

Manual of Petroleum Measurement Standards Chapter 11.1—Volume Correction Factors

Volume VII

**TABLE 53A—Generalized Crude Oils
Correction of Observed Density to
Density at 15°C**

**TABLE 54A—Generalized Crude Oils
Correction of Volume to 15°C Against
Density at 15°C**

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Measurement Coordination Department

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FIRST EDITION, AUGUST 1980**

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Manual of Petroleum Measurement Standards

Chapter 11—Physical Properties Data **Section 1—Volume Correction Factors**

Volume VII

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Note to User: Both TABLES 53A and 54A are internally numbered beginning with page 1. The actual table begins after the page noted in the contents.

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FOREWORD

The Objectives

The complete collection of the jointly issued API/ASTM-IP tables of which this volume is a part is the result of close cooperation between the American Petroleum Institute (API), the Institute of Petroleum (London) (IP), and the American Society for Testing and Materials (ASTM). The overall objective of this effort was to meet the worldwide need for a uniform and authoritative publication, based on the most accurate information available. This publication serves as a basis for standardized calculations of measured quantities of petroleum fluids regardless of point of origin, destination, or units of measure used by custom or statute. To meet the objective of worldwide standardized measurement practices, the American National Standards Institute (ANSI) and the British Standards Institute (BSI) have also been closely involved nationally, resulting in the acceptance of the revised tables as an American National Standard and as a British Standard. In addition, in their respective capacities as Secretariat of the International Organization for Standardization TC/28 and of TC/28 SC3, ANSI and BSI have been instrumental in progressing the revised tables towards their adoption as an international standard by the International Organization for Standardization.

Historical Notes

The present collection supersedes all previous editions of the petroleum measurement Tables ANSI/ASTM D1250, IP200, and API Standard 2540. Action is being taken in ISO/TC 28 for the corresponding tables listed in ISO R91 and the tables in the addendum to R91 to be superseded by the present revised collection.

In view of the progress of metrification in countries formerly using the British system of weights and measures, demand for the revision of the British edition does not justify the considerable work involved. The present edition will therefore be withdrawn on the same date as the corresponding metric and American editions are published and will not be replaced.

For the metric edition the new standard covers products with densities in the range 610.0 to 1076.0 kg/m³ (0.610 to 1.076 g/mL). The tables for densities below this range, covering liquefied petroleum gases, have not been revised.

The original tables, which were developed in the late 1940s, were based on the 1916 data of Bearce and Peffer (1916) and represent thirty years of evolution. The history of this evolution is summarized by Hall et al. (1975).

Present Development

Downer and Inkley (1972) demonstrated that the original tables were not satisfactory representations of many petroleum fluids of current importance. In 1974 the American Petroleum Institute (API) and the United States National Bureau of Standards (NBS) initiated a research program funded by the API which intended to provide the solid scientific base for the development of more accurate, consequently more equitable, measurement tables. The result of this program was precise density data on 349 different fluids representing a wide variety of refined products and 66.8 percent of the world crude production in 1974. The completion of this five-year, \$500,000 project in March 1979 opened the way for modernizing the tables. Using the NBS density data and taking advantage of publications of outstanding technical authorities, a Joint API-ASTM Physical Properties Working

Group produced this present collection of the Petroleum Measurement Tables. The development and results of the work are described by Hankinson et al. (1979).

Conceptual Departure

A major conceptual departure from previous versions is inherent in the recognition of the present and future position of computers in the petroleum industry. The actual Standard represented by this volume and the companion volumes is neither the hardcopy printed tables nor the set of equations used to represent the density data but is an explicit implementation procedure used to develop computer subroutines. The standardization of an implementation procedure implies the standardization of the set of mathematical expressions, including calculational sequence and round-off procedures, used within the computer code. Absolute adherence to the outlined procedures will ensure that all computers and computer codes of the future, meeting the stated specifications and restrictions, will be able to produce identical results. Hence, the published implementation procedures are the primary Standard, the distributed subroutines are the secondary standard, and the published tables are produced for convenience.

Acknowledgments

The task of completing this project could not have been accomplished without many substantial contributions by a considerable number of individuals and companies. It is impossible to single out any specific individuals for special mention. However, included in the introductory material are lists of the officers of the API's Committee on Petroleum Measurement (COPM), the officers of the Joint API/ASTM Committee on Static Petroleum Measurement (COSM), the major contributors from the Institute of Petroleum, and the members of the COSM Physical Properties Working Group.

References

- Bearce, H. W., and E. L. Pepper. "Technology Papers of National Bureau of Standards—Density and Thermal Expansion of American Petroleum Oils." GPO, pp. 125-154, Washington, DC, 1916.
- Downer, L., and F. A. Inkley. *Oil and Gas Journal*, Vol. 70, No. 25, p. 52-55, June 19, 1972.
- Hall, A. H., J. A. Simpson, and J. R. Whetstone. "Investigation of Densities and Thermal Expansion Coefficients Applicable to Petroleum Measurement." SP 7, World Petroleum Congress, Tokyo, 1975.
- Hankinson, R. W., R. G. Segers, T. Krolikowski Buck, and F. P. Gielzecki. *Oil and Gas Journal*, Vol. 77, No. 52, p. 66-70, December 24, 1979.

PREFACE

The Petroleum Measurement Tables, Volume Correction Factors (Volumes I through X), are, with this edition, incorporated into API's *Manual of Petroleum Measurement Standards*. These tables form Section 1 of Chapter 11, "Physical Properties Data." To simplify the transition from the American Society for Testing and Materials' (ASTM) publication of the original tables to API's publication in 1980, the original ASTM numerical designations have been retained for the individual tables.

The numbering system used throughout Volumes I through X corresponds to the numbering system of the *Manual of Petroleum Measurement Standards*. The system consists of a series of fields separated by decimal points. The first two fields (11.1) indicate chapter and section of the manual; the third field gives the ASTM table number. Therefore, although not serial, 11.1.5, 11.1.6, 11.1.23, 11.1.24, 11.1.53, and 11.1.54 are the major headings used. All other headings are subordinate to the three field headings.

Volumes I through IX, which are designed for field use, are arranged on a functional basis rather than on a topical basis.

First Series—Volumes I, II, and III

These three volumes contain TABLES 5 and 6, the tables for the °API, °F, 60°F base series, plus examples to guide the user. Each volume contains specific data as follows:

- Volume I —Generalized Crude Oils (TABLES 5A and 6A)
- Volume II —Generalized Products (TABLES 5B and 6B)
- Volume III —Individual and Special Applications (TABLE 6C) and an appendix describing the equations and constants used and the densities and coefficients of thermal expansion of each NBS sample.

Second Series—Volumes IV, V, and VI

These three volumes contain TABLES 23 and 24, the tables for the relative density, °F, 60°F base series, plus examples to guide the user. Each volume contains specific data as follows:

- Volume IV —Generalized Crude Oils (TABLES 23A and 24A)
- Volume V —Generalized Products (TABLES 23B and 24B)
- Volume VI —Individual and Special Applications (TABLE 24C) and an appendix describing the equations and constants used and the densities and coefficients of thermal expansion of each NBS sample.

Third Series—Volumes VII, VIII, and IX

These three volumes contain TABLES 53 and 54, the tables for the kilogram per cubic metre, °C, 15°C base series, plus examples to guide the user. Each volume contains specific data as follows:

- Volume VII —Generalized Crude Oils (TABLES 53A and 54A)
- Volume VIII—Generalized Products (TABLES 53B and 54B)
- Volume IX —Individual and Special Applications (TABLE 54C) and an appendix describing the equations and constants used and the densities and coefficients of thermal expansion for each NBS sample.

Volume X provides a complete breakdown of the Petroleum Measurement Tables, Volume Correction Factors, and references appropriate volumes for the location of specific tables. Volume X is the key volume of the entire set and contains the actual Standard, the implementation procedures, and the instructions for the

use of the computer subroutines. The history and development of the project are also included in Volume X under 11.1.6.

Inquiries concerning the application of the tables or the computer subroutines should be addressed to—

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COPM—API Committee on Petroleum Measurement

COSM—Joint API/ASTM Subcommittee on Static Petroleum Measurement

NBS—U.S. National Bureau of Standards

ISO—International Organization for Standardization

Chapter 11—Physical Properties Data

SECTION 1—VOLUME CORRECTION FACTORS

11.1.53 TABLES 53A and 53B—Correction of Observed Density to Density at 15°C

TABLES 53A and 53B give values of density in kilogram per cubic metre for a fluid at 15°C corresponding to densities (kg/m^3) of that fluid at temperatures other than 15°C. It is assumed that the observed densities are obtained with a glass hydrometer. The density measurements at temperatures other than 15°C require two corrections: the first is for the change in the volume of the glass hydrometer with temperature, the second is for the change in the volume of the fluid with temperature.

The first correction is necessary because the glass hydrometers are calibrated for 15°C. Both corrections are applied in this table.

The data are represented by two tables to maximize accuracy while maintaining convenience of use:

TABLE 53A Generalized Crude Oils

TABLE 53B Generalized Products
(see Volume VIII)

The development and intended use of these tables is described in 11.1.6 in Volume X. The parameters K_0 and K_1 are defined in 11.1.54.7.1 (see Volume X).

The limits of these tables are illustrated in Figures VII-1 and VII-2.

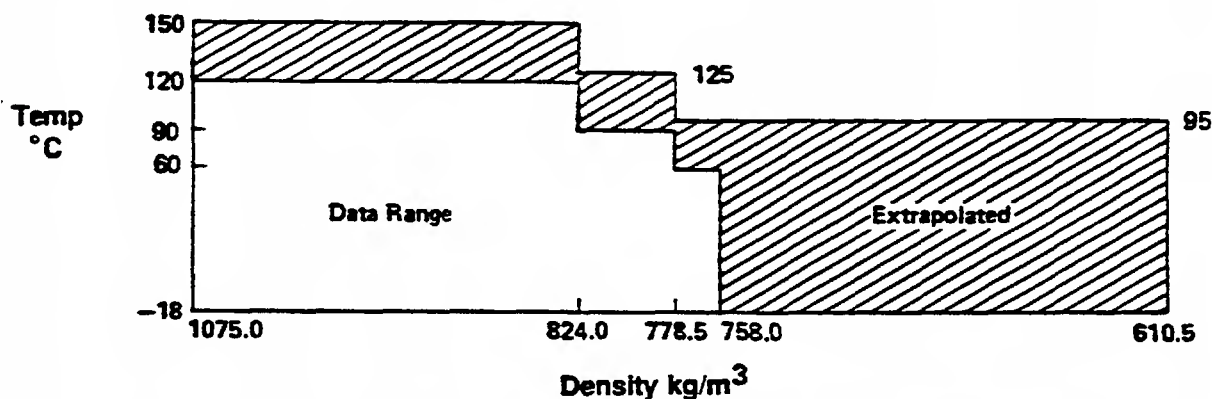


Figure VII-1 — Data Limits for TABLE 53A, Generalized Crude Oils

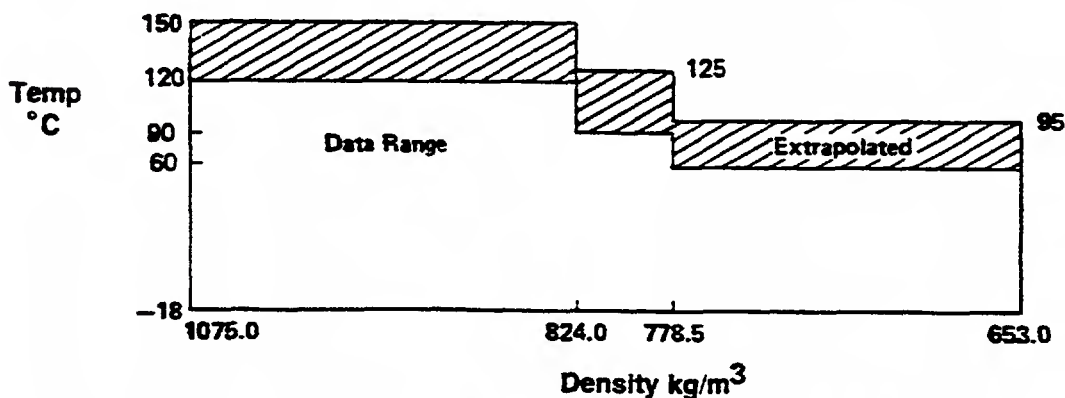


Figure VII-2 — Data Limits for TABLE 53B, Generalized Products

11.1.53.1 TABLE 53A—Generalized Crude Oils, Correction of Observed Density to Density at 15°C

TABLE 53A gives the value of density in kilogram per cubic metre at 15°C corresponding to a hydrometer reading at observed temperatures other than 15°C. In converting the hydrometer reading at the observed temperature to the corresponding density at 15°C, two corrections are necessary: the first arises from the change in volume of the glass hydrometer with temperature (stem correction) and the second from the change in volume of the crude oil with temperature. Both have been applied in this table. The values of density at 15°C in this table are the result of a computer procedure which is the Standard (see 11.1.53.2 and 11.1.53.3 in Volume X.).

The temperature ranges of this table are:

Density, kg/m ³	°C
610 to 778	-18 to 95
778 to 824	-18 to 125
824 to 1075	-18 to 150

The values of density at 15°C given in this table are based on data from the U.S. National Bureau of Standards and from other published data. Portions of the density and temperature ranges represent areas beyond these data. Thus, mathematical techniques were employed to extrapolate beyond the density and temperature ranges of the given data to determine the value of the density at 15°C for these areas. These values are denoted by an asterisk (*). Extension of this table beyond the ranges shown is not recommended.

Increments used in this table for determining density at 15°C are 0.25°C and 2 kg/m³. Interpolation with temperature is not intended since there is no practical method of interpolation that will produce the accuracy obtainable from the Standard. However, interpolation with density to one additional significant digit can be reasonably made. Interpolation is not required if the TABLE 53A results are to be used as entries to TABLE 54A.

Some countries which have historically used a metric system have retained for field use density units such as g/mL, g/cc, or g/kL. This practice was consistent with previously published API/IP measurement tables which have been replaced by this 1980 edition. In these instances where field measurements of density are recorded in g/mL, g/cc, or g/kL, multiply the measure-

ments by 1,000 to obtain kg/m³ prior to entering TABLES 53A and 53B.

This table must be entered with a hydrometer reading measured with a soft glass hydrometer calibrated at 15°C and with an observed temperature.

A correction to the glass hydrometer reading has been incorporated into the table to account for the thermal expansion of glass. The hydrometer constant, as defined in the *Report on the Development, Construction, Calculation, and Preparation of the ASTM-IP Petroleum Measurement Tables* (1960), varies with temperature according to the following:

$$\text{HYC} = 1 - 0.000023(t - 15^\circ\text{C}) - 0.00000002(t - 15^\circ\text{C})^2$$

Example 1

If the hydrometer reading for a crude oil at 44°C is 870 kg/m³, what is the density of the crude oil corrected to 15°C?

Enter the table in the column "Density at Observed Temperature," headed 870.0. Read down to an observed "Temperature" of 44°C. The corresponding density at 15°C is 889.0 kg/m³.

Example 2

If the observed density of a crude oil is 0.8936 kg per litre at 27°C, what is the density at 15°C?

1. Convert 0.8936 kg/litre to standard international units $0.8936 \times 1000 = 893.6 \text{ kg/m}^3$.
2. Enter the table in the column "Density at Observed Temperature," headed 892.0 and note that against an observed "Temperature" of 27°C, the corresponding density at 15°C is 900.0 kg/m³.
3. Likewise note that for 894.0 kg/m³ at 27°C the corresponding density at 15°C is 901.9 kg/m³.
4. Interpolate on density

$$(900.0 - 901.9)/(892.0 - 894.0) = 0.95$$

$$0.95 \times (894.0 - 893.6) = 0.38.$$
5. Then, the density at 15°C corresponding to the density of 893.6 kg/m³ at 27°C is 901.9 minus 0.38 or 901.52 kg/m³.

(Text continues on page VII-5 following TABLE 53A.)

API/ASTM-IP PETROLEUM MEASUREMENT TABLE

TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 DEGREES C

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*

THIS TABLE MUST BE ENTERED WITH DENSITIES MEASURED WITH A SOFT GLASS HYDROMETER OR PYKNOMETER CALIBRATED AT 15 DEGREES C.

TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 °C

TEMP. °C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 °C							TEMP. °C
	610.0	612.0	614.0	616.0	618.0	620.0	622.0	624.0
-5.00	-	-	-	-	-	-	-	-5.00
-4.75	-	-	-	-	-	-	-	-4.75
-4.50	-	-	-	-	-	-	-	-4.50
-4.25	-	-	-	-	-	-	-	-4.25
-4.00	-	-	-	-	-	-	-	-4.00
-3.75	-	-	-	-	-	-	-	-3.75
-3.50	-	-	-	-	-	-	-	-3.50
-3.25	-	-	-	-	-	-	-	-3.25
-3.00	-	-	-	-	-	-	-	-3.00
-2.75	-	-	-	-	-	-	-	-2.75
-2.50	-	-	-	-	-	-	-	-2.50
-2.25	-	-	-	-	-	-	-	-2.25
-2.00	-	-	-	-	-	-	-	-2.00
-1.75	-	-	-	-	-	-	-	-1.75
-1.50	-	-	-	-	-	-	-	-1.50
-1.25	-	-	-	-	-	-	-	-1.25
-1.00	-	-	-	-	-	-	-	-1.00
-.75	-	-	-	-	-	-	-	-.75
-.50	-	-	-	-	-	-	-	-.50
-.25	-	-	-	-	-	-	-	-.25
0.00	-	-	-	-	-	-	-	0.00
.25	-	-	-	-	-	-	-	.25
.50	-	-	-	-	-	-	-	.50
.75	-	-	-	-	-	-	-	.75
1.00	-	-	-	-	-	-	-	1.00
1.25	-	-	-	-	-	-	-	1.25
1.50	-	-	-	-	-	-	-	1.50
1.75	-	-	-	-	-	-	-	1.75
2.00	-	-	-	-	-	-	-	2.00
2.25	-	-	-	-	-	-	-	2.25
2.50	-	-	-	-	-	-	-	2.50

OBSERVED DENSITY = 610.0 TO 630.0

1

* DENOTES EXTRAPOLATED VALUE

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TEMP. C	610.0	612.0	614.0	DENSITY AT OBSERVED TEMPERATURE				630.0	TEMP. C	
				616.0	618.0	620.0	622.0			624.0
				CORRESPONDING DENSITY AT 15 C						
2.50	-	-	-	-	-	611.7*	613.8*	615.8*	617.8*	2.50
2.75	-	-	-	-	-	-	612.0*	614.0*	616.0*	2.75
3.00	-	-	-	-	-	-	612.2*	614.2*	616.3*	3.00
3.25	-	-	-	-	-	-	612.5*	614.5*	616.5*	3.25
3.50	-	-	-	-	-	610.7*	612.7*	614.7*	616.8*	3.50
3.75	-	-	-	-	-	610.9*	613.0*	615.0*	617.0*	3.75
4.00	-	-	-	-	-	611.2*	613.2*	615.2*	617.3*	4.00
4.25	-	-	-	-	-	611.4*	613.4*	615.5*	617.5*	4.25
4.50	-	-	-	-	-	611.7*	613.7*	615.7*	617.8*	4.50
4.75	-	-	-	-	-	611.9*	614.0*	616.0*	618.0*	4.75
5.00	-	-	-	-	-	612.2*	614.2*	616.2*	618.3*	5.00
5.25	-	-	-	-	-	612.4*	614.4*	616.5*	618.5*	5.25
5.50	-	-	-	-	-	612.7*	614.7*	616.7*	618.8*	5.50
5.75	-	-	-	-	610.9*	612.9*	614.9*	617.0*	619.0*	5.75
6.00	-	-	-	-	611.1*	613.2*	615.2*	617.2*	619.2*	6.00
6.25	-	-	-	-	611.4*	613.4*	615.4*	617.5*	619.5*	6.25
6.50	-	-	-	-	611.6*	613.7*	615.7*	617.7*	619.7*	6.50
6.75	-	-	-	-	611.9*	613.9*	615.9*	618.0*	620.0*	6.75
7.00	-	-	-	-	612.1*	614.1*	616.2*	618.2*	620.2*	7.00
7.25	-	-	-	-	612.4*	614.4*	616.4*	618.4*	620.5*	7.25
7.50	-	-	-	-	612.6*	614.6*	616.7*	618.7*	620.7*	7.50
7.75	-	-	-	610.8*	612.9*	614.9*	616.9*	618.9*	621.0*	7.75
8.00	-	-	-	611.1*	613.1*	615.1*	617.2*	619.2*	621.2*	8.00
8.25	-	-	-	611.3*	613.4*	615.4*	617.4*	619.4*	621.5*	8.25
8.50	-	-	-	611.6*	613.6*	615.6*	617.6*	619.7*	621.7*	8.50
8.75	-	-	-	611.8*	613.9*	615.9*	617.9*	619.9*	621.9*	8.75
9.00	-	-	-	612.1*	614.1*	616.1*	618.1*	620.2*	622.2*	9.00
9.25	-	-	-	612.3*	614.3*	616.4*	618.4*	620.4*	622.4*	9.25
9.50	-	-	-	612.6*	614.6*	616.6*	618.6*	620.7*	622.7*	9.50
9.75	-	-	-	610.8*	612.8*	614.8*	616.9*	620.9*	622.9*	9.75
10.00	-	-	-	611.1*	613.1*	615.1*	617.1*	621.1*	623.2*	10.00

