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THE THERMODYNAMIC PROPERTIES OF DEUTERIUM

by

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FOREWORD

This report is a reprint of the M. S. thesis of Mr. Rolf Prydz a graduate student in the Chemical Engineering Department of the University of Colorado. The bulk of the work reported here was completed during the summer of 1966 when Mr. Prydz was a guest worker at the Cryogenics Division, Institute for Materials Research, National Bureau of Standards at Boulder, Colorado.

Hans M. Roder
Cryogenic Data Center

Abstract

Prydz, Rolf (M.S., Chemical Engineering)

The Thermodynamic Properties of Deuterium

Thesis directed by Professor Klaus D. Timmerhaus and Dr. Richard B. Stewart

This thesis is an extensive compilation of thermodynamic data with tabular values of pressure, temperature, density, enthalpy, internal energy, and entropy presented for both liquid and gaseous deuterium for pressures to 400 atm and temperatures between the triple point and 300°K. These tables are based on an equation of state and a vapor-pressure equation developed for this fluid. The equation of state is valid from the triple point to 425°K at pressures up to 400 atm. Extrapolation to 3000 atm introduces only small deviations from actual P-ρ-T data. All the P-ρ-T data in the literature were critically evaluated. Then the equation of state was fitted to the data by weighted-least-squares. Measured and calculated density values were compared and deviations were calculated to illustrate the accuracy with which the equation of state represents the P-ρ-T surface of deuterium. Comparisons were also made of virial coefficients, Joule-Thomson inversion curve, and latent heat of vaporization with values calculated from the equation of state. Further, deviations between the vapor-pressure data and the values obtained from the vapor-pressure equation were determined. Two temperature-entropy charts and a compressibility factor chart for deuterium are included.

This abstract is approved as to form and content.

Signed Klaus D. Timmerhaus
Faculty member in charge of thesis

ACKNOWLEDGMENTS

The author wishes to express his sincere appreciation to the staff of the Cryogenic Data Center of the National Bureau of Standards in Boulder, Colorado, for their valuable help and suggestions concerning this compilation. The literature files of the Data Center have been available to the author in preparation of this manuscript. In particular, acknowledgment is made to Dr. Richard B. Stewart of the Data Center, who served as research advisor during the preparation of this thesis. Without the assistance of Dr. Stewart this work could not have been completed. Acknowledgment is also made to Mr. Jerome G. Hust and Mr. Robert D. McCarty for their assistance in the extensive computer calculations required in the performance of this task. In addition, the author would like to thank Mrs. Alberta M. Ohm, Mrs. Wanda Stakebake, Mrs. Mildred F. Birchfield, and Mr. Hans M. Roder for their assistance in the preparation of this manuscript and Mr. Richard D. Weekley and Mr. Lewis J. Ericks for their drafting of the eleven figures, the two temperature-entropy charts, and the compressibility factor chart.

Further, the author thanks the Dow Chemical Company for a research fellowship during the academic year 1965-1966.

Finally, acknowledgment is made to Professor Klaus D. Timmerhaus who served as academic advisor during the preparation of this thesis. Professor Timmerhaus' suggestions and comments have greatly contributed to this thesis.

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INTRODUCTION

Technical and scientific interest in deuterium arises from the recent use of this fluid in bubble chambers and the continuing importance of certain experimental physics studies. This has increased the need for the development of thermodynamic property tables of deuterium over both the vapor and liquid ranges.

The primary objective of this task was, therefore, to determine an equation of state that would represent the available deuterium data in both phases to within the precision of the experimental data. A vapor-pressure equation that represents the data from the triple point was also to be presented. Further, comparisons with data for second and third virial coefficients, the Joule-Thomson inversion curve, and latent heat of vaporization with values calculated from the equation of state with the vapor-pressure equation were also desired. Finally, extensive tables of thermodynamic properties with tabular values of pressure, temperature, density, enthalpy, internal energy, and entropy were to be presented.

In order to obtain thermodynamic consistency in pressure, density, and temperature as well as the other derived properties, the equation of state and the vapor-pressure equation should be constrained to the same critical point. For this reason, the slope of the critical isometric of the equation of state at the critical point should be equal to the slope of the vapor-pressure equation at this point.

OTHER THERMODYNAMIC PROPERTY TABULATIONS

Tables of thermodynamic properties for liquid normal deuterium have been published by White, Roode, and Johnston [1] *. This work is based on the smoothed liquid P-ρ-T data published by Friedman, Trzeciak, and Johnston [2] that cover the range from 20°K to the critical point at pressures up to 100 atm.

Michels, De Graaff, and Wolkers [3, 4] calculated tables of thermodynamic properties for the gaseous normal deuterium between -175°C and 150°C at densities up to 840 Amagat and pressures up to 2500 atm. This work is based on the extensive gaseous P-ρ-T data published by Michels, De Graaff, Wassenaar, Levelt, and Louwerse [5] in 1959. Their thermodynamic property calculations are based on the virial equation, $PV = A + BV^{-1} + CV^{-2} + \ldots$.

Friedman [6] published tables of the compressibility factor $Z = PV/RT$ that were based on the smoothed data of reference [2] . Barthólome [7] calculated values of Z at 19.70°K, 20.31°K, and 20.97°K at pressures up to 100 atm.

No thermodynamic charts of deuterium have been published in the literature.

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* Numbers in brackets refer to citations in the bibliography.

VAPOR PRESSURE

The sources of the vapor-pressure data reported in the literature and the corresponding estimated uncertainties in temperature and pressure are listed in Tables I and II, respectively. The uncertainty estimates of the data are based upon the experimenters' discussions of possible experimental errors, and the precision as indicated by deviations of the data from a preliminary equation. Since most authors did not relate their uncertainty estimates to any statistical term, the estimated uncertainty of the experimental data is taken to be twice the standard deviation throughout this paper. The vapor-pressure data extend from the triple point to the critical point. The critical temperature and pressure reported by Friedman, White and Johnston [8] are used in this compilation; these values are listed in Table VI. The data by Lewis and Hanson [9] were not used in the final fit of Equation (1) since all their values deviate from other sources [10, 11, 12] by as much as three to four percent in pressure.

The vapor-pressure equation obtained by the method of least squares is given as Equation (1). Pressure deviations between the individual experimental data points and the values calculated from Equation (1) are illustrated in Figure 1. [The percent pressure deviations are defined as $(P_{expr} - P_{calc}) \times 100/P_{expr}$, where P_{expr} is experimental pressure, and P_{calc} is the pressure calculated from Equation (1).] This equation was developed to represent the vapor-pressure data of Table I from the triple point to the critical point. The equation was constrained to the critical point in order to obtain thermodynamic consistency with the equation of state at this point.

In a study of vapor-pressure equations for oxygen, Hust and Stewart [13] concluded that the type of equation which gives the best fit of the vapor pressure of oxygen is,

$$\ln P = \sum_{i=1}^{k} A_i \, T^{i+j-1} ,$$

where P is the vapor pressure, T is the temperature, and the A_i's are the coefficients. This equation was reported to give the smallest sum of the squares of the deviations and was tried for normal deuterium. It was found to represent the vapor-pressure data satisfactorily and no other type of equation was investigated. This form of equation was, therefore, selected for normal deuterium and several different values of k were examined both for $j = 0$ and $j = -1$ by fitting the data to a succession of equations. It was determined that this equation with $j = -1$ and $k = 4$ gave an optimum fit of the data. Additional terms did not significantly improve the fit of the equation.

The selected vapor-pressure equation for normal deuterium is, therefore,

$$\ln P = A_1 / T + A_2 + A_3 T + A_4 T^2 . \qquad (1)$$

The coefficients of this equation were determined by a weighted-least-squares fit of the experimental data indicated in Table I. The selected coefficients for Equation (1) with P in atm and T in °K are

$$A_1 = -1.51144145 \times 10^2$$
$$A_2 = 6.07452099$$
$$A_3 = 6.82523016 \times 10^{-3}$$
$$A_4 = 2.75678719 \times 10^{-4}$$

All temperatures reported by the various experimentalists were adjusted to conform to the presently acceptable temperature scale as noted in Appendix A. The weight factors*, W, in the

---

* The weight factors were defined according to the methods outlined in Reference [14] (See Appendix B.)

least-squares fit were defined as the inverse of the variances in pressure and an equivalent variance due to errors in temperature. This equivalent variance in Y (the dependent variable) may be found from the error-propagation formula

$$\sigma_f^2 = \sum_{i=1}^{m} \left(\frac{\partial f}{\partial x_i} \sigma x_i \right)^2 \tag{2}$$

where σ_f^2 denotes the variance in f due to errors in the independent variables, x_i's. That is,

$$W = \frac{1}{\sigma_P^2 + \left(\frac{\partial P}{\partial T} \sigma_T \right)^2}$$

where σ_P^2 and σ_T^2 are the respective variances in pressure and temperature.

TABLE I - SUMMARY OF VAPOR-PRESSURE DATA

Number of Points	Corrected Temperature Range (°K)	Source
6	18.935 to 20.324	Scott, Brickwedde, Urey, and Wahl (1934) [11] *
5	18.694 to 20.284	Lewis and Hanson (1934)[9]
4	18.70 to 20.37	Brickwedde, Scott, and Taylor (1935) [12] *
19	28.99 to 38.34	Friedman, White, and Johnston (1951) [8] *
29	18.863 to 27.768	Grilly (1951) [10] *
16	21.114 to 34.100	Hoge and Arnold (1951) [15] *

* Data used in fitting Equation (1)

TABLE II - ESTIMATED UNCERTAINTIES OF EXPERIMENTAL VAPOR-PRESSURE DATA*

Source	Estimated Uncertainty in Pressure	Estimated Uncertainty in Temp. °K
Scott, Brickwedde, Urey, and Wahl [11]	0.2 mm Hg	0.005
Brickwedde, Scott, and Taylor [12]	0.2 mm Hg	0.005
Friedman, White, and Johnston [8]	0.01 %	0.02
Grilly [10]	0.03 %	0.005
Hoge and Arnold [15]	0.2 - 0.3 mm Hg below 1 atm, up to 8 mm Hg at the C.P.	0.003

* These uncertainties were used to determine the weight factors of the least-squares fit of Equation (1)

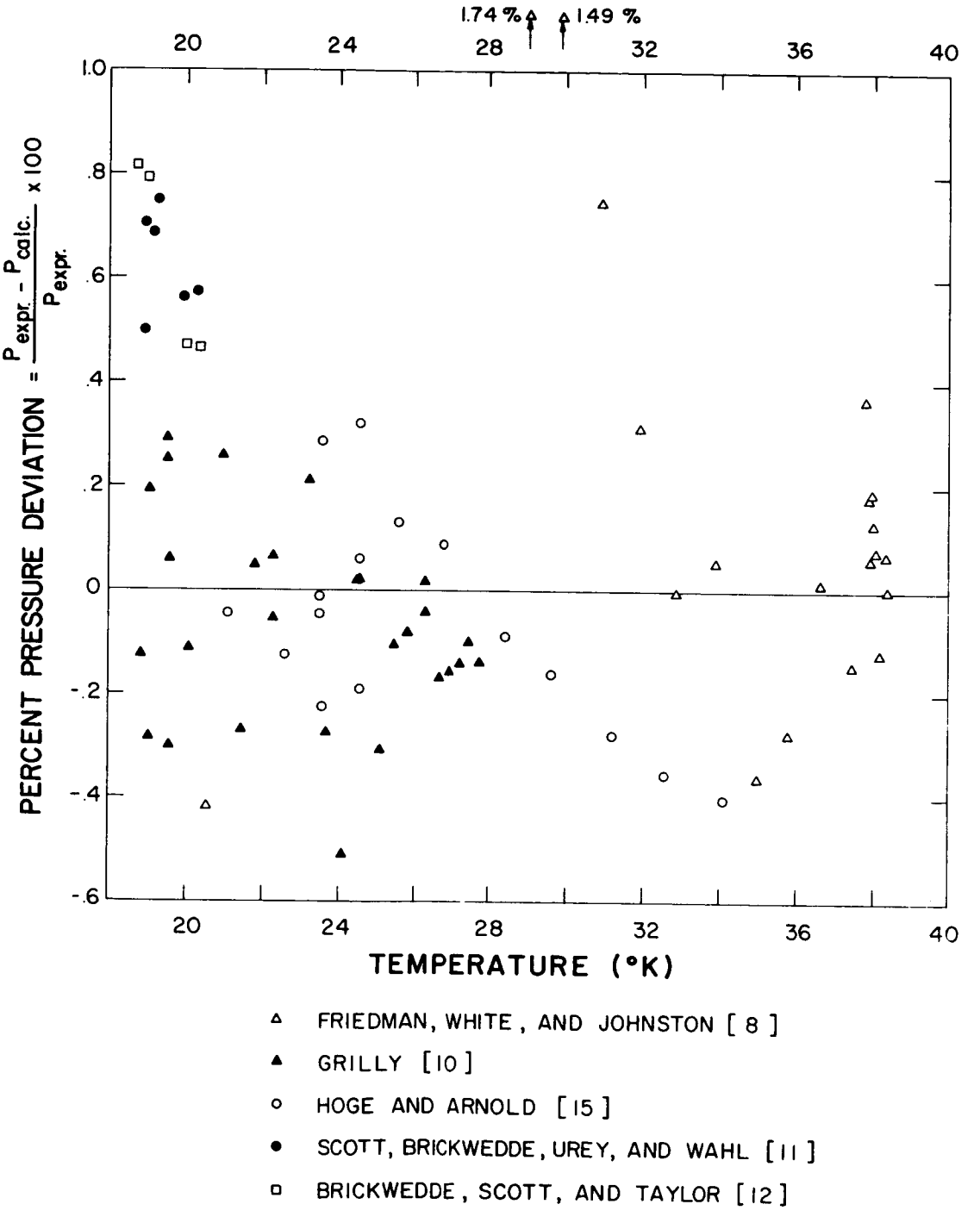

Fig. 1 Deviations of vapor-pressure data of deuterium from Equation (1).

COMPARISON AND ANALYSIS OF P-ρ-T DATA

The sources of P-ρ-T data published in the literature and considered in this compilation are summarized in Table III. The main sources of data are the 277 values reported by Michels and Goudeket [16] in 1941, and the more recent 417 data points by Michels, De Graaff, Wassenaar, Levelt, and Louwerse [5] in 1959. These data points cover the range from 98° to 423°K at pressures from about 5 to 3000 atm. The only data between 98°K and the critical point are two isotherms at 64.5°K and 78.9°K for pressures from 150 to 900 atm by David and Hamann [17]. The primary source of liquid P-ρ-T data is Friedman, Trzeciak, and Johnston [2].

The various P-ρ-T data sets were initially evaluated by comparing the experimental data to the values calculated from a preliminary equation of state. The coefficients of this equation were determined by a least-squares fit of all the P-ρ-T data sets given in Table III. This preliminary analysis of the data also contributed in evaluating the precision of the data sets in Table III.

The data by David and Hamann [17] are not precise. Their principal objective was to compare a quantized Lennard-Jones and the Devonshire theory of gases. Thus pressure-density measurements were made in this study only for the purpose of determining which of the two theories best described the behavior. They emphasize that no high accuracy was sought, because the pressures predicted by the two theories were so strikingly different. However, since this data set is the only one in the region between the critical temperature and 98°K, it was included in the final fit of the equation of state (3) (p. 19).

Because of the paucity of data between the critical temperature and 98°K, corresponding-state data obtained from parahydrogen were used in a preliminary fit of the equation of state. However, the percent density deviations for the set of corresponding-state data

TABLE III - SUMMARY OF P-ρ-T DATA

Number of Points	Corrected Temperature Range (°K)	Pressure Range (atm)	Source
		GAS	
277	273 to 423	9 to 3011	Michels and Goudeket (1941) [16]
50	37.2 to 41.2	14 to 22	*Hoge and Lassiter (1951) [18]
16	64.5 to 78.9	150 to 900	David and Hamann (1953) [17]
5	20.4	.15 to .34	Beenakker, Varekamp, and Van Itterbeek (1959) [19]
417	98 to 423	5 to 2801	Michels, De Graaff, Wassenaar, Levelt, and Louwerse (1959) [5]
		LIQUID (except liquid at the vapor pressure)	
25	19.70 to 20.97	6.8 to 91	Barthólome (1936) [7]
44	20.3 to 38.05	8.6 to 109	Friedman, Trzeciak, and Johnston (1954)[2]
		SATURATED LIQUID (at the vapor pressure)	
8	18.8 to 20.53		Clusius and Barthólome (1935) [20]
5	19.5 to 24.2		Kerr (1952) [21, 22]
5	20.32 to 35.16		**Friedman, Trzeciak, and Johnston (1954) [2] (extrapolated from liquid data)

* Equilibrium deuterium
** Not used in the fit of Equation (3)

that agreed most closely with the data in adjacent regions ranged from -5.5 to 2.8 percent. For this reason, corresponding-state data were not included in the final fit of the equation of state (3). This comparison with corresponding states values did confirm, however, that the equation of state was not erratic in this region.

The final equation of state was fitted using all the data of Table III below 400 atm. It was found, however, that this equation would allow extrapolation up to 3000 atm above 98°K with a maximum density deviation of 0.8 percent when compared with experimental data of References [5] and [16]. The deviations of the final equation of state (3) are illustrated in Figures 2 through 8.

The following conclusions can be drawn concerning the data used in fitting this equation:

> Figure 2 illustrates the density deviations of all isotherms of the data of Michels and Goudeket [16] and of Michels, De Graaff, Wassenaar, Levelt, and Louwerse [5] from the equation of state. These two references are the main data sources in the vapor region. The deviations between the equation of state predictions and these data are within 0.1 percent. This is not as low as the quoted precision of the experiment which is 0.01 percent. While for any given isotherm the deviations appear to be systematic, they are not systematic when all isotherms are considered together. The later experiment by Michels, et al. [5] repeated the earlier measurements [16] since they found that these earlier measurements were not self-consistent over the whole range [23].
>
> The pressure-deviation curves of Figure 3 compare isotherm measurements of Hoge and Lassiter [18] with the values calculated from Equation (3). The abscissa

used in this figure is density. The pressure range covered by these measurements is only from 14.0 to 22.3 atm. The experimenters used equilibrium deuterium (97.8 percent o-deuterium and 2.2 percent p-deuterium) while all other P-ρ-T data were measured using normal deuterium (66.7 percent o-deuterium and 33.3 percent p-deuterium). However, according to De Graaff [23] no difference in P-ρ-T values for different ortho-para modifications could be detected in the work of Reference [5]. These relatively large deviations can, therefore, not be explained in this manner. The fact that rather few measurements were made close to the critical point is a more probable explanation for the larger deviations. That is, the data may be insufficient to define the shape of the P-ρ-T surface in this region, which indicates that the equation of state probably is in error close to the critical point.

Figure 4 indicates the density deviations of the different isotherm measurements in the liquid region made by Barthólome [7]. The deviations are quite random. The density deviations of the 20.31°K isotherm may be compared to the deviations of the 20.30°K and the 20.32°K isotherms of Friedman, Trzeciak, and Johnston [2] illustrated in Figure 5. A common trend may be observed for all three isotherms. Barthólome [7] estimated his uncertainty in density measurements to be ± 0.04 g mole/liter or about ± 0.1 percent.

Figure 5 illustrates the density deviations of the different isotherm measurements of Reference [2]. With the exception of the isotherms near the critical point, there seems to be no systematic trend between these

data and the equation of state. Two different sets of measurements were made at 38.05°K. The uncertainty of Friedman, et al. density measurements is taken to be ± 0.15 percent.

The curve of Figure 6 indicates the deviation in density of the 20.4°K isotherm measurements by Beenakker, Varekamp, and Van Itterbeek [19]. These experimentalists estimate their density measurements to be accurate to one part in 10,000. Somewhat of a systematic trend is noticeable, which may be attributed to the equation of state.

Figure 7 indicates the density deviations of the data by David and Hamann [17]. Since the experimenters emphasized that no high accuracy was sought, good agreement with the equation of state was not to be expected. Again, though, an upward trend is apparent.

Finally, Figure 8 illustrates density deviation of saturated liquid data of several sources from the equation of state. The data of Clusius and Bartholome [20] and that of Kerr [21, 22], used in fitting Equation (3), exhibit only small deviations and there are no identifiable systematic trend between these data and the equation of state. The data by Friedman, Trzeciak, and Johnston [2] were extrapolated from their liquid data, the density deviation being illustrated in Figure 5. Rogers and Brickwedde's [24] data were obtained graphically by a quantum mechanical principle of corresponding states with molecular parameters of $\Lambda^* = 1.245$, $\epsilon/k = 35.2°K$, and $\sigma = 2.952$ Å. When approaching the critical point the deviation from the equation of state of these theoretical values becomes large. This should be expected as

this application of the principle of corresponding states usually does not give good results close to the critical point. Consequently, the saturated liquid data from References [2, 24] were not used in fitting Equation (3).

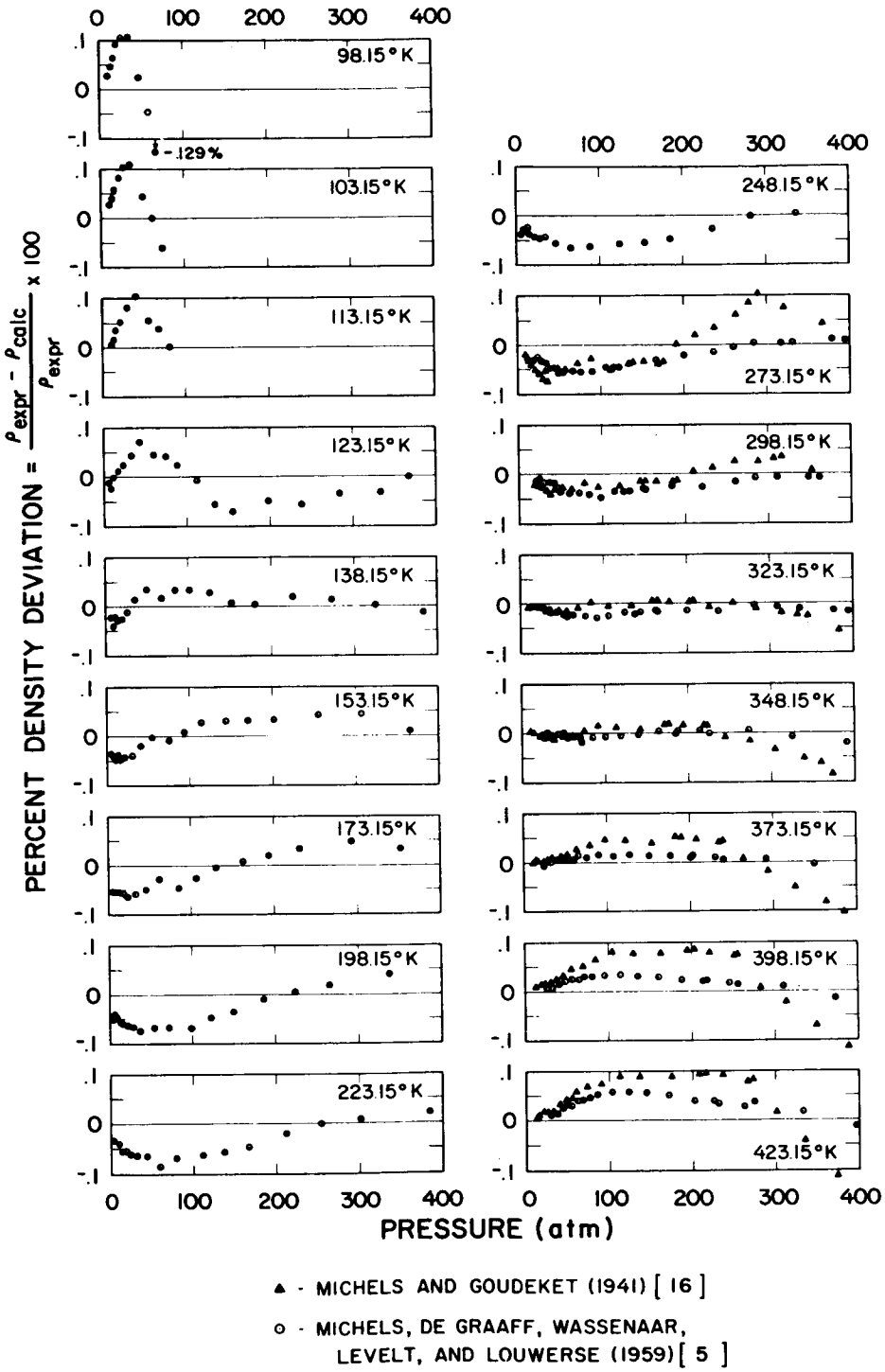

Fig. 2 Density deviations of the deuterium data by Michels and Goudeket [16] and Michels, De Graaff, Wassenaar, Levelt, and Louwerse [5] from the equation of state (3).

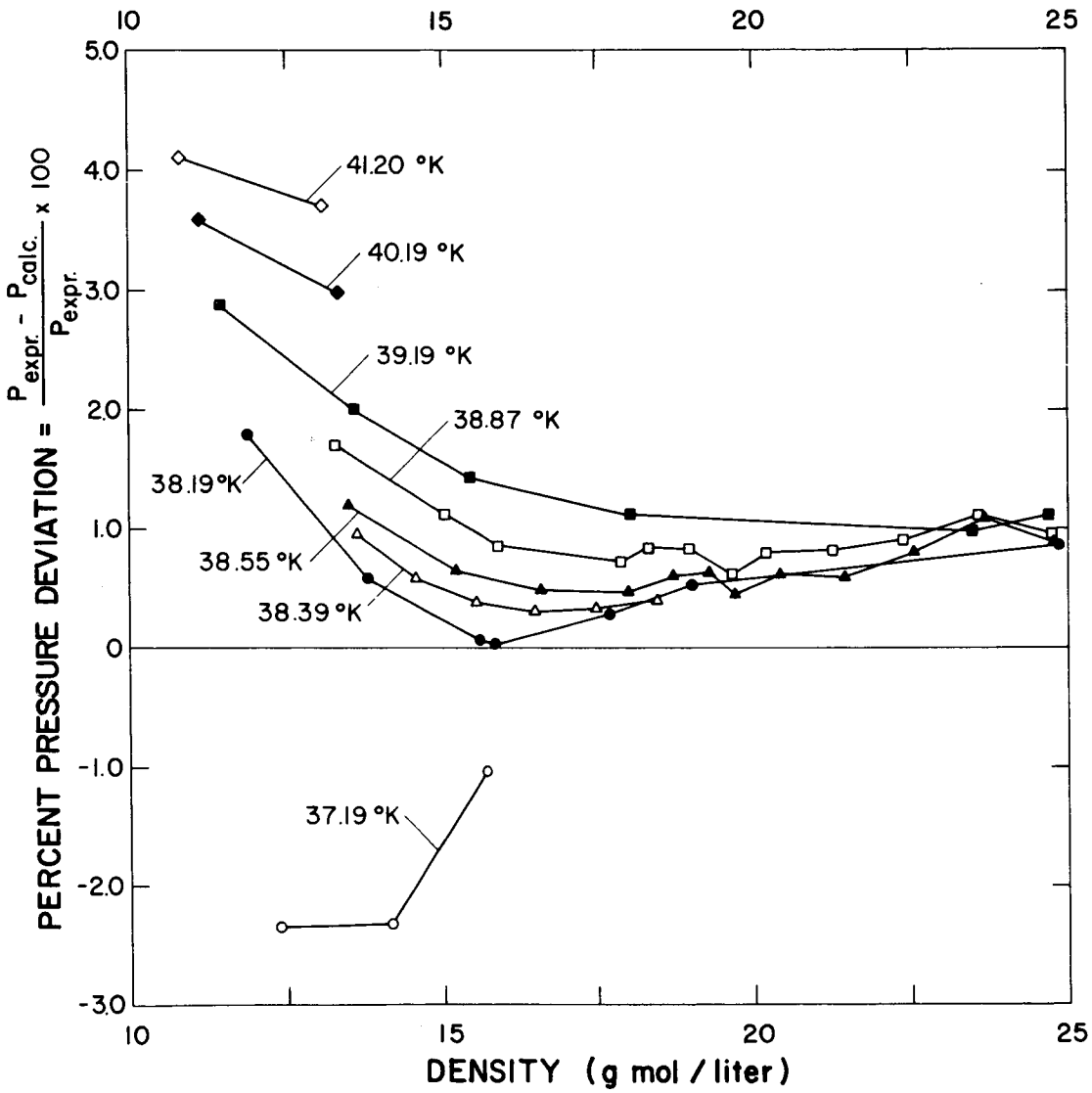

Fig. 3 Pressure deviations near the critical point of the deuterium data by Hoge and Lassiter [18] from the equation of state (3).

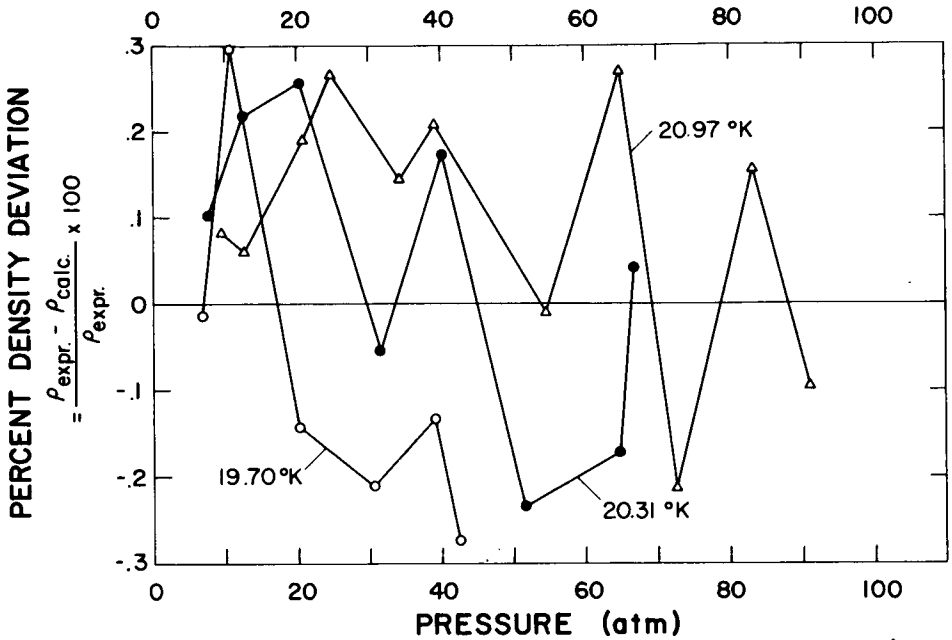

Fig. 4 Density deviations of the deuterium data by Barthólome [7] from the equation of state (3).

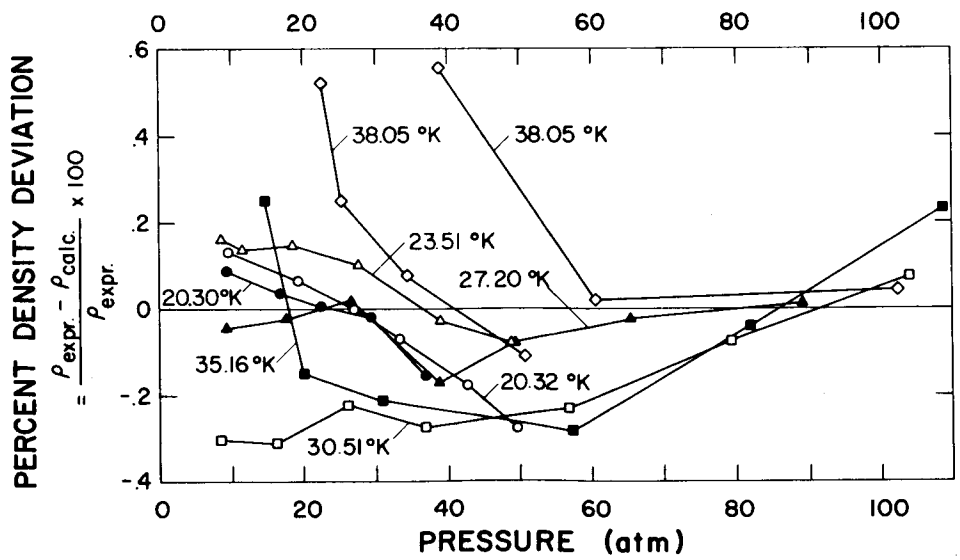

Fig. 5 Density deviations of the deuterium data by Friedman, Trzeciak, and Johnston [2] from the equation of state (3).

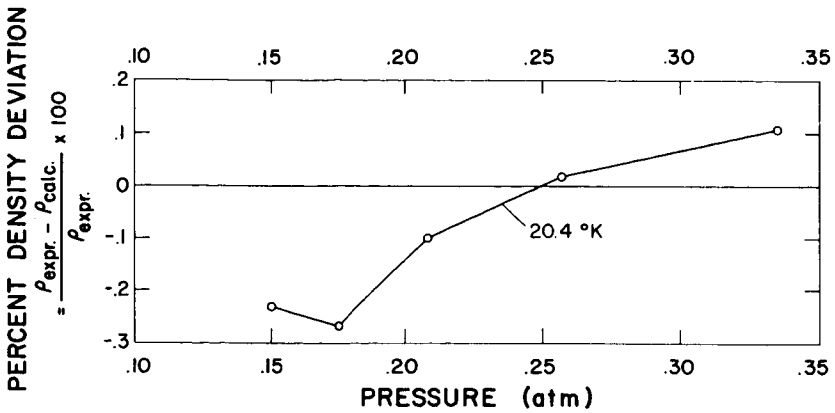

Fig. 6 Density deviations of the deuterium data by Beenakker, Varekamp, and Van Itterbeek [19] from the equation of state (3).

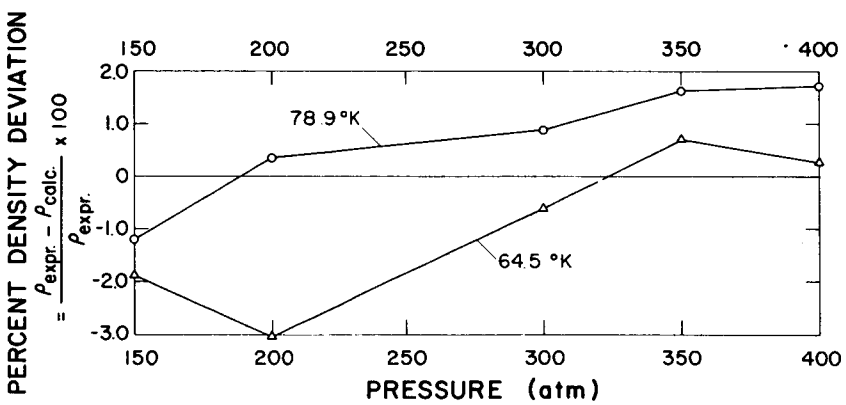

Fig. 7 Density deviations of the deuterium data by David and Hamann [17] from the equation of state (3).

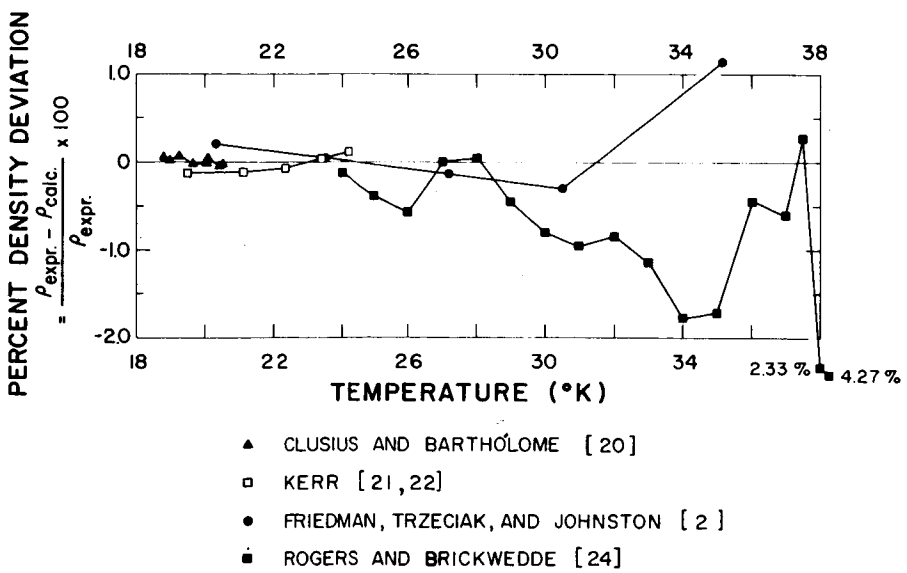

Fig. 8 Density deviations of saturated liquid data of deuterium from the equation of state (3).

EQUATION OF STATE

It was desired in this compilation to obtain an equation of state for deuterium that would include the entire temperature and pressure ranges to be tabulated, both in the liquid and vapor phases, so that it could be used to generate thermodynamic property tables. This equation should represent the P-ρ-T data with an accuracy that approximates the precision of the different data sets. In addition, the derivatives of this equation should be adequate for the calculation of the thermodynamic properties, enthalpy, and entropy, over the entire range of temperatures and pressures.

The equation of state adopted by Strobridge [25] to represent the P-ρ-T behavior of nitrogen, was used as a preliminary equation of state. It was found, however, that this equation, although representing the vapor-phase data to the desired accuracy, did not fit the liquid range satisfactorily. Roder and Goodwin [26] experienced the same problem in their work on parahydrogen, as evidenced by the fact that they adopted two sets of coefficients for the Strobridge equation, one for the liquid phase and one for the vapor phase.

The Strobridge equation was modified for neon by McCarty and Stewart [27] by adding two more parameters and other minor modifications. The McCarty-Stewart equation also presented difficulties in adequately representing the P-ρ-T behavior of deuterium, since this equation did not represent the liquid phase to within the uncertainty of the data.

In his oxygen work, Stewart [28] made extensive modifications to the equation of state for neon, which resulted in a twenty-eight-parameter equation of state. He studied the effect of adding and deleting terms to the equation by performing a weighted-least-squares fit of the selected data to a systematic succession of equations. To determine the significance of the added terms and as a guide in eliminating unnecessary ones, Stewart calculated the standard

deviations of the linear terms. He improved the equations by judging the decreases in the weighted sum of the squares of the differences between the measured and the calculated data points, and by inspection of the density deviations for all data points to which the equation was fitted. The four parameters of the last term of his oxygen equation of state corrected for the density behavior of oxygen around the critical point.

The oxygen equation with the deletion of the correction term was fitted to the P-ρ-T data of deuterium. It was found that this equation represented the data in all regions to the desired accuracy. Since P-ρ-T data for deuterium were insufficient in the vicinity of the critical point to define the peculiar systematic behavior of the density that Stewart found for oxygen around this point (see Figure 3), no correction term was used in this compilation.

The equation of state adopted for deuterium is

$$\begin{aligned} P = \rho RT &+ (n_1 T + n_2 + n_3/T^2 + n_4/T^4 + n_5/T^6)\rho^2 \\ &+ (n_6 T^2 + n_7 T + n_8 + n_9/T + n_{10}/T^2)\rho^3 \\ &+ (n_{11} T + n_{12})\rho^4 + (n_{13} + n_{14}/T)\rho^5 \\ &+ \rho^3 (n_{15}/T^2 + n_{16}/T^3 + n_{17}/T^4)\exp(n_{24}\rho^2) \\ &+ \rho^5 (n_{18}/T^2 + n_{19}/T^3 + n_{20}/T^4)\exp(n_{24}\rho^2) \\ &+ \rho^7 (n_{21}/T^2 + n_{22}/T^3 + n_{23}/T^4)\exp(n_{24}\rho^2). \end{aligned} \tag{3}$$

The coefficients of this equation of state, n_1 to n_{24}, and the corresponding 95 percent confidence intervals are listed in Table IV. The linear coefficients were determined by a weighted-least-squares fit of the experimental data below 400 atm. The initial value of the exponential term, n_{24}, was determined by corresponding states from the value used by Roder and Goodwin [26] for parahydrogen. An optimum value was then obtained by fitting several equations with various values of n_{24}.

The four constraints imposed on this equation using methods outlined in Reference [14] (see Appendix B), are given in Table V. The fixed points and the conversion factors used in this compilation are listed in Table VI and VII, respectively.

The weight factors*, W, used in the least-squares fit were defined as the inverse of the variances in pressure and an equivalent variance due to errors in density and temperature. This equivalent variance is defined according to the error-propagation formula -- Equation (2). Therefore,

$$W = \frac{1}{\sigma_P^2 + \left(\frac{\partial P}{\partial \rho}\sigma_\rho\right)^2 + \left(\frac{\partial P}{\partial T}\sigma_T\right)^2}$$

where σ_P^2, σ_ρ^2, σ_T^2 are the respective variances in pressure, density, and temperature. The variances were taken, in most cases, as the squares of the uncertainties in these three variables. The uncertainties were based upon the experimenters' discussion of possible experimental errors and are listed in Table VIII. In the case of the data by Friedman, Trzeciak, and Johnston [2] and the data by David and Hamann [17], no indication was given about the uncertainties. It was, therefore, assumed that the errors in temperature and pressure were small compared to the density errors and the uncertainty in density was estimated by the precision of the data as illustrated in density deviation plots from a preliminary equation of state. The variances of these data were, therefore, taken as the square of the uncertainty of an equivalent variance in pressure,

i.e.

$$W = \frac{1}{\left(\frac{\partial P}{\partial \rho}\sigma_\rho\right)^2}$$

---

* The weight factors were defined according to the methods outlined in Reference [14] (see Appendix B)

TABLE IV - COEFFICIENTS FOR EQUATION (3)

T in °K, P in atm, ρ in g mol/liter

			95% Confidence Interval
R	=	0.0820535	
n_1	=	$1.7402845195 \times 10^{-3}$	1.02×10^{-5}
n_2	=	$-1.7793868011 \times 10^{-1}$	2.90×10^{-3}
n_3	=	$-2.4001560074 \times 10^{2}$	1.51×10^{1}
n_4	=	$8.0781369940 \times 10^{4}$	1.32×10^{4}
n_5	=	$9.0331481535 \times 10^{5}$	3.90×10^{6}
n_6	=	$-6.2073719586 \times 10^{-8}$	8.17×10^{-9}
n_7	=	$3.9710560252 \times 10^{-5}$	6.42×10^{-6}
n_8	=	$4.0521016760 \times 10^{-3}$	1.71×10^{-3}
n_9	=	$-1.1448326042 \times 10^{-1}$	3.56×10^{-1}
n_{10}	=	$-1.5518933218 \times 10^{1}$	5.52
n_{11}	=	$5.5243829784 \times 10^{-7}$	2.04×10^{-7}
n_{12}	=	$-1.8459331814 \times 10^{-4}$	7.25×10^{-5}
n_{13}	=	$2.7872915743 \times 10^{-6}$	1.20×10^{-6}
n_{14}	=	$2.6676069525 \times 10^{-4}$	1.56×10^{-4}
n_{15}	=	$-4.6440039399 \times 10^{1}$	4.40×10^{1}
n_{16}	=	$5.0142509504 \times 10^{3}$	1.81×10^{3}
n_{17}	=	$-8.6823429312 \times 10^{4}$	2.91×10^{4}
n_{18}	=	$8.2905182310 \times 10^{-2}$	1.91×10^{-2}
n_{19}	=	-3.8202148461	1.22
n_{20}	=	$5.5751492076 \times 10^{1}$	3.18×10^{1}
n_{21}	=	$-4.0191132239 \times 10^{-5}$	1.15×10^{-5}
n_{22}	=	$2.7207301373 \times 10^{-3}$	4.74×10^{-4}
n_{23}	=	$-2.8208998864 \times 10^{-2}$	1.06×10^{-2}
n_{24}	=	-1.4670×10^{-3}	

TABLE V - CONSTRAINTS IMPOSED ON EQUATION (3)	
P-ρ-T at the Critical Point	P = 16.432 atm *ρ = 17.328 g mol/liter T = 38.34°K
$(\partial P/\partial \rho)_T$	= 0 at the Critical Point
$(\partial^2 P/\partial \rho^2)_T$	= 0 at the Critical Point
$(\partial P/\partial T)_\rho$	= dP/dT from Equation (1) at the Critical Point = 2.149 atm/°K

TABLE VI - FIXED POINT DATA	
Critical Pressure [8]	16.432 atm
Critical Temperature [8]	38.34°K
*Critical Density	17.328 g mol/liter
Normal Boiling Temperature, Eq. (3) and [10]	23.66°K
Saturated Vapor Density at nbp Eq. (3)	0.566 g mol/liter
Saturated Liquid Density at nbp Eq. (3)	40.44 g mol/liter
Triple Point Pressure [8]	0.1691 atm
Triple Point Temperature [8]	18.71°K

TABLE VII - CONVERSION CONSTANTS		
1 atmosphere	= 1.01325×10^5	Newton/meter^2
1 joule	= 9.86896×10^{-3}	liter-atm
1 calorie	= 4.1840	joules
1 g mol deuterium	= 4.02820 g (based on the C^{12} = 12.000 scale)	

* The Critical Density was obtained by applying the principle of corresponding states to parahydrogen, with the assumption that the critical compressibility factors of deuterium and parahydrogen are equal.

TABLE VIII - ESTIMATED UNCERTAINTIES OF THE EXPERIMENTAL DENSITY DATA*

Data Source	Estimated Uncertainty in Density
Michels and Goudeket [16]	0.01%
Hoge and Lassiter [18]	2.0 %
David and Hamann [17]	1.0 %
Beenakker, Varekamp, and Van Itterbeek [19]	0.01%
Michels, De Graaff, Wassenaar, Levelt, and Louwerse [5]	0.01%
Barthólome [7]	0.04 g mol/liter
Friedman, Trzeciak, and Johnston [2]	0.15%
Clusius and Barthólome [20]	0.04 g mol/liter
Kerr [21, 22]	0.04 g mol/liter

* These uncertainties were used to determine the weight factors used in the least-squares fit of Equation (3).

VIRIAL COEFFICIENTS

If the equation of state (3) is rewritten in a power series expansion in density, commonly referred to as the virial form, the second and third virial coefficients, respectively, may be extracted as

$$B = (n_1 T + n_2 + n_3 / T^2 + n_4 / T^4 + n_5 / T^6)/RT \tag{4}$$

and

$$C = [n_6 T^2 + n_7 T + n_8 + n_9 / T + (n_{10} + n_{15}) T^2 + n_{16} / T^3 + n_{17} / T^4] / RT. \tag{5}$$

The n_i's are the coefficients of the equation of state given in Table IV. Calculated values of the second and third virial coefficients are given in Table IX as a function of temperature.

Several authors have reported both experimental and theoretical values of the second virial coefficient for deuterium. These are compared to the calculated values from Equation (4) in Figure 9. The form of this equation gives second virial coefficients that are not valid below 25°K. There are no experimental or theoretical values in the region from 50°K to 98.15°K. The values of Beenakker and Varekamp [29] were obtained by interpolation of their graph of the second virial coefficients. These values agree more closely with Equation (4) than do the values reported by Schäfer [30] that were calculated from the Amagat values by Van Itterbeek and Van Doninck [31]. The experimental second virial coefficients evaluated by De Graaff [23] and Michels and Goudeket [16] for temperatures above -175°C agree quite well with Equation (4). This is to be expected since this equation was based on the P-ρ-T data of References [5 and 16]. De Graaff also obtained his P-ρ-T data from Reference [5].

De Graaff [23] has also calculated theoretical second virial coefficients applying the Lennard-Jones (6-12) potential, and using molecular parameters of $\epsilon/k = 35.2$°K and $N\sigma^3 = 15.50$ cm^3/g mol.

These theoretical values agree quite well with his experimental points. When he used literature values of $\epsilon/k = 37.0°K$ and $N\sigma^3 = 15.12\ cm^3/g\ mol$ the agreement was not as good. Michels and Goudeket [16] also calculated theoretical second virial coefficients. Their function, obtained by taking $\epsilon/k = 36.77°K$ and $b_o = 31.409\ cm^3/g\ mol$ ($b_o = \frac{2}{3}\pi N\sigma^3$), overlap values calculated by Equation (4) and was therefore not included in Figure 9.

The third virial coefficients were calculated from Equation (5) and represented in Figure 10. No experimental or theoretical values are available in the literature below -175°C for comparison. However, the third virial coefficient has the general shape suggested by Hirschfelder, Curtiss, and Bird [32] although the peak is much more pronounced. De Graaff [23] based his experimental third virial coefficient on the P-ρ-T data of Reference [5]. Michels' and Goudeket's [16] values deviate noticeably from Reference [5] at high temperatures. Values calculated from Equation (5) in this region are in between the values calculated by References [16 and 23]. Theoretical values calculated by Michels and Goudeket [16] using molecular parameters of $\epsilon/k = 36.77°K$ and $b_o = 31.409\ cm^3/g\ mol$ agree well with Equation (5) around 400°K but the deviations increase as the temperature approaches 300°K.

TABLE IX - SECOND AND THIRD VIRIAL COEFFICIENTS CALCULATED BY EQUATIONS (4 and 5)

T °K	B liters/g mol	C (liters/g mol)^2	T °K	B liters/g mol	C (liters/g mol)^2
25	-0.150125	-0.000031	230	0.011542	0.000456
30	-0.118396	0.004490*	235	0.011757	0.000451
35	-0.090059	0.003694	240	0.011963	0.000446
40	-0.069029	0.002555	245	0.012160	0.000441
45	-0.053717	0.001740	250	0.012349	0.000436
50	-0.042399	0.001226	255	0.012530	0.000431
55	-0.033837	0.000916	260	0.012703	0.000426
60	-0.027206	0.000733	265	0.012869	0.000421
65	-0.021954	0.000626	270	0.013030	0.000416
70	-0.017711	0.000566	275	0.013183	0.000411
75	-0.014223	0.000533	280	0.013332	0.000406
80	-0.011310	0.000517	285	0.013474	0.000401
85	-0.008844	0.000510	290	0.013612	0.000395
90	-0.006732	0.000509	295	0.013745	0.000390
95	-0.004902	0.000510	300	0.013873	0.000385
100	-0.003303	0.000513	305	0.013996	0.000380
105	-0.001894	0.000516	310	0.014116	0.000375
110	-0.000642	0.000519	315	0.014232	0.000370
115	0.000478	0.000521	320	0.014343	0.000365
120	0.001485	0.000523	325	0.014452	0.000360
125	0.002395	0.000524	330	0.014557	0.000355
130	0.003223	0.000525	335	0.014658	0.000350
135	0.003979	0.000525	340	0.014757	0.000345
140	0.004672	0.000524	345	0.014852	0.000340
145	0.005309	0.000523	350	0.014945	0.000335
150	0.005898	0.000521	355	0.015035	0.000330
155	0.006444	0.000519	360	0.015123	0.000325
160	0.006951	0.000516	365	0.015208	0.000320
165	0.007423	0.000513	370	0.015291	0.000316
170	0.007864	0.000510	375	0.015371	0.000311
175	0.008278	0.000506	380	0.015449	0.000306
180	0.008665	0.000502	385	0.015525	0.000301
185	0.009030	0.000498	390	0.015600	0.000296
190	0.009373	0.000494	395	0.015672	0.000291
195	0.009697	0.000490	400	0.015742	0.000287
200	0.010004	0.000485	405	0.015811	0.000282
205	0.010294	0.000481	410	0.015878	0.000277
210	0.010569	0.000476	415	0.015943	0.000272
215	0.010831	0.000471	420	0.016007	0.000268
220	0.011079	0.000466	425	0.016069	0.000263
225	0.011316	0.000461			

*The maximum value of C x 10^5 is 4495.77 (liters/g mol)^2 at 30.29°K.

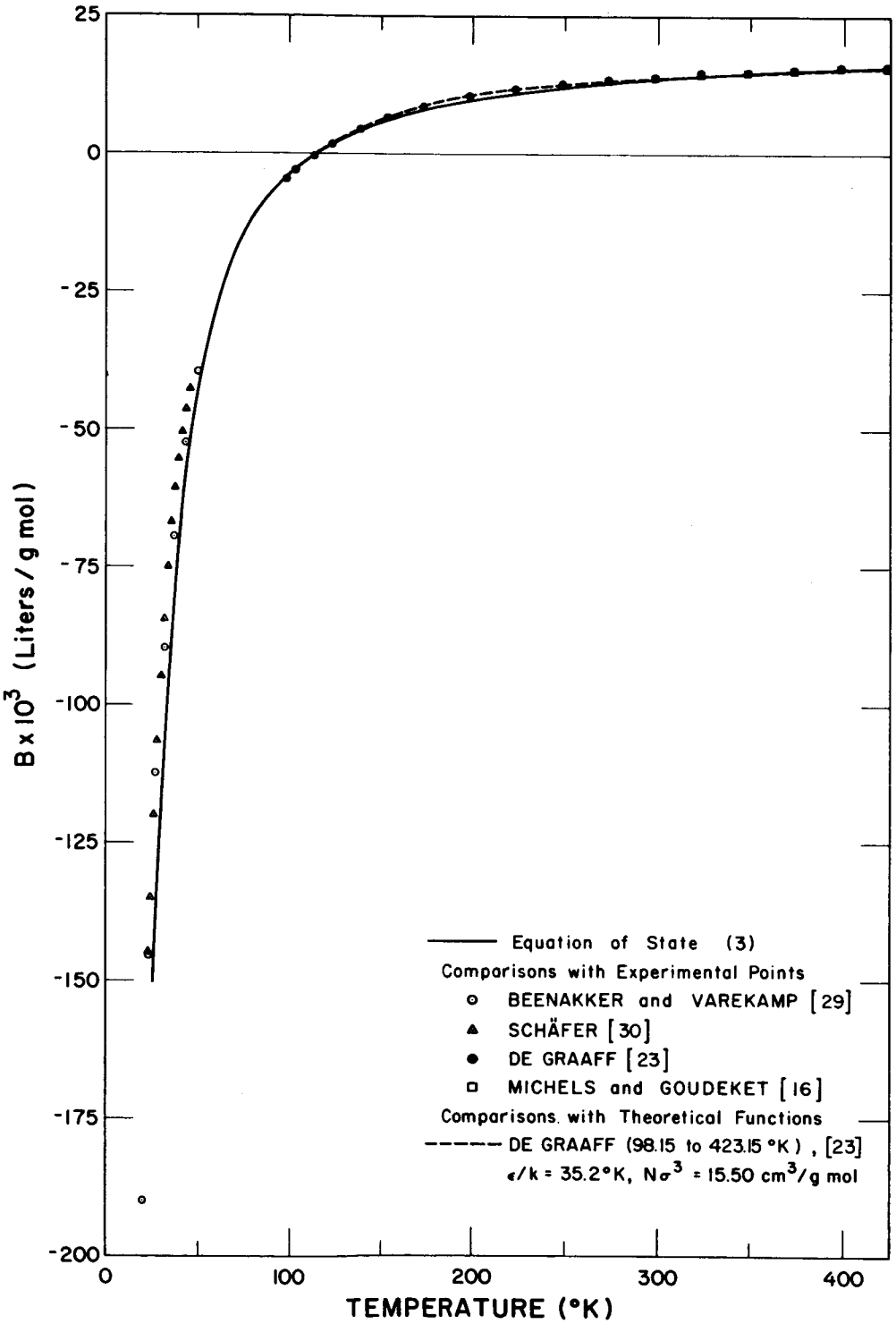

Fig. 9 Comparisons of second virial coefficients for deuterium.

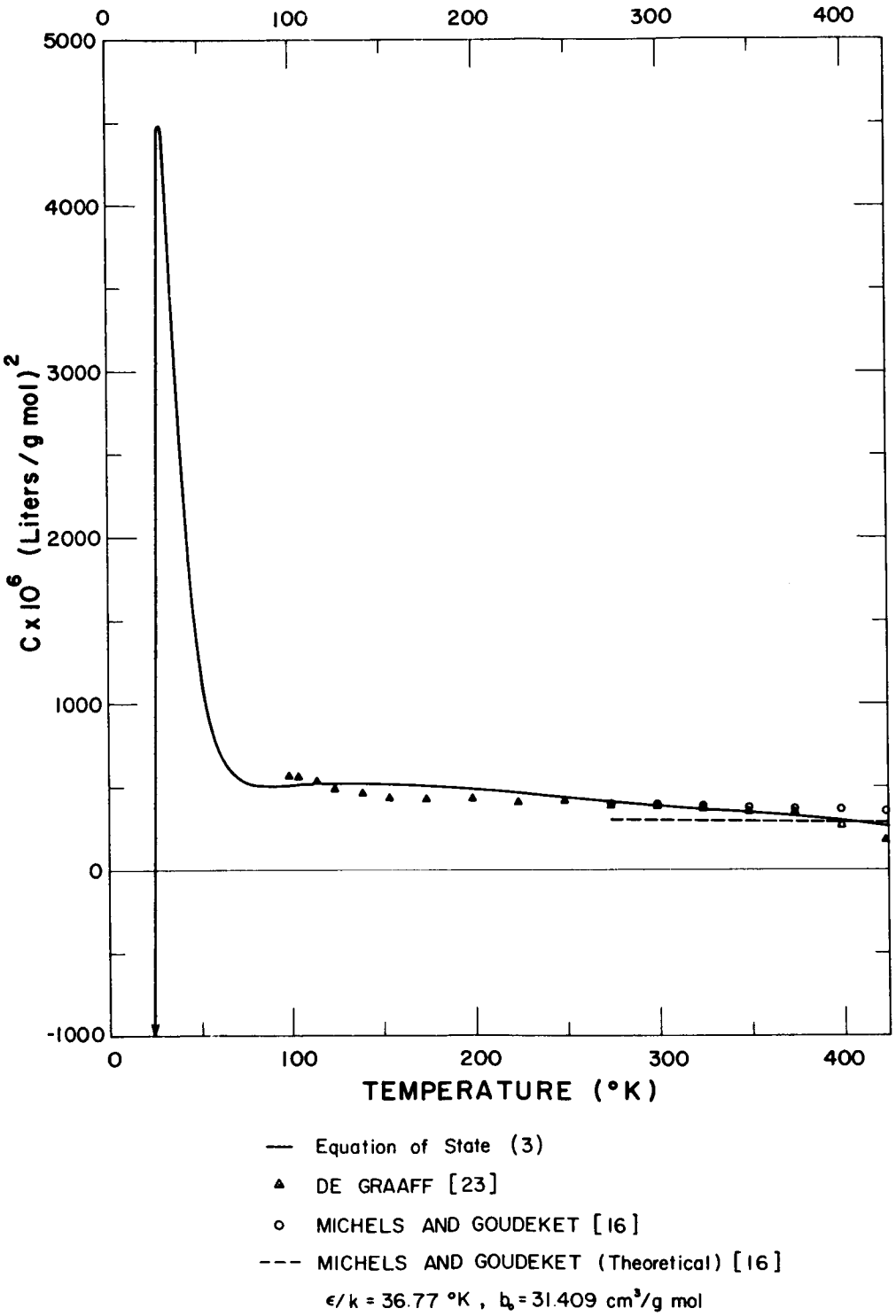

Fig. 10 Comparisons of third virial coefficients for deuterium.

JOULE-THOMSON INVERSION CURVE

The Joule-Thomson coefficient, μ, is defined as $\mu = (\partial T/\partial P)_H$. The thermodynamic expression for this coefficient is

$$\mu = \frac{1}{C_p} \left[- \frac{T}{\rho^2} \left(\frac{\partial \rho}{\partial T} \right)_P - \frac{1}{\rho} \right] .$$

The Joule-Thomson inversion curve is defined as the locus of the points where $\mu = 0$, i.e.,

$$- \frac{T}{\rho^2} \left(\frac{\partial \rho}{\partial T} \right)_P = \frac{1}{\rho} . \tag{6}$$

The inversion curve, when referring to a T-S diagram, is also given by the maxima of the isenthalpic curves according to

$$\left(\frac{\partial T}{\partial S} \right)_H = 0 .$$

In the case of deuterium, the inversion curve was calculated by an iterative solution of Equation (6). Values of $-(\partial \rho/\partial T)_P$ were taken as the ratio of the isochore derivative, $(\partial P/\partial T)_\rho$, and the isotherm derivative, $(\partial P/\partial \rho)_T$, given as Equations (2D and 4D), respectively, in Appendix D. The data for this curve are given in Table X. It is compared in Figure 11 on a classical reduced basis to the inversion curve obtained by Roder, Weber, and Goodwin [33] for parahydrogen and the curve obtained by Dean and Mann [34], also for parahydrogen. The work of Reference [33] lists values from 28°K to 100°K, while Reference [34] extrapolated the Strobridge equation of state [25] which was used by Roder, Weber, and Goodwin [33] for the parahydrogen data to the upper inversion temperature.

Consistent with the comparison in Table X, Koeppe [35, 36] also found that the principle of corresponding states does not give a common inversion curve for quantum fluids such as is found for most gases. Riedel [37] represented the reduced inversion curve as a function of a critical parameter, α_c, defined as

$$\alpha_c = \lim_{T \to T_c} \frac{d \log P_s}{d \log T}$$

in which $P_s = P_s(T)$ is the vapor pressure curve. However, the inversion curve of deuterium has the same general trend as the one observed by Koeppe for other fluids. No experimental data have been reported in the literature on the deuterium inversion curve.

TABLE X - JOULE-THOMSON INVERSION CURVE

CALCULATED FROM EQUATION (6)

AND THE EQUATION OF STATE (3)

T °K	P atm	ρ g mol/liter	P/P_c	T/T_c
35	32.12	33.878	1.955	0.9129
40	60.56	32.657	3.686	1.0433
45	84.42	31.402	5.137	1.1737
50	104.72	30.176	6.373	1.3041
55	122.18	29.003	7.435	1.4345
60	137.30	27.889	8.355	1.5650
65	150.40	26.830	9.153	1.6954
70	161.67	25.815	9.839	1.8258
75	171.24	24.835	10.421	1.9562
80	179.18	23.881	10.904	2.0866
85	185.55	22.943	11.292	2.2170
90	190.40	22.015	11.587	2.3474
95	193.76	21.092	11.792	2.4778
100	195.69	20.169	11.909	2.6082
105	196.19	19.242	11.940	2.7387
110	195.31	18.309	11.886	2.8691
115	193.06	17.365	11.749	2.9995
120	189.48	16.409	11.531	3.1299
125	184.58	15.438	11.233	3.2603
130	178.41	14.452	10.858	3.3907
135	171.01	13.449	10.407	3.5211
140	162.44	12.430	9.885	3.6515
145	152.78	11.399	9.298	3.7820
150	142.18	10.360	8.653	3.9124
155	130.81	9.321	7.960	4.0428
160	118.88	8.294	7.235	4.1732
165	106.65	7.292	6.491	4.3036
170	94.39	6.328	5.744	4.4340
175	82.32	5.413	5.010	4.5644
180	70.62	4.556	4.298	4.6948
185	59.39	3.759	3.614	4.8253
190	48.68	3.024	2.963	4.9557
195	38.48	2.346	2.342	5.0861
200	28.76	1.721	1.750	5.2165
205	19.47	1.144	1.185	5.3469
210	10.56	0.609	0.643	5.4773
215	1.97	0.112	0.120	5.6077

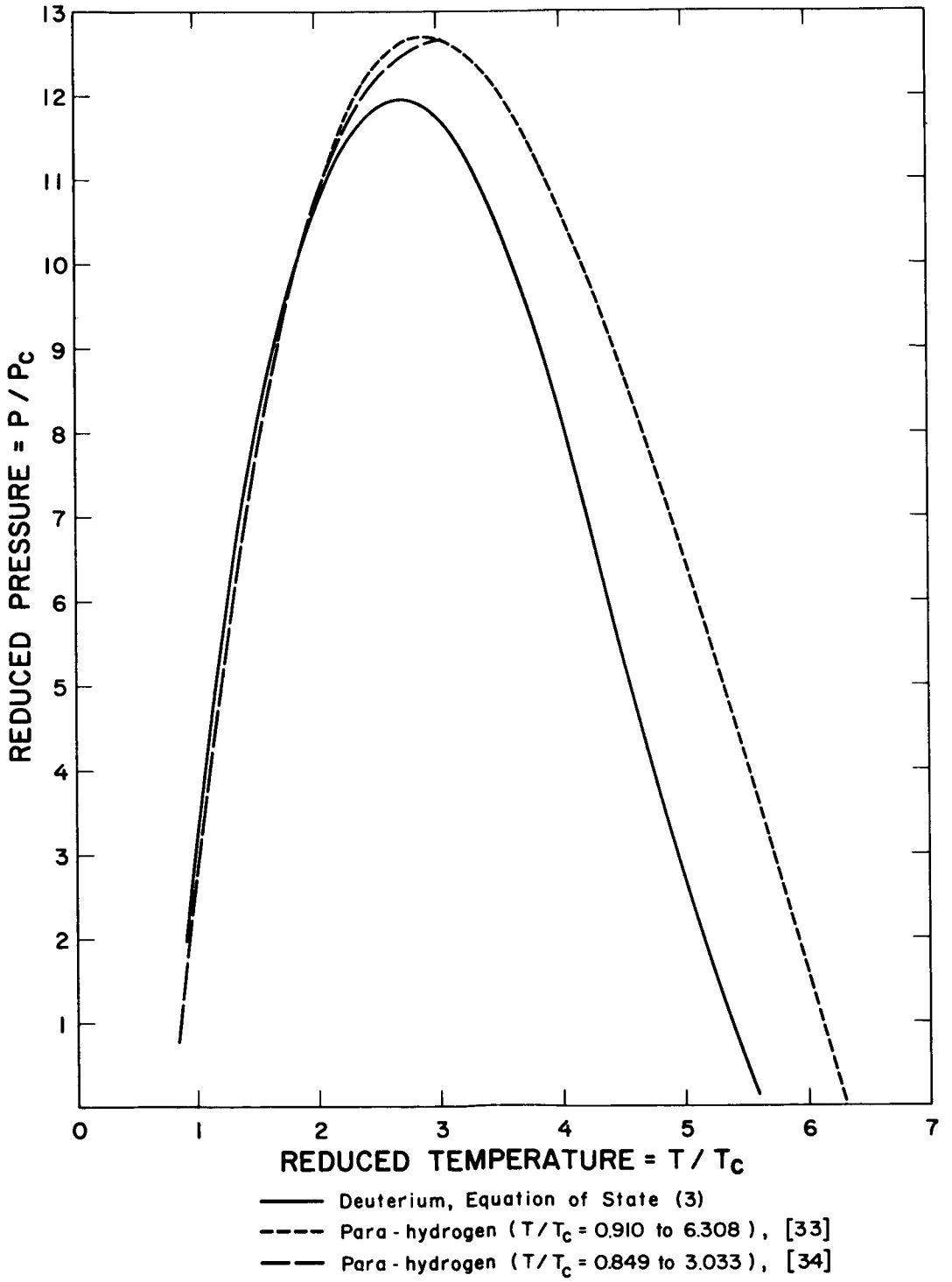

Fig. 11 Comparisons of reduced Joule-Thomson inversion curves for deuterium and parahydrogen.

LATENT HEAT OF VAPORIZATION

The Clapeyron equation

$$\frac{dP}{dT} = \frac{\Delta H_L}{T\,(V_g - V_\ell)}$$

may be used to calculate the latent heat of vaporization. In this equation dP/dT is the slope of the vapor-pressure equation, ΔH_L the latent heat of vaporization, V the specific volume, and the subscripts g and ℓ indicate saturated vapor and liquid conditions, respectively. The latent heat of deuterium as calculated from the equation of state may be obtained from the saturation table of Appendix G as the difference in enthalpies of the saturated liquid and the saturated vapor.

White, Hu, and Johnston [38] have reported latent heats at nine different temperatures. Uncertainties in their data approach 5 percent as the temperatures approach critical temperature. They obtain their values by extrapolating the P-ρ-T data of Reference [2] to the saturation line. However, the much larger deviation between the values calculated from the equation of state and the data of Reference [38] may have resulted from the fact that no P-ρ-T vapor data were available in the literature between 20.4°K and 98°K at pressures below 150 atm, and Equation (3) could, therefore be in error in this region.

A comparison of values calculated from Equation (3) and the data by White, Hu, and Johnston [38] is given in Table XI. The difference $\Delta H_{L_1} - \Delta H_{L_2}$ is rounded off because there is one less significant digit in ΔH_{L_2} than in ΔH_{L_1}.

TABLE XI - COMPARISONS OF LATENT HEATS OF VAPORIZATION

ΔH_{L_1} is obtained from Reference [38]

ΔH_{L_2} is calculated from Equation (3)

T °K	ΔH_{L_1} j/mole	ΔH_{L_2} j/mole	$\Delta H_{L_1} - \Delta H_{L_2}$ j/mole
24.25	1202.1	1195	7
26.83	1153.1	1114	39
28.58	1098.3	1046	52
30.53	1028.8	954	75
32.48	937.6	845	93
34.10	830.1	730	100
35.43	725.9	617	109
36.57	628.9	493	136
37.52	502.1	346	156

DERIVED THERMODYNAMIC PROPERTIES

The derived thermodynamic properties given in Appendices G and H (entropy, enthalpy, internal energy) have been calculated from the vapor-pressure equation (1), the equation of state (3), and from interpolation of the ideal gas entropy and enthalpy tables of Haar, Friedman, and Beckett [39] (see Appendix F). The relations for calculating entropy and enthalpy are derived in Appendix C and given below. Appendices D and E give the derivatives of the equation of state and the solutions of the integrals used in these calculations.

The entropy of the gas phase, including the saturated vapor, was calculated by Equation (7C) of Appendix C given here as Equation (7):

$$S(T,\rho) = S_T^\circ - R \ln(RT\rho) + \int_0^\rho \left[\frac{R}{\rho} - \frac{1}{\rho^2}\left(\frac{\partial P}{\partial T}\right)_\rho \right]_T d\rho . \qquad (7)$$

The derivative $(\partial P/\partial T)_\rho$ is the derivative of the equation of state (3) and is given as Equation (2D) in Appendix D. The solution of the integral $\int \left[R/\rho - (1/\rho^2)(\partial P/\partial T)_\rho \right]_T d\rho$ is given as Equation (1E) in Appendix E. The entropy of the ideal gas was obtained by the Aitken interpolation procedure of tables of Reference [39] . This interpolation method is given in Reference [40] , page 879.

The enthalpy of the gas phase may be calculated by Equation (4C) which was derived in Appendix C, and given here as Equation (8):

$$H(T,\rho) = H_T^\circ + T \int_0^\rho \left[\frac{P}{T\rho^2} - \frac{1}{\rho^2}\left(\frac{\partial P}{\partial T}\right)_\rho \right]_T d\rho + \frac{P - \rho RT}{\rho} . \qquad (8)$$

In the calculation of enthalpy, however, it was convenient to replace the integral in Equation (8) with the integral used in Equation (7), i.e.,

$$T \int \left[\frac{P}{T\rho^2} - \frac{1}{\rho^2} \left(\frac{\partial P}{\partial T} \right)_\rho \right]_T d\rho = T \int \left[\frac{R}{\rho} - \frac{1}{\rho^2} \left(\frac{\partial P}{\partial T} \right)_\rho \right]_T d\rho$$

$$+ \int \left[\frac{P}{\rho^2} - \frac{RT}{\rho} \right]_T d\rho \ .$$

Then,

$$H(T,\rho) = H_T^o + T \int_o^\rho \left[\frac{R}{\rho} - \frac{1}{\rho^2} \left(\frac{\partial P}{\partial T} \right)_\rho \right]_T d\rho + \int_o^\rho \left[\frac{P}{\rho^2} - \frac{RT}{\rho} \right]_T d\rho$$

$$+ \frac{P - \rho RT}{\rho} \ . \qquad (9)$$

The solution of the integral $\int \left[(P/\rho^2) - (RT/\rho) \right]_T d\rho$ is given as Equation (2E) in Appendix E. The enthalpy of the ideal gas was taken from values of $H_o - E_o^o$ of Reference [39] by the Aitken interpolation procedure. E_o^o was taken to be zero.

The internal energy of the gas was calculated from the following equation:

$$U(T,\rho) = H(T,\rho) - P/\rho \ . \qquad (10)$$

By using the Clapeyron equation (11) the saturated liquid entropies and enthalpies were obtained as a difference in the changes in entropy and enthalpy due to vaporization from the saturated vapor value.

$$\Delta H = T\Delta S = T \frac{dP}{dT} \Delta V \qquad (11)$$

In the above equation $\frac{dP}{dT}$ is the derivative of the vapor-pressure equation (1). Simultaneous solution of the vapor-pressure equation (1) and the equation of state (3) gave saturated liquid and vapor densities.

The liquid phase entropy was obtained by calculating the isothermal changes from the saturated liquid state with Equation (7C)

in Appendix C, given here as Equation (12):

$$S(T,\rho) = S(T,\rho_{sat}) - \int_{\rho_{sat}}^{\rho} \left[\frac{1}{\rho^2} \left(\frac{\partial P}{\partial T} \right)_\rho \right]_T d\rho \ . \qquad (12)$$

The solution of the integral in Equation (12) was obtained by subtracting the quantity ($R \ln \rho$) from Equation (1E).

The liquid phase internal energy was determined by calculating the isothermal changes from the saturated liquid state using the relationship obtained upon integration of the basic thermodynamic equation

$$\left(\frac{\partial U}{\partial V} \right)_T = T \left(\frac{\partial P}{\partial T} \right)_V - P$$

with respect to volume. This relationship is given here as Equation (13):

$$U(T,\rho) = U(T,\rho_{sat}) - \int_{\rho_{sat}}^{\rho} \left[\frac{T}{\rho^2} \left(\frac{\partial P}{\partial T} \right)_\rho - \frac{P}{\rho^2} \right]_T d\rho . \qquad (13)$$

In this calculation, however, it was convenient to replace the integral in Equation (13) with the integral used in Equation (12), i.e.,

$$- \int \left[\frac{T}{\rho^2} \left(\frac{\partial P}{\partial T} \right)_\rho - \frac{P}{\rho^2} \right] d\rho = - \int \left[\frac{1}{\rho^2} \left(\frac{\partial P}{\partial T} \right)_\rho \right]_T d\rho + \int \frac{P}{\rho^2} d\rho \ .$$

Then,

$$U(T,\rho) = U(T,\rho_{sat}) - \int_{\rho_{sat}}^{\rho} \left[\frac{1}{\rho^2} \left(\frac{\partial P}{\partial T} \right)_\rho \right]_T d\rho + \int_{\rho_{sat}}^{\rho} \frac{P}{\rho^2} d\rho . \qquad (14)$$

The solution of the integral $\int \left[(1/\rho^2) (\partial P/\partial T)_\rho \right]_T d\rho$ was obtained by subtracting ($R \ln \rho$) from Equation (1E). The integral $\int (P/\rho^2)$ was solved by subtracting the quantity ($RT \ln \rho$) from Equation (2E). The enthalpy of the liquid was determined from Equation (15) and this was obtained by combining Equations (10 and 13):

$$H(T,\rho) = H(T,\rho_{sat}) + \frac{P}{\rho} - \frac{P_{sat}}{\rho_{sat}} - \int_{\rho_{sat}}^{\rho} \left[\frac{T}{\rho^2} \left(\frac{\partial P}{\partial T} \right)_{\rho} - \frac{P}{\rho^2} \right]_T d\rho . \quad (15)$$

CONCLUSIONS AND RECOMMENDATIONS

The accuracy of the equation of state (3) may be estimated from the deviations of the experimental P-ρ-T data from the predictions of this equation. In particular, comparison of different data sets in the same region gives information about the accuracy of these data.

References [5 and 16] give essentially all known data in the vapor phase. The deviations between these data and the equation of state predictions are illustrated in Figure 2 and are within 0.1 percent. This is not as low as the quoted precision of the experiment which is 0.01 percent. In the region from the critical point to 98°K virtually no experimental data exist. Therefore, the values predicted by the equation of state (3) actually represent an extrapolation in this region.

The uncertainty of Friedman, Trzeciak, and Johnston's [2] liquid data at low temperature has been taken to be ±0.15 percent in density and was estimated by comparing their data to the data of Barthólome [7]. At higher temperatures there are no other data sets that may be compared to the data of Reference [2]. The data of Hoge and Lassiter [18] is the only set available in the region near the critical point and no comparison can be made.

The bump in the isobars above the critical pressures and for temperatures near the critical temperature is attributable to the lack of data, which in turn does not sufficiently constrain the equation of state (3) in this region.

The following estimates of the accuracy of the equation of state (3) were based on these P-ρ-T comparisons:

1. The accuracy of the equation of state (3) in the gaseous region from 98 to 423°K for pressures to 400 atm, is estimated to be within ±0.1 percent in density.
2. The estimated accuracy of the equation of state (3) in the critical region is ±5 percent in pressure and -23 percent in density.

3. The accuracy of the equation of state (3) in the liquid region from 20 to 35°K for pressures to 100 atm is estimated to be 0.3 percent in density.
4. The standard deviation in the thermodynamic properties in the gaseous region due to uncertainties in the P-ρ-T measurements are at a maximum at about 40°K and 100 atm being 0.127 joules/mol °K in entropy and 3.39 joules/mol in enthalpy. The value for enthalpy decreases with pressure being 0.2 joules/mol at this temperature and 1 atm. The corresponding values at 100°K are 0.1 at 1 atm and 1.05 at 100 atm. In the region from 200 to 300°K the values are about 0.12 at 10 atm and 0.85 at 400 atm.

   The standard deviation in entropy for all pressures reduces to 0.1 joules/mol °K at temperatures of 60°K and above. This value is due to the estimated deviation in the zero-pressure specific heat data.

On this background it is recommended that the following measurements are needed to improve the accuracy of the equation of state (3) for deuterium and the thermodynamic property tables calculated from this equation:

1. P-ρ-T data from the critical point to 100°K for pressures to 400 atm.
2. P-ρ-T data in the gaseous region from the triple point to the critical point.
3. P-ρ-T data in the critical region.
4. Latent heat of vaporization data from the triple point to the critical point.
5. Specific heat data at constant volume in both the liquid and vapor regions.

NOMENCLATURE

P	pressure, atm
T	temperature, °K
ρ	density, g mol/liter
V	volume = $1/\rho$, liter/g mol
R	gas constant = 0.0820535 liter atm/g mol °K
Z	compressibility factor, $P/\rho RT$
U	internal energy, joules/g mol
H	enthalpy, joules/g mol
S	entropy, joules/g mol °K
ΔH_L	latent heat of vaporization, joules/g mol
μ	Joule-Thomson coefficient, °K/atm
B	second virial coefficient, liters/g mol
C	third virial coefficient, (liters/g mol)^2
b_o	reducing parameter = $\frac{2}{3}\pi N\sigma^3$, liters/g mol
ϵ	maximum energy of attraction, joules
k	Boltzmann constant = 1.38054×10^{-23} joules/°K
V_g	saturated vapor volume, liters
V_ℓ	saturated liquid volume, liters

Subscripts:

c	critical point value
sat	property at saturation
o	reference state property
expr	experimentally determined property value
calc	calculated property value

Superscripts

o	ideal gas property
*	condition at very low pressure

APPENDIX A - TEMPERATURE SCALE CORRECTIONS

Many of the experimental vapor pressure data and P-ρ-T data were based on different temperature scales. To make all the data consistent, the reported temperatures were converted to a common Kelvin scale using 273.15°K as the ice point of water** and 90.18°K as the normal boiling point of oxygen. The temperatures below the oxygen point were based on the NBS-1955 low temperature scale, obtained by subtracting 0.01°K from the temperatures on the NBS-1939 scale of Hoge and Brickwedde [41]. In some cases the experimenter did not report the temperature scale used. However, such information was usually obtained from other publications from that particular laboratory published at the same time. Table A gives the various temperature corrections applied to the data of the various experimenters.

TABLE A - TEMPERATURE SCALE CORRECTIONS†

Superscript * indicates temperature reported by investigator

T = temperature in °K

t = temperature in °C

Data Source‡	Temperature Correction Function
7, 17, 19, 20	$T = T^*$
5, 16	$T = t^* + 273.15$
2, 8, 10, 11, 12, 15, 18, 21, 22	$T = T^* - 0.01$
9	$T = T^* - 0.016$

† to reduce the reported temperatures to a Kelvin scale based on 273.15°K as the ice point, and 90.18°K as the oxygen point.

‡ numbers refer to references in the bibliography.

** The primary defined point is the triple point of water as 273.16°K.

APPENDIX B - METHODS OF LEAST SQUARES

The following is reprinted from Reference [14] . The weighted-least-squares fitting methods used in the constrained fitting of Equations (1) and (3) are described here.

Suppose n experimental data points Y_i, X_{1i}, X_{2i}, . . ., X_{qi} (i = 1, 2, . . ., n) of the function $y(x_1, x_2, \ldots, x_q)$ have been obtained. It is desired to approximate this functional relationship with the additive relationship,

$$y = a_1 f_1 + a_2 f_2 + \ldots + a_m f_m \tag{1B}$$

where the m functions, f_j, are prescribed and the m parameters, a_j, are to be determined.

The dependent variable is denoted by Y, and the independent variables are denoted by X_1, X_2, . . ., X_q. However, in many instances the distinction between dependent and independent variables is not physically significant. The quantities y_i and f_{ij} will denote y and f_j evaluated at the ith data point.

The values of the parameters selected as best, for equally reliable data, are those which minimize the sum of the squares of the residuals as given by Equation (2B):

$$S = \sum_{i=1}^{n} r^2_i, \text{ where } r_i = y_i - Y_i \ . \tag{2B}$$

The minimization of S with respect to the m unknown parameters results in a set of m equations in m unknowns. These equations, referred to as the normal equations, are

$$\sum_{j=1}^{m} a_j \sum_{i=1}^{n} f_{ij} = \sum_{i=1}^{n} f_{ik} \ Y_i, \ (k = 1, 2, \ldots, m). \tag{3B}$$

If the data are not equally reliable, a weight factor, W_i, is introduced so the quantity to be minimized becomes

$$S' = \sum_{i=1}^{n} W_i r_i^2 \quad . \tag{4B}$$

This weight factor is usually defined as the reciprocal of the variance of the measured dependent variable

$$W = \frac{1}{\sigma^2 Y_i} \quad . \tag{5B}$$

However, if the weight factor is defined according to Equation (6B), the fit is influenced by the imprecision of the independent variables as well as the dependent variable:

$$W_i = \frac{1}{\sigma^2 Y_j + \sigma^2_{y_j}} \quad . \tag{6B}$$

The quantity σ_{y_i} is determined from the error propagation formula,

$$\sigma^2_{y_j} = \sum \left(\frac{\partial y}{\partial x_i} \sigma_{x_i} \right)^2 \quad . \tag{7B}$$

The weighted normal equations are then

$$\sum_{j=1}^{m} a_j \sum_{i=1}^{n} W_i f_{ij} f_{ik} = \sum_{i=1}^{n} W_i f_{ik} Y_i, \ (k = 1, 2, \ldots, m). \tag{8B}$$

In some instances, it is essential or at least desirable to impose constraints upon the adjustable parameters along with the least-squares condition. These ℓ constraints are denoted by

$$\sum_{j=1}^{m} a_j g_{kj} = C_k, \ (k = 1, 2, \ldots, \ell) \tag{9B}$$

where g_{kj} denotes the numerical coefficients of the relationships between the m parameters that are to be satisfied exactly (e.g. see Table E, p. 56).

By the application of the Lagrangian multiplier technique, one obtains the constrained normal equations. These $m+\ell$ unknowns are

$$\sum_{j=1}^{m} a_j \sum_{i=1}^{n} W_i f_{ij} f_{ik} + \sum_{j=1}^{\ell} \lambda'_j g_{jk} = \sum_{i=1}^{n} W_i f_{ik} Y_i, \quad (k=1, 2, \ldots, m) \qquad \ldots\ldots\ldots \quad (10B)$$

where λ' are used to obtain the m parameters (a_j, $j=1, 2, \ldots, \ell$) and the ℓ Lagrangian multipliers (λ_j, $j=1, 2, \ldots, \ell$).

APPENDIX C - DERIVATION OF THE EQUATIONS FOR THE CALCULATIONS OF THERMODYNAMIC PROPERTIES

Relationships for the calculations of the derived properties, enthalpy and entropy, may be obtained as follows. From the second law of thermodynamics

$$TdS = dH - VdP,$$

and at constant temperature

$$\left(\frac{\partial H}{\partial P}\right)_T = V + T\left(\frac{\partial S}{\partial P}\right)_T .$$

The Maxwell relation gives

$$\left(\frac{\partial V}{\partial T}\right)_P = -\left(\frac{\partial S}{\partial P}\right)_T .$$

Therefore,

$$dH = \left[V - T\left(\frac{\partial V}{\partial T}\right)_P \right]_T dP ,$$

where the T subscript denotes constant temperature conditions. If $(\partial V/\partial T)_P$ is a known function of pressure, this equation can be integrated to give the enthalpy change during an isothermal process for a corresponding change in pressure. Thus,

$$H(T, P) = H_T^o + \int_o^P \left[V - T\left(\frac{\partial V}{\partial T}\right)_P \right]_T dP_T \qquad (1C)$$

where H_T^o is the enthalpy of the ideal gas at temperature T. The reason for using zero pressure in the lower limit is that one then can use the enthalpy of the ideal gas as the reference.

The integral $\int VdP$ can be rewritten as follows:

$$\int_1^2 VdP = \int_1^2 d(PV) - \int_1^2 PdV = (PV)_2 - (PV)_1 - \int_1^2 PdV .$$

Since the base for calculations is taken as $P_1 = 0$, $Z = 1$, $V = \infty$. Therefore,

$$\int_0^P VdP = RT(Z-1) - \int_\infty^V PdV = \frac{P-\rho RT}{\rho} - \int_\infty^V PdV. \quad (2C)$$

Also,

$$\left(\frac{\partial V}{\partial T}\right)_P = -\left(\frac{\partial P}{\partial T}\right)_V \left(\frac{\partial V}{\partial P}\right)_T = -\left(\frac{\partial P}{\partial T}\right)_V \left(\frac{dV_T}{dP_T}\right). \quad (3C)$$

Substitution of Equations (2C) and (3C) into Equation (1C) gives

$$H(T, V) = H_T^o + \int_\infty^V \left[T\left(\frac{\partial P}{\partial T}\right)_V - P \right]_T dV + \frac{P-\rho RT}{\rho} .$$

By setting $V = 1/\rho$ and $dV = -d\rho/\rho^2$, the final equation becomes

$$H(T,\rho) = H_T^o + T\int_0^\rho \left[\frac{P}{T\rho^2} - \frac{1}{\rho^2}\left(\frac{\partial P}{\partial T}\right)_\rho \right]_T d\rho + \frac{P-\rho RT}{\rho} . \quad (4C)$$

Similar derivations may be followed for entropy. Starting with the Maxwell equation

$$\left(\frac{\partial S}{\partial V}\right)_T = \left(\frac{\partial P}{\partial T}\right)_V ,$$

one obtains upon integration with respect to volume

$$S(T, V) = S_T^o + \lim_{P^* \to 0} \left[\int_{V_o}^{V^*} \left[\left(\frac{\partial P}{\partial T}\right)_V \right]_T dV + \int_{V^*}^{V} \left[\left(\frac{\partial P}{\partial T}\right)_V \right]_T dV \right], \quad (5C)$$

where S_T^o is the entropy of the ideal gas at temperature T. The first integral of Equation (5C) refers to the integration over the ideal gas surface while the second integral applies to integration back on the real gas surface.

It now becomes necessary to introduce the limit as P^* approaches zero, in order that the real and the ideal gas surfaces coincide. For the ideal gas $\left(\frac{\partial P}{\partial T}\right)_V = R/V$ since this quantity is independent of temperature. The first integral is replaced by two integrals

$$\int_{V_o}^{V^*} \left[\left(\frac{\partial P}{\partial T}\right)_V\right]_T dV = \int_{V_o}^{V} \left[\left(\frac{\partial P}{\partial T}\right)_V\right]_T dV + \int_{V}^{V^*} \left[\left(\frac{\partial P}{\partial T}\right)_V\right]_T dV.$$

Substitution into Equation (5C) yields in the limit

$$S(T,V) = S_T^o - R \ln\left(\frac{P_o V}{RT}\right) + \int_V^\infty \left[\frac{R}{V} - \left(\frac{\partial P}{\partial T}\right)_V\right]_T dV. \qquad (6C)$$

Replacing $V = 1/\rho$ and $dV = -d\rho/\rho^2$ and the reference pressure $P_o = 1$ atm in Equation (6C) gives

$$S(T,\rho) = S_T^o - R \ln(RT\rho) + \int_o^\rho \left[\frac{R}{\rho} - \frac{1}{\rho^2}\left(\frac{\partial P}{\partial T}\right)_\rho\right]_T d\rho\ . \qquad (7C)$$

APPENDIX D - DERIVATIVES OF THE EQUATION OF STATE*

Equation of State

The equation of state (3) may be written as Equation (1D)

$$P = \rho RT + \sum_{i=1}^{23} n_i X_i, \qquad (1D)$$

where the n_i's are the coefficients listed in Table IV, and the X_i functions are as follows:

$X_1 = \rho^2 T$	$X_9 = \rho^3 / T$	$X_{17} = \rho^3 f_1 / T^4$
$X_2 = \rho^2$	$X_{10} = \rho^3 / T^2$	$X_{18} = \rho^5 f_1 / T^2$
$X_3 = \rho^2 / T^2$	$X_{11} = \rho^4 T$	$X_{19} = \rho^5 f_1 / T^3$
$X_4 = \rho^2 / T^4$	$X_{12} = \rho^4$	$X_{20} = \rho^5 f_1 / T^4$
$X_5 = \rho^2 / T^6$	$X_{13} = \rho^5$	$X_{21} = \rho^7 f_1 / T^2$
$X_6 = \rho^3 T^2$	$X_{14} = \rho^5 / T$	$X_{22} = \rho^7 f_1 / T^3$
$X_7 = \rho^3 T$	$X_{15} = \rho^3 f_1 / T^2$	$X_{23} = \rho^7 f_1 / T^4$
$X_8 = \rho^3$	$X_{16} = \rho^3 f_1 / T^3$	

where the f_i's are given in Table D.

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* The derivatives of the equation of state used in calculation of entropy, and enthalpy are given here (see Section on Derived Thermodynamic Properties and Appendix E).

Isochor Derivative

The isochor derivative, $(\partial P/\partial T)_\rho$, for Equation (1D) is given by Equation (2D)

$$\left(\frac{\partial P}{\partial T}\right)_\rho = \rho R + \sum_{i=1}^{23} n_i X_i , \qquad (2D)$$

where the n_i's are the coefficients listed in Table IV, and the X_i functions are as follows:

$X_1 = \rho^2$	$X_9 = -\rho^3/T^2$	$X_{17} = -4\rho^3 f_1/T^5$
$X_2 = 0$	$X_{10} = -2\rho^3/T^3$	$X_{18} = -2\rho^5 f_1/T^3$
$X_3 = -2\rho^2/T^3$	$X_{11} = \rho^4$	$X_{19} = -3\rho^5 f_1/T^4$
$X_4 = -4\rho^2/T^5$	$X_{12} = 0$	$X_{20} = -4\rho^5 f_1/T^5$
$X_5 = -6\rho^2/T^7$	$X_{13} = 0$	$X_{21} = -2\rho^7 f_1/T^3$
$X_6 = 2T\rho^3$	$X_{14} = -\rho^5/T^2$	$X_{22} = -3\rho^7 f_1/T^4$
$X_7 = \rho^3$	$X_{15} = -2\rho^3 f_1/T^3$	$X_{23} = -4\rho^7 f_1/T^5$
$X_8 = 0$	$X_{16} = -3\rho^3 f_1/T^4$	

where the f_i's are given in Table D.

Second Derivative of the Isochor

The second derivative of the isochor, $(\partial^2 P/\partial T^2)_\rho$, for Equation (1D) is given by Equation (3D).

$$\left(\frac{\partial^2 P}{\partial T^2}\right)_\rho = \sum_{i=1}^{23} n_i X_i , \qquad (3D)$$

where the n_i's are the coefficients listed in Table IV, and the X_i functions are as follows:

$X_1 = 0$	$X_9 = 2\rho^3/T^3$	$X_{17} = 20\rho^3 f_1/T^6$
$X_2 = 0$	$X_{10} = 6\rho^3/T^4$	$X_{18} = 6\rho^5 f_1/T^4$
$X_3 = 6\rho^2/T^4$	$X_{11} = 0$	$X_{19} = 12\rho^5 f_1/T^5$
$X_4 = 20\rho^2/T^6$	$X_{12} = 0$	$X_{20} = 20\rho^5 f_1/T^6$
$X_5 = 42\rho^2/T^8$	$X_{13} = 0$	$X_{21} = 6\rho^7 f_1/T^4$
$X_6 = 2\rho^3$	$X_{14} = 2\rho^5/T^3$	$X_{22} = 12\rho^7 f_1/T^5$
$X_7 = 0$	$X_{15} = 6\rho^3 f_1/T^4$	$X_{23} = 20\rho^7 f_1/T^6$
$X_8 = 0$	$X_{16} = 12\rho^3 f_1/T^5$	

where the f_i's are given in Table D.

Isotherm Derivative

The isotherm derivative $(\partial P/\partial \rho)_T$ for Equation (1D) is given by Equation (4D).

$$\left(\frac{\partial P}{\partial \rho}\right)_T = RT + \sum_{i=1}^{23} n_i X_i, \tag{4D}$$

where the n_i's are the coefficients listed in Table IV, and the X_i functions are as follows:

$X_1 = 2\rho T$	$X_9 = 3\rho^2/T$	$X_{17} = f_3/T^4$
$X_2 = 2\rho$	$X_{10} = 3\rho^2/T^2$	$X_{18} = f_4/T^2$
$X_3 = 2\rho/T^2$	$X_{11} = 4\rho^3 T$	$X_{19} = f_4/T^3$
$X_4 = 2\rho/T^4$	$X_{12} = 4\rho^3$	$X_{20} = f_4/T^4$
$X_5 = 2\rho/T^6$	$X_{13} = 5\rho^4$	$X_{21} = f_5/T^2$
$X_6 = 3\rho^2 T^2$	$X_{14} = 5\rho^4/T$	$X_{22} = f_5/T^3$
$X_7 = 3\rho^2 T$	$X_{15} = f_3/T^2$	$X_{23} = f_5/T^4$
$X_8 = 3\rho^2$	$X_{16} = f_3/T^3$	

where the f_i's are given in Table D.

Second Derivative of the Isotherm

The second derivative of the isotherm, $(\partial^2 P/\partial \rho^2)_T$ for Equation (1D) is given by Equation (5D).

$$\left(\frac{\partial^2 P}{\partial \rho^2}\right)_T = \sum_{i=1}^{23} n_i X_i, \tag{5D}$$

where the n_i's are the coefficients listed in Table IV, and the X_i functions are as follows:

$X_1 = 2T$	$X_9 = 6\rho/T$	$X_{17} = f_7/T^4$
$X_2 = 2$	$X_{10} = 6\rho/T^2$	$X_{18} = f_8/T^2$
$X_3 = 2/T^2$	$X_{11} = 12\rho^2 T$	$X_{19} = f_8/T^3$
$X_4 = 2/T^4$	$X_{12} = 12\rho^2$	$X_{20} = f_8/T^4$
$X_5 = 2/T^6$	$X_{13} = 20\rho^3$	$X_{21} = f_9/T^2$
$X_6 = 6\rho T^2$	$X_{14} = 20\rho^3/T$	$X_{22} = f_9/T^3$
$X_7 = 6\rho T$	$X_{15} = f_7/T^2$	$X_{23} = f_9/T^4$
$X_8 = 6\rho$	$X_{16} = f_7/T^3$	

where the f_i's are given in Table D.

TABLE D - FUNCTIONS FOR DERIVATIVES
$f_1 = \exp(n_{24}\rho^2)$
$f_2 = 2f_1\rho n_{24}$
$f_3 = 3f_1\rho^2 + f_2\rho^3$
$f_4 = 5f_1\rho^4 + f_2\rho^5$
$f_5 = 7f_1\rho^6 + f_2\rho^7$
$f_6 = 2f_2\rho n_{24} + 2f_1 n_{24}$
$f_7 = 6f_1\rho + 6f_2\rho^2 + f_6\rho^3$
$f_8 = 20f_1\rho^3 + 10f_2\rho^4 + f_6\rho^5$
$f_9 = 42f_1\rho^5 + 14f_2\rho^6 + f_6\rho^7$

APPENDIX E - INTEGRATION OF THE THERMODYNAMIC EQUATIONS*

The solution of the integral $\int \left[\frac{R}{\rho} - \frac{1}{\rho^2} \left(\frac{\partial P}{\partial T} \right)_\rho \right] d\rho$ at constant temperature is given by Equation (1E). This integration uses the isochor derivative $(\partial P/\partial T)$ given in Appendix D as Equation (2D).

$$_T\int \left[\frac{R}{\rho} - \frac{1}{\rho^2} \left(\frac{\partial P}{\partial T} \right)_\rho \right] d\rho = \sum_{i=1}^{23} n_i \; Y_i, \qquad (1E)$$

where the n_i's are the coefficients listed in Table IV, and the Y_i functions are as follows:

$Y_1 = -\rho$	$Y_9 = \rho^2/(2T^2)$	$Y_{17} = 4g_2/T^5$
$Y_2 = 0$	$Y_{10} = \rho^2/T^3$	$Y_{18} = 2g_3/T^3$
$Y_3 = 2\rho/T^3$	$Y_{11} = -\rho^3/3$	$Y_{19} = 3g_3/T^4$
$Y_4 = 4\rho/T^5$	$Y_{12} = 0$	$Y_{20} = 4g_3/T^5$
$Y_5 = 6\rho/T^7$	$Y_{13} = 0$	$Y_{21} = 2g_4/T^3$
$Y_6 = \rho^2 T$	$Y_{14} = \rho^4/(4T^2)$	$Y_{22} = 3g_4/T^4$
$Y_7 = -\rho^2/2$	$Y_{15} = 2g_2/T^3$	$Y_{23} = 4g_4/T^5$
$Y_8 = 0$	$Y_{16} = 3g_2/T^4$	

where the g_i's are given in Table E.

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*The solution of the integrals of the thermodynamic equations for the calculation of entropy, and enthalpy are given here (see Section on Derived Thermodynamic Properties).

The solution of the integral $\int \left[\frac{R}{\rho^2} - \frac{RT}{\rho} \right] d\rho$ at constant temperature is given by Equation (2E). This integration uses $P = f(T, \rho)$ from equation of state (1D) as given in Appendix D.

$$\int_T \left[\frac{P}{\rho^2} - \frac{RT}{\rho} \right] d\rho = \sum_{i=1}^{23} n_i \; Y_i \,, \qquad (2E)$$

where the n_i's are the coefficients listed in Table IV, and the Y_i functions are as follows:

$Y_1 = T\rho$	$Y_9 = \rho^2/(2T)$	$Y_{17} = g_2/T^4$
$Y_2 = \rho$	$Y_{10} = \rho^2/(2T^2)$	$Y_{18} = g_3/T^2$
$Y_3 = \rho/T^2$	$Y_{11} = \rho^3 T/3$	$Y_{19} = g_3/T^3$
$Y_4 = \rho/T^4$	$Y_{12} = \rho^3/3$	$Y_{20} = g_3/T^4$
$Y_5 = \rho/T^6$	$Y_{13} = \rho^4/4$	$Y_{21} = g_4/T^2$
$Y_6 = \rho^2 T^2/2$	$Y_{14} = \rho^4/(4T)$	$Y_{22} = g_4/T^3$
$Y_7 = \rho^2 T/2$	$Y_{15} = g_2/T^2$	$Y_{23} = g_4/T^4$
$Y_8 = \rho^2/2$	$Y_{16} = g_2/T^3$	

where the g_i's are given in Table E.

The solution of the integral $\int \left[\frac{T}{\rho^2} \left(\frac{\partial^2 P}{\partial T^2} \right)_\rho \right] d\rho$ at constant temperature is given as Equation (3E). This integration uses the second derivative of the isochor given in Appendix D as Equation (3D).

$$\int_T \left[\frac{T}{\rho^2} \left(\frac{\partial^2 P}{\partial T^2} \right)_\rho \right] d\rho = \sum_{i=1}^{23} n_i Y_i, \qquad (3E)$$

where the n_i's are the coefficients listed in Table IV, and the Y_i functions are as follows:

$Y_1 = 0$	$Y_9 = \rho^2/T^2$	$Y_{17} = 20\, g_2/T^5$
$Y_2 = 0$	$Y_{10} = 3\rho^2/T^3$	$Y_{18} = 6g_3/T^3$
$Y_3 = 6\rho/T^3$	$Y_{11} = 0$	$Y_{19} = 12g_3/T^4$
$Y_4 = 20\rho/T^5$	$Y_{12} = 0$	$Y_{20} = 20g_3/T^5$
$Y_5 = 42\rho/T^7$	$Y_{13} = 0$	$Y_{21} = 6g_4/T^3$
$Y_6 = T\rho^2$	$Y_{14} = \rho^4/2T^2$	$Y_{22} = 12g_4/T^4$
$Y_7 = 0$	$Y_{15} = 6g_2/T^3$	$Y_{23} = 20g_4/T^5$
$Y_8 = 0$	$Y_{16} = 12g_2/T^4$	

where the g_i's are given in Table E.

