

DATA FILE: 10-10-10

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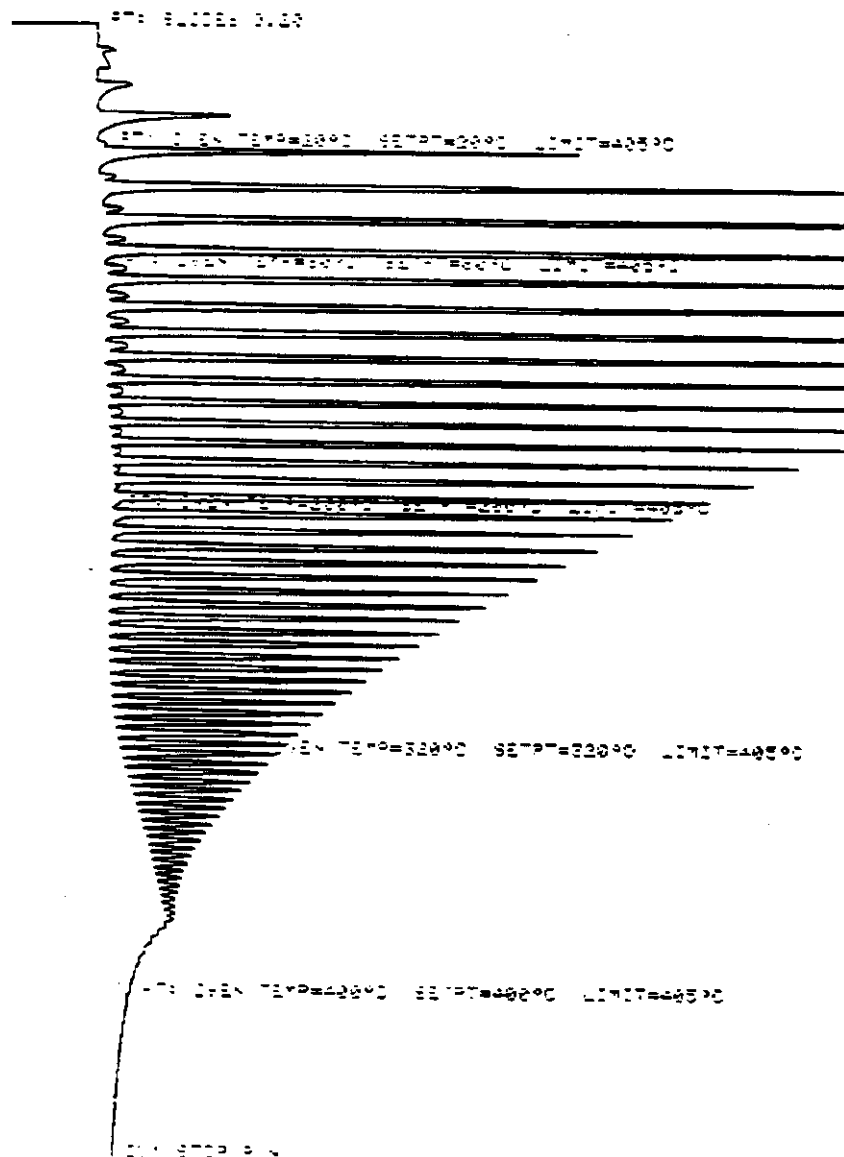
FILE: 10-10-10

FILE: 10-10-10-10-10

Fig. B87

OVER TEMP NOT READ

141



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Fig. B88

QhT

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SETPT=2200 SETPT=2200 LIMIT=40500

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SETPT=2200 SETPT=2200 LIMIT=40500

IVEN TEMP=2200

SETPT=2200 SETPT=2200

Fig. B89

0.25 12.5 10.0 12.5

100

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0.25 12.5 10.0 12.5

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0.25 12.5 10.0 12.5

0.25 12.5 10.0 12.5

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0.25 12.5 10.0 12.5

Fig. B91

DATA TEMP UNIT 4540

101

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DATA 1000 1.00

DATA 1000 1.00 1.00 1.00

Fig. B92

- B105 -

10/25/72 10:17:12

101

10/25/72 10:17:12

10/25/72 10:17:12 10/25/72 10:17:12 10/25/72 10:17:12

10/25/72 10:17:12 10/25/72 10:17:12 10/25/72 10:17:12

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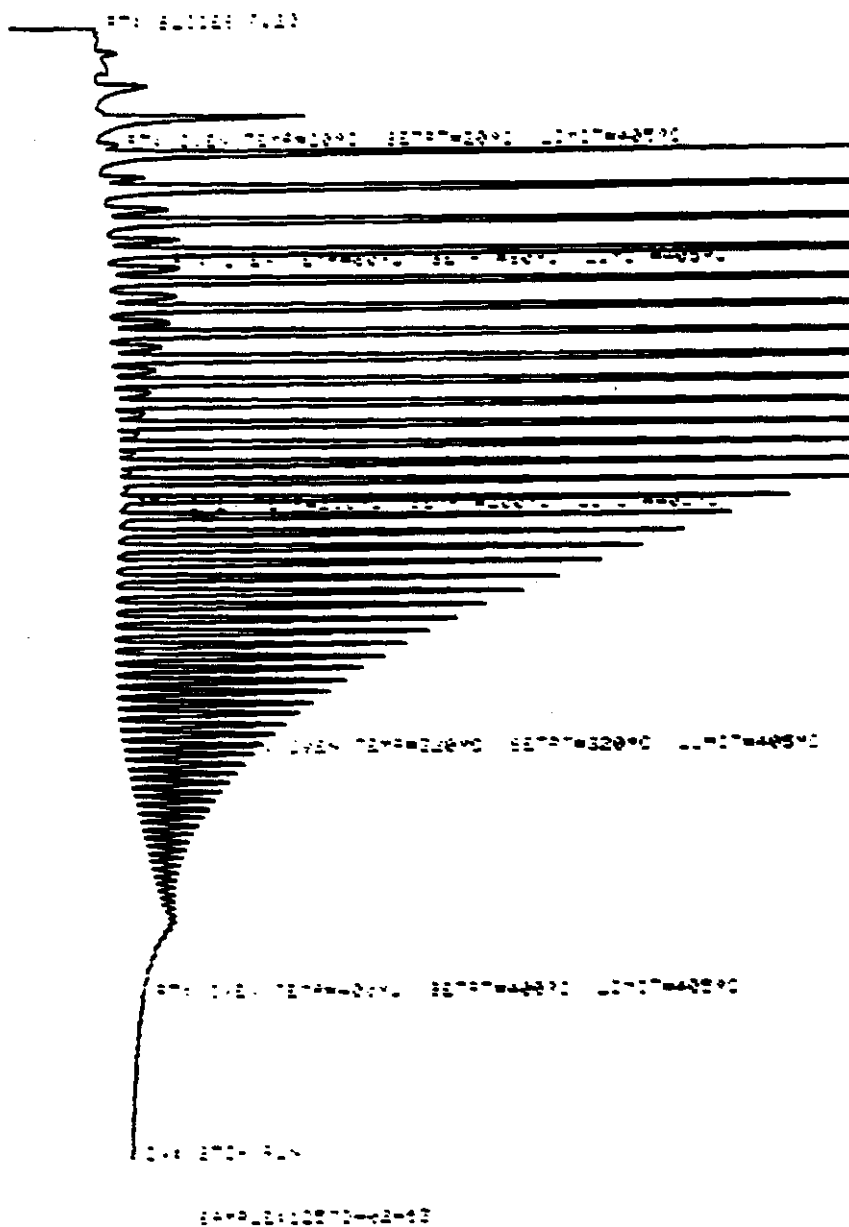
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10/25/72 10:17:12

