OKLAHOMA

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

# PLANE COORDINATE PROJECTION TABLES

## OKLAHOMA
(LAMBERT)

SPECIAL PUBLICATION NO. 287

U. S. Department of Commerce
Charles Sawyer, *Secretary*

Coast and Geodetic Survey
Robert F. A. Studds, *Director*

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Special Publication No. 287

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# PLANE COORDINATE PROJECTION TABLES

# OKLAHOMA

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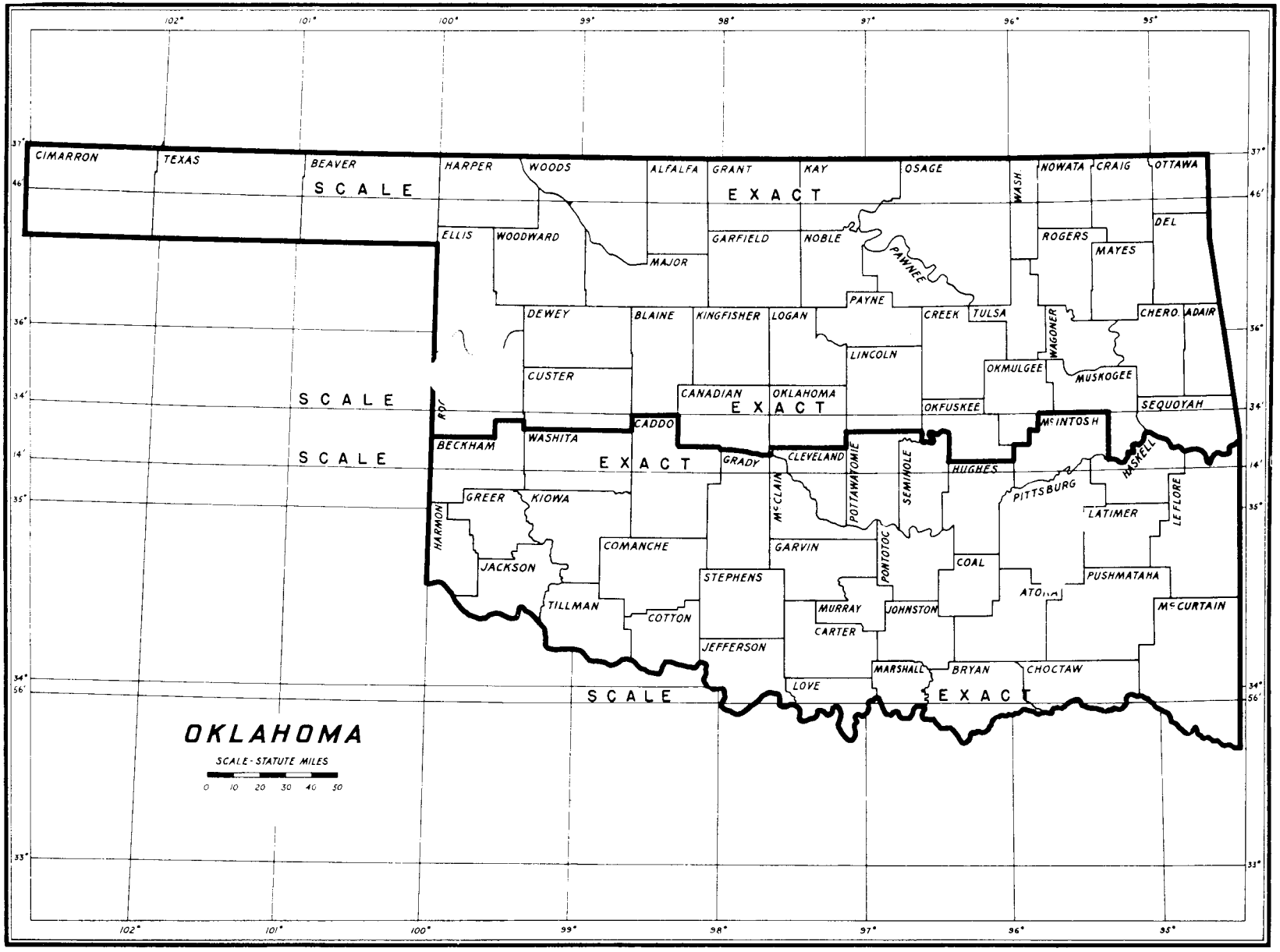


STATE PLANE-COORDINATE ZONES

# Foreword

The plane coordinate system used in this State is based on the Lambert conformal conic projection with two standard parallels for each zone. The tables in this publication are to be used for the conversion of geographic positions to plane coordinates or plane coordinates to geographic positions. The constants of the projection are listed with the tables.

The methods of computation have been designed for machine calculation, using tables of natural trigonometric functions. A table of these functions has been published by the Coast and Geodetic Survey to ten decimal places with ten-second intervals for 0° to 6° in Special Publication No. 246 and is sold for a nominal sum by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.

The formulas and sample computations which follow show the general methods for computing either type of coordinates.

## Plane Coordinates from Geographic Positions

$$x = R \sin \theta + C$$

$$y = R_b - R \cos \theta$$

Grid azimuth = geodetic azimuth - $\theta$ + second term

where

R is the radius for the latitude of the station,

$R_b$ is a constant for a zone,

$\theta$ is the mapping angle for the longitude of the station,

and

C is the value of x assigned to the Central Meridian for a zone.

The second term for the reduction of geodetic to grid azimuths may be neglected for most work. However, for lines five miles or more in length, if the same degree of accuracy is desired as is obtained by geographic computations, this term should be evaluated and used.

$$\text{Second term} = \frac{x_2 - x_1}{2\rho_0^{\,2} \sin 1''} \left( y_1 - y_o + \frac{y_2 - y_1}{3} \right)$$

## Geographic Positions from Plane Coordinates

The formulas show the method of computing R and θ from which the latitude and longitude may be obtained.

$$x' = x - C$$

$$\tan \theta = x' \div (R_b - y)$$

$$R = (R_b - y) \div \cos \theta$$

$$\Delta\lambda = \theta \div \ell$$

$$\lambda = \text{Central Meridian} - \Delta\lambda$$

where

$R$, $R_b$, $\theta$, and $C$ are the same as previously defined

and $\ell$ is a constant for a zone.

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Form 725 d

# PLANE COORDINATES ON LAMBERT PROJECTION

(Condensed form for calculating-machine computation)



$X = R \sin\theta + C$ $\quad C = 2{,}000{,}000.00$ $\quad Y = R_b - R\cos\theta$ $\quad R_b = 29{,}082{,}831.70$ $\quad$ State-Zone Okla. - North $\quad$ Grid Az. = Geod. Az. $- \theta$

| Station | Latitude / Longitude | R / θ | sin θ / cos θ | X / Y |
|---|---|---|---|---|
| 1 Fame, 1934 | 35 20 36.925 | 28,957,760.29 | +0.02424 82919 | 2,702,176.22 |
| | 95 38 44.046 | +1 23 22.595 | 0.99970 54664 | 133,585.95 |
| | Grid azimuth to azimuth mark | | | 177° 53' 25" |
| 2 Cole, 1934 | 36 50 19.568 | 28,413,477.64 | −0.00733 98751 | 1,791,448.62 |
| | 98 42 45.414 | −0 25 13.9715 | 0.99997 30628 | 670,119.44 |
| | Grid azimuth to azimuth mark | | | 260° 51' 52" |
| 3 | | | | |
| | Grid azimuth to azimuth mark | | | ° ' " |
| 4 | | | | |
| | Grid azimuth to azimuth mark | | | ° ' " |
| 5 | | | | |
| | Grid azimuth to azimuth mark | | | ° ' " |
| 6 | | | | |
| | Grid azimuth to azimuth mark | | | ° ' " |
| 7 | | | | |
| | Grid azimuth to azimuth mark | | | ° ' " |
| 8 | | | | |
| | Grid azimuth to azimuth mark | | | ° ' " |
| 9 | | | | |
| | Grid azimuth to azimuth mark | | | ° ' " |
| 10 | | | | |
| | Grid azimuth to azimuth mark | | | ° ' " |
| 11 | | | | |
| | Grid azimuth to azimuth mark | | | ° ' " |
| 12 | | | | |
| | Grid azimuth to azimuth mark | | | ° ' " |

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 742 b

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# GEODETIC POSITIONS FROM LAMBERT COORDINATES

(CALCULATING MACHINE COMPUTATION)

STATE – ZONE Oklahoma - North  $\ell$ = 0.59014 70744

Station Fame, 1934

| | | | |
|---|---|---|---|
| C | – 2,000,000.00 | $R_b$ | 29,082,831.70 |
| X | 2,702,176.22 | Y | – 133,585.95 |
| $X' = X - C$ | + 702,176.22 | $R_b - Y$ | 28,949,245.75 |
| $\tan\theta = X' \div (R_b - Y)$ | +0.02425 54236 | $\theta$ | +5002".0595 |
| $\theta$ | + 1° 23' 22".0595 | $\Delta\lambda = \theta \div \ell$ | +8475".454 |
| $\cos\theta$ | 0.99970 59669 | $\Delta\lambda$ | + 2° 21' 15".454 |
| $R = (R_b - Y) \div \cos\theta$ | 28,957,760.29 | Central Meridian | 98° 00' 00".000 |
| $\phi$ | 35° 20' 36".925 | $\lambda$ = C.M. – $\Delta\lambda$ | 95° 38' 44".046 |

Station Cole, 1934

| | | | |
|---|---|---|---|
| C | – 2,000,000.00 | $R_b$ | 29,082,831.70 |
| X | 1,791,448.62 | Y | – 670,119.44 |
| $X' = X - C$ | – 208,551.38 | $R_b - Y$ | 28,412,712.26 |
| $\tan\theta = X' \div (R_b - Y)$ | -0.00734 00729 | $\theta$ | -1513".9715 |
| $\theta$ | – 0° 25' 13".9715 | $\Delta\lambda = \theta \div \ell$ | -2565.414 |
| $\cos\theta$ | 0.99997 30628 | $\Delta\lambda$ | – 0° 42' 45".414 |
| $R = (R_b - Y) \div \cos\theta$ | 28,413,477.64 | Central Meridian | 98° 00' 00".000 |
| $\phi$ | 36° 50' 19".568 | $\lambda$ = C.M. – $\Delta\lambda$ | 98° 42' 45".414 |

Station

| | | | |
|---|---|---|---|
| C | – | $R_b$ | |
| X | | Y | – |
| $X' = X - C$ | | $R_b - Y$ | |
| $\tan\theta = X' \div (R_b - Y)$ | | $\theta$ | " |
| $\theta$ | ° ' " | $\Delta\lambda = \theta \div \ell$ | " |
| $\cos\theta$ | | $\Delta\lambda$ | ° ' " |
| $R = (R_b - Y) \div \cos\theta$ | | Central Meridian | ° ' " |
| $\phi$ | ° ' " | $\lambda$ = C.M. – $\Delta\lambda$ | ° ' " |

