

Table 23 RESULT OF PROPYLENE OPERATION

RUN NO. 9972-17  
 CATALYST 5115-HH-CAW #10042-43 48CC 35.0GM (33.83 GM AFTER RUN, 1.17GM)  
 FEED H<sub>2</sub>:C<sub>3</sub>H<sub>6</sub>:H<sub>2</sub>O 4:1:1.2 MOLE RATIO, 0.5 C<sub>3</sub>H<sub>6</sub> WHSV, CONTINUOUS OVERNITE  
 C<sub>3</sub>H<sub>6</sub> MW: 42.0813 DENSITY = 0.51041 GM/CC (@ 73 F)  
 TARGET FLOW: C<sub>3</sub>H<sub>6</sub> 34.3 CC/HR H<sub>2</sub> 170 CCM, 10.2 L/HR H<sub>2</sub>O 15.0 CC/HR  
 ACTUAL FLOW: 34.9 CC/HR EFFLUENT 14.1 L/HR AQ LAYR 13.3 CC/HR

RUN & SAMPLE NO.	9972-17-1	9972-17-2	9972-17-3	9972-17-4	9972-17-5
C <sub>3</sub> H <sub>6</sub> WHSV	0.5	0.5	0.5	0.5	0.5
HRS ON STREAM	17.4	24.4	42.8	48.2	64.9
PRESSURE, PSIG	137	158	162	143	145
TEMP., C	249	247	247	249	248
FEED C <sub>3</sub> H <sub>6</sub> CC	866.49	739.12	660.72	188.78	603.66
HOURS FEEDING	17.417	7.0	18.417	5.417	16.75
EFFLUENT GAS LITER	309.72	123.9	334.13	97.86	305.17
CM AQUEOUS LAYER	241.0	102.63	296.43	79.98	246.50
CM LIQ HYDROCARBON	22.2	2.72	5.33	1.21	4.90
WT FR. LIQ HC/FEED	.0502	.0223	.0158	.0126	.0161
MATERIAL BALANCE WT %	68.43	94.46	91.82	99.47	94.36
C <sub>3</sub> H <sub>6</sub> CONVERSION %	12.81	7.52	5.71	5.74	5.71
PRDT SELECTIVITY WT %					
CH <sub>4</sub>	0.00	0.00	0.00	0.00	0.00
C <sub>2</sub> HC'S	0.00	0.00	0.00	0.00	0.00
C <sub>3</sub> H <sub>8</sub>	7.16	12.38	14.85	15.17	15.09
C <sub>4</sub> H <sub>10</sub>	0.76	1.02	0.58	0.99	0.79
C <sub>4</sub> H <sub>8</sub> -	4.11	5.69	4.97	6.34	5.42
C <sub>5</sub> H <sub>12</sub>	0.63	0.75	0.40	0.59	0.33
C <sub>5</sub> H <sub>10</sub> -	0.59	0.83	0.82	0.94	0.87
C <sub>6</sub> H <sub>14</sub>	1.36	1.88	1.46	2.12	1.70
C <sub>6</sub> H <sub>12</sub> - & CYCLO'S	4.72	9.58	10.64	12.92	11.77
C <sub>7</sub> + IN GAS	23.07	35.62	35.96	38.21	34.33
LIQ HC'S	57.61	32.25	30.32	22.72	29.69
TOTAL	100.00	100.00	100.00	100.00	100.00
SUB-GROUPING					
C <sub>1</sub> -C <sub>4</sub>	12.02	19.09	20.40	22.50	21.30
C <sub>5</sub> -420 F	53.22	59.40	58.77	61.44	57.62
420-700 F	34.07	20.70	19.95	15.40	20.55
700-END PT	0.69	0.81	0.88	0.66	0.53
C <sub>5</sub> -END PT	87.98	80.91	79.60	77.50	78.70

Table 23 (cont.)