TABLE E - FUNCTIONS FOR INTEGRALS
$g_1 = \exp(n_{24}\rho^2)$
$g_2 = g_1/(2n_{24})$
$g_3 = g_1(n_{24}\rho^2 - 1)/(2n_{24}^2)$
$g_4 = g_1[n_{24}^2\rho^4 - 2(n_{24}\rho^2 - 1)]/(2n_{24}^3)$.

APPENDIX F - IDEAL GAS PROPERTIES

The following is reprinted from Reference [39] . The tables of the ideal gas specific heats, enthalpy, and entropy are given here. Values of enthalpy and entropy used in calculating the thermodynamic property tables were obtained from the following table by the Aitken interpolation method of Reference [40] .

°K	$\frac{C_p^\circ}{R}$	$\frac{H^\circ - E_0^\circ}{RT}$	$\frac{S^\circ}{R}$
10	2.50000	5.36562	7.04820
20	2.50142	3.93292	8.78116
30	2.54598	3.46056	9.80068
40	2.71957	3.25066	10.55348
50	2.99519	3.17115	11.18898
60	3.26809	3.16526	11.75995
70	3.46556	3.19515	12.27973
80	3.57472	3.23661	12.75051
90	3.61698	3.27701	13.17450
100	3.62015	3.31139	13.55598
110	3.60538	3.33887	13.90043
120	3.58527	3.36025	14.21327
130	3.56599	3.37680	14.49945
140	3.54993	3.38972	14.76311
150	3.53755	3.39997	15.00759
160	3.52846	3.40826	15.23559
170	3.52203	3.41513	15.44929
180	3.51761	3.42094	15.65047
190	3.51467	3.42595	15.84058
200	3.51277	3.43033	16.02080
210	3.51159	3.43423	16.19216
220	3.51092	3.43773	16.35551
230	3.51058	3.44090	16.51155
240	3.51047	3.44380	16.66096
250	3.51052	3.44647	16.80427
260	3.51067	3.44893	16.94195
270	3.51089	3.45123	17.07446
280	3.51115	3.45336	17.20213
290	3.51145	3.45536	17.32535
300	3.51177	3.45723	17.44440
310	3.51200	3.45900	17.55956
320	3.51217	3.46055	17.67111
330	3.51250	3.46206	17.77922
340	3.51298	3.46355	17.88409
350	3.51349	3.46497	17.98593

APPENDIX G - TABLES OF THERMODYNAMIC PROPERTIES OF DEUTERIUM

Tables of thermodynamic properties of deuterium are presented with tabular values for pressure, temperature, density, enthalpy, internal energy, and entropy. The number of significant figures given in the tables is not justified on the basis of the uncertainty of the data, but is given to maintain internal consistency.

No property values are presented below 120°K at pressures above 100 atm, since no accurate P-ρ-T data were available in this region.

SATURATION DATA

TEMP. K	PRESSURE ATM	DENSITY MOL/LITER VAPOR	DENSITY MOL/LITER LIQUID	ENTHALPY J/MOL VAPOR	ENTHALPY J/MOL LIQUID	ENTROPY J/MOL-K VAPOR	ENTROPY J/MOL-K LIQUID
18.710	0.16872	0.111221	43.1598	638.7	-648.9	87.09	18.27
19.000	0.19181	0.124876	43.0160	640.8	-644.7	86.52	18.86
20.000	0.29057	0.181841	42.5081	660.4	-615.6	83.81	20.02
21.000	0.42405	0.256456	41.9781	675.1	-587.7	81.48	21.35
22.000	0.59925	0.352051	41.4228	687.2	-558.9	79.30	22.66
23.000	0.82353	0.472322	40.8403	696.7	-529.2	77.25	23.95
24.000	1.10456	0.621418	40.2287	703.3	-498.8	75.31	25.22
25.000	1.45018	0.804045	39.5858	707.0	-467.7	73.44	26.46
26.000	1.86843	1.02561	38.9085	707.7	-436.0	71.65	27.66
27.000	2.36751	1.29242	38.1926	705.4	-403.6	69.91	28.84
28.000	2.95576	1.61194	37.4326	700.1	-370.5	68.22	29.98
29.000	3.64163	1.99316	36.6212	691.5	-336.6	66.56	31.10
30.000	4.43377	2.44712	35.7488	679.6	-301.9	64.93	32.21
31.000	5.34100	2.98769	34.8025	664.5	-265.6	63.31	33.31
32.000	6.37235	3.63281	33.7643	645.8	-227.6	61.71	34.42
33.000	7.53713	4.40669	32.6085	623.2	-187.1	60.11	35.56
34.000	8.84496	5.34403	31.2963	596.2	-142.9	58.49	36.75
35.000	10.30579	6.49920	29.7650	563.9	-93.3	56.83	38.05
36.000	11.93005	7.97036	27.9000	524.2	-34.7	55.07	39.54
37.000	13.72861	9.98197	25.4469	471.7	40.4	53.06	41.41
38.000	15.71290	13.4367	21.4462	382.7	160.0	50.23	44.37
38.340	16.43200	17.3280	17.3280	278.6	278.6	47.38	47.38

0.10 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
19	0.0646188	639.1	482.3	91.43					
20	0.0614620	656.5	491.6	92.35					
21	0.0585564	675.3	502.3	93.25	91	0.0133936	2481.8	1725.3	129.01
22	0.0558882	694.8	513.5	94.16	92	0.0132480	2511.9	1747.1	129.34
23	0.0534381	714.8	525.1	95.04	93	0.0131054	2542.1	1768.9	129.66
24	0.0511856	735.0	537.0	95.90	94	0.0129660	2572.2	1790.7	129.99
25	0.0491108	755.5	549.1	96.74	95	0.0128294	2602.3	1812.5	130.30
26	0.0471951	776.1	561.4	97.55	96	0.0126957	2632.4	1834.3	130.62
27	0.0454222	796.9	573.9	98.34	97	0.0125648	2662.5	1856.1	130.93
28	0.0437772	817.9	586.4	99.10	98	0.0124365	2692.6	1877.9	131.24
29	0.0422473	839.0	599.1	99.84	99	0.0123108	2722.7	1899.7	131.55
30	0.0408209	860.0	611.8	100.56	100	0.0121877	2752.9	1921.5	131.85
31	0.0394880	881.4	624.8	101.26	101	0.0120669	2782.9	1943.2	132.15
32	0.0382399	902.9	637.9	101.94	102	0.0119486	2813.1	1965.0	132.45
33	0.0370687	924.4	651.1	102.60	103	0.0118325	2843.1	1986.8	132.74
34	0.0359675	946.0	664.3	103.25	104	0.0117187	2873.2	2008.6	133.03
35	0.0349302	967.8	677.7	103.88	105	0.0116071	2903.3	2030.3	133.32
36	0.0339514	989.7	691.2	104.50	106	0.0114975	2933.3	2052.0	133.60
37	0.0330264	1011.7	704.9	105.10	107	0.0113901	2963.4	2073.8	133.88
38	0.0321506	1034.0	718.8	105.69	108	0.0112846	2993.4	2095.5	134.16
39	0.0313204	1056.4	732.8	106.28	109	0.0111810	3023.4	2117.1	134.44
40	0.0305322	1078.9	747.1	106.85	110	0.0110793	3053.4	2138.8	134.71
41	0.0297829	1101.7	761.5	107.41	111	0.0109795	3083.3	2160.5	134.98
42	0.0290697	1124.7	776.2	107.96	112	0.0108814	3113.3	2182.1	135.25
43	0.0283900	1148.0	791.1	108.51	113	0.0107851	3143.2	2203.7	135.52
44	0.0277415	1171.4	806.1	109.05	114	0.0106905	3173.2	2225.4	135.78
45	0.0271221	1195.1	821.5	109.58	115	0.0105975	3203.1	2246.9	136.04
46	0.0265298	1218.9	837.0	110.10	116	0.0105061	3233.0	2268.5	136.30
47	0.0259630	1243.1	852.8	110.63	117	0.0104163	3262.8	2290.1	136.56
48	0.0254200	1267.4	868.8	111.14	118	0.0103280	3292.7	2311.6	136.81
49	0.0248993	1292.0	885.1	111.65	119	0.0102412	3322.5	2333.1	137.07
50	0.0243996	1316.9	901.6	112.15	120	0.0101558	3352.4	2354.7	137.32
51	0.0239196	1342.0	918.4	112.65	121	0.0100719	3382.1	2376.1	137.56
52	0.0234581	1367.3	935.3	113.14	122	0.0099893	3411.9	2397.6	137.81
53	0.0230142	1392.8	952.5	113.63	123	0.0099081	3441.7	2419.1	138.05
54	0.0225869	1418.6	970.0	114.11	124	0.0098281	3471.5	2440.5	138.29
55	0.0221751	1444.6	987.7	114.59	125	0.0097495	3501.2	2461.9	138.53
56	0.0217782	1470.9	1005.6	115.06	126	0.0096721	3530.9	2483.3	138.77
57	0.0213952	1497.4	1023.8	115.53	127	0.0095959	3560.6	2504.7	139.00
58	0.0210255	1524.0	1042.1	115.99	128	0.0095210	3590.3	2526.1	139.23
59	0.0206683	1550.9	1060.7	116.45	129	0.0094471	3620.0	2547.4	139.47
60	0.0203232	1578.0	1079.5	116.91	130	0.0093745	3649.7	2568.8	139.70
61	0.0199894	1605.4	1098.5	117.36	131	0.0093029	3679.3	2590.1	139.92
62	0.0196664	1632.9	1117.7	117.81	132	0.0092324	3708.9	2611.4	140.15
63	0.0193537	1660.6	1137.0	118.25	133	0.0091630	3738.5	2632.7	140.37
64	0.0190508	1688.4	1156.5	118.69	134	0.0090946	3768.1	2654.0	140.59
65	0.0187572	1716.5	1176.3	119.12	135	0.0090272	3797.7	2675.3	140.81
66	0.0184726	1744.7	1196.1	119.55	136	0.0089608	3827.3	2696.5	141.03
67	0.0181965	1773.0	1216.2	119.98	137	0.0088954	3856.8	2717.8	141.25
68	0.0179285	1801.5	1236.3	120.40	138	0.0088309	3886.4	2739.0	141.46
69	0.0176683	1830.1	1256.7	120.82	139	0.0087674	3916.0	2760.3	141.68
70	0.0174156	1858.9	1277.1	121.23	140	0.0087048	3945.5	2781.5	141.89
71	0.0171700	1887.9	1297.8	121.64	141	0.0086430	3975.0	2802.7	142.10
72	0.0169313	1917.0	1318.6	122.05	142	0.0085822	4004.5	2823.8	142.30
73	0.0166991	1946.2	1339.5	122.45	143	0.0085221	4034.0	2845.0	142.51
74	0.0164732	1975.5	1360.4	122.85	144	0.0084629	4063.4	2866.2	142.72
75	0.0162533	2004.8	1381.4	123.24	145	0.0084046	4092.9	2887.3	142.92
76	0.0160392	2034.2	1402.4	123.63	146	0.0083470	4122.4	2908.5	143.12
77	0.0158307	2063.6	1423.5	124.02	147	0.0082902	4151.8	2929.6	143.33
78	0.0156276	2093.1	1444.7	124.40	148	0.0082342	4181.3	2950.7	143.52
79	0.0154296	2122.6	1466.0	124.78	149	0.0081789	4210.7	2971.9	143.72
80	0.0152366	2152.3	1487.3	125.15	150	0.0081244	4240.1	2993.0	143.92
81	0.0150483	2182.1	1508.8	125.52	151	0.0080706	4269.5	3014.0	144.12
82	0.0148647	2211.9	1530.3	125.89	152	0.0080175	4298.9	3035.1	144.31
83	0.0146854	2241.8	1551.8	126.25	153	0.0079651	4328.3	3056.2	144.50
84	0.0145105	2271.7	1573.4	126.61	154	0.0079133	4357.7	3077.3	144.69
85	0.0143397	2301.6	1595.0	126.96	155	0.0078623	4387.1	3098.3	144.88
86	0.0141728	2331.6	1616.7	127.31	156	0.0078119	4416.4	3119.4	145.07
87	0.0140098	2361.6	1638.4	127.66	157	0.0077621	4445.8	3140.4	145.26
88	0.0138505	2391.6	1660.1	128.00	158	0.0077130	4475.2	3161.5	145.45
89	0.0136948	2421.7	1681.8	128.34	159	0.0076645	4504.5	3182.5	145.63
90	0.0135425	2451.7	1703.5	128.68	160	0.0076166	4533.9	3203.6	145.82

0.10 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	0.0075693	4563.2	3224.6	146.00	231	0.0052755	6609.2	4688.5	156.55
162	0.0075225	4592.5	3245.6	146.18	232	0.0052528	6638.4	4709.4	156.68
163	0.0074764	4621.8	3266.6	146.36	233	0.0052302	6667.6	4730.3	156.80
164	0.0074308	4651.2	3287.6	146.54	234	0.0052079	6696.8	4751.1	156.93
165	0.0073858	4680.5	3308.6	146.72	235	0.0051857	6725.9	4772.0	157.05
166	0.0073413	4709.8	3329.6	146.89	236	0.0051637	6755.1	4792.9	157.18
167	0.0072973	4739.1	3350.6	147.07	237	0.0051420	6784.3	4813.8	157.30
168	0.0072539	4768.4	3371.5	147.25	238	0.0051203	6813.5	4834.6	157.42
169	0.0072109	4797.7	3392.5	147.42	239	0.0050989	6842.7	4855.5	157.55
170	0.0071685	4827.0	3413.5	147.59	240	0.0050777	6871.9	4876.4	157.67
171	0.0071266	4856.3	3434.5	147.76	241	0.0050566	6901.1	4897.2	157.79
172	0.0070852	4885.5	3455.4	147.93	242	0.0050357	6930.3	4918.1	157.91
173	0.0070442	4914.8	3476.4	148.10	243	0.0050150	6959.5	4939.0	158.03
174	0.0070037	4944.1	3497.3	148.27	244	0.0049944	6988.6	4959.9	158.15
175	0.0069637	4973.3	3518.3	148.44	245	0.0049741	7017.8	4980.8	158.27
176	0.0069241	5002.6	3539.2	148.61	246	0.0049538	7047.0	5001.6	158.39
177	0.0068850	5031.9	3560.2	148.77	247	0.0049338	7076.2	5022.5	158.51
178	0.0068463	5061.1	3581.1	148.94	248	0.0049139	7105.4	5043.4	158.62
179	0.0068081	5090.4	3602.1	149.10	249	0.0048942	7134.6	5064.3	158.74
180	0.0067703	5119.6	3623.0	149.27	250	0.0048746	7163.8	5085.1	158.86
181	0.0067328	5148.9	3643.9	149.43	251	0.0048552	7192.9	5106.0	158.98
182	0.0066959	5178.1	3664.9	149.59	252	0.0048359	7222.1	5126.9	159.09
183	0.0066593	5207.4	3685.8	149.75	253	0.0048168	7251.3	5147.7	159.21
184	0.0066231	5236.6	3706.7	149.91	254	0.0047978	7280.5	5168.6	159.32
185	0.0065873	5265.8	3727.6	150.07	255	0.0047790	7309.7	5189.5	159.44
186	0.0065519	5295.1	3748.6	150.22	256	0.0047603	7338.9	5210.4	159.55
187	0.0065168	5324.3	3769.5	150.38	257	0.0047418	7368.1	5231.2	159.67
188	0.0064821	5353.5	3790.4	150.54	258	0.0047234	7397.3	5252.1	159.78
189	0.0064479	5382.8	3811.3	150.69	259	0.0047052	7426.5	5273.0	159.89
190	0.0064139	5412.0	3832.2	150.85	260	0.0046871	7455.7	5293.9	160.00
191	0.0063803	5441.2	3853.1	151.00	261	0.0046691	7484.8	5314.7	160.12
192	0.0063471	5470.4	3874.0	151.15	262	0.0046513	7514.0	5335.6	160.23
193	0.0063142	5499.6	3894.9	151.30	263	0.0046336	7543.2	5356.5	160.34
194	0.0062817	5528.9	3915.8	151.45	264	0.0046161	7572.4	5377.4	160.45
195	0.0062495	5558.1	3936.7	151.60	265	0.0045987	7601.6	5398.3	160.56
196	0.0062176	5587.3	3957.6	151.75	266	0.0045814	7630.8	5419.1	160.67
197	0.0061860	5616.5	3978.5	151.90	267	0.0045642	7660.0	5440.0	160.78
198	0.0061548	5645.7	3999.4	152.05	268	0.0045472	7689.2	5460.9	160.89
199	0.0061238	5674.9	4020.3	152.20	269	0.0045303	7718.4	5481.8	161.00
200	0.0060932	5704.1	4041.2	152.34	270	0.0045135	7747.6	5502.6	161.11
201	0.0060629	5733.3	4062.1	152.49	271	0.0044968	7776.8	5523.5	161.21
202	0.0060329	5762.5	4083.0	152.64	272	0.0044803	7806.0	5544.4	161.32
203	0.0060032	5791.8	4103.9	152.78	273	0.0044639	7835.1	5565.3	161.43
204	0.0059737	5821.0	4124.8	152.92	274	0.0044476	7864.3	5586.1	161.53
205	0.0059446	5850.2	4145.7	153.07	275	0.0044314	7893.5	5607.0	161.64
206	0.0059157	5879.4	4166.6	153.21	276	0.0044154	7922.7	5627.9	161.75
207	0.0058872	5908.6	4187.4	153.35	277	0.0043994	7951.9	5648.8	161.85
208	0.0058589	5937.8	4208.3	153.49	278	0.0043836	7981.1	5669.7	161.96
209	0.0058308	5967.0	4229.2	153.63	279	0.0043679	8010.3	5690.5	162.06
210	0.0058031	5996.2	4250.1	153.77	280	0.0043523	8039.5	5711.4	162.17
211	0.0057756	6025.4	4271.0	153.91	281	0.0043368	8068.7	5732.3	162.27
212	0.0057483	6054.6	4291.9	154.05	282	0.0043214	8097.9	5753.2	162.37
213	0.0057213	6083.8	4312.7	154.18	283	0.0043062	8127.1	5774.1	162.48
214	0.0056946	6112.9	4333.6	154.32	284	0.0042910	8156.3	5794.9	162.58
215	0.0056681	6142.1	4354.5	154.46	285	0.0042760	8185.5	5815.8	162.68
216	0.0056419	6171.3	4375.4	154.59	286	0.0042610	8214.7	5836.7	162.79
217	0.0056159	6200.5	4396.3	154.73	287	0.0042462	8243.9	5857.6	162.89
218	0.0055901	6229.7	4417.1	154.86	288	0.0042314	8273.0	5878.5	162.99
219	0.0055646	6258.9	4438.0	154.99	289	0.0042168	8302.2	5899.3	163.09
220	0.0055393	6288.1	4458.9	155.13	290	0.0042022	8331.4	5920.2	163.19
221	0.0055142	6317.3	4479.8	155.26	291	0.0041878	8360.6	5941.1	163.29
222	0.0054894	6346.5	4500.7	155.39	292	0.0041735	8389.8	5962.0	163.39
223	0.0054648	6375.7	4521.5	155.52	293	0.0041592	8419.0	5982.9	163.49
224	0.0054404	6404.9	4542.4	155.65	294	0.0041451	8448.2	6003.7	163.59
225	0.0054162	6434.1	4563.3	155.78	295	0.0041310	8477.4	6024.6	163.69
226	0.0053922	6463.2	4584.2	155.91	296	0.0041171	8506.6	6045.5	163.79
227	0.0053685	6492.4	4605.0	156.04	297	0.0041032	8535.8	6066.4	163.89
228	0.0053449	6521.6	4625.9	156.17	298	0.0040894	8565.0	6087.3	163.99
229	0.0053216	6550.8	4646.8	156.30	299	0.0040757	8594.2	6108.2	164.08
230	0.0052984	6580.0	4667.7	156.43	300	0.0040622	8623.4	6129.0	164.18

0.15 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
19	0.0973151	641.7	485.5	88.23					
20	0.0926101	657.6	493.5	89.07					
21	0.0882434	675.4	503.2	89.93	91	0.0200913	2481.6	1725.1	125.64
22	0.0842145	694.3	513.8	90.80	92	0.0198727	2511.7	1746.9	125.97
23	0.0805052	713.7	525.0	91.66	93	0.0196589	2541.9	1768.7	126.29
24	0.0770907	733.7	536.5	92.51	94	0.0194496	2572.0	1790.5	126.61
25	0.0739439	754.0	548.4	93.34	95	0.0192447	2602.1	1812.3	126.93
26	0.0710386	774.5	560.6	94.15	96	0.0190441	2632.2	1834.1	127.25
27	0.0683504	795.3	573.0	94.94	97	0.0188476	2662.3	1855.9	127.56
28	0.0658575	816.3	585.5	95.70	98	0.0186552	2692.5	1877.7	127.87
29	0.0635401	837.4	598.2	96.44	99	0.0184666	2722.6	1899.5	128.17
30	0.0613809	858.4	610.8	97.16	100	0.0182819	2752.7	1921.3	128.48
31	0.0593645	879.9	623.8	97.85	101	0.0181007	2782.8	1943.1	128.78
32	0.0574773	901.4	636.9	98.54	102	0.0179232	2812.9	1964.9	129.07
33	0.0557074	923.0	650.1	99.20	103	0.0177491	2843.0	1986.7	129.37
34	0.0540441	944.6	663.4	99.85	104	0.0175783	2873.1	2008.4	129.66
35	0.0524782	966.5	676.8	100.48	105	0.0174108	2903.1	2030.2	129.94
36	0.0510013	988.4	690.4	101.10	106	0.0172465	2933.2	2051.9	130.23
37	0.0496060	1010.5	704.1	101.70	107	0.0170852	2963.2	2073.6	130.51
38	0.0482856	1032.8	718.0	102.30	108	0.0169269	2993.2	2095.3	130.79
39	0.0470343	1055.2	732.1	102.88	109	0.0167716	3023.2	2117.0	131.07
40	0.0458467	1077.9	746.3	103.46	110	0.0166190	3053.2	2138.7	131.34
41	0.0447181	1100.7	760.8	104.02	111	0.0164693	3083.2	2160.3	131.61
42	0.0436441	1123.8	775.5	104.57	112	0.0163221	3113.2	2182.0	131.88
43	0.0426209	1147.0	790.4	105.12	113	0.0161776	3143.1	2203.6	132.15
44	0.0416449	1170.5	805.5	105.66	114	0.0160357	3173.0	2225.2	132.41
45	0.0407128	1194.2	820.9	106.19	115	0.0158962	3202.9	2246.8	132.67
46	0.0398218	1218.1	836.4	106.72	116	0.0157591	3232.8	2268.4	132.93
47	0.0389692	1242.3	852.3	107.24	117	0.0156244	3262.7	2290.0	133.19
48	0.0381526	1266.7	868.3	107.76	118	0.0154919	3292.6	2311.5	133.44
49	0.0373696	1291.3	884.6	108.27	119	0.0153617	3322.4	2333.0	133.69
50	0.0366183	1316.2	901.1	108.77	120	0.0152336	3352.2	2354.5	133.94
51	0.0358968	1341.3	917.9	109.27	121	0.0151077	3382.0	2376.0	134.19
52	0.0352032	1366.6	934.8	109.76	122	0.0149838	3411.8	2397.4	134.44
53	0.0345361	1392.2	952.1	110.25	123	0.0148620	3441.6	2418.9	134.68
54	0.0338939	1418.0	969.6	110.73	124	0.0147421	3471.4	2440.4	134.92
55	0.0332752	1444.0	987.3	111.21	125	0.0146241	3501.1	2461.8	135.16
56	0.0326788	1470.3	1005.2	111.68	126	0.0145080	3530.8	2483.2	135.40
57	0.0321034	1496.8	1023.4	112.15	127	0.0143937	3560.5	2504.6	135.63
58	0.0315480	1523.5	1041.7	112.61	128	0.0142812	3590.2	2526.0	135.86
59	0.0310116	1550.4	1060.3	113.07	129	0.0141705	3619.9	2547.3	136.09
60	0.0304932	1577.5	1079.1	113.53	130	0.0140615	3649.6	2568.7	136.32
61	0.0299919	1604.9	1098.1	113.98	131	0.0139541	3679.2	2590.0	136.55
62	0.0295068	1632.4	1117.3	114.43	132	0.0138484	3708.8	2611.3	136.78
63	0.0290372	1660.1	1136.7	114.87	133	0.0137442	3738.4	2632.6	137.00
64	0.0285824	1687.9	1156.2	115.31	134	0.0136416	3768.0	2653.9	137.22
65	0.0281416	1716.0	1176.0	115.75	135	0.0135406	3797.6	2675.2	137.44
66	0.0277143	1744.2	1195.8	116.18	136	0.0134410	3827.2	2696.4	137.66
67	0.0272997	1772.6	1215.9	116.60	137	0.0133429	3856.8	2717.7	137.88
68	0.0268974	1801.1	1236.0	117.03	138	0.0132462	3886.3	2738.9	138.09
69	0.0265068	1829.8	1256.4	117.44	139	0.0131508	3915.9	2760.2	138.30
70	0.0261274	1858.5	1276.8	117.86	140	0.0130569	3945.4	2781.4	138.52
71	0.0257588	1887.6	1297.5	118.27	141	0.0129643	3974.9	2802.6	138.73
72	0.0254004	1916.7	1318.3	118.68	142	0.0128730	4004.4	2823.7	138.93
73	0.0250519	1945.9	1339.2	119.08	143	0.0127829	4033.9	2844.9	139.14
74	0.0247128	1975.2	1360.1	119.47	144	0.0126941	4063.4	2866.1	139.35
75	0.0243828	2004.5	1381.1	119.87	145	0.0126066	4092.8	2887.2	139.55
76	0.0240615	2033.9	1402.2	120.26	146	0.0125202	4122.3	2908.4	139.75
77	0.0237486	2063.3	1423.3	120.64	147	0.0124350	4151.8	2929.5	139.95
78	0.0234437	2092.8	1444.5	121.03	148	0.0123510	4181.2	2950.6	140.15
79	0.0231465	2122.4	1465.7	121.40	149	0.0122681	4210.7	2971.8	140.35
80	0.0228568	2152.0	1487.0	121.78	150	0.0121863	4240.1	2992.9	140.55
81	0.0225743	2181.8	1508.5	122.15	151	0.0121056	4269.5	3014.0	140.74
82	0.0222987	2211.7	1530.1	122.51	152	0.0120259	4298.9	3035.0	140.94
83	0.0220297	2241.5	1551.6	122.87	153	0.0119473	4328.3	3056.1	141.13
84	0.0217672	2271.5	1573.2	123.23	154	0.0118697	4357.6	3077.2	141.32
85	0.0215109	2301.4	1594.8	123.59	155	0.0117931	4387.0	3098.2	141.51
86	0.0212605	2331.4	1616.5	123.94	156	0.0117175	4416.4	3119.3	141.70
87	0.0210159	2361.4	1638.2	124.28	157	0.0116429	4445.8	3140.4	141.89
88	0.0207768	2391.4	1659.9	124.63	158	0.0115692	4475.1	3161.4	142.07
89	0.0205432	2421.5	1681.6	124.97	159	0.0114964	4504.5	3182.4	142.26
90	0.0203147	2451.5	1703.3	125.30	160	0.0114246	4533.8	3203.5	142.44

0.15 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	0.0113536	4563.2	3224.5	142.63	231	0.0079130	6609.2	4688.5	153.18
162	0.0112835	4592.5	3245.5	142.81	232	0.0078789	6638.4	4709.3	153.31
163	0.0112143	4621.8	3266.5	142.99	233	0.0078451	6667.6	4730.2	153.43
164	0.0111459	4651.1	3287.5	143.17	234	0.0078116	6696.8	4751.1	153.56
165	0.0110783	4680.4	3308.5	143.35	235	0.0077783	6726.0	4772.0	153.68
166	0.0110116	4709.7	3329.5	143.52	236	0.0077454	6755.1	4792.8	153.81
167	0.0109456	4739.1	3350.5	143.70	237	0.0077127	6784.3	4813.7	153.93
168	0.0108805	4768.4	3371.5	143.87	238	0.0076803	6813.5	4834.6	154.05
169	0.0108161	4797.7	3392.5	144.05	239	0.0076482	6842.7	4855.5	154.17
170	0.0107525	4826.9	3413.4	144.22	240	0.0076163	6871.9	4876.3	154.30
171	0.0106896	4856.2	3434.4	144.39	241	0.0075847	6901.1	4897.2	154.42
172	0.0106274	4885.5	3455.4	144.56	242	0.0075533	6930.3	4918.1	154.54
173	0.0105660	4914.8	3476.3	144.73	243	0.0075223	6959.5	4939.0	154.66
174	0.0105053	4944.0	3497.3	144.90	244	0.0074914	6988.7	4959.8	154.78
175	0.0104452	4973.3	3518.2	145.07	245	0.0074609	7017.8	4980.7	154.90
176	0.0103859	5002.6	3539.2	145.24	246	0.0074305	7047.0	5001.6	155.02
177	0.0103272	5031.8	3560.1	145.40	247	0.0074004	7076.2	5022.5	155.14
178	0.0102692	5061.1	3581.1	145.57	248	0.0073706	7105.4	5043.3	155.25
179	0.0102118	5090.4	3602.0	145.73	249	0.0073410	7134.6	5064.2	155.37
180	0.0101551	5119.6	3623.0	145.89	250	0.0073116	7163.8	5085.1	155.49
181	0.0100990	5148.9	3643.9	146.06	251	0.0072825	7193.0	5105.9	155.60
182	0.0100435	5178.1	3664.8	146.22	252	0.0072536	7222.2	5126.8	155.72
183	0.0099886	5207.3	3685.7	146.38	253	0.0072249	7251.4	5147.7	155.84
184	0.0099343	5236.6	3706.7	146.54	254	0.0071965	7280.5	5168.6	155.95
185	0.0098806	5265.8	3727.6	146.70	255	0.0071683	7309.7	5189.4	156.07
186	0.0098275	5295.1	3748.5	146.85	256	0.0071403	7338.9	5210.3	156.18
187	0.0097749	5324.3	3769.4	147.01	257	0.0071125	7368.1	5231.2	156.29
188	0.0097229	5353.5	3790.3	147.17	258	0.0070849	7397.3	5252.1	156.41
189	0.0096715	5382.8	3811.3	147.32	259	0.0070576	7426.5	5272.9	156.52
190	0.0096206	5412.0	3832.2	147.48	260	0.0070304	7455.7	5293.8	156.63
191	0.0095702	5441.2	3853.1	147.63	261	0.0070035	7484.8	5314.7	156.74
192	0.0095204	5470.4	3874.0	147.78	262	0.0069768	7514.1	5335.6	156.86
193	0.0094710	5499.6	3894.9	147.93	263	0.0069502	7543.3	5356.5	156.97
194	0.0094222	5528.8	3915.8	148.08	264	0.0069239	7572.4	5377.3	157.08
195	0.0093739	5558.1	3936.7	148.23	265	0.0068978	7601.6	5398.2	157.19
196	0.0093261	5587.3	3957.6	148.38	266	0.0068719	7630.8	5419.1	157.30
197	0.0092787	5616.5	3978.5	148.53	267	0.0068461	7660.0	5440.0	157.41
198	0.0092319	5645.7	3999.4	148.68	268	0.0068206	7689.2	5460.8	157.52
199	0.0091855	5674.9	4020.3	148.83	269	0.0067952	7718.4	5481.7	157.63
200	0.0091395	5704.1	4041.2	148.97	270	0.0067701	7747.6	5502.6	157.73
201	0.0090941	5733.3	4062.1	149.12	271	0.0067451	7776.8	5523.5	157.84
202	0.0090490	5762.5	4082.9	149.26	272	0.0067203	7806.0	5544.4	157.95
203	0.0090045	5791.7	4103.8	149.41	273	0.0066957	7835.2	5565.2	158.06
204	0.0089603	5820.9	4124.7	149.55	274	0.0066712	7864.4	5586.1	158.16
205	0.0089166	5850.2	4145.6	149.69	275	0.0066470	7893.6	5607.0	158.27
206	0.0088733	5879.4	4166.5	149.84	276	0.0066229	7922.7	5627.9	158.38
207	0.0088305	5908.6	4187.4	149.98	277	0.0065990	7951.9	5648.7	158.48
208	0.0087880	5937.8	4208.3	150.12	278	0.0065752	7981.1	5669.6	158.59
209	0.0087460	5967.0	4229.2	150.26	279	0.0065517	8010.3	5690.5	158.69
210	0.0087043	5996.2	4250.0	150.40	280	0.0065283	8039.5	5711.4	158.80
211	0.0086631	6025.4	4270.9	150.54	281	0.0065050	8068.7	5732.2	158.90
212	0.0086222	6054.6	4291.8	150.67	282	0.0064820	8097.9	5753.1	159.00
213	0.0085817	6083.8	4312.7	150.81	283	0.0064591	8127.1	5774.0	159.11
214	0.0085416	6112.9	4333.6	150.95	284	0.0064363	8156.3	5794.9	159.21
215	0.0085019	6142.1	4354.5	151.09	285	0.0064137	8185.5	5815.8	159.31
216	0.0084625	6171.3	4375.3	151.22	286	0.0063913	8214.7	5836.7	159.41
217	0.0084235	6200.5	4396.2	151.36	287	0.0063691	8243.9	5857.5	159.52
218	0.0083849	6229.7	4417.1	151.49	288	0.0063469	8273.1	5878.4	159.62
219	0.0083466	6258.9	4438.0	151.62	289	0.0063250	8302.3	5899.3	159.72
220	0.0083087	6288.1	4458.9	151.76	290	0.0063032	8331.5	5920.2	159.82
221	0.0082711	6317.3	4479.7	151.89	291	0.0062815	8360.7	5941.0	159.92
222	0.0082338	6346.5	4500.6	152.02	292	0.0062600	8389.9	5961.9	160.02
223	0.0081969	6375.7	4521.5	152.15	293	0.0062386	8419.1	5982.8	160.12
224	0.0081603	6404.9	4542.4	152.28	294	0.0062174	8448.2	6003.7	160.22
225	0.0081240	6434.1	4563.2	152.41	295	0.0061963	8477.4	6024.6	160.32
226	0.0080881	6463.3	4584.1	152.54	296	0.0061754	8506.6	6045.5	160.42
227	0.0080525	6492.4	4605.0	152.67	297	0.0061546	8535.8	6066.3	160.52
228	0.0080171	6521.6	4625.9	152.80	298	0.0061340	8565.0	6087.2	160.62
229	0.0079821	6550.8	4646.7	152.93	299	0.0061134	8594.2	6108.1	160.71
230	0.0079474	6580.0	4667.6	153.05	300	0.0060931	8623.4	6129.0	160.81

0.20 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
19	43.0162	-641.7	-642.1	18.66					
* 19.096	42.9678	-639.2	-639.7	18.79					
* 19.096	0.129681	645.5	489.3	86.07					
20	0.124057	658.6	495.3	86.77					
21	0.118219	675.5	504.1	87.57	91	0.0267895	2481.4	1724.9	123.24
22	0.112808	693.7	514.0	88.41	92	0.0264980	2511.5	1746.8	123.57
23	0.107814	712.7	524.7	89.26	93	0.0262128	2541.7	1768.6	123.90
24	0.103211	732.4	536.0	90.10	94	0.0259337	2571.8	1790.4	124.22
25	0.0989678	752.5	547.7	90.92	95	0.0256604	2601.9	1812.2	124.54
26	0.0950503	772.9	559.7	91.73	96	0.0253929	2632.0	1834.0	124.85
27	0.0914268	793.7	572.0	92.51	97	0.0251309	2662.2	1855.8	125.17
28	0.0880682	814.6	584.5	93.27	98	0.0248742	2692.3	1877.6	125.47
29	0.0849479	835.7	597.2	94.01	99	0.0246227	2722.4	1899.4	125.78
30	0.0820422	856.8	609.8	94.74	100	0.0243763	2752.5	1921.2	126.08
31	0.0793304	878.3	622.9	95.43	101	0.0241348	2782.6	1942.9	126.38
32	0.0767939	899.9	636.0	96.12	102	0.0238980	2812.7	1964.8	126.68
33	0.0744164	921.5	649.2	96.78	103	0.0236658	2842.8	1986.5	126.97
34	0.0721834	943.3	662.5	97.43	104	0.0234380	2872.9	2008.3	127.26
35	0.0700820	965.1	676.0	98.06	105	0.0232147	2903.0	2030.0	127.55
36	0.0681010	987.1	689.6	98.69	106	0.0229955	2933.0	2051.8	127.84
37	0.0662302	1009.3	703.3	99.29	107	0.0227805	2963.1	2073.5	128.12
38	0.0644607	1031.6	717.2	99.89	108	0.0225694	2993.1	2095.2	128.40
39	0.0627843	1054.1	731.3	100.47	109	0.0223622	3023.1	2116.9	128.67
40	0.0611938	1076.8	745.6	101.05	110	0.0221588	3053.1	2138.6	128.95
41	0.0596827	1099.7	760.1	101.61	111	0.0219591	3083.0	2160.2	129.22
42	0.0582451	1122.8	774.8	102.17	112	0.0217629	3113.0	2181.9	129.49
43	0.0568759	1146.1	789.8	102.71	113	0.0215702	3143.0	2203.5	129.75
44	0.0555701	1169.6	804.9	103.25	114	0.0213809	3172.9	2225.1	130.02
45	0.0543234	1193.3	820.3	103.79	115	0.0211949	3202.8	2246.7	130.28
46	0.0531319	1217.3	835.9	104.32	116	0.0210121	3232.7	2268.3	130.54
47	0.0519920	1241.5	851.7	104.84	117	0.0208324	3262.6	2289.8	130.79
48	0.0509003	1265.9	867.8	105.35	118	0.0206557	3292.5	2311.4	131.05
49	0.0498538	1290.6	884.1	105.87	119	0.0204821	3322.3	2332.9	131.30
50	0.0488497	1315.5	900.6	106.37	120	0.0203113	3352.1	2354.4	131.55
51	0.0478856	1340.6	917.4	106.87	121	0.0201434	3381.9	2375.9	131.80
52	0.0469590	1365.9	934.4	107.36	122	0.0199782	3411.7	2397.3	132.04
53	0.0460677	1391.5	951.6	107.85	123	0.0198157	3441.5	2418.8	132.29
54	0.0452099	1417.4	969.1	108.33	124	0.0196559	3471.3	2440.3	132.53
55	0.0443836	1443.4	986.8	108.81	125	0.0194986	3501.0	2461.7	132.77
56	0.0435870	1469.7	1004.8	109.28	126	0.0193438	3530.7	2483.1	133.00
57	0.0428188	1496.3	1023.0	109.75	127	0.0191914	3560.4	2504.5	133.24
58	0.0420772	1523.0	1041.4	110.22	128	0.0190414	3590.1	2525.9	133.47
59	0.0413610	1549.9	1060.0	110.68	129	0.0188937	3619.8	2547.2	133.70
60	0.0406688	1577.0	1078.7	111.13	130	0.0187484	3649.5	2568.6	133.93
61	0.0399996	1604.4	1097.8	111.59	131	0.0186052	3679.1	2589.9	134.16
62	0.0393521	1632.0	1117.0	112.03	132	0.0184642	3708.7	2611.2	134.38
63	0.0387253	1659.7	1136.4	112.48	133	0.0183253	3738.3	2632.5	134.61
64	0.0381182	1687.5	1155.9	112.92	134	0.0181885	3767.9	2653.8	134.83
65	0.0375299	1715.6	1175.7	113.35	135	0.0180538	3797.5	2675.1	135.05
66	0.0369595	1743.8	1195.5	113.78	136	0.0179210	3827.1	2696.3	135.27
67	0.0364063	1772.2	1215.6	114.21	137	0.0177901	3856.7	2717.6	135.48
68	0.0358694	1800.7	1235.7	114.63	138	0.0176612	3886.3	2738.8	135.70
69	0.0353482	1829.4	1256.1	115.05	139	0.0175341	3915.8	2760.1	135.91
70	0.0348420	1858.1	1276.5	115.46	140	0.0174088	3945.4	2781.3	136.12
71	0.0343500	1887.2	1297.3	115.87	141	0.0172853	3974.9	2802.5	136.33
72	0.0338719	1916.4	1318.1	116.28	142	0.0171636	4004.3	2823.6	136.54
73	0.0334068	1945.6	1339.0	116.68	143	0.0170435	4033.8	2844.8	136.75
74	0.0329544	1974.8	1359.9	117.08	144	0.0169251	4063.3	2866.0	136.95
75	0.0325141	2004.2	1380.9	117.47	145	0.0168084	4092.8	2887.1	137.16
76	0.0320855	2033.6	1402.0	117.86	146	0.0166932	4122.2	2908.3	137.36
77	0.0316680	2063.0	1423.1	118.25	147	0.0165797	4151.7	2929.4	137.56
78	0.0312613	2092.5	1444.3	118.63	148	0.0164676	4181.2	2950.6	137.76
79	0.0308649	2122.1	1465.5	119.01	149	0.0163571	4210.6	2971.7	137.96
80	0.0304784	2151.7	1486.8	119.38	150	0.0162480	4240.0	2992.8	138.16
81	0.0301015	2181.6	1508.3	119.75	151	0.0161404	4269.4	3013.9	138.35
82	0.0297339	2211.4	1529.9	120.12	152	0.0160342	4298.8	3035.0	138.55
83	0.0293751	2241.3	1551.4	120.48	153	0.0159294	4328.2	3056.0	138.74
84	0.0290249	2271.2	1573.0	120.84	154	0.0158259	4357.6	3077.1	138.93
85	0.0286830	2301.2	1594.7	121.19	155	0.0157238	4387.0	3098.2	139.12
86	0.0283490	2331.1	1616.3	121.54	156	0.0156230	4416.3	3119.2	139.31
87	0.0280227	2361.2	1638.0	121.89	157	0.0155235	4445.7	3140.3	139.50
88	0.0277039	2391.2	1659.7	122.23	158	0.0154252	4475.1	3161.3	139.68
89	0.0273922	2421.2	1681.4	122.57	159	0.0153282	4504.4	3182.4	139.87
90	0.0270875	2451.3	1703.2	122.91	160	0.0152323	4533.8	3203.4	140.05

* PHASE CHANGE

0.20 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	0.0151377	4563.1	3224.4	140.23	231	0.0105504	6609.2	4688.4	150.79
162	0.0150443	4592.4	3245.4	140.42	232	0.0105049	6638.4	4709.3	150.91
163	0.0149520	4621.8	3266.4	140.60	233	0.0104598	6667.6	4730.2	151.04
164	0.0148608	4651.1	3287.4	140.78	234	0.0104151	6696.8	4751.0	151.17
165	0.0147707	4680.4	3308.4	140.95	235	0.0103708	6726.0	4771.9	151.29
166	0.0146817	4709.7	3329.4	141.13	236	0.0103269	6755.2	4792.8	151.41
167	0.0145938	4739.0	3350.4	141.31	237	0.0102833	6784.3	4813.7	151.54
168	0.0145069	4768.3	3371.4	141.48	238	0.0102401	6813.5	4834.5	151.66
169	0.0144211	4797.6	3392.4	141.66	239	0.0101972	6842.7	4855.4	151.78
170	0.0143362	4826.9	3413.4	141.83	240	0.0101547	6871.9	4876.3	151.90
171	0.0142524	4856.2	3434.3	142.00	241	0.0101126	6901.1	4897.2	152.03
172	0.0141695	4885.5	3455.3	142.17	242	0.0100708	6930.3	4918.0	152.15
173	0.0140876	4914.7	3476.2	142.34	243	0.0100294	6959.5	4938.9	152.27
174	0.0140066	4944.0	3497.2	142.51	244	0.0099883	6988.7	4959.8	152.39
175	0.0139266	4973.3	3518.1	142.68	245	0.0099475	7017.9	4980.7	152.51
176	0.0138475	5002.5	3539.1	142.84	246	0.0099071	7047.1	5001.5	152.62
177	0.0137692	5031.8	3560.0	143.01	247	0.0098670	7076.2	5022.4	152.74
178	0.0136919	5061.1	3581.0	143.17	248	0.0098272	7105.4	5043.3	152.86
179	0.0136154	5090.3	3601.9	143.34	249	0.0097877	7134.6	5064.2	152.98
180	0.0135397	5119.6	3622.9	143.50	250	0.0097486	7163.8	5085.0	153.10
181	0.0134649	5148.8	3643.8	143.66	251	0.0097097	7193.0	5105.9	153.21
182	0.0133909	5178.1	3664.7	143.82	252	0.0096712	7222.2	5126.8	153.33
183	0.0133177	5207.3	3685.7	143.99	253	0.0096330	7251.4	5147.7	153.44
184	0.0132454	5236.6	3706.6	144.14	254	0.0095950	7280.6	5168.5	153.56
185	0.0131738	5265.8	3727.5	144.30	255	0.0095574	7309.7	5189.4	153.67
186	0.0131029	5295.0	3748.4	144.46	256	0.0095201	7338.9	5210.3	153.79
187	0.0130328	5324.3	3769.4	144.62	257	0.0094830	7368.1	5231.1	153.90
188	0.0129635	5353.5	3790.3	144.77	258	0.0094463	7397.3	5252.0	154.02
189	0.0128949	5382.7	3811.2	144.93	259	0.0094098	7426.5	5272.9	154.13
190	0.0128271	5412.0	3832.1	145.08	260	0.0093736	7455.7	5293.8	154.24
191	0.0127599	5441.2	3853.0	145.24	261	0.0093377	7484.9	5314.6	154.35
192	0.0126934	5470.4	3873.9	145.39	262	0.0093021	7514.1	5335.5	154.46
193	0.0126277	5499.6	3894.8	145.54	263	0.0092667	7543.3	5356.4	154.58
194	0.0125626	5528.8	3915.7	145.69	264	0.0092316	7572.5	5377.3	154.69
195	0.0124981	5558.0	3936.6	145.84	265	0.0091968	7601.7	5398.2	154.80
196	0.0124344	5587.3	3957.5	145.99	266	0.0091622	7630.9	5419.0	154.91
197	0.0123713	5616.5	3978.4	146.14	267	0.0091279	7660.0	5439.9	155.02
198	0.0123088	5645.7	3999.3	146.29	268	0.0090938	7689.2	5460.8	155.13
199	0.0122469	5674.9	4020.2	146.43	269	0.0090600	7718.4	5481.7	155.23
200	0.0121857	5704.1	4041.1	146.58	270	0.0090265	7747.6	5502.6	155.34
201	0.0121251	5733.3	4062.0	146.73	271	0.0089932	7776.8	5523.4	155.45
202	0.0120650	5762.5	4082.9	146.87	272	0.0089601	7806.0	5544.3	155.56
203	0.0120056	5791.7	4103.8	147.02	273	0.0089273	7835.2	5565.2	155.66
204	0.0119467	5820.9	4124.7	147.16	274	0.0088947	7864.4	5586.1	155.77
205	0.0118885	5850.1	4145.6	147.30	275	0.0088624	7893.6	5606.9	155.88
206	0.0118308	5879.3	4166.4	147.44	276	0.0088303	7922.8	5627.8	155.98
207	0.0117736	5908.6	4187.3	147.59	277	0.0087984	7952.0	5648.7	156.09
208	0.0117170	5937.8	4208.2	147.73	278	0.0087667	7981.2	5669.6	156.19
209	0.0116609	5967.0	4229.1	147.87	279	0.0087353	8010.3	5690.5	156.30
210	0.0116054	5996.2	4250.0	148.01	280	0.0087041	8039.5	5711.3	156.40
211	0.0115504	6025.4	4270.9	148.14	281	0.0086731	8068.7	5732.2	156.51
212	0.0114959	6054.6	4291.8	148.28	282	0.0086424	8097.9	5753.1	156.61
213	0.0114419	6083.7	4312.6	148.42	283	0.0086118	8127.1	5774.0	156.72
214	0.0113885	6112.9	4333.5	148.56	284	0.0085815	8156.3	5794.9	156.82
215	0.0113355	6142.1	4354.4	148.69	285	0.0085514	8185.5	5815.7	156.92
216	0.0112830	6171.3	4375.3	148.83	286	0.0085215	8214.7	5836.6	157.02
217	0.0112310	6200.5	4396.2	148.96	287	0.0084918	8243.9	5857.5	157.12
218	0.0111795	6229.7	4417.0	149.10	288	0.0084623	8273.1	5878.4	157.23
219	0.0111285	6258.9	4437.9	149.23	289	0.0084331	8302.3	5899.3	157.33
220	0.0110779	6288.1	4458.8	149.36	290	0.0084040	8331.5	5920.1	157.43
221	0.0110278	6317.3	4479.7	149.50	291	0.0083751	8360.7	5941.0	157.53
222	0.0109781	6346.5	4500.5	149.63	292	0.0083464	8389.9	5961.9	157.63
223	0.0109289	6375.7	4521.4	149.76	293	0.0083179	8419.1	5982.8	157.73
224	0.0108801	6404.9	4542.3	149.89	294	0.0082896	8448.3	6003.7	157.83
225	0.0108317	6434.1	4563.2	150.02	295	0.0082616	8477.5	6024.5	157.93
226	0.0107838	6463.3	4584.0	150.15	296	0.0082336	8506.7	6045.4	158.03
227	0.0107363	6492.5	4604.9	150.28	297	0.0082059	8535.9	6066.3	158.12
228	0.0106892	6521.6	4625.8	150.41	298	0.0081784	8565.1	6087.2	158.22
229	0.0106425	6550.8	4646.7	150.53	299	0.0081510	8594.3	6108.1	158.32
230	0.0105962	6580.0	4667.6	150.66	300	0.0081239	8623.5	6129.0	158.42

0.30 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
19	43.0197	-641.5	-642.2	18.66					
20	42.5084	-615.6	-616.3	20.02					
* 20.081	42.4660	-613.3	-614.0	20.12					
* 20.081	0.187186	661.7	499.3	83.61					
21	0.179091	675.5	505.7	84.28	91	0.0401877	2481.0	1724.6	119.87
22	0.170837	692.3	514.4	85.06	92	0.0397502	2511.1	1746.4	120.20
23	0.163187	710.5	524.2	85.86	93	0.0393221	2541.3	1768.2	120.52
24	0.156122	729.6	534.9	86.68	94	0.0389031	2571.4	1790.0	120.84
25	0.149606	749.4	546.3	87.49	95	0.0384930	2601.5	1811.9	121.16
26	0.143592	769.7	558.0	88.29	96	0.0380915	2631.7	1833.7	121.48
27	0.138034	790.4	570.2	89.07	97	0.0376983	2661.8	1855.5	121.79
28	0.132889	811.3	582.6	89.83	98	0.0373131	2691.9	1877.3	122.10
29	0.128114	832.5	595.2	90.57	99	0.0369357	2722.0	1899.1	122.41
30	0.123674	853.6	607.8	91.30	100	0.0365659	2752.2	1920.9	122.71
31	0.119535	875.2	620.9	92.00	101	0.0362034	2782.3	1942.6	123.01
32	0.115668	896.8	634.0	92.68	102	0.0358481	2812.4	1964.5	123.31
33	0.112048	918.6	647.3	93.35	103	0.0354997	2842.5	1986.2	123.60
34	0.108651	940.5	660.7	94.01	104	0.0351579	2872.6	2008.0	123.89
35	0.105458	962.4	674.2	94.64	105	0.0348228	2902.7	2029.8	124.18
36	0.102451	984.6	687.9	95.27	106	0.0344939	2932.7	2051.5	124.46
37	0.0996139	1006.8	701.7	95.88	107	0.0341712	2962.8	2073.2	124.74
38	0.0969319	1029.2	715.7	96.48	108	0.0338545	2992.8	2094.9	125.02
39	0.0943930	1051.8	729.8	97.06	109	0.0335436	3022.8	2116.6	125.30
40	0.0919859	1074.6	744.2	97.65	110	0.0332384	3052.8	2138.3	125.58
41	0.0897003	1097.6	758.7	98.21	111	0.0329387	3082.8	2159.9	125.85
42	0.0875272	1120.8	773.5	98.76	112	0.0326444	3112.8	2181.6	126.11
43	0.0854584	1144.2	788.5	99.31	113	0.0323553	3142.7	2203.2	126.38
44	0.0834864	1167.8	803.7	99.86	114	0.0320712	3172.7	2224.9	126.64
45	0.0816046	1191.6	819.1	100.39	115	0.0317921	3202.6	2246.5	126.91
46	0.0798067	1215.6	834.7	100.92	116	0.0315178	3232.5	2268.0	127.17
47	0.0780872	1239.9	850.6	101.44	117	0.0312483	3262.4	2289.6	127.42
48	0.0764411	1264.4	866.7	101.96	118	0.0309833	3292.2	2311.1	127.68
49	0.0748637	1289.1	883.0	102.47	119	0.0307227	3322.1	2332.7	127.93
50	0.0733507	1314.0	899.6	102.98	120	0.0304665	3351.9	2354.2	128.18
51	0.0718982	1339.2	916.4	103.48	121	0.0302146	3381.7	2375.7	128.42
52	0.0705026	1364.6	933.5	103.97	122	0.0299668	3411.5	2397.1	128.67
53	0.0691606	1390.3	950.7	104.46	123	0.0297230	3441.3	2418.6	128.91
54	0.0678691	1416.1	968.3	104.94	124	0.0294831	3471.1	2440.1	129.15
55	0.0666254	1442.2	986.0	105.42	125	0.0292471	3500.8	2461.5	129.39
56	0.0654268	1468.6	1004.0	105.90	126	0.0290149	3530.5	2482.9	129.63
57	0.0642708	1495.2	1022.2	106.37	127	0.0287863	3560.3	2504.3	129.86
58	0.0631552	1521.9	1040.6	106.83	128	0.0285613	3589.9	2525.6	130.10
59	0.0620780	1548.9	1059.2	107.29	129	0.0283398	3619.6	2547.0	130.33
60	0.0610370	1576.0	1078.0	107.75	130	0.0281217	3649.3	2568.4	130.56
61	0.0600307	1603.4	1097.1	108.20	131	0.0279069	3678.9	2589.7	130.78
62	0.0590571	1631.0	1116.3	108.65	132	0.0276954	3708.6	2611.0	131.01
63	0.0581148	1658.8	1135.7	109.09	133	0.0274871	3738.2	2632.3	131.23
64	0.0572022	1686.6	1155.2	109.53	134	0.0272818	3767.8	2653.6	131.46
65	0.0563180	1714.8	1175.0	109.97	135	0.0270797	3797.4	2674.9	131.68
66	0.0554608	1743.0	1194.9	110.40	136	0.0268805	3827.0	2696.1	131.89
67	0.0546295	1771.4	1215.0	110.83	137	0.0266842	3856.5	2717.4	132.11
68	0.0538228	1799.9	1235.2	111.25	138	0.0264908	3886.1	2738.6	132.33
69	0.0530396	1828.6	1255.5	111.67	139	0.0263001	3915.7	2759.9	132.54
70	0.0522791	1857.4	1276.0	112.08	140	0.0261122	3945.2	2781.1	132.75
71	0.0515401	1886.5	1296.7	112.49	141	0.0259269	3974.7	2802.3	132.96
72	0.0508217	1915.7	1317.6	112.90	142	0.0257443	4004.2	2823.5	133.17
73	0.0501232	1944.9	1338.4	113.30	143	0.0255642	4033.7	2844.6	133.38
74	0.0494437	1974.2	1359.4	113.70	144	0.0253866	4063.2	2865.8	133.58
75	0.0487825	2003.5	1380.4	114.10	145	0.0252115	4092.7	2887.0	133.79
76	0.0481387	2032.9	1401.5	114.49	146	0.0250387	4122.1	2908.1	133.99
77	0.0475118	2062.4	1422.6	114.87	147	0.0248683	4151.6	2929.2	134.19
78	0.0469010	2091.9	1443.8	115.25	148	0.0247003	4181.0	2950.4	134.39
79	0.0463058	2121.5	1465.1	115.63	149	0.0245344	4210.5	2971.5	134.59
80	0.0457255	2151.2	1486.4	116.01	150	0.0243708	4239.9	2992.6	134.78
81	0.0451596	2181.0	1507.9	116.38	151	0.0242094	4269.3	3013.7	134.98
82	0.0446076	2210.9	1529.4	116.74	152	0.0240501	4298.7	3034.8	135.17
83	0.0440690	2240.8	1551.0	117.10	153	0.0238928	4328.1	3055.9	135.37
84	0.0435432	2270.7	1572.6	117.46	154	0.0237377	4357.5	3076.9	135.56
85	0.0430299	2300.7	1594.3	117.82	155	0.0235845	4386.9	3098.0	135.75
86	0.0425285	2330.7	1615.9	118.17	156	0.0234333	4416.2	3119.1	135.94
87	0.0420388	2360.7	1637.6	118.52	157	0.0232840	4445.6	3140.1	136.12
88	0.0415602	2390.7	1659.3	118.86	158	0.0231366	4475.0	3161.2	136.31
89	0.0410924	2420.8	1681.1	119.20	159	0.0229910	4504.3	3182.2	136.50
90	0.0406350	2450.9	1702.8	119.53	160	0.0228473	4533.7	3203.2	136.68

* PHASE CHANGE

0.30 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	0.0227054	4563.0	3224.3	136.86	231	0.0158246	6609.2	4688.3	147.42
162	0.0225652	4592.4	3245.3	137.04	232	0.0157564	6638.4	4709.2	147.54
163	0.0224267	4621.7	3266.3	137.22	233	0.0156888	6667.6	4730.1	147.67
164	0.0222900	4651.0	3287.3	137.40	234	0.0156217	6696.8	4750.9	147.79
165	0.0221548	4680.3	3308.3	137.58	235	0.0155552	6726.0	4771.8	147.92
166	0.0220214	4709.6	3329.3	137.76	236	0.0154893	6755.2	4792.7	148.04
167	0.0218895	4738.9	3350.3	137.94	237	0.0154240	6784.4	4813.6	148.17
168	0.0217592	4768.2	3371.2	138.11	238	0.0153592	6813.6	4834.4	148.29
169	0.0216304	4797.6	3392.2	138.28	239	0.0152949	6842.7	4855.3	148.41
170	0.0215031	4826.8	3413.2	138.46	240	0.0152312	6871.9	4876.2	148.53
171	0.0213774	4856.1	3434.2	138.63	241	0.0151680	6901.1	4897.1	148.65
172	0.0212531	4885.4	3455.1	138.80	242	0.0151053	6930.3	4917.9	148.77
173	0.0211302	4914.7	3476.1	138.97	243	0.0150432	6959.5	4938.8	148.90
174	0.0210087	4944.0	3497.1	139.14	244	0.0149815	6988.7	4959.7	149.02
175	0.0208887	4973.2	3518.0	139.31	245	0.0149204	7017.9	4980.6	149.13
176	0.0207700	5002.5	3539.0	139.47	246	0.0148597	7047.1	5001.4	149.25
177	0.0206526	5031.8	3559.9	139.64	247	0.0147995	7076.3	5022.3	149.37
178	0.0205366	5061.0	3580.9	139.80	248	0.0147399	7105.5	5043.2	149.49
179	0.0204218	5090.3	3601.8	139.97	249	0.0146807	7134.7	5064.1	149.61
180	0.0203084	5119.5	3622.7	140.13	250	0.0146220	7163.8	5084.9	149.72
181	0.0201962	5148.8	3643.7	140.29	251	0.0145637	7193.0	5105.8	149.84
182	0.0200852	5178.0	3664.6	140.45	252	0.0145059	7222.2	5126.7	149.96
183	0.0199754	5207.3	3685.5	140.61	253	0.0144486	7251.4	5147.6	150.07
184	0.0198668	5236.5	3706.5	140.77	254	0.0143917	7280.6	5168.4	150.19
185	0.0197594	5265.8	3727.4	140.93	255	0.0143353	7309.8	5189.3	150.30
186	0.0196532	5295.0	3748.3	141.09	256	0.0142793	7339.0	5210.2	150.42
187	0.0195481	5324.2	3769.2	141.25	257	0.0142237	7368.2	5231.1	150.53
188	0.0194441	5353.5	3790.1	141.40	258	0.0141686	7397.3	5251.9	150.64
189	0.0193412	5382.7	3811.1	141.56	259	0.0141139	7426.5	5272.8	150.76
190	0.0192394	5411.9	3832.0	141.71	260	0.0140596	7455.7	5293.7	150.87
191	0.0191387	5441.2	3852.9	141.86	261	0.0140057	7484.9	5314.5	150.98
192	0.0190390	5470.4	3873.8	142.02	262	0.0139523	7514.1	5335.4	151.09
193	0.0189404	5499.6	3894.7	142.17	263	0.0138992	7543.3	5356.3	151.20
194	0.0188427	5528.8	3915.6	142.32	264	0.0138466	7572.5	5377.2	151.31
195	0.0187461	5558.0	3936.5	142.47	265	0.0137943	7601.7	5398.1	151.43
196	0.0186504	5587.2	3957.4	142.62	266	0.0137425	7630.9	5419.0	151.54
197	0.0185558	5616.5	3978.3	142.77	267	0.0136910	7660.1	5439.8	151.64
198	0.0184620	5645.7	3999.2	142.92	268	0.0136399	7689.3	5460.7	151.75
199	0.0183693	5674.9	4020.1	143.06	269	0.0135892	7718.5	5481.6	151.86
200	0.0182774	5704.1	4041.0	143.21	270	0.0135389	7747.7	5502.5	151.97
201	0.0181865	5733.3	4061.9	143.36	271	0.0134890	7776.8	5523.3	152.08
202	0.0180964	5762.5	4082.8	143.50	272	0.0134394	7806.1	5544.2	152.19
203	0.0180073	5791.7	4103.7	143.64	273	0.0133901	7835.2	5565.1	152.29
204	0.0179190	5820.9	4124.5	143.79	274	0.0133413	7864.4	5586.0	152.40
205	0.0178316	5850.1	4145.4	143.93	275	0.0132928	7893.6	5606.9	152.51
206	0.0177450	5879.3	4166.3	144.07	276	0.0132446	7922.8	5627.7	152.61
207	0.0176593	5908.5	4187.2	144.21	277	0.0131968	7952.0	5648.6	152.72
208	0.0175744	5937.7	4208.1	144.36	278	0.0131493	7981.2	5669.5	152.82
209	0.0174903	5967.0	4229.0	144.50	279	0.0131022	8010.4	5690.4	152.93
210	0.0174070	5996.2	4249.9	144.63	280	0.0130554	8039.6	5711.2	153.03
211	0.0173245	6025.4	4270.8	144.77	281	0.0130090	8068.8	5732.1	153.14
212	0.0172428	6054.5	4291.6	144.91	282	0.0129628	8098.0	5753.0	153.24
213	0.0171619	6083.7	4312.5	145.05	283	0.0129170	8127.2	5773.9	153.34
214	0.0170817	6112.9	4333.4	145.19	284	0.0128715	8156.4	5794.8	153.45
215	0.0170022	6142.1	4354.3	145.32	285	0.0128264	8185.6	5815.7	153.55
216	0.0169235	6171.3	4375.2	145.46	286	0.0127815	8214.8	5836.5	153.65
217	0.0168455	6200.5	4396.0	145.59	287	0.0127370	8244.0	5857.4	153.75
218	0.0167682	6229.7	4416.9	145.73	288	0.0126928	8273.2	5878.3	153.86
219	0.0166917	6258.9	4437.8	145.86	289	0.0126489	8302.4	5899.2	153.96
220	0.0166158	6288.1	4458.7	145.99	290	0.0126053	8331.6	5920.1	154.06
221	0.0165406	6317.3	4479.5	146.13	291	0.0125619	8360.7	5940.9	154.16
222	0.0164661	6346.5	4500.4	146.26	292	0.0125189	8389.9	5961.8	154.26
223	0.0163923	6375.7	4521.3	146.39	293	0.0124762	8419.1	5982.7	154.36
224	0.0163191	6404.9	4542.2	146.52	294	0.0124338	8448.3	6003.6	154.46
225	0.0162466	6434.1	4563.1	146.65	295	0.0123916	8477.5	6024.5	154.56
226	0.0161747	6463.3	4583.9	146.78	296	0.0123498	8506.7	6045.3	154.66
227	0.0161034	6492.5	4604.8	146.91	297	0.0123082	8535.9	6066.2	154.75
228	0.0160328	6521.7	4625.7	147.04	298	0.0122669	8565.1	6087.1	154.85
229	0.0159628	6550.8	4646.6	147.16	299	0.0122259	8594.3	6108.0	154.95
230	0.0158934	6580.0	4667.5	147.29	300	0.0121851	8623.5	6128.9	155.05

0.40 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
19	43.0232	-641.3	-642.2	19.66					
20	42.5123	-615.4	-616.3	20.01					
* 20.840	42.0648	-592.3	-593.2	21.13					
* 20.840	0.243159	672.9	506.3	81.84					
21	0.241288	675.2	507.2	81.95	91	0.0535881	2480.6	1724.2	117.47
22	0.230064	690.8	514.6	82.67	92	0.0530044	2510.7	1746.1	117.80
23	0.219624	708.2	523.7	83.44	93	0.0524333	2540.9	1767.9	118.13
24	0.209970	726.8	533.8	84.24	94	0.0518744	2571.0	1789.7	118.45
25	0.201064	746.3	544.7	85.04	95	0.0513272	2601.2	1811.5	118.77
26	0.192850	766.4	556.3	85.83	96	0.0507916	2631.3	1833.3	119.08
27	0.185268	787.0	568.3	86.61	97	0.0502670	2661.4	1855.2	119.40
28	0.178257	807.9	580.6	87.37	98	0.0497532	2691.6	1877.0	119.71
29	0.171760	829.1	593.2	88.11	99	0.0492498	2721.7	1898.8	120.01
30	0.165727	850.4	605.8	88.84	100	0.0487565	2751.8	1920.6	120.31
31	0.160110	872.1	618.9	89.54	101	0.0482730	2781.9	1942.3	120.61
32	0.154869	893.8	632.1	90.23	102	0.0477990	2812.1	1964.2	120.91
33	0.149969	915.7	645.4	90.90	103	0.0473342	2842.2	1985.9	121.20
34	0.145376	937.7	658.9	91.56	104	0.0468784	2872.3	2007.7	121.50
35	0.141063	959.8	672.4	92.20	105	0.0464313	2902.4	2029.5	121.78
36	0.137005	982.0	686.2	92.83	106	0.0459927	2932.4	2051.2	122.07
37	0.133179	1004.4	700.0	93.44	107	0.0455623	2962.5	2072.9	122.35
38	0.129566	1026.9	714.1	94.04	108	0.0451399	2992.5	2094.7	122.63
39	0.126148	1049.6	728.3	94.63	109	0.0447253	3022.5	2116.3	122.91
40	0.122909	1072.5	742.7	95.22	110	0.0443182	3052.6	2138.0	123.18
41	0.119836	1095.5	757.3	95.78	111	0.0439185	3082.5	2159.7	123.45
42	0.116916	1118.8	772.1	96.34	112	0.0435259	3112.5	2181.4	123.72
43	0.114138	1142.3	787.2	96.89	113	0.0431403	3142.5	2203.0	123.99
44	0.111491	1165.9	802.4	97.43	114	0.0427615	3172.4	2224.6	124.25
45	0.108966	1189.8	817.9	97.97	115	0.0423893	3202.3	2246.2	124.51
46	0.106554	1213.9	833.6	98.50	116	0.0420235	3232.3	2267.8	124.77
47	0.104249	1238.3	849.5	99.03	117	0.0416640	3262.1	2289.4	125.03
48	0.102042	1262.8	865.6	99.55	118	0.0413105	3292.0	2310.9	125.28
49	0.0999293	1287.6	882.0	100.06	119	0.0409631	3321.8	2332.4	125.53
50	0.0979026	1312.6	898.6	100.57	120	0.0406214	3351.7	2354.0	125.78
51	0.0959575	1337.9	915.5	101.07	121	0.0402854	3381.5	2375.4	126.03
52	0.0940891	1363.3	932.5	101.56	122	0.0399549	3411.3	2396.9	126.28
53	0.0922929	1389.0	949.8	102.05	123	0.0396298	3441.1	2418.4	126.52
54	0.0905648	1414.9	967.4	102.53	124	0.0393100	3470.9	2439.8	126.76
55	0.0889008	1441.1	985.2	103.01	125	0.0389953	3500.6	2461.3	127.00
56	0.0872974	1467.4	1003.2	103.49	126	0.0386856	3530.4	2482.7	127.24
57	0.0857514	1494.1	1021.4	103.96	127	0.0383807	3560.1	2504.1	127.47
58	0.0842596	1520.9	1039.8	104.43	128	0.0380807	3589.7	2525.4	127.70
59	0.0828193	1547.9	1058.5	104.89	129	0.0377853	3619.5	2546.8	127.93
60	0.0814278	1575.1	1077.3	105.35	130	0.0374944	3649.1	2568.2	128.16
61	0.0800826	1602.5	1096.4	105.80	131	0.0372080	3678.8	2589.5	128.39
62	0.0787815	1630.1	1115.6	106.25	132	0.0369260	3708.4	2610.8	128.62
63	0.0775223	1657.9	1135.1	106.69	133	0.0366482	3738.0	2632.1	128.84
64	0.0763029	1685.8	1154.6	107.13	134	0.0363745	3767.6	2653.4	129.06
65	0.0751216	1713.9	1174.4	107.57	135	0.0361049	3797.2	2674.7	129.28
66	0.0739765	1742.2	1194.3	108.00	136	0.0358393	3826.8	2695.9	129.50
67	0.0728660	1770.6	1214.4	108.43	137	0.0355776	3856.4	2717.2	129.72
68	0.0717885	1799.2	1234.6	108.85	138	0.0353196	3886.0	2738.4	129.93
69	0.0707426	1827.9	1255.0	109.27	139	0.0350654	3915.5	2759.7	130.15
70	0.0697269	1856.7	1275.4	109.68	140	0.0348148	3945.1	2780.9	130.36
71	0.0687401	1885.8	1296.2	110.10	141	0.0345678	3974.6	2802.1	130.57
72	0.0677809	1915.0	1317.0	110.50	142	0.0343242	4004.1	2823.3	130.78
73	0.0668483	1944.2	1337.9	110.90	143	0.0340841	4033.6	2844.4	130.98
74	0.0659411	1973.5	1358.9	111.30	144	0.0338473	4063.0	2865.6	131.19
75	0.0650583	2002.9	1379.9	111.70	145	0.0336138	4092.5	2886.8	131.39
76	0.0641989	2032.3	1401.0	112.09	146	0.0333834	4122.0	2907.9	131.60
77	0.0633620	2061.8	1422.2	112.47	147	0.0331562	4151.5	2929.1	131.80
78	0.0625468	2091.4	1443.4	112.86	148	0.0329321	4180.9	2950.2	132.00
79	0.0617523	2121.0	1464.6	113.23	149	0.0327110	4210.4	2971.3	132.19
80	0.0609778	2150.6	1486.0	113.61	150	0.0324929	4239.8	2992.5	132.39
81	0.0602226	2180.5	1507.5	113.98	151	0.0322776	4269.2	3013.5	132.59
82	0.0594859	2210.4	1529.0	114.34	152	0.0320652	4298.6	3034.6	132.78
83	0.0587670	2240.3	1550.6	114.71	153	0.0318555	4328.0	3055.7	132.97
84	0.0580654	2270.2	1572.2	115.07	154	0.0316486	4357.4	3076.8	133.16
85	0.0573804	2300.2	1593.9	115.42	155	0.0314444	4386.8	3097.8	133.36
86	0.0567114	2330.2	1615.5	115.77	156	0.0312427	4416.1	3118.9	133.54
87	0.0560579	2360.2	1637.2	116.12	157	0.0310437	4445.5	3139.9	133.73
88	0.0554193	2390.3	1659.0	116.46	158	0.0308472	4474.9	3161.0	133.92
89	0.0547951	2420.4	1680.7	116.80	159	0.0306531	4504.3	3182.0	134.10
90	0.0541849	2450.4	1702.4	117.14	160	0.0304615	4533.6	3203.1	134.29

* PHASE CHANGE

0.40 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	0.0302722	4562.9	3224.1	134.47	231	0.0210982	6609.2	4688.2	145.02
162	0.0300853	4592.3	3245.1	134.65	232	0.0210072	6638.4	4709.1	145.15
163	0.0299007	4621.6	3266.1	134.83	233	0.0209171	6667.6	4730.0	145.28
164	0.0297183	4650.9	3287.1	135.01	234	0.0208277	6696.8	4750.8	145.40
165	0.0295382	4680.2	3308.1	135.19	235	0.0207391	6726.0	4771.7	145.53
166	0.0293602	4709.6	3329.1	135.37	236	0.0206512	6755.2	4792.6	145.65
167	0.0291843	4738.9	3350.1	135.54	237	0.0205641	6784.4	4813.5	145.77
168	0.0290106	4768.2	3371.1	135.72	238	0.0204777	6813.6	4834.3	145.90
169	0.0288389	4797.5	3392.1	135.89	239	0.0203920	6842.8	4855.2	146.02
170	0.0286692	4826.8	3413.1	136.06	240	0.0203070	6872.0	4876.1	146.14
171	0.0285015	4856.1	3434.0	136.24	241	0.0202228	6901.1	4897.0	146.26
172	0.0283358	4885.3	3455.0	136.41	242	0.0201392	6930.3	4917.8	146.38
173	0.0281720	4914.6	3476.0	136.58	243	0.0200563	6959.5	4938.7	146.50
174	0.0280100	4943.9	3496.9	136.74	244	0.0199741	6988.7	4959.6	146.62
175	0.0278500	4973.2	3517.9	136.91	245	0.0198926	7017.9	4980.5	146.74
176	0.0276917	5002.4	3538.8	137.08	246	0.0198117	7047.1	5001.4	146.86
177	0.0275352	5031.7	3559.8	137.25	247	0.0197315	7076.3	5022.2	146.98
178	0.0273805	5061.0	3580.7	137.41	248	0.0196520	7105.5	5043.1	147.10
179	0.0272275	5090.2	3601.7	137.57	249	0.0195731	7134.7	5064.0	147.22
180	0.0270762	5119.5	3622.6	137.74	250	0.0194948	7163.9	5084.9	147.33
181	0.0269266	5148.7	3643.5	137.90	251	0.0194171	7193.0	5105.7	147.45
182	0.0267787	5178.0	3664.5	138.06	252	0.0193401	7222.2	5126.6	147.56
183	0.0266323	5207.2	3685.4	138.22	253	0.0192636	7251.4	5147.5	147.68
184	0.0264876	5236.5	3706.3	138.38	254	0.0191878	7280.6	5168.3	147.80
185	0.0263444	5265.7	3727.2	138.54	255	0.0191126	7309.8	5189.2	147.91
186	0.0262027	5295.0	3748.2	138.70	256	0.0190379	7339.0	5210.1	148.02
187	0.0260626	5324.2	3769.1	138.85	257	0.0189638	7368.2	5231.0	148.14
188	0.0259239	5353.4	3790.0	139.01	258	0.0188903	7397.4	5251.8	148.25
189	0.0257868	5382.7	3810.9	139.16	259	0.0188174	7426.6	5272.7	148.36
190	0.0256510	5411.9	3831.8	139.32	260	0.0187450	7455.8	5293.6	148.48
191	0.0255167	5441.1	3852.7	139.47	261	0.0186732	7484.9	5314.5	148.59
192	0.0253838	5470.3	3873.7	139.62	262	0.0186019	7514.2	5335.4	148.70
193	0.0252523	5499.6	3894.6	139.78	263	0.0185312	7543.4	5356.2	148.81
194	0.0251221	5528.8	3915.5	139.93	264	0.0184610	7572.5	5377.1	148.92
195	0.0249933	5558.0	3936.4	140.08	265	0.0183914	7601.7	5398.0	149.03
196	0.0248657	5587.2	3957.3	140.23	266	0.0183222	7630.9	5418.9	149.14
197	0.0247395	5616.4	3978.2	140.38	267	0.0182536	7660.1	5439.8	149.25
198	0.0246146	5645.7	3999.1	140.52	268	0.0181855	7689.3	5460.6	149.36
199	0.0244909	5674.9	4020.0	140.67	269	0.0181179	7718.5	5481.5	149.47
200	0.0243684	5704.1	4040.9	140.82	270	0.0180508	7747.7	5502.4	149.58
201	0.0242472	5733.3	4061.8	140.96	271	0.0179842	7776.9	5523.3	149.69
202	0.0241271	5762.5	4082.6	141.11	272	0.0179181	7806.1	5544.1	149.79
203	0.0240083	5791.7	4103.5	141.25	273	0.0178525	7835.3	5565.0	149.90
204	0.0238906	5820.9	4124.4	141.40	274	0.0177873	7864.5	5585.9	150.01
205	0.0237740	5850.1	4145.3	141.54	275	0.0177227	7893.7	5606.8	150.11
206	0.0236586	5879.3	4166.2	141.68	276	0.0176584	7922.9	5627.6	150.22
207	0.0235443	5908.5	4187.1	141.82	277	0.0175947	7952.1	5648.5	150.33
208	0.0234311	5937.7	4208.0	141.96	278	0.0175314	7981.3	5669.4	150.43
209	0.0233190	5966.9	4228.9	142.10	279	0.0174686	8010.5	5690.3	150.54
210	0.0232080	5996.1	4249.8	142.24	280	0.0174062	8039.6	5711.2	150.64
211	0.0230980	6025.3	4270.6	142.38	281	0.0173443	8068.8	5732.0	150.74
212	0.0229890	6054.5	4291.5	142.52	282	0.0172828	8098.0	5752.9	150.85
213	0.0228811	6083.7	4312.4	142.66	283	0.0172217	8127.2	5773.8	150.95
214	0.0227742	6112.9	4333.3	142.79	284	0.0171611	8156.4	5794.7	151.05
215	0.0226682	6142.1	4354.2	142.93	285	0.0171009	8185.6	5815.6	151.16
216	0.0225633	6171.3	4375.1	143.06	286	0.0170411	8214.8	5836.5	151.26
217	0.0224593	6200.5	4395.9	143.20	287	0.0169817	8244.0	5857.3	151.36
218	0.0223563	6229.7	4416.8	143.33	288	0.0169227	8273.2	5878.2	151.46
219	0.0222542	6258.9	4437.7	143.47	289	0.0168642	8302.4	5899.1	151.56
220	0.0221530	6288.1	4458.6	143.60	290	0.0168060	8331.6	5920.0	151.67
221	0.0220528	6317.3	4479.4	143.73	291	0.0167483	8360.8	5940.9	151.77
222	0.0219535	6346.5	4500.3	143.86	292	0.0166909	8390.0	5961.7	151.87
223	0.0218550	6375.7	4521.2	144.00	293	0.0166340	8419.2	5982.6	151.97
224	0.0217575	6404.9	4542.1	144.13	294	0.0165774	8448.4	6003.5	152.07
225	0.0216608	6434.1	4563.0	144.26	295	0.0165212	8477.6	6024.4	152.16
226	0.0215649	6463.3	4583.8	144.39	296	0.0164654	8506.8	6045.3	152.26
227	0.0214699	6492.5	4604.7	144.51	297	0.0164100	8536.0	6066.2	152.36
228	0.0213758	6521.7	4625.6	144.64	298	0.0163549	8565.2	6087.0	152.46
229	0.0212824	6550.9	4646.5	144.77	299	0.0163002	8594.4	6107.9	152.56
230	0.0211899	6580.1	4667.3	144.90	300	0.0162459	8623.6	6128.8	152.66

0.50 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
19	43.0267	-641.1	-642.3	18.65					
20	42.5161	-615.2	-616.4	20.01					
21	41.9812	-587.6	-588.8	21.34					
* 21.466	41.7227	-574.4	-575.6	21.96	91	0.0669908	2480.1	1723.9	115.61
* 21.466	0.298147	681.1	511.1	80.45	92	0.0662607	2510.3	1745.7	115.94
22	0.290589	689.1	514.8	80.82	93	0.0655464	2540.5	1767.5	116.27
23	0.277198	705.7	523.0	81.55	94	0.0648473	2570.6	1789.4	116.59
24	0.264808	723.9	532.6	82.33	95	0.0641631	2600.8	1811.2	116.91
25	0.253382	743.1	543.1	83.11	96	0.0634931	2630.9	1833.0	117.23
26	0.242856	763.1	554.4	83.90	97	0.0628371	2661.1	1854.8	117.54
27	0.233151	783.6	566.3	84.68	98	0.0621945	2691.2	1876.6	117.85
28	0.224191	804.5	578.6	85.44	99	0.0615649	2721.4	1898.4	118.15
29	0.215900	825.8	591.1	86.18	100	0.0609480	2751.5	1920.3	118.46
30	0.208211	847.1	603.8	86.92					
31	0.201064	868.9	616.9	87.62	101	0.0603434	2781.6	1942.0	118.76
32	0.194405	890.8	630.2	88.31	102	0.0597506	2811.8	1963.9	119.05
33	0.188185	912.7	643.5	88.99	103	0.0591694	2841.9	1985.7	119.35
34	0.182362	934.8	657.0	89.65	104	0.0585995	2872.0	2007.4	119.64
35	0.176900	957.0	670.7	90.29	105	0.0580404	2902.1	2029.2	119.93
36	0.171765	979.4	684.4	90.93	106	0.0574919	2932.1	2050.9	120.21
37	0.166929	1001.9	698.4	91.54	107	0.0569538	2962.2	2072.7	120.49
38	0.162365	1024.5	712.5	92.15	108	0.0564256	2992.3	2094.4	120.77
39	0.158051	1047.3	726.8	92.74	109	0.0559071	3022.3	2116.1	121.05
40	0.153966	1070.3	741.2	93.33	110	0.0553981	3052.3	2137.8	121.32
41	0.150093	1093.5	755.9	93.89	111	0.0548983	3082.3	2159.4	121.59
42	0.146414	1116.8	770.8	94.45	112	0.0544075	3112.3	2181.1	121.86
43	0.142916	1140.4	785.9	95.01	113	0.0539253	3142.2	2202.7	122.13
44	0.139584	1164.1	801.2	95.55	114	0.0534517	3172.2	2224.4	122.39
45	0.136408	1188.1	816.7	96.09	115	0.0529863	3202.1	2246.0	122.65
46	0.133375	1212.3	832.4	96.62	116	0.0525289	3232.0	2267.5	122.91
47	0.130478	1236.7	848.4	97.15	117	0.0520794	3261.9	2289.1	123.17
48	0.127705	1261.3	864.6	97.67	118	0.0516376	3291.8	2310.7	123.42
49	0.125050	1286.1	881.0	98.18	119	0.0512031	3321.6	2332.2	123.68
50	0.122505	1311.2	897.6	98.69	120	0.0507760	3351.5	2353.7	123.93
51	0.120063	1336.5	914.5	99.19	121	0.0503559	3381.3	2375.2	124.17
52	0.117718	1362.0	931.6	99.69	122	0.0499427	3411.1	2396.7	124.42
53	0.115464	1387.7	949.0	100.18	123	0.0495363	3440.9	2418.2	124.66
54	0.113296	1413.7	966.5	100.66	124	0.0491364	3470.7	2439.6	124.90
55	0.111209	1439.9	984.3	101.14	125	0.0487429	3500.4	2461.0	125.14
56	0.109199	1466.3	1002.4	101.62	126	0.0483557	3530.2	2482.5	125.38
57	0.107260	1493.0	1020.6	102.09	127	0.0479746	3559.9	2503.9	125.61
58	0.105390	1519.8	1039.1	102.56	128	0.0475995	3589.6	2525.2	125.85
59	0.103585	1546.8	1057.7	103.02	129	0.0472302	3619.3	2546.6	126.08
60	0.101841	1574.1	1076.6	103.48	130	0.0468666	3649.0	2568.0	126.31
61	0.100155	1601.5	1095.7	103.93	131	0.0465086	3678.6	2589.3	126.53
62	0.0985253	1629.2	1115.0	104.38	132	0.0461559	3708.2	2610.6	126.76
63	0.0969478	1657.0	1134.4	104.83	133	0.0458086	3737.8	2631.9	126.98
64	0.0954203	1684.9	1154.0	105.27	134	0.0454665	3767.5	2653.2	127.21
65	0.0939407	1713.1	1173.8	105.70	135	0.0451295	3797.1	2674.5	127.43
66	0.0925066	1741.4	1193.7	106.14	136	0.0447975	3826.7	2695.7	127.64
67	0.0911159	1769.8	1213.8	106.56	137	0.0444702	3856.2	2717.0	127.86
68	0.0897667	1798.4	1234.0	106.99	138	0.0441478	3885.8	2738.3	128.08
69	0.0884571	1827.2	1254.4	107.41	139	0.0438300	3915.4	2759.5	128.29
70	0.0871855	1856.0	1274.9	107.82	140	0.0435167	3944.9	2780.7	128.50
71	0.0859501	1885.1	1295.7	108.23	141	0.0432079	3974.4	2801.9	128.71
72	0.0847494	1914.3	1316.5	108.64	142	0.0429035	4003.9	2823.1	128.92
73	0.0835820	1943.6	1337.4	109.04	143	0.0426033	4033.4	2844.3	129.13
74	0.0824465	1972.9	1358.4	109.44	144	0.0423072	4062.9	2865.4	129.33
75	0.0813416	2002.3	1379.4	109.84	145	0.0420153	4092.4	2886.6	129.54
76	0.0802661	2031.7	1400.5	110.23	146	0.0417274	4121.9	2907.7	129.74
77	0.0792188	2061.2	1421.7	110.61	147	0.0414434	4151.3	2928.9	129.94
78	0.0781986	2090.8	1442.9	110.99	148	0.0411632	4180.8	2950.0	130.14
79	0.0772044	2120.4	1464.2	111.37	149	0.0408868	4210.3	2971.2	130.34
80	0.0762353	2150.1	1485.5	111.75	150	0.0406141	4239.7	2992.3	130.53
81	0.0752904	2180.0	1507.1	112.12	151	0.0403451	4269.1	3013.4	130.73
82	0.0743686	2209.8	1528.6	112.48	152	0.0400795	4298.5	3034.4	130.92
83	0.0734693	2239.8	1550.2	112.85	153	0.0398174	4327.9	3055.5	131.12
84	0.0725915	2269.7	1571.8	113.21	154	0.0395588	4357.3	3076.6	131.31
85	0.0717346	2299.7	1593.5	113.56	155	0.0393035	4386.7	3097.7	131.50
86	0.0708977	2329.7	1615.2	113.91	156	0.0390514	4416.1	3118.7	131.69
87	0.0700801	2359.8	1636.9	114.26	157	0.0388026	4445.4	3139.8	131.87
88	0.0692813	2389.8	1658.6	114.60	158	0.0385569	4474.8	3160.8	132.06
89	0.0685005	2419.9	1680.3	114.94	159	0.0383143	4504.2	3181.9	132.25
90	0.0677372	2450.0	1702.1	115.28	160	0.0380748	4533.5	3202.9	132.43

* PHASE CHANGE

0.50 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	0.0378382	4562.9	3223.9	132.61	231	0.0263711	6609.2	4688.1	143.17
162	0.0376046	4592.2	3244.9	132.80	232	0.0262574	6638.4	4709.0	143.30
163	0.0373738	4621.5	3266.0	132.98	233	0.0261447	6667.6	4729.9	143.42
164	0.0371459	4650.8	3287.0	133.15	234	0.0260330	6696.8	4750.7	143.55
165	0.0369207	4680.2	3308.0	133.33	235	0.0259222	6726.0	4771.6	143.67
166	0.0366982	4709.5	3329.0	133.51	236	0.0258124	6755.2	4792.5	143.79
167	0.0364784	4738.8	3350.0	133.69	237	0.0257035	6784.4	4813.4	143.92
168	0.0362612	4768.1	3371.0	133.86	238	0.0255955	6813.6	4834.2	144.04
169	0.0360466	4797.4	3391.9	134.04	239	0.0254884	6842.8	4855.1	144.16
170	0.0358345	4826.7	3412.9	134.21	240	0.0253822	6872.0	4876.0	144.29
171	0.0356249	4856.0	3433.9	134.38	241	0.0252769	6901.2	4896.9	144.41
172	0.0354177	4885.3	3454.8	134.55	242	0.0251725	6930.4	4917.8	144.53
173	0.0352130	4914.6	3475.8	134.72	243	0.0250689	6959.6	4938.6	144.65
174	0.0350105	4943.8	3496.8	134.89	244	0.0249661	6988.8	4959.5	144.77
175	0.0348104	4973.1	3517.7	135.06	245	0.0248643	7017.9	4980.4	144.89
176	0.0346126	5002.4	3538.7	135.22	246	0.0247632	7047.1	5001.3	145.01
177	0.0344170	5031.6	3559.6	135.39	247	0.0246629	7076.3	5022.1	145.12
178	0.0342236	5060.9	3580.6	135.55	248	0.0245635	7105.5	5043.0	145.24
179	0.0340324	5090.2	3601.5	135.72	249	0.0244649	7134.7	5063.9	145.36
180	0.0338433	5119.4	3622.5	135.88	250	0.0243670	7163.9	5084.8	145.48
181	0.0336563	5148.7	3643.4	136.04	251	0.0242699	7193.1	5105.6	145.59
182	0.0334713	5177.9	3664.3	136.20	252	0.0241736	7222.3	5126.5	145.71
183	0.0332884	5207.2	3685.3	136.36	253	0.0240781	7251.5	5147.4	145.82
184	0.0331075	5236.4	3706.2	136.52	254	0.0239833	7280.7	5168.3	145.94
185	0.0329285	5265.7	3727.1	136.68	255	0.0238893	7309.8	5189.1	146.05
186	0.0327514	5294.9	3748.0	136.84	256	0.0237959	7339.0	5210.0	146.17
187	0.0325763	5324.2	3769.0	137.00	257	0.0237034	7368.2	5230.9	146.28
188	0.0324030	5353.4	3789.9	137.15	258	0.0236115	7397.4	5251.8	146.40
189	0.0322315	5382.6	3810.8	137.31	259	0.0235203	7426.6	5272.6	146.51
190	0.0320618	5411.9	3831.7	137.46	260	0.0234299	7455.8	5293.5	146.62
191	0.0318940	5441.1	3852.6	137.62	261	0.0233401	7485.0	5314.4	146.73
192	0.0317278	5470.3	3873.5	137.77	262	0.0232510	7514.2	5335.3	146.85
193	0.0315634	5499.5	3894.4	137.92	263	0.0231627	7543.4	5356.1	146.96
194	0.0314007	5528.8	3915.3	138.07	264	0.0230749	7572.6	5377.0	147.07
195	0.0312397	5558.0	3936.2	138.22	265	0.0229879	7601.8	5397.9	147.18
196	0.0310803	5587.2	3957.1	138.37	266	0.0229014	7631.0	5418.8	147.29
197	0.0309225	5616.4	3978.0	138.52	267	0.0228157	7660.2	5439.7	147.40
198	0.0307663	5645.6	3998.9	138.67	268	0.0227306	7689.4	5460.5	147.51
199	0.0306117	5674.8	4019.8	138.82	269	0.0226461	7718.6	5481.4	147.62
200	0.0304586	5704.1	4040.7	138.96	270	0.0225622	7747.8	5502.3	147.72
201	0.0303071	5733.3	4061.6	139.11	271	0.0224790	7776.9	5523.2	147.83
202	0.0301570	5762.5	4082.5	139.25	272	0.0223963	7806.1	5544.1	147.94
203	0.0300085	5791.7	4103.4	139.40	273	0.0223143	7835.3	5564.9	148.05
204	0.0298614	5820.9	4124.3	139.54	274	0.0222329	7864.5	5585.8	148.15
205	0.0297157	5850.1	4145.2	139.68	275	0.0221520	7893.7	5606.7	148.26
206	0.0295714	5879.3	4166.1	139.82	276	0.0220718	7922.9	5627.6	148.36
207	0.0294286	5908.5	4187.0	139.97	277	0.0219921	7952.1	5648.4	148.47
208	0.0292871	5937.7	4207.9	140.11	278	0.0219130	7981.3	5669.3	148.58
209	0.0291470	5966.9	4228.8	140.25	279	0.0218345	8010.5	5690.2	148.68
210	0.0290082	5996.1	4249.7	140.39	280	0.0217565	8039.7	5711.1	148.79
211	0.0288707	6025.3	4270.5	140.53	281	0.0216791	8068.9	5732.0	148.89
212	0.0287345	6054.5	4291.4	140.66	282	0.0216022	8098.1	5752.8	148.99
213	0.0285996	6083.7	4312.3	140.80	283	0.0215259	8127.3	5773.7	149.10
214	0.0284660	6112.9	4333.2	140.94	284	0.0214501	8156.5	5794.6	149.20
215	0.0283336	6142.1	4354.1	141.07	285	0.0213748	8185.7	5815.5	149.30
216	0.0282024	6171.3	4374.9	141.21	286	0.0213001	8214.9	5836.4	149.40
217	0.0280724	6200.5	4395.8	141.34	287	0.0212259	8244.1	5857.3	149.51
218	0.0279436	6229.7	4416.7	141.48	288	0.0211522	8273.3	5878.1	149.61
219	0.0278160	6258.9	4437.6	141.61	289	0.0210790	8302.5	5899.0	149.71
220	0.0276896	6288.1	4458.5	141.75	290	0.0210064	8331.7	5919.9	149.81
221	0.0275643	6317.3	4479.3	141.88	291	0.0209342	8360.9	5940.8	149.91
222	0.0274402	6346.5	4500.2	142.01	292	0.0208625	8390.1	5961.7	150.01
223	0.0273171	6375.7	4521.1	142.14	293	0.0207913	8419.3	5982.5	150.11
224	0.0271952	6404.9	4542.0	142.27	294	0.0207206	8448.5	6003.4	150.21
225	0.0270743	6434.1	4562.9	142.40	295	0.0206504	8477.7	6024.3	150.31
226	0.0269545	6463.3	4583.7	142.53	296	0.0205806	8506.9	6045.2	150.41
227	0.0268358	6492.5	4604.6	142.66	297	0.0205113	8536.1	6066.1	150.51
228	0.0267181	6521.7	4625.5	142.79	298	0.0204425	8565.3	6087.0	150.60
229	0.0266014	6550.9	4646.4	142.92	299	0.0203741	8594.5	6107.8	150.70
230	0.0264857	6580.1	4667.2	143.04	300	0.0203062	8623.7	6128.7	150.80

0.60 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
19	43.0302	-640.9	-642.4	18.65					
20	42.5199	-615.0	-616.5	20.01					
21	41.9854	-587.4	-588.9	21.34					
22	41.4228	-558.9	-560.4	22.66	91	0.0803957	2479.7	1723.5	114.09
* 22.004	41.4206	-558.8	-560.3	22.67	92	0.0795190	2509.9	1745.4	114.42
* 22.004	0.352459	687.3	514.8	79.30	93	0.0786613	2540.1	1767.2	114.75
23	0.335992	703.1	522.2	80.00	94	0.0778220	2570.2	1789.0	115.07
24	0.320697	720.8	531.2	80.75	95	0.0770004	2600.4	1810.9	115.39
25	0.306606	739.8	541.5	81.53	96	0.0761961	2630.6	1832.7	115.71
26	0.293642	759.6	552.6	82.31	97	0.0754084	2660.7	1854.5	116.02
27	0.281709	780.1	564.3	83.09	98	0.0746369	2690.9	1876.3	116.33
28	0.270709	801.1	576.5	83.85	99	0.0738811	2721.0	1898.1	116.63
29	0.260548	822.4	589.1	84.60	100	0.0731405	2751.2	1920.0	116.94
30	0.251140	843.8	601.8	85.33					
31	0.242407	865.7	614.9	86.04	101	0.0724146	2781.3	1941.7	117.24
32	0.234281	887.7	628.2	86.74	102	0.0717030	2811.4	1963.6	117.53
33	0.226701	909.8	641.6	87.42	103	0.0710053	2841.6	1985.4	117.83
34	0.219613	932.0	655.2	88.08	104	0.0703211	2871.7	2007.1	118.12
35	0.212972	954.3	668.9	88.73	105	0.0696500	2901.8	2028.9	118.41
36	0.206734	976.8	682.7	89.36	106	0.0689916	2931.9	2050.7	118.69
37	0.200865	999.4	696.7	89.98	107	0.0683455	2961.9	2072.4	118.97
38	0.195331	1022.1	710.9	90.59	108	0.0677115	2992.0	2094.1	119.25
39	0.190103	1045.0	725.2	91.18	109	0.0670892	3022.0	2115.8	119.53
40	0.185157	1068.1	739.8	91.77	110	0.0664782	3052.0	2137.5	119.81
41	0.180470	1091.4	754.5	92.34	111	0.0658782	3082.0	2159.2	120.08
42	0.176021	1114.8	769.4	92.90	112	0.0652890	3112.0	2180.8	120.35
43	0.171792	1138.5	784.6	93.46	113	0.0647103	3142.0	2202.5	120.61
44	0.167767	1162.3	799.9	94.01	114	0.0641418	3171.9	2224.1	120.88
45	0.163931	1186.3	815.5	94.55	115	0.0635832	3201.9	2245.7	121.14
46	0.160271	1210.6	831.3	95.08	116	0.0630342	3231.8	2267.3	121.40
47	0.156774	1235.0	847.3	95.61	117	0.0624947	3261.7	2288.9	121.65
48	0.153430	1259.7	863.5	96.13	118	0.0619643	3291.6	2310.4	121.91
49	0.150228	1284.6	879.9	96.65	119	0.0614429	3321.4	2332.0	122.16
50	0.147160	1309.8	896.6	97.16	120	0.0609302	3351.3	2353.5	122.41
51	0.144217	1335.1	913.6	97.66	121	0.0604260	3381.1	2375.0	122.66
52	0.141391	1360.7	930.7	98.15	122	0.0599301	3410.9	2396.4	122.90
53	0.138676	1386.4	948.1	98.64	123	0.0594423	3440.7	2417.9	123.14
54	0.136065	1412.5	965.7	99.13	124	0.0589624	3470.5	2439.4	123.39
55	0.133552	1438.7	983.5	99.61	125	0.0584901	3500.2	2460.8	123.62
56	0.131131	1465.2	1001.5	100.09	126	0.0580254	3530.0	2482.2	123.86
57	0.128798	1491.9	1019.8	100.56	127	0.0575680	3559.7	2503.6	124.10
58	0.126547	1518.7	1038.3	101.03	128	0.0571178	3589.4	2525.0	124.33
59	0.124375	1545.8	1057.0	101.49	129	0.0566746	3619.1	2546.4	124.56
60	0.122277	1573.1	1075.9	101.95	130	0.0562382	3648.8	2567.8	124.79
61	0.120249	1600.6	1095.0	102.41	131	0.0558085	3678.4	2589.1	125.02
62	0.118288	1628.2	1114.3	102.86	132	0.0553853	3708.1	2610.4	125.24
63	0.116391	1656.1	1133.8	103.30	133	0.0549685	3737.7	2631.7	125.47
64	0.114554	1684.0	1153.3	103.74	134	0.0545579	3767.3	2653.0	125.69
65	0.112775	1712.3	1173.2	104.18	135	0.0541535	3796.9	2674.3	125.91
66	0.111051	1740.6	1193.1	104.61	136	0.0537549	3826.5	2695.5	126.13
67	0.109379	1769.0	1213.2	105.04	137	0.0533623	3856.1	2716.8	126.34
68	0.107757	1797.6	1233.5	105.46	138	0.0529753	3885.7	2738.1	126.56
69	0.106183	1826.4	1253.9	105.88	139	0.0525939	3915.2	2759.3	126.77
70	0.104654	1855.2	1274.3	106.30	140	0.0522179	3944.8	2780.5	126.98
71	0.103170	1884.4	1295.1	106.71	141	0.0518473	3974.3	2801.7	127.19
72	0.101727	1913.6	1316.0	107.12	142	0.0514819	4003.8	2822.9	127.40
73	0.100324	1942.9	1336.9	107.52	143	0.0511217	4033.3	2844.1	127.61
74	0.0989600	1972.3	1357.9	107.92	144	0.0507664	4062.8	2865.2	127.82
75	0.0976324	2001.7	1379.0	108.31	145	0.0504161	4092.3	2886.4	128.02
76	0.0963403	2031.1	1400.1	108.70	146	0.0500706	4121.8	2907.6	128.22
77	0.0950820	2060.6	1421.2	109.09	147	0.0497298	4151.2	2928.7	128.42
78	0.0938564	2090.2	1442.5	109.47	148	0.0493936	4180.7	2949.9	128.62
79	0.0926622	2119.8	1463.7	109.85	149	0.0490619	4210.1	2971.0	128.82
80	0.0914981	2149.5	1485.1	110.23	150	0.0487346	4239.6	2992.1	129.02
81	0.0903630	2179.4	1506.6	110.60	151	0.0484117	4269.0	3013.2	129.21
82	0.0892559	2209.3	1528.2	110.96	152	0.0480930	4298.4	3034.3	129.41
83	0.0881757	2239.3	1549.8	111.33	153	0.0477785	4327.8	3055.4	129.60
84	0.0871215	2269.2	1571.4	111.69	154	0.0474681	4357.2	3076.4	129.79
85	0.0860923	2299.2	1593.1	112.04	155	0.0471618	4386.6	3097.5	129.98
86	0.0850872	2329.3	1614.8	112.39	156	0.0468593	4416.0	3118.6	130.17
87	0.0841055	2359.3	1636.5	112.74	157	0.0465607	4445.3	3139.6	130.36
88	0.0831462	2389.4	1658.2	113.08	158	0.0462659	4474.7	3160.7	130.54
89	0.0822086	2419.5	1680.0	113.42	159	0.0459748	4504.1	3181.7	130.73
90	0.0812920	2449.6	1701.7	113.76	160	0.0456873	4533.4	3202.8	130.91