Station

| | | | |
|---|---|---|---|
| C | – | $R_b$ | |
| X | | Y | – |
| $X' = X - C$ | | $R_b - Y$ | |
| $\tan\theta = X' \div (R_b - Y)$ | | $\theta$ | " |
| $\theta$ | ° ' " | $\Delta\lambda = \theta \div \ell$ | " |
| $\cos\theta$ | | $\Delta\lambda$ | ° ' " |
| $R = (R_b - Y) \div \cos\theta$ | | Central Meridian | ° ' " |
| $\phi$ | ° ' " | $\lambda$ = C.M. – $\Delta\lambda$ | ° ' " |

M-2545-2

Constants for Oklahoma

| Constant | North zone | South zone |
|---|---|---|
| C | 2,000,000.00 ft. | 2,000,000.00 ft. |
| Central Meridian | 98° 00' 00".000 | 98° 00' 00".000 |
| $R_b$ | 29,082,831.70 ft. | 30,838,032.96 ft. |
| $y_o$ | 424,960.04 ft. | 455,201.90 ft. |
| $\ell$ | 0.59014 70744 | 0.56761 66827 |
| $\frac{1}{2\rho_o^2 \sin 1''}$ | $2.360 \times 10^{-10}$ | $2.361 \times 10^{-10}$ |
| $\log \frac{1}{2\rho_o^2 \sin 1''}$ | 0.372 9293 - 10 | 0.373 0830 - 10 |
| $\log \ell$ | 9.77096 02585 - 10 | 9.75405 51512 - 10 |
| log K | 7.62996 13756 | 7.64043 45872 |

# Lambert Projection for Oklahoma (North)

Table I

| Lat. | R (feet) | Y' y value on central meridian feet | Tabular difference for 1 sec. of lat. feet | Scale in units of 7th place of logs. | Scale expressed as a ratio |
|---|---|---|---|---|---|
| 35° 00' | 29,082,831.70 | 0 | 101.11717 | +655.8 | 1.0001510 |
| 01 | 29,076,764.67 | 6,067.03 | 101.11700 | +630.6 | 1.0001452 |
| 02 | 29,070,697.65 | 12,134.05 | 101.11667 | +605.7 | 1.0001395 |
| 03 | 29,064,630.65 | 18,201.05 | 101.11633 | +581.2 | 1.0001338 |
| 04 | 29,058,563.67 | 24,268.03 | 101.11617 | +557.0 | 1.0001283 |
| 05 | 29,052,496.70 | 30,335.00 | 101.11583 | +533.2 | 1.0001228 |
| 35° 06' | 29,046,429.75 | 36,401.95 | 101.11550 | +509.8 | 1.0001174 |
| 07 | 29,040,362.82 | 42,468.88 | 101.11533 | +486.7 | 1.0001121 |
| 08 | 29,034,295.90 | 48,535.80 | 101.11500 | +464.0 | 1.0001068 |
| 09 | 29,028,229.00 | 54,602.70 | 101.11483 | +441.6 | 1.0001017 |
| 10 | 29,022,162.11 | 60,669.59 | 101.11467 | +419.6 | 1.0000966 |
| 35° 11' | 29,016,095.23 | 66,736.47 | 101.11433 | +397.9 | 1.0000916 |
| 12 | 29,010,028.37 | 72,803.33 | 101.11417 | +376.6 | 1.0000867 |
| 13 | 29,003,961.52 | 78,870.18 | 101.11400 | +355.7 | 1.0000819 |
| 14 | 28,997,894.68 | 84,937.02 | 101.11367 | +335.2 | 1.0000772 |
| 15 | 28,991,827.86 | 91,003.84 | 101.11367 | +315.0 | 1.0000725 |
| 35° 16' | 28,985,761.04 | 97,070.66 | 101.11333 | +295.1 | 1.0000679 |
| 17 | 28,979,694.24 | 103,137.46 | 101.11333 | +275.6 | 1.0000635 |
| 18 | 28,973,627.44 | 109,204.26 | 101.11300 | +256.5 | 1.0000591 |
| 19 | 28,967,560.66 | 115,271.04 | 101.11300 | +237.8 | 1.0000548 |
| 20 | 28,961,493.88 | 121,337.82 | 101.11283 | +219.4 | 1.0000505 |
| 35° 21' | 28,955,427.11 | 127,404.59 | 101.11267 | +201.4 | 1.0000464 |
| 22 | 28,949,360.35 | 133,471.35 | 101.11250 | +183.7 | 1.0000423 |
| 23 | 28,943,293.60 | 139,538.10 | 101.11233 | +166.4 | 1.0000383 |
| 24 | 28,937,226.86 | 145,604.84 | 101.11233 | +149.4 | 1.0000344 |
| 25 | 28,931,160.12 | 151,671.58 | 101.11233 | +132.8 | 1.0000306 |
| 35° 26' | 28,925,093.38 | 157,738.32 | 101.11217 | +116.6 | 1.0000268 |
| 27 | 28,919,026.65 | 163,805.05 | 101.11200 | +100.8 | 1.0000232 |
| 28 | 28,912,959.93 | 169,871.77 | 101.11200 | +85.3 | 1.0000196 |
| 29 | 28,906,893.21 | 175,938.49 | 101.11183 | +70.2 | 1.0000162 |
| 30 | 28,900,826.50 | 182,005.20 | 101.11183 | +55.4 | 1.0000128 |
| 35° 31' | 28,894,759.79 | 188,071.91 | 101.11183 | +41.0 | 1.0000094 |
| 32 | 28,888,693.08 | 194,138.62 | 101.11183 | +27.0 | 1.0000062 |
| 33 | 28,882,626.37 | 200,205.33 | 101.11167 | +13.3 | 1.0000031 |
| 34 | 28,876,559.67 | 206,272.03 | 101.11167 | 0.0 | 1.0000000 |
| 35 | 28,870,492.97 | 212,338.73 | 101.11167 | -13.0 | 0.9999970 |

# Lambert Projection for Oklahoma (North)

## Table I (Cont'd)

| Lat. | R (feet) | Y' y value on central meridian feet | Tabular difference for 1 sec. of lat. feet | Scale in units of 7th place of logs | Scale expressed as a ratio |
|---|---|---|---|---|---|
| 35° 36' | 28,864,426.27 | 218,405.43 | 101.11183 | -25.6 | 0.9999941 |
| 37 | 28,858,359.56 | 224,472.14 | 101.11167 | -37.8 | 0.9999913 |
| 38 | 28,852,292.86 | 230,538.84 | 101.11167 | -49.7 | 0.9999886 |
| 39 | 28,846,226.16 | 236,605.54 | 101.11167 | -61.2 | 0.9999859 |
| 40 | 28,840,159.46 | 242,672.24 | 101.11183 | -72.3 | 0.9999834 |
| 35° 41 | 28,834,092.75 | 248,738.95 | 101.11183 | -83.1 | 0.9999809 |
| 42 | 28,828,026.04 | 254,805.66 | 101.11183 | -93.5 | 0.9999785 |
| 43 | 28,821,959.33 | 260,872.37 | 101.11183 | -103.5 | 0.9999762 |
| 44 | 28,815,892.62 | 266,939.08 | 101.11200 | -113.2 | 0.9999739 |
| 45 | 28,809,825.90 | 273,005.80 | 101.11200 | -122.5 | 0.9999718 |
| 35° 46' | 28,803,759.18 | 279,072.52 | 101.11200 | -131.5 | 0.9999697 |
| 47 | 28,797,692.46 | 285,139.24 | 101.11217 | -140.1 | 0.9999677 |
| 48 | 28,791,625.73 | 291,205.97 | 101.11233 | -148.3 | 0.9999658 |
| 49 | 28,785,558.99 | 297,272.71 | 101.11250 | -156.2 | 0.9999640 |
| 50 | 28,779,492.24 | 303,339.46 | 101.11250 | -163.7 | 0.9999623 |
| 35° 51' | 28,773,425.49 | 309,406.21 | 101.11250 | -170.8 | 0.9999607 |
| 52 | 28,767,358.74 | 315,472.96 | 101.11283 | -177.6 | 0.9999591 |
| 53 | 28,761,291.97 | 321,539.73 | 101.11283 | -184.0 | 0.9999576 |
| 54 | 28,755,225.20 | 327,606.50 | 101.11317 | -190.1 | 0.9999562 |
| 55 | 28,749,158.41 | 333,673.29 | 101.11317 | -195.8 | 0.9999549 |
| 35° 56' | 28,743,091.62 | 339,740.08 | 101.11333 | -201.1 | 0.9999537 |
| 57 | 28,737,024.82 | 345,806.88 | 101.11350 | -206.0 | 0.9999526 |
| 58 | 28,730,958.01 | 351,873.69 | 101.11383 | -210.6 | 0.9999515 |
| 59 | 28,724,891.18 | 357,940.52 | 101.11383 | -214.8 | 0.9999505 |
| 36° 00' | 28,718,824.35 | 364,007.35 | 101.11417 | -218.7 | 0.9999496 |
| 36° 01' | 28,712,757.50 | 370,074.20 | 101.11433 | -222.2 | 0.9999488 |
| 02 | 28,706,690.64 | 376,141.06 | 101.11450 | -225.3 | 0.9999481 |
| 03 | 28,700,623.77 | 382,207.93 | 101.11483 | -228.1 | 0.9999475 |
| 04 | 28,694,556.88 | 388,274.82 | 101.11500 | -230.5 | 0.9999469 |
| 05 | 28,688,489.98 | 394,341.72 | 101.11517 | -232.5 | 0.9999465 |
| 36° 06' | 28,682,423.07 | 400,408.63 | 101.11550 | -234.1 | 0.9999461 |
| 07 | 28,676,356.14 | 406,475.56 | 101.11567 | -235.4 | 0.9999458 |
| 08 | 28,670,289.20 | 412,542.50 | 101.11600 | -236.3 | 0.9999456 |
| 09 | 28,664,222.24 | 418,609.46 | 101.11633 | -236.9 | 0.9999455 |
| 10 | 28,658,155.26 | 424,676.44 | 101.11667 | -237.1 | 0.9999454 |

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Lambert Projection for Oklahoma (North)

