ₄ Butane	TOTAL C ₁ - C ₄	TOTAL C ₂ - C ₄	% GAS WETNESS	TOTAL C ₅ - C ₇	$\frac{iC_4}{nC_4}$
1280-187	2100	248	30	36	11	18	343	95	27.7	76	0.61
1280-192	2150	373	59	81	21	47	581	209	35.9	55	0.45
1280-197	2200	221	70	96	28	51	466	246	52.7	48	0.54
1280-200	2230	242	66	53	10	20	391	149	38.0	37	0.49
1280-202	2248	4791	3150	2187	255	529	10912	6122	56.1	627	0.48
1280-204	2275	2590	1686	1526	276	536	6613	4023	60.8	319	0.51
1280-206	2293	181	1224	1846	325	674	4249	4068	95.7	428	0.48
1280-208	2311	942	597	197	20	42	1798	856	47.6	72	0.49
1280-211	2329	645	644	1262	190	399	3141	2496	79.5	241	0.47
1280-213	2347	625	431	739	96	171	2063	1437	69.7	102	0.56
1280-215	2365	761	538	783	93	145	2319	1558	67.2	89	0.65
1280-217	2383	552	549	767	82	109	2058	1506	73.2	72	0.75
1280-219	2401	209	114	183	30	41	577	367	63.7	60	0.72
1280-221	2419	302	175	293	47	57	874	572	65.4	92	0.82
1280-223	2437	1566	1368	1127	120	168	4349	2783	64.0	114	0.71
1280-225	2455	3396	2307	1007	107	126	6944	3547	51.1	104	0.85
1280-227	2473	1202	1275	802	85	134	3498	2296	65.6	139	0.63
1280-229	2491	2878	744	320	46	52	4039	1162	28.8	59	0.88
1280-231	2509	1219	515	246	36	27	2044	824	40.3	26	1.36
1280-233	2527	178	103	148	21	35	486	308	63.3	43	0.60
1280-235	2545	51	84	62	11	26	234	183	78.3	58	0.43
1280-237	2563	466	132	134	22	38	792	326	41.2	49	0.58
1280-239	2581	100	95	101	15	28	339	239	70.5	37	0.53
1280-241	2599	379	219	358	67	132	1154	775	67.2	148	0.51
1280-243	2617	131	205	164	22	48	571	439	77.0	86	0.45
1280-245	2635	72	37	44	7	14	174	102	58.5	24	0.48
1280-247	2653	38	5	9	2	4	58	20	34.8	27	0.50
1280-249	2671	35	4	7	2	5	54	18	33.8	35	0.44
1280-251	2689	28	19	16	3	3	68	41	59.5	11	0.84
1280-253	2707	26	2	4	1	2	35	9	26.3	6	0.42

TABLE 2A
CONCENTRATION (VOL. PPM OF ROCK) OF C₁ - C₇ HYDROCARBONS IN AIR SPACE GAS

GEOCHEM SAMPLE NUMBER	DEPTH	C ₁ Methane	C ₂ Ethane	C ₃ Propane	iC ₄ Isobutane	nC ₄ Butane	TOTAL C ₁ - C ₄	TOTAL C ₂ - C ₄	% GAS WETNESS	TOTAL C ₅ - C ₇	$\frac{iC_4}{nC_4}$
1280-255	2725	45	8	12	3	9	76	31	40.9	21	0.34
1280-257	2743	48	9	16	2	5	81	32	40.0	11	0.42
1280-259	2761	51	31	25	3	5	115	64	55.8	6	0.51
1280-261	2779	53	3	6	1	3	66	13	19.9	5	0.45
1280-263	2797	55	3	3	1	2	63	8	13.4	12	0.28
1280-265	2815	46	3	3	1	2	54	8	14.4	12	0.32
1280-267	2833	45	4	7	2	3	60	16	26.1	10	0.49
1280-269	2851	37	3	3	0	2	45	8	18.2	13	0.27
1280-271	2869	65	41	50	9	21	187	122	65.0	28	0.42
1280-273	2881	103	139	216	30	66	553	450	81.4	70	0.46

TABLE 2B
CONCENTRATION (VOL. PPM OF ROCK) OF C₁ - C₇ HYDROCARBONS IN CUTTING GAS

GEOCHEM SAMPLE NUMBER	DEPTH	C ₁ Methane	C ₂ Ethane	C ₃ Propane	iC ₄ Isobutane	nC ₄ Butane	TOTAL C ₁ - C ₄	TOTAL C ₂ - C ₄	% GAS WETNESS	TOTAL C ₅ - C ₇	$\frac{iC_4}{nC_4}$
1280-037	600	1496	13	4	0	1	1515	19	1.2	20	0.15
1280-042	650	1403	12	2	0	0	1416	13	0.9	5	0.00
1280-047	700	2386	30	6	1	2	2425	39	1.6	9	0.33
1280-052	750	236	8	3	3	13	264	27	10.4	9	0.24
1280-057	800	1273	24	12	2	7	1318	45	3.4	26	0.30
1280-062	850	2184	22	2	0	1	2210	25	1.1	31	0.26
1280-067	900	866	16	7	1	5	896	30	3.3	12	0.24
1280-072	950	1803	13	3	0	1	1820	17	0.9	11	0.31
1280-077	1000	371	11	6	1	3	392	21	5.4	12	0.45
1280-082	1050	69	10	4	1	2	85	16	19.0	22	0.28
1280-087	1100	27	6	3	0	1	38	10	26.9	40	0.30
1280-092	1150	68	7	3	0	1	80	12	15.0	115	0.31
1280-097	1200	18	7	3	1	2	32	14	42.8	10	0.35
1280-102	1250	49	34	3	1	2	88	40	44.8	17	0.45
1280-107	1300	24	6	3	1	2	36	12	33.9	18	0.37
1280-112	1350	13	6	3	2	4	28	15	54.3	20	0.45
1280-117	1400	90	8	5	1	2	106	16	15.2	25	0.34
1280-122	1450	47	7	4	2	5	65	18	27.6	88	0.39
1280-127	1500	70	6	4	3	4	86	16	19.1	108	0.73
1280-132	1550	144	6	4	4	3	161	17	10.3	32	1.15
1280-137	1600	135	5	3	1	2	147	12	7.9	35	0.73
1280-142	1650	155	8	6	2	2	173	17	10.1	27	0.87
1280-147	1700	66	5	3	2	3	78	12	15.6	23	0.73
1280-152	1750	44	4	3	1	1	54	10	18.5	15	0.97
1280-157	1800	131	11	18	8	9	176	46	25.9	34	0.89
1280-162	1850	109	10	18	9	11	157	49	31.0	31	0.87
1280-167	1900	38	5	4	2	3	51	14	26.3	24	0.84
1280-172	1950	33	7	13	8	16	75	43	56.9	120	0.49
1280-177	2000	97	15	49	25	62	249	151	60.9	256	0.40
1280-182	2050	326	76	94	27	56	579	253	43.7	231	0.49

