

KANSAS AND OKLAHOMA.

PRIMARY TRAVERSE.

Columbus, Joplin, Parsons, and Wyandotte quadrangles.

CHEROKEE COUNTY.

In the spring of 1916 J. H. Wilson extended control for the above-named quadrangles from primary traverse stations previously located in near-by parts of Kansas and Missouri. (See Missouri list also.) The line was tied to Edwards triangulation station.

Positions are on approximate North American datum.

COLUMBUS QUADRANGLE, KANS.

South along highways near west border of quadrangle, north half. (By J. H. Wilson in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
T. 32 S., R. 22 E., corner of secs. 21, 22, 27, and 28, crossroads at church.....	° ' '' 37 14 16.2	° ' '' 94 59 42.2	Feet. -----
T. 32 S., R. 22 E., corner of secs. 27, 28, 33, and 34, crossroads.....	37 13 23.5	94 59 42.7	5,330
Tps. 32 and 33 S., R. 22 E., corner of secs. 3, 4, 33, and 34, crossroads at district 11 schoolhouse.....	37 12 30.8	94 59 42.6	5,335
T. 33 S., R. 22 E., corner of secs. 3, 4, 9, and 10, crossroads.....	37 11 37.8	94 59 42.8	5,355
Hallowell, northeast corner of village, T. 33 S., R. 22 E., stone corner of secs. 9, 10, 15, and 16, crossroads at schoolhouse.....	37 10 45.1	94 59 42.2	5,330
Hallowell, railroad crossing, about 800 feet east of depot.....	37 10 29.8	94 59 42.3	1,555
T. 33 S., R. 22 E., corner of secs. 15, 16, 21, and 22, crossroads.....	37 09 52.3	94 59 42.5	3,785
T. 33 S., R. 22 E., corner of secs. 21, 22, 27, and 28, crossroads.....	37 08 59.0	94 59 42.6	5,395
T. 33 S., R. 22 E., 25 feet south by 25 feet east of corner of secs. 27, 28, 33, and 34, at southeast corner of crossroads; iron post stamped "Prim. Trav. Sta. No. 19, 1916".....	37 08 05.7	94 59 42.5	5,382

Along highways through center of quadrangle.

T. 33 S., R. 22 E., corner of secs. 26, 27, 34, and 35, crossroads.....	37 08 05.8	94 58 36.9	-----
T. 33 S., R. 22 E., corner of secs. 25, 26, 35, and 36, crossroads.....	37 08 05.7	94 57 31.5	5,300
T. 33 S., Rs. 22 and 23 E., corner of secs. 25, 30, 31, and 36, crossroads.....	37 08 05.5	94 56 25.9	5,315
T. 33 S., R. 23 E., corner of secs. 29, 30, 31, and 32, crossroads.....	37 08 05.0	94 55 20.6	5,285
T. 33 S., R. 23 E., corner of secs. 28, 29, 32, and 33, crossroads.....	37 08 04.7	94 54 15.3	5,290
T. 33 S., R. 23 E., 25 feet south by 35 feet east of corner of secs. 27, 28, 33, and 34, at southeast corner of crossroads; iron post stamped "Prim. Trav. Sta. No. 20, 1916".....	37 08 03.8	94 53 09.1	5,360

East along highways through center of quadrangle.

T. 33 S., R. 23 E., stone corner of secs. 26, 27, 34, and 35, crossroads at Mitchell schoolhouse.....	37 08 03.8	94 52 04.1	5,268
T. 33 S., R. 23 E., corner of secs. 25, 26, 35, and 36, crossroads.....	37 08 03.5	94 50 58.7	5,292
T. 33 S., Rs. 23 and 24 E., corner of secs. 25, 30, 31, and 36, crossroads.....	37 08 02.9	94 49 53.4	5,290
T. 33 S., R. 24 E., corner of secs. 29, 30, 31, and 32, crossroads.....	37 08 02.7	94 48 48.4	5,260
T. 33 S., R. 24 E., corner of secs. 28, 29, 32, and 33, T road north.....	37 08 02.6	94 47 42.8	5,314
T. 33 S., R. 24 E., corner of secs. 27, 28, 33, and 34, T road north.....	37 08 02.6	94 46 37.0	5,303
T. 33 S., R. 24 E., corner of secs. 26, 27, 34, and 35, crossroads.....	37 08 02.5	94 45 31.4	5,310

COLUMBUS QUADRANGLE, KANS.—Continued.