ISO/NORMAL MOLE RATIO					
C4	0.3046	0.3018	0.2929	0.2640	0.2878
C5	0.2767	0.2446	-	0.2111	-
C6	2.3357	2.1579	1.5833	2.3608	2.1205
C4-	0.1053	0.1084	0.1140	0.1171	0.1157
PARAFFIN/OLEFIN M RATIO					
C2	-	-	-	-	-
C3	0.0101	0.0097	0.0086	0.0089	0.0088
C4	0.1780	0.1721	0.1131	0.1506	0.1409
C5	1.0354	0.8827	0.4667	0.6124	0.3747
L10 HC COLLECTION					
PHYS. APPEARANCE	OIL	OIL	OIL	OIL	OIL
DENSITY	0.753	0.762	0.744		0.748
N. REFRACTIVE INDEX	1.4335	1.4356	1.4367		1.4354
SIMULATED DISTILLATION					
10 WT % @ DEG F.	289	302	301	312	328
16	315	333	337	352	364
50	436	447	449	453	458
84	529	546	552	553	528
90	563	595	603	602	563
RANGE (16-84%)	214	213	215	201	164
WT % @470 F	39.7	33.3	31.3	29.3	29.0
WT % @700 F	98.8	97.5	97.1	97.1	98.2

Table 23 (cont.) RESULT OF PROPYLENE OPERATION

RUN NO. 9972-17  
 CATALYST S115-HE-CAW #10042-43 48CC 35.0GM (33.83 GM AFTER RUN, .1.17GM)  
 FEED H<sub>2</sub>:C<sub>3</sub>H<sub>6</sub>:H<sub>2</sub>O @1:1:2 MOLE RATIO, 0.5 C<sub>3</sub>H<sub>6</sub> WHSV, CONTINUOUS OVERNITE  
 C<sub>3</sub>H<sub>6</sub> MW= 42.0813 DENSITY= 0.51041 GM/CC (@ 73 F)  
 TARGET FLOW: C<sub>3</sub>H<sub>6</sub> 34.3 CC/HR H<sub>2</sub> 170 CCMN, 10.2 L/HR H<sub>2</sub>O 15.0 CC/HR  
 ACTUAL FLOW: 34.9 CC/HR EFFLUENT 14.1 L/HR AQ LAYR 13.3 CC/HR

RUN & SAMPLE NO.	9972-17-6	9972-17-7	9972-17-8	9972-17-9	9972-17-10
C <sub>3</sub> H <sub>6</sub> WHSV	0.5	0.5	0.5	0.5	0.5
HRS ON STREAM	70.8	88.62	94.12	113.4	134.0
PRESSURE, PSIG	151	121	110	281	149
TEMP. C	283	282	282	280	281
FEED C <sub>3</sub> H <sub>6</sub> CC	213.95	653.28	195.07	686.52	547.45
HOURS FEEDING	5.933	17.816	5.5	19.25	16.75
EFFLUENT GAS LITER	94.31	273.44	84.80	302.47	283.98
GM AQUEOUS LAYER	86.56	264.60	81.44	275.03	150.92
GM LIQ HYDROCARBON	18.07	84.42	20.09	48.78	17.19
WT FR. LIQ HC/FEED	.1655	.2570	.2038	.1392	.0615
MATERIAL BALANCE WT %	84.95	80.72	95.01	85.41E	89.42
C <sub>3</sub> H <sub>6</sub> CONVERSION %	43.00	48.11	37.68	26.62E	18.12
PRDT SELECTIVITY WT %				NO GC	
CH <sub>4</sub>	0.00	0.00	0.00	0.00E	0.00
C <sub>2</sub> HC'S	0.08	0.00	0.00	0.00E	0.00
C <sub>3</sub> H <sub>8</sub>	4.08	1.90	2.82	3.20E	5.24
C <sub>4</sub> H <sub>10</sub>	1.18	0.22	0.27	0.14E	0.23
C <sub>4</sub> H <sub>8</sub> -	15.60	8.21	11.53	7.45E	12.21
C <sub>5</sub> H <sub>12</sub>	1.19	0.34	0.39	0.20E	0.33
C <sub>5</sub> H <sub>10</sub> -	1.13	0.73	0.97	0.75E	1.22
C <sub>6</sub> H <sub>14</sub>	6.02	3.43	4.12	2.45E	4.02
C <sub>6</sub> H <sub>12</sub> - & CYCLO'S	6.38	4.30	4.81	5.36E	8.77
C <sub>7</sub> + IN GAS	17.51	14.16	17.00	18.13E	29.68
LIQ HC'S	46.82	66.73	58.09	62.33E	38.31
TOTAL	100.00	100.00	100.00	100.00	100.00
SUB-GROUPING					
C1 -C4	20.95	10.32	14.62	10.79E	17.68
C5 -420 P	59.85	81.51	60.26	76.95E	73.51
420-700 P	19.01	8.17	24.68	12.26E	8.81
700-END PT	0.19	0.00	0.44	0.00	0.00
C5 -END PT	79.05	89.68	85.38	89.21E	82.32