TABLE 2B
CONCENTRATION (VOL. PPM OF ROCK) OF C₁ - C₇ HYDROCARBONS IN CUTTING GAS

GEOCHEM SAMPLE NUMBER	DEPTH	C ₁ Methane	C ₂ Ethane	C ₃ Propane	iC ₄ Isobutane	nC ₄ Butane	TOTAL C ₁ - C ₄	TOTAL C ₂ - C ₄	% GAS WETNESS	TOTAL C ₅ - C ₇	$\frac{iC_4}{nC_4}$
1280-187	2100	42	20	33	14	38	146	105	71.5	203	0.37
1280-192	2150	115	14	33	13	48	224	109	48.5	91	0.28
1280-197	2200	28	14	25	8	31	105	78	73.9	141	0.26
1280-200	2230	24	9	15	6	15	68	43	63.9	85	0.38
1280-202	2248	2350	2357	2118	456	1273	8554	6205	72.5	1276	0.36
1280-204	2275	2475	2419	2740	945	2492	11071	8596	77.6	992	0.38
1280-206	2293	83	700	3198	940	2507	7429	7345	98.9	2026	0.37
1280-208	2311	328	358	268	51	161	1167	839	71.9	536	0.32
1280-211	2329	148	213	1191	221	752	2525	2376	94.1	474	0.29
1280-213	2347	178	253	1114	147	514	2206	2028	91.9	357	0.29
1280-215	2365	116	155	587	81	263	1202	1086	90.3	165	0.31
1280-217	2383	70	181	692	72	209	1224	1154	94.3	159	0.35
1280-219	2401	52	58	167	26	60	363	311	85.7	159	0.44
1280-221	2419	37	46	194	40	100	417	380	91.1	193	0.40
1280-223	2437	593	1486	1511	158	378	4125	3532	85.6	358	0.42
1280-225	2455	976	1869	1924	215	459	5442	4466	82.1	512	0.47
1280-227	2473	77	222	365	44	121	829	753	90.8	212	0.36
1280-229	2491	472	296	331	52	68	1219	746	61.2	98	0.76
1280-231	2509	908	857	1142	206	211	3324	2416	72.7	154	0.98
1280-233	2527	35	23	58	16	61	192	157	81.9	66	0.26
1280-235	2545	33	21	21	5	9	90	56	62.9	70	0.55
1280-237	2563	89	40	63	10	28	229	140	61.2	84	0.36
1280-239	2581	49	120	275	46	148	638	588	92.3	306	0.31
1280-241	2599	53	35	62	11	34	195	142	72.7	120	0.32
1280-243	2617	28	77	284	36	134	558	530	95.0	207	0.27
1280-245	2635	24	14	24	5	14	81	56	70.0	45	0.34
1280-247	2653	13	3	3	0	0	19	6	30.8	14	0.00
1280-249	2671	12	3	2	0	0	17	5	28.7	22	0.00
1280-251	2689	10	4	4	0	1	18	9	47.7	32	0.42
1280-253	2707	10	2	2	1	1	16	6	35.8	31	0.58

TABLE 2B
CONCENTRATION (VOL. PPM OF ROCK) OF C₁ - C₇ HYDROCARBONS IN CUTTING GAS

GEOCHEM SAMPLE NUMBER	DEPTH	C ₁ Methane	C ₂ Ethane	C ₃ Propane	iC ₄ Isobutane	nC ₄ Butane	TOTAL C ₁ - C ₄	TOTAL C ₂ - C ₄	% GAS WETNESS	TOTAL C ₅ - C ₇	$\frac{iC_4}{nC_4}$
1280-255	2725	17	4	3	1	5	29	13	43.2	23	0.13
1280-257	2743	14	3	4	1	2	23	9	40.2	17	0.34
1280-259	2761	25	21	24	3	6	79	54	68.2	11	0.43
1280-261	2779	16	3	2	0	1	22	7	30.3	4	0.34
1280-263	2797	18	4	1	0	1	25	6	25.8	13	0.52
1280-265	2815	12	3	1	0	1	17	5	28.0	9	0.40
1280-267	2833	18	4	2	0	1	25	7	28.7	13	0.34
1280-269	2851	18	3	1	0	1	24	6	25.2	11	0.40
1280-271	2869	82	12	18	4	13	128	47	36.3	41	0.35
1280-273	2881	28	10	38	7	25	108	80	74.1	60	0.28

TABLE 2 C
TOTAL CONCENTRATION (VOL. PPM OF ROCK) OF C₁ - C₇ HYDROCARBONS (2A + 2B)

GEOCHEM SAMPLE NUMBER	DEPTH	C ₁ Methane	C ₂ Ethane	C ₃ Propane	iC ₄ Isobutane	nC ₄ Butane	TOTAL C ₁ - C ₄	TOTAL C ₂ - C ₄	% GAS WETNESS	TOTAL C ₅ - C ₇	$\frac{iC_4}{nC_4}$
1280-037	600	3296	34	10	2	3	3345	49	1.5	40	0.44
1280-042	650	3993	21	13	1	3	4032	39	1.0	20	0.35
1280-047	700	4461	47	14	2	4	4527	66	1.5	18	0.42
1280-052	750	11720	44	9	4	16	11793	73	0.6	59	0.25
1280-057	800	3374	34	15	2	8	3434	60	1.7	57	0.30
1280-062	850	6653	43	5	1	2	6703	50	0.7	60	0.22
1280-067	900	6237	46	14	3	9	6310	73	1.2	13	0.35
1280-072	950	5776	27	6	1	2	5811	36	0.6	20	0.27
1280-077	1000	4075	29	10	2	4	4120	45	1.1	20	0.44
1280-082	1050	573	14	5	1	2	595	22	3.7	32	0.24
1280-087	1100	49	7	3	0	1	61	12	19.4	44	0.28
1280-092	1150	81	8	3	0	2	95	14	14.6	121	0.30
1280-097	1200	60	19	7	1	4	90	30	33.6	180	0.31
1280-102	1250	78	146	7	2	5	237	160	67.3	52	0.48
1280-107	1300	83	11	5	1	3	102	20	19.4	36	0.35
1280-112	1350	24	8	4	2	4	41	17	42.4	25	0.44
1280-117	1400	326	11	6	1	3	347	21	5.9	29	0.32
1280-122	1450	1083	24	15	7	12	1142	59	5.1	145	0.58
1280-127	1500	1646	26	16	11	11	1710	64	3.7	148	0.98
1280-132	1550	1305	19	10	6	4	1345	39	2.9	38	1.38
1280-137	1600	831	15	9	3	3	860	29	3.4	45	1.15
1280-142	1650	1147	21	14	5	4	1190	43	3.6	41	1.29
1280-147	1700	2201	35	25	8	7	2277	76	3.3	41	1.13
1280-152	1750	1366	22	14	4	4	1410	44	3.1	19	1.09
1280-157	1800	1248	40	38	14	13	1352	104	7.7	48	1.05
1280-162	1850	961	33	33	13	14	1054	93	8.8	37	0.97
1280-167	1900	479	19	18	10	11	538	58	10.8	56	0.92
1280-172	1950	850	47	51	23	35	1005	155	15.5	206	0.64
1280-177	2000	2275	183	181	61	111	2812	537	19.1	388	0.55
1280-182	2050	1451	233	178	48	82	1991	540	27.1	315	0.58

TABLE 2 C
TOTAL CONCENTRATION (VOL. PPM OF ROCK) OF C₁ - C₇ HYDROCARBONS (2A + 2B)