Document

630.0

610.0

OBSERVED DENSITY =

DENOTES EXTRAPOLATED VALUE

DENOTES EXTRAPOLATED VALUE

2

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C					TEMP. C		
	610.0	612.0	614.0	616.0	618.0	620.0	622.0	624.0
10.00	-	-	-	611.1*	613.1*	615.1*	617.1*	619.1*
10.25	-	-	-	611.3*	613.3*	615.3*	617.4*	619.4*
10.50	-	-	-	611.6*	613.6*	615.6*	617.6*	619.6*
10.75	-	-	-	611.8*	613.8*	615.8*	617.8*	619.9*
11.00	-	-	-	612.1*	614.1*	616.1*	618.1*	620.1*
11.25	-	-	-	612.3*	614.3*	616.3*	618.3*	620.3*
11.50	-	-	-	612.5*	614.6*	616.6*	618.6*	620.6*
11.75	-	-	610.8*	612.8*	614.8*	616.8*	618.8*	620.8*
12.00	-	-	611.0*	613.0*	615.0*	617.1*	619.1*	621.1*
12.25	-	-	611.3*	613.3*	615.3*	617.3*	619.3*	621.3*
12.50	-	-	611.5*	613.5*	615.5*	617.6*	619.6*	621.6*
12.75	-	-	611.8*	613.8*	615.8*	617.8*	619.8*	621.8*
13.00	-	-	612.0*	614.0*	616.0*	618.0*	620.1*	622.1*
13.25	-	-	612.3*	614.3*	616.3*	618.3*	620.3*	622.3*
13.50	-	-	612.5*	614.5*	616.5*	618.5*	620.5*	622.5*
13.75	-	610.8*	612.8*	614.8*	616.8*	618.8*	620.8*	622.8*
14.00	-	611.0*	613.0*	615.0*	617.0*	619.0*	621.0*	623.0*
14.25	-	611.3*	613.3*	615.3*	617.3*	619.3*	621.3*	623.3*
14.50	-	611.5*	613.5*	615.5*	617.5*	619.5*	621.5*	623.5*
14.75	-	611.7*	613.8*	615.8*	617.8*	619.8*	621.8*	623.8*
15.00	-	612.0*	614.0*	616.0*	618.0*	620.0*	622.0*	624.0*
15.25	-	612.3*	614.2*	616.2*	618.2*	620.2*	622.2*	624.2*
15.50	-	612.5*	614.5*	616.5*	618.5*	620.5*	622.5*	624.5*
15.75	-	612.7*	614.7*	616.7*	618.7*	620.7*	622.7*	624.7*
16.00	-	613.0*	615.0*	617.0*	619.0*	621.0*	623.0*	625.0*
16.25	-	613.2*	615.2*	617.2*	619.2*	621.2*	623.2*	625.2*
16.50	-	613.5*	615.5*	617.5*	619.5*	621.5*	623.5*	625.5*
16.75	-	613.7*	615.7*	617.7*	619.7*	621.7*	623.7*	625.7*
17.00	-	614.0*	616.0*	618.0*	620.0*	621.9*	623.9*	625.9*
17.25	-	614.2*	616.2*	618.2*	620.2*	622.2*	624.2*	626.2*
17.50	-	614.5*	616.5*	618.4*	620.4*	622.4*	624.4*	626.4*

OBSERVED DENSITY = 610.0 TO 630.0

3

DENOTES EXTRAPOLATED VALUE

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C										TEMP. C
	610.0	612.0	614.0	616.0	618.0	620.0	622.0	624.0	626.0	628.0	
-	614.5*	616.5*	618.4*	620.4*	622.4*	624.4*	626.4*	628.4*	630.4*	632.4*	17.50
-	614.7*	616.7*	618.7*	620.7*	622.7*	624.7*	626.7*	628.6*	630.6*	632.6*	17.75
-	615.0*	616.9*	618.9*	620.9*	622.9*	624.9*	626.9*	628.9*	630.9*	632.9*	18.00
-	615.2*	617.2*	619.2*	621.2*	623.2*	625.1*	627.1*	629.1*	631.1*	633.1*	18.25
-	615.4*	617.4*	619.4*	621.4*	623.4*	625.4*	627.4*	629.4*	631.4*	633.3*	18.50
-	615.7*	617.7*	619.7*	621.7*	623.6*	625.6*	627.6*	629.6*	631.6*	633.6*	18.75
-	615.9*	617.9*	619.9*	621.9*	623.9*	625.9*	627.9*	629.8*	631.8*	633.8*	19.00
-	616.2*	618.2*	620.2*	622.1*	624.1*	626.1*	628.1*	630.1*	632.1*	634.1*	19.25
-	616.4*	618.4*	620.4*	622.4*	624.4*	626.4*	628.3*	630.3*	632.3*	634.3*	19.50
-	616.7*	618.7*	620.6*	622.6*	624.6*	626.6*	628.6*	630.6*	632.6*	634.5*	19.75
-	616.9*	618.9*	620.9*	622.9*	624.9*	626.8*	628.8*	630.8*	632.8*	634.8*	20.00
-	617.2*	619.1*	621.1*	623.1*	625.1*	627.1*	629.1*	631.0*	633.0*	635.0*	20.25
-	617.4*	619.4*	621.4*	623.4*	625.3*	627.3*	629.3*	631.3*	633.3*	635.2*	20.50
-	617.7*	619.6*	621.6*	623.6*	625.6*	627.6*	629.5*	631.5*	633.5*	635.5*	20.75
-	617.9*	619.9*	621.9*	623.8*	625.8*	627.8*	629.8*	631.8*	633.7*	635.7*	21.00
-	618.1*	620.1*	622.1*	624.1*	626.1*	628.0*	630.0*	632.0*	634.0*	636.0*	21.25
-	618.4*	620.4*	622.3*	624.3*	626.3*	628.3*	630.3*	632.2*	634.2*	636.2*	21.50
-	618.6*	620.6*	622.6*	624.6*	626.5*	628.5*	630.5*	632.5*	634.5*	636.4*	21.75
-	618.9*	620.8*	622.8*	624.8*	626.8*	628.8*	630.7*	632.7*	634.7*	636.7*	22.00
-	619.1*	621.1*	623.1*	625.0*	627.0*	629.0*	631.0*	633.0*	634.9*	636.9*	22.25
-	619.4*	621.3*	623.3*	625.3*	627.3*	629.2*	631.2*	633.2*	635.2*	637.1*	22.50
-	619.6*	621.6*	623.5*	625.5*	627.5*	629.5*	631.5*	633.4*	635.4*	637.4*	22.75
-	619.8*	621.8*	623.8*	625.8*	627.7*	629.7*	631.7*	633.7*	635.6*	637.6*	23.00
-	620.1*	622.1*	624.0*	626.0*	628.0*	630.0*	631.9*	633.9*	635.9*	637.8*	23.25
-	620.3*	622.3*	624.3*	626.2*	628.2*	630.2*	632.2*	634.1*	636.1*	638.1*	23.50
-	620.6*	622.5*	624.5*	626.5*	628.5*	630.4*	632.4*	634.4*	636.3*	638.3*	23.75
-	620.8*	622.8*	624.8*	626.7*	628.7*	630.7*	632.6*	634.6*	636.6*	638.6*	24.00
-	621.1*	623.0*	625.0*	627.0*	628.9*	630.9*	632.9*	634.9*	636.8*	638.8*	24.25
-	621.3*	623.3*	625.2*	627.2*	629.2*	631.1*	633.1*	635.1*	637.1*	639.0*	24.50
-	621.5*	623.5*	625.5*	627.4*	629.4*	631.4*	633.4*	635.3*	637.3*	639.3*	24.75
-	621.8*	623.7*	625.7*	627.7*	629.7*	631.6*	633.6*	635.6*	637.5*	639.5*	25.00

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★ DENOTES EXTRAPOLATED VALUE

OBSERVED DENSITY = 610.0 TO 630.0

OBSERVED DENSITY = 610.0 TO 630.0

4

* DENOTES EXTRAPOLATED VALUE

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C										TEMP. C	
	610.0	612.0	614.0	616.0	618.0	620.0	622.0	624.0	626.0	628.0		630.0
-												
25.00	-	621.8*	623.7*	625.7*	627.7*	629.7*	631.6*	633.6*	635.6*	637.5*	639.5*	25.00
25.25	-	622.0*	624.0*	626.0*	627.9*	629.9*	631.9*	633.8*	635.8*	637.8*	639.7*	25.25
25.50	-	622.3*	624.2*	626.2*	628.2*	630.1*	632.1*	634.1*	636.0*	638.0*	640.0*	25.50
25.75	-	622.5*	624.5*	626.4*	628.4*	630.4*	632.3*	634.3*	636.3*	638.2*	640.2*	25.75
26.00	-	622.7*	624.7*	626.7*	628.6*	630.6*	632.6*	634.5*	636.5*	638.5*	640.4*	26.00
26.25	-	623.0*	624.9*	626.9*	628.9*	630.8*	632.8*	634.8*	636.7*	638.7*	640.7*	26.25
26.50	-	623.2*	625.2*	627.2*	629.1*	631.1*	633.0*	635.0*	637.0*	638.9*	640.9*	26.50
26.75	-	623.5*	625.4*	627.4*	629.4*	631.3*	633.3*	635.2*	637.2*	639.2*	641.1*	26.75
27.00	-	623.7*	625.7*	627.6*	629.6*	631.6*	633.5*	635.5*	637.4*	639.4*	641.4*	27.00
27.25	-	624.0*	625.9*	627.9*	629.8*	631.8*	633.8*	635.7*	637.7*	639.6*	641.6*	27.25
27.50	-	624.2*	626.1*	628.1*	630.1*	632.0*	634.0*	636.0*	637.9*	639.9*	641.8*	27.50
27.75	-	624.4*	626.4*	628.4*	630.3*	632.3*	634.2*	636.2*	638.1*	640.1*	642.1*	27.75
28.00	-	624.7*	626.6*	628.6*	630.5*	632.5*	634.5*	636.4*	638.4*	640.3*	642.3*	28.00
28.25	-	624.9*	626.9*	628.8*	630.8*	632.7*	634.7*	636.7*	638.6*	640.6*	642.5*	28.25
28.50	-	625.2*	627.1*	629.1*	631.0*	633.0*	634.9*	636.9*	638.9*	640.8*	642.8*	28.50
28.75	-	625.4*	627.3*	629.3*	631.3*	633.2*	635.2*	637.1*	639.1*	641.0*	643.0*	28.75
29.00	-	625.6*	627.6*	629.5*	631.5*	633.5*	635.4*	637.4*	639.3*	641.3*	643.2*	29.00
29.25	-	625.9*	627.8*	629.8*	631.7*	633.7*	635.6*	637.6*	639.6*	641.5*	643.5*	29.25
29.50	-	626.1*	628.1*	630.0*	632.0*	633.9*	635.9*	637.8*	639.8*	641.7*	643.7*	29.50
29.75	-	626.3*	628.3*	630.3*	632.2*	634.2*	636.1*	638.1*	640.0*	642.0*	643.9*	29.75
30.00	-	626.6*	628.5*	630.5*	632.4*	634.4*	636.3*	638.3*	640.3*	642.2*	644.2*	30.00
30.25	-	626.8*	628.8*	630.7*	632.7*	634.6*	636.6*	638.5*	640.5*	642.4*	644.4*	30.25
30.50	-	627.1*	629.0*	631.0*	632.9*	634.9*	636.8*	638.8*	640.7*	642.7*	644.6*	30.50
30.75	-	627.3*	629.2*	631.2*	633.2*	635.1*	637.1*	639.0*	641.0*	642.9*	644.9*	30.75
31.00	-	627.5*	629.5*	631.4*	633.4*	635.3*	637.3*	639.2*	641.2*	643.1*	645.1*	31.00
31.25	-	627.8*	629.7*	631.7*	633.6*	635.6*	637.5*	639.5*	641.4*	643.4*	645.3*	31.25
31.50	-	628.0*	630.0*	631.9*	633.9*	635.8*	637.8*	639.7*	641.7*	643.6*	645.6*	31.50
31.75	-	628.2*	630.2*	632.1*	634.1*	636.0*	638.0*	639.9*	641.9*	643.8*	645.8*	31.75
32.00	-	628.5*	630.4*	632.4*	634.3*	636.3*	638.2*	640.2*	642.1*	644.1*	646.0*	32.00
32.25	-	628.7*	630.7*	632.6*	634.6*	636.5*	638.5*	640.4*	642.4*	644.3*	646.3*	32.25
32.50	-	629.0*	630.9*	632.9*	634.8*	636.8*	638.7*	640.6*	642.6*	644.5*	646.5*	32.50

DENOTES EXTRAPOLATED VALUE

OBSERVED DENSITY = 610.0 TO 630.0

5

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 °C

TEMP. C	610.0	612.0	614.0	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C					626.0	628.0	630.0	TEMP. C
				616.0	618.0	620.0	622.0	624.0				
-												
32.50	-	629.0*	630.9*	632.9*	634.8*	636.8*	638.7*	640.6*	642.6*	644.5*	646.5*	32.50
32.75	-	629.2*	631.2*	633.1*	635.0*	637.0*	638.9*	640.9*	642.8*	644.8*	646.7*	32.75
33.00	-	629.4*	631.4*	633.3*	635.3*	637.2*	639.2*	641.1*	643.1*	645.0*	647.0*	33.00
33.25	-	629.7*	631.6*	633.6*	635.5*	637.5*	639.4*	641.3*	643.3*	645.2*	647.2*	33.25
33.50	-	629.9*	631.9*	633.8*	635.7*	637.7*	639.6*	641.6*	643.5*	645.5*	647.4*	33.50
33.75	-											
33.75	-	630.1*	632.1*	634.0*	636.0*	637.9*	639.9*	641.8*	643.8*	645.7*	647.6*	33.75
34.00	-	630.4*	632.3*	634.3*	636.2*	638.1*	640.1*	642.0*	644.0*	645.9*	647.9*	34.00
34.25	-	630.6*	632.6*	634.5*	636.4*	638.4*	640.3*	642.3*	644.2*	646.2*	648.1*	34.25
34.50	-	630.9*	632.8*	634.7*	636.7*	638.6*	640.6*	642.5*	644.4*	646.4*	648.3*	34.50
34.75	-	631.1*	633.0*	635.0*	636.9*	638.8*	640.8*	642.7*	644.7*	646.6*	648.6*	34.75
35.00	-											
35.00	-	631.3*	633.3*	635.2*	637.1*	639.1*	641.0*	643.0*	644.9*	646.9*	648.8*	35.00
35.25	-	631.6*	633.5*	635.4*	637.4*	639.3*	641.3*	643.2*	645.1*	647.1*	649.0*	35.25
35.50	-	631.8*	633.7*	635.7*	637.6*	639.5*	641.5*	643.4*	645.4*	647.3*	649.2*	35.50
35.75	-	632.0*	634.0*	635.9*	637.8*	639.8*	641.7*	643.7*	645.6*	647.5*	649.5*	35.75
36.00	-	632.3*	634.2*	636.1*	638.1*	640.0*	641.9*	643.9*	645.8*	647.8*	649.7*	36.00
36.25	-											
36.25	-	632.5*	634.4*	636.4*	638.3*	640.2*	642.2*	644.1*	646.1*	648.0*	649.9*	36.25
36.50	-	632.7*	634.7*	636.6*	638.5*	640.5*	642.4*	644.4*	646.3*	648.2*	650.2*	36.50
36.75	-	633.0*	634.9*	636.9*	638.8*	640.7*	642.6*	644.6*	646.5*	648.5*	650.4*	36.75
37.00	-	633.2*	635.1*	637.1*	639.0*	640.9*	642.9*	644.8*	646.8*	648.7*	650.6*	37.00
37.25	-	633.4*	635.4*	637.3*	639.2*	641.2*	643.1*	645.0*	647.0*	648.9*	650.8*	37.25
37.50	-											
37.50	-	633.7*	635.6*	637.6*	639.5*	641.4*	643.3*	645.3*	647.2*	649.1*	651.1*	37.50
37.75	-	633.9*	635.8*	637.8*	639.7*	641.6*	643.6*	645.5*	647.4*	649.4*	651.3*	37.75
38.00	-	634.2*	636.1*	638.0*	639.9*	641.9*	643.8*	645.7*	647.7*	649.6*	651.5*	38.00
38.25	-	634.4*	636.3*	638.2*	640.2*	642.1*	644.0*	646.0*	647.9*	649.8*	651.8*	38.25
38.50	-	634.6*	636.5*	638.5*	640.4*	642.3*	644.3*	646.2*	648.1*	650.1*	652.0*	38.50
38.75	-											
38.75	-	634.9*	636.8*	638.7*	640.6*	642.6*	644.5*	646.4*	648.4*	650.3*	652.2*	38.75
39.00	-	635.1*	637.0*	638.9*	640.9*	642.8*	644.7*	646.7*	648.6*	650.5*	652.5*	39.00
39.25	-	635.3*	637.3*	639.2*	641.1*	643.0*	645.0*	646.9*	648.8*	650.7*	652.7*	39.25
39.50	-	635.6*	637.5*	639.4*	641.3*	643.3*	645.2*	647.1*	649.0*	651.0*	652.9*	39.50
39.75	-	635.8*	637.7*	639.6*	641.6*	643.5*	645.4*	647.3*	649.3*	651.2*	653.1*	39.75
40.00	-											
40.00	-	636.0*	638.0*	639.9*	641.8*	643.7*	645.6*	647.6*	649.5*	651.4*	653.4*	40.00

* DENOTES EXTRAPOLATED VALUE

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OBSERVED DENSITY = 610.0 TO 630.0

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 °C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C										TEMP. C	
	610.0	612.0	614.0	616.0	618.0	620.0	622.0	624.0	626.0	628.0		630.0
-												
40.00	-	636.0*	638.0*	639.9*	641.8*	643.7*	645.6*	647.6*	649.5*	651.4*	653.4*	40.00
40.25	-	636.3*	638.2*	640.1*	642.0*	644.0*	645.9*	647.8*	649.7*	651.7*	653.6*	40.25
40.50	-	636.5*	638.4*	640.3*	642.3*	644.2*	646.1*	648.0*	650.0*	651.9*	653.8*	40.50
40.75	-	636.7*	638.6*	640.6*	642.5*	644.4*	646.3*	648.3*	650.2*	652.1*	654.0*	40.75
41.00	-	637.0*	638.9*	640.8*	642.7*	644.6*	646.6*	648.5*	650.4*	652.3*	654.3*	41.00
41.25	-	637.2*	639.1*	641.0*	643.0*	644.9*	646.8*	648.7*	650.6*	652.6*	654.5*	41.25
41.50	-	637.4*	639.3*	641.3*	643.2*	645.1*	647.0*	648.9*	650.9*	652.8*	654.7*	41.50
41.75	-	637.7*	639.6*	641.5*	643.4*	645.3*	647.3*	649.2*	651.1*	653.0*	654.9*	41.75
42.00	-	637.9*	639.8*	641.7*	643.6*	645.6*	647.5*	649.4*	651.3*	653.2*	655.2*	42.00
42.25	-	638.1*	640.0*	642.0*	643.9*	645.8*	647.7*	649.6*	651.6*	653.5*	655.4*	42.25
42.50	-	638.3*	640.3*	642.2*	644.1*	646.0*	647.9*	649.9*	651.8*	653.7*	655.6*	42.50
42.75	-	638.6*	640.5*	642.4*	644.3*	646.2*	648.2*	650.1*	652.0*	653.9*	655.8*	42.75
43.00	-	638.8*	640.7*	642.6*	644.6*	646.5*	648.4*	650.3*	652.2*	654.2*	656.1*	43.00
43.25	-	639.0*	641.0*	642.9*	644.8*	646.7*	648.6*	650.5*	652.5*	654.4*	656.3*	43.25
43.50	-	639.3*	641.2*	643.1*	645.0*	646.9*	648.9*	650.8*	652.7*	654.6*	656.5*	43.50
43.75	-	639.5*	641.4*	643.3*	645.3*	647.2*	649.1*	651.0*	652.9*	654.8*	656.7*	43.75
44.00	-	639.7*	641.7*	643.6*	645.5*	647.4*	649.3*	651.2*	653.1*	655.1*	657.0*	44.00
44.25	-	640.0*	641.9*	643.8*	645.7*	647.6*	649.5*	651.5*	653.4*	655.3*	657.2*	44.25
44.50	-	640.2*	642.1*	644.0*	645.9*	647.9*	649.8*	651.7*	653.6*	655.5*	657.4*	44.50
44.75	-	640.4*	642.3*	644.3*	646.2*	648.1*	650.0*	651.9*	653.8*	655.7*	657.7*	44.75
45.00	-	640.7*	642.6*	644.5*	646.4*	648.3*	650.2*	652.1*	654.1*	656.0*	657.9*	45.00
45.25	-	640.9*	642.8*	644.7*	646.6*	648.5*	650.5*	652.4*	654.3*	656.2*	658.1*	45.25
45.50	-	641.1*	643.0*	644.9*	646.9*	648.8*	650.7*	652.6*	654.5*	656.4*	658.3*	45.50
45.75	-	641.4*	643.3*	645.2*	647.1*	649.0*	650.9*	652.8*	654.7*	656.6*	658.5*	45.75
46.00	-	641.6*	643.5*	645.4*	647.3*	649.2*	651.1*	653.0*	654.9*	656.9*	658.8*	46.00
46.25	-	641.8*	643.7*	645.6*	647.5*	649.4*	651.4*	653.3*	655.2*	657.1*	659.0*	46.25
46.50	-	642.0*	643.9*	645.9*	647.8*	649.7*	651.6*	653.5*	655.4*	657.3*	659.2*	46.50
46.75	-	642.3*	644.2*	646.1*	648.0*	649.9*	651.8*	653.7*	655.6*	657.5*	659.4*	46.75
47.00	-	642.5*	644.4*	646.3*	648.2*	650.1*	652.0*	653.9*	655.9*	657.8*	659.7*	47.00
47.25	-	642.7*	644.6*	646.5*	648.5*	650.4*	652.3*	654.2*	656.1*	658.0*	659.9*	47.25
47.50	-	643.0*	644.9*	646.8*	648.7*	650.6*	652.5*	654.4*	656.3*	658.2*	660.1*	47.50