West along St. Louis-San Francisco Ry. (1900 traverse line.)

Station.	Latitude.	Longitude.	Distance between stations.
T. 33 S., R. 24 E., quarter corner between secs. 16 and 17; railroad crossing is 40 feet south.....	° ' '' 37 10 14.9	° ' '' 94 47 43.3	Feet.
Columbus, east of, at crossing of Kansas City, Pittsburg & Gulf Ry.....	37 10 32.0	94 50 14.3	12,351
Columbus, at station.....	37 10 30.8	94 50 34.6	1,649
Road crossing (see Wilson's traverse above).....	37 10 43.8	94 54 15.2	17,903
Sherwin crossing of Missouri Pacific R. R.....	37 10 45.1	94 56 53.9	12,796
T. 33 S., R. 22 E., corner of secs. 11, 12, 13, and 14; railroad crossing is 100 feet north.....	37 10 44.3	94 57 31.4	3,041
Road crossing (see Wilson's traverse).....	37 10 29.8	94 59 42.3	2,450

Magnetic declination for north and south borders and along center line of quadrangle, 8.8° E.; for west border of quadrangle, 8.9° E.

South along highways along south half of west border of quadrangle.

Tps. 33 and 34 S., R. 22 E., corner of secs. 3, 4, 33, and 34, crossroads.....	37 07 13.1	94 59 42.6	.....
T. 34 S., R. 22 E., corner of secs. 3, 4, 9, and 10, 1 mile east of Faulkner, crossroads.....	37 06 18.7	94 59 42.6	5,500
T. 34 S., R. 22 E., corner of secs. 9, 10, 15, and 16, crossroads.....	37 05 24.6	94 59 42.7	5,460
T. 34 S., R. 22 E., corner of secs. 15, 16, 21, and 22, crossroads.....	37 04 32.2	94 59 42.4	5,295
T. 34 S., R. 22 E., corner of secs. 21, 22, 27, and 28, crossroads.....	37 03 41.0	94 59 41.8	5,175
Pleasant Valley schoolhouse, T. 34 S., R. 22 E., corner of secs. 27, 28, 33, and 34, crossroads.....	37 02 48.5	94 59 41.5	5,305
Tps. 34 and 35 S., R. 22 E., corner of secs. 3, 4, 33, and 34, crossroads.....	37 01 55.6	94 59 41.5	5,345
Fairview schoolhouse, T. 35 S., R. 22 E., corner of secs. 3, 4, 9, and 10, crossroads.....	37 01 03.0	94 59 41.5	5,320
T. 35 S., R. 22 E., corner of secs. 9, 10, 15, and 16, T road east and lane west.....	37 00 10.6	94 59 41.7	5,300

At Edwards triangulation station.

Edwards triangulation station, on a prairie hill locally known as Blue Mound, 0.3 mile north of south line of Kansas, at point 6 miles west of Baxter Springs on land of Mr. Edwards; iron post (Bull. 440, p. 490) North American datum.....	37 00 13.2	94 49 25.9	.....
Value on Indian Territory datum.....	37 00 14.6	94 49 23.9	.....
NOTE.—For positions along the Kansas-Oklahoma State line near south border of quadrangle see Wyandotte quadrangle.			

JOPLIN 30' QUADRANGLE, NORTHEAST QUARTER, KANS.

Near southwest corner of 15' quadrangle. (By J. H. Wilson in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
T. 32 S., R. 24 E., 20 feet south by 30 feet west of corner secs. 13, 14, 23, and 24, at southwest corner of crossroads; iron post stamped "Prim. Trav. Sta. No. 16, 1916".....	° ' '' 37 15 05.1	° ' '' 94 44 28.8	Feet.