GEOCHEM SAMPLE NUMBER	DEPTH	C ₁ Methane	C ₂ Ethane	C ₃ Propane	iC ₄ Isobutane	nC ₄ Butane	TOTAL C ₁ - C ₄	TOTAL C ₂ - C ₄	% GAS WETNESS	TOTAL C ₅ - C ₇	$\frac{iC_4}{nC_4}$
1280-187	2100	289	50	69	25	56	489	200	40.8	278	0.45
1280-192	2150	488	74	114	35	95	805	317	39.4	145	0.37
1280-197	2200	248	85	120	36	82	572	323	56.6	189	0.44
1280-200	2230	267	75	68	15	34	459	192	41.9	123	0.44
1280-202	2248	7140	5507	4306	711	1802	19467	12326	63.3	1902	0.39
1280-204	2275	5065	4105	4267	1220	3028	17685	12619	71.4	1311	0.40
1280-206	2293	264	1924	5044	1264	3181	11678	11414	97.7	2455	0.40
1280-208	2311	1270	954	466	72	203	2965	1695	57.2	608	0.35
1280-211	2329	794	857	2453	411	1151	5666	4872	86.0	715	0.36
1280-213	2347	803	684	1852	243	685	4268	3465	81.2	459	0.36
1280-215	2365	877	693	1369	175	407	3521	2644	75.1	254	0.43
1280-217	2383	622	729	1459	154	318	3282	2660	81.1	231	0.48
1280-219	2401	261	171	350	56	101	939	678	72.2	219	0.55
1280-221	2419	339	221	487	87	157	1291	952	73.7	285	0.55
1280-223	2437	2159	2854	2638	278	546	8474	6315	74.5	472	0.51
1280-225	2455	4372	4176	2931	322	585	12386	8014	64.7	616	0.55
1280-227	2473	1279	1497	1167	129	255	4327	3048	70.4	351	0.50
1280-229	2491	3350	1040	651	97	120	5258	1908	36.3	157	0.81
1280-231	2509	2127	1373	1388	242	237	5368	3241	60.4	181	1.02
1280-233	2527	213	126	206	37	97	678	465	68.6	109	0.38
1280-235	2545	84	105	83	16	35	324	240	74.0	128	0.46
1280-237	2563	554	172	197	32	65	1020	466	45.7	133	0.49
1280-239	2581	149	214	376	61	176	976	827	84.7	343	0.35
1280-241	2599	432	254	419	78	166	1349	917	68.0	268	0.47
1280-243	2617	159	282	447	58	182	1129	969	85.9	293	0.32
1280-245	2635	97	52	67	11	28	255	158	62.2	69	0.41
1280-247	2653	51	8	12	2	4	77	26	33.8	40	0.47
1280-249	2671	48	7	10	2	5	71	23	32.6	58	0.44
1280-251	2689	37	23	19	3	4	86	49	57.0	43	0.77
1280-253	2707	36	4	6	2	3	51	15	29.2	37	0.46

TABLE 2 C
TOTAL CONCENTRATION (VOL. PPM OF ROCK) OF C₁ - C₇ HYDROCARBONS (2A + 2B)

GEOCHEM SAMPLE NUMBER	DEPTH	C ₁ Methane	C ₂ Ethane	C ₃ Propane	iC ₄ Isobutane	nC ₄ Butane	TOTAL C ₁ - C ₄	TOTAL C ₂ - C ₄	% GAS WETNESS	TOTAL C ₅ - C ₇	$\frac{iC_4}{nC_4}$
1280-255	2725	61	12	15	4	13	105	44	41.5	44	0.26
1280-257	2743	62	12	19	3	7	103	41	40.0	28	0.40
1280-259	2761	76	52	49	5	11	193	118	60.8	18	0.46
1280-261	2779	68	6	8	2	4	88	20	22.5	10	0.41
1280-263	2797	73	7	4	1	3	88	15	16.9	25	0.34
1280-265	2815	58	6	4	1	2	71	12	17.7	21	0.34
1280-267	2833	62	8	9	2	4	85	23	26.8	23	0.45
1280-269	2851	55	7	4	1	3	69	14	20.6	24	0.32
1280-271	2869	147	54	68	13	33	315	168	53.3	70	0.40
1280-273	2881	131	149	254	37	91	662	531	80.2	129	0.41



TABLE 3

ROCKEVAL PYROLYSIS DATA

GEOCHEM SAMPLE NUMBER	DEPTH (M)	S1 (mg/g)	S2 (mg/g)	S3 (mg/g)	PRODUCTION INDEX	HYDROGEN INDEX	OXYGEN INDEX	TMAX (°C)
1280-274A	1052	0.04	0.18	0.71	0.18	29.0	114.5	382
1280-275A	1099	0.10	1.02	1.36	0.09	99.0	132.0	419
1280-276A	1157	0.12	2.01	1.88	0.06	134.0	125.3	431
1280-277A	1209	0.14	1.93	1.70	0.07	135.0	118.9	427
1280-278A	1277.5	0.09	1.24	0.79	0.07	117.0	74.5	418
1280-279A	1350	0.04	0.59	1.08	0.06	40.7	74.5	404
1280-280A	1405	0.17	0.99	0.95	0.15	65.1	62.5	410
1280-281A	1491.5	0.11	0.32	2.14	0.26	47.1	314.7	396
1280-282A	1563	0.05	0.05	0.53	0.50	10.2	108.2	302
1280-283A	1621.5	0.07	0.03	0.60	0.70	6.7	133.3	338
1280-284A	1771.5	0.09	0.29	1.20	0.24	15.7	64.9	413
1280-285A	1918	0.08	0.54	0.84	0.13	45.4	70.6	420
1280-286A	1975	0.17	1.82	0.71	0.09	67.9	26.5	415
1280-287A	1999.5	0.09	1.57	0.53	0.05	100.6	34.0	417
1280-288A	2032	0.10	1.45	0.39	0.06	101.4	27.3	421
1280-289A	2090	0.03	0.04	0.25	0.43	11.1	69.4	425
1280-290A	2130	0.06	0.37	0.81	0.14	48.7	106.6	421
1280-291A	2193	0.08	0.18	0.60	0.31	24.7	82.2	363
1280-292A	2221	0.03	0.10	0.34	0.23	22.2	75.6	341
1280-201A	2239	1.02	48.74	1.47	0.02	618.5	18.7	422
1280-293A	2243	1.25	41.28	1.03	0.03	508.4	12.7	422
1280-202A	2248	1.26	53.33	1.16	0.02	669.1	14.6	422
1280-294A	2251	1.17	27.36	0.70	0.04	498.4	12.8	418
1280-295A	2254	0.64	5.12	0.89	0.11	167.3	29.1	413
1280-296A	2256	0.57	13.09	2.57	0.04	314.7	61.8	422
1280-203A	2257	0.91	40.93	1.51	0.02	562.2	20.7	421
1280-297A	2258	0.81	37.18	0.92	0.02	500.4	12.4	417
1280-298A	2264	0.49	17.22	0.89	0.03	290.9	15.0	420
1280-299A	2270	0.25	2.47	0.86	0.09	105.1	36.6	427
1280-300A	2273	0.17	2.65	0.57	0.06	133.8	28.8	424
1280-204A	2275	0.93	32.11	1.22	0.03	503.3	19.1	420
1280-301A	2276	0.19	0.93	0.66	0.17	60.4	42.9	421
1280-205A	2284	0.78	27.39	2.05	0.03	415.6	31.1	424
1280-206A	2293	0.74	27.85	1.45	0.03	481.0	25.0	420
1280-302A	2299	0.15	1.68	0.78	0.08	147.4	68.4	432
1280-207A	2302	0.77	32.64	1.75	0.02	492.3	26.4	423
1280-303A	2302.8	0.10	1.90	1.50	0.05	186.3	147.1	435
1280-304A	2305.2	1.00	1.00	1.10	0.50	98.0	107.8	434
1280-305A	2309.8	0.07	1.48	0.45	0.05	128.7	39.1	434
1280-306A	2310	0.06	1.08	0.74	0.05	104.9	71.8	433
1280-208B	3211	0.07	0.08	1.39	0.47	25.0	424.4	423
1280-307A	2320	0.06	1.54	1.22	0.04	146.7	116.2	435
1280-209D	2312	0.22	2.77	1.39	0.07	216.4	108.6	432
1280-210A	2320	1.37	0.28	2.73	1.17	222.0	95.1	434



