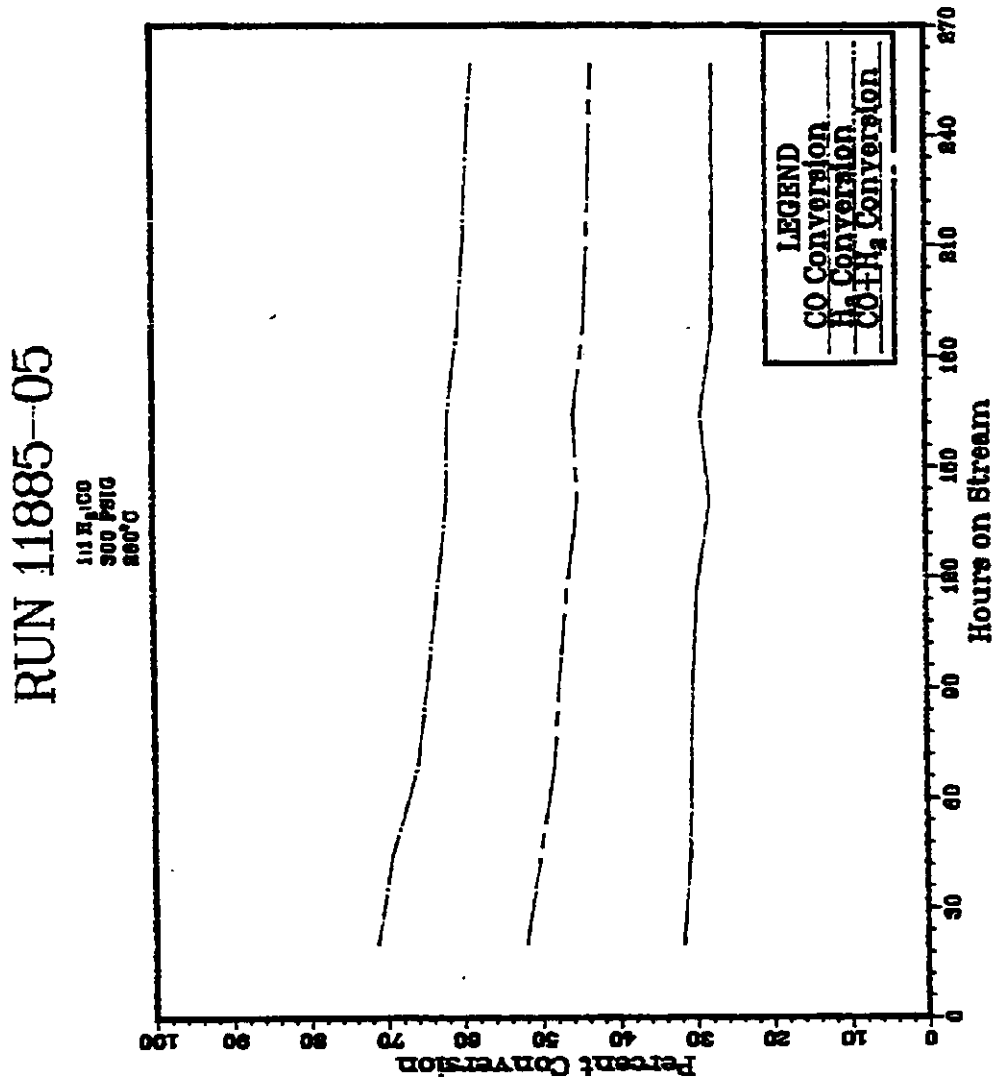
RUN 11885-05
1:1 H2:CO
300 PSIG
260°C
LEGEND
CO Conversion
H2 Conversion
CO+H2 Conversion
Percent Conversion
Hours on Stream
0
10
20
30
40
50
60
70
80
90
100
0
30
60
90
120
150
180
210
240
270

Fig. A104

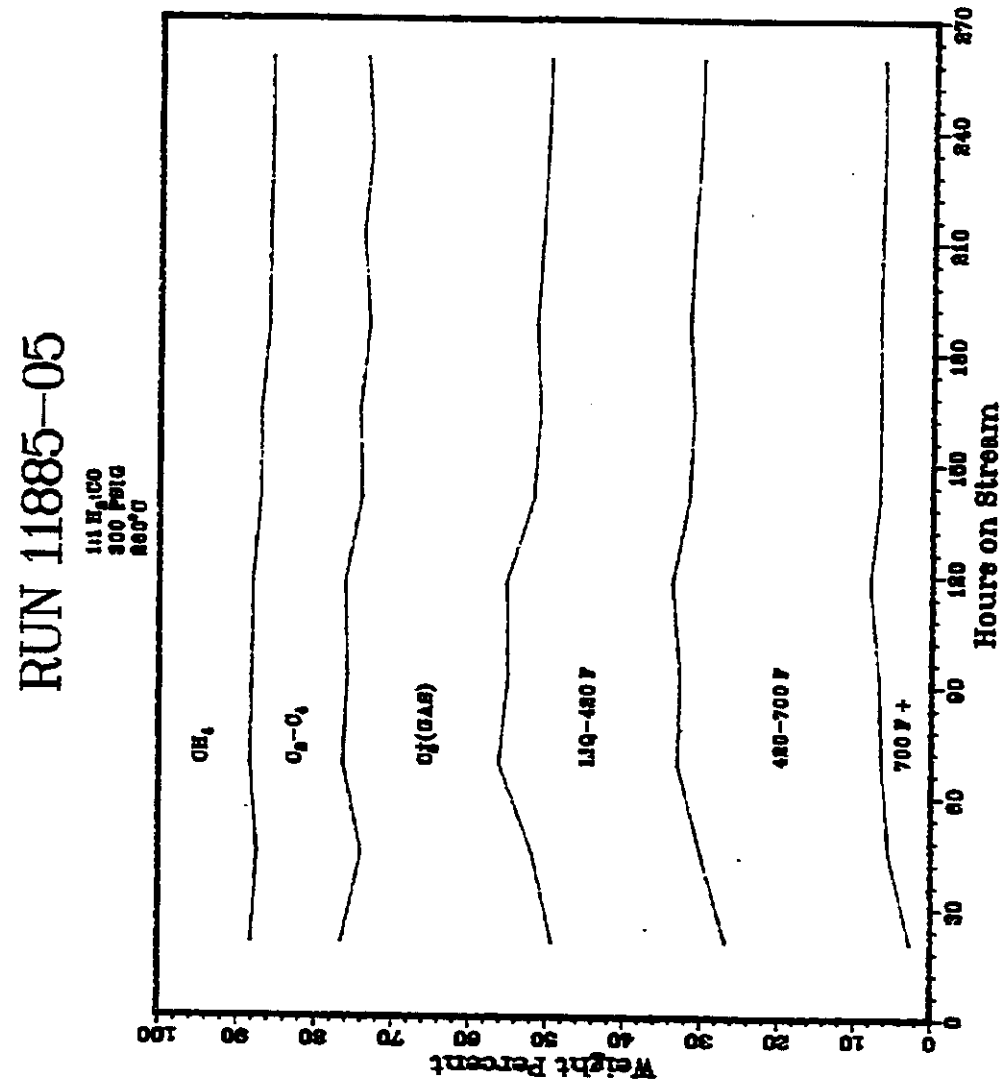
RUN 11885-05
111 H2/CO
300 PSIG
850°F
Weight Percent
Hours on Stream
0
10
20
30
40
50
60
70
80
90
100
0
30
60
90
120
150
180
210
240
270
C5+
C5-C6
C6(BTX)
180-430 F
430-700 F
700 F +