Magnetic declination for southwest corner of quadrangle, 8.7° E.

JOPLIN 30' QUADRANGLE, NORTHWEST QUARTER, KANS.

West along highways near south border of quadrangle. (By J. H. Wilson in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
T. 32 S., R. 24 E., corner of secs. 14, 15, 22, and 23, crossroads.....	37 15 05.6	94 45 33.8	.....
T. 32 S., R. 24 E., corner of secs. 15, 16, 21, and 22, crossroads.....	37 15 05.9	94 46 38.9	5,260
T. 32 S., R. 24 E., corner of secs. 16, 17, 20, and 21, crossroads.....	37 15 06.4	94 47 44.6	5,310
T. 32 S., R. 24 E., corner of secs. 17, 18, 19, and 23, crossroads.....	37 15 06.7	94 48 49.7	5,270
Skidmore, 1 mile north of, at road crossing on St. Louis-San Francisco Ry.....	37 15 07.0	94 49 34.3	3,600
Crowe 10, T. 32 S., Rs. 23 and 24 E., crossroads at district 91 schoolhouse.....	37 15 07.1	94 49 54.4	1,625
West Skidmore, T. 32 S., R. 23 E., corner of secs. 13, 14, 23, and 24, at crossroads.....	37 15 07.4	94 50 59.9	5,295
T. 32 S., R. 23 E., corner of secs. 14, 15, 22, and 23, at crossroads.....	37 15 07.6	94 52 05.3	5,290
T. 32 S., R. 23 E., 20 feet south by 25 feet east of corner of secs. 15, 16, 21, and 22, at southeast corner of crossroads; iron post stamped "Prim. Trav. Sta. No. 17, 1916".....	37 15 07.5	94 53 10.5	5,269
T. 32 S., R. 23 E., corner of secs. 16, 17, 20, and 21, at crossroads at Miriam schoolhouse.....	37 15 08.1	94 54 16.4	5,330
Road north.....	37 15 08.6	94 55 18.9	5,050
T. 32 S., Rs. 22 and 23 E., corner of secs. 13, 24, 18, and 19, crossroads.....	37 15 09.3	94 56 25.3	5,270
T. 32 S., R. 22 E., corner of secs. 13, 14, 23, and 24, crossroads.....	37 15 08.7	94 57 30.6	5,274
T. 32 S., R. 22 E., corner of secs. 14, 15, 22, and 23, crossroads.....	37 15 08.4	94 58 35.8	5,275
T. 32 S., R. 22 E., 25 feet south by 18 feet west of corner of secs. 15, 16, 21, and 22, at southwest corner of crossroads; iron post stamped "Prim. Trav. Sta. No. 18, 1916".....	37 15 08.0	94 59 41.5	5,307

Magnetic declination for south border of quadrangle, 8.8° E.

JOPLIN DISTRICT QUADRANGLE, KANS.

West along highways near State line and north border of quadrangle. (By J. H. Wilson in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Waco, Mo., 1 mile west of, 25 feet east of Kansas-Missouri State line, 25 feet east by 20 feet south of west corner of fractional sections 10 and 15, T. 29 N., R. 34 W., at southeast corner of T road east; iron post stamped "Prim. Trav. Sta. No. 14, 1916 Mo.".....	37 14 50.4	94 37 03.8	.....
T. 32 S., R. 25 E., east corner of fractional sections 24 and 25, at T road west on State line; west corner of secs. 15 and 22, T. 29 N., R. 34 W., is 1,400 feet south.....	37 14 12.3	94 37 04.3	3,850
T. 32 S., R. 25 E., east corner of fractional sections 25 and 36, T road west on State line.....	37 13 19.9	94 37 04.4	5,300
Lawton, at crossroads.....	37 13 20.0	94 38 09.5	5,270
T. 32 S., R. 25 E., corner of secs. 26, 27, 34, and 35, T road south.....	37 13 20.5	94 38 58.9	3,994
T. 32 S., R. 25 E., corner of secs. 27, 28, 33, and 34, T road south.....	37 13 20.2	94 40 05.0	5,345
T. 32 S., R. 25 E., corner of secs. 28, 29, 32, and 33, crossroads.....	37 13 20.0	94 41 11.3	5,360
T. 32 S., R. 25 E., corner of secs. 29, 30, 31, and 32, crossroads.....	37 13 19.8	94 42 16.8	5,300
T. 32 S., Rs. 24 and 25 E., corner of secs. 25, 36, 30, and 31, cr ossroads.....	37 13 19.6	94 43 21.7	5,245
T. 32 S., R. 24 E., corner of secs. 25, 26, 35, and 36, crossroads.....	37 13 19.9	94 44 27.6	5,330