TABLE 3

ROCKEVAL PYROLYSIS DATA

GEOCHEM SAMPLE NUMBER	DEPTH (M)	S1 (mg/g)	S2 (mg/g)	S3 (mg/g)	PRODUCTION INDEX	HYDROGEN INDEX	OXYGEN INDEX	TMAX (°C)
1280-211A	2329	0.29	2.56	1.00	0.10	195.4	76.3	433
1280-212A	2338	0.22	1.99	1.73	0.10	184.3	160.2	436
1280-308A	2340	0.06	1.11	1.14	0.05	99.1	101.8	437
1280-213A	2347	0.25	1.29	1.05	0.16	125.2	101.9	434
1280-309A	2350	0.06	1.29	0.79	0.04	90.8	55.6	431
1280-214A	2356	0.27	3.17	0.97	0.08	242.0	74.0	432
1280-215B	2365	0.17	1.29	1.10	0.12	121.7	103.8	436
1280-216A	2374	0.22	2.15	1.05	0.09	173.4	84.7	432
1280-217B	2383	0.25	1.87	0.86	0.12	149.6	68.8	436
1280-218A	2392	0.21	1.57	1.16	0.12	157.0	116.0	433
1280-219B	2410	0.36	1.96	0.70	0.16	183.2	65.4	436
1280-310A	2410	0.06	0.75	0.59	0.07	89.3	70.2	432
1280-220A	2410	0.15	1.92	0.77	0.07	188.2	75.5	434
1280-221A	2419	0.20	1.41	0.55	0.12	139.6	54.5	432
1280-222A	2428	0.45	17.10	0.63	0.03	458.4	16.9	420
1280-223A	2437	0.52	17.39	0.69	0.03	479.1	19.0	422
1280-311A	2441.5	0.77	43.60	2.09	0.02	198.2	9.5	433
1280-224A	2446	0.13	3.37	0.39	0.04	244.2	28.3	428
1280-225A	2455	0.27	9.24	0.84	0.03	325.4	29.6	427
1280-226B	2464	0.19	4.77	0.77	0.04	245.9	39.7	429
1280-227B	2473	0.41	6.68	0.64	0.06	267.2	25.6	426
1280-228A	2482	0.30	9.33	0.68	0.03	388.7	28.3	423
1280-312A	2484.5	0.02	0.03	0.45	0.40	115.3	173.1	436
1280-313A	2488	0.04	7.26	0.37	0.01	312.9	15.9	430
1280-229A	2491	0.16	0.33	0.38	0.33	60.0	69.1	431
1280-229C	2491	1.89	113.60	5.40	0.02	298.9	14.2	428
1280-230A	2500	0.11	0.36	0.29	0.23	69.2	55.8	383
1280-314A	2503	0.02	0.02	0.25	0.50	117.6	147.1	432

TABLE 4
GAS - OIL INDEX



GEOCHEM SAMPLE NUMBER	DEPTH	DRY GAS	WET GAS	GASOLINES KEROSENES	GAS OIL DISTILLATE	GAS-OIL INDEX
		% C ₁	% C ₂ - C ₅	% C ₆ - C ₁₄	% C ₁₅₊	$\frac{\% C_1 - C_5}{\text{TOTAL}}$
1280-201A	2239	8.74	10.81	55.06	25.39	19.55
1280-202A	2248	7.54	12.08	51.39	28.99	19.62
1280-294A	2251	6.34	12.07	50.10	31.50	18.41
1280-295A	2254	7.82	47.52	43.26	1.39	55.35
1280-296A	2256	12.50	32.03	52.22	3.25	44.53
1280-203A	2257	8.16	11.07	58.85	21.92	19.23
1280-297A	2258	11.35	18.66	56.66	13.33	30.01
1280-298A	2264	13.59	29.01	52.43	4.96	42.60
1280-300A	2273	11.66	27.44	60.63	0.27	39.10
1280-204A	2275	6.12	10.09	56.13	27.66	16.21
1280-302A	2299	16.24	41.82	41.57	0.37	58.06
1280-306A	2310	16.12	54.82	28.75	0.31	70.94
1280-210A	2320	8.00	43.28	45.21	3.51	51.28
1280-211A	2329	12.39	50.65	35.01	1.94	63.04
1280-213A	2347	15.39	35.91	45.66	3.05	51.29
1280-309A	2350	22.70	26.86	46.91	3.52	49.56
1280-215B	2365	22.73	42.67	33.21	1.39	65.40
1280-217B	2383	10.11	35.79	49.59	4.51	45.90
1280-219B	2401	15.99	52.12	31.51	0.39	68.11
1280-221A	2419	24.96	39.26	35.16	0.63	64.22
1280-223A	2437	12.27	22.86	58.90	5.97	35.13
1280-311A	2441.5	43.53	20.21	34.37	1.89	63.74
1280-225A	2455	10.48	41.12	46.11	2.29	51.60
1280-227B	2473	14.54	30.86	52.03	2.56	45.41
1280-313A	2488	27.07	25.99	43.17	3.77	53.06
1280-229A	2491	12.87	48.48	37.92	0.73	61.35
1280-229C	2491	25.91	11.09	43.66	19.35	36.99

TABLE 5
KEROGEN TYPE AND MATURATION

GEOCHEM SAMPLE NUMBER	DEPTH	ORGANIC MATTER DESCRIPTION					THERMAL MATURATION	
		TYPES > 35%; 10-35%; < 10%	REMARKS	RE- WORKED (%)	PARTICLE SIZE	PRESERV- ATION	THERMAL ALTERATION INDEX	1 - 10 SCALE
1280-201	2239m	Am; Al*; I-W-H	*generally passing to amorphous	10	F-C	G	1+ to 2-	2
1280-202A	2248m	Am; Al*; I-W-H	*as 201A	<10	F-C	G	1+ to 2-	2
1280-294A	2251m	SWC Am; Al*; I-W-H	H at 2-	10	F-C	G	1+ to 2-	2
1280-295A	2254m	SWC (Al-W; I-Am; H)	differentiation extremely difficult, abundant fine pyrite, unreliable H at 2-	--	F-C	F	1+ to 2-(?)	2(?)
1280-296A	2256m	SWC Am*; I-Al*; W-H	*includes material passing to amorphous good H at 2-	30	F-C	G	1+ to 2-/2-	2.5
1280-203A	2257m	Am*; Al*; I-W-H	*as 296A close to 2-	<10	F-C	G	1+ to 2-/2-(?)	2.5(?)
1280-297A	2258m	SWC Am*; Al*; I-W-H	*as 296A	15	F-C	G	2- max	3 max
1280-298A	2264.0m	SWC Am; I-Al*; W-H	*frequently passing to amorphous	30	F-M/C	G	2- max	3 max
1280-300A	2273m	SWC H; W-I; Al-Am	dominant H at 2-, also H at 2- to 2 and 2	55	F-M	F	1+ to 2-/2-	2.5
1280-204A	2275m	Am*; I-Al*; W-H	*includes material passing to amorphous significant H at 2-	30	F-C	G	1+ to 2-(?)	2(?)
1280-302A	2276m	SWC W; H-I; Al		--	M-C	G	2-	3
1280-306A	2310.0m	SWC W-I; H-Al		60	M	G	2-(?)	3(?)
1280-210A	2320m	-; Am*-W-I; H-Al	*as 204A caving, mixture of lithologies?	30	F-C	F-G	2-(?)	3(?)

