Table 11. PROPYLENE(WITH H2) OPERATION

RUN NO. 9972-3
CATALYST UCC-101 #9939-27 60 CC 35.0 GM (44.3 GM AFTER THE RUN, +9.3 GM)
FEED H2:C3H6:H2O @ 1:1:2 MOLE RATIO,0.5 C3H6 WHSV,CONTINOUS OVERNITE
C3H6 MW= 42.0813 DENSITY= 0.51041 GM/CC (@ 73 F)
TARGET FLOW: C3H6 34.3 CC/HR H2 168 CCMN, 10.08 L/HR H2O 15 CC/HR
ACTUAL FLOW: 28.92 CCHR EFFLUENT 17.13 L/HR 10.42 CC/HR

RUN & SAMPLE NO.	9972-3-1	9972-3-2	9972-3-3	9972-3-4	9972-3-5
C3H6 WHSV	0.4	0.4	0.4	0.4	0.4
HRS ON STREAMS	4.1667	7.6667	25.1667	31.9167	48.5833
PRESSURE,PSIG	172	178	179	178	179
TEMP. C	408	408	408	409	408
FEED C3H6 CC	132.14	99.423	523.54	165.49	484.53
HOURS FEEDING	4.1667	3.50	17.50	6.75	16.6667
EFFLNT GAS LITER	64.60	57.30	302.10	114.40	294.00
GM AQUEOUS LAYER	0.0	72.37	175.12	67.37	167.36
GM LIC HYDROCARBON	0.0	3.51	1.40	0.29	0.13
WT FR. LIQ HC/FEED	.0000	.0692	.0052	.0034	.0005
MATERIAL BALANCE WT %	69.13	96.42	84.12	102.30	86.81
C3H6 CONVERSION %	50.37	31.06	9.47	7.86	5.16
PROT SELECTIVITY WT %					
CH4	1.2558	0.8444	1.3219	1.4112	1.6555
C2 HC'S	1.9387	1.5031	2.3223	2.6226	3.8195
C3H8	62.9995	47.4961	62.3689	62.2339	63.0845
C4H10	4.5238	1.1010	1.2465	2.6253	4.2017
C4H8=	7.1352	4.4865	3.7899	5.6893	7.1939
C5H12	2.5906	0.6025	0.6040	0.6929	0.8256
C5H10=	0.2053	0.1618	0.1890	0.2343	0.3750
C6H14	4.9462	3.0185	3.5826	3.7124	4.2668
C6H12= & CYCLO'S	4.6688	7.9576	9.6325	8.5573	7.8029
C7+ IN GAS	9.7360	8.6442	8.4847	7.9335	6.6254
LIQ HC'S	0.0000	24.1844	14.1610E	4.2874E	1.1490E
TOTAL	100.00	100.00	100.00	100.00	100.00
SUBGROUPING					
C1 -C4	77.8530	55.4312	71.0495	74.5822	78.9552
C5 -420 F	22.1470	33.9277	23.8295	23.5314	20.5392
420-700 F	0.0000	9.6979	4.3266	1.7192	0.4608
C5 -END PT	22.1470	44.5688	28.9505	25.4178	21.0448

Table 11 (cont.)

ISO/NORMAL MOLE RATIO					
C4	2.0584	1.1355	0.3955	0.1466	0.0833
C5	2.9107	1.0894	0.4038	0.4639	0.2442
C6	3.7536	2.0800	1.7256	1.8657	1.4759
C4=	0.4142	0.4460	0.4075	0.3768	0.3553
PARAFFIN/OLEFIN M RATIO					
C3	0.6321	0.2098	0.0644	0.0524	0.0340
C4	0.6120	0.2369	0.3175	0.4454	0.5638
C5	12.2640	3.6197	3.1064	2.8750	2.1400
LIQ HC COLLECTION					
PHYS. APPEARANCE		OIL			
DENSITY		0.879			
N,REFRACTIVE INDEX		1.5171			
SIMULATED DISTILLATION					
10 WT % @ DEG F.	0	295	386	0	0
16	0	325	408	0	0
50	0	407	511	0	0
84	0	564	659	0	0
90	0	604	729	0	0
RANGE(16-84%)		239	251		
WT % @420 F	0	56	20.7	0	0
WT % @700 F	0	96.1	87.6	0	0

Table 12 PROPYLENE(WITH H2) OPERATION

RUN NO. 9972-4
CATALYST UCC-101 #9939-27 60 CC 38.0 GM (37.11GM AFTER THE RUN, +2.1 GM)
FEED H2:C3H6:H2O @ 1:1:3 MOLE RATIO,0.5 C3H6 WHSV,CONTINOUS OVERNITE
C3H6 MW= 42.0813 DENSITY= 0.51041 GM/CC (@ 73 F)
TARGET FLOW: C3H6 34.3 CC/HR H2 168 CCMN, 10.11 L/HR H2O 22.5 CC/HR
ACTUAL FLOW: 29.8 CCHR EFFLUENT 14.99 L/HR 24.67 CC/HR

