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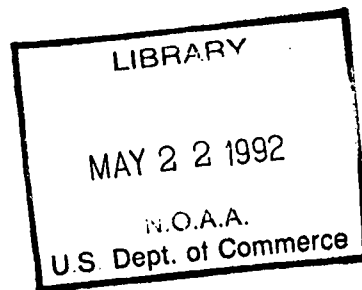
Charles Sawyer, *Secretary*

Coast and Geodetic Survey

Robert F. A. Studds, *Director*

Special Publication No. 276

PLANE COORDINATE PROJECTION TABLES
COLORADO



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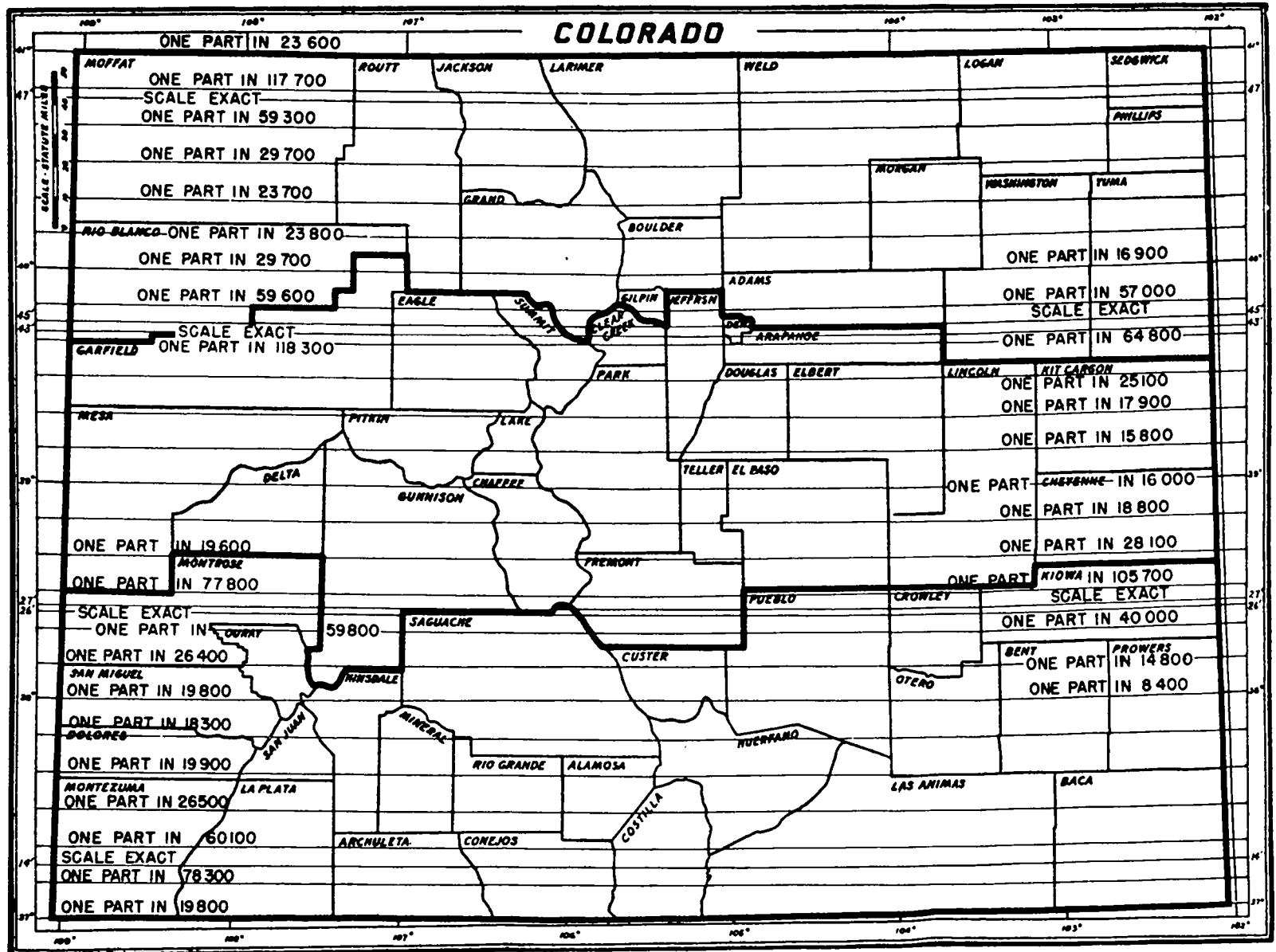
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STATE PLANE-COORDINATE ZONES AND SCALE FACTORS

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 for sale 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 - θ + second term

where

R is the radius for the latitude of the station,

R_b is a constant for a zone,

θ 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.

$$\text{Second term} = \frac{x_2 - x_1}{2 \rho_0^2 \sin 1''} \left(y_1 - y_0 + \frac{y_2 - y_1}{3} \right)$$

Geographic Positions from Plane Coordinates

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

$$x' = x - C$$

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

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

$$\Delta \lambda = \theta \div l$$

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

where

R , R_b , θ , and C are the same as previously defined

and

l is a constant for a zone.

PLANE COORDINATES ON LAMBERT PROJECTION

(Condensed form for calculating-machine computation)

$X = R \sin \theta + C$
 $C = 2,000,000.00$

$Y = R_b - R \cos \theta$
 $R_b = 25,086,068.20$

State-Zone Colorado-North
Grid Az. = Geod. Az. - θ

Station	Latitude	R	sin θ	X
	Longitude	θ	cos θ	Y
1 Younghall, 1937	40 25 33.504	24,688,052.92	-0.03681 59112	1,091,086.84
	108 45 55.378	-2 06 35.5433	0.99932 20645	414,752.19
	Grid azimuth to azimuth mark			349° 53' 34"
2 Filter, 1939	40 12 42.711	24,766,049.63	+0.00286 44314	2,070,940.65
	105 14 45.588	+0 09 50.8322	0.99999 58976	320,120.17
	Grid azimuth to azimuth mark			262° 16' 23"
3				
	Grid azimuth to azimuth mark			0° 0' 00"
4				
	Grid azimuth to azimuth mark			0° 0' 00"
5				
	Grid azimuth to azimuth mark			0° 0' 00"
6				
	Grid azimuth to azimuth mark			0° 0' 00"
7				
	Grid azimuth to azimuth mark			0° 0' 00"
8				
	Grid azimuth to azimuth mark			0° 0' 00"
9				
	Grid azimuth to azimuth mark			0° 0' 00"
10				
	Grid azimuth to azimuth mark			0° 0' 00"
11				
	Grid azimuth to azimuth mark			0° 0' 00"
12				
	Grid azimuth to azimuth mark			0° 0' 00"

GEODETIC POSITIONS FROM LAMBERT COORDINATES
(CALCULATING MACHINE COMPUTATION)

STATE - ZONE Colorado - North $l = 0.64613\ 34829$

Station Younghall, 1937

C	- 2,000,000.00	R _b	25,086,068.20
X	1,091,086.84	Y	- 414,752.19
X' = X - C	- 908,913.16	R _b - Y	24,671,316.01
tan θ = X' ÷ (R _b - Y)	- 0.03684 08868	θ	- 7595.5433
θ	- 2° 06' 35.5433"	Δλ = θ ÷ l	- 11755.378
cos θ	0.99932 20645	Δλ	- 3° 15' 55.378"
R = (R _b - Y) ÷ cos θ	24,688,052.92	Central Meridian	105° 30' 00.000"
φ	40° 25' 33.504"	λ = C.M. - Δλ	108° 45' 55.378"

Station Filter, 1939

C	- 2,000,000.00	R _b	25,086,068.20
X	2,070,940.65	Y	- 320,120.17
X' = X - C	+ 70,940.65	R _b - Y	24,765,948.03
tan θ = X' ÷ (R _b - Y)	+ 0.00286 44431	θ	+ 590.8322
θ	+ 0° 09' 50.8322"	Δλ = θ ÷ l	+ 914.412
cos θ	0.99999 58976	Δλ	+ 0° 15' 14.412"
R = (R _b - Y) ÷ cos θ	24,766,049.63	Central Meridian	105° 30' 00.000"
φ	40° 12' 42.711"	λ = C.M. - Δλ	105° 14' 45.588"

Station

C	-	R _b	
X		Y	-
X' = X - C		R _b - Y	
tan θ = X' ÷ (R _b - Y)		θ	"
θ	"	Δλ = θ ÷ l	"
cos θ		Δλ	"
R = (R _b - Y) ÷ cos θ		Central Meridian	"
φ		λ = C.M. - Δλ	"

Station

C	-	R _b	
X		Y	-
X' = X - C		R _b - Y	
tan θ = X' ÷ (R _b - Y)		θ	"
θ	"	Δλ = θ ÷ l	"
cos θ		Δλ	"
R = (R _b - Y) ÷ cos θ		Central Meridian	"
φ		λ = C.M. - Δλ	"

Constants for Colorado

Constant	North zone	Central zone	South zone
C	2,000,000.00 ft.	2,000,000.00 ft.	2,000,000.00 ft.
Central Meridian	105° 30' 00" 000	105° 30' 00" 000	105° 30' 00" 000
R_p	25,086,068.20 ft.	26,243,052.74 ft.	27,402,231.82 ft.
y_0	334,170.52 ft.	461,675.83 ft.	425,097.94 ft.
l	0.64613 34829	0.63068 95773	0.61337 80528
$\frac{1}{2\rho_0 \sin 1''}$	2.358×10^{-10}	2.359×10^{-10}	2.359×10^{-10}
$\log \frac{1}{2\rho_0 \sin 1''}$	0.372 5214 - 10	0.372 6376 - 10	0.372 7645 - 10
$\log l$	9.81032 22469 - 10	9.79981 56539 - 10	9.78772 82325 -10
$\log K$	7.60806 77177	7.61352 67748	7.62017 39934

Lambert Projection for Colorado (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
39° 20'	25,086,068.20	0	101.18550	+364.5	1.0000839
21	25,079,997.07	6,071.13	101.18533	+344.7	1.0000794
22	25,073,925.95	12,142.25	101.18500	+325.2	1.0000749
23	25,067,854.85	18,213.35	101.18500	+306.1	1.0000705
24	25,061,783.75	24,284.45	101.18483	+287.4	1.0000662
25	25,055,712.66	30,355.54	101.18467	+269.0	1.0000619
39° 26'	25,049,641.58	36,426.62	101.18450	+250.9	1.0000578
27	25,043,570.51	42,497.69	101.18450	+233.3	1.0000537
28	25,037,499.44	48,568.76	101.18433	+216.0	1.0000497
29	25,031,428.38	54,639.82	101.18433	+199.1	1.0000458
30	25,025,357.32	60,710.88	101.18417	+182.5	1.0000420
39° 31'	25,019,286.27	66,781.93	101.18400	+166.3	1.0000383
32	25,013,215.23	72,852.97	101.18400	+150.4	1.0000346
33	25,007,144.19	78,924.01	101.18400	+134.9	1.0000311
34	25,001,073.15	84,995.05	101.18383	+119.8	1.0000276
35	24,995,002.12	91,066.08	101.18400	+105.0	1.0000242
39° 36'	24,988,931.08	97,137.12	101.18367	+ 90.6	1.0000209
37	24,982,860.06	103,208.14	101.18383	+ 76.6	1.0000176
38	24,976,789.03	109,279.17	101.18383	+ 62.9	1.0000145
39	24,970,718.00	115,350.20	101.18367	+ 49.6	1.0000114
40	24,964,646.98	121,421.22	101.18367	+ 36.7	1.0000085
39° 41'	24,958,575.96	127,492.24	101.18383	+ 24.1	1.0000055
42	24,952,504.93	133,563.27	101.18383	+ 11.9	1.0000027
43	24,946,433.90	139,634.30	101.18383	0.0	1.0000000
44	24,940,362.87	145,705.33	101.18383	- 11.5	0.9999974
45	24,934,291.84	151,776.36	101.18383	- 22.7	0.9999948
39° 46'	24,928,220.81	157,847.39	101.18383	- 33.4	0.9999923
47	24,922,149.78	163,918.42	101.18400	- 43.8	0.9999899
48	24,916,078.74	169,989.46	101.18400	- 53.9	0.9999876
49	24,910,007.70	176,060.50	101.18417	- 63.6	0.9999854
50	24,903,936.65	182,131.55	101.18417	- 72.9	0.9999832
39° 51'	24,897,865.60	188,202.60	101.18433	- 81.8	0.9999812
52	24,891,794.54	194,273.66	101.18433	- 90.4	0.9999792
53	24,885,723.48	200,344.72	101.18450	- 98.7	0.9999773
54	24,879,652.41	206,415.79	101.18450	-106.5	0.9999755
55	24,873,581.34	212,486.86	101.18483	-114.0	0.9999738