Fig. A105

RUN 11885-05

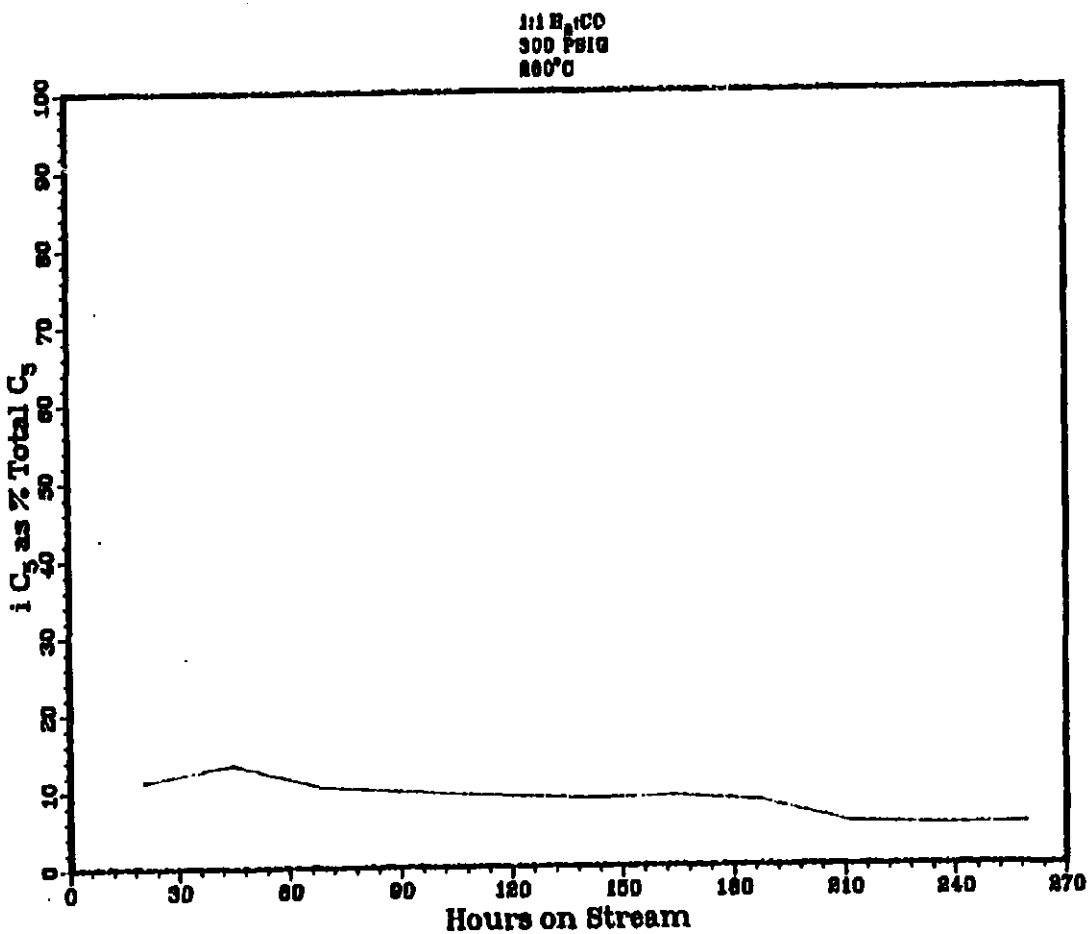

Fig. A106

RUN 11885-05

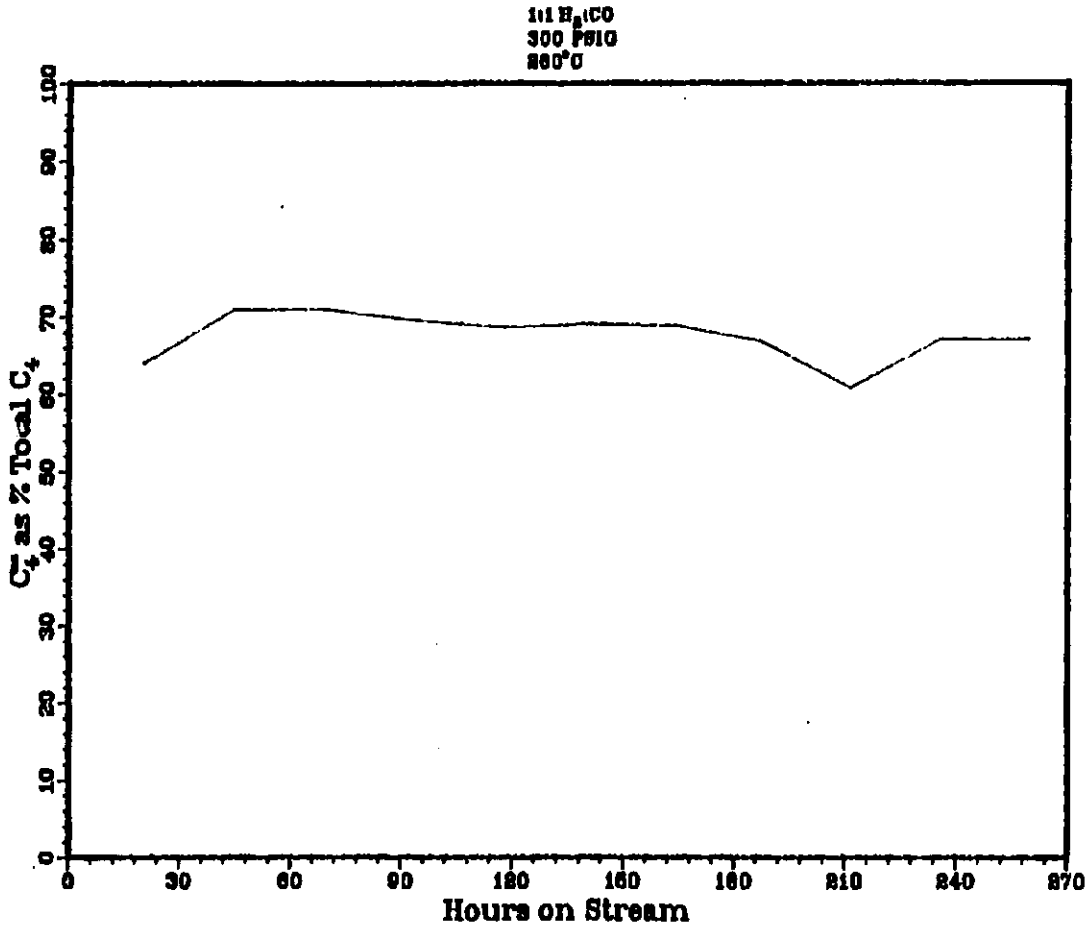

Fig. A107

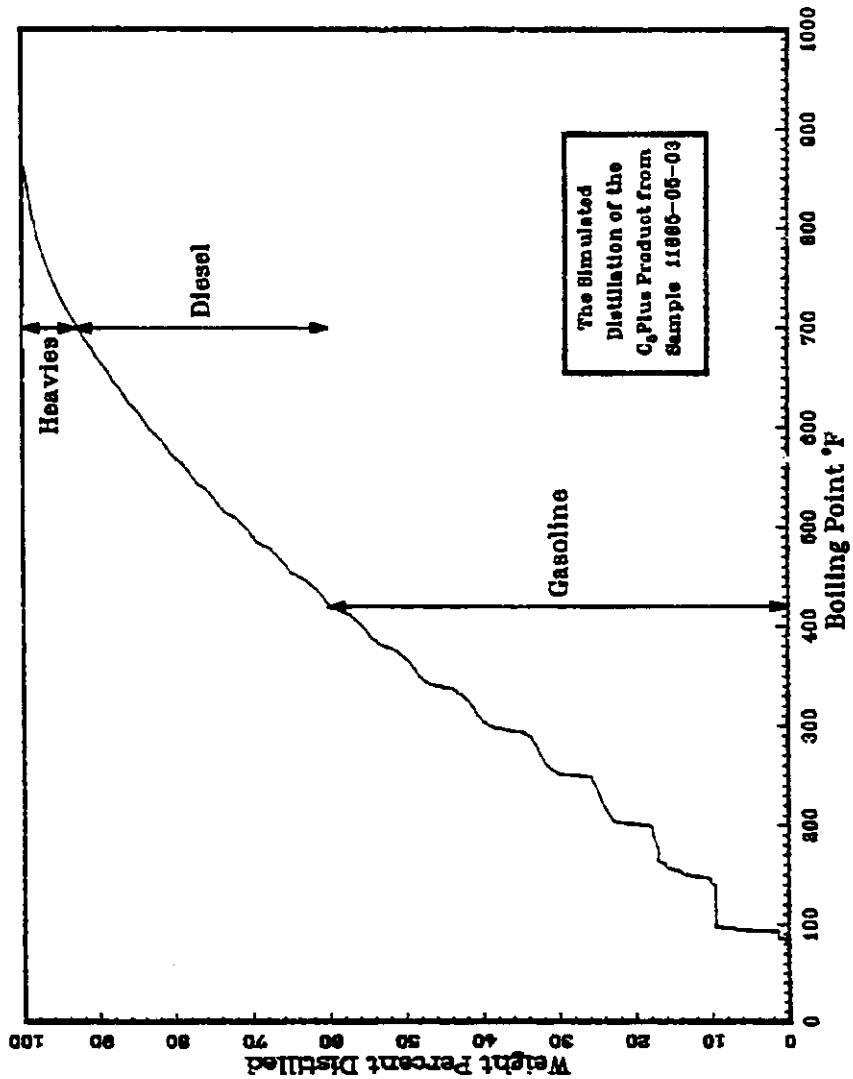
Weight Percent Distilled
0
10
20
30
40
50
60
70
80
90
100
Boiling Point °F
0
100
200
300
400
500
600
700
800
900
1000
Gasoline
Diesel
Heavies
The Simulated Distillation of the C5Plus Product from Sample 11886-05-03

Fig. A108

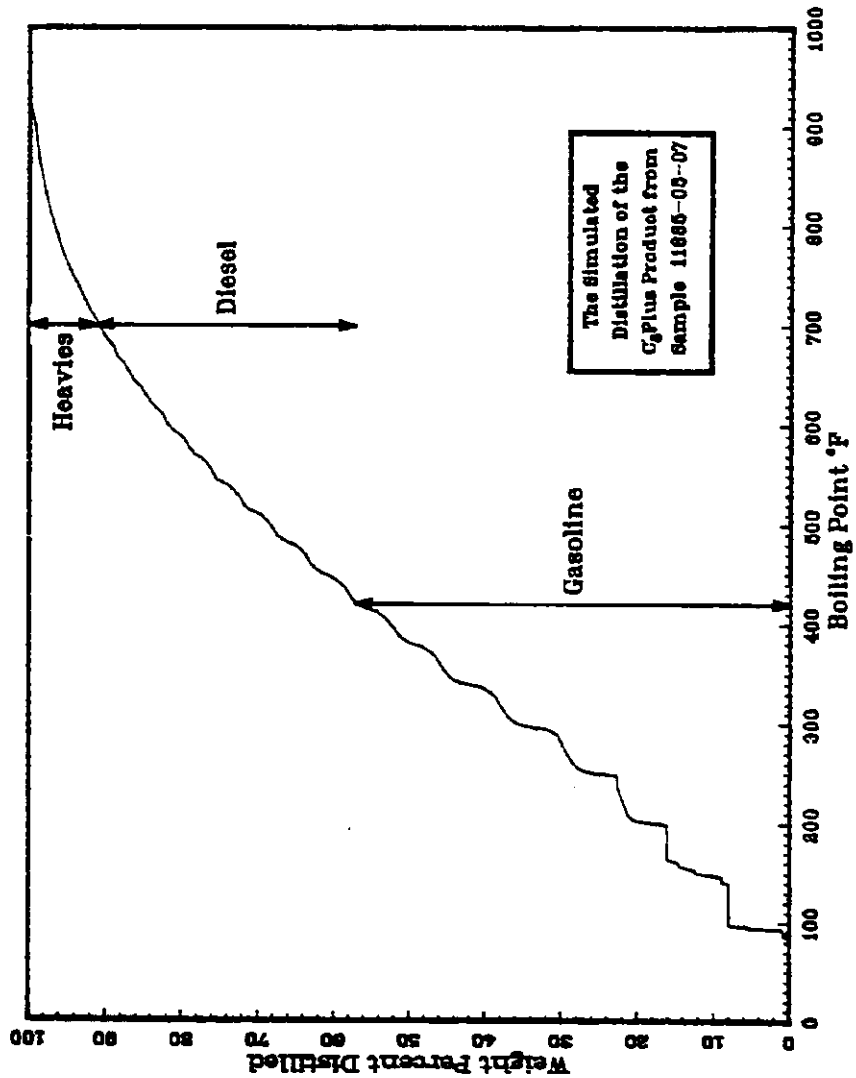
Weight Percent Distilled
0
10
20
30
40
50
60
70
80
90
100
Boiling Point °F
0
100
200
300
400
500
600
700
800
900
1000
Gasoline
Diesel
Heavies
The Simulated Distillation of the C5Plus Product from Sample 11686-05-07

