Appendix B

Gas Chromatography Data
Fuel Blends

DATE OF SHIPMENT

CUSTOMER ORDER NO.

INV./REQN. NO.

Certificate of Analysis

PHILLIPS 66 COMPANY
A DIVISION OF PHILLIPS PETROLEUM COMPANY

SPECIALTY CHEMICALS
P.O. BOX 968
BORGER, TX 79008-0968

API 94-02

R.F.-A
LOT S-424-A

TESTS	RESULTS	SPECIFICATIONS	METHOD
Specific Gravity, 60/60	0.7480	0.7479-0.7503	ASTM D-4052
Reid Vapor Pressure	8.7	8.4 - 9.0	ASTM D-323
Sulfur, ppm (ANTEK)	320	339 ± 25	ASTM D-4294
Benzene Content, LV%	1.44	1.2 - 1.8	Chromatography
DISTILLATION, D-86, °F			ASTM D-86
IBP	92		
5%	114		
10%	126	123-133	
20%	147		
30%	168		
40%	192		
50%	216	213-223	
60%	240		
70%	265		
80%	295		
90%	332	325-335	
95%	366		
EP	424		
Loss	0.6		
Residue	1.3		
HYDROCARBON TYPE, VOL. %			ASTM D-1319
Aromatics	31.7	32 ± 2.7	
Olefins	11.6	9.2± 2.5	
Saturates	56.7	<58.8 ± 2	
Research Octane Number	92.4	Report	ASTM D-2699
Motor Octane Number	82.7	Report	ASTM D-2700
Antiknock Index	87.5	87.3 ± 0.5	

EAA:jam
08/04/94
RD2300

CHEVRON RESEARCH GASOLINE ANALYSIS Liquid

Sample Name: 6018638 API BASE GASOLINE Customer: CARR
Acquisition Date: 5-Apr-1996 Acquisition Time: 19:55
Channel #: 13 Analysis: GASO126 Sample #: 3 Injection #: 1

*** DETAILED COMPOSITION, PERCENT ***

1. BY VOLUME

C NO.	PARA	OLEF	NAPH	AROM	UNCL HC	TOTALS BY C #	NORMAL PARA	NON-ALKYL I-PARA	ALKYL I-PARA	CYCLO-PENT	CYCLO-HEX
3-	0.00	0.00	******	******	******	0.00	0.00	******	******	******	******
4	4.68	0.06	******	******	******	4.74	4.59	0.09	******	******	******
5	12.38	3.71	0.18	******	******	16.26	2.89	9.49	******	0.18	******
6	12.30	3.17	1.62	1.40	******	18.49	2.29	10.01	******	1.36	0.26
7	7.69	1.94	1.66	7.85	******	19.15	1.18	6.52	******	0.98	0.69
8	7.30	0.53	1.55	10.60	0.18	20.16	0.52	2.94	3.83	0.91	0.64
9	1.54	0.00	0.87	7.87	0.30	10.58	0.22	1.22	0.10	0.08	0.79
10	1.08	0.00	0.05	4.34	0.52	6.00	0.00	0.84	0.24	0.00	0.05
11	0.35	0.00	0.00	1.98	0.48	2.80	0.00	0.35	0.00	0.00	0.00
12+	0.14	0.00	0.00	0.21	1.46	1.82	0.11	0.04	0.00	0.00	0.00
TOT	47.47	9.40	5.95	34.25	2.93	100.00	11.79	31.51	4.17	3.51	2.44

2. BY WEIGHT

3-	0.00	0.00	******	******	******	0.00	0.00	******	******	******	******
4	3.64	0.05	******	******	******	3.69	3.57	0.07	******	******	******
5	10.31	3.28	0.18	******	******	13.77	2.42	7.89	******	0.18	******
6	10.84	2.94	1.64	1.64	******	17.07	2.02	8.82	******	1.37	0.27
7	7.06	1.86	1.69	9.11	******	19.72	1.08	5.98	******	0.98	0.71
8	6.84	0.51	1.61	12.30	0.18	21.45	0.49	2.76	3.59	0.94	0.67
9	1.48	0.00	0.92	9.20	0.30	11.91	0.21	1.18	0.10	0.08	0.84
10	1.06	0.00	0.06	5.19	0.52	6.84	0.00	0.83	0.24	0.00	0.06
11	0.34	0.00	0.00	2.52	0.50	3.35	0.00	0.34	0.00	0.00	0.00
12+	0.14	0.00	0.00	0.27	1.81	2.22	0.11	0.04	0.00	0.00	0.00
TOT	41.73	8.63	6.10	40.24	3.30	100.00	9.90	27.91	3.92	3.55	2.55

3. BY MOLAR

3-	0.00	0.00	******	******	******	0.00	0.00	******	******	******	******
4	6.00	0.08	******	******	******	6.08	5.89	0.12	******	******	******
5	13.71	4.49	0.24	******	******	18.44	3.22	10.48	******	0.24	******
6	12.07	3.36	1.87	2.02	******	19.31	2.25	9.81	******	1.56	0.31
7	6.75	1.82	1.65	9.48	******	19.71	1.03	5.72	******	0.96	0.69
8	5.75	0.43	1.38	11.11	0.15	18.82	0.41	2.32	3.01	0.80	0.57
9	1.11	0.00	0.70	7.34	0.23	9.38	0.16	0.88	0.07	0.06	0.64
10	0.72	0.00	0.04	3.73	0.36	4.85	0.00	0.56	0.16	0.00	0.04
11	0.21	0.00	0.00	1.65	0.31	2.17	0.00	0.21	0.00	0.00	0.00
12+	0.08	0.00	0.00	0.17	0.99	1.24	0.06	0.02	0.00	0.00	0.00
TOT	46.39	10.19	5.88	35.51	2.04	100.00	13.02	30.13	3.24	3.62	2.25

GRP. TYPE, VOL %: P = 48.91, O = 9.68, N = 6.13, A = 35.28, Saturates = 55.03
DIENE CONTENT = 438. vol ppm AVG MW = 95.9 API GR. = 56.8 SP. GR. =0.7516
OCTANE NUMBER: (from pure values) RON = 84.8 MON = 79.4
(from blending values) RON = 87.9 MON = 79.3
CARBON-HYDROGEN RATIO =6.577 STOICH. AIR-FUEL RATIO =14.49 lbs air/lbs fuel
BTU/lb = 11445. NET, 12334. GROSS; BTU/gal = 71783. NET, 77356. GROSS
REID VAPOR PRESSURE = 8.1 BROMINE NO. = 17.1

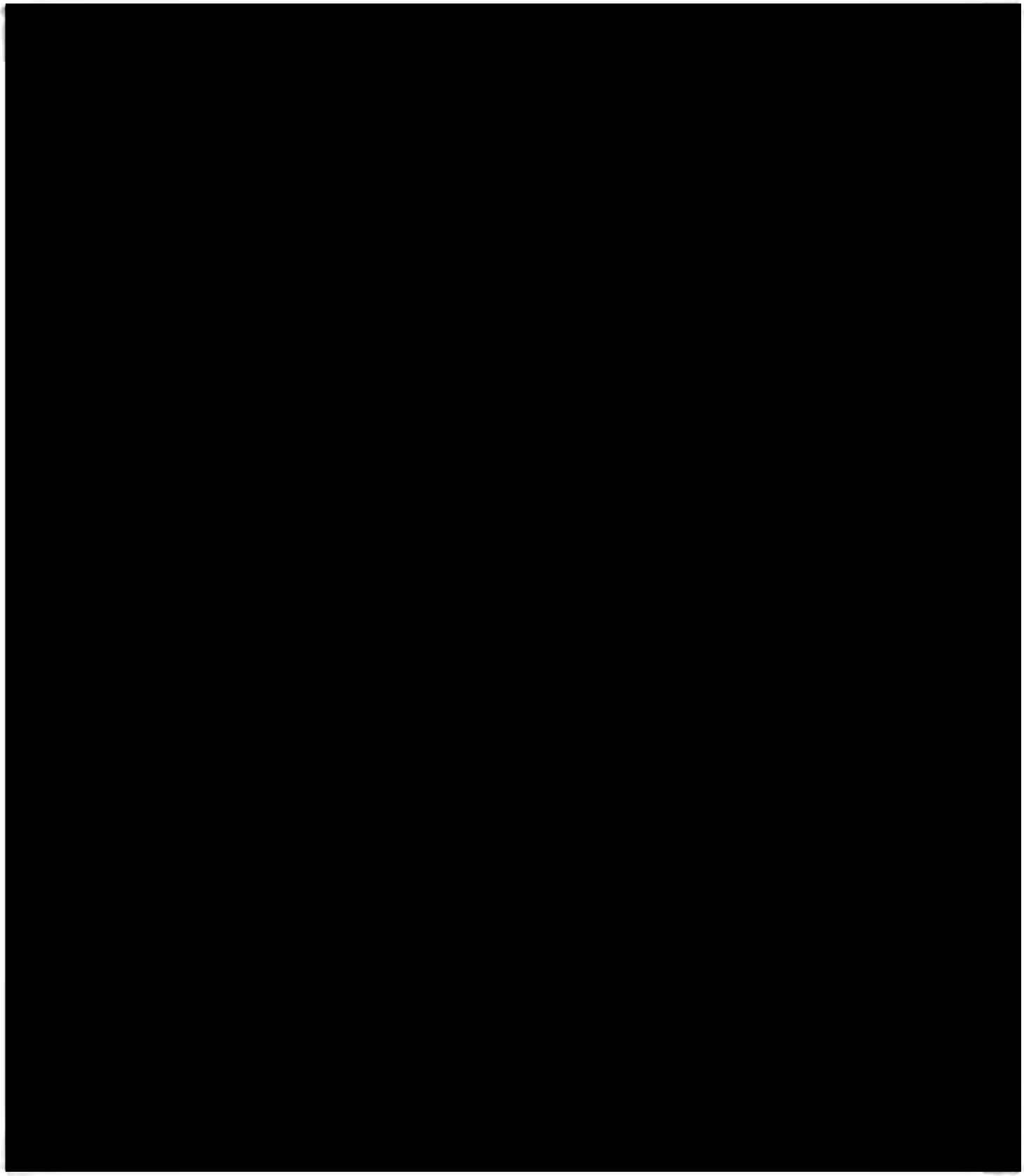
* DISTILLATION CURVES

VOL %	TBP	D86
0.	11.	82.
5.	82.	99.
10.	82.	136.
15.	88.	140.
20.	101.	146.
25.	140.	154.
30.	146.	161.
35.	156.	182.
40.	177.	194.
45.	194.	209.
50.	211.	213.
55.	231.	231.
60.	231.	231.
65.	244.	249.
70.	277.	275.
75.	282.	280.
80.	292.	301.
85.	324.	325.
90.	337.	348.
95.	388.	393.
100.	509.	459.

* COMPOUND DICTIONARY NUMBERS AND AREAS AS READ IN

[redacted]

CHEVRON RESEARCH GASOLINE ANALYSIS
5-Apr-1996 19:55
6018638 API BASE GASOLINE 13GASO126
Sample 3 Injection 1



TOTAL UNCORRECTED AREA = 3607962.

NUMBER OF PEAKS READ IN = 380

5-Apr-1996 19:55
6018638 API BASE GASOLINE 13GASO126
Sample 3 Injection 1

* DETAILED HYDROCARBON ANALYSIS, EXCLUDING COMPOUNDS BELOW 0.01 VOLUME PERCENT

NORMAL PARAFFINS

CODE	MOL.	VOL.	WT.	NAME
4	5.89	4.59	3.57	N-BUTANE
6	3.22	2.89	2.42	N-PENTANE
9	2.25	2.29	2.02	N-HEXANE
14	1.03	1.18	1.08	N-HEPTANE
23	0.41	0.52	0.49	N-OCTANE
41	0.16	0.22	0.21	N-NONANE
102	0.04	0.06	0.06	N-DODECANE
103	0.02	0.04	0.04	N-TRIDECANE

ISO-PARAFFINS

CODE	MOL.	VOL.	WT.	NAME	
5	0.12	0.09	0.07	ISOBUTANE	
8	0.05	0.05	0.04	NEOPENTANE	
7	10.43	9.44	7.85	ISOPENTANE	
12	0.65	0.67	0.58	22-DIME BUTANE	
13	1.49	1.51	1.34	23-DIME BUTANE	
10	4.83	4.96	4.34	2-ME PENTANE	
11	2.85	2.88	2.56	3-ME PENTANE	
18	0.08	0.09	0.08	22-DIME PENTANE	
20	0.97	1.13	1.01	24-DIME PENTANE	
19	1.86	2.09	1.95	23-DIME PENTANE	
15	1.32	1.52	1.38	2-ME HEXANE	
16	1.39	1.58	1.45	3-ME HEXANE	
17	0.10	0.11	0.11	3-ET PENTANE	
37	2.06	2.65	2.45	224-TRIME PENTANE	*
28	0.03	0.04	0.04	22-DIME HEXANE	
36	0.05	0.06	0.06	223-TRIME PENTANE	*
31	0.27	0.35	0.32	25-DIME HEXANE	
30	0.38	0.48	0.45	24-DIME HEXANE	
32	0.03	0.04	0.04	33-DIME HEXANE	
39	0.60	0.74	0.71	234-TRIME PENTANE	*
34	0.09	0.11	0.10	2-ME-3-ET PENTANE	
29	0.31	0.39	0.37	23-DIME HEXANE	*
24	0.67	0.85	0.80	2-ME HEPTANE	
26	0.21	0.26	0.25	4-ME HEPTANE	
25	0.64	0.81	0.77	3-ME HEPTANE	
73	0.02	0.03	0.03	224-TRIME HEXANE	
51	0.08	0.11	0.10	244-TRIME HEXANE	
52	0.03	0.05	0.04	24-DIME HEPTANE	
43	0.07	0.10	0.10	235-TRIME HEXANE	*
67	0.01	0.01	0.01	22-DIME HEPTANE	
53	0.08	0.11	0.10	26-DIME HEPTANE	
55	0.18	0.24	0.24	35-DIME HEPTANE	
50	0.02	0.02	0.02	234-TRIME HEXANE	
56	0.05	0.07	0.07	23-DIME HEPTANE	
71	0.02	0.03	0.03	3-ME-4-ET HEXANE	
57	0.04	0.05	0.05	34-DIME HEPTANE	

66	0.03	0.04	0.04	4-ET HEPTANE
62	0.13	0.18	0.17	4-ME OCTANE
60	0.17	0.24	0.23	2-ME OCTANE
4660	0.01	0.01	0.01	246-TRIME HEPTANE *
76	0.02	0.03	0.03	33-DIET PENTANE
4652	0.02	0.03	0.03	225-TRIME HEPTANE *
4657	0.04	0.05	0.05	236-TRIME HEPTANE *
4659	0.02	0.03	0.03	245-TRIME HEPTANE *
151	0.02	0.03	0.03	22-DIME OCTANE
161	0.02	0.02	0.02	44-DIME OCTANE
4650	0.06	0.08	0.08	223-TRIME HEPTANE *
157	0.05	0.07	0.07	33-DIME OCTANE
89	0.02	0.02	0.02	4-ET OCTANE
152	0.04	0.06	0.06	23-DIME OCTANE
215	0.02	0.04	0.03	C-11 ISOPARAFFINS
213	0.03	0.05	0.04	C-10 ISOPARAFFINS
86	0.20	0.30	0.30	4-ME NONANE
84	0.08	0.12	0.12	2-ME NONANE
88	0.02	0.03	0.03	3-ET OCTANE
85	0.09	0.13	0.13	3-ME NONANE
4663	0.02	0.03	0.03	335-TRIME HEPTANE *
163	0.13	0.21	0.21	2-ME DECANE
164	0.06	0.10	0.10	3-ME DECANE
5030	0.02	0.03	0.03	26-DIME UNDECANE

CYCLOPENTANES

CODE	MOL.	VOL.	WT.	NAME
800	0.24	0.18	0.18	CYCLOPENTANE
801	1.56	1.36	1.37	ME CYCLOPENTANE
806	0.31	0.32	0.32	1C3-DIME CYCPENTANE
807	0.27	0.28	0.28	1T3-DIME CYCPENTANE
805	0.19	0.19	0.20	1T2-DIME CYCPENTANE
811	0.05	0.06	0.06	113-TRIME CPENTANE
802	0.18	0.18	0.19	ET CYCLOPENTANE
817	0.10	0.12	0.12	1T2C4TRIME CPENTANE
814	0.05	0.05	0.06	1T2C3TRIME CPENTANE
810	0.05	0.06	0.06	112-TRIME CPENTANE*
848	0.05	0.07	0.07	11C3T4-TETRME CPENT
864	0.09	0.10	0.10	1MEC3ET CYCPENTANE
861	0.39	0.44	0.46	1ME-1ET CYCPENTANE
812	0.03	0.03	0.03	1C2C3TRIMECPENTANE*
4326	0.01	0.01	0.02	C-9 CYCLOPENTANE B
862	0.03	0.04	0.04	1ME-C2ET CYPENTANE
808	0.01	0.01	0.01	N-PR CYCLOPENTANE

CYCLOHEXANES

CODE	MOL.	VOL.	WT.	NAME
825	0.31	0.26	0.27	CYCLOHEXANE
826	0.69	0.69	0.71	ME CYCLOHEXANE
831	0.08	0.09	0.09	1C3-DIME CYCHEXANE

830	0.06	0.07	0.07	1T2-DIME CYCHEXANE
832	0.14	0.16	0.17	1T3-DIME CYCHEXANE
833	0.07	0.08	0.08	1C4-DIME CYCHEXANE
829	0.05	0.05	0.05	1C2-DIME CYCHEXANE
827	0.17	0.19	0.20	ETHYL CYCLOHEXANE
946	0.05	0.06	0.06	113-TRIME CYCHEXANE
979	0.03	0.03	0.04	C-9 CYLOHEXANES
956	0.05	0.06	0.07	1C3T5-TRIME CYCHEX
950	0.02	0.03	0.03	1T2C3-TRIME CYCHEX
945	0.02	0.02	0.03	112-TRIME CYCHEXANE
941	0.11	0.14	0.15	1ME-C3ET CYCHEXANE
944	0.04	0.05	0.05	1ME-T4ET CYCHEXANE
940	0.09	0.11	0.12	1ME-1-ET CYCHEXANE
949	0.05	0.06	0.07	1C2T3-TRIME CYCHEX
943	0.03	0.04	0.04	1M-C4-ET CYCHEXANE
948	0.09	0.12	0.12	1C2C3-TRIME CYCHEX
836	0.03	0.03	0.03	ISOPR CYCLOHEXANE
835	0.03	0.04	0.04	N-PR CYCLOHEXANE
980	0.04	0.05	0.06	C-10 CYCLOHEXANES

OLEFINS, DIENES

CODE	MOL.	VOL.	WT.	NAME
304	0.03	0.02	0.02	TRANS-2-BUTENE
303	0.05	0.03	0.03	C1S-2-BUTENE
310	0.07	0.06	0.05	3-METHYL-1-BUTENE
306	0.32	0.27	0.23	1-PENTENE
309	0.65	0.54	0.47	2-METHYL-1-BUTENE
509	0.02	0.01	0.01	ISOPRENE
308	1.04	0.87	0.76	TRANS-2-PENTENE
327	0.01	0.01	0.01	3,3-DIME BUTENE
307	0.58	0.48	0.43	CIS-2-PENTENE
311	1.56	1.29	1.14	2-METHYL-2-BUTENE
505	0.02	0.02	0.02	T-13-PENTADIENE
504	0.01	0.01	0.01	C-13-PENTADIENE
450	0.22	0.15	0.16	CYCLOPENTENE
318	0.14	0.14	0.12	3-METHYL-1-PENTENE
323	0.09	0.09	0.08	C-4ME-2-PENTENE
324	0.17	0.17	0.15	T-4ME-2-PENTENE
317	0.30	0.29	0.26	2-ME-1-PENTENE
312	0.16	0.15	0.14	1-HEXENE
315	0.44	0.42	0.38	CIS-3-HEXENE
314	0.52	0.50	0.46	TRANS-2-HEXENE
320	0.49	0.47	0.43	2-METHYL-2-PENTENE
321	0.29	0.28	0.26	C-3ME-2-PENTENE
313	0.26	0.24	0.23	CIS-2-HEXENE
2005	0.01	0.01	0.01	33-DIME-1-PENTENE
537	0.01	0.01	0.01	HEPTADIENES
4500	0.01	0.01	0.01	HEPTENE A
2011	0.01	0.02	0.02	44-DIME-C2-PENTENE
451	0.49	0.40	0.42	1-ME CYLCOPENTENE
2004	0.03	0.03	0.03	24-DIME-1-PENTENE
2017	0.01	0.01	0.01	3-ET 1-PENTENE

403	0.02	0.02	0.02	HEPTENES
2003	0.03	0.03	0.03	23-DIME-1-PENTENE
2024	0.02	0.02	0.02	5-ME-1-HEXENE
2009	0.04	0.05	0.04	24-DIME-CIS2-PENTENE
403	0.01	0.01	0.01	HEPTENES
403	0.02	0.02	0.02	HEPTENES
2033	0.09	0.10	0.09	2-ME-T3-HEXENE
2031	0.05	0.06	0.06	5-ME-T2-HEXENE
2030	0.04	0.04	0.04	5-ME-C2-HEXENE
2010	0.03	0.04	0.03	34-DIME-C2-PENTENE
2038	0.12	0.13	0.12	1-HEPTENE
2035	0.07	0.08	0.07	3-ME-T3-HEXENE
5370	0.13	0.12	0.13	C-7 CYCLOPENTENE A
5371	0.12	0.11	0.12	C-7 CYCLOPENTENE B
2042	0.15	0.17	0.16	T3-HEPTENE
2025	0.16	0.17	0.17	2-ME-2-HEXENE
2034	0.12	0.12	0.12	3-ME-C3-HEXENE
2018	0.10	0.11	0.10	3-ET-2-PENTENE
2040	0.20	0.21	0.20	TRANS-2-HEPTENE
2008	0.14	0.15	0.15	23-DIME-C2-PENTENE
2039	0.09	0.09	0.09	CIS-2-HEPTENE
4526	0.01	0.01	0.01	OCTENE B
4529	0.01	0.01	0.01	OCTENE E
4530	0.01	0.01	0.01	OCTENE F
4527	0.02	0.02	0.02	OCTENE C
4532	0.02	0.03	0.03	OCTENE H
4528	0.06	0.07	0.07	OCTENE D
4533	0.03	0.04	0.04	OCTENE I
4534	0.04	0.04	0.04	OCTENE J
404	0.02	0.02	0.02	OCTENES
4531	0.01	0.02	0.02	OCTENE G
2212	0.01	0.01	0.01	6-ME-C2-HEPTENE
2213	0.01	0.01	0.01	6-ME-T2-HEPTENE
2193	0.07	0.09	0.09	1-OCTENE
2198	0.08	0.10	0.10	C4-OCTENE
4536	0.03	0.04	0.04	OCTENE L

AROMATIC HCS

CODE	MOL.	VOL.	WT.	NAME	
600	2.02	1.40	1.64	BENZENE	
601	9.48	7.85	9.11	TOLUENE	
602	2.36	2.25	2.61	ETHYLBENZENE	
604	4.41	4.22	4.88	M-XYLENE	
605	1.78	1.71	1.97	P-XYLENE	
603	2.57	2.42	2.84	O-XYLENE	*
607	0.10	0.11	0.13	CUMENE	
644	0.53	0.57	0.66	N-PROPYL BENZENE	
609	1.55	1.68	1.95	1-ME-3-ET BENZENE	
610	0.69	0.75	0.86	1-ME-4-ET BENZENE	
613	0.79	0.85	0.99	135-TRIME BENZENE	
608	0.48	0.51	0.60	1-ME-2-ET BENZENE	*
612	2.37	2.54	2.97	124-TRIME BENZENE	*

615	0.07	0.08	0.09	ISOBUTYLBENZENE	
616	0.07	0.08	0.09	SEC BUTYLBENZENE	
611	0.57	0.59	0.71	123-TRIME BENZENE	*
622	0.04	0.05	0.06	M-CYMENE	
623	0.03	0.03	0.04	P-CYMENE	
650	0.27	0.25	0.33	INDAN	*
621	0.03	0.04	0.04	O-CYMENE	*
646	0.18	0.22	0.25	13-DIETHYL BENZENE	
647	0.31	0.38	0.43	1-ME-3-PR BENZENE	
648	0.27	0.33	0.38	1-ME-4-PR BENZENE	
651	0.35	0.42	0.49	12-DIET BENZENE	*
653	0.10	0.12	0.15	1-ME-2-PR BENZENE	*
654	0.27	0.33	0.38	14-DIME2ET BENZENE	*
655	0.17	0.21	0.24	13-DIME4ET BENZENE	*
656	0.37	0.44	0.52	12-DIME4ET BENZENE	*
659	0.10	0.12	0.14	12-DIME3ET BENZENE	
685	0.02	0.03	0.04	2-PHENYL-2ME BUTANE	
683	0.01	0.02	0.02	1-PHENYL-3ME BUTANE	
635	0.18	0.21	0.25	1245-TETME BENZENE	*
634	0.30	0.36	0.43	1235-TETME BENZENE	*
7800	0.15	0.16	0.21	METHYLINDANE A	
660	0.06	0.09	0.10	1-ME35DIET BENZENE	
773	0.03	0.04	0.05	C-11 AROMATIC K	
7801	0.21	0.22	0.28	METHYLINDANE B	
7004	0.08	0.10	0.13	C-11 AROMATIC E	
633	0.09	0.10	0.12	1234-TETME BENZENE	*
715	0.04	0.04	0.05	TETRALIN	*
755	0.07	0.10	0.11	1-ME-3NBU BENZENE	
7099	0.03	0.04	0.04	PENTYLBENZENE	
768	0.03	0.04	0.05	13-DIME-4PR BENZENE	
769	0.03	0.03	0.04	1-ME-35DIET BENZENE	
714	0.40	0.41	0.53	NAPHTHALENE	*
698	0.08	0.10	0.12	12-DIME-3PR BENZENE	
7830	0.05	0.06	0.08	DIMETHYLINDANE A	
7831	0.14	0.16	0.22	DIMETHYLINDANE B	
7833	0.01	0.02	0.02	DIMETHYLINDANE D	
699	0.03	0.04	0.05	135-TRIME-2ETBENZENE	
771	0.05	0.06	0.08	125-TRIME-3ETBENZENE	
693	0.03	0.05	0.05	124-TRIME-5ETBENZENE	
694	0.06	0.08	0.09	123-TRIME-5ETBENZENE	
695	0.02	0.03	0.03	124-TRIME-3ETBENZENE	
7030	0.02	0.02	0.03	C-12 AROMATIC A	
7104	0.02	0.03	0.04	135-TRIETHYLBENZENE	
772	0.05	0.06	0.08	123-TRIME4ET BENZENE	
7101	0.02	0.02	0.03	T-BUTYL-DIMEBENZENES	
7034	0.02	0.03	0.04	C-12 AROMATIC E	
7835	0.07	0.08	0.11	DIMETHYLINDANE F	
7836	0.07	0.08	0.11	DIMETHYLINDANE G	
7837	0.06	0.08	0.09	C-11 INDANE H	
636	0.04	0.05	0.06	PENTAMETHYLBENZENE	
796	0.34	0.37	0.51	2-ME NAPHTHALENE	*
795	0.16	0.17	0.23	1-ME NAPHTHALENE	*
7910	0.02	0.03	0.03	1-ETHYL NAPHTHALENE	
7908	0.01	0.01	0.02	26-DIME NAPHTHALENE	