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* DENOTES EXTRAPOLATED VALUE

OBSERVED DENSITY = 610.0 TO 630.0

* DENOTES EXTRAPOLATED VALUE

OBSERVED DENSITY = 610.0 TO 630.0

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WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 °C

TEMP. °C	610.0	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 °C										TEMP. °C
		612.0	614.0	616.0	618.0	620.0	622.0	624.0	626.0	628.0	630.0	
-		643.0*	644.9*	646.8*	648.7*	650.6*	652.5*	654.4*	656.3*	658.2*	660.1*	47.50
-		643.2*	645.1*	647.0*	648.9*	650.8*	652.7*	654.6*	656.5*	658.4*	660.3*	47.75
-		643.4*	645.3*	647.2*	649.1*	651.0*	652.9*	654.8*	656.7*	658.7*	660.6*	48.00
-		643.7*	645.6*	647.5*	649.4*	651.3*	653.2*	655.1*	657.0*	658.9*	660.8*	48.25
-		643.9*	645.8*	647.7*	649.6*	651.5*	653.4*	655.3*	657.2*	659.1*	661.0*	48.50
-		644.1*	646.0*	647.9*	649.8*	651.7*	653.6*	655.5*	657.4*	659.3*	661.2*	48.75
-		644.3*	646.2*	648.1*	650.0*	651.9*	653.8*	655.7*	657.7*	659.5*	661.5*	49.00
-		644.6*	646.5*	648.4*	650.3*	652.2*	654.1*	656.0*	657.9*	659.8*	661.7*	49.25
-		644.8*	646.7*	648.6*	650.5*	652.4*	654.3*	656.2*	658.1*	660.0*	661.9*	49.50
-		645.0*	646.9*	648.8*	650.7*	652.6*	654.5*	656.4*	658.3*	660.2*	662.1*	49.75
-		645.3*	647.2*	649.1*	651.0*	652.8*	654.7*	656.6*	658.5*	660.4*	662.3*	50.00
-		645.5*	647.4*	649.3*	651.2*	653.1*	655.0*	656.9*	658.8*	660.7*	662.6*	50.25
-		645.7*	647.6*	649.5*	651.4*	653.3*	655.2*	657.1*	659.0*	660.9*	662.8*	50.50
-		645.9*	647.8*	649.7*	651.6*	653.5*	655.4*	657.3*	659.2*	661.1*	663.0*	50.75
-		646.2*	648.1*	650.0*	651.9*	653.7*	655.6*	657.5*	659.4*	661.3*	663.2*	51.00
-		646.4*	648.3*	650.2*	652.1*	654.0*	655.9*	657.8*	659.7*	661.6*	663.5*	51.25
-		646.6*	648.5*	650.4*	652.3*	654.2*	656.1*	658.0*	659.9*	661.8*	663.7*	51.50
-		646.9*	648.7*	650.6*	652.5*	654.4*	656.3*	658.2*	660.1*	662.0*	663.9*	51.75
-		647.1*	649.0*	650.9*	652.8*	654.7*	656.5*	658.4*	660.3*	662.2*	664.1*	52.00
-		647.3*	649.2*	651.1*	653.0*	654.9*	656.8*	658.7*	660.6*	662.4*	664.3*	52.25
-		647.5*	649.4*	651.3*	653.2*	655.1*	657.0*	658.9*	660.8*	662.7*	664.6*	52.50
-		647.8*	649.6*	651.5*	653.4*	655.3*	657.2*	659.1*	661.0*	662.9*	664.8*	52.75
-		648.0*	649.9*	651.8*	653.7*	655.5*	657.4*	659.3*	661.2*	663.1*	665.0*	53.00
-		648.2*	650.1*	652.0*	653.9*	655.8*	657.7*	659.6*	661.4*	663.3*	665.2*	53.25
-		648.4*	650.3*	652.2*	654.1*	656.0*	657.9*	659.8*	661.7*	663.6*	665.4*	53.50
-		648.7*	650.5*	652.4*	654.3*	656.2*	658.1*	660.0*	661.9*	663.8*	665.7*	53.75
-		648.9*	650.8*	652.7*	654.6*	656.4*	658.3*	660.2*	662.1*	664.0*	665.9*	54.00
-		649.1*	651.0*	652.9*	654.8*	656.7*	658.6*	660.4*	662.3*	664.2*	666.1*	54.25
-		649.3*	651.2*	653.1*	655.0*	656.9*	658.8*	660.7*	662.6*	664.4*	666.3*	54.50
-		649.6*	651.5*	653.3*	655.2*	657.1*	659.0*	660.9*	662.8*	664.7*	666.6*	54.75
-		649.8*	651.7*	653.6*	655.4*	657.3*	659.2*	661.1*	663.0*	664.9*	666.8*	55.00

OBSERVED DENSITY = 610.0 TO 630.0

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* DENOTES EXTRAPOLATED VALUE

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C										TEMP. C	
	610.0	612.0	614.0	616.0	618.0	620.0	622.0	624.0	626.0	628.0	630.0	
55.00	-	649.8*	651.7*	653.6*	655.4*	657.3*	659.2*	661.1*	663.0*	664.9*	666.8*	55.00
55.25	-	650.0*	651.9*	653.8*	655.7*	657.6*	659.4*	661.3*	663.2*	665.1*	667.0*	55.25
55.50	-	650.2*	652.1*	654.0*	655.9*	657.8*	659.7*	661.6*	663.4*	665.3*	667.2*	55.50
55.75	-	650.5*	652.3*	654.2*	656.1*	658.0*	659.9*	661.8*	663.7*	665.5*	667.4*	55.75
56.00	-	650.7*	652.6*	654.5*	656.3*	658.2*	660.1*	662.0*	663.9*	665.8*	667.6*	56.00
56.25	-	650.9*	652.8*	654.7*	656.6*	658.4*	660.3*	662.2*	664.1*	666.0*	667.9*	56.25
56.50	-	651.1*	653.0*	654.9*	656.8*	658.7*	660.5*	662.4*	664.3*	666.2*	668.1*	56.50
56.75	-	651.4*	653.3*	655.1*	657.0*	658.9*	660.8*	662.7*	664.5*	666.4*	668.3*	56.75
57.00	-	651.6*	653.5*	655.3*	657.2*	659.1*	661.0*	662.9*	664.8*	666.6*	668.5*	57.00
57.25	-	651.8*	653.7*	655.6*	657.5*	659.3*	661.2*	663.1*	665.0*	666.9*	668.8*	57.25
57.50	-	652.0*	653.9*	655.8*	657.7*	659.6*	661.4*	663.3*	665.2*	667.1*	669.0*	57.50
57.75	-	652.3*	654.1*	656.0*	657.9*	659.8*	661.7*	663.5*	665.4*	667.3*	669.2*	57.75
58.00	-	652.5*	654.4*	656.2*	658.1*	660.0*	661.9*	663.8*	665.6*	667.5*	669.4*	58.00
58.25	-	652.7*	654.6*	656.5*	658.3*	660.2*	662.1*	664.0*	665.9*	667.7*	669.6*	58.25
58.50	-	652.9*	654.8*	656.7*	658.6*	660.4*	662.3*	664.2*	666.1*	668.0*	669.8*	58.50
58.75	-	653.2*	655.0*	656.9*	658.8*	660.7*	662.5*	664.4*	666.3*	668.2*	670.1*	58.75
59.00	-	653.4*	655.3*	657.1*	659.0*	660.9*	662.8*	664.6*	666.5*	668.4*	670.3*	59.00
59.25	-	653.6*	655.5*	657.4*	659.2*	661.1*	663.0*	664.9*	666.7*	668.6*	670.5*	59.25
59.50	-	653.8*	655.7*	657.6*	659.5*	661.3*	663.2*	665.1*	667.0*	668.8*	670.7*	59.50
59.75	-	654.1*	655.9*	657.8*	659.7*	661.6*	663.4*	665.3*	667.2*	669.1*	670.9*	59.75
60.00	-	654.3*	656.2*	658.0*	659.9*	661.8*	663.6*	665.5*	667.4*	669.3*	671.1*	60.00
60.25	-	654.5*	656.4*	658.2*	660.1*	662.0*	663.9*	665.7*	667.6*	669.5*	671.4*	60.25
60.50	-	654.7*	656.6*	658.5*	660.3*	662.2*	664.1*	666.0*	667.8*	669.7*	671.6*	60.50
60.75	-	654.9*	656.8*	658.7*	660.6*	662.4*	664.3*	666.2*	668.1*	669.9*	671.8*	60.75
61.00	-	655.2*	657.0*	658.9*	660.8*	662.7*	664.5*	666.4*	668.3*	670.1*	672.0*	61.00
61.25	-	655.4*	657.3*	659.1*	661.0*	662.9*	664.7*	666.6*	668.5*	670.4*	672.2*	61.25
61.50	-	655.6*	657.5*	659.3*	661.2*	663.1*	665.0*	666.8*	668.7*	670.6*	672.5*	61.50
61.75	-	655.8*	657.7*	659.6*	661.4*	663.3*	665.2*	667.1*	668.9*	670.8*	672.7*	61.75
62.00	-	656.1*	657.9*	659.8*	661.7*	663.5*	665.4*	667.3*	669.1*	671.0*	672.9*	62.00
62.25	-	656.3*	658.2*	660.0*	661.9*	663.8*	665.6*	667.5*	669.4*	671.2*	673.1*	62.25
62.50	-	656.5*	658.4*	660.2*	662.1*	664.0*	665.8*	667.7*	669.6*	671.5*	673.3*	62.50

OBSERVED DENSITY = 610.0 TO 630.0

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* DENOTES EXTRAPOLATED VALUE

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 °C

TEMP. C	610.0	612.0	614.0	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C					626.0	628.0	630.0	TEMP. C
				616.0	618.0	620.0	622.0	624.0				
-	-	656.5*	658.4*	660.2*	662.1*	664.0*	665.8*	667.7*	669.6*	671.5*	673.3*	62.50
62.75	-	656.7*	658.6*	660.5*	662.3*	664.2*	666.1*	667.9*	669.8*	671.7*	673.5*	62.75
63.00	-	657.0*	658.8*	660.7*	662.5*	664.4*	666.3*	668.1*	670.0*	671.9*	673.8*	63.00
63.25	-	657.2*	659.0*	660.9*	662.8*	664.6*	666.5*	668.4*	670.2*	672.1*	674.0*	63.25
63.50	-	657.4*	659.3*	661.1*	663.0*	664.8*	666.7*	668.6*	670.4*	672.3*	674.2*	63.50
63.75	-	657.6*	659.5*	661.3*	663.2*	665.1*	666.9*	668.8*	670.7*	672.5*	674.4*	63.75
64.00	-	657.8*	659.7*	661.6*	663.4*	665.3*	667.2*	669.0*	670.9*	672.8*	674.6*	64.00
64.25	-	658.1*	659.9*	661.8*	663.6*	665.5*	667.4*	669.2*	671.1*	673.0*	674.8*	64.25
64.50	-	658.3*	660.1*	662.0*	663.9*	665.7*	667.6*	669.5*	671.3*	673.2*	675.1*	64.50
64.75	-	658.5*	660.4*	662.2*	664.1*	665.9*	667.8*	669.7*	671.5*	673.4*	675.3*	64.75
65.00	-	658.7*	660.6*	662.4*	664.3*	666.2*	668.0*	669.9*	671.8*	673.6*	675.5*	65.00
65.25	-	658.9*	660.8*	662.7*	664.5*	666.4*	668.2*	670.1*	672.0*	673.8*	675.7*	65.25
65.50	-	659.2*	661.0*	662.9*	664.7*	666.6*	668.5*	670.3*	672.2*	674.1*	675.9*	65.50
65.75	-	659.4*	661.2*	663.1*	665.0*	666.8*	668.7*	670.5*	672.4*	674.3*	676.1*	65.75
66.00	-	659.6*	661.5*	663.3*	665.2*	667.0*	668.9*	670.8*	672.6*	674.5*	676.3*	66.00
66.25	-	659.8*	661.7*	663.5*	665.4*	667.3*	669.1*	671.0*	672.8*	674.7*	676.6*	66.25
66.50	-	660.0*	661.9*	663.8*	665.6*	667.5*	669.3*	671.2*	673.1*	674.9*	676.8*	66.50
66.75	-	660.3*	662.1*	664.0*	665.8*	667.7*	669.5*	671.4*	673.3*	675.1*	677.0*	66.75
67.00	-	660.5*	662.3*	664.2*	666.1*	667.9*	669.8*	671.6*	673.5*	675.3*	677.2*	67.00
67.25	-	660.7*	662.6*	664.4*	666.3*	668.1*	670.0*	671.8*	673.7*	675.6*	677.4*	67.25
67.50	*	660.9*	662.8*	664.6*	666.5*	668.3*	670.2*	672.1*	673.9*	675.8*	677.6*	67.50
67.75	-	661.1*	663.0*	664.8*	666.7*	668.6*	670.4*	672.3*	674.1*	676.0*	677.8*	67.75
68.00	-	661.3*	663.2*	665.1*	666.9*	668.8*	670.6*	672.5*	674.3*	676.2*	678.1*	68.00
68.25	-	661.6*	663.4*	665.3*	667.1*	669.0*	670.8*	672.7*	674.6*	676.4*	678.3*	68.25
68.50	-	661.8*	663.6*	665.5*	667.3*	669.2*	671.1*	672.9*	674.8*	676.6*	678.5*	68.50
68.75	-	662.0*	663.9*	665.7*	667.6*	669.4*	671.3*	673.1*	675.0*	676.8*	678.7*	68.75
69.00	-	662.2*	664.1*	665.9*	667.8*	669.6*	671.5*	673.4*	675.2*	677.1*	678.9*	69.00
69.25	-	662.4*	664.3*	666.2*	668.0*	669.9*	671.7*	673.6*	675.4*	677.3*	679.1*	69.25
69.50	-	662.7*	664.5*	666.4*	668.2*	670.1*	671.9*	673.8*	675.6*	677.5*	679.3*	69.50
69.75	-	662.9*	664.7*	666.6*	668.4*	670.3*	672.1*	674.0*	675.8*	677.7*	679.6*	69.75
70.00	-	663.1*	664.9*	666.8*	668.6*	670.5*	672.4*	674.2*	676.1*	677.9*	679.8*	70.00

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OBSERVED DENSITY = 610.0 TO 630.0

TEMPERATURE EXTRAPOLATED VALUE

OBSERVED DENSITY = 610.0 TO 630.0

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* DENOTES EXTRAPOLATED VALUE

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A. GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 °C

TEMP. °C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 °C										TEMP. °C	
	610.0	612.0	614.0	616.0	618.0	620.0	622.0	624.0	626.0	628.0		630.0
-												
70.00	-	663.1*	664.9*	666.8*	668.6*	670.5*	672.4*	674.2*	676.1*	677.9*	679.8*	70.00
70.25	-	663.3*	665.2*	667.0*	668.9*	670.7*	672.6*	674.4*	676.3*	678.1*	680.0*	70.25
70.50	-	663.5*	665.4*	667.2*	669.1*	670.9*	672.8*	674.6*	676.5*	678.3*	680.2*	70.50
70.75	-	663.8*	665.6*	667.4*	669.3*	671.1*	673.0*	674.8*	676.7*	678.6*	680.4*	70.75
71.00	-	664.0*	665.8*	667.7*	669.5*	671.4*	673.2*	675.1*	676.9*	678.8*	680.6*	71.00
71.25	-	664.2*	666.0*	667.9*	669.7*	671.6*	673.4*	675.3*	677.1*	679.0*	680.8*	71.25
71.50	-	664.4*	666.2*	668.1*	669.9*	671.8*	673.6*	675.5*	677.3*	679.2*	681.0*	71.50
71.75	-	664.6*	666.5*	668.3*	670.2*	672.0*	673.9*	675.7*	677.5*	679.4*	681.3*	71.75
72.00	-	664.8*	666.7*	668.5*	670.4*	672.2*	674.1*	675.9*	677.8*	679.6*	681.5*	72.00
72.25	-	665.1*	666.9*	668.7*	670.6*	672.4*	674.3*	676.1*	678.0*	679.8*	681.7*	72.25
72.50	-	665.3*	667.1*	668.9*	670.8*	672.6*	674.5*	676.3*	678.2*	680.0*	681.9*	72.50
72.75	-	665.5*	667.3*	669.2*	671.0*	672.9*	674.7*	676.6*	678.4*	680.2*	682.1*	72.75
73.00	-	665.7*	667.5*	669.4*	671.2*	673.1*	674.9*	676.8*	678.6*	680.5*	682.3*	73.00
73.25	-	665.9*	667.8*	669.6*	671.4*	673.3*	675.1*	677.0*	678.8*	680.7*	682.5*	73.25
73.50	-	666.1*	668.0*	669.8*	671.7*	673.5*	675.4*	677.2*	679.0*	680.9*	682.7*	73.50
73.75	-	666.4*	668.2*	670.0*	671.9*	673.7*	675.6*	677.4*	679.3*	681.1*	683.0*	73.75
74.00	-	668.6*	668.4*	670.2*	672.1*	673.9*	675.8*	677.6*	679.5*	681.3*	683.2*	74.00
74.25	-	666.8*	668.6*	670.5*	672.3*	674.1*	676.0*	677.8*	679.7*	681.5*	683.4*	74.25
74.50	-	667.0*	668.8*	670.7*	672.5*	674.4*	676.2*	678.0*	679.9*	681.7*	683.6*	74.50
74.75	-	667.2*	669.1*	670.9*	672.7*	674.6*	676.4*	678.3*	680.1*	681.9*	683.8*	74.75
75.00	-	667.4*	669.3*	671.1*	672.9*	674.8*	676.6*	678.5*	680.3*	682.2*	684.0*	75.00
75.25	-	667.7*	669.5*	671.3*	673.2*	675.0*	676.8*	678.7*	680.5*	682.4*	684.2*	75.25
75.50	-	667.9*	669.7*	671.5*	673.4*	675.2*	677.1*	678.9*	680.7*	682.6*	684.4*	75.50
75.75	-	668.1*	669.9*	671.7*	673.6*	675.4*	677.3*	679.1*	680.9*	682.8*	684.6*	75.75
76.00	-	668.3*	670.1*	672.0*	673.8*	675.6*	677.5*	679.3*	681.2*	683.0*	684.8*	76.00
76.25	-	668.5*	670.3*	672.2*	674.0*	675.9*	677.7*	679.5*	681.4*	683.2*	685.1*	76.25
76.50	-	668.7*	670.6*	672.4*	674.2*	676.1*	677.9*	679.7*	681.6*	683.4*	685.3*	76.50
76.75	-	668.9*	670.8*	672.6*	674.5*	676.3*	678.1*	680.0*	681.8*	683.6*	685.5*	76.75
77.00	-	669.2*	671.0*	672.8*	674.7*	676.5*	678.3*	680.2*	682.0*	683.8*	685.7*	77.00
77.25	-	669.4*	671.2*	673.0*	674.9*	676.7*	678.5*	680.4*	682.2*	684.1*	685.9*	77.25
77.50	-	669.6*	671.4*	673.3*	675.1*	676.9*	678.8*	680.6*	682.4*	684.3*	686.1*	77.50

* DENOTES EXTRAPOLATED VALUE

OBSERVED DENSITY = 610.0 TO 630.0

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WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 °C