Algal, Amorphous, Herbaceous, Inertinite, Resin, Wood

preservation = Poor, Fair, Good size = Fine, Medium, Coarse

TA1 SCALE 1 | 1+ to 2- | 2- | 2 | 2 to 2+ | 2+ to 3- | 3 | 3+ | 4 | 5
1 - 10 SCALE 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10



TABLE 5
KEROGEN TYPE AND MATURATION

GEOCHEM SAMPLE NUMBER	DEPTH	ORGANIC MATTER DESCRIPTION					THERMAL MATURATION	
		TYPES >35%; 10-35%; <10%	REMARKS	RE- WORKED (%)	PARTICLE SIZE	PRESERV- ATION	THERMAL ALTERATION INDEX	1 - 10 SCALE
1280-211A	2329m	I-W;H;Am-Al	caving	60	M	G	2-	3
1280-213A	2347m	I-W;H-Am;Al	H at 2- to 2 and 2, minor caving	60	M	G	2-	3
1280-309A	2350m	SWC W;H-I;Al		--	M	G	2-	3
1280-215B	2365m	W;I-H-Am*;Al	contamination *caved?	50	M-C	G	2-	3
1280-217B	2383m	-;W-I-H-Am;Al	minor H at 1+ to 2-	50	M-C	G	2-	3
1280-219B	2401m	W-I;H;Al		60	F-M	G	2-	3
1280-221A	2419m	W;I-H;Al-Am	lean	65	F-M	F	2-	3
1280-223A	2437m	Am;Al*-I;W-H	*generally passing to amorphous H at 2- to 2 and 2	15	M-C	G	2-	3
1280-311A	2441.5m	SWC W;Am*-H**;I	differentiation difficult *degraded, disseminated **includes material undergoing sapolipisation	--	F-C	F-G	2-	3
1280-225A	2455m	Am;I-W-Al-H;-	H at 2	25	M-C	G	2- to 2	3.5
1280-227B	2473m	I;W-Am-H;Al		75	M-C	G	2- to 2	3.5
1280-313A	2488m	SWC Am;W-H;I-Al		--	F-C	G	2- to 2	3.5
1280-229A	2491m	W;I-H;Al-Am	contamination	60	F-M	F	2- to 2	3.5
1280-229C	2491m	W;H;Am-I	differentiation difficult	--	F-C	G	2- to 2	3.5

Algal, Amorphous, Herbaceous, Inertinite, Resin, Wood

preservation = Poor, Fair, Good size = Fine, Medium, Coarse

TA1 SCALE	1	1 + to 2-	2-	2	2 to 2+	2+ to 3-	3	3+	4	5
1 - 10 SCALE	1	2	3	4	5	6	7	8	9	10





TABLE 6

METHYL PHENANTHRENE INDEX

<u>GEOCHEM SAMPLE NUMBER</u>	<u>DEPTH</u>	<u>% AREA</u>	<u>% HEIGHT</u>
1280-201A	2239m	0.52	0.65
1280-202A	2248m	0.91	0.86
1280-294A	2251m	0.54	0.82
1280-295A	2254m	0.58	0.76
1280-296A	2256m	0.47	0.65
1280-203A	2257m	0.36	0.63
1280-297A	2258m	0.49	0.57
1280-298A	2264m	0.59	0.69
1280-300A	2273m	0.47	0.75
1280-204A	2275m	0.57	0.67
1280-302A	2299m	1.10	1.26
1280-306A	2310m	0.52	0.47
1280-210A	2320m	0.49	0.61
1280-211A	2329m	0.86	0.84
1280-213A	2347m	0.32	0.42
1280-309A	2350m	0.55	0.68
1280-215B	2365m	0.44	0.53
1280-217B	2383m	0.37	0.45
1280-219B	2401m	0.23	0.37
1280-221A	2419m	0.26	0.31
1280-223A	2437m	0.43	0.56
1280-311A	2441.5m	0.99	1.03
1280-225A	2455m	0.23	0.34
1280-227B	2473m	0.18	0.28
1280-313A	2488m	0.54	0.55
1280-229A	2491m	0.72	0.82
1280-229C	2491m	0.09	0.22
1280-002	OIL	0.39	0.58



TABLE 7a
CONCENTRATION (PPM) OF EXTRACTED C₁₅₊ MATERIAL IN ROCK

JOB GEOCHEM SAMPLE NUMBER	LITHO	DEPTH	TOTAL EXTRACT	HYDROCARBONS			NON HYDROCARBONS			
				Saturates	Aromatics	TOTAL	Precipitd. Asphaltenes	Eluted NSO's	Non-eluted NSO's	TOTAL
1280-201A		2239	2756	640	183	822	928	859	146	1934
1280-202A		2248	5393	1317	427	1744	1832	1744	72	3649
1280-294A		2251	2365	535	283	819	790	709	48	1547
1280-295A		2254	3647	1372	613	1985	728	875	59	1662
1280-296A		2256	2484	363	207	571	1444	447	23	1914
1280-203A		2257	5745	1419	485	1904	2010	1755	76	3841
1280-297A		2258	5257	1338	392	1729	2235	1269	24	3528
1280-298A		2264	3528	416	356	772	2039	700	17	2755
1280-300A		2273	2855	538	262	800	1658	370	27	2056
1280-204A		2275	2560	573	161	734	1313	499	15	1827
1280-302A		2299	1712	315	199	514	943	246	9	1198
1280-306A		2310	620	105	71	176	281	163	1	444
1280-210A		2320	852	208	47	255	451	136	10	596
1280-211A		2329	357	50	13	63	263	30	2	294
1280-213A		2347	274	45	17	62	162	46	3	212
1280-309A		2350	874	91	68	158	591	118	7	716
1280-215B		2365	329	29	12	41	243	42	3	288
1280-217B		2383	786	125	52	178	454	145	10	608
1280-219B		2401	1125	181	137	319	550	253	3	806
1280-221A		2419	1327	233	66	299	657	361	9	1028
1280-223A		2437	1240	254	76	329	605	286	21	911
1280-311A		2441.5	5374	157	313	470	4565	313	26	4904
1280-225A		2455	764	180	89	270	354	130	11	495
1280-227B		2473	1052	139	67	206	692	139	15	846
1280-313A		2488	2017	249	227	476	1283	234	24	1541
1280-229A		2491	377	72	38	110	217	47	2	266
1280-229C		2491	33333	4903	2097	7000	23319	2903	111	26333

S - shale, SS - sandstone, L - limestone, D - dolomite, M - mixed, see Table 1.