* PHASE CHANGE

0.60 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	0.0454034	4562.8	3223.8	131.10	231	0.0316434	6609.3	4688.0	141.65
162	0.0451231	4592.1	3244.8	131.28	232	0.0315070	6638.5	4708.9	141.78
163	0.0448461	4621.4	3265.8	131.46	233	0.0313718	6667.7	4729.8	141.90
164	0.0445726	4650.8	3286.8	131.64	234	0.0312377	6696.8	4750.6	142.03
165	0.0443024	4680.1	3307.8	131.82	235	0.0311048	6726.0	4771.5	142.15
166	0.0440354	4709.4	3328.8	131.99	236	0.0309730	6755.2	4792.4	142.28
167	0.0437716	4738.7	3349.8	132.17	237	0.0308423	6784.4	4813.3	142.40
168	0.0435110	4768.0	3370.8	132.34	238	0.0307127	6813.6	4834.2	142.52
169	0.0432535	4797.3	3391.8	132.52	239	0.0305842	6842.8	4855.0	142.65
170	0.0429990	4826.6	3412.8	132.69	240	0.0304568	6872.0	4875.9	142.77
171	0.0427474	4855.9	3433.7	132.86	241	0.0303304	6901.2	4896.8	142.89
172	0.0424988	4885.2	3454.7	133.03	242	0.0302051	6930.4	4917.7	143.01
173	0.0422531	4914.5	3475.7	133.20	243	0.0300808	6959.6	4938.5	143.13
174	0.0420102	4943.8	3496.6	133.37	244	0.0299576	6988.8	4959.4	143.25
175	0.0417701	4973.0	3517.6	133.54	245	0.0298353	7018.0	4980.3	143.37
176	0.0415327	5002.3	3538.5	133.71	246	0.0297140	7047.2	5001.2	143.49
177	0.0412980	5031.6	3559.5	133.87	247	0.0295937	7076.4	5022.0	143.61
178	0.0410660	5060.9	3580.4	134.04	248	0.0294744	7105.6	5042.9	143.73
179	0.0408365	5090.1	3601.4	134.20	249	0.0293561	7134.7	5063.8	143.84
180	0.0406096	5119.4	3622.3	134.37	250	0.0292386	7163.9	5084.7	143.96
181	0.0403852	5148.6	3643.3	134.53	251	0.0291222	7193.1	5105.5	144.08
182	0.0401632	5177.9	3664.2	134.69	252	0.0290066	7222.3	5126.4	144.19
183	0.0399437	5207.1	3685.1	134.85	253	0.0288920	7251.5	5147.3	144.31
184	0.0397266	5236.4	3706.1	135.01	254	0.0287782	7280.7	5168.2	144.42
185	0.0395118	5265.6	3727.0	135.17	255	0.0286654	7309.9	5189.0	144.54
186	0.0392994	5294.9	3747.9	135.32	256	0.0285534	7339.1	5209.9	144.65
187	0.0390892	5324.1	3768.8	135.48	257	0.0284423	7368.3	5230.8	144.77
188	0.0388812	5353.4	3789.8	135.64	258	0.0283321	7397.5	5251.7	144.88
189	0.0386755	5382.6	3810.7	135.79	259	0.0282227	7426.7	5272.5	144.99
190	0.0384719	5411.8	3831.6	135.95	260	0.0281142	7455.9	5293.4	145.11
191	0.0382705	5441.1	3852.5	136.10	261	0.0280065	7485.0	5314.3	145.22
192	0.0380711	5470.3	3873.4	136.25	262	0.0278996	7514.2	5335.2	145.33
193	0.0378738	5499.5	3894.3	136.40	263	0.0277935	7543.4	5356.1	145.44
194	0.0376786	5528.7	3915.2	136.55	264	0.0276883	7572.6	5376.9	145.55
195	0.0374853	5557.9	3936.1	136.70	265	0.0275838	7601.8	5397.8	145.66
196	0.0372941	5587.2	3957.0	136.85	266	0.0274801	7631.0	5418.7	145.77
197	0.0371047	5616.4	3977.9	137.00	267	0.0273772	7660.2	5439.6	145.88
198	0.0369173	5645.6	3998.8	137.15	268	0.0272751	7689.4	5460.5	145.99
199	0.0367318	5674.8	4019.7	137.30	269	0.0271737	7718.6	5481.3	146.10
200	0.0365481	5704.0	4040.6	137.45	270	0.0270730	7747.8	5502.2	146.21
201	0.0363663	5733.3	4061.5	137.59	271	0.0269732	7777.0	5523.1	146.32
202	0.0361862	5762.5	4082.4	137.74	272	0.0268740	7806.2	5544.0	146.42
203	0.0360080	5791.7	4103.3	137.88	273	0.0267756	7835.4	5564.8	146.53
204	0.0358315	5820.9	4124.2	138.02	274	0.0266779	7864.6	5585.7	146.64
205	0.0356567	5850.1	4145.1	138.17	275	0.0265809	7893.8	5606.6	146.74
206	0.0354836	5879.3	4166.0	138.31	276	0.0264846	7923.0	5627.5	146.85
207	0.0353121	5908.5	4186.9	138.45	277	0.0263890	7952.2	5648.4	146.95
208	0.0351424	5937.7	4207.8	138.59	278	0.0262941	7981.4	5669.2	147.06
209	0.0349742	5966.9	4228.6	138.73	279	0.0261998	8010.6	5690.1	147.16
210	0.0348077	5996.1	4249.5	138.87	280	0.0261063	8039.8	5711.0	147.27
211	0.0346427	6025.3	4270.4	139.01	281	0.0260134	8068.9	5731.9	147.37
212	0.0344793	6054.5	4291.3	139.15	282	0.0259211	8098.1	5752.8	147.48
213	0.0343174	6083.7	4312.2	139.28	283	0.0258296	8127.3	5773.6	147.58
214	0.0341570	6112.9	4333.1	139.42	284	0.0257386	8156.5	5794.5	147.68
215	0.0339982	6142.1	4354.0	139.56	285	0.0256483	8185.7	5815.4	147.79
216	0.0338408	6171.3	4374.8	139.69	286	0.0255587	8214.9	5836.3	147.89
217	0.0336848	6200.5	4395.7	139.83	287	0.0254696	8244.1	5857.2	147.99
218	0.0335303	6229.7	4416.6	139.96	288	0.0253812	8273.3	5878.1	148.09
219	0.0333772	6258.9	4437.5	140.10	289	0.0252934	8302.5	5898.9	148.19
220	0.0332255	6288.1	4458.4	140.23	290	0.0252062	8331.7	5919.8	148.29
221	0.0330752	6317.3	4479.2	140.36	291	0.0251196	8360.9	5940.7	148.39
222	0.0329262	6346.5	4500.1	140.49	292	0.0250336	8390.1	5961.6	148.49
223	0.0327785	6375.7	4521.0	140.62	293	0.0249481	8419.3	5982.5	148.59
224	0.0326322	6404.9	4541.9	140.75	294	0.0248633	8448.5	6003.3	148.69
225	0.0324872	6434.1	4562.8	140.88	295	0.0247790	8477.7	6024.2	148.79
226	0.0323434	6463.3	4583.6	141.01	296	0.0246953	8506.9	6045.1	148.89
227	0.0322009	6492.5	4604.5	141.14	297	0.0246122	8536.1	6066.0	148.99
228	0.0320597	6521.7	4625.4	141.27	298	0.0245296	8565.3	6086.9	149.09
229	0.0319197	6550.9	4646.3	141.40	299	0.0244476	8594.5	6107.8	149.19
230	0.0317809	6580.1	4667.1	141.53	300	0.0243661	8623.7	6128.7	149.28

0.70 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
19	43.0337	-640.8	-642.4	18.65					
20	42.5238	-614.9	-616.5	20.00					
21	41.9895	-587.3	-588.9	21.34					
22	41.4273	-558.7	-560.5	22.66	91	0.0938029	2479.3	1723.2	112.81
* 22.479	41.1475	-544.8	-546.5	23.28	92	0.0927794	2509.5	1745.0	113.14
* 22.479	0.406290	692.1	517.5	78.31	93	0.0917782	2539.7	1766.9	113.46
23	0.396099	700.3	521.3	78.67	94	0.0907984	2569.9	1788.7	113.79
24	0.377704	717.6	529.8	79.41	95	0.0898394	2600.0	1810.5	114.11
25	0.360784	736.4	539.8	80.18	96	0.0889005	2630.2	1832.4	114.42
26	0.345245	756.1	550.7	80.95	97	0.0879811	2660.4	1854.2	114.73
27	0.330969	776.6	562.3	81.73	98	0.0870806	2690.5	1876.0	115.04
28	0.317832	797.6	574.4	82.49	99	0.0861984	2720.7	1897.8	115.35
29	0.305720	819.0	587.0	83.24	100	0.0853339	2750.8	1919.7	115.65
30	0.294523	840.5	599.7	83.98					
31	0.284146	862.5	612.9	84.69	101	0.0844867	2781.0	1941.4	115.95
32	0.274504	884.6	626.2	85.39	102	0.0836562	2811.1	1963.3	116.25
33	0.265522	906.8	639.7	86.08	103	0.0828419	2841.3	1985.1	116.54
34	0.257134	929.2	653.3	86.74	104	0.0820433	2871.4	2006.9	116.83
35	0.249282	951.6	667.1	87.39	105	0.0812600	2901.5	2028.6	117.12
36	0.241916	974.2	681.0	88.03	106	0.0804916	2931.6	2050.4	117.41
37	0.234990	996.9	695.1	88.65	107	0.0797376	2961.6	2072.1	117.69
38	0.228465	1019.8	709.3	89.26	108	0.0789977	2991.7	2093.8	117.97
39	0.222307	1042.8	723.7	89.86	109	0.0782714	3021.7	2115.5	118.25
40	0.216484	1065.9	738.3	90.45	110	0.0775583	3051.8	2137.2	118.52
41	0.210970	1089.3	753.1	91.03	111	0.0768582	3081.7	2158.9	118.79
42	0.205738	1112.8	768.1	91.59	112	0.0761706	3111.7	2180.6	119.06
43	0.200768	1136.6	783.3	92.15	113	0.0754953	3141.7	2202.2	119.33
44	0.196040	1160.5	798.7	92.70	114	0.0748318	3171.7	2223.9	119.59
45	0.191536	1184.6	814.3	93.24	115	0.0741799	3201.6	2245.5	119.85
46	0.187240	1208.9	830.1	93.78	116	0.0735393	3231.5	2267.1	120.11
47	0.183138	1233.4	846.1	94.30	117	0.0729097	3261.4	2288.6	120.37
48	0.179216	1258.2	862.4	94.83	118	0.0722909	3291.3	2310.2	120.62
49	0.175462	1283.1	878.9	95.34	119	0.0716824	3321.2	2331.7	120.87
50	0.171866	1308.3	895.6	95.85	120	0.0710841	3351.1	2353.3	121.13
51	0.168418	1333.7	912.6	96.36	121	0.0704958	3380.9	2374.7	121.37
52	0.165108	1359.3	929.8	96.85	122	0.0699171	3410.6	2396.2	121.62
53	0.161928	1385.2	947.2	97.35	123	0.0693479	3440.5	2417.7	121.86
54	0.158870	1411.2	964.8	97.83	124	0.0687879	3470.3	2439.2	122.10
55	0.155928	1437.5	982.7	98.32	125	0.0682368	3500.0	2460.6	122.34
56	0.153095	1464.0	1000.7	98.79	126	0.0676946	3529.8	2482.0	122.58
57	0.150364	1490.8	1019.1	99.27	127	0.0671609	3559.5	2503.4	122.81
58	0.147731	1517.7	1037.6	99.73	128	0.0666356	3589.2	2524.8	123.05
59	0.145190	1544.8	1056.3	100.20	129	0.0661184	3618.9	2546.2	123.28
60	0.142735	1572.1	1075.2	100.66	130	0.0656092	3648.6	2567.6	123.51
61	0.140364	1599.6	1094.3	101.11	131	0.0651078	3678.3	2588.9	123.73
62	0.138071	1627.3	1113.6	101.56	132	0.0646140	3707.9	2610.2	123.96
63	0.135852	1655.2	1133.1	102.01	133	0.0641277	3737.5	2631.5	124.18
64	0.133705	1683.2	1152.7	102.45	134	0.0636487	3767.1	2652.8	124.41
65	0.131625	1711.4	1172.6	102.89	135	0.0631767	3796.7	2674.1	124.63
66	0.129609	1739.8	1192.5	103.32	136	0.0627117	3826.4	2695.3	124.84
67	0.127655	1768.2	1212.6	103.75	137	0.0622536	3855.9	2716.6	125.06
68	0.125760	1796.9	1232.9	104.17	138	0.0618020	3885.5	2737.9	125.28
69	0.123920	1825.7	1253.3	104.59	139	0.0613570	3915.1	2759.1	125.49
70	0.122134	1854.5	1273.8	105.01	140	0.0609184	3944.7	2780.4	125.70
71	0.120400	1883.7	1294.6	105.42	141	0.0604860	3974.2	2801.5	125.91
72	0.118714	1912.9	1315.5	105.83	142	0.0600597	4003.7	2822.7	126.12
73	0.117075	1942.3	1336.4	106.23	143	0.0596394	4033.2	2843.9	126.33
74	0.115481	1971.6	1357.4	106.63	144	0.0592249	4062.7	2865.1	126.53
75	0.113930	2001.0	1378.5	107.03	145	0.0588161	4092.2	2886.2	126.74
76	0.112421	2030.5	1399.6	107.42	146	0.0584130	4121.6	2907.4	126.94
77	0.110951	2060.0	1420.8	107.80	147	0.0580154	4151.1	2928.5	127.14
78	0.109520	2089.6	1442.0	108.19	148	0.0576231	4180.6	2949.7	127.34
79	0.108125	2119.3	1463.3	108.56	149	0.0572361	4210.0	2970.8	127.54
80	0.106766	2149.0	1484.7	108.94	150	0.0568543	4239.5	2991.9	127.74
81	0.105440	2178.9	1506.2	109.31	151	0.0564776	4268.9	3013.0	127.93
82	0.104147	2208.8	1527.8	109.68	152	0.0561058	4298.3	3034.1	128.12
83	0.102886	2238.8	1549.4	110.04	153	0.0557388	4327.7	3055.2	128.32
84	0.101655	2268.7	1571.0	110.40	154	0.0553767	4357.1	3076.3	128.51
85	0.100453	2298.8	1592.7	110.75	155	0.0550192	4386.5	3097.3	128.70
86	0.0992802	2328.8	1614.4	111.11	156	0.0546664	4415.9	3118.4	128.89
87	0.0981339	2358.9	1636.1	111.45	157	0.0543180	4445.2	3139.5	129.08
88	0.0970139	2388.9	1657.8	111.80	158	0.0539740	4474.6	3160.5	129.26
89	0.0959193	2419.1	1679.6	112.14	159	0.0536344	4504.0	3181.6	129.45
90	0.0948492	2449.2	1701.4	112.47	160	0.0532990	4533.4	3202.6	129.63

* PHASE CHANGE

0.70 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	0.0529678	4562.7	3223.6	129.81	231	0.0369150	6609.3	4687.9	140.37
162	0.0526407	4592.0	3244.6	130.00	232	0.0367559	6638.5	4708.8	140.50
163	0.0523177	4621.4	3265.6	130.18	233	0.0365982	6667.7	4729.7	140.62
164	0.0519985	4650.7	3286.7	130.36	234	0.0364418	6696.9	4750.5	140.75
165	0.0516832	4680.0	3307.7	130.53	235	0.0362867	6726.1	4771.4	140.87
166	0.0513718	4709.3	3328.7	130.71	236	0.0361330	6755.3	4792.3	141.00
167	0.0510641	4738.6	3349.7	130.89	237	0.0359805	6784.4	4813.2	141.12
168	0.0507600	4768.0	3370.7	131.06	238	0.0358293	6813.6	4834.1	141.24
169	0.0504595	4797.3	3391.6	131.24	239	0.0356794	6842.8	4854.9	141.36
170	0.0501626	4826.6	3412.6	131.41	240	0.0355308	6872.0	4875.8	141.49
171	0.0498692	4855.9	3433.6	131.58	241	0.0353834	6901.2	4896.7	141.61
172	0.0495791	4885.2	3454.6	131.75	242	0.0352372	6930.4	4917.6	141.73
173	0.0492925	4914.4	3475.5	131.92	243	0.0350922	6959.6	4938.4	141.85
174	0.0490091	4943.7	3496.5	132.09	244	0.0349484	6988.8	4959.3	141.97
175	0.0487290	4973.0	3517.4	132.26	245	0.0348057	7018.0	4980.2	142.09
176	0.0484520	5002.3	3538.4	132.42	246	0.0346643	7047.2	5001.1	142.21
177	0.0481782	5031.5	3559.4	132.59	247	0.0345239	7076.4	5021.9	142.33
178	0.0479075	5060.8	3580.3	132.76	248	0.0343847	7105.6	5042.8	142.44
179	0.0476398	5090.1	3601.3	132.92	249	0.0342467	7134.8	5063.7	142.56
180	0.0473751	5119.3	3622.2	133.08	250	0.0341097	7164.0	5084.6	142.68
181	0.0471133	5148.6	3643.1	133.24	251	0.0339738	7193.1	5105.4	142.79
182	0.0468543	5177.8	3664.1	133.41	252	0.0338390	7222.3	5126.3	142.91
183	0.0465982	5207.1	3685.0	133.57	253	0.0337053	7251.5	5147.2	143.03
184	0.0463449	5236.3	3705.9	133.73	254	0.0335726	7280.7	5168.1	143.14
185	0.0460944	5265.6	3726.8	133.88	255	0.0334410	7309.9	5188.9	143.26
186	0.0458465	5294.8	3747.8	134.04	256	0.0333103	7339.1	5209.8	143.37
187	0.0456013	5324.1	3768.7	134.20	257	0.0331807	7368.3	5230.7	143.48
188	0.0453587	5353.3	3789.6	134.35	258	0.0330521	7397.5	5251.6	143.60
189	0.0451187	5382.6	3810.5	134.51	259	0.0329246	7426.7	5272.5	143.71
190	0.0448812	5411.8	3831.5	134.66	260	0.0327979	7455.9	5293.3	143.82
191	0.0446462	5441.0	3852.4	134.82	261	0.0326723	7485.1	5314.2	143.94
192	0.0444136	5470.2	3873.3	134.97	262	0.0325476	7514.3	5335.1	144.05
193	0.0441834	5499.5	3894.2	135.12	263	0.0324239	7543.5	5356.0	144.16
194	0.0439557	5528.7	3915.1	135.27	264	0.0323011	7572.7	5376.8	144.27
195	0.0437302	5557.9	3936.0	135.42	265	0.0321792	7601.9	5397.7	144.38
196	0.0435071	5587.1	3956.9	135.57	266	0.0320582	7631.1	5418.6	144.49
197	0.0432862	5616.4	3977.8	135.72	267	0.0319382	7660.3	5439.5	144.60
198	0.0430676	5645.6	3998.7	135.87	268	0.0318190	7689.5	5460.4	144.71
199	0.0428511	5674.8	4019.6	136.02	269	0.0317008	7718.7	5481.3	144.82
200	0.0426369	5704.0	4040.5	136.16	270	0.0315834	7747.9	5502.1	144.93
201	0.0424247	5733.2	4061.4	136.31	271	0.0314668	7777.0	5523.0	145.03
202	0.0422147	5762.4	4082.3	136.45	272	0.0313512	7806.2	5543.9	145.14
203	0.0420067	5791.7	4103.2	136.60	273	0.0312363	7835.4	5564.8	145.25
204	0.0418008	5820.9	4124.1	136.74	274	0.0311224	7864.6	5585.6	145.35
205	0.0415969	5850.1	4145.0	136.88	275	0.0310092	7893.8	5606.5	145.46
206	0.0413949	5879.3	4165.9	137.03	276	0.0308969	7923.0	5627.4	145.57
207	0.0411950	5908.5	4186.8	137.17	277	0.0307853	7952.2	5648.3	145.67
208	0.0409969	5937.7	4207.6	137.31	278	0.0306746	7981.4	5669.2	145.78
209	0.0408007	5966.9	4228.5	137.45	279	0.0305647	8010.6	5690.0	145.88
210	0.0406064	5996.1	4249.4	137.59	280	0.0304555	8039.8	5710.9	145.99
211	0.0404140	6025.3	4270.3	137.73	281	0.0303472	8069.0	5731.8	146.09
212	0.0402234	6054.5	4291.2	137.86	282	0.0302396	8098.2	5752.7	146.19
213	0.0400345	6083.7	4312.1	138.00	283	0.0301328	8127.4	5773.6	146.30
214	0.0398474	6112.9	4333.0	138.14	284	0.0300267	8156.6	5794.4	146.40
215	0.0396621	6142.1	4353.8	138.27	285	0.0299213	8185.8	5815.3	146.50
216	0.0394785	6171.3	4374.7	138.41	286	0.0298167	8215.0	5836.2	146.61
217	0.0392965	6200.5	4395.6	138.55	287	0.0297129	8244.2	5857.1	146.71
218	0.0391163	6229.7	4416.5	138.68	288	0.0296097	8273.4	5878.0	146.81
219	0.0389377	6258.9	4437.4	138.81	289	0.0295073	8302.6	5898.9	146.91
220	0.0387607	6288.1	4458.3	138.95	290	0.0294055	8331.8	5919.7	147.01
221	0.0385853	6317.3	4479.1	139.08	291	0.0293045	8361.0	5940.6	147.11
222	0.0384115	6346.5	4500.0	139.21	292	0.0292042	8390.2	5961.5	147.21
223	0.0382393	6375.7	4520.9	139.34	293	0.0291045	8419.4	5982.4	147.31
224	0.0380686	6404.9	4541.8	139.47	294	0.0290055	8448.6	6003.3	147.41
225	0.0378994	6434.1	4562.6	139.60	295	0.0289072	8477.8	6024.2	147.51
226	0.0377317	6463.3	4583.5	139.73	296	0.0288096	8507.0	6045.0	147.61
227	0.0375655	6492.5	4604.4	139.86	297	0.0287126	8536.2	6065.9	147.71
228	0.0374007	6521.7	4625.3	139.99	298	0.0286163	8565.4	6086.8	147.81
229	0.0372374	6550.9	4646.2	140.12	299	0.0285206	8594.6	6107.7	147.90
230	0.0370755	6580.1	4667.0	140.24	300	0.0284255	8623.8	6128.6	148.00

0.80 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
19	43.0372	-640.6	-642.5	18.65					
20	42.5276	-614.7	-616.6	20.00					
21	41.9937	-587.1	-589.0	21.33					
22	41.4318	-558.6	-560.5	22.65	91	0.107212	2478.9	1722.8	111.69
* 22.905	40.8966	-532.1	-534.1	23.83	92	0.106041	2509.1	1744.7	112.02
* 22.905	0.459774	695.9	519.6	77.44	93	0.104896	2539.3	1766.5	112.35
23	0.457623	697.4	520.3	77.51	94	0.103776	2569.5	1788.4	112.67
24	0.435904	714.3	528.4	78.23	95	0.102679	2599.6	1810.2	112.99
25	0.415970	732.8	538.0	78.99	96	0.101606	2629.8	1832.0	113.31
26	0.397704	752.5	548.7	79.76	97	0.100555	2660.0	1853.9	113.62
27	0.380958	773.0	560.2	80.54	98	0.0995254	2690.2	1875.7	113.93
28	0.365582	794.0	572.3	81.30	99	0.0985167	2720.3	1897.5	114.24
29	0.351431	815.5	584.9	82.06	100	0.0975283	2750.5	1919.4	114.54
30	0.338374	837.1	597.6	82.80					
31	0.326293	859.2	610.8	83.51	101	0.0965596	2780.6	1941.1	114.84
32	0.315084	881.5	624.2	84.22	102	0.0956101	2810.8	1963.0	115.14
33	0.304656	903.8	637.8	84.91	103	0.0946790	2840.9	1984.8	115.43
34	0.294930	926.3	651.4	85.58	104	0.0937660	2871.1	2006.6	115.72
35	0.285836	948.9	665.3	86.23	105	0.0928706	2901.2	2028.3	116.01
36	0.277312	971.6	679.3	86.87	106	0.0919921	2931.3	2050.1	116.29
37	0.269306	994.4	693.4	87.50	107	0.0911301	2961.3	2071.8	116.58
38	0.261770	1017.4	707.7	88.11	108	0.0902841	2991.4	2093.6	116.86
39	0.254663	1040.5	722.2	88.71	109	0.0894538	3021.4	2115.3	117.13
40	0.247948	1063.7	736.8	89.31	110	0.0886386	3051.5	2137.0	117.41
41	0.241592	1087.2	751.7	89.88	111	0.0878383	3081.5	2158.6	117.68
42	0.235566	1110.8	766.7	90.45	112	0.0870522	3111.5	2180.3	117.95
43	0.229845	1134.6	782.0	91.01	113	0.0862802	3141.5	2202.0	118.22
44	0.224404	1158.6	797.4	91.56	114	0.0855218	3171.4	2223.6	118.48
45	0.219224	1182.8	813.1	92.10	115	0.0847766	3201.4	2245.2	118.74
46	0.214285	1207.2	828.9	92.64	116	0.0840443	3231.3	2266.8	119.00
47	0.209570	1231.8	845.0	93.17	117	0.0833246	3261.2	2288.4	119.26
48	0.205064	1256.6	861.3	93.70	118	0.0826171	3291.1	2310.0	119.51
49	0.200753	1281.7	877.9	94.21	119	0.0819216	3321.0	2331.5	119.76
50	0.196624	1306.9	894.6	94.72	120	0.0812377	3350.8	2353.0	120.01
51	0.192666	1332.4	911.6	95.23	121	0.0805652	3380.6	2374.5	120.26
52	0.188868	1358.0	928.8	95.73	122	0.0799037	3410.4	2396.0	120.51
53	0.185219	1383.9	946.3	96.22	123	0.0792531	3440.3	2417.5	120.75
54	0.181712	1410.0	963.9	96.71	124	0.0786129	3470.1	2438.9	120.99
55	0.178339	1436.3	981.8	97.19	125	0.0779831	3499.8	2460.4	121.23
56	0.175090	1462.9	999.9	97.67	126	0.0773633	3529.6	2481.8	121.47
57	0.171960	1489.7	1018.3	98.14	127	0.0767532	3559.3	2503.2	121.70
58	0.168941	1516.6	1036.8	98.61	128	0.0761528	3589.0	2524.6	121.93
59	0.166029	1543.8	1055.5	99.08	129	0.0755616	3618.7	2546.0	122.17
60	0.163217	1571.1	1074.4	99.54	130	0.0749796	3648.4	2567.4	122.40
61	0.160500	1598.7	1093.6	99.99	131	0.0744065	3678.1	2588.7	122.62
62	0.157873	1626.4	1112.9	100.44	132	0.0738422	3707.7	2610.0	122.85
63	0.155332	1654.3	1132.4	100.89	133	0.0732863	3737.4	2631.3	123.07
64	0.152872	1682.3	1152.1	101.33	134	0.0727387	3767.0	2652.6	123.29
65	0.150491	1710.6	1171.9	101.77	135	0.0721993	3796.6	2673.9	123.51
66	0.148183	1738.9	1191.9	102.20	136	0.0716679	3826.2	2695.1	123.73
67	0.145945	1767.4	1212.0	102.63	137	0.0711442	3855.8	2716.4	123.95
68	0.143775	1796.1	1232.3	103.05	138	0.0706281	3885.4	2737.7	124.16
69	0.141670	1824.9	1252.7	103.47	139	0.0701195	3915.0	2758.9	124.38
70	0.139625	1853.8	1273.2	103.89	140	0.0696182	3944.5	2780.2	124.59
71	0.137640	1883.0	1294.1	104.30	141	0.0691239	3974.0	2801.4	124.80
72	0.135710	1912.3	1315.0	104.71	142	0.0686367	4003.5	2822.5	125.01
73	0.133835	1941.6	1335.9	105.11	143	0.0681563	4033.0	2843.7	125.22
74	0.132011	1971.0	1356.9	105.51	144	0.0676826	4062.5	2864.9	125.42
75	0.130236	2000.4	1378.0	105.91	145	0.0672154	4092.0	2886.1	125.62
76	0.128509	2029.9	1399.1	106.30	146	0.0667547	4121.5	2907.2	125.83
77	0.126827	2059.4	1420.3	106.69	147	0.0663002	4151.0	2928.4	126.03
78	0.125190	2089.0	1441.6	107.07	148	0.0658519	4180.5	2949.5	126.23
79	0.123594	2118.7	1462.9	107.45	149	0.0654096	4209.9	2970.6	126.43
80	0.122039	2148.4	1484.2	107.82	150	0.0649732	4239.4	2991.8	126.62
81	0.120522	2178.4	1505.8	108.19	151	0.0645426	4268.8	3012.9	126.82
82	0.119044	2208.3	1527.4	108.56	152	0.0641177	4298.2	3033.9	127.01
83	0.117601	2238.3	1549.0	108.92	153	0.0636984	4327.6	3055.0	127.21
84	0.116193	2268.3	1570.6	109.28	154	0.0632845	4357.0	3076.1	127.40
85	0.114818	2298.3	1592.3	109.64	155	0.0628759	4386.4	3097.2	127.59
86	0.113476	2328.3	1614.0	109.99	156	0.0624726	4415.8	3118.2	127.78
87	0.112165	2358.4	1635.7	110.34	157	0.0620745	4445.1	3139.3	127.96
88	0.110884	2388.5	1657.5	110.68	158	0.0616814	4474.5	3160.4	128.15
89	0.109632	2418.6	1679.2	111.02	159	0.0612932	4503.9	3181.4	128.34
90	0.108408	2448.7	1701.0	111.36	160	0.0609099	4533.3	3202.4	128.52

* PHASE CHANGE

0.80 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	0.0605314	4562.6	3223.5	128.70	231	0.0421860	6609.3	4687.8	139.26
162	0.0601576	4591.9	3244.5	128.88	232	0.0420042	6638.5	4708.7	139.39
163	0.0597884	4621.3	3265.5	129.06	233	0.0418239	6667.7	4729.6	139.51
164	0.0594236	4650.6	3286.5	129.24	234	0.0416452	6696.9	4750.4	139.64
165	0.0590633	4679.9	3307.5	129.42	235	0.0414680	6726.1	4771.3	139.76
166	0.0587074	4709.3	3328.5	129.60	236	0.0412923	6755.3	4792.2	139.89
167	0.0583557	4738.6	3349.5	129.78	237	0.0411181	6784.5	4813.1	140.01
168	0.0580082	4767.9	3370.5	129.95	238	0.0409453	6813.7	4834.0	140.13
169	0.0576648	4797.2	3391.5	130.13	239	0.0407740	6842.9	4854.8	140.25
170	0.0573255	4826.5	3412.5	130.30	240	0.0406041	6872.1	4875.7	140.38
171	0.0569901	4855.8	3433.4	130.47	241	0.0404357	6901.2	4896.6	140.50
172	0.0566586	4885.1	3454.4	130.64	242	0.0402686	6930.4	4917.5	140.62
173	0.0563310	4914.4	3475.4	130.81	243	0.0401029	6959.6	4938.3	140.74
174	0.0560072	4943.7	3496.3	130.98	244	0.0399386	6988.8	4959.2	140.86
175	0.0556870	4972.9	3517.3	131.15	245	0.0397756	7018.0	4980.1	140.98
176	0.0553705	5002.2	3538.3	131.31	246	0.0396139	7047.2	5001.0	141.10
177	0.0550576	5031.5	3559.2	131.48	247	0.0394535	7076.4	5021.8	141.22
178	0.0547482	5060.8	3580.2	131.64	248	0.0392945	7105.6	5042.7	141.33
179	0.0544423	5090.0	3601.1	131.81	249	0.0391367	7134.8	5063.6	141.45
180	0.0541397	5119.3	3622.1	131.97	250	0.0389802	7164.0	5084.5	141.57
181	0.0538405	5148.6	3643.0	132.13	251	0.0388249	7193.2	5105.3	141.68
182	0.0535446	5177.8	3663.9	132.29	252	0.0386708	7222.4	5126.2	141.80
183	0.0532520	5207.1	3684.9	132.45	253	0.0385180	7251.6	5147.1	141.92
184	0.0529625	5236.3	3705.8	132.61	254	0.0383664	7280.8	5168.0	142.03
185	0.0526761	5265.6	3726.7	132.77	255	0.0382159	7310.0	5188.9	142.15
186	0.0523929	5294.8	3747.6	132.93	256	0.0380667	7339.2	5209.7	142.26
187	0.0521127	5324.0	3768.6	133.09	257	0.0379186	7368.3	5230.6	142.37
188	0.0518354	5353.3	3789.5	133.24	258	0.0377716	7397.5	5251.5	142.49
189	0.0515611	5382.5	3810.4	133.40	259	0.0376258	7426.7	5272.4	142.60
190	0.0512897	5411.8	3831.3	133.55	260	0.0374811	7455.9	5293.2	142.71
191	0.0510211	5441.0	3852.2	133.71	261	0.0373375	7485.1	5314.1	142.82
192	0.0507553	5470.2	3873.1	133.86	262	0.0371950	7514.3	5335.0	142.94
193	0.0504923	5499.4	3894.1	134.01	263	0.0370536	7543.5	5355.9	143.05
194	0.0502320	5528.7	3915.0	134.16	264	0.0369133	7572.7	5376.8	143.16
195	0.0499744	5557.9	3935.9	134.31	265	0.0367740	7601.9	5397.6	143.27
196	0.0497194	5587.1	3956.8	134.46	266	0.0366358	7631.1	5418.5	143.38
197	0.0494670	5616.3	3977.7	134.61	267	0.0364986	7660.3	5439.4	143.49
198	0.0492171	5645.6	3998.6	134.76	268	0.0363624	7689.5	5460.3	143.60
199	0.0489697	5674.8	4019.5	134.91	269	0.0362273	7718.7	5481.2	143.71
200	0.0487249	5704.0	4040.4	135.05	270	0.0360931	7747.9	5502.0	143.81
201	0.0484824	5733.2	4061.3	135.20	271	0.0359600	7777.1	5522.9	143.92
202	0.0482424	5762.4	4082.2	135.34	272	0.0358278	7806.3	5543.8	144.03
203	0.0480047	5791.6	4103.1	135.49	273	0.0356966	7835.5	5564.7	144.14
204	0.0477694	5820.9	4124.0	135.63	274	0.0355663	7864.7	5585.6	144.24
205	0.0475364	5850.1	4144.8	135.77	275	0.0354370	7893.9	5606.4	144.35
206	0.0473056	5879.3	4165.7	135.92	276	0.0353086	7923.1	5627.3	144.46
207	0.0470771	5908.5	4186.6	136.06	277	0.0351812	7952.3	5648.2	144.56
208	0.0468507	5937.7	4207.5	136.20	278	0.0350547	7981.5	5669.1	144.67
209	0.0466265	5966.9	4228.4	136.34	279	0.0349290	8010.7	5690.0	144.77
210	0.0464045	5996.1	4249.3	136.48	280	0.0348043	8039.9	5710.8	144.88
211	0.0461846	6025.3	4270.2	136.62	281	0.0346805	8069.0	5731.7	144.98
212	0.0459667	6054.5	4291.1	136.75	282	0.0345575	8098.3	5752.6	145.08
213	0.0457509	6083.7	4312.0	136.89	283	0.0344354	8127.5	5773.5	145.19
214	0.0455371	6112.9	4332.8	137.03	284	0.0343142	8156.7	5794.4	145.29
215	0.0453253	6142.1	4353.7	137.16	285	0.0341938	8185.9	5815.2	145.39
216	0.0451155	6171.3	4374.6	137.30	286	0.0340743	8215.1	5836.1	145.50
217	0.0449076	6200.5	4395.5	137.43	287	0.0339556	8244.3	5857.0	145.60
218	0.0447016	6229.7	4416.4	137.57	288	0.0338377	8273.5	5877.9	145.70
219	0.0444975	6258.9	4437.3	137.70	289	0.0337207	8302.7	5898.8	145.80
220	0.0442952	6288.1	4458.2	137.84	290	0.0336044	8331.9	5919.7	145.90
221	0.0440948	6317.3	4479.0	137.97	291	0.0334889	8361.0	5940.5	146.00
222	0.0438962	6346.5	4499.9	138.10	292	0.0333743	8390.2	5961.4	146.10
223	0.0436993	6375.7	4520.8	138.23	293	0.0332604	8419.4	5982.3	146.20
224	0.0435042	6404.9	4541.7	138.36	294	0.0331473	8448.6	6003.2	146.30
225	0.0433109	6434.1	4562.5	138.49	295	0.0330349	8477.8	6024.1	146.40
226	0.0431193	6463.3	4583.4	138.62	296	0.0329234	8507.0	6045.0	146.50
227	0.0429293	6492.5	4604.3	138.75	297	0.0328125	8536.2	6065.8	146.60
228	0.0427410	6521.7	4625.2	138.88	298	0.0327024	8565.4	6086.7	146.70
229	0.0425544	6550.9	4646.1	139.01	299	0.0325931	8594.6	6107.6	146.79
230	0.0423694	6580.1	4666.9	139.13	300	0.0324845	8623.8	6128.5	146.89

0.90 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
19	43.0407	-640.4	-642.5	18.64					
20	42.5315	-614.5	-616.6	20.00					
21	41.9978	-586.9	-589.1	21.33					
22	41.4362	-558.4	-560.6	22.65	91	0.120623	2478.5	1722.5	110.71
23	40.8439	-529.1	-531.3	23.95	92	0.119306	2508.7	1744.3	111.04
* 23.294	40.6634	-520.3	-522.6	24.33	93	0.118017	2538.9	1766.2	111.37
* 23.294	0.513009	698.9	521.1	76.67	94	0.116756	2569.1	1788.0	111.69
24	0.495379	710.9	526.8	77.18	95	0.115522	2599.3	1809.9	112.01
25	0.472222	729.2	536.1	77.93	96	0.114313	2629.5	1831.7	112.32
26	0.451060	748.8	546.6	78.70	97	0.113130	2659.6	1853.6	112.64
27	0.431709	769.3	558.1	79.48	98	0.111971	2689.8	1875.4	112.95
28	0.413981	790.4	570.2	80.24	99	0.110836	2720.0	1897.2	113.25
29	0.397700	812.0	582.7	81.00	100	0.109723	2750.2	1919.0	113.56
30	0.382705	833.8	595.5	81.75					
31	0.368856	856.0	608.7	82.47	101	0.108633	2780.3	1940.8	113.86
32	0.356026	878.3	622.2	83.18	102	0.107564	2810.5	1962.7	114.15
33	0.344107	900.8	635.8	83.87	103	0.106516	2840.6	1984.5	114.45
34	0.333004	923.4	649.6	84.54	104	0.105489	2870.8	2006.3	114.74
35	0.322635	946.1	663.5	85.20	105	0.104481	2900.9	2028.1	115.03
36	0.312927	968.9	677.5	85.85	106	0.103492	2931.0	2049.8	115.31
37	0.303816	991.9	691.7	86.47	107	0.102522	2961.1	2071.6	115.60
38	0.295248	1015.0	706.1	87.09	108	0.101570	2991.1	2093.3	115.88
39	0.287174	1038.2	720.6	87.69	109	0.100636	3021.2	2115.0	116.15
40	0.279550	1061.6	735.3	88.29	110	0.0997191	3051.2	2136.7	116.43
41	0.272339	1085.1	750.3	88.87	111	0.0988184	3081.2	2158.4	116.70
42	0.265506	1108.8	765.4	89.44	112	0.0979339	3111.2	2180.1	116.97
43	0.259022	1132.7	780.7	90.00	113	0.0970651	3141.2	2201.7	117.23
44	0.252859	1156.8	796.2	90.55	114	0.0962116	3171.2	2223.4	117.50
45	0.246994	1181.1	811.9	91.10	115	0.0953731	3201.1	2245.0	117.76
46	0.241404	1205.5	827.8	91.64	116	0.0945490	3231.1	2266.6	118.02
47	0.236070	1230.2	843.9	92.17	117	0.0937392	3261.0	2288.2	118.28
48	0.230975	1255.1	860.3	92.69	118	0.0929431	3290.9	2309.7	118.53
49	0.226101	1280.2	876.8	93.21	119	0.0921605	3320.7	2331.2	118.78
50	0.221434	1305.5	893.6	93.73	120	0.0913910	3350.6	2352.8	119.03
51	0.216962	1331.0	910.7	94.23	121	0.0906342	3380.4	2374.3	119.28
52	0.212671	1356.7	927.9	94.73	122	0.0898900	3410.2	2395.7	119.52
53	0.208551	1382.6	945.4	95.22	123	0.0891578	3440.1	2417.3	119.77
54	0.204592	1408.8	963.1	95.71	124	0.0884375	3469.9	2438.7	120.01
55	0.200783	1435.2	981.0	96.20	125	0.0877288	3499.6	2460.2	120.25
56	0.197116	1461.7	999.1	96.67	126	0.0870314	3529.4	2481.6	120.49
57	0.193584	1488.6	1017.5	97.15	127	0.0863450	3559.1	2503.0	120.72
58	0.190178	1515.5	1036.0	97.62	128	0.0856694	3588.8	2524.4	120.95
59	0.186893	1542.7	1054.8	98.08	129	0.0850043	3618.6	2545.8	121.18
60	0.183721	1570.1	1073.7	98.54	130	0.0843495	3648.3	2567.1	121.41
61	0.180657	1597.7	1092.9	99.00	131	0.0837047	3677.9	2588.5	121.64
62	0.177695	1625.5	1112.3	99.45	132	0.0830697	3707.6	2609.8	121.87
63	0.174829	1653.4	1131.8	99.90	133	0.0824442	3737.2	2631.1	122.09
64	0.172057	1681.4	1151.4	100.34	134	0.0818282	3766.8	2652.4	122.31
65	0.169372	1709.7	1171.3	100.78	135	0.0812213	3796.4	2673.7	122.53
66	0.166770	1738.1	1191.3	101.21	136	0.0806233	3826.0	2695.0	122.75
67	0.164249	1766.7	1211.4	101.64	137	0.0800341	3855.6	2716.2	122.97
68	0.161803	1795.3	1231.7	102.07	138	0.0794535	3885.2	2737.5	123.18
69	0.159430	1824.2	1252.2	102.49	139	0.0788812	3914.8	2758.7	123.40
70	0.157127	1853.1	1272.7	102.90	140	0.0783172	3944.4	2780.0	123.61
71	0.154890	1882.3	1293.5	103.32	141	0.0777612	3973.9	2801.2	123.82
72	0.152716	1911.6	1314.4	103.72	142	0.0772130	4003.4	2822.4	124.03
73	0.150603	1940.9	1335.4	104.13	143	0.0766725	4032.9	2843.5	124.23
74	0.148548	1970.3	1356.4	104.53	144	0.0761395	4062.4	2864.7	124.44
75	0.146549	1999.8	1377.5	104.92	145	0.0756139	4091.9	2885.9	124.64
76	0.144604	2029.3	1398.6	105.31	146	0.0750955	4121.4	2907.0	124.85
77	0.142710	2058.8	1419.8	105.70	147	0.0745842	4150.9	2928.2	125.05
78	0.140866	2088.5	1441.1	106.08	148	0.0740799	4180.3	2949.3	125.25
79	0.139069	2118.1	1462.4	106.46	149	0.0735823	4209.8	2970.5	125.45
80	0.137317	2147.9	1483.8	106.84	150	0.0730913	4239.2	2991.6	125.64
81	0.135610	2177.8	1505.4	107.21	151	0.0726069	4268.7	3012.7	125.84
82	0.133944	2207.8	1526.9	107.58	152	0.0721288	4298.1	3033.8	126.03
83	0.132320	2237.7	1548.6	107.94	153	0.0716571	4327.5	3054.9	126.22
84	0.130734	2267.8	1570.2	108.30	154	0.0711914	4356.9	3075.9	126.42
85	0.129187	2297.8	1591.9	108.66	155	0.0707318	4386.3	3097.0	126.61
86	0.127676	2327.9	1613.6	109.01	156	0.0702781	4415.7	3118.1	126.80
87	0.126200	2357.9	1635.3	109.36	157	0.0698302	4445.1	3139.1	126.98
88	0.124757	2388.1	1657.1	109.70	158	0.0693879	4474.4	3160.2	127.17
89	0.123348	2418.2	1678.9	110.04	159	0.0689512	4503.8	3181.2	127.36
90	0.121970	2448.3	1700.7	110.38	160	0.0685200	4533.2	3202.3	127.54

* PHASE CHANGE

0.90 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	0.0680942	4562.5	3223.3	127.72	231	0.0474563	6609.3	4687.7	138.28
162	0.0676736	4591.9	3244.3	127.90	232	0.0472518	6638.5	4708.6	138.41
163	0.0672582	4621.2	3265.3	128.08	233	0.0470490	6667.7	4729.5	138.53
164	0.0668479	4650.5	3286.3	128.26	234	0.0468480	6696.9	4750.3	138.66
165	0.0664426	4679.9	3307.4	128.44	235	0.0466486	6726.1	4771.2	138.78
166	0.0660421	4709.2	3328.4	128.62	236	0.0464510	6755.3	4792.1	138.91
167	0.0656465	4738.5	3349.4	128.80	237	0.0462550	6784.5	4813.0	139.03
168	0.0652555	4767.8	3370.4	128.97	238	0.0460607	6813.7	4833.9	139.15
169	0.0648692	4797.1	3391.3	129.15	239	0.0458680	6842.9	4854.7	139.27
170	0.0644875	4826.4	3412.3	129.32	240	0.0456769	6872.1	4875.6	139.40
171	0.0641102	4855.7	3433.3	129.49	241	0.0454874	6901.3	4896.5	139.52
172	0.0637373	4885.0	3454.3	129.66	242	0.0452994	6930.5	4917.4	139.64
173	0.0633687	4914.3	3475.2	129.83	243	0.0451130	6959.7	4938.2	139.76
174	0.0630044	4943.6	3496.2	130.00	244	0.0449282	6988.9	4959.1	139.88
175	0.0626443	4972.9	3517.2	130.17	245	0.0447448	7018.1	4980.0	140.00
176	0.0622882	5002.2	3538.1	130.33	246	0.0445629	7047.3	5000.9	140.12
177	0.0619362	5031.4	3559.1	130.50	247	0.0443826	7076.4	5021.8	140.24
178	0.0615881	5060.7	3580.0	130.66	248	0.0442036	7105.6	5042.6	140.35
179	0.0612439	5090.0	3601.0	130.83	249	0.0440261	7134.8	5063.5	140.47
180	0.0609036	5119.2	3621.9	130.99	250	0.0438500	7164.0	5084.4	140.59
181	0.0605670	5148.5	3642.9	131.15	251	0.0436754	7193.2	5105.2	140.70
182	0.0602341	5177.8	3663.8	131.31	252	0.0435021	7222.4	5126.1	140.82
183	0.0599049	5207.0	3684.7	131.47	253	0.0433301	7251.6	5147.0	140.94
184	0.0595793	5236.3	3705.7	131.63	254	0.0431596	7280.8	5167.9	141.05
185	0.0592571	5265.5	3726.6	131.79	255	0.0429904	7310.0	5188.8	141.17
186	0.0589385	5294.8	3747.5	131.95	256	0.0428224	7339.2	5209.6	141.28
187	0.0586232	5324.0	3768.4	132.11	257	0.0426558	7368.4	5230.5	141.39
188	0.0583113	5353.3	3789.4	132.26	258	0.0424905	7397.6	5251.4	141.51
189	0.0580027	5382.5	3810.3	132.42	259	0.0423265	7426.8	5272.3	141.62
190	0.0576974	5411.7	3831.2	132.57	260	0.0421637	7456.0	5293.2	141.73
191	0.0573953	5441.0	3852.1	132.73	261	0.0420022	7485.1	5314.0	141.85
192	0.0570963	5470.2	3873.0	132.88	262	0.0418419	7514.4	5334.9	141.96
193	0.0568004	5499.4	3893.9	133.03	263	0.0416829	7543.6	5355.8	142.07
194	0.0565076	5528.6	3914.8	133.18	264	0.0415250	7572.8	5376.7	142.18
195	0.0562177	5557.9	3935.7	133.33	265	0.0413683	7602.0	5397.6	142.29
196	0.0559309	5587.1	3956.6	133.48	266	0.0412128	7631.2	5418.4	142.40
197	0.0556469	5616.3	3977.5	133.63	267	0.0410585	7660.4	5439.3	142.51
198	0.0553659	5645.5	3998.5	133.78	268	0.0409053	7689.6	5460.2	142.62
199	0.0550876	5674.8	4019.4	133.93	269	0.0407533	7718.8	5481.1	142.73
200	0.0548121	5704.0	4040.3	134.07	270	0.0406024	7747.9	5502.0	142.84
201	0.0545394	5733.2	4061.2	134.22	271	0.0404526	7777.1	5522.8	142.94
202	0.0542694	5762.4	4082.0	134.36	272	0.0403039	7806.3	5543.7	143.05
203	0.0540020	5791.6	4102.9	134.51	273	0.0401563	7835.5	5564.6	143.16
204	0.0537373	5820.8	4123.8	134.65	274	0.0400098	7864.7	5585.5	143.26
205	0.0534751	5850.1	4144.7	134.79	275	0.0398643	7893.9	5606.4	143.37
206	0.0532155	5879.3	4165.6	134.94	276	0.0397199	7923.1	5627.2	143.48
207	0.0529584	5908.5	4186.5	135.08	277	0.0395765	7952.3	5648.1	143.58
208	0.0527038	5937.7	4207.4	135.22	278	0.0394342	7981.5	5669.0	143.69
209	0.0524516	5966.9	4228.3	135.36	279	0.0392929	8010.7	5689.9	143.79
210	0.0522019	5996.1	4249.2	135.50	280	0.0391526	8039.9	5710.8	143.90
211	0.0519545	6025.3	4270.1	135.64	281	0.0390133	8069.1	5731.6	144.00
212	0.0517094	6054.5	4291.0	135.77	282	0.0388750	8098.3	5752.5	144.10
213	0.0514666	6083.7	4311.9	135.91	283	0.0387376	8127.5	5773.4	144.21
214	0.0512261	6112.9	4332.7	136.05	284	0.0386013	8156.7	5794.3	144.31
215	0.0509878	6142.1	4353.6	136.18	285	0.0384658	8185.9	5815.2	144.41
216	0.0507518	6171.3	4374.5	136.32	286	0.0383314	8215.1	5836.1	144.52
217	0.0505179	6200.5	4395.4	136.45	287	0.0381978	8244.3	5856.9	144.62
218	0.0502862	6229.7	4416.3	136.59	288	0.0380652	8273.5	5877.8	144.72
219	0.0500566	6258.9	4437.2	136.72	289	0.0379336	8302.7	5898.7	144.82
220	0.0498290	6288.1	4458.0	136.86	290	0.0378028	8331.9	5919.6	144.92
221	0.0496036	6317.3	4478.9	136.99	291	0.0376729	8361.1	5940.5	145.02
222	0.0493801	6346.5	4499.8	137.12	292	0.0375439	8390.3	5961.3	145.12
223	0.0491587	6375.7	4520.7	137.25	293	0.0374158	8419.5	5982.2	145.22
224	0.0489393	6404.9	4541.6	137.38	294	0.0372886	8448.7	6003.1	145.32
225	0.0487218	6434.1	4562.4	137.51	295	0.0371622	8477.9	6024.0	145.42
226	0.0485062	6463.3	4583.3	137.64	296	0.0370367	8507.1	6044.9	145.52
227	0.0482925	6492.5	4604.2	137.77	297	0.0369120	8536.3	6065.8	145.62
228	0.0480807	6521.7	4625.1	137.90	298	0.0367882	8565.5	6086.7	145.72
229	0.0478708	6550.9	4646.0	138.03	299	0.0366652	8594.7	6107.5	145.81
230	0.0476627	6580.1	4666.8	138.15	300	0.0365430	8623.9	6128.4	145.91

1.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
19	43.0441	-640.2	-642.6	18.64					
20	42.5353	-614.3	-616.7	19.99					
21	42.0020	-586.7	-589.1	21.33					
22	41.4407	-558.2	-560.7	22.65	91	0.134037	2478.1	1722.1	109.83
23	40.8488	-528.9	-531.4	23.95	92	0.132573	2508.3	1744.0	110.16
* 23.653	40.4446	-509.4	-512.0	24.78	93	0.131140	2538.5	1765.8	110.49
* 23.653	0.566067	701.3	522.3	75.97	94	0.129738	2568.7	1787.7	110.81
24	0.556223	707.2	525.1	76.22	95	0.128365	2598.9	1809.5	111.13
25	0.529605	725.5	534.2	76.97	96	0.127022	2629.1	1831.4	111.45
26	0.505360	745.1	544.6	77.74	97	0.125706	2659.3	1853.2	111.76
27	0.483253	765.6	555.9	78.52	98	0.124418	2689.5	1875.1	112.07
28	0.463053	786.8	568.0	79.29	99	0.123156	2719.6	1896.9	112.37
29	0.444543	808.5	580.5	80.05	100	0.121919	2749.8	1918.7	112.68
30	0.427531	830.3	593.3	80.80					
31	0.411846	852.7	606.6	81.52	101	0.120708	2780.0	1940.5	112.98
32	0.397339	875.2	620.2	82.24	102	0.119520	2810.2	1962.4	113.28
33	0.383882	897.8	633.8	82.93	103	0.118355	2840.3	1984.2	113.57
34	0.371363	920.5	647.7	83.61	104	0.117213	2870.4	2006.0	113.86
35	0.359685	943.4	661.6	84.27	105	0.116093	2900.6	2027.8	114.15
36	0.348762	966.3	675.8	84.92	106	0.114994	2930.7	2049.5	114.43
37	0.338522	989.4	690.0	85.55	107	0.113915	2960.8	2071.3	114.72
38	0.328900	1012.6	704.5	86.17	108	0.112857	2990.8	2093.0	115.00
39	0.319840	1035.9	719.1	86.78	109	0.111819	3020.9	2114.7	115.27
40	0.311291	1059.4	733.9	87.38	110	0.110799	3050.9	2136.5	115.55
41	0.303210	1083.0	748.8	87.96	111	0.109798	3080.9	2158.1	115.82
42	0.295559	1106.8	764.0	88.53	112	0.108815	3111.0	2179.8	116.09
43	0.288301	1130.8	779.3	89.09	113	0.107849	3141.0	2201.5	116.36
44	0.281406	1155.0	794.9	89.65	114	0.106901	3170.9	2223.1	116.62
45	0.274848	1179.3	810.6	90.19	115	0.105969	3200.9	2244.7	116.88
46	0.268599	1203.8	826.6	90.73	116	0.105053	3230.8	2266.3	117.14
47	0.262640	1228.6	842.8	91.27	117	0.104153	3260.8	2287.9	117.40
48	0.256948	1253.5	859.2	91.79	118	0.103268	3290.7	2309.5	117.65
49	0.251506	1278.7	875.8	92.32	119	0.102399	3320.5	2331.0	117.90
50	0.246297	1304.0	892.6	92.83	120	0.101543	3350.4	2352.6	118.15
51	0.241306	1329.6	909.7	93.33	121	0.100702	3380.2	2374.0	118.40
52	0.236519	1355.4	927.0	93.83	122	0.0998758	3410.0	2395.5	118.65
53	0.231923	1381.4	944.5	94.33	123	0.0990621	3439.9	2417.0	118.89
54	0.227508	1407.6	962.2	94.82	124	0.0982617	3469.7	2438.5	119.13
55	0.223261	1434.0	980.1	95.30	125	0.0974741	3499.5	2459.9	119.37
56	0.219174	1460.6	998.3	95.78	126	0.0966991	3529.2	2481.4	119.61
57	0.215237	1487.5	1016.7	96.26	127	0.0959363	3559.0	2502.8	119.84
58	0.211442	1514.5	1035.3	96.73	128	0.0951855	3588.7	2524.2	120.08
59	0.207781	1541.7	1054.0	97.20	129	0.0944464	3618.4	2545.6	120.31
60	0.204248	1569.1	1073.0	97.66	130	0.0937187	3648.1	2566.9	120.54
61	0.200835	1596.7	1092.2	98.11	131	0.0930022	3677.7	2588.3	120.76
62	0.197536	1624.5	1111.6	98.56	132	0.0922965	3707.4	2609.6	120.99
63	0.194345	1652.5	1131.1	99.01	133	0.0916015	3737.0	2630.9	121.21
64	0.191258	1680.6	1150.8	99.45	134	0.0909170	3766.7	2652.2	121.44
65	0.188269	1708.9	1170.7	99.89	135	0.0902426	3796.3	2673.5	121.66
66	0.185373	1737.3	1190.7	100.33	136	0.0895781	3825.9	2694.8	121.87
67	0.182566	1765.9	1210.9	100.76	137	0.0889234	3855.5	2716.0	122.09
68	0.179844	1794.6	1231.2	101.18	138	0.0882782	3885.1	2737.3	122.31
69	0.177203	1823.4	1251.6	101.60	139	0.0876423	3914.7	2758.5	122.52
70	0.174639	1852.3	1272.2	102.02	140	0.0870155	3944.2	2779.8	122.73
71	0.172150	1881.6	1293.0	102.43	141	0.0863976	3973.8	2801.0	122.94
72	0.169731	1910.9	1313.9	102.84	142	0.0857885	4003.3	2822.2	123.15
73	0.167380	1940.3	1334.9	103.25	143	0.0851879	4032.8	2843.3	123.36
74	0.165094	1969.7	1355.9	103.65	144	0.0845957	4062.3	2864.5	123.56
75	0.162870	1999.1	1377.0	104.04	145	0.0840117	4091.8	2885.7	123.77
76	0.160706	2028.7	1398.2	104.43	146	0.0834357	4121.3	2906.9	123.97
77	0.158599	2058.3	1419.4	104.82	147	0.0828675	4150.7	2928.0	124.17
78	0.156548	2087.9	1440.6	105.20	148	0.0823071	4180.2	2949.2	124.37
79	0.154549	2117.6	1462.0	105.58	149	0.0817541	4209.7	2970.3	124.57
80	0.152601	2147.3	1483.3	105.96	150	0.0812086	4239.1	2991.4	124.77
81	0.150702	2177.3	1504.9	106.33	151	0.0806704	4268.6	3012.5	124.96
82	0.148850	2207.2	1526.5	106.70	152	0.0801392	4298.0	3033.6	125.16
83	0.147043	2237.2	1548.2	107.06	153	0.0796150	4327.4	3054.7	125.35
84	0.145280	2267.3	1569.8	107.42	154	0.0790976	4356.8	3075.8	125.54
85	0.143559	2297.3	1591.5	107.78	155	0.0785869	4386.2	3096.8	125.73
86	0.141878	2327.4	1613.2	108.13	156	0.0780827	4415.6	3117.9	125.92
87	0.140237	2357.5	1635.0	108.47	157	0.0775850	4445.0	3139.0	126.11
88	0.138634	2387.6	1656.7	108.82	158	0.0770936	4474.3	3160.0	126.29
89	0.137067	2417.7	1678.5	109.16	159	0.0766084	4503.7	3181.1	126.48
90	0.135535	2447.9	1700.3	109.50	160	0.0761293	4533.1	3202.1	126.66

* PHASE CHANGE

1.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	0.0756561	4562.4	3223.2	126.85	231	0.0527260	6609.3	4687.6	137.40
162	0.0751888	4591.8	3244.2	127.03	232	0.0524988	6638.5	4708.5	137.53
163	0.0747273	4621.1	3265.2	127.21	233	0.0522735	6667.7	4729.4	137.66
164	0.0742714	4650.4	3286.2	127.39	234	0.0520501	6696.9	4750.2	137.78
165	0.0738210	4679.8	3307.2	127.57	235	0.0518287	6726.1	4771.1	137.91
166	0.0733760	4709.1	3328.2	127.74	236	0.0516091	6755.3	4792.0	138.03
167	0.0729364	4738.4	3349.2	127.92	237	0.0513913	6784.5	4812.9	138.15
168	0.0725021	4767.8	3370.2	128.09	238	0.0511754	6813.7	4833.8	138.28
169	0.0720728	4797.1	3391.2	128.27	239	0.0509613	6842.9	4854.6	138.40
170	0.0716487	4826.4	3412.2	128.44	240	0.0507490	6872.1	4875.5	138.52
171	0.0712295	4855.7	3433.2	128.61	241	0.0505385	6901.3	4896.4	138.64
172	0.0708152	4885.0	3454.1	128.78	242	0.0503296	6930.5	4917.3	138.76
173	0.0704057	4914.2	3475.1	128.95	243	0.0501226	6959.7	4938.1	138.88
174	0.0700009	4943.5	3496.1	129.12	244	0.0499172	6988.9	4959.0	139.00
175	0.0696007	4972.8	3517.0	129.29	245	0.0497134	7018.1	4979.9	139.12
176	0.0692051	5002.1	3538.0	129.46	246	0.0495114	7047.3	5000.8	139.24
177	0.0688140	5031.4	3558.9	129.62	247	0.0493110	7076.5	5021.7	139.36
178	0.0684272	5060.7	3579.9	129.79	248	0.0491122	7105.7	5042.5	139.48
179	0.0680448	5089.9	3600.8	129.95	249	0.0489150	7134.9	5063.4	139.59
180	0.0676667	5119.2	3621.8	130.12	250	0.0487193	7164.1	5084.3	139.71
181	0.0672927	5148.5	3642.7	130.28	251	0.0485253	7193.2	5105.2	139.83
182	0.0669229	5177.7	3663.7	130.44	252	0.0483327	7222.4	5126.0	139.94
183	0.0665570	5207.0	3684.6	130.60	253	0.0481417	7251.6	5146.9	140.06
184	0.0661952	5236.2	3705.5	130.76	254	0.0479522	7280.8	5167.8	140.18
185	0.0658373	5265.5	3726.4	130.92	255	0.0477642	7310.0	5188.7	140.29
186	0.0654833	5294.7	3747.4	131.07	256	0.0475776	7339.2	5209.5	140.40
187	0.0651330	5324.0	3768.3	131.23	257	0.0473926	7368.4	5230.4	140.52
188	0.0647865	5353.2	3789.2	131.39	258	0.0472089	7397.6	5251.3	140.63
189	0.0644436	5382.5	3810.2	131.54	259	0.0470267	7426.8	5272.2	140.74
190	0.0641044	5411.7	3831.1	131.70	260	0.0468458	7456.0	5293.1	140.86
191	0.0637687	5440.9	3852.0	131.85	261	0.0466664	7485.2	5313.9	140.97
192	0.0634365	5470.2	3872.9	132.00	262	0.0464883	7514.4	5334.8	141.08
193	0.0631077	5499.4	3893.8	132.15	263	0.0463115	7543.6	5355.7	141.19
194	0.0627824	5528.6	3914.7	132.31	264	0.0461362	7572.8	5376.6	141.30
195	0.0624604	5557.8	3935.6	132.46	265	0.0459621	7602.0	5397.5	141.41
196	0.0621416	5587.1	3956.5	132.60	266	0.0457893	7631.2	5418.3	141.52
197	0.0618262	5616.3	3977.4	132.75	267	0.0456179	7660.4	5439.2	141.63
198	0.0615139	5645.5	3998.3	132.90	268	0.0454477	7689.6	5460.1	141.74
199	0.0612047	5674.7	4019.2	133.05	269	0.0452788	7718.8	5481.0	141.85
200	0.0608986	5704.0	4040.1	133.20	270	0.0451111	7748.0	5501.9	141.96
201	0.0605956	5733.2	4061.0	133.34	271	0.0449447	7777.2	5522.7	142.07
202	0.0602956	5762.4	4081.9	133.49	272	0.0447795	7806.4	5543.6	142.17
203	0.0599986	5791.6	4102.8	133.63	273	0.0446155	7835.6	5564.5	142.28
204	0.0597044	5820.8	4123.7	133.77	274	0.0444527	7864.8	5585.4	142.39
205	0.0594132	5850.0	4144.6	133.92	275	0.0442911	7894.0	5606.3	142.49
206	0.0591247	5879.3	4165.5	134.06	276	0.0441306	7923.2	5627.1	142.60
207	0.0588391	5908.5	4186.4	134.20	277	0.0439714	7952.4	5648.0	142.71
208	0.0585562	5937.7	4207.3	134.34	278	0.0438132	7981.6	5668.9	142.81
209	0.0582760	5966.9	4228.2	134.48	279	0.0436562	8010.8	5689.8	142.92
210	0.0579985	5996.1	4249.1	134.62	280	0.0435003	8040.0	5710.7	143.02
211	0.0577236	6025.3	4270.0	134.76	281	0.0433456	8069.1	5731.5	143.12
212	0.0574513	6054.5	4290.9	134.90	282	0.0431919	8098.4	5752.4	143.23
213	0.0571816	6083.7	4311.7	135.04	283	0.0430393	8127.6	5773.3	143.33
214	0.0569144	6112.9	4332.6	135.17	284	0.0428878	8156.8	5794.2	143.43
215	0.0566497	6142.1	4353.5	135.31	285	0.0427374	8186.0	5815.1	143.54
216	0.0563874	6171.3	4374.4	135.44	286	0.0425880	8215.2	5836.0	143.64
217	0.0561276	6200.5	4395.3	135.58	287	0.0424396	8244.4	5856.9	143.74
218	0.0558701	6229.7	4416.2	135.71	288	0.0422923	8273.6	5877.7	143.84
219	0.0556150	6259.0	4437.1	135.85	289	0.0421460	8302.8	5898.6	143.94
220	0.0553622	6288.2	4457.9	135.98	290	0.0420007	8332.0	5919.5	144.05
221	0.0551117	6317.3	4478.8	136.11	291	0.0418564	8361.2	5940.4	144.15
222	0.0548635	6346.6	4499.7	136.24	292	0.0417131	8390.4	5961.3	144.25
223	0.0546174	6375.7	4520.6	136.37	293	0.0415707	8419.6	5982.2	144.35
224	0.0543736	6404.9	4541.5	136.51	294	0.0414294	8448.8	6003.0	144.45
225	0.0541320	6434.1	4562.3	136.64	295	0.0412890	8478.0	6023.9	144.54
226	0.0538925	6463.3	4583.2	136.77	296	0.0411495	8507.2	6044.8	144.64
227	0.0536551	6492.5	4604.1	136.89	297	0.0410110	8536.4	6065.7	144.74
228	0.0534198	6521.7	4625.0	137.02	298	0.0408734	8565.6	6086.6	144.84
229	0.0531865	6550.9	4645.9	137.15	299	0.0407368	8594.8	6107.5	144.94
230	0.0529553	6580.1	4666.7	137.28	300	0.0406010	8624.0	6128.3	145.04

1.50 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
19	43.0616	-639.3	-642.8	18.63					
20	42.5545	-613.4	-617.0	19.98					
21	42.0228	-585.8	-589.5	21.31					
22	41.4630	-557.4	-561.1	22.63	91	0.201140	2476.0	1720.4	106.44
23	40.8728	-528.1	-531.8	23.93	92	0.198936	2506.3	1742.3	106.77
24	40.2492	-498.2	-502.0	25.21	93	0.196780	2536.5	1764.1	107.10
25	39.5886	-467.6	-471.5	26.46	94	0.194671	2566.8	1786.0	107.42
* 25.129	39.5002	-463.6	-467.5	26.62	95	0.192607	2597.0	1807.9	107.74
* 25.129	0.830380	707.2	524.2	73.21	96	0.190586	2627.2	1829.8	108.06
26	0.792920	724.7	533.0	73.89	97	0.188608	2657.5	1851.6	108.37
27	0.754224	745.8	544.3	74.69	98	0.186671	2687.7	1873.5	108.68
28	0.719474	767.6	556.4	75.49	99	0.184774	2717.9	1895.4	108.99
29	0.688088	790.0	569.1	76.27	100	0.182915	2748.1	1917.2	109.29
30	0.659593	812.6	582.2	77.05					
31	0.633596	835.8	595.9	77.79	101	0.181093	2778.3	1939.0	109.59
32	0.609773	859.0	609.8	78.53	102	0.179307	2808.6	1960.9	109.89
33	0.587850	882.4	623.8	79.25	103	0.177557	2838.7	1982.7	110.18
34	0.567600	905.8	638.0	79.95	104	0.175840	2868.9	2004.6	110.48
35	0.548828	929.3	652.4	80.63	105	0.174157	2899.1	2026.4	110.76
36	0.531370	952.9	666.9	81.30	106	0.172505	2929.2	2048.2	111.05
37	0.515086	976.6	681.6	81.95	107	0.170885	2959.3	2069.9	111.33
38	0.499853	1000.4	696.3	82.58	108	0.169296	2989.4	2091.7	111.61
39	0.485568	1024.3	711.3	83.21	109	0.167735	3019.5	2113.4	111.89
40	0.472140	1048.3	726.4	83.82	110	0.166204	3049.6	2135.1	112.17
41	0.459488	1072.5	741.7	84.41	111	0.164700	3079.6	2156.8	112.44
42	0.447545	1096.7	757.1	84.99	112	0.163223	3109.7	2178.5	112.71
43	0.436248	1121.2	772.8	85.57	113	0.161773	3139.7	2200.2	112.97
44	0.425544	1145.7	788.6	86.13	114	0.160348	3169.7	2221.9	113.24
45	0.415384	1170.5	804.6	86.69	115	0.158948	3199.7	2243.5	113.50
46	0.405725	1195.4	820.8	87.24	116	0.157573	3229.7	2265.1	113.76
47	0.396531	1220.5	837.2	87.78	117	0.156222	3259.6	2286.7	114.02
48	0.387765	1245.7	853.8	88.31	118	0.154893	3289.5	2308.3	114.27
49	0.379398	1271.2	870.6	88.84	119	0.153587	3319.4	2329.8	114.52
50	0.371401	1296.8	887.6	89.36	120	0.152303	3349.3	2351.4	114.77
51	0.363749	1322.7	904.9	89.87	121	0.151040	3379.2	2372.9	115.02
52	0.356420	1348.7	922.3	90.37	122	0.149798	3409.0	2394.4	115.27
53	0.349392	1375.0	940.0	90.87	123	0.148577	3438.9	2415.9	115.51
54	0.342647	1401.4	957.8	91.37	124	0.147375	3468.7	2437.4	115.75
55	0.336166	1428.0	975.9	91.86	125	0.146193	3498.5	2458.8	115.99
56	0.329935	1454.9	994.2	92.34	126	0.145029	3528.3	2480.3	116.23
57	0.323939	1481.9	1012.8	92.82	127	0.143884	3558.0	2501.7	116.46
58	0.318163	1509.2	1031.4	93.29	128	0.142757	3587.7	2523.1	116.70
59	0.312596	1536.5	1050.3	93.76	129	0.141648	3617.5	2544.5	116.93
60	0.307226	1564.1	1069.4	94.23	130	0.140556	3647.2	2565.9	117.16
61	0.302042	1591.9	1088.7	94.68	131	0.139480	3676.9	2587.2	117.38
62	0.297035	1619.9	1108.2	95.14	132	0.138421	3706.6	2608.6	117.61
63	0.292196	1648.0	1127.8	95.59	133	0.137378	3736.2	2629.9	117.83
64	0.287515	1676.2	1147.6	96.03	134	0.136351	3765.9	2651.2	118.06
65	0.282986	1704.7	1167.6	96.47	135	0.135338	3795.5	2672.5	118.28
66	0.278600	1733.2	1187.7	96.91	136	0.134341	3825.1	2693.8	118.50
67	0.274351	1761.9	1207.9	97.34	137	0.133359	3854.7	2715.1	118.71
68	0.270233	1790.7	1228.3	97.77	138	0.132390	3884.4	2736.3	118.93
69	0.266238	1819.7	1248.8	98.19	139	0.131436	3914.0	2757.6	119.14
70	0.262362	1848.7	1269.4	98.61	140	0.130496	3943.5	2778.8	119.35
71	0.258600	1878.1	1290.3	99.02	141	0.129569	3973.1	2800.0	119.56
72	0.254945	1907.5	1311.3	99.43	142	0.128655	4002.6	2821.2	119.77
73	0.251394	1936.9	1332.4	99.84	143	0.127753	4032.1	2842.4	119.98
74	0.247943	1966.4	1353.5	100.24	144	0.126865	4061.6	2863.6	120.19
75	0.244586	1996.0	1374.6	100.64	145	0.125988	4091.2	2884.8	120.39
76	0.241320	2025.6	1395.8	101.03	146	0.125124	4120.7	2906.0	120.59
77	0.238142	2055.3	1417.1	101.42	147	0.124272	4150.1	2927.1	120.79
78	0.235047	2085.0	1438.4	101.80	148	0.123431	4179.6	2948.3	120.99
79	0.232033	2114.8	1459.7	102.18	149	0.122601	4209.1	2969.4	121.19
80	0.229096	2144.6	1481.2	102.56	150	0.121783	4238.6	2990.6	121.39
81	0.226234	2174.6	1502.8	102.93	151	0.120975	4268.0	3011.7	121.58
82	0.223443	2204.6	1524.4	103.30	152	0.120178	4297.4	3032.8	121.78
83	0.220721	2234.7	1546.1	103.66	153	0.119392	4326.9	3053.8	121.97
84	0.218065	2264.8	1567.8	104.02	154	0.118616	4356.3	3074.9	122.16
85	0.215473	2294.9	1589.5	104.38	155	0.117850	4385.7	3096.0	122.35
86	0.212942	2325.0	1611.3	104.73	156	0.117093	4415.1	3117.1	122.54
87	0.210471	2355.2	1633.1	105.08	157	0.116347	4444.5	3138.2	122.73
88	0.208057	2385.4	1654.9	105.43	158	0.115609	4473.9	3159.2	122.92
89	0.205699	2415.6	1676.7	105.77	159	0.114882	4503.3	3180.3	123.10
90	0.203393	2445.8	1698.5	106.11	160	0.114163	4532.7	3201.3	123.29

* PHASE CHANGE

1.50 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	0.113453	4562.0	3222.4	123.47	231	0.0790648	6609.4	4687.1	134.03
162	0.112752	4591.4	3243.4	123.65	232	0.0787241	6638.6	4708.0	134.16
163	0.112060	4620.7	3264.4	123.83	233	0.0783862	6667.8	4728.9	134.28
164	0.111376	4650.1	3285.4	124.01	234	0.0780513	6697.0	4749.7	134.41
165	0.110700	4679.4	3306.4	124.19	235	0.0777192	6726.2	4770.6	134.53
166	0.110033	4708.7	3327.5	124.37	236	0.0773900	6755.4	4791.5	134.66
167	0.109374	4738.1	3348.5	124.54	237	0.0770635	6784.6	4812.4	134.78
168	0.108722	4767.4	3369.5	124.72	238	0.0767397	6813.8	4833.3	134.90
169	0.108078	4796.7	3390.5	124.89	239	0.0764187	6843.0	4854.1	135.03
170	0.107442	4826.1	3411.5	125.07	240	0.0761003	6872.2	4875.0	135.15
171	0.106813	4855.4	3432.4	125.24	241	0.0757846	6901.4	4895.9	135.27
172	0.106192	4884.7	3453.4	125.41	242	0.0754715	6930.6	4916.8	135.39
173	0.105578	4913.9	3474.4	125.58	243	0.0751610	6959.8	4937.7	135.51
174	0.104970	4943.2	3495.3	125.75	244	0.0748530	6989.0	4958.5	135.63
175	0.104370	4972.5	3516.3	125.91	245	0.0745476	7018.2	4979.4	135.75
176	0.103777	5001.8	3537.3	126.08	246	0.0742446	7047.4	5000.3	135.87
177	0.103190	5031.1	3558.2	126.25	247	0.0739441	7076.6	5021.2	135.99
178	0.102610	5060.4	3579.2	126.41	248	0.0736460	7105.8	5042.1	136.10
179	0.102037	5089.7	3600.2	126.58	249	0.0733503	7135.0	5062.9	136.22
180	0.101470	5119.0	3621.1	126.74	250	0.0730569	7164.2	5083.8	136.34
181	0.100909	5148.2	3642.0	126.90	251	0.0727659	7193.4	5104.7	136.46
182	0.100354	5177.5	3663.0	127.06	252	0.0724773	7222.6	5125.6	136.57
183	0.0998058	5206.8	3683.9	127.22	253	0.0721909	7251.8	5146.5	136.69
184	0.0992632	5236.0	3704.9	127.38	254	0.0719067	7281.0	5167.3	136.80
185	0.0987264	5265.3	3725.8	127.54	255	0.0716248	7310.2	5188.2	136.92
186	0.0981954	5294.5	3746.7	127.70	256	0.0713451	7339.4	5209.1	137.03
187	0.0976701	5323.8	3767.7	127.86	257	0.0710676	7368.6	5230.0	137.15
188	0.0971504	5353.0	3788.6	128.01	258	0.0707922	7397.8	5250.9	137.26
189	0.0966362	5382.3	3809.5	128.17	259	0.0705189	7427.0	5271.7	137.37
190	0.0961275	5411.5	3830.4	128.32	260	0.0702478	7456.2	5292.6	137.48
191	0.0956240	5440.8	3851.3	128.48	261	0.0699787	7485.4	5313.5	137.60
192	0.0951258	5470.0	3872.3	128.63	262	0.0697117	7514.6	5334.4	137.71
193	0.0946328	5499.2	3893.2	128.78	263	0.0694467	7543.8	5355.3	137.82
194	0.0941449	5528.5	3914.1	128.93	264	0.0691837	7573.0	5376.1	137.93
195	0.0936620	5557.7	3935.0	129.08	265	0.0689227	7602.2	5397.0	138.04
196	0.0931840	5586.9	3955.9	129.23	266	0.0686637	7631.4	5417.9	138.15
197	0.0927109	5616.2	3976.8	129.38	267	0.0684066	7660.6	5438.8	138.26
198	0.0922426	5645.4	3997.7	129.53	268	0.0681514	7689.8	5459.7	138.37
199	0.0917790	5674.6	4018.6	129.68	269	0.0678981	7719.0	5480.6	138.48
200	0.0913200	5703.9	4039.5	129.82	270	0.0676468	7748.2	5501.4	138.59
201	0.0908656	5733.1	4060.4	129.97	271	0.0673972	7777.4	5522.3	138.69
202	0.0904157	5762.3	4081.3	130.11	272	0.0671495	7806.6	5543.2	138.80
203	0.0899702	5791.5	4102.2	130.26	273	0.0669036	7835.8	5564.1	138.91
204	0.0895291	5820.8	4123.1	130.40	274	0.0666595	7865.0	5585.0	139.02
205	0.0890924	5850.0	4144.0	130.54	275	0.0664172	7894.2	5605.8	139.12
206	0.0886598	5879.2	4164.9	130.69	276	0.0661766	7923.4	5626.7	139.23
207	0.0882315	5908.4	4185.8	130.83	277	0.0659378	7952.6	5647.6	139.33
208	0.0878073	5937.6	4206.7	130.97	278	0.0657007	7981.8	5668.5	139.44
209	0.0873871	5966.9	4227.6	131.11	279	0.0654653	8011.0	5689.4	139.54
210	0.0869710	5996.1	4248.5	131.25	280	0.0652316	8040.2	5710.3	139.65
211	0.0865588	6025.3	4269.4	131.39	281	0.0649995	8069.4	5731.1	139.75
212	0.0861504	6054.5	4290.3	131.52	282	0.0647691	8098.6	5752.0	139.86
213	0.0857460	6083.7	4311.2	131.66	283	0.0645403	8127.8	5772.9	139.96
214	0.0853453	6112.9	4332.1	131.80	284	0.0643131	8157.0	5793.8	140.06
215	0.0849483	6142.1	4353.0	131.93	285	0.0640876	8186.2	5814.7	140.16
216	0.0845550	6171.3	4373.8	132.07	286	0.0638636	8215.4	5835.6	140.27
217	0.0841654	6200.6	4394.7	132.20	287	0.0636411	8244.7	5856.5	140.37
218	0.0837793	6229.8	4415.6	132.34	288	0.0634202	8273.9	5877.3	140.47
219	0.0833968	6259.0	4436.5	132.47	289	0.0632008	8303.1	5898.2	140.57
220	0.0830177	6288.2	4457.4	132.61	290	0.0629830	8332.3	5919.1	140.67
221	0.0826421	6317.4	4478.3	132.74	291	0.0627666	8361.5	5940.0	140.77
222	0.0822699	6346.6	4499.2	132.87	292	0.0625518	8390.7	5960.9	140.87
223	0.0819010	6375.8	4520.0	133.00	293	0.0623384	8419.9	5981.8	140.97
224	0.0815353	6405.0	4540.9	133.13	294	0.0621264	8449.1	6002.6	141.07
225	0.0811730	6434.2	4561.8	133.26	295	0.0619159	8478.3	6023.5	141.17
226	0.0808139	6463.4	4582.7	133.39	296	0.0617068	8507.5	6044.4	141.27
227	0.0804579	6492.6	4603.6	133.52	297	0.0614991	8536.7	6065.3	141.37
228	0.0801050	6521.8	4624.5	133.65	298	0.0612928	8565.9	6086.2	141.47
229	0.0797553	6551.0	4645.3	133.78	299	0.0610879	8595.1	6107.1	141.57
230	0.0794085	6580.2	4666.2	133.90	300	0.0608843	8624.3	6128.0	141.66

2.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
19	43.0791	-638.4	-643.1	18.61
20	42.5737	-612.5	-617.3	19.97
21	42.0435	-585.0	-589.8	21.30
22	41.4853	-556.5	-561.4	22.61
23	40.8968	-527.3	-532.3	23.91
24	40.2752	-497.4	-502.4	25.19
25	39.6168	-466.9	-472.0	26.43
26	38.9166	-435.8	-441.0	27.66
* 26.281	38.7116	-426.9	-432.2	28.00
* 26.281	1.09563	707.4	522.4	71.16
27	1.05177	723.6	531.0	71.77
28	0.997425	746.7	543.6	72.61
29	0.949370	770.3	556.8	73.43
30	0.906466	793.9	570.4	74.24
31	0.867853	818.0	584.5	75.03
32	0.832865	842.2	598.9	75.79
33	0.800976	866.4	613.4	76.54
34	0.771759	890.7	628.1	77.26
35	0.744868	915.0	642.9	77.97
36	0.720014	939.3	657.8	78.65
37	0.696957	963.7	672.9	79.32
38	0.675495	988.1	688.1	79.97
39	0.655454	1012.6	703.4	80.61
40	0.636689	1037.1	718.8	81.24
41	0.619072	1061.8	734.4	81.84
42	0.602492	1086.5	750.2	82.43
43	0.586855	1111.4	766.1	83.02
44	0.572077	1136.4	782.2	83.59
45	0.558084	1161.6	798.4	84.16
46	0.544810	1186.8	814.9	84.72
47	0.532198	1212.3	831.5	85.26
48	0.520197	1237.9	848.3	85.81
49	0.508760	1263.7	865.4	86.34
50	0.497846	1289.6	882.6	86.86
51	0.487418	1315.8	900.0	87.38
52	0.477442	1342.0	917.6	87.89
53	0.467888	1368.5	935.4	88.40
54	0.458728	1395.2	953.5	88.89
55	0.449937	1422.1	971.7	89.39
56	0.441493	1449.1	990.1	89.88
57	0.433373	1476.4	1008.8	90.36
58	0.425559	1503.8	1027.6	90.83
59	0.418033	1531.4	1046.6	91.31
60	0.410779	1559.1	1065.8	91.77
61	0.403782	1587.1	1085.2	92.24
62	0.397027	1615.2	1104.8	92.69
63	0.390502	1643.5	1124.5	93.14
64	0.384195	1671.8	1144.4	93.59
65	0.378095	1700.4	1164.5	94.03
66	0.372191	1729.1	1184.6	94.47
67	0.366473	1757.9	1205.0	94.91
68	0.360934	1786.9	1225.4	95.33
69	0.355563	1816.0	1246.0	95.76
70	0.350355	1845.1	1266.7	96.18
71	0.345300	1874.6	1287.7	96.59
72	0.340392	1904.1	1308.7	97.01
73	0.335625	1933.6	1329.8	97.41
74	0.330992	1963.2	1351.0	97.82
75	0.326489	1992.9	1372.2	98.21
76	0.322108	2022.6	1393.4	98.61
77	0.317846	2052.3	1414.7	99.00
78	0.313697	2082.1	1436.1	99.38
79	0.309657	2112.0	1457.5	99.76
80	0.305721	2141.9	1479.0	100.14
81	0.301886	2172.0	1500.7	100.51
82	0.298148	2202.0	1522.3	100.88
83	0.294502	2232.2	1544.1	101.25
84	0.290946	2262.3	1565.8	101.61
85	0.287475	2292.5	1587.6	101.97
86	0.284088	2322.7	1609.4	102.32
87	0.280781	2352.9	1631.2	102.67
88	0.277551	2383.1	1653.0	103.01
89	0.274395	2413.4	1674.9	103.36
90	0.271311	2443.6	1696.7	103.69
91	0.268296	2473.9	1718.6	104.03
92	0.265349	2504.2	1740.5	104.36
93	0.262466	2534.5	1762.4	104.69
94	0.259646	2564.8	1784.4	105.01
95	0.256886	2595.1	1806.3	105.33
96	0.254186	2625.4	1828.2	105.65
97	0.251541	2655.7	1850.1	105.96
98	0.248952	2686.0	1871.9	106.27
99	0.246416	2716.2	1893.8	106.58
100	0.243932	2746.5	1915.7	106.88
101	0.241498	2776.7	1937.6	107.19
102	0.239112	2807.0	1959.4	107.48
103	0.236773	2837.2	1981.3	107.78
104	0.234480	2867.4	2003.1	108.07
105	0.232232	2897.6	2025.0	108.36
106	0.230026	2927.7	2046.8	108.65
107	0.227862	2957.9	2068.6	108.93
108	0.225739	2988.0	2090.3	109.21
109	0.223656	3018.1	2112.1	109.49
110	0.221610	3048.3	2133.8	109.76
111	0.219602	3078.3	2155.5	110.03
112	0.217631	3108.4	2177.2	110.30
113	0.215694	3138.5	2198.9	110.57
114	0.213792	3168.5	2220.6	110.83
115	0.211924	3198.5	2242.3	111.10
116	0.210088	3228.5	2263.9	111.36
117	0.208284	3258.4	2285.5	111.61
118	0.206511	3288.4	2307.1	111.87
119	0.204767	3318.3	2328.7	112.12
120	0.203053	3348.2	2350.2	112.37
121	0.201368	3378.1	2371.7	112.62
122	0.199711	3408.0	2393.2	112.87
123	0.198081	3437.9	2414.8	113.11
124	0.196477	3467.7	2436.3	113.35
125	0.194899	3497.5	2457.7	113.59
126	0.193347	3527.3	2479.2	113.83
127	0.191819	3557.1	2500.6	114.06
128	0.190315	3586.8	2522.0	114.30
129	0.188835	3616.6	2543.4	114.53
130	0.187378	3646.4	2564.9	114.76
131	0.185943	3676.0	2586.2	114.98
132	0.184530	3705.7	2607.5	115.21
133	0.183138	3735.4	2628.9	115.44
134	0.181768	3765.1	2650.2	115.66
135	0.180418	3794.7	2671.5	115.88
136	0.179087	3824.4	2692.8	116.10
137	0.177777	3854.0	2714.1	116.31
138	0.176485	3883.6	2735.4	116.53
139	0.175212	3913.2	2756.6	116.74
140	0.173958	3942.8	2777.9	116.96
141	0.172721	3972.4	2799.1	117.17
142	0.171502	4001.9	2820.3	117.37
143	0.170300	4031.5	2841.5	117.58
144	0.169115	4061.0	2862.7	117.79
145	0.167946	4090.5	2883.9	117.99
146	0.166794	4120.0	2905.1	118.19
147	0.165657	4149.6	2926.2	118.40
148	0.164535	4179.1	2947.4	118.60
149	0.163429	4208.5	2968.6	118.79
150	0.162337	4238.0	2989.7	118.99
151	0.161261	4267.5	3010.8	119.19
152	0.160198	4296.9	3031.9	119.38
153	0.159149	4326.3	3053.0	119.57
154	0.158114	4355.8	3074.1	119.77
155	0.157092	4385.2	3095.2	119.96
156	0.156084	4414.6	3116.3	120.15
157	0.155088	4444.0	3137.4	120.33
158	0.154105	4473.4	3158.4	120.52
159	0.153135	4502.8	3179.5	120.71
160	0.152176	4532.2	3200.5	120.89

* PHASE CHANGE

2.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	0.151230	4561.6	3221.6	121.07	231	0.105387	6609.5	4686.6	131.64
162	0.150295	4591.0	3242.6	121.25	232	0.104933	6638.7	4707.5	131.76
163	0.149372	4620.3	3263.6	121.44	233	0.104483	6667.9	4728.4	131.89
164	0.148460	4649.7	3284.7	121.61	234	0.104036	6697.1	4749.2	132.01
165	0.147560	4679.0	3305.7	121.79	235	0.103593	6726.3	4770.1	132.14
166	0.146670	4708.4	3326.7	121.97	236	0.103155	6755.5	4791.0	132.26
167	0.145790	4737.7	3347.7	122.15	237	0.102719	6784.7	4811.9	132.39
168	0.144922	4767.1	3368.7	122.32	238	0.102288	6813.9	4832.8	132.51
169	0.144063	4796.4	3389.7	122.50	239	0.101860	6843.1	4853.7	132.63
170	0.143215	4825.7	3410.7	122.67	240	0.101436	6872.3	4874.5	132.75
171	0.142377	4855.0	3431.7	122.84	241	0.101015	6901.5	4895.4	132.87
172	0.141548	4884.3	3452.7	123.01	242	0.100598	6930.8	4916.3	133.00
173	0.140730	4913.6	3473.7	123.18	243	0.100184	6960.0	4937.2	133.12
174	0.139920	4943.0	3494.6	123.35	244	0.0997737	6989.2	4958.1	133.24
175	0.139120	4972.3	3515.6	123.52	245	0.0993666	7018.4	4978.9	133.36
176	0.138329	5001.6	3536.6	123.69	246	0.0989628	7047.6	4999.8	133.47
177	0.137547	5030.8	3557.5	123.85	247	0.0985623	7076.8	5020.7	133.59
178	0.136774	5060.1	3578.5	124.02	248	0.0981649	7106.0	5041.6	133.71
179	0.136009	5089.4	3599.5	124.18	249	0.0977708	7135.2	5062.5	133.83
180	0.135253	5118.7	3620.4	124.34	250	0.0973799	7164.4	5083.4	133.95
181	0.134505	5148.0	3641.4	124.51	251	0.0969920	7193.6	5104.2	134.06
182	0.133766	5177.3	3662.3	124.67	252	0.0966073	7222.8	5125.1	134.18
183	0.133034	5206.5	3683.2	124.83	253	0.0962255	7252.0	5146.0	134.29
184	0.132311	5235.8	3704.2	124.99	254	0.0958468	7281.2	5166.9	134.41
185	0.131595	5265.1	3725.1	125.15	255	0.0954711	7310.4	5187.8	134.52
186	0.130887	5294.3	3746.1	125.30	256	0.0950983	7339.6	5208.6	134.64
187	0.130187	5323.6	3767.0	125.46	257	0.0947284	7368.8	5229.5	134.75
188	0.129494	5352.9	3787.9	125.62	258	0.0943613	7398.0	5250.4	134.87
189	0.128809	5382.1	3808.9	125.77	259	0.0939971	7427.2	5271.3	134.98
190	0.128131	5411.4	3829.8	125.93	260	0.0936357	7456.4	5292.2	135.09
191	0.127460	5440.6	3850.7	126.08	261	0.0932771	7485.6	5313.0	135.20
192	0.126795	5469.9	3871.6	126.23	262	0.0929212	7514.8	5333.9	135.31
193	0.126138	5499.1	3892.5	126.38	263	0.0925681	7544.0	5354.8	135.43
194	0.125488	5528.4	3913.5	126.54	264	0.0922176	7573.2	5375.7	135.54
195	0.124844	5557.6	3934.4	126.69	265	0.0918697	7602.4	5396.6	135.65
196	0.124207	5586.8	3955.3	126.84	266	0.0915245	7631.6	5417.5	135.76
197	0.123576	5616.1	3976.2	126.98	267	0.0911818	7660.8	5438.4	135.87
198	0.122952	5645.3	3997.1	127.13	268	0.0908417	7690.1	5459.2	135.98
199	0.122334	5674.5	4018.0	127.28	269	0.0905042	7719.3	5480.1	136.08
200	0.121722	5703.8	4038.9	127.43	270	0.0901691	7748.5	5501.0	136.19
201	0.121116	5733.0	4059.8	127.57	271	0.0898365	7777.7	5521.9	136.30
202	0.120517	5762.2	4080.7	127.72	272	0.0895064	7806.9	5542.8	136.41
203	0.119923	5791.5	4101.6	127.86	273	0.0891786	7836.1	5563.7	136.52
204	0.119335	5820.7	4122.5	128.01	274	0.0888533	7865.3	5584.5	136.62
205	0.118753	5849.9	4143.4	128.15	275	0.0885304	7894.5	5605.4	136.73
206	0.118176	5879.2	4164.3	128.29	276	0.0882097	7923.7	5626.3	136.83
207	0.117605	5908.4	4185.2	128.43	277	0.0878914	7952.9	5647.2	136.94
208	0.117040	5937.6	4206.1	128.57	278	0.0875754	7982.1	5668.1	137.05
209	0.116480	5966.8	4227.0	128.71	279	0.0872617	8011.3	5689.0	137.15
210	0.115925	5996.0	4247.9	128.85	280	0.0869502	8040.5	5709.9	137.25
211	0.115376	6025.3	4268.8	128.99	281	0.0866409	8069.7	5730.7	137.36
212	0.114831	6054.5	4289.7	129.13	282	0.0863338	8098.9	5751.6	137.46
213	0.114292	6083.7	4310.6	129.27	283	0.0860289	8128.1	5772.5	137.57
214	0.113758	6112.9	4331.5	129.40	284	0.0857261	8157.3	5793.4	137.67
215	0.113229	6142.1	4352.4	129.54	285	0.0854254	8186.5	5814.3	137.77
216	0.112705	6171.3	4373.3	129.68	286	0.0851269	8215.7	5835.2	137.87
217	0.112185	6200.6	4394.2	129.81	287	0.0848304	8244.9	5856.1	137.98
218	0.111671	6229.8	4415.1	129.94	288	0.0845360	8274.1	5876.9	138.08
219	0.111161	6259.0	4436.0	130.08	289	0.0842436	8303.4	5897.8	138.18
220	0.110656	6288.2	4456.9	130.21	290	0.0839533	8332.6	5918.7	138.28
221	0.110155	6317.4	4477.7	130.34	291	0.0836649	8361.8	5939.6	138.38
222	0.109659	6346.6	4498.6	130.48	292	0.0833785	8391.0	5960.5	138.48
223	0.109167	6375.8	4519.5	130.61	293	0.0830941	8420.2	5981.4	138.58
224	0.108680	6405.0	4540.4	130.74	294	0.0828116	8449.4	6002.3	138.68
225	0.108197	6434.2	4561.3	130.87	295	0.0825310	8478.6	6023.1	138.78
226	0.107718	6463.5	4582.2	131.00	296	0.0822524	8507.8	6044.0	138.88
227	0.107244	6492.7	4603.1	131.13	297	0.0819756	8537.0	6064.9	138.98
228	0.106773	6521.9	4623.9	131.25	298	0.0817006	8566.2	6085.8	139.07
229	0.106307	6551.1	4644.8	131.38	299	0.0814275	8595.4	6106.7	139.17
230	0.105845	6580.3	4665.7	131.51	300	0.0811562	8624.6	6127.6	139.27