TEMP. °C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 °C										TEMP. °C	
	610.0	612.0	614.0	616.0	618.0	620.0	622.0	624.0	626.0	628.0	630.0	
77.50	-	669.6*	671.4*	673.3*	675.1*	676.9*	678.8*	680.6*	682.4*	684.3*	686.1*	77.50
77.75	-	669.8*	671.6*	673.5*	675.3*	677.1*	679.0*	680.8*	682.6*	684.5*	686.3*	77.75
78.00	-	670.0*	671.8*	673.7*	675.5*	677.3*	679.2*	681.0*	682.8*	684.7*	686.5*	78.00
78.25	-	670.2*	672.1*	673.9*	675.7*	677.6*	679.4*	681.2*	683.1*	684.9*	686.7*	78.25
78.50	-	670.4*	672.3*	674.1*	675.9*	677.8*	679.6*	681.4*	683.3*	685.1*	686.9*	78.50
78.75	-	670.7*	672.5*	674.3*	676.1*	678.0*	679.8*	681.6*	683.5*	685.3*	687.2*	78.75
79.00	-	670.9*	672.7*	674.5*	676.4*	678.2*	680.0*	681.9*	683.7*	685.5*	687.4*	79.00
79.25	-	671.1*	672.9*	674.7*	676.6*	678.4*	680.2*	682.1*	683.9*	685.7*	687.6*	79.25
79.50	-	671.3*	673.1*	674.9*	676.8*	678.6*	680.5*	682.3*	684.1*	685.9*	687.8*	79.50
79.75	-	671.5*	673.3*	675.1*	677.0*	678.8*	680.7*	682.5*	684.3*	686.2*	688.0*	79.75
80.00	-	671.7*	673.5*	675.3*	677.2*	679.0*	680.9*	682.7*	684.5*	686.4*	688.2*	80.00
80.25	-	671.9*	673.8*	675.6*	677.4*	679.3*	681.1*	682.9*	684.7*	686.6*	688.4*	80.25
80.50	-	672.2*	674.0*	675.8*	677.6*	679.5*	681.3*	683.1*	684.9*	686.8*	688.6*	80.50
80.75	-	672.4*	674.2*	676.0*	677.8*	679.7*	681.5*	683.3*	685.2*	687.0*	688.8*	80.75
81.00	-	672.6*	674.4*	676.2*	678.1*	679.9*	681.7*	683.5*	685.4*	687.2*	689.0*	81.00
81.25	-	672.8*	674.6*	676.4*	678.3*	680.1*	681.9*	683.7*	685.6*	687.4*	689.2*	81.25
81.50	-	673.0*	674.8*	676.6*	678.5*	680.3*	682.1*	684.0*	685.8*	687.6*	689.4*	81.50
81.75	-	673.2*	675.0*	676.9*	678.7*	680.5*	682.3*	684.2*	686.0*	687.8*	689.7*	81.75
82.00	-	673.4*	675.3*	677.1*	678.9*	680.7*	682.6*	684.4*	686.2*	688.0*	689.9*	82.00
82.25	-	673.6*	675.5*	677.3*	679.1*	680.9*	682.8*	684.6*	686.4*	688.2*	690.1*	82.25
82.50	-	673.8*	675.7*	677.5*	679.3*	681.1*	683.0*	684.8*	686.6*	688.5*	690.3*	82.50
82.75	-	674.1*	675.9*	677.7*	679.5*	681.4*	683.2*	685.0*	686.8*	688.7*	690.5*	82.75
83.00	-	674.3*	676.1*	677.9*	679.7*	681.6*	683.4*	685.2*	687.0*	688.9*	690.7*	83.00
83.25	-	674.5*	676.3*	678.1*	680.0*	681.8*	683.6*	685.4*	687.3*	689.1*	690.9*	83.25
83.50	-	674.7*	676.5*	678.3*	680.2*	682.0*	683.8*	685.6*	687.5*	689.3*	691.1*	83.50
83.75	-	674.9*	676.7*	678.6*	680.4*	682.2*	684.0*	685.8*	687.7*	689.5*	691.3*	83.75
84.00	-	675.1*	676.9*	678.8*	680.6*	682.4*	684.2*	686.1*	687.9*	689.7*	691.5*	84.00
84.25	-	675.3*	677.2*	679.0*	680.8*	682.6*	684.4*	686.3*	688.1*	689.9*	691.7*	84.25
84.50	-	675.5*	677.4*	679.2*	681.0*	682.8*	684.6*	686.5*	688.3*	690.1*	691.9*	84.50
84.75	-	675.8*	677.6*	679.4*	681.2*	683.0*	684.8*	686.7*	688.5*	690.3*	692.1*	84.75
85.00	-	676.0*	677.8*	679.6*	681.4*	683.2*	685.1*	686.9*	688.7*	690.5*	692.3*	85.00

* DENOTES EXTRAPOLATED VALUE

OBSERVED DENSITY = 610.0 TO 630.0

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 °C

TEMP. °C	610.0	612.0	614.0	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 °C					626.0	628.0	630.0	TEMP. °C
				616.0	618.0	620.0	622.0	624.0				
-	-	676.0*	677.8*	679.6*	681.4*	683.2*	685.1*	686.9*	688.7*	690.5*	692.3*	85.00
-	-	676.2*	678.0*	679.8*	681.6*	683.5*	685.3*	687.1*	688.9*	690.7*	692.6*	85.25
-	-	676.4*	678.2*	680.0*	681.8*	683.7*	685.5*	687.3*	689.1*	690.9*	692.8*	85.50
-	-	676.6*	678.4*	680.2*	682.0*	683.9*	685.7*	687.5*	689.3*	691.2*	693.0*	85.75
-	-	676.8*	678.6*	680.4*	682.3*	684.1*	685.9*	687.7*	689.5*	691.4*	693.2*	86.00
-	-	677.0*	678.8*	680.7*	682.5*	684.3*	686.1*	687.9*	689.7*	691.6*	693.4*	86.25
-	-	677.2*	679.1*	680.9*	682.7*	684.5*	686.3*	688.1*	689.9*	691.8*	693.6*	86.50
-	-	677.4*	679.3*	681.1*	682.9*	684.7*	686.5*	688.3*	690.2*	692.0*	693.8*	86.75
-	-	677.7*	679.5*	681.3*	683.1*	684.9*	686.7*	688.5*	690.4*	692.2*	694.0*	87.00
-	-	677.9*	679.7*	681.5*	683.3*	685.1*	686.9*	688.8*	690.6*	692.4*	694.2*	87.25
-	-	678.1*	679.9*	681.7*	683.5*	685.3*	687.1*	689.0*	690.8*	692.6*	694.4*	87.50
-	-	678.3*	680.1*	681.9*	683.7*	685.5*	687.3*	689.2*	691.0*	692.8*	694.6*	87.75
-	-	678.5*	680.3*	682.1*	683.9*	685.7*	687.6*	689.4*	691.2*	693.0*	694.8*	88.00
-	-	678.7*	680.5*	682.3*	684.1*	685.9*	687.8*	689.6*	691.4*	693.2*	695.0*	88.25
-	-	678.9*	680.7*	682.5*	684.4*	686.1*	688.0*	689.8*	691.6*	693.4*	695.2*	88.50
-	-	679.1*	680.9*	682.8*	684.6*	686.4*	688.2*	690.0*	691.8*	693.6*	695.4*	88.75
-	-	679.3*	681.2*	683.0*	684.8*	686.6*	688.4*	690.2*	692.0*	693.8*	695.6*	89.00
-	-	679.6*	681.4*	683.2*	685.0*	686.8*	688.6*	690.4*	692.2*	694.0*	695.8*	89.25
-	-	679.8*	681.6*	683.4*	685.2*	687.0*	688.8*	690.6*	692.4*	694.2*	696.0*	89.50
-	-	680.0*	681.8*	683.6*	685.4*	687.2*	689.0*	690.8*	692.6*	694.4*	696.3*	89.75
-	-	680.2*	682.0*	683.8*	685.6*	687.4*	689.2*	691.0*	692.8*	694.6*	696.5*	90.00
-	-	680.4*	682.2*	684.0*	685.8*	687.6*	689.4*	691.2*	693.1*	694.8*	696.7*	90.25
-	-	680.6*	682.4*	684.2*	686.0*	687.8*	689.6*	691.5*	693.2*	695.1*	696.9*	90.50
-	-	680.8*	682.6*	684.4*	686.2*	688.0*	689.8*	691.6*	693.5*	695.3*	697.1*	90.75
-	-	681.0*	682.8*	684.6*	686.4*	688.2*	690.0*	691.9*	693.7*	695.5*	697.3*	91.00
-	-	681.2*	683.0*	684.8*	686.6*	688.4*	690.3*	692.1*	693.9*	695.7*	697.5*	91.25
-	-	681.4*	683.2*	685.0*	686.8*	688.7*	690.5*	692.3*	694.1*	695.9*	697.7*	91.50
-	-	681.6*	683.4*	685.2*	687.1*	688.9*	690.7*	692.5*	694.3*	696.1*	697.9*	91.75
-	-	681.8*	683.6*	685.5*	687.3*	689.1*	690.9*	692.7*	694.5*	696.3*	698.1*	92.00
-	-	682.1*	683.9*	685.7*	687.5*	689.3*	691.1*	692.9*	694.7*	696.5*	698.3*	92.25
-	-	682.3*	684.1*	685.9*	687.7*	689.5*	691.3*	693.1*	694.9*	696.7*	698.5*	92.50

OBSERVED DENSITY = 610.0 TO 630.0

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* DENOTES EXTRAPOLATED VALUE

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C										TEMP. C	
	610.0	612.0	614.0	616.0	618.0	620.0	622.0	624.0	626.0	628.0		630.0
-	610.0	612.0	614.0	616.0	618.0	620.0	622.0	624.0	626.0	628.0	630.0	TEMP. C
92.50	-	682.3*	684.1*	685.9*	687.7*	689.5*	691.3*	693.1*	694.9*	696.7*	698.5*	92.50
92.75	-	682.5*	684.3*	686.1*	687.9*	689.7*	691.5*	693.3*	695.1*	696.9*	698.7*	92.75
93.00	-	682.7*	684.5*	686.3*	688.1*	689.9*	691.7*	693.5*	695.3*	697.1*	698.9*	93.00
93.25	-	682.9*	684.7*	686.5*	688.3*	690.1*	691.9*	693.7*	695.5*	697.3*	699.1*	93.25
93.50	-	683.1*	684.9*	686.7*	688.5*	690.3*	692.1*	693.9*	695.7*	697.5*	699.3*	93.50
93.75	-	683.3*	685.1*	686.9*	688.7*	690.5*	692.3*	694.1*	695.9*	697.7*	699.5*	93.75
94.00	-	683.5*	685.3*	687.1*	688.9*	690.7*	692.5*	694.3*	696.1*	697.9*	699.7*	94.00
94.25	-	683.7*	685.5*	687.3*	689.1*	690.9*	692.7*	694.5*	696.3*	698.1*	699.9*	94.25
94.50	-	683.9*	685.7*	687.5*	689.3*	691.1*	692.9*	694.7*	696.5*	698.3*	700.1*	94.50
94.75	-	684.1*	685.9*	687.7*	689.5*	691.3*	693.1*	694.9*	696.7*	698.5*	700.3*	94.75
95.00	-	684.3*	686.1*	687.9*	689.7*	691.5*	693.3*	695.1*	696.9*	698.7*	700.5*	95.00

OBSERVED DENSITY = 610.0 TO 630.0

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* DENOTES EXTRAPOLATED VALUE

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE



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TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 °C

TEMP. °C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 °C							TEMP. °C				
	630.0	632.0	634.0	636.0	638.0	640.0	642.0					
-18.00	-	-	-	-	-	-	-	612.0*	614.1*	618.2*	618.3*	-18.00
-17.75	-	-	-	-	-	-	-	612.2*	614.3*	616.4*	618.5*	-17.75
-17.50	-	-	-	-	-	-	-	612.5*	614.6*	616.7*	618.8*	-17.50
-17.25	-	-	-	-	-	-	-	612.7*	614.8*	616.9*	619.0*	-17.25
-17.00	-	-	-	-	-	-	610.9*	613.0*	615.1*	617.2*	619.3*	-17.00
-16.75	-	-	-	-	-	-	611.1*	613.2*	615.3*	617.4*	619.5*	-16.75
-16.50	-	-	-	-	-	-	611.4*	613.5*	615.6*	617.7*	619.8*	-16.50
-16.25	-	-	-	-	-	-	611.6*	613.7*	615.8*	617.9*	620.0*	-16.25
-16.00	-	-	-	-	-	-	611.9*	614.0*	616.1*	618.2*	620.3*	-16.00
-15.75	-	-	-	-	-	-	612.1*	614.2*	616.3*	618.4*	620.5*	-15.75
-15.50	-	-	-	-	-	-	612.4*	614.5*	616.6*	618.7*	620.8*	-15.50
-15.25	-	-	-	-	-	-	612.6*	614.7*	616.8*	618.9*	621.0*	-15.25
-15.00	-	-	-	-	-	610.8*	612.9*	615.0*	617.1*	619.2*	621.3*	-15.00
-14.75	-	-	-	-	-	611.0*	613.1*	615.2*	617.3*	619.4*	621.5*	-14.75
-14.50	-	-	-	-	-	611.3*	613.4*	615.5*	617.6*	619.7*	621.8*	-14.50
-14.25	-	-	-	-	-	611.5*	613.6*	615.7*	617.8*	619.9*	622.0*	-14.25
-14.00	-	-	-	-	-	611.8*	613.9*	616.0*	618.1*	620.1*	622.2*	-14.00
-13.75	-	-	-	-	-	612.0*	614.1*	616.2*	618.3*	620.4*	622.5*	-13.75
-13.50	-	-	-	-	-	612.3*	614.4*	616.5*	618.5*	620.6*	622.7*	-13.50
-13.25	-	-	-	-	-	612.5*	614.6*	616.7*	618.8*	620.9*	623.0*	-13.25
-13.00	-	-	-	-	610.7*	612.8*	614.9*	616.9*	619.0*	621.1*	623.2*	-13.00
-12.75	-	-	-	-	610.9*	613.0*	615.1*	617.2*	619.3*	621.4*	623.5*	-12.75
-12.50	-	-	-	-	611.2*	613.3*	615.4*	617.5*	619.5*	621.6*	623.7*	-12.50
-12.25	-	-	-	-	611.4*	613.5*	615.6*	617.7*	619.8*	621.9*	624.0*	-12.25
-12.00	-	-	-	-	611.7*	613.8*	615.9*	617.9*	620.0*	622.1*	624.2*	-12.00
-11.75	-	-	-	-	611.9*	614.0*	616.1*	618.2*	620.3*	622.4*	624.5*	-11.75
-11.50	-	-	-	-	612.2*	614.3*	616.4*	618.4*	620.5*	622.6*	624.7*	-11.50
-11.25	-	-	-	-	612.4*	614.5*	616.6*	618.7*	620.8*	622.9*	624.9*	-11.25
-11.00	-	-	-	-	612.7*	614.8*	616.9*	618.9*	621.0*	623.1*	625.2*	-11.00
-10.75	-	-	-	610.8*	612.9*	615.0*	617.1*	619.2*	621.3*	623.4*	625.4*	-10.75
-10.50	-	-	-	611.1*	613.2*	615.3*	617.4*	619.4*	621.5*	623.6*	625.7*	-10.50

* DENOTES EXTRAPOLATED VALUE

OBSERVED DENSITY = 630.0 TO 650.0

* DENOTES EXTRAPOLATED VALUE

OBSERVED DENSITY = 630.0 TO 650.0

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C								TEMP. C
	630.0	632.0	634.0	636.0	638.0	640.0	642.0	644.0	
-10.50	-	-	-	611.1*	613.2*	615.3*	617.4*	619.4*	625.7*
-10.25	-	-	-	611.3*	613.4*	615.5*	617.6*	619.7*	625.9*
-10.00	-	-	-	611.6*	613.7*	615.8*	617.8*	619.9*	626.1*
-9.75	-	-	-	611.8*	613.9*	616.0*	618.1*	620.2*	626.4*
-9.50	-	-	-	612.1*	614.2*	616.3*	618.3*	620.4*	626.7*
-9.25	-	-	-	612.4*	614.4*	616.5*	618.6*	620.7*	626.9*
-9.00	-	-	-	612.6*	614.7*	616.8*	618.8*	620.9*	627.1*
-8.75	-	-	610.8*	612.8*	614.9*	617.0*	619.1*	621.2*	627.4*
-8.50	-	-	611.0*	613.1*	615.2*	617.3*	619.3*	621.4*	627.6*
-8.25	-	-	611.3*	613.3*	615.4*	617.5*	619.6*	621.7*	627.9*
-8.00	-	-	611.5*	613.6*	615.7*	617.7*	619.8*	621.9*	628.1*
-7.75	-	-	611.8*	613.8*	615.9*	618.0*	620.1*	622.1*	628.4*
-7.50	-	-	612.0*	614.1*	616.2*	618.2*	620.3*	622.4*	628.6*
-7.25	-	-	612.3*	614.3*	616.4*	618.5*	620.6*	622.6*	628.8*
-7.00	-	-	612.5*	614.6*	616.7*	618.7*	620.8*	622.9*	629.1*
-6.75	-	610.7*	612.8*	614.8*	616.9*	619.0*	621.1*	623.1*	629.3*
-6.50	-	611.0*	613.0*	615.1*	617.2*	619.2*	621.3*	623.4*	629.6*
-6.25	-	611.2*	613.3*	615.3*	617.4*	619.5*	621.5*	623.6*	629.8*
-6.00	-	611.4*	613.5*	615.6*	617.7*	619.7*	621.8*	623.9*	630.1*
-5.75	-	611.7*	613.8*	615.8*	617.9*	620.0*	622.0*	624.1*	630.3*
-5.50	-	611.9*	614.0*	616.1*	618.2*	620.2*	622.3*	624.4*	630.5*
-5.25	-	612.2*	614.3*	616.3*	618.4*	620.5*	622.5*	624.6*	630.8*
-5.00	-	612.5*	614.5*	616.6*	618.6*	620.7*	622.8*	624.8*	631.0*
-4.75	610.6*	612.7*	614.8*	616.8*	618.9*	621.0*	623.0*	625.1*	631.3*
-4.50	610.9*	612.9*	615.0*	617.1*	619.1*	621.2*	623.3*	625.3*	631.5*
-4.25	611.1*	613.2*	615.3*	617.3*	619.4*	621.4*	623.5*	625.6*	631.7*
-4.00	611.4*	613.4*	615.5*	617.6*	619.6*	621.7*	623.8*	625.8*	632.0*
-3.75	611.6*	613.7*	615.8*	617.8*	619.9*	621.9*	624.0*	626.1*	632.2*
-3.50	611.9*	613.9*	616.0*	618.1*	620.1*	622.2*	624.2*	626.3*	632.5*
-3.25	612.1*	614.2*	616.2*	618.3*	620.4*	622.4*	624.5*	626.6*	632.7*
-3.00	612.4*	614.4*	616.5*	618.6*	620.6*	622.7*	624.7*	626.8*	633.0*

* DENOTES EXTRAPOLATED VALUE

OBSERVED DENSITY = 630.0 TO 650.0

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C										TEMP. C	
	630.0	632.0	634.0	636.0	638.0	640.0	642.0	644.0	646.0	648.0		650.0
-3.00	612.4*	614.4*	616.5*	618.6*	620.6*	622.7*	624.7*	626.8*	628.8*	630.9*	633.0*	-3.00
-2.75	612.6*	614.7*	616.7*	618.8*	620.9*	622.9*	625.0*	627.0*	629.1*	631.1*	633.2*	-2.75
-2.50	612.9*	614.9*	617.0*	619.1*	621.1*	623.2*	625.2*	627.3*	629.3*	631.4*	633.4*	-2.50
-2.25	613.1*	615.2*	617.2*	619.3*	621.4*	623.4*	625.5*	627.5*	629.6*	631.6*	633.7*	-2.25
-2.00	613.4*	615.4*	617.5*	619.6*	621.6*	623.7*	625.7*	627.8*	629.8*	631.9*	633.9*	-2.00
-1.75	613.6*	615.7*	617.7*	619.8*	621.8*	623.9*	625.9*	628.0*	630.1*	632.1*	634.2*	-1.75
-1.50	613.9*	615.9*	618.0*	620.0*	622.1*	624.1*	626.2*	628.2*	630.3*	632.3*	634.4*	-1.50
-1.25	614.1*	616.2*	618.2*	620.3*	622.3*	624.4*	626.4*	628.5*	630.5*	632.6*	634.6*	-1.25
-1.00	614.4*	616.4*	618.5*	620.5*	622.6*	624.6*	626.7*	628.7*	630.8*	632.8*	634.9*	-1.00
-.75	614.6*	616.7*	618.7*	620.8*	622.8*	624.9*	626.9*	629.0*	631.0*	633.1*	635.1*	-.75
-.50	614.9*	616.9*	619.0*	621.0*	623.1*	625.1*	627.2*	629.2*	631.3*	633.3*	635.4*	-.50
-.25	615.1*	617.2*	619.2*	621.3*	623.3*	625.4*	627.4*	629.5*	631.5*	633.6*	635.6*	-.25
0.00	615.4*	617.4*	619.5*	621.5*	623.6*	625.6*	627.7*	629.7*	631.7*	633.8*	635.8*	0.00
.25	615.6*	617.7*	619.7*	621.8*	623.8*	625.8*	627.9*	629.9*	632.0*	634.0*	636.1*	.25
.50	615.9*	617.9*	620.0*	622.0*	624.0*	626.1*	628.1*	630.2*	632.2*	634.3*	636.3*	.50
.75	616.1*	618.1*	620.2*	622.3*	624.3*	626.3*	628.4*	630.4*	632.5*	634.5*	636.6*	.75
1.00	616.4*	618.4*	620.4*	622.5*	624.5*	626.6*	628.6*	630.7*	632.7*	634.8*	636.8*	1.00
1.25	616.6*	618.6*	620.7*	622.7*	624.8*	626.8*	628.9*	630.9*	633.0*	635.0*	637.0*	1.25
1.50	616.8*	618.9*	620.9*	623.0*	625.0*	627.1*	629.1*	631.2*	633.2*	635.2*	637.3*	1.50
1.75	617.1*	619.1*	621.2*	623.2*	625.3*	627.3*	629.3*	631.4*	633.4*	635.5*	637.5*	1.75
2.00	617.3*	619.4*	621.4*	623.5*	625.5*	627.6*	629.6*	631.6*	633.7*	635.7*	637.8*	2.00
2.25	617.6*	619.6*	621.7*	623.7*	625.8*	627.8*	629.8*	631.9*	633.9*	636.0*	638.0*	2.25
2.50	617.8*	619.9*	621.9*	624.0*	626.0*	628.0*	630.1*	632.1*	634.2*	636.2*	638.2*	2.50
2.75	618.1*	620.1*	622.2*	624.2*	626.2*	628.3*	630.3*	632.4*	634.4*	636.4*	638.5*	2.75
3.00	618.3*	620.4*	622.4*	624.4*	626.5*	628.5*	630.6*	632.6*	634.6*	636.7*	638.7*	3.00
3.25	618.6*	620.6*	622.7*	624.7*	626.7*	628.8*	630.8*	632.8*	634.9*	636.9*	638.9*	3.25
3.50	618.8*	620.9*	622.9*	624.9*	627.0*	629.0*	631.0*	633.1*	635.1*	637.1*	639.2*	3.50
3.75	619.1*	621.1*	623.1*	625.2*	627.2*	629.2*	631.3*	633.3*	635.4*	637.4*	639.4*	3.75
4.00	619.3*	621.4*	623.4*	625.4*	627.5*	629.5*	631.5*	633.6*	635.6*	637.6*	639.7*	4.00
4.25	619.6*	621.6*	623.6*	625.7*	627.7*	629.7*	631.8*	633.8*	635.8*	637.9*	639.9*	4.25
4.50	619.8*	621.8*	623.9*	625.9*	627.9*	630.0*	632.0*	634.0*	636.1*	638.1*	640.1*	4.50