7909	0.01	0.02	0.02	27-DIME NAPHTHALENE
7901	0.02	0.03	0.04	13-DIME NAPHTHALENE
7904	0.01	0.01	0.02	16-DIME NAPHTHALENE
7903	0.01	0.01	0.01	15-DIME NAPHTHALENE

UNCLASSIFIED HCS

CODE	MOL.	VOL.	WT.	NAME
188	0.05	0.06	0.06	UNCLASS. H.C. C- 8
188	0.01	0.01	0.01	UNCLASS. H.C. C- 8
188	0.06	0.07	0.07	UNCLASS. H.C. C- 8
188	0.02	0.03	0.03	UNCLASS. H.C. C- 8
189	0.04	0.05	0.05	UNCLASS. H.C. C- 9
189	0.02	0.02	0.02	UNCLASS. H.C. C- 9
189	0.03	0.04	0.04	UNCLASS. H.C. C- 9
189	0.02	0.02	0.02	UNCLASS. H.C. C- 9
189	0.02	0.03	0.03	UNCLASS. H.C. C- 9
189	0.01	0.02	0.02	UNCLASS. H.C. C- 9
189	0.01	0.01	0.01	UNCLASS. H.C. C- 9
189	0.01	0.02	0.02	UNCLASS. H.C. C- 9
189	0.01	0.02	0.02	UNCLASS. H.C. C- 9
189	0.02	0.03	0.03	UNCLASS. H.C. C- 9
190	0.03	0.05	0.05	UNCLASS. H.C. C-10
4052	0.01	0.01	0.01	UNCLASSIFIED C-10 C
4053	0.02	0.03	0.03	UNCLASSIFIED C-10 D
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
190	0.02	0.03	0.03	UNCLASS. H.C. C-10
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
190	0.01	0.02	0.02	UNCLASS. H.C. C-10
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
4900	0.02	0.02	0.03	CIS-HYDRINDANE
190	0.01	0.02	0.02	UNCLASS. H.C. C-10
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
190	0.05	0.07	0.07	UNCLASS. H.C. C-10
190	0.01	0.02	0.02	UNCLASS. H.C. C-10
190	0.05	0.08	0.08	UNCLASS. H.C. C-10
190	0.01	0.02	0.02	UNCLASS. H.C. C-10
190	0.01	0.02	0.02	UNCLASS. H.C. C-10
190	0.04	0.06	0.07	UNCLASS. H.C. C-10
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
191	0.01	0.01	0.01	UNCLASS. H.C. C-11
191	0.01	0.01	0.01	UNCLASS. H.C. C-11
191	0.02	0.03	0.03	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.01	0.01	0.01	UNCLASS. H.C. C-11
191	0.02	0.03	0.03	UNCLASS. H.C. C-11
191	0.04	0.06	0.06	UNCLASS. H.C. C-11
191	0.02	0.04	0.04	UNCLASS. H.C. C-11
191	0.02	0.04	0.04	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.01	0.01	0.02	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11

191	0.02	0.03	0.04	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.02	0.03	0.03	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
192	0.03	0.05	0.06	UNCLASS. H.C. C-12
192	0.01	0.01	0.02	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
192	0.02	0.03	0.03	UNCLASS. H.C. C-12
192	0.05	0.08	0.08	UNCLASS. H.C. C-12
192	0.03	0.06	0.06	UNCLASS. H.C. C-12
192	0.02	0.04	0.04	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
192	0.03	0.05	0.06	UNCLASS. H.C. C-12
192	0.05	0.08	0.08	UNCLASS. H.C. C-12
192	0.01	0.02	0.02	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.01	0.01	0.02	UNCLASSIFIED C-13
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.01	0.01	0.02	UNCLASSIFIED C-13
193	0.02	0.03	0.03	UNCLASSIFIED C-13
193	0.02	0.03	0.05	UNCLASSIFIED C-13
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.01	0.01	0.02	UNCLASSIFIED C-13
193	0.03	0.04	0.05	UNCLASSIFIED C-13
193	0.01	0.01	0.02	UNCLASSIFIED C-13
193	0.04	0.05	0.07	UNCLASSIFIED C-13
193	0.02	0.03	0.04	UNCLASSIFIED C-13
193	0.04	0.05	0.07	UNCLASSIFIED C-13
193	0.01	0.02	0.03	UNCLASSIFIED C-13
193	0.02	0.02	0.03	UNCLASSIFIED C-13
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.02	0.02	0.03	UNCLASSIFIED C-13
193	0.02	0.02	0.03	UNCLASSIFIED C-13
193	0.01	0.01	0.01	UNCLASSIFIED C-13
193	0.02	0.03	0.05	UNCLASSIFIED C-13
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.02	0.03	0.04	UNCLASSIFIED C-13
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.02	0.03	UNCLASSIFIED C-14
194	0.01	0.02	0.02	UNCLASSIFIED C-14
194	0.01	0.02	0.03	UNCLASSIFIED C-14
194	0.01	0.01	0.01	UNCLASSIFIED C-14
194	0.01	0.02	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.02	0.02	UNCLASSIFIED C-14

194	0.02	0.02	0.03	UNCLASSIFIED C-14
194	0.01	0.02	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.02	0.02	UNCLASSIFIED C-14
194	0.01	0.02	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.01	UNCLASSIFIED C-14

CHEVRON RESEARCH GASOLINE ANALYSIS Liquid

Sample Name: 6012720 API BLEND #1 GASOLINE/MTBE Customer: CARR
Acquisition Date: 1-Apr-1996 Acquisition Time: 13:15
Channel #: 13 Analysis: GASO124 Sample #: 2 Injection #: 1

*** DETAILED COMPOSITION, PERCENT ***

1. BY VOLUME

C NO.	PARA	OLEF	NAPH	AROM	UNCL HC	TOTALS BY C #	NORMAL PARA	NON-ALKYL I-PARA	ALKYL I-PARA	CYCLO-PENT	CYCLO-HEX
3-	0.00	0.00	******	******	******	0.00	0.00	******	******	******	******
4	3.54	0.04	******	******	******	3.58	3.47	0.07	******	******	******
5	9.89	3.04	0.16	******	******	28.08	2.33	7.56	******	0.16	******
6	10.27	2.64	1.37	1.18	******	15.45	1.91	8.36	******	1.14	0.22
7	6.61	1.65	1.44	6.82	******	16.53	1.02	5.59	******	0.84	0.60
8	6.39	0.46	1.35	9.38	0.15	17.72	0.46	2.58	3.34	0.79	0.56
9	1.35	0.00	0.76	7.01	0.25	9.38	0.19	1.07	0.09	0.07	0.69
10	0.95	0.00	0.05	3.83	0.43	5.26	0.00	0.74	0.21	0.00	0.05
11	0.27	0.00	0.00	1.73	0.44	2.45	0.00	0.27	0.00	0.00	0.00
12+	0.12	0.00	0.00	0.16	1.28	1.56	0.09	0.03	0.00	0.00	0.00
TOT	39.39	7.83	5.12	30.11	17.55	100.00	9.47	26.27	3.64	3.00	2.12

2. BY WEIGHT

3-	0.00	0.00	******	******	******	0.00	0.00	******	******	******	******
4	2.75	0.04	******	******	******	2.78	2.70	0.05	******	******	******
5	8.24	2.69	0.16	******	******	25.65	1.95	6.28	******	0.16	******
6	9.05	2.45	1.38	1.39	******	14.27	1.69	7.36	******	1.15	0.23
7	6.07	1.58	1.46	7.92	******	17.03	0.94	5.13	******	0.84	0.62
8	5.99	0.44	1.40	10.89	0.14	18.87	0.43	2.43	3.13	0.82	0.58
9	1.30	0.00	0.80	8.20	0.26	10.56	0.18	1.04	0.09	0.07	0.73
10	0.93	0.00	0.05	4.59	0.43	6.00	0.00	0.72	0.20	0.00	0.05
11	0.27	0.00	0.00	2.21	0.46	2.94	0.00	0.27	0.00	0.00	0.00
12+	0.12	0.00	0.00	0.21	1.57	1.90	0.09	0.03	0.00	0.00	0.00
TOT	34.72	7.20	5.26	35.38	17.44	100.00	7.99	23.31	3.42	3.04	2.22

3. BY MOLAR

3-	0.00	0.00	******	******	******	0.00	0.00	******	******	******	******
4	4.36	0.06	******	******	******	4.42	4.28	0.08	******	******	******
5	10.52	3.54	0.20	******	******	32.87	2.49	8.02	******	0.20	******
6	9.68	2.70	1.51	1.63	******	15.52	1.81	7.87	******	1.26	0.25
7	5.58	1.49	1.37	7.92	******	16.35	0.86	4.72	******	0.79	0.58
8	4.83	0.36	1.15	9.45	0.12	15.91	0.35	1.96	2.53	0.67	0.48
9	0.94	0.00	0.59	6.29	0.19	8.00	0.13	0.74	0.06	0.05	0.53
10	0.60	0.00	0.03	3.17	0.29	4.09	0.00	0.47	0.13	0.00	0.03
11	0.16	0.00	0.00	1.40	0.27	1.83	0.00	0.16	0.00	0.00	0.00
12+	0.06	0.00	0.00	0.12	0.83	1.01	0.05	0.01	0.00	0.00	0.00
TOT	36.73	8.14	4.86	29.97	20.30	100.00	9.97	24.04	2.72	2.98	1.88

GRP. TYPE, VOL %: P = 47.77, O = 9.50, N = 6.21, A = 36.52, Saturates = 53.98
DIENE CONTENT = 609. vol ppm AVG MW = 92.1 API GR. = 56.8 SP. GR. =0.7514
OCTANE NUMBER: (from pure values) RON = 88.9 MON = 82.2
(from blending values) RON = 91.4 MON = 82.1
CARBON-HYDROGEN RATIO =6.330 STOICH. AIR-FUEL RATIO =14.59 lbs air/lbs fuel
BTU/lb = 12324. NET, 13267. GROSS; BTU/gal = 77280. NET, 83190. GROSS
REID VAPOR PRESSURE = 7.7 BROMINE NO. = 14.3

CHEVRON RESEARCH GASOLINE ANALYSIS
1-Apr-1996 13:15
6012720 API BLEND #1 GASOLINE/MTBE 13GASO124
Sample 2 Injection 1

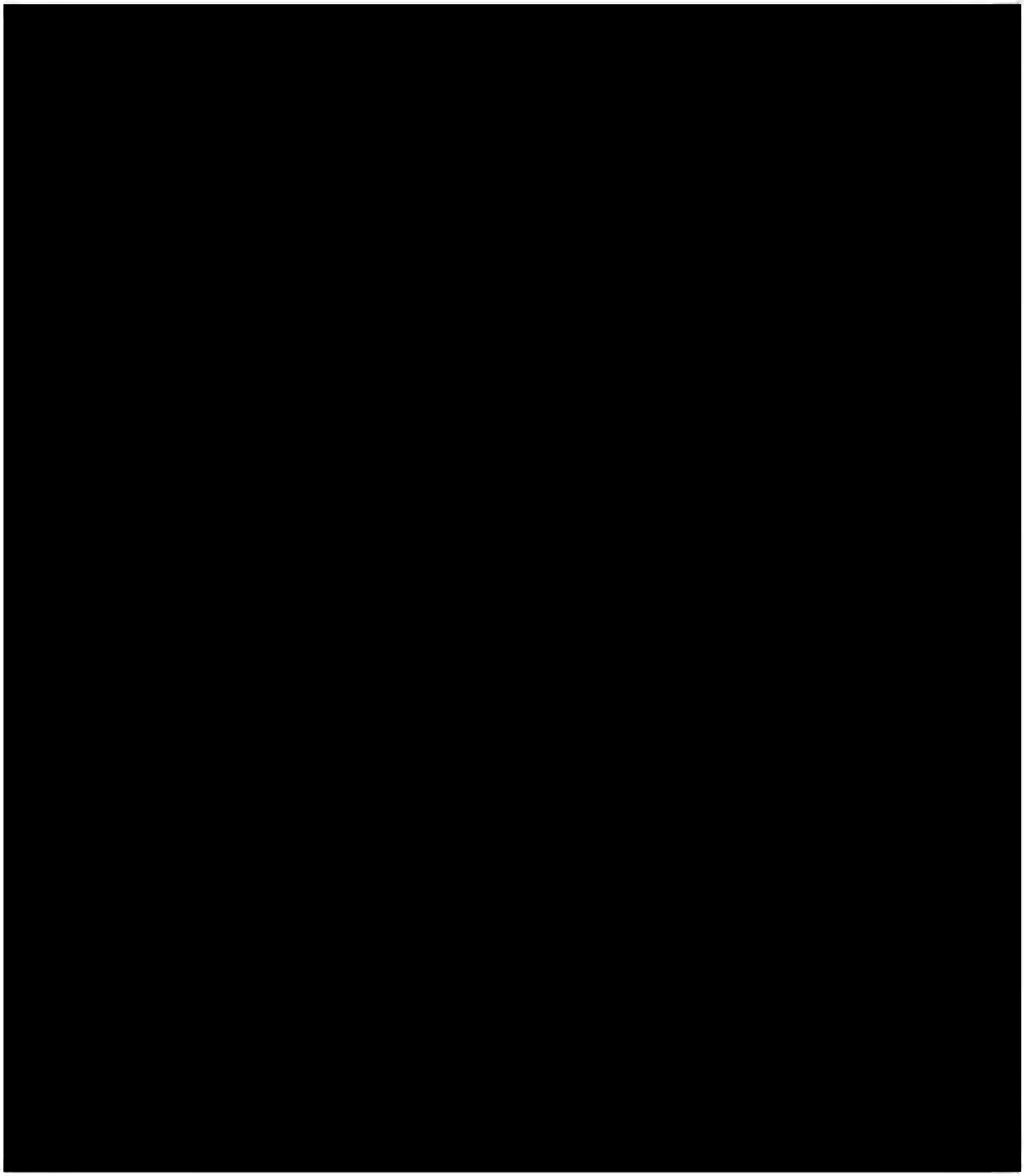
* DISTILLATION CURVES

VOL %	TBP	D86
0.	11.	97.
5.	82.	130.
10.	82.	130.
15.	99.	130.
20.	130.	130.
25.	130.	136.
30.	130.	140.
35.	140.	152.
40.	146.	161.
45.	161.	194.
50.	194.	197.
55.	209.	210.
60.	229.	231.
65.	231.	231.
70.	246.	251.
75.	281.	279.
80.	282.	290.
85.	319.	319.
90.	337.	333.
95.	374.	390.
100.	509.	459.

* COMPOUND DICTIONARY NUMBERS AND AREAS AS READ IN

[redacted]

CHEVRON RESEARCH GASOLINE ANALYSIS
1-Apr-1996 13:15
6012720 API BLEND #1 GASOLINE/MTBE 13GASO124
Sample 2 Injection 1



TOTAL UNCORRECTED AREA = 3514780.

NUMBER OF PEAKS READ IN = 379

1-Apr-1996 13:15
6012720 API BLEND #1 GASOLINE/MTBE 13GASO124
Sample 2 Injection 1

* DETAILED HYDROCARBON ANALYSIS, EXCLUDING COMPOUNDS BELOW 0.01 VOLUME PERCENT

NORMAL PARAFFINS

CODE	MOL.	VOL.	WT.	NAME
4	4.28	3.47	2.70	N-BUTANE
6	2.49	2.33	1.95	N-PENTANE
9	1.81	1.91	1.69	N-HEXANE
14	0.86	1.02	0.94	N-HEPTANE
23	0.35	0.46	0.43	N-OCTANE
41	0.13	0.19	0.18	N-NONANE
102	0.03	0.06	0.06	N-DODECANE
103	0.02	0.04	0.04	N-TRIDECANE

ISO-PARAFFINS

CODE	MOL.	VOL.	WT.	NAME	
5	0.08	0.07	0.05	ISOBUTANE	
8	0.04	0.04	0.03	NEOPENTANE	
7	7.98	7.52	6.25	ISOPENTANE	
12	0.51	0.55	0.48	22-DIME BUTANE	
13	1.21	1.27	1.13	23-DIME BUTANE	
10	3.88	4.15	3.63	2-ME PENTANE	
11	2.27	2.39	2.13	3-ME PENTANE	
18	0.06	0.07	0.07	22-DIME PENTANE	
20	0.79	0.96	0.86	24-DIME PENTANE	
19	1.54	1.80	1.67	23-DIME PENTANE	
15	1.09	1.31	1.19	2-ME HEXANE	
16	1.15	1.36	1.25	3-ME HEXANE	
17	0.08	0.10	0.09	3-ET PENTANE	
37	1.71	2.29	2.12	224-TRIME PENTANE	*
28	0.02	0.03	0.03	22-DIME HEXANE	
36	0.04	0.05	0.05	223-TRIME PENTANE	*
31	0.23	0.30	0.28	25-DIME HEXANE	
30	0.32	0.42	0.40	24-DIME HEXANE	
32	0.03	0.03	0.03	33-DIME HEXANE	
39	0.52	0.67	0.64	234-TRIME PENTANE	*
34	0.08	0.10	0.09	2-ME-3-ET PENTANE	
29	0.26	0.34	0.32	23-DIME HEXANE	*
24	0.57	0.75	0.70	2-ME HEPTANE	
26	0.18	0.23	0.22	4-ME HEPTANE	
25	0.54	0.71	0.68	3-ME HEPTANE	
73	0.02	0.03	0.03	224-TRIME HEXANE	
51	0.07	0.09	0.09	244-TRIME HEXANE	
52	0.03	0.04	0.04	24-DIME HEPTANE	
43	0.06	0.09	0.09	235-TRIME HEXANE	*
67	0.01	0.01	0.01	22-DIME HEPTANE	
53	0.07	0.10	0.09	26-DIME HEPTANE	
55	0.15	0.22	0.21	35-DIME HEPTANE	
50	0.01	0.02	0.02	234-TRIME HEXANE	
56	0.05	0.07	0.06	23-DIME HEPTANE	
71	0.02	0.03	0.03	3-ME-4-ET HEXANE	
57	0.03	0.04	0.04	34-DIME HEPTANE	

66	0.02	0.03	0.03	4-ET HEPTANE
62	0.11	0.16	0.15	4-ME OCTANE
60	0.14	0.21	0.20	2-ME OCTANE
4660	0.01	0.01	0.01	246-TRIME HEPTANE *
76	0.02	0.03	0.03	33-DIET PENTANE
4652	0.02	0.03	0.03	225-TRIME HEPTANE *
4657	0.03	0.05	0.05	236-TRIME HEPTANE *
4659	0.02	0.02	0.02	245-TRIME HEPTANE *
151	0.02	0.03	0.03	22-DIME OCTANE
161	0.01	0.02	0.02	44-DIME OCTANE
4650	0.05	0.07	0.07	223-TRIME HEPTANE *
157	0.04	0.07	0.06	33-DIME OCTANE
89	0.01	0.02	0.02	4-ET OCTANE
152	0.03	0.05	0.05	23-DIME OCTANE
215	0.02	0.03	0.03	C-11 ISOPARAFFINS
213	0.03	0.04	0.04	C-10 ISOPARAFFINS
86	0.17	0.27	0.27	4-ME NONANE
84	0.07	0.11	0.11	2-ME NONANE
88	0.02	0.02	0.02	3-ET OCTANE
85	0.07	0.11	0.11	3-ME NONANE
4663	0.02	0.03	0.03	335-TRIME HEPTANE *
163	0.09	0.15	0.15	2-ME DECANE
164	0.05	0.09	0.09	3-ME DECANE
5030	0.01	0.03	0.03	26-DIME UNDECANE

CYCLOPENTANES

CODE	MOL.	VOL.	WT.	NAME
800	0.20	0.16	0.16	CYCLOPENTANE
801	1.26	1.14	1.15	ME CYCLOPENTANE
806	0.26	0.27	0.27	1C3-DIME CYCPENTANE
807	0.23	0.24	0.24	1T3-DIME CYCPENTANE
805	0.16	0.17	0.17	1T2-DIME CYCPENTANE
811	0.04	0.05	0.05	113-TRIME CPENTANE
802	0.15	0.16	0.16	ET CYCLOPENTANE
817	0.08	0.10	0.10	1T2C4TRIME CPENTANE
814	0.04	0.05	0.05	1T2C3TRIME CPENTANE
810	0.04	0.05	0.05	112-TRIME CPENTANE*
848	0.04	0.06	0.06	11C3T4-TETRME CPENT
864	0.07	0.09	0.09	1MEC3ET CYCPENTANE
861	0.33	0.39	0.40	1ME-1ET CYCPENTANE
812	0.02	0.03	0.03	1C2C3TRIMECPENTANE*
4326	0.01	0.01	0.01	C-9 CYCLOPENTANE B
862	0.03	0.03	0.03	1ME-C2ET CYPENTANE

CYCLOHEXANES

CODE	MOL.	VOL.	WT.	NAME
825	0.25	0.22	0.23	CYCLOHEXANE
826	0.58	0.60	0.62	ME CYCLOHEXANE
831	0.07	0.08	0.08	1C3-DIME CYCHEXANE
830	0.05	0.06	0.06	1T2-DIME CYCHEXANE

832	0.12	0.14	0.15	1T3-DIME CYCHEXANE
833	0.06	0.07	0.07	1C4-DIME CYCHEXANE
829	0.04	0.04	0.05	1C2-DIME CYCHEXANE
827	0.14	0.16	0.17	ETHYL CYCLOHEXANE
946	0.04	0.05	0.05	113-TRIME CYCHEXANE
979	0.02	0.03	0.03	C-9 CYLOHEXANES
956	0.04	0.06	0.06	1C3T5-TRIME CYCHEX
950	0.02	0.02	0.02	1T2C3-TRIME CYCHEX
945	0.02	0.02	0.02	112-TRIME CYCHEXANE
941	0.09	0.12	0.13	1ME-C3ET CYCHEXANE
944	0.03	0.04	0.05	1ME-T4ET CYCHEXANE
940	0.08	0.10	0.10	1ME-1-ET CYCHEXANE
949	0.04	0.06	0.06	1C2T3-TRIME CYCHEX
943	0.03	0.03	0.03	1M-C4-ET CYCHEXANE
948	0.08	0.10	0.11	1C2C3-TRIME CYCHEX
836	0.02	0.03	0.03	ISOPR CYCLOHEXANE
835	0.02	0.03	0.03	N-PR CYCLOHEXANE
980	0.03	0.05	0.05	C-10 CYCLOHEXANES

OLEFINS, DIENES

CODE	MOL.	VOL.	WT.	NAME
304	0.02	0.02	0.01	TRANS-2-BUTENE
303	0.03	0.02	0.02	C1S-2-BUTENE
310	0.05	0.04	0.04	3-METHYL-1-BUTENE
306	0.25	0.22	0.19	1-PENTENE
309	0.50	0.44	0.38	2-METHYL-1-BUTENE
509	0.01	0.01	0.01	ISOPRENE
308	0.80	0.70	0.61	TRANS-2-PENTENE
327	0.01	0.01	0.01	3,3-DIME BUTENE
307	0.47	0.40	0.36	CIS-2-PENTENE
311	1.23	1.05	0.94	2-METHYL-2-BUTENE
505	0.03	0.02	0.02	T-13-PENTADIENE
530	0.01	0.01	0.01	CYCLOPENTADIENE
504	0.01	0.01	0.01	C-13-PENTADIENE
450	0.18	0.13	0.14	CYCLOPENTENE
318	0.12	0.12	0.11	3-METHYL-1-PENTENE
324	0.20	0.20	0.18	T-4ME-2-PENTENE
512	0.01	0.01	0.01	15-HEXADIENE
317	0.24	0.24	0.22	2-ME-1-PENTENE
312	0.13	0.13	0.12	1-HEXENE
315	0.35	0.35	0.32	CIS-3-HEXENE
314	0.42	0.42	0.38	TRANS-2-HEXENE
320	0.39	0.39	0.36	2-METHYL-2-PENTENE
321	0.24	0.23	0.21	C-3ME-2-PENTENE
313	0.21	0.20	0.19	CIS-2-HEXENE
2005	0.01	0.01	0.01	33-DIME-1-PENTENE
4500	0.01	0.01	0.01	HEPTENE A
2011	0.01	0.01	0.01	44-DIME-C2-PENTENE
451	0.40	0.34	0.36	1-ME CYLCOPENTENE
2004	0.03	0.03	0.03	24-DIME-1-PENTENE
2017	0.01	0.01	0.01	3-ET 1-PENTENE
403	0.01	0.02	0.01	HEPTENES

2003	0.03	0.03	0.03	23-DIME-1-PENTENE
2024	0.01	0.02	0.01	5-ME-1-HEXENE
2009	0.03	0.04	0.04	24-DIME-CIS2-PENTENE
403	0.01	0.01	0.01	HEPTENES
403	0.01	0.02	0.01	HEPTENES
2033	0.07	0.08	0.08	2-ME-T3-HEXENE
2031	0.05	0.05	0.05	5-ME-T2-HEXENE
2030	0.03	0.04	0.04	5-ME-C2-HEXENE
2010	0.03	0.03	0.03	34-DIME-C2-PENTENE
2038	0.10	0.11	0.10	1-HEPTENE
2035	0.06	0.06	0.06	3-ME-T3-HEXENE
5370	0.11	0.10	0.11	C-7 CYCLOPENTENE A
5371	0.10	0.10	0.10	C-7 CYCLOPENTENE B
2042	0.13	0.14	0.13	T3-HEPTENE
2025	0.13	0.15	0.14	2-ME-2-HEXENE
2034	0.10	0.11	0.10	3-ME-C3-HEXENE
2018	0.08	0.09	0.09	3-ET-2-PENTENE
2040	0.16	0.19	0.17	TRANS-2-HEPTENE
2008	0.12	0.13	0.13	23-DIME-C2-PENTENE
2039	0.07	0.08	0.07	CIS-2-HEPTENE
4526	0.01	0.01	0.01	OCTENE B
4529	0.01	0.01	0.01	OCTENE E
4530	0.00	0.01	0.01	OCTENE F
4527	0.01	0.02	0.02	OCTENE C
4532	0.02	0.02	0.02	OCTENE H
4528	0.05	0.06	0.06	OCTENE D
4533	0.03	0.03	0.03	OCTENE I
4534	0.03	0.04	0.04	OCTENE J
404	0.01	0.02	0.02	OCTENES
4531	0.01	0.01	0.01	OCTENE G
2212	0.01	0.01	0.01	6-ME-C2-HEPTENE
2213	0.01	0.01	0.01	6-ME-T2-HEPTENE
2193	0.06	0.08	0.08	1-OCTENE
2198	0.07	0.09	0.09	C4-OCTENE
4536	0.03	0.04	0.04	OCTENE L