3.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
19	43.1141	-636.5	-643.6	18.59					
20	42.6120	-610.7	-617.8	19.94					
21	42.0849	-583.2	-590.4	21.27					
22	41.5298	-554.8	-562.2	22.58	91	0.402771	2469.8	1715.1	100.62
23	40.9446	-525.7	-533.1	23.87	92	0.398323	2500.2	1737.1	100.95
24	40.3268	-495.8	-503.4	25.15	93	0.393973	2530.6	1759.0	101.28
25	39.6730	-465.4	-473.1	26.39	94	0.389719	2561.0	1781.0	101.60
26	38.9784	-434.4	-442.2	27.61	95	0.385557	2591.4	1803.0	101.93
27	38.2360	-402.8	-410.7	28.80	96	0.381485	2621.7	1824.9	102.24
28	37.4359	-370.5	-378.6	29.98	97	0.377499	2652.1	1846.9	102.56
• 28.069	37.3781	-368.2	-376.3	30.06	98	0.373597	2682.4	1868.8	102.87
• 28.069	1.63623	699.6	513.8	68.10	99	0.369775	2712.8	1890.7	103.18
29	1.54215	725.5	528.4	69.01	100	0.366032	2743.1	1912.7	103.48
30	1.45626	752.7	543.9	69.94					
31	1.38208	779.7	559.7	70.82	101	0.362365	2773.4	1934.6	103.79
32	1.31697	806.4	575.6	71.66	102	0.358772	2803.8	1956.5	104.08
33	1.25909	832.8	591.4	72.48	103	0.355250	2834.0	1978.4	104.38
34	1.20716	859.1	607.3	73.26	104	0.351798	2864.3	2000.3	104.67
35	1.16017	885.1	623.1	74.02	105	0.348413	2894.6	2022.1	104.96
36	1.11737	911.1	639.1	74.75	106	0.345093	2924.8	2044.0	105.25
37	1.07816	937.0	655.0	75.46	107	0.341836	2955.0	2065.8	105.53
38	1.04206	962.8	671.1	76.15	108	0.338641	2985.2	2087.6	105.81
39	1.00867	988.5	687.2	76.82	109	0.335506	3015.4	2109.4	106.09
40	0.977675	1014.3	703.3	77.47	110	0.332429	3045.6	2131.2	106.37
41	0.948790	1040.0	719.7	78.10	111	0.329408	3075.7	2152.9	106.64
42	0.921788	1065.8	736.1	78.72	112	0.326443	3105.9	2174.7	106.91
43	0.896476	1091.7	752.6	79.33	113	0.323531	3136.0	2196.4	107.18
44	0.872683	1117.6	769.2	79.92	114	0.320670	3166.0	2218.1	107.44
45	0.850264	1143.5	786.0	80.51	115	0.317861	3196.1	2239.8	107.70
46	0.829094	1169.6	803.0	81.08	116	0.315101	3226.1	2261.4	107.96
47	0.809062	1195.8	820.1	81.65	117	0.312388	3256.2	2283.1	108.22
48	0.790070	1222.1	837.4	82.20	118	0.309722	3286.2	2304.7	108.48
49	0.772033	1248.5	854.8	82.75	119	0.307102	3316.1	2326.3	108.73
50	0.754874	1275.1	872.4	83.29	120	0.304526	3346.1	2347.9	108.98
51	0.738527	1301.8	890.2	83.82	121	0.301994	3376.0	2369.4	109.23
52	0.722930	1328.6	908.1	84.34	122	0.299503	3405.9	2391.0	109.48
53	0.708030	1355.6	926.3	84.85	123	0.297054	3435.8	2412.5	109.72
54	0.693776	1382.8	944.6	85.36	124	0.294644	3465.7	2434.1	109.96
55	0.680125	1410.1	963.2	85.86	125	0.292274	3495.6	2455.6	110.20
56	0.667037	1437.6	981.9	86.36	126	0.289942	3525.4	2477.0	110.44
57	0.654476	1465.3	1000.8	86.85	127	0.287647	3555.3	2498.5	110.68
58	0.642408	1493.1	1019.9	87.33	128	0.285388	3585.0	2519.9	110.91
59	0.630803	1521.0	1039.1	87.81	129	0.283165	3614.8	2541.3	111.14
60	0.619634	1549.1	1058.6	88.28	130	0.280976	3644.6	2562.8	111.37
61	0.608874	1577.4	1078.2	88.75	131	0.278821	3674.4	2584.1	111.60
62	0.598501	1605.9	1098.0	89.21	132	0.276699	3704.1	2605.5	111.82
63	0.588492	1634.4	1117.9	89.67	133	0.274609	3733.8	2626.8	112.05
64	0.578829	1663.1	1137.9	90.12	134	0.272551	3763.5	2648.2	112.27
65	0.569492	1692.0	1158.2	90.57	135	0.270524	3793.2	2669.5	112.49
66	0.560464	1720.9	1178.5	91.01	136	0.268527	3822.9	2690.8	112.71
67	0.551730	1750.0	1199.0	91.45	137	0.266559	3852.5	2712.2	112.93
68	0.543275	1779.1	1219.6	91.88	138	0.264620	3882.2	2733.5	113.14
69	0.535085	1808.5	1240.4	92.31	139	0.262709	3911.8	2754.7	113.36
70	0.527148	1837.8	1261.2	92.73	140	0.260826	3941.5	2776.0	113.57
71	0.519450	1867.5	1282.3	93.15	141	0.258970	3971.0	2797.3	113.78
72	0.511982	1897.2	1303.5	93.56	142	0.257140	4000.6	2818.5	113.99
73	0.504733	1927.0	1324.7	93.97	143	0.255336	4030.2	2839.7	114.20
74	0.497692	1956.8	1346.0	94.38	144	0.253557	4059.7	2860.9	114.40
75	0.490851	1986.6	1367.3	94.78	145	0.251803	4089.3	2882.1	114.61
76	0.484202	2016.5	1388.7	95.17	146	0.250073	4118.8	2903.3	114.81
77	0.477735	2046.4	1410.1	95.57	147	0.248367	4148.4	2924.5	115.01
78	0.471443	2076.3	1431.6	95.95	148	0.246684	4177.9	2945.7	115.21
79	0.465319	2106.3	1453.1	96.34	149	0.245024	4207.4	2966.8	115.41
80	0.459356	2136.4	1474.6	96.71	150	0.243386	4236.9	2988.0	115.61
81	0.453547	2166.6	1496.4	97.09	151	0.241770	4266.4	3009.1	115.80
82	0.447888	2196.9	1518.2	97.46	152	0.240176	4295.9	3030.2	116.00
83	0.442371	2227.1	1540.0	97.83	153	0.238602	4325.3	3051.3	116.19
84	0.436991	2257.4	1561.8	98.19	154	0.237049	4354.8	3072.4	116.38
85	0.431743	2287.7	1583.6	98.55	155	0.235516	4384.2	3093.5	116.58
86	0.426623	2318.0	1605.5	98.90	156	0.234003	4413.7	3114.6	116.76
87	0.421624	2348.3	1627.4	99.25	157	0.232509	4443.1	3135.7	116.95
88	0.416744	2378.7	1649.3	99.60	158	0.231035	4472.5	3156.8	117.14
89	0.411978	2409.0	1671.2	99.94	159	0.229579	4502.0	3177.9	117.33
90	0.407322	2439.4	1693.1	100.28	160	0.228141	4531.4	3199.0	117.51

• PHASE CHANGE

3.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	0.226721	4560.8	3220.0	117.69	231	0.157984	6609.6	4685.6	128.26
162	0.225319	4590.1	3241.1	117.87	232	0.157303	6638.9	4706.5	128.39
163	0.223935	4619.5	3262.1	118.05	233	0.156628	6668.1	4727.3	128.51
164	0.222567	4648.9	3283.1	118.23	234	0.155959	6697.3	4748.2	128.64
165	0.221216	4678.3	3304.2	118.41	235	0.155295	6726.5	4769.1	128.76
166	0.219881	4707.6	3325.2	118.59	236	0.154637	6755.7	4790.0	128.89
167	0.218562	4737.0	3346.2	118.77	237	0.153985	6784.9	4810.9	129.01
168	0.217259	4766.4	3367.2	118.94	238	0.153338	6814.2	4831.8	129.13
169	0.215972	4795.7	3388.2	119.12	239	0.152697	6843.4	4852.7	129.26
170	0.214700	4825.1	3409.3	119.29	240	0.152061	6872.6	4873.6	129.38
171	0.213442	4854.4	3430.2	119.46	241	0.151430	6901.8	4894.4	129.50
172	0.212200	4883.7	3451.2	119.63	242	0.150805	6931.0	4915.3	129.62
173	0.210972	4913.1	3472.2	119.80	243	0.150184	6960.2	4936.2	129.74
174	0.209758	4942.4	3493.2	119.97	244	0.149569	6989.4	4957.1	129.86
175	0.208558	4971.7	3514.2	120.14	245	0.148959	7018.7	4978.0	129.98
176	0.207372	5001.0	3535.2	120.31	246	0.148354	7047.9	4998.9	130.10
177	0.206199	5030.3	3556.1	120.47	247	0.147753	7077.1	5019.8	130.22
178	0.205039	5059.6	3577.1	120.64	248	0.147158	7106.3	5040.7	130.34
179	0.203892	5088.9	3598.1	120.80	249	0.146567	7135.5	5061.5	130.45
180	0.202759	5118.2	3619.1	120.97	250	0.145981	7164.7	5082.4	130.57
181	0.201637	5147.5	3640.0	121.13	251	0.145400	7193.9	5103.3	130.69
182	0.200529	5176.8	3661.0	121.29	252	0.144823	7223.1	5124.2	130.80
183	0.199432	5206.1	3681.9	121.45	253	0.144251	7252.3	5145.1	130.92
184	0.198347	5235.4	3702.9	121.61	254	0.143683	7281.5	5166.0	131.03
185	0.197274	5264.7	3723.8	121.77	255	0.143120	7310.8	5186.8	131.15
186	0.196213	5294.0	3744.8	121.93	256	0.142561	7340.0	5207.7	131.26
187	0.195163	5323.2	3765.7	122.08	257	0.142007	7369.2	5228.6	131.38
188	0.194124	5352.5	3786.6	122.24	258	0.141457	7398.4	5249.5	131.49
189	0.193096	5381.8	3807.6	122.39	259	0.140911	7427.6	5270.4	131.60
190	0.192079	5411.1	3828.5	122.55	260	0.140369	7456.8	5291.3	131.72
191	0.191073	5440.3	3849.4	122.70	261	0.139832	7486.0	5312.2	131.83
192	0.190077	5469.6	3870.4	122.86	262	0.139298	7515.2	5333.1	131.94
193	0.189092	5498.8	3891.3	123.01	263	0.138769	7544.4	5353.9	132.05
194	0.188117	5528.1	3912.2	123.16	264	0.138244	7573.7	5374.8	132.16
195	0.187152	5557.3	3933.1	123.31	265	0.137722	7602.9	5395.7	132.27
196	0.186196	5586.6	3954.1	123.46	266	0.137205	7632.1	5416.6	132.38
197	0.185251	5615.9	3975.0	123.61	267	0.136691	7661.3	5437.5	132.49
198	0.184315	5645.1	3995.9	123.76	268	0.136182	7690.5	5458.4	132.60
199	0.183388	5674.4	4016.8	123.90	269	0.135676	7719.7	5479.3	132.71
200	0.182471	5703.6	4037.7	124.05	270	0.135173	7748.9	5500.2	132.82
201	0.181563	5732.8	4058.6	124.20	271	0.134675	7778.1	5521.0	132.93
202	0.180664	5762.1	4079.6	124.34	272	0.134180	7807.4	5541.9	133.03
203	0.179774	5791.3	4100.5	124.48	273	0.133689	7836.6	5562.8	133.14
204	0.178892	5820.6	4121.4	124.63	274	0.133201	7865.8	5583.7	133.25
205	0.178019	5849.8	4142.3	124.77	275	0.132717	7895.0	5604.6	133.35
206	0.177155	5879.0	4163.2	124.91	276	0.132237	7924.2	5625.5	133.46
207	0.176299	5908.3	4184.1	125.06	277	0.131760	7953.4	5646.4	133.57
208	0.175451	5937.5	4205.0	125.20	278	0.131286	7982.6	5667.3	133.67
209	0.174612	5966.8	4225.9	125.34	279	0.130816	8011.8	5688.1	133.78
210	0.173780	5996.0	4246.8	125.48	280	0.130349	8041.0	5709.0	133.88
211	0.172957	6025.2	4267.7	125.62	281	0.129885	8070.2	5729.9	133.99
212	0.172141	6054.5	4288.6	125.75	282	0.129425	8099.5	5750.8	134.09
213	0.171333	6083.7	4309.5	125.89	283	0.128968	8128.7	5771.7	134.19
214	0.170532	6112.9	4330.4	126.03	284	0.128514	8157.9	5792.6	134.30
215	0.169739	6142.1	4351.3	126.16	285	0.128064	8187.1	5813.5	134.40
216	0.168953	6171.4	4372.2	126.30	286	0.127616	8216.3	5834.4	134.50
217	0.168174	6200.6	4393.1	126.43	287	0.127172	8245.5	5855.3	134.60
218	0.167403	6229.8	4414.0	126.57	288	0.126731	8274.7	5876.1	134.70
219	0.166639	6259.0	4434.9	126.70	289	0.126292	8303.9	5897.0	134.81
220	0.165881	6288.3	4455.8	126.84	290	0.125857	8333.2	5917.9	134.91
221	0.165131	6317.5	4476.6	126.97	291	0.125425	8362.4	5938.8	135.01
222	0.164387	6346.7	4497.6	127.10	292	0.124996	8391.6	5959.7	135.11
223	0.163650	6375.9	4518.5	127.23	293	0.124570	8420.8	5980.6	135.21
224	0.162919	6405.1	4539.3	127.36	294	0.124146	8450.0	6001.5	135.31
225	0.162195	6434.4	4560.2	127.49	295	0.123726	8479.2	6022.4	135.41
226	0.161478	6463.6	4581.1	127.62	296	0.123308	8508.4	6043.3	135.50
227	0.160767	6492.8	4602.0	127.75	297	0.122893	8537.6	6064.2	135.60
228	0.160062	6522.0	4622.9	127.88	298	0.122481	8566.8	6085.0	135.70
229	0.159363	6551.2	4643.8	128.01	299	0.122072	8596.1	6105.9	135.80
230	0.158670	6580.4	4664.7	128.13	300	0.121665	8625.3	6126.8	135.90

4.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
19	43.1491	-634.7	-644.1	18.56					
20	42.6503	-608.9	-618.4	19.91					
21	42.1262	-581.5	-591.1	21.23					
22	41.5741	-553.1	-562.9	22.55	91	0.537455	2465.6	1711.5	98.19
23	40.9921	-524.0	-533.9	23.84	92	0.531488	2496.2	1733.6	98.52
24	40.3780	-494.3	-504.3	25.11	93	0.525655	2526.7	1755.6	98.85
25	39.7287	-463.9	-474.1	26.35	94	0.519951	2557.1	1777.6	99.18
26	39.0396	-433.1	-443.4	27.56	95	0.514372	2587.6	1799.7	99.50
27	38.3041	-401.6	-412.2	28.75	96	0.508915	2618.1	1821.7	99.82
28	37.5129	-369.4	-380.2	29.92	97	0.503574	2648.5	1843.7	100.13
29	36.6528	-336.4	-347.4	31.08	98	0.498346	2678.9	1865.7	100.45
* 29.470	36.2196	-320.4	-331.6	31.63	99	0.493227	2709.4	1887.6	100.76
* 29.470	2.19660	686.4	501.8	65.79	100	0.488215	2739.8	1909.6	101.06
30	2.11248	704.1	512.2	66.39					
31	1.97775	736.2	531.2	67.44	101	0.483305	2770.2	1931.6	101.36
32	1.86553	766.7	549.5	68.41	102	0.478495	2800.6	1953.5	101.66
33	1.76950	796.3	567.3	69.32	103	0.473781	2830.9	1975.5	101.96
34	1.68575	825.2	584.8	70.18	104	0.469160	2861.3	1997.4	102.25
35	1.61169	853.6	602.1	71.00	105	0.464630	2891.6	2019.3	102.54
36	1.54546	881.5	619.3	71.79	106	0.460189	2921.9	2041.2	102.83
37	1.48569	909.2	636.3	72.55	107	0.455832	2952.2	2063.1	103.11
38	1.43137	936.5	653.4	73.28	108	0.451559	2982.5	2084.9	103.40
39	1.38168	963.7	670.4	73.99	109	0.447366	3012.7	2106.7	103.68
40	1.33598	990.8	687.4	74.68	110	0.443251	3042.9	2128.5	103.95
41	1.29375	1017.8	704.5	75.34	111	0.439212	3073.1	2150.3	104.22
42	1.25457	1044.7	721.6	75.98	112	0.435247	3103.3	2172.1	104.49
43	1.21807	1071.5	738.8	76.61	113	0.431354	3133.5	2193.9	104.76
44	1.18397	1098.4	756.0	77.23	114	0.427531	3163.6	2215.6	105.03
45	1.15200	1125.2	773.4	77.83	115	0.423776	3193.7	2237.3	105.29
46	1.12196	1152.1	790.9	78.43	116	0.420087	3223.8	2259.0	105.55
47	1.09365	1179.1	808.5	79.01	117	0.416463	3253.9	2280.7	105.81
48	1.06691	1206.1	826.2	79.58	118	0.412901	3283.9	2302.3	106.07
49	1.04161	1233.2	844.1	80.14	119	0.409400	3313.9	2324.0	106.32
50	1.01762	1260.4	862.1	80.69	120	0.405959	3344.0	2345.6	106.57
51	0.994838	1287.7	880.3	81.23	121	0.402576	3373.9	2367.1	106.82
52	0.973155	1315.1	898.6	81.76	122	0.399249	3403.9	2388.7	107.07
53	0.952491	1342.6	917.1	82.29	123	0.395978	3433.8	2410.3	107.31
54	0.932771	1370.3	935.8	82.80	124	0.392760	3463.8	2431.8	107.55
55	0.913925	1398.1	954.6	83.31	125	0.389595	3493.7	2453.4	107.79
56	0.895892	1426.0	973.6	83.82	126	0.386480	3523.6	2474.9	108.03
57	0.878617	1454.1	992.8	84.31	127	0.383416	3553.4	2496.3	108.27
58	0.862048	1482.3	1012.1	84.80	128	0.380400	3583.2	2517.8	108.50
59	0.846140	1510.6	1031.6	85.29	129	0.377432	3613.1	2539.2	108.73
60	0.830852	1539.1	1051.3	85.77	130	0.374510	3642.9	2560.7	108.96
61	0.816145	1567.7	1071.1	86.24	131	0.371633	3672.7	2582.1	109.19
62	0.801984	1596.5	1091.1	86.71	132	0.368801	3702.4	2603.5	109.42
63	0.788338	1625.4	1111.2	87.17	133	0.366012	3732.2	2624.8	109.64
64	0.775177	1654.3	1131.4	87.63	134	0.363265	3761.9	2646.2	109.87
65	0.762474	1683.5	1151.9	88.08	135	0.360559	3791.6	2667.6	110.09
66	0.750204	1712.7	1172.4	88.52	136	0.357894	3821.3	2688.9	110.31
67	0.738345	1742.0	1193.1	88.97	137	0.355268	3851.1	2710.2	110.52
68	0.726874	1771.4	1213.8	89.40	138	0.352681	3880.7	2731.5	110.74
69	0.715772	1801.0	1234.7	89.83	139	0.350131	3910.4	2752.9	110.95
70	0.705020	1830.6	1255.7	90.26	140	0.347618	3940.1	2774.1	111.17
71	0.694602	1860.4	1276.9	90.68	141	0.345141	3969.7	2795.4	111.38
72	0.684501	1890.4	1298.3	91.10	142	0.342700	3999.3	2816.6	111.58
73	0.674702	1920.3	1319.6	91.51	143	0.340293	4028.9	2837.9	111.79
74	0.665191	1950.3	1341.0	91.92	144	0.337920	4058.5	2859.1	112.00
75	0.655955	1980.3	1362.4	92.32	145	0.335580	4088.1	2880.3	112.20
76	0.646983	2010.3	1383.9	92.72	146	0.333272	4117.6	2901.5	112.41
77	0.638261	2040.4	1405.4	93.11	147	0.330996	4147.2	2922.7	112.61
78	0.629780	2070.5	1427.0	93.50	148	0.328751	4176.8	2943.9	112.81
79	0.621529	2100.7	1448.6	93.89	149	0.326537	4206.3	2965.1	113.01
80	0.613498	2130.9	1470.3	94.27	150	0.324353	4235.8	2986.3	113.21
81	0.605680	2161.3	1492.1	94.65	151	0.322197	4265.3	3007.4	113.40
82	0.598064	2191.7	1514.0	95.02	152	0.320070	4294.8	3028.5	113.60
83	0.590643	2222.1	1535.9	95.39	153	0.317972	4324.3	3049.7	113.79
84	0.583409	2252.5	1557.8	95.75	154	0.315901	4353.8	3070.8	113.98
85	0.576356	2282.9	1579.7	96.11	155	0.313856	4383.3	3091.9	114.17
86	0.569475	2313.3	1601.6	96.47	156	0.311839	4412.7	3113.0	114.36
87	0.562762	2343.8	1623.6	96.82	157	0.309847	4442.2	3134.1	114.55
88	0.556208	2374.2	1645.5	97.17	158	0.307880	4471.6	3155.2	114.74
89	0.549810	2404.7	1667.5	97.51	159	0.305939	4501.1	3176.3	114.92
90	0.543560	2435.2	1689.5	97.85	160	0.304022	4530.5	3197.4	115.11

* PHASE CHANGE

4.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	0.302129	4559.9	3218.4	115.29	231	0.210515	6609.8	4684.5	125.87
162	0.300259	4589.3	3239.5	115.47	232	0.209608	6639.1	4705.5	125.99
163	0.298413	4618.7	3260.6	115.65	233	0.208709	6668.3	4726.3	126.12
164	0.296589	4648.1	3281.6	115.83	234	0.207817	6697.5	4747.2	126.24
165	0.294788	4677.5	3302.6	116.01	235	0.206933	6726.7	4768.1	126.37
166	0.293008	4706.9	3323.7	116.19	236	0.206057	6756.0	4789.0	126.49
167	0.291250	4736.3	3344.7	116.37	237	0.205188	6785.2	4809.9	126.61
168	0.289513	4765.7	3365.8	116.54	238	0.204326	6814.4	4830.8	126.74
169	0.287797	4795.1	3386.8	116.72	239	0.203472	6843.6	4851.7	126.86
170	0.286101	4824.4	3407.8	116.89	240	0.202624	6872.8	4872.6	126.98
171	0.284425	4853.8	3428.8	117.06	241	0.201784	6902.0	4893.5	127.10
172	0.282768	4883.1	3449.8	117.23	242	0.200950	6931.3	4914.4	127.22
173	0.281131	4912.5	3470.8	117.40	243	0.200124	6960.5	4935.3	127.35
174	0.279513	4941.8	3491.8	117.57	244	0.199304	6989.7	4956.2	127.47
175	0.277913	4971.1	3512.8	117.74	245	0.198491	7018.9	4977.1	127.58
176	0.276332	5000.5	3533.8	117.91	246	0.197685	7048.2	4997.9	127.70
177	0.274769	5029.8	3554.8	118.07	247	0.196885	7077.4	5018.8	127.82
178	0.273223	5059.1	3575.7	118.24	248	0.196092	7106.6	5039.7	127.94
179	0.271694	5088.5	3596.7	118.40	249	0.195305	7135.8	5060.6	128.06
180	0.270183	5117.8	3617.7	118.57	250	0.194524	7165.1	5081.5	128.18
181	0.268689	5147.1	3638.7	118.73	251	0.193749	7194.3	5102.4	128.29
182	0.267211	5176.4	3659.6	118.89	252	0.192981	7223.5	5123.3	128.41
183	0.265749	5205.7	3680.6	119.05	253	0.192219	7252.7	5144.2	128.52
184	0.264303	5235.0	3701.5	119.21	254	0.191462	7281.9	5165.1	128.64
185	0.262873	5264.3	3722.5	119.37	255	0.190712	7311.1	5185.9	128.75
186	0.261458	5293.6	3743.4	119.53	256	0.189968	7340.3	5206.8	128.87
187	0.260059	5322.9	3764.4	119.68	257	0.189229	7369.6	5227.7	128.98
188	0.258674	5352.2	3785.3	119.84	258	0.188496	7398.8	5248.6	129.10
189	0.257305	5381.5	3806.3	120.00	259	0.187769	7428.0	5269.5	129.21
190	0.255949	5410.8	3827.2	120.15	260	0.187047	7457.2	5290.4	129.32
191	0.254608	5440.0	3848.2	120.30	261	0.186331	7486.4	5311.3	129.43
192	0.253281	5469.3	3869.1	120.46	262	0.185621	7515.7	5332.2	129.54
193	0.251968	5498.6	3890.0	120.61	263	0.184915	7544.9	5353.1	129.66
194	0.250668	5527.8	3911.0	120.76	264	0.184215	7574.1	5374.0	129.77
195	0.249382	5557.1	3931.9	120.91	265	0.183521	7603.3	5394.9	129.88
196	0.248109	5586.4	3952.8	121.06	266	0.182831	7632.5	5415.7	129.99
197	0.246849	5615.6	3973.8	121.21	267	0.182147	7661.8	5436.6	130.10
198	0.245602	5644.9	3994.7	121.36	268	0.181468	7691.0	5457.5	130.21
199	0.244367	5674.2	4015.6	121.51	269	0.180794	7720.2	5478.4	130.32
200	0.243145	5703.4	4036.5	121.65	270	0.180125	7749.4	5499.3	130.42
201	0.241934	5732.7	4057.4	121.80	271	0.179461	7778.6	5520.2	130.53
202	0.240736	5761.9	4078.4	121.94	272	0.178802	7807.8	5541.1	130.64
203	0.239550	5791.2	4099.3	122.09	273	0.178147	7837.1	5562.0	130.75
204	0.238375	5820.5	4120.2	122.23	274	0.177498	7866.3	5582.9	130.85
205	0.237212	5849.7	4141.1	122.37	275	0.176853	7895.5	5603.8	130.96
206	0.236061	5879.0	4162.0	122.52	276	0.176213	7924.7	5624.6	131.07
207	0.234920	5908.2	4182.9	122.66	277	0.175577	7953.9	5645.5	131.17
208	0.233790	5937.5	4203.9	122.80	278	0.174946	7983.1	5666.4	131.28
209	0.232672	5966.7	4224.8	122.94	279	0.174320	8012.4	5687.3	131.38
210	0.231563	5995.9	4245.7	123.08	280	0.173698	8041.6	5708.2	131.49
211	0.230466	6025.2	4266.6	123.22	281	0.173080	8070.8	5729.1	131.59
212	0.229379	6054.4	4287.5	123.36	282	0.172467	8100.0	5750.0	131.69
213	0.228302	6083.7	4308.4	123.49	283	0.171858	8129.2	5770.9	131.80
214	0.227235	6112.9	4329.3	123.63	284	0.171253	8158.4	5791.8	131.90
215	0.226178	6142.1	4350.2	123.77	285	0.170653	8187.7	5812.7	132.00
216	0.225131	6171.4	4371.1	123.90	286	0.170057	8216.9	5833.6	132.11
217	0.224094	6200.6	4392.0	124.04	287	0.169465	8246.1	5854.5	132.21
218	0.223066	6229.9	4412.9	124.17	288	0.168877	8275.3	5875.4	132.31
219	0.222047	6259.1	4433.8	124.31	289	0.168293	8304.5	5896.2	132.41
220	0.221038	6288.3	4454.7	124.44	290	0.167714	8333.8	5917.1	132.51
221	0.220038	6317.5	4475.6	124.57	291	0.167138	8363.0	5938.0	132.61
222	0.219047	6346.8	4496.5	124.70	292	0.166566	8392.2	5958.9	132.71
223	0.218065	6376.0	4517.4	124.83	293	0.165998	8421.4	5979.8	132.81
224	0.217092	6405.2	4538.3	124.97	294	0.165434	8450.6	6000.7	132.91
225	0.216127	6434.5	4559.2	125.10	295	0.164874	8479.8	6021.6	133.01
226	0.215171	6463.7	4580.1	125.23	296	0.164318	8509.1	6042.5	133.11
227	0.214223	6492.9	4601.0	125.35	297	0.163765	8538.3	6063.4	133.21
228	0.213284	6522.2	4621.9	125.48	298	0.163216	8567.5	6084.3	133.31
229	0.212353	6551.4	4642.8	125.61	299	0.162671	8596.7	6105.2	133.40
230	0.211430	6580.6	4663.7	125.74	300	0.162129	8625.9	6126.1	133.50

5.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
19	43.1841	-632.8	-644.6	18.53					
20	42.6885	-607.1	-619.0	19.88					
21	42.1674	-579.7	-591.7	21.20	91	0.672341	2461.5	1708.0	96.30
22	41.6182	-551.4	-563.6	22.51	92	0.664838	2492.1	1730.1	96.63
23	41.0394	-522.4	-534.7	23.80	93	0.657505	2522.7	1752.2	96.96
24	40.4289	-492.7	-505.2	25.07	94	0.650336	2553.3	1774.3	97.29
25	39.7840	-462.5	-475.2	26.30	95	0.643325	2583.9	1796.4	97.61
26	39.1002	-431.7	-444.7	27.51	96	0.636468	2614.4	1818.4	97.93
27	38.3713	-400.3	-413.5	28.70	97	0.629760	2644.9	1840.5	98.25
28	37.5887	-368.4	-381.9	29.86	98	0.623194	2675.5	1862.5	98.56
29	36.7399	-335.5	-349.3	31.01	99	0.616767	2706.0	1884.5	98.87
30	35.8066	-301.6	-315.8	32.17	100	0.610474	2736.4	1906.6	99.18
* 30.639	35.1532	-278.9	-293.3	32.91					
* 30.639	2.78174	670.3	488.2	63.89	101	0.604312	2766.9	1928.5	99.48
31	2.69851	684.7	497.0	64.36	102	0.598275	2797.4	1950.6	99.78
32	2.50500	721.8	519.6	65.54	103	0.592360	2827.8	1972.6	100.08
33	2.34936	756.1	540.5	66.59	104	0.586563	2858.2	1994.5	100.37
34	2.21927	788.6	560.3	67.56	105	0.580880	2888.6	2016.5	100.66
35	2.10772	819.9	579.5	68.47	106	0.575309	2919.0	2038.4	100.95
36	2.01031	850.3	598.3	69.33	107	0.569846	2949.4	2060.3	101.23
37	1.92405	880.0	616.7	70.14	108	0.564487	2979.7	2082.2	101.52
38	1.84684	909.3	635.0	70.92	109	0.559230	3010.0	2104.0	101.80
39	1.77711	938.1	653.0	71.67	110	0.554072	3040.3	2125.9	102.07
40	1.71367	966.6	671.0	72.40					
41	1.65559	994.9	688.9	73.09	111	0.549009	3070.5	2147.7	102.34
42	1.60213	1023.0	706.8	73.77	112	0.544040	3100.8	2169.5	102.62
43	1.55269	1051.0	724.7	74.42	113	0.539161	3131.0	2191.3	102.89
44	1.50678	1078.8	742.6	75.06	114	0.534371	3161.2	2213.1	103.15
45	1.46398	1106.6	760.6	75.69	115	0.529666	3191.3	2234.8	103.41
46	1.42396	1134.4	778.6	76.30	116	0.525045	3221.5	2256.6	103.68
47	1.38642	1162.1	796.7	76.90	117	0.520504	3251.6	2278.3	103.93
48	1.35111	1189.9	814.9	77.49	118	0.516043	3281.7	2300.0	104.19
49	1.31782	1217.7	833.2	78.06	119	0.511658	3311.8	2321.6	104.44
50	1.28636	1245.5	851.7	78.63	120	0.507349	3341.8	2343.3	104.70
51	1.25656	1273.5	870.3	79.18	121	0.503112	3371.8	2364.9	104.94
52	1.22829	1301.4	888.9	79.72	122	0.498946	3401.8	2386.4	105.19
53	1.20142	1329.5	907.8	80.25	123	0.494850	3431.9	2408.1	105.44
54	1.17584	1357.7	926.8	80.78	124	0.490822	3461.8	2429.6	105.68
55	1.15144	1385.9	945.9	81.30	125	0.486859	3491.8	2451.2	105.92
56	1.12814	1414.3	965.2	81.81	126	0.482960	3521.7	2472.7	106.16
57	1.10586	1442.8	984.7	82.32	127	0.479124	3551.6	2494.2	106.39
58	1.08454	1471.4	1004.3	82.81	128	0.475350	3581.5	2515.7	106.63
59	1.06409	1500.2	1024.0	83.31	129	0.471635	3611.3	2537.2	106.86
60	1.04447	1529.0	1043.9	83.79	130	0.467978	3641.2	2558.6	107.09
61	1.02562	1558.0	1064.0	84.27	131	0.464378	3671.0	2580.0	107.32
62	1.00750	1587.1	1084.2	84.74	132	0.460834	3700.8	2601.4	107.55
63	0.990062	1616.2	1104.5	85.21	133	0.457343	3730.6	2622.8	107.77
64	0.973258	1645.5	1124.9	85.67	134	0.453906	3760.3	2644.2	108.00
65	0.957056	1674.9	1145.6	86.13	135	0.450521	3790.1	2665.6	108.22
66	0.941422	1704.4	1166.3	86.58	136	0.447186	3819.9	2686.9	108.44
67	0.926325	1734.0	1187.1	87.02	137	0.443901	3849.6	2708.3	108.65
68	0.911736	1763.7	1208.0	87.46	138	0.440664	3879.3	2729.6	108.87
69	0.897628	1793.5	1229.1	87.90	139	0.437475	3909.0	2751.0	109.08
70	0.883975	1823.3	1250.1	88.32	140	0.434332	3938.7	2772.3	109.30
71	0.870755	1853.4	1271.5	88.75	141	0.431234	3968.4	2793.5	109.51
72	0.857947	1883.5	1293.0	89.17	142	0.428180	3998.0	2814.8	109.72
73	0.845530	1913.6	1314.5	89.59	143	0.425170	4027.6	2836.0	109.93
74	0.833486	1943.8	1336.0	90.00	144	0.422202	4057.2	2857.3	110.13
75	0.821797	1974.0	1357.5	90.40	145	0.419275	4086.9	2878.5	110.34
76	0.810447	2004.2	1379.1	90.80	146	0.416389	4116.5	2899.7	110.54
77	0.799420	2034.5	1400.7	91.20	147	0.413543	4146.0	2921.0	110.74
78	0.788703	2064.8	1422.4	91.59	148	0.410736	4175.6	2942.2	110.94
79	0.778282	2095.1	1444.1	91.98	149	0.407967	4205.2	2963.4	111.14
80	0.768144	2125.4	1465.9	92.36	150	0.405236	4234.8	2984.6	111.34
81	0.758277	2156.0	1487.8	92.74	151	0.402541	4264.3	3005.7	111.54
82	0.748670	2186.5	1509.8	93.11	152	0.399881	4293.8	3026.9	111.73
83	0.739313	2217.0	1531.7	93.48	153	0.397257	4323.3	3048.0	111.92
84	0.730195	2247.5	1553.7	93.85	154	0.394668	4352.8	3069.1	112.12
85	0.721307	2278.1	1575.7	94.21	155	0.392112	4382.3	3090.3	112.31
86	0.712640	2308.7	1597.7	94.57	156	0.389590	4411.8	3111.4	112.50
87	0.704186	2339.2	1619.8	94.92	157	0.387100	4441.3	3132.5	112.68
88	0.695937	2369.8	1641.8	95.27	158	0.384641	4470.7	3153.6	112.87
89	0.687884	2400.4	1663.9	95.62	159	0.382214	4500.2	3174.7	113.06
90	0.680021	2430.9	1685.9	95.96	160	0.379818	4529.7	3195.8	113.24

* PHASE CHANGE

5.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	0.377451	4559.1	3216.9	113.43	231	0.262982	6610.0	4683.5	124.01
162	0.375115	4588.5	3238.0	113.61	232	0.261849	6639.2	4704.4	124.13
163	0.372807	4618.0	3259.0	113.79	233	0.260725	6668.5	4725.3	124.26
164	0.370527	4647.4	3280.1	113.97	234	0.259612	6697.7	4746.2	124.38
165	0.368275	4676.8	3301.1	114.15	235	0.258508	6726.9	4767.1	124.51
166	0.366051	4706.2	3322.2	114.33	236	0.257413	6756.2	4788.0	124.63
167	0.363854	4735.6	3343.2	114.50	237	0.256327	6785.4	4808.9	124.76
168	0.361683	4765.0	3364.3	114.68	238	0.255251	6814.6	4829.8	124.88
169	0.359538	4794.4	3385.3	114.85	239	0.254184	6843.9	4850.7	125.00
170	0.357418	4823.8	3406.3	115.03	240	0.253125	6873.1	4871.6	125.12
171	0.355323	4853.2	3427.4	115.20	241	0.252076	6902.3	4892.5	125.24
172	0.353253	4882.5	3448.4	115.37	242	0.251035	6931.6	4913.4	125.37
173	0.351207	4911.9	3469.4	115.54	243	0.250002	6960.8	4934.3	125.49
174	0.349185	4941.2	3490.4	115.71	244	0.248978	6990.0	4955.2	125.61
175	0.347186	4970.6	3511.4	115.88	245	0.247963	7019.2	4976.1	125.73
176	0.345209	5000.0	3532.4	116.04	246	0.246956	7048.5	4997.0	125.84
177	0.343256	5029.3	3553.4	116.21	247	0.245957	7077.7	5017.9	125.96
178	0.341324	5058.7	3574.4	116.38	248	0.244966	7106.9	5038.8	126.08
179	0.339414	5088.0	3595.4	116.54	249	0.243983	7136.2	5059.7	126.20
180	0.337526	5117.3	3616.3	116.70	250	0.243007	7165.4	5080.6	126.32
181	0.335658	5146.7	3637.3	116.87	251	0.242040	7194.6	5101.5	126.43
182	0.333811	5176.0	3658.3	117.03	252	0.241080	7223.8	5122.4	126.55
183	0.331985	5205.3	3679.2	117.19	253	0.240128	7253.1	5143.3	126.66
184	0.330178	5234.6	3700.2	117.35	254	0.239184	7282.3	5164.1	126.78
185	0.328391	5263.9	3721.2	117.51	255	0.238247	7311.5	5185.0	126.89
186	0.326624	5293.2	3742.1	117.66	256	0.237317	7340.7	5205.9	127.01
187	0.324875	5322.5	3763.1	117.82	257	0.236394	7370.0	5226.8	127.12
188	0.323145	5351.9	3784.1	117.98	258	0.235479	7399.2	5247.7	127.24
189	0.321434	5381.2	3805.0	118.13	259	0.234571	7428.4	5268.6	127.35
190	0.319740	5410.5	3826.0	118.29	260	0.233669	7457.6	5289.5	127.46
191	0.318065	5439.7	3846.9	118.44	261	0.232775	7486.8	5310.4	127.57
192	0.316407	5469.0	3867.9	118.60	262	0.231887	7516.1	5331.3	127.69
193	0.314766	5498.3	3888.8	118.75	263	0.231006	7545.3	5352.2	127.80
194	0.313142	5527.6	3909.7	118.90	264	0.230132	7574.5	5373.1	127.91
195	0.311535	5556.9	3930.7	119.05	265	0.229265	7603.8	5394.0	128.02
196	0.309945	5586.2	3951.6	119.20	266	0.228404	7633.0	5414.9	128.13
197	0.308370	5615.4	3972.5	119.35	267	0.227549	7662.2	5435.8	128.24
198	0.306812	5644.7	3993.5	119.50	268	0.226701	7691.4	5456.7	128.35
199	0.305269	5674.0	4014.4	119.64	269	0.225859	7720.7	5477.6	128.46
200	0.303742	5703.3	4035.3	119.79	270	0.225023	7749.9	5498.5	128.57
201	0.302230	5732.5	4056.3	119.94	271	0.224194	7779.1	5519.3	128.67
202	0.300734	5761.8	4077.2	120.08	272	0.223371	7808.3	5540.3	128.78
203	0.299252	5791.1	4098.1	120.23	273	0.222553	7837.6	5561.1	128.89
204	0.297784	5820.3	4119.0	120.37	274	0.221742	7866.8	5582.0	128.99
205	0.296331	5849.6	4140.0	120.51	275	0.220937	7896.0	5602.9	129.10
206	0.294892	5878.9	4160.9	120.66	276	0.220137	7925.2	5623.8	129.21
207	0.293467	5908.1	4181.8	120.80	277	0.219343	7954.4	5644.7	129.31
208	0.292056	5937.4	4202.7	120.94	278	0.218555	7983.7	5665.6	129.42
209	0.290659	5966.7	4223.6	121.08	279	0.217773	8012.9	5686.5	129.52
210	0.289274	5995.9	4244.5	121.22	280	0.216996	8042.1	5707.4	129.63
211	0.287903	6025.2	4265.5	121.36	281	0.216224	8071.3	5728.3	129.73
212	0.286545	6054.4	4286.4	121.50	282	0.215459	8100.6	5749.2	129.84
213	0.285200	6083.7	4307.3	121.63	283	0.214698	8129.8	5770.1	129.94
214	0.283867	6112.9	4328.2	121.77	284	0.213943	8159.0	5791.0	130.04
215	0.282547	6142.2	4349.1	121.91	285	0.213193	8188.2	5811.9	130.15
216	0.281239	6171.4	4370.0	122.04	286	0.212449	8217.5	5832.8	130.25
217	0.279943	6200.7	4390.9	122.18	287	0.211709	8246.7	5853.7	130.35
218	0.278659	6229.9	4411.8	122.31	288	0.210975	8275.9	5874.6	130.45
219	0.277387	6259.2	4432.7	122.45	289	0.210246	8305.1	5895.5	130.55
220	0.276126	6288.4	4453.6	122.58	290	0.209522	8334.4	5916.4	130.65
221	0.274877	6317.6	4474.5	122.71	291	0.208803	8363.6	5937.2	130.75
222	0.273639	6346.9	4495.4	122.84	292	0.208089	8392.8	5958.1	130.85
223	0.272412	6376.1	4516.3	122.98	293	0.207379	8422.0	5979.0	130.95
224	0.271197	6405.4	4537.2	123.11	294	0.206675	8451.2	5999.9	131.05
225	0.269992	6434.6	4558.1	123.24	295	0.205975	8480.5	6020.8	131.15
226	0.268797	6463.8	4579.0	123.37	296	0.205280	8509.7	6041.7	131.25
227	0.267614	6493.1	4599.9	123.49	297	0.204590	8538.9	6062.6	131.35
228	0.266440	6522.3	4620.9	123.62	298	0.203904	8568.1	6083.5	131.45
229	0.265277	6551.5	4641.8	123.75	299	0.203223	8597.4	6104.4	131.55
230	0.264124	6580.8	4662.7	123.88	300	0.202547	8626.6	6125.3	131.64

6.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
19	43.2191	-631.0	-645.1	18.51					
20	42.7268	-605.3	-619.5	19.85					
21	42.2085	-577.9	-592.3	21.17	91	0.807425	2457.4	1704.5	94.74
22	41.6622	-549.7	-564.3	22.48	92	0.798367	2488.1	1726.6	95.08
23	41.0864	-520.7	-535.5	23.77	93	0.789517	2518.8	1748.8	95.41
24	40.4795	-491.1	-506.1	25.03	94	0.780867	2549.5	1770.9	95.74
25	39.8388	-461.0	-476.2	26.26	95	0.772411	2580.1	1793.0	96.06
26	39.1601	-430.3	-445.8	27.47	96	0.764141	2610.8	1815.2	96.38
27	38.4378	-399.1	-414.9	28.65	97	0.756051	2641.4	1837.3	96.70
28	37.6634	-367.3	-383.4	29.80	98	0.748136	2672.0	1859.4	97.01
29	36.8254	-334.7	-351.2	30.95	99	0.740390	2702.6	1881.4	97.32
30	35.9069	-301.1	-318.0	32.09	100	0.732806	2733.1	1903.5	97.63
31	34.8821	-265.6	-283.0	33.25					
* 31.653	34.1361	-241.0	-258.8	34.03	101	0.725380	2763.7	1925.5	97.93
* 31.653	3.39586	652.7	473.6	62.27	102	0.718107	2794.2	1947.6	98.23
32	3.28592	668.7	483.7	62.77	103	0.710982	2824.7	1969.6	98.53
33	3.02734	710.7	509.8	64.06	104	0.704001	2855.2	1991.7	98.83
34	2.82551	748.4	533.3	65.19	105	0.697158	2885.7	2013.6	99.12
35	2.66004	783.7	555.1	66.21	106	0.690450	2916.1	2035.6	99.41
36	2.52007	817.2	575.9	67.16	107	0.683873	2946.5	2057.6	99.69
37	2.39906	849.5	596.0	68.04	108	0.677423	2976.9	2079.5	99.98
38	2.29275	880.8	615.7	68.88	109	0.671096	3007.3	2101.4	100.26
39	2.19817	911.5	635.0	69.68	110	0.664888	3037.6	2123.3	100.53
40	2.11319	941.7	654.0	70.45					
41	2.03620	971.4	672.9	71.18	111	0.658796	3067.9	2145.1	100.81
42	1.96596	1000.8	691.6	71.88	112	0.652818	3098.2	2167.0	101.08
43	1.90151	1030.0	710.3	72.57	113	0.646949	3128.5	2188.8	101.35
44	1.84205	1058.9	728.9	73.23	114	0.641186	3158.8	2210.6	101.61
45	1.78697	1087.7	747.5	73.88	115	0.635527	3189.0	2232.4	101.88
46	1.73572	1116.3	766.1	74.51	116	0.629969	3219.2	2254.1	102.14
47	1.68788	1144.9	784.8	75.13	117	0.624509	3249.3	2275.9	102.40
48	1.64308	1173.5	803.5	75.73	118	0.619144	3279.5	2297.6	102.65
49	1.60099	1202.0	822.3	76.32	119	0.613873	3309.6	2319.2	102.91
50	1.56136	1230.5	841.1	76.90	120	0.608692	3339.7	2340.9	103.16
51	1.52394	1259.1	860.1	77.46	121	0.603599	3369.8	2362.6	103.41
52	1.48854	1287.6	879.2	78.02	122	0.598591	3399.8	2384.2	103.66
53	1.45499	1316.2	898.4	78.56	123	0.593668	3429.9	2405.8	103.90
54	1.42311	1344.9	917.7	79.10	124	0.588826	3459.9	2427.4	104.15
55	1.39279	1373.7	937.2	79.62	125	0.584063	3489.9	2449.0	104.39
56	1.36389	1402.5	956.8	80.14	126	0.579379	3519.8	2470.5	104.63
57	1.33630	1431.5	976.6	80.66	127	0.574769	3549.8	2492.1	104.86
58	1.30994	1460.5	996.4	81.16	128	0.570234	3579.7	2513.5	105.10
59	1.28472	1489.6	1016.4	81.66	129	0.565770	3609.6	2535.1	105.33
60	1.26054	1518.8	1036.5	82.15	130	0.561377	3639.5	2556.5	105.56
61	1.23736	1548.2	1056.8	82.64	131	0.557052	3669.3	2578.0	105.79
62	1.21509	1577.6	1077.3	83.11	132	0.552794	3699.2	2599.4	106.02
63	1.19368	1607.1	1097.8	83.59	133	0.548602	3729.0	2620.8	106.24
64	1.17309	1636.6	1118.4	84.05	134	0.544474	3758.8	2642.2	106.46
65	1.15325	1666.4	1139.2	84.51	135	0.540408	3788.6	2663.6	106.69
66	1.13412	1696.1	1160.1	84.97	136	0.536403	3818.4	2685.0	106.91
67	1.11568	1726.0	1181.0	85.42	137	0.532457	3848.1	2706.4	107.12
68	1.09786	1755.9	1202.1	85.86	138	0.528570	3877.9	2727.7	107.34
69	1.08065	1785.9	1223.3	86.30	139	0.524740	3907.6	2749.1	107.55
70	1.06401	1816.0	1244.6	86.73	140	0.520966	3937.4	2770.4	107.77
71	1.04791	1846.3	1266.1	87.16	141	0.517246	3967.0	2791.7	107.98
72	1.03232	1876.6	1287.7	87.58	142	0.513579	3996.7	2813.0	108.19
73	1.01721	1907.0	1309.3	88.00	143	0.509965	4026.4	2834.2	108.40
74	1.00257	1937.3	1330.9	88.41	144	0.506401	4056.0	2855.5	108.60
75	0.988373	1967.7	1352.6	88.82	145	0.502888	4085.6	2876.7	108.81
76	0.974591	1998.1	1374.3	89.22	146	0.499423	4115.3	2898.0	109.01
77	0.961209	2028.5	1396.0	89.62	147	0.496006	4144.9	2919.2	109.21
78	0.948208	2059.0	1417.8	90.01	148	0.492637	4174.5	2940.4	109.41
79	0.935573	2089.4	1439.6	90.40	149	0.489313	4204.1	2961.6	109.61
80	0.923286	2119.9	1461.5	90.79	150	0.486034	4233.7	2982.9	109.81
81	0.911333	2150.6	1483.5	91.17	151	0.482799	4263.2	3004.0	110.01
82	0.899700	2181.3	1505.5	91.55	152	0.479607	4292.8	3025.2	110.20
83	0.888374	2211.9	1527.6	91.92	153	0.476458	4322.3	3046.3	110.40
84	0.877341	2242.6	1549.7	92.28	154	0.473350	4351.8	3067.5	110.59
85	0.866591	2273.3	1571.8	92.65	155	0.470282	4381.4	3088.6	110.78
86	0.856111	2304.0	1593.8	93.01	156	0.467255	4410.9	3109.8	110.97
87	0.845891	2334.7	1615.9	93.36	157	0.464266	4440.4	3130.9	111.16
88	0.835922	2365.3	1638.1	93.71	158	0.461316	4469.9	3152.0	111.35
89	0.826194	2396.0	1660.2	94.06	159	0.458403	4499.4	3173.1	111.53
90	0.816698	2426.7	1682.3	94.40	160	0.455528	4528.8	3194.2	111.72

* PHASE CHANGE

6.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	0.452688	4558.3	3215.3	111.90	231	0.315383	6610.2	4682.5	122.49
162	0.449884	4587.8	3236.4	112.08	232	0.314024	6639.4	4703.4	122.61
163	0.447114	4617.2	3257.5	112.26	233	0.312677	6668.7	4724.3	122.74
164	0.444379	4646.6	3278.6	112.44	234	0.311342	6697.9	4745.2	122.86
165	0.441677	4676.1	3299.6	112.62	235	0.310018	6727.2	4766.1	122.99
166	0.439008	4705.5	3320.7	112.80	236	0.308705	6756.4	4787.1	123.11
167	0.436372	4734.9	3341.7	112.98	237	0.307404	6785.6	4808.0	123.24
168	0.433767	4764.3	3362.8	113.15	238	0.306113	6814.9	4828.9	123.36
169	0.431193	4793.8	3383.8	113.33	239	0.304833	6844.1	4849.8	123.48
170	0.428650	4823.2	3404.9	113.50	240	0.303564	6873.4	4870.7	123.60
171	0.426137	4852.6	3425.9	113.67	241	0.302305	6902.6	4891.5	123.72
172	0.423653	4881.9	3446.9	113.85	242	0.301057	6931.8	4912.5	123.85
173	0.421199	4911.3	3467.9	114.02	243	0.299819	6961.1	4933.4	123.97
174	0.418772	4940.7	3489.0	114.18	244	0.298592	6990.3	4954.3	124.09
175	0.416374	4970.1	3510.0	114.35	245	0.297374	7019.6	4975.2	124.21
176	0.414003	4999.4	3531.0	114.52	246	0.296166	7048.8	4996.1	124.32
177	0.411659	5028.8	3552.0	114.69	247	0.294968	7078.0	5017.0	124.44
178	0.409342	5058.2	3573.0	114.85	248	0.293780	7107.3	5037.9	124.56
179	0.407051	5087.5	3594.0	115.02	249	0.292601	7136.5	5058.8	124.68
180	0.404786	5116.9	3615.0	115.18	250	0.291432	7165.7	5079.7	124.80
181	0.402545	5146.2	3636.0	115.34	251	0.290272	7194.9	5100.5	124.91
182	0.400330	5175.6	3656.9	115.50	252	0.289121	7224.2	5121.4	125.03
183	0.398139	5204.9	3677.9	115.67	253	0.287980	7253.4	5142.3	125.15
184	0.395972	5234.2	3698.9	115.83	254	0.286847	7282.7	5163.2	125.26
185	0.393828	5263.6	3719.9	115.98	255	0.285724	7311.9	5184.1	125.38
186	0.391708	5292.9	3740.8	116.14	256	0.284609	7341.1	5205.0	125.49
187	0.389611	5322.2	3761.8	116.30	257	0.283502	7370.4	5225.9	125.60
188	0.387536	5351.5	3782.8	116.46	258	0.282405	7399.6	5246.8	125.72
189	0.385483	5380.8	3803.7	116.61	259	0.281316	7428.8	5267.7	125.83
190	0.383452	5410.2	3824.7	116.77	260	0.280235	7458.1	5288.6	125.94
191	0.381442	5439.5	3845.6	116.92	261	0.279163	7487.3	5309.5	126.06
192	0.379453	5468.8	3866.6	117.07	262	0.278098	7516.5	5330.4	126.17
193	0.377485	5498.1	3887.5	117.23	263	0.277042	7545.8	5351.3	126.28
194	0.375538	5527.4	3908.5	117.38	264	0.275994	7575.0	5372.2	126.39
195	0.373610	5556.7	3929.4	117.53	265	0.274954	7604.2	5393.1	126.50
196	0.371703	5586.0	3950.4	117.68	266	0.273921	7633.5	5414.0	126.61
197	0.369815	5615.3	3971.3	117.83	267	0.272897	7662.7	5434.9	126.72
198	0.367946	5644.5	3992.3	117.97	268	0.271880	7691.9	5455.8	126.83
199	0.366095	5673.8	4013.2	118.12	269	0.270870	7721.2	5476.7	126.94
200	0.364264	5703.1	4034.1	118.27	270	0.269868	7750.4	5497.6	127.05
201	0.362451	5732.4	4055.1	118.41	271	0.268874	7779.6	5518.5	127.15
202	0.360656	5761.7	4076.0	118.56	272	0.267887	7808.8	5539.4	127.26
203	0.358878	5791.0	4096.9	118.70	273	0.266907	7838.1	5560.3	127.37
204	0.357118	5820.2	4117.9	118.85	274	0.265934	7867.3	5581.2	127.48
205	0.355376	5849.5	4138.8	118.99	275	0.264968	7896.5	5602.1	127.58
206	0.353650	5878.8	4159.7	119.13	276	0.264010	7925.7	5623.0	127.69
207	0.351941	5908.1	4180.6	119.28	277	0.263058	7955.0	5643.9	127.79
208	0.350249	5937.3	4201.6	119.42	278	0.262113	7984.2	5664.8	127.90
209	0.348573	5966.6	4222.5	119.56	279	0.261175	8013.4	5685.7	128.00
210	0.346913	5995.9	4243.4	119.70	280	0.260243	8042.7	5706.6	128.11
211	0.345268	6025.1	4264.3	119.84	281	0.259318	8071.9	5727.5	128.21
212	0.343640	6054.4	4285.3	119.97	282	0.258400	8101.1	5748.4	128.32
213	0.342026	6083.7	4306.2	120.11	283	0.257488	8130.4	5769.3	128.42
214	0.340428	6112.9	4327.1	120.25	284	0.256583	8159.6	5790.2	128.52
215	0.338845	6142.2	4348.0	120.39	285	0.255684	8188.8	5811.1	128.63
216	0.337276	6171.4	4368.9	120.52	286	0.254791	8218.0	5832.0	128.73
217	0.335722	6200.7	4389.8	120.66	287	0.253905	8247.3	5852.9	128.83
218	0.334182	6230.0	4410.7	120.79	288	0.253025	8276.5	5873.8	128.93
219	0.332657	6259.2	4431.7	120.93	289	0.252150	8305.7	5894.7	129.03
220	0.331145	6288.5	4452.6	121.06	290	0.251282	8335.0	5915.6	129.14
221	0.329647	6317.7	4473.5	121.19	291	0.250420	8364.2	5936.5	129.24
222	0.328163	6347.0	4494.4	121.32	292	0.249564	8393.4	5957.4	129.34
223	0.326692	6376.2	4515.3	121.45	293	0.248713	8422.6	5978.3	129.44
224	0.325234	6405.5	4536.2	121.59	294	0.247869	8451.9	5999.2	129.54
225	0.323789	6434.7	4557.1	121.72	295	0.247030	8481.1	6020.1	129.63
226	0.322357	6464.0	4578.0	121.85	296	0.246196	8510.3	6041.0	129.73
227	0.320937	6493.2	4598.9	121.97	297	0.245369	8539.6	6061.9	129.83
228	0.319530	6522.5	4619.8	122.10	298	0.244547	8568.8	6082.8	129.93
229	0.318136	6551.7	4640.7	122.23	299	0.243730	8598.0	6103.7	130.03
230	0.316753	6581.0	4661.6	122.36	300	0.242919	8627.2	6124.6	130.13

7.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
19	43.2542	-629.1	-645.5	18.48					
20	42.7649	-603.5	-620.1	19.82					
21	42.2495	-576.2	-593.0	21.14	91	0.942700	2453.3	1700.9	93.42
22	41.7059	-548.0	-565.0	22.45	92	0.932070	2484.1	1723.1	93.76
23	41.1332	-519.1	-536.3	23.73	93	0.921687	2514.9	1745.3	94.09
24	40.5297	-489.5	-507.0	24.99	94	0.911540	2545.6	1767.5	94.42
25	39.8931	-459.5	-477.3	26.22	95	0.901623	2576.4	1789.7	94.74
26	39.2195	-428.9	-447.0	27.42	96	0.891927	2607.1	1811.9	95.07
27	38.5034	-397.8	-416.3	28.60	97	0.882444	2637.8	1834.1	95.38
28	37.7370	-366.2	-385.0	29.75	98	0.873167	2668.5	1856.2	95.70
29	36.9095	-333.8	-353.0	30.88	99	0.864089	2699.2	1878.3	96.01
30	36.0050	-300.6	-320.2	32.02	100	0.855204	2729.8	1900.5	96.32
31	35.0000	-265.5	-285.7	33.16					
32	33.8565	-227.9	-248.9	34.35	101	0.846506	2760.4	1922.5	96.62
* 32.554	33.1411	-205.5	-226.9	35.04	102	0.837988	2791.1	1944.7	96.92
* 32.554	4.04336	633.8	458.3	60.83	103	0.829644	2821.6	1966.7	97.22
33	3.85809	657.2	473.4	61.54	104	0.821469	2852.2	1988.8	97.52
34	3.53384	703.3	502.6	62.92	105	0.813459	2882.7	2010.8	97.81
35	3.28629	744.1	528.2	64.10	106	0.805607	2913.2	2032.8	98.10
36	3.08614	781.6	551.8	65.16	107	0.797909	2943.7	2054.8	98.39
37	2.91847	817.1	574.1	66.13	108	0.790361	2974.2	2076.8	98.67
38	2.77456	851.1	595.4	67.04	109	0.782958	3004.6	2098.7	98.95
39	2.64884	883.9	616.1	67.89	110	0.775695	3035.0	2120.6	99.23
40	2.53749	915.9	636.4	68.71					
41	2.43782	947.3	656.3	69.48	111	0.768569	3065.3	2142.5	99.50
42	2.34779	978.1	676.0	70.22	112	0.761576	3095.7	2164.4	99.77
43	2.26587	1008.5	695.5	70.93	113	0.754712	3126.0	2186.3	100.04
44	2.19086	1038.6	714.8	71.62	114	0.747973	3156.3	2208.1	100.31
45	2.12181	1068.4	734.1	72.29	115	0.741356	3186.6	2229.9	100.58
46	2.05793	1098.0	753.4	72.95	116	0.734857	3216.9	2251.7	100.84
47	1.99859	1127.5	772.6	73.58	117	0.728474	3247.1	2273.5	101.10
48	1.94326	1156.9	791.9	74.20	118	0.722203	3277.3	2295.2	101.35
49	1.89149	1186.1	811.1	74.81	119	0.716041	3307.4	2316.9	101.61
50	1.84292	1215.3	830.5	75.40	120	0.709985	3337.6	2338.6	101.86
51	1.79722	1244.6	849.9	75.98	121	0.704033	3367.7	2360.3	102.11
52	1.75411	1273.7	869.4	76.54	122	0.698181	3397.8	2381.9	102.36
53	1.71335	1302.9	888.9	77.10	123	0.692428	3427.9	2403.6	102.60
54	1.67473	1332.1	908.6	77.65	124	0.686771	3458.0	2425.2	102.85
55	1.63808	1361.4	928.4	78.18	125	0.681206	3488.0	2446.8	103.09
56	1.60322	1390.7	948.3	78.71	126	0.675733	3518.0	2468.4	103.33
57	1.57001	1420.1	968.4	79.23	127	0.670348	3548.0	2489.9	103.56
58	1.53833	1449.6	988.5	79.74	128	0.665050	3577.9	2511.4	103.80
59	1.50807	1479.1	1008.7	80.25	129	0.659836	3607.9	2533.0	104.03
60	1.47911	1508.6	1029.1	80.75	130	0.654705	3637.8	2554.5	104.26
61	1.45138	1538.3	1049.6	81.24	131	0.649654	3667.7	2575.9	104.49
62	1.42477	1568.1	1070.3	81.72	132	0.644681	3697.6	2597.4	104.72
63	1.39924	1597.9	1091.0	82.20	133	0.639786	3727.4	2618.8	104.94
64	1.37469	1627.8	1111.8	82.67	134	0.634965	3757.3	2640.2	105.17
65	1.35107	1657.8	1132.8	83.13	135	0.630217	3787.1	2661.6	105.39
66	1.32833	1687.8	1153.9	83.59	136	0.625540	3816.9	2683.0	105.61
67	1.30641	1717.9	1175.0	84.04	137	0.620934	3846.7	2704.4	105.83
68	1.28527	1748.1	1196.2	84.49	138	0.616396	3876.5	2725.8	106.05
69	1.26486	1778.4	1217.6	84.93	139	0.611924	3906.3	2747.2	106.26
70	1.24513	1808.6	1239.0	85.37	140	0.607518	3936.0	2768.5	106.47
71	1.22606	1839.2	1260.7	85.80	141	0.603175	3965.7	2789.8	106.68
72	1.20762	1869.7	1282.4	86.23	142	0.598895	3995.4	2811.1	106.89
73	1.18975	1900.3	1304.1	86.65	143	0.594676	4025.1	2832.4	107.10
74	1.17245	1930.8	1325.9	87.06	144	0.590516	4054.8	2853.7	107.31
75	1.15567	1961.4	1347.7	87.47	145	0.586416	4084.5	2874.9	107.52
76	1.13941	1992.0	1369.5	87.88	146	0.582372	4114.1	2896.2	107.72
77	1.12362	2022.6	1391.3	88.28	147	0.578384	4143.8	2917.5	107.92
78	1.10828	2053.2	1413.2	88.67	148	0.574451	4173.4	2938.7	108.12
79	1.09339	2083.8	1435.1	89.07	149	0.570572	4203.0	2959.9	108.32
80	1.07892	2114.5	1457.1	89.45	150	0.566746	4232.6	2981.1	108.52
81	1.06484	2145.3	1479.2	89.83	151	0.562971	4262.2	3002.3	108.72
82	1.05114	2176.1	1501.3	90.21	152	0.559246	4291.8	3023.5	108.91
83	1.03782	2206.9	1523.5	90.59	153	0.555571	4321.3	3044.7	109.10
84	1.02484	2237.7	1545.6	90.95	154	0.551944	4350.9	3065.8	109.30
85	1.01220	2268.5	1567.8	91.32	155	0.548365	4380.4	3087.0	109.49
86	0.999881	2299.3	1589.9	91.68	156	0.544833	4410.0	3108.1	109.68
87	0.987872	2330.1	1612.1	92.04	157	0.541346	4439.5	3129.3	109.87
88	0.976160	2360.9	1634.3	92.39	158	0.537904	4469.0	3150.4	110.05
89	0.964735	2391.7	1656.5	92.74	159	0.534506	4498.5	3171.6	110.24
90	0.953585	2422.5	1678.7	93.08	160	0.531151	4528.0	3192.7	110.43

* PHASE CHANGE

7.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	0.527838	4557.5	3213.8	110.61	231	0.367719	6610.4	4681.5	121.20
162	0.524566	4587.0	3234.9	110.79	232	0.366135	6639.6	4702.4	121.33
163	0.521335	4616.4	3255.9	110.97	233	0.364564	6668.9	4723.3	121.45
164	0.518144	4645.9	3277.0	111.15	234	0.363008	6698.1	4744.3	121.58
165	0.514993	4675.4	3298.1	111.33	235	0.361464	6727.4	4765.2	121.70
166	0.511879	4704.8	3319.2	111.51	236	0.359934	6756.6	4786.1	121.83
167	0.508804	4734.3	3340.3	111.69	237	0.358416	6785.9	4807.0	121.95
168	0.505765	4763.7	3361.3	111.86	238	0.356912	6815.1	4827.9	122.07
169	0.502763	4793.1	3382.4	112.04	239	0.355420	6844.4	4848.8	122.20
170	0.499796	4822.6	3403.4	112.21	240	0.353940	6873.6	4869.7	122.32
171	0.496865	4852.0	3424.5	112.38	241	0.352473	6902.9	4890.6	122.44
172	0.493968	4881.4	3445.5	112.56	242	0.351018	6932.1	4911.5	122.56
173	0.491105	4910.8	3466.5	112.73	243	0.349575	6961.4	4932.4	122.68
174	0.488275	4940.2	3487.5	112.90	244	0.348144	6990.6	4953.3	122.80
175	0.485478	4969.5	3508.6	113.06	245	0.346724	7019.9	4974.2	122.92
176	0.482713	4998.9	3529.6	113.23	246	0.345316	7049.1	4995.1	123.04
177	0.479979	5028.3	3550.6	113.40	247	0.343920	7078.4	5016.0	123.16
178	0.477277	5057.7	3571.6	113.56	248	0.342535	7107.6	5036.9	123.28
179	0.474605	5087.1	3592.6	113.73	249	0.341160	7136.8	5057.8	123.39
180	0.471962	5116.4	3613.6	113.89	250	0.339797	7166.1	5078.7	123.51
181	0.469350	5145.8	3634.6	114.05	251	0.338445	7195.3	5099.6	123.63
182	0.466766	5175.2	3655.6	114.22	252	0.337104	7224.6	5120.5	123.74
183	0.464211	5204.5	3676.6	114.38	253	0.335773	7253.8	5141.4	123.86
184	0.461684	5233.9	3697.6	114.54	254	0.334453	7283.0	5162.3	123.98
185	0.459184	5263.2	3718.6	114.70	255	0.333143	7312.3	5183.2	124.09
186	0.456711	5292.5	3739.5	114.85	256	0.331843	7341.5	5204.1	124.20
187	0.454265	5321.9	3760.5	115.01	257	0.330554	7370.8	5225.0	124.32
188	0.451846	5351.2	3781.5	115.17	258	0.329274	7400.0	5245.9	124.43
189	0.449452	5380.6	3802.5	115.32	259	0.328004	7429.2	5266.8	124.55
190	0.447083	5409.9	3823.4	115.48	260	0.326745	7458.5	5287.7	124.66
191	0.444740	5439.2	3844.4	115.63	261	0.325494	7487.7	5308.6	124.77
192	0.442421	5468.5	3865.3	115.78	262	0.324254	7517.0	5329.6	124.88
193	0.440126	5497.8	3886.3	115.94	263	0.323023	7546.2	5350.5	124.99
194	0.437855	5527.1	3907.3	116.09	264	0.321801	7575.4	5371.4	125.10
195	0.435607	5556.4	3928.2	116.24	265	0.320588	7604.7	5392.3	125.22
196	0.433383	5585.8	3949.2	116.39	266	0.319385	7633.9	5413.2	125.33
197	0.431181	5615.1	3970.1	116.54	267	0.318190	7663.2	5434.1	125.43
198	0.429002	5644.4	3991.1	116.69	268	0.317005	7692.4	5455.0	125.54
199	0.426845	5673.7	4012.0	116.83	269	0.315828	7721.6	5475.9	125.65
200	0.424709	5703.0	4032.9	116.98	270	0.314660	7750.9	5496.8	125.76
201	0.422595	5732.3	4053.9	117.13	271	0.313501	7780.1	5517.7	125.87
202	0.420502	5761.6	4074.8	117.27	272	0.312350	7809.3	5538.6	125.98
203	0.418429	5790.8	4095.8	117.42	273	0.311208	7838.6	5559.5	126.08
204	0.416377	5820.1	4116.7	117.56	274	0.310074	7867.8	5580.4	126.19
205	0.414345	5849.4	4137.6	117.70	275	0.308948	7897.0	5601.3	126.30
206	0.412333	5878.7	4158.6	117.85	276	0.307830	7926.3	5622.2	126.40
207	0.410341	5908.0	4179.5	117.99	277	0.306721	7955.5	5643.1	126.51
208	0.408368	5937.3	4200.4	118.13	278	0.305619	7984.7	5664.0	126.62
209	0.406414	5966.6	4221.4	118.27	279	0.304526	8014.0	5684.9	126.72
210	0.404478	5995.9	4242.3	118.41	280	0.303440	8043.2	5705.8	126.82
211	0.402561	6025.1	4263.2	118.55	281	0.302362	8072.4	5726.7	126.93
212	0.400662	6054.4	4284.1	118.69	282	0.301292	8101.7	5747.6	127.03
213	0.398781	6083.7	4305.1	118.83	283	0.300229	8130.9	5768.5	127.14
214	0.396918	6112.9	4326.0	118.96	284	0.299173	8160.2	5789.4	127.24
215	0.395072	6142.2	4346.9	119.10	285	0.298125	8189.4	5810.3	127.34
216	0.393243	6171.5	4367.8	119.23	286	0.297085	8218.6	5831.2	127.44
217	0.391431	6200.8	4388.7	119.37	287	0.296051	8247.9	5852.1	127.55
218	0.389636	6230.0	4409.7	119.50	288	0.295025	8277.1	5873.0	127.65
219	0.387857	6259.3	4430.6	119.64	289	0.294006	8306.3	5893.9	127.75
220	0.386095	6288.6	4451.5	119.77	290	0.292994	8335.6	5914.8	127.85
221	0.384348	6317.8	4472.4	119.90	291	0.291989	8364.8	5935.7	127.95
222	0.382618	6347.1	4493.3	120.04	292	0.290991	8394.0	5956.6	128.05
223	0.380903	6376.3	4514.2	120.17	293	0.290000	8423.3	5977.5	128.15
224	0.379203	6405.6	4535.2	120.30	294	0.289015	8452.5	5998.4	128.25
225	0.377518	6434.8	4556.1	120.43	295	0.288037	8481.7	6019.3	128.35
226	0.375849	6464.1	4577.0	120.56	296	0.287066	8511.0	6040.2	128.45
227	0.374194	6493.4	4597.9	120.69	297	0.286101	8540.2	6061.1	128.55
228	0.372554	6522.6	4618.8	120.82	298	0.285143	8569.4	6082.0	128.65
229	0.370928	6551.9	4639.7	120.95	299	0.284191	8598.7	6102.9	128.74
230	0.369316	6581.1	4660.6	121.07	300	0.283245	8627.9	6123.8	128.84

8.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
19	43.2892	-627.3	-646.0	18.46					
20	42.8031	-601.7	-620.6	19.80					
21	42.2904	-574.4	-593.6	21.11	91	1.07815	2449.2	1697.3	92.27
22	41.7496	-546.3	-565.7	22.42	92	1.06594	2480.1	1719.6	92.61
23	41.1797	-517.4	-537.1	23.70	93	1.05400	2511.0	1741.9	92.94
24	40.5796	-488.0	-507.9	24.95	94	1.04234	2541.8	1764.2	93.27
25	39.9470	-458.0	-478.3	26.18	95	1.03095	2572.7	1786.4	93.60
26	39.2783	-427.5	-448.2	27.38	96	1.01982	2603.5	1808.6	93.92
27	38.5683	-396.6	-417.6	28.55	97	1.00893	2634.3	1830.9	94.24
28	37.8097	-365.1	-386.5	29.69	98	0.998281	2665.0	1853.0	94.56
29	36.9921	-332.9	-354.8	30.82	99	0.987861	2695.8	1875.2	94.87
30	36.1011	-299.9	-322.4	31.95	100	0.977664	2726.5	1897.4	95.18
31	35.1148	-265.3	-288.3	33.07					
32	33.9991	-228.4	-252.2	34.24	101	0.967683	2757.2	1919.5	95.48
33	32.6944	-187.7	-212.5	35.49	102	0.957911	2787.9	1941.7	95.79
* 33.367	32.1476	-171.4	-196.6	35.99	103	0.948340	2818.6	1963.8	96.08
* 33.367	4.72942	613.8	442.4	59.52	104	0.938964	2849.2	1985.9	96.38
34	4.39935	650.7	466.4	60.61	105	0.929778	2879.8	2008.0	96.67
35	4.01500	699.9	498.0	62.04	106	0.920776	2910.4	2030.0	96.96
36	3.72527	743.1	525.5	63.26	107	0.911951	2940.9	2052.0	97.25
37	3.49293	782.6	550.5	64.34	108	0.903298	2971.4	2074.0	97.53
38	3.29945	819.7	574.0	65.33	109	0.894813	3001.9	2096.0	97.82
39	3.13414	855.1	596.4	66.25	110	0.886490	3032.4	2118.0	98.09
40	2.99022	889.2	618.1	67.12					
41	2.86314	922.3	639.2	67.93	111	0.878324	3062.8	2139.9	98.37
42	2.74965	954.7	659.9	68.71	112	0.870312	3093.2	2161.8	98.64
43	2.64735	986.5	680.3	69.46	113	0.862448	3123.6	2183.7	98.91
44	2.55442	1017.8	700.5	70.18	114	0.854728	3154.0	2205.6	99.18
45	2.46945	1048.8	720.5	70.88	115	0.847149	3184.3	2227.4	99.44
46	2.39132	1079.4	740.4	71.55	116	0.839706	3214.6	2249.2	99.71
47	2.31913	1109.8	760.3	72.21	117	0.832396	3244.9	2271.0	99.97
48	2.25214	1140.0	780.1	72.84	118	0.825215	3275.1	2292.8	100.22
49	2.18972	1170.1	799.9	73.46	119	0.818160	3305.3	2314.5	100.48
50	2.13138	1200.0	819.7	74.07	120	0.811226	3335.5	2336.3	100.73
51	2.07666	1229.9	839.5	74.66	121	0.804412	3365.7	2358.0	100.98
52	2.02521	1259.7	859.4	75.24	122	0.797714	3395.8	2379.6	101.23
53	1.97670	1289.4	879.4	75.81	123	0.791128	3425.9	2401.3	101.48
54	1.93085	1319.2	899.4	76.36	124	0.784653	3456.0	2423.0	101.72
55	1.88744	1349.0	919.5	76.91	125	0.778284	3486.1	2444.6	101.96
56	1.84624	1378.8	939.7	77.45	126	0.772021	3516.2	2466.2	102.20
57	1.80707	1408.7	960.1	77.98	127	0.765859	3546.2	2487.8	102.44
58	1.76977	1438.5	980.5	78.50	128	0.759796	3576.2	2509.3	102.67
59	1.73420	1468.4	1001.0	79.01	129	0.753831	3606.2	2530.9	102.91
60	1.70022	1498.4	1021.6	79.51	130	0.747960	3636.2	2552.4	103.14
61	1.66772	1528.4	1042.4	80.01	131	0.742181	3666.1	2573.9	103.37
62	1.63659	1558.5	1063.2	80.50	132	0.736493	3696.0	2595.3	103.59
63	1.60674	1588.7	1084.2	80.98	133	0.730892	3725.9	2616.8	103.82
64	1.57808	1618.8	1105.2	81.45	134	0.725377	3755.7	2638.2	104.04
65	1.55054	1649.2	1126.4	81.92	135	0.719947	3785.6	2659.7	104.27
66	1.52405	1679.5	1147.6	82.39	136	0.714598	3815.4	2681.1	104.49
67	1.49854	1709.9	1168.9	82.84	137	0.709329	3845.3	2702.5	104.70
68	1.47396	1740.3	1190.3	83.29	138	0.704139	3875.1	2723.9	104.92
69	1.45024	1770.8	1211.9	83.74	139	0.699025	3904.9	2745.3	105.14
70	1.42735	1801.3	1233.4	84.18	140	0.693986	3934.7	2766.7	105.35
71	1.40523	1832.1	1255.2	84.61	141	0.689020	3964.4	2788.0	105.56
72	1.38384	1862.8	1277.1	85.04	142	0.684126	3994.1	2809.3	105.77
73	1.36315	1893.6	1298.9	85.47	143	0.679302	4023.9	2830.6	105.98
74	1.34312	1924.3	1320.8	85.88	144	0.674546	4053.6	2851.9	106.19
75	1.32371	1955.1	1342.7	86.30	145	0.669857	4083.3	2873.2	106.39
76	1.30489	1985.8	1364.6	86.70	146	0.665234	4113.0	2894.4	106.60
77	1.28665	2016.6	1386.6	87.11	147	0.660675	4142.6	2915.7	106.80
78	1.26894	2047.4	1408.6	87.51	148	0.656179	4172.3	2937.0	107.00
79	1.25174	2078.2	1430.6	87.90	149	0.651744	4201.9	2958.2	107.20
80	1.23503	2109.0	1452.7	88.29	150	0.647370	4231.6	2979.4	107.40
81	1.21880	2140.0	1474.9	88.67	151	0.643055	4261.2	3000.6	107.59
82	1.20300	2170.9	1497.1	89.05	152	0.638797	4290.8	3021.8	107.79
83	1.18764	2201.8	1519.3	89.43	153	0.634597	4320.4	3043.0	107.98
84	1.17269	2232.8	1541.5	89.80	154	0.630451	4349.9	3064.2	108.18
85	1.15812	2263.7	1563.8	90.16	155	0.626360	4379.5	3085.4	108.37
86	1.14394	2294.6	1586.0	90.52	156	0.622323	4409.1	3106.5	108.56
87	1.13012	2325.6	1608.3	90.88	157	0.618338	4438.6	3127.7	108.75
88	1.11664	2356.5	1630.5	91.24	158	0.614404	4468.2	3148.8	108.93
89	1.10349	2387.4	1652.8	91.58	159	0.610520	4497.7	3170.0	109.12
90	1.09067	2418.3	1675.1	91.93	160	0.606685	4527.2	3191.1	109.31

* PHASE CHANGE

8.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	0.602899	4556.7	3212.2	109.49	231	0.419989	6610.6	4680.5	120.09
162	0.599161	4586.2	3233.3	109.67	232	0.418180	6639.8	4701.4	120.21
163	0.595469	4615.7	3254.4	109.85	233	0.416387	6669.1	4722.4	120.34
164	0.591822	4645.2	3275.5	110.03	234	0.414609	6698.4	4743.3	120.46
165	0.588221	4674.7	3296.6	110.21	235	0.412846	6727.6	4764.2	120.59
166	0.584663	4704.1	3317.7	110.39	236	0.411099	6756.9	4785.1	120.71
167	0.581149	4733.6	3338.8	110.57	237	0.409366	6786.1	4806.0	120.84
168	0.577676	4763.0	3359.8	110.74	238	0.407648	6815.4	4826.9	120.96
169	0.574246	4792.5	3380.9	110.92	239	0.405944	6844.7	4847.8	121.08
170	0.570856	4821.9	3402.0	111.09	240	0.404254	6873.9	4868.7	121.20
171	0.567507	4851.4	3423.0	111.27	241	0.402579	6903.1	4889.6	121.33
172	0.564197	4880.8	3444.1	111.44	242	0.400917	6932.4	4910.6	121.45
173	0.560926	4910.2	3465.1	111.61	243	0.399269	6961.7	4931.5	121.57
174	0.557692	4939.6	3486.1	111.78	244	0.397635	6990.9	4952.4	121.69
175	0.554497	4969.0	3507.2	111.95	245	0.396014	7020.2	4973.3	121.81
176	0.551337	4998.4	3528.2	112.11	246	0.394406	7049.4	4994.2	121.93
177	0.548214	5027.8	3549.2	112.28	247	0.392811	7078.7	5015.1	122.04
178	0.545127	5057.2	3570.2	112.45	248	0.391229	7107.9	5036.0	122.16
179	0.542074	5086.6	3591.3	112.61	249	0.389660	7137.2	5056.9	122.28
180	0.539055	5116.0	3612.3	112.77	250	0.388104	7166.4	5077.8	122.40
181	0.536071	5145.4	3633.3	112.94	251	0.386559	7195.7	5098.7	122.51
182	0.533119	5174.8	3654.3	113.10	252	0.385028	7224.9	5119.6	122.63
183	0.530200	5204.1	3675.3	113.26	253	0.383508	7254.2	5140.5	122.75
184	0.527313	5233.5	3696.3	113.42	254	0.382000	7283.4	5161.4	122.86
185	0.524457	5262.8	3717.3	113.58	255	0.380504	7312.7	5182.3	122.98
186	0.521633	5292.2	3738.2	113.74	256	0.379020	7341.9	5203.2	123.09
187	0.518838	5321.6	3759.2	113.89	257	0.377548	7371.2	5224.1	123.21
188	0.516074	5350.9	3780.2	114.05	258	0.376087	7400.4	5245.1	123.32
189	0.513340	5380.3	3801.2	114.21	259	0.374637	7429.7	5266.0	123.43
190	0.510634	5409.6	3822.2	114.36	260	0.373198	7458.9	5286.9	123.54
191	0.507957	5438.9	3843.1	114.52	261	0.371770	7488.1	5307.8	123.66
192	0.505308	5468.3	3864.1	114.67	262	0.370354	7517.4	5328.7	123.77
193	0.502687	5497.6	3885.1	114.82	263	0.368948	7546.6	5349.6	123.88
194	0.500093	5526.9	3906.0	114.97	264	0.367553	7575.9	5370.5	123.99
195	0.497526	5556.2	3927.0	115.12	265	0.366168	7605.1	5391.4	124.10
196	0.494985	5585.6	3947.9	115.27	266	0.364794	7634.4	5412.3	124.21
197	0.492470	5614.9	3968.9	115.42	267	0.363430	7663.6	5433.2	124.32
198	0.489981	5644.2	3989.9	115.57	268	0.362076	7692.9	5454.1	124.43
199	0.487517	5673.5	4010.8	115.72	269	0.360732	7722.1	5475.0	124.54
200	0.485077	5702.8	4031.8	115.87	270	0.359399	7751.4	5495.9	124.65
201	0.482663	5732.1	4052.7	116.01	271	0.358075	7780.6	5516.8	124.76
202	0.480272	5761.4	4073.7	116.16	272	0.356761	7809.8	5537.7	124.86
203	0.477905	5790.7	4094.6	116.30	273	0.355456	7839.1	5558.6	124.97
204	0.475561	5820.0	4115.5	116.45	274	0.354161	7868.3	5579.5	125.08
205	0.473240	5849.3	4136.5	116.59	275	0.352876	7897.6	5600.4	125.18
206	0.470942	5878.6	4157.4	116.73	276	0.351600	7926.8	5621.4	125.29
207	0.468667	5907.9	4178.4	116.87	277	0.350333	7956.1	5642.3	125.40
208	0.466413	5937.2	4199.3	117.01	278	0.349075	7985.3	5663.2	125.50
209	0.464181	5966.5	4220.2	117.16	279	0.347826	8014.5	5684.1	125.61
210	0.461970	5995.8	4241.2	117.30	280	0.346586	8043.8	5705.0	125.71
211	0.459781	6025.1	4262.1	117.43	281	0.345355	8073.0	5725.9	125.82
212	0.457612	6054.4	4283.0	117.57	282	0.344133	8102.3	5746.8	125.92
213	0.455464	6083.7	4304.0	117.71	283	0.342919	8131.5	5767.7	126.02
214	0.453336	6113.0	4324.9	117.85	284	0.341714	8160.7	5788.6	126.13
215	0.451227	6142.2	4345.8	117.98	285	0.340517	8190.0	5809.5	126.23
216	0.449139	6171.5	4366.7	118.12	286	0.339329	8219.2	5830.4	126.33
217	0.447069	6200.8	4387.7	118.26	287	0.338149	8248.5	5851.3	126.43
218	0.445019	6230.1	4408.6	118.39	288	0.336977	8277.7	5872.2	126.54
219	0.442988	6259.4	4429.5	118.52	289	0.335814	8306.9	5893.1	126.64
220	0.440975	6288.6	4450.4	118.66	290	0.334658	8336.2	5914.0	126.74
221	0.438981	6317.9	4471.3	118.79	291	0.333510	8365.4	5934.9	126.84
222	0.437004	6347.2	4492.3	118.92	292	0.332371	8394.7	5955.8	126.94
223	0.435045	6376.5	4513.2	119.05	293	0.331239	8423.9	5976.7	127.04
224	0.433104	6405.7	4534.1	119.18	294	0.330114	8453.1	5997.6	127.14
225	0.431180	6435.0	4555.0	119.31	295	0.328997	8482.4	6018.5	127.24
226	0.429274	6464.3	4576.0	119.44	296	0.327888	8511.6	6039.4	127.34
227	0.427384	6493.5	4596.9	119.57	297	0.326787	8540.9	6060.3	127.44
228	0.425511	6522.8	4617.8	119.70	298	0.325692	8570.1	6081.2	127.53
229	0.423654	6552.1	4638.7	119.83	299	0.324605	8599.3	6102.2	127.63
230	0.421813	6581.3	4659.6	119.96	300	0.323526	8628.6	6123.1	127.73

9.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
19	43.3243	-625.4	-646.5	18.43					
20	42.8412	-599.8	-621.1	19.77					
21	42.3312	-572.6	-594.2	21.08	91	1.21379	2445.1	1693.8	91.25
22	41.7930	-544.6	-566.4	22.38	92	1.19997	2476.1	1716.1	91.59
23	41.2260	-515.8	-537.9	23.66	93	1.18647	2507.1	1738.5	91.93
24	40.6292	-486.4	-508.8	24.91	94	1.17328	2538.0	1760.8	92.26
25	40.0005	-456.5	-479.3	26.14	95	1.16040	2569.0	1783.1	92.59
26	39.3365	-426.1	-449.3	27.33	96	1.14781	2599.9	1805.4	92.91
27	38.6324	-395.3	-418.9	28.50	97	1.13550	2630.7	1827.6	93.23
28	37.8812	-364.0	-388.0	29.63	98	1.12347	2661.6	1849.9	93.55
29	37.0734	-332.0	-356.6	30.76	99	1.11170	2692.4	1872.1	93.86
30	36.1952	-299.3	-324.5	31.87	100	1.10018	2723.2	1894.3	94.17
31	35.2266	-265.0	-290.9	32.99					
32	34.1369	-228.7	-255.4	34.14	101	1.08890	2754.0	1916.5	94.47
33	32.8736	-189.0	-216.8	35.36	102	1.07787	2784.8	1938.7	94.78
34	31.3348	-143.4	-172.5	36.72	103	1.06706	2815.5	1960.9	95.08
* 34.111	31.1380	-137.7	-167.0	36.89	104	1.05648	2846.2	1983.0	95.37
* 34.111	5.46070	592.9	425.9	58.31	105	1.04611	2876.9	2005.1	95.67
35	4.89807	649.1	463.0	59.94	106	1.03595	2907.5	2027.2	95.96
36	4.46388	700.5	496.3	61.39	107	1.02599	2938.1	2049.3	96.25
37	4.13781	745.4	525.0	62.62	108	1.01623	2968.7	2071.3	96.53
38	3.87711	786.4	551.2	63.71	109	1.00665	2999.2	2093.3	96.81
39	3.66055	824.8	575.7	64.71	110	0.997268	3029.8	2115.3	97.09
40	3.47589	861.4	599.0	65.64					
41	3.31543	896.6	621.5	66.50	111	0.988058	3060.2	2137.3	97.37
42	3.17394	930.7	643.4	67.32	112	0.979021	3090.7	2159.3	97.64
43	3.04774	964.0	664.8	68.11	113	0.970153	3121.2	2181.2	97.91
44	2.93410	996.6	685.8	68.86	114	0.961448	3151.6	2203.1	98.18
45	2.83098	1028.8	706.6	69.58	115	0.952903	3181.9	2225.0	98.44
46	2.73676	1060.5	727.3	70.28	116	0.944512	3212.3	2246.8	98.71
47	2.65020	1091.8	747.7	70.95	117	0.936272	3242.6	2268.6	98.97
48	2.57026	1122.9	768.1	71.61	118	0.928178	3272.9	2290.4	99.22
49	2.49611	1153.8	788.5	72.25	119	0.920226	3303.2	2312.2	99.48
50	2.42706	1184.5	808.7	72.87	120	0.912412	3333.4	2334.0	99.73
51	2.36255	1215.1	829.1	73.47	121	0.904733	3363.6	2355.7	99.98
52	2.30207	1245.5	849.3	74.06	122	0.897185	3393.8	2377.4	100.23
53	2.24521	1275.9	869.7	74.64	123	0.889765	3424.0	2399.1	100.48
54	2.19162	1306.2	890.1	75.21	124	0.882470	3454.1	2420.8	100.72
55	2.14099	1336.5	910.6	75.77	125	0.875295	3484.3	2442.4	100.96
56	2.09305	1366.8	931.1	76.31	126	0.868239	3514.3	2464.0	101.20
57	2.04757	1397.1	951.7	76.85	127	0.861298	3544.4	2485.6	101.44
58	2.00433	1427.4	972.4	77.38	128	0.854470	3574.4	2507.2	101.68
59	1.96317	1457.7	993.2	77.90	129	0.847751	3604.5	2528.8	101.91
60	1.92391	1488.1	1014.1	78.41	130	0.841139	3634.5	2550.3	102.14
61	1.88642	1518.5	1035.1	78.91	131	0.834631	3664.4	2571.8	102.37
62	1.85056	1549.0	1056.2	79.40	132	0.828226	3694.4	2593.3	102.60
63	1.81621	1579.4	1077.3	79.89	133	0.821919	3724.3	2614.8	102.83
64	1.78328	1609.9	1098.5	80.37	134	0.815710	3754.2	2636.3	103.05
65	1.75167	1640.5	1119.9	80.85	135	0.809595	3784.1	2657.7	103.27
66	1.72129	1671.1	1141.3	81.31	136	0.803573	3814.0	2679.2	103.49
67	1.69207	1701.8	1162.8	81.77	137	0.797642	3843.9	2700.6	103.71
68	1.66393	1732.5	1184.4	82.23	138	0.791799	3873.7	2722.0	103.93
69	1.63681	1763.2	1206.1	82.68	139	0.786042	3903.5	2743.4	104.14
70	1.61065	1794.0	1227.8	83.12	140	0.780370	3933.4	2764.8	104.36
71	1.58539	1824.9	1249.7	83.56	141	0.774780	3963.1	2786.1	104.57
72	1.56099	1855.9	1271.7	83.99	142	0.769271	3992.9	2807.4	104.78
73	1.53740	1886.9	1293.7	84.42	143	0.763841	4022.6	2828.8	104.99
74	1.51457	1917.8	1315.7	84.84	144	0.758489	4052.4	2850.1	105.20
75	1.49246	1948.8	1337.8	85.25	145	0.753212	4082.1	2871.4	105.40
76	1.47105	1979.7	1359.8	85.66	146	0.748009	4111.8	2892.7	105.61
77	1.45029	2010.7	1381.9	86.07	147	0.742878	4141.5	2914.0	105.81
78	1.43015	2041.6	1404.0	86.47	148	0.737819	4171.2	2935.2	106.01
79	1.41061	2072.5	1426.1	86.86	149	0.732828	4200.9	2956.5	106.21
80	1.39163	2103.5	1448.2	87.25	150	0.727906	4230.5	2977.7	106.41
81	1.37319	2134.6	1470.5	87.64	151	0.723050	4260.2	2998.9	106.60
82	1.35527	2165.7	1492.8	88.02	152	0.718260	4289.8	3020.1	106.80
83	1.33784	2196.8	1515.2	88.40	153	0.713533	4319.4	3041.3	106.99
84	1.32088	2227.9	1537.5	88.77	154	0.708869	4349.0	3062.5	107.19
85	1.30437	2258.9	1559.8	89.14	155	0.704266	4378.6	3083.7	107.38
86	1.28829	2290.0	1582.1	89.50	156	0.699724	4408.2	3104.9	107.57
87	1.27263	2321.0	1604.4	89.86	157	0.695240	4437.7	3126.1	107.76
88	1.25736	2352.0	1626.8	90.21	158	0.690814	4467.3	3147.2	107.95
89	1.24248	2383.1	1649.1	90.56	159	0.686445	4496.9	3168.4	108.13
90	1.22796	2414.1	1671.4	90.91	160	0.682131	4526.4	3189.5	108.32

* PHASE CHANGE

9.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	0.677872	4555.9	3210.7	108.50	231	0.472193	6610.8	4679.5	119.10
162	0.673667	4585.4	3231.8	108.68	232	0.470160	6640.0	4700.4	119.23
163	0.669513	4615.0	3252.9	108.87	233	0.468144	6669.3	4721.4	119.35
164	0.665412	4644.5	3274.0	109.05	234	0.466146	6698.6	4742.3	119.48
165	0.661360	4674.0	3295.1	109.23	235	0.464164	6727.9	4763.2	119.60
166	0.657359	4703.4	3316.2	109.40	236	0.462200	6757.1	4784.1	119.73
167	0.653405	4732.9	3337.3	109.58	237	0.460252	6786.4	4805.0	119.85
168	0.649500	4762.4	3358.4	109.76	238	0.458320	6815.7	4825.9	119.98
169	0.645642	4791.9	3379.5	109.93	239	0.456405	6844.9	4846.9	120.10
170	0.641829	4821.4	3400.5	110.11	240	0.454505	6874.2	4867.8	120.22
171	0.638062	4850.8	3421.6	110.28	241	0.452622	6903.4	4888.7	120.34
172	0.634339	4880.2	3442.6	110.45	242	0.450754	6932.7	4909.6	120.46
173	0.630660	4909.7	3463.7	110.62	243	0.448901	6962.0	4930.5	120.58
174	0.627024	4939.1	3484.7	110.79	244	0.447064	6991.2	4951.4	120.70
175	0.623429	4968.5	3505.8	110.96	245	0.445242	7020.5	4972.3	120.82
176	0.619876	4997.9	3526.8	111.13	246	0.443435	7049.8	4993.3	120.94
177	0.616364	5027.4	3547.8	111.29	247	0.441642	7079.0	5014.2	121.06
178	0.612892	5056.8	3568.9	111.46	248	0.439864	7108.3	5035.1	121.18
179	0.609459	5086.2	3589.9	111.62	249	0.438100	7137.5	5056.0	121.30
180	0.606064	5115.6	3610.9	111.79	250	0.436350	7166.8	5076.9	121.41
181	0.602708	5145.0	3631.9	111.95	251	0.434615	7196.0	5097.8	121.53
182	0.599388	5174.4	3652.9	112.11	252	0.432893	7225.3	5118.7	121.65
183	0.596106	5203.7	3673.9	112.27	253	0.431184	7254.6	5139.6	121.76
184	0.592859	5233.1	3694.9	112.43	254	0.429490	7283.8	5160.5	121.88
185	0.589648	5262.5	3715.9	112.59	255	0.427808	7313.1	5181.4	121.99
186	0.586472	5291.9	3736.9	112.75	256	0.426140	7342.3	5202.4	122.11
187	0.583330	5321.2	3757.9	112.91	257	0.424485	7371.6	5223.3	122.22
188	0.580222	5350.6	3778.9	113.06	258	0.422842	7400.8	5244.2	122.34
189	0.577147	5380.0	3799.9	113.22	259	0.421212	7430.1	5265.1	122.45
190	0.574104	5409.3	3820.9	113.38	260	0.419595	7459.3	5286.0	122.56
191	0.571094	5438.7	3841.9	113.53	261	0.417991	7488.6	5306.9	122.67
192	0.568116	5468.0	3862.8	113.68	262	0.416398	7517.8	5327.8	122.79
193	0.565168	5497.4	3883.8	113.84	263	0.414818	7547.1	5348.7	122.90
194	0.562251	5526.7	3904.8	113.99	264	0.413249	7576.4	5369.6	123.01
195	0.559365	5556.0	3925.8	114.14	265	0.411693	7605.6	5390.5	123.12
196	0.556508	5585.4	3946.7	114.29	266	0.410148	7634.9	5411.5	123.23
197	0.553680	5614.7	3967.7	114.44	267	0.408615	7664.1	5432.4	123.34
198	0.550882	5644.0	3988.7	114.59	268	0.407093	7693.4	5453.3	123.45
199	0.548111	5673.4	4009.6	114.73	269	0.405583	7722.6	5474.2	123.56
200	0.545369	5702.7	4030.6	114.88	270	0.404084	7751.9	5495.1	123.67
201	0.542653	5732.0	4051.5	115.03	271	0.402596	7781.1	5516.0	123.77
202	0.539965	5761.3	4072.5	115.17	272	0.401118	7810.4	5536.9	123.88
203	0.537304	5790.7	4093.4	115.32	273	0.399652	7839.6	5557.8	123.99
204	0.534669	5820.0	4114.4	115.46	274	0.398197	7868.9	5578.7	124.10
205	0.532060	5849.3	4135.3	115.60	275	0.396752	7898.1	5599.6	124.20
206	0.529476	5878.6	4156.3	115.75	276	0.395317	7927.3	5620.5	124.31
207	0.526918	5907.9	4177.2	115.89	277	0.393893	7956.6	5641.4	124.41
208	0.524384	5937.2	4198.2	116.03	278	0.392479	7985.8	5662.3	124.52
209	0.521875	5966.5	4219.1	116.17	279	0.391075	8015.1	5683.3	124.63
210	0.519389	5995.8	4240.1	116.31	280	0.389682	8044.3	5704.2	124.73
211	0.516928	6025.1	4261.0	116.45	281	0.388298	8073.6	5725.1	124.83
212	0.514489	6054.4	4281.9	116.59	282	0.386924	8102.8	5746.0	124.94
213	0.512074	6083.7	4302.9	116.73	283	0.385560	8132.1	5766.9	125.04
214	0.509682	6113.0	4323.8	116.86	284	0.384205	8161.3	5787.8	125.14
215	0.507311	6142.3	4344.7	117.00	285	0.382860	8190.6	5808.7	125.25
216	0.504963	6171.6	4365.7	117.14	286	0.381524	8219.8	5829.6	125.35
217	0.502637	6200.9	4386.6	117.27	287	0.380198	8249.1	5850.5	125.45
218	0.500332	6230.2	4407.5	117.41	288	0.378881	8278.3	5871.4	125.55
219	0.498049	6259.4	4428.5	117.54	289	0.377573	8307.6	5892.3	125.65
220	0.495786	6288.7	4449.4	117.67	290	0.376274	8336.8	5913.2	125.76
221	0.493543	6318.0	4470.3	117.81	291	0.374984	8366.0	5934.1	125.86
222	0.491321	6347.3	4491.2	117.94	292	0.373703	8395.3	5955.1	125.96
223	0.489120	6376.6	4512.2	118.07	293	0.372430	8424.5	5976.0	126.06
224	0.486937	6405.9	4533.1	118.20	294	0.371166	8453.8	5996.9	126.16
225	0.484775	6435.1	4554.0	118.33	295	0.369911	8483.0	6017.8	126.26
226	0.482631	6464.4	4574.9	118.46	296	0.368664	8512.3	6038.7	126.35
227	0.480507	6493.7	4595.8	118.59	297	0.367426	8541.5	6059.6	126.45
228	0.478401	6523.0	4616.8	118.72	298	0.366196	8570.8	6080.5	126.55
229	0.476314	6552.2	4637.7	118.85	299	0.364974	8600.0	6101.4	126.65
230	0.474244	6581.5	4658.6	118.97	300	0.363760	8629.2	6122.3	126.75