Fig. B93

- B106 -



15b

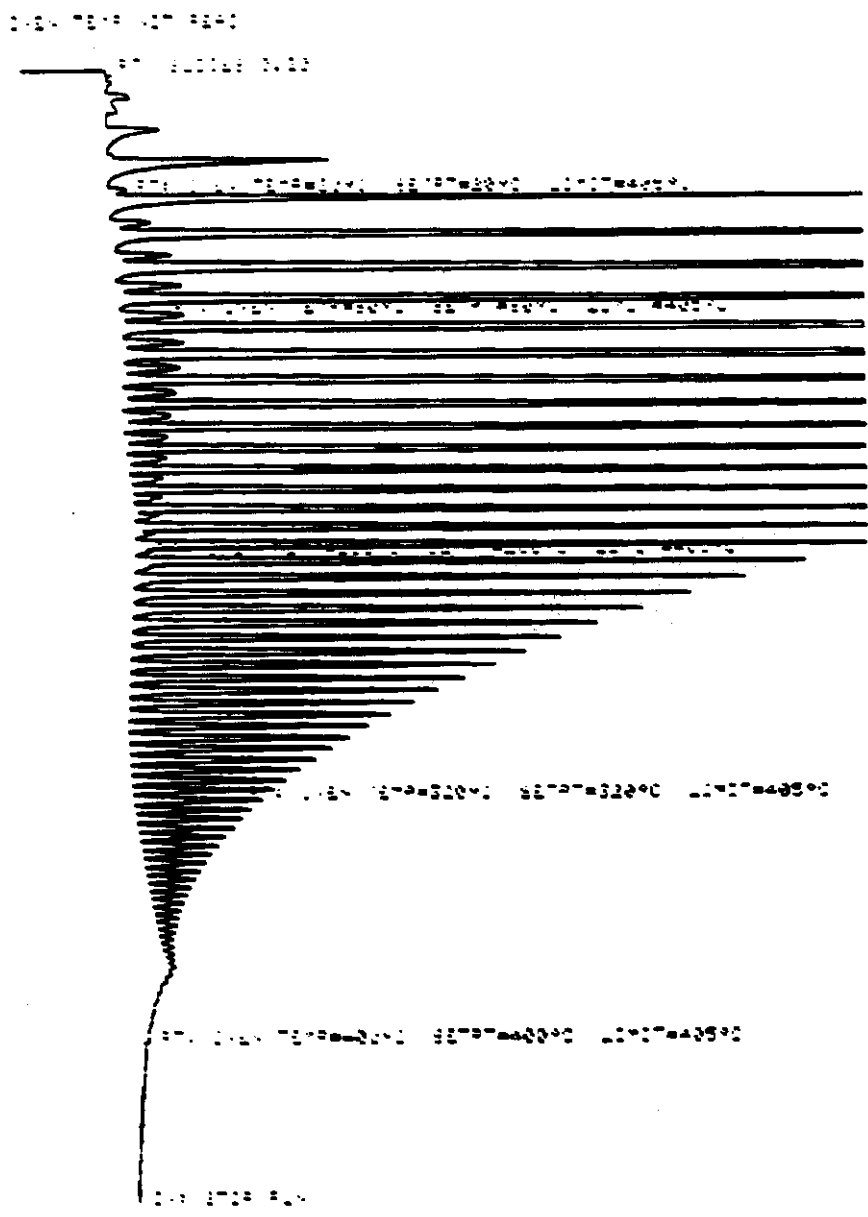


Fig. B95

Table B3

FILE: 1257002A 5Q4

A1

RESULT OF SYNGAS OPERATION

RUN NO.	12570-02				
CATALYST	CO/X11-TC123	80 CC	37.4 C	AFTER USE:56.0 C (+18.6 G)	
FEED	H2:CO OF 50:50	@ 400 CC/MN	OR 300 GHSV	(CAT#12524-18)	
RUN & SAMPLE NO.	12570-02-01	570-02-02	570-02-03	570-02-04	570-02-05
FEED H2:CO:AR	50:50: 0	50:50: 0	50:50: 0	50:50: 0	50:50: 0
HRS ON STREAM	19.25	45.25	67.25	91.25	116.25
PRESSURE, PSIG	300.00	300.00	300.00	300.00	300.00
TEMP. C	242.00	241.00	241.00	241.00	241.00
FEED CC/MIN	400.00	400.00	400.00	400.00	400.00
HOURS FEEDING	19.25	26.00	22.00	24.00	25.00
EFFLNT GAS LITER	191.90	322.30	279.00	303.00	312.20
GM AQUEOUS LAYER	52.46	53.36	43.72	48.23	51.47
GM OIL	6.61	44.41	38.12	39.61	39.61
MATERIAL BALANCE					
GM ATOM CARBON %	62.47	94.59	95.97	94.77	93.25
GM ATOM HYDROGEN %	70.58	92.45	93.33	92.18	91.62
GM ATOM OXYGEN %	87.12	91.43	91.64	91.59	91.26
RATIO CHX/(H2O+CO2)	0.2877	1.1173	1.1661	1.1214	1.0743
RATIO X IN CHX	2.2874	2.1782	2.1796	2.1863	2.1886
USAGE H2/CO PRDT	3.5325	1.8061	1.7906	1.8311	1.8703
FEED H2/CO FRM EFFLNT	1.1299	0.9774	0.9725	0.9726	0.9825
RESIDUAL H2/CO RATIO	0.5383	0.5534	0.5616	0.5562	0.5574
RATIO CO2/(H2O+CO2)	0.0690	0.0709	0.0655	0.0609	0.0579
K SHIFT IN EFFLNT	0.0399	0.0422	0.0394	0.0361	0.0343
SPECIFIC ACTIVITY SA	1.6779	3.3151	3.2483	3.1958	3.1022
CONVERSION					
ON CO %	19.76	33.84	33.44	32.67	32.38
ON H2 %	61.77	62.54	61.56	61.50	61.64
ON CO+H2 %	42.04	48.03	47.30	46.88	46.88
PRDT SELECTIVITY, WT %					
CH4	9.74	3.55	3.55	3.76	3.76
C2 HC'S	1.48	0.04	0.00	0.59	0.73
C3H8	1.53	0.58	0.60	0.62	0.66
C3H6=	3.60	1.59	1.59	1.66	1.72
C4H10	1.78	0.71	0.71	0.76	0.81
C4H8=	4.60	1.85	1.91	1.93	2.12
C5H12	2.30	0.84	0.90	0.92	1.02
C5H10=	3.75	1.59	1.62	1.66	1.81
C6H14	3.59	1.31	1.44	1.52	1.61
C6H12= & CYCLO'S	2.90	1.21	1.20	1.23	1.21
C7+ IN GAS	15.92	5.86	5.20	5.27	5.76
LIQ HC'S	48.80	80.88	81.29	80.07	78.78
TOTAL	100.00	100.00	100.00	100.00	100.00
SUB-GROUPING					
C1 -C4	22.75	8.32	8.35	9.33	9.80
C5 -420 F	47.63	27.05			28.12
420-700 F	25.57	32.92			31.20
700-END PT	4.05	31.71			30.88