Table 23 ( cont. )

ISO/NORMAL MOLE RATIO					
C4	0.4257	0.6759	0.6917	-	0.7791
C5	0.4451	0.4270	0.3921	-	0.3730
C6	8.7470	10.2005	11.1373	-	7.9450
C4-	0.1481	0.1384	0.1435	-	0.1197
PARAFFIN/OLEFIN M RATIO					
C2	-	-	-	-	-
C3	0.0295	0.0168	0.0163	-	0.0111
C4	0.0731	0.0255	0.0223	-	0.0183
C5	1.0199	0.4453	0.3916	-	0.2590
LIQ HC COLLECTION					
PHYS. APPEARANCE	OIL	OIL	OIL	OIL	OIL
DENSITY	0.713	0.724	0.728	0.731	0.745
N, REFRACTIVE INDEX	1.4260	1.4264	1.4269	1.4275	1.4290
SIMULATED DISTILLATION					
10 WT % @ DEG F.	234	209	218	240	241
16	258	233	272	263	267
50	383	319	394	340	347
84	489	408	493	437	459
90	527	432	531	474	504
RANGE (16-84%)	231	175	221	174	192
WT % @420 F	59.0	87.8	56.8	80.3	77.0
WT % @700 F	99.6	100	99.2	100	100

Table 23 (cont.) RESULT OF PROPYLENE OPERATION

RUN NO.	9972-17			
CATALYST	S115-HE-CAW #10042-43 4800 35.0GM (33.83 GM AFTER RUN, 1.17GM)			
FEED	H2:C3H6:H2O @1:1:2 MOLE RATIO.0.5 C3H6 WHSV,CONTINUOUS OVERNITE			
	C3H6 MW- 42.0813 DENSITY- 0.51041 GM/CC (@ 73 F)			
TARGET FLOW:	C3H6 34.3 CC/HR	H2 170 CC/HR	H2O 10.2 L/HR	15.0 CC/HR
ACTUAL FLOW:	34.9 CC/HR	EFFLUENT 14.1 L/HR	AQ LAYR 13.3 CC/HR	
RUN & SAMPLE NO.	9972-17-11	972-17-12	972-17-13	9972-17-14
C3H6 WHSV	0.5	0.5	0.5	0.5
HRS ON STREAM	156.6	164.8	181.3	188.3
PRESSURE,PSIG	149	155	148	149
TEMP, C	340	340	342	344
FEED C3H6 CC	591.50	283.17	597.17	239.18
HOURS FEEDING	16.167	8.167	16.5	7.0
EFFLNT GAS LITER	199.35	99.76	203.02	84.95
GM AQUEOUS LAYER	230.62	116.55	223.40	99.53
GM LIQ HYDROCARBON	130.78	63.44	132.68	53.72
WT FR. LIQ HC/FEED	.3186	.4389	.4353	.4620
MATERIAL BALANCE WT %	88.13	91.89	87.91	93.47
C3H6 CONVERSION %	89.37	89.20E	89.34	89.29
PRDT SELECTIVITY WT %		NO. GC		
CH4	0.01	0.01E	0.01	0.01
C2 HC'S	0.41	0.41E	0.41	0.41
C3H8	3.45	3.51E	3.34	3.47
C4H10	5.97	6.07E	5.94	6.01
C4H8=	10.27	10.44E	10.09	10.82
C5H12	5.57	5.66E	5.33	5.50
C5H10=	0.30	0.30E	0.31	0.33
C6H14	8.09	8.23E	7.88	8.34
C6H12- & CYCLO'S	2.54	2.59E	2.57	2.74
C7- IN GAS	7.82	7.96E	8.11	8.31
LIQ HC'S	55.59	54.82E	56.01	54.11
TOTAL	100.00	100.00	100.00	100.00
SUB-GROUPING				
C1 -C4	20.09	20.44E	19.80	20.66
C5 -420 F	72.79	77.53E	77.51	77.23
420-700 F	7.12	2.03E	2.69	2.11
700-END PT	0.00	0.00	0.00	0.00
C5 -END PT	79.91	79.56E	80.20	79.34

Table 23 (cont.)