RUN & SAMPLE NO.	9972-4-1	9972-4-2	9972-4-3	9972-4-4	9972-4-5
C3H6 WHSV	0.4	0.4	0.4	0.4	0.4
HRS ON STREAM	7.8	23.8	28.1	31.2	48.1
PRESSURE,PSIG	160	154	156	157	160
TEMP. C	278	278	278	340	338
FEED C3H6 CC	215.84	488.93	125.85	86.21	521.03
HOURS FEEDING	7.75	16.00	4.25	3.17	16.92
EFFLNT GAS LITER	108.70	244.40	63 80	45.80	258.30
GM AQUEOUS LAYER	187.46	390.30	104.88	77.11	412.63
GM LIQ HYDROCARBON	0.0	1.43	0.00	1.12	2.00
WT FR. LIQ HC/FEED	0.000	0.0057	0.000	0.0255	0.0075
MATERIAL BALANCE WT %	85.07	83.96	88.49	97.09	83.91
C3H6 CONVERSION %	10.99	7.14	6.51	22.76	11.81
PRDT SELECTIVITY WT %					
CH4	0.0453	0.0837E	0.0925	0.2210	0.1835
C2 HC'S	0.1854	0.1178E	0.1303	0.3156	0.2482
C3H8	34.9861	35.4022E	39.1240	37.1714	38.9291
C4H10	3.6021	2.2243E	2.4581	4.9234	3.6059
C4H8=	5.9033	10.0413E	11.0969	10.2263	13.2319
C5H12	2.9608	1.3998E	1.5470	2.9490	0.7180
C5H10=	0.2288	0.1971E	0.2178	0.2826	0.3462
C6H14	15.2585	8.4234E	9.3089	7.3512	3.7970
C6H12= & CYCLO'S	7.9238	9.6847E	10.7028	6.2292	12.0398
C7+ IN GAS	28.9061	22.9128E	25.3217	18.1121	19.3498
LIQ HC'S	0.0000	9.5128E	0.0000	12.2182	7.5507
TOTAL	100.00	100.00	100.00	100.00	100.00
SUBGROUPING					
C1 -C4	44.7221	47.8693E	52.9018	52.8577	56.1986
C5 -420 F	55.2779	47.8499E	47.0982	41.8274	39.8977
420-700 F	0.0000	3.9954E	0.0000	4.8751	3.6243
C5 -END PT	55.2779	52.1307E	47.0982	47.1423	43.8014

Table 12 (cont.)

ISO/NORMAL MOLE RATIO					
C4	5.8252	---	1.7902	2.2263	0.3878
C5	------	---	10.6000	5.9028	0.0973
C6	18.4058	---	7.3011	6.8580	1.8226
C4=	0.5287	---	0.4669	0.4643	0.4480
PARAFFIN/OLEFIN M RATIO					
C3	0.0422	0.0265	0.0265	0.1070	0.0508
C4	0.5890	0.2138	0.2138	0.4647	0.2631
C5	12.5811	6.9048	6.9048	10.1429	2.0163
LIQ HC COLLECTION					
PHYS. APPEARANCE		OIL		OIL	OIL
DENSITY	.	.			
N,REFRACTIVE INDEX	.	.			
SIMULATED DISTILLATION					
10 WT % @ DEG F.	0	291	0	275	303
16	0	330	0	290	335
50	0	409	0	405	425
84	0	508	0	531	555
90	0	556	0	592	609
RANGE(16-84%)	0	178	0	241	220
WT % @420 F	0	55.0	0	56.5	48.3
WT % @700 F	0	97.0	0	96.4	96.3

Table 12 (cont.) PROPYLENE(WITH H2) OPERATION

RUN NO. 9972-4
CATALYST UCC-101 *9939-27 60 CC 35.0 GM (37.11GM AFTER THE RUN, +2.1 GM)
FEED H2:C3H6:H2O @ 1:1:3 MOLE RATIO,0.5 C3H6 WHSV,CONTINOUS OVERNITE
C3H6 MW= 42.0813 DENSITY= 0.51041 GM/CC (@ 73 F)
TARGET FLOW: C3H6 34.3 CC/HR H2 168 CCMN, 10.08 L/HR H2O 22.5 CC/HR
ACTUAL FLOW: 29.8 CC/HR EFFLUENT 14.89 L/HR 24.7 CC/HR

RUN & SAMPLE NO.	9972-4-6
C3H6 WHSV	0.4
HRS ON STREAMS	55.0
PRESSURE,PSIG	155
TEMP. C	338
FEED C3H6 CC	201.36
HOURS FEEDING	6.92
EFFLNT GAS LITER	103.50
GM AQUEOUS LAYER	167.84
GM LIQ HYDROCARBON	0.790
WT FR. LIQ HC/FEED	0.0020
MATERIAL BALANCE WT %	87.55
C3H6 CONVERSION %	9.81
PRDT SELECTIVITY WT %	
CH4	0.1694
C2 HC'S	0.4297
C3H8	39.4476
C4H10	3.1567
C4H8=	10.9984
C5H12	0.8183
C5H10=	0.3326
C6H14	3.7366
C6H12= & CYCLO'S	13.4696
C7+ IN GAS	18.3737
LIQ HC'S	9.0675
TOTAL	100.00
SUBGROUPING	
C1 -C4	54.2018
C5 -420 F	41.7179
420-700 F	3.8083
C5 -END PT	45.7982

Table 12 (cont.)