Table I (Cont'd)

| Lat. | R (feet) | y' y value on central meridian feet | Tabular difference for 1 sec. of lat. feet | Scale in units of 7th place of logs | Scale expressed as a ratio |
|---|---|---|---|---|---|
| 36° 11' | 28,652,088.26 | 430,743.44 | 101.11683 | -236.9 | 0.9999455 |
| 12 | 28,646,021.25 | 436,810.45 | 101.11717 | -236.4 | 0.9999456 |
| 13 | 28,639,954.22 | 442,877.48 | 101.11750 | -235.5 | 0.9999458 |
| 14 | 28,633,887.17 | 448,944.53 | 101.11783 | -234.2 | 0.9999461 |
| 15 | 28,627,820.10 | 455,011.60 | 101.11800 | -232.6 | 0.9999464 |
| 36° 16' | 28,621,753.02 | 461,078.68 | 101.11850 | -230.6 | 0.9999469 |
| 17 | 28,615,685.91 | 467,145.79 | 101.11883 | -228.2 | 0.9999475 |
| 18 | 28,609,618.78 | 473,212.92 | 101.11917 | -225.5 | 0.9999481 |
| 19 | 28,603,551.63 | 479,280.07 | 101.11950 | -222.4 | 0.9999488 |
| 20 | 28,597,484.46 | 485,347.24 | 101.12000 | -218.9 | 0.9999496 |
| 36° 21' | 28,591,417.26 | 491,414.44 | 101.12017 | -215.1 | 0.9999505 |
| 22 | 28,585,350.05 | 497,481.65 | 101.12067 | -210.9 | 0.9999514 |
| 23 | 28,579,282.81 | 503,548.89 | 101.12117 | -206.3 | 0.9999525 |
| 24 | 28,573,215.54 | 509,616.16 | 101.12150 | -201.4 | 0.9999536 |
| 25 | 28,567,148.25 | 515,683.45 | 101.12183 | -196.1 | 0.9999548 |
| 36° 26' | 28,561,080.94 | 521,750.76 | 101.12233 | -190.4 | 0.9999562 |
| 27 | 28,555,013.60 | 527,818.10 | 101.12267 | -184.4 | 0.9999576 |
| 28 | 28,548,946.24 | 533,885.46 | 101.12317 | -178.0 | 0.9999590 |
| 29 | 28,542,878.85 | 539,952.85 | 101.12367 | -171.2 | 0.9999606 |
| 30 | 28,536,811.43 | 546,020.27 | 101.12400 | -164.1 | 0.9999622 |
| 36° 31' | 28,530,743.99 | 552,087.71 | 101.12450 | -156.6 | 0.9999639 |
| 32 | 28,524,676.52 | 558,155.18 | 101.12500 | -148.7 | 0.9999658 |
| 33 | 28,518,609.02 | 564,222.68 | 101.12550 | -140.5 | 0.9999677 |
| 34 | 28,512,541.49 | 570,290.21 | 101.12600 | -131.9 | 0.9999696 |
| 35 | 28,506,473.93 | 576,357.77 | 101.12650 | -123.0 | 0.9999717 |
| 36° 36' | 28,500,406.34 | 582,425.36 | 101.12700 | -113.6 | 0.9999738 |
| 37 | 28,494,338.72 | 588,492.98 | 101.12750 | -103.9 | 0.9999761 |
| 38 | 28,488,271.07 | 594,560.63 | 101.12800 | -93.8 | 0.9999784 |
| 39 | 28,482,203.39 | 600,628.31 | 101.12867 | -83.4 | 0.9999808 |
| 40 | 28,476,135.67 | 606.696.03 | 101.12917 | -72.6 | 0.9999833 |
| 36° 41' | 28,470,067.92 | 612,763.78 | 101.12967 | -61.4 | 0.9999859 |
| 42 | 28,464,000.14 | 618,831.56 | 101.13017 | -49.9 | 0.9999885 |
| 43 | 28,457,932.33 | 624,899.37 | 101.13083 | -38.0 | 0.9999913 |
| 44 | 28,451,864.48 | 630,967.22 | 101.13133 | -25.7 | 0.9999941 |
| 45 | 28,445,796.60 | 637,035.10 | 101.13200 | -13.0 | 0.9999970 |

Lambert Projection for Oklahoma (North)

Table I (Cont'd)

| Lat. | R feet | Y' y value on central meridian feet | Tabular difference for 1 sec. of lat. feet | Scale in units of 7th place of logs | Scale expressed as a ratio |
|---|---|---|---|---|---|
| 36° 46' | 28,439,728.68 | 643,103.02 | 101.13250 | 0.0 | 1.0000000 |
| 47 | 28,433.660.73 | 649,170.97 | 101.13317 | +13.4 | 1.0000031 |
| 48 | 28,427,592.74 | 655,238.96 | 101.13383 | +27.2 | 1.0000063 |
| 49 | 28,421,524.71 | 661,306.99 | 101.13433 | +41.3 | 1.0000095 |
| 50 | 28,415,456.65 | 667,375.05 | 101.13500 | +55.8 | 1.0000128 |
| 36° 51' | 28,409,388.55 | 673,443.15 | 101.13567 | +70.7 | 1.0000163 |
| 52 | 28,403,320.41 | 679,511.29 | 101.13633 | +85.9 | 1.0000198 |
| 53 | 28,397,252.23 | 685,579.47 | 101.13700 | +101.5 | 1.0000234 |
| 54 | 28,391,184.01 | 691,647.69 | 101.13750 | +117.5 | 1.0000271 |
| 55 | 28,385,115.76 | 697,715.94 | 101.13833 | +133.8 | 1.0000308 |
| 36° 56' | 28,379,047.46 | 703,784.24 | 101.13900 | +150.5 | 1.0000347 |
| 57 | 28,372,979.12 | 709,852.58 | 101.13967 | +167.6 | 1.0000386 |
| 58 | 28,366,910.74 | 715,920.96 | 101.14033 | +185.1 | 1.0000426 |
| 59 | 28,360,842.32 | 721,989.38 | 101.14117 | +202.9 | 1.0000467 |
| 37° 00' | 28,354,773.85 | 728,057.85 | 101.14167 | +221.1 | 1.0000509 |
| 37° 01' | 28,348,705.35 | 734,126.35 | 101.14250 | +239.7 | 1.0000552 |
| 02 | 28,342.636.80 | 740,194.90 | 101.14333 | +258.6 | 1.0000595 |
| 03 | 28,336,568.20 | 746,263.50 | 101.14400 | +277.9 | 1.0000640 |
| 04 | 28,330,499.56 | 752,332.14 | 101.14467 | +297.6 | 1.0000685 |
| 05 | 28,324,430.88 | 758,400.82 | 101.14550 | +317.6 | 1.0000731 |
| 37° 06' | 28,318,362.15 | 764,469.55 | 101.14633 | +338.0 | 1.0000778 |
| 07 | 28,312,293.37 | 770,538.33 | 101.14700 | +358.8 | 1.0000826 |
| 08 | 28,306,224.55 | 776,607.15 | 101.14783 | +380.0 | 1.0000875 |
| 09 | 28,300,155.68 | 782,676.02 | 101.14867 | +401.5 | 1.0000924 |
| 10 | 28,294,086.76 | 788,744.94 | 101.14933 | +423.4 | 1.0000975 |
| 37° 11' | 28,288,017.80 | 794,813.90 | 101.15033 | +445.7 | 1.0001026 |
| 12 | 28,281,948.78 | 800,882.92 | 101.15100 | +468.3 | 1.0001078 |
| 13 | 28,275,879.72 | 806,951.98 | 101.15183 | +491.3 | 1.0001131 |
| 14 | 28,269,810.61 | 813,021.09 | 101.15283 | +514.7 | 1.0001185 |
| 15 | 28,263,741.44 | 819,090.26 | 101.15350 | +538.4 | 1.0001240 |
| 37° 16' | 28,257,672.23 | 825,159.47 | 101.15433 | +562.5 | 1.0001295 |
| 17 | 28,251,602.97 | 831,228.73 | 101.15533 | +587.0 | 1.0001352 |
| 18 | 28,245.533.65 | 837,298.05 | 101.15617 | +611.9 | 1.0001409 |
| 19 | 28,239,464.28 | 843,367.42 | 101.15700 | +637.1 | 1.0001467 |
| 20 | 28,233,394.86 | 849,436.84 | | +662.7 | 1.0001526 |

# Lambert Projection for Oklahoma (North)

## Table II

1" of Long. = 0".59014707 of θ

| Long. | θ | Long. | θ | Long. | θ |
|---|---|---|---|---|---|
| 94° 10' | +2° 15' 44".0296 | | | | |
| 11 | +2 15 08.6208 | 94° 46' | +1° 54' 29".3120 | 95° 21' | +1° 33' 50".0031 |
| 12 | +2 14 33.2120 | 47 | +1 53 53.9031 | 22 | +1 33 14.5943 |
| 13 | +2 13 57.8032 | 48 | +1 53 18.4943 | 23 | +1 32 39.1854 |
| 14 | +2 13 22.3943 | 49 | +1 52 43.0855 | 24 | +1 32 03.7766 |
| 15 | +2 12 46.9855 | 50 | +1 52 07.6767 | 25 | +1 31 28.3678 |
| 94° 16' | +2 12 11.5767 | 94° 51' | +1 51 32.2678 | 95° 26' | +1 30 52.9590 |
| 17 | +2 11 36.1679 | 52 | +1 50 56.8590 | 27 | +1 30 17.5501 |
| 18 | +2 11 00.7590 | 53 | +1 50 21.4502 | 28 | +1 29 42.1413 |
| 19 | +2 10 25.3502 | 54 | +1 49 46.0414 | 29 | +1 29 06.7325 |
| 20 | +2 09 49.9414 | 55 | +1 49 10.6325 | 30 | +1 28 31.3237 |
| 94° 21' | +2 09 14.5326 | 94° 56' | +1 48 35.2237 | 95° 31' | +1 27 55.9149 |
| 22 | +2 08 39.1237 | 57 | +1 47 59.8149 | 32 | +1 27 20.5060 |
| 23 | +2 08 03.7149 | 58 | +1 47 24.4061 | 33 | +1 26 45.0972 |
| 24 | +2 07 28.3061 | 59 | +1 46 48.9972 | 34 | +1 26 09.6884 |
| 25 | +2 06 52.8973 | 95° 00' | +1 46 13.5884 | 35 | +1 25 34.2796 |
| 94° 26' | +2 06 17.4884 | 95° 01' | +1 45 38.1796 | 95° 36' | +1 24 58.8707 |
| 27 | +2 05 42.0796 | 02 | +1 45 02.7708 | 37 | +1 24 23.4619 |
| 28 | +2 05 06.6708 | 03 | +1 44 27.3619 | 38 | +1 23 48.0531 |
| 29 | +2 04 31.2620 | 04 | +1 43 51.9531 | 39 | +1 23 12.6443 |
| 30 | +2 03 55.8531 | 05 | +1 43 16.5443 | 40 | +1 22 37.2354 |
| 94° 31' | +2 03 20.4443 | 95° 06' | +1 42 41.1355 | 95° 41' | +1 22 01.8266 |
| 32 | +2 02 45.0355 | 07 | +1 42 05.7266 | 42 | +1 21 26.4178 |
| 33 | +2 02 09.6267 | 08 | +1 41 30.3178 | 43 | +1 20 51.0090 |
| 34 | +2 01 34.2178 | 09 | +1 40 54.9090 | 44 | +1 20 15.6001 |
| 35 | +2 00 58.8090 | 10 | +1 40 19.5002 | 45 | +1 19 40.1913 |
| 94° 36' | +2 00 23.4002 | 95° 11' | +1 39 44.0913 | 95° 46' | +1 19 04.7825 |
| 37 | +1 59 47.9914 | 12 | +1 39 08.6825 | 47 | +1 18 29.3737 |
| 38 | +1 59 12.5825 | 13 | +1 38 33.2737 | 48 | +1 17 53.9648 |
| 39 | +1 58 37.1737 | 14 | +1 37 57.8649 | 49 | +1 17 18.5560 |
| 40 | +1 58 01.7649 | 15 | +1 37 22.4560 | 50 | +1 16 43.1472 |
| 94° 41' | +1 57 26.3561 | 95° 16' | +1 36 47.0472 | 95° 51' | +1 16 07.7384 |
| 42 | +1 56 50.9473 | 17 | +1 36 11.6384 | 52 | +1 15 32.3295 |
| 43 | +1 56 15.5384 | 18 | +1 35 36.2296 | 53 | +1 14 56.9207 |
| 44 | +1 55 40.1296 | 19 | +1 35 00.8207 | 54 | +1 14 21.5119 |
| 45 | +1 55 04.7208 | 20 | +1 34 25.4119 | 55 | +1 13 46.1031 |

