

# **Petroleum Systems and Assessment of Undiscovered Oil and Gas in the Denver Basin Province, Colorado, Kansas, Nebraska, South Dakota, and Wyoming— USGS Province 39**



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Compiled by Debra K. Higley

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# Conversion Factors (Approximate) \*

Note: For this assessment, 6,000 cubic feet of gas equals 1 barrel of oil equivalent (BOE).

| To convert from   | To                               | Multiply by |
|---|----------------------------------|-------------|
| <b>Length</b>   |                                  |             |
| foot (ft)   | kilometer (km)                   | 0.000305    |
| foot (ft)   | meter (m)                        | 0.305       |
| foot (ft)   | mile (mi)                        | 0.000189    |
| kilometer (km)  | foot (ft)                        | 3,281       |
| kilometer (km)  | mile (mi)                        | 0.621       |
| meter (m)   | foot (ft)                        | 3.281       |
| mile (mi)   | foot (ft)                        | 5,280       |
| mile (mi)   | kilometer (km)                   | 1.61        |
| <b>Area</b>   |                                  |             |
| sq. kilometer (km <sup>2</sup> )  | sq. mile (mi <sup>2</sup> )      | 0.386       |
| sq. mile (mi <sup>2</sup> )   | sq. kilometer (km <sup>2</sup> ) | 2.59        |
| <b>Weight</b>   |                                  |             |
| metric ton  | ton, short (2,000 lb)            | 1.10        |
| ton, short (2,000 lb)   | metric ton                       | 0.907       |
| <b>Crude oil (based on average specific gravity at standard temperature and pressure)</b> |                                  |             |
| barrel (bbl)  | metric ton                       | 0.136       |
| barrel (bbl)  | ton, short (2,000 lb)            | 0.150       |
| metric ton  | barrel (bbl)                     | 7.33        |
| ton, short (2,000 lb)   | barrel (bbl)                     | 6.65        |

# Conversion Factors (Approximate)—Continued

| To convert from  | To   | Multiply by |
|--|--|-------------|
| <b>Liquid fuels</b>  |  |             |
| barrel (bbl)   | cubic meter (m <sup>3</sup> )  | 0.159       |
| barrel (bbl)   | gallon (gal)   | 42.0        |
| barrel (bbl)   | liter (L)  | 159         |
| cubic meter (m <sup>3</sup> )  | barrel (bbl)   | 6.29        |
| gallon (gal)   | barrel (bbl)   | 0.0238      |
| liter (L)  | barrel (bbl)   | 0.00629     |
| <b>Gaseous fuels</b>   |  |             |
| cubic foot (ft <sup>3</sup> )  | cubic meter (m <sup>3</sup> )  | 0.0283      |
| cubic meter (m <sup>3</sup> )  | cubic foot (ft <sup>3</sup> )  | 35.3        |
| <b>Coproduct ratios</b>  |  |             |
| cubic feet per barrel<br>(ft <sup>3</sup> /bbl or CF/B)                    | cubic meters per cubic meters<br>(m <sup>3</sup> /m <sup>3</sup> )         | 0.178       |
| barrel per million cubic feet<br>(bbl/1,000,000 ft <sup>3</sup> or B/MMCF) | cubic centimeters per cubic meter<br>(cm <sup>3</sup> /m <sup>3</sup> )    | 5.61        |
| cubic meters per cubic meters<br>(m <sup>3</sup> /m <sup>3</sup> )         | cubic feet per barrel<br>(ft <sup>3</sup> /bbl or CF/B)                    | 5.61        |
| cubic centimeters per cubic meters<br>(cm <sup>3</sup> /m <sup>3</sup> )   | barrel per million cubic feet<br>(bbl/1,000,000 ft <sup>3</sup> or B/MMCF) | 0.178       |
| <b>Geothermal gradients</b>  |  |             |
| degree Celsius per 100 meters<br>(°C/100 m)                                | degree Fahrenheit per 100 feet<br>(°F/100 ft)                              | 0.549       |
| degree Fahrenheit per 100 feet<br>(°F/100 ft)                              | degree Celsius per 100 meters<br>(°C/100 m)                                | 1.82        |