Lambert Projection for Colorado (North)

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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
39° 56'	24,867,510.25	218,557.95	101.18483	-121.2	0.9999722
57	24,861,439.16	224,629.04	101.18500	-127.9	0.9999706
58	24,855,368.06	230,700.14	101.18517	-134.3	0.9999691
59	24,849,296.95	236,771.25	101.18533	-140.4	0.9999677
40° 00'	24,843,225.83	242,842.37	101.18550	-146.1	0.9999664
40° 01'	24,837,154.70	248,913.50	101.18567	-151.4	0.9999651
02	24,831,083.56	254,984.64	101.18583	-156.3	0.9999640
03	24,825,012.41	261,055.79	101.18600	-160.9	0.9999629
04	24,818,941.25	267,126.95	101.18617	-165.1	0.9999620
05	24,812,870.08	273,198.12	101.18650	-169.0	0.9999611
40° 06'	24,806,798.89	279,269.31	101.18667	-172.5	0.9999603
07	24,800,727.69	285,340.51	101.18683	-175.6	0.9999596
08	24,794,656.48	291,411.72	101.18717	-178.3	0.9999589
09	24,788,585.25	297,482.95	101.18733	-180.7	0.9999584
10	24,782,514.01	303,554.19	101.18767	-182.8	0.9999579
40° 11'	24,776,442.75	309,625.45	101.18783	-184.4	0.9999575
12	24,770,371.48	315,696.72	101.18817	-185.7	0.9999572
13	24,764,300.19	321,768.01	101.18850	-186.7	0.9999570
14	24,758,228.88	327,839.32	101.18867	-187.2	0.9999569
15	24,752,157.56	333,910.64	101.18900	-187.4	0.9999569
40° 16'	24,746,086.22	339,981.98	101.18933	-187.3	0.9999569
17	24,740,014.86	346,053.34	101.18967	-186.7	0.9999570
18	24,733,943.48	352,124.72	101.18983	-185.8	0.9999572
19	24,727,872.09	358,196.11	101.19033	-184.5	0.9999575
20	24,721,800.67	364,267.53	101.19067	-182.9	0.9999579
40° 21'	24,715,729.23	370,338.97	101.19083	-180.9	0.9999584
22	24,709,657.78	376,410.42	101.19133	-178.6	0.9999589
23	24,703,586.30	382,481.90	101.19167	-175.8	0.9999596
24	24,697,514.80	388,553.40	101.19217	-172.7	0.9999603
25	24,691,443.27	394,624.93	101.19233	-169.3	0.9999611
40° 26'	24,685,371.73	400,696.47	101.19283	-165.4	0.9999620
27	24,679,300.16	406,768.04	101.19333	-161.2	0.9999629
28	24,673,228.56	412,839.64	101.19350	-156.7	0.9999640
29	24,667,156.95	418,911.25	101.19417	-151.7	0.9999651
30	24,661,085.30	424,982.90	101.19433	-146.4	0.9999664

Lambert Projection for Colorado (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
40° 31'	24,655,013.64	431,054.56	101.19483	-140.8	0.9999677
32	24,648,941.95	437,126.25	101.19550	-134.7	0.9999691
33	24,642,870.22	443,197.98	101.19567	-128.3	0.9999706
34	24,636,798.48	449,269.72	101.19633	-121.5	0.9999721
35	24,630,726.70	455,341.50	101.19667	-114.4	0.9999737
40° 36'	24,624,654.90	461,413.30	101.19717	-106.9	0.9999754
37	24,618,583.07	467,485.13	101.19767	-99.0	0.9999772
38	24,612,511.21	473,556.99	101.19817	-90.8	0.9999791
39	24,606,439.32	479,628.88	101.19867	-82.2	0.9999811
40	24,600,367.40	485,700.80	101.19917	-73.2	0.9999831
40° 41'	24,594,295.45	491,772.75	101.19983	-63.8	0.9999853
42	24,588,223.46	497,844.74	101.20017	-54.1	0.9999875
43	24,582,151.45	503,916.75	101.20067	-44.0	0.9999899
44	24,576,079.41	509,988.79	101.20133	-33.6	0.9999923
45	24,570,007.33	516,060.87	101.20183	-22.8	0.9999947
40° 46'	24,563,935.22	522,132.98	101.20250	-11.6	0.9999973
47	24,557,863.07	528,205.13	101.20300	0.0	1.0000000
48	24,551,790.89	534,277.31	101.20350	+11.9	1.0000027
49	24,545,718.68	540,349.52	101.20417	+24.2	1.0000056
50	24,539,646.43	546,421.77	101.20467	+36.9	1.0000085
40° 51'	24,533,574.15	552,494.05	101.20550	+49.9	1.0000115
52	24,527,501.82	558,566.38	101.20583	+63.3	1.0000146
53	24,521,429.47	564,638.73	101.20667	+77.1	1.0000178
54	24,515,357.07	570,711.13	101.20717	+91.3	1.0000210
55	24,509,284.64	576,783.56	101.20783	+105.8	1.0000244
40° 56'	24,503,212.17	582,856.03	101.20867	+120.7	1.0000278
57	24,497,139.65	588,928.55	101.20917	+135.9	1.0000313
58	24,491,067.10	595,001.10	101.20983	+151.5	1.0000349
59	24,484,994.51	601,073.69	101.21050	+167.5	1.0000386
41° 00'	24,478,921.88	607,146.32	101.21117	+183.9	1.0000423
41° 01'	24,472,849.21	613,218.99	101.21183	+200.6	1.0000462
02	24,466,776.50	619,291.70	101.21250	+217.7	1.0000501
03	24,460,703.75	625,364.45	101.21333	+235.2	1.0000542
04	24,454,630.95	631,437.25	101.21400	+253.1	1.0000582
05	24,448,558.11	637,510.09	101.21467	+271.3	1.0000625

Lambert Projection for Colorado (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
41° 06'	24,442,485.23	643,582.97	101.21550	+289.9	1.0000668
07	24,436,412.30	649,655.90	101.21617	+308.8	1.0000711
08	24,430,339.33	655,728.87	101.21700	+328.2	1.0000756
09	24,424,266.31	661,801.89	101.21767	+347.9	1.0000801
10	24,418,193.25	667,874.95	101.21850	+367.9	1.0000847
41° 11'	24,412,120.14	673,948.06	101.21933	+388.4	1.0000894
12	24,406,046.98	680,021.22	101.22000	+409.2	1.0000942
13	24,399,973.78	686,094.42	101.22083	+430.4	1.0000991
14	24,393,900.53	692,167.67	101.22167	+451.9	1.0001041
15	24,387,827.23	698,240.97	101.22250	+473.9	1.0001091
41° 16'	24,381,753.88	704,314.32	101.22333	+496.2	1.0001143
17	24,375,680.48	710,387.72	101.22400	+518.8	1.0001195
18	24,369,607.04	716,461.16	101.22500	+541.9	1.0001248
19	24,363,533.54	722,534.66	101.22583	+565.3	1.0001302
20	24,357,459.99	728,608.21		+589.1	1.0001356

Lambert Projection for Colorado (North)

Table II

1" of Long. = 0.64613348 of θ

Long.	θ	Long.	θ	Long.	θ
101° 30'	+2° 35' 04.3222	102° 06'	+2° 11' 48.6738	102° 41'	+1° 49' 11.7935
31	+2 34 25.5541	07	+2 11 09.9058	42	+1 48 33.0255
32	+2 33 46.7861	08	+2 10 31.1378	43	+1 47 54.2575
33	+2 33 08.0181	09	+2 09 52.3698	44	+1 47 15.4895
34	+2 32 29.2501	10	+2 09 13.6018	45	+1 46 36.7215
35	+2 31 50.4821				
101° 36'	+2 31 11.7141	102° 11'	+2 08 34.8338	102° 46'	+1 45 57.9535
37	+2 30 32.9461	12	+2 07 56.0658	47	+1 45 19.1855
38	+2 29 54.1781	13	+2 07 17.2978	48	+1 44 40.4175
39	+2 29 15.4101	14	+2 06 38.5298	49	+1 44 01.6494
40	+2 28 36.6421	15	+2 05 59.7617	50	+1 43 22.8814
101° 41'	+2 27 57.8741	102° 16'	+2 05 20.9937	102° 51'	+1 42 44.1134
42	+2 27 19.1060	17	+2 04 42.2257	52	+1 42 05.3454
43	+2 26 40.3380	18	+2 04 03.4577	53	+1 41 26.5774
44	+2 26 01.5700	19	+2 03 24.6897	54	+1 40 47.8094
45	+2 25 22.8020	20	+2 02 45.9217	55	+1 40 09.0414
101° 46'	+2 24 44.0340	102° 21'	+2 02 07.1537	102° 56'	+1 39 30.2734
47	+2 24 05.2660	22	+2 01 28.3857	57	+1 38 51.5054
48	+2 23 26.4980	23	+2 00 49.6177	58	+1 38 12.7374
49	+2 22 47.7300	24	+2 00 10.8497	59	+1 37 33.9694
50	+2 22 08.9620	25	+1 59 32.0817	103° 00'	+1 36 55.2013
101° 51'	+2 21 30.1940	102° 26'	+1 58 53.3137	103° 01'	+1 36 16.4333
52	+2 20 51.4260	27	+1 58 14.5456	02	+1 35 37.6653
53	+2 20 12.6579	28	+1 57 35.7776	03	+1 34 58.8973
54	+2 19 33.8899	29	+1 56 57.0096	04	+1 34 20.1293
55	+2 18 55.1219	30	+1 56 18.2416	05	+1 33 41.3613
101° 56'	+2 18 16.3539	102° 31'	+1 55 39.4736	103° 06'	+1 33 02.5933
57	+2 17 37.5859	32	+1 55 00.7056	07	+1 32 23.8253
58	+2 16 58.8179	33	+1 54 21.9376	08	+1 31 45.0573
59	+2 16 20.0499	34	+1 53 43.1696	09	+1 31 06.2893
102° 00'	+2 15 41.2819	35	+1 53 04.4016	10	+1 30 27.5213
102° 01'	+2 15 02.5139	102° 36'	+1 52 25.6336	103° 11'	+1 29 48.7532
02	+2 14 23.7459	37	+1 51 46.8656	12	+1 29 09.9852
03	+2 13 44.9779	38	+1 51 08.0975	13	+1 28 31.2172
04	+2 13 06.2098	39	+1 50 29.3295	14	+1 27 52.4492
05	+2 12 27.4418	40	+1 49 50.5615	15	+1 27 13.6812