South along highways near west border of quadrangle.

T. 32 S., R. 24 E., corner of secs. 23, 24, 25, and 26, just east of steel bridge over Shawnee Creek, crossroads.....	37 14 12.6	94 44 27.9	5,328
Tps. 32 and 33 S., R. 24 E., corner of secs. 1, 2, 35, and 36, crossroads.....	37 12 26.9	94 44 26.9	5,362
T. 33 S., R. 24 E., corner of secs. 1, 2, 11, and 12, crossroads.....	37 11 34.2	94 44 26.7	5,327
T. 33 S., R. 24 E., corner of secs. 11, 12, 13 and 14, crossroads.....	37 10 41.2	94 44 26.5	5,365
T. 33 S., R. 24 E., quarter corner between secs. 13 and 14, railroad crossing.....	37 10 14.4	94 44 26.5	2,710

JOPLIN DISTRICT QUADRANGLE, KANS.—Continued.

(Hawkins 1900 traverse.)

Station.	Latitude.	Longitude.	Distance between stations.
T. 33 S., R. 24 E., corner of secs. 13, 14, 23, and 24, crossroads at schoolhouse.....	° ' " 37 09 48.1	° ' " 94 44 26.4	Feet. 2,655
T. 33 S., R. 24 E., corner of secs. 23, 24, 25, and 26, crossroads.....	37 08 55.3	94 44 25.9	5,335
T. 33 S., R. 24 E., corner of secs. 25, 26, 35, and 36, T road north.....	37 08 02.4	94 44 25.9	5,344
T. 33 S., R. 24 E., 20 feet north of quarter corner between secs. 26 and 35, on north side of east and west road, in line with T road south; iron post stamped "Prim. Trav. Sta. No. 15, 1916".....	37 08 02.8	94 44 58.4	2,637
Tps. 33 and 34 S., R. 24 E., corner of secs. 1, 2, 35, and 36, T road south.....	37 07 09.4	94 44 25.7	6,008
T. 34 S., R. 24 E., corner of secs. 1, 2, 11, and 12, crossroads.....	37 06 17.1	94 44 25.9	5,290
T. 34 S., R. 24 E., corner of secs. 11, 12, 13, and 14, crossroads.....	37 05 24.7	94 44 26.2	5,300
T. 34 S., R. 24 E., corner of secs. 13, 14, 23, and 24, T road east.....	37 04 32.3	94 44 26.4	5,290
Birch Creek, south end of bridge over.....	37 04 24.3	94 44 26.8	814
T. 34 S., R. 24 E., stone corner of secs. 23, 24, 25, and 26, T road west.....	37 03 39.5	94 44 26.2	4,525
T. 34 S., R. 24 E., corner of secs. 25, 26, 35, and 36, crossroads.....	37 02 45.6	94 44 25.7	5,445
Baxter, Tps. 34 and 35 S., R. 24 E., corner of secs. 35, 36, 1, and 2, T road north.....	37 01 52.1	94 44 25.2	5,415
Baxter Springs, intersection of Military and River streets.....	37 01 25.2	94 44 06.6	3,107
Bull. 440, p. 490, value.....	37 01 26.6	94 44 04.5	.....

Magnetic declination for north border of quadrangle, 8.4° E.; for west border of quadrangle, 8.7° E.

Northwest along St. Louis-San Francisco Ry. (By G. T. Hawkins in 1900.)