Table B3 (continued)

FILE: 1257002A SQ4

A1

C5+--END PT	77.25	91.68	91.65	90.67	90.20
ISO/NORMAL MOLE RATIO					
C4	0.0000	0.0000	0.0000	0.0000	0.0000
C5	0.0368	0.0000	0.0435	0.0273	0.0455
C6	0.2751	0.1853	0.2594	0.2449	0.2398
C4=	0.0305	0.0210	0.0288	0.0223	0.0316
PARAFFIN/OLEFIN RATIO					
C3	0.4059	0.3453	0.3623	0.3569	0.3651
C4	0.3735	0.3714	0.3592	0.3791	0.3677
C5	0.5968	0.5151	0.5432	0.5416	0.5498
SCHULZ-FLORY DISTRTN					
ALPHA (EXP(SLOPE))	0.8049	0.9113	0.8375	0.8359	0.9026
RATIO CH4/(1-A)**2	2.5592	4.5105	1.3434	1.3944	3.9689
ALPHA FRM CORRELATION	0.8420	0.8407			0.8404
ALPHA (EXPTL/CORR)	0.9559	1.0840			1.0741
WYCH4 FRM CORRELATION	12.9128	13.0873			13.1959
WYCH4 (EXPTL/CORR)	0.7546	0.2709			0.2851
LIQ HC COLLECTION					
PHYS. APPEARANCE	OIL WAX	OIL WAX	OIL WAX	OIL WAX	OIL WAX
DENSITY					
N, REFRACTIVE INDEX					
SIMULT'D DISTILAIN					
10 WT % @ DEG F	309.00	341.00			338.00
16	338.00	406.00			380.00
50	458.00	631.00			615.00
84	613.00	875.00			887.00
90	676.00	940.00			953.00
RANGE(16-84 %)	275.00	469.00			507.00
WT % @ 420 F	39.30	20.10			21.20
WT % @ 700 F	91.80	60.80			60.80

Table B4

FILE: 1257002B 5Q4

A1

RESULT OF SYNGAS OPERATION

RUN NO. 12570-02
 CATALYST CO/X11-TC123 80 CC 37.4 G AFTER USE:56.0 G (+18.6 G)
 FEED H2:CO OF 50:50 @ 400 CC/MN OR 300 GHSV (CAT#12514-18)

RUN & SAMPLE NO.	12570-02-06	570-02-07	570-02-08	570-02-09	570-02-10
FEED H2:CO:AR	50:50: 0	50:50: 0	50:50: 0	50:50: 0	50:50: 0
HRS ON STREAM	140.25	164.25	188.25	212.25	235.25
PRESSURE, PSIG	300.00	300.00	300.00	300.00	300.00
TEMP. C	241.00	241.00	241.00	241.00	241.00
FEED CC/MIN	400.00	400.00	400.00	400.00	400.00
HOURS FEEDING	24.00	24.00	24.00	24.00	23.00
EFFLNT GAS LITER	300.00	302.70	302.80	308.30	316.10
GM AQUEOUS LAYER	50.00	49.30	46.33	42.70	47.32
GM OIL	38.71	37.23	40.25	44.63	38.55
MATERIAL BALANCE					
GM ATOM CARBON %	93.63	93.49	94.08	98.16	100.39
GM ATOM HYDROGEN %	92.46	92.01	92.38	94.74	98.00
GM ATOM OXYGEN %	91.43	91.68	89.59	88.95	97.00
RATIO CHX/(H2O+CO2)	1.0822	1.0679	1.1792	1.3933	1.1262
RATIO X IN CHX	2.1825	2.1884	2.1796	2.1768	2.1815
USAGE H2/CO PRDCT	1.8708	1.8678	1.8064	1.6909	1.8363
FEED H2/CO FRM EFFLNT	0.9874	0.9841	0.9819	0.9651	0.9762
RESIDUAL H2/CO RATIO	0.5600	0.5637	0.5775	0.5797	0.5789
RATIO CO2/(H2O+CO2)	0.0545	0.0606	0.0552	0.0597	0.0565
K SHIFT IN EFFLNT	0.0323	0.0364	0.0338	0.0368	0.0347
SPECIFIC ACTIVITY SA	3.1407	3.0815	3.0128	3.2664	2.8993
CONVERSION					
ON CO %	32.61	32.24	32.91	34.68	31.60
ON H2 %	61.78	61.19	60.54	60.77	59.44
ON CO+H2 %	47.10	46.60	46.60	47.49	45.35
PRDCT SELECTIVITY, WT %					
CH4	3.64	3.85	3.41	3.13	3.65
C2 HC'S	0.24	0.61	0.22	0.62	0.27
C3H8	0.65	0.72	0.62	0.58	0.66
C3H6=	1.71	1.91	1.77	1.64	1.86
C4H10	0.80	0.87	0.77	0.72	0.82
C4H8=	2.08	2.21	2.12	1.99	2.21
C5H12	1.00	1.10	0.96	0.90	1.02
C5H10=	1.76	1.88	1.72	1.60	1.82
C6H14	1.62	1.68	1.53	1.43	1.56
C6H12= & CYCLO'S	1.34	1.32	1.27	1.21	1.30
C7- IN GAS	6.10	6.38	4.80	4.98	5.75
LIQ HC'S	79.07	77.48	80.82	81.20	79.08
TOTAL	100.00	100.00	100.00	100.00	100.00
SUB-GROUPING					
C1 -C4	9.12	10.17	8.90	8.67	9.47
C5 -420 F			23.45		
420-700 F			30.06		
700-END PT			37.58		

Table B4 (continued)