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* DENOTES EXTRAPOLATED VALUE

OBSERVED DENSITY = 630.0 TO 650.0

OBSERVED DENSITY = 630.0 TO 650.0

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* DENOTES EXTRAPOLATED VALUE

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C										TEMP. C	
	630.0	632.0	634.0	636.0	638.0	640.0	642.0	644.0	646.0	648.0		650.0
4.50	619.8*	621.8*	623.9*	625.9*	627.9*	630.0*	632.0*	634.0*	636.1*	638.1*	640.1*	4.50
4.75	620.1*	622.1*	624.1*	626.1*	628.2*	630.2*	632.2*	634.3*	636.3*	638.3*	640.4*	4.75
5.00	620.3*	622.3*	624.4*	626.4*	628.4*	630.5*	632.5*	634.5*	636.6*	638.6*	640.6*	5.00
5.25	620.5*	622.6*	624.6*	626.6*	628.7*	630.7*	632.7*	634.8*	636.8*	638.8*	640.8*	5.25
5.50	620.8*	622.8*	624.8*	626.9*	628.9*	630.9*	633.0*	635.0*	637.0*	639.1*	641.1*	5.50
5.75	621.0*	623.1*	625.1*	627.1*	629.1*	631.2*	633.2*	635.2*	637.3*	639.3*	641.3*	5.75
6.00	621.3*	623.3*	625.3*	627.4*	629.4*	631.4*	633.4*	635.5*	637.5*	639.5*	641.6*	6.00
6.25	621.5*	623.6*	625.6*	627.6*	629.6*	631.7*	633.7*	635.7*	637.7*	639.8*	641.8*	6.25
6.50	621.8*	623.8*	625.8*	627.8*	629.9*	631.9*	633.9*	636.0*	638.0*	640.0*	642.0*	6.50
6.75	622.0*	624.0*	626.1*	628.1*	630.1*	632.1*	634.2*	636.2*	638.2*	640.2*	642.3*	6.75
7.00	622.3*	624.3*	626.3*	628.3*	630.4*	632.4*	634.4*	636.4*	638.5*	640.5*	642.5*	7.00
7.25	622.5*	624.5*	626.5*	628.6*	630.6*	632.6*	634.6*	636.7*	638.7*	640.7*	642.7*	7.25
7.50	622.7*	624.8*	626.8*	628.8*	630.8*	632.9*	634.9*	636.9*	638.9*	641.0*	643.0*	7.50
7.75	623.0*	625.0*	627.0*	629.1*	631.1*	633.1*	635.1*	637.1*	639.2*	641.2*	643.2*	7.75
8.00	623.2*	625.2*	627.3*	629.3*	631.3*	633.3*	635.4*	637.4*	639.4*	641.4*	643.4*	8.00
8.25	623.5*	625.5*	627.5*	629.5*	631.6*	633.6*	635.6*	637.6*	639.6*	641.7*	643.7*	8.25
8.50	623.7*	625.7*	627.8*	629.8*	631.8*	633.8*	635.8*	637.9*	639.9*	641.9*	643.9*	8.50
8.75	624.0*	626.0*	628.0*	630.0*	632.0*	634.1*	636.1*	638.1*	640.1*	642.1*	644.1*	8.75
9.00	624.2*	626.2*	628.2*	630.3*	632.3*	634.3*	636.3*	638.3*	640.4*	642.4*	644.4*	9.00
9.25	624.4*	626.5*	628.5*	630.5*	632.5*	634.5*	636.5*	638.6*	640.6*	642.6*	644.6*	9.25
9.50	624.7*	626.7*	628.7*	630.7*	632.8*	634.8*	636.8*	638.8*	640.8*	642.8*	644.9*	9.50
9.75	624.9*	627.0*	629.0*	631.0*	633.0*	635.0*	637.0*	639.0*	641.1*	643.1*	645.1*	9.75
10.00	625.2*	627.2*	629.2*	631.2*	633.2*	635.2*	637.3*	639.3*	641.3*	643.3*	645.3*	10.00
10.25	625.4*	627.4*	629.4*	631.5*	633.5*	635.5*	637.5*	639.5*	641.5*	643.5*	645.6*	10.25
10.50	625.7*	627.7*	629.7*	631.7*	633.7*	635.7*	637.7*	639.8*	641.8*	643.8*	645.8*	10.50
10.75	625.9*	627.9*	629.9*	631.9*	634.0*	636.0*	638.0*	640.0*	642.0*	644.0*	646.0*	10.75
11.00	626.1*	628.2*	630.2*	632.2*	634.2*	636.2*	638.2*	640.2*	642.2*	644.3*	646.3*	11.00
11.25	626.4*	628.4*	630.4*	632.4*	634.4*	636.4*	638.5*	640.5*	642.5*	644.5*	646.5*	11.25
11.50	626.6*	628.6*	630.6*	632.7*	634.7*	636.7*	638.7*	640.7*	642.7*	644.7*	646.7*	11.50
11.75	626.9*	628.9*	630.9*	632.9*	634.9*	636.9*	638.9*	640.9*	643.0*	645.0*	647.0*	11.75
12.00	627.1*	629.1*	631.1*	633.1*	635.1*	637.2*	639.2*	641.2*	643.2*	645.2*	647.2*	12.00

OBSERVED DENSITY = 630.0 TO 650.0

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* DENOTES EXTRAPOLATED VALUE

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C										TEMP. C	
	630.0	632.0	634.0	636.0	638.0	640.0	642.0	644.0	646.0	648.0		650.0
12.00	627.1*	629.1*	631.1*	633.1*	635.1*	637.2*	639.2*	641.2*	643.2*	645.2*	647.2*	12.00
12.25	627.4*	629.4*	631.4*	633.4*	635.4*	637.4*	639.4*	641.4*	643.4*	645.4*	647.4*	12.25
12.50	627.6*	629.6*	631.6*	633.6*	635.6*	637.6*	639.6*	641.7*	643.7*	645.7*	647.7*	12.50
12.75	627.8*	629.8*	631.8*	633.9*	635.9*	637.9*	639.9*	641.9*	643.9*	645.9*	647.9*	12.75
13.00	628.1*	630.1*	632.1*	634.1*	636.1*	638.1*	640.1*	642.1*	644.1*	646.1*	648.1*	13.00
13.25	628.3*	630.3*	632.3*	634.3*	636.3*	638.3*	640.4*	642.4*	644.4*	646.4*	648.4*	13.25
13.50	628.6*	630.6*	632.6*	634.6*	636.6*	638.6*	640.6*	642.6*	644.6*	646.6*	648.6*	13.50
13.75	628.8*	630.8*	632.8*	634.8*	636.8*	638.8*	640.8*	642.8*	644.8*	646.8*	648.8*	13.75
14.00	629.0*	631.0*	633.0*	635.0*	637.0*	639.0*	641.1*	643.1*	645.1*	647.1*	649.1*	14.00
14.25	629.3*	631.3*	633.3*	635.3*	637.3*	639.3*	641.3*	643.3*	645.3*	647.3*	649.3*	14.25
14.50	629.5*	631.5*	633.5*	635.5*	637.5*	639.5*	641.5*	643.5*	645.5*	647.5*	649.5*	14.50
14.75	629.8*	631.8*	633.8*	635.8*	637.8*	639.8*	641.8*	643.8*	645.8*	647.8*	649.8*	14.75
15.00	630.0*	632.0*	634.0*	636.0*	638.0*	640.0*	642.0*	644.0*	646.0*	648.0*	650.0*	15.00
15.25	630.2*	632.2*	634.2*	636.2*	638.2*	640.2*	642.2*	644.2*	646.2*	648.2*	650.2*	15.25
15.50	630.5*	632.5*	634.5*	636.5*	638.5*	640.5*	642.5*	644.5*	646.5*	648.5*	650.5*	15.50
15.75	630.7*	632.7*	634.7*	636.7*	638.7*	640.7*	642.7*	644.7*	646.7*	648.7*	650.7*	15.75
16.00	631.0*	633.0*	635.0*	637.0*	639.0*	641.0*	642.9*	644.9*	646.9*	648.9*	650.9*	16.00
16.25	631.2*	633.2*	635.2*	637.2*	639.2*	641.2*	643.2*	645.2*	647.2*	649.2*	651.2*	16.25
16.50	631.4*	633.4*	635.4*	637.4*	639.4*	641.4*	643.4*	645.4*	647.4*	649.4*	651.4*	16.50
16.75	631.7*	633.7*	635.7*	637.7*	639.7*	641.6*	643.6*	645.6*	647.6*	649.6*	651.6*	16.75
17.00	631.9*	633.9*	635.9*	637.9*	639.9*	641.9*	643.9*	645.9*	647.9*	649.9*	651.9*	17.00
17.25	632.2*	634.2*	636.1*	638.1*	640.1*	642.1*	644.1*	646.1*	648.1*	650.1*	652.1*	17.25
17.50	632.4*	634.4*	636.4*	638.4*	640.4*	642.4*	644.3*	646.3*	648.3*	650.3*	652.3*	17.50
17.75	632.6*	634.6*	636.6*	638.6*	640.6*	642.6*	644.6*	646.6*	648.6*	650.6*	652.6*	17.75
18.00	632.9*	634.9*	636.9*	638.8*	640.8*	642.8*	644.8*	646.8*	648.8*	650.8*	652.8*	18.00
18.25	633.1*	635.1*	637.1*	639.1*	641.1*	643.1*	645.0*	647.0*	649.0*	651.0*	653.0*	18.25
18.50	633.3*	635.3*	637.3*	639.3*	641.3*	643.3*	645.3*	647.3*	649.3*	651.3*	653.2*	18.50
18.75	633.6*	635.6*	637.6*	639.6*	641.5*	643.5*	645.5*	647.5*	649.5*	651.5*	653.5*	18.75
19.00	633.8*	635.8*	637.8*	639.8*	641.8*	643.8*	645.7*	647.7*	649.7*	651.7*	653.7*	19.00
19.25	634.1*	636.1*	638.0*	640.0*	642.0*	644.0*	646.0*	648.0*	650.0*	651.9*	653.9*	19.25
19.50	634.3*	636.3*	638.3*	640.3*	642.2*	644.2*	646.2*	648.2*	650.2*	652.2*	654.2*	19.50

* DENOTES EXTRAPOLATED VALUE

OBSERVED DENSITY = 630.0 TO 650.0

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WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 °C

TEMP. °C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 °C										TEMP. °C	
	630.0	632.0	634.0	636.0	638.0	640.0	642.0	644.0	646.0	648.0		650.0
19.50	634.3*	636.3*	638.3*	640.3*	642.2*	644.2*	646.2*	648.2*	650.2*	652.2*	654.2*	19.50
19.75	634.5*	636.5*	638.5*	640.5*	642.5*	644.5*	646.5*	648.4*	650.4*	652.4*	654.4*	19.75
20.00	634.8*	636.8*	638.7*	640.7*	642.7*	644.7*	646.7*	648.7*	650.7*	652.6*	654.6*	20.00
20.25	635.0*	637.0*	639.0*	641.0*	642.9*	644.9*	646.9*	648.9*	650.9*	652.9*	654.9*	20.25
20.50	635.2*	637.2*	639.2*	641.2*	643.2*	645.2*	647.2*	649.1*	651.1*	653.1*	655.1*	20.50
20.75	635.5*	637.5*	639.5*	641.4*	643.4*	645.4*	647.4*	649.4*	651.3*	653.3*	655.3*	20.75
21.00	635.7*	637.7*	639.7*	641.7*	643.6*	645.6*	647.6*	649.6*	651.6*	653.6*	655.5*	21.00
21.25	636.0*	637.9*	639.9*	641.9*	643.9*	645.9*	647.8*	649.8*	651.8*	653.8*	655.8*	21.25
21.50	636.2*	638.2*	640.2*	642.1*	644.1*	646.1*	648.1*	650.1*	652.0*	654.0*	656.0*	21.50
21.75	636.4*	638.4*	640.4*	642.4*	644.4*	646.3*	648.3*	650.3*	652.3*	654.3*	656.2*	21.75
22.00	636.7*	638.7*	640.6*	642.6*	644.6*	646.6*	648.5*	650.5*	652.5*	654.5*	656.5*	22.00
22.25	636.9*	638.9*	640.9*	642.8*	644.8*	646.8*	648.8*	650.8*	652.7*	654.7*	656.7*	22.25
22.50	637.1*	639.1*	641.1*	643.1*	645.1*	647.0*	649.0*	651.0*	653.0*	654.9*	656.9*	22.50
22.75	637.4*	639.4*	641.3*	643.3*	645.3*	647.3*	649.2*	651.2*	653.2*	655.2*	657.1*	22.75
23.00	637.6*	639.6*	641.6*	643.5*	645.5*	647.5*	649.5*	651.4*	653.4*	655.4*	657.4*	23.00
23.25	637.8*	639.8*	641.8*	643.8*	645.8*	647.7*	649.7*	651.7*	653.7*	655.6*	657.6*	23.25
23.50	638.1*	640.1*	642.0*	644.0*	646.0*	648.0*	649.9*	651.9*	653.9*	655.9*	657.8*	23.50
23.75	638.3*	640.3*	642.3*	644.2*	646.2*	648.2*	650.2*	652.1*	654.1*	656.1*	658.1*	23.75
24.00	638.6*	640.5*	642.5*	644.5*	646.5*	648.4*	650.4*	652.4*	654.3*	656.3*	658.3*	24.00
24.25	638.8*	640.8*	642.7*	644.7*	646.7*	648.7*	650.6*	652.6*	654.6*	656.5*	658.5*	24.25
24.50	639.0*	641.0*	643.0*	644.9*	646.9*	648.9*	650.9*	652.8*	654.8*	656.8*	658.7*	24.50
24.75	639.3*	641.2*	643.2*	645.2*	647.1*	649.1*	651.1*	653.1*	655.0*	657.0*	659.0*	24.75
25.00	639.5*	641.5*	643.4*	645.4*	647.4*	649.3*	651.3*	653.3*	655.3*	657.2*	659.2*	25.00
25.25	639.7*	641.7*	643.7*	645.6*	647.6*	649.6*	651.6*	653.5*	655.5*	657.5*	659.4*	25.25
25.50	640.0*	641.9*	643.9*	645.9*	647.8*	649.8*	651.8*	653.7*	655.7*	657.7*	659.7*	25.50
25.75	640.2*	642.2*	644.1*	646.1*	648.1*	650.0*	652.0*	654.0*	655.9*	657.9*	659.9*	25.75
26.00	640.4*	642.4*	644.4*	646.3*	648.3*	650.3*	652.2*	654.2*	656.2*	658.1*	660.1*	26.00
26.25	640.7*	642.6*	644.6*	646.6*	648.5*	650.5*	652.5*	654.4*	656.4*	658.4*	660.3*	26.25
26.50	640.9*	642.9*	644.8*	646.8*	648.8*	650.7*	652.7*	654.7*	656.6*	658.6*	660.6*	26.50
26.75	641.1*	643.1*	645.1*	647.0*	649.0*	651.0*	652.9*	654.9*	656.9*	658.8*	660.8*	26.75
27.00	641.4*	643.3*	645.3*	647.3*	649.2*	651.2*	653.2*	655.1*	657.1*	659.1*	661.0*	27.00

Observed Density = 630.0 TO 650.0

Denotes Extrapolated Value

* DENOTES EXTRAPOLATED VALUE

OBSERVED DENSITY = 630.0 TO 650.0

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WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C										TEMP. C	
	630.0	632.0	634.0	636.0	638.0	640.0	642.0	644.0	646.0	648.0		650.0
27.00	641.4*	643.3*	645.3*	647.3*	649.2*	651.2*	653.2*	655.1*	657.1*	659.1*	661.0*	27.00
27.25	641.6*	643.6*	645.5*	647.5*	649.5*	651.4*	653.4*	655.4*	657.3*	659.3*	661.2*	27.25
27.50	641.8*	643.8*	645.8*	647.7*	649.7*	651.6*	653.6*	655.6*	657.5*	659.5*	661.5*	27.50
27.75	642.1*	644.0*	646.0*	648.0*	649.9*	651.9*	653.8*	655.8*	657.8*	659.7*	661.7*	27.75
28.00	642.3*	644.3*	646.2*	648.2*	650.2*	652.1*	654.1*	656.0*	658.0*	660.0*	661.9*	28.00
28.25	642.5*	644.5*	646.5*	648.4*	650.4*	652.3*	654.3*	656.3*	658.2*	660.2*	662.2*	28.25
28.50	642.8*	644.7*	646.7*	648.7*	650.6*	652.6*	654.5*	656.5*	658.5*	660.4*	662.4*	28.50
28.75	643.0*	645.0*	646.9*	648.9*	650.8*	652.8*	654.8*	656.7*	658.7*	660.6*	662.6*	28.75
29.00	643.2*	645.2*	647.2*	649.1*	651.1*	653.0*	655.0*	657.0*	658.9*	660.9*	662.8*	29.00
29.25	643.5*	645.4*	647.4*	649.3*	651.3*	653.3*	655.2*	657.2*	659.1*	661.1*	663.1*	29.25
29.50	643.7*	645.7*	647.6*	649.6*	651.5*	653.5*	655.4*	657.4*	659.4*	661.3*	663.3*	29.50
29.75	643.9*	645.9*	647.8*	649.8*	651.8*	653.7*	655.7*	657.6*	659.6*	661.6*	663.5*	29.75
30.00	644.2*	646.1*	648.1*	650.0*	652.0*	654.0*	655.9*	657.9*	659.8*	661.8*	663.7*	30.00
30.25	644.4*	646.4*	648.3*	650.3*	652.2*	654.2*	656.1*	658.1*	660.0*	662.0*	664.0*	30.25
30.50	644.6*	646.6*	648.5*	650.5*	652.5*	654.4*	656.4*	658.3*	660.3*	662.2*	664.2*	30.50
30.75	644.9*	646.8*	648.8*	650.7*	652.7*	654.6*	656.6*	658.5*	660.5*	662.5*	664.4*	30.75
31.00	645.1*	647.0*	649.0*	651.0*	652.9*	654.9*	656.8*	658.8*	660.7*	662.7*	664.6*	31.00
31.25	645.3*	647.3*	649.2*	651.2*	653.1*	655.1*	657.0*	659.0*	661.0*	662.9*	664.9*	31.25
31.50	645.6*	647.5*	649.5*	651.4*	653.4*	655.3*	657.3*	659.2*	661.2*	663.1*	665.1*	31.50
31.75	645.8*	647.7*	649.7*	651.6*	653.6*	655.5*	657.5*	659.5*	661.4*	663.4*	665.3*	31.75
32.00	646.0*	648.0*	649.9*	651.9*	653.8*	655.8*	657.7*	659.7*	661.6*	663.6*	665.5*	32.00
32.25	646.3*	648.2*	650.1*	652.1*	654.1*	656.0*	658.0*	659.9*	661.9*	663.8*	665.8*	32.25
32.50	646.5*	648.4*	650.4*	652.3*	654.3*	656.2*	658.2*	660.1*	662.1*	664.0*	666.0*	32.50
32.75	646.7*	648.7*	650.6*	652.6*	654.5*	656.5*	658.4*	660.4*	662.3*	664.3*	666.2*	32.75
33.00	647.0*	648.9*	650.8*	652.8*	654.7*	656.7*	658.6*	660.6*	662.5*	664.5*	666.4*	33.00
33.25	647.2*	649.1*	651.1*	653.0*	655.0*	656.9*	658.9*	660.8*	662.7*	664.7*	666.6*	33.25
33.50	647.4*	649.4*	651.3*	653.2*	655.2*	657.1*	659.1*	661.0*	663.0*	664.9*	666.9*	33.50
33.75	647.6*	649.6*	651.5*	653.5*	655.4*	657.4*	659.3*	661.3*	663.2*	665.2*	667.1*	33.75
34.00	647.9*	649.8*	651.8*	653.7*	655.6*	657.6*	659.5*	661.5*	663.4*	665.4*	667.3*	34.00
34.25	648.1*	650.0*	652.0*	653.9*	655.9*	657.8*	659.8*	661.7*	663.7*	665.6*	667.5*	34.25
34.50	648.3*	650.3*	652.2*	654.2*	656.1*	658.0*	660.0*	661.9*	663.9*	665.8*	667.8*	34.50