Fig. A109

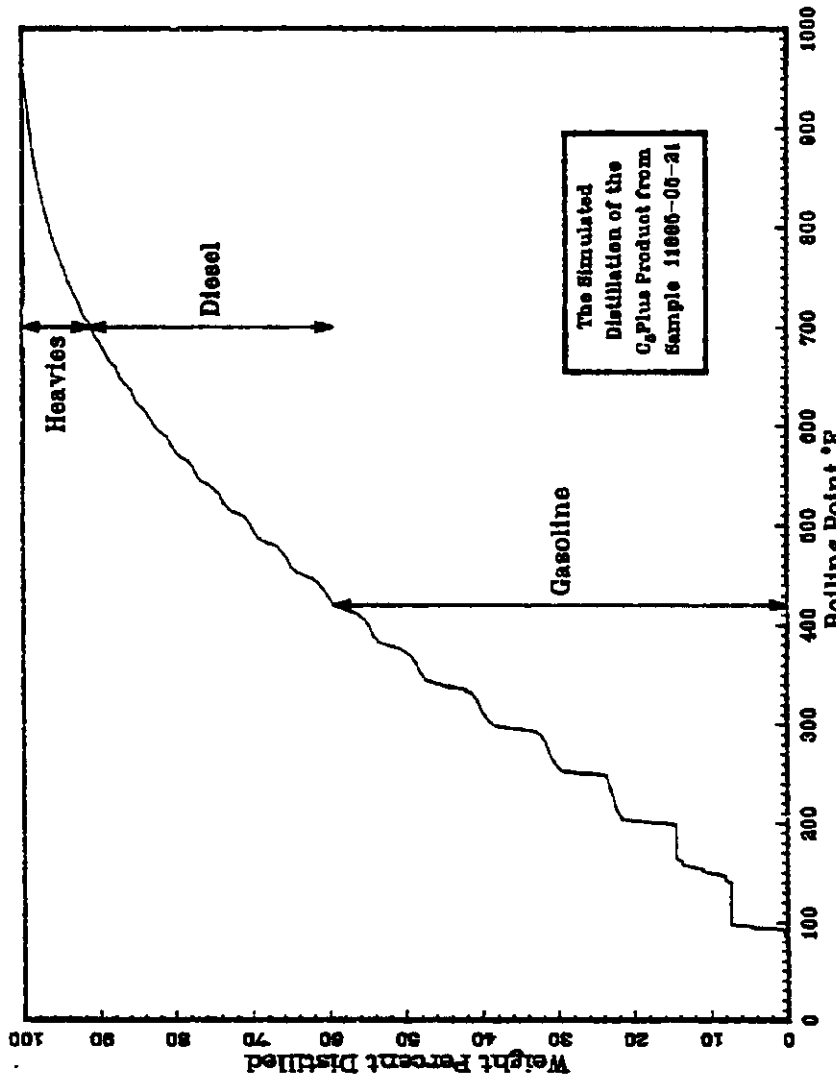
Weight Percent Distilled
0
10
20
30
40
50
60
70
80
90
100
Boiling Point °F
0
100
200
300
400
500
600
700
800
900
1000
Gasoline
Diesel
Heavies
The Simulated Distillation of the C5Plus Product from Sample 11005-05-21

Fig. A110

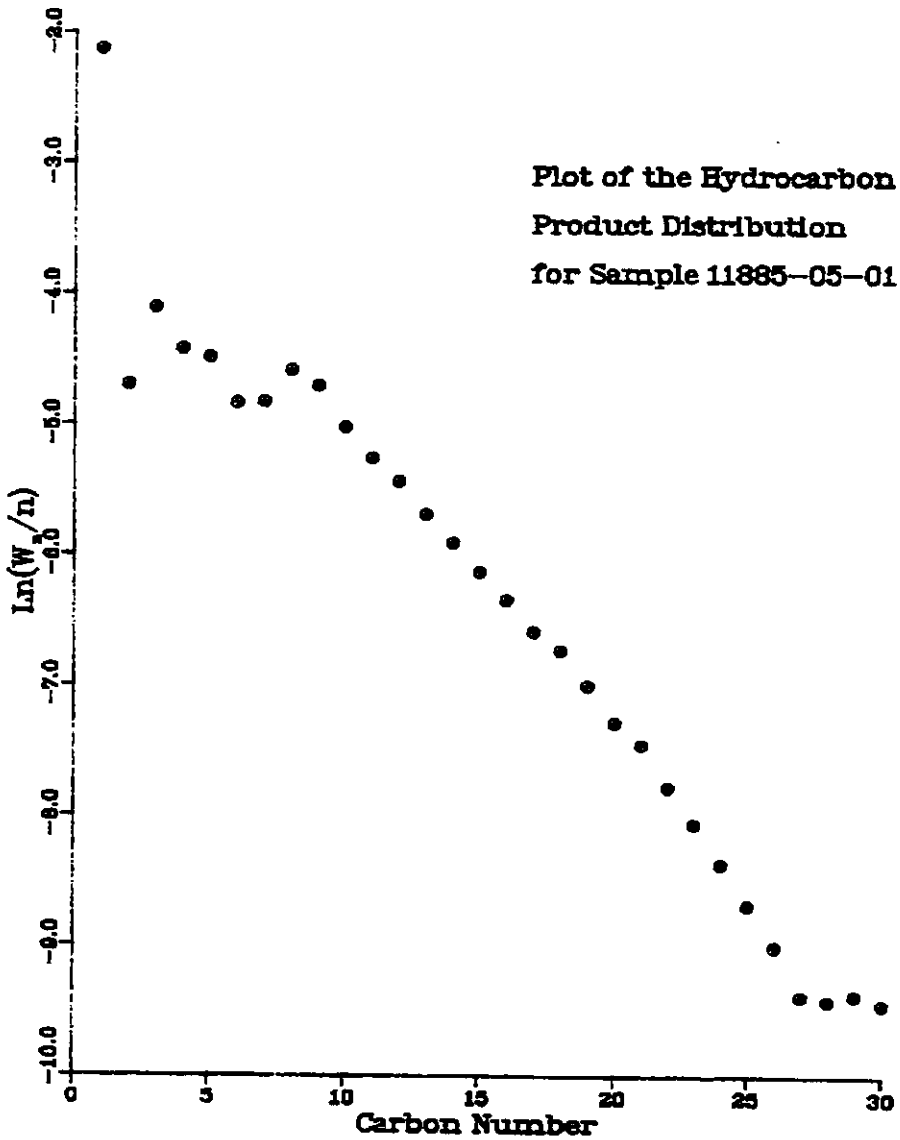
Plot of the Hydrocarbon
Product Distribution
for Sample 11885-05-01
Ln(W_n/n)
-2.0
-3.0
-4.0
-5.0
-6.0
-7.0
-8.0
-9.0
-10.0
0
5
10
15
20
25
30
Carbon Number

Fig. A111

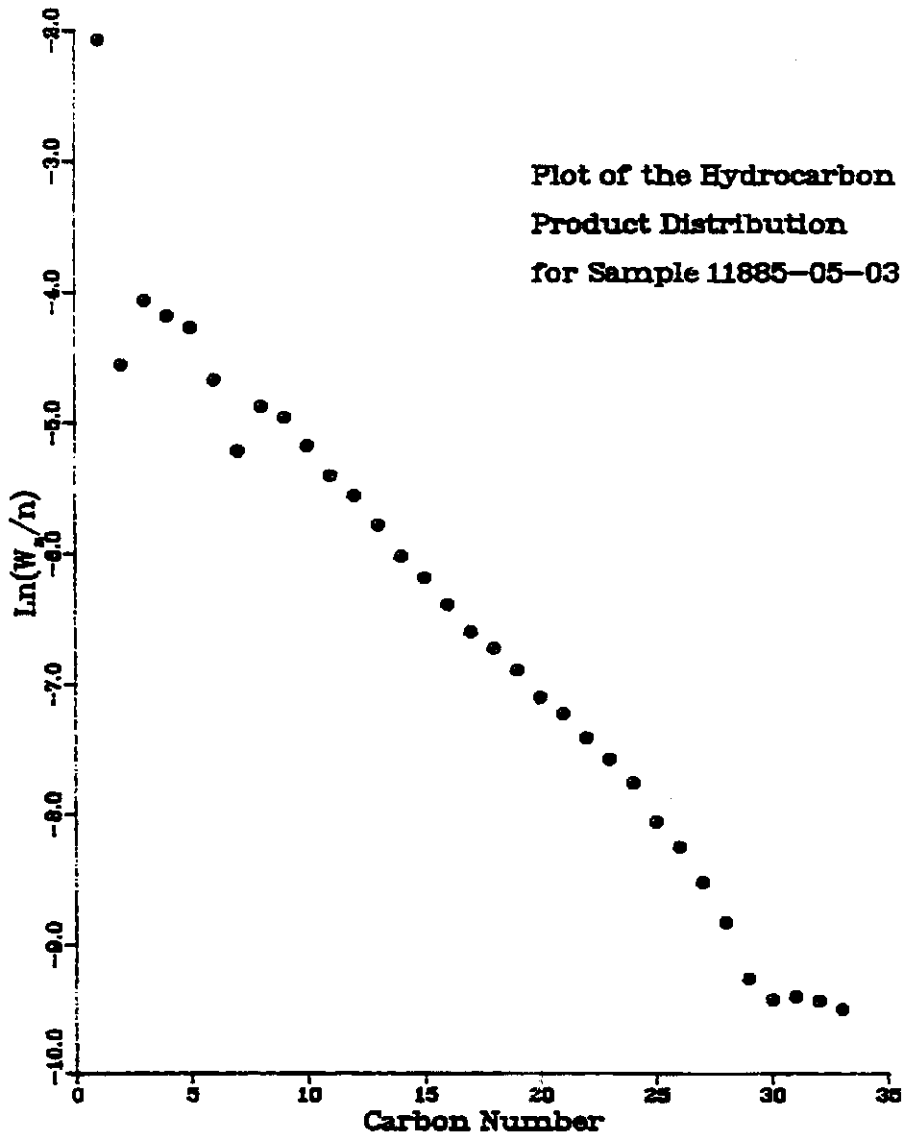
Plot of the Hydrocarbon
Product Distribution
for Sample 11885-05-03
Ln(W_n/n)
-2.0
-3.0
-4.0
-5.0
-6.0
-7.0
-8.0
-9.0
-10.0
0
5
10
15
20
25
30
35
Carbon Number