10.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
19	43.3594	-623.6	-646.9	18.40					
20	42.8792	-598.0	-621.7	19.74					
21	42.3718	-570.9	-594.8	21.05	91	1.34960	2441.0	1690.2	90.34
22	41.8362	-542.8	-567.1	22.35	92	1.33415	2472.1	1712.6	90.68
23	41.2720	-514.1	-538.7	23.63	93	1.31907	2503.2	1735.0	91.01
24	40.6784	-484.8	-509.7	24.88	94	1.30434	2534.2	1757.4	91.35
25	40.0535	-455.0	-480.2	26.10	95	1.28996	2565.2	1779.8	91.68
26	39.3942	-424.7	-450.4	27.29	96	1.27590	2596.2	1802.1	92.00
27	38.6958	-394.0	-420.2	28.45	97	1.26216	2627.2	1824.4	92.32
28	37.9519	-362.8	-389.5	29.58	98	1.24873	2658.1	1846.7	92.64
29	37.1533	-331.1	-358.3	30.69	99	1.23560	2689.0	1869.0	92.95
30	36.2873	-298.6	-326.5	31.80	100	1.22274	2719.9	1891.3	93.26
31	35.3356	-264.7	-293.4	32.91					
32	34.2700	-228.9	-258.5	34.04	101	1.21017	2750.8	1913.5	93.57
33	33.0445	-190.1	-220.8	35.23	102	1.19786	2781.6	1935.8	93.87
34	31.5729	-146.0	-178.1	36.55	103	1.18581	2812.4	1958.0	94.17
* 34.799	30.0941	-103.8	-137.5	37.78	104	1.17401	2843.2	1980.1	94.47
* 34.799	6.24627	570.9	408.7	57.17	105	1.16245	2873.9	2002.3	94.77
35	6.05112	586.9	419.5	57.63	106	1.15113	2904.6	2024.4	95.06
36	5.34808	652.3	462.8	59.47	107	1.14003	2935.3	2046.5	95.34
37	4.87653	704.8	497.0	60.91	108	1.12915	2966.0	2068.6	95.63
38	4.52114	750.9	526.7	62.14	109	1.11848	2996.6	2090.7	95.91
39	4.23665	792.9	553.8	63.23	110	1.10802	3027.2	2112.7	96.19
40	4.00023	832.3	579.0	64.23					
41	3.79866	869.8	603.1	65.16	111	1.09776	3057.7	2134.7	96.47
42	3.62353	905.9	626.3	66.02	112	1.08770	3088.2	2156.7	96.74
43	3.46916	940.9	648.8	66.84	113	1.07782	3118.7	2178.6	97.01
44	3.33150	975.0	670.8	67.63	114	1.06813	3149.2	2200.6	97.28
45	3.20760	1008.4	692.5	68.38	115	1.05861	3179.6	2222.5	97.55
46	3.09518	1041.2	713.8	69.10	116	1.04927	3210.0	2244.4	97.81
47	2.99251	1073.6	735.0	69.80	117	1.04009	3240.4	2266.2	98.07
48	2.89819	1105.6	756.0	70.48	118	1.03108	3270.8	2288.1	98.33
49	2.81112	1137.3	776.9	71.13	119	1.02223	3301.1	2309.8	98.58
50	2.73036	1168.8	797.7	71.77	120	1.01353	3331.4	2331.7	98.84
51	2.65518	1200.1	818.5	72.39	121	1.00499	3361.6	2353.4	99.09
52	2.58493	1231.2	839.2	72.99	122	0.996593	3391.8	2375.1	99.34
53	2.51909	1262.2	859.9	73.58	123	0.988337	3422.1	2396.9	99.58
54	2.45720	1293.1	880.7	74.16	124	0.980219	3452.2	2418.5	99.83
55	2.39887	1323.9	901.5	74.73	125	0.972237	3482.4	2440.2	100.07
56	2.34376	1354.7	922.4	75.28	126	0.964386	3512.5	2461.9	100.31
57	2.29159	1385.5	943.3	75.83	127	0.956665	3542.6	2483.5	100.55
58	2.24209	1416.2	964.3	76.36	128	0.949069	3572.7	2505.1	100.79
59	2.19504	1447.0	985.4	76.89	129	0.941595	3602.8	2526.7	101.02
60	2.15024	1477.7	1006.5	77.40	130	0.934241	3632.8	2548.3	101.25
61	2.10752	1508.5	1027.7	77.91	131	0.927003	3662.8	2569.8	101.48
62	2.06672	1539.3	1049.1	78.41	132	0.919879	3692.8	2591.3	101.71
63	2.02769	1570.1	1070.4	78.91	133	0.912865	3722.8	2612.8	101.94
64	1.99032	1600.9	1091.8	79.39	134	0.905960	3752.7	2634.3	102.16
65	1.95448	1631.8	1113.4	79.87	135	0.899161	3782.6	2655.8	102.38
66	1.92007	1662.7	1135.0	80.34	136	0.892465	3812.5	2677.2	102.60
67	1.88700	1693.7	1156.7	80.81	137	0.885870	3842.5	2698.7	102.82
68	1.85519	1724.6	1178.4	81.27	138	0.879373	3872.3	2720.1	103.04
69	1.82456	1755.6	1200.3	81.72	139	0.872973	3902.2	2741.5	103.25
70	1.79504	1786.6	1222.1	82.16	140	0.866667	3932.1	2762.9	103.47
71	1.76656	1817.8	1244.2	82.60	141	0.860453	3961.9	2784.3	103.68
72	1.73906	1849.0	1266.4	83.04	142	0.854329	3991.6	2805.6	103.89
73	1.71249	1880.2	1288.5	83.47	143	0.848293	4021.4	2827.0	104.10
74	1.68680	1911.3	1310.6	83.89	144	0.842343	4051.2	2848.3	104.31
75	1.66194	1942.4	1332.8	84.31	145	0.836477	4080.9	2869.6	104.51
76	1.63787	1973.6	1354.9	84.72	146	0.830694	4110.7	2890.9	104.72
77	1.61455	2004.7	1377.1	85.13	147	0.824992	4140.4	2912.2	104.92
78	1.59193	2035.8	1399.3	85.53	148	0.819368	4170.1	2933.5	105.12
79	1.57000	2066.9	1421.5	85.93	149	0.813822	4199.8	2954.8	105.32
80	1.54870	2098.0	1443.8	86.32	150	0.808352	4229.5	2976.0	105.52
81	1.52803	2129.3	1466.2	86.71	151	0.802955	4259.2	2997.3	105.72
82	1.50793	2160.5	1488.6	87.09	152	0.797632	4288.8	3018.5	105.91
83	1.48840	2191.7	1511.0	87.47	153	0.792379	4318.4	3039.7	106.11
84	1.46940	2223.0	1533.4	87.85	154	0.787196	4348.1	3060.9	106.30
85	1.45092	2254.1	1555.8	88.21	155	0.782082	4377.7	3082.1	106.49
86	1.43292	2285.3	1578.2	88.58	156	0.777034	4407.3	3103.3	106.68
87	1.41539	2316.5	1600.6	88.94	157	0.772052	4436.9	3124.5	106.87
88	1.39831	2347.6	1623.0	89.30	158	0.767135	4466.5	3145.6	107.06
89	1.38167	2378.8	1645.4	89.65	159	0.762280	4496.1	3166.8	107.25
[illegible]	1.36544	2409.9	1667.8	90.00	160	0.757487	4525.6	3188.0	107.43

* PHASE CHANGE

10.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	0.752755	4555.2	3209.1	107.62	231	0.524332	6611.0	4678.5	118.22
162	0.748083	4584.7	3230.2	107.80	232	0.522075	6640.3	4699.4	118.35
163	0.743469	4614.2	3251.4	107.98	233	0.519836	6669.5	4720.4	118.47
164	0.738912	4643.8	3272.5	108.16	234	0.517618	6698.8	4741.3	118.60
165	0.734411	4673.3	3293.6	108.34	235	0.515418	6728.1	4762.2	118.72
166	0.729965	4702.8	3314.7	108.52	236	0.513236	6757.4	4783.1	118.85
167	0.725574	4732.3	3335.8	108.70	237	0.511074	6786.6	4804.1	118.97
168	0.721235	4761.8	3356.9	108.87	238	0.508929	6815.9	4825.0	119.10
169	0.716949	4791.3	3378.0	109.05	239	0.506803	6845.2	4845.9	119.22
170	0.712714	4820.8	3399.1	109.22	240	0.504694	6874.5	4866.8	119.34
171	0.708529	4850.2	3420.1	109.39	241	0.502603	6903.7	4887.7	119.46
172	0.704394	4879.7	3441.2	109.57	242	0.500529	6933.0	4908.7	119.58
173	0.700307	4909.1	3462.3	109.74	243	0.498472	6962.3	4929.6	119.70
174	0.696268	4938.6	3483.3	109.91	244	0.496433	6991.6	4950.5	119.82
175	0.692276	4968.0	3504.4	110.07	245	0.494409	7020.8	4971.4	119.94
176	0.688329	4997.5	3525.4	110.24	246	0.492403	7050.1	4992.3	120.06
177	0.684428	5026.9	3546.5	110.41	247	0.490413	7079.4	5013.2	120.18
178	0.680571	5056.3	3567.5	110.58	248	0.488438	7108.6	5034.2	120.30
179	0.676758	5085.8	3588.5	110.74	249	0.486480	7137.9	5055.1	120.42
180	0.672988	5115.2	3609.6	110.90	250	0.484538	7167.2	5076.0	120.54
181	0.669260	5144.6	3630.6	111.07	251	0.482611	7196.4	5096.9	120.65
182	0.665573	5174.0	3651.6	111.23	252	0.480699	7225.7	5117.8	120.77
183	0.661928	5203.4	3672.6	111.39	253	0.478802	7254.9	5138.7	120.88
184	0.658322	5232.8	3693.6	111.55	254	0.476921	7284.2	5159.6	121.00
185	0.654756	5262.2	3714.6	111.71	255	0.475054	7313.5	5180.6	121.11
186	0.651228	5291.6	3735.7	111.87	256	0.473202	7342.7	5201.5	121.23
187	0.647739	5320.9	3756.7	112.03	257	0.471364	7372.0	5222.4	121.34
188	0.644287	5350.3	3777.7	112.18	258	0.469541	7401.2	5243.3	121.46
189	0.640872	5379.7	3798.7	112.34	259	0.467731	7430.5	5264.2	121.57
190	0.637493	5409.1	3819.6	112.49	260	0.465936	7459.8	5285.1	121.68
191	0.634150	5438.4	3840.6	112.65	261	0.464155	7489.0	5306.0	121.80
192	0.630843	5467.8	3861.6	112.80	262	0.462387	7518.3	5326.9	121.91
193	0.627569	5497.1	3882.6	112.95	263	0.460632	7547.6	5347.9	122.02
194	0.624330	5526.5	3903.6	113.10	264	0.458891	7576.8	5368.8	122.13
195	0.621125	5555.9	3924.5	113.26	265	0.457163	7606.1	5389.7	122.24
196	0.617952	5585.2	3945.5	113.41	266	0.455448	7635.3	5410.6	122.35
197	0.614812	5614.5	3966.5	113.55	267	0.453746	7664.6	5431.5	122.46
198	0.611704	5643.9	3987.5	113.70	268	0.452056	7693.9	5452.4	122.57
199	0.608628	5673.2	4008.4	113.85	269	0.450380	7723.1	5473.3	122.68
200	0.605582	5702.6	4029.4	114.00	270	0.448715	7752.4	5494.3	122.79
201	0.602567	5731.9	4050.4	114.14	271	0.447063	7781.6	5515.2	122.90
202	0.599582	5761.2	4071.3	114.29	272	0.445423	7810.9	5536.1	123.00
203	0.596627	5790.6	4092.3	114.43	273	0.443795	7840.1	5557.0	123.11
204	0.593701	5819.9	4113.2	114.58	274	0.442180	7869.4	5577.9	123.22
205	0.590804	5849.2	4134.2	114.72	275	0.440575	7898.6	5598.8	123.32
206	0.587935	5878.5	4155.1	114.87	276	0.438983	7927.9	5619.7	123.43
207	0.585094	5907.9	4176.1	115.01	277	0.437402	7957.1	5640.6	123.54
208	0.582281	5937.2	4197.0	115.15	278	0.435832	7986.4	5661.5	123.64
209	0.579494	5966.5	4218.0	115.29	279	0.434274	8015.6	5682.4	123.75
210	0.576735	5995.8	4238.9	115.43	280	0.432726	8044.9	5703.4	123.85
211	0.574001	6025.1	4259.9	115.57	281	0.431190	8074.1	5724.3	123.96
212	0.571294	6054.4	4280.8	115.71	282	0.429665	8103.4	5745.2	124.06
213	0.568612	6083.7	4301.8	115.84	283	0.428150	8132.7	5766.1	124.16
214	0.565956	6113.0	4322.7	115.98	284	0.426647	8161.9	5787.0	124.27
215	0.563324	6142.3	4343.6	116.12	285	0.425153	8191.2	5807.9	124.37
216	0.560717	6171.6	4364.6	116.25	286	0.423670	8220.4	5828.8	124.47
217	0.558134	6200.9	4385.5	116.39	287	0.422198	8249.7	5849.7	124.57
218	0.555575	6230.2	4406.5	116.52	288	0.420736	8278.9	5870.6	124.67
219	0.553039	6259.5	4427.4	116.66	289	0.419284	8308.2	5891.6	124.78
220	0.550526	6288.8	4448.3	116.79	290	0.417841	8337.4	5912.5	124.88
221	0.548037	6318.1	4469.2	116.93	291	0.416409	8366.7	5933.4	124.98
222	0.545570	6347.4	4490.2	117.06	292	0.414987	8395.9	5954.3	125.08
223	0.543125	6376.7	4511.1	117.19	293	0.413574	8425.2	5975.2	125.18
224	0.540702	6406.0	4532.0	117.32	294	0.412171	8454.4	5996.1	125.28
225	0.538301	6435.3	4553.0	117.45	295	0.410778	8483.7	6017.0	125.38
226	0.535921	6464.6	4573.9	117.58	296	0.409394	8512.9	6037.9	125.48
227	0.533562	6493.9	4594.8	117.71	297	0.408019	8542.2	6058.8	125.58
228	0.531224	6523.1	4615.8	117.84	298	0.406653	8571.4	6079.7	125.67
229	0.528907	6552.4	4636.7	117.97	299	0.405297	8600.7	6100.7	125.77
230	0.526609	6581.7	4657.6	118.09	300	0.403950	8629.9	6121.6	125.87

12.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
19	43.4295	-619.9	-647.9	18.35					
20	42.9552	-594.4	-622.7	19.69					
21	42.4529	-567.3	-595.9	21.00	91	1.62172	2432.8	1683.0	88.75
22	41.9222	-539.4	-568.4	22.29	92	1.60297	2464.1	1705.6	89.09
23	41.3634	-510.8	-540.2	23.56	93	1.58467	2495.4	1728.1	89.43
24	40.7759	-481.6	-511.4	24.80	94	1.56682	2526.6	1750.6	89.76
25	40.1583	-451.9	-482.2	26.02	95	1.54938	2557.9	1773.1	90.09
26	39.5079	-421.8	-452.6	27.20	96	1.53235	2589.0	1795.5	90.42
27	38.8205	-391.4	-422.7	28.35	97	1.51572	2620.2	1818.0	90.74
28	38.0903	-360.5	-392.4	29.47	98	1.49946	2651.3	1840.4	91.06
29	37.3093	-329.1	-361.7	30.57	99	1.48356	2682.3	1862.8	91.37
30	36.4663	-297.1	-330.5	31.67	100	1.46802	2713.4	1885.1	91.69
31	35.5456	-263.9	-298.1	32.75					
32	34.5241	-229.1	-264.3	33.85	101	1.45281	2744.4	1907.5	92.00
33	33.3650	-191.8	-228.2	35.00	102	1.43793	2775.4	1929.8	92.30
34	32.0053	-150.3	-188.3	36.24	103	1.42337	2806.3	1952.1	92.60
35	30.3168	-101.3	-141.4	37.66	104	1.40911	2837.3	1974.4	92.90
36	27.9398	-35.4	-78.9	39.51	105	1.39515	2868.1	1996.6	93.20
* 36.041	27.8139	-32.0	-75.7	39.61	106	1.38147	2899.0	2018.8	93.49
* 36.041	8.03956	522.4	371.1	54.99	107	1.36807	2929.8	2041.0	93.78
37	6.82673	606.8	428.6	57.30	108	1.35495	2960.6	2063.2	94.06
38	6.10029	669.9	470.6	58.99	109	1.34208	2991.3	2085.3	94.35
39	5.58976	722.7	505.2	60.36	110	1.32946	3022.0	2107.4	94.63
40	5.19702	769.7	535.8	61.56					
41	4.87914	813.1	563.9	62.62	111	1.31708	3052.6	2129.5	94.90
42	4.61322	853.8	590.2	63.60	112	1.30495	3083.3	2151.5	95.18
43	4.38552	892.6	615.3	64.51	113	1.29304	3113.9	2173.6	95.45
44	4.18710	929.9	639.6	65.37	114	1.28136	3144.5	2195.6	95.72
45	4.01184	966.2	663.1	66.19	115	1.26989	3175.0	2217.5	95.99
46	3.85531	1001.5	686.1	66.96	116	1.25864	3205.5	2239.5	96.25
47	3.71425	1036.1	708.8	67.71	117	1.24758	3236.0	2261.4	96.51
48	3.58615	1070.1	731.1	68.43	118	1.23673	3266.5	2283.3	96.77
49	3.46905	1103.7	753.2	69.12	119	1.22607	3296.8	2305.2	97.03
50	3.36142	1136.8	775.1	69.79	120	1.21560	3327.3	2327.0	97.28
51	3.26198	1169.6	796.8	70.44	121	1.20531	3357.6	2348.8	97.54
52	3.16973	1202.1	818.5	71.07	122	1.19520	3387.9	2370.6	97.79
53	3.08379	1234.4	840.1	71.69	123	1.18527	3418.2	2392.4	98.03
54	3.00347	1266.5	861.6	72.29	124	1.17550	3448.5	2414.1	98.28
55	2.92816	1298.4	883.2	72.87	125	1.16590	3478.7	2435.8	98.52
56	2.85734	1330.3	904.7	73.45	126	1.15645	3508.9	2457.5	98.76
57	2.79057	1362.0	926.3	74.01	127	1.14716	3539.1	2479.2	99.00
58	2.72748	1393.7	947.9	74.56	128	1.13803	3569.3	2500.8	99.24
59	2.66772	1425.3	969.5	75.10	129	1.12904	3599.4	2522.5	99.47
60	2.61101	1456.9	991.2	75.63	130	1.12020	3629.6	2544.1	99.70
61	2.55709	1488.4	1012.9	76.15	131	1.11150	3659.6	2565.7	99.93
62	2.50573	1520.0	1034.7	76.67	132	1.10293	3689.7	2587.2	100.16
63	2.45674	1551.5	1056.5	77.17	133	1.09450	3719.7	2608.8	100.39
64	2.40994	1582.9	1078.4	77.67	134	1.08620	3749.7	2630.3	100.61
65	2.36517	1614.4	1100.3	78.15	135	1.07803	3779.7	2651.8	100.84
66	2.32227	1645.9	1122.3	78.63	136	1.06998	3809.7	2673.3	101.06
67	2.28113	1677.4	1144.3	79.11	137	1.06206	3839.7	2694.8	101.28
68	2.24162	1708.8	1166.4	79.57	138	1.05425	3869.6	2716.3	101.50
69	2.20365	1740.4	1188.6	80.03	139	1.04656	3899.5	2737.8	101.71
70	2.16710	1771.8	1210.7	80.49	140	1.03899	3929.5	2759.2	101.93
71	2.13190	1803.5	1233.2	80.93	141	1.03152	3959.3	2780.6	102.14
72	2.09796	1835.1	1255.6	81.38	142	1.02417	3989.2	2802.0	102.35
73	2.06522	1866.7	1278.0	81.81	143	1.01692	4019.0	2823.3	102.56
74	2.03359	1898.3	1300.4	82.24	144	1.00977	4048.8	2844.7	102.77
75	2.00303	1929.8	1322.8	82.66	145	1.00273	4078.6	2866.0	102.97
76	1.97347	1961.3	1345.2	83.08	146	0.995792	4108.4	2887.4	103.18
77	1.94486	1992.7	1367.6	83.49	147	0.988945	4138.2	2908.7	103.38
78	1.91715	2024.2	1390.0	83.90	148	0.982193	4168.0	2930.0	103.58
79	1.89029	2055.6	1412.4	84.30	149	0.975535	4197.7	2951.3	103.78
80	1.86424	2087.1	1434.9	84.70	150	0.968968	4227.5	2972.6	103.98
81	1.83897	2118.6	1457.5	85.09	151	0.962491	4257.2	2993.9	104.18
82	1.81444	2150.2	1480.0	85.47	152	0.956101	4286.9	3015.1	104.38
83	1.79060	2181.7	1502.6	85.86	153	0.949796	4316.6	3036.4	104.57
84	1.76744	2213.1	1525.2	86.23	154	0.943576	4346.2	3057.6	104.76
85	1.74491	2244.6	1547.8	86.61	155	0.937438	4375.9	3078.8	104.96
86	1.72299	2276.0	1570.3	86.97	156	0.931381	4405.5	3100.1	105.15
87	1.70166	2307.4	1592.9	87.34	157	0.925402	4435.2	3121.3	105.34
88	1.68089	2338.8	1615.4	87.70	158	0.919501	4464.8	3142.5	105.52
89	1.66066	2370.2	1638.0	88.05	159	0.913677	4494.5	3163.7	105.71
90	1.64094	2401.5	1660.5	88.40	160	0.907926	4524.1	3184.9	105.90

* PHASE CHANGE

12.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	0.902249	4553.6	3206.0	106.08	231	0.628412	6611.4	4676.5	116.70
162	0.896643	4583.2	3227.2	106.26	232	0.625707	6640.7	4697.5	116.82
163	0.891107	4612.8	3248.3	106.45	233	0.623025	6670.0	4718.4	116.95
164	0.885641	4642.4	3269.5	106.63	234	0.620367	6699.3	4739.3	117.07
165	0.880242	4671.9	3290.6	106.81	235	0.617731	6728.6	4760.3	117.20
166	0.874909	4701.5	3311.7	106.99	236	0.615117	6757.9	4781.2	117.32
167	0.869641	4731.0	3332.9	107.16	237	0.612526	6787.2	4802.1	117.45
168	0.864438	4760.6	3354.0	107.34	238	0.609957	6816.5	4823.1	117.57
169	0.859297	4790.1	3375.1	107.51	239	0.607409	6845.8	4844.0	117.69
170	0.854217	4819.6	3396.2	107.69	240	0.604883	6875.1	4864.9	117.82
171	0.849199	4849.1	3417.3	107.86	241	0.602377	6904.3	4885.8	117.94
172	0.844239	4878.6	3438.4	108.03	242	0.599893	6933.6	4906.8	118.06
173	0.839338	4908.1	3459.4	108.20	243	0.597428	6962.9	4927.7	118.18
174	0.834494	4937.6	3480.5	108.37	244	0.594985	6992.2	4948.6	118.30
175	0.829707	4967.1	3501.6	108.54	245	0.592561	7021.5	4969.5	118.42
176	0.824974	4996.5	3522.7	108.71	246	0.590157	7050.8	4990.5	118.54
177	0.820296	5026.0	3543.7	108.88	247	0.587772	7080.1	5011.4	118.66
178	0.815672	5055.5	3564.8	109.04	248	0.585407	7109.3	5032.3	118.78
179	0.811100	5084.9	3585.8	109.21	249	0.583061	7138.6	5053.3	118.89
180	0.806579	5114.4	3606.9	109.37	250	0.580734	7167.9	5074.2	119.01
181	0.802109	5143.8	3627.9	109.54	251	0.578425	7197.2	5095.1	119.13
182	0.797689	5173.2	3649.0	109.70	252	0.576135	7226.5	5116.0	119.25
183	0.793318	5202.7	3670.0	109.86	253	0.573863	7255.7	5136.9	119.36
184	0.788995	5232.1	3691.0	110.02	254	0.571609	7285.0	5157.9	119.48
185	0.784720	5261.5	3712.0	110.18	255	0.569372	7314.3	5178.8	119.59
186	0.780491	5290.9	3733.1	110.34	256	0.567153	7343.6	5199.7	119.71
187	0.776307	5320.4	3754.1	110.50	257	0.564952	7372.8	5220.6	119.82
188	0.772169	5349.8	3775.1	110.65	258	0.562767	7402.1	5241.5	119.93
189	0.768076	5379.2	3796.1	110.81	259	0.560600	7431.4	5262.5	120.05
190	0.764025	5408.6	3817.1	110.96	260	0.558449	7460.7	5283.4	120.16
191	0.760018	5438.0	3838.1	111.12	261	0.556314	7489.9	5304.3	120.27
192	0.756053	5467.3	3859.1	111.27	262	0.554196	7519.2	5325.2	120.38
193	0.752130	5496.7	3880.1	111.42	263	0.552094	7548.5	5346.1	120.50
194	0.748247	5526.1	3901.1	111.58	264	0.550009	7577.8	5367.1	120.61
195	0.744405	5555.5	3922.1	111.73	265	0.547938	7607.0	5388.0	120.72
196	0.740602	5584.9	3943.1	111.88	266	0.545884	7636.3	5408.9	120.83
197	0.736839	5614.2	3964.1	112.03	267	0.543845	7665.6	5429.8	120.94
198	0.733114	5643.6	3985.1	112.18	268	0.541821	7694.8	5450.8	121.05
199	0.729426	5673.0	4006.0	112.32	269	0.539812	7724.1	5471.7	121.16
200	0.725776	5702.3	4027.0	112.47	270	0.537818	7753.4	5492.6	121.27
201	0.722162	5731.7	4048.0	112.62	271	0.535839	7782.6	5513.5	121.37
202	0.718585	5761.1	4069.0	112.76	272	0.533875	7811.9	5534.4	121.48
203	0.715043	5790.4	4089.9	112.91	273	0.531924	7841.2	5555.3	121.59
204	0.711537	5819.8	4110.9	113.05	274	0.529989	7870.5	5576.3	121.70
205	0.708064	5849.1	4131.9	113.20	275	0.528067	7899.7	5597.2	121.80
206	0.704626	5878.4	4152.9	113.34	276	0.526159	7929.0	5618.1	121.91
207	0.701221	5907.8	4173.8	113.48	277	0.524265	7958.2	5639.0	122.01
208	0.697850	5937.1	4194.8	113.62	278	0.522384	7987.5	5659.9	122.12
209	0.694511	5966.5	4215.7	113.76	279	0.520518	8016.8	5680.8	122.22
210	0.691203	5995.8	4236.7	113.90	280	0.518664	8046.0	5701.8	122.33
211	0.687928	6025.1	4257.7	114.04	281	0.516824	8075.3	5722.7	122.43
212	0.684684	6054.5	4278.6	114.18	282	0.514996	8104.6	5743.6	122.54
213	0.681470	6083.8	4299.6	114.32	283	0.513182	8133.8	5764.5	122.64
214	0.678286	6113.1	4320.5	114.46	284	0.511380	8163.1	5785.4	122.74
215	0.675133	6142.5	4341.5	114.59	285	0.509592	8192.4	5806.3	122.85
216	0.672009	6171.8	4362.4	114.73	286	0.507815	8221.6	5827.3	122.95
217	0.668913	6201.1	4383.4	114.86	287	0.506051	8250.9	5848.2	123.05
218	0.665847	6230.4	4404.3	115.00	288	0.504300	8280.2	5869.1	123.15
219	0.662808	6259.7	4425.3	115.13	289	0.502560	8309.4	5890.0	123.26
220	0.659798	6289.1	4446.2	115.27	290	0.500832	8338.7	5910.9	123.36
221	0.656815	6318.3	4467.1	115.40	291	0.499117	8367.9	5931.8	123.46
222	0.653859	6347.7	4488.1	115.53	292	0.497413	8397.2	5952.8	123.56
223	0.650929	6377.0	4509.0	115.66	293	0.495720	8426.5	5973.7	123.66
224	0.648026	6406.3	4530.0	115.80	294	0.494040	8455.7	5994.6	123.76
225	0.645149	6435.6	4550.9	115.93	295	0.492370	8485.0	6015.5	123.86
226	0.642297	6464.9	4571.9	116.06	296	0.490712	8514.2	6036.4	123.96
227	0.639471	6494.2	4592.8	116.19	297	0.489065	8543.5	6057.3	124.05
228	0.636669	6523.5	4613.7	116.31	298	0.487429	8572.8	6078.2	124.15
229	0.633893	6552.8	4634.7	116.44	299	0.485804	8602.0	6099.2	124.25
230	0.631140	6582.1	4655.6	116.57	300	0.484190	8631.3	6120.1	124.35

14.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
20	43.0309	-590.7	-623.7	19.63					
21	42.5334	-563.7	-597.1	20.94	91	1.89445	2424.7	1675.9	87.39
22	42.0075	-535.9	-569.7	22.23	92	1.87233	2456.2	1698.6	87.73
23	41.4537	-507.4	-541.7	23.49	93	1.85076	2487.7	1721.2	88.07
24	40.8721	-478.4	-513.1	24.73	94	1.82972	2519.1	1743.8	88.41
25	40.2614	-448.8	-484.1	25.94	95	1.80918	2550.5	1766.4	88.74
26	39.6194	-419.0	-454.8	27.11	96	1.78912	2581.9	1789.0	89.07
27	38.9424	-388.7	-425.1	28.26	97	1.76954	2613.2	1811.5	89.39
28	38.2251	-358.1	-395.2	29.37	98	1.75041	2644.4	1834.0	89.71
29	37.4605	-327.0	-364.9	30.46	99	1.73171	2675.7	1856.5	90.03
30	36.6387	-295.5	-334.3	31.54	100	1.71343	2706.9	1879.0	90.35
31	35.7461	-262.9	-302.6	32.60					
32	34.7634	-229.0	-269.8	33.67	101	1.69556	2738.0	1901.4	90.66
33	33.6611	-193.0	-235.1	34.78	102	1.67807	2769.2	1923.9	90.96
34	32.3914	-153.6	-197.4	35.96	103	1.66097	2800.3	1946.2	91.27
35	30.8669	-108.4	-154.4	37.27	104	1.64422	2831.3	1968.6	91.57
36	28.8910	-52.2	-101.3	38.85	105	1.62783	2862.4	1990.9	91.86
37	25.7466	33.9	-21.1	41.20	106	1.61178	2893.3	2013.2	92.16
* 37.143	25.0166	53.5	-3.3	41.73	107	1.59606	2924.3	2035.5	92.45
* 37.143	10.3425	462.4	325.3	52.74	108	1.58066	2955.2	2057.7	92.73
38	8.43444	564.9	396.7	55.47	109	1.56556	2986.0	2079.9	93.02
39	7.37113	639.5	447.1	57.42	110	1.55077	3016.9	2102.1	93.30
40	6.67753	698.9	486.5	58.92					
41	6.16353	750.5	520.4	60.19	111	1.53626	3047.6	2124.2	93.58
42	5.75712	797.4	551.0	61.32	112	1.52204	3078.4	2146.4	93.85
43	5.42269	841.1	579.5	62.35	113	1.50808	3109.1	2168.5	94.13
44	5.13983	882.4	606.4	63.30	114	1.49440	3139.8	2190.6	94.40
45	4.89574	922.0	632.2	64.19	115	1.48096	3170.5	2212.6	94.67
46	4.68181	960.2	657.2	65.03	116	1.46778	3201.1	2234.6	94.93
47	4.49199	997.3	681.5	65.83	117	1.45484	3231.6	2256.6	95.19
48	4.32187	1033.6	705.3	66.59	118	1.44214	3262.2	2278.5	95.45
49	4.16810	1069.1	728.7	67.33	119	1.42966	3292.7	2300.5	95.71
50	4.02813	1104.0	751.8	68.04	120	1.41740	3323.2	2322.4	95.97
51	3.89992	1138.4	774.7	68.72	121	1.40536	3353.6	2344.2	96.22
52	3.78185	1172.4	797.3	69.38	122	1.39353	3384.0	2366.0	96.47
53	3.67262	1206.0	819.8	70.02	123	1.38191	3414.4	2387.9	96.72
54	3.57113	1239.4	842.2	70.64	124	1.37048	3444.8	2409.7	96.96
55	3.47648	1272.6	864.5	71.25	125	1.35925	3475.1	2431.5	97.21
56	3.38792	1305.5	886.8	71.84	126	1.34821	3505.4	2453.2	97.45
57	3.30479	1338.3	909.0	72.42	127	1.33735	3535.7	2475.0	97.69
58	3.22655	1370.9	931.2	72.99	128	1.32667	3565.9	2496.6	97.92
59	3.15272	1403.4	953.4	73.55	129	1.31616	3596.1	2518.3	98.16
60	3.08290	1435.8	975.6	74.09	130	1.30582	3626.3	2540.0	98.39
61	3.01673	1468.1	997.9	74.63	131	1.29565	3656.5	2561.6	98.62
62	2.95388	1500.4	1020.2	75.15	132	1.28564	3686.6	2583.2	98.85
63	2.89409	1532.6	1042.5	75.67	133	1.27579	3716.7	2604.8	99.08
64	2.83711	1564.7	1064.7	76.17	134	1.26610	3746.8	2626.4	99.30
65	2.78273	1596.9	1087.1	76.67	135	1.25655	3776.8	2647.9	99.53
66	2.73074	1628.9	1109.5	77.16	136	1.24715	3806.9	2669.5	99.75
67	2.68097	1661.0	1131.9	77.64	137	1.23789	3836.9	2691.0	99.97
68	2.63328	1693.0	1154.3	78.12	138	1.22878	3866.9	2712.5	100.19
69	2.58751	1725.0	1176.8	78.58	139	1.21980	3896.9	2734.0	100.40
70	2.54354	1757.0	1199.3	79.04	140	1.21095	3926.9	2755.5	100.62
71	2.50125	1789.1	1222.0	79.50	141	1.20223	3956.8	2776.9	100.83
72	2.46054	1821.2	1244.7	79.94	142	1.19365	3986.7	2798.3	101.04
73	2.42131	1853.2	1267.4	80.39	143	1.18518	4016.6	2819.7	101.25
74	2.38347	1885.2	1290.0	80.82	144	1.17684	4046.5	2841.1	101.46
75	2.34695	1917.1	1312.7	81.25	145	1.16862	4076.4	2862.5	101.67
76	2.31166	1949.0	1335.3	81.67	146	1.16051	4106.2	2883.9	101.87
77	2.27754	1980.8	1358.0	82.09	147	1.15252	4136.1	2905.2	102.08
78	2.24453	2012.6	1380.6	82.50	148	1.14464	4165.9	2926.6	102.28
79	2.21257	2044.4	1403.2	82.90	149	1.13687	4195.7	2947.9	102.48
80	2.18160	2076.1	1425.9	83.30	150	1.12921	4225.5	2969.3	102.68
81	2.15158	2108.0	1448.7	83.70	151	1.12165	4255.2	2990.5	102.88
82	2.12246	2139.8	1471.4	84.09	152	1.11419	4285.0	3011.8	103.07
83	2.09419	2171.6	1494.2	84.48	153	1.10683	4314.7	3033.1	103.27
84	2.06673	2203.3	1517.0	84.86	154	1.09958	4344.4	3054.3	103.46
85	2.04005	2235.0	1539.7	85.23	155	1.09242	4374.1	3075.6	103.65
86	2.01411	2266.7	1562.4	85.60	156	1.08535	4403.8	3096.8	103.85
87	1.98888	2298.4	1585.1	85.97	157	1.07837	4433.5	3118.1	104.03
88	1.96433	2330.0	1607.8	86.33	158	1.07149	4463.2	3139.3	104.22
89	1.94042	2361.6	1630.5	86.69	159	1.06470	4492.9	3160.5	104.41
90	1.91714	2393.1	1653.2	87.04	160	1.05799	4522.5	3181.8	104.60

* PHASE CHANGE

14.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	1.05137	4552.2	3202.9	104.78	231	0.732226	6611.8	4674.5	115.41
162	1.04483	4581.8	3224.1	104.96	232	0.729075	6641.2	4695.5	115.53
163	1.03837	4611.4	3245.3	105.15	233	0.725952	6670.5	4716.4	115.66
164	1.03200	4641.0	3266.4	105.33	234	0.722855	6699.8	4737.4	115.79
165	1.02570	4670.6	3287.6	105.51	235	0.719785	6729.1	4758.3	115.91
166	1.01948	4700.2	3308.8	105.69	236	0.716741	6758.4	4779.3	116.03
167	1.01334	4729.8	3329.9	105.86	237	0.713722	6787.7	4800.2	116.16
168	1.00727	4759.4	3351.1	106.04	238	0.710730	6817.0	4821.1	116.28
169	1.00128	4788.9	3372.2	106.22	239	0.707762	6846.4	4842.1	116.40
170	0.995361	4818.5	3393.3	106.39	240	0.704819	6875.7	4863.0	116.53
171	0.989509	4848.0	3414.4	106.56	241	0.701901	6904.9	4883.9	116.65
172	0.983727	4877.6	3435.5	106.74	242	0.699007	6934.3	4904.9	116.77
173	0.978013	4907.1	3456.6	106.91	243	0.696137	6963.6	4925.8	116.89
174	0.972365	4936.6	3477.7	107.08	244	0.693290	6992.9	4946.8	117.01
175	0.966784	4966.1	3498.8	107.25	245	0.690467	7022.2	4967.7	117.13
176	0.961267	4995.6	3519.9	107.41	246	0.687667	7051.5	4988.6	117.25
177	0.955814	5025.1	3541.0	107.58	247	0.684890	7080.8	5009.6	117.37
178	0.950423	5054.6	3562.1	107.75	248	0.682135	7110.1	5030.5	117.49
179	0.945094	5084.1	3583.2	107.91	249	0.679402	7139.4	5051.4	117.61
180	0.939824	5113.6	3604.2	108.08	250	0.676692	7168.7	5072.4	117.72
181	0.934614	5143.1	3625.3	108.24	251	0.674003	7197.9	5093.3	117.84
182	0.929462	5172.5	3646.3	108.40	252	0.671335	7227.2	5114.2	117.96
183	0.924367	5202.0	3667.4	108.56	253	0.668689	7256.5	5135.1	118.07
184	0.919329	5231.4	3688.4	108.72	254	0.666063	7285.8	5156.1	118.19
185	0.914345	5260.9	3709.5	108.88	255	0.663458	7315.1	5177.0	118.30
186	0.909417	5290.4	3730.5	109.04	256	0.660874	7344.4	5197.9	118.42
187	0.904541	5319.8	3751.5	109.20	257	0.658310	7373.7	5218.9	118.53
188	0.899719	5349.2	3772.6	109.36	258	0.655765	7403.0	5239.8	118.65
189	0.894948	5378.7	3793.6	109.51	259	0.653241	7432.3	5260.7	118.76
190	0.890228	5408.1	3814.6	109.67	260	0.650736	7461.6	5281.6	118.87
191	0.885558	5437.5	3835.6	109.82	261	0.648250	7490.8	5302.6	118.98
192	0.880937	5466.9	3856.7	109.98	262	0.645783	7520.1	5323.5	119.10
193	0.876365	5496.3	3877.7	110.13	263	0.643335	7549.4	5344.4	119.21
194	0.871841	5525.7	3898.7	110.28	264	0.640905	7578.7	5365.4	119.32
195	0.867363	5555.2	3919.7	110.43	265	0.638494	7608.0	5386.3	119.43
196	0.862932	5584.6	3940.7	110.58	266	0.636101	7637.3	5407.2	119.54
197	0.858547	5614.0	3961.7	110.73	267	0.633726	7666.6	5428.1	119.65
198	0.854206	5643.4	3982.7	110.88	268	0.631369	7695.9	5449.1	119.76
199	0.849909	5672.7	4003.7	111.03	269	0.629030	7725.1	5470.0	119.87
200	0.845656	5702.1	4024.7	111.18	270	0.626707	7754.4	5490.9	119.98
201	0.841446	5731.5	4045.7	111.32	271	0.624402	7783.7	5511.8	120.09
202	0.837278	5760.9	4066.7	111.47	272	0.622114	7813.0	5532.8	120.19
203	0.833151	5790.3	4087.6	111.62	273	0.619843	7842.3	5553.7	120.30
204	0.829065	5819.6	4108.6	111.76	274	0.617588	7871.5	5574.6	120.41
205	0.825019	5849.0	4129.6	111.90	275	0.615350	7900.8	5595.5	120.51
206	0.821013	5878.4	4150.6	112.05	276	0.613128	7930.1	5616.5	120.62
207	0.817047	5907.8	4171.6	112.19	277	0.610922	7959.4	5637.4	120.73
208	0.813118	5937.1	4192.5	112.33	278	0.608732	7988.6	5658.3	120.83
209	0.809228	5966.5	4213.5	112.47	279	0.606557	8017.9	5679.2	120.94
210	0.805375	5995.8	4234.5	112.61	280	0.604399	8047.2	5700.2	121.04
211	0.801559	6025.2	4255.5	112.75	281	0.602255	8076.5	5721.1	121.15
212	0.797779	6054.6	4276.4	112.89	282	0.600127	8105.8	5742.0	121.25
213	0.794035	6083.9	4297.4	113.03	283	0.598014	8135.0	5762.9	121.35
214	0.790326	6113.2	4318.4	113.16	284	0.595916	8164.3	5783.9	121.46
215	0.786653	6142.6	4339.3	113.30	285	0.593832	8193.6	5804.8	121.56
216	0.783013	6171.9	4360.3	113.44	286	0.591763	8222.9	5825.7	121.66
217	0.779407	6201.3	4381.2	113.57	287	0.589709	8252.1	5846.6	121.77
218	0.775835	6230.6	4402.2	113.71	288	0.587669	8281.4	5867.5	121.87
219	0.772295	6260.0	4423.2	113.84	289	0.585643	8310.7	5888.5	121.97
220	0.768788	6289.3	4444.1	113.98	290	0.583631	8340.0	5909.4	122.07
221	0.765313	6318.6	4465.1	114.11	291	0.581632	8369.2	5930.3	122.17
222	0.761869	6348.0	4486.0	114.24	292	0.579648	8398.5	5951.2	122.27
223	0.758456	6377.3	4507.0	114.37	293	0.577677	8427.8	5972.2	122.37
224	0.755074	6406.6	4527.9	114.50	294	0.575719	8457.0	5993.1	122.47
225	0.751723	6435.9	4548.9	114.64	295	0.573775	8486.3	6014.0	122.57
226	0.748401	6465.3	4569.8	114.77	296	0.571844	8515.6	6034.9	122.67
227	0.745109	6494.6	4590.8	114.89	297	0.569926	8544.8	6055.8	122.77
228	0.741845	6523.9	4611.7	115.02	298	0.568021	8574.1	6076.8	122.87
229	0.738611	6553.2	4632.7	115.15	299	0.566128	8603.4	6097.7	122.96
230	0.735405	6582.5	4653.6	115.28	300	0.564248	8632.7	6118.6	123.06

16.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
20	43.1065	-587.1	-624.7	19.58					
21	42.6136	-560.2	-598.2	20.88	91	2.16775	2416.6	1668.7	86.20
22	42.0921	-532.5	-571.0	22.16	92	2.14219	2448.3	1691.5	86.55
23	41.5431	-504.1	-543.1	23.42	93	2.11728	2480.0	1714.3	86.89
24	40.9670	-475.1	-514.7	24.66	94	2.09299	2511.6	1737.0	87.23
25	40.3629	-445.8	-485.9	25.86	95	2.06930	2543.2	1759.7	87.56
26	39.7289	-416.0	-456.8	27.03	96	2.04617	2574.7	1782.4	87.89
27	39.0617	-386.0	-427.5	28.16	97	2.02359	2606.2	1805.1	88.22
28	38.3565	-355.6	-397.9	29.27	98	2.00155	2637.7	1827.7	88.54
29	37.6072	-324.9	-368.0	30.35	99	1.98001	2669.0	1850.3	88.86
30	36.8049	-293.8	-337.9	31.41	100	1.95896	2700.4	1872.8	89.18
31	35.9379	-261.7	-306.9	32.45					
32	34.9899	-228.6	-274.9	33.50	101	1.93838	2731.7	1895.4	89.49
33	33.9367	-193.7	-241.4	34.58	102	1.91826	2763.0	1917.9	89.79
34	32.7414	-156.0	-205.5	35.70	103	1.89857	2794.3	1940.4	90.10
35	31.3411	-113.7	-165.5	36.93	104	1.87932	2825.5	1962.8	90.40
36	29.6146	-63.4	-118.2	38.34	105	1.86047	2856.6	1985.2	90.70
37	27.2584	3.4	-56.1	40.17	106	1.84202	2887.7	2007.6	90.99
38	22.5921	131.9	60.2	43.60	107	1.82395	2918.8	2030.0	91.29
* 38.137	20.5039	187.7	108.6	45.06	108	1.80625	2949.8	2052.3	91.57
* 38.137	14.2907	360.5	247.0	49.59	109	1.78891	2980.8	2074.6	91.86
39	10.1067	528.9	368.5	53.97	110	1.77192	3011.8	2096.8	92.14
40	8.64718	614.6	427.2	56.15					
41	7.75648	679.9	470.9	57.75	111	1.75526	3042.7	2119.0	92.42
42	7.11615	735.6	507.8	59.09	112	1.73893	3073.6	2141.3	92.70
43	6.61914	785.6	540.7	60.27	113	1.72292	3104.4	2163.4	92.97
44	6.21538	831.9	571.1	61.33	114	1.70721	3135.2	2185.6	93.24
45	5.87715	875.5	599.6	62.31	115	1.69180	3165.9	2207.7	93.51
46	5.58746	917.0	626.9	63.23	116	1.67668	3196.6	2229.7	93.78
47	5.33513	957.0	653.1	64.09	117	1.66184	3227.3	2251.8	94.04
48	5.11238	995.7	678.6	64.91	118	1.64727	3258.0	2273.8	94.30
49	4.91360	1033.4	703.5	65.69	119	1.63296	3288.6	2295.8	94.56
50	4.73459	1070.3	727.9	66.43	120	1.61891	3319.2	2317.7	94.82
51	4.57216	1106.5	751.9	67.15	121	1.60511	3349.7	2339.6	95.07
52	4.42381	1142.1	775.6	67.84	122	1.59156	3380.1	2361.5	95.32
53	4.28753	1177.2	799.1	68.51	123	1.57824	3410.7	2383.4	95.57
54	4.16173	1211.9	822.3	69.16	124	1.56515	3441.1	2405.3	95.82
55	4.04508	1246.3	845.5	69.79	125	1.55228	3471.5	2427.1	96.06
56	3.93648	1280.3	868.5	70.40	126	1.53963	3501.9	2448.9	96.30
57	3.83503	1314.2	891.5	71.00	127	1.52719	3532.3	2470.7	96.54
58	3.73994	1347.8	914.3	71.59	128	1.51496	3562.5	2492.4	96.78
59	3.65056	1381.2	937.1	72.16	129	1.50293	3592.9	2514.2	97.02
60	3.56633	1414.5	959.9	72.72	130	1.49109	3623.1	2535.9	97.25
61	3.48676	1447.7	982.7	73.27	131	1.47945	3653.3	2557.5	97.48
62	3.41141	1480.7	1005.5	73.80	132	1.46800	3683.5	2579.2	97.71
63	3.33993	1513.6	1028.2	74.33	133	1.45672	3713.7	2600.8	97.94
64	3.27198	1546.4	1050.9	74.85	134	1.44562	3743.9	2622.4	98.17
65	3.20727	1579.2	1073.7	75.36	135	1.43470	3774.0	2644.0	98.39
66	3.14555	1611.9	1096.5	75.85	136	1.42394	3804.1	2665.6	98.61
67	3.08659	1644.5	1119.3	76.35	137	1.41335	3834.2	2687.2	98.83
68	3.03019	1677.1	1142.1	76.83	138	1.40292	3864.3	2708.7	99.05
69	2.97616	1709.7	1164.9	77.30	139	1.39265	3894.4	2730.2	99.27
70	2.92434	1742.1	1187.7	77.77	140	1.38253	3924.4	2751.8	99.48
71	2.87459	1774.7	1210.8	78.23	141	1.37256	3954.4	2773.2	99.70
72	2.82675	1807.3	1233.7	78.68	142	1.36274	3984.3	2794.7	99.91
73	2.78073	1839.7	1256.7	79.13	143	1.35306	4014.3	2816.1	100.12
74	2.73639	1872.1	1279.6	79.57	144	1.34352	4044.2	2837.5	100.33
75	2.69364	1904.4	1302.5	80.01	145	1.33412	4074.1	2859.0	100.53
76	2.65239	1936.6	1325.4	80.43	146	1.32485	4104.1	2880.4	100.74
77	2.61255	1968.8	1348.3	80.85	147	1.31572	4133.9	2901.8	100.94
78	2.57404	2001.0	1371.2	81.27	148	1.30671	4163.8	2923.2	101.15
79	2.53679	2033.1	1394.0	81.68	149	1.29782	4193.7	2944.5	101.35
80	2.50073	2065.2	1416.9	82.08	150	1.28906	4223.5	2965.9	101.55
81	2.46580	2097.3	1439.9	82.48	151	1.28042	4253.3	2987.2	101.75
82	2.43194	2129.5	1462.8	82.88	152	1.27190	4283.1	3008.5	101.94
83	2.39910	2161.5	1485.8	83.27	153	1.26349	4312.9	3029.8	102.14
84	2.36723	2193.5	1508.7	83.65	154	1.25520	4342.7	3051.1	102.33
85	2.33629	2225.5	1531.6	84.03	155	1.24702	4372.4	3072.4	102.52
86	2.30622	2257.5	1554.5	84.40	156	1.23894	4402.2	3093.6	102.72
87	2.27699	2289.4	1577.4	84.77	157	1.23097	4431.9	3114.9	102.90
88	2.24856	2321.2	1600.2	85.13	158	1.22311	4461.6	3136.2	103.09
89	2.22090	2353.0	1623.1	85.49	159	1.21534	4491.4	3157.4	103.28
90	2.19398	2384.8	1645.9	85.85	160	1.20768	4521.1	3178.7	103.47

* PHASE CHANGE

16.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	1.20011	4550.7	3199.9	103.65	231	0.835775	6612.3	4672.6	114.29
162	1.19264	4580.4	3221.1	103.84	232	0.832180	6641.7	4693.5	114.42
163	1.18527	4610.0	3242.3	104.02	233	0.828616	6671.0	4714.5	114.54
164	1.17799	4639.7	3263.4	104.20	234	0.825082	6700.3	4735.4	114.67
165	1.17079	4669.3	3284.6	104.38	235	0.821579	6729.7	4756.4	114.79
166	1.16369	4699.0	3305.8	104.56	236	0.818106	6759.0	4777.3	114.92
167	1.15667	4728.6	3327.0	104.74	237	0.814662	6788.3	4798.3	115.04
168	1.14974	4758.2	3348.1	104.91	238	0.811247	6817.6	4819.2	115.16
169	1.14290	4787.8	3369.3	105.09	239	0.807861	6847.0	4840.2	115.29
170	1.13613	4817.4	3390.5	105.26	240	0.804503	6876.3	4861.1	115.41
171	1.12945	4847.0	3411.6	105.44	241	0.801174	6905.6	4882.1	115.53
172	1.12285	4876.5	3432.7	105.61	242	0.797872	6934.9	4903.0	115.65
173	1.11632	4906.1	3453.8	105.78	243	0.794597	6964.2	4924.0	115.77
174	1.10987	4935.7	3475.0	105.95	244	0.791349	6993.6	4944.9	115.89
175	1.10350	4965.2	3496.1	106.12	245	0.788128	7022.9	4965.9	116.01
176	1.09720	4994.7	3517.2	106.29	246	0.784933	7052.2	4986.8	116.13
177	1.09097	5024.3	3538.3	106.46	247	0.781764	7081.5	5007.7	116.25
178	1.08482	5053.8	3559.4	106.62	248	0.778621	7110.8	5028.7	116.37
179	1.07873	5083.3	3580.5	106.79	249	0.775503	7140.1	5049.6	116.49
180	1.07271	5112.9	3601.6	106.95	250	0.772411	7169.4	5070.6	116.61
181	1.06677	5142.4	3622.6	107.12	251	0.769343	7198.7	5091.5	116.72
182	1.06088	5171.9	3643.7	107.28	252	0.766299	7228.1	5112.4	116.84
183	1.05507	5201.3	3664.8	107.44	253	0.763280	7257.4	5133.4	116.96
184	1.04931	5230.8	3685.8	107.60	254	0.760284	7286.7	5154.3	117.07
185	1.04363	5260.3	3706.9	107.76	255	0.757312	7316.0	5175.2	117.19
186	1.03800	5289.8	3727.9	107.92	256	0.754364	7345.3	5196.2	117.30
187	1.03243	5319.3	3749.0	108.08	257	0.751438	7374.6	5217.1	117.42
188	1.02693	5348.7	3770.1	108.24	258	0.748535	7403.9	5238.1	117.53
189	1.02148	5378.2	3791.1	108.39	259	0.745655	7433.2	5259.0	117.64
190	1.01609	5407.7	3812.1	108.55	260	0.742796	7462.5	5279.9	117.76
191	1.01076	5437.1	3833.2	108.70	261	0.739960	7491.8	5300.8	117.87
192	1.00549	5466.5	3854.2	108.86	262	0.737146	7521.1	5321.8	117.98
193	1.00027	5496.0	3875.2	109.01	263	0.734353	7550.4	5342.7	118.09
194	0.995108	5525.4	3896.2	109.16	264	0.731581	7579.7	5363.7	118.20
195	0.989997	5554.8	3917.3	109.31	265	0.728830	7609.0	5384.6	118.31
196	0.984939	5584.3	3938.3	109.46	266	0.726100	7638.3	5405.5	118.42
197	0.979934	5613.7	3959.3	109.61	267	0.723390	7667.6	5426.5	118.53
198	0.974979	5643.1	3980.3	109.76	268	0.720701	7696.9	5447.4	118.64
199	0.970075	5672.5	4001.3	109.91	269	0.718032	7726.2	5468.3	118.75
200	0.965220	5702.0	4022.3	110.06	270	0.715382	7755.5	5489.3	118.86
201	0.960415	5731.4	4043.3	110.20	271	0.712752	7784.8	5510.2	118.97
202	0.955658	5760.8	4064.3	110.35	272	0.710142	7814.1	5531.1	119.08
203	0.950948	5790.2	4085.3	110.49	273	0.707551	7843.4	5552.1	119.18
204	0.946284	5819.6	4106.3	110.64	274	0.704978	7872.6	5573.0	119.29
205	0.941667	5849.0	4127.3	110.78	275	0.702425	7901.9	5593.9	119.40
206	0.937095	5878.4	4148.3	110.93	276	0.699889	7931.2	5614.9	119.50
207	0.932568	5907.7	4169.3	111.07	277	0.697373	7960.5	5635.8	119.61
208	0.928085	5937.1	4190.3	111.21	278	0.694874	7989.8	5656.7	119.72
209	0.923645	5966.5	4211.3	111.35	279	0.692393	8019.1	5677.6	119.82
210	0.919248	5995.9	4232.3	111.49	280	0.689930	8048.4	5698.6	119.93
211	0.914893	6025.3	4253.3	111.63	281	0.687485	8077.7	5719.5	120.03
212	0.910579	6054.7	4274.2	111.77	282	0.685057	8107.0	5740.4	120.13
213	0.906306	6084.0	4295.2	111.91	283	0.682646	8136.2	5761.4	120.24
214	0.902074	6113.4	4316.2	112.04	284	0.680252	8165.5	5782.3	120.34
215	0.897881	6142.8	4337.2	112.18	285	0.677875	8194.8	5803.2	120.44
216	0.893728	6172.1	4358.1	112.32	286	0.675515	8224.1	5824.2	120.55
217	0.889613	6201.5	4379.1	112.45	287	0.673171	8253.4	5845.1	120.65
218	0.885536	6230.8	4400.1	112.59	288	0.670843	8282.7	5866.0	120.75
219	0.881497	6260.2	4421.1	112.72	289	0.668532	8312.0	5886.9	120.85
220	0.877495	6289.6	4442.0	112.86	290	0.666236	8341.2	5907.9	120.95
221	0.873529	6318.9	4463.0	112.99	291	0.663957	8370.5	5928.8	121.05
222	0.869600	6348.3	4484.0	113.12	292	0.661693	8399.8	5949.7	121.16
223	0.865706	6377.6	4504.9	113.25	293	0.659444	8429.1	5970.6	121.26
224	0.861847	6407.0	4525.9	113.39	294	0.657211	8458.4	5991.6	121.36
225	0.858022	6436.3	4546.8	113.52	295	0.654992	8487.6	6012.5	121.45
226	0.854232	6465.6	4567.8	113.65	296	0.652789	8516.9	6033.4	121.55
227	0.850475	6495.0	4588.8	113.78	297	0.650601	8546.2	6054.4	121.65
228	0.846751	6524.3	4609.7	113.90	298	0.648427	8575.5	6075.3	121.75
229	0.843060	6553.7	4630.7	114.03	299	0.646268	8604.8	6096.2	121.85
230	0.839402	6583.0	4651.6	114.16	300	0.644123	8634.0	6117.1	121.95

18.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
20	43.1818	-583.4	-625.7	19.53					
21	42.6932	-556.6	-599.3	20.82	91	2.44156	2408.5	1661.5	85.14
22	42.1759	-529.0	-572.3	22.10	92	2.41251	2440.4	1684.4	85.49
23	41.6315	-500.7	-544.5	23.36	93	2.38420	2472.3	1707.3	85.84
24	41.0607	-471.9	-516.3	24.59	94	2.35661	2504.1	1730.2	86.18
25	40.4629	-442.6	-487.7	25.78	95	2.32970	2535.9	1753.0	86.51
26	39.8364	-413.1	-458.9	26.95	96	2.30345	2567.6	1775.8	86.85
27	39.1784	-383.2	-429.8	28.07	97	2.27783	2599.3	1798.6	87.17
28	38.4848	-353.1	-400.5	29.17	98	2.25283	2630.9	1821.3	87.50
29	37.7496	-322.7	-371.0	30.24	99	2.22840	2662.5	1844.0	87.82
30	36.9654	-292.0	-341.3	31.29	100	2.20455	2694.0	1866.7	88.14
31	36.1219	-260.4	-310.9	32.31	101	2.18123	2725.4	1889.3	88.45
32	35.2050	-227.9	-279.8	33.34	102	2.15844	2756.9	1911.9	88.76
33	34.1949	-194.0	-247.3	34.39	103	2.13615	2788.3	1934.5	89.07
34	33.0622	-157.7	-212.9	35.47	104	2.11435	2819.6	1957.0	89.37
35	31.7603	-117.8	-175.2	36.63	105	2.09302	2850.9	1979.5	89.67
36	30.2083	-71.6	-132.0	37.93	106	2.07214	2882.2	2002.0	89.96
37	28.2416	-14.1	-78.7	39.50	107	2.05171	2913.4	2024.5	90.26
38	25.4109	68.6	-3.2	41.71	108	2.03169	2944.6	2046.9	90.55
39	18.5219	270.0	171.5	46.92	109	2.01209	2975.6	2069.2	90.83
40	11.6827	503.0	346.9	52.85	110	1.99288	3006.7	2091.6	91.12
41	9.86755	596.5	411.6	55.15	111	1.97406	3037.7	2113.8	91.40
42	8.79274	666.1	458.7	56.83	112	1.95561	3068.7	2136.1	91.68
43	8.03285	725.1	498.0	58.22	113	1.93752	3099.7	2158.4	91.95
44	7.44959	777.8	532.9	59.43	114	1.91978	3130.6	2180.6	92.22
45	6.97962	826.2	564.9	60.52	115	1.90238	3161.4	2202.7	92.49
46	6.58843	871.7	594.9	61.52	116	1.88530	3192.3	2224.9	92.76
47	6.25511	915.0	623.4	62.45	117	1.86855	3223.0	2247.0	93.02
48	5.96599	956.5	650.8	63.33	118	1.85211	3253.8	2269.0	93.29
49	5.71169	996.6	677.3	64.16	119	1.83596	3284.5	2291.1	93.54
50	5.48544	1035.7	703.2	64.95	120	1.82011	3315.2	2313.1	93.80
51	5.28225	1073.8	728.5	65.70	121	1.80454	3345.8	2335.1	94.05
52	5.09830	1111.1	753.3	66.42	122	1.78925	3376.3	2357.0	94.31
53	4.93064	1147.7	777.8	67.12	123	1.77423	3406.9	2379.0	94.56
54	4.77692	1183.9	802.1	67.80	124	1.75947	3437.5	2400.9	94.80
55	4.63523	1219.5	826.1	68.45	125	1.74496	3468.0	2422.8	95.05
56	4.50405	1254.8	849.9	69.09	126	1.73070	3498.4	2444.6	95.29
57	4.38209	1289.8	873.6	69.71	127	1.71668	3528.9	2466.4	95.53
58	4.26828	1324.4	897.1	70.31	128	1.70289	3559.2	2488.2	95.77
59	4.16174	1358.8	920.6	70.90	129	1.68933	3589.6	2510.0	96.01
60	4.06169	1393.0	943.9	71.47	130	1.67600	3620.0	2531.8	96.24
61	3.96748	1427.0	967.3	72.03	131	1.66288	3650.3	2553.5	96.47
62	3.87856	1460.8	990.6	72.58	132	1.64997	3680.5	2575.2	96.70
63	3.79443	1494.5	1013.8	73.12	133	1.63727	3710.8	2596.8	96.93
64	3.71466	1528.0	1037.0	73.65	134	1.62477	3741.0	2618.5	97.16
65	3.63888	1561.5	1060.2	74.17	135	1.61247	3771.2	2640.1	97.38
66	3.56677	1594.8	1083.4	74.68	136	1.60035	3801.4	2661.7	97.61
67	3.49802	1628.0	1106.6	75.18	137	1.58843	3831.6	2683.3	97.83
68	3.43238	1661.1	1129.8	75.67	138	1.57668	3861.7	2704.9	98.05
69	3.36961	1694.2	1153.0	76.15	139	1.56511	3891.8	2726.5	98.26
70	3.30951	1727.2	1176.1	76.63	140	1.55372	3921.9	2748.1	98.48
71	3.25189	1760.3	1199.4	77.09	141	1.54250	3952.0	2769.6	98.69
72	3.19659	1793.3	1222.7	77.55	142	1.53144	3982.0	2791.0	98.90
73	3.14344	1826.2	1246.0	78.01	143	1.52055	4012.0	2812.5	99.12
74	3.09231	1859.0	1269.2	78.45	144	1.50981	4042.0	2834.0	99.32
75	3.04307	1891.7	1292.3	78.89	145	1.49923	4072.0	2855.4	99.53
76	2.99561	1924.3	1315.5	79.32	146	1.48880	4101.9	2876.9	99.74
77	2.94982	1956.9	1338.6	79.75	147	1.47852	4131.9	2898.3	99.94
78	2.90561	1989.4	1361.7	80.17	148	1.46838	4161.8	2919.7	100.14
79	2.86288	2021.8	1384.7	80.59	149	1.45839	4191.7	2941.1	100.35
80	2.82156	2054.2	1407.8	80.99	150	1.44853	4221.6	2962.5	100.55
81	2.78157	2086.7	1431.0	81.40	151	1.43881	4251.5	2983.9	100.74
82	2.74283	2119.1	1454.2	81.79	152	1.42922	4281.3	3005.2	100.94
83	2.70529	2151.5	1477.3	82.19	153	1.41976	4311.1	3026.5	101.14
84	2.66889	2183.8	1500.4	82.57	154	1.41043	4340.9	3047.8	101.33
85	2.63356	2216.0	1523.5	82.96	155	1.40123	4370.8	3069.1	101.52
86	2.59926	2248.2	1546.5	83.33	156	1.39214	4400.5	3090.4	101.72
87	2.56594	2280.4	1569.6	83.70	157	1.38318	4430.3	3111.7	101.91
88	2.53355	2312.5	1592.6	84.07	158	1.37433	4460.1	3133.0	102.10
89	2.50205	2344.5	1615.6	84.43	159	1.36560	4489.9	3154.3	102.28
90	2.47140	2376.5	1638.5	84.79	160	1.35699	4519.6	3175.6	102.47

18.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	1.34848	4549.3	3196.8	102.65	231	0.939058	6612.8	4670.6	113.30
162	1.34008	4579.0	3218.0	102.84	232	0.935020	6642.2	4691.6	113.43
163	1.33178	4608.7	3239.2	103.02	233	0.931016	6671.5	4712.5	113.55
164	1.32360	4638.4	3260.5	103.20	234	0.927048	6700.9	4733.5	113.68
165	1.31551	4668.1	3281.7	103.38	235	0.923113	6730.2	4754.5	113.80
166	1.30752	4697.8	3302.9	103.56	236	0.919212	6759.6	4775.4	113.93
167	1.29963	4727.4	3324.1	103.74	237	0.915344	6788.9	4796.4	114.05
168	1.29184	4757.1	3345.3	103.92	238	0.911508	6818.3	4817.3	114.18
169	1.28415	4786.7	3366.4	104.09	239	0.907705	6847.6	4838.3	114.30
170	1.27654	4816.3	3387.6	104.27	240	0.903934	6876.9	4859.3	114.42
171	1.26903	4846.0	3408.8	104.44	241	0.900195	6906.2	4880.2	114.54
172	1.26160	4875.6	3429.9	104.61	242	0.896486	6935.6	4901.2	114.67
173	1.25427	4905.1	3451.0	104.79	243	0.892808	6964.9	4922.1	114.79
174	1.24702	4934.7	3472.2	104.96	244	0.889160	6994.3	4943.1	114.91
175	1.23986	4964.3	3493.3	105.13	245	0.885543	7023.6	4964.0	115.03
176	1.23278	4993.9	3514.4	105.29	246	0.881954	7052.9	4985.0	115.15
177	1.22578	5023.5	3535.6	105.46	247	0.878396	7082.3	5005.9	115.27
178	1.21886	5053.0	3556.7	105.63	248	0.874865	7111.6	5026.9	115.38
179	1.21202	5082.6	3577.8	105.79	249	0.871364	7140.9	5047.8	115.50
180	1.20526	5112.1	3598.9	105.96	250	0.867890	7170.2	5068.8	115.62
181	1.19857	5141.7	3620.0	106.12	251	0.864445	7199.6	5089.7	115.74
182	1.19196	5171.2	3641.1	106.29	252	0.861026	7228.9	5110.7	115.85
183	1.18542	5200.7	3662.2	106.45	253	0.857635	7258.2	5131.6	115.97
184	1.17896	5230.2	3683.2	106.61	254	0.854271	7287.5	5152.5	116.09
185	1.17256	5259.8	3704.3	106.77	255	0.850933	7316.8	5173.5	116.20
186	1.16624	5289.3	3725.4	106.93	256	0.847622	7346.2	5194.4	116.32
187	1.15999	5318.8	3746.5	107.09	257	0.844336	7375.5	5215.4	116.43
188	1.15380	5348.3	3767.5	107.24	258	0.841076	7404.8	5236.3	116.54
189	1.14768	5377.8	3788.6	107.40	259	0.837841	7434.1	5257.3	116.66
190	1.14163	5407.2	3809.7	107.56	260	0.834631	7463.4	5278.2	116.77
191	1.13564	5436.7	3830.7	107.71	261	0.831446	7492.7	5299.1	116.88
192	1.12971	5466.2	3851.7	107.86	262	0.828285	7522.1	5320.1	116.99
193	1.12384	5495.6	3872.8	108.02	263	0.825148	7551.4	5341.0	117.11
194	1.11804	5525.1	3893.8	108.17	264	0.822035	7580.7	5362.0	117.22
195	1.11230	5554.6	3914.9	108.32	265	0.818946	7610.0	5382.9	117.33
196	1.10662	5584.0	3935.9	108.47	266	0.815880	7639.3	5403.9	117.44
197	1.10099	5613.5	3956.9	108.62	267	0.812837	7668.6	5424.8	117.55
198	1.09543	5642.9	3978.0	108.77	268	0.809816	7697.9	5445.8	117.66
199	1.08992	5672.4	3999.0	108.92	269	0.806818	7727.2	5466.7	117.77
200	1.08446	5701.8	4020.0	109.07	270	0.803843	7756.6	5487.6	117.88
201	1.07906	5731.2	4041.0	109.21	271	0.800889	7785.8	5508.6	117.98
202	1.07372	5760.7	4062.0	109.36	272	0.797958	7815.2	5529.5	118.09
203	1.06843	5790.1	4083.1	109.50	273	0.795048	7844.5	5550.4	118.20
204	1.06319	5819.5	4104.1	109.65	274	0.792159	7873.8	5571.4	118.31
205	1.05800	5848.9	4125.1	109.79	275	0.789291	7903.1	5592.3	118.41
206	1.05286	5878.3	4146.1	109.94	276	0.786444	7932.4	5613.3	118.52
207	1.04778	5907.8	4167.1	110.08	277	0.783617	7961.7	5634.2	118.63
208	1.04274	5937.2	4188.1	110.22	278	0.780811	7991.0	5655.1	118.73
209	1.03775	5966.6	4209.1	110.36	279	0.778025	8020.3	5676.1	118.84
210	1.03282	5996.0	4230.1	110.50	280	0.775259	8049.6	5697.0	118.94
211	1.02792	6025.4	4251.1	110.64	281	0.772513	8078.9	5717.9	119.05
212	1.02308	6054.8	4272.1	110.78	282	0.769786	8108.2	5738.9	119.15
213	1.01828	6084.2	4293.1	110.92	283	0.767079	8137.5	5759.8	119.25
214	1.01352	6113.6	4314.1	111.06	284	0.764390	8166.8	5780.7	119.36
215	1.00881	6142.9	4335.0	111.19	285	0.761721	8196.1	5801.7	119.46
216	1.00415	6172.3	4356.0	111.33	286	0.759070	8225.4	5822.6	119.56
217	0.999530	6201.7	4377.0	111.46	287	0.756438	8254.7	5843.6	119.67
218	0.994951	6231.1	4398.0	111.60	288	0.753824	8283.9	5864.5	119.77
219	0.990414	6260.5	4419.0	111.73	289	0.751228	8313.2	5885.4	119.87
220	0.985918	6289.9	4440.0	111.87	290	0.748650	8342.5	5906.4	119.97
221	0.981464	6319.2	4460.9	112.00	291	0.746090	8371.8	5927.3	120.07
222	0.977050	6348.6	4481.9	112.13	292	0.743547	8401.1	5948.2	120.17
223	0.972676	6378.0	4502.9	112.27	293	0.741022	8430.4	5969.1	120.27
224	0.968341	6407.3	4523.8	112.40	294	0.738513	8459.7	5990.1	120.37
225	0.964045	6436.7	4544.8	112.53	295	0.736022	8489.0	6011.0	120.47
226	0.959788	6466.0	4565.8	112.66	296	0.733548	8518.3	6031.9	120.57
227	0.955568	6495.4	4586.8	112.79	297	0.731090	8547.6	6052.9	120.67
228	0.951386	6524.8	4607.7	112.92	298	0.728649	8576.9	6073.8	120.77
229	0.947240	6554.1	4628.7	113.05	299	0.726224	8606.2	6094.7	120.87
230	0.943131	6583.5	4649.7	113.17	300	0.723816	8635.4	6115.7	120.96

20.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
20	43.2568	-579.8	-626.6	19.48					
21	42.7724	-553.0	-600.4	20.77	91	2.71585	2400.4	1654.2	84.19
22	42.2591	-525.5	-573.5	22.04	92	2.68323	2432.6	1677.3	84.54
23	41.7190	-497.3	-545.9	23.29	93	2.65146	2464.6	1700.4	84.89
24	41.1531	-468.6	-517.9	24.52	94	2.62050	2496.7	1723.3	85.23
25	40.5613	-439.5	-489.5	25.71	95	2.59033	2528.6	1746.3	85.57
26	39.9420	-410.1	-460.9	26.86	96	2.56091	2560.5	1769.2	85.90
27	39.2928	-380.4	-432.0	27.99	97	2.53221	2592.4	1792.1	86.23
28	38.6099	-350.6	-403.0	29.07	98	2.50421	2624.2	1814.9	86.56
29	37.8881	-320.4	-373.9	30.13	99	2.47687	2655.9	1837.7	86.88
30	37.1207	-290.1	-344.7	31.17	100	2.45016	2687.6	1860.5	87.20
31	36.2987	-259.0	-314.8	32.18	101	2.42408	2719.2	1883.2	87.52
32	35.4100	-227.1	-284.3	33.19	102	2.39859	2750.8	1906.0	87.83
33	34.4379	-194.0	-252.9	34.21	103	2.37366	2782.4	1928.6	88.13
34	33.3589	-159.0	-219.7	35.25	104	2.34930	2813.9	1951.3	88.44
35	32.1373	-120.9	-183.9	36.36	105	2.32546	2845.3	1973.9	88.74
36	30.7162	-77.8	-143.8	37.57	106	2.30213	2876.7	1996.4	89.04
37	28.9947	-26.2	-96.1	38.98	107	2.27930	2908.0	2018.9	89.33
38	26.7650	41.9	-33.8	40.80	108	2.25695	2939.3	2041.4	89.62
39	23.4738	149.8	63.5	43.60	109	2.23507	2970.5	2063.8	89.91
40	17.4882	330.9	215.0	48.19	110	2.21363	3001.7	2086.3	90.20
41	12.9513	491.4	334.9	52.15	111	2.19262	3032.8	2108.6	90.48
42	10.9626	586.0	401.1	54.43	112	2.17204	3064.0	2131.0	90.76
43	9.75072	658.1	450.2	56.12	113	2.15186	3095.0	2153.3	91.03
44	8.89171	719.2	491.3	57.53	114	2.13207	3126.0	2175.6	91.31
45	8.23353	773.8	527.7	58.76	115	2.11267	3157.0	2197.8	91.58
46	7.70457	824.0	561.0	59.86	116	2.09363	3187.9	2220.0	91.84
47	7.26547	871.1	592.2	60.88	117	2.07496	3218.8	2242.2	92.11
48	6.89225	915.8	621.8	61.82	118	2.05663	3249.7	2264.3	92.37
49	6.56926	958.7	650.2	62.71	119	2.03864	3280.4	2286.4	92.63
50	6.28574	1000.0	677.6	63.54	120	2.02098	3311.2	2308.5	92.89
51	6.03396	1040.2	704.4	64.34	121	2.00363	3341.9	2330.5	93.14
52	5.80821	1079.4	730.5	65.10	122	1.98660	3372.6	2352.5	93.40
53	5.60414	1117.7	756.1	65.83	123	1.96987	3403.3	2374.5	93.65
54	5.41838	1155.3	781.3	66.53	124	1.95343	3433.9	2396.5	93.89
55	5.24826	1192.4	806.3	67.21	125	1.93727	3464.5	2418.4	94.14
56	5.09163	1228.9	830.9	67.87	126	1.92140	3495.0	2440.3	94.38
57	4.94676	1265.1	855.4	68.51	127	1.90579	3525.5	2462.2	94.62
58	4.81218	1300.8	879.7	69.13	128	1.89045	3556.0	2484.0	94.86
59	4.68671	1336.2	903.8	69.74	129	1.87536	3586.4	2505.8	95.10
60	4.56933	1371.3	927.8	70.33	130	1.86052	3616.9	2527.7	95.33
61	4.45918	1406.1	951.7	70.90	131	1.84592	3647.2	2549.4	95.57
62	4.35553	1440.8	975.5	71.47	132	1.83156	3677.6	2571.1	95.80
63	4.25774	1475.2	999.3	72.02	133	1.81743	3707.9	2592.8	96.03
64	4.16527	1509.4	1022.9	72.56	134	1.80352	3738.2	2614.5	96.25
65	4.07764	1543.6	1046.6	73.09	135	1.78983	3768.4	2636.2	96.48
66	3.99443	1577.5	1070.2	73.60	136	1.77636	3798.7	2657.9	96.70
67	3.91527	1611.4	1093.8	74.11	137	1.76310	3828.9	2679.5	96.92
68	3.83984	1645.1	1117.3	74.61	138	1.75004	3859.1	2701.2	97.14
69	3.76784	1678.7	1140.9	75.10	139	1.73718	3889.3	2722.8	97.36
70	3.69902	1712.2	1164.3	75.59	140	1.72451	3919.5	2744.4	97.58
71	3.63314	1745.8	1188.0	76.06	141	1.71203	3949.6	2765.9	97.79
72	3.56999	1779.3	1211.6	76.53	142	1.69974	3979.7	2787.4	98.00
73	3.50939	1812.6	1235.1	76.99	143	1.68763	4009.7	2808.9	98.22
74	3.45117	1845.8	1258.6	77.44	144	1.67570	4039.8	2830.4	98.43
75	3.39518	1878.9	1282.1	77.88	145	1.66393	4069.8	2851.9	98.63
76	3.34126	1912.0	1305.4	78.32	146	1.65234	4099.8	2873.4	98.84
77	3.28930	1944.9	1328.8	78.75	147	1.64092	4129.8	2894.9	99.04
78	3.23918	1977.8	1352.1	79.18	148	1.62965	4159.8	2916.3	99.25
79	3.19080	2010.5	1375.4	79.59	149	1.61854	4189.8	2937.7	99.45
80	3.14404	2043.3	1398.7	80.01	150	1.60759	4219.7	2959.2	99.65
81	3.09883	2076.1	1422.1	80.41	151	1.59679	4249.6	2980.5	99.85
82	3.05507	2108.8	1445.5	80.82	152	1.58614	4279.5	3001.9	100.04
83	3.01270	2141.4	1468.8	81.21	153	1.57563	4309.4	3023.2	100.24
84	2.97163	2174.0	1492.1	81.60	154	1.56527	4339.3	3044.6	100.44
85	2.93181	2206.5	1515.3	81.99	155	1.55504	4369.1	3065.9	100.63
86	2.89318	2239.0	1538.6	82.37	156	1.54495	4399.0	3087.3	100.82
87	2.85566	2271.4	1561.7	82.74	157	1.53499	4428.8	3108.6	101.01
88	2.81922	2303.7	1584.9	83.11	158	1.52517	4458.6	3129.9	101.20
89	2.78380	2336.0	1608.0	83.48	159	1.51547	4488.4	3151.2	101.39
90	2.74936	2368.2	1631.1	83.84	160	1.50590	4518.2	3172.5	101.58

20.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	1.49645	4547.9	3193.7	101.76	231	1.04207	6613.3	4668.6	112.42
162	1.48712	4577.7	3215.0	101.94	232	1.03759	6642.7	4689.6	112.54
163	1.47791	4607.4	3236.2	102.13	233	1.03315	6672.1	4710.6	112.67
164	1.46882	4637.2	3257.5	102.31	234	1.02875	6701.4	4731.6	112.80
165	1.45984	4666.9	3278.7	102.49	235	1.02438	6730.8	4752.5	112.92
166	1.45097	4696.6	3299.9	102.67	236	1.02005	6760.2	4773.5	113.05
167	1.44221	4726.3	3321.2	102.85	237	1.01576	6789.5	4794.5	113.17
168	1.43356	4756.0	3342.4	103.03	238	1.01151	6818.9	4815.5	113.29
169	1.42502	4785.7	3363.6	103.20	239	1.00729	6848.2	4836.4	113.42
170	1.41657	4815.3	3384.8	103.38	240	1.00311	6877.6	4857.4	113.54
171	1.40823	4845.0	3405.9	103.55	241	0.998963	6906.9	4878.3	113.66
172	1.39999	4874.6	3427.1	103.72	242	0.994849	6936.3	4899.3	113.78
173	1.39185	4904.2	3448.3	103.89	243	0.990770	6965.7	4920.3	113.90
174	1.38380	4933.9	3469.4	104.07	244	0.986723	6995.0	4941.2	114.02
175	1.37585	4963.5	3490.6	104.24	245	0.982711	7024.3	4962.2	114.14
176	1.36799	4993.1	3511.7	104.40	246	0.978731	7053.7	4983.2	114.26
177	1.36022	5022.7	3532.9	104.57	247	0.974783	7083.0	5004.1	114.38
178	1.35254	5052.3	3554.0	104.74	248	0.970867	7112.4	5025.1	114.50
179	1.34495	5081.9	3575.1	104.90	249	0.966983	7141.7	5046.0	114.62
180	1.33744	5111.5	3596.3	105.07	250	0.963130	7171.1	5067.0	114.74
181	1.33002	5141.0	3617.4	105.23	251	0.959308	7200.4	5087.9	114.85
182	1.32268	5170.6	3638.5	105.40	252	0.955517	7229.7	5108.9	114.97
183	1.31543	5200.1	3659.6	105.56	253	0.951755	7259.1	5129.8	115.09
184	1.30825	5229.7	3680.7	105.72	254	0.948024	7288.4	5150.8	115.20
185	1.30116	5259.2	3701.8	105.88	255	0.944321	7317.7	5171.7	115.32
186	1.29414	5288.8	3722.9	106.04	256	0.940648	7347.1	5192.7	115.43
187	1.28720	5318.3	3744.0	106.20	257	0.937004	7376.4	5213.7	115.55
188	1.28033	5347.8	3765.0	106.35	258	0.933387	7405.7	5234.6	115.66
189	1.27354	5377.3	3786.1	106.51	259	0.929799	7435.1	5255.6	115.77
190	1.26682	5406.9	3807.2	106.67	260	0.926239	7464.4	5276.5	115.89
191	1.26017	5436.4	3828.3	106.82	261	0.922706	7493.7	5297.4	116.00
192	1.25360	5465.9	3849.3	106.98	262	0.919200	7523.0	5318.4	116.11
193	1.24709	5495.3	3870.4	107.13	263	0.915720	7552.4	5339.4	116.22
194	1.24065	5524.8	3891.4	107.28	264	0.912268	7581.7	5360.3	116.34
195	1.23428	5554.3	3912.5	107.43	265	0.908841	7611.0	5381.3	116.45
196	1.22797	5583.8	3933.5	107.58	266	0.905440	7640.3	5402.2	116.56
197	1.22173	5613.3	3954.6	107.73	267	0.902065	7669.7	5423.2	116.67
198	1.21555	5642.7	3975.6	107.88	268	0.898715	7699.0	5444.1	116.78
199	1.20944	5672.2	3996.7	108.03	269	0.895390	7728.3	5465.1	116.89
200	1.20339	5701.7	4017.7	108.18	270	0.892089	7757.6	5486.0	116.99
201	1.19740	5731.1	4038.7	108.33	271	0.888813	7786.9	5506.9	117.10
202	1.19147	5760.6	4059.7	108.47	272	0.885562	7816.3	5527.9	117.21
203	1.18560	5790.0	4080.8	108.62	273	0.882334	7845.6	5548.8	117.32
204	1.17978	5819.5	4101.8	108.76	274	0.879129	7874.9	5569.8	117.43
205	1.17403	5848.9	4122.8	108.91	275	0.875948	7904.2	5590.7	117.53
206	1.16833	5878.4	4143.8	109.05	276	0.872791	7933.5	5611.7	117.64
207	1.16269	5907.8	4164.9	109.19	277	0.869656	7962.8	5632.6	117.74
208	1.15710	5937.2	4185.9	109.33	278	0.866543	7992.1	5653.5	117.85
209	1.15157	5966.7	4206.9	109.47	279	0.863453	8021.5	5674.5	117.96
210	1.14608	5996.1	4227.9	109.62	280	0.860385	8050.8	5695.4	118.06
211	1.14066	6025.5	4248.9	109.75	281	0.857339	8080.1	5716.4	118.16
212	1.13528	6054.9	4269.9	109.89	282	0.854315	8109.4	5737.3	118.27
213	1.12996	6084.3	4290.9	110.03	283	0.851312	8138.7	5758.3	118.37
214	1.12468	6113.7	4311.9	110.17	284	0.848330	8168.0	5779.2	118.48
215	1.11946	6143.2	4332.9	110.31	285	0.845369	8197.3	5800.1	118.58
216	1.11428	6172.6	4353.9	110.44	286	0.842429	8226.6	5821.1	118.68
217	1.10915	6202.0	4374.9	110.58	287	0.839509	8255.9	5842.0	118.78
218	1.10407	6231.4	4395.9	110.71	288	0.836609	8285.2	5863.0	118.89
219	1.09904	6260.8	4416.9	110.85	289	0.833730	8314.5	5883.9	118.99
220	1.09405	6290.2	4437.9	110.98	290	0.830871	8343.9	5904.8	119.09
221	1.08911	6319.5	4458.8	111.12	291	0.828031	8373.1	5925.8	119.19
222	1.08421	6348.9	4479.9	111.25	292	0.825211	8402.5	5946.7	119.29
223	1.07936	6378.3	4500.8	111.38	293	0.822410	8431.8	5967.7	119.39
224	1.07455	6407.7	4521.8	111.51	294	0.819628	8461.1	5988.6	119.49
225	1.06979	6437.1	4542.8	111.64	295	0.816865	8490.4	6009.5	119.59
226	1.06506	6466.5	4563.8	111.77	296	0.814120	8519.7	6030.5	119.69
227	1.06038	6495.9	4584.8	111.90	297	0.811394	8549.0	6051.4	119.79
228	1.05574	6525.2	4605.7	112.03	298	0.808687	8578.3	6072.3	119.89
229	1.05115	6554.6	4626.7	112.16	299	0.805997	8607.6	6093.3	119.98
230	1.04659	6584.0	4647.7	112.29	300	0.803326	8636.9	6114.2	120.08

25.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
20	43.4434	-570.6	-628.9	19.35					
21	42.9682	-544.1	-603.0	20.63	91	3.40325	2380.4	1636.1	82.14
22	42.4639	-516.8	-576.5	21.90	92	3.36144	2413.1	1659.5	82.50
23	41.9336	-488.9	-549.3	23.14	93	3.32077	2445.7	1682.9	82.85
24	41.3791	-460.4	-521.7	24.35	94	3.28119	2478.2	1706.2	83.20
25	40.8008	-431.6	-493.7	25.53	95	3.24265	2510.6	1729.5	83.54
26	40.1980	-402.6	-465.6	26.67	96	3.20510	2543.0	1752.7	83.88
27	39.5688	-373.3	-437.4	27.77	97	3.16851	2575.3	1775.8	84.22
28	38.9103	-344.0	-409.1	28.84	98	3.13283	2607.5	1799.0	84.55
29	38.2186	-314.5	-380.8	29.88	99	3.09803	2639.7	1822.0	84.87
30	37.4884	-284.9	-352.5	30.89	100	3.06407	2671.8	1845.1	85.20
31	36.7131	-254.8	-323.8	31.86	101	3.03092	2703.8	1868.0	85.52
32	35.8843	-224.3	-294.9	32.83	102	2.99855	2735.8	1891.0	85.83
33	34.9909	-192.9	-265.3	33.80	103	2.96693	2767.7	1913.9	86.14
34	34.0182	-160.3	-234.8	34.77	104	2.93603	2799.6	1936.8	86.45
35	32.9463	-125.6	-202.5	35.78	105	2.90582	2831.3	1959.6	86.75
36	31.7474	-87.7	-167.5	36.85	106	2.87628	2863.1	1982.4	87.06
37	30.3821	-44.5	-127.9	38.03	107	2.84739	2894.7	2005.1	87.35
38	28.7918	8.1	-79.9	39.43	108	2.81912	2926.3	2027.8	87.65
39	26.8906	81.7	-12.5	41.34	109	2.79145	2957.9	2050.4	87.94
40	24.5615	165.4	62.3	43.47	110	2.76437	2989.4	2073.0	88.23
41	21.7148	260.5	143.8	45.81	111	2.73784	3020.8	2095.6	88.51
42	18.5606	365.4	229.0	48.34	112	2.71185	3052.2	2118.1	88.79
43	15.7718	466.9	306.2	50.72	113	2.68639	3083.6	2140.6	89.07
44	13.7128	554.3	369.6	52.73	114	2.66144	3114.8	2163.1	89.35
45	12.2351	628.9	421.9	54.41	115	2.63698	3146.1	2185.5	89.62
46	11.1344	694.3	466.8	55.85	116	2.61300	3177.3	2207.8	89.89
47	10.2788	753.3	506.9	57.12	117	2.58948	3208.4	2230.2	90.16
48	9.58964	807.6	543.5	58.27	118	2.56641	3239.5	2252.5	90.42
49	9.01885	858.5	577.7	59.32	119	2.54377	3270.5	2274.7	90.68
50	8.53567	906.7	610.0	60.29	120	2.52155	3301.5	2296.9	90.94
51	8.11945	952.8	640.8	61.21	121	2.49974	3332.5	2319.1	91.20
52	7.75576	997.2	670.6	62.07	122	2.47833	3363.4	2341.2	91.45
53	7.43420	1040.1	699.4	62.88	123	2.45730	3394.3	2363.4	91.70
54	7.14707	1081.9	727.5	63.67	124	2.43664	3425.1	2385.5	91.95
55	6.88851	1122.7	755.0	64.41	125	2.41636	3455.9	2407.6	92.20
56	6.65396	1162.7	782.0	65.13	126	2.39642	3486.6	2429.6	92.45
57	6.43986	1201.9	808.6	65.83	127	2.37683	3517.3	2451.6	92.69
58	6.24332	1240.5	834.8	66.50	128	2.35757	3548.0	2473.5	92.93
59	6.06201	1278.5	860.7	67.15	129	2.33864	3578.6	2495.5	93.17
60	5.89401	1316.1	886.3	67.78	130	2.32003	3609.3	2517.4	93.40
61	5.73774	1353.3	911.8	68.40	131	2.30173	3639.8	2539.3	93.64
62	5.59185	1390.1	937.1	69.00	132	2.28372	3670.3	2561.1	93.87
63	5.45521	1426.5	962.2	69.58	133	2.26601	3700.8	2582.9	94.10
64	5.32686	1462.6	987.0	70.15	134	2.24859	3731.3	2604.7	94.33
65	5.20597	1498.5	1011.9	70.70	135	2.23144	3761.7	2626.5	94.56
66	5.09183	1534.1	1036.6	71.25	136	2.21456	3792.1	2648.3	94.78
67	4.98382	1569.5	1061.2	71.78	137	2.19795	3822.5	2670.0	95.00
68	4.88139	1604.7	1085.8	72.30	138	2.18160	3852.9	2691.8	95.22
69	4.78406	1639.8	1110.3	72.81	139	2.16550	3883.2	2713.5	95.44
70	4.69142	1674.6	1134.6	73.31	140	2.14965	3913.6	2735.2	95.66
71	4.60309	1709.4	1159.1	73.81	141	2.13403	3943.8	2756.8	95.87
72	4.51873	1744.1	1183.5	74.29	142	2.11866	3974.0	2778.4	96.09
73	4.43806	1778.6	1207.8	74.76	143	2.10350	4004.2	2800.0	96.30
74	4.36080	1812.9	1232.0	75.23	144	2.08858	4034.4	2821.6	96.51
75	4.28671	1847.1	1256.1	75.69	145	2.07387	4064.6	2843.2	96.72
76	4.21558	1881.1	1280.2	76.14	146	2.05938	4094.8	2864.7	96.93
77	4.14722	1915.0	1304.2	76.58	147	2.04509	4124.9	2886.3	97.13
78	4.08144	1948.7	1328.1	77.02	148	2.03101	4155.0	2907.8	97.34
79	4.01808	1982.4	1352.0	77.45	149	2.01713	4185.1	2929.3	97.54
80	3.95699	2016.0	1375.8	77.87	150	2.00344	4215.2	2950.8	97.74
81	3.89805	2049.6	1399.7	78.29	151	1.98994	4245.2	2972.2	97.94
82	3.84112	2083.1	1423.6	78.70	152	1.97663	4275.2	2993.7	98.14
83	3.78609	2116.4	1447.4	79.11	153	1.96351	4305.2	3015.1	98.33
84	3.73286	2149.7	1471.1	79.51	154	1.95056	4335.2	3036.5	98.53
85	3.68133	2182.9	1494.8	79.90	155	1.93779	4365.2	3057.9	98.72
86	3.63140	2216.0	1518.5	80.29	156	1.92519	4395.1	3079.3	98.92
87	3.58301	2249.1	1542.1	80.67	157	1.91276	4425.1	3100.7	99.11
88	3.53607	2282.0	1565.7	81.04	158	1.90049	4455.0	3122.1	99.30
89	3.49050	2314.9	1589.2	81.42	159	1.88838	4484.9	3143.5	99.49
90	3.44625	2347.7	1612.6	81.78	160	1.87643	4514.8	3164.8	99.67

25.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	1.86464	4544.7	3186.1	99.86	231	1.29843	6614.7	4663.8	110.54
162	1.85300	4574.5	3207.5	100.05	232	1.29286	6644.1	4684.8	110.67
163	1.84151	4604.3	3228.8	100.23	233	1.28733	6673.5	4705.8	110.79
164	1.83016	4634.2	3250.1	100.41	234	1.28185	6703.0	4726.8	110.92
165	1.81895	4664.0	3271.4	100.59	235	1.27641	6732.4	4747.8	111.05
166	1.80789	4693.8	3292.6	100.77	236	1.27103	6761.8	4768.8	111.17
167	1.79696	4723.6	3313.9	100.95	237	1.26569	6791.2	4789.8	111.30
168	1.78617	4753.4	3335.2	101.13	238	1.26039	6820.6	4810.8	111.42
169	1.77551	4783.1	3356.4	101.31	239	1.25514	6850.0	4831.8	111.54
170	1.76498	4812.9	3377.7	101.48	240	1.24994	6879.4	4852.8	111.67
171	1.75458	4842.6	3398.9	101.66	241	1.24477	6908.7	4873.7	111.79
172	1.74430	4872.4	3420.1	101.83	242	1.23965	6938.1	4894.7	111.91
173	1.73414	4902.1	3441.4	102.00	243	1.23457	6967.5	4915.7	112.03
174	1.72411	4931.8	3462.6	102.17	244	1.22954	6996.9	4936.7	112.15
175	1.71419	4961.5	3483.8	102.34	245	1.22454	7026.3	4957.7	112.27
176	1.70439	4991.2	3505.0	102.51	246	1.21959	7055.7	4978.7	112.39
177	1.69471	5020.9	3526.2	102.68	247	1.21468	7085.1	4999.6	112.51
178	1.68513	5050.6	3547.3	102.85	248	1.20980	7114.4	5020.6	112.63
179	1.67567	5080.2	3568.5	103.01	249	1.20497	7143.8	5041.6	112.75
180	1.66631	5109.9	3589.7	103.18	250	1.20017	7173.2	5062.6	112.86
181	1.65706	5139.5	3610.8	103.34	251	1.19542	7202.5	5083.5	112.98
182	1.64792	5169.2	3632.0	103.51	252	1.19070	7231.9	5104.5	113.10
183	1.63887	5198.8	3653.1	103.67	253	1.18602	7261.3	5125.5	113.21
184	1.62993	5228.4	3674.3	103.83	254	1.18137	7290.7	5146.5	113.33
185	1.62109	5258.0	3695.4	103.99	255	1.17677	7320.0	5167.4	113.45
186	1.61234	5287.6	3716.6	104.15	256	1.17219	7349.4	5188.4	113.56
187	1.60370	5317.2	3737.7	104.31	257	1.16766	7378.8	5209.4	113.68
188	1.59514	5346.8	3758.8	104.47	258	1.16316	7408.1	5230.3	113.79
189	1.58668	5376.4	3779.9	104.62	259	1.15869	7437.5	5251.3	113.90
190	1.57831	5406.0	3801.1	104.78	260	1.15426	7466.9	5272.3	114.02
191	1.57002	5435.6	3822.2	104.94	261	1.14986	7496.2	5293.2	114.13
192	1.56183	5465.1	3843.3	105.09	262	1.14550	7525.6	5314.2	114.24
193	1.55372	5494.7	3864.4	105.24	263	1.14117	7554.9	5335.2	114.35
194	1.54570	5524.3	3885.4	105.40	264	1.13687	7584.3	5356.2	114.46
195	1.53776	5553.8	3906.5	105.55	265	1.13261	7613.7	5377.1	114.58
196	1.52991	5583.4	3927.6	105.70	266	1.12838	7643.0	5398.1	114.69
197	1.52213	5612.9	3948.7	105.85	267	1.12418	7672.4	5419.1	114.80
198	1.51444	5642.4	3969.8	106.00	268	1.12001	7701.7	5440.0	114.91
199	1.50683	5672.0	3990.9	106.15	269	1.11587	7731.1	5461.0	115.02
200	1.49929	5701.5	4011.9	106.30	270	1.11176	7760.4	5482.0	115.12
201	1.49183	5731.0	4033.0	106.44	271	1.10769	7789.8	5502.9	115.23
202	1.48444	5760.5	4054.1	106.59	272	1.10364	7819.1	5523.9	115.34
203	1.47713	5790.0	4075.1	106.74	273	1.09962	7848.5	5544.8	115.45
204	1.46989	5819.5	4096.2	106.88	274	1.09563	7877.8	5565.8	115.56
205	1.46272	5849.0	4117.2	107.02	275	1.09168	7907.1	5586.8	115.66
206	1.45563	5878.5	4138.3	107.17	276	1.08775	7936.5	5607.7	115.77
207	1.44860	5908.0	4159.3	107.31	277	1.08384	7965.8	5628.7	115.88
208	1.44164	5937.5	4180.4	107.45	278	1.07997	7995.2	5649.6	115.98
209	1.43475	5967.0	4201.4	107.59	279	1.07613	8024.5	5670.6	116.09
210	1.42793	5996.5	4222.5	107.74	280	1.07231	8053.8	5691.5	116.19
211	1.42117	6025.9	4243.5	107.88	281	1.06852	8083.2	5712.5	116.30
212	1.41447	6055.4	4264.5	108.01	282	1.06475	8112.5	5733.5	116.40
213	1.40784	6084.9	4285.6	108.15	283	1.06102	8141.9	5754.4	116.50
214	1.40128	6114.3	4306.6	108.29	284	1.05730	8171.2	5775.4	116.61
215	1.39477	6143.8	4327.6	108.43	285	1.05362	8200.5	5796.3	116.71
216	1.38833	6173.2	4348.7	108.57	286	1.04996	8229.9	5817.3	116.81
217	1.38194	6202.7	4369.7	108.70	287	1.04633	8259.2	5838.2	116.92
218	1.37562	6232.2	4390.7	108.84	288	1.04272	8288.5	5859.2	117.02
219	1.36935	6261.6	4411.7	108.97	289	1.03914	8317.9	5880.2	117.12
220	1.36314	6291.0	4432.8	109.11	290	1.03558	8347.2	5901.1	117.22
221	1.35699	6320.5	4453.7	109.24	291	1.03204	8376.5	5922.1	117.32
222	1.35090	6349.9	4474.8	109.37	292	1.02853	8405.9	5943.0	117.42
223	1.34485	6379.4	4495.8	109.50	293	1.02505	8435.2	5964.0	117.52
224	1.33887	6408.8	4516.8	109.64	294	1.02159	8464.5	5984.9	117.62
225	1.33294	6438.2	4537.8	109.77	295	1.01815	8493.8	6005.9	117.72
226	1.32706	6467.6	4558.8	109.90	296	1.01473	8523.2	6026.8	117.82
227	1.32123	6497.1	4579.8	110.03	297	1.01134	8552.5	6047.8	117.92
228	1.31545	6526.5	4600.8	110.16	298	1.00797	8581.8	6068.7	118.02
229	1.30973	6555.9	4621.8	110.29	299	1.00462	8611.1	6089.7	118.12
230	1.30406	6585.3	4642.8	110.41	300	1.00130	8640.5	6110.6	118.22

30.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
20	43.6281	-561.4	-631.0	19.23					
21	43.1609	-535.1	-605.5	20.50	91	4.09239	2360.6	1617.9	80.44
22	42.6642	-508.1	-579.3	21.75	92	4.04103	2393.9	1641.6	80.80
23	42.1424	-480.4	-552.5	22.98	93	3.99112	2427.0	1665.3	81.16
24	41.5979	-452.2	-525.3	24.18	94	3.94260	2460.0	1689.0	81.51
25	41.0316	-423.7	-497.8	25.35	95	3.89540	2492.9	1712.6	81.86
26	40.4434	-395.0	-470.1	26.48	96	3.84946	2525.7	1736.1	82.20
27	39.8318	-366.1	-442.4	27.57	97	3.80473	2558.5	1759.5	82.54
28	39.1946	-337.2	-414.7	28.62	98	3.76116	2591.1	1782.9	82.88
29	38.5287	-308.2	-387.1	29.64	99	3.71869	2623.7	1806.3	83.21
30	37.8301	-279.3	-359.7	30.62	100	3.67729	2656.2	1829.6	83.53
31	37.0938	-250.1	-332.0	31.57	101	3.63690	2688.6	1852.8	83.86
32	36.3136	-220.6	-304.3	32.51	102	3.59749	2721.0	1876.1	84.18
33	35.4817	-190.6	-276.3	33.43	103	3.55901	2753.3	1899.2	84.49
34	34.5884	-159.7	-247.6	34.35	104	3.52144	2785.5	1922.3	84.80
35	33.6214	-127.5	-217.9	35.29	105	3.48473	2817.7	1945.4	85.11
36	32.5652	-92.9	-186.2	36.27	106	3.44886	2849.7	1968.3	85.41
37	31.4001	-54.4	-151.2	37.32	107	3.41380	2881.7	1991.3	85.71
38	30.1016	-8.7	-109.7	38.54	108	3.37950	2913.7	2014.2	86.01
39	28.6410	54.2	-51.9	40.17	109	3.34596	2945.5	2037.0	86.31
40	26.9893	121.1	8.5	41.87	110	3.31314	2977.3	2059.8	86.60
41	25.1304	190.6	69.7	43.58	111	3.28101	3009.0	2082.6	86.88
42	23.0860	263.7	132.0	45.34	112	3.24955	3040.7	2105.3	87.17
43	20.9427	339.8	194.7	47.13	113	3.21875	3072.4	2128.0	87.45
44	18.8447	417.0	255.7	48.91	114	3.18857	3103.9	2150.6	87.73
45	16.9367	492.8	313.3	50.61	115	3.15900	3135.4	2173.2	88.00
46	15.3020	565.0	366.3	52.20	116	3.13002	3166.9	2195.7	88.27
47	13.9487	632.6	414.6	53.65	117	3.10160	3198.3	2218.2	88.54
48	12.8395	695.5	458.8	54.98	118	3.07374	3229.6	2240.6	88.81
49	11.9256	754.3	499.5	56.19	119	3.04641	3260.9	2263.0	89.07
50	11.1635	809.7	537.4	57.31	120	3.01960	3292.1	2285.4	89.34
51	10.5188	862.1	573.1	58.35	121	2.99329	3323.3	2307.7	89.59
52	9.96590	912.0	607.0	59.32	122	2.96747	3354.4	2330.0	89.85
53	9.48567	960.0	639.5	60.23	123	2.94212	3385.5	2352.3	90.10
54	9.06386	1006.3	670.9	61.10	124	2.91723	3416.6	2374.6	90.35
55	8.68968	1051.1	701.3	61.92	125	2.89278	3447.6	2396.8	90.60
56	8.35488	1094.7	730.9	62.71	126	2.86877	3478.5	2418.9	90.85
57	8.05301	1137.3	759.9	63.46	127	2.84518	3509.4	2441.0	91.09
58	7.77899	1179.0	788.2	64.19	128	2.82200	3540.3	2463.1	91.34
59	7.52876	1219.8	816.1	64.89	129	2.79921	3571.1	2485.2	91.58
60	7.29905	1260.0	843.6	65.56	130	2.77682	3601.9	2507.2	91.81
61	7.08715	1299.6	870.7	66.22	131	2.75480	3632.6	2529.2	92.05
62	6.89085	1338.7	897.5	66.85	132	2.73315	3663.3	2551.2	92.28
63	6.70830	1377.2	924.1	67.47	133	2.71185	3694.0	2573.1	92.52
64	6.53794	1415.2	950.3	68.07	134	2.69090	3724.6	2595.0	92.74
65	6.37843	1453.0	976.4	68.65	135	2.67029	3755.3	2616.9	92.97
66	6.22866	1490.4	1002.3	69.22	136	2.65001	3785.8	2638.8	93.20
67	6.08765	1527.4	1028.1	69.78	137	2.63006	3816.4	2660.6	93.42
68	5.95456	1564.1	1053.6	70.32	138	2.61041	3846.9	2682.4	93.64
69	5.82866	1600.6	1079.1	70.86	139	2.59107	3877.4	2704.2	93.86
70	5.70930	1636.8	1104.4	71.38	140	2.57204	3907.9	2726.0	94.08
71	5.59594	1673.0	1129.8	71.89	141	2.55329	3938.3	2747.7	94.30
72	5.48806	1708.9	1155.0	72.39	142	2.53483	3968.6	2769.4	94.51
73	5.38523	1744.5	1180.1	72.88	143	2.51664	3999.0	2791.1	94.73
74	5.28707	1780.0	1205.0	73.36	144	2.49873	4029.3	2812.8	94.94
75	5.19321	1815.2	1229.9	73.84	145	2.48108	4059.6	2834.5	95.15
76	5.10335	1850.2	1254.6	74.30	146	2.46369	4089.9	2856.1	95.36
77	5.01720	1885.1	1279.2	74.76	147	2.44655	4120.2	2877.7	95.56
78	4.93451	1919.8	1303.8	75.20	148	2.42966	4150.4	2899.3	95.77
79	4.85504	1954.4	1328.3	75.65	149	2.41301	4180.7	2920.9	95.97
80	4.77860	1988.8	1352.7	76.08	150	2.39660	4210.9	2942.5	96.17
81	4.70498	2023.2	1377.1	76.51	151	2.38042	4241.0	2964.0	96.37
82	4.63402	2057.5	1401.5	76.93	152	2.36447	4271.1	2985.5	96.57
83	4.56555	2091.6	1425.8	77.34	153	2.34873	4301.3	3007.0	96.77
84	4.49944	2125.6	1450.0	77.75	154	2.33321	4331.4	3028.5	96.97
85	4.43553	2159.5	1474.2	78.15	155	2.31791	4361.4	3050.0	97.16
86	4.37373	2193.3	1498.3	78.54	156	2.30281	4391.5	3071.5	97.35
87	4.31390	2227.0	1522.3	78.93	157	2.28791	4421.6	3092.9	97.55
88	4.25594	2260.5	1546.3	79.32	158	2.27321	4451.6	3114.4	97.74
89	4.19977	2294.0	1570.2	79.70	159	2.25871	4481.6	3135.8	97.93
90	4.14528	2327.3	1594.0	80.07	160	2.24440	4511.6	3157.2	98.11