ISO/NORMAL MOLE RATIO	
C4	0.3321
C5	1.3918
C6	1.4639
C4=	0.4805
PARAFFIN/OLEFIN M RATIO	
C3	0.0419
C4	0.2771
C5	2.3918
LIQ HC COLLECTION	
PHYS. APPEARANCE	OIL
DENSITY	.
N,REFRACTIVE INDEX	.
SIMULATED DISTILLATION	
10 WT % @ DEG F.	
16	0
50	0
84	0
90	0
RANGE(16-84%)	0
WT % @420 F	0
WT % @700 F	0

Table 13 PROPYLENE(WITH H2) OPERATION

RUN NO. 9972-5
CATALYST ALPO-11 (20% AL2O3) #9939-67, 63 CC 30 GM,30.05G AFTER THE RUN
FEED H2:C3H6:H2O @ 2:1:1 MOLE RATIO,0.5 C3H6 WHSV,DAY-TIME FEED
C3H6 MW= 42.0813 DENSITY= 0.51041 GM/CC (@ 73 F)
TARGET FLOW: C3H6 29.4 CC/HR H2 290 CCMN, 17.4 L/HR H2O 6.4 CC/HR
ACTUAL FLOW: 29.1 CC/HR EFFLUENT 22.55 L/HR 6.0 CC/HR

RUN & SAMPLE NO.	9972-5-1	9972-5-2	9972-5-3	9972-5-4	9972-5-5
C3H6 WHSV	0.4	0.5	0.5	0.5	0.5
HRS ON STREAMS	7.0	24.6	32.0	38.8	46.4
PRESSURE,PSIG	150	148	149	304	301
TEMP. C	278	278	339	337	336
FEED C3H6 CC	182.48	534.87	207.66	218.35	203.88
HOURS FEEDING	7.0	17.6	7.4	6.8	7.5
EFFLNT GAS LITER	159.3	409.0	168.6	145.5	162.3
GM AQUEOUS LAYER	32.2	92.86	39.67	37.55	40.51
GM LIQ HYDROCARBON	0.0	0.0	0.0	0.0	0.0
WT FR. LIQ HC/FEED	0.000	0.000	0.000	0.000	0.000
MATERIAL BALANCE WT %	97.30	84.55	86.29	83.46	86.91
C3H6 CONVERSION %	3.80	0.91	5.48	6.75	6.87
PRDT SELECTIVITY WT %					
CH4	0.4707	2.2457	0.0000	0.3702	0.0000
C2 HC'S	0.0000	0.0000	0.0000	0.1877	0.0000
C3H8	72.9831	0.0000	27.0770	18.7602	15.0155
C4H10	5.3347	12.7855	0.0000	3.0310	0.8574
C4H8=	2.6909	10.3224	0.0000	9.2956	0.4543
C5H12	0.0000	0.0000	0.0000	1.4880	0.7122
C5H10=	0.0000	0.0000	0.0000	0.1102	0.0000
C6H14	1.6208	7.1690	0.0000	7.8285	6.5284
C6H12= & CYCLO'S	11.6183	45.1719	54.0272	34.0115	48.9986
C7+ IN GAS	5.2815	22.3054	18.8958	24.9170	27.4336
LIQ HC'S	0.0000	0.0000	0.0000	0.0000	0.0000
TOTAL	100.00	100.00	100.00	100.0	100.00
SUBGROUPING					
C1 -C4	81.4794	25.3536	27.0770	31.6449	16.3272
C5 -420 F	18.5206	74.6464	72.9230	68.3551	83.6728
420-700 F	0.0000	0.0000	0.0000	0.0000	0.0000
C5 -END PT	18.5206	74.6464	72.9230	68.3551	83.6728

Table 13 (cont.)

ISO/NORMAL MOLE RATIO					
C4	2.2752	0.6871	------	0.0684	0.2430
C5	------	------	------	0.4384	0.3284
C6	0.5152	0.5522	0.0000	0.9392	1.0449
C4=	0.5255	0.4739	0.0000	0.4861	0.0000
PARAFFIN/OLEFIN M RATIO					
C3	0.0286	------	0.0152	0.0131	0.0107
C4	1.9137	1.1957	------	0.3148	1.8219
C5	------	------	------	13.1250	------

Table 14 PROPYLENE(WITH H2) OPERATION

RUN NO. 9972-6
CATALYST UCC-104 #9939-74 58 CC 35.0 GM (35.1 GM AFTER THE RUN, +0.1 GM)
FEED H2:C3H6:H2O @ 1:1:0 MOLE RATIO,0.5 C3H6 WHSV,CONTINOUS OVERNITE
C3H6 MW= 42.0813 DENSITY= 0.51041 GM/CC (@ 73 F)
TARGET FLOW: C3H6 34.3 CC/HR H2 151 CCMN, 9.06 L/HR(NOTE: H2 MASS FLOW)
ACTUAL FLOW: 29.6 CCHR EFFLUENT 9.20 L/HR(METER OFF)