TABLE 7b
COMPOSITION (NORMALISED %) OF C₁₅₊ MATERIAL

JOB	LITHO	DEPTH	HYDROCARBONS		NON HYDROCARBONS		
			Saturates	Aromatics	Preciptd. Asphaltenes	Eluted NSO's	Non eluted NSO's
1280-201A		2239	23.21	6.64	33.68	31.17	5.31
1280-202A		2248	24.43	7.91	33.97	32.34	1.34
1280-294A		2251	22.64	11.97	33.38	29.97	2.05
1280-295A		2254	37.61	16.81	19.96	24.00	1.62
1280-296A		2256	14.62	8.35	58.12	17.98	0.93
1280-203A		2257	24.69	8.45	34.99	30.55	1.31
1280-297A		2258	25.44	7.45	42.51	24.13	0.46
1280-298A		2264	11.81	10.09	57.79	19.84	0.48
1280-300A		2273	18.83	9.18	58.07	12.97	0.95
1280-204A		2275	22.38	6.28	51.28	19.49	0.58
1280-302A		2299	18.38	11.64	55.11	14.36	0.50
1280-306A		2310	16.92	11.44	45.27	26.20	0.17
1280-210A		2320	24.43	5.54	52.93	15.96	1.14
1280-211A		2329	13.86	3.71	73.51	8.42	0.50
1280-213A		2347	16.27	6.33	59.34	16.87	1.20
1280-309A		2350	10.36	7.73	67.54	13.54	0.83
1280-215B		2365	8.93	3.57	74.01	12.70	0.79
1280-217B		2383	15.97	6.63	57.74	18.43	1.23
1280-219B		2401	16.11	12.22	48.89	22.50	0.28
1280-221A		2419	17.57	4.98	49.52	27.25	0.69
1280-223A		2437	20.44	6.10	48.74	23.04	1.68
1280-311A		2441.5	2.91	5.83	84.95	5.83	0.49
1280-225A		2455	23.58	11.70	46.28	17.02	1.42
1280-227B		2473	13.24	6.32	65.81	13.24	1.38
1280-313A		2488	12.34	11.25	63.62	11.59	1.20
1280-229A		2491	19.08	10.20	57.57	12.50	0.66
1280-229C		2491	14.71	6.29	69.96	8.71	0.33
1280-002		OIL	79.85	13.80	1.41	4.92	0.02

S - shale, SS - sandstone, L - limestone, D - dolomite, M - mixed, see Table 1.

TABLE 8
SIGNIFICANT RATIOS (%) OF C₁₅₊ FRACTIONS AND ORGANIC CARBON

JOB	LITHO	DEPTH	ORGANIC CARBON (wt. %)	HYDROCARBONS TOTAL EXTRACT	HYDROCARBONS ORG. CARBON	TOTAL EXTRACT ORG. CARBON	SATURATES AROMATICS
GEOCHEM SAMPLE NUMBER							
1280-201A		2239	7.40	29.84	1.11	3.72	3.50
1280-202A		2248	7.04	32.34	2.48	7.66	3.09
1280-294A		2251	5.22	34.61	1.57	4.53	1.89
1280-295A		2254	3.00	54.42	6.62	12.16	2.24
1280-296A		2256	4.40	22.97	1.30	5.65	1.75
1280-203A		2257	6.30	33.14	3.02	9.12	2.92
1280-297A		2258	7.01	32.90	2.47	7.50	3.41
1280-298A		2264	6.16	21.89	1.25	5.73	1.17
1280-300A		2273	1.99	28.01	4.02	14.35	2.05
1280-204A		2275	7.19	28.65	1.02	3.56	3.57
1280-302A		2299	1.88	30.02	2.73	9.10	1.58
1280-306A		2310	1.12	28.36	1.57	5.54	1.48
1280-210A		2320	1.37	29.97	1.86	6.22	4.41
1280-211A		2329	1.57	17.57	0.40	2.28	3.73
1280-213A		2347	0.90	22.59	0.69	3.04	2.57
1280-309A		2350	1.75	18.09	0.90	5.00	1.34
1280-215B		2365	0.93	12.50	0.44	3.54	2.50
1280-217B		2383	0.99	22.60	1.79	7.94	2.41
1280-219B		2401	0.78	28.33	4.09	14.42	1.32
1280-221A		2419	0.84	22.54	3.56	15.79	3.53
1280-223A		2437	2.90	26.54	1.14	4.28	3.35
1280-311A		2441.5	24.25	8.74	0.19	2.22	0.50
1280-225A		2455	2.38	35.28	1.13	3.21	2.02
1280-227B		2473	1.25	19.57	1.65	8.42	2.09
1280-313A		2488	2.44	23.59	1.95	8.27	1.10
1280-229A		2491	0.48	29.28	2.30	7.85	1.87
1280-229C		2491	33.50	21.00	2.09	9.95	2.34

S - shale, SS - sandstone, L - limestone, D - dolomite, M - mixed, see Table 1.



TABLE 9
COMPOSITION (NORMALISED %) OF C₁₅₊ SATURATE (PARAFFIN - NAPHTHENE) HYDROCARBONS

GEOCHEM SAMPLE NUMBER	-201A	-202A	-294A	-295A	-296	-203A	-297	-298
DEPTH	2239m	2248m	2251m	2254m	2256m	2257m	2258m	2264m
SAMPLE TYPE								
nC ₁₅	0.98	1.60	0.66	1.81	0.21	3.06	2.66	0.59
nC ₁₆	1.18	4.14	3.17	4.80	1.26	5.98	4.38	0.80
nC ₁₇	4.99	8.61	3.85	11.86	5.46	9.34	6.75	3.20
nC ₁₈	7.75	8.35	3.64	10.28	7.28	8.74	6.96	10.52
nC ₁₉	9.48	9.89	7.88	10.65	7.18	8.44	7.50	7.24
nC ₂₀	9.83	8.12	7.19	9.94	5.79	8.31	7.22	8.83
nC ₂₁	10.05	7.32	9.49	7.66	6.24	6.79	6.42	7.82
nC ₂₂	6.03	6.93	5.11	6.97	5.87	5.97	4.79	5.68
nC ₂₃	4.88	4.31	5.63	5.19	5.06	3.86	3.95	6.11
nC ₂₄	4.99	4.42	5.81	4.33	6.12	4.15	3.59	3.76
nC ₂₅	4.48	4.11	3.76	5.10	5.42	3.64	4.81	3.80
nC ₂₆	5.03	4.31	5.58	3.37	6.74	2.72	3.89	7.36
nC ₂₇	5.86	6.38	4.91	5.28	7.45	10.54	6.72	4.79
nC ₂₈	5.98	5.93	4.96	3.17	5.66	2.36	8.04	6.23
nC ₂₉	4.60	2.64	6.56	3.34	6.56	7.36	9.59	7.23
nC ₃₀	3.39	3.59	11.66	2.78	5.12	3.37	4.98	4.00
nC ₃₁	3.45	2.33	2.53	1.53	4.35	1.58	2.91	3.42
nC ₃₂	2.58	1.96	1.98	0.65	2.09	1.84	1.26	2.67
nC ₃₃	1.38	1.58	2.23	0.45	2.38	1.16	1.24	1.76
nC ₃₄	0.97	1.31	1.59	0.57	1.46	0.36	0.86	2.64
nC ₃₅	2.09	2.17	1.80	0.27	2.30	0.43	1.49	1.55
PARAFFIN	48.69	15.00	28.82	26.33	14.73	17.62	28.35	15.11
ISOPRENOID	9.30	2.61	3.79	4.84	2.16	5.26	8.68	2.70
NAPHTHENE	42.01	82.39	67.38	68.83	83.11	77.12	62.96	82.18
CPI INDEX 1	1.06	0.98	1.06	1.12	0.99	1.40	1.10	0.93
CPI INDEX 2	1.02	0.91	0.68	1.32	1.11	2.04	1.25	0.93
CPI INDEX 3	1.06	1.25	0.93	1.62	1.20	4.15	1.13	0.71
PRISTANE/PHYTANE	0.84	1.37	0.75	0.88	0.79	1.34	1.49	1.12
PRISTANE/nC ₁₇	1.75	1.16	1.47	0.73	1.18	1.83	2.71	2.95