AROMATIC HCS

CODE	MOL.	VOL.	WT.	NAME	
600	1.63	1.18	1.39	BENZENE	
601	7.92	6.82	7.92	TOLUENE	
602	2.00	1.99	2.31	ETHYLBENZENE	
604	3.74	3.73	4.31	M-XYLENE	
605	1.52	1.52	1.75	P-XYLENE	
603	2.18	2.14	2.52	O-XYLENE	*
607	0.09	0.10	0.11	CUMENE	
644	0.45	0.51	0.59	N-PROPYL BENZENE	
609	1.33	1.50	1.73	1-ME-3-ET BENZENE	
610	0.60	0.68	0.78	1-ME-4-ET BENZENE	
613	0.67	0.76	0.88	135-TRIME BENZENE	
608	0.41	0.45	0.53	1-ME-2-ET BENZENE	*
612	2.03	2.26	2.64	124-TRIME BENZENE	*
615	0.06	0.07	0.08	ISOBUTYLBENZENE	

1-Apr-1996 13:15
6012720 API BLEND #1 GASOLINE/MTBE 13GASO124
Sample 2 Injection 1

616	0.06	0.07	0.08	SEC BUTYLBENZENE
611	0.48	0.53	0.63	123-TRIME BENZENE *
622	0.03	0.04	0.05	M-CYMENE
623	0.02	0.03	0.03	P-CYMENE
650	0.23	0.23	0.30	INDAN *
621	0.03	0.03	0.04	O-CYMENE *
646	0.14	0.18	0.21	13-DIETHYL BENZENE
647	0.27	0.34	0.39	1-ME-3-PR BENZENE
648	0.23	0.30	0.34	1-ME-4-PR BENZENE
651	0.30	0.37	0.44	12-DIET BENZENE *
653	0.09	0.11	0.13	1-ME-2-PR BENZENE *
654	0.23	0.29	0.34	14-DIME2ET BENZENE *
655	0.15	0.19	0.22	13-DIME4ET BENZENE *
656	0.31	0.39	0.46	12-DIME4ET BENZENE *
659	0.08	0.10	0.12	12-DIME3ET BENZENE
685	0.02	0.03	0.03	2-PHENYL-2ME BUTANE
683	0.01	0.01	0.02	1-PHENYL-3ME BUTANE
635	0.15	0.19	0.22	1245-TETME BENZENE *
634	0.26	0.32	0.38	1235-TETME BENZENE *
7800	0.13	0.15	0.19	METHYLINDANE A
660	0.05	0.08	0.09	1-ME35DIET BENZENE
773	0.03	0.03	0.04	C-11 AROMATIC K
7801	0.18	0.19	0.25	METHYLINDANE B
7004	0.07	0.09	0.11	C-11 AROMATIC E
633	0.07	0.09	0.11	1234-TETME BENZENE *
715	0.03	0.04	0.05	TETRALIN *
755	0.06	0.08	0.10	1-ME-3NBU BENZENE
7099	0.02	0.03	0.04	PENTYLBENZENE
768	0.03	0.04	0.05	13-DIME-4PR BENZENE
769	0.02	0.03	0.04	1-ME-35DIET BENZENE
714	0.34	0.36	0.47	NAPHTHALENE *
698	0.07	0.09	0.11	12-DIME-3PR BENZENE
7830	0.04	0.05	0.07	DIMETHYLINDANE A
7831	0.12	0.15	0.19	DIMETHYLINDANE B
7833	0.01	0.01	0.02	DIMETHYLINDANE D
699	0.03	0.04	0.05	135-TRIME-2ETBENZENE
771	0.04	0.06	0.07	125-TRIME-3ETBENZENE
693	0.03	0.04	0.05	124-TRIME-5ETBENZENE
694	0.05	0.07	0.08	123-TRIME-5ETBENZENE
695	0.02	0.02	0.03	124-TRIME-3ETBENZENE
7104	0.02	0.03	0.03	135-TRIETHYLBENZENE
772	0.04	0.06	0.07	123-TRIME4ET BENZENE
7101	0.01	0.02	0.02	T-BUTYL-DIMEBENZENES
7034	0.02	0.02	0.03	C-12 AROMATIC E
7835	0.06	0.07	0.10	DIMETHYLINDANE F
7836	0.06	0.07	0.09	DIMETHYLINDANE G
7837	0.04	0.06	0.07	C-11 INDANE H
636	0.04	0.05	0.06	PENTAMETHYLBENZENE
796	0.29	0.33	0.45	2-ME NAPHTHALENE *
795	0.13	0.15	0.21	1-ME NAPHTHALENE *
7910	0.02	0.02	0.03	1-ETHYL NAPHTHALENE
7908	0.01	0.01	0.02	26-DIME NAPHTHALENE
7909	0.01	0.01	0.02	27-DIME NAPHTHALENE
7901	0.02	0.02	0.03	13-DIME NAPHTHALENE

7904	0.01	0.01	0.01	16-DIME NAPHTHALENE

UNCLASSIFIED HCS

CODE	MOL.	VOL.	WT.	NAME
1412	18.61	15.00	14.57	2-ME-2METHOXYPROPANE
188	0.04	0.05	0.05	UNCLASS. H.C. C- 8
188	0.01	0.01	0.01	UNCLASS. H.C. C- 8
188	0.05	0.06	0.06	UNCLASS. H.C. C- 8
188	0.02	0.02	0.02	UNCLASS. H.C. C- 8
189	0.03	0.04	0.04	UNCLASS. H.C. C- 9
189	0.01	0.02	0.02	UNCLASS. H.C. C- 9
189	0.03	0.04	0.04	UNCLASS. H.C. C- 9
189	0.01	0.02	0.02	UNCLASS. H.C. C- 9
189	0.02	0.03	0.03	UNCLASS. H.C. C- 9
189	0.01	0.02	0.02	UNCLASS. H.C. C- 9
189	0.01	0.01	0.01	UNCLASS. H.C. C- 9
189	0.01	0.02	0.02	UNCLASS. H.C. C- 9
189	0.02	0.02	0.02	UNCLASS. H.C. C- 9
190	0.03	0.04	0.04	UNCLASS. H.C. C-10
4052	0.01	0.01	0.01	UNCLASSIFIED C-10 C
4053	0.02	0.02	0.02	UNCLASSIFIED C-10 D
190	0.02	0.03	0.03	UNCLASS. H.C. C-10
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
190	0.01	0.02	0.02	UNCLASS. H.C. C-10
4900	0.02	0.02	0.02	CIS-HYDRINDANE
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
190	0.04	0.06	0.06	UNCLASS. H.C. C-10
190	0.01	0.02	0.02	UNCLASS. H.C. C-10
190	0.05	0.07	0.07	UNCLASS. H.C. C-10
190	0.01	0.02	0.02	UNCLASS. H.C. C-10
190	0.01	0.01	0.02	UNCLASS. H.C. C-10
190	0.04	0.06	0.06	UNCLASS. H.C. C-10
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
191	0.01	0.01	0.01	UNCLASS. H.C. C-11
191	0.02	0.02	0.03	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.02	0.03	0.03	UNCLASS. H.C. C-11
191	0.03	0.05	0.05	UNCLASS. H.C. C-11
191	0.02	0.03	0.03	UNCLASS. H.C. C-11
191	0.01	0.01	0.01	UNCLASS. H.C. C-11
191	0.02	0.03	0.04	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.01	0.01	0.01	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.02	0.03	0.03	UNCLASS. H.C. C-11
191	0.02	0.03	0.03	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.01	0.01	0.02	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.01	0.01	0.01	UNCLASS. H.C. C-11

192	0.03	0.05	0.05	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
192	0.01	0.03	0.03	UNCLASS. H.C. C-12
192	0.04	0.07	0.07	UNCLASS. H.C. C-12
192	0.03	0.05	0.05	UNCLASS. H.C. C-12
192	0.02	0.04	0.04	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
192	0.03	0.05	0.05	UNCLASS. H.C. C-12
192	0.04	0.07	0.07	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
192	0.02	0.03	0.03	UNCLASS. H.C. C-12
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.01	0.01	0.01	UNCLASSIFIED C-13
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.01	0.01	0.02	UNCLASSIFIED C-13
193	0.02	0.02	0.03	UNCLASSIFIED C-13
193	0.02	0.03	0.04	UNCLASSIFIED C-13
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.01	0.01	0.01	UNCLASSIFIED C-13
193	0.02	0.04	0.05	UNCLASSIFIED C-13
193	0.01	0.01	0.02	UNCLASSIFIED C-13
193	0.03	0.05	0.06	UNCLASSIFIED C-13
193	0.02	0.03	0.04	UNCLASSIFIED C-13
193	0.03	0.04	0.06	UNCLASSIFIED C-13
193	0.01	0.01	0.02	UNCLASSIFIED C-13
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.01	0.02	0.03	UNCLASSIFIED C-13
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.01	0.02	0.03	UNCLASSIFIED C-13
193	0.01	0.02	0.03	UNCLASSIFIED C-13
193	0.02	0.03	0.04	UNCLASSIFIED C-13
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.01	0.01	0.01	UNCLASSIFIED C-13
193	0.02	0.03	0.03	UNCLASSIFIED C-13
194	0.01	0.01	0.01	UNCLASSIFIED C-14
194	0.01	0.02	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.02	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.02	0.03	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14

CHEVRON RESEARCH GASOLINE ANALYSIS

Liquid

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Sample Name: 6012721 API BLEND #2 GASOLINE/TAME Customer: CARR
Acquisition Date: 2-Apr-1996 Acquisition Time: 13:00
Channel #: 13 Analysis: GASO124 Sample #: 8 Injection #: 1

*** DETAILED COMPOSITION, PERCENT ***

1. BY VOLUME

C NO.	PARA	OLEF	NAPH	AROM	UNCL HC	TOTALS BY C #	NORMAL PARA	NON-ALKYL I-PARA	ALKYL I-PARA	CYCLO-PENT	CYCLO-HEX
3-	0.00	0.00	******	******	******	0.00	0.00	******	******	******	******
4	3.59	0.04	******	******	******	3.64	3.53	0.07	******	******	******
5	9.96	3.00	0.14	******	******	13.10	2.34	7.62	******	0.14	******
6	10.20	2.64	1.36	1.17	******	32.49	1.91	8.29	******	1.14	0.22
7	6.53	1.67	1.44	6.60	******	16.24	1.00	5.53	******	0.85	0.58
8	6.19	0.44	1.30	8.88	0.14	16.96	0.44	2.49	3.26	0.77	0.54
9	1.29	0.00	0.73	6.55	0.24	8.81	0.18	1.02	0.08	0.07	0.66
10	0.90	0.00	0.04	3.57	0.42	4.93	0.00	0.70	0.20	0.00	0.04
11	0.29	0.00	0.00	1.63	0.39	2.31	0.00	0.29	0.00	0.00	0.00
12+	0.12	0.00	0.00	0.16	1.25	1.53	0.09	0.04	0.00	0.00	0.00
TOT	39.06	7.80	5.02	28.57	19.56	100.00	9.48	26.04	3.54	2.97	2.04

2. BY WEIGHT

3-	0.00	0.00	******	******	******	0.00	0.00	******	******	******	******
4	2.78	0.04	******	******	******	2.81	2.73	0.05	******	******	******
5	8.25	2.64	0.14	******	******	11.03	1.95	6.30	******	0.14	******
6	8.94	2.44	1.36	1.37	******	31.55	1.68	7.26	******	1.14	0.23
7	5.96	1.59	1.45	7.62	******	16.61	0.91	5.05	******	0.85	0.60
8	5.77	0.42	1.35	10.26	0.14	17.93	0.41	2.32	3.04	0.79	0.56
9	1.23	0.00	0.77	7.61	0.24	9.86	0.17	0.98	0.08	0.07	0.70
10	0.88	0.00	0.05	4.24	0.42	5.59	0.00	0.68	0.19	0.00	0.05
11	0.28	0.00	0.00	2.07	0.40	2.75	0.00	0.28	0.00	0.00	0.00
12+	0.12	0.00	0.00	0.21	1.53	1.86	0.09	0.04	0.00	0.00	0.00
TOT	34.21	7.13	5.12	33.37	20.18	100.00	7.93	22.96	3.31	2.99	2.13

3. BY MOLAR

3-	0.00	0.00	******	******	******	0.00	0.00	******	******	******	******
4	4.51	0.06	******	******	******	4.57	4.42	0.08	******	******	******
5	10.78	3.55	0.19	******	******	14.53	2.55	8.23	******	0.19	******
6	9.78	2.74	1.53	1.65	******	34.80	1.84	7.95	******	1.27	0.25
7	5.61	1.53	1.39	7.80	******	16.33	0.86	4.75	******	0.82	0.58
8	4.77	0.36	1.13	9.11	0.12	15.48	0.34	1.92	2.51	0.66	0.47
9	0.91	0.00	0.57	5.98	0.18	7.64	0.13	0.72	0.06	0.05	0.52
10	0.58	0.00	0.03	3.00	0.28	3.90	0.00	0.45	0.13	0.00	0.03
11	0.17	0.00	0.00	1.34	0.24	1.75	0.00	0.17	0.00	0.00	0.00
12+	0.07	0.00	0.00	0.12	0.83	1.02	0.05	0.02	0.00	0.00	0.00
TOT	37.17	8.24	4.85	29.00	20.75	100.00	10.18	24.29	2.70	3.00	1.85

GRP. TYPE, VOL %: P = 48.56, O = 9.69, N = 6.23, A = 35.51, Saturates = 54.79
DIENE CONTENT = 226. vol ppm AVG MW = 94.3 API GR. = 55.7 SP. GR. =0.7557
OCTANE NUMBER: (from pure values) RON = 88.1 MON = 81.1
(from blending values) RON = 90.6 MON = 81.0
CARBON-HYDROGEN RATIO =6.281 STOICH. AIR-FUEL RATIO =14.61 lbs air/lbs fuel
BTU/lb = 12687. NET, 13652. GROSS; BTU/gal = 80011. NET, 86091. GROSS
REID VAPOR PRESSURE = 7.4 BROMINE NO. = 14.0

2-Apr-1996 13:00
6012721 API BLEND #2 GASOLINE/TAME 13GASO124
Sample 8 Injection 1

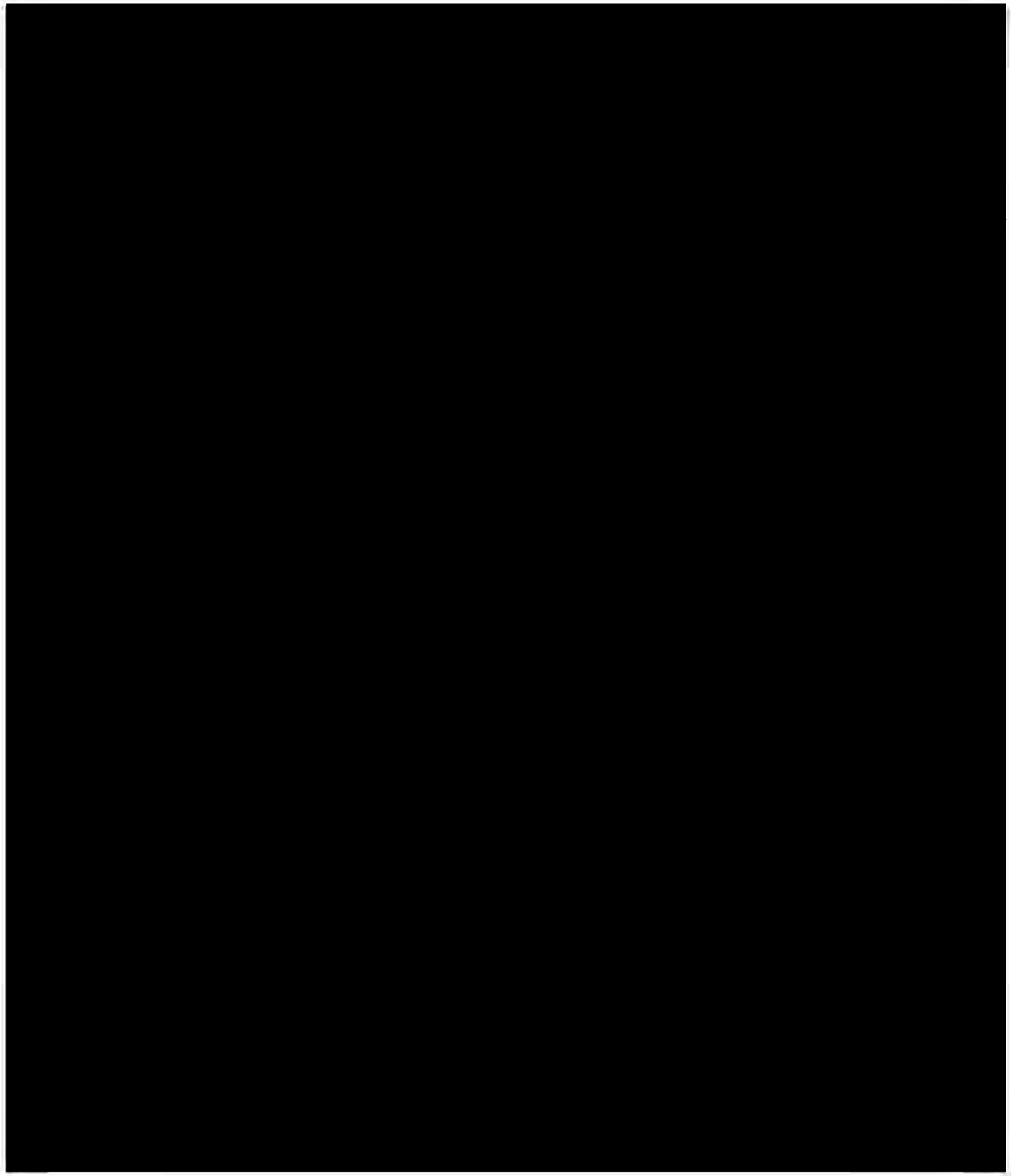
* DISTILLATION CURVES

VOL %	TBP	D86
0.	11.	97.
5.	82.	140.
10.	82.	144.
15.	97.	154.
20.	140.	161.
25.	146.	182.
30.	161.	187.
35.	187.	187.
40.	187.	187.
45.	187.	187.
50.	187.	194.
55.	197.	209.
60.	211.	228.
65.	231.	231.
70.	240.	243.
75.	277.	275.
80.	282.	280.
85.	315.	319.
90.	337.	333.
95.	374.	382.
100.	509.	459.

* COMPOUND DICTIONARY NUMBERS AND AREAS AS READ IN

[redacted]

2-Apr-1996 13:00
6012721 API BLEND #2 GASOLINE/TAME 13GASO124
Sample 8 Injection 1



TOTAL UNCORRECTED AREA = 3328144.

NUMBER OF PEAKS READ IN = 376

2-Apr-1996 13:00
6012721 API BLEND #2 GASOLINE/TAME 13GASO124
Sample 8 Injection 1

* DETAILED HYDROCARBON ANALYSIS, EXCLUDING COMPOUNDS BELOW 0.01 VOLUME PERCENT

NORMAL PARAFFINS

CODE	MOL.	VOL.	WT.	NAME
4	4.42	3.53	2.73	N-BUTANE
6	2.55	2.34	1.95	N-PENTANE
9	1.84	1.91	1.68	N-HEXANE
14	0.86	1.00	0.91	N-HEPTANE
23	0.34	0.44	0.41	N-OCTANE
41	0.13	0.18	0.17	N-NONANE
102	0.03	0.05	0.05	N-DODECANE
103	0.02	0.04	0.04	N-TRIDECANE

ISO-PARAFFINS

CODE	MOL.	VOL.	WT.	NAME	
5	0.08	0.07	0.05	ISOBUTANE	
8	0.04	0.04	0.03	NEOPENTANE	
7	8.19	7.58	6.27	ISOPENTANE	
12	0.52	0.55	0.48	22-DIME BUTANE	
13	1.21	1.25	1.10	23-DIME BUTANE	
10	3.91	4.10	3.57	2-ME PENTANE	
11	2.31	2.39	2.11	3-ME PENTANE	
18	0.06	0.08	0.07	22-DIME PENTANE	
20	0.80	0.95	0.85	24-DIME PENTANE	
19	1.54	1.77	1.63	23-DIME PENTANE	
15	1.10	1.29	1.17	2-ME HEXANE	
16	1.15	1.34	1.22	3-ME HEXANE	
17	0.09	0.11	0.10	3-ET PENTANE	
37	1.70	2.24	2.06	224-TRIME PENTANE	*
28	0.02	0.03	0.03	22-DIME HEXANE	
36	0.04	0.05	0.05	223-TRIME PENTANE	*
31	0.22	0.29	0.27	25-DIME HEXANE	
30	0.32	0.41	0.38	24-DIME HEXANE	
32	0.03	0.03	0.03	33-DIME HEXANE	
38	0.01	0.01	0.01	233-TRIME PENTANE	*
39	0.50	0.64	0.61	234-TRIME PENTANE	*
34	0.07	0.09	0.09	2-ME-3-ET PENTANE	
29	0.25	0.33	0.31	23-DIME HEXANE	*
24	0.55	0.72	0.67	2-ME HEPTANE	
26	0.17	0.23	0.21	4-ME HEPTANE	
25	0.53	0.69	0.64	3-ME HEPTANE	
73	0.02	0.03	0.03	224-TRIME HEXANE	
51	0.06	0.09	0.09	244-TRIME HEXANE	
52	0.03	0.04	0.04	24-DIME HEPTANE	
43	0.06	0.08	0.08	235-TRIME HEXANE	*
67	0.01	0.01	0.01	22-DIME HEPTANE	
53	0.06	0.09	0.09	26-DIME HEPTANE	
55	0.15	0.21	0.20	35-DIME HEPTANE	
50	0.01	0.02	0.02	234-TRIME HEXANE	
56	0.04	0.06	0.06	23-DIME HEPTANE	
71	0.02	0.03	0.03	3-ME-4-ET HEXANE	

57	0.03	0.04	0.04	34-DIME HEPTANE
66	0.02	0.03	0.03	4-ET HEPTANE
62	0.11	0.15	0.14	4-ME OCTANE
60	0.14	0.20	0.19	2-ME OCTANE
4660	0.01	0.01	0.01	246-TRIME HEPTANE *
76	0.02	0.03	0.03	33-DIET PENTANE
4652	0.02	0.03	0.02	225-TRIME HEPTANE *
4657	0.03	0.04	0.04	236-TRIME HEPTANE *
4659	0.01	0.02	0.02	245-TRIME HEPTANE *
151	0.02	0.03	0.03	22-DIME OCTANE
161	0.01	0.02	0.02	44-DIME OCTANE
4650	0.05	0.07	0.07	223-TRIME HEPTANE *
157	0.03	0.05	0.05	33-DIME OCTANE
5004	0.01	0.01	0.01	2-ME-3-ET HEPTANE
89	0.01	0.02	0.02	4-ET OCTANE
152	0.03	0.05	0.05	23-DIME OCTANE
215	0.02	0.03	0.03	C-11 ISOPARAFFINS
213	0.03	0.04	0.04	C-10 ISOPARAFFINS
86	0.16	0.25	0.25	4-ME NONANE
84	0.07	0.10	0.10	2-ME NONANE
88	0.01	0.02	0.02	3-ET OCTANE
85	0.07	0.11	0.10	3-ME NONANE
4663	0.02	0.03	0.02	335-TRIME HEPTANE *
163	0.10	0.17	0.17	2-ME DECANE
164	0.05	0.08	0.08	3-ME DECANE
5030	0.01	0.03	0.03	26-DIME UNDECANE

CYCLOPENTANES

CODE	MOL.	VOL.	WT.	NAME
800	0.19	0.14	0.14	CYCLOPENTANE
801	1.27	1.14	1.14	ME CYCLOPENTANE
806	0.26	0.27	0.27	1C3-DIME CYCPENTANE
807	0.23	0.24	0.24	1T3-DIME CYCPENTANE
805	0.18	0.19	0.19	1T2-DIME CYCPENTANE
811	0.04	0.05	0.05	113-TRIME CPENTANE
802	0.15	0.16	0.16	ET CYCLOPENTANE
817	0.08	0.10	0.10	1T2C4TRIME CPENTANE
814	0.04	0.05	0.05	1T2C3TRIME CPENTANE
810	0.04	0.05	0.05	112-TRIME CPENTANE*
848	0.04	0.06	0.06	11C3T4-TETRME CPENT
864	0.07	0.08	0.09	1MEC3ET CYCPENTANE
861	0.32	0.37	0.38	1ME-1ET CYCPENTANE
812	0.02	0.03	0.03	1C2C3TRIMECPENTANE*
4326	0.01	0.01	0.01	C-9 CYCLOPENTANE B
862	0.03	0.03	0.03	1ME-C2ET CYPENTANE