RUN & SAMPLE NO.	9972-6-1	9972-6-2	9972-6-3	9972-6-4	9972-6-5
C3H6 WHSV	0.4	0.4	0.4	0.4	0.1
HRS ON STREAMS	7.1	24.9	30.3	48.9	53.5
PRESSURE,PSIG	150	150	150	150	151
TEMP. C	280	280	280	341	340
FEED C3H6 CC	171.79	532.98	160.46	457.47	36.5
HOURS FEEDING	7.2	17.8	5.7	16.6	4.5
EFFLNT GAS LITER	52.4	157.3	52.6	138.5	26.6
GM AQUEOUS LAYER	0.0	0.0	0.0	0.0	0.0
GM LIQ HYDROCARBON	32.28	65.31	17.94	85.97	3.07
WT FR. LIQ HC/FEED	0.3681	0.2401	0.2190	0.3682	0.1648
				*CHANGING T	
MATERIAL BALANCE WT %	98.37	85.35	95.81	53.86*	100.19
C3H6 CONVERSION %	71.64	61.85	58.56	96.12	86.25
PROT SELECTIVITY WT %					
CH4	0.0055	0.0233	0.0331	0.0570	0.1624
C2 HC'S	0.0131	0.0128	0.0119	0.0818	0.2907
C3H8	10.7970	8.6405	8.5733	1.3926	11.5642
C4H10	0.4168	0.3198	0.4008	0.6145	2.6316
C4H8=	0.9287	1.0057	1.1858	0.9235	5.0197
C5H12	0.3429	0.1991	0.1919	0.6497	2.3623
C5H10=	0.0350	0.0314	0.0334	0.0530	0.1989
C6H14	4.4915	3.1704	3.2983	3.4234	9.7053
C6H12= & CYCLO'S	22.7645	36.8818	36.0544	13.5246	35.3949
C7+ IN GAS	6.1001	3.6835	9.5362	7.1864	12.1123
LIQ HC'S	54.1051	46.0317	40.6807	72.0935	20.5578
TOTAL	100.00	100.00	100.00	100.00	100.00
SUBGROUPING					
C1 -C4	12.1611	10.0021	10.2050	3.0695	19.6685
C5 -420 F	84.9173	82.1265	84.9540	82.7281	76.7955
420-700 F	2.9217	7.6873	4.8410	12.8326	3.4948
C5 -END PT	87.8389	89.9979	89.7950	96.9305	80.3315

Table 1- (cont.)

ISO/NORMAL MOLE RATIO					
C4	4.5111	1.3601	0.7807	3.1973	4.1134
C5	13.7753	3.5489	5.5301	4.1335	4.3052
C6	3.5023	1.6072	1.4850	2.8733	3.3221
C4=	0.7314	0.6984	0.6417	0.5267	0.5336
PARAFFIN/OLEFIN M RATIO					
C3	0.2636	0.1342	0.1165	0.3292	0.7012
C4	0.4332	0.3069	0.3263	0.6423	0.5061
C5	9.5290	6.1735	5.5876	11.9241	11.5426
LIQ HC COLLECTION					
PHYS. APPEARANCE	OIL CLEAR	OIL CLEAR	OIL CLEAR	OIL YLW	OIL YLW
DENSITY	0.724	0.728	0.710	0.720	0.742
N,REFRACTIVE INDEX	1.4169	1.4166	1.4164	1.4165	1.4277
SIMULATED DISTILLATION					
10 WT % @ DEG F.	147	157	155	169	155
16	156	160	159	177	159
50	222	291	278	300	282
84	362	433	397	453	433
90	392	485	447	521	499
RANGE(16-84%)	106	273	238	276	274
WT % @420 F	94.6	82.9	88.1	80.3	82.8
WT % @700 F	100.0	99.6	100.0	98.1	99.8

Table 1- (cont.)PROPYLENE(WITH H2) OPERATION

RUN NO. 9972-6
CATALYST UCC-104 #9939-74 58 CC 35.0 GM (35.1 GM AFTER THE RUN, +0.1 GM)
FEED H2:C3H6:H2O @ 1:1:0 MOLE RATIO,0.5 C3H6 WHSV,CONTINOUS OVERNITE
C3H6 MW= 42.0813 DENSITY= 0.5104] GM/CC (@ 73 F)
TARGET FLOW: C3H6 34.3 CC/HR H2 151 CCMN, 9.06 L/HR(NOTE: H2 MASS FLOW)
ACTUAL FLOW: 29.6 CC/HR EFFLUENT 9.23 L/HR(METER OFF)

RUN & SAMPLE NO.	9972-6-6	9972-6-7
C3H6 WHSV	0.5	0.6
HRS ON STREAMS	72.3	79.0
PRESSURE,PSIG	155	152
TEMP. C	340	340
FEED C3H6 CC	648.76	288.83
HOURS FEEDING	18.8	7.0
EFFLNT GAS LITER	197.6	89.1
GM ACUEOUS LAYER	0.0	0.0
GM LIQ HYDROCARBON	101.69	39.11
WT FR. LIQ HC/FEED	0.3071	0.2653
MATERIAL BALANCE WT %	99.90	96.72
C3H6 CONVERSION %	63.60	59.77
PRDT SELECTIVITY WT %		
CH4	0.0396	0.0401
C2 HC'S	0.0571	0.0590
C3H8	4.3172	4.4432
C4H10	0.4310	0.4564
C4H8=	1.8769	1.9106
C5H12	0.3204	0.2821
C5H10=	0.0724	0.0726
C6H14	3.0862	3.1971
C6H12= & CYCLO'S	32.1118	30.9868
C7+ IN GAS	8.9782	11.5794
LIQ HC'S	48.7092	46.9727
TOTAL	100.00	100.00
SUBGROUPING		
C1 -C4	6.7218	6.9093
C5 -420 F	93.2782	91.7755
420-700 F	0.0000	1.3152
C5 -END PT	93.2782	93.0907

Table 1- (cont.)