FILE: 1257002B 5Q4

A1

C5+-END PT	90.88	89.83	91.10	91.33	90.53
ISO/NORMAL MOLE RATIO					
C4	0.0000	0.0000	0.0000	0.0000	0.0000
C5	0.0422	0.0258	0.0226	0.0338	0.0384
C6	0.2443	0.2016	0.2565	0.2453	0.2309
C4=	0.0285	0.0205	0.0191	0.0234	0.0272
PARAFFIN/OLEFIN RATIO					
C3	0.3653	0.3593	0.3341	0.3364	0.3385
C4	0.3715	0.3783	0.3499	0.3465	0.3589
C5	0.5547	0.5682	0.5403	0.5439	0.5448
SCHULZ-FLORY DISTRIBN					
ALPHA (EXP(SLOPE))	0.8465	0.8233	0.9056	0.8312	0.8202
RATIO C ₄ /(1-A)**2	1.5435	1.2335	3.8286	1.0975	1.1294
ALPHA FRM CORRELATION			0.8386		
ALPHA (EXPTL/CORR)			1.0799		
W _X CH ₄ FRM CORRELATION			13.7296		
W _X CH ₄ (EXPTL/CORR)			0.2483		
LIQ HC COLLECTION					
PHYS. APPEARANCE	OIL WAX	OIL WAX	OIL WAX	OIL WAX	OIL WAX
DENSITY					
N, REFRACTIVE INDEX					
SIMULT'D DISTILATN					
10 WT % @ DEG F			374.00		
16			415.00		
50			671.00		
84			963.00		
90			0.00		
RANGE(16-84 %)			548.00		
WT % @ 420 F			16.30		
WT % @ 700 F			53.50		

Table B5

FILE: 1257002C 5Q4

A1

RESULT OF SYNGAS OPERATION

RUN NO.	12570-02				
CATALYST	CO/X11-TC123 80 CC 37.4 G AFTER USE:56.0 G (-18.6 G)				
FEED	H2:CO OF 60:40 @ 400 CC/MN OR 00 GHSV (CAT#12524-18)				
RUN & SAMPLE NO.	12570-02-11	570-02-12	570-02-13	570-02-14	570-02-15
FEED H2:CO:AR	50:50: 0	60:40: 0	60:40: 0	60:40: 0	60:40: 0
HRS ON STREAM	259.25	282.75	307.25	331.25	403.75
PRESSURE, PSIG	300.00	300.00	300.00	300.00	300.00
TEMP. C	241.00	241.00	241.00	241.00	242.00
FEED CC/MIN	400.00	400.00	400.00	400.00	400.00
HOURS FEEDING	24.00	20.00	24.50	24.00	72.50
EFFLNT GAS LITER	301.40	207.74	234.00	238.90	718.90
GM AQUEOUS LAYER	48.77	50.15	65.42	65.38	199.26
GM OIL	37.86	36.61	50.97	43.04	131.75
MATERIAL BALANCE					
GM ATOM CARBON %	92.37	96.34	95.87	93.24	93.20
GM ATOM HYDROGEN %	92.00	91.34	92.69	90.62	90.85
GM ATOM OXYGEN %	90.14	91.33	88.73	92.12	92.27
RATIO CHX/(H2O+CO2)	1.0855	1.1264	1.1729	1.0265	1.0217
RATIO X IN CHX	2.1809	2.2675	2.2371	2.2526	2.2651
USAGE H2/CO PRODT	1.8881	1.8738	1.8599	1.9714	1.9821
FEED H2/CO FRM EFFLNT	0.9960	1.4222	1.4502	1.4579	1.4623
RESIDUAL H2/CO RATIO	0.5779	0.9942	0.9977	0.9763	0.9714
RATIO CO2/(H2O+CO2)	0.0464	0.0579	0.0456	0.0446	0.0443
K SHIFT IN EFFLNT	0.0281	0.0611	0.0477	0.0456	0.0450
SPECIFIC ACTIVITY SA	2.8883	2.3125	2.5927	2.3703	2.2618
CONVERSION					
ON CO %	31.91	48.66	52.48	48.40	48.57
ON H2 %	60.50	64.11	67.31	65.44	65.83
ON CO+H2 %	46.17	57.73	61.26	58.51	58.82
PRDT SELECTIVITY, WT %					
CH4	3.39	7.30	5.72	6.48	7.13
C2 HC'S	0.71	1.06	0.96	1.15	1.17
C3H8	0.62	1.72	1.48	1.58	1.54
C3H6=	1.92	1.27	1.22	1.37	1.33
C4H10	0.76	1.79	1.49	1.69	1.66
C4H8=	2.28	1.66	1.48	1.77	1.77
C5H12	0.93	1.99	1.71	1.92	1.92
C5H10=	1.82	1.18	1.07	1.31	1.30
C6H14	1.40	2.63	2.32	2.68	2.68
C6H12= & CYCLO'S	0.98	0.61	0.61	0.70	0.77
C7- IN GAS	5.64	6.11	5.72	5.83	4.56
LIQ HC'S	79.54	72.69	76.22	73.51	74.18
TOTAL	100.00	100.00	100.00	100.00	100.00
SUB-GROUPING					
C1 -C4	9.68	14.79	12.35	14.05	14.60
C5 -420 F	26.05	28.80	29.87		
420-700 F	29.67	26.61	29.42		
700-END PT	34.60	29.80	28.35		

Table B5 (continued)

FILE: 1257002C 5Q4

A1

CS--END PT	90.32	85.21	87.65	85.95	85.40
ISO/NORMAL MOLE RATIO					
C4	0.0000	0.0142	0.0150	0.0142	0.0139
C5	0.0414	0.0513	0.0561	0.0556	0.0483
C6	0.2604	0.2183	0.2317	0.2308	0.2404
C4=	0.0212	0.0626	0.0620	0.0620	0.0580
PARAFFIN/OLEFIN RATIO					
C3	0.3077	1.2890	1.1559	1.1017	1.0983
C4	0.3243	1.0399	0.9708	0.9230	0.9059
C5	0.4931	1.6426	1.5461	1.4274	1.4322
SCHULZ-FLORY DISTRIBUTION					
ALPHA (EXP(SLOPE))	0.8970	0.8868	0.8920	0.8213	0.8335
RATIO C ₄ /(1-A)**2	3.1923	5.6968	4.9108	2.0284	2.5718
ALPHA FRM CORRELATION	0.8386	0.8122	0.8120		
ALPHA (EXPTL/CORR)	1.0696	1.0919	1.0985		
W _X /C ₄ FRM CORRELATION	13.7397	21.9415	21.9940		
W _X /C ₄ (EXPTL/CORR)	0.2466	0.3326	0.2602		
LIQ HC COLLECTION					
PHYS. APPEARANCE	OIL WAX	OIL WAX	OIL WAX	OIL WAX	OIL WAX
DENSITY					
N, REFRACTIVE INDEX					
SIMULT'D DISTILLATE					
10 WT % @ D ₁₅ 7 F	345.00	335.00	334.00		
16	409.00	377.00	373.00		
50	647.00	620.00	596.00		
84	949.00	936.00	902.00		
90	0.00	0.00	985.00		
RANGE(16-84 %)	540.00	559.00	529.00		
WT % @ 420 F	19.20	22.40	24.20		
WT % @ 700 F	56.50	59.00	62.80		