Fig. A112

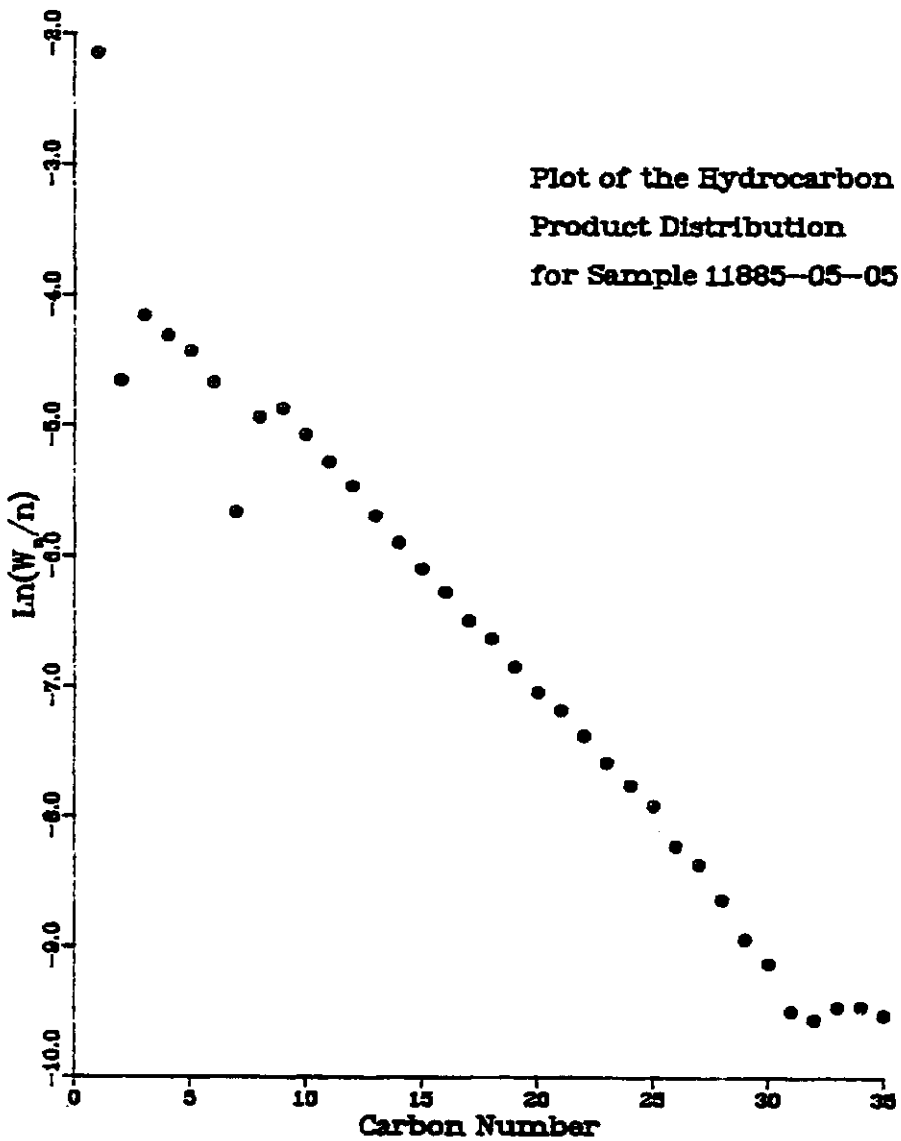
Plot of the Hydrocarbon
Product Distribution
for Sample 11885--05--05
Ln(W_n/n)
-2.0
-3.0
-4.0
-5.0
-6.0
-7.0
-8.0
-9.0
-10.0
0
5
10
15
20
25
30
35
Carbon Number

Fig. A113

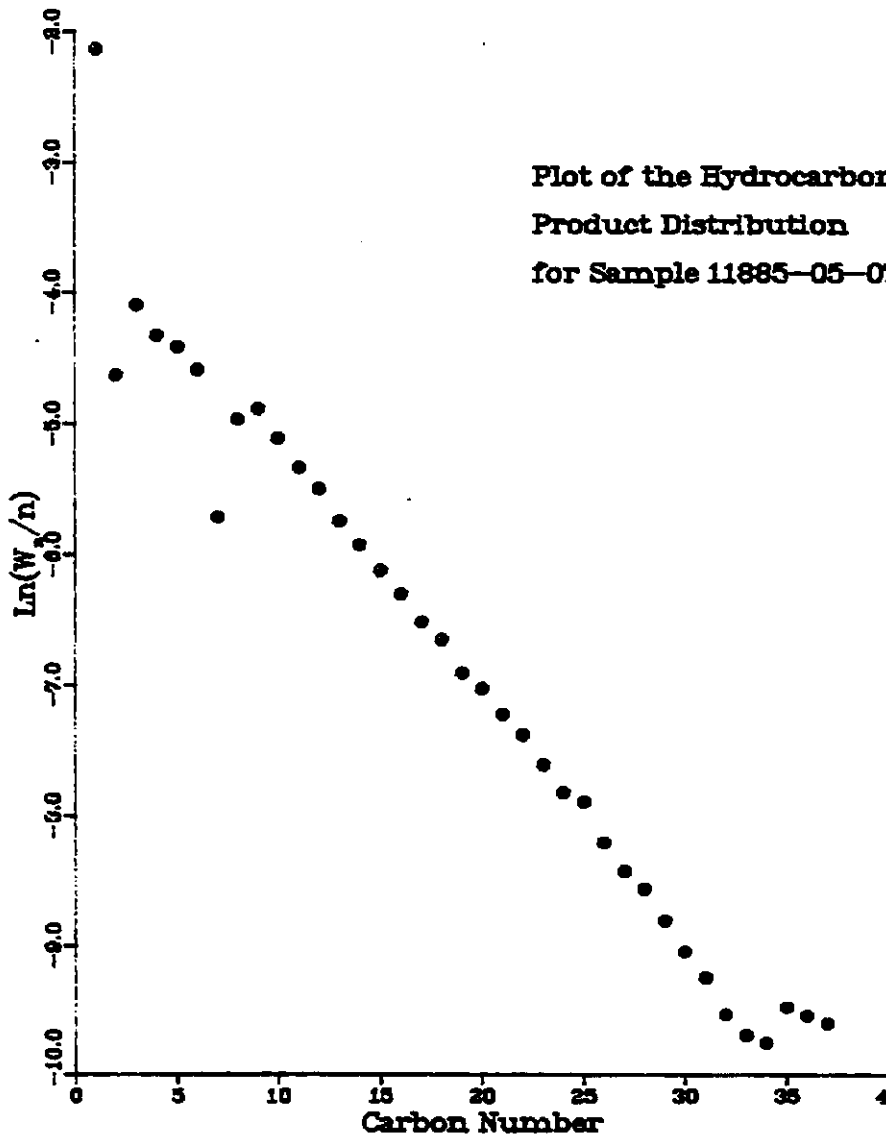
Plot of the Hydrocarbon
Product Distribution
for Sample 11885-05-07
Ln(W_n/n)
-2.0
-3.0
-4.0
-5.0
-6.0
-7.0
-8.0
-9.0
-10.0
0
5
10
15
20
25
30
35
40
Carbon Number

Fig. A114

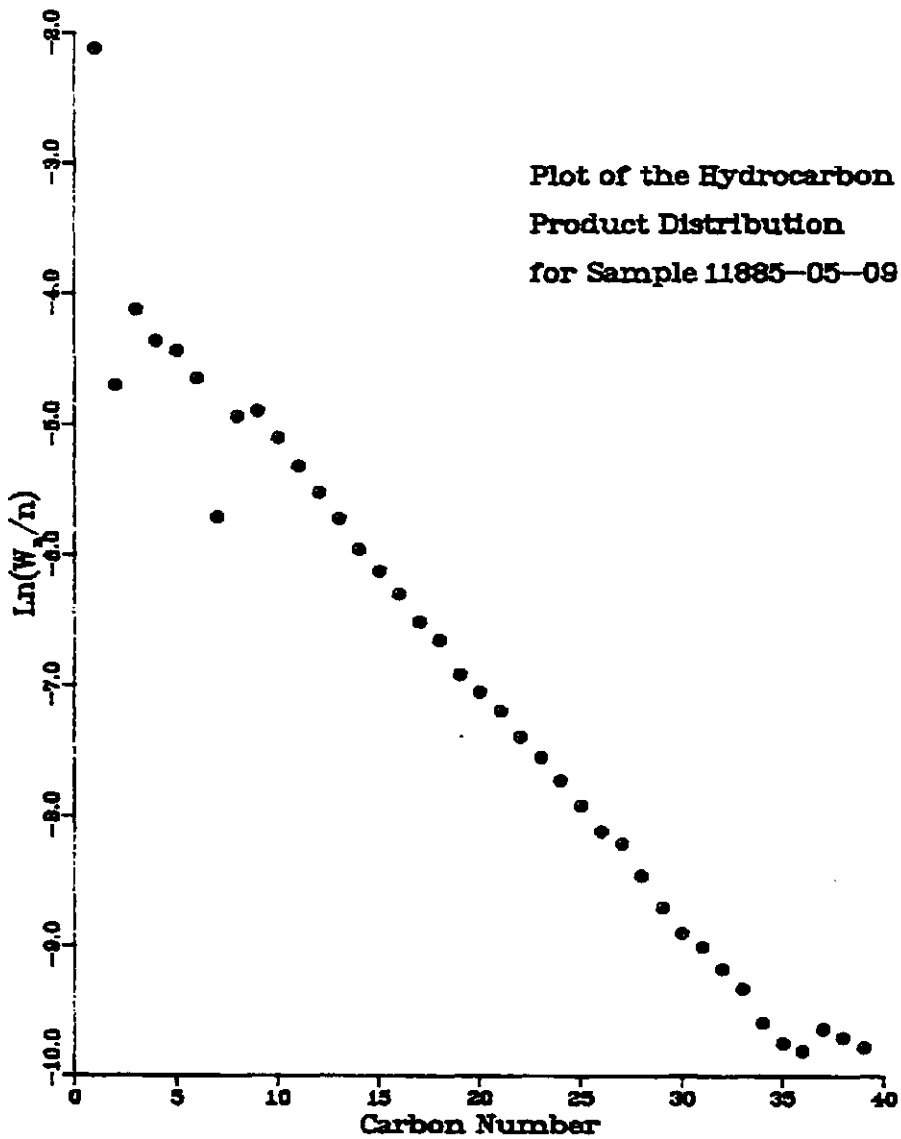
Plot of the Hydrocarbon
Product Distribution
for Sample 11885-05-09
Ln(W_n/n)
-2.0
-3.0
-4.0
-5.0
-6.0
-7.0
-8.0
-9.0
-10.0
0
5
10
15
20
25
30
35
40
Carbon Number