ISO/NORMAL MOLE RATIO		
C4	1.1860	0.8344
C5	2.2386	1.8553
C6	1.0160	0.7396
C4=	0.5779	0.5840
PARAFFIN/OLEFIN M RATIO		
C3	0.0727	0.0636
C4	0.2217	0.2306
C5	4.3019	3.7787
LIQ HC COLLECTION		
PHYS. APPEARANCE	OIL CLEAR	OIL CLEAR
DENSITY	0.716	0.713
N,REFRACTIVE INDEX	1.4132	1.4331
SIMULATED DISTILLATION		
10 WT % @ DEG F.	146	150
16	155	156
50	168	173
84	294	306
90	305	368
RANGE(16-84%)	139	150
WT % @420 F	100	97.2
WT % @700 F	100	100

Table 15 PROPYLENE(WITH H2) OPERATION

RUN NO. 9972-7
CATALYST UCC-104 #9939-74 59 CC 35.0 GM (33.9 GM AFTER THE RUN, -1.1 GM)
FEED H2:C3H6:H2O @ 2:1:1 MOLE RATIO,0.5 C3H6 WHSV,CONTINOUS OVERNITE
C3H6 MW= 42.0813 DENSITY= 0.51041 GM/CC (@ 73 F)
TARGET FLOW: C3H6 34.3 CC/HR H2 310 CCMN, 18.60 L/HR H2O 7.5 CC/HR
ACTUAL FLOW: 32.5 CC/HR EFFLUENT 19.15 L/HR 7.15 CC/HR

RUN & SAMPLE NO.	9972-7-1	9972-7-2	9972-7-3	9972-7-4	9972-7-5
C3H6 WHSV	0.5	0.5	0.5	0.5	0.5
HRS ON STREAMS	7.3	24.4	31.4	47.5	55.3
PRESSURE,PSIG	150	149	147	142	146
TEMP. C	277	276	276	277	339
FEED C3H6 CC	229.68	560.04	195.70	565.70	242.89
HOURS FEEDING	7.4	17.1	6.9	16.1	7.75
EFFLNT GAS LITER	135.0	326.3	133.8	321.1	141.9
GM AQUEOUS LAYER	46.80	115.32	46.15	107.69	50.99
GM LIQ HYDROCARBON	11.31	16.30	4.87	10.30	23.42
WT FR. LIQ HC/FEED	0.0965	0.0570	0.0488	0.0357	0.1889
MATERIAL BALANCE WT %	96.39	91.47	108.66	87.52	105.78
C3H6 CONVERSION %	49.56	41.19	43.11	37.06	64.51
PROT SELECTIVITY WT %					
CH4	0.0321	0.0312	0.0305	0.0373	0.0350
C2 HC'S	0.0144	0.0133	0.0086	0.0345	0.0916
C3H8	9.9002	7.8514	6.0165	6.1979	3.8257
C4H10	0.2975	0.5607	0.0954	0.5177	0.8287
C4H8=	0.9039	1.0424	0.5315	1.1562	2.8463
C5H12	0.3234	0.1898	0.0973	0.1279	0.8844
C5H10=	0.0361	0.0299	0.0271	0.0298	0.1172
C6H14	4.9220	4.1218	4.1261	4.6897	9.4567
C6H12= & CYCLO'S	48.6190	56.5851	61.2512	52.6780	34.5065
C7+ IN GAS	14.3996	14.3668	17.4462	23.4749	19.2499
LIQ HC'S	20.5518	15.2077	10.3698	11.0566	28.1579
TOTAL	100.00	100.00	100.00	100.00	100.00
SUBGROUPING					
C1 -C4	11.1481	9.4989	6.6825	7.9437	7.6275
C5 -420 F	85.6253	88.4024	91.5962	90.4753	90.1199
420-700 F	3.2266	2.0987	1.7214	1.5810	2.2526
C5 -END PT	88.8519	90.5011	93.3175	92.0563	92.3725

Table 15 (cont.)