Table B6

FILE: 1257002D 5Q4

A1

RESULT OF SYNGAS OPERATION

RUN NO.	12570-02				
CATALYST	CO/X11-TC123	80 CC	37.4 G	AFTER USE:56.0 G	(+18.6 G)
FEED	H2:CO	OF 60:40	@ 400 CC/MN	OR 300 GHSV	(CAT#12524-18)
RUN & SAMPLE NO.	12570-02-16	570-02-17	570-02-18	570-02-19	570-02-20
FEED H2:CO:AR	60:40: 0	60:40: 0	64:36: 0	64:36: 0	64:36: 0
HRS ON STREAM	429.75	475.25	499.25	522.50	549.00
PRESSURE, PSIG	300.00	300.00	300.00	300.00	300.00
TEMP. C	240.00	240.00	240.00	240.00	240.00
FEED CC/MIN	400.00	400.00	400.00	400.00	400.00
HOURS FEEDING	26.00	45.50	22.00	22.75	26.50
EFFLNT GAS LITER	258.30	461.90	212.30	216.70	249.70
GM AQUEOUS LAYER	70.42	120.61	61.20	63.66	74.94
GM OIL	49.55	83.06	38.24	35.49	43.67
MATERIAL BALANCE					
GM ATOM CARBON %	94.33	93.94	98.91	92.06	93.37
GM ATOM HYDROGEN %	92.05	91.35	92.79	88.65	89.39
GM ATOM OXYGEN %	90.85	90.99	92.40	92.42	92.44
RATIO CHX/(H2O+CO2)	1.0839	1.0725	1.1365	0.9924	1.0192
RATIO X IN CHX	2.2420	2.2456	2.3420	2.3673	2.3532
USAGE H2/CO PRDCT	1.9438	1.9576	1.9362	2.0542	2.0318
FEED H2/CO FRM EFFLNT	1.4637	1.4587	1.6678	1.7119	1.7021
RESIDUAL H2/CO RATIO	0.9957	0.9982	1.3133	1.3105	1.3012
RATIO CO2/(H2O+CO2)	0.0368	0.0354	0.0444	0.0445	0.0424
K SHIFT IN EFFLNT	0.0380	0.0366	0.0610	0.0611	0.0576
SPECIFIC ACTIVITY SA	2.5240	2.3634	3.2404	1.9570	2.0406
CONVERSION					
ON CO %	49.36	48.00	56.91	53.97	54.88
ON H2 %	65.55	64.41	66.07	64.77	65.51
ON CO+H2 %	58.98	57.74	62.64	60.79	61.58
PRDCT SELECTIVITY, WT %					
CH4	5.95	6.13	11.16	12.09	11.45
C2 HC'S	0.96	1.11	1.42	1.56	1.44
C3H8	1.51	1.55	2.25	2.47	2.33
C3H6=	1.42	1.48	0.82	0.93	0.88
C4H10	1.61	1.63	2.43	2.65	2.51
C4H8=	1.81	1.84	1.22	1.40	1.30
C5H12	1.82	1.84	2.70	2.98	2.82
C5H10=	1.21	1.23	0.73	0.84	0.81
C6H14	2.55	2.64	3.60	4.01	3.82
C6H12= & CYCLO'S	0.79	0.83	5.12	0.72	0.54
C7+ IN GAS	5.31	5.55	5.76	6.26	6.59
LIQ HC'S	75.06	74.17	62.79	64.09	65.51
TOTAL	100.00	100.00	100.00	100.00	100.00
SUB-GROUPING					
C1 -C4	13.26	13.74	19.31	21.10	19.91
C5 -420 F		29.23			
420-700 F		27.96			
700-END PT		29.07			

Table B6 (continued)

FILE: 1257002D SQ4

A1

C5+-END PT	86.74	86.26	80.69	78.90	80.09
ISO/NORMAL MOLE RATIO					
C4	0.0138	0.0143	0.0196	0.0189	0.0176
C5	0.0410	0.0397	0.0537	0.0528	0.0529
C6	0.2404	0.2351	0.1886	0.1922	0.2003
C4=	0.0584	0.0565	0.1021	0.0990	0.0931
PARAFFIN/OLEFIN RATIO					
C3	1.0135	0.9995	2.6066	2.5428	2.5342
C4	0.8580	0.8558	1.9175	1.8260	1.8684
C5	1.4599	1.4525	3.6093	3.4518	3.4003
SCHULZ-FLORY DISTRIBIN					
ALPHA (EXP(SLOPE))	0.8152	0.8869	1.0793	0.8722	0.8666
RATIO CH4/(1-A)**2	1.7419	4.7885	17.7392	7.4099	6.4362
ALPHA FRM CORRELATION		0.8120			
ALPHA (EXPTL/CORR)		1.0922			
WYCH4 FRM CORRELATION		21.7567			
WYCH4 (EXPTL/CORR)		0.2817			
LIQ HC COLLECTION					
PHYS. APPEARANCE	OIL WAX	OIL WAX	OIL WAX	OIL WAX	OIL WAX
DENSITY					
N. REFRACTIVE INDEX					
SIMULT'D DISTILLATN					
10 WT % @ DEG F		337.00			
16		378.00			
50		616.00			
84		917.00			
90		0.00			
RANGE(16-84 %)		539.00			
WT % @ 420 F		23.10			
WT % @ 700 F		60.80			