Lambert Projection for Colorado (North)

Table II (Cont'd)

1" of Long. = 0.64613348 of θ

Long.	θ			Long.	θ			Long.	θ		
103° 16'	+1° 26'	34.9132		103° 51'	+1° 03'	58.0329		104° 26'	+0° 41'	21.1526	
17	+1 25	56.1452		52	+1 03	19.2649		27	+0 40	42.3846	
18	+1 25	17.3772		53	+1 02	40.4969		28	+0 40	03.6166	
19	+1 24	38.6092		54	+1 02	01.7289		29	+0 39	24.8485	
20	+1 23	59.8412		55	+1 01	22.9609		30	+0 38	46.0805	
103° 21'	+1 23	21.0732		103° 56'	+1 00	44.1928		104° 31'	+0 38	07.3125	
22	+1 22	42.3051		57	+1 00	05.4248		32	+0 37	28.5445	
23	+1 22	03.5371		58	+0 59	26.6568		33	+0 36	49.7765	
24	+1 21	24.7691		59	+0 58	47.8888		34	+0 36	11.0085	
25	+1 20	46.0011		104° 00'	+0 58	09.1208		35	+0 35	32.2405	
103° 26'	+1 20	07.2331		104° 01'	+0 57	30.3528		104° 36'	+0 34	53.4725	
27	+1 19	28.4651		02	+0 56	51.5848		37	+0 34	14.7045	
28	+1 18	49.6971		03	+0 56	12.8168		38	+0 33	35.9365	
29	+1 18	10.9291		04	+0 55	34.0488		39	+0 32	57.1685	
30	+1 17	32.1611		05	+0 54	55.2807		40	+0 32	18.4004	
103° 31'	+1 16	53.3931		104° 06'	+0 54	16.5127		104° 41'	+0 31	39.6324	
32	+1 16	14.6251		07	+0 53	37.7447		42	+0 31	00.8644	
33	+1 15	35.8570		08	+0 52	58.9767		43	+0 30	22.0964	
34	+1 14	57.0890		09	+0 52	20.2087		44	+0 29	43.3284	
35	+1 14	18.3210		10	+0 51	41.4407		45	+0 29	04.5604	
103° 36'	+1 13	39.5530		104° 11'	+0 51	02.6727		104° 46'	+0 28	25.7924	
37	+1 13	00.7850		12	+0 50	23.9047		47	+0 27	47.0244	
38	+1 12	22.0170		13	+0 49	45.1367		48	+0 27	08.2564	
39	+1 11	43.2490		14	+0 49	06.3687		49	+0 26	29.4884	
40	+1 11	04.4810		15	+0 48	27.6007		50	+0 25	50.7204	
103° 41'	+1 10	25.7130		104° 16'	+0 47	48.8327		104° 51'	+0 25	11.9523	
42	+1 09	46.9450		17	+0 47	10.0647		52	+0 24	33.1843	
43	+1 09	08.1770		18	+0 46	31.2966		53	+0 23	54.4163	
44	+1 08	29.4090		19	+0 45	52.5286		54	+0 23	15.6483	
45	+1 07	50.6409		20	+0 45	13.7606		55	+0 22	36.8803	
103° 46'	+1 07	11.8729		104° 21'	+0 44	34.9926		104° 56'	+0 21	58.1123	
47	+1 06	33.1049		22	+0 43	56.2246		57	+0 21	19.3443	
48	+1 05	54.3369		23	+0 43	17.4566		58	+0 20	40.5763	
49	+1 05	15.5689		24	+0 42	38.6886		59	+0 20	01.8083	
50	+1 04	36.8009		25	+0 41	59.9206		105° 00'	+0 19	23.0403	

Lambert Projection for Colorado (North)

Table II (Cont'd)

1" of Long. = 0.64613348 of θ

Long.	θ	Long.	θ	Long.	θ
105° 01'	+0° 18' 44.2723	105° 36'	-0° 03' 52.6081	106° 11'	-0° 26' 29.4884
02	+0 18 05.5043	37	-0 04 31.3761	12	-0 27 08.2564
03	+0 17 26.7362	38	-0 05 10.1441	13	-0 27 47.0244
04	+0 16 47.9682	39	-0 05 48.9121	14	-0 28 25.7924
05	+0 16 09.2002	40	-0 06 27.6801	15	-0 29 04.5604
105° 06'	+0 15 30.4322	105° 41'	-0 07 06.4481	106° 16'	-0 29 43.3284
07	+0 14 51.6642	42	-0 07 45.2161	17	-0 30 22.0964
08	+0 14 12.8962	43	-0 08 23.9841	18	-0 31 00.8644
09	+0 13 34.1282	44	-0 09 02.7521	19	-0 31 39.6324
10	+0 12 55.3602	45	-0 09 41.5201	20	-0 32 18.4004
105° 11'	+0 12 16.5922	105° 46'	-0 10 20.2881	106° 21'	-0 32 57.1685
12	+0 11 37.8242	47	-0 10 59.0562	22	-0 33 35.9365
13	+0 10 59.0562	48	-0 11 37.8242	23	-0 34 14.7045
14	+0 10 20.2881	49	-0 12 16.5922	24	-0 34 53.4725
15	+0 09 41.5201	50	-0 12 55.3602	25	-0 35 32.2405
105° 16'	+0 09 02.7521	105° 51'	-0 13 34.1282	106° 26'	-0 36 11.0085
17	+0 08 23.9841	52	-0 14 12.8962	27	-0 36 49.7765
18	+0 07 45.2161	53	-0 14 51.6642	28	-0 37 28.5445
19	+0 07 06.4481	54	-0 15 30.4322	29	-0 38 07.3125
20	+0 06 27.6801	55	-0 16 09.2002	30	-0 38 46.0805
105° 21'	+0 05 48.9121	105° 56'	-0 16 47.9682	106° 31'	-0 39 24.8485
22	+0 05 10.1441	57	-0 17 26.7362	32	-0 40 03.6166
23	+0 04 31.3761	58	-0 18 05.5043	33	-0 40 42.3846
24	+0 03 52.6081	59	-0 18 44.2723	34	-0 41 21.1526
25	+0 03 13.8400	106° 00'	-0 19 23.0403	35	-0 41 59.9206
105° 26'	+0 02 35.0720	106° 01'	-0 20 01.8083	106° 36'	-0 42 38.6886
27	+0 01 56.3040	02	-0 20 40.5763	37	-0 43 17.4566
28	+0 01 17.5360	03	-0 21 19.3443	38	-0 43 56.2246
29	+0 00 38.7680	04	-0 21 58.1123	39	-0 44 34.9926
30	0 00 00.0000	05	-0 22 36.8803	40	-0 45 13.7606
105° 31'	-0 00 38.7680	106° 06'	-0 23 15.6483	106° 41'	-0 45 52.5286
32	-0 01 17.5360	07	-0 23 54.4163	42	-0 46 31.2966
33	-0 01 56.3040	08	-0 24 33.1843	43	-0 47 10.0647
34	-0 02 35.0720	09	-0 25 11.9523	44	-0 47 48.8327
35	-0 03 13.8400	10	-0 25 50.7204	45	-0 48 27.6007

Lambert Projection for Colorado (North)

Table II (Cont'd)

1" of Long. = 0.64613348 of θ

Long.	θ	Long.	θ	Long.	θ
106° 46'	-0° 49' 06.3687	107° 21'	-1° 11' 43.2490	107° 56'	-1° 34' 20.1293
47	-0 49 45.1367	22	-1 12 22.0170	57	-1 34 58.8973
48	-0 50 23.9047	23	-1 13 00.7850	58	-1 35 37.6653
49	-0 51 02.6727	24	-1 13 39.5530	59	-1 36 16.4333
50	-0 51 41.4407	25	-1 14 18.3210	108° 00'	-1 36 55.2013
106° 51'	-0 52 20.2087	107° 26'	-1 14 57.0890	108° 01'	-1 37 33.9694
52	-0 52 58.9767	27	-1 15 35.8570	02	-1 38 12.7374
53	-0 53 37.7447	28	-1 16 14.6251	03	-1 38 51.5054
54	-0 54 16.5127	29	-1 16 53.3931	04	-1 39 30.2734
55	-0 54 55.2807	30	-1 17 32.1611	05	-1 40 09.0414
106° 56'	-0 55 34.0488	107° 31'	-1 18 10.9291	108° 06'	-1 40 47.8094
57	-0 56 12.8168	32	-1 18 49.6971	07	-1 41 26.5774
58	-0 56 51.5848	33	-1 19 28.4651	08	-1 42 05.3454
59	-0 57 30.3528	34	-1 20 07.2331	09	-1 42 44.1134
107° 00'	-0 58 09.1208	35	-1 20 46.0011	10	-1 43 22.8814
107° 01'	-0 58 47.8888	107° 36'	-1 21 24.7691	108° 11'	-1 44 01.6494
02	-0 59 26.6568	37	-1 22 03.5371	12	-1 44 40.4175
03	-1 00 05.4248	38	-1 22 42.3051	13	-1 45 19.1855
04	-1 00 44.1928	39	-1 23 21.0732	14	-1 45 57.9535
05	-1 01 22.9609	40	-1 23 59.8412	15	-1 46 36.7215
107° 06'	-1 02 01.7289	107° 41'	-1 24 38.6092	108° 16'	-1 47 15.4895
07	-1 02 40.4969	42	-1 25 17.3772	17	-1 47 54.2575
08	-1 03 19.2649	43	-1 25 56.1452	18	-1 48 33.0255
09	-1 03 58.0329	44	-1 26 34.9132	19	-1 49 11.7935
10	-1 04 36.8009	45	-1 27 13.6812	20	-1 49 50.5615
107° 11'	-1 05 15.5689	107° 46'	-1 27 52.4492	108° 21'	-1 50 29.3295
12	-1 05 54.3369	47	-1 28 31.2172	22	-1 51 08.0975
13	-1 06 33.1049	48	-1 29 09.9852	23	-1 51 46.8656
14	-1 07 11.8729	49	-1 29 48.7532	24	-1 52 25.6336
15	-1 07 50.6409	50	-1 30 27.5213	25	-1 53 04.4016
107° 16'	-1 08 29.4090	107° 51'	-1 31 06.2893	108° 26'	-1 53 43.1696
17	-1 09 08.1770	52	-1 31 45.0573	27	-1 54 21.9376
18	-1 09 46.9450	53	-1 32 23.8253	28	-1 55 00.7056
19	-1 10 25.7130	54	-1 33 02.5933	29	-1 55 39.4736
20	-1 11 04.4810	55	-1 33 41.3613	30	-1 56 18.2416

Lambert Projection for Colorado (North)

Table II (Cont'd)