# Lambert Projection for Oklahoma (North)

## Table II (Cont'd)

1" of Long. = 0".59014707 of θ

| Long. | θ | Long. | θ | Long. | θ |
|---|---|---|---|---|---|
| 95° 56' | +1° 13' 10".6942 | 96° 31' | +0° 52' 31".3854 | 97° 06' | +0° 31' 52".0765 |
| 57 | +1 12 35.2854 | 32 | +0 51 55.9766 | 07 | +0 31 16.6677 |
| 58 | +1 11 59.8766 | 33 | +0 51 20.5677 | 08 | +0 30 41.2589 |
| 59 | +1 11 24.4678 | 34 | +0 50 45.1589 | 09 | +0 30 05.8500 |
| 96° 00' | +1 10 49.0589 | 35 | +0 50 09.7501 | 10 | +0 29 30.4412 |
| 96° 01' | +1 10 13.6501 | 96° 36' | +0 49 34.3413 | 97° 11' | +0 28 55.0324 |
| 02 | +1 09 38.2413 | 37 | +0 48 58.9324 | 12 | +0 28 19.6236 |
| 03 | +1 09 02.8325 | 38 | +0 48 23.5236 | 13 | +0 27 44.2148 |
| 04 | +1 08 27.4236 | 39 | +0 47 48.1148 | 14 | +0 27 08.8059 |
| 05 | +1 07 52.0148 | 40 | +0 47 12.7060 | 15 | +0 26 33.3971 |
| 96° 06' | +1 07 16.6060 | 96° 41' | +0 46 37.2971 | 97° 16' | +0 25 57.9883 |
| 07 | +1 06 41.1972 | 42 | +0 46 01.8883 | 17 | +0 25 22.5795 |
| 08 | +1 06 05.7883 | 43 | +0 45 26.4795 | 18 | +0 24 47.1706 |
| 09 | +1 05 30.3795 | 44 | +0 44 51.0707 | 19 | +0 24 11.7618 |
| 10 | +1 04 54.9707 | 45 | +0 44 15.6618 | 20 | +0 23 36.3530 |
| 96° 11' | +1 04 19.5619 | 96° 46' | +0 43 40.2530 | 97° 21' | +0 23 00.9442 |
| 12 | +1 03 44.1530 | 47 | +0 43 04.8442 | 22 | +0 22 25.5353 |
| 13 | +1 03 08.7442 | 48 | +0 42 29.4354 | 23 | +0 21 50.1265 |
| 14 | +1 02 33.3354 | 49 | +0 41 54.0265 | 24 | +0 21 14.7177 |
| 15 | +1 01 57.9266 | 50 | +0 41 18.6177 | 25 | +0 20 39.3089 |
| 96° 16' | +1 01 22.5177 | 96° 51' | +0 40 43.2089 | 97° 26' | +0 20 03.9000 |
| 17 | +1 00 47.1089 | 52 | +0 40 07.8001 | 27 | +0 19 28.4912 |
| 18 | +1 00 11.7001 | 53 | +0 39 32.3912 | 28 | +0 18 53.0824 |
| 19 | +0 59 36.2913 | 54 | +0 38 56.9824 | 29 | +0 18 17.6736 |
| 20 | +0 59 00.8825 | 55 | +0 38 21.5736 | 30 | +0 17 42.2647 |
| 96° 21' | +0 58 25.4736 | 96° 56' | +0 37 46.1648 | 97° 31' | +0 17 06.8559 |
| 22 | +0 57 50.0648 | 57 | +0 37 10.7559 | 32 | +0 16 31.4471 |
| 23 | +0 57 14.6560 | 58 | +0 36 35.3471 | 33 | +0 15 56.0383 |
| 24 | +0 56 39.2472 | 59 | +0 35 59.9383 | 34 | +0 15 20.6294 |
| 25 | +0 56 03.8383 | 97° 00' | +0 35 24.5295 | 35 | +0 14 45.2206 |
| 96° 26' | +0 55 28.4295 | 97° 01' | +0 34 49.1206 | 97° 36' | +0 14 09.8118 |
| 27 | +0 54 53.0207 | 02 | +0 34 13.7118 | 37 | +0 13 34.4030 |
| 28 | +0 54 17.6119 | 03 | +0 33 38.3030 | 38 | +0 12 58.9941 |
| 29 | +0 53 42.2030 | 04 | +0 33 02.8942 | 39 | +0 12 23.5853 |
| 30 | +0 53 06.7942 | 05 | +0 32 27.4853 | 40 | +0 11 48.1765 |

# Lambert Projection for Oklahoma (North)

## Table II (Cont'd)

1" of Long. = 0".59014707 of θ

| Long. | θ | Long. | θ | Long. | θ |
|---|---|---|---|---|---|
| 97° 41' | +0° 11' 12".7677 | 98° 16' | -0° 09' 26".5412 | 98° 51' | -0° 30' 05".8500 |
| 42 | +0 10 37.3588 | 17 | -0 10 01.9500 | 52 | -0 30 41.2589 |
| 43 | +0 10 01.9500 | 18 | -0 10 37.3588 | 53 | -0 31 16.6677 |
| 44 | +0 09 26.5412 | 19 | -0 11 12.7677 | 54 | -0 31 52.0765 |
| 45 | +0 08 51.1324 | 20 | -0 11 48.1765 | 55 | -0 32 27.4853 |
| 97° 46' | +0 08 15.7235 | 98° 21' | -0 12 23.5853 | 98° 56' | -0 33 02.8942 |
| 47 | +0 07 40.3147 | 22 | -0 12 58.9941 | 57 | -0 33 38.3030 |
| 48 | +0 07 04.9059 | 23 | -0 13 34.4030 | 58 | -0 34 13.7118 |
| 49 | +0 06 29.4971 | 24 | -0 14 09.8118 | 59 | -0 34 49.1206 |
| 50 | +0 05 54.0882 | 25 | -0 14 45.2206 | 99° 00' | -0 35 24.5295 |
| 97° 51' | +0 05 18.6794 | 98° 26' | -0 15 20.6294 | 99° 01' | -0 35 59.9383 |
| 52 | +0 04 43.2706 | 27 | -0 15 56.0383 | 02 | -0 36 35.3471 |
| 53 | +0 04 07.8618 | 28 | -0 16 31.4471 | 03 | -0 37 10.7559 |
| 54 | +0 03 32.4529 | 29 | -0 17 06.8559 | 04 | -0 37 46.1648 |
| 55 | +0 02 57.0441 | 30 | -0 17 42.2647 | 05 | -0 38 21.5736 |
| 97° 56' | +0 02 21.6353 | 98° 31' | -0 18 17.6736 | 99° 06' | -0 38 56.9824 |
| 57 | +0 01 46.2265 | 32 | -0 18 53.0824 | 07 | -0 39 32.3912 |
| 58 | +0 01 10.8176 | 33 | -0 19 28.4912 | 08 | -0 40 07.8001 |
| 59 | +0 00 35.4088 | 34 | -0 20 03.9000 | 09 | -0 40 43.2089 |
| 98° 00' | 0 00 00.0000 | 35 | -0 20 39.3089 | 10 | -0 41 18.6177 |
| 98° 01' | -0 00 35.4088 | 98° 36' | -0 21 14.7177 | 99° 11' | -0 41 54.0265 |
| 02 | -0 01 10.8176 | 37 | -0 21 50.1265 | 12 | -0 42 29.4354 |
| 03 | -0 01 46.2265 | 38 | -0 22 25.5353 | 13 | -0 43 04.8442 |
| 04 | -0 02 21.6353 | 39 | -0 23 00.9442 | 14 | -0 43 40.2530 |
| 05 | -0 02 57.0441 | 40 | -0 23 36.3530 | 15 | -0 44 15.6618 |
| 98° 06' | -0 03 32.4529 | 98° 41' | -0 24 11.7618 | 99° 16' | -0 44 51.0707 |
| 07 | -0 04 07.8618 | 42 | -0 24 47.1706 | 17 | -0 45 26.4795 |
| 08 | -0 04 43.2706 | 43 | -0 25 22.5795 | 18 | -0 46 01.8883 |
| 09 | -0 05 18.6794 | 44 | -0 25 57.9883 | 19 | -0 46 37.2971 |
| 10 | -0 05 54.0882 | 45 | -0 26 33.3971 | 20 | -0 47 12.7060 |
| 98° 11' | -0 06 29.4971 | 98° 46' | -0 27 08.8059 | 99° 21' | -0 47 48.1148 |
| 12 | -0 07 04.9059 | 47 | -0 27 44.2148 | 22 | -0 48 23.5236 |
| 13 | -0 07 40.3147 | 48 | -0 28 19.6236 | 23 | -0 48 58.9324 |
| 14 | -0 08 15.7235 | 49 | -0 28 55.0324 | 24 | -0 49 34.3413 |
| 15 | -0 08 51.1324 | 50 | -0 29 30.4412 | 25 | -0 50 09.7501 |