CYCLOHEXANES

CODE	MOL.	VOL.	WT.	NAME
825	0.25	0.22	0.23	CYCLOHEXANE
826	0.58	0.58	0.60	ME CYCLOHEXANE

831	0.07	0.08	0.08	1C3-DIME CYCHEXANE
830	0.05	0.06	0.06	1T2-DIME CYCHEXANE
832	0.12	0.13	0.14	1T3-DIME CYCHEXANE
833	0.06	0.07	0.07	1C4-DIME CYCHEXANE
829	0.04	0.04	0.04	1C2-DIME CYCHEXANE
827	0.14	0.16	0.16	ETHYL CYCLOHEXANE
946	0.04	0.05	0.05	113-TRIME CYCHEXANE
979	0.02	0.03	0.03	C-9 CYLOHEXANES
956	0.04	0.05	0.06	1C3T5-TRIME CYCHEX
950	0.02	0.02	0.02	1T2C3-TRIME CYCHEX
945	0.02	0.02	0.02	112-TRIME CYCHEXANE
941	0.09	0.12	0.12	1ME-C3ET CYCHEXANE
944	0.03	0.04	0.04	1ME-T4ET CYCHEXANE
940	0.07	0.09	0.10	1ME-1-ET CYCHEXANE
949	0.04	0.05	0.06	1C2T3-TRIME CYCHEX
943	0.02	0.03	0.03	1M-C4-ET CYCHEXANE
948	0.08	0.10	0.10	1C2C3-TRIME CYCHEX
836	0.02	0.03	0.03	ISOPR CYCLOHEXANE
835	0.02	0.03	0.03	N-PR CYCLOHEXANE
980	0.03	0.04	0.05	C-10 CYCLOHEXANES

OLEFINS, DIENES

CODE	MOL.	VOL.	WT.	NAME
304	0.02	0.02	0.01	TRANS-2-BUTENE
303	0.04	0.03	0.02	C1S-2-BUTENE
310	0.05	0.04	0.04	3-METHYL-1-BUTENE
306	0.25	0.22	0.19	1-PENTENE
309	0.51	0.44	0.38	2-METHYL-1-BUTENE
509	0.01	0.01	0.01	ISOPRENE
308	0.82	0.71	0.61	TRANS-2-PENTENE
327	0.01	0.01	0.01	3,3-DIME BUTENE
307	0.46	0.39	0.34	CIS-2-PENTENE
311	1.24	1.05	0.92	2-METHYL-2-BUTENE
505	0.02	0.01	0.01	T-13-PENTADIENE
450	0.18	0.13	0.13	CYCLOPENTENE
318	0.11	0.11	0.10	3-METHYL-1-PENTENE
323	0.08	0.08	0.07	C-4ME-2-PENTENE
324	0.14	0.14	0.13	T-4ME-2-PENTENE
317	0.24	0.24	0.22	2-ME-1-PENTENE
312	0.13	0.13	0.11	1-HEXENE
315	0.36	0.35	0.32	CIS-3-HEXENE
314	0.42	0.42	0.38	TRANS-2-HEXENE
320	0.40	0.39	0.36	2-METHYL-2-PENTENE
321	0.24	0.23	0.21	C-3ME-2-PENTENE
313	0.21	0.20	0.19	CIS-2-HEXENE
2005	0.01	0.01	0.01	33-DIME-1-PENTENE
4500	0.04	0.04	0.04	HEPTENE A
2011	0.02	0.02	0.02	44-DIME-C2-PENTENE
451	0.41	0.34	0.35	1-ME CYLCOPENTENE
2004	0.02	0.03	0.03	24-DIME-1-PENTENE
2017	0.01	0.01	0.01	3-ET 1-PENTENE
403	0.01	0.01	0.01	HEPTENES

2003	0.02	0.03	0.03	23-DIME-1-PENTENE
2024	0.01	0.02	0.01	5-ME-1-HEXENE
2009	0.03	0.04	0.04	24-DIME-CIS2-PENTENE
403	0.01	0.01	0.01	HEPTENES
403	0.01	0.02	0.01	HEPTENES
2033	0.07	0.08	0.08	2-ME-T3-HEXENE
2031	0.04	0.05	0.04	5-ME-T2-HEXENE
2030	0.03	0.04	0.04	5-ME-C2-HEXENE
403	0.01	0.01	0.01	HEPTENES
2010	0.03	0.03	0.03	34-DIME-C2-PENTENE
2038	0.10	0.11	0.11	1-HEPTENE
2035	0.06	0.06	0.06	3-ME-T3-HEXENE
5370	0.10	0.10	0.11	C-7 CYCLOPENTENE A
5371	0.10	0.10	0.10	C-7 CYCLOPENTENE B
2042	0.13	0.14	0.13	T3-HEPTENE
2025	0.13	0.15	0.14	2-ME-2-HEXENE
2034	0.10	0.10	0.10	3-ME-C3-HEXENE
2018	0.08	0.09	0.09	3-ET-2-PENTENE
2040	0.16	0.18	0.17	TRANS-2-HEPTENE
2008	0.12	0.13	0.12	23-DIME-C2-PENTENE
2039	0.07	0.07	0.07	CIS-2-HEPTENE
4526	0.01	0.01	0.01	OCTENE B
4529	0.01	0.01	0.01	OCTENE E
4530	0.00	0.01	0.01	OCTENE F
4527	0.01	0.02	0.02	OCTENE C
4532	0.02	0.02	0.02	OCTENE H
4528	0.05	0.06	0.06	OCTENE D
4533	0.03	0.03	0.03	OCTENE I
4534	0.03	0.04	0.04	OCTENE J
404	0.01	0.02	0.02	OCTENES
4531	0.01	0.01	0.01	OCTENE G
2212	0.01	0.01	0.01	6-ME-C2-HEPTENE
2213	0.01	0.01	0.01	6-ME-T2-HEPTENE
2193	0.06	0.08	0.07	1-OCTENE
2198	0.07	0.08	0.08	C4-OCTENE
4536	0.03	0.04	0.03	OCTENE L

AROMATIC HCS

CODE	MOL.	VOL.	WT.	NAME	
600	1.65	1.17	1.37	BENZENE	
601	7.80	6.60	7.62	TOLUENE	
602	1.93	1.89	2.18	ETHYLBENZENE	
604	3.60	3.52	4.05	M-XYLENE	
605	1.48	1.45	1.66	P-XYLENE	
603	2.10	2.02	2.37	O-XYLENE	*
607	0.08	0.09	0.11	CUMENE	
644	0.43	0.48	0.55	N-PROPYL BENZENE	
609	1.26	1.40	1.61	1-ME-3-ET BENZENE	
610	0.57	0.63	0.73	1-ME-4-ET BENZENE	
613	0.64	0.71	0.81	135-TRIME BENZENE	
608	0.39	0.42	0.50	1-ME-2-ET BENZENE	*
612	1.92	2.10	2.45	124-TRIME BENZENE	*

615	0.05	0.07	0.08	ISOBUTYLBENZENE
616	0.05	0.07	0.08	SEC BUTYLBENZENE
611	0.46	0.49	0.58	123-TRIME BENZENE *
622	0.03	0.04	0.05	M-CYMENE
623	0.02	0.03	0.03	P-CYMENE
650	0.22	0.22	0.28	INDAN *
621	0.03	0.03	0.04	O-CYMENE *
646	0.15	0.18	0.21	13-DIETHYL BENZENE
647	0.25	0.31	0.36	1-ME-3-PR BENZENE
648	0.22	0.27	0.31	1-ME-4-PR BENZENE
651	0.28	0.34	0.40	12-DIET BENZENE *
653	0.08	0.10	0.12	1-ME-2-PR BENZENE *
654	0.22	0.27	0.31	14-DIME2ET BENZENE *
655	0.14	0.17	0.20	13-DIME4ET BENZENE *
656	0.30	0.36	0.42	12-DIME4ET BENZENE *
659	0.08	0.10	0.11	12-DIME3ET BENZENE
685	0.02	0.03	0.03	2-PHENYL-2ME BUTANE
683	0.01	0.01	0.02	1-PHENYL-3ME BUTANE
635	0.15	0.18	0.21	1245-TETME BENZENE *
634	0.24	0.29	0.35	1235-TETME BENZENE *
7800	0.12	0.13	0.17	METHYLINDANE A
660	0.05	0.07	0.08	1-ME35DIET BENZENE
773	0.02	0.03	0.04	C-11 AROMATIC K
7801	0.16	0.18	0.23	METHYLINDANE B
7004	0.07	0.08	0.10	C-11 AROMATIC E
633	0.07	0.08	0.10	1234-TETME BENZENE *
715	0.03	0.03	0.04	TETRALIN *
755	0.06	0.08	0.09	1-ME-3NBU BENZENE
7099	0.02	0.03	0.04	PENTYLBENZENE
768	0.03	0.04	0.04	13-DIME-4PR BENZENE
769	0.02	0.03	0.03	1-ME-35DIET BENZENE
714	0.32	0.33	0.43	NAPHTHALENE *
698	0.07	0.09	0.10	12-DIME-3PR BENZENE
7830	0.04	0.05	0.07	DIMETHYLINDANE A
7831	0.11	0.13	0.18	DIMETHYLINDANE B
7833	0.01	0.01	0.02	DIMETHYLINDANE D
699	0.03	0.04	0.04	135-TRIME-2ETBENZENE
771	0.04	0.05	0.06	125-TRIME-3ETBENZENE
693	0.03	0.04	0.05	124-TRIME-5ETBENZENE
694	0.05	0.06	0.07	123-TRIME-5ETBENZENE
695	0.02	0.02	0.03	124-TRIME-3ETBENZENE
7104	0.02	0.03	0.03	135-TRIETHYLBENZENE
772	0.04	0.05	0.06	123-TRIME4ET BENZENE
7101	0.01	0.02	0.02	T-BUTYL-DIMEBENZENES
7034	0.02	0.02	0.03	C-12 AROMATIC E
7835	0.06	0.07	0.09	DIMETHYLINDANE F
7836	0.06	0.07	0.09	DIMETHYLINDANE G
7837	0.05	0.06	0.08	C-11 INDANE H
636	0.03	0.04	0.05	PENTAMETHYLBENZENE
796	0.28	0.30	0.41	2-ME NAPHTHALENE *
795	0.13	0.14	0.19	1-ME NAPHTHALENE *
7910	0.02	0.02	0.03	1-ETHYL NAPHTHALENE
7908	0.01	0.01	0.02	26-DIME NAPHTHALENE
7909	0.01	0.01	0.02	27-DIME NAPHTHALENE

7901	0.02	0.02	0.03	13-DIME NAPHTHALENE
7904	0.01	0.01	0.02	16-DIME NAPHTHALENE

UNCLASSIFIED HCS

CODE	MOL.	VOL.	WT.	NAME
1413	19.09	17.12	17.45	2-ME-2-METHOXYBUTANE
188	0.04	0.05	0.05	UNCLASS. H.C. C- 8
188	0.01	0.01	0.01	UNCLASS. H.C. C- 8
188	0.05	0.06	0.05	UNCLASS. H.C. C- 8
188	0.02	0.02	0.02	UNCLASS. H.C. C- 8
189	0.03	0.04	0.04	UNCLASS. H.C. C- 9
189	0.01	0.02	0.02	UNCLASS. H.C. C- 9
189	0.03	0.03	0.03	UNCLASS. H.C. C- 9
189	0.01	0.02	0.02	UNCLASS. H.C. C- 9
189	0.02	0.03	0.03	UNCLASS. H.C. C- 9
189	0.01	0.02	0.02	UNCLASS. H.C. C- 9
189	0.01	0.01	0.01	UNCLASS. H.C. C- 9
189	0.01	0.02	0.02	UNCLASS. H.C. C- 9
189	0.02	0.02	0.02	UNCLASS. H.C. C- 9
190	0.03	0.04	0.04	UNCLASS. H.C. C-10
4052	0.01	0.01	0.01	UNCLASSIFIED C-10 C
4053	0.02	0.02	0.02	UNCLASSIFIED C-10 D
190	0.02	0.03	0.03	UNCLASS. H.C. C-10
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
190	0.01	0.02	0.02	UNCLASS. H.C. C-10
4900	0.02	0.02	0.02	CIS-HYDRINDANE
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
190	0.04	0.05	0.05	UNCLASS. H.C. C-10
190	0.01	0.02	0.02	UNCLASS. H.C. C-10
190	0.04	0.06	0.06	UNCLASS. H.C. C-10
190	0.01	0.02	0.02	UNCLASS. H.C. C-10
190	0.01	0.02	0.02	UNCLASS. H.C. C-10
190	0.04	0.05	0.05	UNCLASS. H.C. C-10
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
191	0.01	0.01	0.01	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.02	0.02	0.03	UNCLASS. H.C. C-11
191	0.03	0.05	0.05	UNCLASS. H.C. C-11
191	0.02	0.03	0.03	UNCLASS. H.C. C-11
191	0.02	0.03	0.03	UNCLASS. H.C. C-11
191	0.01	0.01	0.02	UNCLASS. H.C. C-11
191	0.01	0.01	0.01	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.02	0.03	0.03	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.01	0.01	0.02	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.01	0.01	0.01	UNCLASS. H.C. C-11
192	0.03	0.04	0.05	UNCLASS. H.C. C-12

192	0.01	0.01	0.01	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
192	0.01	0.02	0.03	UNCLASS. H.C. C-12
192	0.04	0.07	0.07	UNCLASS. H.C. C-12
192	0.03	0.05	0.05	UNCLASS. H.C. C-12
192	0.02	0.03	0.04	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
192	0.03	0.05	0.05	UNCLASS. H.C. C-12
192	0.04	0.06	0.07	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
192	0.02	0.03	0.03	UNCLASS. H.C. C-12
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.01	0.01	0.01	UNCLASSIFIED C-13
193	0.01	0.01	0.02	UNCLASSIFIED C-13
193	0.01	0.01	0.02	UNCLASSIFIED C-13
193	0.01	0.02	0.03	UNCLASSIFIED C-13
193	0.02	0.03	0.04	UNCLASSIFIED C-13
193	0.01	0.01	0.02	UNCLASSIFIED C-13
193	0.01	0.01	0.01	UNCLASSIFIED C-13
193	0.02	0.03	0.04	UNCLASSIFIED C-13
193	0.01	0.01	0.01	UNCLASSIFIED C-13
193	0.03	0.05	0.06	UNCLASSIFIED C-13
193	0.02	0.03	0.03	UNCLASSIFIED C-13
193	0.03	0.04	0.06	UNCLASSIFIED C-13
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.01	0.02	0.03	UNCLASSIFIED C-13
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.01	0.02	0.03	UNCLASSIFIED C-13
193	0.01	0.02	0.03	UNCLASSIFIED C-13
193	0.02	0.03	0.04	UNCLASSIFIED C-13
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.02	0.03	0.03	UNCLASSIFIED C-13
194	0.01	0.01	0.01	UNCLASSIFIED C-14
194	0.01	0.02	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.02	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.01	UNCLASSIFIED C-14
194	0.01	0.01	0.01	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.02	0.02	0.03	UNCLASSIFIED C-14
194	0.01	0.01	0.01	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.01	UNCLASSIFIED C-14
194	0.01	0.01	0.01	UNCLASSIFIED C-14

CHEVRON RESEARCH GASOLINE ANALYSIS

Liquid

Sample Name: 6015317 API BLEND 3 GASOLINE/DIPE Customer: CARR
Acquisition Date: 5-Apr-1996 Acquisition Time: 17:45
Channel #: 13 Analysis: GASO126 Sample #: 2 Injection #: 1

*** DETAILED COMPOSITION, PERCENT ***

1. BY VOLUME

C NO.	PARA	OLEF	NAPH	AROM	UNCL HC	TOTALS BY C #	NORMAL PARA	NON-ALKYL I-PARA	ALKYL I-PARA	CYCLO-PENT	CYCLO-HEX
3-	0.00	0.00	******	******	******	0.00	0.00	******	******	******	******
4	3.65	0.05	******	******	******	3.70	3.58	0.07	******	******	******
5	10.24	3.08	0.15	******	******	13.47	2.40	7.84	******	0.15	******
6	10.38	2.26	1.37	1.17	******	33.39	1.93	8.46	******	1.15	0.22
7	6.44	1.60	1.38	6.50	******	15.92	0.98	5.46	******	0.81	0.57
8	6.07	0.43	1.27	8.75	0.14	16.65	0.43	2.43	3.21	0.75	0.52
9	1.24	0.00	0.70	6.45	0.21	8.61	0.17	0.98	0.08	0.07	0.64
10	0.86	0.00	0.04	3.49	0.39	4.77	0.00	0.67	0.19	0.00	0.04
11	0.27	0.00	0.00	1.56	0.35	2.18	0.00	0.27	0.00	0.00	0.00
12+	0.10	0.00	0.00	0.15	1.05	1.30	0.08	0.02	0.00	0.00	0.00
TOT	39.25	7.41	4.91	28.07	20.35	100.00	9.57	26.20	3.48	2.93	1.99

2. BY WEIGHT

3-	0.00	0.00	******	******	******	0.00	0.00	******	******	******	******
4	2.86	0.04	******	******	******	2.89	2.80	0.05	******	******	******
5	8.60	2.74	0.15	******	******	11.49	2.03	6.56	******	0.15	******
6	9.22	2.12	1.39	1.39	******	31.79	1.71	7.50	******	1.16	0.23
7	5.95	1.54	1.42	7.60	******	16.50	0.90	5.04	******	0.82	0.59
8	5.73	0.42	1.33	10.23	0.14	17.84	0.41	2.30	3.03	0.78	0.55
9	1.20	0.00	0.75	7.60	0.22	9.77	0.17	0.95	0.08	0.07	0.68
10	0.85	0.00	0.05	4.20	0.40	5.49	0.00	0.66	0.18	0.00	0.05
11	0.27	0.00	0.00	2.00	0.36	2.64	0.00	0.27	0.00	0.00	0.00
12+	0.10	0.00	0.00	0.20	1.30	1.60	0.08	0.02	0.00	0.00	0.00
TOT	34.77	6.86	5.08	33.21	20.08	100.00	8.11	23.37	3.29	2.98	2.10

3. BY MOLAR

3-	0.00	0.00	******	******	******	0.00	0.00	******	******	******	******
4	4.61	0.06	******	******	******	4.68	4.53	0.08	******	******	******
5	11.19	3.68	0.20	******	******	15.06	2.65	8.54	******	0.20	******
6	10.04	2.38	1.55	1.67	******	34.89	1.87	8.17	******	1.29	0.25
7	5.57	1.48	1.35	7.74	******	16.15	0.85	4.72	******	0.79	0.57
8	4.71	0.35	1.11	9.04	0.12	15.33	0.33	1.89	2.49	0.65	0.46
9	0.88	0.00	0.56	5.94	0.16	7.54	0.12	0.70	0.06	0.05	0.51
10	0.56	0.00	0.03	2.96	0.27	3.81	0.00	0.44	0.12	0.00	0.03
11	0.16	0.00	0.00	1.29	0.22	1.67	0.00	0.16	0.00	0.00	0.00
12+	0.06	0.00	0.00	0.12	0.70	0.87	0.04	0.01	0.00	0.00	0.00
TOT	37.78	7.94	4.80	28.76	20.71	100.00	10.39	24.73	2.67	2.98	1.82

GRP. TYPE, VOL %: P = 49.28, O = 9.31, N = 6.17, A = 35.24, Saturates = 55.45
DIENE CONTENT = 231. vol ppm AVG MW = 93.9 API GR. = 58.1 SP. GR. =0.7462
OCTANE NUMBER: (from pure values) RON = 87.8 MON = 81.5
(from blending values) RON = 90.3 MON = 81.4
CARBON-HYDROGEN RATIO =6.268 STOICH. AIR-FUEL RATIO =14.62 lbs air/lbs fuel
BTU/lb = 12721. NET, 13687. GROSS; BTU/gal = 79214. NET, 85230. GROSS
REID VAPOR PRESSURE = 7.0 BROMINE NO. = 13.6

CHEVRON RESEARCH GASOLINE ANALYSIS
5-Apr-1996 17:45
6015317 API BLEND 3 GASOLINE/DIPE 13GASO126
Sample 2 Injection 1

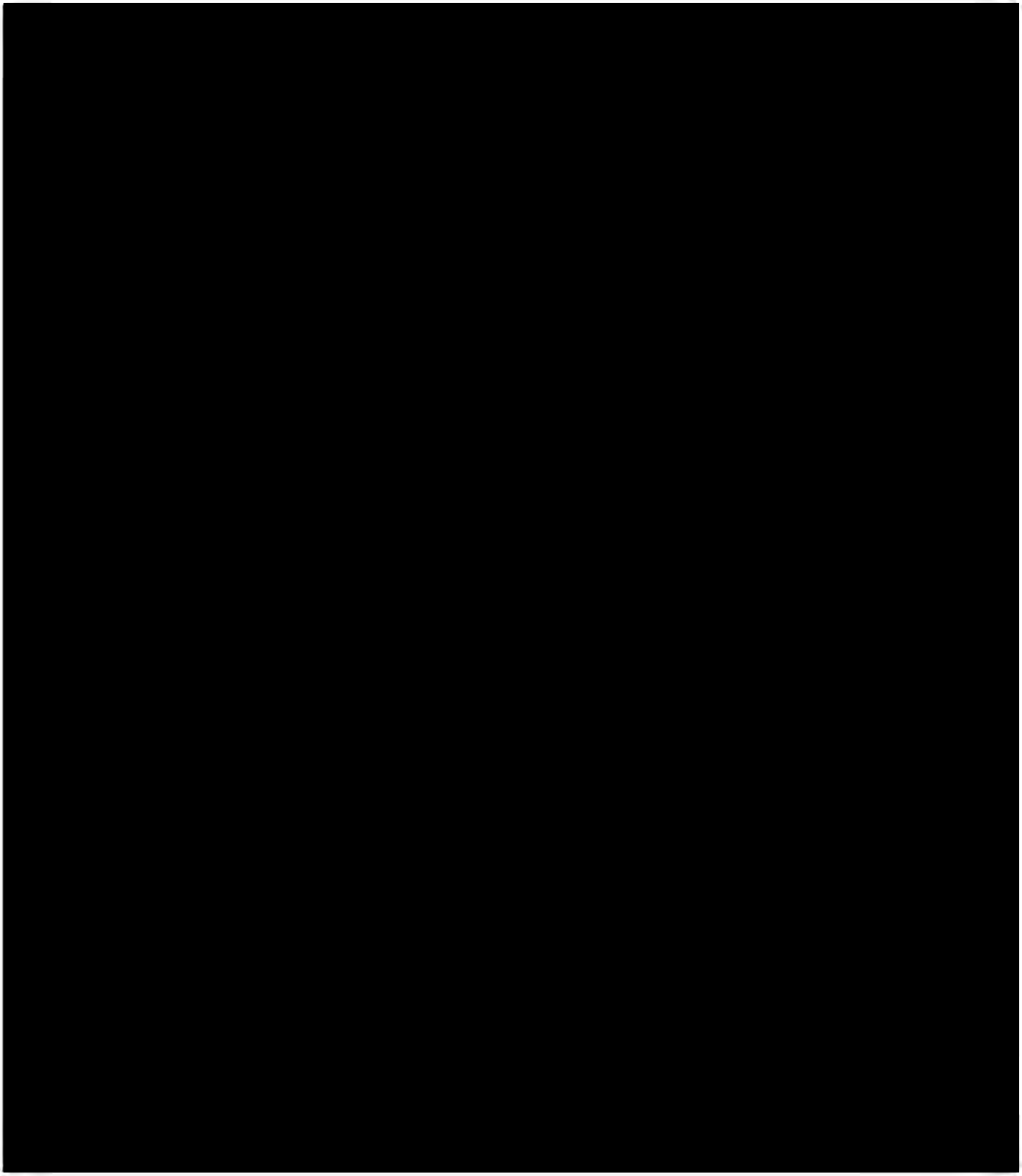
* DISTILLATION CURVES

VOL %	TBP	D86
0.	11.	88.
5.	82.	136.
10.	82.	140.
15.	97.	152.
20.	140.	161.
25.	146.	177.
30.	161.	187.
35.	187.	187.
40.	187.	187.
45.	187.	187.
50.	187.	194.
55.	194.	204.
60.	211.	213.
65.	231.	231.
70.	236.	239.
75.	275.	275.
80.	282.	280.
85.	304.	313.
90.	332.	333.
95.	371.	380.
100.	509.	459.

* COMPOUND DICTIONARY NUMBERS AND AREAS AS READ IN

[redacted]

5-Apr-1996 17:45
6015317 API BLEND 3 GASOLINE/DIPE 13GASO126
Sample 2 Injection 1



TOTAL UNCORRECTED AREA = 3257632.