1" of Long. = 0.64613348 of θ

Long.	θ		Long.	θ	
108° 31'	-1° 56'	57.0096	109° 06'	-2° 19'	33.8899
32	-1 57	35.7776	07	-2 20	12.6579
33	-1 58	14.5456	08	-2 20	51.4260
34	-1 58	53.3137	09	-2 21	30.1940
35	-1 59	32.0817	10	-2 22	08.9620
108° 36'	-2 00	10.8497	109° 11'	-2 22	47.7300
37	-2 00	49.6177	12	-2 23	26.4980
38	-2 01	28.3857	13	-2 24	05.2660
39	-2 02	07.1537	14	-2 24	44.0340
40	-2 02	45.9217	15	-2 25	22.8020
108° 41'	-2 03	24.6897	109° 16'	-2 26	01.5700
42	-2 04	03.4577	17	-2 26	40.3380
43	-2 04	42.2257	18	-2 27	19.1050
44	-2 05	20.9937	19	-2 27	57.8740
45	-2 05	59.7617	20	-2 28	36.6421
108° 46'	-2 06	38.5298	109° 21'	-2 29	15.4101
47	-2 07	17.2978	22	-2 29	54.1781
48	-2 07	56.0658	23	-2 30	32.9461
49	-2 08	34.8338	24	-2 31	11.7141
50	-2 09	13.6018	25	-2 31	50.4821
108° 51'	-2 09	52.3698	109° 26'	-2 32	29.2501
52	-2 10	31.1378	27	-2 33	08.0181
53	-2 11	09.9058	28	-2 33	46.7861
54	-2 11	48.6738	29	-2 34	25.5541
55	-2 12	27.4418	30	-2 35	04.3222
108° 56'	-2 13	06.2098			
57	-2 13	44.9779			
58	-2 14	23.7459			
59	-2 15	02.5139			
109° 00'	-2 15	41.2819			
109° 01'	-2 16	20.0499			
02	-2 16	58.8179			
03	-2 17	37.5859			
04	-2 18	16.3539			
05	-2 18	55.1219			

Table I

Lat.	R feet	Y ¹ 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
37° 50'	26,243,052.74	0	101.16850	+774.6	1.0001784
51	26,236,982.63	6,070.11	101.16833	+747.1	1.0001720
52	26,230,912.53	12,140.21	101.16783	+719.9	1.0001658
53	26,224,842.46	18,210.28	101.16750	+693.1	1.0001596
54	26,218,772.41	24,280.33	101.16733	+666.7	1.0001535
55	26,212,702.37	30,350.37	101.16700	+640.6	1.0001475
37° 56'	26,206,632.35	36,420.39	101.16667	+615.0	1.0001416
57	26,200,562.35	42,490.39	101.16633	+589.6	1.0001358
58	26,194,492.37	48,560.37	101.16600	+564.7	1.0001300
59	26,188,422.41	54,630.33	101.16583	+540.1	1.0001244
38° 00'	26,182,352.46	60,700.28	101.16550	+516.0	1.0001188
38° 01'	26,176,282.53	66,770.21	101.16517	+492.2	1.0001133
02	26,170,212.62	72,840.12	101.16500	+468.7	1.0001079
03	26,164,142.72	78,910.02	101.16483	+445.6	1.0001026
04	26,158,072.83	84,979.91	101.16450	+423.0	1.0000974
05	26,152,002.96	91,049.78	101.16433	+400.5	1.0000922
38° 06'	26,145,933.10	97,119.64	101.16417	+378.5	1.0000871
07	26,139,863.25	103,189.49	101.16383	+356.9	1.0000822
08	26,133,793.42	109,259.32	101.16367	+335.6	1.0000773
09	26,127,723.60	115,329.14	101.16350	+314.7	1.0000724
10	26,121,653.79	121,398.95	101.16333	+294.2	1.0000677
38° 11'	26,115,583.99	127,468.75	101.16317	+274.0	1.0000631
12	26,109,514.20	133,538.54	101.16283	+254.1	1.0000585
13	26,103,444.43	139,608.31	101.16283	+234.6	1.0000540
14	26,097,374.66	145,678.08	101.16267	+215.5	1.0000496
15	26,091,304.90	151,747.84	101.16250	+196.8	1.0000453
38° 16'	26,085,235.15	157,817.59	101.16233	+178.4	1.0000411
17	26,079,165.41	163,887.33	101.16233	+160.4	1.0000369
18	26,073,095.67	169,957.07	101.16217	+142.7	1.0000329
19	26,067,025.94	176,026.80	101.16200	+125.4	1.0000289
20	26,060,956.22	182,096.52	101.16200	+108.5	1.0000250
38° 21'	26,054,886.50	188,166.24	101.16183	+91.9	1.0000212
22	26,048,816.79	194,235.95	101.16167	+75.6	1.0000174
23	26,042,747.09	200,305.65	101.16167	+59.8	1.0000138
24	26,036,677.39	206,375.35	101.16167	+44.3	1.0000102
25	26,030,607.69	212,445.05	101.16150	+29.1	1.0000067

Lambert Projection for Colorado (Central)

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
38° 26'	26,024,538.00	218,514.74	101.16167	+14.4	1.0000033
27	26,018,468.30	224,584.44	101.16133	0	1.0000000
28	26,012,398.62	230,654.12	101.16150	-14.1	0.9999968
29	26,006,328.93	236,723.81	101.16150	-27.8	0.9999936
30	26,000,259.24	242,793.50	101.16133	-41.1	0.9999905
38° 31'	25,994,189.56	248,863.18	101.16150	-54.0	0.9999876
32	25,988,119.87	254,932.87	101.16133	-66.6	0.9999847
33	25,982,050.19	261,002.55	101.16133	-78.9	0.9999818
34	25,975,980.51	267,072.23	101.16150	-90.7	0.9999791
35	25,969,910.82	273,141.92	101.16150	-102.2	0.9999765
38° 36'	25,963,841.13	279,211.61	101.16150	-113.4	0.9999739
37	25,957,771.44	285,281.30	101.16150	-124.2	0.9999714
38	25,951,701.75	291,350.99	101.16167	-134.6	0.9999690
39	25,945,632.05	297,420.69	101.16167	-144.6	0.9999667
40	25,939,562.35	303,490.39	101.16167	-154.3	0.9999645
38° 41'	25,933,492.65	309,560.09	101.16183	-163.6	0.9999623
42	25,927,422.94	315,629.80	101.16200	-172.6	0.9999603
43	25,921,353.22	321,699.52	101.16200	-181.2	0.9999583
44	25,915,283.50	327,769.24	101.16200	-189.4	0.9999564
45	25,909,213.78	333,838.96	101.16217	-197.3	0.9999546
38° 46'	25,903,144.05	339,908.69	101.16250	-204.8	0.9999528
47	25,897,074.30	345,978.44	101.16233	-212.0	0.9999512
48	25,891,004.56	352,048.18	101.16267	-218.7	0.9999496
49	25,884,934.80	358,117.94	101.16283	-225.2	0.9999481
50	25,878,865.03	364,187.71	101.16283	-231.2	0.9999468
38° 51'	25,872,795.26	370,257.48	101.16300	-236.9	0.9999455
52	25,866,725.48	376,327.26	101.16333	-242.2	0.9999442
53	25,860,655.68	382,397.06	101.16350	-247.1	0.9999431
54	25,854,585.87	388,466.87	101.16350	-251.7	0.9999420
55	25,848,516.06	394,536.68	101.16383	-256.0	0.9999411
38° 56'	25,842,446.23	400,606.51	101.16400	-259.8	0.9999402
57	25,836,376.39	406,676.35	101.16433	-263.3	0.9999394
58	25,830,306.53	412,746.21	101.16450	-266.4	0.9999387
59	25,824,236.66	418,816.08	101.16467	-269.2	0.9999380
39° 00'	25,818,166.78	424,885.96	101.16500	-271.6	0.9999375

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
39° 01'	25,812,096.88	430,955.86	101.16517	-273.7	0.9999370
02	25,806,026.97	437,025.77	101.16533	-275.3	0.9999366
03	25,799,957.05	443,095.69	101.16583	-276.6	0.9999363
04	25,793,887.10	449,165.64	101.16600	-277.6	0.9999361
05	25,787,817.14	455,235.60	101.16617	-278.2	0.9999359
39° 06'	25,781,747.17	461,305.57	101.16667	-278.4	0.9999359
07	25,775,677.17	467,375.57	101.16683	-278.2	0.9999359
08	25,769,607.16	473,445.58	101.16717	-277.7	0.9999361
09	25,763,537.13	479,515.61	101.16750	-276.8	0.9999363
10	25,757,467.08	485,585.66	101.16783	-275.5	0.9999366
39° 11'	25,751,397.01	491,655.73	101.16817	-273.9	0.9999369
12	25,745,326.92	497,725.82	101.16850	-271.9	0.9999374
13	25,739,256.81	503,795.93	101.16883	-269.5	0.9999379
14	25,733,186.68	509,866.06	101.16933	-266.8	0.9999386
15	25,727,116.52	515,936.22	101.16950	-263.7	0.9999393
39° 16'	25,721,046.35	522,006.39	101.17000	-260.3	0.9999401
17	25,714,976.15	528,076.59	101.17033	-256.4	0.9999410
18	25,708,905.93	534,146.81	101.17083	-252.2	0.9999419
19	25,702,835.68	540,217.06	101.17117	-247.7	0.9999430
20	25,696,765.41	546,287.33	101.17150	-242.7	0.9999441
39° 21'	25,690,695.12	552,357.62	101.17200	-237.5	0.9999453
22	25,684,624.80	558,427.94	101.17233	-231.8	0.9999466
23	25,678,554.46	564,498.28	101.17300	-225.8	0.9999480
24	25,672,484.08	570,568.66	101.17317	-219.4	0.9999495
25	25,666,413.69	576,639.05	101.17383	-212.6	0.9999510
39° 26'	25,660,343.26	582,709.48	101.17417	-205.5	0.9999527
27	25,654,272.81	588,779.93	101.17483	-198.0	0.9999544
28	25,648,202.32	594,850.42	101.17517	-190.1	0.9999562
29	25,642,131.81	600,920.93	101.17567	-181.9	0.9999581
30	25,636,061.27	606,991.47	101.17617	-173.3	0.9999601
39° 31'	25,629,990.70	613,062.04	101.17667	-164.3	0.9999622
32	25,623,920.10	619,132.64	101.17717	-155.0	0.9999643
33	25,617,849.47	625,203.27	101.17767	-145.2	0.9999666
34	25,611,778.81	631,273.93	101.17833	-135.2	0.9999689
35	25,605,708.11	637,344.63	101.17867	-124.7	0.9999713

Lambert Projection for Colorado (Central)

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
39° 36'	25,599,637.39	643,415.35	101.17933	-113.9	0.9999738
37	25,593,566.63	649,486.11	101.18000	-102.7	0.9999764
38	25,587,495.83	655,556.91	101.18050	-91.2	0.9999790
39	25,581,425.00	661,627.74	101.18100	-79.3	0.9999817
40	25,575,354.14	667,698.60	101.18167	-67.0	0.9999846
39° 41'	25,569,283.24	673,769.50	101.18217	-54.3	0.9999875
42	25,563,212.31	679,840.43	101.18283	-41.3	0.9999905
43	25,557,141.34	685,911.40	101.18350	-27.9	0.9999936
44	25,551,070.33	691,982.41	101.18400	-14.1	0.9999968
45	25,544,999.29	698,053.45	101.18467	0	1.0000000
39° 46'	25,538,928.21	704,124.53	101.18533	+14.5	1.0000033
47	25,532,857.09	710,195.65	101.18600	+29.4	1.0000068
48	25,526,785.93	716,266.81	101.18667	+44.6	1.0000103
49	25,520,714.73	722,338.01	101.18717	+60.2	1.0000139
50	25,514,643.50	728,409.24	101.18800	+76.2	1.0000175
39° 51'	25,508,572.22	734,480.52	101.18867	+92.6	1.0000213
52	25,502,500.90	740,551.84	101.18933	+109.3	1.0000252
53	25,496,429.54	746,623.20	101.19000	+126.4	1.0000291
54	25,490,358.14	752,694.60	101.19083	+143.9	1.0000331
55	25,484,286.69	758,766.05	101.19133	+161.7	1.0000372
39° 56'	25,478,215.21	764,837.53	101.19217	+179.9	1.0000414
57	25,472,143.68	770,909.06	101.19300	+198.5	1.0000457
58	25,466,072.10	776,980.64	101.19367	+217.4	1.0000501
59	25,460,000.48	783,052.26	101.19433	+236.7	1.0000545
40° 00'	25,453,928.82	789,123.92	101.19517	+256.4	1.0000590
40° 01'	25,447,857.11	795,195.63	101.19583	+276.5	1.0000637
02	25,441,785.36	801,267.38	101.19667	+296.9	1.0000684
03	25,435,713.56	807,339.18	101.19750	+317.7	1.0000732
04	25,429,641.71	813,411.03	101.19833	+338.8	1.0000780
05	25,423,569.81	819,482.93	101.19900	+360.4	1.0000830
40° 06'	25,417,497.87	825,554.87	101.20000	+382.3	1.0000880
07	25,411,425.87	831,626.87	101.20067	+404.6	1.0000932
08	25,405,353.83	837,698.91	101.20150	+427.3	1.0000984
09	25,399,281.74	843,771.00	101.20233	+450.3	1.0001037
10	25,393,209.60	849,843.14	101.20317	+473.7	1.0001091