ISO/NORMAL MOLE RATIO					
C4	1.4853	0.2644	6.0000	0.2031	2.0866
C5	4.2235	4.5263	3.4848	3.3103	3.6684
C6	1.6207	1.0549	1.2931	1.1376	3.5866
C4=	0.7431	0.6352	0.7673	0.5520	0.5275
PARAFFIN/OLEFIN M RATIO					
C3	0.0934	0.0528	0.0437	0.0350	0.0664
C4	0.3177	0.5192	0.1733	0.4322	0.2811
C5	8.7059	6.1765	3.4848	4.1667	7.3361
LIQ HC COLLECTION					
PHYS. APPEARANCE	OIL YL GN	OIL YL GN	OIL YL GN	OIL YL GN	OIL YL GN
DENSITY	0.732	0.738	0.754	0.723	0.729
N,REFRACTIVE INDEX	1.4267	1.4274	1.4292	1.4310	1.4256
SIMULATED DISTILLATION					
10 WT % @ DEG F.	158	158	160	159	0
16	163	163	172	164	0
50	296	297	302	299	0
84	418	407	424	409	0
90	472	457	472	460	0
RANGE(16-84%)	255	244	252	245	0
WT % @420 F	84.3	86.2	83.4	85.7	92.0
WT % @700 F	100.0	100.0	100.0	100.0	100.0

Table 15 (cont.) PROPYLENE(WITH H2) OPERATION

RUN NO. 9972-7
CATALYST UCC-104 #9939-74 59 CC 35.0 GM (33.9 GM AFTER THE RUN, -1.1 GM)
FEED H2:C3H6:H2O @ 2:1:1 MOLE RATIO,0.5 C3H6 WHSV,CONTINOUS OVERNITE
C3H6 MW= 42.0813 DENSITY= 0.51041 GM/CC (@ 73 F)
TARGET FLOW: C3H6 34.3 CC/HR H2 310 CCMN, 18.60 L/HR H2O 7.50 CC/HR
ACTUAL FLOW: 32.5 CC/HR EFFLUENT 19.15 L/HR 7.15 CC/HR

RUN & SAMPLE NO.		9972-7-6	9972-7-7	9972-7-8
C3H6 WHSV		0.5	0.4	0.5
HRS ON STREAM5		70.7	78.0	94.3
PRESSURE,PSIG		155	155	153
TEMP. C		337	337	337
FEED C3H6 CC		508.44	198.22	547.45
HOURS FEEDING		15.3	7.4	16.3
EFFLNT GAS LITER		303.9	146.1	328.8
GM AQUEOUS LAYER		103.80	48.27	109.62
GM LIQ HYDROCARBON		35.85	14.28	29.68
WT FR. LIQ HC/FEED		0.1381	0.1411	0.1062
MATERIAL BALANCE WT %		101.35E	123.39	123.42
C3H6 CONVERSION %		64.10E	63.17	50.45
PROT SELECTIVITY WT %				
CH4	NO	---	0.0000	0.0539
C2 HC'S	GAS	---	0.0000	0.0514
C3H8	SAM	---	2.6718	2.6813
C4H10	PLE	---	0.1980	0.1904
C4H8=		---	1.5425	1.4552
C5H12		---	0.1768	0.2437
C5H10=		---	0.7216	0.0737
C6H14		---	5.6123	5.4110
C6H12= & CYCLO'S		---	52.4359	56.1453
C7+ IN GAS		---	18.1686	16.5006
LIQ HC'S		---	18.4725	17.3626
TOTAL		---	100.00	100.00
SUBGROUPING		ESTIMATED		
C1 -C4		4.2499E	4.4123	4.4323
C5 -420 F		93.9678E	94.0175	94.1923
420-700 F		1.7824E	1.5702	1.3755
C5 -END PT		95.7501E	95.5877	95.5677

Table 15 (cont.)

ISO/NORMAL MOLE RATIO			
C4	---	------	3.3093
C5	---	------	1.9320
C6	---	1.7710	1.4756
C4=	---	0.6102	0.5887
PARAFFIN/OLEFIN M RATIO			
C3	---	0.0438	0.0261
C4	---	0.1239	0.1263
C5	---	0.2381	3.2164
LIQ HC COLLECTION			
PHYS. APPEARANCE	OIL YLW	OIL YLW	OIL YLW
DENSITY	0.720	0.710	0.710
N,REFRACTIVE INDEX	1.4286	1.4302	1.4248
SIMULATED DISTILLATION			
10 WT % @ DEG F.	156	157	-
16	159	160	-
50	282	285	-
84	384	387	-
90	407	408	-
RANGE(16-84%)	225	227	-
WT % @420 F	91.7	91.5	-
WT % @700 F	100.0	100.0	-

Table 16 RESULT OF PROPYLENE OPERATION

RUN NO. 9972-8
CATALYST UCC-103 #9939-46 76 CC 35.00GM (34.72GM AFTER THE RUN, -0.28GM)
FEED H2:C3H6:H2O @ 1:1:2 MOLE RATIO.0.5 C3H6 WHSV.CONTINOUS OVERNITE
C3H6 MW= 42.0813 DENSITY= 0.51041 GM/CC (@ 73 F)
TARGET FLOW: C3H6 34.30CC/HR H2 150 CCMN. 9.0 L/HR H2O 15 CC/HR
ACTUAL FLOW: 34.4 CCHR EFFLUENT 15.23 L/HR AQ LAYR 14 CC/HR