30.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	2.23027	4541.6	3178.6	98.30	231	1.55311	6616.2	4659.0	109.01
162	2.21633	4571.5	3200.0	98.49	232	1.54644	6645.7	4680.1	109.13
163	2.20256	4601.5	3221.4	98.67	233	1.53984	6675.1	4701.1	109.26
164	2.18897	4631.4	3242.7	98.85	234	1.53329	6704.6	4722.1	109.39
165	2.17556	4661.3	3264.1	99.04	235	1.52680	6734.0	4743.1	109.51
166	2.16231	4691.2	3285.4	99.22	236	1.52037	6763.5	4764.1	109.64
167	2.14923	4721.1	3306.7	99.39	237	1.51399	6792.9	4785.1	109.76
168	2.13631	4751.0	3328.1	99.57	238	1.50766	6822.4	4806.2	109.88
169	2.12355	4780.8	3349.4	99.75	239	1.50139	6851.8	4827.2	110.01
170	2.11094	4810.7	3370.7	99.93	240	1.49517	6881.2	4848.2	110.13
171	2.09849	4840.5	3392.0	100.10	241	1.48900	6910.6	4869.2	110.25
172	2.08619	4870.3	3413.2	100.28	242	1.48288	6940.1	4890.2	110.38
173	2.07404	4900.1	3434.5	100.45	243	1.47681	6969.5	4911.2	110.50
174	2.06203	4929.9	3455.8	100.62	244	1.47080	6998.9	4932.2	110.62
175	2.05016	4959.7	3477.0	100.79	245	1.46483	7028.4	4953.2	110.74
176	2.03844	4989.5	3498.3	100.96	246	1.45891	7057.8	4974.2	110.86
177	2.02685	5019.2	3519.5	101.13	247	1.45304	7087.2	4995.2	110.98
178	2.01539	5049.0	3540.7	101.30	248	1.44722	7116.6	5016.2	111.10
179	2.00407	5078.8	3562.0	101.46	249	1.44145	7146.0	5037.2	111.21
180	1.99288	5108.5	3583.2	101.63	250	1.43572	7175.4	5058.2	111.33
181	1.98181	5138.2	3604.4	101.79	251	1.43004	7204.8	5079.2	111.45
182	1.97087	5167.9	3625.6	101.96	252	1.42440	7234.2	5100.2	111.57
183	1.96006	5197.6	3646.8	102.12	253	1.41881	7263.6	5121.2	111.68
184	1.94936	5227.3	3668.0	102.28	254	1.41326	7293.0	5142.2	111.80
185	1.93878	5257.0	3689.2	102.44	255	1.40775	7322.5	5163.2	111.91
186	1.92833	5286.7	3710.3	102.60	256	1.40229	7351.8	5184.2	112.03
187	1.91798	5316.4	3731.5	102.76	257	1.39687	7381.2	5205.1	112.14
188	1.90775	5346.0	3752.7	102.92	258	1.39150	7410.6	5226.1	112.26
189	1.89763	5375.7	3773.8	103.08	259	1.38616	7440.0	5247.1	112.37
190	1.88762	5405.3	3795.0	103.23	260	1.38087	7469.4	5268.1	112.49
191	1.87772	5435.0	3816.1	103.39	261	1.37562	7498.8	5289.1	112.60
192	1.86792	5464.6	3837.3	103.54	262	1.37040	7528.2	5310.1	112.71
193	1.85823	5494.2	3858.4	103.70	263	1.36523	7557.6	5331.1	112.82
194	1.84863	5523.8	3879.5	103.85	264	1.36010	7587.0	5352.1	112.93
195	1.83914	5553.5	3900.7	104.00	265	1.35500	7616.4	5373.0	113.04
196	1.82975	5583.1	3921.8	104.15	266	1.34995	7645.8	5394.0	113.16
197	1.82046	5612.7	3942.9	104.31	267	1.34493	7675.2	5415.0	113.27
198	1.81126	5642.3	3964.0	104.46	268	1.33995	7704.5	5436.0	113.38
199	1.80216	5671.9	3985.1	104.60	269	1.33501	7733.9	5457.0	113.49
200	1.79315	5701.4	4006.2	104.75	270	1.33010	7763.3	5478.0	113.59
201	1.78423	5731.0	4027.3	104.90	271	1.32523	7792.7	5498.9	113.70
202	1.77540	5760.6	4048.4	105.05	272	1.32039	7822.1	5519.9	113.81
203	1.76666	5790.2	4069.5	105.19	273	1.31560	7851.4	5540.9	113.92
204	1.75801	5819.7	4090.6	105.34	274	1.31083	7880.8	5561.9	114.03
205	1.74944	5849.3	4111.7	105.48	275	1.30610	7910.2	5582.8	114.13
206	1.74096	5878.8	4132.8	105.63	276	1.30141	7939.5	5603.8	114.24
207	1.73256	5908.4	4153.9	105.77	277	1.29675	7968.9	5624.8	114.35
208	1.72424	5937.9	4175.0	105.91	278	1.29212	7998.3	5645.8	114.45
209	1.71601	5967.4	4196.0	106.05	279	1.28753	8027.7	5666.7	114.56
210	1.70785	5997.0	4217.1	106.20	280	1.28297	8057.0	5687.7	114.66
211	1.69977	6026.5	4238.2	106.34	281	1.27844	8086.4	5708.7	114.77
212	1.69177	6056.0	4259.2	106.47	282	1.27394	8115.8	5729.7	114.87
213	1.68385	6085.5	4280.3	106.61	283	1.26948	8145.1	5750.6	114.98
214	1.67600	6115.1	4301.4	106.75	284	1.26504	8174.5	5771.6	115.08
215	1.66823	6144.6	4322.4	106.89	285	1.26064	8203.8	5792.6	115.18
216	1.66052	6174.1	4343.5	107.03	286	1.25627	8233.2	5813.5	115.28
217	1.65290	6203.6	4364.5	107.16	287	1.25193	8262.6	5834.5	115.39
218	1.64534	6233.1	4385.6	107.30	288	1.24762	8291.9	5855.5	115.49
219	1.63785	6262.6	4406.6	107.43	289	1.24334	8321.3	5876.5	115.59
220	1.63043	6292.1	4427.7	107.57	290	1.23909	8350.6	5897.4	115.69
221	1.62308	6321.5	4448.7	107.70	291	1.23487	8380.0	5918.4	115.79
222	1.61579	6351.0	4469.8	107.83	292	1.23067	8409.3	5939.4	115.89
223	1.60858	6380.5	4490.8	107.97	293	1.22651	8438.7	5960.3	115.99
224	1.60142	6410.0	4511.8	108.10	294	1.22237	8468.0	5981.3	116.09
225	1.59433	6439.5	4532.9	108.23	295	1.21826	8497.4	6002.3	116.19
226	1.58731	6468.9	4553.9	108.36	296	1.21418	8526.7	6023.2	116.29
227	1.58035	6498.4	4574.9	108.49	297	1.21013	8556.1	6044.2	116.39
228	1.57345	6527.9	4596.0	108.62	298	1.20611	8585.4	6065.2	116.49
229	1.56661	6557.3	4617.0	108.75	299	1.20211	8614.8	6086.1	116.59
230	1.55983	6586.8	4638.0	108.88	300	1.19814	8644.1	6107.1	116.69

35.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
20	43.8110	-552.1	-633.1	19.11					
21	43.3504	-526.1	-607.9	20.37	91	4.78236	2341.1	1599.6	78.96
22	42.8602	-499.3	-582.1	21.61	92	4.72112	2374.9	1623.7	79.33
23	42.3456	-471.8	-555.6	22.83	93	4.66168	2408.5	1647.7	79.70
24	41.8098	-443.9	-528.7	24.02	94	4.60394	2442.0	1671.7	80.06
25	41.2542	-415.6	-501.6	25.18	95	4.54783	2475.4	1695.6	80.41
26	40.6789	-387.2	-474.4	26.30	96	4.49327	2508.7	1719.5	80.76
27	40.0829	-358.7	-447.1	27.37	97	4.44019	2541.9	1743.2	81.10
28	39.4644	-330.2	-420.0	28.41	98	4.38853	2575.0	1766.9	81.44
29	38.8211	-301.7	-393.0	29.41	99	4.33821	2608.0	1790.5	81.78
30	38.1497	-273.4	-366.3	30.38	100	4.28919	2640.9	1814.1	82.11
31	37.4463	-244.8	-339.5	31.30	101	4.24141	2673.7	1837.6	82.43
32	36.7064	-216.2	-312.8	32.21	102	4.19481	2706.5	1861.1	82.76
33	35.9242	-187.3	-286.0	33.10	103	4.14936	2739.2	1884.5	83.08
34	35.0929	-157.9	-258.9	33.98	104	4.10499	2771.7	1907.8	83.39
35	34.2045	-127.4	-231.0	34.87	105	4.06168	2804.2	1931.1	83.70
36	33.2493	-95.1	-201.7	35.78	106	4.01938	2836.6	1954.3	84.01
37	32.2162	-59.7	-169.8	36.74	107	3.97804	2869.0	1977.5	84.31
38	31.0926	-18.2	-132.2	37.85	108	3.93765	2901.2	2000.6	84.61
39	29.8657	39.1	-79.7	39.34	109	3.89815	2933.4	2023.6	84.91
40	28.5248	98.4	-26.0	40.85	110	3.85952	2965.5	2046.7	85.20
41	27.0658	157.8	26.8	42.31	111	3.82173	2997.5	2069.6	85.49
42	25.4983	218.4	79.3	43.77	112	3.78474	3029.5	2092.5	85.78
43	23.8510	280.4	131.7	45.22	113	3.74854	3061.4	2115.3	86.06
44	22.1715	343.6	183.7	46.68	114	3.71308	3093.2	2138.1	86.34
45	20.5164	407.7	234.9	48.12	115	3.67836	3125.0	2160.9	86.62
46	18.9394	472.0	284.7	49.53	116	3.64434	3156.7	2183.6	86.89
47	17.4824	535.7	332.8	50.91	117	3.61099	3188.4	2206.3	87.17
48	16.1712	598.3	379.0	52.22	118	3.57831	3219.9	2228.9	87.43
49	15.0149	659.1	422.9	53.48	119	3.54626	3251.5	2251.4	87.70
50	14.0079	717.8	464.7	54.67	120	3.51483	3282.9	2274.0	87.96
51	13.1353	774.3	504.3	55.79	121	3.48400	3314.3	2296.4	88.22
52	12.3788	828.5	542.0	56.84	122	3.45375	3345.7	2318.8	88.48
53	11.7201	880.6	578.0	57.83	123	3.42406	3377.0	2341.3	88.74
54	11.1429	930.9	612.7	58.77	124	3.39492	3408.3	2363.7	88.99
55	10.6337	979.5	646.0	59.66	125	3.36631	3439.5	2386.0	89.24
56	10.1811	1026.7	678.3	60.51	126	3.33821	3470.6	2408.3	89.49
57	9.77600	1072.6	709.8	61.33	127	3.31061	3501.7	2430.5	89.74
58	9.41102	1117.3	740.4	62.10	128	3.28350	3532.8	2452.7	89.98
59	9.08018	1160.9	770.4	62.85	129	3.25685	3563.8	2474.9	90.22
60	8.77861	1203.7	799.8	63.57	130	3.23067	3594.8	2497.1	90.46
61	8.50232	1245.8	828.7	64.26	131	3.20493	3625.7	2519.2	90.70
62	8.24799	1287.1	857.1	64.94	132	3.17963	3656.6	2541.2	90.93
63	8.01289	1327.8	885.2	65.59	133	3.15475	3687.4	2563.3	91.17
64	7.79471	1367.8	912.8	66.22	134	3.13028	3718.2	2585.3	91.40
65	7.59152	1407.5	940.3	66.83	135	3.10621	3749.0	2607.3	91.62
66	7.40165	1446.6	967.4	67.43	136	3.08253	3779.8	2629.3	91.85
67	7.22371	1485.3	994.3	68.01	137	3.05923	3810.5	2651.2	92.08
68	7.05649	1523.6	1021.0	68.58	138	3.03630	3841.1	2673.2	92.30
69	6.89893	1561.5	1047.5	69.13	139	3.01374	3871.8	2695.1	92.52
70	6.75013	1599.1	1073.7	69.67	140	2.99152	3902.4	2716.9	92.74
71	6.60928	1636.6	1100.0	70.20	141	2.96965	3933.0	2738.7	92.96
72	6.47571	1673.8	1126.1	70.72	142	2.94811	3963.5	2760.5	93.17
73	6.34878	1710.6	1152.0	71.23	143	2.92690	3994.0	2782.3	93.39
74	6.22795	1747.2	1177.8	71.73	144	2.90601	4024.4	2804.1	93.60
75	6.11274	1783.5	1203.4	72.22	145	2.88543	4054.9	2825.8	93.81
76	6.00272	1819.6	1228.8	72.69	146	2.86516	4085.3	2847.5	94.02
77	5.89750	1855.4	1254.1	73.16	147	2.84518	4115.7	2869.3	94.23
78	5.79674	1891.1	1279.3	73.62	148	2.82550	4146.1	2890.9	94.43
79	5.70012	1926.5	1304.4	74.08	149	2.80609	4176.4	2912.6	94.64
80	5.60736	1961.8	1329.3	74.52	150	2.78697	4206.7	2934.3	94.84
81	5.51820	1997.0	1354.4	74.96	151	2.76811	4237.0	2955.9	95.04
82	5.43241	2032.1	1379.3	75.39	152	2.74952	4267.3	2977.5	95.24
83	5.34978	2067.0	1404.1	75.81	153	2.73120	4297.5	2999.0	95.44
84	5.27012	2101.7	1428.8	76.23	154	2.71312	4327.7	3020.6	95.64
85	5.19325	2136.3	1453.4	76.64	155	2.69529	4357.9	3042.1	95.83
86	5.11901	2170.8	1478.0	77.04	156	2.67771	4388.1	3063.7	96.03
87	5.04724	2205.1	1502.5	77.44	157	2.66036	4418.3	3085.2	96.22
88	4.97782	2239.3	1526.8	77.83	158	2.64325	4448.4	3106.7	96.41
89	4.91060	2273.3	1551.2	78.21	159	2.62636	4478.5	3128.2	96.60
90	4.84549	2307.3	1575.4	78.59	160	2.60970	4508.6	3149.7	96.79

35.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	2.59325	4538.7	3171.2	96.98	231	1.80609	6617.9	4654.3	107.70
162	2.57702	4568.7	3192.6	97.16	232	1.79835	6647.4	4675.4	107.83
163	2.56100	4598.8	3214.0	97.35	233	1.79068	6676.9	4696.4	107.96
164	2.54519	4628.8	3235.4	97.53	234	1.78308	6706.3	4717.4	108.08
165	2.52958	4658.8	3256.8	97.71	235	1.77554	6735.8	4738.5	108.21
166	2.51416	4688.8	3278.2	97.89	236	1.76806	6765.3	4759.5	108.34
167	2.49894	4718.8	3299.6	98.07	237	1.76065	6794.8	4780.6	108.46
168	2.48391	4748.8	3321.0	98.25	238	1.75330	6824.3	4801.6	108.58
169	2.46906	4778.7	3342.4	98.43	239	1.74602	6853.7	4822.6	108.71
170	2.45440	4808.7	3363.7	98.61	240	1.73879	6883.2	4843.7	108.83
171	2.43991	4838.6	3385.1	98.78	241	1.73163	6912.7	4864.7	108.95
172	2.42560	4868.5	3406.4	98.96	242	1.72453	6942.1	4885.7	109.08
173	2.41147	4898.4	3427.7	99.13	243	1.71748	6971.6	4906.7	109.20
174	2.39750	4928.2	3449.0	99.30	244	1.71049	7001.1	4927.8	109.32
175	2.38370	4958.1	3470.3	99.47	245	1.70356	7030.5	4948.8	109.44
176	2.37006	4988.0	3491.6	99.64	246	1.69669	7060.0	4969.8	109.56
177	2.35659	5017.8	3512.9	99.81	247	1.68987	7089.4	4990.8	109.68
178	2.34327	5047.6	3534.2	99.98	248	1.68311	7118.9	5011.9	109.80
179	2.33010	5077.5	3555.5	100.15	249	1.67641	7148.3	5032.9	109.92
180	2.31709	5107.3	3576.8	100.31	250	1.66975	7177.8	5053.9	110.03
181	2.30422	5137.1	3598.0	100.48	251	1.66315	7207.2	5074.9	110.15
182	2.29150	5166.9	3619.2	100.64	252	1.65661	7236.7	5095.9	110.27
183	2.27893	5196.6	3640.5	100.81	253	1.65011	7266.1	5116.9	110.39
184	2.26649	5226.4	3661.7	100.97	254	1.64367	7295.5	5137.9	110.50
185	2.25420	5256.2	3682.9	101.13	255	1.63728	7325.0	5159.0	110.62
186	2.24204	5285.9	3704.2	101.29	256	1.63093	7354.4	5180.0	110.73
187	2.23002	5315.7	3725.4	101.45	257	1.62464	7383.8	5201.0	110.85
188	2.21812	5345.4	3746.6	101.61	258	1.61840	7413.3	5222.0	110.96
189	2.20636	5375.1	3767.8	101.77	259	1.61220	7442.7	5243.0	111.08
190	2.19472	5404.8	3789.0	101.92	260	1.60605	7472.1	5264.0	111.19
191	2.18321	5434.5	3810.2	102.08	261	1.59995	7501.5	5285.0	111.30
192	2.17183	5464.2	3831.3	102.23	262	1.59390	7531.0	5306.0	111.41
193	2.16056	5493.9	3852.5	102.39	263	1.58789	7560.4	5327.0	111.53
194	2.14942	5523.6	3873.7	102.54	264	1.58193	7589.8	5348.0	111.64
195	2.13839	5553.3	3894.8	102.69	265	1.57602	7619.2	5369.0	111.75
196	2.12747	5582.9	3916.0	102.85	266	1.57014	7648.6	5390.0	111.86
197	2.11667	5612.6	3937.2	103.00	267	1.56432	7678.1	5411.0	111.97
198	2.10598	5642.3	3958.3	103.15	268	1.55853	7707.5	5432.0	112.08
199	2.09541	5671.9	3979.5	103.30	269	1.55279	7736.9	5453.0	112.19
200	2.08494	5701.6	4000.6	103.45	270	1.54709	7766.3	5474.0	112.30
201	2.07457	5731.2	4021.7	103.59	271	1.54144	7795.7	5495.0	112.41
202	2.06431	5760.8	4042.9	103.74	272	1.53582	7825.1	5516.0	112.52
203	2.05416	5790.4	4064.0	103.89	273	1.53025	7854.5	5537.0	112.62
204	2.04410	5820.1	4085.1	104.03	274	1.52472	7883.9	5558.0	112.73
205	2.03415	5849.7	4106.3	104.18	275	1.51923	7913.3	5579.0	112.84
206	2.02430	5879.3	4127.4	104.32	276	1.51377	7942.7	5600.0	112.94
207	2.01454	5908.9	4148.5	104.46	277	1.50836	7972.1	5621.0	113.05
208	2.00488	5938.5	4169.6	104.61	278	1.50299	8001.5	5642.0	113.16
209	1.99531	5968.1	4190.7	104.75	279	1.49765	8030.9	5662.9	113.26
210	1.98583	5997.6	4211.8	104.89	280	1.49236	8060.3	5683.9	113.37
211	1.97645	6027.2	4232.9	105.03	281	1.48710	8089.7	5704.9	113.47
212	1.96716	6056.8	4254.0	105.17	282	1.48188	8119.1	5725.9	113.58
213	1.95795	6086.4	4275.1	105.31	283	1.47669	8148.5	5746.9	113.68
214	1.94883	6115.9	4296.2	105.45	284	1.47154	8177.8	5767.9	113.78
215	1.93980	6145.5	4317.3	105.59	285	1.46643	8207.2	5788.9	113.89
216	1.93086	6175.0	4338.4	105.72	286	1.46135	8236.6	5809.9	113.99
217	1.92199	6204.6	4359.4	105.86	287	1.45631	8266.0	5830.8	114.09
218	1.91322	6234.1	4380.5	105.99	288	1.45131	8295.4	5851.8	114.20
219	1.90452	6263.7	4401.6	106.13	289	1.44634	8324.8	5872.8	114.30
220	1.89590	6293.2	4422.7	106.26	290	1.44140	8354.2	5893.8	114.40
221	1.88736	6322.7	4443.7	106.40	291	1.43650	8383.5	5914.8	114.50
222	1.87890	6352.3	4464.8	106.53	292	1.43163	8412.9	5935.8	114.60
223	1.87051	6381.8	4485.9	106.66	293	1.42679	8442.3	5956.7	114.70
224	1.86221	6411.3	4506.9	106.80	294	1.42199	8471.7	5977.7	114.80
225	1.85397	6440.8	4528.0	106.93	295	1.41722	8501.0	5998.7	114.90
226	1.84581	6470.4	4549.1	107.06	296	1.41248	8530.4	6019.7	115.00
227	1.83773	6499.9	4570.1	107.19	297	1.40777	8559.8	6040.6	115.10
228	1.82971	6529.4	4591.2	107.32	298	1.40310	8589.2	6061.6	115.20
229	1.82177	6558.9	4612.2	107.45	299	1.39845	8618.5	6082.6	115.30
230	1.81389	6588.4	4633.3	107.58	300	1.39384	8647.9	6103.6	115.39

40.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
20	43.9916	-542.9	-635.1	19.00					
21	43.5365	-517.1	-610.2	20.24	91	5.47219	2321.9	1581.2	77.67
22	43.0517	-490.5	-584.7	21.47	92	5.40079	2356.2	1605.7	78.04
23	42.5434	-463.3	-558.5	22.68	93	5.33156	2390.3	1630.1	78.41
24	42.0153	-435.6	-532.0	23.87	94	5.26438	2424.3	1654.5	78.77
25	41.4691	-407.5	-505.3	25.01	95	5.19914	2458.2	1678.7	79.13
26	40.9053	-379.4	-478.5	26.12	96	5.13576	2492.0	1702.8	79.49
27	40.3231	-351.1	-451.7	27.19	97	5.07415	2525.6	1726.9	79.83
28	39.7212	-323.0	-425.0	28.21	98	5.01423	2559.2	1750.9	80.18
29	39.0977	-294.9	-398.6	29.19	99	4.95592	2592.6	1774.8	80.52
30	38.4500	-267.1	-372.5	30.15	100	4.89915	2625.9	1798.6	80.85
31	37.7749	-239.2	-346.5	31.05	101	4.84384	2659.1	1822.4	81.18
32	37.0690	-211.3	-320.6	31.94	102	4.78995	2692.3	1846.1	81.51
33	36.3279	-183.3	-294.9	32.80	103	4.73741	2725.3	1869.8	81.83
34	35.5467	-155.0	-269.0	33.65	104	4.68616	2758.3	1893.4	82.15
35	34.7197	-125.9	-242.6	34.49	105	4.63615	2791.1	1916.9	82.46
36	33.8406	-95.4	-215.1	35.35	106	4.58734	2823.8	1940.3	82.78
37	32.9025	-62.2	-185.4	36.26	107	4.53967	2856.5	1963.7	83.08
38	31.8982	-23.5	-150.6	37.29	108	4.49310	2889.1	1987.0	83.39
39	30.8208	30.2	-101.3	38.68	109	4.44759	2921.6	2010.3	83.68
40	29.6656	84.9	-51.7	40.08	110	4.40310	2954.0	2033.5	83.98
41	28.4316	138.7	-3.8	41.40	111	4.35960	2986.3	2056.6	84.27
42	27.1244	192.6	43.2	42.69	112	4.31704	3018.6	2079.7	84.56
43	25.7584	247.0	89.7	43.97	113	4.27540	3050.7	2102.8	84.85
44	24.3568	302.2	135.8	45.24	114	4.23463	3082.8	2125.7	85.13
45	22.9482	358.2	181.6	46.50	115	4.19472	3114.9	2148.7	85.41
46	21.5619	414.7	226.8	47.75	116	4.15563	3146.8	2171.5	85.69
47	20.2236	471.8	271.3	48.97	117	4.11734	3178.7	2194.4	85.96
48	18.9541	529.0	315.2	50.18	118	4.07981	3210.6	2217.1	86.23
49	17.7691	586.2	358.1	51.36	119	4.04303	3242.3	2239.9	86.50
50	16.6789	643.1	400.1	52.51	120	4.00697	3274.0	2262.6	86.77
51	15.6882	699.2	440.8	53.62	121	3.97161	3305.6	2285.2	87.03
52	14.7962	754.2	480.3	54.69	122	3.93692	3337.2	2307.7	87.29
53	13.9979	808.1	518.5	55.72	123	3.90288	3368.8	2330.3	87.55
54	13.2854	860.5	555.5	56.70	124	3.86948	3400.2	2352.8	87.80
55	12.6493	911.6	591.2	57.64	125	3.83670	3431.7	2375.3	88.05
56	12.0803	961.4	625.9	58.53	126	3.80451	3463.0	2397.7	88.30
57	11.5696	1009.9	659.6	59.39	127	3.77290	3494.3	2420.1	88.55
58	11.1093	1057.1	692.3	60.21	128	3.74186	3525.5	2442.4	88.79
59	10.6928	1103.3	724.3	61.00	129	3.71136	3556.8	2464.7	89.04
60	10.3140	1148.5	755.5	61.76	130	3.68139	3587.9	2487.0	89.28
61	9.96807	1192.8	786.2	62.49	131	3.65194	3619.0	2509.2	89.52
62	9.65073	1236.2	816.3	63.20	132	3.62299	3650.1	2531.4	89.75
63	9.35846	1279.0	845.9	63.88	133	3.59454	3681.1	2553.6	89.99
64	9.08825	1320.9	875.0	64.55	134	3.56655	3712.1	2575.7	90.22
65	8.83752	1362.4	903.8	65.19	135	3.53903	3743.0	2597.8	90.45
66	8.60410	1403.2	932.2	65.81	136	3.51196	3773.9	2619.9	90.68
67	8.38611	1443.5	960.2	66.42	137	3.48533	3804.8	2641.9	90.90
68	8.18194	1483.4	988.0	67.01	138	3.45913	3835.6	2663.9	91.13
69	7.99020	1522.8	1015.6	67.58	139	3.43334	3866.4	2685.9	91.35
70	7.80968	1561.8	1042.8	68.14	140	3.40796	3897.2	2707.9	91.57
71	7.63932	1600.6	1070.0	68.69	141	3.38298	3927.9	2729.8	91.79
72	7.47820	1639.0	1097.0	69.23	142	3.35838	3958.5	2751.7	92.00
73	7.32551	1677.0	1123.8	69.75	143	3.33416	3989.2	2773.6	92.22
74	7.18052	1714.8	1150.3	70.27	144	3.31031	4019.8	2795.4	92.43
75	7.04262	1752.1	1176.6	70.77	145	3.28681	4050.4	2817.2	92.65
76	6.91122	1789.2	1202.8	71.26	146	3.26367	4080.9	2839.1	92.86
77	6.78583	1826.1	1228.8	71.74	147	3.24087	4111.4	2860.8	93.06
78	6.66599	1862.6	1254.6	72.21	148	3.21840	4141.9	2882.6	93.27
79	6.55130	1899.0	1280.3	72.68	149	3.19626	4172.4	2904.4	93.48
80	6.44140	1935.1	1305.9	73.13	150	3.17443	4202.9	2926.1	93.68
81	6.33595	1971.2	1331.5	73.58	151	3.15292	4233.2	2947.8	93.88
82	6.23465	2007.0	1357.0	74.02	152	3.13172	4263.6	2969.4	94.08
83	6.13724	2042.7	1382.3	74.45	153	3.11081	4294.0	2991.1	94.28
84	6.04347	2078.2	1407.5	74.88	154	3.09019	4324.3	3012.7	94.48
85	5.95311	2113.4	1432.6	75.30	155	3.06986	4354.6	3034.3	94.67
86	5.86596	2148.6	1457.6	75.71	156	3.04981	4384.9	3056.0	94.87
87	5.78182	2183.5	1482.5	76.11	157	3.03003	4415.2	3077.5	95.06
88	5.70053	2218.3	1507.3	76.51	158	3.01052	4445.4	3099.1	95.25
89	5.62193	2253.0	1532.1	76.90	159	2.99126	4475.6	3120.7	95.45
90	5.54586	2287.5	1556.7	77.29	160	2.97227	4505.8	3142.2	95.64

40.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	2.95352	4536.0	3163.7	95.82	231	2.05736	6619.6	4649.6	106.58
162	2.93502	4566.2	3185.2	96.01	232	2.04856	6649.2	4670.7	106.70
163	2.91676	4596.3	3206.7	96.19	233	2.03984	6678.7	4691.8	106.83
164	2.89874	4626.4	3228.2	96.38	234	2.03119	6708.2	4712.8	106.96
165	2.88095	4656.5	3249.7	96.56	235	2.02261	6737.7	4733.9	107.08
166	2.86338	4686.6	3271.1	96.74	236	2.01411	6767.3	4755.0	107.21
167	2.84604	4716.7	3292.6	96.92	237	2.00568	6796.8	4776.0	107.33
168	2.82891	4746.7	3314.0	97.10	238	1.99732	6826.3	4797.1	107.46
169	2.81200	4776.8	3335.5	97.28	239	1.98903	6855.8	4818.1	107.58
170	2.79529	4806.8	3356.9	97.46	240	1.98081	6885.3	4839.2	107.70
171	2.77879	4836.8	3378.3	97.64	241	1.97266	6914.8	4860.2	107.83
172	2.76249	4866.8	3399.6	97.81	242	1.96458	6944.3	4881.3	107.95
173	2.74639	4896.8	3421.0	97.98	243	1.95657	6973.8	4902.3	108.07
174	2.73048	4926.7	3442.4	98.16	244	1.94862	7003.3	4923.4	108.19
175	2.71476	4956.7	3463.7	98.33	245	1.94074	7032.8	4944.4	108.31
176	2.69923	4986.6	3485.1	98.50	246	1.93292	7062.3	4965.5	108.43
177	2.68388	5016.5	3506.4	98.67	247	1.92516	7091.8	4986.5	108.55
178	2.66871	5046.4	3527.7	98.84	248	1.91747	7121.3	5007.6	108.67
179	2.65372	5076.3	3549.1	99.00	249	1.90984	7150.8	5028.6	108.79
180	2.63890	5106.2	3570.4	99.17	250	1.90228	7180.2	5049.6	108.91
181	2.62425	5136.1	3591.7	99.34	251	1.89477	7209.7	5070.7	109.03
182	2.60977	5166.0	3613.0	99.50	252	1.88732	7239.2	5091.7	109.14
183	2.59545	5195.8	3634.2	99.66	253	1.87993	7268.7	5112.7	109.26
184	2.58130	5225.7	3655.5	99.83	254	1.87260	7298.1	5133.8	109.38
185	2.56730	5255.5	3676.8	99.99	255	1.86533	7327.6	5154.8	109.49
186	2.55346	5285.3	3698.0	100.15	256	1.85812	7357.1	5175.8	109.61
187	2.53977	5315.1	3719.3	100.31	257	1.85096	7386.5	5196.9	109.72
188	2.52623	5344.9	3740.6	100.47	258	1.84386	7416.0	5217.9	109.84
189	2.51284	5374.7	3761.8	100.63	259	1.83681	7445.4	5238.9	109.95
190	2.49959	5404.5	3783.0	100.78	260	1.82982	7474.9	5259.9	110.06
191	2.48649	5434.3	3804.3	100.94	261	1.82288	7504.3	5280.9	110.18
192	2.47353	5464.0	3825.5	101.10	262	1.81599	7533.8	5302.0	110.29
193	2.46071	5493.8	3846.7	101.25	263	1.80916	7563.3	5323.0	110.40
194	2.44802	5523.5	3867.9	101.40	264	1.80238	7592.7	5344.0	110.51
195	2.43547	5553.2	3889.1	101.56	265	1.79565	7622.2	5365.0	110.62
196	2.42305	5583.0	3910.3	101.71	266	1.78897	7651.6	5386.1	110.74
197	2.41075	5612.7	3931.5	101.86	267	1.78234	7681.1	5407.1	110.85
198	2.39859	5642.4	3952.7	102.01	268	1.77576	7710.5	5428.1	110.96
199	2.38655	5672.1	3973.9	102.16	269	1.76923	7739.9	5449.1	111.07
200	2.37464	5701.8	3995.0	102.31	270	1.76275	7769.4	5470.1	111.17
201	2.36284	5731.5	4016.2	102.46	271	1.75631	7798.8	5491.1	111.28
202	2.35117	5761.2	4037.4	102.60	272	1.74993	7828.2	5512.1	111.39
203	2.33961	5790.9	4058.5	102.75	273	1.74359	7857.7	5533.2	111.50
204	2.32817	5820.5	4079.7	102.90	274	1.73730	7887.1	5554.2	111.61
205	2.31684	5850.2	4100.8	103.04	275	1.73105	7916.5	5575.2	111.71
206	2.30563	5879.9	4122.0	103.19	276	1.72485	7945.9	5596.2	111.82
207	2.29453	5909.5	4143.1	103.33	277	1.71869	7975.4	5617.2	111.93
208	2.28353	5939.2	4164.3	103.47	278	1.71258	8004.8	5638.2	112.03
209	2.27264	5968.8	4185.4	103.61	279	1.70651	8034.2	5659.2	112.14
210	2.26186	5998.5	4206.6	103.76	280	1.70048	8063.6	5680.2	112.24
211	2.25119	6028.1	4227.7	103.90	281	1.69450	8093.0	5701.2	112.35
212	2.24061	6057.7	4248.8	104.04	282	1.68856	8122.5	5722.2	112.45
213	2.23014	6087.3	4269.9	104.18	283	1.68266	8151.9	5743.2	112.56
214	2.21977	6116.9	4291.1	104.31	284	1.67680	8181.3	5764.2	112.66
215	2.20949	6146.5	4312.2	104.45	285	1.67099	8210.7	5785.2	112.77
216	2.19931	6176.1	4333.3	104.59	286	1.66521	8240.1	5806.2	112.87
217	2.18923	6205.7	4354.4	104.73	287	1.65948	8269.5	5827.2	112.97
218	2.17924	6235.3	4375.5	104.86	288	1.65379	8298.9	5848.2	113.07
219	2.16934	6264.9	4396.6	105.00	289	1.64813	8328.4	5869.2	113.18
220	2.15954	6294.5	4417.7	105.13	290	1.64251	8357.8	5890.2	113.28
221	2.14982	6324.1	4438.8	105.27	291	1.63694	8387.1	5911.2	113.38
222	2.14020	6353.7	4459.9	105.40	292	1.63140	8416.6	5932.2	113.48
223	2.13066	6383.2	4481.0	105.53	293	1.62589	8446.0	5953.2	113.58
224	2.12121	6412.8	4502.1	105.67	294	1.62043	8475.4	5974.2	113.68
225	2.11184	6442.3	4523.2	105.80	295	1.61500	8504.8	5995.2	113.78
226	2.10256	6471.9	4544.3	105.93	296	1.60961	8534.2	6016.2	113.88
227	2.09336	6501.5	4565.3	106.06	297	1.60426	8563.5	6037.2	113.98
228	2.08424	6531.0	4586.4	106.19	298	1.59894	8592.9	6058.1	114.08
229	2.07520	6560.6	4607.5	106.32	299	1.59366	8622.3	6079.1	114.18
230	2.06624	6590.1	4628.6	106.45	300	1.58841	8651.7	6100.1	114.27

45.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
20	44.1700	-533.7	-636.9	18.88					
21	43.7193	-508.1	-612.4	20.12	91	6.16080	2303.0	1562.9	76.50
22	43.2389	-481.8	-587.2	21.34	92	6.07904	2337.8	1587.8	76.88
23	42.7359	-454.7	-561.4	22.54	93	5.99982	2372.5	1612.5	77.26
24	42.2145	-427.2	-535.2	23.71	94	5.92301	2407.0	1637.2	77.62
25	41.6768	-399.4	-508.8	24.85	95	5.84848	2441.4	1661.7	77.99
26	41.1232	-371.5	-482.3	25.95	96	5.77614	2475.6	1686.2	78.35
27	40.5534	-343.5	-455.9	27.01	97	5.70586	2509.7	1710.6	78.70
28	39.9663	-315.7	-429.8	28.02	98	5.63756	2543.7	1734.9	79.05
29	39.3603	-288.0	-403.8	28.99	99	5.57113	2577.5	1759.1	79.39
30	38.7334	-260.6	-378.4	29.92	100	5.50650	2611.2	1783.2	79.73
31	38.0830	-233.2	-352.9	30.81	101	5.44359	2644.8	1807.2	80.07
32	37.4062	-206.0	-327.9	31.68	102	5.38232	2678.4	1831.2	80.40
33	36.6997	-178.7	-303.0	32.52	103	5.32261	2711.8	1855.1	80.72
34	35.9599	-151.3	-278.1	33.34	104	5.26441	2745.1	1878.9	81.04
35	35.1826	-123.3	-252.9	34.15	105	5.20764	2778.3	1902.7	81.36
36	34.3634	-94.2	-226.9	34.97	106	5.15226	2811.3	1926.4	81.67
37	33.4977	-62.7	-198.9	35.83	107	5.09820	2844.3	1950.0	81.98
38	32.5811	-26.1	-166.1	36.81	108	5.04542	2877.2	1973.5	82.29
39	31.6094	25.0	-119.3	38.14	109	4.99386	2910.0	1997.0	82.59
40	30.5804	76.6	-72.5	39.45	110	4.94348	2942.7	2020.4	82.89
41	29.4939	126.8	-27.8	40.68	111	4.89423	2975.3	2043.7	83.19
42	28.3537	176.4	15.6	41.87	112	4.84607	3007.9	2067.0	83.48
43	27.1685	226.0	58.2	43.04	113	4.79897	3040.3	2090.2	83.77
44	25.9517	276.1	100.4	44.19	114	4.75287	3072.7	2113.4	84.05
45	24.7204	326.7	142.3	45.33	115	4.70776	3105.0	2136.5	84.33
46	23.4931	378.0	183.9	46.46	116	4.66359	3137.2	2159.5	84.61
47	22.2871	429.8	225.2	47.57	117	4.62034	3169.4	2182.5	84.89
48	21.1169	482.2	266.2	48.68	118	4.57796	3201.5	2205.5	85.16
49	19.9945	535.0	306.9	49.77	119	4.53644	3233.4	2228.3	85.43
50	18.9290	588.1	347.2	50.85	120	4.49574	3265.4	2251.2	85.70
51	17.9274	641.4	387.1	51.90	121	4.45584	3297.2	2273.9	85.96
52	16.9946	694.6	426.3	52.93	122	4.41671	3329.0	2296.6	86.23
53	16.1327	747.5	464.9	53.94	123	4.37833	3360.8	2319.4	86.48
54	15.3417	799.9	502.7	54.92	124	4.34068	3392.5	2342.0	86.74
55	14.6193	851.5	539.6	55.87	125	4.30373	3424.1	2364.6	86.99
56	13.9615	902.3	575.7	56.78	126	4.26746	3455.6	2387.2	87.25
57	13.3633	952.2	611.0	57.66	127	4.23185	3487.1	2409.7	87.50
58	12.8191	1001.0	645.4	58.51	128	4.19688	3518.6	2432.1	87.74
59	12.3234	1048.9	678.9	59.33	129	4.16253	3550.0	2454.6	87.99
60	11.8709	1095.9	711.8	60.12	130	4.12880	3581.3	2477.0	88.23
61	11.4568	1142.0	744.0	60.89	131	4.09564	3612.6	2499.3	88.47
62	11.0766	1187.3	775.6	61.62	132	4.06306	3643.8	2521.6	88.71
63	10.7266	1231.8	806.7	62.33	133	4.03104	3675.0	2543.9	88.94
64	10.4032	1275.4	837.1	63.02	134	3.99956	3706.1	2566.1	89.17
65	10.1035	1318.5	867.2	63.69	135	3.96860	3737.2	2588.3	89.41
66	9.82507	1360.9	896.9	64.34	136	3.93816	3768.3	2610.5	89.64
67	9.56547	1402.8	926.1	64.97	137	3.90821	3799.3	2632.7	89.86
68	9.32282	1444.0	955.0	65.58	138	3.87875	3830.3	2654.8	90.09
69	9.09541	1484.9	983.6	66.17	139	3.84976	3861.3	2676.9	90.31
70	8.88176	1525.2	1011.8	66.75	140	3.82123	3892.2	2698.9	90.53
71	8.68056	1565.2	1040.0	67.32	141	3.79315	3923.0	2720.9	90.75
72	8.49066	1604.9	1067.8	67.87	142	3.76551	3953.8	2742.9	90.97
73	8.31106	1644.0	1095.4	68.41	143	3.73829	3984.6	2764.9	91.19
74	8.14087	1682.9	1122.8	68.94	144	3.71150	4015.3	2786.8	91.40
75	7.97929	1721.3	1149.9	69.46	145	3.68510	4046.0	2808.7	91.61
76	7.82562	1759.4	1176.7	69.96	146	3.65911	4076.7	2830.6	91.82
77	7.67923	1797.2	1203.4	70.46	147	3.63350	4107.4	2852.5	92.03
78	7.53957	1834.7	1229.9	70.94	148	3.60827	4138.0	2874.3	92.24
79	7.40613	1871.9	1256.2	71.42	149	3.58341	4168.6	2896.2	92.45
80	7.27845	1908.9	1282.4	71.88	150	3.55891	4199.2	2918.0	92.65
81	7.15613	1945.8	1308.6	72.34	151	3.53476	4229.7	2939.7	92.85
82	7.03880	1982.4	1334.6	72.79	152	3.51096	4260.2	2961.5	93.05
83	6.92613	2018.8	1360.5	73.23	153	3.48749	4290.6	2983.2	93.25
84	6.81781	2055.0	1386.2	73.66	154	3.46435	4321.1	3004.9	93.45
85	6.71356	2090.9	1411.8	74.09	155	3.44153	4351.5	3026.6	93.65
86	6.61313	2126.7	1437.2	74.51	156	3.41903	4381.9	3048.3	93.85
87	6.51628	2162.3	1462.6	74.92	157	3.39684	4412.3	3069.9	94.04
88	6.42282	2197.7	1487.8	75.32	158	3.37495	4442.6	3091.6	94.23
89	6.33253	2233.0	1513.0	75.72	159	3.35335	4472.9	3113.2	94.42
90	6.24525	2268.1	1538.0	76.11	160	3.33204	4503.2	3134.8	94.61

45.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	3.31101	4533.5	3156.4	94.80	231	2.30693	6621.5	4645.0	105.58
162	3.29026	4563.8	3178.0	94.99	232	2.29708	6651.1	4666.1	105.70
163	3.26978	4594.0	3199.5	95.17	233	2.28731	6680.6	4687.2	105.83
164	3.24957	4624.2	3221.1	95.36	234	2.27762	6710.2	4708.3	105.96
165	3.22962	4654.4	3242.6	95.54	235	2.26802	6739.8	4729.4	106.08
166	3.20992	4684.6	3264.1	95.73	236	2.25850	6769.3	4750.5	106.21
167	3.19047	4714.8	3285.6	95.91	237	2.24906	6798.9	4771.5	106.34
168	3.17127	4744.9	3307.1	96.09	238	2.23970	6828.4	4792.6	106.46
169	3.15230	4775.0	3328.6	96.27	239	2.23042	6858.0	4813.7	106.58
170	3.13357	4805.1	3350.1	96.44	240	2.22122	6887.5	4834.8	106.71
171	3.11507	4835.2	3371.5	96.62	241	2.21210	6917.1	4855.8	106.83
172	3.09680	4865.3	3392.9	96.79	242	2.20305	6946.6	4876.9	106.95
173	3.07875	4895.3	3414.4	96.97	243	2.19408	6976.2	4898.0	107.07
174	3.06092	4925.4	3435.8	97.14	244	2.18518	7005.7	4919.1	107.20
175	3.04330	4955.4	3457.2	97.31	245	2.17635	7035.2	4940.1	107.32
176	3.02590	4985.4	3478.6	97.49	246	2.16760	7064.7	4961.2	107.44
177	3.00869	5015.4	3500.0	97.66	247	2.15891	7094.3	4982.3	107.56
178	2.99169	5045.4	3521.3	97.82	248	2.15030	7123.8	5003.3	107.68
179	2.97489	5075.4	3542.7	97.99	249	2.14176	7153.3	5024.4	107.79
180	2.95828	5105.4	3564.1	98.16	250	2.13329	7182.8	5045.4	107.91
181	2.94187	5135.3	3585.4	98.33	251	2.12488	7212.3	5066.5	108.03
182	2.92564	5165.2	3606.7	98.49	252	2.11654	7241.8	5087.5	108.15
183	2.90960	5195.2	3628.1	98.65	253	2.10827	7271.3	5108.6	108.26
184	2.89374	5225.1	3649.4	98.82	254	2.10007	7300.8	5129.6	108.38
185	2.87805	5255.0	3670.7	98.98	255	2.09192	7330.3	5150.7	108.50
186	2.86254	5284.9	3692.0	99.14	256	2.08385	7359.8	5171.7	108.61
187	2.84721	5314.7	3713.3	99.30	257	2.07583	7389.3	5192.8	108.73
188	2.83204	5344.6	3734.6	99.46	258	2.06788	7418.8	5213.8	108.84
189	2.81704	5374.5	3755.9	99.62	259	2.05999	7448.3	5234.9	108.96
190	2.80220	5404.3	3777.1	99.78	260	2.05216	7477.8	5255.9	109.07
191	2.78752	5434.1	3798.4	99.93	261	2.04439	7507.3	5276.9	109.18
192	2.77300	5464.0	3819.7	100.09	262	2.03668	7536.8	5298.0	109.30
193	2.75864	5493.8	3840.9	100.24	263	2.02903	7566.2	5319.0	109.41
194	2.74442	5523.6	3862.2	100.40	264	2.02144	7595.7	5340.1	109.52
195	2.73036	5553.4	3883.4	100.55	265	2.01390	7625.2	5361.1	109.63
196	2.71645	5583.2	3904.6	100.70	266	2.00642	7654.7	5382.2	109.74
197	2.70268	5612.9	3925.9	100.85	267	1.99900	7684.1	5403.2	109.85
198	2.68906	5642.7	3947.1	101.00	268	1.99163	7713.6	5424.2	109.96
199	2.67557	5672.5	3968.3	101.15	269	1.98432	7743.1	5445.3	110.07
200	2.66223	5702.2	3989.5	101.30	270	1.97706	7772.5	5466.3	110.18
201	2.64902	5732.0	4010.7	101.45	271	1.96986	7802.0	5487.3	110.29
202	2.63594	5761.7	4031.9	101.60	272	1.96271	7831.5	5508.3	110.40
203	2.62300	5791.4	4053.1	101.75	273	1.95561	7860.9	5529.4	110.51
204	2.61018	5821.2	4074.3	101.89	274	1.94856	7890.4	5550.4	110.61
205	2.59750	5850.9	4095.5	102.04	275	1.94157	7919.8	5571.4	110.72
206	2.58494	5880.6	4116.7	102.18	276	1.93463	7949.3	5592.4	110.83
207	2.57250	5910.3	4137.9	102.33	277	1.92773	7978.7	5613.5	110.94
208	2.56019	5940.0	4159.0	102.47	278	1.92089	8008.2	5634.5	111.04
209	2.54800	5969.7	4180.2	102.61	279	1.91409	8037.6	5655.5	111.15
210	2.53593	5999.4	4201.4	102.75	280	1.90734	8067.1	5676.5	111.25
211	2.52397	6029.1	4222.5	102.89	281	1.90065	8096.5	5697.5	111.36
212	2.51213	6058.7	4243.7	103.03	282	1.89399	8126.0	5718.6	111.46
213	2.50040	6088.4	4264.8	103.17	283	1.88739	8155.4	5739.6	111.57
214	2.48878	6118.1	4286.0	103.31	284	1.88083	8184.8	5760.6	111.67
215	2.47728	6147.7	4307.1	103.45	285	1.87432	8214.3	5781.6	111.77
216	2.46588	6177.4	4328.3	103.59	286	1.86785	8243.7	5802.6	111.88
217	2.45459	6207.0	4349.4	103.73	287	1.86143	8273.1	5823.6	111.98
218	2.44340	6236.7	4370.6	103.86	288	1.85506	8302.6	5844.6	112.08
219	2.43232	6266.3	4391.7	104.00	289	1.84872	8332.0	5865.7	112.18
220	2.42134	6295.9	4412.8	104.13	290	1.84244	8361.4	5886.7	112.29
221	2.41046	6325.5	4433.9	104.27	291	1.83619	8390.9	5907.7	112.39
222	2.39968	6355.2	4455.1	104.40	292	1.82999	8420.3	5928.7	112.49
223	2.38900	6384.8	4476.2	104.53	293	1.82383	8449.7	5949.7	112.59
224	2.37842	6414.4	4497.3	104.67	294	1.81771	8479.1	5970.7	112.69
225	2.36793	6444.0	4518.4	104.80	295	1.81163	8508.6	5991.7	112.79
226	2.35754	6473.6	4539.5	104.93	296	1.80559	8538.0	6012.7	112.89
227	2.34724	6503.2	4560.6	105.06	297	1.79960	8567.4	6033.7	112.99
228	2.33703	6532.8	4581.7	105.19	298	1.79364	8596.8	6054.7	113.09
229	2.32691	6562.3	4602.8	105.32	299	1.78773	8626.2	6075.7	113.19
230	2.31688	6591.9	4623.9	105.45	300	1.78185	8655.6	6096.7	113.28

50.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
20	44.3460	-524.5	-638.7	18.77					
21	43.8986	-499.2	-614.6	20.00	91	6.84707	2284.6	1544.6	75.44
22	43.4218	-473.0	-589.7	21.21	92	6.75479	2319.9	1569.9	75.83
23	42.9233	-446.1	-564.1	22.40	93	6.66545	2355.1	1595.0	76.21
24	42.4079	-418.8	-538.2	23.56	94	6.57889	2390.0	1620.0	76.58
25	41.8775	-391.2	-512.2	24.69	95	6.49497	2424.9	1644.9	76.95
26	41.3332	-363.5	-486.1	25.78	96	6.41356	2459.6	1669.6	77.31
27	40.7745	-335.8	-460.0	26.83	97	6.33453	2494.1	1694.3	77.67
28	40.2007	-308.2	-434.3	27.83	98	6.25776	2528.5	1718.9	78.02
29	39.6104	-280.9	-408.8	28.79	99	6.18315	2562.8	1743.4	78.37
30	39.0018	-253.9	-383.8	29.71	100	6.11060	2596.9	1767.8	78.71
31	38.3730	-227.0	-359.0	30.59	101	6.04002	2630.9	1792.1	79.05
32	37.7215	-200.3	-334.6	31.44	102	5.97131	2664.8	1816.4	79.39
33	37.0447	-173.7	-310.4	32.25	103	5.90440	2698.6	1840.5	79.72
34	36.3398	-147.0	-286.4	33.05	104	5.83920	2732.2	1864.6	80.04
35	35.6037	-120.0	-262.3	33.83	105	5.77564	2765.7	1888.6	80.36
36	34.8332	-92.0	-237.4	34.63	106	5.71366	2799.2	1912.5	80.68
37	34.0250	-61.8	-210.7	35.45	107	5.65319	2832.5	1936.3	80.99
38	33.1761	-26.8	-179.5	36.38	108	5.59416	2865.7	1960.0	81.30
39	32.2841	22.4	-134.6	37.66	109	5.53654	2898.8	1983.7	81.61
40	31.3475	71.7	-89.9	38.92	110	5.48024	2931.8	2007.3	81.91
41	30.3668	119.2	-47.6	40.09	111	5.42524	2964.7	2030.8	82.20
42	29.3445	165.8	-6.8	41.20	112	5.37147	2997.5	2054.3	82.50
43	28.2864	212.1	33.0	42.29	113	5.31890	3030.2	2077.7	82.79
44	27.2011	258.6	72.3	43.36	114	5.26747	3062.9	2101.1	83.08
45	26.0999	305.5	111.4	44.42	115	5.21716	3095.4	2124.4	83.36
46	24.9954	352.9	150.3	45.46	116	5.16791	3127.9	2147.6	83.64
47	23.8998	401.0	189.0	46.49	117	5.11969	3160.3	2170.7	83.92
48	22.8244	449.6	227.6	47.52	118	5.07247	3192.6	2193.8	84.20
49	21.7784	498.8	266.1	48.54	119	5.02622	3224.8	2216.9	84.47
50	20.7692	548.5	304.6	49.54	120	4.98089	3257.0	2239.9	84.74
51	19.8028	598.7	342.9	50.54	121	4.93646	3289.1	2262.8	85.00
52	18.8836	649.2	381.0	51.52	122	4.89290	3321.1	2285.6	85.27
53	18.0152	700.0	418.8	52.48	123	4.85019	3353.1	2308.5	85.53
54	17.2000	750.8	456.3	53.43	124	4.80829	3384.9	2331.3	85.79
55	16.4390	801.5	493.3	54.36	125	4.76719	3416.8	2354.0	86.04
56	15.7321	851.9	529.9	55.27	126	4.72685	3448.5	2376.7	86.30
57	15.0779	901.8	565.8	56.16	127	4.68725	3480.2	2399.4	86.55
58	14.4739	951.1	601.1	57.01	128	4.64838	3511.8	2421.9	86.79
59	13.9172	999.8	635.8	57.85	129	4.61020	3543.4	2444.5	87.04
60	13.4043	1047.8	669.8	58.65	130	4.57271	3574.9	2467.0	87.28
61	12.9315	1095.0	703.2	59.43	131	4.53587	3606.4	2489.5	87.52
62	12.4952	1141.5	736.1	60.19	132	4.49968	3637.8	2511.9	87.76
63	12.0919	1187.3	768.3	60.92	133	4.46411	3669.1	2534.2	88.00
64	11.7184	1232.3	799.9	61.63	134	4.42915	3700.4	2556.6	88.23
65	11.3719	1276.7	831.2	62.32	135	4.39477	3731.7	2578.9	88.47
66	11.0495	1320.4	861.9	62.99	136	4.36097	3762.9	2601.2	88.70
67	10.7490	1363.6	892.3	63.64	137	4.32773	3794.1	2623.5	88.93
68	10.4681	1406.1	922.2	64.27	138	4.29503	3825.2	2645.7	89.15
69	10.2051	1448.2	951.8	64.88	139	4.26286	3856.3	2667.9	89.38
70	9.95816	1489.7	980.9	65.48	140	4.23120	3887.4	2690.0	89.60
71	9.72583	1530.9	1010.0	66.06	141	4.20005	3918.4	2712.1	89.82
72	9.50679	1571.7	1038.8	66.63	142	4.16939	3949.3	2734.2	90.04
73	9.29987	1611.9	1067.2	67.18	143	4.13920	3980.2	2756.3	90.26
74	9.10403	1651.8	1095.3	67.73	144	4.10948	4011.1	2778.3	90.47
75	8.91833	1691.2	1123.1	68.25	145	4.08021	4041.9	2800.3	90.68
76	8.74195	1730.3	1150.7	68.77	146	4.05139	4072.8	2822.3	90.90
77	8.57415	1769.0	1178.1	69.28	147	4.02299	4103.5	2844.2	91.11
78	8.41425	1807.4	1205.2	69.78	148	3.99502	4134.3	2866.1	91.31
79	8.26166	1845.4	1232.2	70.26	149	3.96746	4165.0	2888.1	91.52
80	8.11585	1883.2	1259.0	70.74	150	3.94031	4195.7	2909.9	91.73
81	7.97631	1920.9	1285.7	71.20	151	3.91354	4226.3	2931.8	91.93
82	7.84263	1958.3	1312.3	71.66	152	3.88716	4256.9	2953.6	92.13
83	7.71439	1995.4	1338.7	72.11	153	3.86116	4287.5	2975.4	92.33
84	7.59123	2032.3	1364.9	72.55	154	3.83552	4318.0	2997.2	92.53
85	7.47283	2068.9	1391.0	72.99	155	3.81024	4348.6	3018.9	92.73
86	7.35888	2105.3	1416.9	73.41	156	3.78531	4379.1	3040.7	92.92
87	7.24911	2141.6	1442.7	73.83	157	3.76072	4409.6	3062.4	93.12
88	7.14327	2177.6	1468.4	74.25	158	3.73647	4440.0	3084.1	93.31
89	7.04112	2213.4	1493.9	74.65	159	3.71255	4470.4	3105.8	93.50
90	6.94245	2249.1	1519.3	75.05	160	3.68895	4500.8	3127.5	93.70

50.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	3.66566	4531.2	3149.1	93.88	231	2.55479	6623.5	4640.4	104.68
162	3.64268	4561.6	3170.8	94.07	232	2.54389	6653.1	4661.6	104.81
163	3.62000	4591.9	3192.4	94.26	233	2.53309	6682.7	4682.7	104.94
164	3.59762	4622.2	3214.0	94.44	234	2.52238	6712.3	4703.8	105.06
165	3.57553	4652.5	3235.6	94.63	235	2.51176	6741.9	4724.9	105.19
166	3.55372	4682.8	3257.1	94.81	236	2.50124	6771.5	4746.0	105.32
167	3.53219	4713.0	3278.7	94.99	237	2.49080	6801.1	4767.1	105.44
168	3.51093	4743.2	3300.2	95.17	238	2.48045	6830.7	4788.2	105.57
169	3.48993	4773.5	3321.8	95.35	239	2.47019	6860.3	4809.3	105.69
170	3.46920	4803.7	3343.3	95.53	240	2.46002	6889.9	4830.4	105.81
171	3.44873	4833.8	3364.8	95.71	241	2.44993	6919.4	4851.5	105.94
172	3.42850	4864.0	3386.3	95.88	242	2.43992	6949.0	4872.6	106.06
173	3.40852	4894.1	3407.8	96.06	243	2.43000	6978.6	4893.7	106.18
174	3.38879	4924.2	3429.2	96.23	244	2.42016	7008.1	4914.8	106.30
175	3.36929	4954.3	3450.7	96.40	245	2.41040	7037.7	4935.9	106.42
176	3.35002	4984.4	3472.1	96.58	246	2.40072	7067.3	4957.0	106.54
177	3.33099	5014.5	3493.6	96.75	247	2.39112	7096.8	4978.1	106.66
178	3.31217	5044.6	3515.0	96.92	248	2.38160	7126.4	4999.1	106.78
179	3.29358	5074.6	3536.4	97.08	249	2.37215	7155.9	5020.2	106.90
180	3.27521	5104.7	3557.8	97.25	250	2.36278	7185.5	5041.3	107.02
181	3.25704	5134.7	3579.2	97.42	251	2.35349	7215.0	5062.4	107.14
182	3.23909	5164.7	3600.6	97.58	252	2.34427	7244.6	5083.4	107.26
183	3.22133	5194.7	3621.9	97.75	253	2.33512	7274.1	5104.5	107.37
184	3.20378	5224.6	3643.3	97.91	254	2.32605	7303.6	5125.6	107.49
185	3.18643	5254.6	3664.7	98.07	255	2.31705	7333.1	5146.6	107.61
186	3.16927	5284.6	3686.0	98.23	256	2.30812	7362.7	5167.7	107.72
187	3.15231	5314.5	3707.3	98.40	257	2.29925	7392.2	5188.8	107.84
188	3.13553	5344.4	3728.7	98.55	258	2.29046	7421.7	5209.8	107.95
189	3.11893	5374.4	3750.0	98.71	259	2.28174	7451.2	5230.9	108.07
190	3.10252	5404.3	3771.3	98.87	260	2.27308	7480.8	5252.0	108.18
191	3.08628	5434.2	3792.6	99.03	261	2.26449	7510.3	5273.0	108.29
192	3.07022	5464.0	3813.9	99.18	262	2.25596	7539.8	5294.1	108.41
193	3.05433	5493.9	3835.2	99.34	263	2.24750	7569.3	5315.1	108.52
194	3.03861	5523.8	3856.5	99.49	264	2.23911	7598.8	5336.2	108.63
195	3.02306	5553.6	3877.8	99.65	265	2.23077	7628.3	5357.2	108.74
196	3.00767	5583.5	3899.0	99.80	266	2.22251	7657.8	5378.3	108.85
197	2.99244	5613.3	3920.3	99.95	267	2.21430	7687.3	5399.4	108.96
198	2.97737	5643.2	3941.6	100.10	268	2.20615	7716.8	5420.4	109.07
199	2.96245	5673.0	3962.8	100.25	269	2.19807	7746.3	5441.5	109.18
200	2.94769	5702.8	3984.1	100.40	270	2.19004	7775.8	5462.5	109.29
201	2.93308	5732.6	4005.3	100.55	271	2.18208	7805.3	5483.5	109.40
202	2.91862	5762.4	4026.5	100.70	272	2.17417	7834.8	5504.6	109.51
203	2.90430	5792.2	4047.8	100.85	273	2.16632	7864.3	5525.6	109.62
204	2.89013	5821.9	4069.0	100.99	274	2.15853	7893.7	5546.7	109.73
205	2.87610	5851.7	4090.2	101.14	275	2.15079	7923.2	5567.7	109.83
206	2.86222	5881.5	4111.4	101.28	276	2.14311	7952.7	5588.7	109.94
207	2.84846	5911.2	4132.6	101.43	277	2.13549	7982.2	5609.8	110.05
208	2.83485	5941.0	4153.9	101.57	278	2.12792	8011.6	5630.8	110.15
209	2.82136	5970.7	4175.1	101.71	279	2.12041	8041.1	5651.8	110.26
210	2.80801	6000.5	4196.3	101.86	280	2.11295	8070.6	5672.9	110.36
211	2.79479	6030.2	4217.4	102.00	281	2.10554	8100.0	5693.9	110.47
212	2.78169	6059.9	4238.6	102.14	282	2.09818	8129.5	5714.9	110.57
213	2.76872	6089.6	4259.8	102.28	283	2.09088	8159.0	5736.0	110.68
214	2.75588	6119.3	4281.0	102.42	284	2.08363	8188.5	5757.0	110.78
215	2.74315	6149.0	4302.2	102.55	285	2.07643	8217.9	5778.0	110.89
216	2.73055	6178.7	4323.3	102.69	286	2.06928	8247.4	5799.1	110.99
217	2.71806	6208.4	4344.5	102.83	287	2.06218	8276.8	5820.1	111.09
218	2.70569	6238.1	4365.7	102.97	288	2.05512	8306.3	5841.1	111.19
219	2.69344	6267.8	4386.8	103.10	289	2.04812	8335.8	5862.2	111.30
220	2.68130	6297.5	4408.0	103.24	290	2.04117	8365.2	5883.2	111.40
221	2.66927	6327.1	4429.1	103.37	291	2.03426	8394.6	5904.2	111.50
222	2.65735	6356.8	4450.3	103.51	292	2.02740	8424.1	5925.2	111.60
223	2.64554	6386.4	4471.4	103.64	293	2.02059	8453.5	5946.2	111.70
224	2.63384	6416.1	4492.6	103.77	294	2.01382	8483.0	5967.3	111.80
225	2.62224	6445.7	4513.7	103.90	295	2.00710	8512.4	5988.3	111.90
226	2.61075	6475.4	4534.8	104.03	296	2.00042	8541.9	6009.3	112.00
227	2.59936	6505.0	4556.0	104.17	297	1.99379	8571.3	6030.3	112.10
228	2.58807	6534.6	4577.1	104.30	298	1.98721	8600.8	6051.3	112.20
229	2.57688	6564.3	4598.2	104.43	299	1.98066	8630.2	6072.3	112.30
230	2.56579	6593.9	4619.3	104.55	300	1.97417	8659.6	6093.4	112.40

60.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
21	44.2468	-481.2	-618.6	19.75	91	8.20765	2249.1	1508.3	73.57
22	43.7749	-455.4	-594.3	20.95	92	8.09425	2285.4	1534.3	73.96
23	43.2836	-428.9	-569.4	22.13	93	7.98459	2321.5	1560.1	74.36
24	42.7778	-401.9	-544.0	23.28	94	7.87846	2357.4	1585.8	74.74
25	42.2602	-374.7	-518.5	24.39	95	7.77568	2393.2	1611.3	75.12
26	41.7316	-347.4	-493.1	25.46	96	7.67607	2428.7	1636.7	75.49
27	41.1921	-320.1	-467.7	26.50	97	7.57947	2464.1	1662.0	75.86
28	40.6411	-293.0	-442.6	27.48	98	7.48574	2499.4	1687.2	76.22
29	40.0775	-266.3	-418.0	28.42	99	7.39473	2534.4	1712.3	76.57
30	39.5001	-240.0	-393.9	29.32	100	7.30632	2569.3	1737.2	76.93
31	38.9075	-213.8	-370.0	30.17	101	7.22037	2604.1	1762.1	77.27
32	38.2978	-188.0	-346.7	30.99	102	7.13678	2638.7	1786.8	77.61
33	37.6695	-162.4	-323.8	31.77	103	7.05544	2673.2	1811.5	77.95
34	37.0205	-137.0	-301.3	32.53	104	6.97625	2707.5	1836.0	78.28
35	36.3491	-111.4	-278.7	33.27	105	6.89912	2741.7	1860.5	78.61
36	35.6532	-85.1	-255.6	34.02	106	6.82396	2775.8	1884.9	78.93
37	34.9312	-57.0	-231.1	34.78	107	6.75068	2809.7	1909.1	79.25
38	34.1815	-24.4	-202.2	35.66	108	6.67921	2843.5	1933.3	79.56
39	33.4029	22.1	-159.9	36.86	109	6.60947	2877.2	1957.4	79.87
40	32.5950	68.3	-118.2	38.04	110	6.54139	2910.8	1981.4	80.18
41	31.7581	112.2	-79.2	39.12	111	6.47491	2944.3	2005.3	80.48
42	30.8938	154.7	-42.0	40.14	112	6.40997	2977.7	2029.2	80.78
43	30.0050	196.6	-6.0	41.13	113	6.34651	3010.9	2053.0	81.08
44	29.0960	238.4	29.4	42.08	114	6.28447	3044.1	2076.7	81.37
45	28.1724	280.3	64.5	43.03	115	6.22380	3077.1	2100.3	81.66
46	27.2411	322.6	99.4	43.96	116	6.16445	3110.1	2123.9	81.95
47	26.3089	365.5	134.4	44.88	117	6.10637	3143.0	2147.4	82.23
48	25.3829	408.9	169.4	45.80	118	6.04952	3175.8	2170.8	82.51
49	24.4694	453.0	204.5	46.71	119	5.99386	3208.4	2194.2	82.78
50	23.5737	497.7	239.8	47.61	120	5.93934	3241.1	2217.5	83.06
51	22.7003	543.0	275.2	48.51	121	5.88593	3273.6	2240.7	83.32
52	21.8528	588.9	310.7	49.40	122	5.83358	3306.0	2263.8	83.59
53	21.0340	635.4	346.4	50.29	123	5.78227	3338.4	2287.0	83.86
54	20.2462	682.4	382.1	51.16	124	5.73196	3370.7	2310.0	84.12
55	19.4911	729.7	417.8	52.03	125	5.68262	3402.9	2333.0	84.38
56	18.7702	777.4	453.5	52.89	126	5.63422	3435.0	2356.0	84.63
57	18.0845	825.2	489.1	53.74	127	5.58673	3467.1	2378.9	84.89
58	17.4345	873.1	524.4	54.57	128	5.54012	3499.1	2401.7	85.14
59	16.8201	921.0	559.6	55.39	129	5.49436	3531.0	2424.5	85.38
60	16.2411	968.7	594.4	56.19	130	5.44943	3562.9	2447.3	85.63
61	15.6965	1016.2	628.9	56.98	131	5.40531	3594.7	2470.0	85.87
62	15.1852	1063.4	663.0	57.75	132	5.36197	3626.4	2492.6	86.12
63	14.7055	1110.1	696.7	58.49	133	5.31939	3658.1	2515.2	86.36
64	14.2558	1156.4	729.9	59.22	134	5.27754	3689.7	2537.8	86.59
65	13.8343	1202.3	762.8	59.93	135	5.23641	3721.3	2560.3	86.83
66	13.4390	1247.6	795.2	60.63	136	5.19598	3752.8	2582.8	87.06
67	13.0681	1292.5	827.2	61.30	137	5.15622	3784.3	2605.3	87.29
68	12.7198	1336.8	858.8	61.96	138	5.11713	3815.8	2627.7	87.52
69	12.3924	1380.7	890.1	62.60	139	5.07867	3847.1	2650.1	87.75
70	12.0842	1424.0	920.9	63.22	140	5.04084	3878.5	2672.4	87.97
71	11.7937	1467.0	951.5	63.83	141	5.00362	3909.7	2694.7	88.19
72	11.5195	1509.6	981.8	64.42	142	4.96699	3941.0	2717.0	88.41
73	11.2603	1551.6	1011.7	65.00	143	4.93094	3972.1	2739.2	88.63
74	11.0149	1593.2	1041.3	65.57	144	4.89545	4003.3	2761.4	88.85
75	10.7823	1634.4	1070.5	66.12	145	4.86051	4034.4	2783.6	89.06
76	10.5615	1675.1	1099.5	66.66	146	4.82611	4065.4	2805.7	89.28
77	10.3515	1715.4	1128.1	67.19	147	4.79222	4096.5	2827.8	89.49
78	10.1517	1755.4	1156.5	67.71	148	4.75885	4127.5	2849.9	89.70
79	9.96115	1795.0	1184.7	68.21	149	4.72597	4158.4	2872.0	89.91
80	9.77926	1834.3	1212.6	68.71	150	4.69358	4189.3	2894.1	90.12
81	9.60541	1873.4	1240.4	69.19	151	4.66166	4220.2	2916.0	90.32
82	9.43905	1912.1	1268.0	69.67	152	4.63020	4251.0	2938.0	90.52
83	9.27966	1950.6	1295.5	70.13	153	4.59919	4281.8	2959.9	90.72
84	9.12680	1988.8	1322.7	70.59	154	4.56863	4312.6	2981.9	90.93
85	8.98002	2026.7	1349.7	71.04	155	4.53850	4343.3	3003.8	91.13
86	8.83895	2064.3	1376.5	71.48	156	4.50879	4374.0	3025.7	91.32
87	8.70323	2101.7	1403.2	71.91	157	4.47949	4404.7	3047.5	91.52
88	8.57253	2138.9	1429.7	72.34	158	4.45059	4435.4	3069.4	91.71
89	8.44654	2175.8	1456.1	72.75	159	4.42209	4466.0	3091.2	91.91
90	8.32500	2212.5	1482.3	73.16	160	4.39398	4496.6	3113.0	92.10

60.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	4.36624	4527.2	3134.8	92.29	231	3.04536	6627.8	4631.5	103.13
162	4.33887	4557.7	3156.5	92.48	232	3.03241	6657.5	4652.7	103.26
163	4.31187	4588.2	3178.3	92.67	233	3.01958	6687.2	4673.8	103.39
164	4.28522	4618.7	3200.0	92.85	234	3.00685	6716.9	4695.0	103.51
165	4.25891	4649.2	3221.7	93.04	235	2.99424	6746.5	4716.1	103.64
166	4.23295	4679.6	3243.4	93.22	236	2.98173	6776.2	4737.3	103.77
167	4.20731	4710.0	3265.1	93.40	237	2.96934	6805.9	4758.4	103.89
168	4.18201	4740.4	3286.7	93.59	238	2.95704	6835.5	4779.6	104.02
169	4.15702	4770.8	3308.4	93.77	239	2.94485	6865.2	4900.7	104.14
170	4.13235	4801.2	3330.0	93.95	240	2.93276	6894.8	4821.9	104.27
171	4.10798	4831.5	3351.6	94.12	241	2.92078	6924.5	4843.0	104.39
172	4.08392	4861.8	3373.2	94.30	242	2.90889	6954.1	4864.1	104.51
173	4.06014	4892.1	3394.8	94.47	243	2.89710	6983.8	4885.3	104.63
174	4.03666	4922.4	3416.3	94.65	244	2.88541	7013.4	4906.4	104.76
175	4.01347	4952.7	3437.9	94.82	245	2.87382	7043.0	4927.5	104.88
176	3.99055	4982.9	3459.4	94.99	246	2.86232	7072.6	4948.7	105.00
177	3.96790	5013.1	3481.0	95.17	247	2.85091	7102.3	4969.8	105.12
178	3.94553	5043.3	3502.5	95.34	248	2.83960	7131.9	4990.9	105.24
179	3.92341	5073.5	3524.0	95.51	249	2.82838	7161.5	5012.0	105.36
180	3.90156	5103.7	3545.5	95.67	250	2.81725	7191.1	5033.1	105.48
181	3.87995	5133.9	3567.0	95.84	251	2.80620	7220.7	5054.2	105.59
182	3.85860	5164.0	3588.4	96.01	252	2.79525	7250.3	5075.4	105.71
183	3.83749	5194.1	3609.9	96.17	253	2.78438	7279.9	5096.5	105.83
184	3.81662	5224.2	3631.3	96.34	254	2.77360	7309.5	5117.6	105.94
185	3.79599	5254.3	3652.8	96.50	255	2.76290	7339.1	5138.7	106.06
186	3.77559	5284.4	3674.2	96.66	256	2.75229	7368.7	5159.8	106.18
187	3.75542	5314.5	3695.6	96.82	257	2.74176	7398.3	5180.9	106.29
188	3.73547	5344.6	3717.1	96.98	258	2.73131	7427.8	5202.0	106.41
189	3.71574	5374.6	3738.5	97.14	259	2.72095	7457.4	5223.1	106.52
190	3.69622	5404.6	3759.9	97.30	260	2.71066	7487.0	5244.2	106.64
191	3.67692	5434.7	3781.2	97.46	261	2.70045	7516.5	5265.3	106.75
192	3.65783	5464.7	3802.6	97.62	262	2.69032	7546.1	5286.4	106.86
193	3.63894	5494.6	3824.0	97.77	263	2.68027	7575.7	5307.5	106.97
194	3.62026	5524.6	3845.3	97.93	264	2.67030	7605.3	5328.6	107.09
195	3.60177	5554.6	3866.7	98.08	265	2.66040	7634.8	5349.6	107.20
196	3.58348	5584.6	3888.0	98.23	266	2.65057	7664.4	5370.7	107.31
197	3.56538	5614.5	3909.4	98.39	267	2.64082	7693.9	5391.8	107.42
198	3.54746	5644.5	3930.7	98.54	268	2.63114	7723.5	5412.9	107.53
199	3.52974	5674.4	3952.0	98.69	269	2.62153	7753.0	5434.0	107.64
200	3.51220	5704.3	3973.3	98.84	270	2.61200	7782.6	5455.1	107.75
201	3.49483	5734.2	3994.6	98.99	271	2.60253	7812.1	5476.1	107.86
202	3.47765	5764.1	4015.9	99.14	272	2.59313	7841.7	5497.2	107.97
203	3.46064	5794.0	4037.2	99.28	273	2.58381	7871.2	5518.3	108.08
204	3.44380	5823.9	4058.5	99.43	274	2.57455	7900.7	5539.3	108.19
205	3.42713	5853.8	4079.8	99.58	275	2.56536	7930.3	5560.4	108.29
206	3.41062	5883.6	4101.1	99.72	276	2.55623	7959.8	5581.5	108.40
207	3.39428	5913.5	4122.4	99.87	277	2.54717	7989.3	5602.6	108.51
208	3.37810	5943.3	4143.6	100.01	278	2.53818	8018.8	5623.6	108.61
209	3.36208	5973.2	4164.9	100.15	279	2.52925	8048.4	5644.7	108.72
210	3.34621	6003.0	4186.2	100.30	280	2.52038	8077.9	5665.8	108.82
211	3.33050	6032.8	4207.4	100.44	281	2.51158	8107.4	5686.8	108.93
212	3.31494	6062.6	4228.7	100.58	282	2.50284	8136.9	5707.9	109.03
213	3.29953	6092.4	4249.9	100.72	283	2.49416	8166.4	5728.9	109.14
214	3.28427	6122.2	4271.1	100.86	284	2.48554	8195.9	5750.0	109.24
215	3.26915	6152.0	4292.4	101.00	285	2.47698	8225.4	5771.1	109.35
216	3.25417	6181.8	4313.6	101.14	286	2.46848	8255.0	5792.1	109.45
217	3.23934	6211.6	4334.8	101.27	287	2.46004	8284.5	5813.2	109.55
218	3.22464	6241.4	4356.0	101.41	288	2.45166	8314.0	5834.2	109.66
219	3.21008	6271.1	4377.3	101.55	289	2.44334	8343.5	5855.3	109.76
220	3.19566	6300.9	4398.5	101.68	290	2.43507	8373.0	5876.3	109.86
221	3.18137	6330.6	4419.6	101.82	291	2.42686	8402.4	5897.4	109.96
222	3.16721	6360.4	4440.9	101.95	292	2.41871	8431.9	5918.4	110.06
223	3.15317	6390.1	4462.1	102.08	293	2.41061	8461.4	5939.5	110.16
224	3.13927	6419.8	4483.3	102.22	294	2.40257	8490.9	5960.5	110.26
225	3.12549	6449.6	4504.4	102.35	295	2.39458	8520.4	5981.6	110.36
226	3.11184	6479.3	4525.6	102.48	296	2.38665	8549.9	6002.6	110.46
227	3.09830	6509.0	4546.8	102.61	297	2.37877	8579.4	6023.7	110.56
228	3.08489	6538.7	4568.0	102.74	298	2.37094	8608.9	6044.7	110.66
229	3.07160	6568.4	4589.2	102.87	299	2.36316	8638.3	6065.7	110.76
230	3.05842	6598.1	4610.3	103.00	300	2.35544	8667.8	6086.8	110.86

70.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
21	44.5810	-463.4	-622.5	19.52	91	9.54374	2215.9	1472.7	71.95
22	44.1118	-437.9	-598.7	20.70	92	9.40972	2253.1	1499.4	72.35
23	43.6254	-411.7	-574.3	21.86	93	9.28019	2290.1	1525.8	72.75
24	43.1272	-385.0	-549.5	23.00	94	9.15491	2326.9	1552.2	73.15
25	42.6198	-358.1	-524.5	24.10	95	9.03364	2363.5	1578.3	73.53
26	42.1042	-331.1	-499.6	25.16	96	8.91619	2399.9	1604.4	73.91
27	41.5806	-304.2	-474.8	26.18	97	8.80236	2436.0	1630.3	74.29
28	41.0484	-277.5	-450.3	27.15	98	8.69196	2472.0	1656.0	74.66
29	40.5069	-251.2	-426.3	28.07	99	8.58484	2507.8	1681.6	75.02
30	39.9550	-225.5	-403.0	28.95	100	8.48082	2543.5	1707.1	75.38
31	39.3915	-199.9	-379.9	29.78	101	8.37977	2578.9	1732.5	75.73
32	38.8153	-174.8	-357.5	30.58	102	8.28155	2614.2	1757.8	76.08
33	38.2249	-150.1	-335.6	31.34	103	8.18602	2649.4	1782.9	76.42
34	37.6190	-125.6	-314.2	32.07	104	8.09306	2684.3	1807.9	76.76
35	36.9965	-101.1	-292.8	32.78	105	8.00257	2719.2	1832.9	77.10
36	36.3559	-76.1	-271.2	33.49	106	7.91443	2753.8	1857.7	77.42
37	35.6962	-49.4	-248.1	34.21	107	7.82855	2788.4	1882.4	77.75
38	35.0165	-18.4	-221.0	35.04	108	7.74482	2822.8	1907.0	78.07
39	34.3161	26.2	-180.5	36.20	109	7.66317	2857.0	1931.5	78.38
40	33.5948	70.2	-140.9	37.32	110	7.58350	2891.2	1955.9	78.70
41	32.8529	111.8	-104.1	38.34	111	7.50574	2925.2	1980.2	79.00
42	32.0914	151.7	-69.3	39.30	112	7.42980	2959.1	2004.5	79.31
43	31.3120	190.7	-35.8	40.22	113	7.35563	2992.9	2028.6	79.61
44	30.5172	229.4	-3.0	41.11	114	7.28315	3026.5	2052.7	79.90
45	29.7103	268.1	29.4	41.98	115	7.21230	3060.1	2076.7	80.20
46	28.8953	307.1	61.6	42.84	116	7.14302	3093.5	2100.6	80.49
47	28.0764	346.6	93.9	43.69	117	7.07525	3126.8	2124.4	80.77
48	27.2582	386.6	126.4	44.53	118	7.00894	3160.1	2148.1	81.06
49	26.4452	427.3	159.1	45.37	119	6.94404	3193.2	2171.8	81.34
50	25.6414	468.6	192.0	46.21	120	6.88049	3226.2	2195.4	81.61
51	24.8503	510.6	225.1	47.04	121	6.81825	3259.2	2218.9	81.88
52	24.0751	553.2	258.5	47.87	122	6.75728	3292.0	2242.3	82.16
53	23.3181	596.4	292.2	48.69	123	6.69753	3324.8	2265.8	82.42
54	22.5814	640.2	326.1	49.51	124	6.63896	3357.5	2289.1	82.69
55	21.8665	684.6	360.2	50.32	125	6.58155	3390.1	2312.4	82.95
56	21.1748	729.4	394.5	51.13	126	6.52523	3422.6	2335.6	83.21
57	20.5072	774.8	428.9	51.93	127	6.47000	3455.0	2358.8	83.47
58	19.8646	820.4	463.3	52.73	128	6.41580	3487.3	2381.8	83.72
59	19.2476	866.3	497.8	53.51	129	6.36261	3519.6	2404.9	83.97
60	18.6565	912.4	532.2	54.29	130	6.31039	3551.9	2427.9	84.22
61	18.0916	958.6	566.5	55.05	131	6.25913	3584.0	2450.8	84.46
62	17.5527	1004.8	600.7	55.80	132	6.20878	3616.0	2473.7	84.71
63	17.0395	1051.0	634.7	56.54	133	6.15933	3648.0	2496.5	84.95
64	16.5517	1096.9	668.4	57.27	134	6.11074	3680.0	2519.3	85.19
65	16.0885	1142.8	702.0	57.98	135	6.06299	3711.9	2542.0	85.43
66	15.6490	1188.4	735.2	58.67	136	6.01607	3743.7	2564.7	85.66
67	15.2324	1233.7	768.1	59.35	137	5.96994	3775.5	2587.4	85.89
68	14.8375	1278.7	800.6	60.02	138	5.92458	3807.2	2610.0	86.13
69	14.4633	1323.3	832.9	60.67	139	5.87998	3838.8	2632.6	86.35
70	14.1087	1367.6	864.8	61.31	140	5.83610	3870.5	2655.1	86.58
71	13.7725	1411.6	896.6	61.93	141	5.79295	3902.0	2677.6	86.80
72	13.4535	1455.2	928.0	62.54	142	5.75048	3933.5	2700.0	87.03
73	13.1508	1498.4	959.1	63.14	143	5.70869	3964.9	2722.4	87.25
74	12.8633	1541.2	989.8	63.72	144	5.66756	3996.3	2744.8	87.47
75	12.5899	1583.5	1020.2	64.29	145	5.62707	4027.6	2767.2	87.68
76	12.3298	1625.5	1050.2	64.84	146	5.58721	4058.9	2789.5	87.90
77	12.0821	1667.0	1080.0	65.39	147	5.54796	4090.2	2811.8	88.11
78	11.8458	1708.2	1109.4	65.92	148	5.50930	4121.4	2834.0	88.32
79	11.6204	1749.0	1138.6	66.44	149	5.47122	4152.6	2856.2	88.53
80	11.4051	1789.5	1167.6	66.95	150	5.43371	4183.8	2878.4	88.74
81	11.1991	1829.7	1196.4	67.45	151	5.39676	4214.8	2900.6	88.95
82	11.0020	1869.7	1225.0	67.94	152	5.36034	4245.9	2922.7	89.15
83	10.8131	1909.3	1253.3	68.42	153	5.32445	4276.9	2944.8	89.36
84	10.6319	1948.6	1281.4	68.89	154	5.28907	4307.9	2966.8	89.56
85	10.4580	1987.5	1309.3	69.35	155	5.25420	4338.8	2988.9	89.76
86	10.2909	2026.3	1337.0	69.80	156	5.21982	4369.7	3010.9	89.96
87	10.1301	2064.7	1364.5	70.25	157	5.18592	4400.6	3032.9	90.15
88	9.97539	2102.9	1391.8	70.68	158	5.15249	4431.5	3054.9	90.35
89	9.82628	2140.8	1419.0	71.11	159	5.11952	4462.3	3076.9	90.55
90	9.68249	2178.4	1445.9	71.53	160	5.08699	4493.1	3098.8	90.74

70.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	5.05491	4523.8	3120.7	90.93	231	3.52906	6632.5	4622.7	101.82
162	5.02326	4554.5	3142.6	91.12	232	3.51412	6662.3	4644.0	101.94
163	4.99203	4585.2	3164.4	91.31	233	3.49930	6692.1	4665.2	102.07
164	4.96121	4615.9	3186.3	91.50	234	3.48461	6721.8	4686.4	102.20
165	4.93079	4646.5	3208.1	91.68	235	3.47004	6751.6	4707.6	102.33
166	4.90077	4677.2	3229.9	91.87	236	3.45560	6781.3	4728.8	102.45
167	4.87114	4707.7	3251.7	92.05	237	3.44129	6811.0	4750.0	102.58
168	4.84188	4738.3	3273.4	92.23	238	3.42709	6840.8	4771.2	102.70
169	4.81300	4768.9	3295.2	92.42	239	3.41302	6870.5	4792.3	102.83
170	4.78448	4799.4	3316.9	92.60	240	3.39906	6900.2	4813.5	102.95
171	4.75631	4829.9	3338.6	92.77	241	3.38522	6929.9	4834.7	103.08
172	4.72850	4860.3	3360.3	92.95	242	3.37149	6959.6	4855.9	103.20
173	4.70103	4890.8	3382.0	93.13	243	3.35788	6989.3	4877.1	103.32
174	4.67389	4921.2	3403.7	93.30	244	3.34438	7019.0	4898.2	103.44
175	4.64708	4951.6	3425.3	93.48	245	3.33100	7048.7	4919.4	103.56
176	4.62060	4982.0	3447.0	93.65	246	3.31772	7078.4	4940.6	103.69
177	4.59443	5012.4	3468.6	93.82	247	3.30455	7108.1	4961.7	103.81
178	4.56858	5042.7	3490.2	93.99	248	3.29148	7137.8	4982.9	103.93
179	4.54303	5073.1	3511.8	94.16	249	3.27852	7167.4	5004.0	104.05
180	4.51778	5103.4	3533.4	94.33	250	3.26567	7197.1	5025.2	104.16
181	4.49282	5133.7	3555.0	94.50	251	3.25292	7226.8	5046.3	104.28
182	4.46815	5163.9	3576.5	94.67	252	3.24027	7256.4	5067.5	104.40
183	4.44377	5194.2	3598.1	94.83	253	3.22772	7286.1	5088.6	104.52
184	4.41966	5224.4	3619.6	95.00	254	3.21527	7315.7	5109.8	104.63
185	4.39583	5254.7	3641.1	95.16	255	3.20292	7345.4	5130.9	104.75
186	4.37226	5284.9	3662.7	95.32	256	3.19066	7375.0	5152.1	104.87
187	4.34896	5315.1	3684.2	95.49	257	3.17851	7404.7	5173.2	104.98
188	4.32592	5345.3	3705.7	95.65	258	3.16644	7434.3	5194.3	105.10
189	4.30313	5375.4	3727.2	95.81	259	3.15447	7463.9	5215.5	105.21
190	4.28059	5405.6	3748.6	95.97	260	3.14259	7493.6	5236.6	105.33
191	4.25830	5435.7	3770.1	96.13	261	3.13080	7523.2	5257.7	105.44
192	4.23625	5465.8	3791.5	96.28	262	3.11910	7552.8	5278.9	105.55
193	4.21444	5495.9	3813.0	96.44	263	3.10749	7582.4	5300.0	105.67
194	4.19286	5526.0	3834.4	96.59	264	3.09597	7612.1	5321.1	105.78
195	4.17151	5556.1	3855.8	96.75	265	3.08454	7641.7	5342.2	105.89
196	4.15039	5586.2	3877.2	96.90	266	3.07319	7671.3	5363.3	106.00
197	4.12949	5616.2	3898.7	97.06	267	3.06193	7700.9	5384.5	106.11
198	4.10880	5646.3	3920.1	97.21	268	3.05075	7730.5	5405.6	106.22
199	4.08833	5676.3	3941.5	97.36	269	3.03965	7760.1	5426.7	106.33
200	4.06808	5706.4	3962.8	97.51	270	3.02864	7789.7	5447.8	106.44
201	4.04803	5736.4	3984.2	97.66	271	3.01770	7819.3	5468.9	106.55
202	4.02818	5766.4	4005.6	97.81	272	3.00685	7848.9	5490.0	106.66
203	4.00854	5796.4	4026.9	97.96	273	2.99608	7878.5	5511.1	106.77
204	3.98910	5826.3	4048.3	98.10	274	2.98538	7908.0	5532.2	106.88
205	3.96985	5856.3	4069.7	98.25	275	2.97477	7937.6	5553.3	106.99
206	3.95079	5886.3	4091.0	98.40	276	2.96423	7967.2	5574.4	107.09
207	3.93192	5916.2	4112.3	98.54	277	2.95376	7996.8	5595.5	107.20
208	3.91324	5946.2	4133.7	98.69	278	2.94337	8026.3	5616.6	107.31
209	3.89474	5976.1	4155.0	98.83	279	2.93306	8055.9	5637.7	107.41
210	3.87642	6006.0	4176.3	98.97	280	2.92282	8085.5	5658.8	107.52
211	3.85828	6035.9	4197.6	99.11	281	2.91265	8115.0	5679.9	107.63
212	3.84032	6065.8	4218.9	99.26	282	2.90255	8144.6	5701.0	107.73
213	3.82252	6095.7	4240.2	99.40	283	2.89252	8174.2	5722.1	107.84
214	3.80490	6125.6	4261.5	99.54	284	2.88257	8203.7	5743.2	107.94
215	3.78745	6155.5	4282.8	99.68	285	2.87268	8233.3	5764.2	108.04
216	3.77015	6185.4	4304.1	99.81	286	2.86286	8262.8	5785.3	108.15
217	3.75303	6215.2	4325.4	99.95	287	2.85312	8292.4	5806.4	108.25
218	3.73606	6245.1	4346.6	100.09	288	2.84343	8321.9	5827.5	108.35
219	3.71925	6274.9	4367.9	100.23	289	2.83382	8351.5	5848.6	108.46
220	3.70260	6304.8	4389.2	100.36	290	2.82427	8381.0	5869.7	108.56
221	3.68610	6334.6	4410.4	100.50	291	2.81479	8410.5	5890.7	108.66
222	3.66975	6364.4	4431.7	100.63	292	2.80537	8440.1	5911.8	108.76
223	3.65355	6394.2	4452.9	100.77	293	2.79601	8469.6	5932.9	108.86
224	3.63749	6424.1	4474.2	100.90	294	2.78672	8499.1	5954.0	108.96
225	3.62158	6453.9	4495.4	101.03	295	2.77749	8528.7	5975.0	109.06
226	3.60582	6483.7	4516.6	101.16	296	2.76832	8558.2	5996.1	109.16
227	3.59019	6513.5	4537.9	101.30	297	2.75922	8587.7	6017.2	109.26
228	3.57471	6543.2	4559.1	101.43	298	2.75017	8617.3	6038.2	109.36
229	3.55936	6573.0	4580.3	101.56	299	2.74118	8646.8	6059.3	109.46
230	3.54414	6602.8	4601.5	101.69	300	2.73226	8676.3	6080.4	109.56

80.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
21	44.9016	-445.6	-626.1	19.29	91	10.8451	2185.5	1438.1	70.52
22	44.4332	-420.5	-602.9	20.45	92	10.6917	2223.5	1465.4	70.93
23	43.9502	-394.5	-579.0	21.60	93	10.5435	2261.3	1492.5	71.34
24	43.4579	-368.1	-554.6	22.73	94	10.4001	2298.8	1519.4	71.74
25	42.9589	-341.4	-530.1	23.82	95	10.2613	2336.1	1546.2	72.14
26	42.4542	-314.7	-505.6	24.87	96	10.1269	2373.2	1572.8	72.53
27	41.9439	-288.1	-481.3	25.88	97	9.99665	2410.1	1599.2	72.91
28	41.4276	-261.8	-457.4	26.83	98	9.87033	2446.8	1625.5	73.29
29	40.9045	-235.8	-434.0	27.74	99	9.74778	2483.2	1651.7	73.66
30	40.3739	-210.5	-411.3	28.61	100	9.62880	2519.5	1677.7	74.02
31	39.8345	-185.4	-388.9	29.42	101	9.51324	2555.6	1703.5	74.38
32	39.2856	-160.9	-367.2	30.20	102	9.40094	2591.6	1729.3	74.73
33	38.7260	-136.9	-346.2	30.94	103	9.29174	2627.3	1754.9	75.08
34	38.1546	-113.2	-325.6	31.65	104	9.18551	2662.9	1780.4	75.43
35	37.5705	-89.5	-305.3	32.33	105	9.08213	2698.3	1805.8	75.77
36	36.9729	-65.4	-284.7	33.01	106	8.98146	2733.5	1831.0	76.10
37	36.3608	-39.9	-262.8	33.71	107	8.88338	2768.6	1856.1	76.43
38	35.7338	-10.1	-237.0	34.51	108	8.78780	2803.6	1881.2	76.75
39	35.0913	33.1	-197.9	35.63	109	8.69461	2838.3	1906.0	77.08
40	34.4332	75.6	-159.8	36.71	110	8.60371	2873.0	1930.9	77.39
41	33.7598	115.4	-124.7	37.69	111	8.51500	2907.5	1955.5	77.70
42	33.0717	153.5	-91.6	38.61	112	8.42841	2941.9	1980.2	78.01
43	32.3700	190.5	-59.9	39.47	113	8.34385	2976.2	2004.7	78.32
44	31.6562	227.0	-29.1	40.31	114	8.26124	3010.3	2029.1	78.62
45	30.9325	263.4	1.4	41.13	115	8.18050	3044.3	2053.4	78.91
46	30.2013	300.1	31.7	41.94	116	8.10157	3078.2	2077.6	79.21
47	29.4656	337.1	62.0	42.74	117	8.02439	3111.9	2101.8	79.50
48	28.7283	374.7	92.5	43.53	118	7.94888	3145.6	2125.8	79.78
49	27.9926	412.9	123.3	44.32	119	7.87500	3179.1	2149.8	80.07
50	27.2616	451.7	154.4	45.11	120	7.80267	3212.6	2173.7	80.35
51	26.5381	491.3	185.8	45.89	121	7.73185	3245.9	2197.5	80.62
52	25.8246	531.4	217.5	46.67	122	7.66249	3279.1	2221.2	80.90
53	25.1233	572.3	249.6	47.45	123	7.59453	3312.3	2244.9	81.17
54	24.4361	613.7	282.0	48.22	124	7.52794	3345.3	2268.5	81.44
55	23.7644	655.8	314.7	48.99	125	7.46266	3378.3	2292.1	81.70
56	23.1095	698.4	347.7	49.76	126	7.39865	3411.2	2315.6	81.96
57	22.4723	741.6	380.9	50.53	127	7.33588	3443.9	2339.0	82.22
58	21.8536	785.2	414.2	51.28	128	7.27430	3476.6	2362.3	82.48
59	21.2541	829.1	447.8	52.04	129	7.21387	3509.2	2385.6	82.73
60	20.6743	873.4	481.4	52.78	130	7.15457	3541.8	2408.8	82.98
61	20.1145	918.1	515.1	53.52	131	7.09635	3574.2	2431.9	83.23
62	19.5749	962.9	548.8	54.25	132	7.03918	3606.6	2455.0	83.48
63	19.0557	1007.9	582.5	54.97	133	6.98304	3638.9	2478.1	83.72
64	18.5568	1052.8	616.0	55.68	134	6.92790	3671.1	2501.1	83.96
65	18.0781	1097.9	649.6	56.37	135	6.87371	3703.3	2524.0	84.20
66	17.6193	1143.0	682.9	57.06	136	6.82047	3735.4	2546.9	84.44
67	17.1802	1187.9	716.1	57.74	137	6.76813	3767.5	2569.8	84.67
68	16.7601	1232.7	749.0	58.40	138	6.71668	3799.5	2592.6	84.91
69	16.3586	1277.3	781.8	59.05	139	6.66609	3831.4	2615.4	85.14
70	15.9751	1321.6	814.2	59.69	140	6.61634	3863.3	2638.1	85.37
71	15.6088	1366.0	846.7	60.32	141	6.56740	3895.1	2660.8	85.59
72	15.2590	1410.0	878.8	60.93	142	6.51926	3926.8	2683.4	85.81
73	14.9251	1453.6	910.5	61.53	143	6.47188	3958.5	2706.0	86.04
74	14.6062	1497.0	942.0	62.12	144	6.42526	3990.1	2728.5	86.26
75	14.3016	1540.0	973.2	62.70	145	6.37938	4021.7	2751.0	86.48
76	14.0106	1582.6	1004.0	63.26	146	6.33420	4053.2	2773.5	86.69
77	13.7324	1624.9	1034.6	63.82	147	6.28972	4084.7	2796.0	86.91
78	13.4664	1666.9	1064.9	64.36	148	6.24593	4116.2	2818.4	87.12
79	13.2117	1708.5	1094.9	64.89	149	6.20279	4147.6	2840.8	87.33
80	12.9679	1749.8	1124.7	65.41	150	6.16030	4179.0	2863.1	87.54
81	12.7343	1790.9	1154.4	65.92	151	6.11844	4210.2	2885.4	87.75
82	12.5102	1831.7	1183.8	66.42	152	6.07719	4241.5	2907.7	87.96
83	12.2952	1872.2	1212.9	66.91	153	6.03655	4272.7	2929.9	88.16
84	12.0888	1912.3	1241.8	67.39	154	5.99649	4303.9	2952.1	88.37
85	11.8904	1952.2	1270.5	67.87	155	5.95700	4335.0	2974.3	88.57
86	11.6995	1991.7	1298.9	68.33	156	5.91807	4366.1	2996.4	88.77
87	11.5158	2031.0	1327.1	68.78	157	5.87969	4397.2	3018.6	88.97
88	11.3389	2070.0	1355.1	69.23	158	5.84185	4428.3	3040.7	89.16
89	11.1684	2108.8	1383.0	69.67	159	5.80453	4459.3	3062.8	89.36
90	11.0039	2147.2	1410.6	70.10	160	5.76772	4490.2	3084.8	89.55