ISO/NORMAL MOLE RATIO				
C4	2.3900	-	2.4940	2.4410
C5	2.2550	-	2.3102	2.2562
C6	10.1424	-	10.4345	10.2416
C4-	0.4743	-	0.4747	0.4744
PARAFFIN/OLEFIN M RATIO				
C2	0.0913	-	0.0806	0.0635
C3	0.2785	-	0.2690	0.2737
C4	0.5613	-	0.5681	0.5362
C5	16.1791	-	16.8575	16.2543
L10 HC COLLECTION				
PHYS. APPEARANCE	OIL	OIL	OIL	OIL
DENSITY	0.733	0.728	0.726	0.732
N. REFRACTIVE INDEX	1.4285	1.4305	1.4280	1.4285
SIMULATED DISTILLATION				
30 WT % @ DEC F.	154	147	150	148
36	179	168	172	170
50	272	262	264	263
84	399	348	353	349
90	433	376	386	378
RANGE (36-84%)	220	180	181	170
WT % @420 F	87.2	96.3	95.2	96.1
WT % @700 F	100	100	100	100

Table 24

## RESULT OF PROPYLENE OPERATION

RUN NO. 9972-18  
 CATALYST ZSM-5 #9939-44 54CC 35.00GM (35.59GM AFTER THE RUN, +0.59G)  
 FEED H<sub>2</sub>:C<sub>3</sub>H<sub>6</sub>:H<sub>2</sub>O @ 1:1:2 MOLE RATIO, 0.5 C<sub>3</sub>H<sub>6</sub> WHSV, CONTINUOUS FEED  
 C<sub>3</sub>H<sub>6</sub> MW= 42.0813 DENSITY= 0.5087 GM/CC (@ 73 F)  
 TARGET FLOW: C<sub>3</sub>H<sub>6</sub> 34.3 CC/HR H<sub>2</sub> 168 CCMN, 10.1 L/HR H<sub>2</sub>O 15.0 CC/HR  
 ACTUAL FLOW: 34.1 CC/HR EFFLUENT 13.1 L/HR AQ LAYR 13.9 CC/HR

RUN & SAMPLE NO.	9972-18-01	972-18-02	972-18-03	972-18-04	972-18-05
C <sub>3</sub> H <sub>6</sub> WHSV	0.49	0.51	0.49	0.50	0.51
HRS ON STREAM	2.9	19.5	27.15	45.4	50.9
PRESSURE, PSIG	152	152	154	135	146
TEMP. C	279	279	279	279	279
FEED C <sub>3</sub> H <sub>6</sub> CC	96.91	565.07	270.58	633.03	191.29
HOURS FEEDING	2.90	16.25	8.00	18.25	5.50
EFFLNT GAS LITER	36.40	203.83	107.45	265.55	82.92
GM AQUEOUS LAYER	38.19	234.56	115.74	242.38	74.26
GM LIQ HYDROCARBON	20.26	133.24	56.24	104.45	26.30
WT FR. LIQ HC/FEED	0.4110	0.4635	0.4086	0.3244	0.2703
MATERIAL BALANCE WT %	92.97	92.42	95.97	97.70	97.94
C <sub>3</sub> H <sub>6</sub> CONVERSION %	84.43	73.75	65.72	50.34	43.70
PRDT SELECTIVITY, WT %					
CH <sub>4</sub>	0.00	0.00	0.00	0.00	0.00
C <sub>2</sub> HC'S	0.10	0.03	0.03	0.00	0.02
C <sub>3</sub> H <sub>8</sub>	5.74	2.90	3.05	3.13	3.34
C <sub>4</sub> H <sub>10</sub>	6.97	2.06	2.01	1.46	1.39
C <sub>4</sub> H <sub>8</sub> =	6.59	7.48	8.61	8.17	8.74
C <sub>5</sub> H <sub>12</sub>	5.59	1.75	1.49	1.13	0.99
C <sub>5</sub> H <sub>10</sub> =	0.24	0.36	0.42	0.44	0.50
C <sub>6</sub> H <sub>14</sub>	7.15	4.67	4.04	3.61	3.39
C <sub>6</sub> H <sub>12</sub> = & CYCLO'S	2.54	3.15	4.09	4.23	4.41
C <sub>7</sub> + IN GAS	8.58	8.77	9.74	11.29	11.74
LIQ HC'S	56.51	68.84	66.52	66.55	65.47
TOTAL	100.00	100.00	100.00	100.00	100.00
SUB-GROUPING					
C <sub>1</sub> -C <sub>4</sub>	19.40	12.47	13.70	12.76	13.50
C <sub>5</sub> -420 F	75.24	83.46	80.18	79.65	77.99
420-700 F	5.37	4.06	6.12	7.59	8.51
700-END PT	0.00	0.00	0.00	0.00	0.00
C <sub>5</sub> + -END PT	80.60	87.53	86.30	87.24	86.50
ISO/NORMAL MOLE RATIO					
C <sub>4</sub>	1.5218	1.2047	1.0059	0.9882	1.0146
C <sub>5</sub>	1.7258	1.3639	1.3957	1.2251	1.1840
C <sub>6</sub>	8.2157	11.2969	11.7850	10.1468	10.7688
C <sub>4</sub> =	0.3678	0.1978	0.1615	0.1359	0.1276