RUN & SAMPLE NO.	9972-08-1	9972-08-2	9972-08-3	9972-08-4	9972-08-5
C3H6 WHSV	0.5	0.5	0.5	0.5	0.5
HRS ON STREAM	6.8	23.0	30.6	48.9	54.7
PRESSURE,PSIG	150	143	144	150	140
TEMP. C	283	281	341	338	338
FEED C3H6 CC	211.43	570.74	249.82	646.25	203.25
HOURS FEEDING	6.8	16.1	7.6	18.3	6.0
EFFLNT GAS LITER	98.6	243.6	112.8	292.5	95.4
GM AQUEOUS LAYER	97.22	224.51	104.17	254.83	82.36
GM LIQ HYDROCARBON	0.78	1.46	2.93	1.66	0.54
WT FR. LIQ HC/FEED	.0072	.0050	.0230	.0050	.0052
MATERIAL BALANCE WT %	101.43	89.64	91.47E	88.51	93.73E
C3H6 CONVERSION %	10.56	7.66	13.21E	11.45	11.44E
PROT SELECTIVITY WT %			NO GC		NO GC
CH4	0.04	0.07	0.09E	0.11	0.11E
C2 HC'S	0.05	0.06	0.13E	0.15	0.17E
C3H8	13.04	15.53	16.67E	19.63	19.63E
C4H10	5.29	3.39	3.68E	4.33	4.33E
C4H8=	7.66	7.89	6.75E	7.95	7.95E
C5H12	1.51	0.53	0.45E	0.53	0.53E
C5H10=	0.15	0.16	0.15E	0.18	0.18E
C6H14	12.51	9.50	7.14E	8.41	8.41E
C6H12- & CYCLO'S	15.09	22.07	24.51E	28.87	28.87E
C7+ IN GAS	37.74	33.49	21.13E	24.88	24.88E
LIQ HC'S	6.91	7.31	19.30E	4.96	4.95E
TOTAL	100.00	100.00	100.00	100.00	100.00
SUBGROUPING					
C1 -C4	26.09	26.94	27.31E	32.17	32.17E
C5 -420 F	68.24	71.23	65.25E	66.24	65.60E
420-700 F	4.08	1.83	7.18E	1.49	2.08E
700-END PT	1.59	0.00	0.25E	0.09	0.15E
C5 -END PT	73.91	73.06	72.69E	67.83	67.83E

Table 16 (cont.)

ISO/NORMAL MOLE RATIO					
C4	0.4781	0.2797	-	0.1035	-
C5	7.5735	-	-	1.0928	-
C6	13.9593	7.6110	-	3.7230	-
C4=	0.5747	0.5287	-	0.5354	-
PARAFFIN/OLEFIN M RATIO					
C2	0.6765	0.4074	-	0.8205	
C3	0.0149	0.0124		0.0245	
C4	0.6668	0.4149	-	0.5253	-
C5	10.0517	3.1957	-	2.8194	-
LIQ HC COLLECTION					
PHYS. APPEARANCE	OIL	OIL	OIL	OIL	TRACE OIL
DENSITY		0.802			
N.REFRACTIVE INDEX		1.4537			
SIMULATED DISTILLATION					
10 WT % @ DEG F.	356	273	283	263	NOT
16	410	281	302	277	
50	597	374	396	378	ENO-
84	732	450	492	491	
90	765	478	532	544	UGH
RANGE(16-84%)	322	169	190	214	
WT % @420 F	18.0	75.0	61.5	68.0	
WT % @700 F	77.0	100	98.7	98.1	

Table 17 RESULT OF PROPYLENE OPERATION

RUN NO. 9972-9 (LZ 20)
CATALYST UCC-106 #9939-35 56 CC 35.0 GM(35.77GM AFTER THE RUN, +0.77GM)
FEED H2:C3H6:H2O @1:1:2 MOLE RATIO,0.5 C3H6 WHSV,CONTINOUS OVERNITE
C3H6 MW- 42.0813 DENSITY= 0.51041 GM/CC (@ 73 F)
TARGET FLOW: C3H6 34.33CC/HR H2 150 CCMN. 9.0 L/HR H2O 15. CC/HR
ACTUAL FLOW: 34.93 CC/HR EFFLUENT 16.43 L/HR AQ LAYR 13.9 CC/HR