# Lambert Projection for Oklahoma (North)

## Table II (Cont'd)

1" of Long. = 0".59014707 of θ

| Long. | θ | Long. | θ | Long. | θ |
|---|---|---|---|---|---|
| 99° 26' | -0° 50' 45".1589 | 100° 01' | -1° 11' 24".4678 | 100° 36' | -1° 32' 03".7766 |
| 27 | -0 51 20.5677 | 02 | -1 11 59.8766 | 37 | -1 32 39.1854 |
| 28 | -0 51 55.9766 | 03 | -1 12 35.2854 | 38 | -1 33 14.5943 |
| 29 | -0 52 31.3854 | 04 | -1 13 10.6942 | 39 | -1 33 50.0031 |
| 30 | -0 53 06.7942 | 05 | -1 13 46.1031 | 40 | -1 34 25.4119 |
| 99° 31' | -0 53 42.2030 | 100° 06' | -1 14 21.5119 | 100° 41' | -1 35 00.8207 |
| 32 | -0 54 17.6119 | 07 | -1 14 56.9207 | 42 | -1 35 36.2296 |
| 33 | -0 54 53.0207 | 08 | -1 15 32.3295 | 43 | -1 36 11.6384 |
| 34 | -0 55 28.4295 | 09 | -1 16 07.7384 | 44 | -1 36 47.0472 |
| 35 | -0 56 03.8383 | 10 | -1 16 43.1472 | 45 | -1 37 22.4560 |
| 99° 36' | -0 56 39.2472 | 100° 11' | -1 17 18.5560 | 100° 46' | -1 37 57.8649 |
| 37 | -0 57 14.6560 | 12 | -1 17 53.9648 | 47 | -1 38 33.2737 |
| 38 | -0 57 50.0648 | 13 | -1 18 29.3737 | 48 | -1 39 08.6825 |
| 39 | -0 58 25.4736 | 14 | -1 19 04.7825 | 49 | -1 39 44.0913 |
| 40 | -0 59 00.8825 | 15 | -1 19 40.1913 | 50 | -1 40 19.5002 |
| 99° 41' | -0 59 36.2913 | 100° 16' | -1 20 15.6001 | 100° 51' | -1 40 54.9090 |
| 42 | -1 00 11.7001 | 17 | -1 20 51.0090 | 52 | -1 41 30.3178 |
| 43 | -1 00 47.1089 | 18 | -1 21 26.4178 | 53 | -1 42 05.7266 |
| 44 | -1 01 22.5177 | 19 | -1 22 01.8266 | 54 | -1 42 41.1355 |
| 45 | -1 01 57.9266 | 20 | -1 22 37.2354 | 55 | -1 43 16.5443 |
| 99° 46' | -1 02 33.3354 | 100° 21' | -1 23 12.6443 | 100° 56' | -1 43 51.9531 |
| 47 | -1 03 08.7442 | 22 | -1 23 48.0531 | 57 | -1 44 27.3619 |
| 48 | -1 03 44.1530 | 23 | -1 24 23.4619 | 58 | -1 45 02.7708 |
| 49 | -1 04 19.5619 | 24 | -1 24 58.8707 | 59 | -1 45 38.1796 |
| 50 | -1 04 54.9707 | 25 | -1 25 34.2796 | 101° 00' | -1 46 13.5884 |
| 99° 51' | -1 05 30.3795 | 100° 26' | -1 26 09.6884 | 101° 01' | -1 46 48.9972 |
| 52 | -1 06 05.7883 | 27 | -1 26 45.0972 | 02 | -1 47 24.4061 |
| 53 | -1 06 41.1972 | 28 | -1 27 20.5060 | 03 | -1 47 59.8149 |
| 54 | -1 07 16.6060 | 29 | -1 27 55.9149 | 04 | -1 48 35.2237 |
| 55 | -1 07 52.0148 | 30 | -1 28 31.3237 | 05 | -1 49 10.6325 |
| 99° 56' | -1 08 27.4236 | 100° 31' | -1 29 06.7325 | 101° 06' | -1 49 46.0414 |
| 57 | -1 09 02.8325 | 32 | -1 29 42.1413 | 07 | -1 50 21.4502 |
| 58 | -1 09 38.2413 | 33 | -1 30 17.5501 | 08 | -1 50 56.8590 |
| 59 | -1 10 13.6501 | 34 | -1 30 52.9590 | 09 | -1 51 32.2678 |
| 100° 00' | -1 10 49.0589 | 35 | -1 31 28.3678 | 10 | -1 52 07.6767 |

# Lambert Projection for Oklahoma (North)

## Table II (Cont'd)

1" of Long. = 0".59014707 of θ

| Long. | θ | Long. | θ | Long. | θ |
|---|---|---|---|---|---|
| 101° 11' | -1° 52' 43".0855 | 101° 46' | -2° 13' 22".3943 | 102° 21' | -2° 34' 01".7032 |
| 12 | -1 53 18.4943 | 47 | -2 13 57.8032 | 22 | -2 34 37.1120 |
| 13 | -1 53 53.9031 | 48 | -2 14 33.2120 | 23 | -2 35 12.5208 |
| 14 | -1 54 29.3120 | 49 | -2 15 08.6208 | 24 | -2 35 47.9297 |
| 15 | -1 55 04.7208 | 50 | -2 15 44.0296 | 25 | -2 36 23.3385 |
| 101° 16' | -1 55 40.1296 | 101° 51' | -2 16 19.4385 | 102° 26' | -2 36 58.7473 |
| 17 | -1 56 15.5384 | 52 | -2 16 54.8473 | 27 | -2 37 34.1561 |
| 18 | -1 56 50.9473 | 53 | -2 17 30.2561 | 28 | -2 38 09.5650 |
| 19 | -1 57 26.3561 | 54 | -2 18 05.6649 | 29 | -2 38 44.9738 |
| 20 | -1 58 01.7649 | 55 | -2 18 41.0738 | 30 | -2 39 20.3826 |
| 101° 21' | -1 58 37.1737 | 101° 56' | -2 19 16.4826 | 102° 31' | -2 39 55.7914 |
| 22 | -1 59 12.5825 | 57 | -2 19 51.8914 | 32 | -2 40 31.2003 |
| 23 | -1 59 47.9914 | 58 | -2 20 27.3002 | 33 | -2 41 06.6091 |
| 24 | -2 00 23.4002 | 59 | -2 21 02.7091 | 34 | -2 41 42.0179 |
| 25 | -2 00 58.8090 | 102° 00' | -2 21 38.1179 | 35 | -2 42 17.4267 |
| 101° 26' | -2 01 34.2178 | 102° 01' | -2 22 13.5267 | 102° 36' | -2 42 52.8356 |
| 27 | -2 02 09.6267 | 02 | -2 22 48.9355 | 37 | -2 43 28.2444 |
| 28 | -2 02 45.0355 | 03 | -2 23 24.3444 | 38 | -2 44 03.6532 |
| 29 | -2 03 20.4443 | 04 | -2 23 59.7532 | 39 | -2 44 39.0620 |
| 30 | -2 03 55.8531 | 05 | -2 24 35.1620 | 40 | -2 45 14.4709 |
| 101° 31' | -2 04 31.2620 | 102° 06' | -2 25 10.5708 | 102° 41' | -2 45 49.8797 |
| 32 | -2 05 06.6708 | 07 | -2 25 45.9797 | 42 | -2 46 25.2885 |
| 33 | -2 05 42.0796 | 08 | -2 26 21.3885 | 43 | -2 47 00.6973 |
| 34 | -2 06 17.4884 | 09 | -2 26 56.7973 | 44 | -2 47 36.1062 |
| 35 | -2 06 52.8973 | 10 | -2 27 32.2061 | 45 | -2 48 11.5150 |
| 101° 36' | -2 07 28.3061 | 102° 11' | -2 28 07.6149 | 102° 46' | -2 48 46.9238 |
| 37 | -2 08 03.7149 | 12 | -2 28 43.0238 | 47 | -2 49 22.3326 |
| 38 | -2 08 39.1237 | 13 | -2 29 18.4326 | 48 | -2 49 57.7415 |
| 39 | -2 09 14.5326 | 14 | -2 29 53.8414 | 49 | -2 50 33.1503 |
| 40 | -2 09 49.9414 | 15 | -2 30 29.2502 | 50 | -2 51 08.5591 |
| 101° 41' | -2 10 25.3502 | 102° 16' | -2 31 04.6591 | 102° 51' | -2 51 43.9679 |
| 42 | -2 11 00.7590 | 17 | -2 31 40.0679 | 52 | -2 52 19.3768 |
| 43 | -2 11 36.1679 | 18 | -2 32 15.4767 | 53 | -2 52 54.7856 |
| 44 | -2 12 11.5767 | 19 | -2 32 50.8855 | 54 | -2 53 30.1944 |
| 45 | -2 12 46.9855 | 20 | -2 33 26.2944 | 55 | -2 54 05.6032 |

Lambert Projection for Oklahoma (North)

Table II (Cont'd)

1" of Long. = 0".59014707 of θ

| Long. | | θ | | |
|---|---|---|---|---|
| 102° | 56' | -2° | 54' | 41".0121 |
| | 57 | -2 | 55 | 16.4209 |
| | 58 | -2 | 55 | 51.8297 |
| | 59 | -2 | 56 | 27.2385 |
| 103° | 00' | -2 | 57 | 02.6474 |
| 103° | 01' | -2 | 57 | 38.0562 |
| | 02 | -2 | 58 | 13.4650 |
| | 03 | -2 | 58 | 48.8738 |
| | 04 | -2 | 49 | 24.2826 |
| | 05 | -2 | 59 | 59.6915 |
| 103° | 06' | -3 | 00 | 35.1003 |
| | 07 | -3 | 01 | 10.5091 |
| | 08 | -3 | 01 | 45.9179 |
| | 09 | -3 | 02 | 21.3268 |
| | 10 | -3 | 02 | 56.7356 |
| 103° | 11' | -3 | 03 | 32.1444 |
| | 12 | -3 | 04 | 07.5532 |
| | 13 | -3 | 04 | 42.9621 |
| | 14 | -3 | 05 | 18.3709 |
| | 15 | -3 | 05 | 53.7797 |
| 103° | 16' | -3 | 06 | 29.1885 |
| | 17 | -3 | 07 | 04.5974 |
| | 18 | -3 | 07 | 40.0062 |
| | 19 | -3 | 08 | 15.4150 |
| | 20 | -3 | 08 | 50.8238 |

# Lambert Projection for Oklahoma (South)

## Table I

| Lat. | R feet | Y' y value on central meridian feet | Tabular difference for 1 sec. of lat. feet | Scale in units of 7th place of logs | Scale expressed as a ratio |
|---|---|---|---|---|---|
| 33° 20' | 30,838,032.96 | 0 | 101.09150 | +746.7 | 1.0001719 |
| 21 | 30,831,967.47 | 6,065.49 | 101.09117 | +719.6 | 1.0001657 |
| 22 | 30,825,902.00 | 12,130.96 | 101.09083 | +692.9 | 1.0001595 |
| 23 | 30,819,836.55 | 18,196.41 | 101.09050 | +666.6 | 1.0001535 |
| 24 | 30,813,771.12 | 24,261.84 | 101.09017 | +640.6 | 1.0001475 |
| 25 | 30,807,705.71 | 30,327.25 | 101.08983 | +615.0 | 1.0001416 |
| 33° 26' | 30,801,640.32 | 36,392.64 | 101.08950 | +589.7 | 1.0001358 |
| 27 | 30,795,574.95 | 42,458.01 | 101.08933 | +564.8 | 1.0001301 |
| 28 | 30,789,509.59 | 48,523.37 | 101.08900 | +540.3 | 1.0001244 |
| 29 | 30,783,444.25 | 54,588.71 | 101.08867 | +516.1 | 1.0001188 |
| 30 | 30,777,378.93 | 60,654.03 | 101.08833 | +492.3 | 1.0001134 |
| 33° 31' | 30,771,313.63 | 66,719.33 | 101.08817 | +468.8 | 1.0001080 |
| 32 | 30,765,248.34 | 72,784.62 | 101.08783 | +445.7 | 1.0001026 |
| 33 | 30,759,183.07 | 78,849.89 | 101.08767 | +423.0 | 1.0000974 |
| 34 | 30,753,117.81 | 84,915.15 | 101.08733 | +400.6 | 1.0000922 |
| 35 | 30,747,052.57 | 90,980.39 | 101.08717 | +378.6 | 1.0000872 |
| 33° 36' | 30,740,987.34 | 97,045.62 | 101.08683 | +357.0 | 1.0000822 |
| 37 | 30,734,922.13 | 103,110.83 | 101.08683 | +335.7 | 1.0000773 |
| 38 | 30,728,856.92 | 109,176.04 | 101.08650 | +314.8 | 1.0000725 |
| 39 | 30,722,791.73 | 115,241.23 | 101.08617 | +294.2 | 1.0000677 |
| 40 | 30,716,726.56 | 121,306.40 | 101.08617 | +274.0 | 1.0000631 |
| 33° 41' | 30,710,661.39 | 127,371.57 | 101.08600 | +254.2 | 1.0000585 |
| 42 | 30,704,596.23 | 133,436.73 | 101.08567 | +234.7 | 1.0000540 |
| 43 | 30,698,531.09 | 139,501.87 | 101.08567 | +215.6 | 1.0000496 |
| 44 | 30,692,465.95 | 145,567.01 | 101.08533 | +196.8 | 1.0000453 |
| 45 | 30,686,400.83 | 151,632.13 | 101.08533 | +178.4 | 1.0000411 |
| 33° 46' | 30,680,335.71 | 157,697.25 | 101.08517 | +160.4 | 1.0000369 |
| 47 | 30,674,270.60 | 163,762.36 | 101.08500 | +142.7 | 1.0000329 |
| 48 | 30,668,205.50 | 169,827.46 | 101.08500 | +125.4 | 1.0000289 |
| 49 | 30,662,140.40 | 175,892.56 | 101.08467 | +108.5 | 1.0000250 |
| 50 | 30,656,075.32 | 181,957.64 | 101.08467 | + 91.9 | 1.0000212 |
| 33° 51' | 30,650,010.24 | 188,022.72 | 101.08467 | + 75.7 | 1.0000174 |
| 52 | 30,643,945.16 | 194,087.80 | 101.08450 | + 59.8 | 1.0000138 |
| 53 | 30,637,880.09 | 200,152.87 | 101.08433 | + 44.3 | 1.0000102 |
| 54 | 30,631,815.03 | 206,217.93 | 101.08433 | + 29.2 | 1.0000067 |
| 55 | 30,625,749.97 | 212,282.99 | 101.08433 | + 14.4 | 1.0000033 |