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
40° 11'	25,387,137.41	855,915.33	101.20417	+497.5	1.0001146
12	25,381,065.16	861,987.58	101.20483	+521.6	1.0001201
13	25,374,992.87	868,059.87	101.20583	+546.2	1.0001258
14	25,368,920.52	874,132.22	101.20667	+571.1	1.0001315
15	25,362,848.12	880,204.62	101.20750	+596.3	1.0001373
40° 16'	25,356,775.67	886,277.07	101.20850	+622.0	1.0001432
17	25,350,703.16	892,349.58	101.20933	+648.0	1.0001492
18	25,344,630.60	898,422.14	101.21033	+674.4	1.0001553
19	25,338,557.98	904,494.76	101.21117	+701.2	1.0001615
20	25,332,485.31	910,567.43		+728.4	1.0001677

Lambert Projection for Colorado (Central)

Table II

1" of Long. = 0.63068958 of θ

Long.	θ	Long.	θ	Long.	θ
101° 30'	+2° 31' 21.9299	102° 06'	+2° 08' 39.6404	102° 41'	+1° 46' 35.1923
31	+2 30 44.0885	07	+2 08 01.7991	42	+1 45 57.3509
32	+2 30 06.2472	08	+2 07 23.9577	43	+1 45 19.5096
33	+2 29 28.4058	09	+2 06 46.1163	44	+1 44 41.6682
34	+2 28 50.5644	10	+2 06 08.2749	45	+1 44 03.8268
35	+2 28 12.7230				
101° 36'	+2 27 34.8817	102° 11'	+2 05 30.4336	102° 46'	+1 43 25.9854
37	+2 26 57.0403	12	+2 04 52.5922	47	+1 42 48.1441
38	+2 26 19.1989	13	+2 04 14.7508	48	+1 42 10.3027
39	+2 25 41.3575	14	+2 03 36.9094	49	+1 41 32.4613
40	+2 25 03.5162	15	+2 02 59.0681	50	+1 40 54.6199
101° 41'	+2 24 25.6748	102° 16'	+2 02 21.2267	102° 51'	+1 40 16.7786
42	+2 23 47.8334	17	+2 01 43.3853	52	+1 39 38.9372
43	+2 23 09.9920	18	+2 01 05.5439	53	+1 39 01.0958
44	+2 22 32.1507	19	+2 00 27.7026	54	+1 38 23.2544
45	+2 21 54.3093	20	+1 59 49.8612	55	+1 37 45.4131
101° 46'	+2 21 16.4679	102° 21'	+1 59 12.0198	102° 56'	+1 37 07.5717
47	+2 20 38.6265	22	+1 58 34.1784	57	+1 36 29.7303
48	+2 20 00.7852	23	+1 57 56.3371	58	+1 35 51.8889
49	+2 19 22.9438	24	+1 57 18.4957	59	+1 35 14.0476
50	+2 18 45.1024	25	+1 56 40.6543	103° 00'	+1 34 36.2062
101° 51'	+2 18 07.2610	102° 26'	+1 56 02.8129	103° 01'	+1 33 58.3648
52	+2 17 29.4197	27	+1 55 24.9716	02	+1 33 20.5234
53	+2 16 51.5783	28	+1 54 47.1302	03	+1 32 42.6821
54	+2 16 13.7369	29	+1 54 09.2888	04	+1 32 04.8407
55	+2 15 35.8955	30	+1 53 31.4474	05	+1 31 26.9993
101° 56'	+2 14 58.0542	102° 31'	+1 52 53.6061	103° 06'	+1 30 49.1579
57	+2 14 20.2128	32	+1 52 15.7647	07	+1 30 11.3166
58	+2 13 42.3714	33	+1 51 37.9233	08	+1 29 33.4752
59	+2 13 04.5300	34	+1 51 00.0819	09	+1 28 55.6338
102° 00'	+2 12 26.6887	35	+1 50 22.2406	10	+1 28 17.7924
102° 01'	+2 11 48.8473	102° 36'	+1 49 44.3992	103° 11'	+1 27 39.9511
02	+2 11 11.0059	37	+1 49 06.5578	12	+1 27 02.1097
03	+2 10 33.1646	38	+1 48 28.7164	13	+1 26 24.2683
04	+2 09 55.3232	39	+1 47 50.8751	14	+1 25 46.4270
05	+2 09 17.4818	40	+1 47 13.0337	15	+1 25 08.5856

Lambert Projection for Colorado (Central)

Table II (Cont'd)

1" of Long. = 0.63068958 of θ

Long.	θ			Long.	θ			Long.	θ		
103° 16'	+1°	24'	30.7442	103° 51'	+1°	02'	26.2961	104° 26'	+0°	40'	21.8480
17	+1	23	52.9028	52	+1	01	48.4547	27	+0	39	44.0066
18	+1	23	15.0615	53	+1	01	10.6133	28	+0	39	06.1652
19	+1	22	37.2201	54	+1	00	32.7720	29	+0	38	28.3239
20	+1	21	59.3787	55	+0	59	54.9306	30	+0	37	50.4825
103° 21'	+1	21	21.5373	103° 56'	+0	59	17.0892	104° 31'	+0	37	12.6411
22	+1	20	43.6959	57	+0	58	39.2478	32	+0	36	34.7997
23	+1	20	05.8546	58	+0	58	01.4065	33	+0	35	56.9584
24	+1	19	28.0132	59	+0	57	23.5651	34	+0	35	19.1170
25	+1	18	50.1718	104° 00'	+0	56	45.7237	35	+0	34	41.2756
103° 26'	+1	18	12.3305	104° 01'	+0	56	07.8823	104° 36'	+0	34	03.4342
27	+1	17	34.4891	02	+0	55	30.0410	37	+0	33	25.5929
28	+1	16	56.6477	03	+0	54	52.1996	38	+0	32	47.7515
29	+1	16	18.8063	04	+0	54	14.3582	39	+0	32	09.9101
30	+1	15	40.9650	05	+0	53	36.5168	40	+0	31	32.0687
103° 31'	+1	15	03.1236	104° 06'	+0	52	58.6755	104° 41'	+0	30	54.2274
32	+1	14	25.2822	07	+0	52	20.8341	42	+0	30	16.3860
33	+1	13	47.4408	08	+0	51	42.9927	43	+0	29	38.5446
34	+1	13	09.5995	09	+0	51	05.1513	44	+0	29	00.7032
35	+1	12	31.7581	10	+0	50	27.3100	45	+0	28	22.8619
103° 36'	+1	11	53.9167	104° 11'	+0	49	49.4686	104° 46'	+0	27	45.0205
37	+1	11	16.0753	12	+0	49	11.6272	47	+0	27	07.1791
38	+1	10	38.2340	13	+0	48	33.7858	48	+0	26	29.3377
39	+1	10	00.3926	14	+0	47	55.9445	49	+0	25	51.4964
40	+1	09	22.5512	15	+0	47	18.1031	50	+0	25	13.6550
103° 41'	+1	08	44.7098	104° 16'	+0	46	40.2617	104° 51'	+0	24	35.8136
42	+1	08	06.8685	17	+0	46	02.4203	52	+0	23	57.9722
43	+1	07	29.0271	18	+0	45	24.5790	53	+0	23	20.1309
44	+1	06	51.1857	19	+0	44	46.7376	54	+0	22	42.2895
45	+1	06	13.3443	20	+0	44	08.8962	55	+0	22	04.4481
103° 46'	+1	05	35.5030	104° 21'	+0	43	31.0549	104° 56'	+0	21	26.6067
47	+1	04	57.6616	22	+0	42	53.2135	57	+0	20	48.7654
48	+1	04	19.8202	23	+0	42	15.3721	58	+0	20	10.9240
49	+1	03	41.9788	24	+0	41	37.5307	59	+0	19	33.0826
50	+1	03	04.1375	25	+0	40	59.6894	105° 00'	+0	18	55.2412

Lambert Projection for Colorado (Central)

Table II (Cont'd)

1" of Long. = 0.63068958 of θ

Long.	θ	Long.	θ	Long.	θ
105° 01'	+0° 18' 17.3999	105° 36'	-0° 03' 47.0482	106° 11'	-0° 25' 51.4964
02	+0 17 39.5585	37	-0 04 24.8896	12	-0 26 29.3377
03	+0 17 01.7171	38	-0 05 02.7310	13	-0 27 07.1791
04	+0 16 23.8757	39	-0 05 40.5724	14	-0 27 45.0205
05	+0 15 46.0344	40	-0 06 18.4137	15	-0 28 22.8619
105° 06'	+0 15 08.1930	105° 41'	-0 06 56.2551	106° 16'	-0 29 00.7032
07	+0 14 30.3516	42	-0 07 34.0965	17	-0 29 38.5446
08	+0 13 52.5102	43	-0 08 11.9379	18	-0 30 16.3860
09	+0 13 14.6689	44	-0 08 49.7792	19	-0 30 54.2274
10	+0 12 36.8275	45	-0 09 27.6206	20	-0 31 32.0687
105° 11'	+0 11 58.9861	105° 46'	-0 10 05.4620	106° 21'	-0 32 09.9101
12	+0 11 21.1447	47	-0 10 43.3034	22	-0 32 47.7515
13	+0 10 43.3034	48	-0 11 21.1447	23	-0 33 25.5929
14	+0 10 05.4620	49	-0 11 58.9861	24	-0 34 03.4342
15	+0 09 27.6206	50	-0 12 36.8275	25	-0 34 41.2756
105° 16'	+0 08 49.7792	105° 51'	-0 13 14.6689	106° 26'	-0 35 19.1170
17	+0 08 11.9379	52	-0 13 52.5102	27	-0 35 56.9584
18	+0 07 34.0965	53	-0 14 30.3516	28	-0 36 34.7997
19	+0 06 56.2551	54	-0 15 08.1930	29	-0 37 12.6411
20	+0 06 18.4137	55	-0 15 46.0344	30	-0 37 50.4825
105° 21'	+0 05 40.5724	105° 56'	-0 16 23.8757	106° 31'	-0 38 28.3239
22	+0 05 02.7310	57	-0 17 01.7171	32	-0 39 06.1652
23	+0 04 24.8896	58	-0 17 39.5585	33	-0 39 44.0066
24	+0 03 47.0482	59	-0 18 17.3999	34	-0 40 21.8480
25	+0 03 09.2069	106° 00'	-0 18 55.2412	35	-0 40 59.6894
105° 26'	+0 02 31.3655	106° 01'	-0 19 33.0826	106° 36'	-0 41 37.5307
27	+0 01 53.5241	02	-0 20 10.9240	37	-0 42 15.3721
28	+0 01 15.6827	03	-0 20 48.7654	38	-0 42 53.2135
29	+0 00 37.8414	04	-0 21 26.6067	39	-0 43 31.0549
30	0 00 00.0000	05	-0 22 04.4481	40	-0 44 08.8962
105° 31'	-0 00 37.8414	106° 06'	-0 22 42.2895	106° 41'	-0 44 46.7376
32	-0 01 15.6827	07	-0 23 20.1309	42	-0 45 24.5790
33	-0 01 53.5241	08	-0 23 57.9722	43	-0 46 02.4203
34	-0 02 31.3655	09	-0 24 35.8136	44	-0 46 40.2617
35	-0 03 09.2069	10	-0 25 13.6550	45	-0 47 18.1031