$$C.P.I. 1 = \frac{1}{2} \frac{C_{21}+C_{23}+C_{25}+C_{27}}{C_{20}+C_{22}+C_{24}+C_{26}} + \frac{C_{21}+C_{23}+C_{25}+C_{27}}{C_{22}+C_{24}+C_{26}+C_{28}}$$

$$C.P.I. 2 = \frac{1}{2} \frac{C_{25}+C_{27}+C_{29}+C_{31}}{C_{24}+C_{26}+C_{28}+C_{30}} + \frac{C_{25}+C_{27}+C_{29}+C_{31}}{C_{26}+C_{28}+C_{30}+C_{32}}$$

$$C.P.I. 3 = \frac{2x (C_{27})}{C_{26}+C_{28}}$$

CT - ditch cuttings CO - core SWC - sidewall core

TABLE 9
COMPOSITION (NORMALISED %) OF C₁₅₊ SATURATE (PARAFFIN – NAPHTHENE) HYDROCARBONS



GEOCHEM SAMPLE NUMBER	-300	-204A	-302A	-306	-210A	-211A	-213A	-309
DEPTH	2273m	2275m	2279m	2310m	2320m	2329m	2347m	2350m
SAMPLE TYPE								
nC ₁₅	0.27	0.54	0.85	0.19	0.60	0.26	0.07	0.49
nC ₁₆	0.80	1.56	1.71	0.45	0.83	0.32	0.30	0.43
nC ₁₇	5.24	4.11	1.78	2.12	0.23	0.85	2.84	2.11
nC ₁₈	6.14	6.61	3.03	4.53	1.20	1.87	4.76	3.25
nC ₁₉	8.57	6.98	7.44	5.55	2.82	4.10	6.02	4.75
nC ₂₀	7.86	7.29	7.43	6.59	4.66	5.46	9.32	3.15
nC ₂₁	7.09	7.58	5.48	6.09	5.20	5.35	5.84	4.17
nC ₂₂	5.61	6.27	6.21	1.17	4.56	5.41	9.02	4.06
nC ₂₃	6.93	6.04	7.64	10.69	7.84	6.51	9.24	5.40
nC ₂₄	4.99	4.86	3.19	7.04	5.08	6.01	7.58	5.52
nC ₂₅	7.88	4.54	9.92	13.71	9.58	9.44	8.94	9.53
nC ₂₆	4.43	8.87	10.88	6.04	5.64	5.06	4.81	5.26
nC ₂₇	9.67	3.82	11.46	11.07	9.02	11.01	8.55	11.58
nC ₂₈	6.79	4.75	3.67	5.86	6.16	6.12	3.66	5.87
nC ₂₉	8.00	8.75	5.97	7.70	8.49	8.85	4.99	10.39
nC ₃₀	3.55	2.64	3.22	3.96	6.19	4.98	3.37	4.19
nC ₃₁	2.57	5.30	4.44	3.48	6.59	5.08	3.62	6.07
nC ₃₂	1.95	3.18	2.21	2.39	3.57	3.16	1.45	4.61
nC ₃₃	1.03	1.91	2.10	1.25	6.89	5.70	3.29	7.69
nC ₃₄	0.40	1.44	0.64	0.04	1.59	1.90	1.15	1.19
nC ₃₅	0.24	2.94	0.73	0.08	2.98	2.56	1.20	0.27
PARAFFIN	22.90	16.03	28.28	32.50	29.96	52.05	22.88	22.80
ISOPRENOID	2.44	2.84	2.95	0.97	0.42	0.69	1.36	2.79
NAPHTHENE	74.66	81.13	68.77	66.53	69.63	47.26	73.76	74.42
CPI INDEX 1	1.41	0.85	1.34	2.03	1.54	1.45	1.18	1.59
CPI INDEX 2	1.55	1.11	1.55	1.77	1.52	1.66	1.65	1.84
CPI INDEX 3	1.72	0.56	1.58	1.86	1.53	1.97	2.02	2.08
PRISTANE/PHYTANE	1.65	0.86	1.65	6.75	0.68	0.44	0.57	0.13
PRISTANE/nC ₁₇	1.26	2.00	3.66	1.23	2.44	0.47	0.76	0.64

$$C.P.I. 1 = \frac{1}{2} \frac{C_{21}+C_{23}+C_{25}+C_{27}}{C_{20}+C_{22}+C_{24}+C_{26}} + \frac{C_{21}+C_{23}+C_{25}+C_{27}}{C_{22}+C_{24}+C_{26}+C_{28}}$$

$$C.P.I. 2 = \frac{1}{2} \frac{C_{25}+C_{27}+C_{29}+C_{31}}{C_{24}+C_{26}+C_{28}+C_{30}} + \frac{C_{25}+C_{27}+C_{29}+C_{31}}{C_{26}+C_{28}+C_{30}+C_{32}}$$

$$C.P.I. 3 = \frac{2 \times (C_{27})}{C_{26}+C_{28}}$$



TABLE 9
COMPOSITION (NORMALISED %) OF C₁₅₊ SATURATE (PARAFFIN – NAPHTHENE) HYDROCARBONS

GEOCHEM SAMPLE NUMBER	-215B	-217B	-219B	-221A	-223A	-311	-225A	-227B
DEPTH	2365m	2383m	2401m	2419m	2437m	2441.5m	2455m	2473m
SAMPLE TYPE								
nC ₁₅	0.12	0.49	0.20	0.41	2.38	0.06	0.71	0.07
nC ₁₆	0.22	0.69	1.95	7.04	1.42	0.18	3.27	0.58
nC ₁₇	1.69	2.79	5.95	4.33	6.01	0.30	5.98	2.29
nC ₁₈	3.46	3.93	10.68	4.76	7.13	1.10	7.28	5.38
nC ₁₉	5.46	7.21	8.28	9.98	8.76	3.59	6.73	6.73
nC ₂₀	7.84	9.34	9.84	9.56	8.52	5.32	5.90	13.35
nC ₂₁	7.29	6.69	6.40	7.77	8.16	7.86	5.29	5.75
nC ₂₂	7.53	8.89	5.31	6.86	6.63	7.31	3.94	6.89
nC ₂₃	8.19	6.23	5.35	5.68	5.86	11.33	5.55	4.70
nC ₂₄	5.99	5.93	3.04	5.09	4.85	7.98	4.11	4.38
nC ₂₅	9.76	8.75	5.79	7.67	4.34	12.92	5.74	14.68
nC ₂₆	5.27	5.18	3.82	10.18	6.54	6.60	4.84	2.66
nC ₂₇	7.71	7.11	8.25	6.75	8.68	10.07	16.60	11.69
nC ₂₈	4.58	4.00	3.46	3.69	5.75	5.39	10.80	2.92
nC ₂₉	6.22	7.02	5.22	1.40	5.44	8.82	2.99	3.61
nC ₃₀	3.61	3.34	3.40	2.04	2.34	3.67	2.71	2.12
nC ₃₁	4.39	4.72	3.14	1.19	1.74	4.72	1.61	5.19
nC ₃₂	2.43	1.74	3.55	0.35	1.01	1.52	1.82	1.42
nC ₃₃	4.70	4.62	3.06	3.04	1.12	1.07	2.14	2.57
nC ₃₄	1.26	0.69	1.31	1.60	0.73	0.12	1.74	2.10
nC ₃₅	2.27	0.62	2.03	0.60	2.59	0.06	0.24	0.91
PARAFFIN	22.07	41.46	12.63	9.74	11.18	21.54	13.05	24.37
ISOPRENOID	0.88	0.90	2.02	1.50	1.91	0.10	2.86	2.09
NAPHTHENE	77.05	57.64	85.34	88.75	86.91	78.36	84.09	73.55
CPI INDEX 1	1.32	1.09	1.41	0.98	1.08	1.55	1.58	1.77
CPI INDEX 2	1.60	1.72	1.60	0.93	1.16	1.84	1.27	3.38
CPI INDEX 3	1.57	1.55	2.27	0.97	1.41	1.68	2.12	4.19
PRISTANE/PHYTANE	0.73	0.50	0.57	0.50	0.64	0.60	1.38	0.59
PRISTANE/nC ₁₇	1.00	0.26	0.97	1.19	1.11	0.60	2.12	1.39