Lambert Projection for Oklahoma (South)

Table I (Cont'd)

| Lat. | R feet | Y' y value on central meridian feet | Tabular difference for 1 sec. of lat. feet | Scale in units of 7th place of logs | Scale expressed as a ratio |
|---|---|---|---|---|---|
| 33° 56' | 30,619,684.91 | 218,348.05 | 101.08433 | 0.0 | 1.0000000 |
| 57 | 30,613,619.85 | 224,413.11 | 101.08417 | -14.0 | 0.9999968 |
| 58 | 30,607,554.80 | 230,478.16 | 101.08417 | -27.7 | 0.9999936 |
| 59 | 30,601,489.75 | 236,543.21 | 101.08400 | -41.0 | 0.9999906 |
| 34° 00' | 30,595,424.71 | 242,608.25 | 101.08417 | -54.0 | 0.9999876 |
| 34° 01' | 30,589,359.66 | 248,673.30 | 101.08400 | -66.6 | 0.9999847 |
| 02 | 30,583,294.62 | 254,738.34 | 101.08417 | -78.8 | 0.9999819 |
| 03 | 30,577,229.57 | 260,803.39 | 101.08400 | -90.7 | 0.9999791 |
| 04 | 30,571,164.53 | 266,868.43 | 101.08417 | -102.2 | 0.9999765 |
| 05 | 30,565,099.48 | 272,933.48 | 101.08417 | -113.3 | 0.9999739 |
| 34° 06' | 30,559,034.43 | 278,998.53 | 101.08417 | -124.1 | 0.9999714 |
| 07 | 30,552,969.38 | 285,063.58 | 101.08417 | -134.5 | 0.9999690 |
| 08 | 30,546,904.33 | 291,128.63 | 101.08417 | -144.6 | 0.9999667 |
| 09 | 30,540,839.28 | 297,193.68 | 101.08433 | -154.3 | 0.9999645 |
| 10 | 30,534,774.22 | 303,258.74 | 101.08433 | -163.6 | 0.9999623 |
| 34° 11' | 30,528,709.16 | 309,323.80 | 101.08450 | -172.6 | 0.9999603 |
| 12 | 30,522,644.09 | 315,388.87 | 101.08450 | -181.2 | 0.9999583 |
| 13 | 30,516,579.02 | 321,453.94 | 101.08467 | -189.4 | 0.9999564 |
| 14 | 30,510,513.94 | 327,519.02 | 101.08467 | -197.3 | 0.9999546 |
| 15 | 30,504,448.86 | 333,584.10 | 101.08483 | -204.8 | 0.9999528 |
| 34° 16 | 30,498,383.77 | 339,649.19 | 101.08500 | -211.9 | 0.9999512 |
| 17 | 30,492,318.67 | 345,714.29 | 101.08500 | -218.7 | 0.9999496 |
| 18 | 30,486,253.57 | 351,779.39 | 101.08517 | -225.1 | 0.9999482 |
| 19 | 30,480,188.46 | 357,844.50 | 101.08533 | -231.1 | 0.9999468 |
| 20 | 30,474,123.34 | 363,909.62 | 101.08550 | -236.8 | 0.9999455 |
| 34° 21' | 30,468,058.21 | 369,974.75 | 101.08567 | -242.1 | 0.9999443 |
| 22 | 30,461,993.07 | 376,039.89 | 101.08583 | -247.0 | 0.9999431 |
| 23 | 30,455,927.92 | 382,105.04 | 101.08600 | -251.6 | 0.9999421 |
| 24 | 30,449,862.76 | 388,170.20 | 101.08617 | -255.9 | 0.9999411 |
| 25 | 30,443.797.59 | 394,235.37 | 101.08633 | -259.7 | 0.9999402 |
| 34° 26' | 30,437.732.41 | 400,300.55 | 101.08667 | -263.2 | 0.9999394 |
| 27 | 30,431,667.21 | 406.365.75 | 101.08683 | -266.3 | 0.9999387 |
| 28 | 30,425,602.00 | 412,430.96 | 101.08700 | -269.1 | 0.9999380 |
| 29 | 30,419,536.78 | 418,496.18 | 101.08717 | -271.5 | 0.9999375 |
| 30 | 30,413,471.55 | 424,561.41 | 101.08750 | -273.5 | 0.9999370 |

Lambert Projection for Oklahoma (South)

Table I (Cont'd)

| Lat. | R feet | Y' y value on central meridian feet | Tabular difference for 1 sec. of lat. feet | Scale in units of 7th place of logs | Scale expressed as a ratio |
|---|---|---|---|---|---|
| 34° 31' | 30,407,406.30 | 430,626.66 | 101.08767 | -275.2 | 0.9999366 |
| 32 | 30,401,341.04 | 436,691.92 | 101.08800 | -276.5 | 0.9999363 |
| 33 | 30,395,275.76 | 442,757.20 | 101.08817 | -277.4 | 0.9999361 |
| 34 | 30,389,210.47 | 448,822.49 | 101.08850 | -278.0 | 0.9999360 |
| 35 | 30,383,145.16 | 454,887.80 | 101.08883 | -278.2 | 0.9999359 |
| 34° 36' | 30,377,079.83 | 460,953.13 | 101.08900 | -278.0 | 0.9999360 |
| 37 | 30,371,014.49 | 467,018.47 | 101.08933 | -277.5 | 0.9999361 |
| 38 | 30,364,949.13 | 473,083.83 | 101.08967 | -276.6 | 0.9999363 |
| 39 | 30,358,883.75 | 479,149.21 | 101.09000 | -275.3 | 0.9999366 |
| 40 | 30,352,818.35 | 485,214.61 | 101.09033 | -273.7 | 0.9999370 |
| 34° 41' | 30,346,752.93 | 491,280.03 | 101.09067 | -271.7 | 0.9999374 |
| 42 | 30,340,687.49 | 497,345.47 | 101.09100 | -269.3 | 0.9999380 |
| 43 | 30,334,622.03 | 503,410.93 | 101.09133 | -266.6 | 0.9999386 |
| 44 | 30,328,556.55 | 509,476.41 | 101.09167 | -263.5 | 0.9999393 |
| 45 | 30,322,491.05 | 515,541.91 | 101.09200 | -260.1 | 0.9999401 |
| 34° 46' | 30,316,425.53 | 521,607.43 | 101.09250 | -256.3 | 0.9999410 |
| 47 | 30,310,359.98 | 527,672.98 | 101.09267 | -252.1 | 0.9999420 |
| 48 | 30,304,294.42 | 533,738.54 | 101.09317 | -247.5 | 0.9999430 |
| 49 | 30,298,228.83 | 539,804.13 | 101.09367 | -242.6 | 0.9999441 |
| 50 | 30,292,163.21 | 545,869.75 | 101.09400 | -237.3 | 0.9999454 |
| 34° 51' | 30,286,097.57 | 551,935.39 | 101.09450 | -231.6 | 0.9999467 |
| 52 | 30,280,031.90 | 558,001.06 | 101.09483 | -225.6 | 0.9999481 |
| 53 | 30,273,966.21 | 564,066.75 | 101.09517 | -219.2 | 0.9999495 |
| 54 | 30,267,900.50 | 570,132.46 | 101.09567 | -212.5 | 0.9999511 |
| 55 | 30,261,834.76 | 576,198.20 | 101.09617 | -205.4 | 0.9999527 |
| 34° 56' | 30,255,768.99 | 582,263.97 | 101.09667 | -197.9 | 0.9999544 |
| 57 | 30,249,703.19 | 588,329.77 | 101.09717 | -190.0 | 0.9999562 |
| 58 | 30,243,637.36 | 594,395.60 | 101.09750 | -181.8 | 0.9999581 |
| 59 | 30,237,571.51 | 600,461.45 | 101.09817 | -173.2 | 0.9999601 |
| 35° 00' | 30,231,505.62 | 606,527.34 | 101.09850 | -164.2 | 0.9999622 |
| 35° 01' | 30,225,439.71 | 612,593.25 | 101.09900 | -154.9 | 0.9999643 |
| 02 | 30,219,373.77 | 618,659.19 | 101.09950 | -145.2 | 0.9999666 |
| 03 | 30,213,307.80 | 624,725.16 | 101.10017 | -135.1 | 0.9999689 |
| 04 | 30,207,241.79 | 630,791.17 | 101.10067 | -124.7 | 0.9999713 |
| 05 | 30,201,175.75 | 636,857.21 | 101.10117 | -113.9 | 0.9999738 |

Lambert Projection for Oklahoma (South)