Table B7

FILE: 1257002E 5Q4

A1

RESULT OF SYNGAS OPERATION

RUN NO.	12570-02				
CATALYST	CO/X11-TC123 80 CC 37.4 G AFTER USE:56.0 G (+18.6 G)				
FEED	H2:CO OF 64:36 @ 400 CC/MN OR 300 GHSV (CAT#12524-18)				
RUN & SAMPLE NO.	12570-02-21	570-02-22	570-02-23	57002.24	570-02-25
FEED H2:CO:AR	64:36: 0	64:36: 0	64:36: 0	64:36: 0	64:36: 0
HRS ON STREAM	571.75	595.75	619.75	643.75	668.25
PRESSURE, PSIG	300.00	500.00	500.00	500.00	500.00
TEMP. C	240.00	239.00	239.00	239.00	239.00
FEED CC/MIN	400.00	400.00	400.00	400.00	400.00
HOURS FEEDING	22.75	24.00	24.00	24.00	24.50
EFFLNT GAS LITER	211.20	177.60	178.80	185.20	192.60
GM AQUEOUS LAYER	62.81	74.80	80.65	78.04	77.83
GM OIL	39.06	53.44	52.43	54.36	52.73
MATERIAL BALANCE					
GM ATOM CARBON %	93.88	95.16	93.40	96.46	94.82
GM ATOM HYDROGEN %	89.03	88.56	90.04	91.54	90.07
GM ATOM OXYGEN %	90.76	89.14	92.60	91.71	91.16
RATIO CHX/(H2O+CO2)	1.0659	1.1150	1.0143	1.0880	1.0693
RATIO X IN CHX	2.3536	2.2712	2.2697	2.2661	2.2726
USAGE H2/CO PRODT	1.9890	1.9276	2.0276	1.9722	1.9921
FEED H2/CO FRM EFFLNT	1.6859	1.6545	1.7137	1.6870	1.6888
RESIDUAL H2/CO RATIO	1.3013	1.1778	1.1902	1.2097	1.2112
RATIO CO2/(H2O+CO2)	0.0449	0.0400	0.0312	0.0293	0.0284
K SHIFT IN EFFLNT	0.0612	0.0490	0.0383	0.0365	0.0354
SPECIFIC ACTIVITY SA	2.1138	1.8529	1.7454	1.7614	1.6732
CONVERSION					
ON CC %	55.93	63.57	62.51	62.60	61.16
ON H2 %	65.99	74.07	73.96	73.18	72.14
ON CO+H2 %	62.24	70.11	69.74	69.24	68.05
PRDT SELECTIVITY, WT %					
CH4	11.49	7.18	7.14	6.88	7.22
C2 HC'S	1.47	1.06	1.12	1.12	1.12
C3H8	2.34	1.83	1.79	1.86	1.94
C3H6=	0.90	0.97	1.01	1.11	1.13
C4H10	2.45	1.95	1.84	1.89	1.97
C4H8=	1.29	1.32	1.33	1.41	1.47
C5H12	2.70	2.12	2.00	2.06	2.12
C5H10=	0.77	0.81	0.81	0.86	0.88
C6H14	3.53	2.80	2.55	2.68	2.70
C6H12= & CYCLO'S	0.50	0.65	0.61	0.54	0.56
C7+ IN GAS	5.93	4.31	3.92	3.80	3.95
LIQ HC'S	66.64	74.99	75.86	75.79	74.93
TOTAL	100.00	100.00	100.00	100.00	100.00
SUB-GROUPING					
C1 -C4	19.94	14.32	14.24	14.26	14.86
C5 -420 F	31.48	29.51	28.33		
420-700 F	26.39	26.10	27.84		
700-END PT	22.19	30.07	29.59		

Table B7 (continued)

FILE: 1257002E 5Q4

A1

CS--END PT	80.06	85.68	85.76	85.74	85.14
ISO/NORMAL MOLE RATIO					
C4	0.0186	0.0156	0.0155	0.0167	0.0154
C5	0.0560	0.0384	0.0400	0.0400	0.0365
C6	0.2007	0.1719	0.1821	0.1751	0.1795
C4=	0.0962	0.0672	0.0673	0.0681	0.0679
PARAFFIN/OLEFIN RATIO					
C3	2.4813	1.7936	1.6948	1.6041	1.6314
C4	1.8388	1.4234	1.3364	1.2937	1.2892
C5	3.4248	2.5423	2.4113	2.3280	2.3481
SCHULZ-FLORY DISTRBTN					
ALPHA (EXP(SLOPE))	0.8762	0.8882	0.8886	0.8047	0.7980
RATIO CH4/(1-A)**2	7.5026	5.7439	5.7600	1.8035	1.7700
ALPHA FRM CORRELATION	0.7991	0.8040	0.8035		
ALPHA (EXPTL/CORR)	1.0965	1.1046	1.1059		
W%CH4 FRM CORRELATION	25.7637	24.0113	24.1699		
W%CH4 (EXPTL/CORR)	0.4462	0.2992	0.2955		
LIQ HC COLLECTION					
PHYS. APPEARANCE					
DENSITY					
N, REFRACTIVE INDEX					
SIMULT'D DISTILATN					
10 WT % @ DEG F	333.00	298.00	330.00		
16	370.00	363.00	373.00		
50	569.00	618.00	614.00		
84	869.00	931.00	925.00		
90	953.00	0.00	0.00		
RANGE(16-84 %)	499.00	568.00	552.00		
WT % @ 420 F	27.10	25.10	24.30		
WT % @ 700 F	66.70	59.90	61.00		

Table B8

FILE: 1257002F 5Q4

A1

RESULT OF SYNGAS OPERATION

RUN NO.	12570-02				
CATALYST	CO/XL1-TC123	80 CC	37.4 G	AFTER USE:56.0 G (-18.6 G)	
FEED	H2:CO	OF 64:36	@ 400 CC/MN	OR 300 GESV	(CAT#12524-18)
RUN & SAMPLE NO.	12570-02-27	570-02-28	570-02-29	570-02-30	570-02-31
FEED H2:CO:AR	64:36: 0	64:36: 0	64:36: 0	64:36: 0	64:36: 0
HRS ON STREAM	740.75	763.75	787.75	811.75	835.75
PRESSURE, PSIG	500.00	500.00	500.00	500.00	500.00
TEMP. C	239.00	239.00	239.00	239.00	239.00
FEED CC/MIN	400.00	400.00	400.00	400.00	400.00
HOURS FEEDING	20.75	23.00	24.00	24.00	24.00
EFFLNT GAS LITER	169.30	181.60	197.60	200.00	200.90
GM AQUEOUS LAYER	67.64	73.19	75.37	74.42	73.41
GM OIL	42.56	55.61	56.01	54.40	57.81
MATERIAL BALANCE					
GM ATOM CARBON %	93.73	99.41	98.99	98.25	100.94
GM ATOM HYDROGEN %	90.36	92.87	92.82	92.16	93.45
GM ATOM OXYGEN %	94.17	91.35	92.16	91.94	91.37
RATIO CHX/(H2O+CO2)	0.9919	1.1528	1.1311	1.1226	1.1886
RATIO X IN CHX	2.2826	2.2533	2.2628	2.2652	2.2557
ULAGE H2/CO PRODT	2.0588	1.9294	1.9513	1.9600	1.9140
FEED H2/CO FRM EFFLNT	1.7139	1.6609	1.6669	1.6676	1.6457
RESIDUAL H2/CO RATIO	1.2145	1.2126	1.2248	1.2273	1.2283
RATIO CO2/(H2O+CO2)	0.0294	0.0255	0.0246	0.0240	0.0225
K SHIFT IN EFFLNT	0.0368	0.0317	0.0309	0.0302	0.0283
SPECIFIC ACTIVITY SA	1.5064	1.7449	1.6212	1.5749	1.5881
CONVERSION					
ON CO %	59.15	62.54	60.86	60.09	60.88
ON H2 %	71.05	72.65	71.24	70.62	70.80
ON CO+H2 %	66.67	68.85	67.35	66.67	67.05
PRDT SELECTIVITY, WT %					
CH4	7.78	6.37	6.74	6.91	6.48
C2 HC'S	1.13	0.87	1.03	1.03	0.94
C3H8	1.93	1.59	1.68	1.71	1.59
C3H6=	1.05	0.90	0.96	0.98	0.94
C4H10	1.93	1.64	1.75	1.75	1.63
C4H8=	1.32	1.16	1.20	1.26	1.18
C5H12	2.08	1.84	1.96	1.95	1.78
C5H10=	0.77	0.71	0.77	0.76	0.70
C6H14	2.80	2.46	2.56	2.61	2.36
C6H12= & CYCLO'S	0.49	0.47	0.50	0.50	0.47
C7+ IN GAS	3.86	3.70	2.96	3.36	3.28
LIQ HC'S	74.86	78.29	77.90	77.17	78.64
TOTAL	100.00	100.00	100.00	100.00	100.00
SUB-GROUPING					
C1 -C4	15.13	12.53	13.36	13.64	12.77
C5 -420 F	24.38				27.62
420-700 F	29.05				24.93
700-END PT	31.44				34.68