Crossing of Missouri-Kansas State line.....	37 09 58.4	94 37 04.4	.....
T. 33 S., R. 25 E., quarter corner between secs. 17 and 18, crossing.....	37 10 14.2	94 42 15.0	25,194
Crestline, at station.....	37 10 14.2	94 42 18.9	310
T. 33 S., R. 24 E., quarter corner between secs. 13 and 14, crossing.....	37 10 14.4	94 44 26.5	10,320

PARSONS QUADRANGLE, KANS.

Along St. Louis-San Francisco Ry. (a spur line of 1900 to Oswego Astronomical Station.) (By J. H. Wilson in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
Oswego, 3 miles east of, 70 feet south of road crossing at section corner, 3,560 feet east of middle of Neosho River.....	° ' " 37 09 52.7	° ' " 95 02 59.2	Feet.
Oswego, courthouse spire.....	37 09 55.3	95 06 26.9	16,813
Astronomical value.....	37 09 58.9	95 06 24.1	.....

WYANDOTTE QUADRANGLE, KANS.-OKLA.

East along highways near State line (north border of quadrangle). (By J. H. Wilson in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
T. 35 S., R. 22 E., 20 feet south of south corner of secs. 15 and 16 and Kansas Oklahoma State line, on south side of road, opposite T road north; iron post stamped "Prim. Trav. Sta. No. 21, 1916".	° ' " 36 59 58.1	° ' " 94 59 41.7	Feet.
NOTE.—T road south at north corner of secs. 13 and 14, T. 29 N., R. 21 E., is 15 feet north by 630 feet east.			
T. 35 S., R. 22 E., south corner of secs. 14 and 15, at T road north	36 59 58.1	94 58 36.3	5,300
NOTE.—T lane south at north corner of secs. 13 and 18, T, 29 N., Rs. 21 and 22 E., is 610 feet east.			
T. 35 S., R. 22 E., south corner of secs. 13 and 14, at T road north	36 59 57.9	94 57 30.6	5,330
NOTE.—T lane south at north corner of secs. 17 and 18, T, 29 N., R. 22 E., is 470 feet east of above.			
T. 35 S., Rs. 22 and 23 E., south corner of secs. 13 and 18, at T road north	36 59 57.3	94 56 25.3	5,300
T. 35 S., R. 23 E., south corner of secs. 17 and 18, at T road north	36 59 57.0	94 55 20.0	5,295
NOTE.—From above corner eastward the State line is in center of road.			
T. 35 S., R. 23 E., south corner of secs. 16 and 17, T road north	36 59 56.5	94 54 14.6	5,300
NOTE.—North corner of secs. 14 and 15, T. 29 N., R. 22 E., is 410 feet east of above.			
T. 35 S., R. 23 E., south corner of secs. 15 and 16, T road north	36 59 56.0	94 53 09.4	5,290
NOTE.—North corner of secs. 13 and 14, T. 29 N., R. 22 E., at T road south, is 420 feet east.			
T. 35 S., R. 23 E., south corner of secs. 14 and 15, T road north	36 59 56.2	94 52 03.5	5,350
NOTE.—North corner of secs. 13 and 18, T. 29 N., Rs. 22 and 23 E., at road south is 300 feet east.			
T. 35 S., R. 23 E., south corner of secs. 13 and 14, T road north	36 59 56.0	94 50 58.1	5,299
T. 35 S., Rs. 23 and 24 E., south corner of secs. 23 and 18, T road north	36 59 55.8	94 49 52.5	5,320
NOTE.—North corner of secs. 16 and 17, T. 29 N., R. 24 E., at T road south is 160 feet east.			

Along highways near State line (north border of quadrangle) by traverse of 1906, taken from Bulletin 440, page 490, corrected.

