MONTEBELLO SYNTHESIS UNIT
SUMMARY OF PRELIMINARY DATA

RUN NUMBER	1	2A	2B	3A	3B
Start	16:00 7/9	17:00 8/1	11:00 8/2	15:00 10/13	7:00 10/14
End	8:00 7/10	11:00 8/2	1:00 8/3	7:00 10/14	1:00 10/15
Duration	16:00	16:00	14:00	16:00	18:00
GENERATOR DATA					
Pressure-psig	210	210	210	215	215
Gas Rate-scfh	2910	2400	2400	2120	2140
Oxygen Rate-scfh	2200			1820	1840
Product Rate-scfh	8600	7300	6780	6350	6700
Product Composition-Corrected Explosion Orsat-mol %					
CO + .7	35.7	35.5	35.3	34.2	34.0
H_2	56.4	57.2	56.9	58.9	58.4
CO_2	2.4	2.2	2.6	2.3	2.0
N_2 - .6	1.4	3.3	0.6	1.0	3.3
CH_4 - 1.1	4.1	1.8	4.6	3.6	2.3
SYNTHESIS DATA					
Pressure-psig	200	200	200	200	200
Recycle Rate-scfh	10520	8515	0	8815	8732
Fresh Feed Rate-scfh	8050	1800	6780	6350	6700
Wet Gas Rate-scfh	6200	610	4930	3550	3350
Catalyst Temperature- F.		570	585	610	600
Catalyst Density-#/cu.ft.		87	76	81	
Catalyst Fluidized-#		197	210	265	
Depth of Bed-ft.			6.3	6.3	
Space Velocity-CFH/# Cat.		9	35	24	
Inlet Velocity-ft./sec.		1.2	0.6	1.4	1.4
Recycle Ratio	1.3	4.7	0	1.4	1.3
Contraction- %	23	66	33	44	50
Recovered Oil-gal./hr.	1.2	0.7	0.8	---2.04---	
Condensed Water-gal./hr.	6.2	3.8	4.4	---9.65---	
Steam Pressure-psig	500	800	850	900	900
Steam Rate-#/hr.	217		250		206
Wet Gas Composition by Mass Spectrometer-mol %					
CO		2.9		6.85	7.3
H_2		41.1		53.3	52.1
CO_2		25.1		24.7	25.3
N_2		7.0		1.4	1.3
CH_4		16.4		8.7	8.5
C_2H_4		1.9		1.25	1.3
C_2H_6		1.0		0.5	0.4
C_3H_6		1.7		1.25	0.7
C_3H_8		0.6		0.15	0.2
C_4H_8		1.3		1.05	1.4
C_4H_{10}		0.2		0.2	0.4
C_5H_{10}		0.5		0.5	0.8
C_5H_{12}		0.3		0.15	0.3
Conversion of CO- %		97.2		88.8	89.3
Conversion of H_2- %		75.6		49.5	55.4
CO Fed Converted to:					
CO_2		17.8		33.7	31.4
C_1 & C_2		16.1		9.5	10.8
C_3 & Heavier		63.3		45.6	47.1

MONTEBELLO SYNTHESIS UNIT
SUMMARY OF PRELIMINARY DATA

RUN NUMBER	4A	4B	5A	5B
Start	19:00 10/28	7:00 10/29	21:00 11/22	7:00 11/23
End	7:00 10/29	23:00 10/29	7:00 11/23	23:00 11/23
Duration	12:00	16:00	10:00	16:00
GENERATOR DATA				
Pressure-psig	210	210	210	210
Gas Rate-scfh	2350	2350	2040	2040
Oxygen Rate-scfh	1920	1920	1680	1680
Product Rate-scfh	7060	7150	5940	6180
Product Composition-Corrected Explosion Orsat-mol %				
CO	34.1	34.4	35.0	35.0
H_2	58.5	59.0	58.1	58.2
CO_2	2.2	2.4	1.9	1.8
N_2	1.6	1.5	0.7	2.2
CH_4	3.6	2.7	4.3	2.8
SYNTHESIS DATA				
Pressure-psig	210	210	200	200
Recycle Rate-scfh	10780	10640	9512	9580
Fresh Feed Rate-scfh	7060	7150	5940	6180
Wet Gas Rate-scfh	3280	3150	1770	1100
Catalyst Temperature- F.	650	650	625	625
Catalyst Density-#/cu.ft.	81	66	92	90
Catalyst Fluidized-#	315	270	315	345
Depth of Bed-ft.	9.2	9.6	8.0	9.0
Space Velocity-cfh/# Cat	23	26	19	18
Inlet Velocity-ft./sec.	1.8	1.7	1.5	1.5
Recycle Ratio	1.5	1.5	1.6	1.5
Contraction- %	54	55	71	82
Recovered Oil-gal/hr	4.1	3.7	4.0	5.6
Condensed Water-gal/hr	10.1	9.5	7.8	8.8
Steam Pressure-psig	960	960	980	980
Steam Rate-#/hr.	227	227	136	220
Wet Gas Composition by Mass Spectrometer-mol %				
CO	7.7	8.0		
H_2	51.4	52.0		
CO_2	23.8	24.2		
N_2	1.7	1.4		
CH_4	9.3	9.7		
C_2H_4	1.3	1.2		
C_2H_6	0.4	0.4		
C_3H_6	1.2	1.2		
C_3H_8	0.1	0.2		
C_4H_8	1.0	0.9		
C_4H_{10}	0.4	0.3		
C_5H_{10}	0.7	0.5		
Conversion of CO- %	89.5	89.7		
Conversion of H_2- %	58.5	61.0		
CO Fed Converted to:				
CO_2	25.9	24.0		
C_1 & C_2	6.9	8.7		
C_3 & Heavier	56.7	57.0		