Table 24 (cont.)

PARAFFIN/OLEFIN RATIO					
C3	0.2995	0.0779	0.0560	0.0304	0.0248
C4	1.0220	0.2656	0.2259	0.1727	0.1538
C5	22.7112	4.7759	3.4449	2.4776	1.9374
LIQ HC COLLECTION					
PHYS. APPEARANCE	CLEAR OIL	CLEAR OIL	CLEAR OIL	CLEAR OIL	CLEAR OIL
DENSITY	0.759	0.748	0.748	0.750	0.751
N. REFRACTIVE INDEX	1.4363	1.4285	1.4275	1.4275	1.4283
SIMULT'D DISTILLATE					
10 WT % @ DEG F	170	154	184	200	209
16	197	170	210	221	234
50	288	261	295	307	312
84	380	358	381	394	402
90	414	390	412	435	450
RANGE(16-84 %)	183	188	171	173	168
WT % @ 420 F	90.5	94.1	90.8	88.6	87.0
WT % @ 700 F	100	100	100	100	100



Table 24 (cont.) RESULT OF PROPYLENE OPERATION

RUN NO. 9972-1B  
 CATALYST ZSM-5 #9939-4A 5ACC 35.00GM (35.59GM AFTER THE RUN, +0.59G)  
 FEED H<sub>2</sub>:C<sub>3</sub>H<sub>6</sub>:H<sub>2</sub>O @ 1:1:2 MOLE RATIO, 0.5 C<sub>3</sub>H<sub>6</sub> WHSV, CONTINUOUS FEED  
 C<sub>3</sub>H<sub>6</sub> MW= 42.0813 DENSITY= 0.5087 GM/CC (@ 73 F)  
 TARGET FLOW: C<sub>3</sub>H<sub>6</sub> 34.3 CC/HR H<sub>2</sub> 168 CCMN, 10.1 L/HR H<sub>2</sub>O 15.0 CC/HR  
 ACTUAL FLOW: 34.1 CC/HR EFFLUENT 13.1 L/HR AQ LAYER 13.9 CC/HR

