

THE TEXAS COMPANY
MONTEBELLO SYNTHESIS UNIT
SUMMARY OF PRELIMINARY DATA

<u>RUN NUMBER</u>		21C	21D	21E	21F	21G	21H	21I	21J	21K
Start		7/10	7/11	7/12	7/13	7/14	7/15	7/16	7/17	7/18
End		7/11	7/12	7/13	7/14	7/15	7/16	7/17	7/18	7/19
<u>GENERATOR DATA</u>										
Pressure - psig		310	313	308	303	304	304	303	306	313
Gas Rate - SCFH		2290	2330	2314	2280	2280	2360	2380	2380	2328
Oxygen Rate - SCFH		1790	1920	1800	1780	1760	1830	1830	1800	1783
Product Rate - SCFH		6970	7260	7020	6850	6670	7250	7240	7320	7040
Product Composition						(15hrs)				
*CEO	**MS	CEO MS	CEO MS	CEO MS	CEO MS	CEO MS	CEO MS	CEO MS	CEO MS	CEO MS
CO	CO	34.0-36.8	34.3-36.3	35.2-33.8	34.2-	31.7-31.8	34.5-34.4	34.9-34.0	34.9-	34.5-30.4
H ₂	H ₂	60.0-57.6	60.3-58.3	59.1-58.4	59.0-	57.7-52.5	58.4-58.5	59.4-58.5	59.7-	59.2-62.5
CO ₂	CO ₂	1.8- 1.7	2.0- 1.5	1.8- 2.5	2.7-	4.4- 5.8	2.3- 1.9	2.3- 2.9	2.1-	2.2- 1.8
N ₂	N ₂	0.6- 1.9	1.2- 3.1	1.3- 3.1	1.1-	1.1- 1.9	2.5- 3.1	1.0- 2.8	1.2-	1.1- 1.3
CH ₄	CH ₄	3.6- 2.0	2.2- 0.8	2.6- 2.2	3.0-	5.1- 8.0	2.3- 2.1	2.4- 1.8	2.1-	3.0- 3.5
										C ₂ H ₆ - .5
<u>SYNTHESIS DATA</u>										
Pressure - psig		285	300	301	299	299	300	300	300	298
Recycle Rate - SCFH		10010	10452	10590	10638	10356	10110	9914	9874	10008
Fresh Feed - SCFH		6970	7260	7020	6850	6670	7250	7240	7320	7320
Wet Gas Rate - SCFH		3600	3520	3420	3520	3440	3700	3600	3380	3640
Catalyst Temperature - °F		630	650	660	640	640	560	650	635	655
Catalyst Density - #/cu ft		120	115	95	98	(94)	(53)	(98)	(70)	(67.2)
Catalyst Fluidized - #		290	241	223	233	187	210	233	273	254.6
Depth of Catalyst Bed - ft		4.5	3.8	4.4	4.5	(3.6)	(5.8)	(4.5)	(8.1)	(7.7)
Fresh Feed - SCFH/#Cat		24.0	30.1	31.5	29.4	35.6	34.5	31.0	26.8	28.7
Inlet Velocity - ft/sec		1.0	1.1	1.1	1.1	1.0	1.0	1.1	1.0	1.0
Recycle Ratio		1.4	1.4	1.5	1.5	1.5	1.3	1.3	1.3	1.4
Contraction - %		48.3	51.5	51.2	48.7	45.5	56.5	50.5	53.5	50.3
Measured Oil - gph		3.3	2.9	2.8	2.8	2.1	2.9	3.0	3.1	2.4
Measured Water - gph		4.8	6.4	5.6	2.3	5.2	5.0	5.8	6.4	5.6
Steam Pressure - psig		450	500	600	700	625	700	600	660	694
Steam Rate - #/hr		131	140.5	102	102				161	132.3
% CO ₂ in Wet Gas by Orsat		19.1	21.1	19.2	20.2	20.5	17.7	20.5	22.2	21.6
Weight Balance - %		102	103	104	104	96.5	99.8	106	99	100.2
<u>WET GAS COMPOSITION BY ** MS</u>										
CO		12.45	9.23	12.11	12.16	12.01	13.76	9.23		
H ₂		54.27	45.56	49.60	46.14	55.80	56.32	53.91		
CO ₂		16.19	18.71	19.16	20.17	15.36	13.79	16.01		
N ₂		2.65	1.78	1.58	2.03	2.06	2.49	4.88		
CH ₄		6.29	16.36	8.63	13.20	8.18	7.47	9.05		
C ₂ H ₄		1.77	1.87	1.45	1.33	1.35	1.34	1.69		
C ₂ H ₆		.90	1.36	1.03	.65	.85	.66	.74		
C ₃ H ₆		2.18	2.06	1.64	1.78	1.59	1.64	1.86		
C ₃ H ₈		.81	.57	.32	.41	.79	.43	.44		
C ₄ H ₈		1.46	1.30	1.03	.95	1.09	1.41	1.21		
C ₄ H ₁₀		.16	.22	.29	.16	.15		.15		
C ₅ H ₁₀		.68	.70	.52	.87	.56	.69	.62		
C ₅ H ₁₂										
C ₆ H ₁₂		.19	.29	.23	.18	.21	.21	.21		

* CEO - CORRECTED EXPLOSION ORSAT
** MS - MASS SPECTROMETER