* DENOTES EXTRAPOLATED VALUE

OBSERVED DENSITY = 630.0 TO 650.0

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A. GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C										TEMP. C	
	630.0	632.0	634.0	636.0	638.0	640.0	642.0	644.0	646.0	648.0		650.0
34.50	648.3*	650.3*	652.2*	654.2*	656.1*	658.0*	660.0*	661.9*	663.9*	665.8*	667.8*	34.50
34.75	648.6*	650.5*	652.4*	654.4*	656.3*	658.3*	660.2*	662.2*	664.1*	666.0*	668.0*	34.75
35.00	648.8*	650.7*	652.7*	654.6*	656.6*	658.5*	660.4*	662.4*	664.3*	666.3*	668.2*	35.00
35.25	649.0*	651.0*	652.9*	654.8*	656.8*	658.7*	660.7*	662.6*	664.5*	666.5*	668.4*	35.25
35.50	649.2*	651.2*	653.1*	655.1*	657.0*	658.9*	660.9*	662.8*	664.8*	666.7*	668.7*	35.50
35.75	649.5*	651.4*	653.4*	655.3*	657.2*	659.2*	661.1*	663.1*	665.0*	666.9*	668.9*	35.75
36.00	649.7*	651.6*	653.6*	655.5*	657.5*	659.4*	661.3*	663.3*	665.2*	667.2*	669.1*	36.00
36.25	649.9*	651.9*	653.8*	655.7*	657.7*	659.6*	661.6*	663.5*	665.4*	667.4*	669.3*	36.25
36.50	650.2*	652.1*	654.0*	656.0*	657.9*	659.9*	661.8*	663.7*	665.7*	667.6*	669.5*	36.50
36.75	650.4*	652.3*	654.3*	656.2*	658.1*	660.1*	662.0*	664.0*	665.9*	667.8*	669.8*	36.75
37.00	650.6*	652.6*	654.5*	656.4*	658.4*	660.3*	662.2*	664.2*	666.1*	668.1*	670.0*	37.00
37.25	650.8*	652.8*	654.7*	656.7*	658.6*	660.5*	662.5*	664.4*	666.3*	668.3*	670.2*	37.25
37.50	651.1*	653.0*	655.0*	656.9*	658.8*	660.8*	662.7*	664.6*	666.6*	668.5*	670.4*	37.50
37.75	651.3*	653.2*	655.2*	657.1*	659.0*	661.0*	662.9*	664.9*	666.8*	668.7*	670.7*	37.75
38.00	651.5*	653.5*	655.4*	657.3*	659.3*	661.2*	663.1*	665.1*	667.0*	668.9*	670.9*	38.00
38.25	651.8*	653.7*	655.6*	657.6*	659.5*	661.4*	663.4*	665.3*	667.2*	669.2*	671.1*	38.25
38.50	652.0*	653.9*	655.9*	657.8*	659.7*	661.7*	663.6*	665.5*	667.5*	669.4*	671.3*	38.50
38.75	652.2*	654.2*	656.1*	658.0*	659.9*	661.9*	663.8*	665.7*	667.7*	669.6*	671.5*	38.75
39.00	652.5*	654.4*	656.3*	658.2*	660.2*	662.1*	664.0*	666.0*	667.9*	669.8*	671.8*	39.00
39.25	652.7*	654.6*	656.5*	658.5*	660.4*	662.3*	664.3*	666.2*	668.1*	670.1*	672.0*	39.25
39.50	652.9*	654.8*	656.8*	658.7*	660.6*	662.5*	664.5*	666.4*	668.3*	670.3*	672.2*	39.50
39.75	653.1*	655.1*	657.0*	658.9*	660.8*	662.8*	664.7*	666.6*	668.6*	670.5*	672.4*	39.75
40.00	653.4*	655.3*	657.2*	659.1*	661.1*	663.0*	664.9*	666.9*	668.8*	670.7*	672.7*	40.00
40.25	653.6*	655.5*	657.4*	659.4*	661.3*	663.2*	665.2*	667.1*	669.0*	670.9*	672.9*	40.25
40.50	653.8*	655.7*	657.7*	659.6*	661.5*	663.4*	665.4*	667.3*	669.2*	671.2*	673.1*	40.50
40.75	654.0*	656.0*	657.9*	659.8*	661.7*	663.7*	665.6*	667.5*	669.5*	671.4*	673.3*	40.75
41.00	654.3*	656.2*	658.1*	660.0*	662.0*	663.9*	665.8*	667.8*	669.7*	671.6*	673.5*	41.00
41.25	654.5*	656.4*	658.3*	660.3*	662.2*	664.1*	666.0*	668.0*	669.9*	671.8*	673.8*	41.25
41.50	654.7*	656.6*	658.6*	660.5*	662.4*	664.3*	666.3*	668.2*	670.1*	672.1*	674.0*	41.50
41.75	654.9*	656.9*	658.8*	660.7*	662.6*	664.6*	666.5*	668.4*	670.3*	672.3*	674.2*	41.75
42.00	655.2*	657.1*	659.0*	660.9*	662.9*	664.8*	666.7*	668.6*	670.6*	672.5*	674.4*	42.00

OBSERVED DENSITY = 630.0 TO 650.0

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* DENOTES EXTRAPOLATED VALUE

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C										TEMP. C	
	630.0	632.0	634.0	636.0	638.0	640.0	642.0	644.0	646.0	648.0		650.0
42.00	655.2*	657.1*	659.0*	660.9*	662.9*	664.8*	666.7*	668.6*	670.6*	672.5*	674.4*	42.00
42.25	655.4*	657.3*	659.2*	661.2*	663.1*	665.0*	666.9*	668.9*	670.8*	672.7*	674.6*	42.25
42.50	655.6*	657.5*	659.5*	661.4*	663.3*	665.2*	667.2*	669.1*	671.0*	672.9*	674.9*	42.50
42.75	655.8*	657.8*	659.7*	661.6*	663.5*	665.5*	667.4*	669.3*	671.2*	673.2*	675.1*	42.75
43.00	656.1*	658.0*	659.9*	661.8*	663.8*	665.7*	667.6*	669.5*	671.4*	673.4*	675.3*	43.00
43.25	656.3*	658.2*	660.1*	662.1*	664.0*	665.9*	667.8*	669.7*	671.7*	673.6*	675.5*	43.25
43.50	656.5*	658.4*	660.4*	662.3*	664.2*	666.1*	668.0*	670.0*	671.9*	673.8*	675.7*	43.50
43.75	656.7*	658.7*	660.6*	662.5*	664.4*	666.3*	668.3*	670.2*	672.1*	674.0*	676.0*	43.75
44.00	657.0*	658.9*	660.8*	662.7*	664.6*	666.6*	668.5*	670.4*	672.3*	674.3*	676.2*	44.00
44.25	657.2*	659.1*	661.0*	663.0*	664.9*	666.8*	668.7*	670.6*	672.5*	674.5*	676.4*	44.25
44.50	657.4*	659.3*	661.3*	663.2*	665.1*	667.0*	668.9*	670.8*	672.8*	674.7*	676.6*	44.50
44.75	657.7*	659.6*	661.5*	663.4*	665.3*	667.2*	669.2*	671.1*	673.0*	674.9*	676.8*	44.75
45.00	657.9*	659.8*	661.7*	663.6*	665.5*	667.5*	669.4*	671.3*	673.2*	675.1*	677.0*	45.00
45.25	658.1*	660.0*	661.9*	663.8*	665.8*	667.7*	669.6*	671.5*	673.4*	675.3*	677.3*	45.25
45.50	658.3*	660.2*	662.1*	664.1*	666.0*	667.9*	669.8*	671.7*	673.6*	675.6*	677.5*	45.50
45.75	658.5*	660.5*	662.4*	664.3*	666.2*	668.1*	670.0*	671.9*	673.9*	675.8*	677.7*	45.75
46.00	658.8*	660.7*	662.6*	664.5*	666.4*	668.3*	670.3*	672.2*	674.1*	676.0*	677.9*	46.00
46.25	659.0*	660.9*	662.8*	664.7*	666.6*	668.6*	670.5*	672.4*	674.3*	676.2*	678.1*	46.25
46.50	659.2*	661.1*	663.0*	665.0*	666.9*	668.8*	670.7*	672.6*	674.5*	676.4*	678.4*	46.50
46.75	659.4*	661.4*	663.3*	665.2*	667.1*	669.0*	670.9*	672.8*	674.7*	676.7*	678.6*	46.75
47.00	659.7*	661.6*	663.5*	665.4*	667.3*	669.2*	671.1*	673.0*	675.0*	676.9*	678.8*	47.00
47.25	659.9*	661.8*	663.7*	665.6*	667.5*	669.4*	671.4*	673.3*	675.2*	677.1*	679.0*	47.25
47.50	660.1*	662.0*	663.9*	665.8*	667.8*	669.7*	671.6*	673.5*	675.4*	677.3*	679.2*	47.50
47.75	660.3*	662.2*	664.2*	666.1*	668.0*	669.9*	671.8*	673.7*	675.6*	677.5*	679.4*	47.75
48.00	660.6*	662.5*	664.4*	666.3*	668.2*	670.1*	672.0*	673.9*	675.8*	677.7*	679.7*	48.00
48.25	660.8*	662.7*	664.6*	666.5*	668.4*	670.3*	672.2*	674.1*	676.1*	678.0*	679.9*	48.25
48.50	661.0*	662.9*	664.8*	666.7*	668.6*	670.5*	672.5*	674.4*	676.3*	678.2*	680.1*	48.50
48.75	661.2*	663.1*	665.0*	666.9*	668.9*	670.8*	672.7*	674.6*	676.5*	678.4*	680.3*	48.75
49.00	661.5*	663.4*	665.3*	667.2*	669.1*	671.0*	672.9*	674.8*	676.7*	678.6*	680.5*	49.00
49.25	661.7*	663.6*	665.5*	667.4*	669.3*	671.2*	673.1*	675.0*	676.9*	678.8*	680.7*	49.25
49.50	661.9*	663.8*	665.7*	667.6*	669.5*	671.4*	673.3*	675.2*	677.1*	679.0*	681.0*	49.50

23 DENOTES EXTRAPOLATED VALUE

OBSERVED DENSITY = 630.0 TO 650.0

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C										TEMP. C	
	630.0	632.0	634.0	636.0	638.0	640.0	642.0	644.0	646.0	648.0		650.0
49.50	661.9*	663.8*	665.7*	667.6*	669.5*	671.4*	673.3*	675.2*	677.1*	679.0*	681.0*	49.50
49.75	662.1*	664.0*	665.9*	667.8*	669.7*	671.6*	673.5*	675.5*	677.4*	679.3*	681.2*	49.75
50.00	662.3*	664.3*	666.1*	668.1*	670.0*	671.9*	673.8*	675.7*	677.6*	679.5*	681.4*	50.00
50.25	662.6*	664.5*	666.4*	668.3*	670.2*	672.1*	674.0*	675.9*	677.8*	679.7*	681.6*	50.25
50.50	662.8*	664.7*	666.6*	668.5*	670.4*	672.3*	674.2*	676.1*	678.0*	679.9*	681.8*	50.50
50.75	663.0*	664.9*	666.8*	668.7*	670.6*	672.5*	674.4*	676.3*	678.2*	680.1*	682.0*	50.75
51.00	663.2*	665.1*	667.0*	668.9*	670.8*	672.7*	674.6*	676.5*	678.4*	680.4*	682.3*	51.00
51.25	663.5*	665.4*	667.3*	669.2*	671.1*	673.0*	674.9*	676.8*	678.7*	680.6*	682.5*	51.25
51.50	663.7*	665.6*	667.5*	669.4*	671.3*	673.2*	675.1*	677.0*	678.9*	680.8*	682.7*	51.50
51.75	663.9*	665.8*	667.7*	669.6*	671.5*	673.4*	675.3*	677.2*	679.1*	681.0*	682.9*	51.75
52.00	664.1*	666.0*	667.9*	669.8*	671.7*	673.6*	675.5*	677.4*	679.3*	681.2*	683.1*	52.00
52.25	664.3*	666.2*	668.1*	670.0*	671.9*	673.8*	675.7*	677.6*	679.5*	681.4*	683.3*	52.25
52.50	664.6*	666.5*	668.4*	670.3*	672.2*	674.1*	676.0*	677.9*	679.7*	681.6*	683.5*	52.50
52.75	664.8*	666.7*	668.6*	670.5*	672.4*	674.3*	676.2*	678.1*	680.0*	681.9*	683.8*	52.75
53.00	665.0*	666.9*	668.8*	670.7*	672.6*	674.5*	676.4*	678.3*	680.2*	682.1*	684.0*	53.00
53.25	665.2*	667.1*	669.0*	670.9*	672.8*	674.7*	676.6*	678.5*	680.4*	682.3*	684.2*	53.25
53.50	665.4*	667.3*	669.2*	671.1*	673.0*	674.9*	676.8*	678.7*	680.6*	682.5*	684.4*	53.50
53.75	665.7*	667.6*	669.5*	671.3*	673.2*	675.1*	677.0*	678.9*	680.8*	682.7*	684.6*	53.75
54.00	665.9*	667.8*	669.7*	671.6*	673.5*	675.4*	677.2*	679.1*	681.0*	682.9*	684.8*	54.00
54.25	666.1*	668.0*	669.9*	671.8*	673.7*	675.6*	677.5*	679.4*	681.3*	683.2*	685.1*	54.25
54.50	666.3*	668.2*	670.1*	672.0*	673.9*	675.8*	677.7*	679.6*	681.5*	683.4*	685.3*	54.50
54.75	666.6*	668.4*	670.3*	672.2*	674.1*	676.0*	677.9*	679.8*	681.7*	683.6*	685.5*	54.75
55.00	666.8*	668.7*	670.6*	672.4*	674.3*	676.2*	678.1*	680.0*	681.9*	683.8*	685.7*	55.00
55.25	667.0*	668.9*	670.8*	672.7*	674.6*	676.4*	678.3*	680.2*	682.1*	684.0*	685.9*	55.25
55.50	667.2*	669.1*	671.0*	672.9*	674.8*	676.7*	678.6*	680.4*	682.3*	684.2*	686.1*	55.50
55.75	667.4*	669.3*	671.2*	673.1*	675.0*	676.9*	678.8*	680.7*	682.5*	684.4*	686.3*	55.75
56.00	667.6*	669.5*	671.4*	673.3*	675.2*	677.1*	679.0*	680.9*	682.8*	684.7*	686.6*	56.00
56.25	667.9*	669.8*	671.6*	673.5*	675.4*	677.3*	679.2*	681.1*	683.0*	684.9*	686.8*	56.25
56.50	668.1*	670.0*	671.9*	673.8*	675.6*	677.5*	679.4*	681.3*	683.2*	685.1*	687.0*	56.50
56.75	668.3*	670.2*	672.1*	674.0*	675.9*	677.7*	679.6*	681.5*	683.4*	685.3*	687.2*	56.75
57.00	668.5*	670.4*	672.3*	674.2*	676.1*	678.0*	679.9*	681.7*	683.6*	685.5*	687.4*	57.00

OBSERVED DENSITY = 630.0 TO 650.0

* DENOTES EXTRAPOLATED VALUE

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C										TEMP. C	
	630.0	632.0	634.0	636.0	638.0	640.0	642.0	644.0	646.0	648.0		650.0
57.00	668.5*	670.4*	672.3*	674.2*	676.1*	678.0*	679.9*	681.7*	683.6*	685.5*	687.4*	57.00
57.25	668.8*	670.6*	672.5*	674.4*	676.3*	678.2*	680.1*	682.0*	683.8*	685.7*	687.6*	57.25
57.50	669.0*	670.9*	672.7*	674.6*	676.5*	678.4*	680.3*	682.2*	684.1*	685.9*	687.8*	57.50
57.75	669.2*	671.1*	672.9*	674.8*	676.7*	678.6*	680.5*	682.4*	684.3*	686.2*	688.0*	57.75
58.00	669.4*	671.3*	673.2*	675.1*	676.9*	678.8*	680.7*	682.6*	684.5*	686.4*	688.3*	58.00
58.25	669.6*	671.5*	673.4*	675.3*	677.2*	679.0*	680.9*	682.8*	684.7*	686.6*	688.5*	58.25
58.50	669.8*	671.7*	673.6*	675.5*	677.4*	679.3*	681.1*	683.0*	684.9*	686.8*	688.7*	58.50
58.75	670.1*	671.9*	673.8*	675.7*	677.6*	679.5*	681.4*	683.2*	685.1*	687.0*	688.9*	58.75
59.00	670.3*	672.2*	674.0*	675.9*	677.8*	679.7*	681.6*	683.5*	685.3*	687.2*	689.1*	59.00
59.25	670.5*	672.4*	674.3*	676.1*	678.0*	679.9*	681.8*	683.7*	685.6*	687.4*	689.3*	59.25
59.50	670.7*	672.6*	674.5*	676.4*	678.2*	680.1*	682.0*	683.9*	685.8*	687.6*	689.5*	59.50
59.75	670.9*	672.8*	674.7*	676.6*	678.5*	680.3*	682.2*	684.1*	686.0*	687.9*	689.8*	59.75
60.00	671.1*	673.0*	674.9*	676.8*	678.7*	680.5*	682.4*	684.3*	686.2*	688.1*	690.0*	60.00
60.25	671.4*	673.2*	675.1*	677.0*	678.9*	680.8*	682.6*	684.5*	686.4*	688.3*	690.2*	60.25
60.50	671.6*	673.5*	675.3*	677.2*	679.1*	681.0*	682.9*	684.7*	686.6*	688.5*	690.4*	60.50
60.75	671.8*	673.7*	675.6*	677.4*	679.3*	681.2*	683.1*	685.0*	686.8*	688.7*	690.6*	60.75
61.00	672.0*	673.9*	675.8*	677.6*	679.5*	681.4*	683.3*	685.2*	687.0*	688.9*	690.8*	61.00
61.25	672.2*	674.1*	676.0*	677.9*	679.7*	681.6*	683.5*	685.4*	687.3*	689.1*	691.0*	61.25
61.50	672.5*	674.3*	676.2*	678.1*	680.0*	681.8*	683.7*	685.6*	687.5*	689.4*	691.2*	61.50
61.75	672.7*	674.5*	676.4*	678.3*	680.2*	682.0*	683.9*	685.8*	687.7*	689.6*	691.4*	61.75
62.00	672.9*	674.8*	676.6*	678.5*	680.4*	682.3*	684.1*	686.0*	687.9*	689.8*	691.7*	62.00
62.25	673.1*	675.0*	676.9*	678.7*	680.6*	682.5*	684.3*	686.2*	688.1*	690.0*	691.9*	62.25
62.50	673.3*	675.2*	677.1*	678.9*	680.8*	682.7*	684.6*	686.4*	688.3*	690.2*	692.1*	62.50
62.75	673.5*	675.4*	677.3*	679.2*	681.0*	682.9*	684.8*	686.7*	688.5*	690.4*	692.3*	62.75
63.00	673.8*	675.6*	677.5*	679.4*	681.2*	683.1*	685.0*	686.9*	688.7*	690.6*	692.5*	63.00
63.25	674.0*	675.8*	677.7*	679.6*	681.5*	683.3*	685.2*	687.1*	689.0*	690.8*	692.7*	63.25
63.50	674.2*	676.1*	677.9*	679.8*	681.7*	683.5*	685.4*	687.3*	689.2*	691.0*	692.9*	63.50
63.75	674.4*	676.3*	678.1*	680.0*	681.9*	683.8*	685.6*	687.5*	689.4*	691.2*	693.1*	63.75
64.00	674.6*	676.5*	678.4*	680.2*	682.1*	684.0*	685.8*	687.7*	689.6*	691.5*	693.3*	64.00
64.25	674.8*	676.7*	678.6*	680.4*	682.3*	684.2*	686.1*	687.9*	689.8*	691.7*	693.5*	64.25
64.50	675.1*	676.9*	678.8*	680.7*	682.5*	684.4*	686.3*	688.1*	690.0*	691.9*	693.8*	64.50

OBSERVED DENSITY = 630.0 TO 650.0

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DENOTES EXTRAPOLATED VALUE

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A. GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C										TEMP. C		
	630.0	632.0	634.0	636.0	638.0	640.0	642.0	644.0	646.0	648.0	650.0		
64.50	675.1*	676.9*	678.8*	680.7*	682.5*	684.4*	686.3*	688.1*	690.0*	691.9*	693.8*	64.50	
64.75	675.3*	677.1*	679.0*	680.9*	682.7*	684.6*	686.5*	688.4*	690.2*	692.1*	694.0*	64.75	
65.00	675.5*	677.3*	679.2*	681.1*	683.0*	684.8*	686.7*	688.6*	690.4*	692.3*	694.2*	65.00	
65.25	675.7*	677.6*	679.4*	681.3*	683.2*	685.0*	686.9*	688.8*	690.6*	692.5*	694.4*	65.25	
65.50	675.9*	677.8*	679.6*	681.5*	683.4*	685.2*	687.1*	689.0*	690.9*	692.7*	694.6*	65.50	
65.75	676.1*	678.0*	679.9*	681.7*	683.6*	685.5*	687.3*	689.2*	691.1*	692.9*	694.8*	65.75	
66.00	676.3*	678.2*	680.1*	681.9*	683.8*	685.7*	687.5*	689.4*	691.3*	693.2*	695.0*	66.00	
66.25	676.6*	678.4*	680.3*	682.2*	684.0*	685.9*	687.8*	689.6*	691.5*	693.4*	695.2*	66.25	
66.50	676.8*	678.6*	680.5*	682.4*	684.2*	686.1*	688.0*	689.8*	691.7*	693.6*	695.4*	66.50	
66.75	677.0*	678.8*	680.7*	682.6*	684.4*	686.3*	688.2*	690.0*	691.9*	693.8*	695.6*	66.75	
67.00	677.2*	679.1*	680.9*	682.8*	684.7*	686.5*	688.4*	690.2*	692.1*	694.0*	695.9*	67.00	
67.25	677.4*	679.3*	681.1*	683.0*	684.9*	686.7*	688.6*	690.5*	692.3*	694.2*	696.1*	67.25	
67.50	677.6*	679.5*	681.4*	683.2*	685.1*	686.9*	688.8*	690.7*	692.5*	694.4*	696.3*	67.50	
67.75	677.8*	679.7*	681.6*	683.4*	685.3*	687.2*	689.0*	690.9*	692.7*	694.6*	696.5*	67.75	
68.00	678.1*	679.9*	681.8*	683.6*	685.5*	687.4*	689.2*	691.1*	693.0*	694.8*	696.7*	68.00	
68.25	678.3*	680.1*	682.0*	683.9*	685.7*	687.6*	689.4*	691.3*	693.2*	695.0*	696.9*	68.25	
68.50	678.5*	680.4*	682.2*	684.1*	685.9*	687.8*	689.6*	691.5*	693.4*	695.2*	697.1*	68.50	
68.75	678.7*	680.6*	682.4*	684.3*	686.1*	688.0*	689.9*	691.7*	693.6*	695.5*	697.3*	68.75	
69.00	678.9*	680.8*	682.6*	684.5*	686.4*	688.2*	690.1*	691.9*	693.8*	695.7*	697.5*	69.00	
69.25	679.1*	681.0*	682.8*	684.7*	686.6*	688.4*	690.3*	692.1*	694.0*	695.9*	697.7*	69.25	
69.50	679.3*	681.2*	683.1*	684.9*	686.8*	688.6*	690.5*	692.3*	694.2*	696.1*	697.9*	69.50	
69.75	679.6*	681.4*	683.3*	685.1*	687.0*	688.8*	690.7*	692.6*	694.4*	696.3*	698.1*	69.75	
70.00	679.8*	681.6*	683.5*	685.3*	687.2*	689.1*	690.9*	692.8*	694.6*	696.5*	698.4*	70.00	
70.25	680.0*	681.8*	683.7*	685.5*	687.4*	689.3*	691.1*	693.0*	694.8*	696.7*	698.6*	70.25	
70.50	680.2*	682.0*	683.9*	685.8*	687.6*	689.5*	691.3*	693.2*	695.1*	696.9*	698.8*	70.50	
70.75	680.4*	682.3*	684.1*	686.0*	687.8*	689.7*	691.5*	693.4*	695.3*	697.1*	699.0*	70.75	
71.00	680.6*	682.5*	684.3*	686.2*	688.0*	689.9*	691.7*	693.6*	695.5*	697.3*	699.2*	71.00	
71.25	680.8*	682.7*	684.5*	686.4*	688.2*	690.1*	692.0*	693.8*	695.7*	697.5*	699.4*	71.25	
71.50	681.0*	682.9*	684.7*	686.6*	688.5*	690.3*	692.2*	694.0*	695.9*	697.7*	699.6*	71.50	
71.75	681.3*	683.1*	685.0*	686.8*	688.7*	690.5*	692.4*	694.2*	696.1*	697.9*	699.8*	71.75	
72.00	681.5*	683.3*	685.2*	687.0*	688.9*	690.7*	692.6*	694.4*	696.3*	698.2*	700.0*	72.00	