NOTE.—For Edwards triangulation station, see Columbus, Kans., quadrangle.			
T. 33 S., R. 24 E., southeast corner of sec. 18, T road north	36 59 55.6	94 48 47.2	.....
T. 33 S., R. 24 E., southeast corner of sec. 17, T road north	36 59 55.8	94 47 41.5	5,330
T. 33 S., R. 24 E., southeast corner of sec. 16, T road north	36 59 55.4	94 46 36.1	5,305
T. 33 S., R. 24 E., southeast corner of sec. 15, T road north	36 59 55.0	94 45 30.5	5,322
Baxter Springs, 2 miles south of, at T road north on Kansas-Oklahoma State line, 2 feet north of east and west wire fence, south of line road; iron post stamped "Prim. Trav. Sta. No. 11, 1906"	36 59 55.2	94 44 09.0	6,611
Kansas, southeast corner	36 59 55.6	94 37 03.2	34,542

Magnetic declination for north border, 1916, 8.7° E.

MISSOURI.

PRIMARY TRAVERSE.

Carthage, Greenfield, Halltown, Joplin, Sarcoxie, Springfield, and Stotts City quadrangles.

DADE, JASPER, AND LAWRENCE COUNTIES.

In the spring of 1916 J. H. Wilson extended control for the above-named quadrangles from primary traverse stations previously located in this vicinity. The positions are on approximate North American datum.

For other positions in Missouri see U. S. Geological Survey Bulletins 122, 181, 201, 216, 245, 310, 440, 496, 551, 644, Nineteenth Annual Report, Part I; U. S. Coast and Geodetic Survey Special Publication No.

30, Missouri River Commission Reports for 1891 and 1893, Mississippi River Commission Reports for 1883, 1888, and 1891, also Appendix 22, House Document 50, Sixty-first Congress.

CARTHAGE 30' QUADRANGLE.

West along highways through center of quadrangle. (By J. H. Wilson in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Fect.
T. 29 N., R. 28 W., line between secs. 5 and 6, T road east.....	37 15 42.1	94 01 03.1	.....
T. 29 N., R. 28 W., corner of secs. 5, 6, 7, and 8, T road west.....	37 15 03.0	94 01 04.0	3,961
T. 29 N., R. 29 W., east corner of secs. 1 and 12, T road west.....	37 15 04.5	94 02 06.0	5,018
NOTE.—70 feet south of the above corner is T. 29 N., R. 28 W., west corner of secs. 6 and 7, at T road east.			
T. 29 N., R. 29 W., corner of secs. 1, 2, 11, and 12, crossroads, on Lawrence-Jasper county line.....	37 15 07.2	94 03 10.5	5,219
T. 29 N., R. 29 W., corner of secs. 2, 3, 10, and 11, crossroads.....	37 15 08.6	94 04 16.6	5,345
T. 29 N., R. 29 W., corner of secs. 3, 4, 9, and 10, crossroads.....	37 15 10.2	94 05 21.6	5,256
T. 29 N., R. 29 W., stone corner of secs. 4, 5, 8, and 9, crossroads.....	37 15 11.8	94 06 27.6	5,334
Maple Grove, at southwest corner of crossroads, 23 feet south by 30 feet west of corner of secs. 5, 6, 7, and 8, T. 29 N., R. 29 W.; iron post stamped "Prim. Trav. Sta. No. 8, 1,100, 1916 Mo.".....	37 15 12.9	94 07 32.1	5,222
T. 29 N., R. 29 W., west corner of secs. 6 and 7, T road east.....	37 15 14.6	94 08 34.7	5,060
NOTE.—140 feet north of above corner is T. 29 N., R. 30 W., east corner of secs. 1 and 12, T road west.			
T. 29 N., R. 30 W., corner of secs. 1, 2, 11, and 12, crossroads.....	37 15 17.0	94 09 40.5	5,328
T. 29 N., R. 30 W., corner of secs. 2, 3, 10, and 11, at Deer Creek schoolhouse, crossroads.....	37 15 18.3	94 10 46.1	5,300
T. 29 N., R. 30 W., corner of secs. 3, 4, 9, and 10, crossroads.....	37 15 19.6	94 11 51.3	5,270
T. 29 N., R. 30 W., corner of secs. 4, 5, 8, and 9, T road east.....	37 15 21.3	94 12 56.3	5,260

Magnetic declination for south border of quadrangle, 7.7° E.

GREENFIELD QUADRANGLE, NORTHEAST QUARTER.