NUMBER OF PEAKS READ IN = 371

5-Apr-1996 17:45
6015317 API BLEND 3 GASOLINE/DIPE 13GASO126
Sample 2 Injection 1

* DETAILED HYDROCARBON ANALYSIS, EXCLUDING COMPOUNDS BELOW 0.01 VOLUME PERCENT

NORMAL PARAFFINS

CODE	MOL.	VOL.	WT.	NAME
4	4.53	3.58	2.80	N-BUTANE
6	2.65	2.40	2.03	N-PENTANE
9	1.87	1.93	1.71	N-HEXANE
14	0.85	0.98	0.90	N-HEPTANE
23	0.33	0.43	0.41	N-OCTANE
41	0.12	0.17	0.17	N-NONANE
102	0.03	0.05	0.05	N-DODECANE
103	0.02	0.03	0.03	N-TRIDECANE

ISO-PARAFFINS

CODE	MOL.	VOL.	WT.	NAME	
5	0.08	0.07	0.05	ISOBUTANE	
8	0.04	0.04	0.03	NEOPENTANE	
7	8.50	7.80	6.53	ISOPENTANE	
12	0.54	0.56	0.49	22-DIME BUTANE	
13	1.24	1.27	1.14	23-DIME BUTANE	
10	4.02	4.19	3.69	2-ME PENTANE	
11	2.38	2.44	2.18	3-ME PENTANE	
18	0.07	0.08	0.07	22-DIME PENTANE	
20	0.80	0.95	0.86	24-DIME PENTANE	
19	1.54	1.75	1.64	23-DIME PENTANE	
15	1.09	1.27	1.16	2-ME HEXANE	
16	1.14	1.31	1.22	3-ME HEXANE	
17	0.08	0.10	0.09	3-ET PENTANE	
37	1.69	2.20	2.05	224-TRIME PENTANE	*
28	0.02	0.03	0.03	22-DIME HEXANE	
36	0.04	0.05	0.05	223-TRIME PENTANE	*
31	0.22	0.28	0.27	25-DIME HEXANE	
30	0.31	0.40	0.38	24-DIME HEXANE	
32	0.03	0.03	0.03	33-DIME HEXANE	
38	0.01	0.02	0.02	233-TRIME PENTANE	*
39	0.50	0.63	0.61	234-TRIME PENTANE	*
34	0.07	0.09	0.09	2-ME-3-ET PENTANE	
29	0.25	0.32	0.30	23-DIME HEXANE	*
24	0.54	0.70	0.66	2-ME HEPTANE	
26	0.17	0.22	0.21	4-ME HEPTANE	
25	0.52	0.67	0.64	3-ME HEPTANE	
73	0.02	0.02	0.02	224-TRIME HEXANE	
51	0.06	0.09	0.09	244-TRIME HEXANE	
52	0.03	0.04	0.04	24-DIME HEPTANE	
43	0.06	0.08	0.08	235-TRIME HEXANE	*
53	0.06	0.09	0.08	26-DIME HEPTANE	
55	0.14	0.20	0.19	35-DIME HEPTANE	
50	0.01	0.02	0.02	234-TRIME HEXANE	
56	0.04	0.06	0.06	23-DIME HEPTANE	
71	0.02	0.03	0.03	3-ME-4-ET HEXANE	
57	0.03	0.04	0.04	34-DIME HEPTANE	

66	0.02	0.03	0.03	4-ET HEPTANE
62	0.10	0.14	0.14	4-ME OCTANE
60	0.14	0.19	0.19	2-ME OCTANE
76	0.02	0.02	0.02	33-DIET PENTANE
4652	0.02	0.02	0.02	225-TRIME HEPTANE *
4657	0.03	0.04	0.04	236-TRIME HEPTANE *
4659	0.01	0.02	0.02	245-TRIME HEPTANE *
151	0.02	0.03	0.02	22-DIME OCTANE
161	0.01	0.02	0.02	44-DIME OCTANE
4650	0.04	0.07	0.07	223-TRIME HEPTANE *
157	0.04	0.06	0.06	33-DIME OCTANE
89	0.01	0.02	0.02	4-ET OCTANE
152	0.03	0.04	0.04	23-DIME OCTANE
215	0.02	0.03	0.03	C-11 ISOPARAFFINS
213	0.02	0.04	0.04	C-10 ISOPARAFFINS
86	0.16	0.25	0.24	4-ME NONANE
84	0.06	0.10	0.10	2-ME NONANE
88	0.01	0.02	0.02	3-ET OCTANE
85	0.07	0.10	0.10	3-ME NONANE
4663	0.02	0.02	0.02	335-TRIME HEPTANE *
163	0.10	0.17	0.17	2-ME DECANE
164	0.05	0.08	0.08	3-ME DECANE
5030	0.01	0.02	0.02	26-DIME UNDECANE

CYCLOPENTANES

CODE	MOL.	VOL.	WT.	NAME
800	0.20	0.15	0.15	CYCLOPENTANE
801	1.29	1.15	1.16	ME CYCLOPENTANE
806	0.25	0.27	0.27	1C3-DIME CYCPENTANE
807	0.23	0.23	0.24	1T3-DIME CYCPENTANE
805	0.16	0.16	0.16	1T2-DIME CYCPENTANE
811	0.04	0.05	0.05	113-TRIME CPENTANE
802	0.15	0.15	0.16	ET CYCLOPENTANE
817	0.08	0.10	0.10	1T2C4TRIME CPENTANE
814	0.04	0.04	0.05	1T2C3TRIME CPENTANE
810	0.04	0.05	0.05	112-TRIME CPENTANE*
848	0.04	0.06	0.06	11C3T4-TETRME CPENT
864	0.07	0.08	0.08	1MEC3ET CYCPENTANE
861	0.32	0.36	0.38	1ME-1ET CYCPENTANE
812	0.02	0.03	0.03	1C2C3TRIMECPENTANE*
4326	0.01	0.01	0.01	C-9 CYCLOPENTANE B
862	0.03	0.03	0.03	1ME-C2ET CYPENTANE

CYCLOHEXANES

CODE	MOL.	VOL.	WT.	NAME
825	0.25	0.22	0.23	CYCLOHEXANE
826	0.57	0.57	0.59	ME CYCLOHEXANE
831	0.07	0.08	0.08	1C3-DIME CYCHEXANE
830	0.05	0.06	0.06	1T2-DIME CYCHEXANE
832	0.12	0.13	0.14	1T3-DIME CYCHEXANE

833	0.06	0.07	0.07	1C4-DIME CYCHEXANE
829	0.04	0.04	0.04	1C2-DIME CYCHEXANE
827	0.13	0.15	0.16	ETHYL CYCLOHEXANE
946	0.03	0.04	0.05	113-TRIME CYCHEXANE
979	0.02	0.03	0.03	C-9 CYLOHEXANES
956	0.04	0.05	0.06	1C3T5-TRIME CYCHEX
950	0.02	0.03	0.03	1T2C3-TRIME CYCHEX
945	0.02	0.02	0.02	112-TRIME CYCHEXANE
941	0.09	0.11	0.12	1ME-C3ET CYCHEXANE
944	0.03	0.04	0.04	1ME-T4ET CYCHEXANE
940	0.07	0.09	0.09	1ME-1-ET CYCHEXANE
949	0.04	0.05	0.06	1C2T3-TRIME CYCHEX
943	0.02	0.03	0.03	1M-C4-ET CYCHEXANE
948	0.08	0.09	0.10	1C2C3-TRIME CYCHEX
836	0.02	0.02	0.03	ISOPR CYCLOHEXANE
835	0.02	0.03	0.03	N-PR CYCLOHEXANE
980	0.03	0.04	0.05	C-10 CYCLOHEXANES

OLEFINS, DIENES

CODE	MOL.	VOL.	WT.	NAME
304	0.03	0.02	0.02	TRANS-2-BUTENE
303	0.04	0.03	0.02	C1S-2-BUTENE
310	0.05	0.05	0.04	3-METHYL-1-BUTENE
306	0.26	0.23	0.19	1-PENTENE
309	0.53	0.45	0.40	2-METHYL-1-BUTENE
509	0.01	0.01	0.01	ISOPRENE
308	0.85	0.73	0.64	TRANS-2-PENTENE
327	0.01	0.01	0.01	3,3-DIME BUTENE
307	0.48	0.40	0.36	CIS-2-PENTENE
311	1.29	1.08	0.96	2-METHYL-2-BUTENE
505	0.02	0.01	0.01	T-13-PENTADIENE
450	0.19	0.13	0.13	CYCLOPENTENE
318	0.12	0.12	0.10	3-METHYL-1-PENTENE
323	0.08	0.08	0.07	C-4ME-2-PENTENE
324	0.15	0.14	0.13	T-4ME-2-PENTENE
317	0.25	0.24	0.22	2-ME-1-PENTENE
312	0.13	0.13	0.12	1-HEXENE
315	0.36	0.35	0.32	CIS-3-HEXENE
320	0.42	0.41	0.38	2-METHYL-2-PENTENE
321	0.24	0.23	0.21	C-3ME-2-PENTENE
313	0.22	0.21	0.20	CIS-2-HEXENE
2005	0.01	0.01	0.01	33-DIME-1-PENTENE
4500	0.01	0.01	0.01	HEPTENE A
2011	0.01	0.01	0.01	44-DIME-C2-PENTENE
451	0.41	0.34	0.36	1-ME CYLCOPENTENE
2004	0.03	0.03	0.03	24-DIME-1-PENTENE
2017	0.01	0.01	0.01	3-ET 1-PENTENE
403	0.01	0.01	0.01	HEPTENES
2003	0.03	0.03	0.03	23-DIME-1-PENTENE
2024	0.01	0.02	0.01	5-ME-1-HEXENE
2009	0.04	0.04	0.04	24-DIME-CIS2-PENTENE
403	0.01	0.01	0.01	HEPTENES

403	0.01	0.02	0.01	HEPTENES
2033	0.07	0.08	0.07	2-ME-T3-HEXENE
2031	0.04	0.05	0.05	5-ME-T2-HEXENE
2030	0.03	0.03	0.03	5-ME-C2-HEXENE
2010	0.03	0.03	0.03	34-DIME-C2-PENTENE
2038	0.10	0.11	0.10	1-HEPTENE
2035	0.06	0.06	0.06	3-ME-T3-HEXENE
5370	0.11	0.10	0.11	C-7 CYCLOPENTENE A
5371	0.10	0.09	0.10	C-7 CYCLOPENTENE B
2042	0.13	0.14	0.13	T3-HEPTENE
2025	0.13	0.14	0.14	2-ME-2-HEXENE
2034	0.09	0.10	0.10	3-ME-C3-HEXENE
2018	0.08	0.09	0.09	3-ET-2-PENTENE
2040	0.16	0.18	0.17	TRANS-2-HEPTENE
2008	0.12	0.12	0.12	23-DIME-C2-PENTENE
2039	0.07	0.08	0.07	CIS-2-HEPTENE
4526	0.01	0.01	0.01	OCTENE B
4529	0.01	0.01	0.01	OCTENE E
4530	0.00	0.01	0.01	OCTENE F
4527	0.01	0.02	0.02	OCTENE C
4532	0.02	0.02	0.02	OCTENE H
4528	0.05	0.06	0.06	OCTENE D
4533	0.03	0.03	0.03	OCTENE I
4534	0.03	0.04	0.03	OCTENE J
404	0.01	0.02	0.02	OCTENES
4531	0.01	0.01	0.01	OCTENE G
2212	0.01	0.01	0.01	6-ME-C2-HEPTENE
2213	0.01	0.01	0.01	6-ME-T2-HEPTENE
2193	0.06	0.07	0.07	1-OCTENE
2198	0.07	0.08	0.08	C4-OCTENE
4536	0.03	0.04	0.03	OCTENE L

AROMATIC HCS

CODE	MOL.	VOL.	WT.	NAME	
600	1.67	1.17	1.39	BENZENE	
601	7.74	6.50	7.60	TOLUENE	
602	1.92	1.86	2.17	ETHYLBENZENE	
604	3.57	3.46	4.03	M-XYLENE	
605	1.47	1.43	1.66	P-XYLENE	
603	2.09	1.99	2.36	O-XYLENE	*
607	0.08	0.09	0.10	CUMENE	
644	0.42	0.47	0.54	N-PROPYL BENZENE	
609	1.26	1.38	1.61	1-ME-3-ET BENZENE	
610	0.56	0.62	0.71	1-ME-4-ET BENZENE	
613	0.63	0.70	0.81	135-TRIME BENZENE	
608	0.39	0.42	0.50	1-ME-2-ET BENZENE	*
612	1.92	2.08	2.46	124-TRIME BENZENE	*
615	0.05	0.06	0.07	ISOBUTYLBENZENE	
616	0.05	0.06	0.07	SEC BUTYLBENZENE	
611	0.45	0.48	0.58	123-TRIME BENZENE	*
622	0.03	0.04	0.04	M-CYMENE	
623	0.02	0.02	0.03	P-CYMENE	

650	0.22	0.21	0.28	INDAN *
621	0.02	0.03	0.03	O-CYMENE *
646	0.13	0.17	0.19	13-DIETHYL BENZENE
647	0.25	0.31	0.36	1-ME-3-PR BENZENE
648	0.22	0.27	0.31	1-ME-4-PR BENZENE
651	0.28	0.34	0.40	12-DIET BENZENE *
653	0.08	0.10	0.12	1-ME-2-PR BENZENE *
654	0.22	0.26	0.31	14-DIME2ET BENZENE *
655	0.14	0.17	0.20	13-DIME4ET BENZENE *
656	0.29	0.36	0.42	12-DIME4ET BENZENE *
659	0.08	0.09	0.11	12-DIME3ET BENZENE
685	0.02	0.03	0.03	2-PHENYL-2ME BUTANE
683	0.01	0.01	0.01	1-PHENYL-3ME BUTANE
635	0.14	0.17	0.21	1245-TETME BENZENE *
634	0.24	0.29	0.35	1235-TETME BENZENE *
7800	0.12	0.13	0.17	METHYLINDANE A
660	0.05	0.07	0.08	1-ME35DIET BENZENE
773	0.02	0.03	0.04	C-11 AROMATIC K
7801	0.16	0.18	0.23	METHYLINDANE B
7004	0.07	0.08	0.10	C-11 AROMATIC E
633	0.07	0.08	0.10	1234-TETME BENZENE *
715	0.03	0.03	0.04	TETRALIN *
755	0.06	0.07	0.09	1-ME-3NBU BENZENE
7099	0.02	0.03	0.03	PENTYLBENZENE
768	0.03	0.03	0.04	13-DIME-4PR BENZENE
769	0.02	0.03	0.03	1-ME-35DIET BENZENE
714	0.32	0.33	0.43	NAPHTHALENE *
698	0.06	0.08	0.10	12-DIME-3PR BENZENE
7830	0.04	0.05	0.07	DIMETHYLINDANE A
7831	0.11	0.13	0.17	DIMETHYLINDANE B
7833	0.01	0.01	0.02	DIMETHYLINDANE D
699	0.03	0.03	0.04	135-TRIME-2ETBENZENE
771	0.04	0.05	0.06	125-TRIME-3ETBENZENE
693	0.03	0.03	0.04	124-TRIME-5ETBENZENE
694	0.04	0.06	0.07	123-TRIME-5ETBENZENE
695	0.01	0.02	0.02	124-TRIME-3ETBENZENE
7030	0.01	0.02	0.02	C-12 AROMATIC A
7104	0.02	0.03	0.03	135-TRIETHYLBENZENE
772	0.04	0.05	0.06	123-TRIME4ET BENZENE
7101	0.01	0.02	0.02	T-BUTYL-DIMEBENZENES
7034	0.02	0.02	0.03	C-12 AROMATIC E
7835	0.06	0.07	0.09	DIMETHYLINDANE F
7836	0.05	0.06	0.08	DIMETHYLINDANE G
7837	0.05	0.06	0.07	C-11 INDANE H
636	0.03	0.04	0.05	PENTAMETHYLBENZENE
796	0.28	0.30	0.42	2-ME NAPHTHALENE *
795	0.12	0.14	0.19	1-ME NAPHTHALENE *
7910	0.02	0.02	0.03	1-ETHYL NAPHTHALENE
7908	0.01	0.01	0.01	26-DIME NAPHTHALENE
7909	0.01	0.01	0.01	27-DIME NAPHTHALENE
7901	0.02	0.02	0.03	13-DIME NAPHTHALENE

5-Apr-1996 17:45
6015317 API BLEND 3 GASOLINE/DIPE 13GASO126
Sample 2 Injection 1

UNCLASSIFIED HCS

CODE	MOL.	VOL.	WT.	NAME
1430	19.25	18.21	17.67	DIISOPROPYLETHER
188	0.02	0.02	0.02	UNCLASS. H.C. C- 8
188	0.02	0.03	0.03	UNCLASS. H.C. C- 8
188	0.01	0.01	0.01	UNCLASS. H.C. C- 8
188	0.04	0.05	0.05	UNCLASS. H.C. C- 8
188	0.02	0.02	0.02	UNCLASS. H.C. C- 8
189	0.03	0.04	0.04	UNCLASS. H.C. C- 9
189	0.01	0.02	0.02	UNCLASS. H.C. C- 9
189	0.02	0.03	0.03	UNCLASS. H.C. C- 9
189	0.01	0.02	0.02	UNCLASS. H.C. C- 9
189	0.02	0.03	0.03	UNCLASS. H.C. C- 9
189	0.01	0.01	0.01	UNCLASS. H.C. C- 9
189	0.01	0.01	0.01	UNCLASS. H.C. C- 9
189	0.01	0.01	0.01	UNCLASS. H.C. C- 9
189	0.02	0.02	0.02	UNCLASS. H.C. C- 9
190	0.03	0.04	0.04	UNCLASS. H.C. C-10
4052	0.01	0.01	0.01	UNCLASSIFIED C-10 C
4053	0.01	0.02	0.02	UNCLASSIFIED C-10 D
190	0.02	0.02	0.02	UNCLASS. H.C. C-10
190	0.01	0.02	0.02	UNCLASS. H.C. C-10
4900	0.01	0.02	0.02	CIS-HYDRINDANE
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
190	0.03	0.05	0.05	UNCLASS. H.C. C-10
190	0.01	0.02	0.02	UNCLASS. H.C. C-10
190	0.04	0.06	0.06	UNCLASS. H.C. C-10
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
190	0.03	0.05	0.05	UNCLASS. H.C. C-10
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.01	0.01	0.01	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.03	0.04	0.04	UNCLASS. H.C. C-11
191	0.02	0.03	0.03	UNCLASS. H.C. C-11
191	0.01	0.01	0.01	UNCLASS. H.C. C-11
191	0.02	0.03	0.03	UNCLASS. H.C. C-11
191	0.01	0.01	0.01	UNCLASS. H.C. C-11
191	0.01	0.01	0.01	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.02	0.02	0.03	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.01	0.01	0.01	UNCLASS. H.C. C-11
191	0.01	0.01	0.01	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.01	0.01	0.01	UNCLASS. H.C. C-11
192	0.03	0.04	0.04	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
192	0.01	0.02	0.02	UNCLASS. H.C. C-12
192	0.04	0.06	0.07	UNCLASS. H.C. C-12
192	0.03	0.04	0.05	UNCLASS. H.C. C-12
192	0.02	0.03	0.03	UNCLASS. H.C. C-12
192	0.03	0.04	0.05	UNCLASS. H.C. C-12
192	0.04	0.06	0.06	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12

193	0.01	0.01	0.02	UNCLASSIFIED C-13
193	0.01	0.01	0.02	UNCLASSIFIED C-13
193	0.01	0.01	0.01	UNCLASSIFIED C-13
193	0.01	0.02	0.03	UNCLASSIFIED C-13
193	0.02	0.03	0.03	UNCLASSIFIED C-13
193	0.01	0.01	0.02	UNCLASSIFIED C-13
193	0.02	0.03	0.04	UNCLASSIFIED C-13
193	0.03	0.04	0.06	UNCLASSIFIED C-13
193	0.02	0.02	0.03	UNCLASSIFIED C-13
193	0.03	0.04	0.05	UNCLASSIFIED C-13
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.01	0.01	0.02	UNCLASSIFIED C-13
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.02	0.02	0.03	UNCLASSIFIED C-13
193	0.01	0.01	0.02	UNCLASSIFIED C-13
193	0.02	0.02	0.03	UNCLASSIFIED C-13
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.01	UNCLASSIFIED C-14
194	0.01	0.01	0.01	UNCLASSIFIED C-14
194	0.01	0.02	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.01	UNCLASSIFIED C-14
194	0.01	0.01	0.01	UNCLASSIFIED C-14

CHEVRON RESEARCH GASOLINE ANALYSIS Liquid

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Sample Name: 6012722 API BLEND #4 GASOLINE/ETBE Customer: CARR
Acquisition Date: 3-Apr-1996 Acquisition Time: 09:42
Channel #: 13 Analysis: GASO125 Sample #: 6 Injection #: 1

*** DETAILED COMPOSITION, PERCENT ***

1. BY VOLUME

C NO.	PARA	OLEF	NAPH	AROM	UNCL HC	TOTALS BY C #	NORMAL PARA	NON-ALKYL I-PARA	ALKYL I-PARA	CYCLO-PENT	CYCLO-HEX
3-	0.00	0.00	******	******	******	0.00	0.00	******	******	******	******
4	3.62	0.06	******	******	******	3.68	3.55	0.07	******	******	******
5	10.05	3.04	0.15	******	******	13.23	2.36	7.69	******	0.15	******
6	10.17	2.61	1.34	1.15	******	32.39	1.89	8.27	******	1.13	0.21
7	6.42	1.58	1.38	6.47	******	15.85	0.97	5.45	******	0.81	0.57
8	6.09	0.44	1.29	8.77	0.28	16.88	0.43	2.44	3.23	0.76	0.54
9	1.31	0.00	0.78	6.56	0.28	8.94	0.19	1.04	0.08	0.07	0.71
10	0.99	0.00	0.05	3.66	0.53	5.23	0.00	0.76	0.23	0.00	0.05
11	0.30	0.00	0.00	1.63	0.48	2.41	0.00	0.30	0.00	0.00	0.00
12+	0.11	0.00	0.00	0.16	1.13	1.39	0.08	0.02	0.00	0.00	0.00
TOT	39.06	7.74	4.99	28.41	19.81	100.00	9.48	26.04	3.54	2.91	2.08

2. BY WEIGHT

3-	0.00	0.00	******	******	******	0.00	0.00	******	******	******	******
4	2.82	0.05	******	******	******	2.87	2.76	0.05	******	******	******
5	8.38	2.69	0.15	******	******	11.22	1.98	6.40	******	0.15	******
6	8.97	2.43	1.35	1.36	******	31.04	1.68	7.30	******	1.13	0.22
7	5.90	1.52	1.40	7.52	******	16.34	0.89	5.01	******	0.81	0.59
8	5.72	0.42	1.34	10.19	0.27	17.96	0.41	2.29	3.03	0.78	0.56
9	1.27	0.00	0.83	7.68	0.29	10.06	0.18	1.01	0.08	0.07	0.75
10	0.97	0.00	0.06	4.39	0.53	5.94	0.00	0.74	0.22	0.00	0.06
11	0.30	0.00	0.00	2.08	0.49	2.87	0.00	0.30	0.00	0.00	0.00
12+	0.11	0.00	0.00	0.21	1.38	1.70	0.09	0.02	0.00	0.00	0.00
TOT	34.44	7.11	5.13	33.42	19.89	100.00	7.99	23.12	3.33	2.94	2.19

3. BY MOLAR

3-	0.00	0.00	******	******	******	0.00	0.00	******	******	******	******
4	4.57	0.08	******	******	******	4.66	4.49	0.09	******	******	******
5	10.97	3.63	0.20	******	******	14.79	2.59	8.37	******	0.20	******
6	9.83	2.73	1.52	1.64	******	34.26	1.84	7.99	******	1.27	0.25
7	5.56	1.47	1.35	7.70	******	16.07	0.84	4.72	******	0.78	0.57
8	4.73	0.36	1.13	9.06	0.23	15.51	0.34	1.89	2.50	0.66	0.47
9	0.93	0.00	0.62	6.04	0.21	7.80	0.13	0.74	0.06	0.05	0.56
10	0.64	0.00	0.04	3.10	0.36	4.14	0.00	0.49	0.15	0.00	0.04
11	0.18	0.00	0.00	1.34	0.30	1.83	0.00	0.18	0.00	0.00	0.00
12+	0.06	0.00	0.00	0.12	0.75	0.93	0.05	0.01	0.00	0.00	0.00
TOT	37.47	8.27	4.85	29.02	20.39	100.00	10.27	24.49	2.71	2.96	1.89

GRP. TYPE, VOL %: P = 48.71, O = 9.65, N = 6.22, A = 35.43, Saturates = 54.93
DIENE CONTENT = 397. vol ppm AVG MW = 94.4 API GR. = 57.1 SP. GR. =0.7505
OCTANE NUMBER: (from pure values) RON = 89.5 MON = 82.3
(from blending values) RON = 92.0 MON = 82.2
CARBON-HYDROGEN RATIO =6.284 STOICH. AIR-FUEL RATIO =14.61 lbs air/lbs fuel
BTU/lb = 12682. NET, 13646. GROSS; BTU/gal = 79420. NET, 85455. GROSS
REID VAPOR PRESSURE = 7.3 BROMINE NO. = 14.1

CHEVRON RESEARCH GASOLINE ANALYSIS
3-Apr-1996 09:42
6012722 API BLEND #4 GASOLINE/ETBE 13GASO125
Sample 6 Injection 1

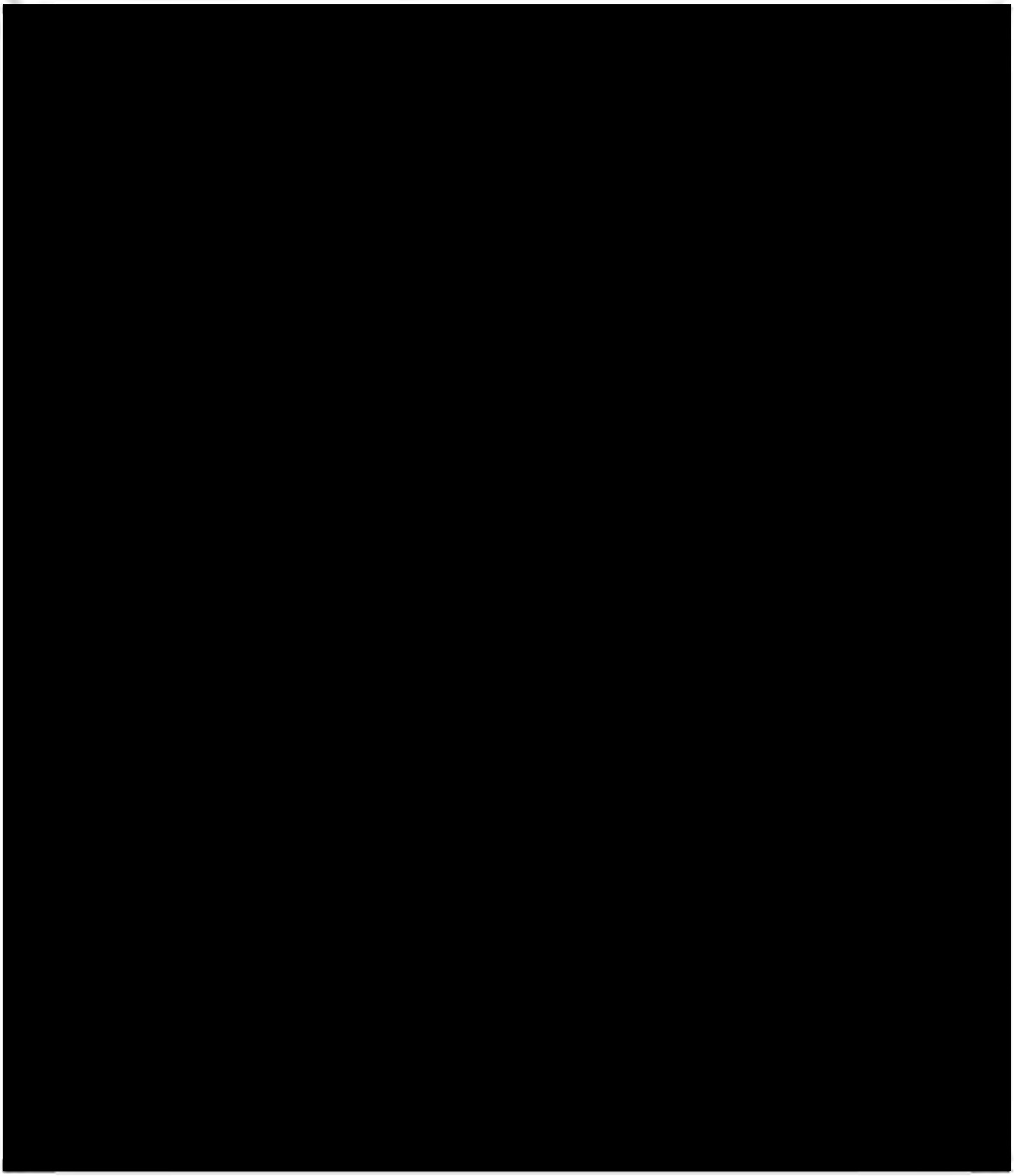
* DISTILLATION CURVES

VOL %	TBP	D86
0.	11.	88.
5.	82.	138.
10.	82.	140.
15.	97.	153.
20.	140.	161.
25.	146.	162.
30.	161.	162.
35.	162.	162.
40.	162.	162.
45.	162.	176.
50.	177.	194.
55.	197.	209.
60.	211.	231.
65.	231.	231.
70.	244.	245.
75.	277.	275.
80.	282.	283.
85.	315.	319.
90.	337.	333.
95.	373.	382.
100.	509.	459.

