

TABLE V

MONTEBELLO RUN 65 REDUCTION  
BETHLEHEM MILL SCALE

Loaded 2445#

Hours above 600°F	Water Production					Temperature - °F			Recycle		Bleed		Total Feed		Hydrogen	Carry-over		Density	Depth	
	Spot	Total	% of	lbs/hr	m/hr	Heater	Bed	Meter Run	ψh	Press. Rate psig.	SCFH	ψh	Rate SCFH	SCFH	m/hr	Conv. %	Spot	Total	#/CF	Ft.
3	56	56	9.1	18.67	1.036	1140	739	62	4.01	235	19032	6.2	1860	20892	55.05	1.88	91	91	167	20.9
5	82	138	22.5	41.0	2.276	1140	809	60	3.94	236	18754	5.3	1595	20349	53.62	4.14	68	159	165	19.9
7	92	230	37.4	46.0	2.553	1090	815	61	3.85	231	18122	5.0	1488	19610	51.67	4.94	43	202		
9	86½	316½	51.5	43.25	2.401	1095	802	59	3.95	223	18333	5.0	1471	19804	52.18	4.60	29	231	165	17.8
11	75	391½	63.7	37.5	2.081	1085	800	54	3.75	224	17523	4.9	1449	18972	49.99	4.17	17	248	162	17.4
7AM 12	52	443½	72.2	52.0	2.886	1080	800	53	3.63	225	17012	4.9	1450	18462	48.65	5.92	10	258		
13	24½	468	76.2	24.5	1.360	1085	784	55	3.55	220	16432	6.5	1925	18357	48.37	2.81	4½	262½	161	16.6
14	37½	505½	82.3	37.5	2.081	1095	786	62	3.55	215	16152	6.5	1870	18022	47.49	4.40	5	267½	156	16.8
15	24½	530	86.2	24.5	1.360	1085	792	65	3.65	225	16908	6.5	1910	18818	49.59	2.74	4	271½	155	16.6
16	28½	558½	90.9	28.5	1.582	1040	800	66	4.00	225	18530	6.5	1905	20435	53.85	2.94	4½	276	160	15.8
17	26	584½	95.1	26.0	1.443	1020	794	70	4.00	225	18442	6.0	1750	20192	53.21	2.72	6½	282½	159	15.7
18	18½	603	98.1	18.5		1005	794	72	4.30	220		6.2					6½	289	158	15.5
19	5	608	98.9	5.0		934	793	75		226		6.2					4	293	159	15.4
20	2	610	99.3	2.0		950	790	74		230		6.4					3	296	160	15.2
23	4½	614½		1.5													7½	303½	164	14.8
Average 3-15					2.125		799			225				50.195	4.23				161	17.6

$$\text{Flow Rate} = \frac{(50.195)(379.5)}{3600} \left( \frac{14.7}{229.7} \right) \left( \frac{1259}{520} \right) = 0.820 \text{ CFS} = 1.24 \text{ ft/sec.}$$

$$\text{Average Inventory} = 2445$$

$$\frac{1590}{2017} / 160 = 12.60 \text{ CF @67\% V} = 8.442 / 0.820 = 10.30 \text{ sec.}$$