RUN & SAMPLE NO.	9972-09-1	9972-09-2	9972-09-3	9972-09-4	9972-09-5
C3H6 WHSV	0.5	0.5	0.5	0.5	0.5
HRS ON STREAM	5.6	21.7	27.4	45.9	53.2
PRESSURE,PSIG	164	141	143	143	147
TEMP. C	282	283	282	329	342
FEED C3H6 CC	201.99	558.78	201.36	655.06	251.07
HOURS FEEDING	5.6	16.3	5.75	18.5	7.33
EFFLNT GAS LITER	84.6	263.5	96.4	303.4	117.8
GM AQUEOUS LAYER	72.7	227.56	79.53	257.46	101.41
GM LIQ HYDROCARBON	2.68	0.25	0.70	1.24	1.19
WT FR. LIQ HC/FEED	.0260	.0009	.0068	.0037	.0093
MATERIAL BALANCE WT %	90.36	85.70	100.20	89.11	92.55
C3H6 CONVERSION %	17.23	7.37	6.20	8.59	11.41
PRDT SELECTIVITY WT %					
CH4	0.07	0.05	0.21	0.14	0.17
C2 HC'S	0.13	0.14	0.14	0.23	0.26
C3H8	20.52	32.65	26.88	26.37	23.29
C4H10	4.51	7.42	8.88	6.42	5.52
C4H8=	6.48	10.53	11.73	8.42	11.78
C5H12	1.60	0.62	1.21	0.38	2.81
C5H10=	0.14	0.13	0.14	0.19	1.12
C6H14	9.80	5.71	4.42	4.67	5.62
C6H12= & CYCLO'S	13.21	21.82	19.24	28.75	24.75
C7+ IN GAS	26.39	19.55	15.99	19.61	15.81
LIQ HC'S	17.15	1.38	11.16	4.82	8.89
TOTAL	100.00	100.00	100.00	100.00	100.00
SUBGROUPING					
C1 -C4	31.71	50.80	47.84	41.59	41.01
C5 -420 F	64.40	48.89	49.62	55.76	54.10
420-700 F	3.77	0.30E	2.46E	2.47	4.55E
700-END PT	0.12	0.01E	0.08E	0.18	0.34E
C5 -END PT	68.29	49.20	52.16	58.41	58.99

Table 17 (cont.)

ISO/NORMAL MOLE RATIO					
C4	0.5793	0.0518	0.0527	0.0610	0.0624
C5	21.1778	1.9583	16.6667	2.0857	1.6364
C6	16.7875	5.7500	4.5479	2.5316	3.1073
C4+	0.3896	0.3768	0.3337	0.4550	0.3566
PARAFFIN/OLEFIN M RATIO					
C2	0.1444	0.6800	0.7273	0.7423	0.3175
C3	0.0415	0.0253	0.0173	0.0241	0.0291
C4	0.6723	0.6806	0.7310	0.7367	0.4525
C5	10.9670	1.7667	8.2812	1.9286	2.4442

LIQ HC COLLECTION					
PHYS. APPEARANCE	OIL				
DENSITY	0.769				
N.REFRACTIVE INDEX	1.4353				
SIMULATED DISTILLATION					
10 WT % @ DEG F.	267			326	
16	275			363	
50	344			429	
84	451			555	
90	490			610	
RANGE(16-84%)	176			192	
WT % @420 F	77.3			45.0	
WT % @700 F	99.3			96.2	

Table 17 (cont.) RESULT OF PROPYLENE OPERATION

RUN NO. 9972-9 (LZ-20)
CATALYST UCC 106 #9939-35 56 CC 35.0 GM (35.77GM AFTER THE RUN, +0.77GM)
FEED H2:C3H6:H2O @ 1:1:2 MOLE RATIO,0.5 C3H6 WHSV,CONTINOUS OVERNITE
C3H6 MW= 42.0813 DENSITY= 0.51041 GM/CC (@ 73 F)
TARGET FLOW: C3H6 34.33CC/HR H2 150 CCMN, 9.0 L/HR H2O 15. CC/HR
ACTUAL FLOW: 34.83 CCHR EFFLUENT 16.43 L/HR AQ LAYR 13.9 CC/HR

RUN & SAMPLE NO.	9972-09-6	9972-09-7
C3H6 WHSV	0.5	0.5
HRS ON STREAM	70.7	77.1
PRESSURE,PSIG	148	145
TEMP. C	337	338
FEED C3H6 CC	616.67	200.10
HOURS FEEDING	17.4	6.3
EFFLNT GAS LITER	290.1	100.9
GM AQUEOUS LAYER	244.89	88.56
GM LIQ HYDROCARBON	0.0	0.0
WT FR. LIQ HC/FEED	.0000	.0000
MATERIAL BALANCE WT %	92.50	96.96
C3H6 CONVERSION %	6.26	6.93
PROT SELECTIVITY WT %		
CH4	0.14	0.19
C2 HC'S	0.24	0.23
C3H8	26.91	26.55
C4H10	5.39	7.40
C4H8-	8.75	9.85
C5H12	0.30	0.31
C5H10-	0.17	0.16
C6H14	4.86	4.85
C6H12+ & CYCLO'S	33.01	32.34
C7+ IN GAS	20.23	18.11
LIQ HC'S	0.00	0.00
TOTAL	100.00	100.00
SUBGROUPING		
C1 -C4	41.42	44.23
C5 -420 F	58.58	55.77
420-700 F	0.00	0.00
700-END PT	0.00	0.00
C5 -END PT	58.58	55.77

Table 17 (cont.)

ISO/NORMAL MOLE RATIO		
C4	0.0589	0.0418
C5	2.7059	1.8000
C6	2.1801	2.2332
C4+	0.4663	0.4328
PARAFFIN/OLEFIN M RATIO		
C2	0.6000	0.7179
C3	0.0174	0.0192
C4	0.5948	0.7251
C5	1.6579	1.8421

LIQ HC COLLECTION
PHYS. APPEARANCE
DENSITY
N,REFRACTIVE INDEX
SIMULATED DISTILLATION
10 WT % @ DEG F.
16
50
84
90

RANGE(16-84%)

WT % @420 F
WT % @700 F