* COMPOUND DICTIONARY NUMBERS AND AREAS AS READ IN

[redacted]

3-Apr-1996 09:42
6012722 API BLEND #4 GASOLINE/ETBE 13GASO125
Sample 6 Injection 1



TOTAL UNCORRECTED AREA = 3532081.

NUMBER OF PEAKS READ IN = 380

3-Apr-1996 09:42
6012722 API BLEND #4 GASOLINE/ETBE 13GASO125
Sample 6 Injection 1

* DETAILED HYDROCARBON ANALYSIS, EXCLUDING COMPOUNDS BELOW 0.01 VOLUME PERCENT

NORMAL PARAFFINS

CODE	MOL.	VOL.	WT.	NAME
4	4.49	3.55	2.76	N-BUTANE
6	2.59	2.36	1.98	N-PENTANE
9	1.84	1.89	1.68	N-HEXANE
14	0.84	0.97	0.89	N-HEPTANE
23	0.34	0.43	0.41	N-OCTANE
41	0.13	0.19	0.18	N-NONANE
102	0.03	0.05	0.05	N-DODECANE
103	0.02	0.03	0.03	N-TRIDECANE

ISO-PARAFFINS

CODE	MOL.	VOL.	WT.	NAME	
5	0.09	0.07	0.05	ISOBUTANE	
8	0.04	0.04	0.03	NEOPENTANE	
7	8.33	7.65	6.37	ISOPENTANE	
12	0.53	0.55	0.48	22-DIME BUTANE	
13	1.21	1.25	1.11	23-DIME BUTANE	
10	3.93	4.09	3.59	2-ME PENTANE	
11	2.32	2.38	2.12	3-ME PENTANE	
18	0.06	0.07	0.06	22-DIME PENTANE	
20	0.81	0.96	0.86	24-DIME PENTANE	
19	1.54	1.76	1.64	23-DIME PENTANE	
15	1.08	1.26	1.15	2-ME HEXANE	
16	1.13	1.31	1.20	3-ME HEXANE	
17	0.08	0.09	0.09	3-ET PENTANE	
37	1.70	2.22	2.06	224-TRIME PENTANE	*
28	0.02	0.03	0.03	22-DIME HEXANE	
36	0.04	0.05	0.05	223-TRIME PENTANE	*
31	0.22	0.29	0.27	25-DIME HEXANE	
30	0.31	0.40	0.38	24-DIME HEXANE	
32	0.03	0.03	0.03	33-DIME HEXANE	
39	0.51	0.64	0.62	234-TRIME PENTANE	*
34	0.07	0.09	0.09	2-ME-3-ET PENTANE	
29	0.25	0.32	0.30	23-DIME HEXANE	*
24	0.54	0.70	0.66	2-ME HEPTANE	
26	0.17	0.22	0.21	4-ME HEPTANE	
25	0.52	0.67	0.64	3-ME HEPTANE	
73	0.02	0.03	0.03	224-TRIME HEXANE	
51	0.06	0.09	0.09	244-TRIME HEXANE	
52	0.03	0.04	0.04	24-DIME HEPTANE	
43	0.06	0.08	0.08	235-TRIME HEXANE	*
67	0.01	0.01	0.01	22-DIME HEPTANE	
53	0.06	0.09	0.09	26-DIME HEPTANE	
55	0.15	0.21	0.20	35-DIME HEPTANE	
50	0.01	0.02	0.02	234-TRIME HEXANE	
56	0.05	0.07	0.06	23-DIME HEPTANE	
71	0.02	0.03	0.03	3-ME-4-ET HEXANE	
57	0.03	0.05	0.05	34-DIME HEPTANE	

66	0.03	0.04	0.04	4-ET HEPTANE
62	0.11	0.15	0.14	4-ME OCTANE
60	0.14	0.20	0.19	2-ME OCTANE
4660	0.01	0.01	0.01	246-TRIME HEPTANE *
76	0.02	0.03	0.03	33-DIET PENTANE
4652	0.02	0.03	0.03	225-TRIME HEPTANE *
4657	0.03	0.05	0.05	236-TRIME HEPTANE *
4659	0.02	0.03	0.03	245-TRIME HEPTANE *
151	0.02	0.03	0.03	22-DIME OCTANE
161	0.02	0.03	0.03	44-DIME OCTANE
4650	0.05	0.08	0.08	223-TRIME HEPTANE *
157	0.05	0.07	0.07	33-DIME OCTANE
89	0.02	0.02	0.02	4-ET OCTANE
152	0.04	0.05	0.05	23-DIME OCTANE
215	0.02	0.04	0.04	C-11 ISOPARAFFINS
213	0.03	0.04	0.04	C-10 ISOPARAFFINS
86	0.17	0.26	0.26	4-ME NONANE
84	0.07	0.11	0.11	2-ME NONANE
88	0.02	0.03	0.02	3-ET OCTANE
85	0.07	0.11	0.11	3-ME NONANE
4663	0.02	0.03	0.03	335-TRIME HEPTANE *
163	0.11	0.18	0.18	2-ME DECANE
164	0.05	0.09	0.09	3-ME DECANE
5030	0.01	0.02	0.02	26-DIME UNDECANE

CYCLOPENTANES

CODE	MOL.	VOL.	WT.	NAME
800	0.20	0.15	0.15	CYCLOPENTANE
801	1.27	1.13	1.13	ME CYCLOPENTANE
806	0.25	0.26	0.26	1C3-DIME CYCPENTANE
807	0.22	0.23	0.23	1T3-DIME CYCPENTANE
805	0.16	0.16	0.16	1T2-DIME CYCPENTANE
811	0.04	0.05	0.05	113-TRIME CPENTANE
802	0.15	0.15	0.16	ET CYCLOPENTANE
817	0.08	0.10	0.10	1T2C4TRIME CPENTANE
814	0.04	0.04	0.05	1T2C3TRIME CPENTANE
810	0.04	0.05	0.05	112-TRIME CPENTANE*
848	0.04	0.06	0.06	11C3T4-TETRME CPENT
864	0.07	0.08	0.09	1MEC3ET CYCPENTANE
861	0.32	0.36	0.38	1ME-1ET CYCPENTANE
812	0.02	0.03	0.03	1C2C3TRIMECPENTANE*
4326	0.01	0.01	0.01	C-9 CYCLOPENTANE B
862	0.03	0.03	0.03	1ME-C2ET CYPENTANE

CYCLOHEXANES

CODE	MOL.	VOL.	WT.	NAME
825	0.25	0.21	0.22	CYCLOHEXANE
826	0.57	0.57	0.59	ME CYCLOHEXANE
831	0.07	0.08	0.08	1C3-DIME CYCHEXANE
830	0.05	0.06	0.06	1T2-DIME CYCHEXANE

832	0.12	0.13	0.14	1T3-DIME CYCHEXANE
833	0.06	0.07	0.07	1C4-DIME CYCHEXANE
829	0.04	0.04	0.05	1C2-DIME CYCHEXANE
827	0.14	0.16	0.17	ETHYL CYCLOHEXANE
946	0.04	0.05	0.05	113-TRIME CYCHEXANE
979	0.02	0.03	0.03	C-9 CYLOHEXANES
956	0.04	0.06	0.06	1C3T5-TRIME CYCHEX
950	0.02	0.02	0.02	1T2C3-TRIME CYCHEX
945	0.02	0.02	0.02	112-TRIME CYCHEXANE
941	0.10	0.12	0.13	1ME-C3ET CYCHEXANE
944	0.04	0.05	0.05	1ME-T4ET CYCHEXANE
940	0.08	0.09	0.10	1ME-1-ET CYCHEXANE
949	0.05	0.06	0.06	1C2T3-TRIME CYCHEX
943	0.03	0.03	0.04	1M-C4-ET CYCHEXANE
948	0.08	0.10	0.11	1C2C3-TRIME CYCHEX
836	0.03	0.03	0.03	ISOPR CYCLOHEXANE
835	0.03	0.04	0.04	N-PR CYCLOHEXANE
980	0.04	0.05	0.06	C-10 CYCLOHEXANES

OLEFINS, DIENES

CODE	MOL.	VOL.	WT.	NAME
302	0.02	0.02	0.01	1-BUTENE
304	0.03	0.02	0.02	TRANS-2-BUTENE
303	0.04	0.03	0.02	C1S-2-BUTENE
310	0.05	0.04	0.04	3-METHYL-1-BUTENE
306	0.26	0.22	0.19	1-PENTENE
309	0.52	0.44	0.39	2-METHYL-1-BUTENE
509	0.01	0.01	0.01	ISOPRENE
308	0.84	0.71	0.62	TRANS-2-PENTENE
327	0.01	0.01	0.01	3,3-DIME BUTENE
307	0.47	0.40	0.35	CIS-2-PENTENE
311	1.26	1.05	0.94	2-METHYL-2-BUTENE
505	0.02	0.01	0.01	T-13-PENTADIENE
504	0.02	0.02	0.01	C-13-PENTADIENE
450	0.18	0.13	0.13	CYCLOPENTENE
318	0.11	0.11	0.10	3-METHYL-1-PENTENE
323	0.08	0.08	0.07	C-4ME-2-PENTENE
324	0.14	0.14	0.12	T-4ME-2-PENTENE
317	0.24	0.24	0.22	2-ME-1-PENTENE
312	0.13	0.13	0.12	1-HEXENE
315	0.36	0.35	0.32	CIS-3-HEXENE
314	0.42	0.41	0.38	TRANS-2-HEXENE
320	0.40	0.39	0.36	2-METHYL-2-PENTENE
321	0.24	0.23	0.21	C-3ME-2-PENTENE
313	0.21	0.20	0.19	CIS-2-HEXENE
2005	0.01	0.01	0.01	33-DIME-1-PENTENE
4500	0.01	0.01	0.01	HEPTENE A
2011	0.01	0.01	0.01	44-DIME-C2-PENTENE
451	0.40	0.33	0.35	1-ME CYLCOPENTENE
2004	0.02	0.03	0.02	24-DIME-1-PENTENE
2017	0.01	0.01	0.01	3-ET 1-PENTENE
403	0.01	0.01	0.01	HEPTENES

2003	0.02	0.03	0.03	23-DIME-1-PENTENE
2024	0.01	0.02	0.01	5-ME-1-HEXENE
2009	0.04	0.04	0.04	24-DIME-CIS2-PENTENE
403	0.01	0.01	0.01	HEPTENES
403	0.01	0.02	0.01	HEPTENES
2033	0.07	0.08	0.07	2-ME-T3-HEXENE
2031	0.04	0.05	0.05	5-ME-T2-HEXENE
2030	0.03	0.03	0.03	5-ME-C2-HEXENE
2010	0.02	0.03	0.03	34-DIME-C2-PENTENE
2038	0.09	0.10	0.10	1-HEPTENE
2035	0.06	0.06	0.06	3-ME-T3-HEXENE
5370	0.10	0.10	0.10	C-7 CYCLOPENTENE A
5371	0.10	0.09	0.10	C-7 CYCLOPENTENE B
2042	0.12	0.14	0.13	T3-HEPTENE
2025	0.13	0.14	0.14	2-ME-2-HEXENE
2034	0.09	0.10	0.10	3-ME-C3-HEXENE
2018	0.08	0.09	0.08	3-ET-2-PENTENE
2040	0.16	0.18	0.17	TRANS-2-HEPTENE
2008	0.12	0.13	0.12	23-DIME-C2-PENTENE
2039	0.07	0.07	0.07	CIS-2-HEPTENE
4526	0.01	0.01	0.01	OCTENE B
4529	0.01	0.01	0.01	OCTENE E
4530	0.00	0.01	0.01	OCTENE F
4527	0.01	0.02	0.02	OCTENE C
4532	0.02	0.02	0.02	OCTENE H
4528	0.05	0.06	0.06	OCTENE D
4533	0.03	0.03	0.03	OCTENE I
4534	0.03	0.04	0.04	OCTENE J
404	0.01	0.02	0.02	OCTENES
4531	0.01	0.01	0.01	OCTENE G
2212	0.01	0.01	0.01	6-ME-C2-HEPTENE
2213	0.01	0.01	0.01	6-ME-T2-HEPTENE
2193	0.06	0.08	0.07	1-OCTENE
2198	0.07	0.08	0.08	C4-OCTENE
4536	0.03	0.04	0.03	OCTENE L

AROMATIC HCS

CODE	MOL.	VOL.	WT.	NAME	
600	1.64	1.15	1.36	BENZENE	
601	7.70	6.47	7.52	TOLUENE	
602	1.92	1.86	2.16	ETHYLBENZENE	
604	3.56	3.46	4.00	M-XYLENE	
605	1.48	1.45	1.67	P-XYLENE	
603	2.10	2.00	2.36	O-XYLENE	*
607	0.09	0.10	0.12	CUMENE	
644	0.44	0.48	0.56	N-PROPYL BENZENE	
609	1.27	1.40	1.62	1-ME-3-ET BENZENE	
610	0.57	0.63	0.72	1-ME-4-ET BENZENE	
613	0.65	0.71	0.82	135-TRIME BENZENE	
608	0.40	0.43	0.51	1-ME-2-ET BENZENE	*
612	1.94	2.10	2.47	124-TRIME BENZENE	*
615	0.06	0.07	0.08	ISOBUTYLBENZENE	

616	0.06	0.07	0.09	SEC BUTYLBENZENE
611	0.47	0.50	0.60	123-TRIME BENZENE *
622	0.04	0.05	0.05	M-CYMENE
623	0.03	0.03	0.04	P-CYMENE
650	0.22	0.21	0.28	INDAN *
621	0.03	0.04	0.04	O-CYMENE *
646	0.15	0.19	0.22	13-DIETHYL BENZENE
647	0.26	0.32	0.36	1-ME-3-PR BENZENE
648	0.23	0.28	0.32	1-ME-4-PR BENZENE
651	0.29	0.35	0.41	12-DIET BENZENE *
653	0.09	0.11	0.13	1-ME-2-PR BENZENE *
654	0.23	0.27	0.32	14-DIME2ET BENZENE *
655	0.14	0.17	0.20	13-DIME4ET BENZENE *
656	0.31	0.37	0.43	12-DIME4ET BENZENE *
659	0.08	0.10	0.12	12-DIME3ET BENZENE
685	0.02	0.03	0.03	2-PHENYL-2ME BUTANE
683	0.01	0.02	0.02	1-PHENYL-3ME BUTANE
635	0.15	0.18	0.21	1245-TETME BENZENE *
634	0.25	0.30	0.35	1235-TETME BENZENE *
7800	0.13	0.14	0.18	METHYLINDANE A
660	0.05	0.07	0.08	1-ME35DIET BENZENE
773	0.03	0.03	0.04	C-11 AROMATIC K
7801	0.17	0.18	0.23	METHYLINDANE B
7004	0.07	0.08	0.11	C-11 AROMATIC E
633	0.07	0.08	0.10	1234-TETME BENZENE *
715	0.03	0.03	0.04	TETRALIN *
755	0.06	0.08	0.10	1-ME-3NBU BENZENE
7099	0.02	0.03	0.03	PENTYLBENZENE
768	0.03	0.04	0.04	13-DIME-4PR BENZENE
769	0.02	0.03	0.03	1-ME-35DIET BENZENE
714	0.32	0.33	0.44	NAPHTHALENE *
698	0.07	0.09	0.10	12-DIME-3PR BENZENE
7830	0.04	0.05	0.07	DIMETHYLINDANE A
7831	0.12	0.14	0.18	DIMETHYLINDANE B
7833	0.01	0.01	0.02	DIMETHYLINDANE D
699	0.03	0.04	0.04	135-TRIME-2ETBENZENE
771	0.04	0.05	0.06	125-TRIME-3ETBENZENE
693	0.03	0.04	0.05	124-TRIME-5ETBENZENE
694	0.05	0.06	0.07	123-TRIME-5ETBENZENE
695	0.01	0.02	0.02	124-TRIME-3ETBENZENE
7030	0.01	0.02	0.02	C-12 AROMATIC A
7104	0.02	0.03	0.03	135-TRIETHYLBENZENE
772	0.04	0.05	0.06	123-TRIME4ET BENZENE
7101	0.01	0.02	0.02	T-BUTYL-DIMEBENZENES
7034	0.02	0.02	0.03	C-12 AROMATIC E
7835	0.06	0.07	0.09	DIMETHYLINDANE F
7836	0.06	0.07	0.09	DIMETHYLINDANE G
7837	0.05	0.06	0.08	C-11 INDANE H
636	0.03	0.04	0.05	PENTAMETHYLBENZENE
796	0.28	0.31	0.42	2-ME NAPHTHALENE *
795	0.13	0.14	0.19	1-ME NAPHTHALENE *
7910	0.02	0.02	0.02	1-ETHYL NAPHTHALENE
7908	0.01	0.01	0.01	26-DIME NAPHTHALENE
7909	0.01	0.01	0.01	27-DIME NAPHTHALENE

7901	0.02	0.02	0.03	13-DIME NAPHTHALENE

UNCLASSIFIED HCS

CODE	MOL.	VOL.	WT.	NAME
1450	18.54	17.12	16.93	2-ME-2ETHOXYPROPANE
188	0.09	0.11	0.11	UNCLASS. H.C. C- 8
188	0.06	0.08	0.08	UNCLASS. H.C. C- 8
188	0.01	0.01	0.01	UNCLASS. H.C. C- 8
188	0.05	0.05	0.05	UNCLASS. H.C. C- 8
188	0.02	0.02	0.02	UNCLASS. H.C. C- 8
189	0.03	0.04	0.04	UNCLASS. H.C. C- 9
189	0.02	0.02	0.02	UNCLASS. H.C. C- 9
189	0.03	0.04	0.04	UNCLASS. H.C. C- 9
189	0.01	0.02	0.02	UNCLASS. H.C. C- 9
189	0.02	0.03	0.03	UNCLASS. H.C. C- 9
189	0.01	0.02	0.02	UNCLASS. H.C. C- 9
189	0.01	0.01	0.01	UNCLASS. H.C. C- 9
189	0.01	0.01	0.01	UNCLASS. H.C. C- 9
189	0.01	0.02	0.02	UNCLASS. H.C. C- 9
189	0.02	0.03	0.03	UNCLASS. H.C. C- 9
190	0.03	0.05	0.05	UNCLASS. H.C. C-10
4052	0.01	0.01	0.02	UNCLASSIFIED C-10 C
4053	0.02	0.03	0.03	UNCLASSIFIED C-10 D
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
190	0.02	0.03	0.03	UNCLASS. H.C. C-10
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
190	0.01	0.02	0.02	UNCLASS. H.C. C-10
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
4900	0.02	0.02	0.02	CIS-HYDRINDANE
190	0.01	0.02	0.02	UNCLASS. H.C. C-10
190	0.01	0.02	0.02	UNCLASS. H.C. C-10
190	0.04	0.06	0.06	UNCLASS. H.C. C-10
190	0.01	0.02	0.02	UNCLASS. H.C. C-10
190	0.05	0.07	0.07	UNCLASS. H.C. C-10
190	0.02	0.02	0.02	UNCLASS. H.C. C-10
190	0.01	0.02	0.02	UNCLASS. H.C. C-10
190	0.04	0.06	0.06	UNCLASS. H.C. C-10
190	0.01	0.02	0.02	UNCLASS. H.C. C-10
191	0.01	0.01	0.02	UNCLASS. H.C. C-11
191	0.01	0.01	0.01	UNCLASS. H.C. C-11
191	0.02	0.03	0.03	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.01	0.01	0.01	UNCLASS. H.C. C-11
191	0.02	0.03	0.03	UNCLASS. H.C. C-11
191	0.03	0.05	0.06	UNCLASS. H.C. C-11
191	0.02	0.03	0.04	UNCLASS. H.C. C-11
191	0.02	0.03	0.03	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.01	0.01	0.02	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11

191	0.02	0.03	0.03	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
192	0.03	0.05	0.05	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
192	0.01	0.03	0.03	UNCLASS. H.C. C-12
192	0.04	0.07	0.07	UNCLASS. H.C. C-12
192	0.03	0.05	0.05	UNCLASS. H.C. C-12
192	0.02	0.03	0.04	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
192	0.03	0.04	0.05	UNCLASS. H.C. C-12
192	0.04	0.06	0.07	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
193	0.01	0.01	0.02	UNCLASSIFIED C-13
193	0.01	0.01	0.02	UNCLASSIFIED C-13
193	0.01	0.01	0.01	UNCLASSIFIED C-13
193	0.01	0.02	0.03	UNCLASSIFIED C-13
193	0.02	0.03	0.04	UNCLASSIFIED C-13
193	0.01	0.01	0.02	UNCLASSIFIED C-13
193	0.02	0.03	0.04	UNCLASSIFIED C-13
193	0.01	0.01	0.01	UNCLASSIFIED C-13
193	0.03	0.04	0.06	UNCLASSIFIED C-13
193	0.02	0.02	0.03	UNCLASSIFIED C-13
193	0.03	0.04	0.05	UNCLASSIFIED C-13
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.01	0.01	0.02	UNCLASSIFIED C-13
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.02	0.03	0.03	UNCLASSIFIED C-13
193	0.01	0.01	0.02	UNCLASSIFIED C-13
193	0.01	0.01	0.02	UNCLASSIFIED C-13
193	0.02	0.02	0.03	UNCLASSIFIED C-13
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.01	UNCLASSIFIED C-14
194	0.01	0.01	0.01	UNCLASSIFIED C-14
194	0.01	0.02	0.02	UNCLASSIFIED C-14

Liquid

CHEVRON RESEARCH GASOLINE ANALYSIS

Sample Name: 6012774 API BLEND 5 GASOLINE/ETHANOL Customer: CARR
Acquisition Date: 4-Apr-1996 Acquisition Time: 14:44
Channel #: 13 Analysis: GASO125 Sample #: 8 Injection #: 1

*** DETAILED COMPOSITION, PERCENT ***

1. BY VOLUME

C NO.	PARA	OLEF	NAPH	AROM	UNCL HC	TOTALS BY C #	NORMAL PARA	NON-ALKYL I-PARA	ALKYL I-PARA	CYCLO-PENT	CYCLO-HEX
3-	0.00	0.00	******	******	******	5.50	0.00	******	******	******	******
4	4.09	0.05	******	******	******	4.14	4.01	0.08	******	******	******
5	11.59	3.76	0.16	******	******	15.52	2.76	8.83	******	0.16	******
6	11.65	3.03	1.54	1.33	******	17.55	2.18	9.47	******	1.30	0.25
7	7.36	1.85	1.60	7.53	******	18.34	1.13	6.24	******	0.93	0.66
8	7.00	0.50	1.47	10.17	0.16	19.30	0.50	2.82	3.69	0.87	0.60
9	1.44	0.00	0.81	7.52	0.26	10.02	0.20	1.15	0.09	0.08	0.73
10	1.00	0.00	0.05	4.08	0.44	5.57	0.00	0.78	0.22	0.00	0.05
11	0.32	0.00	0.00	1.82	0.40	2.54	0.00	0.32	0.00	0.00	0.00
12+	0.12	0.00	0.00	0.18	1.21	1.51	0.09	0.03	0.00	0.00	0.00
TOT	44.58	9.19	5.63	32.62	7.98	100.00	10.88	29.71	4.00	3.34	2.29

2. BY WEIGHT

3-	0.00	0.00	******	******	******	5.73	0.00	******	******	******	******
4	3.17	0.04	******	******	******	3.21	3.11	0.06	******	******	******
5	9.63	3.32	0.16	******	******	13.11	2.32	7.32	******	0.16	******
6	10.24	2.80	1.55	1.56	******	16.15	1.92	8.32	******	1.30	0.26
7	6.74	1.76	1.62	8.71	******	18.83	1.03	5.71	******	0.94	0.68
8	6.55	0.48	1.52	11.77	0.16	20.48	0.47	2.64	3.44	0.89	0.63
9	1.39	0.00	0.85	8.76	0.26	11.26	0.19	1.10	0.09	0.08	0.77
10	0.98	0.00	0.05	4.87	0.45	6.34	0.00	0.76	0.21	0.00	0.05
11	0.32	0.00	0.00	2.31	0.42	3.04	0.00	0.32	0.00	0.00	0.00
12+	0.12	0.00	0.00	0.23	1.48	1.84	0.09	0.03	0.00	0.00	0.00
TOT	39.12	8.40	5.76	38.21	8.51	100.00	9.13	26.25	3.75	3.36	2.39

3. BY MOLAR

3-	0.00	0.00	******	******	******	16.24	0.00	******	******	******	******
4	4.64	0.06	******	******	******	4.71	4.56	0.09	******	******	******
5	11.37	4.03	0.20	******	******	15.60	2.73	8.64	******	0.20	******
6	10.12	2.85	1.57	1.70	******	16.24	1.89	8.22	******	1.31	0.26
7	5.72	1.53	1.40	8.05	******	16.71	0.87	4.85	******	0.81	0.59
8	4.88	0.36	1.15	9.44	0.12	15.96	0.35	1.97	2.57	0.68	0.48
9	0.92	0.00	0.57	6.21	0.18	7.88	0.13	0.73	0.06	0.05	0.52
10	0.58	0.00	0.03	3.11	0.27	4.00	0.00	0.46	0.13	0.00	0.03
11	0.17	0.00	0.00	1.35	0.23	1.75	0.00	0.17	0.00	0.00	0.00
12+	0.06	0.00	0.00	0.13	0.72	0.91	0.05	0.01	0.00	0.00	0.00
TOT	38.47	8.84	4.93	29.99	17.77	100.00	10.58	25.13	2.75	3.05	1.88

GRP. TYPE, VOL %: P = 48.45, O = 9.98, N = 6.12, A = 35.45, Saturates = 54.56
DIENE CONTENT = 1169. vol ppm AVG MW = 85.2 API GR. = 56.3 SP. GR. =0.7536
OCTANE NUMBER: (from pure values) RON = 87.1 MON = 80.5
(from blending values) RON = 90.0 MON = 80.3
CARBON-HYDROGEN RATIO =6.370 STOICH. AIR-FUEL RATIO =14.57 lbs air/lbs fuel
BTU/lb = 11832. NET, 12751. GROSS; BTU/gal = 74416. NET, 80196. GROSS
REID VAPOR PRESSURE = 7.0 BROMINE NO. = 17.0