RUN & SAMPLE NO.	9972-1B-06	972-18-07	972-18-08	972-18-09
C <sub>3</sub> H <sub>6</sub> WHSV	0.52	0.51	0.51	0.50
HRS ON STREAM	71.82	76.24	93.74	99.91
PRESSURE, PSIG	151	150	147	154
TEMP. C	339	339	340	340
FEED C <sub>3</sub> H <sub>6</sub> CC	675.82	154.80	610.38	213.95
HOURS FEEDING	18.92	4.42	17.50	6.17
EFFLUENT GAS LITER	246.49	55.90	227.65	78.55
GM AQUEOUS LAYER	272.51	64.30	252.84	89.31
GM LIQ HYDROCARBON	137.79	32.94	131.34	45.79
WT FR. LIQ HC/FEED	0.4008	0.4183	0.4230	0.4207
MATERIAL BALANCE WT %	93.78	96.11	92.73	97.41
C <sub>3</sub> H <sub>6</sub> CONVERSION %	84.45	84.03	86.43	85.64
PRDT SELECTIVITY, WT %				
CH <sub>4</sub>	0.01	0.02	0.02	0.02
C <sub>2</sub> HC'S	0.30	0.27	0.21	0.18
C <sub>3</sub> H <sub>8</sub>	3.08	2.64	2.21	2.05
C <sub>4</sub> H <sub>10</sub>	3.89	3.02	2.16	2.06
C <sub>4</sub> H <sub>8</sub> =	13.04	13.32	14.49	14.31
C <sub>5</sub> H <sub>12</sub>	3.94	3.16	2.47	2.53
C <sub>5</sub> H <sub>10</sub> =	0.42	0.43	0.46	0.51
C <sub>6</sub> H <sub>14</sub>	9.97	9.17	9.56	10.03
C <sub>6</sub> H <sub>12</sub> = & CYCLO'S	4.24	4.26	4.64	5.33
C <sub>7</sub> + IN GAS	10.04	9.65	10.46	10.96
LIQ HC'S	51.06	54.06	53.31	52.03
TOTAL	100.00	100.00	100.00	100.00
SUB-GROUPING				
C <sub>1</sub> -C <sub>4</sub>	20.32	19.26	19.09	18.61
C <sub>5</sub> -420 F	71.40	78.63	78.61	79.05
420-700 F	8.27	2.11	2.29	2.34
700-END PT	0.00	0.00	0.00	0.00
C <sub>5</sub> + -END PT	79.68	80.74	80.91	81.39
ISO/NORMAL MOLE RATIO				
C <sub>4</sub>	2.1699	2.3078	2.3233	2.1780
C <sub>5</sub>	2.0037	1.8915	1.7441	1.6120
C <sub>6</sub>	12.6516	14.0644	15.4883	15.3583
C <sub>4</sub> =	0.4502	0.4377	0.4248	0.4071

Table 24 (cont.)

PARAFFIN/OLEFIN RATIO				
C3	0.1606	0.1333	0.1350	0.1172
C4	0.2878	0.2187	0.1442	0.1388
C5	9.0552	7.2249	5.1665	4.8597
LIQ HC COLLECTION				
PHYS. APPEARANCE	CLEAR OIL	CLEAR OIL	CLEAR OIL	CLEAR OIL
DENSITY	0.754	0.744	0.739	0.738
N, REFRACTIVE INDEX	1.4312	1.4263	1.4228	1.4236
SIMULT'D DISTILATN				
10 WT % @ DEG F	212	147	145	149
16	238	167	164	165
50	319	261	256	256
84	420	343	349	349
90	474	371	379	379
RANGE(16-84 %)	182	176	185	184
WT % @ 420 F	83.8	96.1	95.7	95.5
WT % @ 700 F	100	100	100	100

Table 25

## RESULT OF PROPYLENE OPERATION

RUN NO. 9972-20  
 CATALYST H-ZSM-5 #10042-65 59 CC 35.0 GM (40.1 AFTER RUN +5.1G)  
 FEED H<sub>2</sub>:C<sub>3</sub>H<sub>6</sub>:H<sub>2</sub>O @ 1:1:2 MOLE RATIO, 0.5 C<sub>3</sub>H<sub>6</sub> WHSV, CONTINUOUS FEED  
 C<sub>3</sub>H<sub>6</sub> MW= 42.0813 DENSITY= 0.5087 GM/CC (@ 73 F)  
 TARGET FLOW: C<sub>3</sub>H<sub>6</sub> 34.3 CC/HR H<sub>2</sub> 168 CC/MN, 10.1 L/HR H<sub>2</sub>O 15.0 CC/HR  
 ACTUAL FLOW: 35.5 CC/HR EFFLUENT 13.1 L/HR AQ LAYR 14.5 CC/HR