$$C.P.I. 1 = \frac{1}{2} \frac{C_{21}+C_{23}+C_{25}+C_{27}}{C_{20}+C_{22}+C_{24}+C_{26}} + \frac{C_{21}+C_{23}+C_{25}+C_{27}}{C_{22}+C_{24}+C_{26}+C_{28}}$$

$$C.P.I. 2 = \frac{1}{2} \frac{C_{25}+C_{27}+C_{29}+C_{31}}{C_{24}+C_{26}+C_{28}+C_{30}} + \frac{C_{25}+C_{27}+C_{29}+C_{31}}{C_{26}+C_{28}+C_{30}+C_{32}}$$

$$C.P.I. 3 = \frac{2x (C_{27})}{C_{26}+C_{28}}$$

TABLE 9
COMPOSITION (NORMALISED %) OF C₁₅+ SATURATE (PARAFFIN - NAPHTHENE) HYDROCARBONS



GEOCHEM SAMPLE NUMBER	-313	-229A	-229C	-002
DEPTH	2488m	2491m	2491m	OIL
SAMPLE TYPE				
nC ₁₅	0.10	4.11	0.57	29.78
nC ₁₆	0.55	4.32	4.40	22.05
nC ₁₇	1.87	5.14	8.08	16.59
nC ₁₈	2.88	4.57	11.75	10.37
nC ₁₉	4.29	6.34	8.92	7.73
nC ₂₀	3.30	4.20	6.70	5.28
nC ₂₁	4.00	5.91	5.44	2.26
nC ₂₂	3.91	4.22	4.97	2.07
nC ₂₃	6.37	6.30	5.82	1.32
nC ₂₄	3.67	4.22	4.26	0.94
nC ₂₅	8.08	7.96	4.96	0.57
nC ₂₆	4.67	4.16	3.63	0.38
nC ₂₇	11.09	11.35	8.50	0.19
nC ₂₈	4.09	5.36	3.44	0.19
nC ₂₉	11.99	8.07	5.76	0.09
nC ₃₀	13.04	5.97	2.57	0.09
nC ₃₁	6.83	4.38	3.02	0.09
nC ₃₂	4.71	1.94	2.11	0.00
nC ₃₃	2.20	0.61	1.75	0.00
nC ₃₄	1.26	0.77	1.42	0.00
nC ₃₅	1.07	0.11	1.93	0.00
PARAFFIN	24.28	23.18	7.17	38.04
ISOPRENOID	2.75	3.83	1.10	5.31
NAPHTHENE	72.97	72.99	91.73	56.65
CPI INDEX 1	1.85	1.82	1.39	0.86
CPI INDEX 2	1.46	1.72	1.75	0.00
CPI INDEX 3	2.53	2.38	2.40	-
PRISTANE/PHYTANE	1.78	1.16	1.30	3.11
PRISTANE/nC ₁₇	3.87	1.73	1.08	0.64

$$C.P.I. 1 = \frac{1}{2} \frac{C_{21}+C_{23}+C_{25}+C_{27}}{C_{20}+C_{22}+C_{24}+C_{26}} + \frac{C_{21}+C_{23}+C_{25}+C_{27}}{C_{22}+C_{24}+C_{26}+C_{28}}$$

$$C.P.I. 2 = \frac{1}{2} \frac{C_{25}+C_{27}+C_{29}+C_{31}}{C_{24}+C_{26}+C_{28}+C_{30}} + \frac{C_{25}+C_{27}+C_{29}+C_{31}}{C_{26}+C_{28}+C_{30}+C_{32}}$$

$$C.P.I. 3 = \frac{2x (C_{27})}{C_{26}+C_{28}}$$

NBS 22 STANDARD	-29.94, -29.87
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TABLE 10
CARBON ISOTOPE COMPOSITIONS (‰, PDB)

GEOCHEM SAMPLE NUMBER	DEPTH	TOTAL EXTRACT WHOLE OIL	SATURATES	AROMATICS	NSO	ASPHALTENES	KEROGEN	PYROLYSATE S2
1280-201A	2239m	-31.49						-31.36
1280-202A	2248m	-30.88	-31.91	-30.75	-30.65	-30.01		-31.02
1280-295A	2254m SWC	-31.08						-32.27
1280-203A	2257m	-31.02						-31.73
1280-297A	2258m SWC	-28.06						-27.98
1280-299A	2270m SWC							-26.49
1280-300A	2273m SWC	-27.01						*
1280-204A	2275m	-28.85	-30.45	-28.96	-31.84	-27.86		-28.10
1280-302A	2299m CORE	-26.64						-30.30
1280-305A	2309.8m CORE							-32.64 ⁺
1280-306A	2310.0m SWC	-27.99						*
1280-210A	2320m	-29.05						-30.10
1280-211A	2329m	-28.39						*
1280-309A	2350m SWC							-32.88 ⁺
1280-215B	2365m	-27.75						*
1280-221A	2419m	-28.14						*

⁺ POSSIBLY ANOMALOUS, LOW SAMPLE WEIGHT



NBS 22 STANDARD -29.94, -29.87

TABLE 10
CARBON ISOTOPE COMPOSITIONS (‰, PDB)

GEOCHEM SAMPLE NUMBER	DEPTH	TOTAL EXTRACT WHOLE OIL	SATURATES	AROMATICS	NSO	ASPHALTENES	KEROGEN	PYROLYSATE S2
1280-223A	2437m	-30.27						-30.79
1280-229C	2491m	-30.47	-34.31	-32.96	-30.25	-29.38		-30.34
1280-001	GAS	-45.15 (C ₁)						
1280-002	OIL	-29.56	-28.79	-26.39	-26.86	-27.83		





TABLE 12

CONDENSATE COMPOSITIONAL DATA

GRAVITY (°API)	58.9
SPECIFIC GRAVITY (g/cc, 15°C)	0.743
SULPHUR (wt %)	0.03
Ni (ppm)	less than 1
V (ppm)	less than 1