Fig. A115

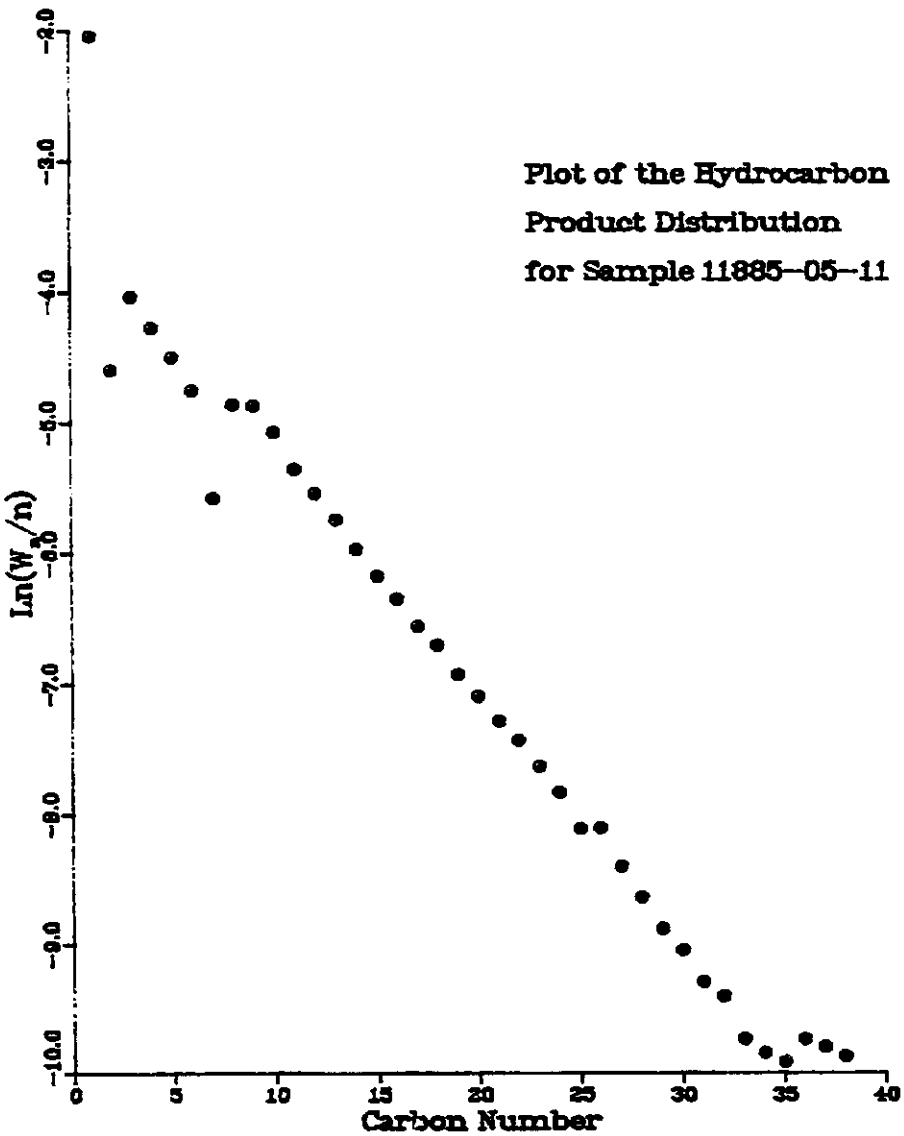
Plot of the Hydrocarbon
Product Distribution
for Sample 11885-05-11
Ln(W_n/n)
-2.0
-3.0
-4.0
-5.0
-6.0
-7.0
-8.0
-9.0
-10.0
0
5
10
15
20
25
30
35
40
Carbon Number

Fig. A116

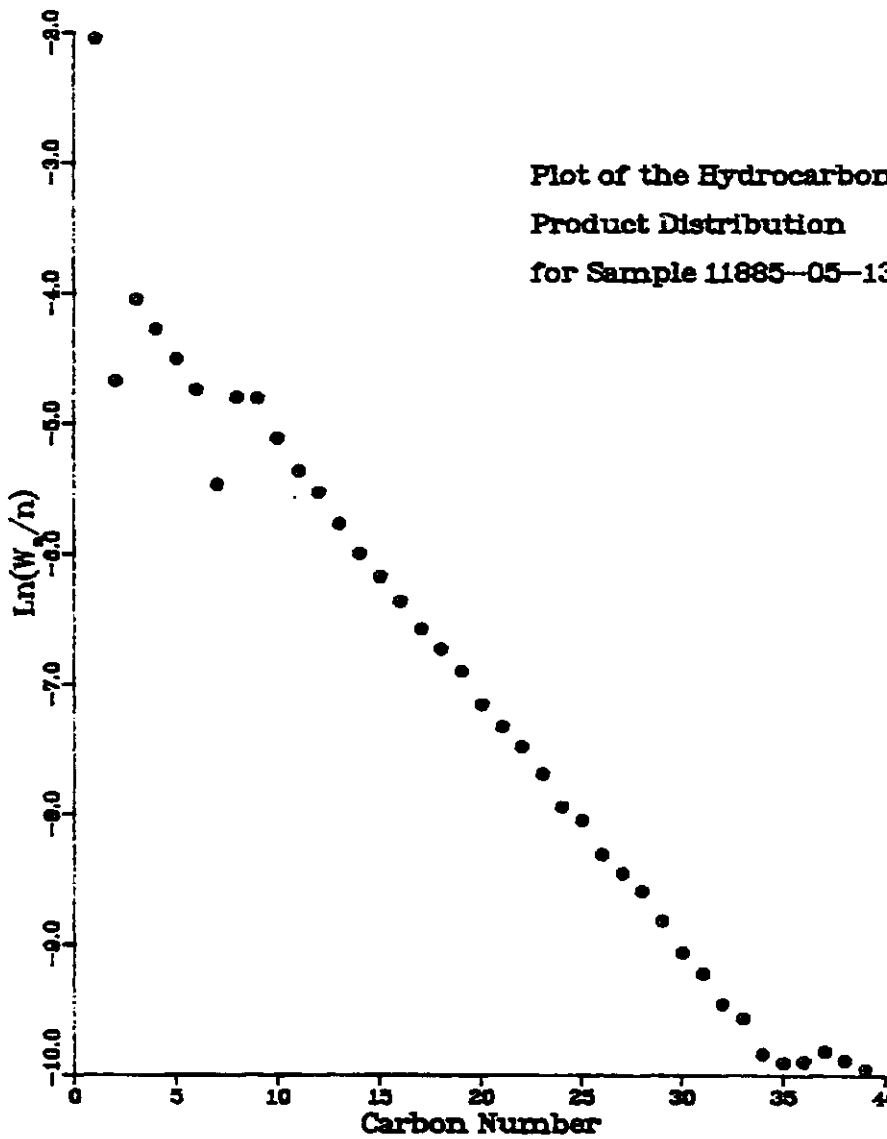
Plot of the Hydrocarbon
Product Distribution
for Sample 11885--05--13
Ln(W_n/n)
-2.0
-3.0
-4.0
-5.0
-6.0
-7.0
-8.0
-9.0
-10.0
0
5
10
15
20
25
30
35
40
Carbon Number

Fig. A117

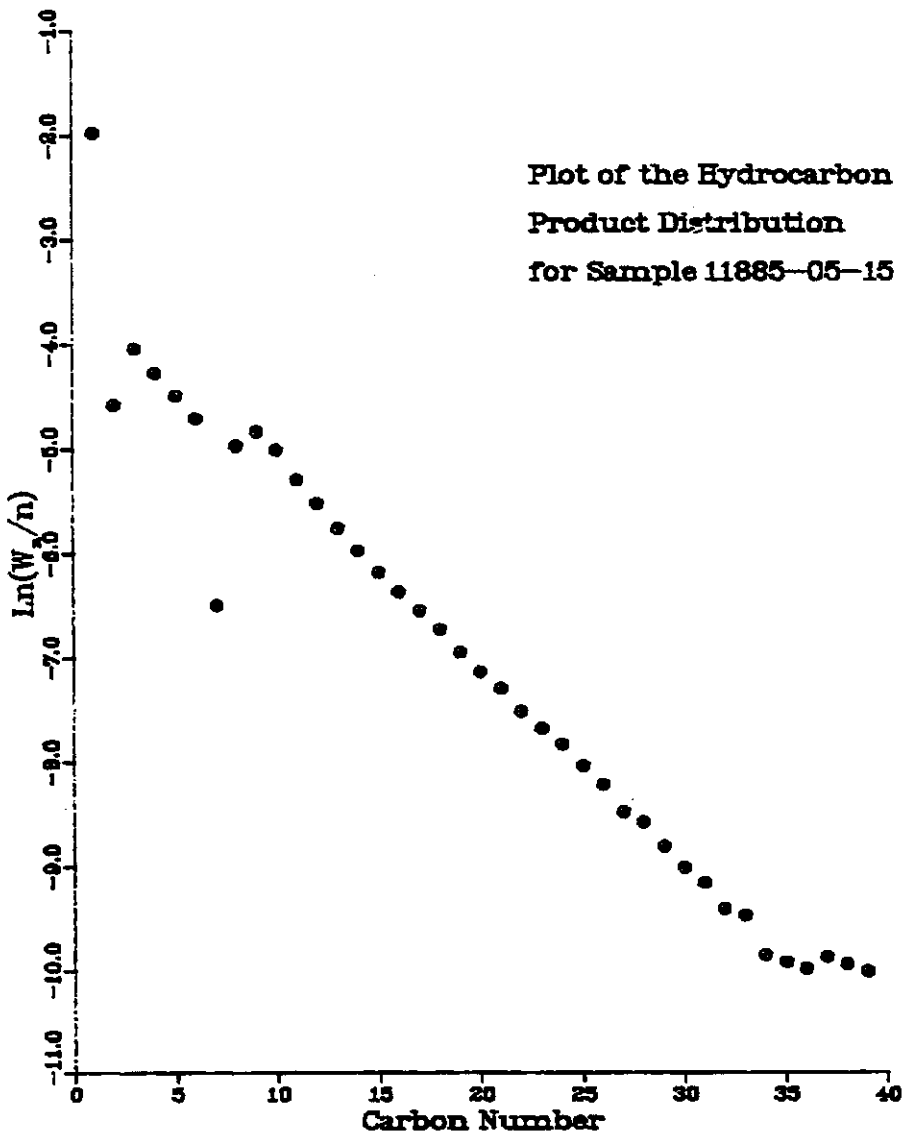
Plot of the Hydrocarbon
Product Distribution
for Sample 11885--05--15
Ln(W_n/n)
-1.0
-2.0
-3.0
-4.0
-5.0
-6.0
-7.0
-8.0
-9.0
-10.0
-11.0
0
5
10
15
20
25
30
35
40
Carbon Number