DENOTES EXTRAPOLATED VALUE

OBSERVED DENSITY = 630.0 TO 650.0

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A. GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C										TEMP. C	
	630.0	632.0	634.0	636.0	638.0	640.0	642.0	644.0	646.0	648.0		650.0
72.00	681.5*	683.3*	685.2*	687.0*	688.9*	690.7*	692.6*	694.4*	696.3*	698.2*	700.0*	72.00
72.25	681.7*	683.5*	685.4*	687.2*	689.1*	690.9*	692.8*	694.7*	696.5*	698.4*	700.2*	72.25
72.50	681.9*	683.7*	685.6*	687.4*	689.3*	691.1*	693.0*	694.9*	696.7*	698.6*	700.4*	72.50
72.75	682.1*	684.0*	685.8*	687.6*	689.5*	691.4*	693.2*	695.1*	696.9*	698.8*	700.6*	72.75
73.00	682.3*	684.2*	686.0*	687.9*	689.7*	691.6*	693.4*	695.3*	697.1*	699.0*	700.8*	73.00
73.25	682.5*	684.4*	686.2*	688.1*	689.9*	691.8*	693.6*	695.5*	697.3*	699.2*	701.1*	73.25
73.50	682.7*	684.6*	686.4*	688.3*	690.1*	692.0*	693.8*	695.7*	697.5*	699.4*	701.3*	73.50
73.75	683.0*	684.8*	686.6*	688.5*	690.3*	692.2*	694.0*	695.9*	697.7*	699.6*	701.5*	73.75
74.00	683.2*	685.0*	686.9*	688.7*	690.6*	692.4*	694.2*	696.1*	698.0*	699.8*	701.7*	74.00
74.25	683.4*	685.2*	687.1*	688.9*	690.8*	692.6*	694.5*	696.3*	698.2*	700.0*	701.9*	74.25
74.50	683.6*	685.4*	687.3*	689.1*	691.0*	692.8*	694.7*	696.5*	698.4*	700.2*	702.1*	74.50
74.75	683.8*	685.6*	687.5*	689.3*	691.2*	693.0*	694.9*	696.7*	698.6*	700.4*	702.3*	74.75
75.00	684.0*	685.8*	687.7*	689.5*	691.4*	693.2*	695.1*	696.9*	698.8*	700.6*	702.5*	75.00
75.25	684.2*	686.1*	687.9*	689.7*	691.6*	693.4*	695.3*	697.1*	699.0*	700.8*	702.7*	75.25
75.50	684.4*	686.3*	688.1*	690.0*	691.8*	693.6*	695.5*	697.3*	699.2*	701.0*	702.9*	75.50
75.75	684.6*	686.5*	688.3*	690.2*	692.0*	693.9*	695.7*	697.6*	699.4*	701.3*	703.1*	75.75
76.00	684.8*	686.7*	688.5*	690.4*	692.2*	694.1*	695.9*	697.8*	699.6*	701.5*	703.3*	76.00
76.25	685.1*	686.9*	688.7*	690.6*	692.4*	694.3*	696.1*	698.0*	699.8*	701.7*	703.5*	76.25
76.50	685.3*	687.1*	689.0*	690.8*	692.6*	694.5*	696.3*	698.2*	700.0*	701.9*	703.7*	76.50
76.75	685.5*	687.3*	689.2*	691.0*	692.9*	694.7*	696.5*	698.4*	700.2*	702.1*	703.9*	76.75
77.00	685.7*	687.5*	689.4*	691.2*	693.1*	694.9*	696.7*	698.6*	700.4*	702.3*	704.1*	77.00
77.25	685.9*	687.7*	689.6*	691.4*	693.3*	695.1*	696.9*	698.8*	700.6*	702.5*	704.3*	77.25
77.50	686.1*	687.9*	689.8*	691.6*	693.5*	695.3*	697.2*	699.0*	700.8*	702.7*	704.5*	77.50
77.75	686.3*	688.2*	690.0*	691.8*	693.7*	695.5*	697.4*	699.2*	701.1*	702.9*	704.7*	77.75
78.00	686.5*	688.4*	690.2*	692.0*	693.9*	695.7*	697.6*	699.4*	701.3*	703.1*	704.9*	78.00
78.25	686.7*	688.6*	690.4*	692.2*	694.1*	695.9*	697.8*	699.6*	701.5*	703.3*	705.1*	78.25
78.50	686.9*	688.8*	690.6*	692.5*	694.3*	696.1*	698.0*	699.8*	701.7*	703.5*	705.4*	78.50
78.75	687.2*	689.0*	690.8*	692.7*	694.5*	696.3*	698.2*	700.0*	701.9*	703.7*	705.6*	78.75
79.00	687.4*	689.2*	691.0*	692.9*	694.7*	696.6*	698.4*	700.2*	702.1*	703.9*	705.8*	79.00
79.25	687.6*	689.4*	691.2*	693.1*	694.9*	696.8*	698.6*	700.4*	702.3*	704.1*	706.0*	79.25
79.50	687.8*	689.6*	691.5*	693.3*	695.1*	697.0*	698.8*	700.6*	702.5*	704.3*	706.2*	79.50

DocuDenotes Extrapolated Value

OBSERVED DENSITY = 630.0 TO 650.0

OBSERVED DENSITY = 630.0 TO 650.0

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WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C										TEMP. C	
	630.0	632.0	634.0	636.0	638.0	640.0	642.0	644.0	646.0	648.0		650.0
79.50	687.8*	689.6*	691.5*	693.3*	695.1*	697.0*	698.8*	700.6*	702.5*	704.3*	706.2*	79.50
79.75	688.0*	689.8*	691.7*	693.5*	695.3*	697.2*	699.0*	700.9*	702.7*	704.5*	706.4*	79.75
80.00	688.2*	690.0*	691.9*	693.7*	695.5*	697.4*	699.2*	701.1*	702.9*	704.7*	706.6*	80.00
80.25	688.4*	690.2*	692.1*	693.9*	695.7*	697.6*	699.4*	701.3*	703.1*	704.9*	706.8*	80.25
80.50	688.6*	690.4*	692.3*	694.1*	696.0*	697.8*	699.6*	701.5*	703.3*	705.1*	707.0*	80.50
80.75	688.8*	690.7*	692.5*	694.3*	696.2*	698.0*	699.8*	701.7*	703.5*	705.3*	707.2*	80.75
81.00	689.0*	690.9*	692.7*	694.5*	696.4*	698.2*	700.0*	701.9*	703.7*	705.6*	707.4*	81.00
81.25	689.2*	691.1*	692.9*	694.7*	696.6*	698.4*	700.2*	702.1*	703.9*	705.8*	707.6*	81.25
81.50	689.4*	691.3*	693.1*	694.9*	696.8*	698.6*	700.4*	702.3*	704.1*	706.0*	707.8*	81.50
81.75	689.7*	691.5*	693.3*	695.2*	697.0*	698.8*	700.7*	702.5*	704.3*	706.2*	708.0*	81.75
82.00	689.9*	691.7*	693.5*	695.4*	697.2*	699.0*	700.9*	702.7*	704.5*	706.4*	708.2*	82.00
82.25	690.1*	691.9*	693.7*	695.6*	697.4*	699.2*	701.1*	702.9*	704.7*	706.6*	708.4*	82.25
82.50	690.3*	692.1*	693.9*	695.8*	697.6*	699.4*	701.3*	703.1*	704.9*	706.8*	708.6*	82.50
82.75	690.5*	692.3*	694.1*	696.0*	697.8*	699.6*	701.5*	703.3*	705.1*	707.0*	708.8*	82.75
83.00	690.7*	692.5*	694.4*	696.2*	698.0*	699.8*	701.7*	703.5*	705.3*	707.2*	709.0*	83.00
83.25	690.9*	692.7*	694.6*	696.4*	698.2*	700.1*	701.9*	703.7*	705.6*	707.4*	709.2*	83.25
83.50	691.1*	692.9*	694.8*	696.6*	698.4*	700.3*	702.1*	703.9*	705.8*	707.6*	709.4*	83.50
83.75	691.3*	693.1*	695.0*	696.8*	698.6*	700.5*	702.3*	704.1*	706.0*	707.8*	709.6*	83.75
84.00	691.5*	693.3*	695.2*	697.0*	698.8*	700.7*	702.5*	704.3*	706.2*	708.0*	709.8*	84.00
84.25	691.7*	693.6*	695.4*	697.2*	699.0*	700.9*	702.7*	704.5*	706.4*	708.2*	710.0*	84.25
84.50	691.9*	693.8*	695.6*	697.4*	699.2*	701.1*	702.9*	704.7*	706.6*	708.4*	710.2*	84.50
84.75	692.1*	694.0*	695.8*	697.6*	699.4*	701.3*	703.1*	704.9*	706.8*	708.6*	710.4*	84.75
85.00	692.3*	694.2*	696.0*	697.8*	699.7*	701.5*	703.3*	705.1*	707.0*	708.8*	710.6*	85.00
85.25	692.6*	694.4*	696.2*	698.0*	699.9*	701.7*	703.5*	705.3*	707.2*	709.0*	710.8*	85.25
85.50	692.8*	694.6*	696.4*	698.2*	700.1*	701.9*	703.7*	705.5*	707.4*	709.2*	711.0*	85.50
85.75	693.0*	694.8*	696.6*	698.4*	700.3*	702.1*	703.9*	705.8*	707.6*	709.4*	711.2*	85.75
86.00	693.2*	695.0*	696.8*	698.6*	700.5*	702.3*	704.1*	705.9*	707.8*	709.6*	711.4*	86.00
86.25	693.4*	695.2*	697.0*	698.8*	700.7*	702.5*	704.3*	706.2*	708.0*	709.8*	711.6*	86.25
86.50	693.6*	695.4*	697.2*	699.1*	700.9*	702.7*	704.5*	706.4*	708.2*	710.0*	711.8*	86.50
86.75	693.8*	695.6*	697.4*	699.3*	701.1*	702.9*	704.7*	706.6*	708.4*	710.2*	712.0*	86.75
87.00	694.0*	695.8*	697.6*	699.5*	701.3*	703.1*	704.9*	706.8*	708.6*	710.4*	712.2*	87.00

OBSERVED DENSITY = 630.0 TO 650.0

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* DENOTES EXTRAPOLATED VALUE

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C										TEMP. C	
	630.0	632.0	634.0	636.0	638.0	640.0	642.0	644.0	646.0	648.0		650.0
87.00	694.0*	695.8*	697.6*	699.5*	701.3*	703.1*	704.9*	706.8*	708.6*	710.4*	712.2*	87.00
87.25	694.2*	696.0*	697.8*	699.7*	701.5*	703.3*	705.1*	707.0*	708.8*	710.6*	712.4*	87.25
87.50	694.4*	696.2*	698.1*	699.9*	701.7*	703.5*	705.3*	707.2*	709.0*	710.8*	712.6*	87.50
87.75	694.6*	696.4*	698.2*	700.1*	701.9*	703.7*	705.5*	707.4*	709.2*	711.0*	712.8*	87.75
88.00	694.8*	696.6*	698.5*	700.3*	702.1*	703.9*	705.7*	707.6*	709.4*	711.2*	713.0*	88.00
88.25	695.0*	696.8*	698.7*	700.5*	702.3*	704.1*	706.0*	707.8*	709.6*	711.4*	713.3*	88.25
88.50	695.2*	697.0*	698.9*	700.7*	702.5*	704.3*	706.2*	708.0*	709.8*	711.6*	713.4*	88.50
88.75	695.4*	697.3*	699.1*	700.9*	702.7*	704.5*	706.4*	708.2*	710.0*	711.8*	713.6*	88.75
88.90	695.6*	697.5*	699.3*	701.1*	702.9*	704.7*	706.6*	708.4*	710.2*	712.0*	713.8*	89.00
89.25	695.8*	697.7*	699.5*	701.3*	703.1*	704.9*	706.8*	708.6*	710.4*	712.2*	714.1*	89.25
89.50	696.0*	697.9*	699.7*	701.5*	703.3*	705.1*	707.0*	708.8*	710.6*	712.4*	714.2*	89.50
89.75	696.3*	698.1*	699.9*	701.7*	703.5*	705.3*	707.2*	709.0*	710.8*	712.6*	714.4*	89.75
90.00	696.5*	698.3*	700.1*	701.9*	703.7*	705.5*	707.4*	709.2*	711.0*	712.8*	714.6*	90.00
90.25	696.7*	698.5*	700.3*	702.1*	703.9*	705.7*	707.6*	709.4*	711.2*	713.0*	714.8*	90.25
90.50	696.9*	698.7*	700.5*	702.3*	704.1*	705.9*	707.8*	709.6*	711.4*	713.2*	715.0*	90.50
90.75	697.1*	698.9*	700.7*	702.5*	704.3*	706.1*	708.0*	709.8*	711.6*	713.4*	715.2*	90.75
91.00	697.3*	699.1*	700.9*	702.7*	704.5*	706.4*	708.2*	710.0*	711.8*	713.6*	715.4*	91.00
91.25	697.5*	699.3*	701.1*	702.9*	704.7*	706.5*	708.4*	710.2*	712.0*	713.8*	715.6*	91.25
91.50	697.7*	699.5*	701.3*	703.1*	704.9*	706.8*	708.6*	710.4*	712.2*	714.0*	715.8*	91.50
91.75	697.9*	699.7*	701.5*	703.3*	705.2*	707.0*	708.8*	710.6*	712.4*	714.2*	716.0*	91.75
92.00	698.1*	699.9*	701.7*	703.5*	705.3*	707.2*	709.0*	710.8*	712.6*	714.4*	716.2*	92.00
92.25	698.3*	700.1*	701.9*	703.7*	705.6*	707.4*	709.2*	711.0*	712.8*	714.6*	716.4*	92.25
92.50	698.5*	700.3*	702.1*	703.9*	705.8*	707.6*	709.4*	711.2*	713.0*	714.8*	716.6*	92.50
92.75	698.7*	700.5*	702.3*	704.1*	706.0*	707.8*	709.6*	711.4*	713.2*	715.0*	716.8*	92.75
93.00	698.9*	700.7*	702.5*	704.3*	706.2*	708.0*	709.8*	711.6*	713.4*	715.2*	717.0*	93.00
93.25	699.1*	700.9*	702.7*	704.6*	706.4*	708.2*	710.0*	711.8*	713.6*	715.4*	717.2*	93.25
93.50	699.3*	701.1*	702.9*	704.7*	706.6*	708.4*	710.2*	712.0*	713.8*	715.6*	717.4*	93.50
93.75	699.5*	701.3*	703.1*	705.0*	706.8*	708.6*	710.4*	712.2*	714.0*	715.8*	717.6*	93.75
94.00	699.7*	701.5*	703.3*	705.2*	707.0*	708.8*	710.6*	712.4*	714.2*	716.0*	717.8*	94.00
94.25	699.9*	701.7*	703.5*	705.4*	707.2*	709.0*	710.8*	712.6*	714.4*	716.2*	718.0*	94.25
94.50	700.1*	701.9*	703.8*	705.6*	707.4*	709.2*	711.0*	712.8*	714.6*	716.4*	718.2*	94.50

OBSERVED DENSITY = 630.0 TO 650.0

* DENOTES EXTRAPOLATED VALUE

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C										TEMP. C	
	630.0	632.0	634.0	636.0	638.0	640.0	642.0	644.0	646.0	648.0		650.0
94.50	700.1*	701.9*	703.8*	705.6*	707.4*	709.2*	711.0*	712.8*	714.6*	716.4*	718.2*	94.50
94.75	700.3*	702.1*	704.0*	705.8*	707.6*	709.4*	711.2*	713.0*	714.8*	716.6*	718.4*	94.75
95.00	700.5*	702.4*	704.1*	706.0*	707.8*	709.6*	711.4*	713.2*	715.0*	716.8*	718.6*	95.00

DENOTES EXTRAPOLATED VALUE 30 OBSERVED DENSITY = 630.0 TO 650.0

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE



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TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 °C

TEMP. °C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 °C										TEMP. °C	
	650.0	652.0	654.0	656.0	658.0	660.0	662.0	664.0	666.0	668.0		670.0
-18.00	618.3*	620.4*	622.5*	624.6*	626.7*	628.8*	630.9*	633.0*	635.1*	637.2*	639.3*	-18.00
-17.75	618.5*	620.6*	622.8*	624.9*	627.0*	629.1*	631.2*	633.3*	635.4*	637.5*	639.6*	-17.75
-17.50	618.8*	620.9*	623.0*	625.1*	627.2*	629.3*	631.4*	633.5*	635.6*	637.7*	639.8*	-17.50
-17.25	619.0*	621.1*	623.2*	625.3*	627.4*	629.6*	631.6*	633.7*	635.8*	637.9*	640.0*	-17.25
-17.00	619.3*	621.4*	623.5*	625.6*	627.7*	629.8*	631.9*	634.0*	636.1*	638.2*	640.3*	-17.00
-16.75	619.5*	621.6*	623.7*	625.8*	627.9*	630.0*	632.1*	634.2*	636.3*	638.4*	640.5*	-16.75
-16.50	619.8*	621.9*	624.0*	626.1*	628.2*	630.3*	632.4*	634.5*	636.6*	638.7*	640.8*	-16.50
-16.25	620.0*	622.1*	624.2*	626.3*	628.4*	630.5*	632.6*	634.7*	636.8*	638.9*	641.0*	-16.25
-16.00	620.3*	622.4*	624.5*	626.6*	628.7*	630.8*	632.9*	635.0*	637.0*	639.1*	641.2*	-16.00
-15.75	620.5*	622.6*	624.7*	626.8*	628.9*	631.0*	633.1*	635.2*	637.3*	639.4*	641.5*	-15.75
-15.50	620.8*	622.9*	625.0*	627.1*	629.2*	631.2*	633.3*	635.4*	637.5*	639.6*	641.7*	-15.50
-15.25	621.0*	623.1*	625.2*	627.3*	629.4*	631.5*	633.6*	635.7*	637.8*	639.9*	641.9*	-15.25
-15.00	621.3*	623.4*	625.4*	627.5*	629.6*	631.7*	633.8*	635.9*	638.0*	640.1*	642.2*	-15.00
-14.75	621.5*	623.6*	625.7*	627.8*	629.9*	632.0*	634.1*	636.2*	638.2*	640.3*	642.4*	-14.75
-14.50	621.8*	623.8*	625.9*	628.0*	630.1*	632.2*	634.3*	636.4*	638.5*	640.6*	642.7*	-14.50
-14.25	622.0*	624.1*	626.2*	628.3*	630.4*	632.5*	634.5*	636.6*	638.7*	640.8*	642.9*	-14.25
-14.00	622.2*	624.3*	626.4*	628.5*	630.6*	632.7*	634.8*	636.9*	639.0*	641.1*	643.1*	-14.00
-13.75	622.5*	624.6*	626.7*	628.8*	630.8*	632.9*	635.0*	637.1*	639.2*	641.3*	643.4*	-13.75
-13.50	622.7*	624.8*	626.9*	629.0*	631.1*	633.2*	635.3*	637.4*	639.4*	641.5*	643.6*	-13.50
-13.25	623.0*	625.1*	627.2*	629.3*	631.3*	633.4*	635.5*	637.6*	639.7*	641.8*	643.9*	-13.25
-13.00	623.2*	625.3*	627.4*	629.5*	631.6*	633.7*	635.8*	637.8*	639.9*	642.0*	644.1*	-13.00
-12.75	623.5*	625.6*	627.6*	629.7*	631.8*	633.9*	636.0*	638.1*	640.2*	642.3*	644.3*	-12.75
-12.50	623.7*	625.8*	627.9*	630.0*	632.1*	634.2*	636.2*	638.3*	640.4*	642.5*	644.6*	-12.50
-12.25	624.0*	626.0*	628.1*	630.2*	632.3*	634.4*	636.5*	638.6*	640.6*	642.7*	644.8*	-12.25
-12.00	624.2*	626.3*	628.4*	630.5*	632.5*	634.6*	636.7*	638.8*	640.9*	643.0*	645.0*	-12.00
-11.75	624.5*	626.5*	628.6*	630.7*	632.8*	634.9*	637.0*	639.0*	641.1*	643.2*	645.3*	-11.75
-11.50	624.7*	626.8*	628.9*	630.9*	633.0*	635.1*	637.2*	639.3*	641.4*	643.4*	645.5*	-11.50
-11.25	624.9*	627.0*	629.1*	631.2*	633.3*	635.4*	637.4*	639.5*	641.6*	643.7*	645.8*	-11.25
-11.00	625.2*	627.3*	629.3*	631.4*	633.5*	635.6*	637.7*	639.8*	641.8*	643.9*	646.0*	-11.00
-10.75	625.4*	627.5*	629.6*	631.7*	633.8*	635.8*	637.9*	640.0*	642.1*	644.1*	646.2*	-10.75
-10.50	625.7*	627.8*	629.8*	631.9*	634.0*	636.1*	638.2*	640.2*	642.3*	644.4*	646.5*	-10.50