CHEVRON RESEARCH GASOLINE ANALYSIS
4-Apr-1996 14:44
6012774 API BLEND 5 GASOLINE/ETHANOL 13GASO125
Sample 8 Injection 1

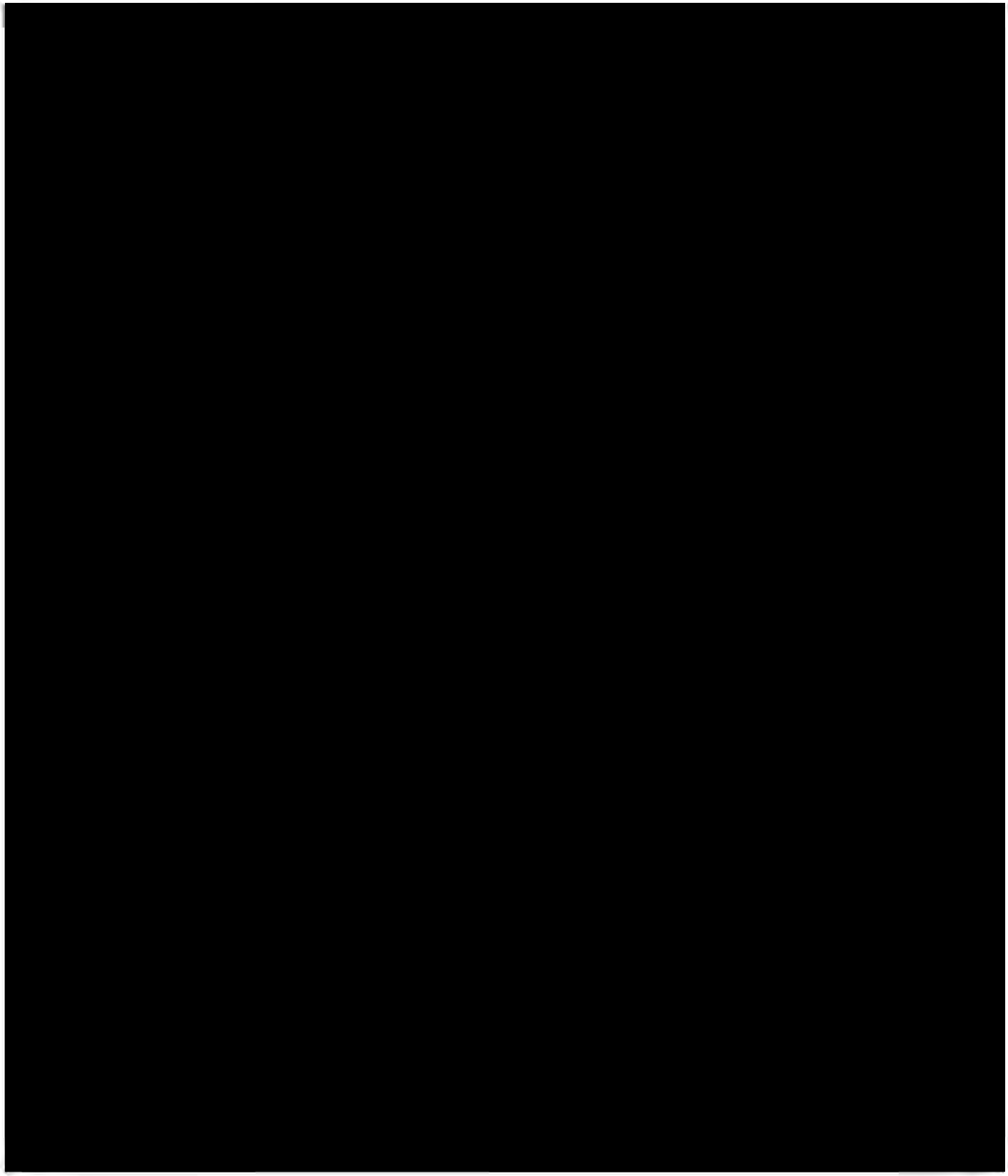
* DISTILLATION CURVES

VOL %	TBP	D86
0.	11.	82.
5.	82.	101.
10.	82.	140.
15.	97.	140.
20.	122.	152.
25.	140.	156.
30.	152.	173.
35.	161.	173.
40.	173.	194.
45.	194.	197.
50.	197.	210.
55.	211.	231.
60.	231.	231.
65.	236.	243.
70.	260.	273.
75.	281.	280.
80.	292.	290.
85.	322.	320.
90.	337.	336.
95.	374.	390.
100.	509.	459.

* COMPOUND DICTIONARY NUMBERS AND AREAS AS READ IN

[redacted]

CHEVRON RESEARCH GASOLINE ANALYSIS
4-Apr-1996 14:44
6012774 API BLEND 5 GASOLINE/ETHANOL 13GASO125
Sample 8 Injection 1



TOTAL UNCORRECTED AREA = 3358347.

NUMBER OF PEAKS READ IN = 372

4-Apr-1996 14:44
6012774 API BLEND 5 GASOLINE/ETHANOL 13GASO125
Sample 8 Injection 1

* DETAILED HYDROCARBON ANALYSIS, EXCLUDING COMPOUNDS BELOW 0.01 VOLUME PERCENT

NORMAL PARAFFINS

CODE	MOL.	VOL.	WT.	NAME
4	4.56	4.01	3.11	N-BUTANE
6	2.73	2.76	2.32	N-PENTANE
9	1.89	2.18	1.92	N-HEXANE
14	0.87	1.13	1.03	N-HEPTANE
23	0.35	0.50	0.47	N-OCTANE
41	0.13	0.20	0.19	N-NONANE
102	0.03	0.06	0.06	N-DODECANE
103	0.02	0.04	0.04	N-TRIDECANE

ISO-PARAFFINS

CODE	MOL.	VOL.	WT.	NAME	
5	0.09	0.08	0.06	ISOBUTANE	
8	0.04	0.04	0.03	NEOPENTANE	
7	8.59	8.78	7.28	ISOPENTANE	
12	0.55	0.64	0.55	22-DIME BUTANE	
13	1.25	1.43	1.26	23-DIME BUTANE	
10	4.04	4.68	4.09	2-ME PENTANE	
11	2.39	2.72	2.42	3-ME PENTANE	
18	0.06	0.08	0.07	22-DIME PENTANE	
20	0.82	1.07	0.97	24-DIME PENTANE	
19	1.58	2.00	1.86	23-DIME PENTANE	
15	1.12	1.46	1.32	2-ME HEXANE	
16	1.18	1.51	1.38	3-ME HEXANE	
17	0.09	0.11	0.11	3-ET PENTANE	
37	1.74	2.53	2.34	224-TRIME PENTANE	*
28	0.03	0.04	0.03	22-DIME HEXANE	
36	0.04	0.06	0.06	223-TRIME PENTANE	*
31	0.23	0.33	0.31	25-DIME HEXANE	
30	0.32	0.46	0.43	24-DIME HEXANE	
32	0.03	0.04	0.04	33-DIME HEXANE	
39	0.52	0.73	0.70	234-TRIME PENTANE	*
34	0.07	0.10	0.10	2-ME-3-ET PENTANE	
29	0.26	0.37	0.35	23-DIME HEXANE	*
24	0.57	0.82	0.76	2-ME HEPTANE	
26	0.18	0.25	0.24	4-ME HEPTANE	
25	0.55	0.78	0.73	3-ME HEPTANE	
73	0.02	0.03	0.03	224-TRIME HEXANE	
51	0.07	0.10	0.10	244-TRIME HEXANE	
52	0.03	0.04	0.04	24-DIME HEPTANE	
43	0.06	0.09	0.09	235-TRIME HEXANE	*
67	0.01	0.01	0.01	22-DIME HEPTANE	
53	0.06	0.10	0.10	26-DIME HEPTANE	
55	0.15	0.23	0.22	35-DIME HEPTANE	
50	0.01	0.02	0.02	234-TRIME HEXANE	
56	0.05	0.07	0.07	23-DIME HEPTANE	
71	0.02	0.03	0.03	3-ME-4-ET HEXANE	
57	0.03	0.05	0.05	34-DIME HEPTANE	

66	0.02	0.04	0.03	4-ET HEPTANE
62	0.11	0.17	0.16	4-ME OCTANE
60	0.14	0.22	0.21	2-ME OCTANE
4660	0.01	0.01	0.01	246-TRIME HEPTANE *
76	0.02	0.03	0.03	33-DIET PENTANE
4652	0.02	0.03	0.03	225-TRIME HEPTANE *
4657	0.03	0.05	0.05	236-TRIME HEPTANE *
4659	0.02	0.03	0.03	245-TRIME HEPTANE *
151	0.02	0.03	0.03	22-DIME OCTANE
161	0.01	0.02	0.02	44-DIME OCTANE
4650	0.05	0.08	0.08	223-TRIME HEPTANE *
157	0.04	0.07	0.07	33-DIME OCTANE
89	0.01	0.02	0.02	4-ET OCTANE
152	0.03	0.05	0.05	23-DIME OCTANE
215	0.02	0.03	0.03	C-11 ISOPARAFFINS
213	0.02	0.04	0.04	C-10 ISOPARAFFINS
86	0.17	0.29	0.28	4-ME NONANE
84	0.07	0.12	0.11	2-ME NONANE
88	0.01	0.02	0.02	3-ET OCTANE
85	0.07	0.12	0.12	3-ME NONANE
4663	0.02	0.03	0.03	335-TRIME HEPTANE *
163	0.11	0.20	0.19	2-ME DECANE
164	0.05	0.09	0.09	3-ME DECANE
5030	0.01	0.03	0.03	26-DIME UNDECANE

CYCLOPENTANES

CODE	MOL.	VOL.	WT.	NAME
800	0.20	0.16	0.16	CYCLOPENTANE
801	1.31	1.30	1.30	ME CYCLOPENTANE
806	0.26	0.30	0.30	1C3-DIME CYCPENTANE
807	0.23	0.27	0.27	1T3-DIME CYCPENTANE
805	0.16	0.19	0.19	1T2-DIME CYCPENTANE
811	0.04	0.06	0.06	113-TRIME CPENTANE
802	0.16	0.18	0.18	ET CYCLOPENTANE
817	0.09	0.12	0.11	1T2C4TRIME CPENTANE
814	0.04	0.05	0.05	1T2C3TRIME CPENTANE
810	0.04	0.05	0.06	112-TRIME CPENTANE*
848	0.04	0.06	0.06	11C3T4-TETRME CPENT
864	0.07	0.10	0.10	1MEC3ET CYCPENTANE
861	0.33	0.42	0.44	1ME-1ET CYCPENTANE
812	0.02	0.03	0.03	1C2C3TRIMECPENTANE*
4326	0.01	0.01	0.01	C-9 CYCLOPENTANE B
862	0.03	0.03	0.03	1ME-C2ET CYPENTANE

CYCLOHEXANES

CODE	MOL.	VOL.	WT.	NAME
825	0.26	0.25	0.26	CYCLOHEXANE
826	0.59	0.66	0.68	ME CYCLOHEXANE
831	0.07	0.09	0.09	1C3-DIME CYCHEXANE
830	0.05	0.07	0.07	1T2-DIME CYCHEXANE

832	0.12	0.15	0.16	1T3-DIME CYCHEXANE
833	0.06	0.08	0.08	1C4-DIME CYCHEXANE
829	0.04	0.05	0.05	1C2-DIME CYCHEXANE
827	0.14	0.18	0.19	ETHYL CYCLOHEXANE
946	0.04	0.05	0.05	113-TRIME CYCHEXANE
979	0.02	0.03	0.03	C-9 CYLOHEXANES
956	0.04	0.06	0.06	1C3T5-TRIME CYCHEX
950	0.02	0.02	0.03	1T2C3-TRIME CYCHEX
945	0.02	0.02	0.02	112-TRIME CYCHEXANE
941	0.09	0.13	0.14	1ME-C3ET CYCHEXANE
944	0.03	0.05	0.05	1ME-T4ET CYCHEXANE
940	0.07	0.10	0.11	1ME-1-ET CYCHEXANE
949	0.04	0.06	0.06	1C2T3-TRIME CYCHEX
943	0.02	0.03	0.04	1M-C4-ET CYCHEXANE
948	0.08	0.11	0.12	1C2C3-TRIME CYCHEX
836	0.02	0.03	0.03	ISOPR CYCLOHEXANE
835	0.02	0.03	0.03	N-PR CYCLOHEXANE
980	0.03	0.05	0.05	C-10 CYCLOHEXANES

OLEFINS, DIENES

CODE	MOL.	VOL.	WT.	NAME
304	0.03	0.02	0.02	TRANS-2-BUTENE
303	0.04	0.03	0.02	C1S-2-BUTENE
310	0.05	0.05	0.04	3-METHYL-1-BUTENE
306	0.35	0.33	0.29	1-PENTENE
309	0.60	0.57	0.50	2-METHYL-1-BUTENE
509	0.06	0.06	0.05	ISOPRENE
308	0.90	0.85	0.74	TRANS-2-PENTENE
327	0.03	0.03	0.03	3,3-DIME BUTENE
307	0.51	0.48	0.42	CIS-2-PENTENE
311	1.31	1.22	1.08	2-METHYL-2-BUTENE
505	0.05	0.04	0.04	T-13-PENTADIENE
530	0.01	0.01	0.01	CYCLOPENTADIENE
450	0.19	0.14	0.15	CYCLOPENTENE
318	0.12	0.13	0.12	3-METHYL-1-PENTENE
323	0.08	0.09	0.08	C-4ME-2-PENTENE
324	0.15	0.16	0.14	T-4ME-2-PENTENE
317	0.25	0.27	0.25	2-ME-1-PENTENE
312	0.13	0.15	0.13	1-HEXENE
315	0.37	0.40	0.36	CIS-3-HEXENE
314	0.44	0.48	0.43	TRANS-2-HEXENE
320	0.41	0.44	0.40	2-METHYL-2-PENTENE
321	0.25	0.26	0.24	C-3ME-2-PENTENE
313	0.21	0.23	0.21	CIS-2-HEXENE
2005	0.01	0.01	0.01	33-DIME-1-PENTENE
537	0.01	0.01	0.01	HEPTADIENES
4500	0.01	0.01	0.01	HEPTENE A
2011	0.01	0.02	0.01	44-DIME-C2-PENTENE
451	0.41	0.38	0.40	1-ME CYLCOPENTENE
2004	0.02	0.03	0.03	24-DIME-1-PENTENE
2017	0.01	0.01	0.01	3-ET 1-PENTENE
403	0.01	0.02	0.01	HEPTENES

2003	0.03	0.03	0.03	23-DIME-1-PENTENE
2024	0.01	0.02	0.02	5-ME-1-HEXENE
2009	0.04	0.05	0.04	24-DIME-CIS2-PENTENE
403	0.01	0.01	0.01	HEPTENES
403	0.01	0.02	0.02	HEPTENES
2033	0.07	0.09	0.08	2-ME-T3-HEXENE
2031	0.05	0.06	0.05	5-ME-T2-HEXENE
2030	0.03	0.04	0.04	5-ME-C2-HEXENE
2010	0.03	0.03	0.03	34-DIME-C2-PENTENE
2038	0.10	0.13	0.12	1-HEPTENE
2035	0.06	0.07	0.07	3-ME-T3-HEXENE
5370	0.11	0.11	0.12	C-7 CYCLOPENTENE A
5371	0.10	0.11	0.11	C-7 CYCLOPENTENE B
2042	0.13	0.16	0.15	T3-HEPTENE
2025	0.14	0.17	0.16	2-ME-2-HEXENE
2034	0.10	0.12	0.11	3-ME-C3-HEXENE
2018	0.09	0.10	0.10	3-ET-2-PENTENE
2040	0.17	0.21	0.19	TRANS-2-HEPTENE
2008	0.12	0.14	0.14	23-DIME-C2-PENTENE
2039	0.07	0.09	0.08	CIS-2-HEPTENE
4526	0.01	0.01	0.01	OCTENE B
4529	0.01	0.01	0.01	OCTENE E
4530	0.00	0.01	0.01	OCTENE F
4527	0.01	0.02	0.02	OCTENE C
4532	0.02	0.03	0.03	OCTENE H
4528	0.05	0.07	0.07	OCTENE D
4533	0.03	0.04	0.04	OCTENE I
4534	0.03	0.04	0.04	OCTENE J
404	0.01	0.02	0.02	OCTENES
4531	0.01	0.02	0.02	OCTENE G
2212	0.01	0.01	0.01	6-ME-C2-HEPTENE
2213	0.01	0.01	0.01	6-ME-T2-HEPTENE
2193	0.06	0.09	0.08	1-OCTENE
2198	0.07	0.10	0.09	C4-OCTENE
4536	0.03	0.04	0.04	OCTENE L

AROMATIC HCS

CODE	MOL.	VOL.	WT.	NAME	
600	1.70	1.33	1.56	BENZENE	
601	8.05	7.53	8.71	TOLUENE	
602	2.00	2.16	2.50	ETHYLBENZENE	
604	3.72	4.02	4.64	M-XYLENE	
605	1.54	1.67	1.92	P-XYLENE	
603	2.18	2.31	2.72	O-XYLENE	*
607	0.09	0.10	0.12	CUMENE	
644	0.44	0.54	0.63	N-PROPYL BENZENE	
609	1.31	1.61	1.85	1-ME-3-ET BENZENE	
610	0.59	0.73	0.83	1-ME-4-ET BENZENE	
613	0.66	0.81	0.94	135-TRIME BENZENE	
608	0.41	0.49	0.57	1-ME-2-ET BENZENE	*
612	2.01	2.42	2.83	124-TRIME BENZENE	*
615	0.05	0.07	0.08	ISOBUTYLBENZENE	

616	0.05	0.08	0.09	SEC BUTYLBENZENE	
611	0.48	0.56	0.67	123-TRIME BENZENE	*
622	0.03	0.05	0.05	M-CYMENE	
623	0.02	0.03	0.03	P-CYMENE	
650	0.23	0.25	0.32	INDAN	*
621	0.02	0.03	0.04	O-CYMENE	*
646	0.15	0.21	0.24	13-DIETHYL BENZENE	
647	0.26	0.36	0.41	1-ME-3-PR BENZENE	
648	0.23	0.31	0.36	1-ME-4-PR BENZENE	
651	0.29	0.39	0.46	12-DIET BENZENE	*
653	0.09	0.12	0.13	1-ME-2-PR BENZENE	*
654	0.23	0.31	0.36	14-DIME2ET BENZENE	*
655	0.15	0.20	0.23	13-DIME4ET BENZENE	*
656	0.31	0.42	0.48	12-DIME4ET BENZENE	*
659	0.08	0.11	0.13	12-DIME3ET BENZENE	
685	0.02	0.03	0.03	2-PHENYL-2ME BUTANE	
683	0.01	0.01	0.02	1-PHENYL-3ME BUTANE	
635	0.15	0.20	0.24	1245-TETME BENZENE	*
634	0.25	0.34	0.40	1235-TETME BENZENE	*
7800	0.13	0.15	0.20	METHYLINDANE A	
660	0.05	0.08	0.09	1-ME35DIET BENZENE	
773	0.02	0.03	0.04	C-11 AROMATIC K	
7801	0.17	0.20	0.27	METHYLINDANE B	
7004	0.07	0.09	0.12	C-11 AROMATIC E	
633	0.07	0.09	0.11	1234-TETME BENZENE	*
715	0.03	0.04	0.05	TETRALIN	*
755	0.06	0.09	0.10	1-ME-3NBU BENZENE	
7099	0.02	0.03	0.04	PENTYLBENZENE	
768	0.03	0.04	0.05	13-DIME-4PR BENZENE	
769	0.02	0.03	0.04	1-ME-35DIET BENZENE	
714	0.33	0.38	0.50	NAPHTHALENE	*
698	0.06	0.09	0.11	12-DIME-3PR BENZENE	
7830	0.04	0.05	0.07	DIMETHYLINDANE A	
7831	0.12	0.15	0.20	DIMETHYLINDANE B	
7833	0.01	0.01	0.02	DIMETHYLINDANE D	
699	0.03	0.04	0.05	135-TRIME-2ETBENZENE	
771	0.04	0.06	0.07	125-TRIME-3ETBENZENE	
693	0.03	0.04	0.05	124-TRIME-5ETBENZENE	
694	0.05	0.07	0.08	123-TRIME-5ETBENZENE	
695	0.01	0.02	0.02	124-TRIME-3ETBENZENE	
7030	0.01	0.02	0.02	C-12 AROMATIC A	
7104	0.02	0.03	0.03	135-TRIETHYLBENZENE	
772	0.04	0.06	0.07	123-TRIME4ET BENZENE	
7101	0.01	0.02	0.02	T-BUTYL-DIMEBENZENES	
7034	0.02	0.02	0.03	C-12 AROMATIC E	
7835	0.06	0.08	0.10	DIMETHYLINDANE F	
7836	0.06	0.07	0.10	DIMETHYLINDANE G	
7837	0.05	0.07	0.09	C-11 INDANE H	
636	0.03	0.05	0.06	PENTAMETHYLBENZENE	
796	0.29	0.35	0.48	2-ME NAPHTHALENE	*
795	0.13	0.16	0.22	1-ME NAPHTHALENE	*
7910	0.02	0.02	0.03	1-ETHYL NAPHTHALENE	
7908	0.01	0.01	0.02	26-DIME NAPHTHALENE	
7909	0.01	0.01	0.02	27-DIME NAPHTHALENE	

7901	0.02	0.02	0.03	13-DIME NAPHTHALENE
7904	0.01	0.01	0.02	16-DIME NAPHTHALENE

UNCLASSIFIED HCS

CODE	MOL.	VOL.	WT.	NAME
1003	16.24	5.50	5.73	ETHANOL
188	0.02	0.03	0.03	UNCLASS. H.C. C- 8
188	0.03	0.03	0.03	UNCLASS. H.C. C- 8
188	0.01	0.01	0.01	UNCLASS. H.C. C- 8
188	0.05	0.06	0.06	UNCLASS. H.C. C- 8
188	0.02	0.02	0.02	UNCLASS. H.C. C- 8
189	0.03	0.05	0.05	UNCLASS. H.C. C- 9
189	0.01	0.02	0.02	UNCLASS. H.C. C- 9
189	0.03	0.04	0.04	UNCLASS. H.C. C- 9
189	0.01	0.02	0.02	UNCLASS. H.C. C- 9
189	0.02	0.03	0.03	UNCLASS. H.C. C- 9
189	0.01	0.02	0.02	UNCLASS. H.C. C- 9
189	0.01	0.01	0.01	UNCLASS. H.C. C- 9
189	0.01	0.01	0.01	UNCLASS. H.C. C- 9
189	0.01	0.02	0.02	UNCLASS. H.C. C- 9
189	0.02	0.02	0.02	UNCLASS. H.C. C- 9
190	0.03	0.04	0.04	UNCLASS. H.C. C-10
4052	0.01	0.01	0.01	UNCLASSIFIED C-10 C
4053	0.01	0.02	0.02	UNCLASSIFIED C-10 D
190	0.02	0.03	0.03	UNCLASS. H.C. C-10
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
190	0.01	0.02	0.02	UNCLASS. H.C. C-10
4900	0.02	0.02	0.02	CIS-HYDRINDANE
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
190	0.04	0.06	0.06	UNCLASS. H.C. C-10
190	0.01	0.02	0.02	UNCLASS. H.C. C-10
190	0.04	0.07	0.07	UNCLASS. H.C. C-10
190	0.01	0.02	0.02	UNCLASS. H.C. C-10
190	0.01	0.02	0.02	UNCLASS. H.C. C-10
190	0.04	0.06	0.06	UNCLASS. H.C. C-10
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
191	0.01	0.01	0.01	UNCLASS. H.C. C-11
191	0.01	0.03	0.03	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.02	0.03	0.03	UNCLASS. H.C. C-11
191	0.03	0.05	0.05	UNCLASS. H.C. C-11
191	0.02	0.03	0.04	UNCLASS. H.C. C-11
191	0.02	0.04	0.04	UNCLASS. H.C. C-11
191	0.01	0.01	0.01	UNCLASS. H.C. C-11
191	0.01	0.01	0.01	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.02	0.03	0.03	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.01	0.01	0.02	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11

191	0.01	0.01	0.01	UNCLASS. H.C. C-11
192	0.03	0.05	0.05	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
192	0.01	0.03	0.03	UNCLASS. H.C. C-12
192	0.04	0.07	0.08	UNCLASS. H.C. C-12
192	0.03	0.05	0.05	UNCLASS. H.C. C-12
192	0.02	0.04	0.04	UNCLASS. H.C. C-12
192	0.03	0.05	0.05	UNCLASS. H.C. C-12
192	0.04	0.07	0.07	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
193	0.01	0.01	0.02	UNCLASSIFIED C-13
193	0.01	0.01	0.01	UNCLASSIFIED C-13
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.01	0.01	0.02	UNCLASSIFIED C-13
193	0.01	0.02	0.03	UNCLASSIFIED C-13
193	0.02	0.03	0.04	UNCLASSIFIED C-13
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.01	0.01	0.01	UNCLASSIFIED C-13
193	0.02	0.04	0.05	UNCLASSIFIED C-13
193	0.01	0.01	0.01	UNCLASSIFIED C-13
193	0.03	0.05	0.07	UNCLASSIFIED C-13
193	0.02	0.03	0.03	UNCLASSIFIED C-13
193	0.03	0.04	0.06	UNCLASSIFIED C-13
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.01	0.02	0.03	UNCLASSIFIED C-13
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.01	0.02	0.03	UNCLASSIFIED C-13
193	0.01	0.02	0.03	UNCLASSIFIED C-13
193	0.02	0.03	0.04	UNCLASSIFIED C-13
193	0.01	0.01	0.02	UNCLASSIFIED C-13
193	0.01	0.01	0.01	UNCLASSIFIED C-13
193	0.02	0.03	0.03	UNCLASSIFIED C-13
194	0.01	0.01	0.01	UNCLASSIFIED C-14
194	0.01	0.02	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.02	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.01	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.02	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.01	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14

CHEVRON RESEARCH GASOLINE ANALYSIS Liquid

Sample Name: 6015318 API BLEND 6 GASOLINE/TBA Customer: CARR
Acquisition Date: 4-Apr-1996 Acquisition Time: 11:58
Channel #: 13 Analysis: GASO125 Sample #: 7 Injection #: 1

