

Table II.—EXPERIMENTAL P-V-T DATA AND COMPUTED COMPRESSIBILITY FACTORS

Composition: 95.03% C ₂ H ₆ — 4.97% N ₂						Composition: 84.99% C ₂ H ₆ — 15.01% N ₂ (cont.)					
Temperature		Pressure		Density	Compressibility Factor	Temperature		Pressure		Density	Compressibility Factor
°K	°F	Psia	atm	gm moles 1000 cc	z = P/RTp	°K	°F	Psia	atm	gm moles 1000 cc	z = P/RTp
1st Isometric						6th Isometric					
316.49	110.00	4322.8	294.148	14.0856	0.804079	316.49	110.00	1091.1	74.244	5.3265	0.53670
305.38	90.00	3556.8	242.025	14.1010	0.684916	305.38	90.00	969.2	65.949	5.3521	0.49172
294.27	70.00	2795.3	190.208	14.1165	0.557987	7th Isometric					
283.17	50.08	2028.8	138.286	14.1261	0.421286	316.49	110.00	857.8	58.369	3.4718	0.64735
266.54	20.09	909.8	61.9080	14.1784	0.1996296	305.38	90.00	787.6	53.492	3.4824	0.61413
2nd Isometric						294.27	70.00	716.0	48.720	3.4896	0.57818
294.27	70.00	1256.6	85.506	12.3601	0.2864818	8th Isometric					
283.17	50.09	754.9	51.3677	12.41310	0.1780867	316.49	110.00	499.4	33.982	1.6141	0.81064
305.38	90.00	1777.3	120.938	12.34090	0.391059	305.38	90.00	472.4	32.144	1.6159	0.79382
305.38	90.00	1778.7	121.033	12.3408	0.391370	294.27	70.00	445.1	30.287	1.6178	0.77528
316.49	110.00	2311.0	157.254	12.32410	0.491308	283.17	50.08	417.5	28.409	1.6199	0.75473
3rd Isometric						Composition: 70.27% C ₂ H ₆ — 29.73% N ₂					
316.49	110.00	1334.8	90.8274	9.98705	0.3501769	1st Isometric					
305.38	90.00	1019.0	69.339	9.99998	0.2766980	305.38	90.00	4445.4	302.490	13.9385	0.86601
4th Isometric						294.27	70.00	3857.4	262.480	13.9505	0.77932
305.38	90.00	865.9	58.9208	7.68396	0.3059927	283.17	50.08	3262.4	221.992	13.9629	0.68420
316.49	110.00	1061.1	72.2033	7.64854	0.3634849	273.16	32.00	2730.9	185.826	13.9762	0.59316
5th Isometric						252.60	—5.00	1669.1	113.575	14.0148	0.39096
316.49	110.00	918.7	62.5136	5.3160	0.4527907	2nd Isometric					
305.38	90.00	793.2	53.9739	5.3342	0.4037774	316.49	110.00	3490.6	237.520	12.2023	0.74949
6th Isometric						305.38	90.00	3050.0	207.539	12.2136	0.67808
305.38	90.00	707.6	48.1492	3.57348	0.537681	294.27	70.00	2617.3	178.096	12.2261	0.60336
316.49	110.00	781.1	53.1505	3.56420	0.574186	283.17	50.08	2188.1	148.891	12.2403	0.52348
7th Isometric						273.16	32.00	1812.8	123.353	12.2562	0.44900
316.49	110.00	524.2	35.6696	1.81889	0.755091	3rd Isometric					
305.38	90.00	492.1	33.48530	1.821600	0.733548	316.49	110.00	2577.7	175.401	10.4529	0.64611
294.27	70.00	459.7	31.2806	1.824045	0.710169	305.38	90.00	2258.5	153.681	10.4644	0.58605
Composition: 84.99% C ₂ H ₆ — 15.01% N ₂						294.27	70.00	1947.6	132.526	10.4764	0.52396
1st Isometric						283.17	50.08	1641.1	111.670	10.4928	0.45800
305.38	90.00	3851.4	262.071	13.8577	0.75467	4th Isometric					
294.27	70.00	3180.1	216.392	13.8691	0.64612	316.49	110.00	2013.3	136.996	8.7047	0.60599
283.17	50.08	2503.6	170.359	13.8822	0.52812	305.38	90.00	1785.6	121.502	8.7173	0.55620
274.83	35.00	2013.1	136.982	13.8934	0.43718	294.27	70.00	1559.5	106.117	8.7288	0.50355
260.94	10.00	1175.6	79.994	13.9235	0.26831	283.17	50.08	1338.4	91.072	8.7446	0.44820
2nd Isometric						5th Isometric					
316.49	110.00	2760.5	184.165	12.0927	0.59810	316.49	110.00	1631.8	111.037	6.9845	0.61212
305.38	90.00	2277.8	154.994	12.0989	0.51121	305.38	90.00	1465.0	99.687	6.9935	0.56881
294.27	70.00	1807.2	122.972	12.1125	0.42043	294.27	70.00	1300.6	88.500	7.0070	0.52314
283.17	50.08	1345.3	91.541	12.1308	0.32475	283.17	50.08	1135.0	77.232	7.0214	0.47336
3rd Isometric						6th Isometric					
316.49	110.00	1907.3	129.783	10.3139	0.48451	316.49	110.00	1314.2	89.426	5.2794	0.65221
305.38	90.00	1572.3	106.988	10.3262	0.41345	305.38	90.00	1200.1	81.662	5.2888	0.61615
294.27	70.00	1251.9	85.186	10.3420	0.34362	294.27	70.00	1085.7	73.877	5.2988	0.57749
4th Isometric						283.17	50.08	966.3	65.753	5.3082	0.53308
316.49	110.00	1493.6	101.633	8.5422	0.45811	7th Isometric					
305.38	90.00	1259.6	85.710	8.5540	0.39984	316.49	110.00	980.7	66.732	3.5521	0.72337
294.27	70.00	1037.1	70.570	8.5704	0.34099	305.38	90.00	912.0	62.058	3.5581	0.69600
5th Isometric						294.27	70.00	716.0	48.720	3.4896	0.57818
316.49	110.00	1299.2	84.405	7.2074	0.47229	283.17	50.08	764.5	52.021	3.5694	0.62720
305.38	90.00	1119.5	76.177	7.2211	0.42097	8th Isometric					
						316.49	110.00	580.4	39.494	1.8252	0.83315
						305.38	90.00	550.5	37.459	1.8273	0.81804
						294.27	70.00	520.7	35.431	1.8294	0.80220
						283.17	50.08	490.2	33.356	1.8314	0.78381