OBSERVED DENSITY = 650.0 TO 670.0

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DENOTES EXTRAPOLATED VALUE

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A. GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 °C

TEMP. °C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 °C										TEMP. °C	
	650.0	652.0	654.0	656.0	658.0	660.0	662.0	664.0	666.0	668.0		670.0
10.50	625.7*	627.8*	629.8*	631.9*	634.0*	636.1*	638.2*	640.2*	642.3*	644.4*	646.5*	-10.50
10.25	625.9*	628.0*	630.1*	632.2*	634.2*	636.3*	638.4*	640.5*	642.5*	644.6*	646.7*	-10.25
10.00	626.2*	628.2*	630.3*	632.4*	634.5*	636.6*	638.6*	640.7*	642.8*	644.9*	646.9*	-10.00
-9.75	626.4*	628.5*	630.6*	632.6*	634.7*	636.8*	638.9*	640.9*	643.0*	645.1*	647.2*	-9.75
-9.50	626.7*	628.7*	630.8*	632.9*	635.0*	637.0*	639.1*	641.2*	643.3*	645.3*	647.4*	-9.50
-9.25	626.9*	629.0*	631.1*	633.1*	635.2*	637.3*	639.3*	641.4*	643.5*	645.6*	647.6*	-9.25
-9.00	627.1*	629.2*	631.3*	633.4*	635.4*	637.5*	639.6*	641.7*	643.7*	645.8*	647.9*	-9.00
-8.75	627.4*	629.5*	631.5*	633.6*	635.7*	637.8*	639.8*	641.9*	644.0*	646.0*	648.1*	-8.75
-8.50	627.6*	629.7*	631.8*	633.9*	635.9*	638.0*	640.1*	642.1*	644.2*	646.3*	648.3*	-8.50
-8.25	627.9*	629.9*	632.0*	634.1*	636.2*	638.2*	640.3*	642.4*	644.4*	646.5*	648.6*	-8.25
-8.00	628.1*	630.2*	632.3*	634.3*	636.4*	638.5*	640.5*	642.6*	644.7*	646.8*	648.8*	-8.00
-7.75	628.4*	630.4*	632.5*	634.6*	636.6*	638.7*	640.8*	642.8*	644.9*	647.0*	649.0*	-7.75
-7.50	628.6*	630.7*	632.7*	634.8*	636.9*	638.9*	641.0*	643.1*	645.2*	647.2*	649.3*	-7.50
-7.25	628.8*	630.9*	633.0*	635.1*	637.1*	639.2*	641.3*	643.3*	645.4*	647.5*	649.5*	-7.25
-7.00	629.1*	631.2*	633.2*	635.3*	637.4*	639.4*	641.5*	643.6*	645.6*	647.7*	649.8*	-7.00
-6.75	629.3*	631.4*	633.5*	635.5*	637.6*	639.7*	641.7*	643.8*	645.9*	647.9*	650.0*	-6.75
-6.50	629.6*	631.6*	633.7*	635.8*	637.8*	639.9*	642.0*	644.0*	646.1*	648.2*	650.2*	-6.50
-6.25	629.8*	631.9*	633.9*	636.0*	638.1*	640.1*	642.2*	644.3*	646.3*	648.4*	650.5*	-6.25
-6.00	630.1*	632.1*	634.2*	636.3*	638.3*	640.4*	642.4*	644.5*	646.6*	648.6*	650.7*	-6.00
-5.75	630.3*	632.4*	634.4*	636.5*	638.6*	640.6*	642.7*	644.7*	646.8*	648.9*	650.9*	-5.75
-5.50	630.5*	632.6*	634.7*	636.7*	638.8*	640.9*	642.9*	645.0*	647.0*	649.1*	651.2*	-5.50
-5.25	630.8*	632.8*	634.9*	637.0*	639.0*	641.1*	643.2*	645.2*	647.3*	649.3*	651.4*	-5.25
-5.00	631.0*	633.1*	635.2*	637.2*	639.3*	641.3*	643.4*	645.5*	647.5*	649.6*	651.6*	-5.00
-4.75	631.3*	633.3*	635.4*	637.4*	639.5*	641.6*	643.6*	645.7*	647.8*	649.8*	651.9*	-4.75
-4.50	631.5*	633.6*	635.6*	637.7*	639.8*	641.8*	643.9*	645.9*	648.0*	650.0*	652.1*	-4.50
-4.25	631.7*	633.8*	635.9*	637.9*	640.0*	642.1*	644.1*	646.2*	648.2*	650.3*	652.3*	-4.25
-4.00	632.0*	634.1*	636.1*	638.2*	640.2*	642.3*	644.3*	646.4*	648.5*	650.5*	652.6*	-4.00
-3.75	632.2*	634.3*	636.4*	638.4*	640.5*	642.5*	644.6*	646.6*	648.7*	650.7*	652.8*	-3.75
-3.50	632.5*	634.5*	636.6*	638.6*	640.7*	642.8*	644.8*	646.9*	648.9*	651.0*	653.0*	-3.50
-3.25	632.7*	634.8*	636.8*	638.9*	640.9*	643.0*	645.0*	647.1*	649.2*	651.2*	653.3*	-3.25
-3.00	633.0*	635.0*	637.1*	639.1*	641.2*	643.2*	645.3*	647.3*	649.4*	651.4*	653.5*	-3.00

Document

670.0

TO

650.0

=

DENSITY

OBSERVED

670.0

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DENOTES EXTRAPOLATED VALUE

OBSERVED DENSITY = 650.0 TO 670.0

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C											TEMP. C
	650.0	652.0	654.0	656.0	658.0	660.0	662.0	664.0	666.0	668.0	670.0	
-3.00	633.0*	635.0*	637.1*	639.1*	641.2*	643.2*	645.3*	647.3*	649.4*	651.4*	653.5*	-3.00
-2.75	633.2*	635.3*	637.3*	639.4*	641.4*	643.5*	645.5*	647.6*	649.6*	651.7*	653.7*	-2.75
-2.50	633.4*	635.5*	637.6*	639.6*	641.7*	643.7*	645.8*	647.8*	649.9*	651.9*	654.0*	-2.50
-2.25	633.7*	635.7*	637.8*	639.8*	641.9*	643.9*	646.0*	648.0*	650.1*	652.1*	654.2*	-2.25
-2.00	633.9*	636.0*	638.0*	640.1*	642.1*	644.2*	646.2*	648.3*	650.3*	652.4*	654.4*	-2.00
-1.75	634.2*	636.2*	638.3*	640.3*	642.4*	644.4*	646.5*	648.5*	650.6*	652.6*	654.7*	-1.75
-1.50	634.4*	636.4*	638.5*	640.6*	642.6*	644.7*	646.7*	648.8*	650.8*	652.8*	654.9*	-1.50
-1.25	634.6*	636.7*	638.7*	640.8*	642.8*	644.9*	646.9*	649.0*	651.0*	653.1*	655.1*	-1.25
-1.00	634.9*	636.9*	639.0*	641.0*	643.1*	645.1*	647.2*	649.2*	651.3*	653.3*	655.4*	-1.00
-.75	635.1*	637.2*	639.2*	641.3*	643.3*	645.4*	647.4*	649.5*	651.5*	653.6*	655.6*	-.75
-.50	635.4*	637.4*	639.5*	641.5*	643.6*	645.6*	647.6*	649.7*	651.7*	653.8*	655.8*	-.50
-.25	635.6*	637.7*	639.7*	641.7*	643.8*	645.8*	647.9*	649.9*	652.0*	654.0*	656.1*	-.25
0.00	635.8*	637.9*	639.9*	642.0*	644.0*	646.1*	648.1*	650.2*	652.2*	654.2*	656.3*	0.00
.25	636.1*	638.1*	640.2*	642.2*	644.3*	646.3*	648.3*	650.4*	652.4*	654.5*	656.5*	.25
.50	636.3*	638.4*	640.4*	642.5*	644.5*	646.5*	648.6*	650.6*	652.7*	654.7*	656.8*	.50
.75	636.6*	638.6*	640.6*	642.7*	644.7*	646.8*	648.8*	650.9*	652.9*	654.9*	657.0*	.75
1.00	636.8*	638.8*	640.9*	642.9*	645.0*	647.0*	649.1*	651.1*	653.1*	655.2*	657.2*	1.00
1.25	637.0*	639.1*	641.1*	643.2*	645.2*	647.2*	649.3*	651.3*	653.4*	655.4*	657.4*	1.25
1.50	637.3*	639.3*	641.4*	643.4*	645.4*	647.5*	649.5*	651.6*	653.6*	655.6*	657.7*	1.50
1.75	637.5*	639.6*	641.6*	643.6*	645.7*	647.7*	649.8*	651.8*	653.8*	655.9*	657.9*	1.75
2.00	637.8*	639.8*	641.8*	643.9*	645.9*	648.0*	650.0*	652.0*	654.1*	656.1*	658.1*	2.00
2.25	638.0*	640.0*	642.1*	644.1*	646.1*	648.2*	650.2*	652.3*	654.3*	656.3*	658.4*	2.25
2.50	638.2*	640.3*	642.3*	644.3*	646.4*	648.4*	650.5*	652.5*	654.5*	656.6*	658.6*	2.50
2.75	638.5*	640.5*	642.5*	644.6*	646.6*	648.6*	650.7*	652.7*	654.8*	656.8*	658.8*	2.75
3.00	638.7*	640.7*	642.8*	644.8*	646.9*	648.9*	650.9*	653.0*	655.0*	657.0*	659.1*	3.00
3.25	638.9*	641.0*	643.0*	645.1*	647.1*	649.1*	651.2*	653.2*	655.2*	657.3*	659.3*	3.25
3.50	639.2*	641.2*	643.3*	645.3*	647.3*	649.4*	651.4*	653.4*	655.5*	657.5*	659.5*	3.50
3.75	639.4*	641.5*	643.5*	645.5*	647.6*	649.6*	651.6*	653.7*	655.7*	657.7*	659.8*	3.75
4.00	639.7*	641.7*	643.7*	645.8*	647.8*	649.8*	651.9*	653.9*	655.9*	658.0*	660.0*	4.00
4.25	639.9*	641.9*	644.0*	646.0*	648.0*	650.1*	652.1*	654.1*	656.1*	658.2*	660.2*	4.25
4.50	640.1*	642.2*	644.2*	646.2*	648.3*	650.3*	652.3*	654.4*	656.4*	658.4*	660.4*	4.50

DENOTES EXTRAPOLATED VALUE

OBSERVED DENSITY = 650.0 TO 670.0

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WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C										TEMP. C	
	650.0	652.0	654.0	656.0	658.0	660.0	662.0	664.0	666.0	668.0	670.0	
4.50	640.1*	642.2*	644.2*	646.2*	648.3*	650.3*	652.3*	654.4*	656.4*	658.4*	660.4*	4.50
4.75	640.4*	642.4*	644.4*	646.5*	648.5*	650.5*	652.6*	654.6*	656.6*	658.6*	660.7*	4.75
5.00	640.6*	642.6*	644.7*	646.7*	648.7*	650.8*	652.8*	654.8*	656.8*	658.9*	660.9*	5.00
5.25	640.8*	642.9*	644.9*	646.9*	649.0*	651.0*	653.0*	655.1*	657.1*	659.1*	661.1*	5.25
5.50	641.1*	643.1*	645.1*	647.2*	649.2*	651.2*	653.2*	655.3*	657.3*	659.3*	661.4*	5.50
5.75	641.3*	643.4*	645.4*	647.4*	649.4*	651.5*	653.5*	655.5*	657.5*	659.6*	661.6*	5.75
6.00	641.6*	643.6*	645.6*	647.6*	649.7*	651.7*	653.7*	655.7*	657.8*	659.8*	661.8*	6.00
6.25	641.8*	643.8*	645.8*	647.9*	649.9*	651.9*	653.9*	656.0*	658.0*	660.0*	662.0*	6.25
6.50	642.0*	644.1*	646.1*	648.1*	650.1*	652.2*	654.2*	656.2*	658.2*	660.3*	662.3*	6.50
6.75	642.3*	644.3*	646.3*	648.3*	650.4*	652.4*	654.4*	656.4*	658.5*	660.5*	662.5*	6.75
7.00	642.5*	644.5*	646.6*	648.6*	650.6*	652.6*	654.6*	656.7*	658.7*	660.7*	662.7*	7.00
7.25	642.7*	644.8*	646.8*	648.8*	650.8*	652.9*	654.9*	656.9*	658.9*	660.9*	663.0*	7.25
7.50	643.0*	645.0*	647.0*	649.0*	651.1*	653.1*	655.1*	657.1*	659.1*	661.2*	663.2*	7.50
7.75	643.2*	645.2*	647.3*	649.3*	651.3*	653.3*	655.3*	657.4*	659.4*	661.4*	663.4*	7.75
8.00	643.4*	645.5*	647.5*	649.5*	651.5*	653.6*	655.6*	657.6*	659.6*	661.6*	663.7*	8.00
8.25	643.7*	645.7*	647.7*	649.7*	651.8*	653.8*	655.8*	657.8*	659.8*	661.9*	663.9*	8.25
8.50	643.9*	645.9*	648.0*	650.0*	652.0*	654.0*	656.0*	658.1*	660.1*	662.1*	664.1*	8.50
8.75	644.1*	646.2*	648.2*	650.2*	652.2*	654.2*	656.3*	658.3*	660.3*	662.3*	664.3*	8.75
9.00	644.4*	646.4*	648.4*	650.4*	652.5*	654.5*	656.5*	658.5*	660.5*	662.5*	664.6*	9.00
9.25	644.6*	646.6*	648.7*	650.7*	652.7*	654.7*	656.7*	658.7*	660.8*	662.8*	664.8*	9.25
9.50	644.9*	646.9*	648.9*	650.9*	652.9*	654.9*	657.0*	659.0*	661.0*	663.0*	665.0*	9.50
9.75	645.1*	647.1*	649.1*	651.1*	653.2*	655.2*	657.2*	659.2*	661.2*	663.2*	665.2*	9.75
10.00	645.3*	647.3*	649.4*	651.4*	653.4*	655.4*	657.4*	659.4*	661.4*	663.5*	665.5*	10.00
10.25	645.6*	647.6*	649.6*	651.6*	653.6*	655.6*	657.6*	659.7*	661.7*	663.7*	665.7*	10.25
10.50	645.8*	647.8*	649.8*	651.8*	653.9*	655.9*	657.9*	659.9*	661.9*	663.9*	665.9*	10.50
10.75	646.0*	648.0*	650.1*	652.1*	654.1*	656.1*	658.1*	660.1*	662.1*	664.1*	666.2*	10.75
11.00	646.3*	648.3*	650.3*	652.3*	654.3*	656.3*	658.3*	660.3*	662.4*	664.4*	666.4*	11.00
11.25	646.5*	648.5*	650.5*	652.5*	654.5*	656.6*	658.6*	660.6*	662.6*	664.6*	666.6*	11.25
11.50	646.7*	648.7*	650.8*	652.8*	654.8*	656.8*	658.8*	660.8*	662.8*	664.8*	666.8*	11.50
11.75	647.0*	649.0*	651.0*	653.0*	655.0*	657.0*	659.0*	661.0*	663.0*	665.1*	667.1*	11.75
12.00	647.2*	649.2*	651.2*	653.2*	655.2*	657.3*	659.3*	661.3*	663.3*	665.3*	667.3*	12.00

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* DENOTES EXTRAPOLATED VALUE

OBSERVED DENSITY = 650.0 TO 670.0

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE

TABLE 53A, GENERALIZED CRUDE OILS
DENSITY CORRECTION TO 15 C

TEMP. C	DENSITY AT OBSERVED TEMPERATURE CORRESPONDING DENSITY AT 15 C										TEMP. C	
	650.0	652.0	654.0	656.0	658.0	660.0	662.0	664.0	666.0	668.0		670.0
12.00	647.2*	649.2*	651.2*	653.2*	655.2*	657.3*	659.3*	661.3*	663.3*	665.3*	667.3*	12.00
12.25	647.4*	649.4*	651.5*	653.5*	655.5*	657.5*	659.5*	661.5*	663.5*	665.5*	667.5*	12.25
12.50	647.7*	649.7*	651.7*	653.7*	655.7*	657.7*	659.7*	661.7*	663.7*	665.7*	667.7*	12.50
12.75	647.9*	649.9*	651.9*	653.9*	655.9*	657.9*	659.9*	661.9*	664.0*	666.0*	668.0*	12.75
13.00	648.1*	650.1*	652.1*	654.2*	656.2*	658.2*	660.2*	662.2*	664.2*	666.2*	668.2*	13.00
13.25	648.4*	650.4*	652.4*	654.4*	656.4*	658.4*	660.4*	662.4*	664.4*	666.4*	668.4*	13.25
13.50	648.6*	650.6*	652.6*	654.6*	656.6*	658.6*	660.6*	662.6*	664.6*	666.6*	668.6*	13.50
13.75	648.8*	650.8*	652.8*	654.8*	656.9*	658.9*	660.9*	662.9*	664.9*	666.9*	668.9*	13.75
14.00	649.1*	651.1*	653.1*	655.1*	657.1*	659.1*	661.1*	663.1*	665.1*	667.1*	669.1*	14.00
14.25	649.3*	651.3*	653.3*	655.3*	657.3*	659.3*	661.3*	663.3*	665.3*	667.3*	669.3*	14.25
14.50	649.5*	651.5*	653.5*	655.5*	657.5*	659.5*	661.5*	663.5*	665.5*	667.6*	669.6*	14.50
14.75	649.8*	651.8*	653.8*	655.8*	657.8*	659.8*	661.8*	663.8*	665.8*	667.8*	669.8*	14.75
15.00	650.0*	652.0*	654.0*	656.0*	658.0*	660.0*	662.0*	664.0*	666.0*	668.0*	670.0*	15.00
15.25	650.2*	652.2*	654.2*	656.2*	658.2*	660.2*	662.2*	664.2*	666.2*	668.2*	670.2*	15.25
15.50	650.5*	652.5*	654.5*	656.5*	658.5*	660.5*	662.5*	664.5*	666.5*	668.4*	670.4*	15.50
15.75	650.7*	652.7*	654.7*	656.7*	658.7*	660.7*	662.7*	664.7*	666.7*	668.7*	670.7*	15.75
16.00	650.9*	652.9*	654.9*	656.9*	658.9*	660.9*	662.9*	664.9*	666.9*	668.9*	670.9*	16.00
16.25	651.2*	653.2*	655.2*	657.1*	659.1*	661.1*	663.1*	665.1*	667.1*	669.1*	671.1*	16.25
16.50	651.4*	653.4*	655.4*	657.4*	659.4*	661.4*	663.4*	665.4*	667.4*	669.4*	671.4*	16.50
16.75	651.6*	653.6*	655.6*	657.6*	659.6*	661.6*	663.6*	665.6*	667.6*	669.6*	671.6*	16.75
17.00	651.9*	653.8*	655.8*	657.8*	659.8*	661.8*	663.8*	665.8*	667.8*	669.8*	671.8*	17.00
17.25	652.1*	654.1*	656.1*	658.1*	660.1*	662.1*	664.1*	666.0*	668.0*	670.0*	672.0*	17.25
17.50	652.3*	654.3*	656.3*	658.3*	660.3*	662.3*	664.3*	666.3*	668.3*	670.3*	672.2*	17.50
17.75	652.6*	654.5*	656.5*	658.5*	660.5*	662.5*	664.5*	666.5*	668.5*	670.5*	672.5*	17.75
18.00	652.8*	654.8*	656.8*	658.7*	660.7*	662.7*	664.7*	666.7*	668.7*	670.7*	672.7*	18.00
18.25	653.0*	655.0*	657.0*	659.0*	661.0*	663.0*	665.0*	666.9*	668.9*	670.9*	672.9*	18.25
18.50	653.2*	655.2*	657.2*	659.2*	661.2*	663.2*	665.2*	667.2*	669.2*	671.2*	673.1*	18.50
18.75	653.5*	655.5*	657.4*	659.4*	661.4*	663.4*	665.4*	667.4*	669.4*	671.4*	673.4*	18.75
19.00	653.7*	655.7*	657.7*	659.7*	661.7*	663.6*	665.6*	667.6*	669.6*	671.6*	673.6*	19.00
19.25	653.9*	655.9*	657.9*	659.9*	661.9*	663.9*	665.9*	667.8*	669.8*	671.8*	673.8*	19.25
19.50	654.2*	656.1*	658.1*	660.1*	662.1*	664.1*	666.1*	668.1*	670.1*	672.0*	674.0*	19.50

DENOTES EXTRAPOLATED VALUE

OBSERVED DENSITY = 650.0 TO 670.0

WHEN USING A DENSITY IN G/ML, G/CC, OR KG/L, MULTIPLY BY 1000 BEFORE ENTERING THE ABOVE TABLE