*** DETAILED COMPOSITION, PERCENT ***

1. BY VOLUME

C NO.	PARA	OLEF	NAPH	AROM	UNCL HC	TOTALS BY C #	NORMAL PARA	NON-ALKYL I-PARA	ALKYL I-PARA	CYCLO-PENT	CYCLO-HEX
3-	0.00	0.00	******	******	******	0.00	0.00	******	******	******	******
4	3.44	0.04	******	******	******	19.99	3.38	0.07	******	******	******
5	9.85	3.07	0.15	******	******	13.07	2.33	7.53	******	0.15	******
6	10.32	2.64	1.36	1.17	******	15.50	1.92	8.40	******	1.15	0.22
7	6.53	1.63	1.42	6.68	******	16.26	1.00	5.53	******	0.83	0.59
8	6.24	0.46	1.33	9.07	0.15	17.25	0.44	2.52	3.28	0.78	0.55
9	1.31	0.00	0.75	6.72	0.24	9.01	0.18	1.04	0.09	0.07	0.68
10	0.92	0.00	0.05	3.69	0.43	5.08	0.00	0.72	0.20	0.00	0.05
11	0.29	0.00	0.00	1.66	0.39	2.35	0.00	0.29	0.00	0.00	0.00
12+	0.12	0.00	0.00	0.18	1.19	1.48	0.09	0.03	0.00	0.00	0.00
TOT	39.02	7.85	5.05	29.17	18.91	100.00	9.34	26.12	3.57	2.97	2.08

2. BY WEIGHT

3-	0.00	0.00	******	******	******	0.00	0.00	******	******	******	******
4	2.64	0.03	******	******	******	19.85	2.60	0.05	******	******	******
5	8.12	2.69	0.14	******	******	10.95	1.93	6.19	******	0.14	******
6	8.99	2.43	1.36	1.37	******	14.15	1.67	7.32	******	1.14	0.23
7	5.92	1.55	1.42	7.66	******	16.56	0.91	5.02	******	0.82	0.60
8	5.79	0.43	1.36	10.41	0.15	18.14	0.41	2.34	3.04	0.80	0.57
9	1.24	0.00	0.78	7.77	0.24	10.04	0.17	0.99	0.08	0.07	0.71
10	0.89	0.00	0.05	4.36	0.43	5.73	0.00	0.69	0.19	0.00	0.05
11	0.29	0.00	0.00	2.09	0.40	2.78	0.00	0.29	0.00	0.00	0.00
12+	0.12	0.00	0.00	0.22	1.45	1.79	0.09	0.03	0.00	0.00	0.00
TOT	34.01	7.13	5.12	33.88	19.85	100.00	7.79	22.91	3.32	2.97	2.15

3. BY MOLAR

3-	0.00	0.00	******	******	******	0.00	0.00	******	******	******	******
4	3.94	0.05	******	******	******	29.59	3.87	0.07	******	******	******
5	9.75	3.33	0.18	******	******	13.26	2.32	7.43	******	0.18	******
6	9.04	2.51	1.40	1.51	******	14.47	1.68	7.36	******	1.17	0.23
7	5.12	1.37	1.26	7.21	******	14.95	0.78	4.34	******	0.73	0.53
8	4.39	0.34	1.05	8.49	0.12	14.39	0.31	1.77	2.30	0.62	0.44
9	0.84	0.00	0.53	5.61	0.16	7.15	0.12	0.67	0.06	0.05	0.49
10	0.54	0.00	0.03	2.83	0.27	3.67	0.00	0.42	0.12	0.00	0.03
11	0.16	0.00	0.00	1.24	0.23	1.63	0.00	0.16	0.00	0.00	0.00
12+	0.06	0.00	0.00	0.12	0.72	0.90	0.04	0.02	0.00	0.00	0.00
TOT	33.84	7.60	4.45	27.02	27.09	100.00	9.13	22.23	2.48	2.74	1.72

GRP. TYPE, VOL %: P = 48.13, O = 9.68, N = 6.22, A = 35.97, Saturates = 54.35
DIENE CONTENT = 1084. vol ppm AVG MW = 86.6 API GR. = 54.7 SP. GR. =0.7600
OCTANE NUMBER: (from pure values) RON = 89.4 MON = 81.5
(from blending values) RON = 91.9 MON = 81.4
CARBON-HYDROGEN RATIO =6.214 STOICH. AIR-FUEL RATIO =14.64 lbs air/lbs fuel
BTU/lb = 12620. NET, 13592. GROSS; BTU/gal = 80038. NET, 86206. GROSS
REID VAPOR PRESSURE = 6.1 BROMINE NO. = 14.3

4-Apr-1996 11:58
6015318 API BLEND 6 GASOLINE/TBA 13GASO125
Sample 7 Injection 1

* DISTILLATION CURVES

VOL %	TBP	D86
0.	11.	97.
5.	82.	140.
10.	82.	144.
15.	99.	154.
20.	140.	161.
25.	146.	181.
30.	161.	181.
35.	181.	181.
40.	181.	181.
45.	181.	181.
50.	187.	194.
55.	197.	210.
60.	214.	231.
65.	231.	231.
70.	244.	245.
75.	277.	279.
80.	282.	283.
85.	315.	319.
90.	337.	333.
95.	374.	382.
100.	509.	459.

* COMPOUND DICTIONARY NUMBERS AND AREAS AS READ IN

[redacted]

[redacted]

TOTAL UNCORRECTED AREA = 3522763.

NUMBER OF PEAKS READ IN = 377

4-Apr-1996 11:58
6015318 API BLEND 6 GASOLINE/TBA 13GASO125
Sample 7 Injection 1

* DETAILED HYDROCARBON ANALYSIS, EXCLUDING COMPOUNDS BELOW 0.01 VOLUME PERCENT

NORMAL PARAFFINS

CODE	MOL.	VOL.	WT.	NAME
4	3.87	3.38	2.60	N-BUTANE
6	2.32	2.33	1.93	N-PENTANE
9	1.68	1.92	1.67	N-HEXANE
14	0.78	1.00	0.91	N-HEPTANE
23	0.31	0.44	0.41	N-OCTANE
41	0.12	0.18	0.17	N-NONANE
102	0.03	0.05	0.05	N-DODECANE
103	0.02	0.04	0.04	N-TRIDECANE

ISO-PARAFFINS

CODE	MOL.	VOL.	WT.	NAME	
5	0.07	0.07	0.05	ISOBUTANE	
8	0.04	0.04	0.03	NEOPENTANE	
7	7.39	7.49	6.16	ISOPENTANE	
12	0.56	0.64	0.55	22-DIME BUTANE	
13	1.10	1.25	1.10	23-DIME BUTANE	
10	3.58	4.11	3.56	2-ME PENTANE	
11	2.12	2.39	2.11	3-ME PENTANE	
18	0.06	0.08	0.07	22-DIME PENTANE	
20	0.73	0.95	0.85	24-DIME PENTANE	
19	1.41	1.78	1.63	23-DIME PENTANE	
15	1.00	1.29	1.16	2-ME HEXANE	
16	1.05	1.34	1.22	3-ME HEXANE	
17	0.08	0.10	0.09	3-ET PENTANE	
37	1.56	2.25	2.06	224-TRIME PENTANE	*
28	0.02	0.03	0.03	22-DIME HEXANE	
36	0.04	0.05	0.05	223-TRIME PENTANE	*
31	0.21	0.30	0.27	25-DIME HEXANE	
30	0.29	0.41	0.38	24-DIME HEXANE	
32	0.02	0.03	0.03	33-DIME HEXANE	
39	0.47	0.65	0.62	234-TRIME PENTANE	*
34	0.07	0.10	0.09	2-ME-3-ET PENTANE	
29	0.23	0.33	0.31	23-DIME HEXANE	*
24	0.51	0.73	0.67	2-ME HEPTANE	
26	0.16	0.22	0.21	4-ME HEPTANE	
25	0.49	0.69	0.65	3-ME HEPTANE	
73	0.02	0.03	0.03	224-TRIME HEXANE	
51	0.06	0.09	0.09	244-TRIME HEXANE	
52	0.03	0.04	0.04	24-DIME HEPTANE	
43	0.06	0.09	0.08	235-TRIME HEXANE	*
67	0.01	0.01	0.01	22-DIME HEPTANE	
53	0.06	0.09	0.09	26-DIME HEPTANE	
55	0.13	0.21	0.20	35-DIME HEPTANE	
50	0.01	0.02	0.02	234-TRIME HEXANE	
56	0.04	0.06	0.06	23-DIME HEPTANE	
71	0.02	0.03	0.03	3-ME-4-ET HEXANE	
57	0.03	0.04	0.04	34-DIME HEPTANE	

66	0.02	0.03	0.03	4-ET HEPTANE
62	0.10	0.15	0.14	4-ME OCTANE
60	0.13	0.20	0.19	2-ME OCTANE
4660	0.01	0.01	0.01	246-TRIME HEPTANE *
76	0.02	0.03	0.03	33-DIET PENTANE
4652	0.02	0.03	0.02	225-TRIME HEPTANE *
4657	0.03	0.04	0.04	236-TRIME HEPTANE *
4659	0.01	0.02	0.02	245-TRIME HEPTANE *
151	0.02	0.03	0.03	22-DIME OCTANE
161	0.01	0.02	0.02	44-DIME OCTANE
4650	0.04	0.07	0.07	223-TRIME HEPTANE *
157	0.04	0.06	0.06	33-DIME OCTANE
89	0.01	0.02	0.02	4-ET OCTANE
152	0.03	0.05	0.05	23-DIME OCTANE
215	0.02	0.03	0.03	C-11 ISOPARAFFINS
213	0.02	0.04	0.04	C-10 ISOPARAFFINS
86	0.15	0.26	0.25	4-ME NONANE
84	0.06	0.11	0.10	2-ME NONANE
88	0.01	0.02	0.02	3-ET OCTANE
85	0.06	0.11	0.11	3-ME NONANE
4663	0.02	0.03	0.02	335-TRIME HEPTANE *
163	0.10	0.18	0.17	2-ME DFCANE
164	0.05	0.08	0.08	3-ME DECANE
5030	0.01	0.02	0.02	26-DIME UNDECANE

CYCLOPENTANES

CODE	MOL.	VOL.	WT.	NAME
800	0.18	0.15	0.14	CYCLOPENTANE
801	1.17	1.15	1.14	ME CYCLOPENTANE
806	0.23	0.27	0.27	1C3-DIME CYCPENTANE
807	0.21	0.24	0.24	1T3-DIME CYCPENTANE
805	0.14	0.16	0.16	1T2-DIME CYCPENTANE
811	0.04	0.05	0.05	113-TRIME CPENTANE
802	0.14	0.16	0.16	ET CYCLOPENTANE
817	0.08	0.10	0.10	1T2C4TRIME CPENTANE
814	0.04	0.05	0.05	1T2C3TRIME CPENTANE
810	0.04	0.05	0.05	112-TRIME CPENTANE*
848	0.04	0.06	0.06	11C3T4-TETRME CPENT
864	0.07	0.09	0.09	1MEC3ET CYCPENTANE
861	0.30	0.37	0.39	1ME-1ET CYCPENTANE
812	0.02	0.03	0.03	1C2C3TRIMECPENTANE*
4326	0.01	0.01	0.01	C-9 CYCLOPENTANE B
862	0.02	0.03	0.03	1ME-C2ET CYPENTANE

CYCLOHEXANES

CODE	MOL.	VOL.	WT.	NAME
825	0.23	0.22	0.23	CYCLOHEXANE
826	0.53	0.59	0.60	ME CYCLOHEXANE
831	0.06	0.08	0.08	1C3-DIME CYCHEXANE
830	0.05	0.06	0.06	1T2-DIME CYCHEXANE

832	0.11	0.14	0.14	1T3-DIME CYCHEXANE
833	0.05	0.07	0.07	1C4-DIME CYCHEXANE
829	0.03	0.04	0.04	1C2-DIME CYCHEXANE
827	0.13	0.16	0.17	ETHYL CYCLOHEXANE
946	0.03	0.05	0.05	113-TRIME CYCHEXANE
979	0.02	0.03	0.03	C-9 CYLOHEXANES
956	0.04	0.06	0.06	1C3T5-TRIME CYCHEX
950	0.02	0.03	0.03	1T2C3-TRIME CYCHEX
945	0.01	0.02	0.02	112-TRIME CYCHEXANE
941	0.08	0.12	0.12	1ME-C3ET CYCHEXANE
944	0.03	0.04	0.04	1ME-T4ET CYCHEXANE
940	0.07	0.09	0.10	1ME-1-ET CYCHEXANE
949	0.04	0.05	0.06	1C2T3-TRIME CYCHEX
943	0.02	0.03	0.03	1M-C4-ET CYCHEXANE
948	0.07	0.10	0.10	1C2C3-TRIME CYCHEX
836	0.02	0.03	0.03	ISOPR CYCLOHEXANE
835	0.02	0.03	0.03	N-PR CYCLOHEXANE
980	0.03	0.05	0.05	C-10 CYCLOHEXANES

OLEFINS, DIENES

CODE	MOL.	VOL.	WT.	NAME
304	0.02	0.02	0.01	TRANS-2-BUTENE
303	0.03	0.02	0.02	C1S-2-BUTENE
310	0.05	0.04	0.04	3-METHYL-1-BUTENE
306	0.23	0.22	0.18	1-PENTENE
309	0.46	0.44	0.38	2-METHYL-1-BUTENE
509	0.01	0.01	0.01	ISOPRENE
308	0.75	0.70	0.60	TRANS-2-PENTENE
327	0.01	0.01	0.01	3,3-DIME BUTENE
307	0.42	0.39	0.34	CIS-2-PENTENE
311	1.13	1.05	0.92	2-METHYL-2-BUTENE
505	0.03	0.02	0.02	T-13-PENTADIENE
504	0.09	0.08	0.07	C-13-PENTADIENE
450	0.17	0.13	0.13	CYCLOPENTENE
318	0.10	0.11	0.10	3-METHYL-1-PENTENE
323	0.07	0.08	0.07	C-4ME-2-PENTENE
324	0.13	0.14	0.13	T-4ME-2-PENTENE
317	0.22	0.24	0.22	2-ME-1-PENTENE
312	0.12	0.13	0.11	1-HEXENE
315	0.33	0.35	0.32	CIS-3-HEXENE
314	0.39	0.42	0.38	TRANS-2-HEXENE
320	0.37	0.39	0.35	2-METHYL-2-PENTENE
321	0.22	0.23	0.21	C-3ME-2-PENTENE
313	0.19	0.21	0.19	CIS-2-HEXENE
2005	0.01	0.01	0.01	33-DIME-1-PENTENE
4500	0.01	0.01	0.01	HEPTENE A
2011	0.01	0.01	0.01	44-DIME-C2-PENTENE
451	0.37	0.34	0.35	1-ME CYLCOPENTENE
2004	0.02	0.03	0.02	24-DIME-1-PENTENE
2017	0.01	0.01	0.01	3-ET 1-PENTENE
403	0.01	0.01	0.01	HEPTENES
2003	0.02	0.03	0.03	23-DIME-1-PENTENE

2024	0.01	0.02	0.01	5-ME-1-HEXENE
2009	0.03	0.04	0.04	24-DIME-CIS2-PENTENE
403	0.01	0.01	0.01	HEPTENES
403	0.01	0.02	0.01	HEPTENES
2033	0.07	0.08	0.07	2-ME-T3-HEXENE
2031	0.04	0.05	0.05	5-ME-T2-HEXENE
2030	0.03	0.04	0.03	5-ME-C2-HEXENE
2010	0.02	0.03	0.03	34-DIME-C2-PENTENE
2038	0.09	0.11	0.10	1-HEPTENE
2035	0.05	0.06	0.06	3-ME-T3-HEXENE
5370	0.10	0.10	0.11	C-7 CYCLOPENTENE A
5371	0.09	0.10	0.10	C-7 CYCLOPENTENE B
2042	0.12	0.14	0.13	T3-HEPTENE
2025	0.12	0.15	0.14	2-ME-2-HEXENE
2034	0.09	0.11	0.10	3-ME-C3-HEXENE
2018	0.08	0.09	0.09	3-ET-2-PENTENE
2040	0.15	0.18	0.17	TRANS-2-HEPTENE
2008	0.11	0.13	0.12	23-DIME-C2-PENTENE
2039	0.06	0.08	0.07	CIS-2-HEPTENE
4526	0.01	0.01	0.01	OCTENE B
4529	0.01	0.01	0.01	OCTENE E
4530	0.00	0.01	0.01	OCTENE F
4527	0.01	0.02	0.02	OCTENE C
4532	0.02	0.02	0.02	OCTENE H
4528	0.05	0.06	0.06	OCTENE D
4533	0.03	0.03	0.03	OCTENE I
4534	0.03	0.04	0.04	OCTENE J
404	0.01	0.02	0.02	OCTENES
4531	0.01	0.02	0.01	OCTENE G
2212	0.01	0.01	0.01	6-ME-C2-HEPTENE
2213	0.01	0.01	0.01	6-ME-T2-HEPTENE
2193	0.06	0.08	0.07	1-OCTENE
2198	0.06	0.09	0.08	C4-OCTENE
4536	0.03	0.04	0.04	OCTENE L

AROMATIC HCS

CODE	MOL.	VOL.	WT.	NAME	
600	1.51	1.17	1.37	BENZENE	
601	7.21	6.68	7.66	TOLUENE	
602	1.80	1.92	2.21	ETHYLBENZENE	
604	3.36	3.60	4.12	M-XYLENE	
605	1.37	1.48	1.68	P-XYLENE	
603	1.96	2.06	2.40	O-XYLENE	*
607	0.08	0.10	0.11	CUMENE	
644	0.40	0.49	0.56	N-PROPYL BENZENE	
609	1.19	1.44	1.64	1-ME-3-ET BENZENE	
610	0.53	0.64	0.73	1-ME-4-ET BENZENE	
613	0.60	0.73	0.83	135-TRIME BENZENE	
608	0.37	0.44	0.51	1-ME-2-ET BENZENE	*
612	1.81	2.17	2.51	124-TRIME BENZENE	*
615	0.05	0.07	0.08	ISOBUTYLBENZENE	
616	0.05	0.07	0.08	SEC BUTYLBENZENE	

611	0.43	0.51	0.60	123-TRIME BENZENE *
622	0.03	0.04	0.05	M-CYMENE
623	0.02	0.03	0.03	P-CYMENE
650	0.20	0.22	0.28	INDAN *
621	0.02	0.03	0.04	O-CYMENE *
646	0.14	0.19	0.21	13-DIETHYL BENZENE
647	0.24	0.32	0.37	1-ME-3-PR BENZENE
648	0.21	0.28	0.32	1-ME-4-PR BENZENE
651	0.27	0.36	0.41	12-DIET BENZENE *
653	0.08	0.11	0.12	1-ME-2-PR BENZENE *
654	0.21	0.28	0.32	14-DIME2ET BENZENE *
655	0.13	0.18	0.20	13-DIME4ET BENZENE *
656	0.28	0.38	0.43	12-DIME4ET BENZENE *
659	0.08	0.10	0.12	12-DIME3ET BENZENE
685	0.02	0.03	0.03	2-PHENYL-2ME BUTANE
683	0.01	0.01	0.02	1-PHENYL-3ME BUTANE
635	0.14	0.18	0.21	1245-TETME BENZENE *
634	0.23	0.30	0.36	1235-TETME BENZENE *
7800	0.12	0.14	0.18	METHYLINDANE A
660	0.05	0.07	0.08	1-ME35DIET BENZENE
773	0.02	0.03	0.04	C-11 AROMATIC K
7801	0.15	0.18	0.24	METHYLINDANE B
7004	0.06	0.08	0.11	C-11 AROMATIC E
633	0.06	0.08	0.10	1234-TETME BENZENE *
715	0.03	0.03	0.04	TETRALIN *
755	0.06	0.08	0.09	1-ME-3NBU BENZENE
7099	0.02	0.03	0.03	PENTYLBENZENE
768	0.02	0.04	0.04	13-DIME-4PR BENZENE
769	0.02	0.03	0.03	1-ME-35DIET BENZENE
714	0.30	0.34	0.45	NAPHTHALENE *
698	0.06	0.09	0.10	12-DIME-3PR BENZENE
7830	0.04	0.05	0.06	DIMETHYLINDANE A
7831	0.11	0.14	0.18	DIMETHYLINDANE B
7833	0.01	0.01	0.02	DIMETHYLINDANE D
699	0.03	0.04	0.04	135-TRIME-2ETBENZENE
771	0.04	0.05	0.06	125-TRIME-3ETBENZENE
693	0.03	0.04	0.04	124-TRIME-5ETBENZENE
694	0.04	0.06	0.07	123-TRIME-5ETBENZENE
695	0.01	0.02	0.02	124-TRIME-3ETBENZENE
7030	0.01	0.02	0.02	C-12 AROMATIC A
7104	0.02	0.03	0.03	135-TRIETHYLBENZENE
772	0.04	0.06	0.06	123-TRIME4ET BENZENE
7101	0.01	0.02	0.02	T-BUTYL-DIMEBENZENES
7034	0.02	0.02	0.03	C-12 AROMATIC E
7835	0.05	0.07	0.09	DIMETHYLINDANE F
7836	0.05	0.07	0.09	DIMETHYLINDANE G
7837	0.05	0.07	0.08	C-11 INDANE H
636	0.03	0.04	0.05	PENTAMETHYLBENZENE
796	0.26	0.32	0.43	2-ME NAPHTHALENE *
795	0.12	0.15	0.20	1-ME NAPHTHALENE *
7910	0.02	0.02	0.03	1-ETHYL NAPHTHALENE
7908	0.01	0.01	0.02	26-DIME NAPHTHALENE
7909	0.01	0.01	0.02	27-DIME NAPHTHALENE
7901	0.02	0.02	0.03	13-DIME NAPHTHALENE

7904	0.01	0.01	0.02	16-DIME NAPHTHALENE

UNCLASSIFIED HCS

CODE	MOL.	VOL.	WT.	NAME
1009	25.60	16.50	17.17	2-ME 2-PROPANOL
188	0.04	0.05	0.05	UNCLASS. H.C. C- 8
188	0.01	0.01	0.01	UNCLASS. H.C. C- 8
188	0.04	0.06	0.06	UNCLASS. H.C. C- 8
188	0.02	0.02	0.02	UNCLASS. H.C. C- 8
189	0.03	0.04	0.04	UNCLASS. H.C. C- 9
189	0.01	0.02	0.02	UNCLASS. H.C. C- 9
189	0.02	0.04	0.03	UNCLASS. H.C. C- 9
189	0.01	0.02	0.02	UNCLASS. H.C. C- 9
189	0.02	0.03	0.03	UNCLASS. H.C. C- 9
189	0.01	0.01	0.01	UNCLASS. H.C. C- 9
189	0.01	0.01	0.01	UNCLASS. H.C. C- 9
189	0.01	0.02	0.02	UNCLASS. H.C. C- 9
189	0.02	0.02	0.02	UNCLASS. H.C. C- 9
190	0.02	0.04	0.04	UNCLASS. H.C. C-10
4052	0.01	0.01	0.01	UNCLASSIFIED C-10 C
4053	0.01	0.02	0.02	UNCLASSIFIED C-10 D
190	0.02	0.03	0.03	UNCLASS. H.C. C-10
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
190	0.01	0.02	0.02	UNCLASS. H.C. C-10
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
4900	0.01	0.02	0.02	CIS-HYDRINDANE
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
190	0.03	0.06	0.06	UNCLASS. H.C. C-10
190	0.01	0.02	0.02	UNCLASS. H.C. C-10
190	0.04	0.07	0.07	UNCLASS. H.C. C-10
190	0.01	0.02	0.02	UNCLASS. H.C. C-10
190	0.01	0.02	0.02	UNCLASS. H.C. C-10
190	0.03	0.05	0.05	UNCLASS. H.C. C-10
190	0.01	0.01	0.01	UNCLASS. H.C. C-10
191	0.01	0.01	0.01	UNCLASS. H.C. C-11
191	0.01	0.01	0.01	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.01	0.03	0.03	UNCLASS. H.C. C-11
191	0.03	0.05	0.05	UNCLASS. H.C. C-11
191	0.02	0.03	0.03	UNCLASS. H.C. C-11
191	0.02	0.03	0.03	UNCLASS. H.C. C-11
191	0.01	0.01	0.02	UNCLASS. H.C. C-11
191	0.01	0.01	0.01	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.02	0.03	0.03	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.01	0.01	0.02	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.01	0.02	0.02	UNCLASS. H.C. C-11
191	0.01	0.01	0.01	UNCLASS. H.C. C-11

192	0.02	0.05	0.05	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
192	0.01	0.02	0.03	UNCLASS. H.C. C-12
192	0.04	0.07	0.07	UNCLASS. H.C. C-12
192	0.03	0.05	0.05	UNCLASS. H.C. C-12
192	0.02	0.03	0.04	UNCLASS. H.C. C-12
192	0.02	0.04	0.05	UNCLASS. H.C. C-12
192	0.03	0.06	0.07	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
192	0.01	0.01	0.01	UNCLASS. H.C. C-12
193	0.01	0.01	0.02	UNCLASSIFIED C-13
193	0.01	0.01	0.02	UNCLASSIFIED C-13
193	0.01	0.01	0.01	UNCLASSIFIED C-13
193	0.01	0.02	0.03	UNCLASSIFIED C-13
193	0.02	0.03	0.04	UNCLASSIFIED C-13
193	0.01	0.01	0.02	UNCLASSIFIED C-13
193	0.02	0.03	0.04	UNCLASSIFIED C-13
193	0.01	0.01	0.01	UNCLASSIFIED C-13
193	0.03	0.05	0.06	UNCLASSIFIED C-13
193	0.02	0.02	0.03	UNCLASSIFIED C-13
193	0.03	0.04	0.06	UNCLASSIFIED C-13
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.01	0.02	0.02	UNCLASSIFIED C-13
193	0.01	0.01	0.02	UNCLASSIFIED C-13
193	0.01	0.02	0.03	UNCLASSIFIED C-13
193	0.01	0.02	0.03	UNCLASSIFIED C-13
193	0.02	0.03	0.04	UNCLASSIFIED C-13
193	0.01	0.01	0.02	UNCLASSIFIED C-13
193	0.01	0.01	0.01	UNCLASSIFIED C-13
193	0.02	0.02	0.03	UNCLASSIFIED C-13
194	0.01	0.01	0.01	UNCLASSIFIED C-14
194	0.01	0.02	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.02	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.01	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.02	0.03	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14
194	0.01	0.01	0.02	UNCLASSIFIED C-14