Lambert Projection for Colorado (Central)

Table II (Cont'd)

1" of Long. = 0.63068958 of θ

Long.	θ		Long.	θ		Long.	θ	
106° 46'	-0° 47'	55.9445	107° 21'	-1° 10'	00.3926	107° 56'	-1° 32'	04.8407
47	-0 48	33.7858	22	-1 10	38.2340	57	-1 32	42.6821
48	-0 49	11.6272	23	-1 11	16.0753	58	-1 33	20.5234
49	-0 49	49.4686	24	-1 11	53.9167	59	-1 33	58.3648
50	-0 50	27.3100	25	-1 12	31.7581	108° 00'	-1 34	36.2062
106° 51'	-0 51	05.1513	107° 26'	-1 13	09.5995	108° 01'	-1 35	14.0476
52	-0 51	42.9927	27	-1 13	47.4408	02	-1 35	51.8889
53	-0 52	20.8341	28	-1 14	25.2822	03	-1 36	29.7303
54	-0 52	58.6755	29	-1 15	03.1236	04	-1 37	07.5717
55	-0 53	36.5168	30	-1 15	40.9650	05	-1 37	45.4131
106° 56'	-0 54	14.3582	107° 31'	-1 16	18.8063	108° 06'	-1 38	23.2544
57	-0 54	52.1996	32	-1 16	56.6477	07	-1 39	01.0958
58	-0 55	30.0410	33	-1 17	34.4891	08	-1 39	38.9372
59	-0 56	07.8823	34	-1 18	12.3305	09	-1 40	16.7786
107° 00'	-0 56	45.7237	35	-1 18	50.1718	10	-1 40	54.6199
107° 01'	-0 57	23.5651	107° 36'	-1 19	28.0132	108° 11'	-1 41	32.4613
02	-0 58	01.4065	37	-1 20	05.8546	12	-1 42	10.3027
03	-0 58	39.2478	38	-1 20	43.6959	13	-1 42	48.1441
04	-0 59	17.0892	39	-1 21	21.5373	14	-1 43	25.9854
05	-0 59	54.9306	40	-1 21	59.3787	15	-1 44	03.8268
107° 06'	-1 00	32.7720	107° 41'	-1 22	37.2201	108° 16'	-1 44	41.6682
07	-1 01	10.6133	42	-1 23	15.0615	17	-1 45	19.5096
08	-1 01	48.4547	43	-1 23	52.9028	18	-1 45	57.3509
09	-1 02	26.2961	44	-1 24	30.7442	19	-1 46	35.1923
10	-1 03	04.1375	45	-1 25	08.5856	20	-1 47	13.0337
107° 11'	-1 03	41.9788	107° 46'	-1 25	46.4270	108° 21'	-1 47	50.8751
12	-1 04	19.8202	47	-1 26	24.2683	22	-1 48	28.7164
13	-1 04	57.6616	48	-1 27	02.1097	23	-1 49	06.5578
14	-1 05	35.5030	49	-1 27	39.9511	24	-1 49	44.3992
15	-1 06	13.3443	50	-1 28	17.7924	25	-1 50	22.2406
107° 16'	-1 06	51.1857	107° 51'	-1 28	55.6338	108° 26'	-1 51	00.0819
17	-1 07	29.0271	52	-1 29	33.4752	27	-1 51	37.9233
18	-1 08	06.8685	53	-1 30	11.3166	28	-1 52	15.7647
19	-1 08	44.7098	54	-1 30	49.1579	29	-1 52	53.6061
20	-1 09	22.5512	55	-1 31	26.9993	30	-1 53	31.4474

Lambert Projection for Colorado (Central)

Table II (Cont'd)

1" of Long. = 0.63068958 of θ

Long.	θ	Long.	θ
108° 31'	-1° 54' 09.2888	109° 06'	-2° 16' 13.7369
32	-1 54 47.1302	07	-2 16 51.5783
33	-1 55 24.9716	08	-2 17 29.4197
34	-1 56 02.8129	09	-2 18 07.2610
35	-1 56 40.6543	10	-2 18 45.1024
108° 36'	-1 57 18.4957	109° 11'	-2 19 22.9438
37	-1 57 56.3371	12	-2 20 00.7852
38	-1 58 34.1784	13	-2 20 38.6265
39	-1 59 12.0198	14	-2 21 16.4679
40	-1 59 49.8612	15	-2 21 54.3093
108° 41'	-2 00 27.7026	109° 16'	-2 22 32.1507
42	-2 01 05.5439	17	-2 23 09.9920
43	-2 01 43.3853	18	-2 23 47.8334
44	-2 02 21.2267	19	-2 24 25.6748
45	-2 02 59.0681	20	-2 25 03.5162
108° 46'	-2 03 36.9094	109° 21'	-2 25 41.3575
47	-2 04 14.7508	22	-2 26 19.1989
48	-2 04 52.5922	23	-2 26 57.0403
49	-2 05 30.4336	24	-2 27 34.8817
50	-2 06 08.2749	25	-2 28 12.7230
108° 51'	-2 06 46.1163	109° 26'	-2 28 50.5644
52	-2 07 23.9577	27	-2 29 28.4058
53	-2 08 01.7991	28	-2 30 06.2472
54	-2 08 39.6404	29	-2 30 44.0885
55	-2 09 17.4818	30	-2 31 21.9299
108° 56'	-2 09 55.3232		
57	-2 10 33.1646		
58	-2 11 11.0059		
59	-2 11 48.8473		
109° 00'	-2 12 26.6887		
109° 01'	-2 13 04.5300		
02	-2 13 42.3714		
03	-2 14 20.2128		
04	-2 14 58.0542		
05	-2 15 35.8955		

Lambert Projection for Colorado (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
36° 40'	27,402,231.82	0	101.14567	+655.8	1.0001510
41	27,396,163.08	6,068.74	101.14533	+630.6	1.0001452
42	27,390,094.36	12,137.46	101.14500	+605.7	1.0001395
43	27,384,025.66	18,206.16	101.14483	+581.2	1.0001338
44	27,377,956.97	24,274.85	101.14450	+557.0	1.0001283
45	27,371,888.30	30,343.52	101.14433	+533.2	1.0001228
36° 46'	27,365,819.64	36,412.18	101.14400	+509.8	1.0001174
47	27,359,751.00	42,480.82	101.14367	+486.7	1.0001121
48	27,353,682.38	48,549.44	101.14350	+464.0	1.0001068
49	27,347,613.77	54,618.05	101.14333	+441.6	1.0001017
50	27,341,545.17	60,686.65	101.14300	+419.6	1.0000966
36° 51'	27,335,476.59	66,755.23	101.14283	+397.9	1.0000916
52	27,329,408.02	72,823.80	101.14267	+376.6	1.0000867
53	27,323,339.46	78,892.36	101.14250	+355.7	1.0000819
54	27,317,270.91	84,960.91	101.14233	+335.2	1.0000772
55	27,311,202.37	91,029.45	101.14217	+315.0	1.0000725
36° 56'	27,305,133.84	97,097.98	101.14183	+295.1	1.0000679
57	27,299,065.33	103,166.49	101.14167	+275.6	1.0000635
58	27,292,996.83	109,234.99	101.14167	+256.5	1.0000591
59	27,286,928.33	115,303.49	101.14150	+237.8	1.0000548
37° 00'	27,280,859.84	121,371.98	101.14133	+219.4	1.0000505
37° 01'	27,274,791.36	127,440.46	101.14117	+201.4	1.0000464
02	27,268,722.89	133,508.93	101.14100	+183.7	1.0000423
03	27,262,654.43	139,577.39	101.14100	+166.4	1.0000383
04	27,256,585.97	145,645.85	101.14083	+149.5	1.0000344
05	27,250,517.52	151,714.30	101.14083	+132.9	1.0000306
37° 06'	27,244,449.07	157,782.75	101.14067	+116.7	1.0000269
07	27,238,380.63	163,851.19	101.14067	+100.9	1.0000232
08	27,232,312.19	169,919.63	101.14050	+85.4	1.0000197
09	27,226,243.76	175,988.06	101.14050	+70.3	1.0000162
10	27,220,175.33	182,056.49	101.14033	+55.5	1.0000128
37° 11'	27,214,106.91	188,124.91	101.14033	+41.1	1.0000095
12	27,208,038.49	194,193.33	101.14050	+27.0	1.0000062
13	27,201,970.06	200,261.76	101.14033	+13.3	1.0000031
14	27,195,901.64	206,330.18	101.14033	0.0	1.0000000
15	27,189,833.22	212,398.60	101.14033	-12.9	0.9999970

Lambert Projection for Colorado (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
37° 16'	27,183,764.80	218,467.02	101.14017	-25.5	0.9999941
17	27,177,696.39	224,535.43	101.14033	-37.8	0.9999913
18	27,171,627.97	230,603.85	101.14033	-49.7	0.9999886
19	27,165,559.55	236,672.27	101.14033	-61.2	0.9999859
20	27,159,491.13	242,740.69	101.14033	-72.3	0.9999834
37° 21'	27,153,422.71	248,809.11	101.14050	-83.1	0.9999809
22	27,147,354.28	254,877.54	101.14050	-93.5	0.9999785
23	27,141,285.85	260,945.97	101.14050	-103.5	0.9999762
24	27,135,217.42	267,014.40	101.14050	-113.3	0.9999739
25	27,129,148.99	273,082.83	101.14067	-122.6	0.9999718
37° 26'	27,123,080.55	279,151.27	101.14083	-131.5	0.9999697
27	27,117,012.10	285,219.72	101.14083	-140.1	0.9999677
28	27,110,943.65	291,288.17	101.14100	-148.3	0.9999659
29	27,104,875.19	297,356.63	101.14100	-156.2	0.9999640
30	27,098,806.73	303,425.09	101.14117	-163.7	0.9999623
37° 31'	27,092,738.26	309,493.56	101.14133	-170.8	0.9999607
32	27,086,669.78	315,562.04	101.14150	-177.6	0.9999591
33	27,080,601.29	321,630.53	101.14167	-184.0	0.9999576
34	27,074,532.79	327,699.03	101.14167	-190.0	0.9999563
35	27,068,464.29	333,767.53	101.14200	-195.7	0.9999549
37° 36'	27,062,395.77	339,836.05	101.14200	-201.0	0.9999537
37	27,056,327.25	345,904.57	101.14233	-205.9	0.9999526
38	27,050,258.71	351,973.11	101.14233	-210.5	0.9999515
39	27,044,190.17	358,041.65	101.14267	-214.7	0.9999506
40	27,038,121.61	364,110.21	101.14283	-218.6	0.9999497
37° 41'	27,032,053.04	370,178.78	101.14300	-222.1	0.9999489
42	27,025,984.46	376,247.36	101.14333	-225.2	0.9999481
43	27,019,915.86	382,315.96	101.14350	-228.0	0.9999475
44	27,013,847.25	388,384.57	101.14383	-230.4	0.9999469
45	27,007,778.62	394,453.20	101.14400	-232.4	0.9999465
37° 46'	27,001,709.98	400,521.84	101.14417	-234.1	0.9999461
47	26,995,641.33	406,590.49	101.14450	-235.4	0.9999458
48	26,989,572.66	412,659.16	101.14483	-236.3	0.9999456
49	26,983,503.97	418,727.85	101.14500	-236.9	0.9999455
50	26,977,435.27	424,796.55	101.14533	-237.1	0.9999454