Table B8 (continued)

FILE: 1257002F SQ4

A1

CS+END PT	84.87	87.47	86.64	86.36	87.23
ISO/NORMAL MOLE RATIO					
C4	0.0181	0.0183	0.0174	0.0203	0.0198
C5	0.0427	0.0411	0.0410	0.0365	0.0373
C6	0.1714	0.1719	0.1790	0.1723	0.1636
C4=	0.0736	0.0731	0.0481	0.0660	0.0670
PARAFFIN/OLEFIN RATIO					
C3	1.7493	1.6747	1.6769	1.6688	1.6230
C4	1.4039	1.3596	1.4021	1.3417	1.3349
C5	2.6167	2.5065	2.4865	2.4772	2.4661
SCHULZ-FLORY DISTRIBUTION					
ALPHA (EXP(SLOPE))	0.8960	0.8262	0.8237	0.8211	0.8880
RATIO C ₄ /(1-A)**2	7.1875	2.1084	2.1690	2.1605	5.1678
ALPHA FRM CORRELATION	0.8025				0.8020
ALPHA (EXPTL/CORR)	1.1164				1.1073
WYCH4 FRM CORRELATION	24.4746				24.6452
WYCH4 (EXPTL/CORR)	0.3178				0.2630
LIQ HC COLLECTION					
PHYS. APPEARANCE					
DENSITY					
N, REFRACTIVE INDEX					
SIMULT'D DISTILLATE					
10 WT % @ DEC F	369.00				293.00
16	410.00				359.00
50	640.00				643.00
84	939.00				984.00
90	0.00				0.00
RANGE(16-84 %)	529.00				625.00
WT % @ 420 F	19.20				24.20
WT % @ 700 F	58.00				55.90

Table B9

FILE: 1257002G 524

A1

RESULT OF SYNGAS OPERATION

RUN NO. 12570-02
 CATALYST CO/X11-TC123 80 CC 37.4 G AFTER USE:56.0 G (+18.6 G)
 FEED H2:CO OF 64:36 @ 400 CC/MIN OR 300 CHSV (CAT#12524-18)

RUN & SAMPLE NO.	12570-02-32	570-02-33	570-02-34	570-02-35	570-02-36
FEED H2:CO:AR	64:36: 0	64:36: 0	64:36: 0	65:35: 0	65:35: 0
HRS ON STREAM	853.75	876.75	902.25	924.25	949.25
PRESSURE, PSIG	500.00	500.00	500.00	500.00	500.00
TEMP. C	239.00	239.00	239.00	239.00	239.00
FEED CC/MIN	400.00	400.00	400.00	400.00	400.00
HOURS FEEDING	18.00	23.00	25.50	17.50	25.00
EFFLNT GAS LITER	155.30	195.50	217.40	143.70	209.00
GM AQUEOUS LAYER	47.52	65.27	77.21	53.86	76.17
GM OIL	33.38	54.23	58.59	37.50	51.22
MATERIAL BALANCE					
GM ATOM CARBON %	91.60	101.27	100.22	96.54	94.75
GM ATOM HYDROGEN %	84.27	91.22	92.32	90.87	89.88
GM ATOM OXYGEN %	86.10	89.18	92.12	90.75	90.88
RATIO CHX/(H2O+CO2)	1.1249	1.2553	1.1612	1.1104	1.0744
RATIO X IN CHX	2.2958	2.2689	2.2674	2.3052	2.3142
USAGE H2/CO PRODT	1.9790	1.8727	1.9391	1.9925	2.0256
FEED H2/CO FRM EFFLNT	1.6354	1.6013	1.6376	1.7481	1.7617
RESIDUAL H2/CO RATIO	1.2123	1.1954	1.1978	1.3566	1.3635
RATIO CO2/(H2O+CO2)	0.0218	0.0255	0.0221	0.0225	0.0221
K SHIFT IN EFFLNT	0.0271	0.0313	0.0270	0.0313	0.0308
SPECIFIC ACTIVITY SA	1.3670	1.6496	1.5569	1.4113	1.3637
CONVERSION					
ON CO %	55.18	59.93	59.33	61.57	60.14
ON H2 %	66.78	70.09	70.25	70.18	69.15
ON CO+H2 %	62.38	66.18	66.11	67.04	65.89
PROT SELECTIVITY, WT %					
CH4	8.42	7.15	7.06	9.01	9.39
C2 HC'S	1.11	0.93	0.96	1.08	1.19
C3H8	2.11	1.74	1.74	1.97	2.07
C3H6=	1.12	0.93	0.98	0.81	0.88
C4H10	2.10	1.75	1.74	2.00	2.08
C4H8=	1.47	1.25	1.21	1.05	1.16
C5H12	2.25	1.84	1.85	2.13	2.20
C5H10=	0.78	0.67	0.70	0.59	0.62
C6H14	2.97	2.37	2.55	2.90	2.83
C6H12= & CYCLO'S	0.53	0.45	0.44	0.41	0.42
C7+ IN GAS	3.70	2.94	3.31	3.81	3.14
LIQ HC'S	73.43	77.98	77.46	74.24	74.01
TOTAL	100.00	100.00	100.00	100.00	100.00
SUB-GROUPING					
C1 -C4	16.33	13.75	13.69	15.92	16.78
C5 -420 F			24.50	26.24	
420-700 F			25.41	25.09	
700-END PT			36.41	32.74	

Table B9 (continued)