Table I (Cont'd)

| Lat. | R feet | Y' y value on central meridian feet | Tabular difference for 1 sec. of lat. feet | Scale in units of 7th place of logs | Scale expressed as a ratio |
|---|---|---|---|---|---|
| 35° 06' | 30,195,109.68 | 642,923.28 | 101.10167 | -102.7 | 0.9999764 |
| 07 | 30,189,043.58 | 648,989.38 | 101.10217 | -91.1 | 0.9999790 |
| 08 | 30,182,977.45 | 655,055.51 | 101.10283 | -79.2 | 0.9999818 |
| 09 | 30,176,911.28 | 661,121.68 | 101.10333 | -66.9 | 0.9999846 |
| 10 | 30,170,845.08 | 667,187.88 | 101.10400 | -54.3 | 0.9999875 |
| 35° 11' | 30,164,778.84 | 673,254.12 | 101.10467 | -41.3 | 0.9999905 |
| 12 | 30,158,712.56 | 679,320.40 | 101.10517 | -27.9 | 0.9999936 |
| 13 | 30,152,646.25 | 685,386.71 | 101.10567 | -14.1 | 0.9999968 |
| 14 | 30,146,579.91 | 691,453.05 | 101.10633 | 0.0 | 1.0000000 |
| 15 | 30,140,513.53 | 697,519.43 | 101.10700 | +14.5 | 1.0000033 |
| 35° 16' | 30,134,447.11 | 703,585.85 | 101.10767 | +29.4 | 1.0000068 |
| 17 | 30,128,380.65 | 709,652.31 | 101.10833 | +44.6 | 1.0000103 |
| 18 | 30,122,314.15 | 715,718.81 | 101.10900 | +60.2 | 1.0000139 |
| 19 | 30,116,247.61 | 721,785.35 | 101.10950 | +76.2 | 1.0000175 |
| 20 | 30,110,181.04 | 727,851.92 | 101.11017 | +92.5 | 1.0000213 |
| 35° 21' | 30,104,114.43 | 733,918.53 | 101.11100 | +109.2 | 1.0000251 |
| 22 | 30,098,047.77 | 739,985.19 | 101.11150 | +126.3 | 1.0000291 |
| 23 | 30,091,981.08 | 746,051.88 | 101.11233 | +143.7 | 1.0000331 |
| 24 | 30,085,914.34 | 752,118.62 | 101.11300 | +161.5 | 1.0000372 |
| 25 | 30,079,847.56 | 758,185.40 | 101.11383 | +179.7 | 1.0000414 |
| 35° 26' | 30,073,780.73 | 764,252.23 | 101.11433 | +198.3 | 1.0000457 |
| 27 | 30,067,713.87 | 770,319.09 | 101.11517 | +217.2 | 1.0000500 |
| 28 | 30,061,646.96 | 776,386.00 | 101.11583 | +236.5 | 1.0000545 |
| 29 | 30,055,580.01 | 782,452.95 | 101.11667 | +256.2 | 1.0000590 |
| 30 | 30,049,513.01 | 788,519.95 | 101.11750 | +276.2 | 1.0000636 |
| 35° 31' | 30,043,445.96 | 794,587.00 | 101.11817 | +296.6 | 1.0000683 |
| 32 | 30,037,378.87 | 800,654.09 | 101.11883 | +317.4 | 1.0000731 |
| 33 | 30,031,311.74 | 806,721.22 | 101.11967 | +338.5 | 1.0000779 |
| 34 | 30,025,244.56 | 812,788.40 | 101.12050 | +360.0 | 1.0000829 |
| 35 | 30,019,177.33 | 818,855.63 | 101.12133 | +381.9 | 1.0000879 |
| 35° 36' | 30,013,110.05 | 824,922.91 | 101.12217 | +404.1 | 1.0000930 |
| 37 | 30,007,042.72 | 830,990.24 | 101.12283 | +426.7 | 1.0000982 |
| 38 | 30,000,975.35 | 837,057.61 | 101.12383 | +449.7 | 1.0001035 |
| 39 | 29,994,907.92 | 843,125.04 | 101.12450 | +473.1 | 1.0001089 |
| 40 | 29,988,840.45 | 849,192.51 | | +496.8 | 1.0001144 |

# Lambert Projection for Oklahoma (South)

## Table II

1" of Long. = 0".56761668 of θ

| Long. | θ | Long. | θ | Long. | θ |
|---|---|---|---|---|---|
| 94° 10' | +2° 10' 33".1102 | | | | |
| 11 | +2 09 59.0532 | 94° 46' | +1° 50' 07".0582 | 95° 21' | +1° 30' 15".0631 |
| 12 | +2 09 24.9962 | 47 | +1 49 33.0012 | 22 | +1 29 41.0061 |
| 13 | +2 08 50.9392 | 48 | +1 48 58.9442 | 23 | +1 29 06.9491 |
| 14 | +2 08 16.8822 | 49 | +1 48 24.8872 | 24 | +1 28 32.8921 |
| 15 | +2 07 42.8252 | 50 | +1 47 50.8302 | 25 | +1 27 58.8351 |
| 94° 16' | +2 07 08.7682 | 94° 51' | +1 47 16.7732 | 95° 26' | +1 27 24.7781 |
| 17 | +2 06 34.7112 | 52 | +1 46 42.7162 | 27 | +1 26 50.7211 |
| 18 | +2 06 00.6542 | 53 | +1 46 08.6592 | 28 | +1 26 16.6641 |
| 19 | +2 05 26.5972 | 54 | +1 45 34.6022 | 29 | +1 25 42.6071 |
| 20 | +2 04 52.5402 | 55 | +1 45 00.5452 | 30 | +1 25 08.5501 |
| 94° 21' | +2 04 18.4832 | 94° 56' | +1 44 26.4882 | 95° 31' | +1 24 34.4931 |
| 22 | +2 03 44.4262 | 57 | +1 43 52.4312 | 32 | +1 24 00.4361 |
| 23 | +2 03 10.3692 | 58 | +1 43 18.3742 | 33 | +1 23 26.3791 |
| 24 | +2 02 36.3122 | 59 | +1 42 44.3172 | 34 | +1 22 52.3221 |
| 25 | +2 02 02.2552 | 95° 00' | +1 42 10.2602 | 35 | +1 22 18.2651 |
| 94° 26' | +2 01 28.1982 | 95° 01' | +1 41 36.2032 | 95° 36' | +1 21 44.2081 |
| 27 | +2 00 54.1412 | 02 | +1 41 02.1462 | 37 | +1 21 10.1511 |
| 28 | +2 00 20.0842 | 03 | +1 40 28.0892 | 38 | +1 20 36.0941 |
| 29 | +1 59 46.0272 | 04 | +1 39 54.0322 | 39 | +1 20 02.0371 |
| 30 | +1 59 11.9702 | 05 | +1 39 19.9752 | 40 | +1 19 27.9801 |
| 94° 31' | +1 58 37.9132 | 95° 06' | +1 38 45.9182 | 95° 41' | +1 18 53.9231 |
| 32 | +1 58 03.8562 | 07 | +1 38 11.8612 | 42 | +1 18 19.8661 |
| 33 | +1 57 29.7992 | 08 | +1 37 37.8042 | 43 | +1 17 45.8091 |
| 34 | +1 56 55.7422 | 09 | +1 37 03.7472 | 44 | +1 17 11.7521 |
| 35 | +1 56 21.6852 | 10 | +1 36 29.6902 | 45 | +1 16 37.6951 |
| 94° 36' | +1 55 47.6282 | 95° 11' | +1 35 55.6332 | 95° 46' | +1 16 03.6381 |
| 37 | +1 55 13.5712 | 12 | +1 35 21.5762 | 47 | +1 15 29.5811 |
| 38 | +1 54 39.5142 | 13 | +1 34 47.5192 | 48 | +1 14 55.5241 |
| 39 | +1 54 05.4572 | 14 | +1 34 13.4621 | 49 | +1 14 21.4671 |
| 40 | +1 53 31.4002 | 15 | +1 33 39.4051 | 50 | +1 13 47.4101 |
| 94° 41' | +1 52 57.3432 | 95° 16' | +1 33 05.3481 | 95° 51' | +1 13 13.3531 |
| 42 | +1 52 23.2862 | 17 | +1 32 31.2911 | 52 | +1 12 39.2961 |
| 43 | +1 51 49.2292 | 18 | +1 31 57.2341 | 53 | +1 12 05.2391 |
| 44 | +1 51 15.1722 | 19 | +1 31 23.1771 | 54 | +1 11 31.1821 |
| 45 | +1 50 41.1152 | 20 | +1 30 49.1201 | 55 | +1 10 57.1251 |

# Lambert Projection for Oklahoma (South)

## Table II (Cont'd)

1" of Long. = 0".56761668 or $\theta$ ..

| Long. | $\theta$ | Long. | $\theta$ | Long. | $\theta$ |
|---|---|---|---|---|---|
| 95° 56' | +1° 10' 23".0681 | 96° 31' | +0° 50' 31".0731 | 97° 06' | +0° 30' 39".0780 |
| 57 | +1 09 49.0111 | 32 | +0 49 57.0161 | 07 | +0 30 05.0210 |
| 58 | +1 09 14.9541 | 33 | +0 49 22.9591 | 08 | +0 29 30.9640 |
| 59 | +1 08 40.8971 | 34 | +0 48 48.9021 | 09 | +0 28 56.9070 |
| 96° 00' | +1 08 06.8401 | 35 | +0 48 14.8451 | 10 | +0 28 22.8500 |
| 96° 01' | +1 07 32.7831 | 96° 36' | +0 47 40.7881 | 97° 11' | +0 27 48.7930 |
| 02 | +1 06 58.7261 | 37 | +0 47 06.7311 | 12 | +0 27 14.7360 |
| 03 | +1 06 24.6691 | 38 | +0 46 32.6741 | 13 | +0 26 40.6790 |
| 04 | +1 05 50.6121 | 39 | +0 45 58.6171 | 14 | +0 26 06.6220 |
| 05 | +1 05 16.5551 | 40 | +0 45 24.5601 | 15 | +0 25 32.5650 |
| 96° 06' | +1 04 42.4981 | 96° 41' | +0 44 50.5031 | 97° 16' | +0 24 58.5080 |
| 07 | +1 04 08.4411 | 42 | +0 44 16.4461 | 17 | +0 24 24.4510 |
| 08 | +1 03 34.3841 | 43 | +0 43 42.3891 | 18 | +0 23 50.3940 |
| 09 | +1 03 00.3271 | 44 | +0 43 08.3321 | 19 | +0 23 16.3370 |
| 10 | +1 02 26.2701 | 45 | +0 42 34.2751 | 20 | +0 22 42.2800 |
| 96° 11' | +1 01 52.2131 | 96° 46' | +0 42 00.2181 | 97° 21' | +0 22 08.2230 |
| 12 | +1 01 18.1561 | 47 | +0 41 26.1611 | 22 | +0 21 34.1660 |
| 13 | +1 00 44.0991 | 48 | +0 40 52.1041 | 23 | +0 21 00.1090 |
| 14 | +1 00 10.0421 | 49 | +0 40 18.0471 | 24 | +0 20 26.0520 |
| 15 | +0 59 35.9851 | 50 | +0 39 43.9901 | 25 | +0 19 51.9950 |
| 96° 16' | +0 59 01.9281 | 96° 51' | +0 39 09.9331 | 97° 26' | +0 19 17.9380 |
| 17 | +0 58 27.8711 | 52 | +0 38 35.8761 | 27 | +0 18 43.8810 |
| 18 | +0 57 53.8141 | 53 | +0 38 01.8191 | 28 | +0 18 09.8240 |
| 19 | +0 57 19.7571 | 54 | +0 37 27.7621 | 29 | +0 17 35.7670 |
| 20 | +0 56 45.7001 | 55 | +0 36 53.7051 | 30 | +0 17 01.7100 |
| 96° 21' | +0 56 11.6431 | 96° 56' | +0 36 19.6481 | 97° 31' | +0 16 27.6530 |
| 22 | +0 55 37.5861 | 57 | +0 35 45.5911 | 32 | +0 15 53.5960 |
| 23 | +0 55 03.5291 | 58 | +0 35 11.5341 | 33 | +0 15 19.5390 |
| 24 | +0 54 29.4721 | 59 | +0 34 37.4771 | 34 | +0 14 45.4820 |
| 25 | +0 53 55.4151 | 97° 00' | +0 34 03.4201 | 35 | +0 14 11.4250 |
| 96° 26' | +0 53 21.3581 | 97° 01' | +0 33 29.3631 | 97° 36' | +0 13 37.3680 |
| 27 | +0 52 47.3011 | 02 | +0 32 55.3061 | 37 | +0 13 03.3110 |
| 28 | +0 52 13.2441 | 03 | +0 32 21.2491 | 38 | +0 12 29.2540 |
| 29 | +0 51 39.1871 | 04 | +0 31 47.1921 | 39 | +0 11 55.1970 |
| 30 | +0 51 05.1301 | 05 | +0 31 13.1350 | 40 | +0 11 21.1400 |

