

TABLE IV

MONTEBELLO RUN 64 REDUCTION  
BETHLEHEM MILL SCALE

Loaded 2200#

Hours above 600°F.	Water Production					Temperature - °F			Recycle		Total H <sub>2</sub> m/hr.	H <sub>2</sub> Conv. %	Carry-over lbs.		H <sub>2</sub> Flow		
	lbs.		% of	lbs./hr.	m/hr.	Heater	Bed	Meter Run	Yh	Press. psig.			Spot	Total	Recycle SCFH	Bleed SCFH	Total SCFH
	Spot	Total	Total														
1	16	16	2.6	16	0.888		628	90	5.8	251	52.35	0.848	18	18	18122	1746	19868
4	14½	30½	4.9	4.83	0.268		668	93	6.23	226	54.77	0.489	20½	38½	19007	1780	20787
7	35½	66	10.6	11.83	0.657		689	91	5.93	226	52.67	1.247	43½	82	18289	1698	19987
9	33	99	15.9	16.5	0.916		702	88	5.60	236	50.70	1.807	34	116	17602	1637	19239
11	49	148	23.8	24.5	1.360		719	88	5.75	231	52.38	2.597	32	148	18177	1703	19880
13	53	201	32.3	26.5	1.471		714	96	5.95	229	49.96	2.944	22½	170½	17254	1705	18959
15	36½	237½	38.1	18.25	1.013		718	100	5.65	226	48.67	2.081	13½	184	16866	1604	18470
17	55½	293	47.0	27.75	1.540		730	96	5.65	230	48.85	3.153	12½	196½	16908	1630	18538
19	48½	341½	54.8	24.25	1.346		733	90	5.60	225	48.28	2.788	6½	203	16725	1598	18323
21	59	400½	64.3	29.5	1.637		741	90	5.55	228	49.92	3.279	8	211	17344	1599	18943
23	48½	449	72.1	24.25	1.346		747	92	5.70	229	48.78	2.759	8	219	16870	1640	18511
25	46	495	79.5	23.0	1.277		750	90	5.60	226	48.44	2.636	7½	226½	16779	1603	18382
27	42	537	86.2	21.0	1.166		752	88	5.60	226	48.54	2.402	6	232½	16814	1606	18420
29	35	572	91.8	17.5	0.971		756	88	5.60	216	47.60	2.040	5	237½	16844	1575	18063
31	26½	598½	96.1	13.25	0.735		768	88	5.75	225	49.09	1.497	5½	243	16986	1644	18630
33	6	604½	97.0	3.0	0.167		788	87	5.50	229	48.82	0.341	5	248	16937	1589	18528
35	11½	616	98.9	5.75	0.319		731	94	5.95	226	51.23	0.623	5½	253½	17744	1698	19442
39	2	618	99.2	0.50	0.028		785	93	6.03	234	52.18	0.053	8½	262	18044	1755	19800
46	1½	619½	99.5	0.21	0.012		778	91	7.39	230	51.14	0.023	11	273	17232	2175	19408
57	3½	623		0.32	0.018		800	88	7.4	230	51.14	0.035			17232	2175	19408
Average 7-27					1.3072		730			228.7	49.452	2.643					

$$\text{Flow Rate} = \frac{(49.45)(379.5)}{3600} \left( \frac{14.7}{244.7} \right) \left( \frac{1191}{520} \right) = 0.7172 \text{ CFS} \quad V = 1.08 \text{ ft./sec.}$$

$$\text{Average Inventory} = 2200\# @ 160\#/CF = 13.75 \text{ CF} @ 67\% V = 9.213 \text{ CF}$$

$$t = 9.213 / 0.7172 = 12.84 \text{ sec.}$$