RUN & SAMPLE NO.	9972-20-01	972-20-02	972-20-03	972-20-04	972-20-05
C <sub>3</sub> H <sub>6</sub> WHSV	0.51	0.52	0.50	0.52	0.51
HRS ON STREAM	4.83	21.41	29.41	44.91	53.83
PRESSURE, PSIG	145	146	143	151	151
TEMP. C	279	278	279	278	278
FEED C <sub>3</sub> H <sub>6</sub> CC	169.27	592.88	276.12	560.04	310.22
HOURS FEEDING	4.83	16.58	8.00	15.50	8.92
EFFLNT GAS LITER	62.99	204.10	104.26	198.00	112.97
GM AQUEOUS LAYER	66.19	239.19	115.24	223.35	127.32
GM LIQ HYDROCARBON	35.18	172.28	83.06	160.71	91.10
WT FR. LIQ HC/FEED	0.4086	0.5712	0.5913	0.5641	0.5773
MATERIAL BALANCE WT %	90.21	91.70	98.20	94.42	96.97
C <sub>3</sub> H <sub>6</sub> CONVERSION %	90.53	91.38	90.69	87.33	85.34
PRDT SELECTIVITY, WT %					
CH <sub>4</sub>	0.01	0.01	0.01	0.00	0.01
C <sub>2</sub> HC'S	0.10	0.06	0.06	0.04	0.04
C <sub>3</sub> H <sub>8</sub>	6.37	2.32	2.08	1.75	1.63
C <sub>4</sub> H <sub>10</sub>	8.57	2.01	1.65	1.02	0.80
C <sub>4</sub> H <sub>8</sub> =	5.93	7.25	7.80	7.88	7.88
C <sub>5</sub> H <sub>12</sub>	7.86	2.19	1.88	1.35	1.09
C <sub>5</sub> H <sub>10</sub> =	0.19	0.25	0.28	0.30	0.30
C <sub>6</sub> H <sub>14</sub>	8.53	6.60	6.65	6.63	5.79
C <sub>6</sub> H <sub>12</sub> = & CYCLO'S	2.07	2.97	3.23	3.46	3.20
C <sub>7</sub> + IN GAS	8.20	7.35	8.25	8.76	7.86
LIQ HC'S	52.17	68.99	68.09	69.31	71.42
TOTAL	100.00	100.00	100.00	100.00	100.00
SUB-GROUPING					
C <sub>1</sub> -C <sub>4</sub>	20.98	11.65	11.61	10.69	10.35
C <sub>5</sub> -420 F	72.39	78.14	78.45	79.05	78.22
420-700 F	6.63	10.21	9.94	10.26	11.43
700-END PT	0.00	0.00	0.00	0.00	0.00
C <sub>5</sub> + -END PT	79.02	88.35	88.39	89.31	89.65
ISO/NORMAL MOLE RATIO					
C <sub>4</sub>	1.5548	1.8799	1.9144	1.8711	1.9078
C <sub>5</sub>	1.8088	1.7077	1.6529	1.4472	1.4069
C <sub>6</sub>	6.7192	13.4260	14.7159	16.0544	17.0921
C <sub>4</sub> =	0.4713	0.4230	0.3952	0.3713	0.3439

Table 25 (cont.)

PARAFFIN/OLEFIN RATIO					
C3	0.5871	0.2354	0.1943	0.1154	0.0906
C4	1.3955	0.2679	0.2045	0.1245	0.0977
C5	39.3409	8.3855	6.4657	4.3639	3.5651
LIQ HC COLLECTION					
PHYS. APPEARANCE	GRN OIL	GRN OIL	GRN OIL	GRN OIL	GRN OIL
DENSITY	0.752	0.742	0.744	0.741	0.740
N. REFRACTIVE INDEX	1.4409	1.4303	1.4295	1.4260	1.4234
SIMULT'D DISTILATN					
10 WT % @ DEG F	160	164	166	170	170
16	193	194	197	202	204
50	293	297	298	300	303
84	403	414	413	413	420
90	441	456	454	454	464
RANGE(16-84 %)	210	220	216	211	216
WT % @ 420 F	87.3	85.2	85.4	85.2	84.0
WT % @ 700 F	100.0	100.0	100.0	100.0	100.0