Fig. A118

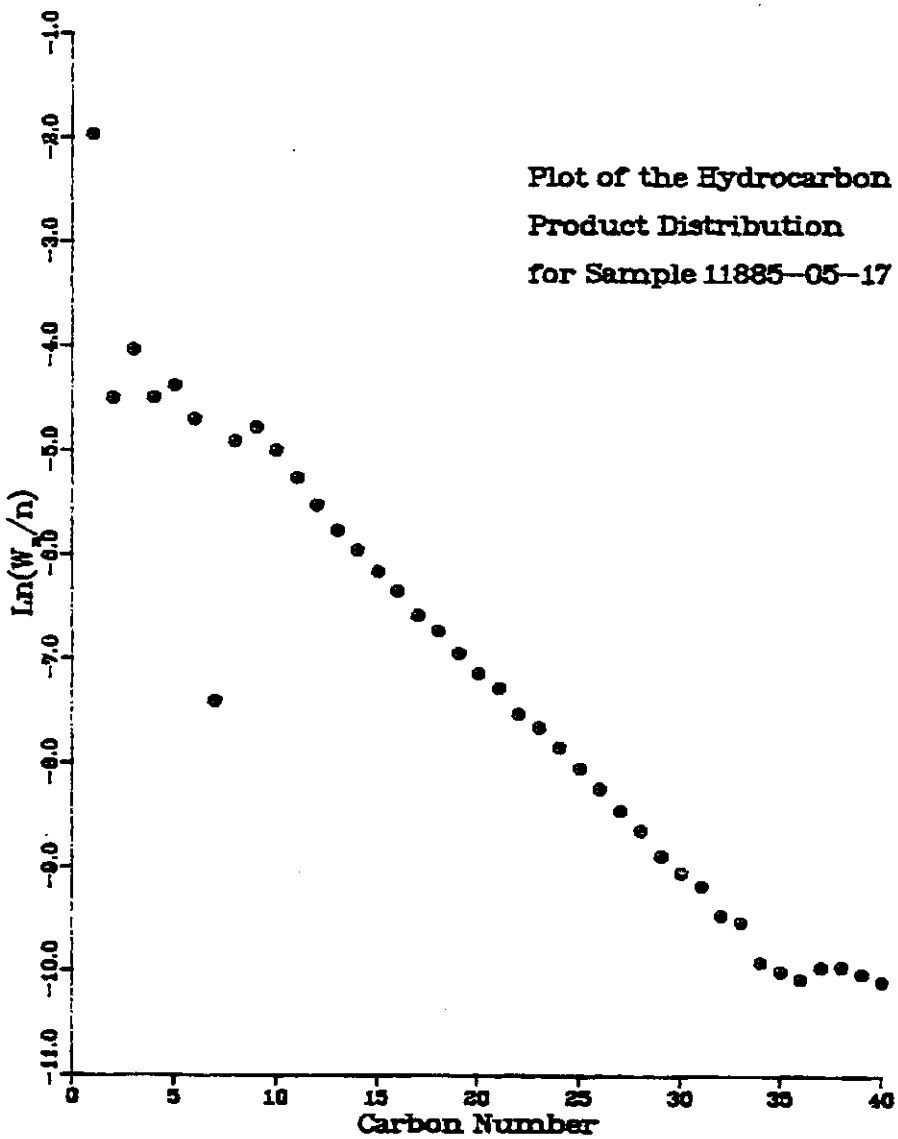
Plot of the Hydrocarbon
Product Distribution
for Sample 11885-05-17
Ln(W_n/n)
-1.0
-2.0
-3.0
-4.0
-5.0
-6.0
-7.0
-8.0
-9.0
-10.0
-11.0
0
5
10
15
20
25
30
35
40
Carbon Number

Fig. A119

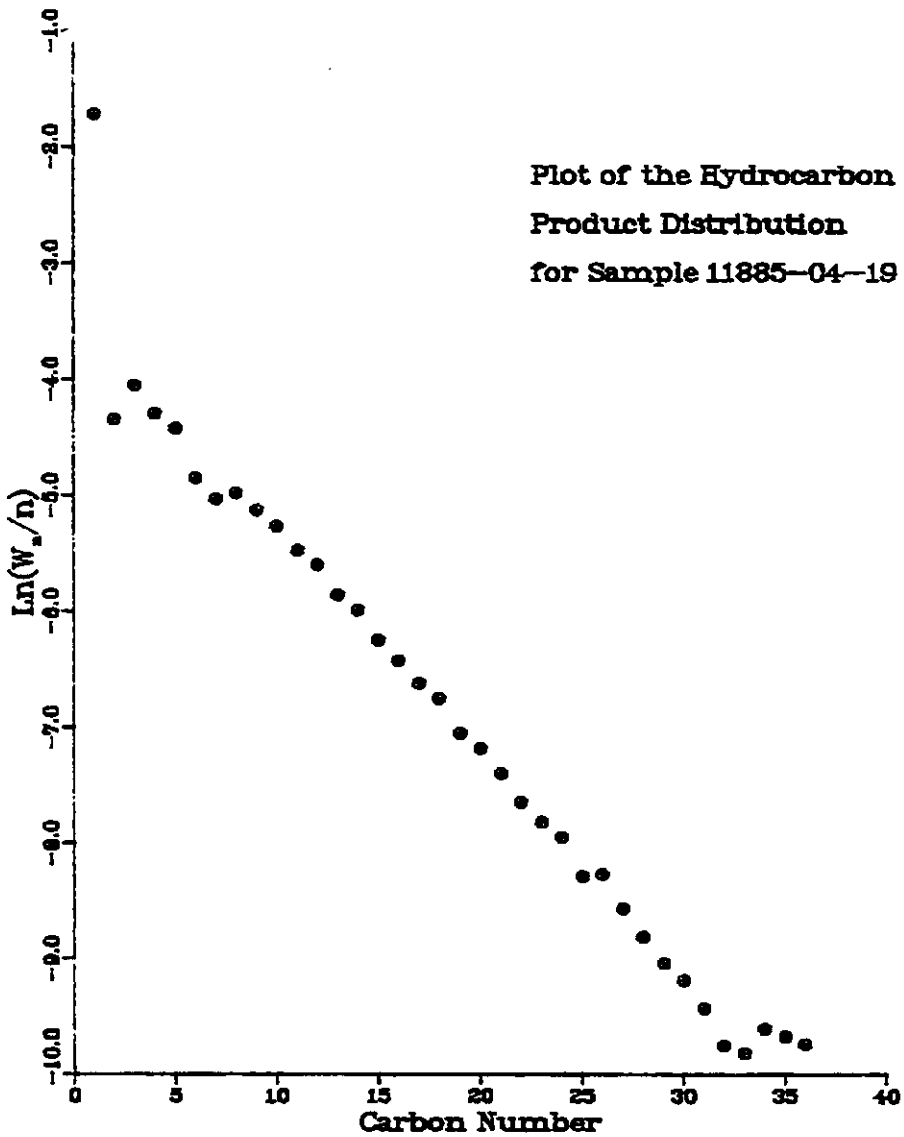
Plot of the Hydrocarbon
Product Distribution
for Sample 11885-04-19
Ln(W_n/n)
-1.0
-2.0
-3.0
-4.0
-5.0
-6.0
-7.0
-8.0
-9.0
-10.0
0
5
10
15
20
25
30
35
40
Carbon Number

Fig. A120

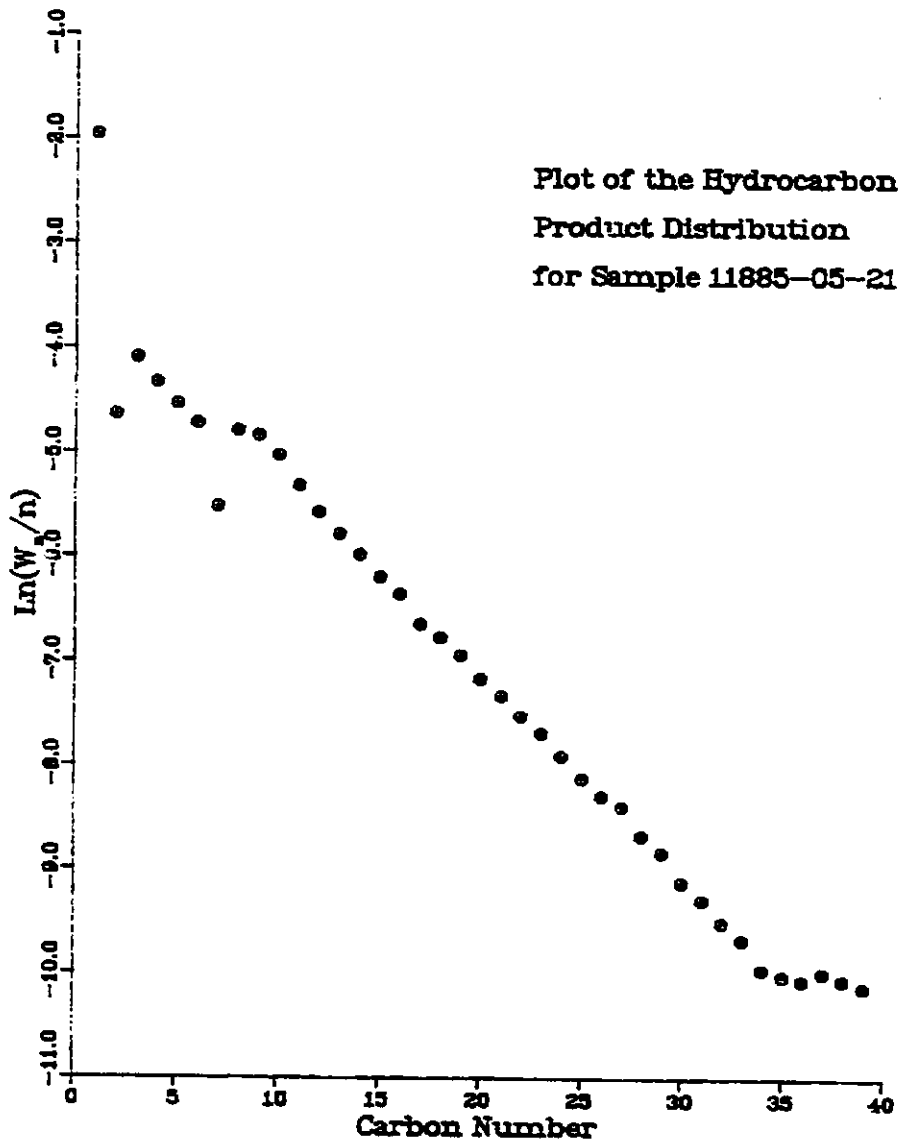
Plot of the Hydrocarbon
Product Distribution
for Sample 11885-05-21
Ln(W_n/n)
-1.0
-2.0
-3.0
-4.0
-5.0
-6.0
-7.0
-8.0
-9.0
-10.0
-11.0
0
5
10
15
20
25
30
35
40
Carbon Number