Lambert Projection for Colorado (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
37° 51'	26,971,366.55	430,865.27	101.14567	-236.9	0.9999455
52	26,965,297.81	436,934.01	101.14600	-236.4	0.9999456
53	26,959,229.05	443,002.77	101.14633	-235.5	0.9999458
54	26,953,160.27	449,071.55	101.14650	-234.3	0.9999461
55	26,947,091.48	455,140.34	101.14700	-232.7	0.9999464
37° 56'	26,941,022.66	461,209.16	101.14733	-230.7	0.9999469
57	26,934,953.82	467,278.00	101.14750	-228.3	0.9999474
58	26,928,884.97	473,346.85	101.14800	-225.6	0.9999481
59	26,922,816.09	479,415.73	101.14833	-222.5	0.9999488
38° 00'	26,916,747.19	485,484.63	101.14867	-219.0	0.9999496
38° 01'	26,910,678.27	491,553.55	101.14917	-215.2	0.9999504
02	26,904,609.32	497,622.50	101.14950	-211.0	0.9999514
03	26,898,540.35	503,691.47	101.15000	-206.4	0.9999525
04	26,892,471.35	509,760.47	101.15033	-201.5	0.9999536
05	26,886,402.33	515,829.49	101.15067	-196.2	0.9999548
38° 06'	26,880,333.29	521,898.53	101.15117	-190.5	0.9999561
07	26,874,264.22	527,967.60	101.15167	-184.5	0.9999575
08	26,868,195.12	534,036.70	101.15200	-178.1	0.9999590
09	26,862,126.00	540,105.82	101.15250	-171.3	0.9999606
10	26,856,056.85	546,174.97	101.15300	-164.2	0.9999622
38° 11'	26,849,987.67	552,244.15	101.15333	-156.7	0.9999639
12	26,843,918.47	558,313.35	101.15383	-148.8	0.9999657
13	26,837,849.24	564,382.58	101.15450	-140.6	0.9999676
14	26,831,779.97	570,451.85	101.15483	-132.0	0.9999696
15	26,825,710.68	576,521.14	101.15550	-123.0	0.9999717
38° 16'	26,819,641.35	582,590.47	101.15583	-113.7	0.9999738
17	26,813,572.00	588,659.82	101.15633	-104.0	0.9999761
18	26,807,502.62	594,729.20	101.15700	-93.9	0.9999784
19	26,801,433.20	600,798.62	101.15750	-83.4	0.9999808
20	26,795,363.75	606,868.07	101.15800	-72.6	0.9999833
38° 21'	26,789,294.27	612,937.55	101.15867	-61.4	0.9999859
22	26,783,224.75	619,007.07	101.15917	-49.9	0.9999885
23	26,777,155.20	625,076.62	101.15967	-38.0	0.9999913
24	26,771,085.62	631,146.20	101.16033	-25.7	0.9999941
25	26,765,016.00	637,215.82	101.16083	-13.0	0.9999970

Lambert Projection for Colorado (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
38° 26'	26,758,946.35	643,285.47	101.16150	0.0	1.0000000
27	26,752,876.66	649,355.16	101.16217	+13.4	1.0000031
28	26,746,806.93	655,424.89	101.16283	+27.2	1.0000063
29	26,740,737.16	661,494.66	101.16333	+41.3	1.0000095
30	26,734,667.36	667,564.46	101.16400	+55.8	1.0000128
38° 31'	26,728,597.52	673,634.30	101.16450	+70.7	1.0000163
32	26,722,527.65	679,704.17	101.16533	+85.9	1.0000198
33	26,716,457.73	685,774.09	101.16600	+101.5	1.0000234
34	26,710,387.77	691,844.05	101.16667	+117.5	1.0000271
35	26,704,317.77	697,914.05	101.16733	+133.9	1.0000308
38° 36'	26,698,247.73	703,984.09	101.16783	+150.6	1.0000347
37	26,692,177.66	710,054.16	101.16867	+167.7	1.0000386
38	26,686,107.54	716,124.28	101.16933	+185.2	1.0000426
39	26,680,037.38	722,194.44	101.17017	+203.0	1.0000467
40	26,673,967.17	728,264.65	101.17083	+221.2	1.0000509
38° 41'	26,667,896.92	734,334.90	101.17150	+239.8	1.0000552
42	26,661,826.63	740,405.19	101.17233	+258.7	1.0000596
43	26,655,756.29	746,475.53	101.17300	+278.0	1.0000640
44	26,649,685.91	752,545.91	101.17383	+297.7	1.0000685
45	26,643,615.48	758,616.34	101.17450	+317.8	1.0000732
38° 46'	26,637,545.01	764,686.81	101.17533	+338.2	1.0000779
47	26,631,474.49	770,757.33	101.17600	+359.0	1.0000827
48	26,625,403.93	776,827.89	101.17683	+380.1	1.0000875
49	26,619,333.32	782,898.50	101.17767	+401.7	1.0000925
50	26,613,262.66	788,969.16	101.17850	+423.6	1.0000975
38° 51'	26,607,191.95	795,039.87	101.17933	+445.9	1.0001027
52	26,601,121.19	801,110.63	101.18017	+468.5	1.0001079
53	26,595,050.38	807,181.44	101.18100	+491.6	1.0001132
54	26,588,979.52	813,252.30	101.18167	+515.0	1.0001186
55	26,582,908.62	819,323.20	101.18267	+538.7	1.0001240
38° 56'	26,576,837.66	825,394.16	101.18350	+562.9	1.0001296
57	26,570,766.65	831,465.17	101.18450	+587.4	1.0001353
58	26,564,695.58	837,536.24	101.18517	+612.2	1.0001410
59	26,558,624.47	843,607.35	101.18617	+637.5	1.0001468
39° 00'	26,552,553.30	849,678.52		+663.1	1.0001527

Lambert Projection for Colorado (South)

Table II

1" of Long. = 0.61337805 of θ

Long.	θ		Long.	θ		Long.	θ	
101° 40'	+2° 21'	04.6171	102° 16'	+1° 58'	59.7205	102° 51'	+1° 37'	31.6266
41	+2 20	27.8144	17	+1 58	22.9179	52	+1 36	54.8239
42	+2 19	51.0118	18	+1 57	46.1152	53	+1 36	18.0213
43	+2 19	14.2091	19	+1 57	09.3125	54	+1 35	41.2186
44	+2 18	37.4064	20	+1 56	32.5098	55	+1 35	04.4159
45	+2 18	00.6037						
101° 46'	+2 17	23.8010	102° 21'	+1 55	55.7071	102° 56'	+1 34	27.6132
47	+2 16	46.9983	22	+1 55	18.9044	57	+1 33	50.8105
48	+2 16	10.1957	23	+1 54	42.1018	58	+1 33	14.0078
49	+2 15	33.3930	24	+1 54	05.2991	59	+1 32	37.2052
50	+2 14	56.5903	25	+1 53	28.4964	103° 00'	+1 32	00.4025
101° 51'	+2 14	19.7876	102° 26'	+1 52	51.6937	103° 01'	+1 31	23.5998
52	+2 13	42.9849	27	+1 52	14.8910	02	+1 30	46.7971
53	+2 13	06.1822	28	+1 51	38.0883	03	+1 30	09.9944
54	+2 12	29.3796	29	+1 51	01.2857	04	+1 29	33.1917
55	+2 11	52.5769	30	+1 50	24.4830	05	+1 28	56.3891
101° 56'	+2 11	15.7742	102° 31'	+1 49	47.6803	103° 06'	+1 28	19.5864
57	+2 10	38.9715	32	+1 49	10.8776	07	+1 27	42.7837
58	+2 10	02.1688	33	+1 48	34.0749	08	+1 27	05.9810
59	+2 09	25.3661	34	+1 47	57.2722	09	+1 26	29.1783
102° 00'	+2 08	48.5635	35	+1 47	20.4696	10	+1 25	52.3756
102° 01'	+2 08	11.7608	102° 36'	+1 46	43.6669	103° 11'	+1 25	15.5730
02	+2 07	34.9581	37	+1 46	06.8642	12	+1 24	38.7703
03	+2 06	58.1554	38	+1 45	30.0615	13	+1 24	01.9676
04	+2 06	21.3527	39	+1 44	53.2588	14	+1 23	25.1649
05	+2 05	44.5500	40	+1 44	16.4561	15	+1 22	48.3622
102° 06'	+2 05	07.7474	102° 41'	+1 43	39.6535	103° 16'	+1 22	11.5595
07	+2 04	30.9447	42	+1 43	02.8508	17	+1 21	34.7569
08	+2 03	54.1420	43	+1 42	26.0481	18	+1 20	57.9542
09	+2 03	17.3393	44	+1 41	49.2454	19	+1 20	21.1515
10	+2 02	40.5366	45	+1 41	12.4427	20	+1 19	44.3488
102° 11'	+2 02	03.7340	102° 46'	+1 40	35.6400	103° 21'	+1 19	07.5461
12	+2 01	26.9313	47	+1 39	58.8374	22	+1 18	30.7434
13	+2 00	50.1286	48	+1 39	22.0347	23	+1 17	53.9408
14	+2 00	13.3259	49	+1 38	45.2320	24	+1 17	17.1381
15	+1 59	36.5232	50	+1 38	08.4293	25	+1 16	40.3354

Lambert Projection for Colorado (South)

Table II (Cont'd)

1" of Long. = 0.61337805 of θ

Long.	θ	Long.	θ	Long.	θ
103° 26'	+1° 16' 03.5327	104° 01'	+0° 54' 35.4388	104° 36'	+0° 33' 07.3449
27	+1 15 26.7300	02	+0 53 58.6361	37	+0 32 30.5422
28	+1 14 49.9273	03	+0 53 21.8334	38	+0 31 53.7395
29	+1 14 13.1247	04	+0 52 45.0308	39	+0 31 16.9368
30	+1 13 36.3220	05	+0 52 08.2281	40	+0 30 40.1342
103° 31'	+1 12 59.5193	104° 06'	+0 51 31.4254	104° 41'	+0 30 03.3315
32	+1 12 22.7166	07	+0 50 54.6227	42	+0 29 26.5288
33	+1 11 45.9139	08	+0 50 17.8200	43	+0 28 49.7261
34	+1 11 09.1112	09	+0 49 41.0173	44	+0 28 12.9234
35	+1 10 32.3086	10	+0 49 04.2147	45	+0 27 36.1207
103° 36'	+1 09 55.5059	104° 11'	+0 48 27.4120	104° 46'	+0 26 59.3181
37	+1 09 18.7032	12	+0 47 50.6093	47	+0 26 22.5154
38	+1 08 41.9005	13	+0 47 13.8066	48	+0 25 45.7127
39	+1 08 05.0978	14	+0 46 37.0039	49	+0 25 08.9100
40	+1 07 28.2951	15	+0 46 00.2012	50	+0 24 32.1073
103° 41'	+1 06 51.4925	104° 16'	+0 45 23.3986	104° 51'	+0 23 55.3046
42	+1 06 14.6898	17	+0 44 46.5959	52	+0 23 18.5020
43	+1 05 37.8871	18	+0 44 09.7932	53	+0 22 41.6993
44	+1 05 01.0844	19	+0 43 32.9905	54	+0 22 04.8966
45	+1 04 24.2817	20	+0 42 56.1878	55	+0 21 28.0939
103° 46'	+1 03 47.4790	104° 21'	+0 42 19.3851	104° 56'	+0 20 51.2912
47	+1 03 10.6764	22	+0 41 42.5825	57	+0 20 14.4885
48	+1 02 33.8737	23	+0 41 05.7798	58	+0 19 37.6859
49	+1 01 57.0710	24	+0 40 28.9771	59	+0 19 00.8832
50	+1 01 20.2683	25	+0 39 52.1744	105° 00'	+0 18 24.0805
103° 51'	+1 00 43.4656	104° 26'	+0 39 15.3717	105° 01'	+0 17 47.2778
52	+1 00 06.6630	27	+0 38 38.5690	02	+0 17 10.4751
53	+0 59 29.8603	28	+0 38 01.7664	03	+0 16 33.6724
54	+0 58 53.0576	29	+0 37 24.9637	04	+0 15 56.8698
55	+0 58 16.2549	30	+0 36 48.1610	05	+0 15 20.0671
103° 56'	+0 57 39.4522	104° 31'	+0 36 11.3583	105° 06'	+0 14 43.2644
57	+0 57 02.6495	32	+0 35 34.5556	07	+0 14 06.4617
58	+0 56 25.8469	33	+0 34 57.7529	08	+0 13 29.6590
59	+0 55 49.0442	34	+0 34 20.9503	09	+0 12 52.8563
104° 00'	+0 55 12.2415	35	+0 33 44.1476	10	+0 12 16.0537