Table 25 (cont.) RESULT OF PROPYLENE OPERATION

RUN NO.	9972-20				
CATALYST	H-ZSM-5 #10042-65 59 CC 35.0 GM (40.1 AFTER RUN +5.1G)				
FEED	H <sub>2</sub> :C <sub>3</sub> H <sub>6</sub> :H <sub>2</sub> O @ 1:1:2 MOLE RATIO, 0.5 C <sub>3</sub> H <sub>6</sub> WHSV, CONTINUOUS FEED				
	C <sub>3</sub> H <sub>6</sub> MW= 42.0813 DENSITY= 0.5087 GM/CC (@ 73 F)				
TARGET FLOW:	C <sub>3</sub> H <sub>6</sub> 34.3 CC/HR	H <sub>2</sub> 168 CC/HR	COMM. 10.1 L/HR	H <sub>2</sub> O 15.0 CC/HR	
ACTUAL FLOW:	35.5 CC/HR	EFFLUENT 13.1 L/HR	AQ LAYR 14.5 CC/HR		
RUN & SAMPLE NO.	9972-20-06	972-20-07	972-20-08	972-20-09	972-20-10
C <sub>3</sub> H <sub>6</sub> WHSV	0.51	0.50	0.53	0.49	0.52
HRS ON STREAM	69.25	77.5	93.67	100.84	117.59
PRESSURE, PSIG	149	147	145	154	147
TEMP. C	336	337	337	337	337
FEED C <sub>3</sub> H <sub>6</sub> CC	540.49	284.42	591.50	244.15	600.94
HOURS FEEDING	15.42	8.25	16.17	7.17	16.75
EFFLNT GAS LITER	209.48	109.30	218.58	95.48	227.32
GM AQUEOUS LAYER	226.60	118.84	237.27	104.40	244.67
GM LIQ HYDROCARBON	122.48	66.75	132.45	58.50	134.45
WT FR. LIQ HC/FEED	0.4455	0.4613	0.4402	0.4710	0.4398
MATERIAL BALANCE WT %	103.07	101.19	95.47	104.92	96.90
C <sub>3</sub> H <sub>6</sub> CONVERSION %	89.69	90.41	88.11	88.85	86.64
PRDT SELECTIVITY, WT %					
C <sub>4</sub>	0.03	0.03	0.03	0.02	0.02
C <sub>2</sub> HC'S	0.38	0.40	0.40	0.36	0.35
C <sub>3</sub> H <sub>8</sub>	6.26	5.36	4.36	4.09	3.47
C <sub>4</sub> H <sub>10</sub>	11.15	9.39	7.29	6.83	5.39
C <sub>4</sub> H <sub>8</sub> =	7.16	8.22	9.71	10.69	11.96
C <sub>5</sub> H <sub>12</sub>	9.75	8.17	6.62	6.14	5.10
C <sub>5</sub> H <sub>10</sub> =	0.24	0.27	0.29	0.32	0.35
C <sub>6</sub> H <sub>14</sub>	7.71	7.80	8.33	8.69	9.00
C <sub>6</sub> H <sub>12</sub> = & CYCLO'S	1.47	1.84	2.31	2.69	3.01
C <sub>7</sub> + IN GAS	7.12	6.96	7.79	8.25	8.45
LIQ HC'S	48.72	51.55	52.86	51.90	52.91
TOTAL	100.00	100.00	100.00	100.00	100.00
SUB-GROUPING					
C <sub>1</sub> -C <sub>4</sub>	24.99	23.41	21.79	22.00	21.19
C <sub>5</sub> -C <sub>7</sub> P	70.58	72.11	73.92	73.84	75.06
C <sub>4</sub> -C <sub>7</sub> P	4.43	4.48	4.28	4.15	3.76
C <sub>7</sub> -END PT	0.00	0.00	0.00	0.00	0.00
C <sub>5</sub> -END PT	75.01	76.59	78.21	78.00	78.81
ISO/NORMAL MOLE RATIO					
C <sub>4</sub>	2.7268	2.3590	2.5016	2.4977	2.5185
C <sub>5</sub>	2.6767	2.6384	2.6645	2.6039	2.5007
C <sub>6</sub>	7.1991	8.0540	9.4070	10.1768	11.3599
C <sub>4</sub> =	0.4631	0.4695	0.4748	0.4699	0.4630

Table 25 (cont.)

PARAFFIN/OLEFIN RATIO					
C3	0.5259	0.4865	0.3112	0.3138	0.2163
C4	1.5028	1.1030	0.7249	0.6168	0.4351
C5	40.0225	29.4922	22.4699	18.7759	14.0341
LIQ HC COLLECTION					
PHYS. APPEARANCE	YL-GR OIL	YL-GR OIL	YL-GR OIL	YL-GR OIL	YL-GR OIL
DENSITY	0.766	0.767	0.759	0.760	0.756
N. REFRACTIVE INDEX	1.4394	1.4359	1.4331	1.4306	1.4286
SIMULT'D DISTILATN					
10 WT % @ DEG F	150	149	151	155	151
16	189	186	181	184	172
50	285	283	281	279	273
84	384	381	377	377	370
90	413	411	407	407	401
RANGE(16-84 %)	195	195	196	193	198
WT % @ 420 F	90.9	91.25	91.90	92.00	92.90
WT % @ 700 F	100.0	100.0	100.0	100.0	100.0