TABLE 4. MASS SPECTROGRAPHIC ANALYSES OF REACTION GASES[a,b,c] AND WET-CHEMICAL ANALYSES OF RESIDUAL CO_2 IN UNREACTED DOLOMITE: DOLOMITE-HYDROGEN SYSTEM

Experiment No.	39	41	42	43	44	45	46	47	49	50	51	56	57	58	59	83	84
Temperature (°C)	520	525	550	620	735	620	620	620	735	735	735	735	735	735	835	605	605
Pressure (psi)	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	4,000	4,000	5,000	2,000	2,000
Wt. % CO_2 remaining in solid	N.A.[d]	44.3	40.2	25.6	10.1	25.4	30.7	19.4	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	0.87	N.A.	N.A.
Duration of run (hours)	4	4	4	4	4	8	2	12	4	4	4	4	6	7	4	2	4
Mole % CH_4 in gas	0.01	0.02	0.04	1.20	2.34	1.82	1.53	2.05	2.00	1.88	1.77	1.80	2.86	4.76	2.12	0.46	2.64
Mole % C_2H_6 in gas	—	—	0.01	0.02	—	0.04	0.05	0.04	—	—	—	—	—	0.03	—	0.03	0.14
Mole % CO_2 in gas	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.09	0.03
Mole % CO in gas	—	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	0.72	0.13
Mole % H_2 in gas	97.70	99.90	99.30	98.70	97.60	98.00	98.40	97.80	98.00	98.10	98.10	98.16	97.10	95.20	97.86	98.6	97.0
Mole % He in gas	2.25	0.10	0.12	0.07	0.04	0.10	0.03	0.07	0.03	0.05	0.11	0.03	—	0.06	0.01	0.06	0.08

[a] Analysis calculated on water-free basis.
[b] Starting hydrogen impurities given as follows: less than 5 ppm N_2, less than 1 ppm O_2, less than 1/2 ppm CO_2, less than 1/2 ppm CO, Dew point —100°F.
[c] Detection limit 0.01%.
[d] Not analyzed.