Table II (Cont'd)

1" of Long. = 0.61337805 of θ

Long.	θ	Long.	θ	Long.	θ
105° 11'	+0° 11' 39.2510	105° 46'	-0° 09' 48.8429	106° 21'	-0° 31' 16.9368
12	+0 11 02.4483	47	-0 10 25.6456	22	-0 31 53.7395
13	+0 10 25.6456	48	-0 11 02.4483	23	-0 32 30.5422
14	+0 09 48.8429	49	-0 11 39.2510	24	-0 33 07.3449
15	+0 09 12.0402	50	-0 12 16.0537	25	-0 33 44.1476
105° 16'	+0 08 35.2376	105° 51'	-0 12 52.8563	106° 26'	-0 34 20.9503
17	+0 07 58.4349	52	-0 13 29.6590	27	-0 34 57.7529
18	+0 07 21.6322	53	-0 14 06.4617	28	-0 35 34.5556
19	+0 06 44.8295	54	-0 14 43.2644	29	-0 36 11.3583
20	+0 06 08.0268	55	-0 15 20.0671	30	-0 36 48.1610
105° 21'	+0 05 31.2241	105° 56'	-0 15 56.8698	106° 31'	-0 37 24.9637
22	+0 04 54.4215	57	-0 16 33.6724	32	-0 38 01.7664
23	+0 04 17.6188	58	-0 17 10.4751	33	-0 38 38.5690
24	+0 03 40.8161	59	-0 17 47.2778	34	-0 39 15.3717
25	+0 03 04.0134	105° 00'	-0 18 24.0805	35	-0 39 52.1744
105° 26'	+0 02 27.2107	106° 01'	-0 19 00.8832	106° 36'	-0 40 28.9771
27	+0 01 50.4080	02	-0 19 37.6859	37	-0 41 05.7798
28	+0 01 13.6054	03	-0 20 14.4885	38	-0 41 42.5825
29	+0 00 36.8027	04	-0 20 51.2912	39	-0 42 19.3851
30	0 00 00.0000	05	-0 21 28.0939	40	-0 42 56.1878
105° 31'	-0 00 36.8027	106° 06'	-0 22 04.8966	106° 41'	-0 43 32.9905
32	-0 01 13.6054	07	-0 22 41.6993	42	-0 44 09.7932
33	-0 01 50.4080	08	-0 23 18.5020	43	-0 44 46.5959
34	-0 02 27.2107	09	-0 23 55.3046	44	-0 45 23.3986
35	-0 03 04.0134	10	-0 24 32.1073	45	-0 46 00.2012
105° 36'	-0 03 40.8161	106° 11'	-0 25 08.9100	106° 46'	-0 46 37.0039
37	-0 04 17.6188	12	-0 25 45.7127	47	-0 47 13.8066
38	-0 04 54.4215	13	-0 26 22.5154	48	-0 47 50.6093
39	-0 05 31.2241	14	-0 26 59.3181	49	-0 48 27.4120
40	-0 06 08.0268	15	-0 27 36.1207	50	-0 49 04.2147
105° 41'	-0 06 44.8295	106° 16'	-0 28 12.9234	106° 51'	-0 49 41.0173
42	-0 07 21.6322	17	-0 28 49.7261	52	-0 50 17.8200
43	-0 07 58.4349	18	-0 29 26.5288	53	-0 50 54.6227
44	-0 08 35.2376	19	-0 30 03.3315	54	-0 51 31.4254
45	-0 09 12.0402	20	-0 30 40.1342	55	-0 52 08.2281

Lambert Projection for Colorado (South)

Table II (Cont'd)

1" of Long. = 0.61337805 of θ

Long.	θ	Long.	θ	Long.	θ
106° 56'	-0° 52' 45.0308	107° 31'	-1° 14' 13.1247	108° 06'	-1° 35' 41.2186
57	-0 53 21.8334	32	-1 14 49.9273	07	-1 36 18.0213
58	-0 53 58.6361	33	-1 15 26.7300	08	-1 36 54.8239
59	-0 54 35.4388	34	-1 16 03.5327	09	-1 37 31.6266
107° 00'	-0 55 12.2415	35	-1 16 40.3354	10	-1 38 08.4293
107° 01'	-0 55 49.0442	107° 36'	-1 17 17.1381	108° 11'	-1 38 45.2320
02	-0 56 25.8469	37	-1 17 53.9408	12	-1 39 22.0347
03	-0 57 02.6495	38	-1 18 30.7434	13	-1 39 58.8374
04	-0 57 39.4522	39	-1 19 07.5461	14	-1 40 35.6400
05	-0 58 16.2549	40	-1 19 44.3488	15	-1 41 12.4427
107° 06'	-0 58 53.0576	107° 41'	-1 20 21.1515	108° 16'	-1 41 49.2454
07	-0 59 29.8603	42	-1 20 57.9542	17	-1 42 26.0481
08	-1 00 06.6630	43	-1 21 34.7569	18	-1 43 02.8508
09	-1 00 43.4656	44	-1 22 11.5595	19	-1 43 39.6535
10	-1 01 20.2683	45	-1 22 48.3622	20	-1 44 16.4561
107° 11'	-1 01 57.0710	107° 46'	-1 23 25.1649	108° 21'	-1 44 53.2588
12	-1 02 33.8737	47	-1 24 01.9676	22	-1 45 30.0615
13	-1 03 10.6764	48	-1 24 38.7703	23	-1 46 06.8642
14	-1 03 47.4790	49	-1 25 15.5730	24	-1 46 43.6669
15	-1 04 24.2817	50	-1 25 52.3756	25	-1 47 20.4696
107° 16'	-1 05 01.0844	107° 51'	-1 26 29.1783	108° 26'	-1 47 57.2722
17	-1 05 37.8871	52	-1 27 05.9810	27	-1 48 34.0749
18	-1 06 14.6898	53	-1 27 42.7837	28	-1 49 10.8776
19	-1 06 51.4925	54	-1 28 19.5864	29	-1 49 47.6803
20	-1 07 28.2951	55	-1 28 56.3891	30	-1 50 24.4830
107° 21'	-1 08 05.0978	107° 56'	-1 29 33.1917	108° 31'	-1 51 01.2857
22	-1 08 41.9005	57	-1 30 09.9944	32	-1 51 38.0883
23	-1 09 18.7032	58	-1 30 46.7971	33	-1 52 14.8910
24	-1 09 55.5059	59	-1 31 23.5998	34	-1 52 51.6937
25	-1 10 32.3086	108° 00'	-1 32 00.4025	35	-1 53 28.4964
107° 26'	-1 11 09.1112	108° 01'	-1 32 37.2052	108° 36'	-1 54 05.2991
27	-1 11 45.9139	02	-1 33 14.0078	37	-1 54 42.1018
28	-1 12 22.7166	03	-1 33 50.8105	38	-1 55 18.9044
29	-1 12 59.5193	04	-1 34 27.6132	39	-1 55 55.7071
30	-1 13 36.3220	05	-1 35 04.4159	40	-1 56 32.5098

Lambert Projection for Colorado (South)

Table II (Cont'd)

1" of Long. = 0.61337805 of θ

Long.	θ	Long.	θ
108° 41'	-1° 57' 09.3125	109° 16'	-2° 18' 37.4064
42	-1 57 46.1152	17	-2 19 14.2091
43	-1 58 22.9179	18	-2 19 51.0118
44	-1 58 59.7205	19	-2 20 27.8144
45	-1 59 36.5232	20	-2 21 04.6171
108° 46'	-2 00 13.3259		
47	-2 00 50.1286		
48	-2 01 26.9313		
49	-2 02 03.7340		
50	-2 02 40.5366		
108° 51'	-2 03 17.3393		
52	-2 03 54.1420		
53	-2 04 30.9447		
54	-2 05 07.7474		
55	-2 05 44.5500		
108° 56'	-2 06 21.3527		
57	-2 06 58.1554		
58	-2 07 34.9581		
59	-2 08 11.7608		
109° 00'	-2 08 48.5635		
109° 01'	-2 09 25.3661		
02	-2 10 02.1688		
03	-2 10 38.9715		
04	-2 11 15.7742		
05	-2 11 52.5769		
109° 06'	-2 12 29.3796		
07	-2 13 06.1822		
08	-2 13 42.9849		
09	-2 14 19.7876		
10	-2 14 56.5903		
109° 11'	-2 15 33.3930		
12	-2 16 10.1957		
13	-2 16 46.9983		
14	-2 17 23.8010		
15	-2 18 00.6037		

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

For Lambert Projection				For Lambert or transverse Mercator Projection	
$\Delta\phi'$ as argument				Δy or Δx	Corr'n (Plus)
$\Delta\phi'$	Corr'n (Plus)	$\Delta\phi'$	Corr'n (Plus)		
1	0	31	34	10,000	0
2	0	32	36	20,000	0
3	0	33	38	30,000	1
4	1	34	40	40,000	2
5	1	35	43	50,000	2
6	1	36	45	60,000	3
7	2	37	48	70,000	5
8	2	38	51	80,000	6
9	3	39	53	90,000	8
10	4	40	56	100,000	10
11	4	41	59	110,000	11
12	5	42	62	120,000	14
13	6	43	65	130,000	16
14	7	44	68	140,000	19
15	8	45	71	150,000	21
16	9	46	74	160,000	24
17	10	47	77	170,000	27
18	11	48	81	180,000	31
19	13	49	84	190,000	34
20	14	50	88	200,000	38
21	15	51	91	210,000	42
22	17	52	95	220,000	46
23	19	53	98	230,000	50
24	20	54	102	240,000	55
25	22	55	106	250,000	59
26	24	56	110	260,000	64
27	26	57	114	270,000	69
28	27	58	118	280,000	74
29	29	59	122	290,000	80
30	32	60	126	300,000	86
				310,000	91
				320,000	97
				330,000	103
				340,000	110
				350,000	116

$\Delta\phi'$ is the difference in latitude in minutes of the ends of the line.

*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.