# Lambert Projection for Oklahoma (South)

## Table II (Cont'd)

1" of Long. = 0".56761668 of θ

| Long. | θ | Long. | θ | Long. | θ |
|---|---|---|---|---|---|
| 97° 41' | +0° 10' 47".0830 | 98° 16' | -0° 09' 04".9120 | 98° 51' | -0° 28' 56".9070 |
| 42 | +0 10 13.0260 | 17 | -0 09 38.9690 | 52 | -0 29 30.9640 |
| 43 | +0 09 38.9690 | 18 | -0 10 13.0260 | 53 | -0 30 05.0210 |
| 44 | +0 09 04.9120 | 19 | -0 10 47.0830 | 54 | -0 30 39.0780 |
| 45 | +0 08 30.8550 | 20 | -0 11 21.1400 | 55 | -0 31 13.1350 |
| 97° 46' | +0 07 56.7980 | 98° 21' | -0 11 55.1970 | 98° 56' | -0 31 47.1921 |
| 47 | +0 07 22.7410 | 22 | -0 12 29.2540 | 57 | -0 32 21.2491 |
| 48 | +0 06 48.6840 | 23 | -0 13 03.3110 | 58 | -0 32 55.3061 |
| 49 | +0 06 14.6270 | 24 | -0 13 37.3680 | 59 | -0 33 29.3631 |
| 50 | +0 05 40.5700 | 25 | -0 14 11.4250 | 99° 00' | -0 34 03.4201 |
| 97° 51' | +0 05 06.5130 | 98° 26' | -0 14 45.4820 | 99° 01' | -0 34 37.4771 |
| 52 | +0 04 32.4560 | 27 | -0 15 19.5390 | 02 | -0 35 11.5341 |
| 53 | +0 03 58.3990 | 28 | -0 15 53.5960 | 03 | -0 35 45.5911 |
| 54 | +0 03 24.3420 | 29 | -0 16 27.6530 | 04 | -0 36 19.6481 |
| 55 | +0 02 50.2850 | 30 | -0 17 01.7100 | 05 | -0 36 53.7051 |
| 97° 56' | +0 02 16.2280 | 98° 31' | -0 17 35.7670 | 99° 06' | -0 37 27.7621 |
| 57 | +0 01 42.1710 | 32 | -0 18 09.8240 | 07 | -0 38 01.8191 |
| 58 | +0 01 08.1140 | 33 | -0 18 43.8810 | 08 | -0 38 35.8761 |
| 59 | +0 00 34.0570 | 34 | -0 19 17.9380 | 09 | -0 39 09.9331 |
| 98° 00' | 0 00 00.0000 | 35 | -0 19 51.9950 | 10 | -0 39 43.9901 |
| 98° 01' | -0 00 34.0570 | 98° 36' | -0 20 26.0520 | 99° 11' | -0 40 18.0471 |
| 02 | -0 01 08.1140 | 37 | -0 21 00.1090 | 12 | -0 40 52.1041 |
| 03 | -0 01 42.1710 | 38 | -0 21 34.1660 | 13 | -0 41 26.1611 |
| 04 | -0 02 16.2280 | 39 | -0 22 08.2230 | 14 | -0 42 00.2181 |
| 05 | -0 02 50.2850 | 40 | -0 22 42.2800 | 15 | -0 42 34.2751 |
| 98° 06' | -0 03 24.3420 | 98° 41' | -0 23 16.3370 | 99° 16' | -0 43 08.3321 |
| 07 | -0 03 58.3990 | 42 | -0 23 50.3940 | 17 | -0 43 42.3891 |
| 08 | -0 04 32.4560 | 43 | -0 24 24.4510 | 18 | -0 44 16.4461 |
| 09 | -0 05 06.5130 | 44 | -0 24 58.5080 | 19 | -0 44 50.5031 |
| 10 | -0 05 40.5700 | 45 | -0 25 32.5650 | 20 | -0 45 24.5601 |
| 98° 11' | -0 06 14.6270 | 98° 46' | -0 26 06.6220 | 99° 21' | -0 45 58.6171 |
| 12 | -0 06 48.6840 | 47 | -0 26 40.6790 | 22 | -0 46 32.6741 |
| 13 | -0 07 22.7410 | 48 | -0 27 14.7360 | 23 | -0 47 06.7311 |
| 14 | -0 07 56.7980 | 49 | -0 27 48.7930 | 24 | -0 47 40.7881 |
| 15 | -0 08 30.8550 | 50 | -0 28 22.8500 | 25 | -0 48 14.8451 |

Lambert Projection for Oklahoma (South)

Table II (Cont'd)

1" of Long. = 0".56761668 of θ

| Long. | θ | Long. | θ |
|---|---|---|---|
| 99° 26' | -0° 48' 48".9021 | 100° 01' | -1° 08' 40".8971 |
| 27 | -0 49 22.9591 | 02 | -1 09 14.9541 |
| 28 | -0 49 57.0161 | 03 | -1 09 49.0111 |
| 29 | -0 50 31.0731 | 04 | -1 10 23.0681 |
| 30 | -0 51 05.1301 | 05 | -1 10 57.1251 |
| 99° 31' | -0 51 39.1871 | 100° 06' | -1 11 31.1821 |
| 32 | -0 52 13.2441 | 07 | -1 12 05.2391 |
| 33 | -0 52 47.3011 | 08 | -1 12 39.2961 |
| 34 | -0 53 21.3581 | 09 | -1 13 13.3531 |
| 35 | -0 53 55.4151 | 10 | -1 13 47.4101 |
| 99° 36' | -0 54 29.4721 | 100° 11' | -1 14 21.4671 |
| 37 | -0 55 03.5291 | 12 | -1 14 55.5241 |
| 38 | -0 55 37.5861 | 13 | -1 15 29.5811 |
| 39 | -0 56 11.6431 | 14 | -1 16 03.6381 |
| 40 | -0 56 45.7001 | 15 | -1 16 37.6951 |
| 99° 41' | -0 57 19.7571 | 100° 16' | -1 17 11.7521 |
| 42 | -0 57 53.8141 | 17 | -1 17 45.8091 |
| 43 | -0 58 27.8711 | 18 | -1 18 19.8661 |
| 44 | -0 59 01.9281 | 19 | -1 18 53.9231 |
| 45 | -0 59 35.9851 | 20 | -1 19 27.9801 |
| 99° 46' | -1 00 10.0421 | 100° 21' | -1 20 02.0371 |
| 47 | -1 00 44.0991 | 22 | -1 20 36.0941 |
| 48 | -1 01 18.1561 | 23 | -1 21 10.1511 |
| 49 | -1 01 52.2131 | 24 | -1 21 44.2081 |
| 50 | -1 02 26.2701 | 25 | -1 22 18.2651 |
| 99° 51' | -1 03 00.3271 | 100° 26' | -1 22 52.3221 |
| 52 | -1 03 34.3841 | 27 | -1 23 26.3791 |
| 53 | -1 04 08.4411 | 28 | -1 24 00.4361 |
| 54 | -1 04 42.4981 | 29 | -1 24 34.4931 |
| 55 | -1 05 16.5551 | 30 | -1 25 08.5501 |
| 99° 56' | -1 05 50.6121 | | |
| 57 | -1 06 24.6691 | | |
| 58 | -1 06 58.7261 | | |
| 59 | -1 07 32.7831 | | |
| 100° 00' | -1 08 06.8401 | | |

# CORRECTIONS TO NATURAL SCALE RATIOS*
(in units of the 7th decimal place)

For Lambert Projection

Δø' as argument

| Δø' | Corr'n (Plus) | Δø' | Corr'n (Plus) |
|---|---|---|---|
| 1 | 0 | 31 | 34 |
| 2 | 0 | 32 | 36 |
| 3 | 0 | 33 | 38 |
| 4 | 1 | 34 | 40 |
| 5 | 1 | 35 | 43 |
| 6 | 1 | 36 | 45 |
| 7 | 2 | 37 | 48 |
| 8 | 2 | 38 | 51 |
| 9 | 3 | 39 | 53 |
| 10 | 4 | 40 | 56 |
| 11 | 4 | 41 | 59 |
| 12 | 5 | 42 | 62 |
| 13 | 6 | 43 | 65 |
| 14 | 7 | 44 | 68 |
| 15 | 8 | 45 | 71 |
| 16 | 9 | 46 | 74 |
| 17 | 10 | 47 | 77 |
| 18 | 11 | 48 | 81 |
| 19 | 13 | 49 | 84 |
| 20 | 14 | 50 | 88 |
| 21 | 15 | 51 | 91 |
| 22 | 17 | 52 | 95 |
| 23 | 19 | 53 | 98 |
| 24 | 20 | 54 | 102 |
| 25 | 22 | 55 | 106 |
| 26 | 24 | 56 | 110 |
| 27 | 26 | 57 | 114 |
| 28 | 27 | 58 | 118 |
| 29 | 29 | 59 | 122 |
| 30 | 32 | 60 | 126 |

Δø' is the difference in latitude in minutes of the ends of the line.

For Lambert or transverse Mercator Projection

| Δy or Δx | Corr'n (Plus) |
|---|---|
| 10,000 | 0 |
| 20,000 | 0 |
| 30,000 | 1 |
| 40,000 | 2 |
| 50,000 | 2 |
| 60,000 | 3 |
| 70,000 | 5 |
| 80,000 | 6 |
| 90,000 | 8 |
| 100,000 | 10 |
| 110,000 | 11 |
| 120,000 | 14 |
| 130,000 | 16 |
| 140,000 | 19 |
| 150,000 | 21 |
| 160,000 | 24 |
| 170,000 | 27 |
| 180,000 | 31 |
| 190,000 | 34 |
| 200,000 | 38 |
| 210,000 | 42 |
| 220,000 | 46 |
| 230,000 | 50 |
| 240,000 | 55 |
| 250,000 | 59 |
| 260,000 | 64 |
| 270,000 | 69 |
| 280,000 | 74 |
| 290,000 | 80 |
| 300,000 | 86 |
| 310,000 | 91 |
| 320,000 | 97 |
| 330,000 | 103 |
| 340,000 | 110 |
| 350,000 | 116 |

*Scale ratio interpolated for mean latitude or mean x' of the ends of a line and corrected by the above table is a true mean value accurate to within one in the seventh decimal place.

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