Fig. A121

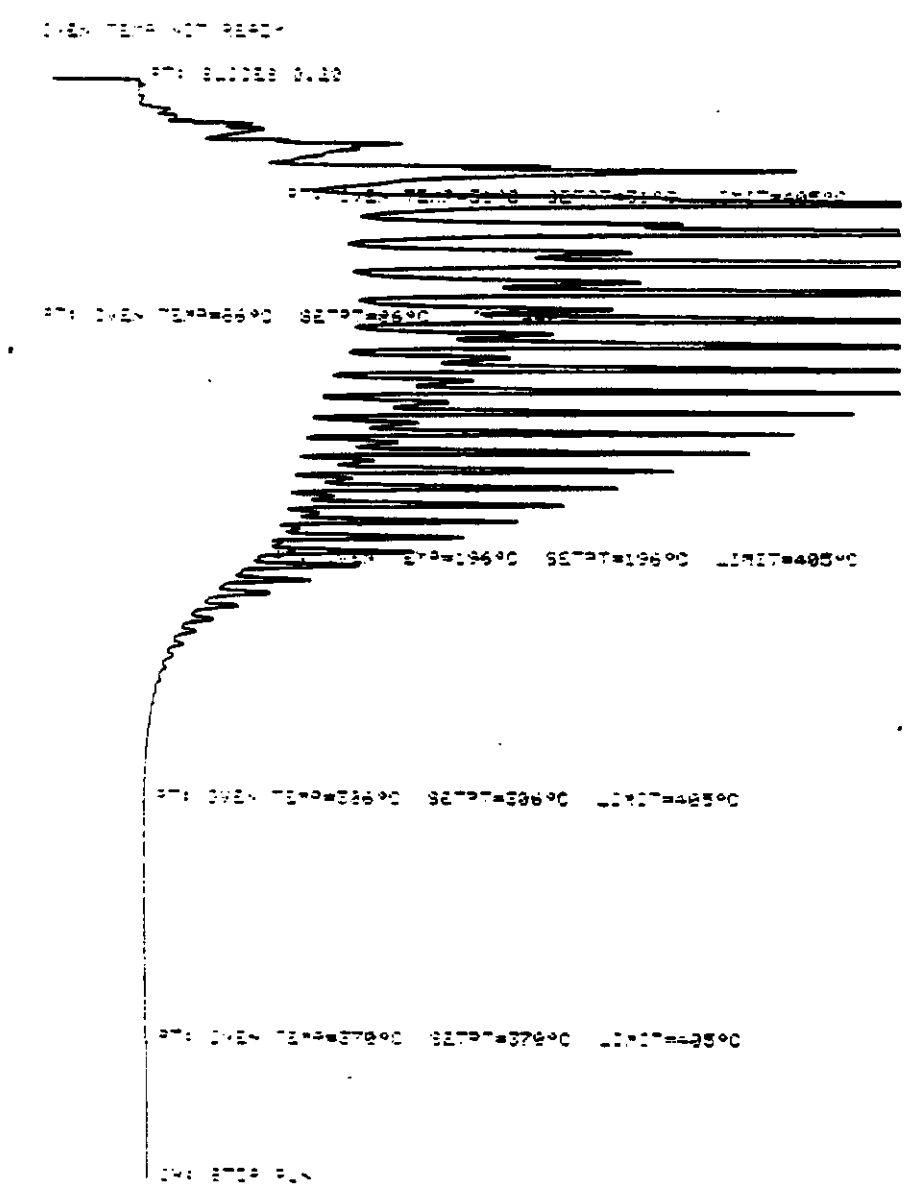

Fig. A122

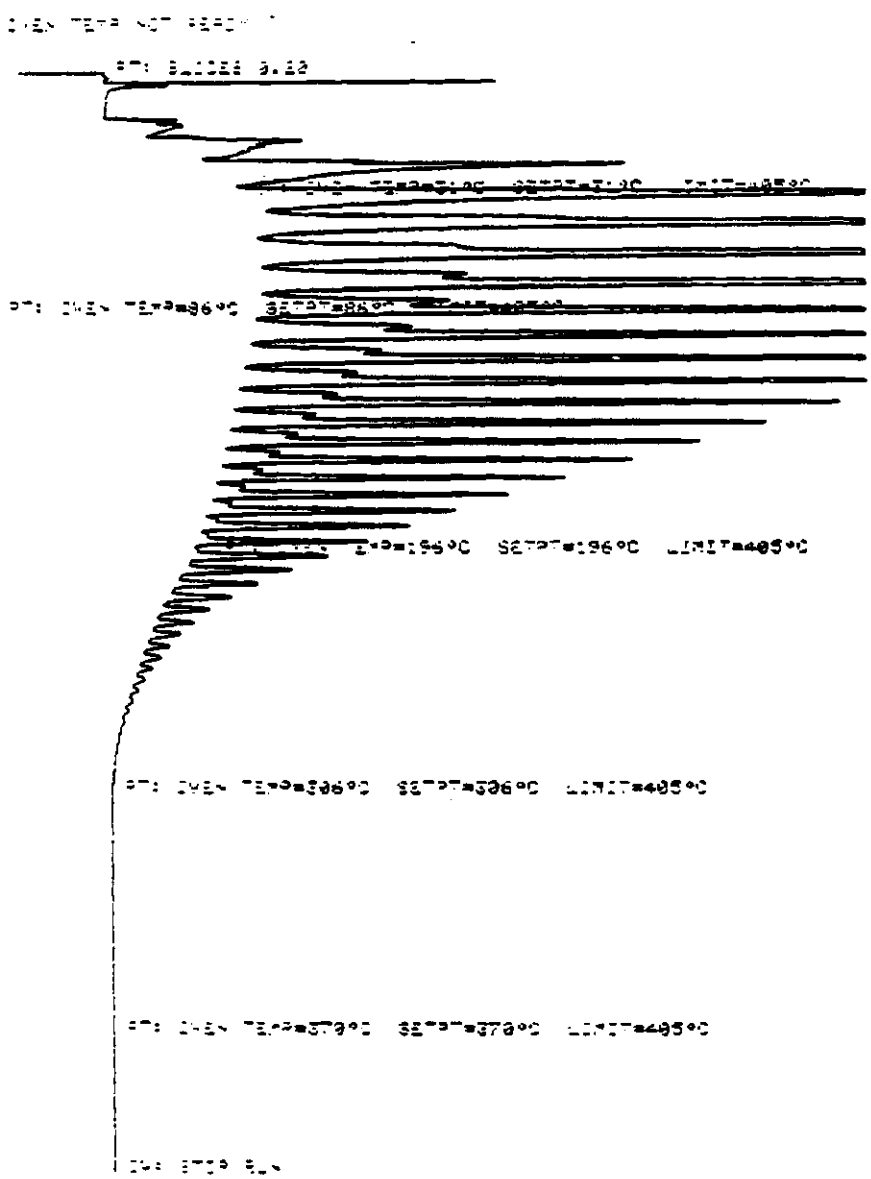

Fig. A123

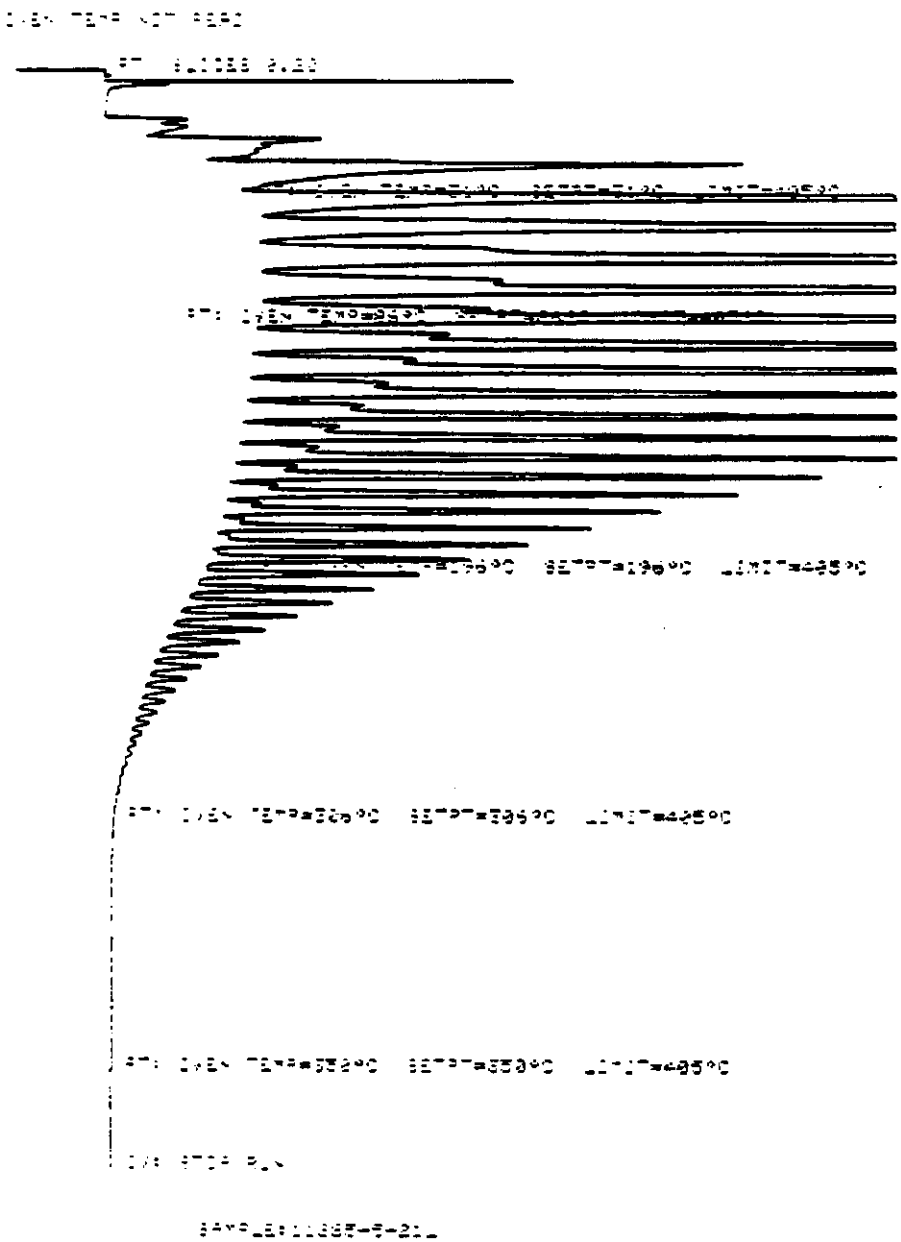

Fig. A124

Table A14

RESULT OF SYNGAS OPERATION

RUN NO. 11885-05
CATALYST Co/Th/X4/X8-U103+U101 1186427 250 CC 110.1G(138.4 @END +28.4)
FEED H2:CO:ARGON OF 50:50:0 @ 1260 CC/MN OR 302 GHSV