80.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	5.73141	4521.2	3106.9	89.74	231	4.00592	6637.7	4614.2	100.67
162	5.69558	4552.1	3128.9	89.94	232	3.98902	6667.5	4635.5	100.80
163	5.66024	4582.9	3150.8	90.13	233	3.97226	6697.4	4656.7	100.93
164	5.62536	4613.8	3172.8	90.31	234	3.95565	6727.2	4678.0	101.06
165	5.59095	4644.6	3194.7	90.50	235	3.93918	6757.0	4699.2	101.18
166	5.55698	4675.4	3216.6	90.69	236	3.92286	6786.8	4720.4	101.31
167	5.52345	4706.1	3238.5	90.87	237	3.90667	6816.6	4741.7	101.44
168	5.49035	4736.8	3260.4	91.06	238	3.89062	6846.4	4762.9	101.56
169	5.45767	4767.5	3282.3	91.24	239	3.87470	6876.2	4784.1	101.69
170	5.42541	4798.2	3304.1	91.42	240	3.85892	6906.0	4805.4	101.81
171	5.39355	4828.9	3325.9	91.60	241	3.84327	6935.7	4826.6	101.94
172	5.36208	4859.5	3347.7	91.78	242	3.82775	6965.5	4847.8	102.06
173	5.33101	4890.1	3369.5	91.95	243	3.81236	6995.3	4869.0	102.18
174	5.30032	4920.6	3391.3	92.13	244	3.79710	7025.0	4890.2	102.30
175	5.27000	4951.2	3413.0	92.31	245	3.78196	7054.8	4911.4	102.42
176	5.24004	4981.7	3434.8	92.48	246	3.76694	7084.5	4932.7	102.55
177	5.21045	5012.2	3456.5	92.65	247	3.75205	7114.3	4953.9	102.67
178	5.18121	5042.7	3478.2	92.82	248	3.73728	7144.0	4975.1	102.79
179	5.15231	5073.2	3499.9	93.00	249	3.72263	7173.7	4996.3	102.91
180	5.12376	5103.6	3521.6	93.17	250	3.70809	7203.5	5017.4	103.03
181	5.09553	5134.0	3543.2	93.33	251	3.69367	7233.2	5038.6	103.14
182	5.06764	5164.4	3564.9	93.50	252	3.67937	7262.9	5059.8	103.26
183	5.04006	5194.8	3586.5	93.67	253	3.66517	7292.6	5081.0	103.38
184	5.01280	5225.2	3608.1	93.83	254	3.65109	7322.3	5102.2	103.50
185	4.98585	5255.6	3629.8	94.00	255	3.63712	7352.0	5123.3	103.61
186	4.95921	5285.9	3651.4	94.16	256	3.62326	7381.7	5144.5	103.73
187	4.93286	5316.2	3672.9	94.32	257	3.60951	7411.4	5165.7	103.85
188	4.90681	5346.5	3694.5	94.49	258	3.59587	7441.1	5186.9	103.96
189	4.88104	5376.8	3716.1	94.65	259	3.58233	7470.8	5208.0	104.08
190	4.85556	5407.1	3737.6	94.81	260	3.56889	7500.5	5229.2	104.19
191	4.83035	5437.3	3759.2	94.96	261	3.55556	7530.2	5250.3	104.30
192	4.80542	5467.5	3780.7	95.12	262	3.54233	7559.8	5271.5	104.42
193	4.78076	5497.7	3802.2	95.28	263	3.52920	7589.5	5292.7	104.53
194	4.75637	5528.0	3823.7	95.44	264	3.51617	7619.2	5313.8	104.64
195	4.73223	5558.1	3845.2	95.59	265	3.50323	7648.9	5335.0	104.76
196	4.70835	5588.3	3866.7	95.74	266	3.49040	7678.5	5356.2	104.87
197	4.68471	5618.5	3888.2	95.90	267	3.47766	7708.2	5377.3	104.98
198	4.66133	5648.6	3909.6	96.05	268	3.46501	7737.8	5398.5	105.09
199	4.63819	5678.8	3931.1	96.20	269	3.45246	7767.5	5419.6	105.20
200	4.61529	5708.9	3952.6	96.35	270	3.44000	7797.1	5440.7	105.31
201	4.59262	5739.0	3974.0	96.50	271	3.42764	7826.8	5461.9	105.42
202	4.57019	5769.1	3995.4	96.65	272	3.41536	7856.4	5483.0	105.53
203	4.54798	5799.2	4016.9	96.80	273	3.40317	7886.0	5504.1	105.64
204	4.52600	5829.3	4038.3	96.95	274	3.39107	7915.7	5525.3	105.75
205	4.50424	5859.3	4059.7	97.10	275	3.37906	7945.3	5546.4	105.85
206	4.48269	5889.4	4081.1	97.24	276	3.36714	7974.9	5567.5	105.96
207	4.46136	5919.4	4102.5	97.39	277	3.35530	8004.5	5588.7	106.07
208	4.44024	5949.5	4123.9	97.53	278	3.34355	8034.2	5609.8	106.18
209	4.41933	5979.5	4145.3	97.68	279	3.33188	8063.8	5630.9	106.28
210	4.39862	6009.5	4166.7	97.82	280	3.32029	8093.4	5652.0	106.39
211	4.37811	6039.5	4188.0	97.96	281	3.30879	8123.0	5673.1	106.49
212	4.35780	6069.5	4209.4	98.11	282	3.29736	8152.6	5694.3	106.60
213	4.33769	6099.5	4230.7	98.25	283	3.28602	8182.2	5715.4	106.70
214	4.31777	6129.5	4252.1	98.39	284	3.27476	8211.8	5736.5	106.81
215	4.29803	6159.4	4273.4	98.53	285	3.26357	8241.4	5757.6	106.91
216	4.27848	6189.4	4294.8	98.67	286	3.25246	8271.0	5778.7	107.02
217	4.25912	6219.3	4316.1	98.80	287	3.24143	8300.6	5799.8	107.12
218	4.23994	6249.3	4337.4	98.94	288	3.23048	8330.2	5821.0	107.22
219	4.22094	6279.2	4358.8	99.08	289	3.21960	8359.8	5842.1	107.32
220	4.20211	6309.1	4380.1	99.21	290	3.20879	8389.3	5863.2	107.43
221	4.18345	6339.0	4401.4	99.35	291	3.19806	8418.9	5884.3	107.53
222	4.16497	6368.9	4422.7	99.49	292	3.18740	8448.5	5905.4	107.63
223	4.14665	6398.8	4444.0	99.62	293	3.17682	8478.1	5926.5	107.73
224	4.12850	6428.7	4465.3	99.75	294	3.16630	8507.6	5947.6	107.83
225	4.11052	6458.6	4486.6	99.89	295	3.15586	8537.2	5968.7	107.93
226	4.09269	6488.4	4507.8	100.02	296	3.14548	8566.8	5989.8	108.03
227	4.07503	6518.3	4529.1	100.15	297	3.13518	8596.3	6010.9	108.13
228	4.05752	6548.2	4550.4	100.28	298	3.12494	8625.9	6031.9	108.23
229	4.04017	6578.0	4571.7	100.41	299	3.11477	8655.5	6053.0	108.33
230	4.02297	6607.9	4592.9	100.54	300	3.10467	8685.0	6074.1	108.43

90.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
21	45.2086	-427.9	-629.6	19.06	91	12.1028	2158.2	1404.7	69.25
22	44.7400	-403.1	-606.9	20.21	92	11.9320	2196.9	1432.6	69.67
23	44.2591	-377.4	-583.4	21.35	93	11.7667	2235.3	1460.3	70.09
24	43.7715	-351.2	-559.5	22.46	94	11.6068	2273.4	1487.7	70.49
25	43.2794	-324.7	-535.4	23.55	95	11.4519	2311.4	1515.0	70.90
26	42.7840	-298.2	-511.4	24.59	96	11.3018	2349.1	1542.2	71.29
27	42.2851	-271.8	-487.5	25.59	97	11.1563	2386.5	1569.1	71.68
28	41.7823	-245.8	-464.1	26.53	98	11.0152	2423.8	1595.9	72.06
29	41.2750	-220.2	-441.1	27.43	99	10.8783	2460.8	1622.6	72.44
30	40.7624	-195.2	-418.9	28.29	100	10.7453	2497.7	1649.0	72.81
31	40.2434	-170.6	-397.2	29.09	101	10.6162	2534.4	1675.4	73.17
32	39.7174	-146.5	-376.1	29.85	102	10.4906	2570.9	1701.6	73.53
33	39.1832	-123.0	-355.7	30.57	103	10.3686	2607.2	1727.6	73.89
34	38.6402	-99.9	-335.9	31.26	104	10.2498	2643.3	1753.6	74.23
35	38.0875	-77.0	-316.4	31.93	105	10.1342	2679.2	1779.3	74.58
36	37.5243	-53.6	-296.7	32.59	106	10.0217	2715.0	1805.0	74.92
37	36.9502	-29.0	-275.8	33.26	107	9.91207	2750.5	1830.5	75.25
38	36.3645	-0.1	-250.9	34.03	108	9.80522	2786.0	1855.9	75.58
39	35.7671	42.0	-213.0	35.12	109	9.70104	2821.2	1881.2	75.91
40	35.1577	83.3	-176.1	36.18	110	9.59942	2856.4	1906.4	76.23
41	34.5365	121.9	-142.2	37.12	111	9.50027	2891.3	1931.4	76.54
42	33.9040	158.5	-110.5	38.00	112	9.40349	2926.2	1956.4	76.86
43	33.2608	194.0	-80.2	38.84	113	9.30898	2960.9	1981.3	77.16
44	32.6081	228.9	-50.8	39.64	114	9.21667	2995.4	2006.0	77.47
45	31.9472	263.6	-21.8	40.42	115	9.12646	3029.9	2030.6	77.77
46	31.2798	298.5	6.9	41.19	116	9.03828	3064.1	2055.2	78.07
47	30.6078	333.7	35.7	41.95	117	8.95205	3098.3	2079.6	78.36
48	29.9335	369.4	64.7	42.70	118	8.86771	3132.4	2104.0	78.65
49	29.2590	405.7	94.0	43.45	119	8.78519	3166.3	2128.3	78.94
50	28.5867	442.6	123.6	44.20	120	8.70442	3200.1	2152.5	79.22
51	27.9188	480.3	153.7	44.94	121	8.62534	3233.8	2176.5	79.50
52	27.2573	518.6	184.0	45.69	122	8.54790	3267.4	2200.5	79.78
53	26.6041	557.6	214.8	46.43	123	8.47203	3300.9	2224.5	80.05
54	25.9610	597.2	246.0	47.17	124	8.39770	3334.3	2248.4	80.32
55	25.3292	637.5	277.5	47.91	125	8.32484	3367.6	2272.2	80.59
56	24.7099	678.3	309.3	48.65	126	8.25341	3400.8	2295.9	80.85
57	24.1042	719.8	341.5	49.38	127	8.18336	3433.9	2319.6	81.11
58	23.5128	761.7	373.8	50.11	128	8.11465	3466.9	2343.1	81.37
59	22.9364	804.0	406.4	50.83	129	8.04724	3499.9	2366.6	81.63
60	22.3755	846.8	439.2	51.55	130	7.98108	3532.7	2390.1	81.88
61	21.8305	890.0	472.2	52.27	131	7.91615	3565.5	2413.5	82.13
62	21.3016	933.4	505.3	52.97	132	7.85240	3598.1	2436.8	82.38
63	20.7892	977.1	538.5	53.67	133	7.78979	3630.7	2460.0	82.63
64	20.2932	1020.9	571.6	54.36	134	7.72830	3663.2	2483.2	82.87
65	19.8139	1065.0	604.8	55.05	135	7.66789	3695.7	2506.4	83.11
66	19.3511	1109.2	637.9	55.72	136	7.60853	3728.1	2529.5	83.35
67	18.9048	1153.3	671.0	56.38	137	7.55019	3760.4	2552.6	83.59
68	18.4747	1197.5	703.9	57.04	138	7.49284	3792.6	2575.6	83.82
69	18.0607	1241.7	736.8	57.68	139	7.43646	3824.8	2598.5	84.05
70	17.6624	1285.7	769.4	58.32	140	7.38101	3857.0	2621.5	84.29
71	17.2795	1329.8	802.1	58.94	141	7.32648	3889.0	2644.3	84.51
72	16.9116	1373.7	834.5	59.55	142	7.27283	3921.0	2667.1	84.74
73	16.5582	1417.4	866.6	60.15	143	7.22005	3952.9	2689.8	84.96
74	16.2189	1460.8	898.6	60.75	144	7.16812	3984.7	2712.6	85.19
75	15.8930	1504.0	930.2	61.32	145	7.11700	4016.6	2735.2	85.41
76	15.5802	1546.9	961.6	61.89	146	7.06668	4048.3	2757.9	85.62
77	15.2799	1589.5	992.7	62.45	147	7.01714	4080.0	2780.5	85.84
78	14.9915	1631.9	1023.6	63.00	148	6.96836	4111.7	2803.1	86.05
79	14.7144	1674.0	1054.2	63.54	149	6.92032	4143.3	2825.6	86.27
80	14.4483	1715.8	1084.6	64.06	150	6.87300	4174.9	2848.1	86.48
81	14.1925	1757.4	1114.9	64.58	151	6.82638	4206.4	2870.5	86.69
82	13.9466	1798.8	1144.9	65.09	152	6.78046	4237.9	2892.9	86.90
83	13.7100	1839.8	1174.7	65.58	153	6.73520	4269.3	2915.3	87.10
84	13.4823	1880.6	1204.2	66.07	154	6.69060	4300.6	2937.6	87.31
85	13.2631	1921.1	1233.5	66.55	155	6.64664	4332.0	2960.0	87.51
86	13.0519	1961.2	1262.6	67.02	156	6.60331	4363.3	2982.3	87.71
87	12.8483	2001.2	1291.4	67.48	157	6.56058	4394.5	3004.5	87.91
88	12.6520	2040.8	1320.0	67.94	158	6.51846	4425.8	3026.8	88.11
89	12.4625	2080.2	1348.5	68.38	159	6.47691	4456.9	3049.0	88.30
90	12.2796	2119.3	1376.7	68.82	160	6.43594	4488.1	3071.2	88.50

90.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	6.39553	4519.2	3093.3	88.69	231	4.47595	6643.2	4605.8	99.66
162	6.35566	4550.2	3115.4	88.89	232	4.45714	6673.1	4627.1	99.79
163	6.31632	4581.3	3137.5	89.08	233	4.43850	6703.0	4648.4	99.92
164	6.27751	4612.3	3159.6	89.27	234	4.42002	6732.9	4669.7	100.05
165	6.23921	4643.2	3181.6	89.46	235	4.40170	6762.8	4691.0	100.17
166	6.20141	4674.2	3203.7	89.64	236	4.38353	6792.7	4712.3	100.30
167	6.16410	4705.1	3225.7	89.83	237	4.36552	6822.5	4733.6	100.43
168	6.12727	4736.0	3247.7	90.01	238	4.34766	6852.4	4754.9	100.55
169	6.09091	4766.8	3269.6	90.20	239	4.32995	6882.2	4776.1	100.68
170	6.05501	4797.7	3291.6	90.38	240	4.31239	6912.1	4797.4	100.80
171	6.01956	4828.4	3313.5	90.56	241	4.29498	6941.9	4818.7	100.93
172	5.98456	4859.2	3335.4	90.74	242	4.27771	6971.7	4839.9	101.05
173	5.94998	4889.9	3357.3	90.91	243	4.26058	7001.6	4861.2	101.17
174	5.91583	4920.6	3379.2	91.09	244	4.24359	7031.4	4882.4	101.30
175	5.88210	4951.3	3401.0	91.27	245	4.22675	7061.2	4903.7	101.42
176	5.84878	4982.0	3422.8	91.44	246	4.21004	7091.0	4924.9	101.54
177	5.81586	5012.6	3444.7	91.62	247	4.19346	7120.8	4946.2	101.66
178	5.78333	5043.3	3466.5	91.79	248	4.17702	7150.6	4967.4	101.78
179	5.75118	5073.9	3488.2	91.96	249	4.16072	7180.4	4988.6	101.90
180	5.71941	5104.4	3510.0	92.13	250	4.14454	7210.2	5009.9	102.02
181	5.68802	5135.0	3531.8	92.30	251	4.12849	7239.9	5031.1	102.14
182	5.65699	5165.5	3553.5	92.47	252	4.11257	7269.7	5052.3	102.26
183	5.62631	5196.0	3575.2	92.63	253	4.09677	7299.5	5073.5	102.37
184	5.59599	5226.5	3596.9	92.80	254	4.08110	7329.3	5094.7	102.49
185	5.56601	5257.0	3618.6	92.97	255	4.06556	7359.0	5116.0	102.61
186	5.53637	5287.4	3640.3	93.13	256	4.05013	7388.8	5137.2	102.73
187	5.50707	5317.9	3661.9	93.29	257	4.03482	7418.5	5158.4	102.84
188	5.47808	5348.3	3683.6	93.46	258	4.01964	7448.3	5179.6	102.96
189	5.44942	5378.7	3705.2	93.62	259	4.00457	7478.0	5200.8	103.07
190	5.42108	5409.1	3726.9	93.78	260	3.98961	7507.7	5222.0	103.19
191	5.39304	5439.4	3748.5	93.94	261	3.97477	7537.4	5243.2	103.30
192	5.36531	5469.7	3770.1	94.10	262	3.96004	7567.2	5264.4	103.41
193	5.33788	5500.1	3791.7	94.25	263	3.94543	7596.9	5285.6	103.53
194	5.31074	5530.4	3813.2	94.41	264	3.93092	7626.6	5306.8	103.64
195	5.28390	5560.7	3834.8	94.57	265	3.91652	7656.4	5327.9	103.75
196	5.25733	5590.9	3856.4	94.72	266	3.90223	7686.1	5349.1	103.86
197	5.23105	5621.2	3877.9	94.87	267	3.88805	7715.8	5370.3	103.98
198	5.20504	5651.5	3899.5	95.03	268	3.87397	7745.5	5391.5	104.09
199	5.17930	5681.7	3921.0	95.18	269	3.86000	7775.2	5412.7	104.20
200	5.15382	5711.9	3942.5	95.33	270	3.84613	7804.9	5433.8	104.31
201	5.12861	5742.1	3964.0	95.48	271	3.83236	7834.5	5455.0	104.42
202	5.10366	5772.3	3985.5	95.63	272	3.81870	7864.2	5476.2	104.53
203	5.07896	5802.5	4007.0	95.78	273	3.80513	7893.9	5497.3	104.64
204	5.05450	5832.7	4028.5	95.93	274	3.79166	7923.6	5518.5	104.74
205	5.03030	5862.8	4050.0	96.08	275	3.77829	7953.3	5539.7	104.85
206	5.00633	5893.0	4071.4	96.22	276	3.76501	7982.9	5560.8	104.96
207	4.98261	5923.1	4092.9	96.37	277	3.75183	8012.6	5582.0	105.07
208	4.95911	5953.2	4114.4	96.51	278	3.73874	8042.3	5603.1	105.17
209	4.93585	5983.3	4135.8	96.66	279	3.72575	8071.9	5624.3	105.28
210	4.91282	6013.5	4157.2	96.80	280	3.71285	8101.6	5645.4	105.39
211	4.89000	6043.5	4178.7	96.95	281	3.70004	8131.2	5666.6	105.49
212	4.86741	6073.6	4200.1	97.09	282	3.68732	8160.9	5687.7	105.60
213	4.84504	6103.7	4221.5	97.23	283	3.67469	8190.5	5708.9	105.70
214	4.82287	6133.7	4242.9	97.37	284	3.66214	8220.2	5730.0	105.81
215	4.80092	6163.8	4264.3	97.51	285	3.64969	8249.8	5751.2	105.91
216	4.77918	6193.8	4285.7	97.65	286	3.63732	8279.4	5772.3	106.02
217	4.75764	6223.8	4307.1	97.79	287	3.62503	8309.1	5793.4	106.12
218	4.73630	6253.8	4328.5	97.93	288	3.61283	8338.7	5814.6	106.22
219	4.71516	6283.9	4349.8	98.06	289	3.60072	8368.3	5835.7	106.32
220	4.69421	6313.9	4371.2	98.20	290	3.58869	8397.9	5856.8	106.43
221	4.67346	6343.8	4392.5	98.34	291	3.57673	8427.6	5878.0	106.53
222	4.65290	6373.8	4413.9	98.47	292	3.56486	8457.2	5899.1	106.63
223	4.63252	6403.8	4435.3	98.61	293	3.55307	8486.8	5920.2	106.73
224	4.61233	6433.7	4456.6	98.74	294	3.54136	8516.4	5941.3	106.83
225	4.59232	6463.7	4477.9	98.87	295	3.52973	8546.0	5962.5	106.93
226	4.57249	6493.6	4499.3	99.01	296	3.51818	8575.6	5983.6	107.03
227	4.55284	6523.6	4520.6	99.14	297	3.50670	8605.2	6004.7	107.13
228	4.53336	6553.5	4541.9	99.27	298	3.49530	8634.8	6025.8	107.23
229	4.51405	6583.4	4563.2	99.40	299	3.48397	8664.4	6046.9	107.33
230	4.49492	6613.3	4584.5	99.53	300	3.47272	8694.0	6068.1	107.43

100.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
					91	13.3098	2134.2	1372.9	68.11
22	45.0329	-385.8	-610.8	19.97	92	13.1237	2173.4	1401.3	68.54
23	44.5534	-360.3	-587.7	21.10	93	12.9435	2212.3	1429.4	68.96
24	44.0695	-334.2	-564.2	22.21	94	12.7690	2250.9	1457.4	69.37
25	43.5833	-308.0	-540.4	23.28	95	12.5998	2289.4	1485.2	69.78
26	43.0958	-281.6	-516.8	24.32	96	12.4358	2327.5	1512.8	70.18
27	42.6067	-255.5	-493.3	25.31	97	12.2766	2365.5	1540.2	70.57
28	42.1157	-229.7	-470.3	26.25	98	12.1221	2403.3	1567.4	70.96
29	41.6221	-204.3	-447.8	27.13	99	11.9722	2440.8	1594.5	71.34
30	41.1249	-179.7	-426.1	27.98	100	11.8264	2478.2	1621.4	71.71
31	40.6235	-155.4	-404.8	28.77	101	11.6848	2515.3	1648.1	72.08
32	40.1169	-131.7	-384.3	29.52	102	11.5471	2552.3	1674.8	72.45
33	39.6043	-108.6	-364.5	30.23	103	11.4132	2589.0	1701.2	72.81
34	39.0851	-86.0	-345.3	30.90	104	11.2828	2625.6	1727.6	73.16
35	38.5585	-63.6	-326.4	31.55	105	11.1559	2662.0	1753.7	73.51
36	38.0239	-41.0	-307.4	32.19	106	11.0323	2698.2	1779.8	73.85
37	37.4808	-17.0	-287.3	32.85	107	10.9119	2734.2	1805.7	74.19
38	36.9288	11.1	-263.3	33.60	108	10.7945	2770.1	1831.4	74.52
39	36.3676	52.3	-226.3	34.67	109	10.6800	2805.8	1857.1	74.85
40	35.7971	92.7	-190.3	35.70	110	10.5684	2841.4	1882.6	75.18
41	35.2174	130.2	-157.5	36.62	111	10.4594	2876.7	1908.0	75.50
42	34.6288	165.8	-126.8	37.47	112	10.3530	2912.0	1933.3	75.81
43	34.0317	200.1	-97.7	38.28	113	10.2491	2947.1	1958.4	76.13
44	33.4270	233.7	-69.4	39.05	114	10.1476	2982.0	1983.5	76.43
45	32.8154	267.1	-41.7	39.80	115	10.0485	3016.8	2008.5	76.74
46	32.1983	300.6	-14.1	40.54	116	9.95156	3051.5	2033.3	77.04
47	31.5771	334.4	13.5	41.27	117	9.85675	3086.0	2058.1	77.33
48	30.9532	368.6	41.3	41.99	118	9.76402	3120.5	2082.7	77.63
49	30.3283	403.4	69.3	42.71	119	9.67328	3154.7	2107.3	77.92
50	29.7042	438.9	97.8	43.43	120	9.58448	3188.9	2131.7	78.20
51	29.0827	475.0	126.6	44.14	121	9.49753	3222.9	2156.1	78.48
52	28.4652	511.8	155.8	44.86	122	9.41238	3256.8	2180.3	78.76
53	27.8536	549.3	185.5	45.57	123	9.32897	3290.7	2204.6	79.04
54	27.2491	587.5	215.6	46.29	124	9.24724	3324.4	2228.7	79.31
55	26.6531	626.3	246.1	47.00	125	9.16713	3358.1	2252.7	79.58
56	26.0666	665.7	277.0	47.71	126	9.08860	3391.6	2276.7	79.85
57	25.4907	705.7	308.3	48.42	127	9.01159	3425.0	2300.6	80.11
58	24.9261	746.3	339.8	49.12	128	8.93605	3458.3	2324.4	80.38
59	24.3734	787.3	371.6	49.82	129	8.86194	3491.5	2348.1	80.63
60	23.8333	828.7	403.6	50.52	130	8.78922	3524.7	2371.8	80.89
61	23.3061	870.7	435.9	51.21	131	8.71784	3557.7	2395.4	81.14
62	22.7922	912.9	468.3	51.90	132	8.64776	3590.6	2418.9	81.39
63	22.2919	955.5	500.9	52.58	133	8.57895	3623.5	2442.4	81.64
64	21.8052	998.2	533.5	53.26	134	8.51136	3656.3	2465.8	81.89
65	21.3324	1041.3	566.3	53.92	135	8.44497	3689.0	2489.1	82.13
66	20.8735	1084.5	599.1	54.58	136	8.37973	3721.6	2512.4	82.37
67	20.4286	1127.9	631.9	55.23	137	8.31561	3754.2	2535.7	82.61
68	19.9975	1171.3	664.6	55.88	138	8.25259	3786.7	2558.9	82.85
69	19.5803	1214.8	697.3	56.51	139	8.19063	3819.1	2582.0	83.08
70	19.1767	1258.3	729.9	57.14	140	8.12970	3851.5	2605.1	83.31
71	18.7866	1301.9	762.6	57.76	141	8.06978	3883.7	2628.1	83.54
72	18.4098	1345.4	795.1	58.36	142	8.01083	3916.0	2651.1	83.77
73	18.0460	1388.8	827.4	58.96	143	7.95284	3948.1	2674.0	84.00
74	17.6948	1432.1	859.5	59.55	144	7.89577	3980.2	2696.9	84.22
75	17.3561	1475.1	891.3	60.13	145	7.83961	4012.2	2719.7	84.44
76	17.0294	1518.0	923.0	60.70	146	7.78433	4044.2	2742.5	84.66
77	16.7143	1560.7	954.5	61.25	147	7.72990	4076.1	2765.3	84.88
78	16.4106	1603.1	985.7	61.80	148	7.67631	4108.0	2788.0	85.09
79	16.1177	1645.4	1016.7	62.34	149	7.62354	4139.8	2810.7	85.31
80	15.8353	1687.4	1047.5	62.87	150	7.57156	4171.6	2833.4	85.52
81	15.5630	1729.3	1078.2	63.39	151	7.52036	4203.3	2855.9	85.73
82	15.3004	1770.9	1108.7	63.90	152	7.46991	4234.9	2878.5	85.94
83	15.0470	1812.3	1138.9	64.40	153	7.42020	4266.5	2901.0	86.15
84	14.8026	1853.5	1169.0	64.90	154	7.37121	4298.1	2923.5	86.35
85	14.5666	1894.3	1198.7	65.38	155	7.32293	4329.6	2945.9	86.56
86	14.3388	1934.9	1228.3	65.86	156	7.27533	4361.1	2968.4	86.76
87	14.1188	1975.3	1257.6	66.32	157	7.22841	4392.5	2990.8	86.96
88	13.9062	2015.4	1286.8	66.78	158	7.18214	4423.9	3013.1	87.16
89	13.7007	2055.2	1315.7	67.23	159	7.13652	4455.3	3035.5	87.36
90	13.5020	2094.8	1344.4	67.67	160	7.09152	4486.6	3057.8	87.55

100.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	7.04714	4517.8	3080.0	87.75	231	4.93919	6649.1	4597.7	98.75
162	7.00336	4549.1	3102.3	87.94	232	4.91853	6679.1	4619.0	98.88
163	6.96016	4580.3	3124.5	88.13	233	4.89805	6709.1	4640.4	99.01
164	6.91754	4611.4	3146.7	88.32	234	4.87775	6739.0	4661.7	99.14
165	6.87548	4642.5	3168.8	88.51	235	4.85762	6768.9	4683.0	99.27
166	6.83397	4673.6	3191.0	88.70	236	4.83766	6798.9	4704.4	99.40
167	6.79300	4704.7	3213.1	88.89	237	4.81787	6828.8	4725.7	99.52
168	6.75256	4735.7	3235.2	89.07	238	4.79825	6858.7	4747.0	99.65
169	6.71263	4766.7	3257.3	89.26	239	4.77880	6888.6	4768.3	99.77
170	6.67321	4797.7	3279.3	89.44	240	4.75950	6918.5	4789.6	99.90
171	6.63429	4828.6	3301.3	89.62	241	4.74037	6948.4	4810.9	100.02
172	6.59585	4859.5	3323.3	89.80	242	4.72139	6978.3	4832.2	100.15
173	6.55789	4890.4	3345.3	89.98	243	4.70257	7008.2	4853.5	100.27
174	6.52039	4921.2	3367.3	90.16	244	4.68391	7038.1	4874.8	100.39
175	6.48335	4952.1	3389.2	90.33	245	4.66540	7067.9	4896.1	100.51
176	6.44676	4982.9	3411.1	90.51	246	4.64704	7097.8	4917.4	100.64
177	6.41061	5013.6	3433.0	90.68	247	4.62883	7127.7	4938.7	100.76
178	6.37490	5044.4	3454.9	90.86	248	4.61076	7157.5	4959.9	100.88
179	6.33960	5075.1	3476.8	91.03	249	4.59284	7187.4	4981.2	101.00
180	6.30472	5105.8	3498.7	91.20	250	4.57506	7217.2	5002.5	101.12
181	6.27025	5136.5	3520.5	91.37	251	4.55743	7247.0	5023.7	101.24
182	6.23618	5167.1	3542.3	91.54	252	4.53993	7276.9	5045.0	101.35
183	6.20250	5197.7	3564.1	91.71	253	4.52257	7306.7	5066.3	101.47
184	6.16920	5228.3	3585.9	91.87	254	4.50535	7336.5	5087.5	101.59
185	6.13629	5258.9	3607.7	92.04	255	4.48826	7366.3	5108.8	101.71
186	6.10374	5289.5	3629.4	92.20	256	4.47131	7396.1	5130.0	101.82
187	6.07156	5320.0	3651.2	92.37	257	4.45449	7425.9	5151.2	101.94
188	6.03974	5350.5	3672.9	92.53	258	4.43779	7455.7	5172.5	102.06
189	6.00827	5381.1	3694.6	92.69	259	4.42123	7485.5	5193.7	102.17
190	5.97715	5411.5	3716.3	92.85	260	4.40479	7515.3	5214.9	102.29
191	5.94637	5442.0	3738.0	93.01	261	4.38848	7545.0	5236.2	102.40
192	5.91592	5472.4	3759.7	93.17	262	4.37229	7574.8	5257.4	102.51
193	5.88580	5502.9	3781.4	93.33	263	4.35623	7604.6	5278.6	102.63
194	5.85600	5533.3	3803.0	93.49	264	4.34028	7634.4	5299.9	102.74
195	5.82652	5563.7	3824.6	93.64	265	4.32445	7664.1	5321.1	102.85
196	5.79735	5594.1	3846.3	93.80	266	4.30875	7693.9	5342.3	102.97
197	5.76849	5624.4	3867.9	93.95	267	4.29316	7723.7	5363.5	103.08
198	5.73993	5654.8	3889.5	94.11	268	4.27768	7753.4	5384.7	103.19
199	5.71167	5685.1	3911.1	94.26	269	4.26232	7783.1	5405.9	103.30
200	5.68369	5715.4	3932.7	94.41	270	4.24707	7812.9	5427.1	103.41
201	5.65601	5745.7	3954.3	94.56	271	4.23194	7842.6	5448.3	103.52
202	5.62861	5776.0	3975.8	94.71	272	4.21691	7872.3	5469.5	103.63
203	5.60148	5806.3	3997.4	94.86	273	4.20199	7902.1	5490.7	103.74
204	5.57463	5836.5	4018.9	95.01	274	4.18719	7931.8	5511.9	103.85
205	5.54805	5866.8	4040.5	95.16	275	4.17248	7961.5	5533.1	103.95
206	5.52173	5897.0	4062.0	95.31	276	4.15789	7991.2	5554.3	104.06
207	5.49568	5927.2	4083.5	95.45	277	4.14339	8020.9	5575.5	104.17
208	5.46988	5957.4	4105.0	95.60	278	4.12901	8050.6	5596.6	104.28
209	5.44433	5987.6	4126.5	95.74	279	4.11472	8080.3	5617.8	104.38
210	5.41903	6017.8	4148.0	95.89	280	4.10053	8110.0	5639.0	104.49
211	5.39398	6048.0	4169.5	96.03	281	4.08645	8139.7	5660.2	104.60
212	5.36917	6078.1	4191.0	96.17	282	4.07246	8169.4	5681.4	104.70
213	5.34459	6108.3	4212.4	96.32	283	4.05857	8199.1	5702.5	104.81
214	5.32026	6138.4	4233.9	96.46	284	4.04478	8228.8	5723.7	104.91
215	5.29615	6168.5	4255.4	96.60	285	4.03108	8258.5	5744.9	105.02
216	5.27227	6198.6	4276.8	96.74	286	4.01748	8288.1	5766.0	105.12
217	5.24861	6228.7	4298.2	96.88	287	4.00397	8317.8	5787.2	105.22
218	5.22517	6258.8	4319.7	97.01	288	3.99055	8347.5	5808.4	105.33
219	5.20195	6288.9	4341.1	97.15	289	3.97723	8377.1	5829.5	105.43
220	5.17895	6319.0	4362.5	97.29	290	3.96400	8406.8	5850.7	105.53
221	5.15615	6349.0	4383.9	97.43	291	3.95085	8436.5	5871.8	105.63
222	5.13357	6379.1	4405.3	97.56	292	3.93780	8466.1	5893.0	105.74
223	5.11119	6409.1	4426.7	97.70	293	3.92483	8495.8	5914.1	105.84
224	5.08901	6439.2	4448.1	97.83	294	3.91195	8525.4	5935.3	105.94
225	5.06703	6469.2	4469.5	97.96	295	3.89916	8555.1	5956.4	106.04
226	5.04525	6499.2	4490.9	98.10	296	3.88645	8584.7	5977.6	106.14
227	5.02366	6529.2	4512.3	98.23	297	3.87382	8614.3	5998.7	106.24
228	5.00226	6559.2	4533.6	98.36	298	3.86128	8644.0	6019.9	106.34
229	4.98105	6589.2	4555.0	98.49	299	3.84882	8673.6	6041.0	106.44
230	4.96003	6619.2	4576.3	98.62	300	3.83645	8703.2	6062.1	106.54

120.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
					120	11.2757	3170.3	2092.0	76.43
					121	11.1744	3204.9	2116.8	76.71
					122	11.0751	3239.4	2141.5	77.00
					123	10.9779	3273.8	2166.3	77.28
					124	10.8826	3308.1	2190.8	77.56
					125	10.7892	3342.3	2215.3	77.83
					126	10.6975	3376.4	2239.8	78.10
					127	10.6077	3410.3	2264.1	78.37
					128	10.5195	3444.1	2288.3	78.63
					129	10.4330	3477.9	2312.5	78.90
					130	10.3482	3511.6	2336.6	79.16
					131	10.2648	3545.1	2360.6	79.41
					132	10.1830	3578.5	2384.5	79.67
					133	10.1026	3611.9	2408.3	79.92
					134	10.0237	3645.1	2432.1	80.17
					135	9.94621	3678.3	2455.8	80.42
					136	9.87001	3711.4	2479.5	80.66
					137	9.79511	3744.4	2503.1	80.90
					138	9.72149	3777.4	2526.7	81.14
					139	9.64910	3810.3	2550.2	81.38
					140	9.57792	3843.1	2573.6	81.61
					141	9.50790	3875.8	2596.9	81.85
					142	9.43902	3908.4	2620.2	82.08
					143	9.37126	3940.9	2643.5	82.31
					144	9.30457	3973.4	2666.7	82.53
					145	9.23894	4005.9	2689.8	82.76
					146	9.17433	4038.2	2712.9	82.98
					147	9.11072	4070.6	2736.0	83.20
					148	9.04808	4102.8	2759.0	83.42
					149	8.98640	4135.0	2782.0	83.64
					150	8.92564	4167.1	2804.9	83.85
					151	8.86579	4199.2	2827.7	84.06
					152	8.80682	4231.2	2850.6	84.27
					153	8.74871	4263.1	2873.3	84.48
					154	8.69145	4295.0	2896.1	84.69
					155	8.63500	4326.9	2918.8	84.90
					156	8.57936	4358.7	2941.5	85.10
					157	8.52450	4390.5	2964.1	85.31
					158	8.47041	4422.2	2986.7	85.51
					159	8.41707	4453.9	3009.3	85.71
					160	8.36446	4485.5	3031.8	85.91

120.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	8.31257	4517.1	3054.3	86.10	231	5.84555	6662.0	4581.9	97.18
162	8.26138	4548.6	3076.8	86.30	232	5.82133	6692.1	4603.4	97.31
163	8.21087	4580.1	3099.2	86.49	233	5.79732	6722.1	4624.8	97.44
164	8.16103	4611.5	3121.6	86.68	234	5.77352	6752.2	4646.2	97.57
165	8.11185	4642.9	3144.0	86.87	235	5.74993	6782.3	4667.6	97.70
166	8.06331	4674.3	3166.4	87.06	236	5.72653	6812.3	4689.0	97.82
167	8.01540	4705.7	3188.7	87.25	237	5.70333	6842.4	4710.4	97.95
168	7.96811	4737.0	3211.0	87.44	238	5.68032	6872.4	4731.8	98.08
169	7.92142	4768.2	3233.3	87.62	239	5.65751	6902.4	4753.2	98.20
170	7.87532	4799.5	3255.5	87.81	240	5.63488	6932.4	4774.6	98.33
171	7.82980	4830.7	3277.7	87.99	241	5.61244	6962.4	4796.0	98.45
172	7.78484	4861.8	3299.9	88.17	242	5.59019	6992.4	4817.4	98.58
173	7.74044	4892.9	3322.1	88.35	243	5.56812	7022.4	4838.8	98.70
174	7.69659	4924.0	3344.2	88.53	244	5.54623	7052.4	4860.1	98.82
175	7.65327	4955.1	3366.4	88.71	245	5.52452	7082.4	4881.5	98.95
176	7.61047	4986.1	3388.5	88.89	246	5.50299	7112.4	4902.8	99.07
177	7.56819	5017.2	3410.6	89.06	247	5.48162	7142.3	4924.2	99.19
178	7.52641	5048.1	3432.6	89.24	248	5.46043	7172.3	4945.6	99.31
179	7.48512	5079.1	3454.7	89.41	249	5.43941	7202.2	4966.9	99.43
180	7.44432	5110.0	3476.7	89.58	250	5.41856	7232.2	4988.2	99.55
181	7.40399	5140.9	3498.7	89.76	251	5.39787	7262.1	5009.6	99.67
182	7.36413	5171.8	3520.7	89.93	252	5.37734	7292.0	5030.9	99.79
183	7.32473	5202.6	3542.7	90.09	253	5.35697	7322.0	5052.2	99.91
184	7.28578	5233.5	3564.6	90.26	254	5.33677	7351.9	5073.5	100.03
185	7.24727	5264.3	3586.5	90.43	255	5.31672	7381.8	5094.9	100.14
186	7.20919	5295.0	3608.4	90.59	256	5.29682	7411.7	5116.2	100.26
187	7.17154	5325.8	3630.3	90.76	257	5.27708	7441.6	5137.5	100.38
188	7.13430	5356.5	3652.2	90.92	258	5.25749	7471.5	5158.8	100.49
189	7.09748	5387.2	3674.1	91.09	259	5.23805	7501.4	5180.1	100.61
190	7.06106	5417.9	3696.0	91.25	260	5.21876	7531.2	5201.4	100.72
191	7.02504	5448.6	3717.8	91.41	261	5.19961	7561.1	5222.7	100.84
192	6.98941	5479.2	3739.6	91.57	262	5.18061	7591.0	5244.0	100.95
193	6.95416	5509.8	3761.4	91.73	263	5.16175	7620.8	5265.3	101.07
194	6.91928	5540.4	3783.2	91.89	264	5.14303	7650.7	5286.5	101.18
195	6.88478	5571.0	3805.0	92.04	265	5.12446	7680.6	5307.8	101.29
196	6.85064	5601.6	3826.7	92.20	266	5.10602	7710.4	5329.1	101.41
197	6.81686	5632.1	3848.5	92.36	267	5.08771	7740.2	5350.4	101.52
198	6.78343	5662.7	3870.2	92.51	268	5.06954	7770.1	5371.6	101.63
199	6.75034	5693.2	3891.9	92.66	269	5.05151	7799.9	5392.9	101.74
200	6.71760	5723.7	3913.7	92.82	270	5.03361	7829.7	5414.2	101.85
201	6.68519	5754.2	3935.4	92.97	271	5.01583	7859.5	5435.4	101.96
202	6.65311	5784.6	3957.0	93.12	272	4.99819	7889.4	5456.7	102.07
203	6.62136	5815.1	3978.7	93.27	273	4.98067	7919.2	5477.9	102.18
204	6.58992	5845.5	4000.4	93.42	274	4.96328	7949.0	5499.2	102.29
205	6.55880	5875.9	4022.0	93.57	275	4.94601	7978.8	5520.4	102.40
206	6.52798	5906.3	4043.7	93.72	276	4.92887	8008.6	5541.7	102.51
207	6.49747	5936.7	4065.3	93.86	277	4.91185	8038.4	5562.9	102.61
208	6.46726	5967.0	4087.0	94.01	278	4.89495	8068.1	5584.2	102.72
209	6.43735	5997.4	4108.6	94.16	279	4.87816	8097.9	5605.4	102.83
210	6.40772	6027.7	4130.2	94.30	280	4.86150	8127.7	5626.6	102.93
211	6.37839	6058.1	4151.8	94.44	281	4.84495	8157.5	5647.8	103.04
212	6.34933	6088.4	4173.4	94.59	282	4.82852	8187.2	5669.1	103.15
213	6.32055	6118.7	4194.9	94.73	283	4.81220	8217.0	5690.3	103.25
214	6.29204	6148.9	4216.5	94.87	284	4.79600	8246.8	5711.5	103.36
215	6.26380	6179.2	4238.1	95.01	285	4.77990	8276.5	5732.8	103.46
216	6.23583	6209.5	4259.6	95.15	286	4.76392	8306.3	5754.0	103.57
217	6.20811	6239.7	4281.2	95.29	287	4.74805	8336.0	5775.2	103.67
218	6.18066	6270.0	4302.7	95.43	288	4.73228	8365.8	5796.4	103.77
219	6.15346	6300.2	4324.2	95.57	289	4.71662	8395.5	5817.6	103.88
220	6.12651	6330.4	4345.7	95.71	290	4.70107	8425.2	5838.8	103.98
221	6.09980	6360.6	4367.2	95.85	291	4.68562	8455.0	5860.0	104.08
222	6.07334	6390.8	4388.7	95.98	292	4.67028	8484.7	5881.2	104.18
223	6.04711	6420.9	4410.2	96.12	293	4.65504	8514.4	5902.4	104.28
224	6.02113	6451.1	4431.7	96.25	294	4.63990	8544.1	5923.6	104.39
225	5.99537	6481.3	4453.2	96.39	295	4.62486	8573.9	5944.8	104.49
226	5.96984	6511.4	4474.7	96.52	296	4.60992	8603.6	5966.0	104.59
227	5.94455	6541.5	4496.1	96.65	297	4.59508	8633.3	5987.2	104.69
228	5.91947	6571.7	4517.6	96.79	298	4.58034	8663.0	6008.4	104.79
229	5.89461	6601.8	4539.1	96.92	299	4.56569	8692.7	6029.6	104.89
230	5.86997	6631.9	4560.5	97.05	300	4.55114	8722.4	6050.8	104.99

140.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
					120	12.8713	3156.7	2054.7	74.91
					121	12.7577	3191.8	2079.9	75.20
					122	12.6463	3226.8	2105.1	75.49
					123	12.5371	3261.7	2130.2	75.78
					124	12.4300	3296.4	2155.2	76.06
					125	12.3250	3331.1	2180.1	76.34
					126	12.2220	3365.6	2204.9	76.61
					127	12.1209	3399.9	2229.6	76.88
					128	12.0217	3434.2	2254.2	77.15
					129	11.9243	3468.4	2278.8	77.42
					130	11.8286	3502.5	2303.2	77.68
					131	11.7347	3536.4	2327.6	77.94
					132	11.6425	3570.3	2351.9	78.20
					133	11.5519	3604.0	2376.1	78.45
					134	11.4629	3637.7	2400.2	78.71
					135	11.3754	3671.3	2424.3	78.96
					136	11.2894	3704.8	2448.3	79.20
					137	11.2048	3738.2	2472.2	79.45
					138	11.1217	3771.5	2496.1	79.69
					139	11.0399	3804.8	2519.9	79.93
					140	10.9595	3838.0	2543.6	80.17
					141	10.8804	3871.0	2567.3	80.40
					142	10.8025	3904.0	2590.8	80.63
					143	10.7259	3936.9	2614.4	80.87
					144	10.6505	3969.8	2637.9	81.10
					145	10.5763	4002.5	2661.3	81.32
					146	10.5032	4035.3	2684.7	81.55
					147	10.4313	4067.9	2708.0	81.77
					148	10.3604	4100.5	2731.3	81.99
					149	10.2906	4133.0	2754.5	82.21
					150	10.2219	4165.5	2777.7	82.43
					151	10.1541	4197.8	2800.8	82.64
					152	10.0874	4230.2	2823.9	82.85
					153	10.0216	4262.4	2846.9	83.07
					154	9.95680	4294.6	2869.9	83.28
					155	9.89288	4326.8	2892.9	83.49
					156	9.82986	4358.9	2915.8	83.69
					157	9.76772	4391.0	2938.7	83.90
					158	9.70645	4423.0	2961.5	84.10
					159	9.64602	4454.9	2984.3	84.30
					160	9.58641	4486.8	3007.1	84.50

140.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	9.52760	4518.7	3029.8	84.70	231	6.72550	6676.1	4566.9	95.84
162	9.46959	4550.5	3052.5	84.90	232	6.69793	6706.3	4588.4	95.97
163	9.41234	4582.2	3075.1	85.09	233	6.67059	6736.5	4609.9	96.10
164	9.35585	4613.9	3097.7	85.29	234	6.64349	6766.7	4631.4	96.23
165	9.30010	4645.6	3120.3	85.48	235	6.61661	6796.8	4652.9	96.36
166	9.24507	4677.2	3142.9	85.67	236	6.58997	6827.0	4674.4	96.49
167	9.19075	4708.8	3165.4	85.86	237	6.56354	6857.2	4695.9	96.62
168	9.13712	4740.4	3187.9	86.05	238	6.53733	6887.3	4717.4	96.74
169	9.08418	4771.9	3210.3	86.23	239	6.51135	6917.4	4738.9	96.87
170	9.03189	4803.4	3232.8	86.42	240	6.48557	6947.6	4760.3	97.00
171	8.98026	4834.8	3255.2	86.60	241	6.46001	6977.6	4781.8	97.12
172	8.92927	4866.2	3277.6	86.79	242	6.43466	7007.8	4803.2	97.25
173	8.87890	4897.6	3299.9	86.97	243	6.40952	7037.9	4824.7	97.37
174	8.82915	4928.9	3322.2	87.15	244	6.38457	7068.0	4846.1	97.49
175	8.78000	4960.2	3344.5	87.33	245	6.35983	7098.0	4867.6	97.62
176	8.73144	4991.5	3366.8	87.51	246	6.33529	7128.1	4889.0	97.74
177	8.68346	5022.7	3389.1	87.68	247	6.31095	7158.2	4910.4	97.86
178	8.63605	5053.9	3411.3	87.86	248	6.28680	7188.2	4931.8	97.98
179	8.58919	5085.1	3433.5	88.03	249	6.26284	7218.3	4953.2	98.10
180	8.54288	5116.2	3455.7	88.21	250	6.23907	7248.3	4974.7	98.22
181	8.49711	5147.3	3477.9	88.38	251	6.21548	7278.3	4996.0	98.34
182	8.45186	5178.4	3500.0	88.55	252	6.19208	7308.4	5017.4	98.46
183	8.40713	5209.4	3522.1	88.72	253	6.16887	7338.4	5038.8	98.58
184	8.36291	5240.5	3544.2	88.89	254	6.14583	7368.4	5060.2	98.70
185	8.31919	5271.5	3566.3	89.06	255	6.12297	7398.4	5081.6	98.82
186	8.27595	5302.4	3588.4	89.23	256	6.10029	7428.4	5103.0	98.94
187	8.23320	5333.4	3610.4	89.39	257	6.07778	7458.3	5124.4	99.05
188	8.19092	5364.3	3632.4	89.56	258	6.05544	7488.3	5145.7	99.17
189	8.14910	5395.2	3654.5	89.72	259	6.03327	7518.3	5167.1	99.28
190	8.10773	5426.1	3676.5	89.88	260	6.01127	7548.3	5188.5	99.40
191	8.06682	5456.9	3698.4	90.05	261	5.98944	7578.2	5209.8	99.52
192	8.02634	5487.7	3720.4	90.21	262	5.96776	7608.2	5231.2	99.63
193	7.98630	5518.5	3742.3	90.37	263	5.94625	7638.1	5252.5	99.74
194	7.94668	5549.3	3764.2	90.53	264	5.92490	7668.1	5273.9	99.86
195	7.90748	5580.1	3786.1	90.68	265	5.90371	7698.0	5295.2	99.97
196	7.86869	5610.8	3808.0	90.84	266	5.88268	7727.9	5316.5	100.08
197	7.83030	5641.5	3829.9	91.00	267	5.86180	7757.9	5337.9	100.20
198	7.79232	5672.2	3851.8	91.15	268	5.84107	7787.8	5359.2	100.31
199	7.75472	5702.9	3873.6	91.31	269	5.82049	7817.7	5380.5	100.42
200	7.71751	5733.6	3895.5	91.46	270	5.80006	7847.6	5401.9	100.53
201	7.68067	5764.2	3917.3	91.61	271	5.77978	7877.5	5423.2	100.64
202	7.64421	5794.8	3939.1	91.77	272	5.75965	7907.4	5444.5	100.75
203	7.60811	5825.4	3960.9	91.92	273	5.73966	7937.3	5465.8	100.86
204	7.57237	5856.0	3982.7	92.07	274	5.71981	7967.2	5487.1	100.97
205	7.53699	5886.6	4004.4	92.22	275	5.70010	7997.0	5508.4	101.08
206	7.50196	5917.1	4026.2	92.37	276	5.68054	8026.9	5529.7	101.19
207	7.46727	5947.6	4048.0	92.51	277	5.66111	8056.8	5551.0	101.29
208	7.43292	5978.2	4069.7	92.66	278	5.64181	8086.6	5572.3	101.40
209	7.39890	6008.7	4091.4	92.81	279	5.62266	8116.5	5593.6	101.51
210	7.36521	6039.2	4113.1	92.95	280	5.60363	8146.3	5614.9	101.62
211	7.33185	6069.6	4134.8	93.10	281	5.58474	8176.2	5636.1	101.72
212	7.29880	6100.1	4156.5	93.24	282	5.56598	8206.0	5657.4	101.83
213	7.26606	6130.5	4178.2	93.38	283	5.54735	8235.9	5678.7	101.93
214	7.23364	6160.9	4199.9	93.53	284	5.52885	8265.7	5700.0	102.04
215	7.20152	6191.3	4221.5	93.67	285	5.51047	8295.5	5721.2	102.14
216	7.16969	6221.7	4243.2	93.81	286	5.49222	8325.3	5742.5	102.25
217	7.13816	6252.1	4264.8	93.95	287	5.47409	8355.2	5763.8	102.35
218	7.10693	6282.5	4286.5	94.09	288	5.45609	8385.0	5785.0	102.46
219	7.07598	6312.8	4308.1	94.23	289	5.43821	8414.8	5806.3	102.56
220	7.04531	6343.2	4329.7	94.37	290	5.42044	8444.6	5827.6	102.66
221	7.01492	6373.5	4351.3	94.50	291	5.40280	8474.4	5848.8	102.77
222	6.98481	6403.8	4372.9	94.64	292	5.38527	8504.2	5870.1	102.87
223	6.95496	6434.1	4394.5	94.78	293	5.36787	8534.0	5891.3	102.97
224	6.92538	6464.4	4416.1	94.91	294	5.35057	8563.8	5912.5	103.07
225	6.89607	6494.7	4437.6	95.05	295	5.33339	8593.5	5933.8	103.17
226	6.86701	6524.9	4459.2	95.18	296	5.31632	8623.3	5955.0	103.27
227	6.83821	6555.2	4480.8	95.32	297	5.29937	8653.1	5976.3	103.37
228	6.80967	6585.4	4502.3	95.45	298	5.28252	8682.9	5997.5	103.47
229	6.78137	6615.7	4523.8	95.58	299	5.26579	8712.6	6018.7	103.57
230	6.75331	6645.9	4545.4	95.71	300	5.24916	8742.4	6040.0	103.67

160.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
					120	14.3704	3148.1	2020.0	73.60
					121	14.2465	3183.5	2045.6	73.89
					122	14.1249	3218.8	2071.1	74.19
					123	14.0057	3254.1	2096.6	74.47
					124	13.8887	3289.2	2121.9	74.76
					125	13.7738	3324.2	2147.1	75.04
					126	13.6611	3359.0	2172.3	75.32
					127	13.5504	3393.7	2197.3	75.59
					128	13.4417	3428.3	2222.3	75.86
					129	13.3350	3462.9	2247.1	76.13
					130	13.2301	3497.3	2271.9	76.40
					131	13.1270	3531.6	2296.6	76.66
					132	13.0258	3565.8	2321.2	76.92
					133	12.9262	3599.9	2345.7	77.18
					134	12.8284	3633.9	2370.1	77.43
					135	12.7322	3667.8	2394.5	77.68
					136	12.6376	3701.6	2418.8	77.93
					137	12.5446	3735.3	2443.0	78.18
					138	12.4531	3769.0	2467.2	78.42
					139	12.3631	3802.6	2491.2	78.67
					140	12.2745	3836.0	2515.3	78.91
					141	12.1873	3869.4	2539.2	79.14
					142	12.1015	3902.7	2563.0	79.38
					143	12.0171	3935.9	2586.8	79.61
					144	11.9339	3969.1	2610.6	79.84
					145	11.8520	4002.1	2634.3	80.07
					146	11.7714	4035.2	2657.9	80.30
					147	11.6920	4068.1	2681.5	80.52
					148	11.6137	4101.0	2705.0	80.75
					149	11.5366	4133.8	2728.5	80.97
					150	11.4607	4166.5	2751.9	81.19
					151	11.3858	4199.2	2775.3	81.40
					152	11.3120	4231.7	2798.6	81.62
					153	11.2393	4264.3	2821.8	81.83
					154	11.1676	4296.7	2845.1	82.04
					155	11.0969	4329.2	2868.2	82.25
					156	11.0272	4361.5	2891.4	82.46
					157	10.9585	4393.8	2914.5	82.67
					158	10.8907	4426.1	2937.5	82.87
					159	10.8238	4458.3	2960.5	83.08
					160	10.7578	4490.5	2983.5	83.28

160.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	10.6927	4522.6	3006.4	83.48	231	7.57969	6691.4	4552.5	94.68
162	10.6285	4554.6	3029.3	83.68	232	7.54896	6721.7	4574.1	94.81
163	10.5651	4586.6	3052.1	83.87	233	7.51848	6752.0	4595.7	94.94
164	10.5025	4618.5	3074.9	84.07	234	7.48827	6782.3	4617.3	95.07
165	10.4408	4650.4	3097.7	84.26	235	7.45830	6812.6	4638.9	95.20
166	10.3798	4682.3	3120.4	84.45	236	7.42859	6842.8	4660.5	95.33
167	10.3196	4714.1	3143.1	84.65	237	7.39913	6873.1	4682.0	95.46
168	10.2602	4745.9	3165.8	84.84	238	7.36990	6903.3	4703.6	95.59
169	10.2015	4777.6	3188.5	85.02	239	7.34092	6933.6	4725.1	95.71
170	10.1435	4809.3	3211.1	85.21	240	7.31218	6963.8	4746.7	95.84
171	10.0863	4841.0	3233.7	85.40	241	7.28367	6994.0	4768.2	95.96
172	10.0298	4872.6	3256.2	85.58	242	7.25539	7024.2	4789.7	96.09
173	9.97394	4904.2	3278.7	85.76	243	7.22734	7054.4	4811.2	96.21
174	9.91876	4935.7	3301.2	85.95	244	7.19952	7084.6	4832.7	96.34
175	9.86424	4967.2	3323.7	86.13	245	7.17192	7114.7	4854.3	96.46
176	9.81037	4998.7	3346.1	86.31	246	7.14454	7144.9	4875.8	96.58
177	9.75714	5030.1	3368.5	86.48	247	7.11738	7175.1	4897.3	96.71
178	9.70452	5061.5	3390.9	86.66	248	7.09043	7205.2	4918.7	96.83
179	9.65252	5092.9	3413.3	86.84	249	7.06369	7235.3	4940.2	96.95
180	9.60113	5124.2	3435.6	87.01	250	7.03716	7265.5	4961.7	97.07
181	9.55032	5155.5	3458.0	87.18	251	7.01084	7295.6	4983.1	97.19
182	9.50009	5186.8	3480.2	87.36	252	6.98473	7325.7	5004.6	97.31
183	9.45043	5218.0	3502.5	87.53	253	6.95881	7355.8	5026.1	97.43
184	9.40132	5249.2	3524.8	87.70	254	6.93310	7385.9	5047.5	97.55
185	9.35277	5280.4	3547.0	87.87	255	6.90758	7416.0	5069.0	97.67
186	9.30475	5311.5	3569.2	88.03	256	6.88226	7446.0	5090.4	97.78
187	9.25727	5342.6	3591.4	88.20	257	6.85713	7476.1	5111.9	97.90
188	9.21030	5373.7	3613.5	88.37	258	6.83219	7506.2	5133.3	98.02
189	9.16384	5404.8	3635.7	88.53	259	6.80743	7536.2	5154.7	98.13
190	9.11788	5435.9	3657.8	88.70	260	6.78287	7566.3	5176.1	98.25
191	9.07242	5466.9	3679.9	88.86	261	6.75848	7596.3	5197.5	98.37
192	9.02744	5497.9	3702.0	89.02	262	6.73428	7626.4	5219.0	98.48
193	8.98294	5528.8	3724.1	89.18	263	6.71026	7656.4	5240.4	98.59
194	8.93891	5559.8	3746.1	89.34	264	6.68641	7686.4	5261.8	98.71
195	8.89534	5590.7	3768.1	89.50	265	6.66274	7716.4	5283.2	98.82
196	8.85222	5621.6	3790.2	89.66	266	6.63925	7746.4	5304.6	98.93
197	8.80954	5652.4	3812.2	89.82	267	6.61592	7776.4	5326.0	99.05
198	8.76731	5683.3	3834.2	89.97	268	6.59276	7806.4	5347.4	99.16
199	8.72550	5714.1	3856.1	90.13	269	6.56977	7836.4	5368.8	99.27
200	8.68412	5744.9	3878.1	90.28	270	6.54695	7866.4	5390.1	99.38
201	8.64316	5775.7	3900.0	90.43	271	6.52429	7896.4	5411.5	99.49
202	8.60260	5806.5	3921.9	90.59	272	6.50179	7926.3	5432.9	99.60
203	8.56245	5837.2	3943.9	90.74	273	6.47945	7956.3	5454.2	99.71
204	8.52270	5868.0	3965.7	90.89	274	6.45727	7986.2	5475.6	99.82
205	8.48334	5898.7	3987.6	91.04	275	6.43525	8016.2	5496.9	99.93
206	8.44436	5929.4	4009.5	91.19	276	6.41338	8046.1	5518.3	100.04
207	8.40577	5960.0	4031.4	91.34	277	6.39166	8076.1	5539.6	100.15
208	8.36754	5990.7	4053.2	91.49	278	6.37010	8106.0	5561.0	100.26
209	8.32969	6021.3	4075.0	91.63	279	6.34868	8135.9	5582.3	100.36
210	8.29219	6051.9	4096.9	91.78	280	6.32742	8165.8	5603.7	100.47
211	8.25506	6082.5	4118.7	91.92	281	6.30630	8195.7	5625.0	100.58
212	8.21827	6113.1	4140.4	92.07	282	6.28533	8225.7	5646.3	100.68
213	8.18183	6143.7	4162.2	92.21	283	6.26449	8255.6	5667.7	100.79
214	8.14573	6174.2	4184.0	92.36	284	6.24381	8285.5	5689.0	100.90
215	8.10997	6204.8	4205.8	92.50	285	6.22326	8315.4	5710.3	101.00
216	8.07454	6235.3	4227.5	92.64	286	6.20285	8345.3	5731.6	101.11
217	8.03943	6265.8	4249.2	92.78	287	6.18258	8375.1	5752.9	101.21
218	8.00465	6296.3	4271.0	92.92	288	6.16244	8405.0	5774.2	101.31
219	7.97018	6326.8	4292.7	93.06	289	6.14244	8434.9	5795.6	101.42
220	7.93602	6357.2	4314.4	93.20	290	6.12257	8464.8	5816.9	101.52
221	7.90217	6387.7	4336.1	93.34	291	6.10284	8494.6	5838.1	101.62
222	7.86863	6418.1	4357.8	93.47	292	6.08323	8524.5	5859.4	101.73
223	7.83538	6448.5	4379.4	93.61	293	6.06376	8554.3	5880.7	101.83
224	7.80243	6478.9	4401.1	93.75	294	6.04441	8584.2	5902.0	101.93
225	7.76977	6509.3	4422.8	93.88	295	6.02519	8614.0	5923.3	102.03
226	7.73740	6539.7	4444.4	94.02	296	6.00610	8643.9	5944.6	102.13
227	7.70531	6570.1	4466.1	94.15	297	5.98712	8673.7	5965.9	102.23
228	7.67349	6600.4	4487.7	94.29	298	5.96828	8703.5	5987.2	102.33
229	7.64196	6630.8	4509.3	94.42	299	5.94955	8733.3	6008.4	102.43
230	7.61069	6661.1	4530.9	94.55	300	5.93094	8763.2	6029.7	102.53

180.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
					120	15.7750	3144.0	1987.9	72.45
					121	15.6428	3179.7	2013.8	72.74
					122	15.5130	3215.3	2039.6	73.03
					123	15.3855	3250.8	2065.4	73.32
					124	15.2604	3286.1	2091.0	73.61
					125	15.1374	3321.4	2116.5	73.89
					126	15.0166	3356.5	2141.9	74.17
					127	14.8979	3391.5	2167.2	74.45
					128	14.7813	3426.3	2192.4	74.72
					129	14.6666	3461.1	2217.6	74.99
					130	14.5539	3495.8	2242.7	75.26
					131	14.4431	3530.4	2267.6	75.53
					132	14.3342	3564.8	2292.4	75.79
					133	14.2270	3599.2	2317.2	76.05
					134	14.1217	3633.4	2341.9	76.30
					135	14.0180	3667.6	2366.5	76.56
					136	13.9160	3701.7	2391.1	76.81
					137	13.8157	3735.7	2415.6	77.06
					138	13.7169	3769.6	2440.0	77.31
					139	13.6197	3803.4	2464.3	77.55
					140	13.5240	3837.2	2488.6	77.79
					141	13.4298	3870.8	2512.7	78.03
					142	13.3371	3904.3	2536.8	78.27
					143	13.2457	3937.8	2560.9	78.50
					144	13.1557	3971.2	2584.8	78.74
					145	13.0671	4004.5	2608.8	78.97
					146	12.9798	4037.8	2632.6	79.20
					147	12.8938	4071.0	2656.4	79.42
					148	12.8090	4104.1	2680.2	79.65
					149	12.7254	4137.1	2703.9	79.87
					150	12.6431	4170.1	2727.5	80.09
					151	12.5619	4203.0	2751.1	80.31
					152	12.4819	4235.8	2774.6	80.52
					153	12.4030	4268.6	2798.1	80.74
					154	12.3251	4301.3	2821.5	80.95
					155	12.2484	4333.9	2844.9	81.16
					156	12.1727	4366.5	2868.2	81.37
					157	12.0980	4399.0	2891.5	81.58
					158	12.0243	4431.5	2914.7	81.79
					159	11.9517	4463.9	2937.9	81.99
					160	11.8799	4496.3	2961.1	82.19

180.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	11.8091	4528.6	2984.2	82.40	231	8.40881	6707.8	4538.8	93.65
162	11.7393	4560.8	3007.2	82.60	232	8.37511	6738.2	4560.5	93.79
163	11.6703	4593.1	3030.2	82.79	233	8.34169	6768.6	4582.2	93.92
164	11.6022	4625.2	3053.2	82.99	234	8.30854	6799.0	4603.8	94.05
165	11.5350	4657.3	3076.2	83.19	235	8.27568	6829.4	4625.5	94.18
166	11.4687	4689.4	3099.1	83.38	236	8.24308	6859.7	4647.1	94.31
167	11.4031	4721.4	3122.0	83.57	237	8.21076	6890.1	4668.8	94.43
168	11.3384	4753.4	3144.8	83.76	238	8.17870	6920.4	4690.4	94.56
169	11.2745	4785.3	3167.6	83.95	239	8.14690	6950.7	4712.0	94.69
170	11.2114	4817.2	3190.4	84.14	240	8.11536	6981.0	4733.6	94.82
171	11.1490	4849.0	3213.2	84.33	241	8.08407	7011.3	4755.2	94.94
172	11.0874	4880.8	3235.9	84.51	242	8.05304	7041.6	4776.8	95.07
173	11.0265	4912.6	3258.5	84.70	243	8.02225	7071.9	4798.4	95.19
174	10.9664	4944.3	3281.2	84.88	244	7.99171	7102.2	4820.0	95.32
175	10.9069	4976.0	3303.8	85.06	245	7.96141	7132.4	4841.6	95.44
176	10.8482	5007.6	3326.4	85.24	246	7.93136	7162.7	4863.1	95.56
177	10.7902	5039.3	3349.0	85.42	247	7.90153	7192.9	4884.7	95.69
178	10.7328	5070.8	3371.5	85.60	248	7.87195	7223.2	4906.3	95.81
179	10.6761	5102.4	3394.0	85.78	249	7.84259	7253.4	4927.8	95.93
180	10.6200	5133.9	3416.5	85.95	250	7.81346	7283.6	4949.3	96.05
181	10.5645	5165.3	3439.0	86.12	251	7.78456	7313.8	4970.9	96.17
182	10.5097	5196.8	3461.4	86.30	252	7.75588	7344.0	4992.4	96.29
183	10.4555	5228.2	3483.8	86.47	253	7.72741	7374.2	5013.9	96.41
184	10.4019	5259.6	3506.2	86.64	254	7.69917	7404.3	5035.4	96.53
185	10.3489	5290.9	3528.5	86.81	255	7.67114	7434.5	5056.9	96.65
186	10.2965	5322.2	3550.9	86.98	256	7.64332	7464.6	5078.4	96.77
187	10.2446	5353.5	3573.2	87.15	257	7.61571	7494.8	5099.9	96.88
188	10.1933	5384.7	3595.5	87.31	258	7.58831	7524.9	5121.4	97.00
189	10.1426	5416.0	3617.8	87.48	259	7.56112	7555.1	5142.9	97.12
190	10.0924	5447.2	3640.0	87.64	260	7.53412	7585.2	5164.4	97.23
191	10.0427	5478.3	3662.3	87.81	261	7.50733	7615.3	5185.9	97.35
192	9.99363	5509.5	3684.5	87.97	262	7.48073	7645.4	5207.4	97.46
193	9.94500	5540.6	3706.6	88.13	263	7.45433	7675.5	5228.8	97.58
194	9.89688	5571.7	3728.8	88.29	264	7.42812	7705.6	5250.3	97.69
195	9.84925	5602.7	3751.0	88.45	265	7.40210	7735.7	5271.7	97.81
196	9.80211	5633.8	3773.1	88.61	266	7.37627	7765.8	5293.2	97.92
197	9.75546	5664.8	3795.2	88.77	267	7.35063	7795.9	5314.6	98.03
198	9.70928	5695.8	3817.3	88.93	268	7.32518	7825.9	5336.1	98.15
199	9.66357	5726.8	3839.4	89.08	269	7.29990	7856.0	5357.5	98.26
200	9.61831	5757.7	3861.5	89.24	270	7.27481	7886.0	5379.0	98.37
201	9.57351	5788.6	3883.5	89.39	271	7.24989	7916.1	5400.4	98.48
202	9.52915	5819.5	3905.6	89.54	272	7.22515	7946.1	5421.8	98.59
203	9.48523	5850.4	3927.6	89.70	273	7.20058	7976.1	5443.2	98.70
204	9.44174	5881.3	3949.6	89.85	274	7.17619	8006.2	5464.6	98.81
205	9.39868	5912.1	3971.6	90.00	275	7.15197	8036.2	5486.0	98.92
206	9.35603	5942.9	3993.5	90.15	276	7.12792	8066.2	5507.4	99.03
207	9.31379	5973.7	4015.5	90.30	277	7.10403	8096.2	5528.8	99.14
208	9.27196	6004.5	4037.4	90.45	278	7.08031	8126.2	5550.2	99.24
209	9.23052	6035.3	4059.4	90.59	279	7.05675	8156.2	5571.6	99.35
210	9.18948	6066.0	4081.3	90.74	280	7.03336	8186.2	5593.0	99.46
211	9.14882	6096.7	4103.2	90.89	281	7.01012	8216.1	5614.4	99.57
212	9.10855	6127.4	4125.1	91.03	282	6.98704	8246.1	5635.8	99.67
213	9.06865	6158.1	4147.0	91.18	283	6.96412	8276.1	5657.2	99.78
214	9.02912	6188.8	4168.8	91.32	284	6.94136	8306.0	5678.5	99.88
215	8.98995	6219.4	4190.7	91.46	285	6.91875	8336.0	5699.9	99.99
216	8.95114	6250.1	4212.5	91.61	286	6.89629	8365.9	5721.3	100.10
217	8.91269	6280.7	4234.4	91.75	287	6.87397	8395.9	5742.6	100.20
218	8.87459	6311.3	4256.2	91.89	288	6.85181	8425.8	5764.0	100.30
219	8.83683	6341.9	4278.0	92.03	289	6.82980	8455.8	5785.3	100.41
220	8.79940	6372.5	4299.8	92.17	290	6.80793	8485.7	5806.7	100.51
221	8.76232	6403.0	4321.5	92.31	291	6.78620	8515.6	5828.0	100.61
222	8.72556	6433.6	4343.3	92.44	292	6.76462	8545.5	5849.4	100.72
223	8.68912	6464.1	4365.1	92.58	293	6.74318	8575.4	5870.7	100.82
224	8.65301	6494.6	4386.8	92.72	294	6.72188	8605.3	5892.0	100.92
225	8.61721	6525.1	4408.6	92.85	295	6.70072	8635.2	5913.4	101.02
226	8.58172	6555.6	4430.3	92.99	296	6.67969	8665.1	5934.7	101.12
227	8.54654	6586.1	4452.0	93.12	297	6.65880	8695.0	5956.0	101.22
228	8.51167	6616.5	4473.7	93.26	298	6.63805	8724.9	5977.3	101.32
229	8.47709	6647.0	4495.5	93.39	299	6.61742	8754.8	5998.7	101.43
230	8.44281	6677.4	4517.1	93.52	300	6.59693	8784.7	6020.0	101.52

200.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
120	17.0898	3144.1	1958.3	71.42					
121	16.9511	3180.0	1984.5	71.72					
122	16.8147	3215.7	2010.5	72.01					
123	16.6806	3251.4	2036.5	72.30					
124	16.5488	3286.9	2062.4	72.59					
125	16.4193	3322.3	2088.1	72.87					
126	16.2919	3357.6	2113.8	73.15					
127	16.1666	3392.8	2139.3	73.43					
128	16.0434	3427.9	2164.7	73.71					
129	15.9223	3462.9	2190.1	73.98					
130	15.8031	3497.8	2215.4	74.25					
131	15.6858	3532.5	2240.6	74.52					
132	15.5705	3567.1	2265.6	74.78					
133	15.4569	3601.7	2290.6	75.04					
134	15.3452	3636.2	2315.6	75.30					
135	15.2352	3670.5	2340.4	75.55					
136	15.1270	3704.8	2365.2	75.81					
137	15.0204	3739.0	2389.9	76.06					
138	14.9154	3773.1	2414.5	76.31					
139	14.8120	3807.2	2439.0	76.55					
140	14.7103	3841.1	2463.5	76.79					
141	14.6100	3874.9	2487.9	77.04					
142	14.5112	3908.7	2512.2	77.27					
143	14.4139	3942.4	2536.4	77.51					
144	14.3180	3976.0	2560.6	77.74					
145	14.2235	4009.5	2584.7	77.98					
146	14.1303	4042.9	2608.8	78.21					
147	14.0385	4076.3	2632.8	78.43					
148	13.9480	4109.6	2656.8	78.66					
149	13.8588	4142.9	2680.6	78.88					
150	13.7708	4176.1	2704.5	79.11					
151	13.6841	4209.1	2728.2	79.33					
152	13.5985	4242.2	2751.9	79.54					
153	13.5141	4275.1	2775.6	79.76					
154	13.4309	4308.0	2799.2	79.97					
155	13.3487	4340.9	2822.7	80.19					
156	13.2677	4373.6	2846.2	80.40					
157	13.1877	4406.4	2869.7	80.61					
158	13.1088	4439.0	2893.1	80.81					
159	13.0310	4471.6	2916.5	81.02					
160	12.9541	4504.2	2939.8	81.22					

200.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	12.8782	4536.7	2963.1	81.43	231	9.21363	6725.2	4525.7	92.73
162	12.8033	4569.1	2986.3	81.63	232	9.17714	6755.7	4547.5	92.87
163	12.7293	4601.5	3009.5	81.83	233	9.14095	6786.2	4569.2	93.00
164	12.6563	4633.8	3032.7	82.02	234	9.10506	6816.7	4591.0	93.13
165	12.5842	4666.1	3055.8	82.22	235	9.06947	6847.1	4612.7	93.26
166	12.5130	4698.4	3078.8	82.41	236	9.03417	6877.6	4634.4	93.39
167	12.4426	4730.6	3101.9	82.61	237	8.99915	6908.0	4656.1	93.52
168	12.3731	4762.7	3124.9	82.80	238	8.96442	6938.4	4677.8	93.64
169	12.3045	4794.8	3147.9	82.99	239	8.92998	6968.8	4699.5	93.77
170	12.2367	4826.9	3170.8	83.18	240	8.89581	6999.2	4721.2	93.90
171	12.1697	4858.9	3193.7	83.37	241	8.86191	7029.6	4742.8	94.02
172	12.1034	4890.8	3216.5	83.55	242	8.82828	7060.0	4764.5	94.15
173	12.0380	4922.8	3239.3	83.74	243	8.79492	7090.3	4786.2	94.27
174	11.9734	4954.6	3262.1	83.92	244	8.76183	7120.7	4807.8	94.40
175	11.9094	4986.5	3284.9	84.11	245	8.72899	7151.0	4829.5	94.52
176	11.8463	5018.3	3307.6	84.29	246	8.69641	7181.4	4851.1	94.65
177	11.7838	5050.1	3330.3	84.47	247	8.66409	7211.7	4872.7	94.77
178	11.7221	5081.8	3353.0	84.65	248	8.63201	7242.0	4894.3	94.89
179	11.6611	5113.5	3375.7	84.82	249	8.60019	7272.3	4916.0	95.01
180	11.6007	5145.2	3398.3	85.00	250	8.56861	7302.6	4937.6	95.14
181	11.5410	5176.8	3420.9	85.17	251	8.53727	7332.8	4959.1	95.26
182	11.4820	5208.4	3443.4	85.35	252	8.50617	7363.1	4980.7	95.38
183	11.4237	5239.9	3466.0	85.52	253	8.47530	7393.4	5002.3	95.50
184	11.3659	5271.4	3488.5	85.69	254	8.44467	7423.6	5023.9	95.62
185	11.3089	5302.9	3511.0	85.86	255	8.41427	7453.9	5045.5	95.74
186	11.2524	5334.4	3533.4	86.03	256	8.38410	7484.1	5067.0	95.85
187	11.1965	5365.8	3555.9	86.20	257	8.35415	7514.3	5088.6	95.97
188	11.1412	5397.2	3578.3	86.37	258	8.32443	7544.5	5110.1	96.09
189	11.0865	5428.6	3600.7	86.54	259	8.29492	7574.7	5131.7	96.21
190	11.0324	5459.9	3623.1	86.70	260	8.26563	7604.9	5153.2	96.32
191	10.9789	5491.2	3645.4	86.87	261	8.23656	7635.1	5174.7	96.44
192	10.9259	5522.5	3667.7	87.03	262	8.20770	7665.3	5196.3	96.55
193	10.8735	5553.7	3690.0	87.19	263	8.17905	7695.5	5217.8	96.67
194	10.8216	5584.9	3712.3	87.35	264	8.15061	7725.6	5239.3	96.78
195	10.7702	5616.1	3734.6	87.51	265	8.12237	7755.8	5260.8	96.90
196	10.7194	5647.3	3756.8	87.67	266	8.09434	7785.9	5282.3	97.01
197	10.6690	5678.5	3779.0	87.83	267	8.06651	7816.1	5303.8	97.12
198	10.6192	5709.6	3801.3	87.99	268	8.03887	7846.2	5325.3	97.24
199	10.5699	5740.7	3823.4	88.15	269	8.01143	7876.3	5346.8	97.35
200	10.5210	5771.8	3845.6	88.30	270	7.98419	7906.5	5368.3	97.46
201	10.4727	5802.8	3867.8	88.46	271	7.95714	7936.6	5389.8	97.57
202	10.4248	5833.8	3889.9	88.61	272	7.93027	7966.7	5411.3	97.68
203	10.3774	5864.8	3912.0	88.76	273	7.90360	7996.8	5432.7	97.79
204	10.3304	5895.8	3934.1	88.91	274	7.87711	8026.8	5454.2	97.90
205	10.2839	5926.8	3956.2	89.07	275	7.85080	8056.9	5475.7	98.01
206	10.2378	5957.7	3978.3	89.22	276	7.82468	8087.0	5497.1	98.12
207	10.1922	5988.6	4000.4	89.37	277	7.79874	8117.1	5518.6	98.23
208	10.1470	6019.5	4022.4	89.52	278	7.77297	8147.1	5540.0	98.34
209	10.1023	6050.4	4044.4	89.66	279	7.74738	8177.2	5561.4	98.45
210	10.0579	6081.3	4066.4	89.81	280	7.72197	8207.2	5582.9	98.55
211	10.0140	6112.1	4088.4	89.96	281	7.69672	8237.2	5604.3	98.66
212	9.97051	6142.9	4110.4	90.10	282	7.67165	8267.3	5625.7	98.77
213	9.92739	6173.7	4132.4	90.25	283	7.64675	8297.3	5647.2	98.87
214	9.88466	6204.5	4154.3	90.39	284	7.62201	8327.3	5668.6	98.98
215	9.84232	6235.2	4176.3	90.54	285	7.59744	8357.3	5690.0	99.08
216	9.80037	6266.0	4198.2	90.68	286	7.57303	8387.3	5711.4	99.19
217	9.75879	6296.7	4220.1	90.82	287	7.54878	8417.3	5732.8	99.29
218	9.71759	6327.4	4242.0	90.96	288	7.52469	8447.3	5754.2	99.40
219	9.67675	6358.1	4263.9	91.10	289	7.50077	8477.3	5775.6	99.50
220	9.63628	6388.8	4285.8	91.24	290	7.47700	8507.3	5797.0	99.61
221	9.59617	6419.4	4307.6	91.38	291	7.45338	8537.3	5818.4	99.71
222	9.55640	6450.1	4329.5	91.52	292	7.42992	8567.3	5839.8	99.81
223	9.51699	6480.7	4351.4	91.66	293	7.40661	8597.2	5861.2	99.92
224	9.47792	6511.3	4373.2	91.79	294	7.38345	8627.2	5882.5	100.02
225	9.43918	6541.9	4395.0	91.93	295	7.36044	8657.1	5903.9	100.12
226	9.40078	6572.5	4416.8	92.07	296	7.33758	8687.1	5925.3	100.22
227	9.36271	6603.1	4438.6	92.20	297	7.31486	8717.0	5946.7	100.32
228	9.32496	6633.6	4460.4	92.33	298	7.29229	8747.0	5968.0	100.42
229	9.28754	6664.2	4482.2	92.47	299	7.26986	8776.9	5989.4	100.52
230	9.25043	6694.7	4504.0	92.60	300	7.24757	8806.8	6010.7	100.62

220.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
120	18.3209	3147.9	1931.2	70.50					
121	18.1770	3183.9	1957.5	70.79					
122	18.0354	3219.7	1983.7	71.09					
123	17.8961	3255.5	2009.9	71.38					
124	17.7591	3291.1	2035.9	71.67					
125	17.6243	3326.7	2061.9	71.96					
126	17.4916	3362.1	2087.7	72.24					
127	17.3610	3397.4	2113.4	72.52					
128	17.2326	3432.6	2139.1	72.79					
129	17.1061	3467.8	2164.6	73.07					
130	16.9816	3502.8	2190.1	73.34					
131	16.8590	3537.7	2215.4	73.60					
132	16.7383	3572.5	2240.7	73.87					
133	16.6195	3607.2	2265.9	74.13					
134	16.5024	3641.8	2291.0	74.39					
135	16.3872	3676.3	2316.0	74.65					
136	16.2736	3710.8	2341.0	74.90					
137	16.1618	3745.1	2365.9	75.15					
138	16.0516	3779.4	2390.7	75.40					
139	15.9430	3813.6	2415.4	75.65					
140	15.8360	3847.7	2440.1	75.89					
141	15.7306	3881.7	2464.6	76.14					
142	15.6266	3915.6	2489.1	76.37					
143	15.5242	3949.4	2513.5	76.61					
144	15.4232	3983.2	2537.9	76.85					
145	15.3236	4016.9	2562.2	77.08					
146	15.2255	4050.5	2586.4	77.31					
147	15.1287	4084.0	2610.6	77.54					
148	15.0332	4117.5	2634.7	77.77					
149	14.9390	4150.9	2658.8	77.99					
150	14.8461	4184.3	2682.8	78.22					
151	14.7545	4217.5	2706.7	78.44					
152	14.6641	4250.7	2730.6	78.66					
153	14.5749	4283.8	2754.4	78.87					
154	14.4868	4316.9	2778.1	79.09					
155	14.4000	4349.9	2801.8	79.30					
156	14.3142	4382.8	2825.5	79.51					
157	14.2296	4415.7	2849.1	79.72					
158	14.1460	4448.5	2872.7	79.93					
159	14.0636	4481.3	2896.2	80.14					
160	13.9821	4514.0	2919.7	80.34					

220.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	13.9017	4546.6	2943.1	80.55	231	9.99491	6743.5	4513.2	91.90
162	13.8223	4579.2	2966.5	80.75	232	9.95581	6774.1	4535.1	92.03
163	13.7439	4611.8	2989.9	80.95	233	9.91703	6804.7	4556.9	92.16
164	13.6664	4644.3	3013.2	81.15	234	9.87857	6835.2	4578.7	92.29
165	13.5899	4676.7	3036.4	81.35	235	9.84043	6865.8	4600.5	92.42
166	13.5143	4709.1	3059.6	81.54	236	9.80259	6896.3	4622.3	92.55
167	13.4397	4741.4	3082.8	81.74	237	9.76506	6926.8	4644.0	92.68
168	13.3659	4773.7	3106.0	81.93	238	9.72783	6957.3	4665.8	92.81
169	13.2930	4806.0	3129.1	82.12	239	9.69089	6987.8	4687.6	92.94
170	13.2209	4838.2	3152.1	82.31	240	9.65425	7018.3	4709.3	93.07
171	13.1497	4870.4	3175.2	82.50	241	9.61791	7048.7	4731.0	93.19
172	13.0794	4902.5	3198.1	82.69	242	9.58184	7079.2	4752.8	93.32
173	13.0098	4934.5	3221.1	82.87	243	9.54607	7109.6	4774.5	93.44
174	12.9411	4966.6	3244.0	83.06	244	9.51057	7140.1	4796.2	93.57
175	12.8731	4998.5	3266.9	83.24	245	9.47535	7170.5	4817.9	93.69
176	12.8059	5030.5	3289.8	83.42	246	9.44040	7200.9	4839.6	93.82
177	12.7395	5062.4	3312.6	83.60	247	9.40572	7231.3	4861.3	93.94
178	12.6738	5094.3	3335.4	83.78	248	9.37131	7261.7	4883.0	94.06
179	12.6089	5126.1	3358.2	83.96	249	9.33716	7292.0	4904.6	94.19
180	12.5446	5157.9	3380.9	84.14	250	9.30327	7322.4	4926.3	94.31
181	12.4811	5189.7	3403.7	84.31	251	9.26963	7352.7	4948.0	94.43
182	12.4183	5221.4	3426.3	84.49	252	9.23626	7383.1	4969.6	94.55
183	12.3561	5253.1	3449.0	84.66	253	9.20313	7413.4	4991.3	94.67
184	12.2946	5284.7	3471.6	84.83	254	9.17025	7443.7	5012.9	94.79
185	12.2338	5316.3	3494.2	85.01	255	9.13761	7474.0	5034.5	94.91
186	12.1736	5347.9	3516.8	85.18	256	9.10522	7504.3	5056.1	95.03
187	12.1141	5379.5	3539.4	85.35	257	9.07307	7534.6	5077.7	95.15
188	12.0551	5411.0	3561.9	85.51	258	9.04115	7564.9	5099.4	95.26
189	11.9968	5442.5	3584.4	85.68	259	9.00947	7595.2	5121.0	95.38
190	11.9391	5474.0	3606.9	85.85	260	8.97802	7625.5	5142.6	95.50
191	11.8820	5505.4	3629.3	86.01	261	8.94679	7655.7	5164.1	95.61
192	11.8255	5536.8	3651.8	86.18	262	8.91580	7686.0	5185.7	95.73
193	11.7696	5568.2	3674.2	86.34	263	8.88502	7716.2	5207.3	95.84
194	11.7142	5599.5	3696.6	86.50	264	8.85447	7746.4	5228.9	95.96
195	11.6594	5630.8	3718.9	86.66	265	8.82414	7776.6	5250.4	96.07
196	11.6052	5662.1	3741.3	86.82	266	8.79402	7806.9	5272.0	96.19
197	11.5514	5693.4	3763.6	86.98	267	8.76411	7837.1	5293.6	96.30
198	11.4982	5724.6	3785.9	87.14	268	8.73442	7867.2	5315.1	96.41
199	11.4456	5755.8	3808.2	87.30	269	8.70494	7897.4	5336.6	96.52
200	11.3934	5787.0	3830.5	87.45	270	8.67566	7927.6	5358.2	96.64
201	11.3418	5818.2	3852.7	87.61	271	8.64659	7957.8	5379.7	96.75
202	11.2906	5849.3	3875.0	87.76	272	8.61771	7987.9	5401.2	96.86
203	11.2400	5880.4	3897.2	87.92	273	8.58904	8018.1	5422.7	96.97
204	11.1898	5911.5	3919.4	88.07	274	8.56057	8048.2	5444.3	97.08
205	11.1401	5942.6	3941.6	88.22	275	8.53229	8078.4	5465.8	97.19
206	11.0909	5973.6	3963.7	88.37	276	8.50421	8108.5	5487.3	97.30
207	11.0421	6004.7	3985.9	88.52	277	8.47632	8138.6	5508.8	97.41
208	10.9938	6035.7	4008.0	88.67	278	8.44861	8168.7	5530.3	97.52
209	10.9460	6066.6	4030.2	88.82	279	8.42110	8198.8	5551.7	97.63
210	10.8986	6097.6	4052.3	88.97	280	8.39377	8228.9	5573.2	97.73
211	10.8516	6128.5	4074.3	89.11	281	8.36662	8259.0	5594.7	97.84
212	10.8051	6159.5	4096.4	89.26	282	8.33965	8289.1	5616.2	97.95
213	10.7589	6190.4	4118.5	89.41	283	8.31287	8319.2	5637.6	98.05
214	10.7132	6221.2	4140.5	89.55	284	8.28626	8349.3	5659.1	98.16
215	10.6680	6252.1	4162.5	89.69	285	8.25983	8379.4	5680.6	98.27
216	10.6231	6282.9	4184.5	89.84	286	8.23357	8409.4	5702.0	98.37
217	10.5786	6313.8	4206.5	89.98	287	8.20749	8439.5	5723.5	98.48
218	10.5345	6344.6	4228.5	90.12	288	8.18158	8469.5	5744.9	98.58
219	10.4908	6375.4	4250.5	90.26	289	8.15583	8499.6	5766.4	98.68
220	10.4475	6406.1	4272.5	90.40	290	8.13025	8529.6	5787.8	98.79
221	10.4045	6436.9	4294.4	90.54	291	8.10484	8559.6	5809.2	98.89
222	10.3620	6467.6	4316.3	90.68	292	8.07959	8589.7	5830.7	98.99
223	10.3198	6498.3	4338.3	90.82	293	8.05451	8619.7	5852.1	99.10
224	10.2779	6529.0	4360.2	90.96	294	8.02958	8649.7	5873.5	99.20
225	10.2365	6559.7	4382.1	91.09	295	8.00482	8679.7	5894.9	99.30
226	10.1953	6590.4	4404.0	91.23	296	7.98021	8709.7	5916.3	99.40
227	10.1546	6621.1	4425.8	91.36	297	7.95576	8739.7	5937.7	99.50
228	10.1141	6651.7	4447.7	91.50	298	7.93146	8769.7	5959.2	99.60
229	10.0741	6682.3	4469.6	91.63	299	7.90731	8799.7	5980.6	99.70
230	10.0343	6712.9	4491.4	91.77	300	7.88332	8829.6	6002.0	99.81

240.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
					120	19.4748	3154.9	1906.2	69.66
					121	19.3269	3190.9	1932.7	69.96
					122	19.1813	3226.8	1959.0	70.26
					123	19.0380	3262.7	1985.4	70.55
					124	18.8968	3298.4	2011.5	70.84
					125	18.7579	3334.0	2037.6	71.12
					126	18.6210	3369.6	2063.6	71.41
					127	18.4862	3405.0	2089.5	71.69
					128	18.3534	3440.3	2115.3	71.96
					129	18.2227	3475.5	2141.0	72.24
					130	18.0939	3510.6	2166.6	72.51
					131	17.9669	3545.6	2192.1	72.78
					132	17.8419	3580.5	2217.5	73.04
					133	17.7187	3615.3	2242.9	73.31
					134	17.5973	3650.0	2268.1	73.57
					135	17.4776	3684.7	2293.3	73.82
					136	17.3597	3719.3	2318.4	74.08
					137	17.2435	3753.7	2343.5	74.33
					138	17.1289	3788.1	2368.4	74.58
					139	17.0159	3822.4	2393.3	74.83
					140	16.9046	3856.7	2418.1	75.07
					141	16.7947	3890.8	2442.8	75.32
					142	16.6865	3924.8	2467.5	75.56
					143	16.5797	3958.8	2492.0	75.80
					144	16.4743	3992.7	2516.6	76.03
					145	16.3704	4026.5	2541.0	76.27
					146	16.2679	4060.2	2565.4	76.50
					147	16.1668	4093.9	2589.7	76.73
					148	16.0670	4127.5	2614.0	76.95
					149	15.9686	4161.1	2638.2	77.18
					150	15.8714	4194.5	2662.4	77.41
					151	15.7756	4227.9	2686.4	77.63
					152	15.6810	4261.2	2710.4	77.85
					153	15.5875	4294.5	2734.4	78.06
					154	15.4953	4327.7	2758.3	78.28
					155	15.4043	4360.8	2782.2	78.50
					156	15.3144	4393.9	2806.0	78.71
					157	15.2257	4426.9	2829.7	78.92
					158	15.1381	4459.8	2853.4	79.13
					159	15.0515	4492.8	2877.1	79.34
					160	14.9661	4525.6	2900.7	79.54

240.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	14.8816	4558.4	2924.3	79.75	231	10.7534	6762.7	4501.3	91.14
162	14.7982	4591.1	2947.8	79.95	232	10.7119	6793.4	4523.2	91.27
163	14.7159	4623.8	2971.3	80.15	233	10.6707	6824.0	4545.1	91.40
164	14.6345	4656.4	2994.7	80.35	234	10.6298	6854.7	4567.0	91.53
165	14.5540	4689.0	3018.1	80.55	235	10.5893	6885.3	4588.8	91.66
166	14.4746	4721.5	3041.4	80.74	236	10.5491	6915.9	4610.7	91.79
167	14.3960	4754.0	3064.7	80.94	237	10.5092	6946.5	4632.5	91.92
168	14.3184	4786.4	3088.0	81.13	238	10.4696	6977.0	4654.3	92.05
169	14.2417	4818.8	3111.3	81.32	239	10.4303	7007.6	4676.2	92.18
170	14.1659	4851.1	3134.5	81.52	240	10.3914	7038.2	4698.0	92.31
171	14.0909	4883.4	3157.6	81.70	241	10.3527	7068.7	4719.7	92.43
172	14.0168	4915.6	3180.7	81.89	242	10.3144	7099.2	4741.6	92.56
173	13.9436	4947.8	3203.8	82.08	243	10.2764	7129.7	4763.3	92.69
174	13.8712	4980.0	3226.8	82.26	244	10.2386	7160.2	4785.1	92.81
175	13.7996	5012.1	3249.9	82.45	245	10.2011	7190.7	4806.9	92.94
176	13.7287	5044.1	3272.8	82.63	246	10.1640	7221.2	4828.6	93.06
177	13.6587	5076.2	3295.8	82.81	247	10.1271	7251.7	4850.4	93.18
178	13.5894	5108.2	3318.7	82.99	248	10.0905	7282.1	4872.1	93.31
179	13.5209	5140.1	3341.6	83.17	249	10.0541	7312.6	4893.9	93.43
180	13.4532	5172.1	3364.5	83.35	250	10.0181	7343.0	4915.6	93.55
181	13.3861	5203.9	3387.3	83.53	251	9.98232	7373.4	4937.3	93.67
182	13.3198	5235.8	3410.1	83.70	252	9.94680	7403.8	4959.0	93.79
183	13.2542	5267.6	3432.8	83.88	253	9.91154	7434.2	4980.7	93.91
184	13.1893	5299.3	3455.6	84.05	254	9.87655	7464.6	5002.4	94.03
185	13.1251	5331.1	3478.3	84.22	255	9.84181	7495.0	5024.1	94.15
186	13.0615	5362.8	3501.0	84.39	256	9.80732	7525.3	5045.7	94.27
187	12.9986	5394.5	3523.6	84.56	257	9.77309	7555.7	5067.4	94.39
188	12.9364	5426.1	3546.3	84.73	258	9.73911	7586.0	5089.1	94.51
189	12.8748	5457.7	3568.9	84.90	259	9.70538	7616.4	5110.7	94.63
190	12.8138	5489.3	3591.5	85.07	260	9.67188	7646.7	5132.4	94.74
191	12.7534	5520.8	3614.0	85.23	261	9.63863	7677.0	5154.0	94.86
192	12.6937	5552.3	3636.6	85.39	262	9.60562	7707.3	5175.7	94.97
193	12.6345	5583.8	3659.1	85.56	263	9.57284	7737.6	5197.3	95.09
194	12.5760	5615.2	3681.6	85.72	264	9.54030	7767.9	5218.9	95.20
195	12.5180	5646.7	3704.0	85.88	265	9.50799	7798.2	5240.5	95.32
196	12.4606	5678.1	3726.5	86.04	266	9.47590	7828.4	5262.1	95.43
197	12.4038	5709.4	3748.9	86.20	267	9.44404	7858.7	5283.7	95.55
198	12.3475	5740.8	3771.3	86.36	268	9.41240	7889.0	5305.3	95.66
199	12.2917	5772.1	3793.7	86.52	269	9.38099	7919.2	5326.9	95.77
200	12.2365	5803.4	3816.1	86.68	270	9.34979	7949.4	5348.5	95.88
201	12.1819	5834.7	3838.4	86.83	271	9.31880	7979.6	5370.1	96.00
202	12.1277	5865.9	3860.7	86.99	272	9.28803	8009.9	5391.7	96.11
203	12.0741	5897.1	3883.0	87.14	273	9.25747	8040.1	5413.2	96.22
204	12.0210	5928.3	3905.3	87.29	274	9.22712	8070.3	5434.8	96.33
205	11.9683	5959.5	3927.6	87.45	275	9.19698	8100.5	5456.3	96.44
206	11.9162	5990.6	3949.9	87.60	276	9.16704	8130.7	5477.9	96.55
207	11.8645	6021.7	3972.1	87.75	277	9.13730	8160.8	5499.4	96.66
208	11.8133	6052.8	3994.3	87.90	278	9.10776	8191.0	5521.0	96.77
209	11.7626	6083.9	4016.5	88.05	279	9.07843	8221.2	5542.5	96.87
210	11.7124	6115.0	4038.7	88.20	280	9.04928	8251.3	5564.0	96.98
211	11.6626	6146.0	4060.9	88.34	281	9.02033	8281.5	5585.5	97.09
212	11.6133	6177.0	4083.0	88.49	282	8.99158	8311.6	5607.1	97.20
213	11.5644	6208.0	4105.2	88.64	283	8.96301	8341.7	5628.6	97.30
214	11.5159	6239.0	4127.3	88.78	284	8.93463	8371.9	5650.1	97.41
215	11.4679	6269.9	4149.4	88.93	285	8.90643	8402.0	5671.6	97.52
216	11.4203	6300.9	4171.5	89.07	286	8.87842	8432.1	5693.1	97.62
217	11.3731	6331.8	4193.6	89.21	287	8.85060	8462.2	5714.6	97.73
218	11.3263	6362.7	4215.6	89.35	288	8.82295	8492.3	5736.1	97.83
219	11.2799	6393.6	4237.7	89.50	289	8.79548	8522.4	5757.6	97.94
220	11.2340	6424.4	4259.7	89.64	290	8.76819	8552.5	5779.1	98.04
221	11.1884	6455.2	4281.7	89.78	291	8.74107	8582.6	5800.5	98.14
222	11.1432	6486.1	4303.8	89.92	292	8.71413	8612.6	5822.0	98.25
223	11.0985	6516.9	4325.8	90.05	293	8.68736	8642.7	5843.5	98.35
224	11.0540	6547.7	4347.7	90.19	294	8.66076	8672.8	5864.9	98.45
225	11.0100	6578.4	4369.7	90.33	295	8.63432	8702.8	5886.4	98.55
226	10.9664	6609.2	4391.7	90.46	296	8.60806	8732.9	5907.8	98.65
227	10.9231	6639.9	4413.6	90.60	297	8.58196	8762.9	5929.3	98.76
228	10.8801	6670.6	4435.6	90.74	298	8.55602	8792.9	5950.7	98.86
229	10.8375	6701.4	4457.5	90.87	299	8.53024	8823.0	5972.2	98.96
230	10.7953	6732.0	4479.4	91.00	300	8.50462	8853.0	5993.6	99.06