FILE: 1257002G 5Q4

A1

CS--END PT	83.67	86.25	86.31	84.08	83.22
ISO/NORMAL MOLE RATIO					
C4	0.0215	0.0190	0.0192	0.0200	0.0199
C5	0.0391	0.0368	0.0378	0.0375	0.0392
C6	0.1664	0.1780	0.1678	0.1506	0.1533
C4=	0.0759	0.0785	0.0689	0.0786	0.0806
PARAFFIN/OLEFIN RATIO					
C3	1.8007	1.7755	1.6856	2.3375	2.2372
C4	1.3742	1.3478	1.3958	1.8389	1.7276
C5	2.8132	2.6679	2.5693	3.4918	3.4400
SCHULZ-FLORY DISTRIBUTION					
ALPHA (EXP(SLOPE))	0.8011	0.7930	0.8961	0.8900	0.8062
RATIO CH4/(1-A)**2	2.1286	1.6680	6.5397	7.4489	2.5010
ALPHA FRM CORRELATION			0.8032	0.7971	
ALPHA (EXPTL/CORR)			1.1156	1.1165	
WYCH4 FRM CORRELATION			24.2661	26.1474	
WYCH4 (EXPTL/CORR)			0.2910	0.3445	
LIQ HC COLLECTION					
PHYS. APPEARANCE	OIL WAX	OIL WAX	OIL WAX	OIL WAX	OIL WAX
DENSITY					
N. REFRACTIVE INDEX					
SIMULT'D DISTILLATE					
10 WT % @ DEG F			336.00	335.00	
16			380.00	378.00	
50			665.00	646.00	
84			0.00	985.00	
90			0.00	0.00	
RANGE(16-84 %)			590.00	607.00	
WT % @ 420 F			20.20	22.10	
WT % @ 700 F			53.00	55.90	

Table B10

FILE: 1257002H SQ4

A1

RESULT OF SYNGAS OPERATION

RUN NO.	12570-02				
CATALYST	CO/XLI-TC123	80 CC	37.4 G	AFTER USE:56.0 G (+18.6 G)	
FEED	H2:CO OF 65:35	@ 400 CC/NW	OR 300 GHSV	(CAT#12524-18)	
RUN & SAMPLE NO.	12570-02-37	570-02-38	570-02-39	570-02-40	570-02-41
FEED H2:CO:AR	65:35: 0	65:35: 0	65:35: 0	65:35: 0	65:35: 0
HRS ON STREAM	1068.25	1093.25	1118.25	1142.75	1166.25
PRESSURE, PSIG	500.00	500.00	500.00	500.00	500.00
TEMP. C	239.00	239.00	239.00	239.00	239.00
FEED CC/MIN	400.00	400.00	400.00	400.00	400.00
HOURS FEEDING	119.00	25.00	25.00	25.50	23.50
EFFLNT GAS LITER	949.30	221.50	231.50	204.50	201.30
GM AQUEOUS LAYER	352.83	74.40	72.37	72.34	68.83
GM OIL	260.44	52.99	53.52	52.15	50.44
MATERIAL BALANCE					
GM ATOM CARBON %	95.56	98.82	105.14	92.97	99.59
GM ATOM HYDROGEN %	88.91	92.33	95.09	86.52	91.81
GM ATOM OXYGEN %	87.76	91.92	92.92	85.77	89.75
RATIO CHX/(H2O+CO2)	1.1548	1.1356	1.2457	1.1488	1.1967
RATIO X IN CHX	2.2906	2.3063	2.3051	2.2993	2.3017
USAGE H2/CO PRDCT	1.9606	1.9792	1.9014	1.9565	1.9342
FEED H2/CO FRM EFFLNT	1.7278	1.7351	1.6796	1.7282	1.7121
RESIDUAL H2/CO RATIO	1.3487	1.3765	1.3466	1.3577	1.3618
RATIO CO2/(H2O+CO2)	0.0198	0.0208	0.0231	0.0208	0.0213
K SHIFT IN EFFLNT	0.0272	0.0292	0.0319	0.0288	0.0297
SPECIFIC ACTIVITY SA	1.4793	1.2894	1.3911	1.3766	1.4485
CONVERSION					
ON CO %	61.96	59.51	60.02	60.86	61.20
ON H2 %	70.31	67.88	67.94	69.25	69.14
ON CO+H2 %	67.25	64.82	64.99	66.17	66.21
PRDCT SELECTIVITY, WT %					
CH4	8.24	9.06	9.08	8.69	8.85
C2 HC'S	1.10	1.14	1.19	1.21	1.19
C3H8	1.84	2.00	2.07	1.92	2.07
C3H6=	0.85	0.99	0.92	0.86	0.88
C4H10	1.87	2.02	2.20	1.97	2.21
C4H8=	1.13	1.25	1.27	1.17	1.30
CSH12	2.01	2.10	2.51	2.17	2.54
CSH10=	0.58	0.58	0.69	0.60	0.69
C6H14	2.65	2.81	3.05	2.64	2.29
C6H12= & CYCLO'S	0.32	0.34	0.26	0.27	0.07
C7+ IN GAS	3.47	3.64	7.01	4.19	5.55
LIQ HC'S	75.95	74.07	69.74	74.30	72.36
TOTAL	100.00	100.00	100.00	100.00	100.00
SUB-GROUPING					
C1 -C4	15.03	16.46	16.73	15.83	16.49
C5 -420 F		25.84		27.77	
420-700 F		27.33		27.42	
700-END PT		30.37		28.98	

Table B10 (continued)

FILE: 1257002H 5Q4

A1

C5--END PT	84.97	83.54	83.27	84.17	83.51
ISO/NORMAL MOLE RATIO					
C4	0.0197	0.0201	0.0199	0.0198	0.0193
C5	0.0410	0.0414	0.0392	0.0378	0.0396
C6	0.1524	0.1508	0.1566	0.1518	0.2156
C4=	0.0748	0.0813	0.0722	0.0760	0.0780
PARAFFIN/OLEFIN RATIO					
C3	2.0639	1.9249	2.1549	2.1220	2.2363
C4	1.5971	1.5521	1.6684	1.6242	1.6367
C5	3.3939	3.5478	3.5388	3.5081	3.5644
SCHULZ-FLORY DISTRBTN					
ALPHA (EXP(SLOPE))	0.8060	0.8913	0.8124	0.8912	0.7378
RATIO CH4/(1-A)**2	2.1892	7.6674	2.5787	7.3405	1.2877
ALPHA FRM CORRELATION		0.7964		0.7971	
ALPHA (EXPTL/CORR)		1.1191		1.1180	
WVCH4 FRM CORRELATION		26.3669		26.1598	
WVCH4 (EXPTL/CORR)		0.3434		0.3324	
LIQ HC COLLECTION					
PHYS. APPEARANCE	OIL WAX	OIL WAX	OIL WAX	OIL WAX	OIL WAX
DENSITY					
N, REFRACTIVE INDEX					
SIMULT'D DISTILATN					
10 WT % @ DEG F		336.00		334.00	
16		378.00		373.00	
50		622.00		613.00	
84		939.00		923.00	
90		0.00		0.00	
RANGE(16-84 %)		561.00		550.00	
WT % @ 420 F		22.10		24.10	
WT % @ 700 F		59.00		61.00	