RUN & SAMPLE NO.	11885-05-01	885-05-03	885-05-05	885-05-07	885-05-09
FEED H2:CO:AR	50:50: 0	50:50: 0	50:50: 0	50:50: 0	50:50: 0
HRS ON STREAM	20.5	44.5	68.5	92.5	117.5
PRESSURE,PSIG	295	298	300	299	298
TEMP. C	262	264	261	261	261
FEED CC/MIN	1260	1260	1260	1260	1260
HOURS FEEDING	20.50	24.00	24.00	24.00	25.00
EFFLNT GAS LITER	751.20	942.05	1007.75	1027.95	1093.65
GM AQUEOUS LAYER	195.18	216.20	201.17	195.73	197.92
GM OIL	60.20	75.66	86.16	83.81	86.53
MATERIAL BALANCE					
GM ATOM CARBON %	89.51	94.25	98.50	98.59	99.32
GM ATOM HYDROGEN %	93.75	95.22	98.98	99.86	99.96
GM ATOM OXYGEN %	100.41	103.10	103.52	102.98	103.29
RATIO CHX/(H2O+CO2)	0.7100	0.7545	0.8505	0.8661	0.8758
RATIO X IN CHX	2.3280	2.3478	2.3320	2.3359	2.3380
USAGE H2/CO PRODT	2.3513	2.2706	2.1654	2.1512	2.1402
FEED H2/CO FRM EFFLNT	1.0473	1.0102	1.0049	1.0129	1.0064
RESIDUAL H2/CO RATIO	0.4400	0.4479	0.4921	0.5161	0.5268
RATIO CO2/(H2O+CO2)	0.0469	0.0528	0.0474	0.0471	0.0476
K SHIFT IN EFFLNT	0.0216	0.0250	0.0245	0.0255	0.0263
SPECIFIC ACTIVITY SA	1.4325	1.2037	1.2168	1.1266	1.0707
CONVERSION					
ON CO %	31.78	30.85	30.64	30.38	29.72
ON H2 %	71.34	69.34	66.04	64.53	63.21
ON CO+H2 %	52.01	50.19	48.38	47.56	46.52
PRDT SELECTIVITY,WT %					
CH4	11.94	12.59	11.68	11.88	12.05
C2 HC'S	1.82	2.10	1.89	1.95	1.81
C3H8	2.10	2.21	1.96	2.10	2.08
C3H6=	2.83	2.96	2.74	2.91	2.77
C4H10	1.76	1.82	1.59	1.65	1.63
C4H8=	3.02	4.28	3.76	3.65	3.46
C5H12	1.71	2.11	1.90	2.00	1.97
C5H10=	3.91	4.89	4.04	4.04	3.95
C6H14	2.25	2.03	2.25	2.29	2.23
C6H12= & CYCLO'S	2.51	3.60	3.33	3.83	3.51
C7+ IN GAS	16.85	9.54	8.66	8.68	9.25
LIQ HC'S	49.28	51.87	56.21	55.01	55.31
TOTAL	100.00	100.00	100.00	100.00	100.00

Table A14 (continued)

SUB-GROUPING					
C1 -C4	23.48	25.96	23.61	24.14	23.81
C5 -420 F	49.78	44.08	43.37	43.13	42.45
420-700 F	24.01	24.46	26.56	25.86	25.66
700-END PT	2.73	5.50	6.46	6.88	8.08
C5+-END PT	76.52	74.04	76.39	75.86	76.19
ISO/NORMAL MOLE RATIO					
C4	0.1250	0.0912	0.0774	0.0686	0.0603
C5	0.1273	0.1548	0.1169	0.1089	0.1015
C6	0.3995	0.2619	0.4207	0.4191	0.3432
C4=	0.0586	0.0470	0.0437	0.0480	0.0450
PARAFFIN/OLEFIN RATIO					
C3	0.7098	0.7125	0.6828	0.6905	0.7178
C4	0.5625	0.4096	0.4073	0.4360	0.4553
C5	0.4256	0.4193	0.4572	0.4818	0.4863
SCHULZ-FLORY DISTRBTN					
ALPHA (EXP(SLOPE))	0.8065	0.8302	0.8350	0.8337	0.8382
RATIO CH4/(1-A)**2	3.1903	4.3691	4.2938	4.2984	4.6061
ALPHA FRM CORRELATION	0.8507	0.8497	0.8453	0.8430	0.8420
ALPHA (EXPTL/CORR)	0.9481	0.9771	0.9879	0.9890	0.9956
W%CH4 FRM CORRELATION	14.5552	15.2749	16.0209	16.7388	17.0513
W%CH4 (EXPTL/CORR)	0.8206	0.8244	0.7293	0.7100	0.7068
LIQ HC COLLECTION					
PHYS. APPEARANCE	CLR &SLD	CLDY &SLD	CLDY &SLD	CLDY &SLD	CLDY &SLD
DENSITY	0.736	0.760	0.761	0.765	0.767
N, REFRACTIVE INDEX	1.4275	1.4295	1.4295	1.4301	1.4310
SIMULT'D DISTILATN					
10 WT % @ DEG F	281	282	291	292	295
16	303	304	313	317	327
50	439	454	461	469	478
84	606	656	662	667	686
90	653	706	715	725	746
RANGE(16-84 %)	303	352	349	350	359
WT % @ 420 F	45.75	42.25	41.25	40.50	39.00
WT % @ 700 F	94.46	89.40	88.50	87.50	85.40

NEW FORMAT JAN 25,85

Table A15

RESULT OF SYNGAS OPERATION

RUN NO. 11885-05
CATALYST Co/Th/X4/X8-U103+U101 1186427 250 CC 110.1G(138.4 @END +28.4)
FEED H2:CO:ARGON OF 50:50:0 @ 1260 CC/MN OR 302 GHSV

RUN & SAMPLE NO.	11885-05-11	885-05-13	885-05-15	885-05-17	885-05-19
FEED H2:CO:AR	50:50: 0	50:50: 0	50:50: 0	50:50: 0	50:50: 0
HRS ON STREAM	140.5	164.0	187.0	211.5	235.5
PRESSURE,PSIG	298	298	298	298	297
TEMP. C	261	261	261	261	261
FEED CC/MIN	1260	1260	1260	1260	1260
HOURS FEEDING	23.00	23.50	23.00	24.50	24.00
EFFLNT GAS LITER	1009.90	1043.55	1054.85	1091.55	1103.05
GM AQUEOUS LAYER	180.81	180.42	181.25	179.70	176.58
GM OIL	68.98	73.64	69.65	70.01	69.74
MATERIAL BALANCE					
GM ATOM CARBON %	97.01	98.64	99.31	95.81	98.60
GM ATOM HYDROGEN %	98.11	100.28	101.79	97.68	100.04
GM ATOM OXYGEN %	102.84	102.24	104.97	100.46	102.73
RATIO CHX/(H2O+CO2)	0.8161	0.8841	0.8223	0.8436	0.8621
RATIO X IN CHX	2.3559	2.3536	2.3739	2.3750	2.3747
USAGE H2/CO PRODT	2.2223	2.1431	2.2242	2.1990	2.1740
FEED H2/CO FRM EFFLNT	1.0114	1.0166	1.0249	1.0196	1.0146
RESIDUAL H2/CO RATIO	0.5363	0.5495	0.5617	0.5689	0.5717
RATIO CO2/(H2O+CO2)	0.0458	0.0463	0.0456	0.0459	0.0471
K SHIFT IN EFFLNT	0.0258	0.0267	0.0268	0.0274	0.0282
SPECIFIC ACTIVITY SA	0.9738	0.9874	0.8982	0.8751	0.8739
CONVERSION					
ON CO %	28.18	29.31	27.86	27.65	27.64
ON H2 %	61.92	61.79	60.47	59.63	59.23
ON CO+H2 %	45.15	45.68	44.37	43.79	43.55
PRDT SELECTIVITY,WT %					
CH4	12.99	12.94	13.89	13.96	14.10
C2 HC'S	2.02	1.87	2.06	2.23	2.37
C3H8	2.27	2.31	2.30	2.32	2.31
C3H6=	3.01	2.93	2.98	2.96	2.86
C4H10	1.76	1.77	1.89	1.79	1.79
C4H8=	3.80	3.79	3.68	2.68	3.52
C5H12	2.13	2.17	2.15	2.10	2.13
C5H10=	3.44	3.34	3.47	4.17	3.32
C6H14	2.39	2.55	2.60	2.54	2.56
C6H12= & CYCLO'S	2.79	2.67	2.79	2.92	2.98
C7+ IN GAS	11.62	12.68	10.64	11.54	11.88
LIQ HC'S	51.78	50.99	51.56	50.77	50.18
TOTAL	100.00	100.00	100.00	100.00	100.00

Table A15 (continued)

SUB-GROUPING					
C1 -C4	25.85	25.60	26.79	25.95	26.94
C5 -420 F	42.56	43.29	41.55	42.87	42.65
420-700 F	24.73	24.31	24.70	24.32	23.84
700-END PT	6.86	6.80	6.96	6.85	6.57
C5+-END PT	74.15	74.40	73.21	74.05	73.06
ISO/NORMAL MOLE RATIO					
C4	0.0651	0.0442	0.0568	0.0525	0.0449
C5	0.0966	0.0999	0.0921	0.0581	0.0553
C6	0.3443	0.4263	0.4071	0.3068	0.2877
C4=	0.0483	0.0493	0.0446	0.0681	0.0434
PARAFFIN/OLEFIN RATIO					
C3	0.7192	0.7517	0.7368	0.7483	0.7694
C4	0.4475	0.4523	0.4961	0.6463	0.4905
C5	0.6004	0.6317	0.6018	0.4911	0.6227
SCHULZ-FLORY DISTRBTN					
ALPHA (EXP(SLOPE))	0.8334	0.8311	0.8312	0.8308	0.8296
RATIO CH4/(1-A)**2	4.6799	4.5375	4.8755	4.8762	4.8533
ALPHA FRM CORRELATION	0.8411	0.8399	0.8388	0.8382	0.8380
ALPHA (EXPTL/CORR)	0.9908	0.9895	0.9909	0.9911	0.9900
W%CH4 FRM CORRELATION	17.3205	17.6891	18.0199	18.2135	18.2870
W%CH4 (EXPTL/CORR)	0.7502	0.7316	0.7709	0.7667	0.7709
LIQ HC COLLECTION					
PHYS. APPEARANCE	CLDY &SLD	CLDY &SLD	CLDY &SLD	CLDY WAXY	CLDY WAXY
DENSITY	0.767	0.766	0.752	0.766	0.762
N, REFRACTIVE INDEX	1.4300	1.4298	1.4310	1.4305	1.4304
SIMULT'D DISTILATN					
10 WT % @ DEG F	296	295	298	300	297
16	331	330	332	334	332
50	476	475	475	477	475
84	675	675	679	679	673
90	732	736	739	738	735
RANGE(16-84 %)	344	345	347	345	341
WT % @ 420 F	39.00	39.00	38.60	38.60	39.40
WT % @ 700 F	86.75	86.67	86.50	86.50	86.91
			39.20		
			86.43		

NEW FORMAT JAN 25,85