THE TEXAS COMPANY
MONTEBELLO SYNTHESIS UNIT
Summary of Preliminary Data

RUN NUMBER	6A	6B	7A	7B
Start	17:00	3:00	9:30	13:00
	11/30	12/1	12/5	12/6
End	3:00	5:00	13:00	18:30
	12/1	12/1	12/6	12/6
Duration	10:00	2:00	27:30	2:00
GENERATOR DATA				
Pressure-psig	210		210	
Gas Rate-scfh	2110		2190	
Oxygen Rate-scfh	1730		1810	
Product Rate-scfh	6600		6770	
Product Composition by Explosion Orsat-mol %				
CO	33.2		32.4	
H_2	59.2		58.6	
CO_2	1.8		2.0	
N_2	2.5		2.5	
CH_4	3.3		4.5	
SYNTHESIS DATA				
Pressure-psig	200		200	200
Fresh Feed Rate-scfh	6600		6770	6770
Recycle Rate-scfh	8376		8660	8660
Net Gas Rate-scfh	2200		3000	2140
Catalyst Temperature- F.	600		610	800
Catalyst Density-#/cu.ft.	81		78	
Catalyst Fluidized-#	610		500	
Depth of Bed-ft.	17.2		14.9	
Space Velocity-cfh/# Cat.	11		13	
Inlet Velocity-ft./sec.	1.4		1.3	1.4
Recycle Ratio	1.3		1.3	1.3
Contraction-%	67		56	68
Recovered Oil-gal./hr.	1.9	3.5	2.8	
Condensed Water-gal./hr.	6.5	11.0	5.4	
Steam Pressure-psig	1000		1000	
Steam Rate-#/hr.	188		149	
% CO_2 in Net Gas by Orsat	27.5		22.3	24.3

MONTEBELLO SYNTHESIS UNIT
SUMMARY OF PRELIMINARY DATA

RUN NUMBER	1	2A	2B	3A	3B
Start	16:00 7/9	17:00 8/1	11:00 8/2	15:00 10/13	7:00 10/14
End	8:00 7/10	11:00 8/2	1:00 8/3	7:00 10/14	1:00 10/15
Duration	16	18	14	16	18
GENERATOR DATA					
Pressure-psig	210	210	210	215	215
Gas Rate-scfh	2910	2400	2400	2120	2140
Oxygen Rate-scfh	2200			1820	1840
Product Rate-scfh	8600	7300	6780	6450	6700
Product Composition by Corrected Explosion Orsat- mol %					
CO	35.7	35.5	35.3	34.2	34.0
H_2	56.4	57.2	56.9	58.9	58.4
CO_2	2.4	2.2	2.6	2.3	2.0
N_2	1.4	3.3	0.6	1.0	3.3
CH_4	4.1	1.8	4.6	3.6	2.3
SYNTHESIS DATA					
Pressure-psig	200	200	200	200	200
Recycle Rate-scfh	10520	8515	0	8815	8732
Fresh Feed Rate-scfh	8050	1800	6780	6350	6700
Wet Gas Rate-scfh	6200	610	4930	3550	3350
Catalyst Temperature- F.		570	585	610	600
Catalyst Density-#/cu.ft.		87	76	81	
Catalyst Fluidized-#		197	210	265	
Depth of Dense Phase-ft.			6.3	6.5	
Fresh Feed-cfh/# cat.		9	35	24	
Inlet Velocity-ft./sec.	1.3	1.2	0.6	1.4	1.4
Recycle Ratio-	1.3	4.7	0	1.4	1.3
Contraction- %	23	66	33	44	50
Measured Oil-gal./hr.	1.2	0.7	0.8	--2.04--	
Measured Water-gal./hr.	6.2	3.8	4.4	--9.65--	
Steam Pressure-psig	1	800	850	900	900
Steam Rate-#/hr.	217		250		206
Wet Gas Composition by Mass Spectrometer- mol %					
CO		2.9		6.8	7.3
H_2		41.1		53.3	52.1
CO_2		25.1		24.7	25.3
N_2		7.0		1.4	1.3
CH_4		16.4		8.7	8.5
C_2H_4		1.9		1.3	1.3
C_2H_6		1.0		0.5	0.4
C_3H_6		1.7		1.2	0.7
C_3H_8		0.6		0.2	0.2
C_4H_8		1.3		1.0	1.4
C_4H_{10}		0.2		0.2	0.4
C_5H_{10}		0.5		0.5	0.8
C_5H_{12}		0.3		0.2	0.3
Conversion of CO- %		97.2		88.8	89.3
Conversion of H_2- %		75.6		49.5	55.4
CO Converted to:					
CO_2		17.8		33.7	31.4
C_1 & C_2		16.1		9.5	10.8
C_3 & Heavier		63.3		45.6	47.1
Unconverted		2.8		11.2	10.7