260.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
					120	20.5581	3164.7	1883.3	68.90
					121	20.4072	3200.8	1909.8	69.20
					122	20.2586	3236.7	1936.3	69.49
					123	20.1121	3272.6	1962.8	69.79
					124	19.9678	3308.4	1989.1	70.08
					125	19.8256	3344.1	2015.2	70.36
					126	19.6854	3379.6	2041.4	70.65
					127	19.5473	3415.1	2067.4	70.93
					128	19.4111	3450.4	2093.2	71.20
					129	19.2770	3485.7	2119.1	71.48
					130	19.1447	3520.9	2144.8	71.75
					131	19.0143	3556.0	2170.5	72.02
					132	18.8857	3590.9	2196.0	72.29
					133	18.7589	3625.8	2221.5	72.55
					134	18.6340	3660.6	2246.9	72.81
					135	18.5107	3695.4	2272.2	73.07
					136	18.3892	3730.0	2297.4	73.32
					137	18.2693	3764.6	2322.6	73.58
					138	18.1511	3799.1	2347.7	73.83
					139	18.0345	3833.5	2372.7	74.08
					140	17.9194	3867.8	2397.6	74.32
					141	17.8059	3902.0	2422.5	74.56
					142	17.6940	3936.1	2447.2	74.81
					143	17.5835	3970.2	2471.9	75.05
					144	17.4744	4004.2	2496.6	75.28
					145	17.3669	4038.1	2521.2	75.52
					146	17.2607	4072.0	2545.7	75.75
					147	17.1559	4105.7	2570.1	75.98
					148	17.0524	4139.4	2594.5	76.21
					149	16.9503	4173.1	2618.9	76.44
					150	16.8495	4206.7	2643.2	76.66
					151	16.7500	4240.2	2667.3	76.88
					152	16.6517	4273.6	2691.5	77.10
					153	16.5547	4306.9	2715.6	77.32
					154	16.4588	4340.2	2739.6	77.54
					155	16.3642	4373.5	2763.6	77.75
					156	16.2707	4406.7	2787.5	77.97
					157	16.1784	4439.8	2811.4	78.18
					158	16.0872	4472.9	2835.3	78.39
					159	15.9971	4505.9	2859.0	78.60
					160	15.9080	4538.8	2882.8	78.80

260.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	15.8201	4571.7	2906.5	79.01	231	11.4901	6782.7	4489.9	90.43
162	15.7332	4604.5	2930.1	79.21	232	11.4463	6813.4	4511.9	90.57
163	15.6473	4637.3	2953.7	79.41	233	11.4028	6844.2	4533.8	90.70
164	15.5624	4670.1	2977.2	79.61	234	11.3597	6874.9	4555.8	90.83
165	15.4785	4702.7	3000.7	79.81	235	11.3169	6905.6	4577.7	90.96
166	15.3956	4735.4	3024.2	80.01	236	11.2745	6936.2	4599.6	91.09
167	15.3136	4768.0	3047.6	80.21	237	11.2324	6966.9	4621.5	91.22
168	15.2326	4800.5	3071.0	80.40	238	11.1906	6997.5	4643.4	91.35
169	15.1525	4833.0	3094.4	80.59	239	11.1492	7028.2	4665.3	91.48
170	15.0733	4865.5	3117.7	80.78	240	11.1080	7058.8	4687.1	91.61
171	14.9950	4897.8	3141.0	80.97	241	11.0672	7089.4	4709.0	91.73
172	14.9175	4930.2	3164.2	81.16	242	11.0268	7120.0	4730.9	91.86
173	14.8410	4962.5	3187.4	81.35	243	10.9866	7150.6	4752.7	91.99
174	14.7652	4994.7	3210.5	81.54	244	10.9467	7181.1	4774.5	92.11
175	14.6903	5027.0	3233.7	81.72	245	10.9072	7211.7	4796.4	92.24
176	14.6163	5059.2	3256.7	81.90	246	10.8679	7242.2	4818.2	92.36
177	14.5430	5091.3	3279.8	82.09	247	10.8289	7272.8	4840.0	92.49
178	14.4705	5123.4	3302.8	82.27	248	10.7903	7303.3	4861.8	92.61
179	14.3988	5155.5	3325.8	82.45	249	10.7519	7333.8	4883.6	92.73
180	14.3278	5187.5	3348.8	82.63	250	10.7138	7364.3	4905.3	92.85
181	14.2576	5219.5	3371.7	82.80	251	10.6760	7394.7	4927.1	92.98
182	14.1882	5251.4	3394.6	82.98	252	10.6384	7425.2	4948.9	93.10
183	14.1194	5283.3	3417.5	83.15	253	10.6012	7455.7	4970.6	93.22
184	14.0514	5315.2	3440.3	83.33	254	10.5642	7486.1	4992.4	93.34
185	13.9841	5347.0	3463.1	83.50	255	10.5275	7516.5	5014.1	93.46
186	13.9175	5378.8	3485.9	83.67	256	10.4910	7547.0	5035.8	93.58
187	13.8515	5410.6	3508.7	83.84	257	10.4548	7577.4	5057.6	93.69
188	13.7862	5442.3	3531.4	84.01	258	10.4189	7607.8	5079.3	93.81
189	13.7216	5474.1	3554.1	84.18	259	10.3832	7638.2	5101.0	93.93
190	13.6577	5505.7	3576.8	84.35	260	10.3478	7668.6	5122.7	94.05
191	13.5943	5537.4	3599.5	84.51	261	10.3126	7698.9	5144.4	94.16
192	13.5316	5569.0	3622.1	84.68	262	10.2777	7729.3	5166.1	94.28
193	13.4696	5600.5	3644.7	84.84	263	10.2431	7759.7	5187.7	94.40
194	13.4081	5632.1	3667.3	85.00	264	10.2086	7790.0	5209.4	94.51
195	13.3472	5663.6	3689.8	85.17	265	10.1745	7820.3	5231.1	94.63
196	13.2869	5695.1	3712.4	85.33	266	10.1405	7850.7	5252.7	94.74
197	13.2272	5726.6	3734.9	85.49	267	10.1068	7881.0	5274.4	94.85
198	13.1681	5758.0	3757.4	85.65	268	10.0733	7911.3	5296.0	94.97
199	13.1096	5789.4	3779.9	85.80	269	10.0401	7941.6	5317.7	95.08
200	13.0516	5820.8	3802.3	85.96	270	10.0071	7971.9	5339.3	95.19
201	12.9941	5852.2	3824.8	86.12	271	9.97434	8002.1	5360.9	95.30
202	12.9372	5883.5	3847.2	86.27	272	9.94178	8032.4	5382.6	95.42
203	12.8808	5914.8	3869.6	86.43	273	9.90944	8062.7	5404.2	95.53
204	12.8249	5946.1	3891.9	86.58	274	9.87731	8092.9	5425.8	95.64
205	12.7696	5977.3	3914.3	86.73	275	9.84540	8123.2	5447.4	95.75
206	12.7148	6008.6	3936.6	86.89	276	9.81371	8153.4	5469.0	95.86
207	12.6604	6039.8	3958.9	87.04	277	9.78223	8183.6	5490.6	95.97
208	12.6066	6071.0	3981.3	87.19	278	9.75096	8213.9	5512.1	96.08
209	12.5532	6102.1	4003.5	87.34	279	9.71989	8244.1	5533.7	96.18
210	12.5004	6133.3	4025.8	87.49	280	9.68903	8274.3	5555.3	96.29
211	12.4480	6164.4	4048.1	87.63	281	9.65838	8304.5	5576.8	96.40
212	12.3961	6195.5	4070.3	87.78	282	9.62792	8334.7	5598.4	96.51
213	12.3446	6226.6	4092.5	87.93	283	9.59766	8364.9	5620.0	96.61
214	12.2936	6257.6	4114.7	88.07	284	9.56761	8395.0	5641.5	96.72
215	12.2430	6288.7	4136.9	88.22	285	9.53774	8425.2	5663.1	96.83
216	12.1929	6319.7	4159.1	88.36	286	9.50807	8455.4	5684.6	96.93
217	12.1432	6350.7	4181.2	88.50	287	9.47859	8485.5	5706.1	97.04
218	12.0939	6381.7	4203.3	88.65	288	9.44930	8515.7	5727.7	97.14
219	12.0451	6412.6	4225.5	88.79	289	9.42020	8545.8	5749.2	97.25
220	11.9967	6443.6	4247.6	88.93	290	9.39128	8575.9	5770.7	97.35
221	11.9487	6474.5	4269.7	89.07	291	9.36255	8606.0	5792.2	97.45
222	11.9010	6505.4	4291.8	89.21	292	9.33400	8636.2	5813.8	97.56
223	11.8538	6536.3	4313.8	89.35	293	9.30563	8666.3	5835.3	97.66
224	11.8070	6567.1	4335.9	89.49	294	9.27743	8696.4	5856.8	97.76
225	11.7606	6598.0	4357.9	89.62	295	9.24942	8726.5	5878.3	97.87
226	11.7146	6628.8	4380.0	89.76	296	9.22158	8756.6	5899.7	97.97
227	11.6690	6659.6	4402.0	89.90	297	9.19391	8786.7	5921.2	98.07
228	11.6237	6690.4	4424.0	90.03	298	9.16641	8816.7	5942.7	98.17
229	11.5788	6721.2	4446.0	90.17	299	9.13908	8846.8	5964.2	98.27
230	11.5343	6752.0	4468.0	90.30	300	9.11192	8876.9	5985.7	98.37

280.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
					120	21.5770	3177.0	1862.2	68.20
					121	21.4239	3213.1	1888.8	68.50
					122	21.2730	3249.0	1915.4	68.80
					123	21.1242	3284.9	1941.9	69.09
					124	20.9775	3320.7	1968.3	69.38
					125	20.8328	3356.4	1994.6	69.66
					126	20.6901	3392.0	2020.8	69.95
					127	20.5494	3427.5	2046.9	70.23
					128	20.4106	3462.9	2072.9	70.51
					129	20.2737	3498.2	2098.8	70.78
					130	20.1387	3533.4	2124.6	71.05
					131	20.0055	3568.5	2150.4	71.32
					132	19.8741	3603.5	2176.0	71.59
					133	19.7445	3638.5	2201.6	71.85
					134	19.6166	3673.3	2227.1	72.11
					135	19.4904	3708.1	2252.5	72.37
					136	19.3659	3742.8	2277.8	72.63
					137	19.2431	3777.5	2303.1	72.88
					138	19.1219	3812.0	2328.3	73.13
					139	19.0022	3846.5	2353.4	73.38
					140	18.8841	3880.9	2378.5	73.63
					141	18.7676	3915.1	2403.4	73.87
					142	18.6525	3949.3	2428.3	74.11
					143	18.5389	3983.5	2453.1	74.35
					144	18.4268	4017.5	2477.9	74.59
					145	18.3161	4051.5	2502.6	74.83
					146	18.2068	4085.5	2527.2	75.06
					147	18.0989	4119.3	2551.8	75.29
					148	17.9923	4153.1	2576.3	75.52
					149	17.8870	4186.9	2600.7	75.75
					150	17.7831	4220.5	2625.1	75.97
					151	17.6804	4254.1	2649.4	76.19
					152	17.5790	4287.6	2673.7	76.42
					153	17.4788	4321.0	2697.9	76.64
					154	17.3798	4354.4	2722.0	76.85
					155	17.2820	4387.8	2746.1	77.07
					156	17.1854	4421.0	2770.2	77.28
					157	17.0900	4454.3	2794.2	77.49
					158	16.9956	4487.4	2818.1	77.71
					159	16.9024	4520.5	2842.0	77.91
					160	16.8103	4553.6	2865.9	78.12

280.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	16.7192	4586.6	2889.7	78.33	231	12.2056	6803.4	4479.0	89.78
162	16.6292	4619.5	2913.4	78.53	232	12.1597	6834.3	4501.1	89.92
163	16.5402	4652.4	2937.1	78.73	233	12.1141	6865.0	4523.1	90.05
164	16.4523	4685.2	2960.7	78.93	234	12.0689	6895.8	4545.1	90.18
165	16.3653	4718.0	2984.4	79.13	235	12.0240	6926.6	4567.0	90.31
166	16.2794	4750.7	3007.9	79.33	236	11.9795	6957.3	4589.0	90.44
167	16.1943	4783.4	3031.5	79.53	237	11.9354	6988.0	4611.0	90.57
168	16.1103	4816.0	3055.0	79.72	238	11.8915	7018.7	4632.9	90.70
169	16.0272	4848.6	3078.4	79.92	239	11.8481	7049.4	4654.9	90.83
170	15.9450	4881.1	3101.8	80.11	240	11.8049	7080.1	4676.8	90.96
171	15.8637	4913.6	3125.2	80.30	241	11.7621	7110.8	4698.7	91.09
172	15.7832	4946.1	3148.5	80.49	242	11.7196	7141.4	4720.6	91.21
173	15.7037	4978.5	3171.8	80.67	243	11.6774	7172.1	4742.5	91.34
174	15.6250	5010.8	3195.1	80.86	244	11.6356	7202.7	4764.4	91.47
175	15.5472	5043.1	3218.3	81.05	245	11.5941	7233.3	4786.3	91.59
176	15.4702	5075.4	3241.5	81.23	246	11.5528	7263.9	4808.2	91.71
177	15.3940	5107.6	3264.6	81.41	247	11.5119	7294.5	4830.0	91.84
178	15.3186	5139.8	3287.8	81.59	248	11.4713	7325.1	4851.9	91.96
179	15.2440	5172.0	3310.9	81.77	249	11.4310	7355.7	4873.7	92.09
180	15.1701	5204.1	3333.9	81.95	250	11.3910	7386.2	4895.6	92.21
181	15.0971	5236.2	3356.9	82.13	251	11.3513	7416.7	4917.4	92.33
182	15.0248	5268.2	3379.9	82.31	252	11.3118	7447.3	4939.2	92.45
183	14.9532	5300.2	3402.9	82.48	253	11.2727	7477.8	4961.0	92.57
184	14.8824	5332.2	3425.8	82.66	254	11.2338	7508.3	4982.8	92.69
185	14.8123	5364.1	3448.7	82.83	255	11.1953	7538.8	5004.6	92.81
186	14.7429	5396.0	3471.6	83.00	256	11.1570	7569.3	5026.4	92.93
187	14.6742	5427.9	3494.5	83.17	257	11.1189	7599.7	5048.1	93.05
188	14.6061	5459.7	3517.3	83.34	258	11.0812	7630.2	5069.9	93.17
189	14.5388	5491.5	3540.1	83.51	259	11.0437	7660.6	5091.7	93.29
190	14.4721	5523.3	3562.9	83.68	260	11.0065	7691.1	5113.4	93.40
191	14.4061	5555.0	3585.6	83.85	261	10.9695	7721.5	5135.1	93.52
192	14.3407	5586.7	3608.3	84.01	262	10.9328	7751.9	5156.9	93.64
193	14.2759	5618.3	3631.0	84.18	263	10.8964	7782.3	5178.6	93.75
194	14.2118	5650.0	3653.7	84.34	264	10.8602	7812.7	5200.4	93.87
195	14.1483	5681.6	3676.3	84.50	265	10.8242	7843.1	5222.1	93.98
196	14.0854	5713.2	3698.9	84.66	266	10.7886	7873.5	5243.8	94.10
197	14.0230	5744.7	3721.6	84.82	267	10.7531	7903.9	5265.5	94.21
198	13.9613	5776.2	3744.1	84.98	268	10.7179	7934.2	5287.2	94.32
199	13.9002	5807.7	3766.7	85.14	269	10.6829	7964.6	5308.9	94.44
200	13.8396	5839.2	3789.2	85.30	270	10.6482	7994.9	5330.5	94.55
201	13.7796	5870.6	3811.7	85.46	271	10.6137	8025.2	5352.2	94.66
202	13.7201	5902.1	3834.2	85.61	272	10.5795	8055.6	5373.9	94.77
203	13.6612	5933.4	3856.7	85.77	273	10.5454	8085.9	5395.5	94.89
204	13.6029	5964.8	3879.2	85.92	274	10.5116	8116.2	5417.2	95.00
205	13.5450	5996.1	3901.6	86.08	275	10.4781	8146.5	5438.8	95.11
206	13.4877	6027.5	3924.0	86.23	276	10.4447	8176.7	5460.5	95.22
207	13.4309	6058.8	3946.4	86.38	277	10.4116	8207.0	5482.1	95.33
208	13.3746	6090.0	3968.8	86.53	278	10.3787	8237.3	5503.7	95.44
209	13.3189	6121.3	3991.1	86.68	279	10.3460	8267.6	5525.3	95.54
210	13.2636	6152.5	4013.5	86.83	280	10.3135	8297.8	5547.0	95.65
211	13.2088	6183.7	4035.8	86.98	281	10.2812	8328.0	5568.5	95.76
212	13.1544	6214.9	4058.1	87.12	282	10.2491	8358.3	5590.2	95.87
213	13.1006	6246.0	4080.4	87.27	283	10.2173	8388.5	5611.8	95.97
214	13.0472	6277.2	4102.7	87.42	284	10.1856	8418.7	5633.4	96.08
215	12.9943	6308.3	4124.9	87.56	285	10.1542	8448.9	5654.9	96.19
216	12.9418	6339.4	4147.2	87.71	286	10.1230	8479.2	5676.5	96.29
217	12.8898	6370.4	4169.4	87.85	287	10.0919	8509.4	5698.1	96.40
218	12.8382	6401.5	4191.6	87.99	288	10.0611	8539.5	5719.7	96.50
219	12.7871	6432.5	4213.8	88.13	289	10.0304	8569.7	5741.2	96.61
220	12.7364	6463.5	4236.0	88.28	290	10.0000	8599.9	5762.8	96.71
221	12.6861	6494.5	4258.1	88.42	291	9.96974	8630.1	5784.3	96.82
222	12.6363	6525.5	4280.3	88.56	292	9.93966	8660.2	5805.9	96.92
223	12.5868	6556.4	4302.4	88.70	293	9.90977	8690.4	5827.5	97.02
224	12.5378	6587.4	4324.6	88.83	294	9.88007	8720.5	5849.0	97.13
225	12.4892	6618.3	4346.7	88.97	295	9.85055	8750.7	5870.5	97.23
226	12.4410	6649.2	4368.8	89.11	296	9.82121	8780.8	5892.1	97.33
227	12.3931	6680.1	4390.8	89.24	297	9.79206	8810.9	5913.6	97.43
228	12.3457	6711.0	4412.9	89.38	298	9.76308	8841.1	5935.1	97.53
229	12.2986	6741.8	4435.0	89.52	299	9.73428	8871.2	5956.6	97.63
230	12.2519	6772.6	4457.0	89.65	300	9.70566	8901.3	5978.1	97.73

300.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
					120	22.5374	3191.5	1842.7	67.56
					121	22.3828	3227.5	1869.4	67.85
					122	22.2303	3263.4	1896.0	68.15
					123	22.0798	3299.3	1922.6	68.44
					124	21.9313	3335.1	1949.1	68.73
					125	21.7847	3370.8	1975.4	69.02
					126	21.6401	3406.4	2001.7	69.30
					127	21.4974	3441.9	2027.9	69.58
					128	21.3566	3477.3	2053.9	69.86
					129	21.2176	3512.6	2080.0	70.14
					130	21.0804	3547.9	2105.9	70.41
					131	20.9451	3583.0	2131.7	70.68
					132	20.8114	3618.0	2157.4	70.94
					133	20.6795	3653.0	2183.1	71.21
					134	20.5493	3687.9	2208.7	71.47
					135	20.4208	3722.7	2234.2	71.73
					136	20.2939	3757.5	2259.6	71.98
					137	20.1686	3792.1	2285.0	72.24
					138	20.0449	3826.7	2310.3	72.49
					139	19.9227	3861.2	2335.5	72.74
					140	19.8021	3895.7	2360.6	72.99
					141	19.6830	3930.0	2385.7	73.23
					142	19.5654	3964.3	2410.6	73.47
					143	19.4492	3998.5	2435.5	73.71
					144	19.3345	4032.6	2460.4	73.95
					145	19.2212	4066.6	2485.2	74.19
					146	19.1092	4100.6	2509.9	74.42
					147	18.9987	4134.5	2534.6	74.65
					148	18.8894	4168.4	2559.2	74.88
					149	18.7815	4202.2	2583.7	75.11
					150	18.6749	4235.9	2608.2	75.33
					151	18.5695	4269.6	2632.6	75.56
					152	18.4654	4303.1	2657.0	75.78
					153	18.3625	4336.7	2681.2	76.00
					154	18.2608	4370.1	2705.5	76.22
					155	18.1603	4403.5	2729.7	76.43
					156	18.0610	4436.9	2753.8	76.65
					157	17.9628	4470.2	2777.9	76.86
					158	17.8658	4503.4	2802.0	77.07
					159	17.7698	4536.6	2826.0	77.28
					160	17.6750	4569.7	2849.9	77.49

300.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	17.5812	4602.8	2873.8	77.69	231	12.9008	6824.9	4468.6	89.18
162	17.4885	4635.8	2897.6	77.90	232	12.8529	6855.8	4490.7	89.31
163	17.3968	4668.7	2921.4	78.10	233	12.8054	6886.6	4512.8	89.44
164	17.3062	4701.6	2945.2	78.30	234	12.7582	6917.4	4534.9	89.58
165	17.2165	4734.5	2968.9	78.50	235	12.7114	6948.2	4556.9	89.71
166	17.1278	4767.3	2992.5	78.70	236	12.6650	6979.1	4578.9	89.84
167	17.0401	4800.0	3016.2	78.90	237	12.6189	7009.8	4601.0	89.97
168	16.9534	4832.8	3039.8	79.09	238	12.5731	7040.6	4623.0	90.10
169	16.8676	4865.4	3063.3	79.29	239	12.5277	7071.4	4645.0	90.23
170	16.7827	4898.0	3086.8	79.48	240	12.4827	7102.1	4666.9	90.35
171	16.6988	4930.6	3110.3	79.67	241	12.4380	7132.8	4688.9	90.48
172	16.6157	4963.1	3133.7	79.86	242	12.3936	7163.5	4710.9	90.61
173	16.5335	4995.6	3157.1	80.05	243	12.3496	7194.2	4732.8	90.74
174	16.4522	5028.0	3180.4	80.23	244	12.3059	7224.9	4754.8	90.86
175	16.3717	5060.4	3203.7	80.42	245	12.2625	7255.6	4776.7	90.99
176	16.2921	5092.8	3227.0	80.60	246	12.2195	7286.3	4798.6	91.11
177	16.2133	5125.1	3250.3	80.79	247	12.1767	7316.9	4820.6	91.24
178	16.1353	5157.4	3273.5	80.97	248	12.1343	7347.5	4842.5	91.36
179	16.0581	5189.6	3296.7	81.15	249	12.0922	7378.2	4864.4	91.48
180	15.9817	5221.8	3319.8	81.33	250	12.0504	7408.8	4886.2	91.61
181	15.9060	5254.0	3342.9	81.51	251	12.0089	7439.3	4908.1	91.73
182	15.8312	5286.1	3366.0	81.68	252	11.9677	7469.9	4930.0	91.85
183	15.7571	5318.2	3389.0	81.86	253	11.9268	7500.5	4951.8	91.97
184	15.6837	5350.2	3412.1	82.03	254	11.8862	7531.1	4973.7	92.09
185	15.6111	5382.2	3435.1	82.21	255	11.8459	7561.6	4995.5	92.21
186	15.5391	5414.2	3458.0	82.38	256	11.8058	7592.1	5017.3	92.33
187	15.4679	5446.1	3481.0	82.55	257	11.7661	7622.7	5039.2	92.45
188	15.3974	5478.1	3503.9	82.72	258	11.7266	7653.2	5061.0	92.57
189	15.3276	5509.9	3526.7	82.89	259	11.6874	7683.7	5082.8	92.69
190	15.2584	5541.8	3549.6	83.06	260	11.6485	7714.2	5104.6	92.80
191	15.1899	5573.6	3572.4	83.23	261	11.6098	7744.6	5126.4	92.92
192	15.1221	5605.3	3595.2	83.39	262	11.5714	7775.1	5148.2	93.04
193	15.0549	5637.1	3618.0	83.56	263	11.5333	7805.6	5169.9	93.15
194	14.9883	5668.8	3640.7	83.72	264	11.4954	7836.0	5191.7	93.27
195	14.9224	5700.5	3663.5	83.88	265	11.4578	7866.4	5213.5	93.38
196	14.8571	5732.1	3686.2	84.05	266	11.4205	7896.9	5235.2	93.50
197	14.7924	5763.8	3708.8	84.21	267	11.3834	7927.3	5257.0	93.61
198	14.7283	5795.4	3731.5	84.37	268	11.3466	7957.7	5278.7	93.73
199	14.6648	5827.0	3754.1	84.53	269	11.3100	7988.1	5300.4	93.84
200	14.6019	5858.5	3776.7	84.68	270	11.2737	8018.5	5322.2	93.95
201	14.5395	5890.0	3799.3	84.84	271	11.2376	8048.8	5343.9	94.07
202	14.4777	5921.5	3821.9	85.00	272	11.2017	8079.2	5365.6	94.18
203	14.4165	5953.0	3844.4	85.15	273	11.1661	8109.6	5387.3	94.29
204	14.3558	5984.4	3867.0	85.31	274	11.1307	8139.9	5409.0	94.40
205	14.2957	6015.8	3889.5	85.46	275	11.0955	8170.3	5430.7	94.51
206	14.2361	6047.2	3912.0	85.61	276	11.0606	8200.6	5452.3	94.62
207	14.1770	6078.6	3934.4	85.77	277	11.0259	8230.9	5474.0	94.73
208	14.1185	6109.9	3956.9	85.92	278	10.9915	8261.2	5495.7	94.84
209	14.0605	6141.2	3979.3	86.07	279	10.9572	8291.5	5517.4	94.95
210	14.0029	6172.5	4001.7	86.22	280	10.9232	8321.8	5539.0	95.06
211	13.9459	6203.8	4024.1	86.36	281	10.8894	8352.1	5560.6	95.16
212	13.8894	6235.0	4046.5	86.51	282	10.8558	8382.4	5582.3	95.27
213	13.8333	6266.3	4068.9	86.66	283	10.8225	8412.7	5603.9	95.38
214	13.7778	6297.5	4091.2	86.81	284	10.7893	8442.9	5625.6	95.49
215	13.7227	6328.6	4113.5	86.95	285	10.7564	8473.2	5647.2	95.59
216	13.6681	6359.8	4135.8	87.10	286	10.7236	8503.4	5668.8	95.70
217	13.6139	6390.9	4158.1	87.24	287	10.6911	8533.7	5690.4	95.80
218	13.5602	6422.1	4180.4	87.38	288	10.6588	8563.9	5712.1	95.91
219	13.5069	6453.2	4202.7	87.53	289	10.6267	8594.1	5733.7	96.01
220	13.4541	6484.3	4224.9	87.67	290	10.5948	8624.4	5755.3	96.12
221	13.4018	6515.3	4247.1	87.81	291	10.5630	8654.6	5776.8	96.22
222	13.3498	6546.3	4269.4	87.95	292	10.5315	8684.8	5798.4	96.33
223	13.2983	6577.4	4291.6	88.09	293	10.5002	8715.0	5820.0	96.43
224	13.2472	6608.4	4313.7	88.23	294	10.4691	8745.1	5841.6	96.53
225	13.1965	6639.4	4335.9	88.36	295	10.4381	8775.3	5863.2	96.63
226	13.1462	6670.3	4358.1	88.50	296	10.4074	8805.5	5884.7	96.74
227	13.0964	6701.3	4380.2	88.64	297	10.3768	8835.7	5906.3	96.84
228	13.0469	6732.2	4402.3	88.77	298	10.3464	8865.8	5927.9	96.94
229	12.9978	6763.1	4424.5	88.91	299	10.3162	8896.0	5949.4	97.04
230	12.9491	6794.0	4446.6	89.04	300	10.2862	8926.1	5971.0	97.14

320.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
					120	23.4447	3207.8	1824.8	66.96
					121	23.2891	3243.8	1851.5	67.25
					122	23.1354	3279.7	1878.2	67.55
					123	22.9837	3315.6	1904.8	67.84
					124	22.8339	3351.3	1931.3	68.13
					125	22.6860	3387.0	1957.7	68.42
					126	22.5400	3422.6	1984.1	68.70
					127	22.3958	3458.1	2010.3	68.98
					128	22.2535	3493.4	2036.4	69.26
					129	22.1129	3528.8	2062.5	69.54
					130	21.9741	3564.0	2088.5	69.81
					131	21.8370	3599.2	2114.4	70.08
					132	21.7016	3634.2	2140.1	70.34
					133	21.5679	3669.2	2165.9	70.61
					134	21.4358	3704.1	2191.5	70.87
					135	21.3054	3739.0	2217.1	71.13
					136	21.1766	3773.7	2242.6	71.39
					137	21.0493	3808.4	2268.0	71.64
					138	20.9236	3843.0	2293.4	71.89
					139	20.7994	3877.6	2318.7	72.14
					140	20.6767	3912.0	2343.9	72.39
					141	20.5556	3946.4	2369.0	72.63
					142	20.4358	3980.7	2394.1	72.87
					143	20.3175	4014.9	2419.1	73.12
					144	20.2006	4049.1	2444.0	73.35
					145	20.0851	4083.2	2468.9	73.59
					146	19.9709	4117.2	2493.7	73.82
					147	19.8581	4151.2	2518.4	74.05
					148	19.7466	4185.1	2543.1	74.28
					149	19.6365	4219.0	2567.7	74.51
					150	19.5275	4252.7	2592.3	74.74
					151	19.4199	4286.4	2616.8	74.96
					152	19.3135	4320.1	2641.2	75.18
					153	19.2083	4353.6	2665.6	75.40
					154	19.1043	4387.1	2689.9	75.62
					155	19.0015	4420.6	2714.2	75.84
					156	18.8998	4454.0	2738.4	76.05
					157	18.7993	4487.4	2762.6	76.27
					158	18.6999	4520.7	2786.7	76.48
					159	18.6016	4553.9	2810.8	76.69
					160	18.5044	4587.1	2834.9	76.90

320.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	18.4082	4620.2	2858.8	77.10	231	13.5765	6847.0	4458.7	88.61
162	18.3131	4653.3	2882.7	77.31	232	13.5268	6877.9	4480.9	88.74
163	18.2191	4686.3	2906.6	77.51	233	13.4774	6908.8	4503.0	88.88
164	18.1260	4719.3	2930.5	77.71	234	13.4284	6939.7	4525.1	89.01
165	18.0340	4752.2	2954.2	77.91	235	13.3798	6970.6	4547.2	89.14
166	17.9430	4785.1	2978.0	78.11	236	13.3315	7001.4	4569.3	89.27
167	17.8529	4817.9	3001.7	78.31	237	13.2836	7032.3	4591.4	89.40
168	17.7638	4850.7	3025.4	78.50	238	13.2361	7063.1	4613.4	89.53
169	17.6756	4883.4	3049.0	78.70	239	13.1890	7093.9	4635.5	89.66
170	17.5884	4916.1	3072.6	78.89	240	13.1422	7124.7	4657.5	89.79
171	17.5021	4948.7	3096.1	79.08	241	13.0957	7155.5	4679.5	89.92
172	17.4166	4981.3	3119.6	79.27	242	13.0496	7186.2	4701.6	90.05
173	17.3321	5013.9	3143.1	79.46	243	13.0038	7217.0	4723.6	90.17
174	17.2484	5046.4	3166.5	79.65	244	12.9584	7247.7	4745.6	90.30
175	17.1656	5078.8	3189.9	79.83	245	12.9133	7278.5	4767.6	90.42
176	17.0836	5111.2	3213.3	80.02	246	12.8685	7309.2	4789.5	90.55
177	17.0025	5143.6	3236.6	80.20	247	12.8241	7339.9	4811.5	90.67
178	16.9222	5176.0	3259.9	80.39	248	12.7799	7370.6	4833.5	90.80
179	16.8426	5208.3	3283.2	80.57	249	12.7361	7401.2	4855.4	90.92
180	16.7639	5240.6	3306.4	80.75	250	12.6926	7431.9	4877.3	91.04
181	16.6860	5272.8	3329.6	80.92	251	12.6495	7462.5	4899.2	91.17
182	16.6088	5305.0	3352.8	81.10	252	12.6066	7493.2	4921.2	91.29
183	16.5324	5337.1	3375.9	81.28	253	12.5640	7523.8	4943.1	91.41
184	16.4567	5369.2	3399.0	81.45	254	12.5218	7554.4	4965.0	91.53
185	16.3818	5401.3	3422.1	81.63	255	12.4798	7585.0	4986.9	91.65
186	16.3076	5433.4	3445.1	81.80	256	12.4381	7615.5	5008.7	91.77
187	16.2341	5465.4	3468.1	81.97	257	12.3968	7646.1	5030.6	91.89
188	16.1614	5497.4	3491.1	82.14	258	12.3557	7676.7	5052.5	92.01
189	16.0893	5529.3	3514.1	82.31	259	12.3149	7707.2	5074.3	92.13
190	16.0179	5561.2	3537.0	82.48	260	12.2743	7737.8	5096.2	92.24
191	15.9472	5593.1	3559.9	82.65	261	12.2341	7768.3	5118.0	92.36
192	15.8771	5624.9	3582.7	82.81	262	12.1941	7798.8	5139.8	92.48
193	15.8077	5656.7	3605.6	82.98	263	12.1544	7829.3	5161.7	92.59
194	15.7389	5688.5	3628.4	83.14	264	12.1150	7859.8	5183.5	92.71
195	15.6708	5720.3	3651.2	83.31	265	12.0758	7890.3	5205.3	92.82
196	15.6033	5752.0	3674.0	83.47	266	12.0369	7920.8	5227.1	92.94
197	15.5364	5783.7	3696.7	83.63	267	11.9983	7951.2	5248.9	93.05
198	15.4702	5815.4	3719.5	83.79	268	11.9599	7981.7	5270.6	93.17
199	15.4045	5847.0	3742.2	83.95	269	11.9218	8012.1	5292.4	93.28
200	15.3394	5878.6	3764.9	84.11	270	11.8840	8042.6	5314.2	93.39
201	15.2749	5910.2	3787.5	84.27	271	11.8463	8073.0	5335.9	93.51
202	15.2110	5941.8	3810.2	84.42	272	11.8090	8103.4	5357.7	93.62
203	15.1477	5973.3	3832.8	84.58	273	11.7719	8133.8	5379.4	93.73
204	15.0849	6004.8	3855.4	84.73	274	11.7350	8164.2	5401.2	93.84
205	15.0227	6036.3	3877.9	84.89	275	11.6983	8194.6	5422.9	93.95
206	14.9610	6067.7	3900.5	85.04	276	11.6619	8224.9	5444.6	94.06
207	14.8998	6099.2	3923.0	85.19	277	11.6258	8255.3	5466.3	94.17
208	14.8392	6130.6	3945.6	85.34	278	11.5899	8285.7	5488.0	94.28
209	14.7791	6162.0	3968.1	85.49	279	11.5542	8316.0	5509.8	94.39
210	14.7195	6193.3	3990.5	85.64	280	11.5187	8346.3	5531.4	94.50
211	14.6605	6224.7	4013.0	85.79	281	11.4835	8376.7	5553.1	94.61
212	14.6019	6256.0	4035.4	85.94	282	11.4484	8407.0	5574.8	94.71
213	14.5438	6287.2	4057.9	86.09	283	11.4136	8437.3	5596.5	94.82
214	14.4863	6318.5	4080.3	86.23	284	11.3791	8467.6	5618.2	94.93
215	14.4292	6349.8	4102.7	86.38	285	11.3447	8497.9	5639.8	95.04
216	14.3725	6381.0	4125.0	86.52	286	11.3106	8528.2	5661.5	95.14
217	14.3164	6412.2	4147.4	86.67	287	11.2766	8558.5	5683.2	95.25
218	14.2607	6443.4	4169.7	86.81	288	11.2429	8588.7	5704.8	95.35
219	14.2055	6474.5	4192.0	86.95	289	11.2094	8619.0	5726.5	95.46
220	14.1507	6505.7	4214.4	87.10	290	11.1761	8649.3	5748.1	95.56
221	14.0964	6536.8	4236.6	87.24	291	11.1430	8679.5	5769.7	95.67
222	14.0425	6567.9	4258.9	87.38	292	11.1101	8709.8	5791.3	95.77
223	13.9891	6599.0	4281.2	87.52	293	11.0774	8740.0	5813.0	95.87
224	13.9360	6630.0	4303.4	87.66	294	11.0449	8770.2	5834.6	95.98
225	13.8835	6661.1	4325.7	87.79	295	11.0126	8800.4	5856.2	96.08
226	13.8313	6692.1	4347.9	87.93	296	10.9805	8830.6	5877.8	96.18
227	13.7795	6723.1	4370.1	88.07	297	10.9486	8860.8	5899.4	96.28
228	13.7282	6754.1	4392.3	88.21	298	10.9169	8891.0	5921.0	96.38
229	13.6772	6785.1	4414.4	88.34	299	10.8854	8921.2	5942.6	96.49
230	13.6267	6816.0	4436.6	88.48	300	10.8541	8951.4	5964.2	96.59

340.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
					120	24.3035	3225.7	1808.2	66.40
					121	24.1473	3261.6	1834.9	66.70
					122	23.9929	3297.5	1861.6	66.99
					123	23.8404	3333.4	1888.3	67.28
					124	23.6898	3369.1	1914.9	67.57
					125	23.5410	3404.7	1941.3	67.86
					126	23.3940	3440.3	1967.7	68.14
					127	23.2487	3475.8	1993.9	68.42
					128	23.1052	3511.1	2020.1	68.70
					129	22.9635	3546.5	2046.2	68.98
					130	22.8234	3581.7	2072.3	69.25
					131	22.6850	3616.8	2098.2	69.52
					132	22.5483	3651.9	2124.1	69.78
					133	22.4132	3686.9	2149.8	70.05
					134	22.2797	3721.8	2175.5	70.31
					135	22.1478	3756.7	2201.2	70.57
					136	22.0174	3791.4	2226.7	70.83
					137	21.8886	3826.1	2252.2	71.08
					138	21.7613	3860.8	2277.7	71.33
					139	21.6355	3895.3	2303.0	71.58
					140	21.5111	3929.8	2328.3	71.83
					141	21.3882	3964.2	2353.5	72.07
					142	21.2668	3998.5	2378.6	72.32
					143	21.1467	4032.8	2403.7	72.56
					144	21.0280	4067.0	2428.7	72.79
					145	20.9107	4101.1	2453.6	73.03
					146	20.7947	4135.2	2478.5	73.26
					147	20.6800	4169.2	2503.3	73.50
					148	20.5666	4203.1	2528.0	73.73
					149	20.4545	4237.0	2552.7	73.95
					150	20.3437	4270.8	2577.4	74.18
					151	20.2341	4304.5	2601.9	74.41
					152	20.1257	4338.2	2626.4	74.63
					153	20.0185	4371.8	2650.9	74.85
					154	19.9125	4405.4	2675.3	75.07
					155	19.8077	4438.9	2699.6	75.28
					156	19.7040	4472.3	2723.9	75.50
					157	19.6015	4505.7	2748.2	75.71
					158	19.5000	4539.1	2772.4	75.92
					159	19.3997	4572.4	2796.6	76.13
					160	19.3004	4605.6	2820.7	76.34

340.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	19.2023	4638.8	2844.7	76.55	231	14.2335	6869.6	4449.3	88.08
162	19.1051	4671.9	2868.7	76.75	232	14.1820	6900.6	4471.5	88.21
163	19.0090	4705.0	2892.6	76.96	233	14.1309	6931.6	4493.7	88.34
164	18.9139	4738.0	2916.6	77.16	234	14.0802	6962.5	4515.8	88.48
165	18.8198	4771.0	2940.4	77.36	235	14.0299	6993.5	4538.0	88.61
166	18.7267	4803.9	2964.3	77.56	236	13.9800	7024.4	4560.1	88.74
167	18.6345	4836.8	2988.0	77.76	237	13.9304	7055.3	4582.2	88.87
168	18.5433	4869.6	3011.8	77.95	238	13.8812	7086.1	4604.3	89.00
169	18.4530	4902.4	3035.5	78.15	239	13.8324	7117.0	4626.5	89.13
170	18.3637	4935.2	3059.2	78.34	240	13.7839	7147.9	4648.5	89.26
171	18.2753	4967.9	3082.8	78.53	241	13.7358	7178.7	4670.6	89.39
172	18.1878	5000.5	3106.3	78.72	242	13.6881	7209.5	4692.7	89.51
173	18.1011	5033.1	3129.9	78.91	243	13.6407	7240.3	4714.7	89.64
174	18.0154	5065.7	3153.4	79.10	244	13.5936	7271.1	4736.8	89.77
175	17.9305	5098.2	3176.9	79.29	245	13.5469	7301.9	4758.8	89.89
176	17.8464	5130.7	3200.3	79.47	246	13.5005	7332.6	4780.9	90.02
177	17.7632	5163.1	3223.7	79.65	247	13.4545	7363.4	4802.9	90.14
178	17.6808	5195.5	3247.1	79.84	248	13.4088	7394.1	4824.9	90.27
179	17.5992	5227.9	3270.4	80.02	249	13.3634	7424.8	4846.9	90.39
180	17.5184	5260.2	3293.7	80.20	250	13.3183	7455.5	4868.8	90.52
181	17.4384	5292.5	3317.0	80.38	251	13.2736	7486.2	4890.8	90.64
182	17.3591	5324.8	3340.2	80.55	252	13.2292	7516.9	4912.8	90.76
183	17.2807	5357.0	3363.4	80.73	253	13.1850	7547.6	4934.7	90.88
184	17.2030	5389.1	3386.6	80.91	254	13.1412	7578.2	4956.7	91.00
185	17.1260	5421.3	3409.7	81.08	255	13.0977	7608.9	4978.6	91.12
186	17.0497	5453.4	3432.8	81.25	256	13.0545	7639.5	5000.5	91.24
187	16.9742	5485.5	3455.9	81.43	257	13.0116	7670.1	5022.4	91.36
188	16.8994	5517.5	3479.0	81.60	258	12.9690	7700.7	5044.3	91.48
189	16.8253	5549.5	3502.0	81.77	259	12.9267	7731.3	5066.2	91.60
190	16.7518	5581.5	3525.0	81.94	260	12.8847	7761.9	5088.1	91.72
191	16.6791	5613.4	3547.9	82.10	261	12.8429	7792.4	5110.0	91.83
192	16.6070	5645.3	3570.9	82.27	262	12.8015	7823.0	5131.9	91.95
193	16.5356	5677.2	3593.8	82.44	263	12.7603	7853.6	5153.8	92.07
194	16.4648	5709.1	3616.7	82.60	264	12.7194	7884.1	5175.6	92.18
195	16.3947	5740.9	3639.6	82.76	265	12.6788	7914.6	5197.5	92.30
196	16.3252	5772.7	3662.4	82.93	266	12.6384	7945.1	5219.3	92.41
197	16.2563	5804.4	3685.2	83.09	267	12.5983	7975.7	5241.1	92.53
198	16.1881	5836.2	3708.0	83.25	268	12.5585	8006.1	5263.0	92.64
199	16.1205	5867.9	3730.8	83.41	269	12.5189	8036.6	5284.8	92.76
200	16.0534	5899.5	3753.5	83.57	270	12.4796	8067.1	5306.6	92.87
201	15.9870	5931.2	3776.3	83.72	271	12.4406	8097.6	5328.4	92.98
202	15.9211	5962.8	3799.0	83.88	272	12.4018	8128.0	5350.2	93.09
203	15.8558	5994.4	3821.7	84.04	273	12.3633	8158.5	5372.0	93.20
204	15.7911	6025.9	3844.3	84.19	274	12.3250	8188.9	5393.7	93.32
205	15.7269	6057.5	3867.0	84.35	275	12.2870	8219.3	5415.5	93.43
206	15.6633	6089.0	3889.6	84.50	276	12.2492	8249.7	5437.3	93.54
207	15.6003	6120.5	3912.2	84.65	277	12.2116	8280.1	5459.0	93.65
208	15.5378	6152.0	3934.8	84.80	278	12.1743	8310.5	5480.8	93.76
209	15.4758	6183.4	3957.3	84.96	279	12.1372	8340.9	5502.5	93.87
210	15.4143	6214.8	3979.9	85.11	280	12.1004	8371.3	5524.2	93.97
211	15.3533	6246.2	4002.4	85.25	281	12.0638	8401.6	5546.0	94.08
212	15.2929	6277.6	4024.9	85.40	282	12.0274	8432.0	5567.7	94.19
213	15.2330	6308.9	4047.4	85.55	283	11.9913	8462.4	5589.4	94.30
214	15.1735	6340.3	4069.8	85.70	284	11.9553	8492.7	5611.1	94.41
215	15.1146	6371.6	4092.3	85.84	285	11.9196	8523.1	5632.8	94.51
216	15.0561	6402.8	4114.7	85.99	286	11.8842	8553.4	5654.5	94.62
217	14.9982	6434.1	4137.1	86.13	287	11.8489	8583.7	5676.2	94.72
218	14.9406	6465.3	4159.5	86.28	288	11.8139	8614.0	5697.9	94.83
219	14.8836	6496.6	4181.9	86.42	289	11.7790	8644.3	5719.6	94.93
220	14.8270	6527.8	4204.3	86.56	290	11.7444	8674.6	5741.3	95.04
221	14.7709	6558.9	4226.6	86.70	291	11.7100	8704.9	5762.9	95.14
222	14.7152	6590.1	4249.0	86.84	292	11.6758	8735.2	5784.6	95.25
223	14.6600	6621.2	4271.3	86.98	293	11.6419	8765.4	5806.2	95.35
224	14.6052	6652.3	4293.6	87.12	294	11.6081	8795.7	5827.9	95.45
225	14.5508	6683.4	4315.9	87.26	295	11.5745	8825.9	5849.5	95.56
226	14.4969	6714.5	4338.1	87.40	296	11.5411	8856.2	5871.2	95.66
227	14.4434	6745.6	4360.4	87.54	297	11.5080	8886.4	5892.8	95.76
228	14.3903	6776.6	4382.6	87.67	298	11.4750	8916.7	5914.4	95.86
229	14.3376	6807.7	4404.9	87.81	299	11.4422	8946.9	5936.1	95.96
230	14.2853	6838.7	4427.1	87.94	300	11.4096	8977.1	5957.7	96.06

360.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
120	25.1181	3245.0	1792.8	65.88					
121	24.9616	3280.9	1819.6	66.17					
122	24.8069	3316.7	1846.3	66.47					
123	24.6540	3352.6	1873.0	66.76					
124	24.5028	3388.3	1899.6	67.05					
125	24.3535	3423.9	1926.1	67.34					
126	24.2058	3459.4	1952.5	67.62					
127	24.0598	3494.9	1978.8	67.90					
128	23.9156	3530.2	2005.0	68.18					
129	23.7730	3565.5	2031.1	68.45					
130	23.6320	3600.7	2057.2	68.72					
131	23.4927	3635.9	2083.2	68.99					
132	23.3550	3670.9	2109.1	69.26					
133	23.2188	3705.9	2134.9	69.52					
134	23.0842	3740.8	2160.6	69.79					
135	22.9512	3775.6	2186.3	70.04					
136	22.8196	3810.4	2211.9	70.30					
137	22.6896	3845.1	2237.5	70.56					
138	22.5610	3879.8	2262.9	70.81					
139	22.4339	3914.3	2288.4	71.06					
140	22.3082	3948.8	2313.7	71.30					
141	22.1839	3983.2	2338.9	71.55					
142	22.0610	4017.6	2364.1	71.79					
143	21.9395	4051.8	2389.2	72.03					
144	21.8193	4086.0	2414.3	72.27					
145	21.7005	4120.2	2439.3	72.51					
146	21.5830	4154.3	2464.2	72.74					
147	21.4667	4188.3	2489.1	72.97					
148	21.3518	4222.3	2513.9	73.20					
149	21.2381	4256.2	2538.7	73.43					
150	21.1256	4290.0	2563.4	73.66					
151	21.0144	4323.8	2588.0	73.88					
152	20.9044	4357.5	2612.5	74.10					
153	20.7955	4391.1	2637.1	74.32					
154	20.6878	4424.7	2661.5	74.54					
155	20.5813	4458.3	2685.9	74.76					
156	20.4759	4491.8	2710.3	74.98					
157	20.3716	4525.2	2734.6	75.19					
158	20.2684	4558.6	2758.9	75.40					
159	20.1663	4591.9	2783.1	75.61					
160	20.0653	4625.2	2807.3	75.82					

360.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	19.9653	4658.4	2831.4	76.03	231	14.8724	6892.9	4440.2	87.58
162	19.8664	4691.6	2855.4	76.23	232	14.8193	6923.9	4462.5	87.71
163	19.7684	4724.7	2879.5	76.44	233	14.7666	6954.9	4484.7	87.84
164	19.6715	4757.7	2903.4	76.64	234	14.7144	6985.9	4506.9	87.98
165	19.5756	4790.8	2927.4	76.84	235	14.6625	7016.9	4529.1	88.11
166	19.4807	4823.7	2951.3	77.04	236	14.6110	7047.9	4551.3	88.24
167	19.3867	4856.7	2975.1	77.24	237	14.5599	7078.8	4573.5	88.37
168	19.2936	4889.5	2998.9	77.43	238	14.5091	7109.7	4595.7	88.50
169	19.2015	4922.4	3022.7	77.63	239	14.4588	7140.6	4617.8	88.63
170	19.1104	4955.2	3046.4	77.82	240	14.4088	7171.5	4640.0	88.76
171	19.0201	4987.9	3070.1	78.01	241	14.3591	7202.4	4662.1	88.89
172	18.9307	5020.6	3093.8	78.20	242	14.3098	7233.3	4684.2	89.01
173	18.8422	5053.3	3117.4	78.39	243	14.2609	7264.1	4706.3	89.14
174	18.7546	5085.9	3140.9	78.58	244	14.2123	7295.0	4728.4	89.27
175	18.6679	5118.5	3164.5	78.77	245	14.1641	7325.8	4750.5	89.39
176	18.5820	5151.0	3188.0	78.95	246	14.1162	7356.6	4772.6	89.52
177	18.4969	5183.5	3211.4	79.14	247	14.0687	7387.4	4794.6	89.65
178	18.4126	5216.0	3234.9	79.32	248	14.0215	7418.2	4816.7	89.77
179	18.3292	5248.4	3258.3	79.50	249	13.9746	7448.9	4838.7	89.89
180	18.2465	5280.8	3281.6	79.68	250	13.9281	7479.7	4860.7	90.02
181	18.1646	5313.1	3305.0	79.86	251	13.8819	7510.4	4882.7	90.14
182	18.0835	5345.4	3328.3	80.04	252	13.8360	7541.1	4904.8	90.26
183	18.0032	5377.7	3351.5	80.22	253	13.7904	7571.8	4926.8	90.38
184	17.9236	5409.9	3374.8	80.39	254	13.7452	7602.5	4948.7	90.50
185	17.8448	5442.1	3398.0	80.57	255	13.7002	7633.2	4970.7	90.62
186	17.7667	5474.3	3421.2	80.74	256	13.6556	7663.9	4992.7	90.74
187	17.6894	5506.4	3444.3	80.91	257	13.6112	7694.5	5014.6	90.86
188	17.6127	5538.5	3467.4	81.08	258	13.5672	7725.2	5036.6	90.98
189	17.5367	5570.5	3490.5	81.25	259	13.5235	7755.8	5058.5	91.10
190	17.4615	5602.6	3513.6	81.42	260	13.4800	7786.5	5080.5	91.22
191	17.3869	5634.6	3536.6	81.59	261	13.4369	7817.1	5102.4	91.34
192	17.3130	5666.5	3559.6	81.76	262	13.3940	7847.7	5124.3	91.45
193	17.2397	5698.5	3582.6	81.92	263	13.3514	7878.3	5146.2	91.57
194	17.1672	5730.4	3605.5	82.09	264	13.3092	7908.8	5168.1	91.69
195	17.0952	5762.2	3628.5	82.25	265	13.2672	7939.4	5190.0	91.80
196	17.0239	5794.1	3651.4	82.41	266	13.2254	7970.0	5211.9	91.92
197	16.9532	5825.9	3674.3	82.58	267	13.1840	8000.5	5233.8	92.03
198	16.8832	5857.7	3697.1	82.74	268	13.1428	8031.1	5255.6	92.15
199	16.8138	5889.4	3720.0	82.90	269	13.1019	8061.6	5277.5	92.26
200	16.7449	5921.2	3742.8	83.06	270	13.0612	8092.1	5299.3	92.37
201	16.6767	5952.8	3765.6	83.22	271	13.0208	8122.6	5321.2	92.49
202	16.6091	5984.5	3788.3	83.37	272	12.9807	8153.1	5343.0	92.60
203	16.5420	6016.2	3811.1	83.53	273	12.9408	8183.6	5364.8	92.71
204	16.4755	6047.8	3833.8	83.68	274	12.9012	8214.0	5386.6	92.82
205	16.4096	6079.4	3856.5	83.84	275	12.8618	8244.5	5408.4	92.93
206	16.3442	6111.0	3879.2	83.99	276	12.8227	8274.9	5430.2	93.04
207	16.2794	6142.5	3901.8	84.14	277	12.7839	8305.4	5452.0	93.15
208	16.2151	6174.0	3924.5	84.30	278	12.7453	8335.8	5473.8	93.26
209	16.1514	6205.5	3947.1	84.45	279	12.7069	8366.2	5495.6	93.37
210	16.0882	6237.0	3969.7	84.60	280	12.6688	8396.7	5517.4	93.48
211	16.0255	6268.4	3992.3	84.75	281	12.6309	8427.1	5539.1	93.59
212	15.9634	6299.9	4014.8	84.90	282	12.5932	8457.5	5560.9	93.70
213	15.9017	6331.3	4037.4	85.04	283	12.5558	8487.9	5582.7	93.80
214	15.8406	6362.6	4059.9	85.19	284	12.5186	8518.2	5604.4	93.91
215	15.7799	6394.0	4082.4	85.34	285	12.4816	8548.6	5626.2	94.02
216	15.7197	6425.3	4104.9	85.48	286	12.4449	8579.0	5647.9	94.13
217	15.6601	6456.6	4127.3	85.63	287	12.4084	8609.3	5669.6	94.23
218	15.6009	6487.9	4149.8	85.77	288	12.3721	8639.7	5691.3	94.34
219	15.5422	6519.2	4172.2	85.91	289	12.3360	8670.0	5713.1	94.44
220	15.4839	6550.5	4194.7	86.06	290	12.3002	8700.3	5734.8	94.55
221	15.4261	6581.7	4217.0	86.20	291	12.2645	8730.6	5756.5	94.65
222	15.3688	6612.9	4239.4	86.34	292	12.2291	8761.0	5778.2	94.75
223	15.3119	6644.1	4261.8	86.48	293	12.1939	8791.3	5799.9	94.86
224	15.2555	6675.2	4284.2	86.62	294	12.1589	8821.6	5821.5	94.96
225	15.1995	6706.4	4306.5	86.76	295	12.1241	8851.8	5843.2	95.06
226	15.1439	6737.5	4328.8	86.90	296	12.0895	8882.1	5864.9	95.17
227	15.0887	6768.6	4351.2	87.03	297	12.0552	8912.4	5886.6	95.27
228	15.0340	6799.7	4373.5	87.17	298	12.0210	8942.7	5908.2	95.37
229	14.9797	6830.8	4395.7	87.31	299	11.9870	8972.9	5929.9	95.47
230	14.9259	6861.9	4418.0	87.44	300	11.9532	9003.2	5951.5	95.57

380.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
120	25.8924	3265.6	1778.6	65.39
121	25.7358	3301.5	1805.4	65.68
122	25.5810	3337.2	1832.1	65.98
123	25.4280	3373.0	1858.8	66.27
124	25.2766	3408.7	1885.4	66.56
125	25.1269	3444.2	1911.9	66.84
126	24.9789	3479.7	1938.3	67.13
127	24.8326	3515.2	1964.6	67.41
128	24.6878	3550.5	1990.9	67.68
129	24.5447	3585.8	2017.0	67.96
130	24.4031	3621.0	2043.2	68.23
131	24.2631	3656.1	2069.1	68.50
132	24.1247	3691.1	2095.1	68.77
133	23.9878	3726.1	2120.9	69.03
134	23.8524	3760.9	2146.7	69.29
135	23.7185	3795.8	2172.4	69.55
136	23.5860	3830.5	2198.1	69.81
137	23.4550	3865.2	2223.7	70.06
138	23.3255	3899.9	2249.2	70.31
139	23.1973	3934.5	2274.6	70.56
140	23.0706	3969.0	2300.0	70.81
141	22.9452	4003.3	2325.3	71.05
142	22.8212	4037.7	2350.5	71.30
143	22.6985	4072.0	2375.7	71.54
144	22.5771	4106.2	2400.8	71.78
145	22.4571	4140.3	2425.8	72.01
146	22.3383	4174.4	2450.8	72.25
147	22.2208	4208.5	2475.7	72.48
148	22.1045	4242.5	2500.6	72.71
149	21.9895	4276.4	2525.4	72.94
150	21.8757	4310.3	2550.2	73.16
151	21.7631	4344.0	2574.8	73.39
152	21.6516	4377.8	2599.5	73.61
153	21.5414	4411.4	2624.0	73.83
154	21.4322	4445.1	2648.5	74.05
155	21.3242	4478.6	2673.0	74.27
156	21.2174	4512.1	2697.4	74.48
157	21.1116	4545.6	2721.8	74.70
158	21.0069	4579.0	2746.1	74.91
159	20.9033	4612.4	2770.4	75.12
160	20.8007	4645.7	2794.6	75.33

380.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	20.6992	4678.9	2818.8	75.54	231	15.4940	6916.7	4431.6	87.10
162	20.5987	4712.1	2842.9	75.74	232	15.4394	6947.8	4453.9	87.23
163	20.4992	4745.3	2867.0	75.95	233	15.3853	6978.8	4476.2	87.37
164	20.4007	4778.4	2891.0	76.15	234	15.3316	7009.8	4498.5	87.50
165	20.3032	4811.4	2915.0	76.35	235	15.2782	7040.9	4520.7	87.63
166	20.2067	4844.5	2939.0	76.55	236	15.2253	7071.9	4543.0	87.76
167	20.1111	4877.4	2962.9	76.75	237	15.1727	7102.9	4565.2	87.90
168	20.0165	4910.4	2986.8	76.94	238	15.1205	7133.8	4587.4	88.03
169	19.9228	4943.2	3010.6	77.14	239	15.0687	7164.8	4609.6	88.16
170	19.8300	4976.1	3034.4	77.33	240	15.0172	7195.7	4631.8	88.29
171	19.7381	5008.9	3058.1	77.52	241	14.9662	7226.6	4653.9	88.41
172	19.6471	5041.6	3081.8	77.72	242	14.9155	7257.6	4676.1	88.54
173	19.5569	5074.3	3105.5	77.90	243	14.8651	7288.4	4698.3	88.67
174	19.4677	5106.9	3129.1	78.09	244	14.8151	7319.3	4720.4	88.80
175	19.3793	5139.6	3152.7	78.28	245	14.7655	7350.2	4742.5	88.92
176	19.2917	5172.1	3176.3	78.47	246	14.7162	7381.0	4764.6	89.05
177	19.2050	5204.7	3199.8	78.65	247	14.6673	7411.9	4786.7	89.17
178	19.1191	5237.2	3223.3	78.83	248	14.6187	7442.7	4808.8	89.30
179	19.0340	5269.7	3246.8	79.02	249	14.5704	7473.5	4830.9	89.42
180	18.9496	5302.1	3270.2	79.20	250	14.5225	7504.3	4853.0	89.55
181	18.8661	5334.5	3293.6	79.38	251	14.4749	7535.0	4875.0	89.67
182	18.7834	5366.8	3316.9	79.55	252	14.4277	7565.8	4897.1	89.79
183	18.7014	5399.1	3340.3	79.73	253	14.3807	7596.6	4919.1	89.91
184	18.6201	5431.4	3363.6	79.91	254	14.3341	7627.3	4941.2	90.03
185	18.5397	5463.6	3386.8	80.08	255	14.2878	7658.0	4963.2	90.15
186	18.4599	5495.9	3410.1	80.25	256	14.2418	7688.7	4985.2	90.27
187	18.3809	5528.0	3433.3	80.43	257	14.1961	7719.4	5007.2	90.39
188	18.3025	5560.2	3456.5	80.60	258	14.1508	7750.1	5029.2	90.51
189	18.2249	5592.3	3479.6	80.77	259	14.1057	7780.8	5051.2	90.63
190	18.1480	5624.4	3502.7	80.94	260	14.0609	7811.5	5073.2	90.75
191	18.0718	5656.4	3525.8	81.11	261	14.0165	7842.1	5095.1	90.87
192	17.9962	5688.4	3548.9	81.27	262	13.9723	7872.8	5117.1	90.98
193	17.9213	5720.4	3571.9	81.44	263	13.9284	7903.4	5139.0	91.10
194	17.8471	5752.3	3594.9	81.60	264	13.8848	7934.0	5161.0	91.22
195	17.7735	5784.3	3617.9	81.77	265	13.8415	7964.6	5182.9	91.33
196	17.7005	5816.2	3640.9	81.93	266	13.7985	7995.2	5204.8	91.45
197	17.6282	5848.0	3663.8	82.09	267	13.7557	8025.8	5226.7	91.56
198	17.5565	5879.9	3686.7	82.26	268	13.7133	8056.4	5248.6	91.68
199	17.4855	5911.7	3709.6	82.42	269	13.6711	8086.9	5270.5	91.79
200	17.4150	5943.4	3732.5	82.58	270	13.6292	8117.5	5292.4	91.91
201	17.3451	5975.2	3755.3	82.73	271	13.5875	8148.0	5314.3	92.02
202	17.2759	6006.9	3778.2	82.89	272	13.5461	8178.6	5336.2	92.13
203	17.2072	6038.6	3801.0	83.05	273	13.5050	8209.1	5358.0	92.24
204	17.1391	6070.3	3823.7	83.20	274	13.4641	8239.6	5379.9	92.35
205	17.0715	6101.9	3846.5	83.36	275	13.4235	8270.1	5401.7	92.46
206	17.0046	6133.5	3869.2	83.51	276	13.3832	8300.6	5423.6	92.58
207	16.9381	6165.1	3891.9	83.66	277	13.3431	8331.0	5445.4	92.69
208	16.8723	6196.7	3914.6	83.82	278	13.3032	8361.5	5467.2	92.80
209	16.8069	6228.2	3937.3	83.97	279	13.2636	8392.0	5489.0	92.90
210	16.7421	6259.8	3960.0	84.12	280	13.2242	8422.4	5510.8	93.01
211	16.6779	6291.3	3982.6	84.27	281	13.1851	8452.8	5532.6	93.12
212	16.6141	6322.7	4005.2	84.42	282	13.1463	8483.3	5554.5	93.23
213	16.5509	6354.2	4027.8	84.56	283	13.1076	8513.7	5576.2	93.34
214	16.4882	6385.6	4050.4	84.71	284	13.0692	8544.1	5598.0	93.45
215	16.4259	6417.0	4073.0	84.86	285	13.0311	8574.5	5619.8	93.55
216	16.3642	6448.4	4095.5	85.00	286	12.9931	8604.9	5641.6	93.66
217	16.3030	6479.8	4118.0	85.15	287	12.9554	8635.3	5663.3	93.76
218	16.2422	6511.1	4140.5	85.29	288	12.9180	8665.7	5685.1	93.87
219	16.1820	6542.4	4163.0	85.44	289	12.8807	8696.1	5706.8	93.98
220	16.1222	6573.7	4185.5	85.58	290	12.8437	8726.4	5728.6	94.08
221	16.0628	6605.0	4207.9	85.72	291	12.8069	8756.8	5750.3	94.19
222	16.0040	6636.2	4230.4	85.86	292	12.7703	8787.1	5772.1	94.29
223	15.9456	6667.5	4252.8	86.00	293	12.7340	8817.5	5793.8	94.39
224	15.8876	6698.7	4275.2	86.14	294	12.6978	8847.8	5815.5	94.50
225	15.8301	6729.9	4297.6	86.28	295	12.6619	8878.1	5837.2	94.60
226	15.7730	6761.1	4320.0	86.42	296	12.6261	8908.4	5858.9	94.70
227	15.7163	6792.2	4342.3	86.56	297	12.5906	8938.7	5880.6	94.80
228	15.6601	6823.4	4364.7	86.69	298	12.5553	8969.0	5902.3	94.91
229	15.6043	6854.5	4387.0	86.83	299	12.5202	8999.3	5924.0	95.01
230	15.5490	6885.6	4409.3	86.97	300	12.4853	9029.6	5945.7	95.11

400.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
					120	26.6295	3287.3	1765.3	64.92
					121	26.4732	3323.1	1792.1	65.22
					122	26.3186	3358.8	1818.9	65.51
					123	26.1656	3394.6	1845.6	65.81
					124	26.0143	3430.2	1872.2	66.09
					125	25.8646	3465.7	1898.7	66.38
					126	25.7164	3501.1	1925.1	66.66
					127	25.5699	3536.5	1951.5	66.94
					128	25.4249	3571.8	1977.7	67.22
					129	25.2815	3607.1	2003.9	67.49
					130	25.1395	3642.2	2030.0	67.76
					131	24.9991	3677.3	2056.1	68.03
					132	24.8602	3712.3	2082.0	68.30
					133	24.7228	3747.3	2107.9	68.56
					134	24.5869	3782.1	2133.7	68.82
					135	24.4523	3817.0	2159.4	69.08
					136	24.3192	3851.7	2185.1	69.34
					137	24.1875	3886.4	2210.7	69.59
					138	24.0572	3921.0	2236.3	69.85
					139	23.9283	3955.6	2261.8	70.10
					140	23.8007	3990.1	2287.2	70.34
					141	23.6745	4024.5	2312.5	70.59
					142	23.5496	4058.8	2337.8	70.83
					143	23.4260	4093.1	2363.0	71.07
					144	23.3037	4127.3	2388.1	71.31
					145	23.1826	4161.5	2413.2	71.55
					146	23.0628	4195.6	2438.2	71.78
					147	22.9443	4229.6	2463.2	72.01
					148	22.8270	4263.6	2488.1	72.24
					149	22.7108	4297.6	2513.0	72.47
					150	22.5959	4331.4	2537.8	72.70
					151	22.4821	4365.2	2562.5	72.92
					152	22.3695	4399.0	2587.1	73.14
					153	22.2581	4432.7	2611.8	73.37
					154	22.1477	4466.3	2636.3	73.59
					155	22.0385	4499.9	2660.8	73.80
					156	21.9304	4533.4	2685.3	74.02
					157	21.8234	4566.9	2709.7	74.23
					158	21.7174	4600.3	2734.1	74.44
					159	21.6125	4633.7	2758.4	74.66
					160	21.5086	4667.1	2782.7	74.86

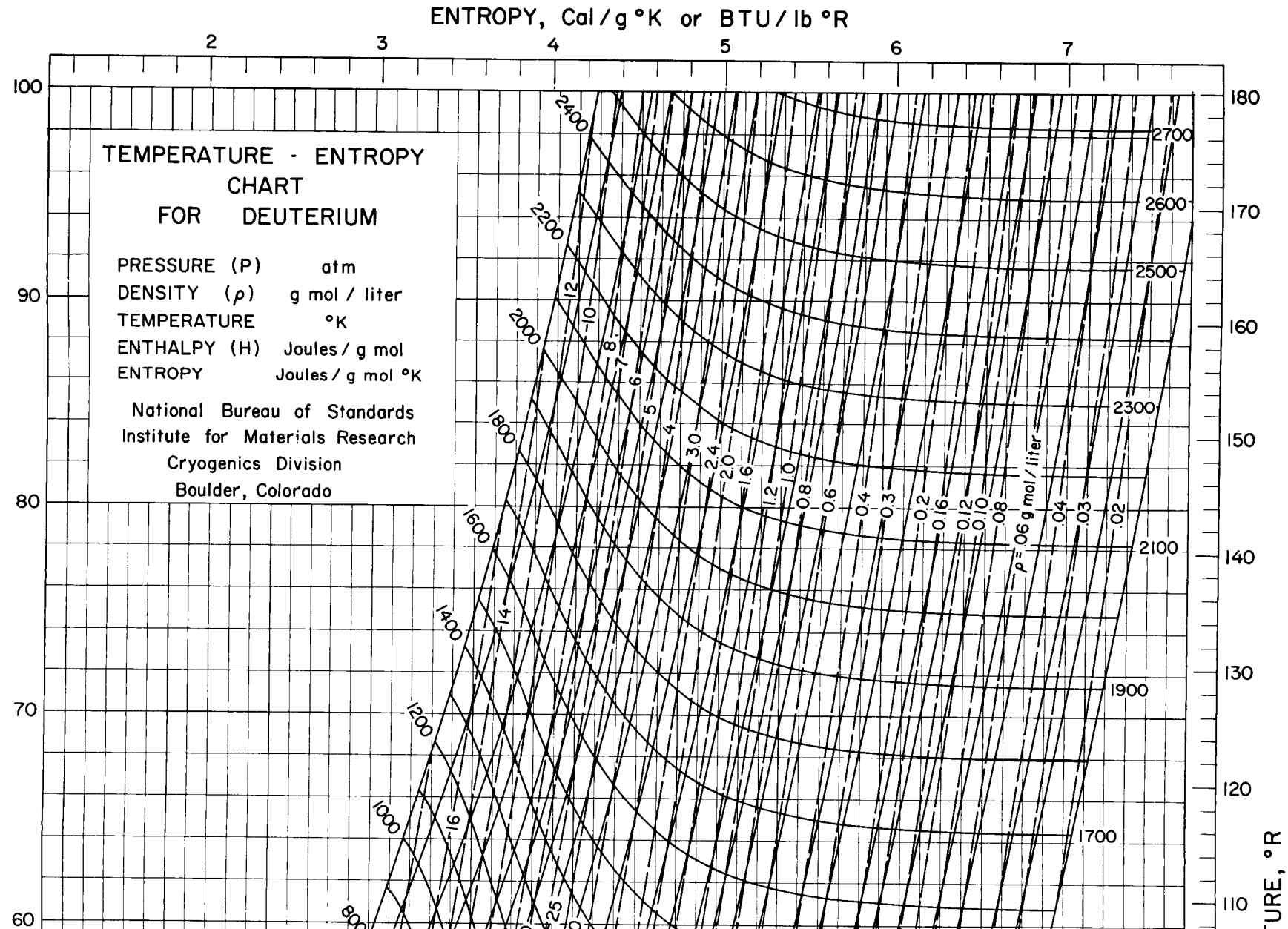
400.00 ATMOSPHERE ISOBAR

TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K	TEMP. K	DENSITY MOL/LITER	ENTHALPY J/MOL	INTERNAL ENERGY J/MOL	ENTROPY J/MOL-K
161	21.4058	4700.3	2806.9	75.07	231	16.0990	6940.9	4423.4	86.65
162	21.3039	4733.6	2831.1	75.28	232	16.0431	6972.1	4445.8	86.78
163	21.2031	4766.7	2855.2	75.48	233	15.9876	7003.2	4468.1	86.92
164	21.1032	4799.9	2879.3	75.68	234	15.9325	7034.2	4490.4	87.05
165	21.0043	4833.0	2903.4	75.89	235	15.8778	7065.3	4512.7	87.18
166	20.9064	4866.0	2927.4	76.08	236	15.8234	7096.3	4535.0	87.32
167	20.8094	4899.0	2951.3	76.28	237	15.7695	7127.4	4557.2	87.45
168	20.7134	4932.0	2975.3	76.48	238	15.7160	7158.4	4579.5	87.58
169	20.6183	4964.9	2999.1	76.68	239	15.6628	7189.4	4601.7	87.71
170	20.5240	4997.7	3023.0	76.87	240	15.6100	7220.4	4624.0	87.84
171	20.4307	5030.6	3046.8	77.06	241	15.5576	7251.3	4646.2	87.97
172	20.3383	5063.3	3070.5	77.25	242	15.5056	7282.3	4668.4	88.09
173	20.2467	5096.1	3094.3	77.44	243	15.4539	7313.2	4690.6	88.22
174	20.1560	5128.8	3118.0	77.63	244	15.4026	7344.1	4712.8	88.35
175	20.0661	5161.4	3141.6	77.82	245	15.3517	7375.0	4734.9	88.47
176	19.9771	5194.0	3165.2	78.00	246	15.3011	7405.9	4757.1	88.60
177	19.8889	5226.6	3188.8	78.19	247	15.2509	7436.8	4779.2	88.73
178	19.8015	5259.2	3212.4	78.37	248	15.2010	7467.6	4801.4	88.85
179	19.7149	5291.7	3235.9	78.55	249	15.1514	7498.5	4823.5	88.97
180	19.6291	5324.1	3259.4	78.74	250	15.1022	7529.3	4845.6	89.10
181	19.5441	5356.6	3282.8	78.91	251	15.0533	7560.1	4867.7	89.22
182	19.4599	5388.9	3306.2	79.09	252	15.0048	7590.9	4889.8	89.34
183	19.3764	5421.3	3329.6	79.27	253	14.9566	7621.7	4911.9	89.47
184	19.2937	5453.6	3352.9	79.45	254	14.9087	7652.5	4934.0	89.59
185	19.2117	5485.9	3376.3	79.62	255	14.8611	7683.3	4956.0	89.71
186	19.1304	5518.2	3399.5	79.79	256	14.8138	7714.0	4978.1	89.83
187	19.0499	5550.4	3422.8	79.97	257	14.7669	7744.7	5000.1	89.95
188	18.9701	5582.6	3446.0	80.14	258	14.7203	7775.5	5022.1	90.07
189	18.8910	5614.7	3469.3	80.31	259	14.6740	7806.2	5044.2	90.19
190	18.8126	5646.8	3492.4	80.48	260	14.6279	7836.9	5066.2	90.30
191	18.7348	5678.9	3515.6	80.65	261	14.5822	7867.6	5088.2	90.42
192	18.6578	5711.0	3538.7	80.82	262	14.5368	7898.3	5110.2	90.54
193	18.5814	5743.0	3561.8	80.98	263	14.4917	7928.9	5132.2	90.66
194	18.5057	5775.0	3584.8	81.15	264	14.4469	7959.6	5154.1	90.77
195	18.4306	5806.9	3607.9	81.31	265	14.4024	7990.2	5176.1	90.89
196	18.3561	5838.9	3630.9	81.47	266	14.3581	8020.9	5198.1	91.00
197	18.2823	5870.8	3653.9	81.64	267	14.3142	8051.5	5220.0	91.12
198	18.2091	5902.7	3676.9	81.80	268	14.2705	8082.1	5242.0	91.23
199	18.1366	5934.5	3699.8	81.96	269	14.2271	8112.7	5263.9	91.35
200	18.0646	5966.3	3722.7	82.12	270	14.1840	8143.3	5285.8	91.46
201	17.9933	5998.1	3745.6	82.28	271	14.1411	8173.8	5307.7	91.57
202	17.9225	6029.9	3768.5	82.43	272	14.0985	8204.4	5329.6	91.69
203	17.8524	6061.6	3791.4	82.59	273	14.0562	8235.0	5351.5	91.80
204	17.7828	6093.3	3814.2	82.75	274	14.0142	8265.5	5373.4	91.91
205	17.7138	6125.0	3837.0	82.90	275	13.9724	8296.0	5395.3	92.02
206	17.6453	6156.7	3859.8	83.06	276	13.9309	8326.6	5417.2	92.13
207	17.5774	6188.3	3882.5	83.21	277	13.8896	8357.1	5439.1	92.24
208	17.5101	6220.0	3905.3	83.36	278	13.8486	8387.6	5460.9	92.35
209	17.4433	6251.5	3928.0	83.51	279	13.8078	8418.1	5482.8	92.46
210	17.3770	6283.1	3950.7	83.66	280	13.7673	8448.5	5504.6	92.57
211	17.3113	6314.6	3973.4	83.81	281	13.7271	8479.0	5526.5	92.68
212	17.2461	6346.2	3996.1	83.96	282	13.6870	8509.5	5548.3	92.79
213	17.1814	6377.7	4018.7	84.11	283	13.6473	8539.9	5570.1	92.90
214	17.1172	6409.1	4041.3	84.26	284	13.6077	8570.4	5591.9	93.00
215	17.0536	6440.6	4064.0	84.41	285	13.5684	8600.8	5613.8	93.11
216	16.9904	6472.0	4086.5	84.55	286	13.5294	8631.3	5635.6	93.22
217	16.9277	6503.4	4109.1	84.70	287	13.4906	8661.7	5657.4	93.32
218	16.8655	6534.8	4131.7	84.84	288	13.4520	8692.1	5679.2	93.43
219	16.8038	6566.2	4154.2	84.98	289	13.4136	8722.5	5700.9	93.53
220	16.7426	6597.5	4176.7	85.13	290	13.3755	8752.9	5722.7	93.64
221	16.6819	6628.8	4199.2	85.27	291	13.3376	8783.3	5744.5	93.74
222	16.6216	6660.1	4221.7	85.41	292	13.2999	8813.6	5766.2	93.85
223	16.5617	6691.4	4244.2	85.55	293	13.2624	8844.0	5788.0	93.95
224	16.5024	6722.7	4266.7	85.69	294	13.2252	8874.4	5809.8	94.05
225	16.4434	6753.9	4289.1	85.83	295	13.1881	8904.7	5831.5	94.16
226	16.3850	6785.1	4311.5	85.97	296	13.1513	8935.1	5853.2	94.26
227	16.3269	6816.3	4333.9	86.11	297	13.1147	8965.4	5875.0	94.36
228	16.2693	6847.5	4356.3	86.24	298	13.0783	8995.7	5896.7	94.46
229	16.2121	6878.7	4378.7	86.38	299	13.0422	9026.0	5918.4	94.57
230	16.1554	6909.8	4401.1	86.52	300	13.0062	9056.3	5940.2	94.67

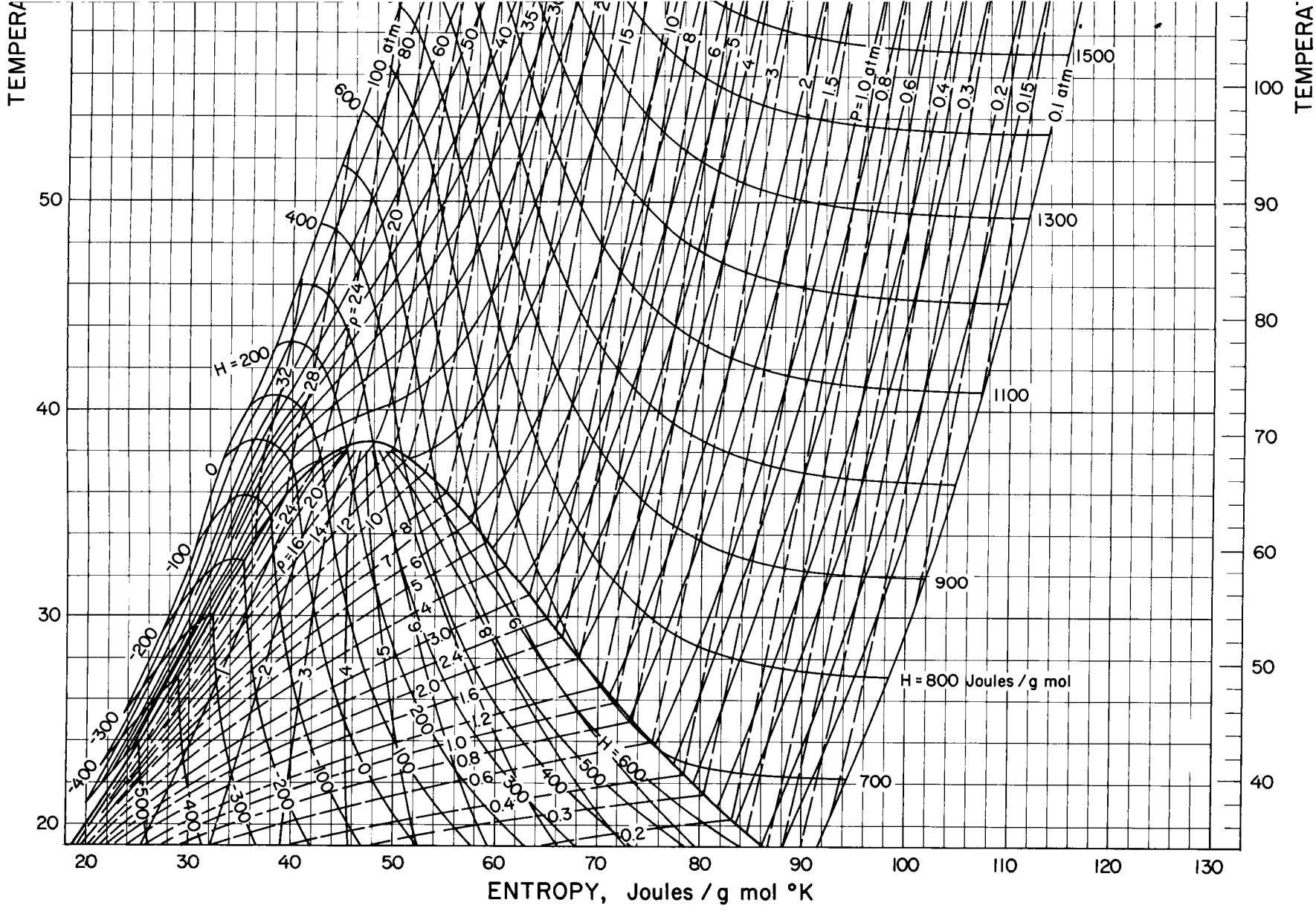
APPENDIX H - TEMPERATURE-ENTROPY AND COMPRESSIBILITY FACTOR CHARTS FOR DEUTERIUM

The two temperature-entropy and the compressibility factor charts were prepared from plots of the intersections of the different property lines. The intersection points for these 16" x 24" charts were plotted by an X-Y digital plotter. The accuracy of the plots was found to be within the accuracy guaranteed by the manufacturer, ± 0.015 inches.

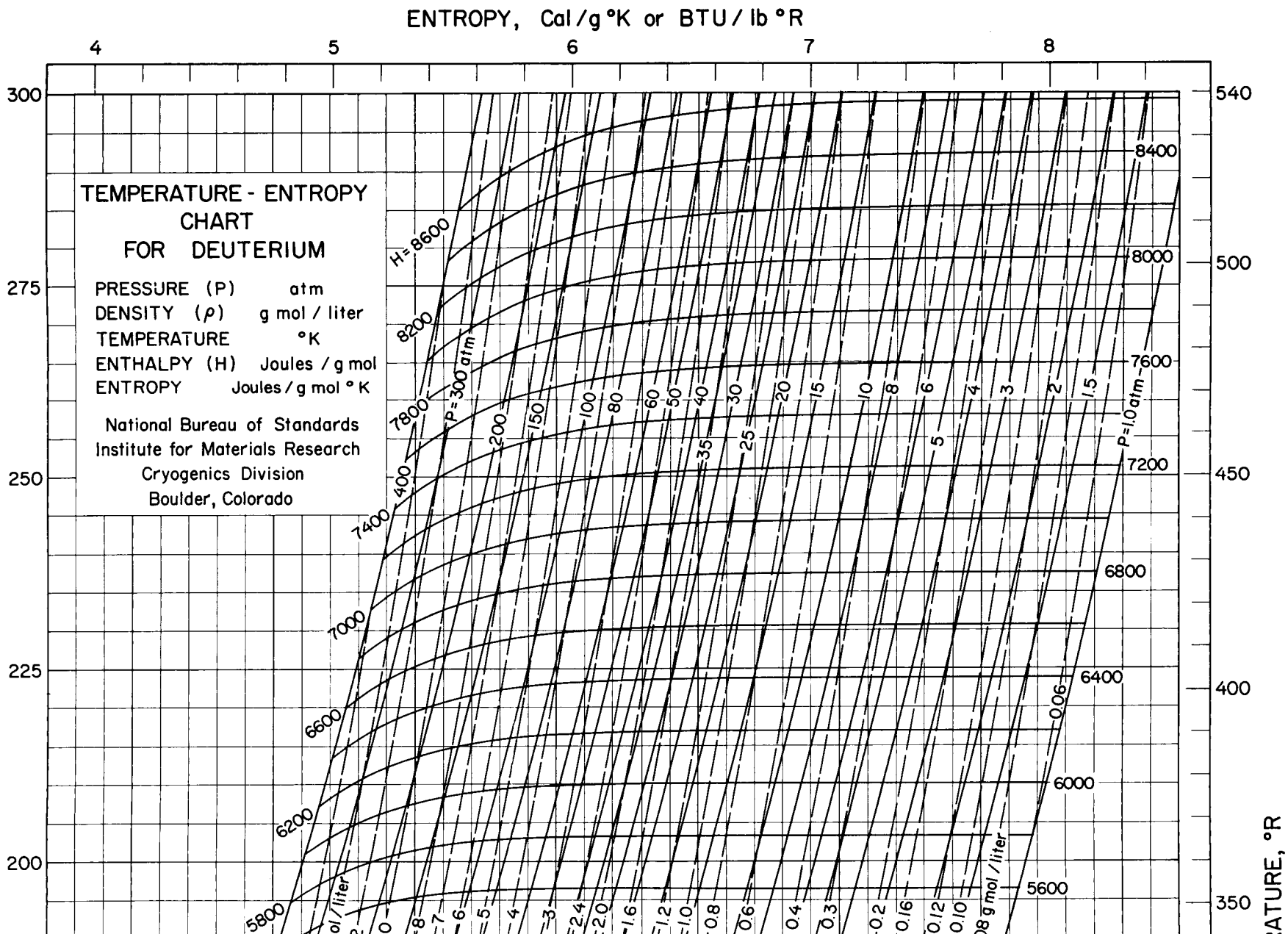
The property lines on the temperature-entropy charts were omitted below 120°K at pressures above 100 atm, since no accurate P-ρ-T data were available in this region.


ENTROPY, Cal / g °K or BTU / lb °R
TEMPERATURE, °K
TEMPERATURE, °R
TEMPERATURE - ENTROPY CHART FOR DEUTERIUM
PRESSURE (P) atm
DENSITY (ρ) g mol / liter
TEMPERATURE °K
ENTHALPY (H) Joules / g mol
ENTROPY Joules / g mol °K
National Bureau of Standards
Institute for Materials Research
Cryogenics Division
Boulder, Colorado
ρ = .06 g mol / liter

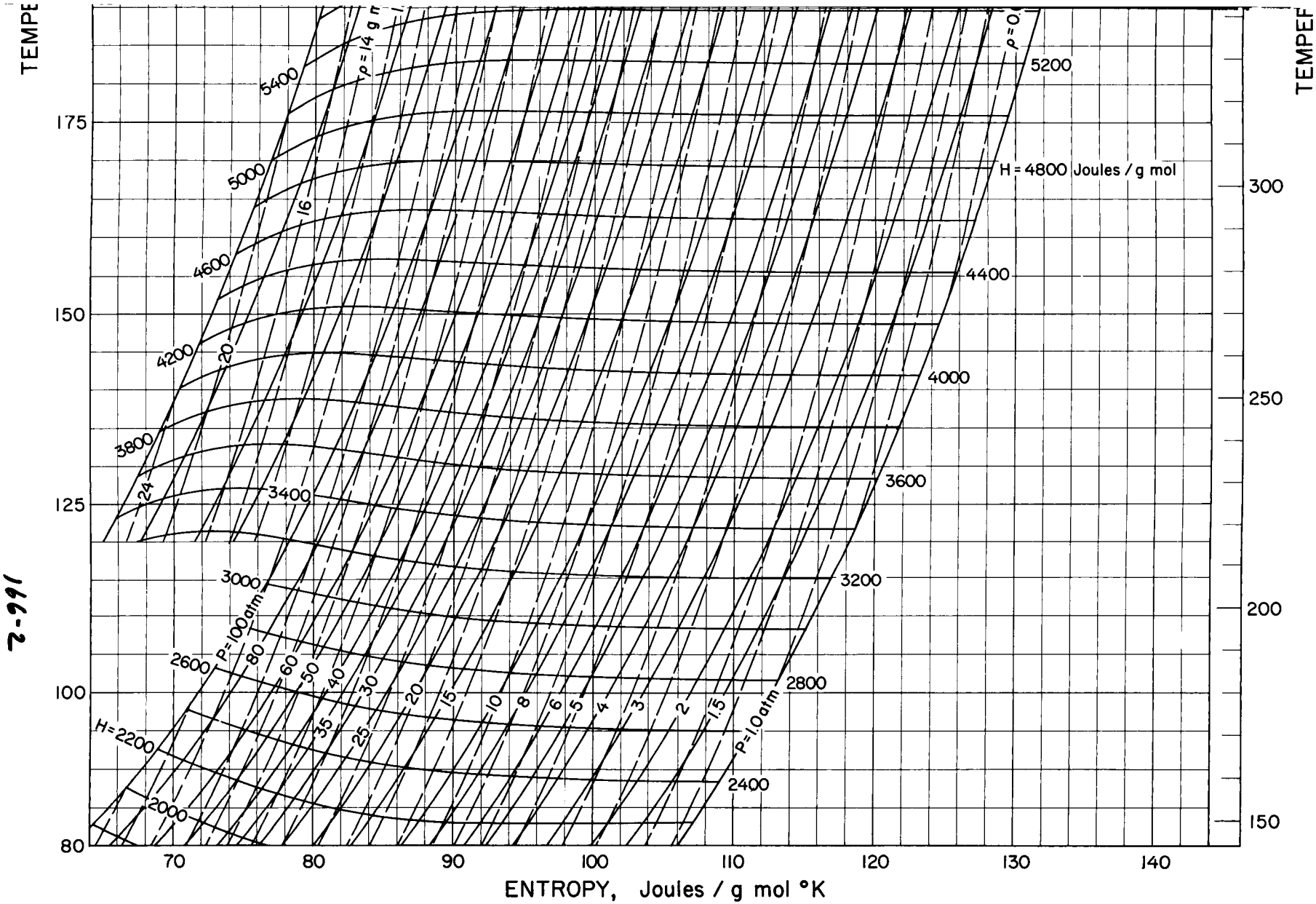
1-591


TEMPERATURE
TEMPERATURE
ENTROPY, Joules / g mol °K
H = 800 Joules / g mol
H = 200
H = 600
P = 1.0 atm
0.1 atm
P = 24
P = 16
1500
1300
1100
900
700
20
30
40
50
60
70
80
90
100
110
120
130

165-2

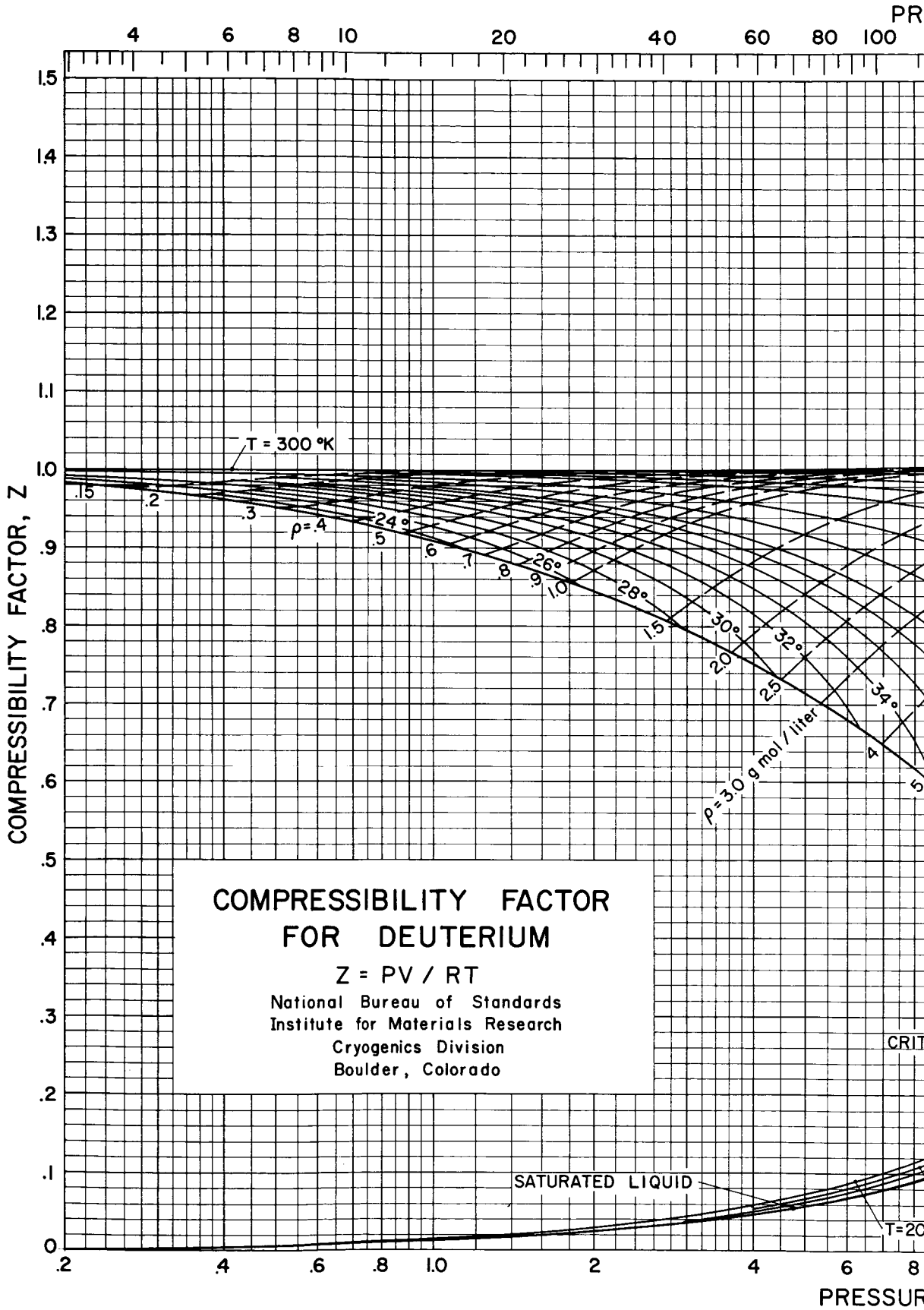

ENTROPY, Cal/g °K or BTU/lb °R
TEMPERATURE - ENTROPY CHART FOR DEUTERIUM
PRESSURE (P) atm
DENSITY (ρ) g mol / liter
TEMPERATURE °K
ENTHALPY (H) Joules / g mol
ENTROPY Joules / g mol °K
National Bureau of Standards
Institute for Materials Research
Cryogenics Division
Boulder, Colorado
TEMPERATURE, °K
TEMPERATURE, °R
H=8600
8400
8200
8000
7800
7600
7400
7200
7000
6800
6600
6400
6200
6000
5800
5600
P=300 atm
P=1.0 atm
g mol / liter

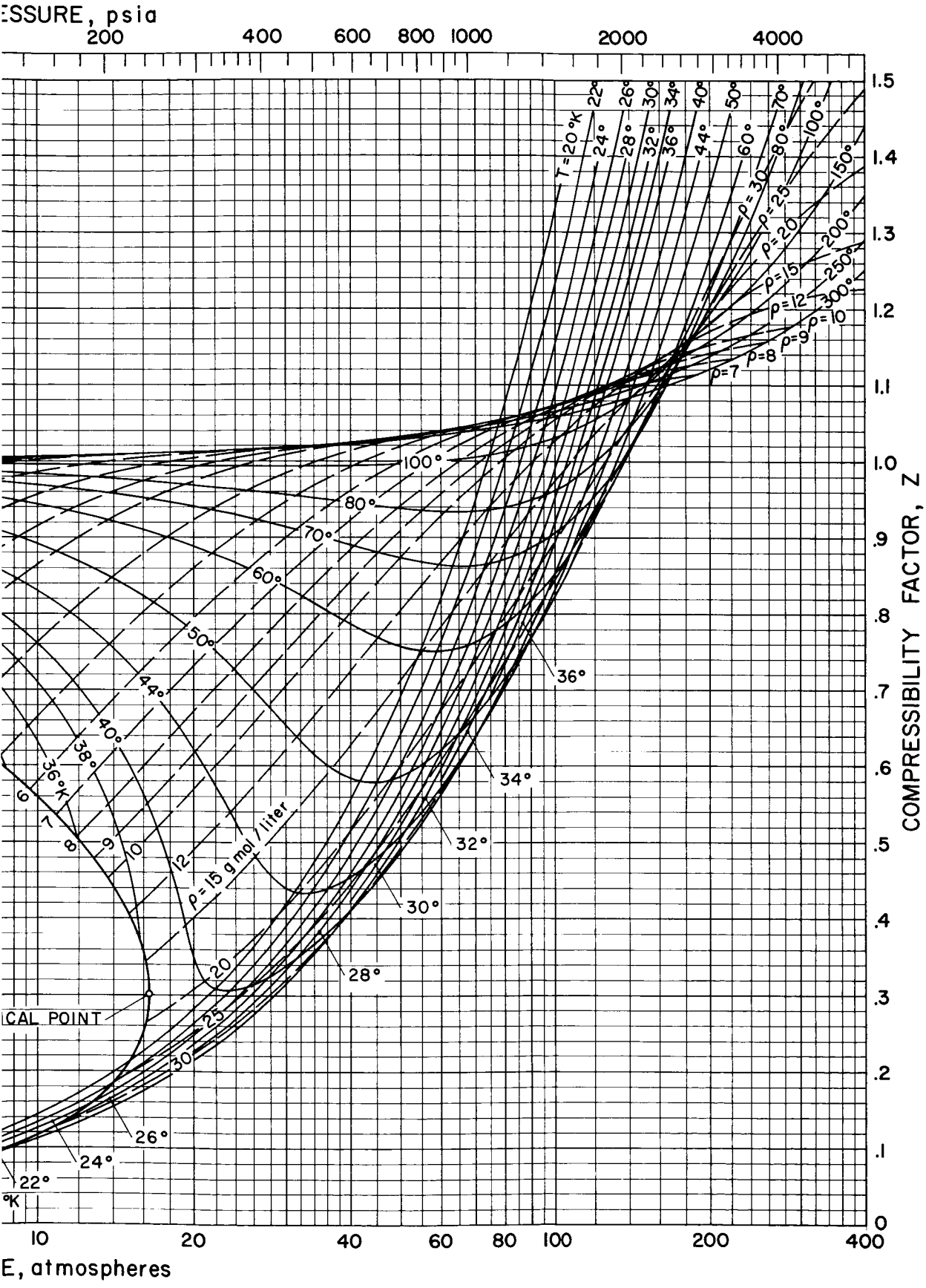
1-991


TEMPE
TEMPEF
ENTROPY, Joules / g mol °K
H = 4800 Joules / g mol
H=2200
P=100atm
P=1.0atm
ρ=14 g m
ρ=0
5400
5000
4600
4200
3800
3400
3000
2600
2000
5200
4400
4000
3600
3200
2800
2400
16
20
24
80
60
50
40
35
30
25
20
15
10
8
6
5
4
3
2
1.5
175
150
125
100
80
70
90
110
120
130
140
300
250
200
150

2-991

B- 65111


COMPRESSIBILITY FACTOR FOR DEUTERIUM
Z = PV / RT
National Bureau of Standards
Institute for Materials Research
Cryogenics Division
Boulder, Colorado
COMPRESSIBILITY FACTOR, Z
PRESSUR
T = 300 °K
ρ = .4
24°
26°
28°
30°
32°
34°
ρ = 3.0 g mol / liter
SATURATED LIQUID
CRIT
T=20


ESSURE, psia
200
400
600
800
1000
2000
4000
T=20°K
22°
24°
26°
28°
30°
32°
34°
36°
40°
44°
50°
60°
70°
80°
100°
150°
200°
250°
300°
ρ=30
ρ=25
ρ=20
ρ=15
ρ=12
ρ=10
ρ=9
ρ=8
ρ=7
100°
80°
70°
60°
50°
44°
40°
38°
36°K
36°
34°
32°
30°
28°
26°
24°
22°
°K
ρ=15 g mol / liter
6
7
8
9
10
12
20
25
30
ICAL POINT
1.5
1.4
1.3
1.2
1.1
1.0
.9
.8
.7
.6
.5
.4
.3
.2
.1
0
COMPRESSIBILITY FACTOR, Z
10
20
40
60
80
100
200
400
E, atmospheres

167-2

B- 65110

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