Northwest along St. Louis-San Francisco Ry. (1900 traverse line). (By J. H. Wilson in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Fect.
Bois d'Arc station.....	37 15 27.3	93 30 24.0	.....
T. 29 N., R. 24 W., corner of secs. 1, 1, 2, 2.....	37 15 30.5	93 30 44.5	.....
T. 30 N., R. 24 W., south corner of secs. 34 and 35.....	37 16 49.9	93 33 08.1	.....
Ash Grove station.....	37 18 59.0	93 35 12.3	.....

West along highway in southeast quarter of quadrangle.

T. 29 N., R. 24 W., corner of secs. 2, 2, 3, 3, center of east and west road at north and south fence line.....	37 15 30.5	93 31 50.1	.....
NOTE.—The sections of the northern tier are more than 2 miles long north and south. This line of traverse seems to run through them about 1 mile from the south border.			
T. 29 N., R. 24 W., corner of secs. 3, 3, 4, 4, T road south at Fairview schoolhouse.....	37 15 30.8	93 32 55.7	5,300
T. 29 N., R. 24 W., corner of secs. 4, 4, 5, 5, crossroads.....	37 15 31.1	93 34 01.4	5,315
T. 29 N., R. 24 W., corner of secs. 5, 5, 6, 6, T road south at Stony Point schoolhouse and church.....	37 15 30.9	93 35 07.6	5,345
Junction point not described.....	37 15 30.9	93 35 23.9	1,320
Tps. 29 and 30 N., Rs. 24 and 25 W., closing corner at T road south, northeast corner of Lawrence County, 21 feet northwest of iron pipe fence post with a concrete base.....	37 16 53.8	93 35 17.1	9,417
T. 30 N., R. 24 W., south corner of secs. 32 and 33, T road west, 180 feet east of T road south.....	37 16 52.4	93 35 20.0	4,610
T. 30 N., R. 24 W., corner of secs. 28, 29, 32, and 33, at crossroads.....	37 17 44.8	93 35 18.3	5,294
T. 30 N., R. 24 W., corner of secs. 20, 21, 28, and 29, T road west, 25 feet south of iron bridge over creek.....	37 18 37.1	93 35 16.6	5,300

GREENFIELD QUADRANGLE, NORTHEAST QUARTER—Continued.

West along highway near west half of south border of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
Lawrenceburg, 0.5 mile north of, stone corner at T road west, line between secs. 3 and 4, T. 29 N., R. 25 W.	37 15 07.7	93 39 35.5	<i>Feet.</i>
NOTE.—North tier of sections is about 2.5 miles long.			
T. 29 N., R. 25 W., stone corner at line between secs. 4 and 5, at T road north.	37 15 08.4	93 40 40.7	5,272
Crossroads.	37 15 08.8	93 41 17.6	2,985
T. 29 N., Rs. 25 and 26 W., T road east, 0.5 mile north of south corner of secs. 1 and 6.	37 15 10.2	93 42 39.7	6,636
Turnback Creek, just east of ford over, at road forks, in center of triangle.	37 15 14.1	93 43 41.6	5,023
T road east.	37 15 01.9	93 44 18.3	3,219

Magnetic declination for south border of quadrangle, 7.7° E.

GREENFIELD QUADRANGLE, NORTHWEST QUARTER.

West along highways near south border of quadrangle. (By J. H. Wilson in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
Stinson, 1.2 miles north of center of triangle at road crossing.	37 15 52.8	93 45 06.4	<i>Feet.</i>
Ford of creek.	37 16 19.5	93 45 26.0	3,139
T road east at Virgil Ruark's residence.	37 16 20.4	93 46 12.1	3,725
T. 29 N., R. 26 W., line between secs. 4 and 5, T lane north.	37 16 08.2	93 47 02.0	4,217
Road north at church and schoolhouse.	37 16 08.3	93 47 31.4	2,380
Mail box No. 12 at road forks.	37 16 09.6	93 48 01.9	2,470
Mail boxes on wheel at road forks.	37 15 49.6	93 48 39.6	3,661
Road fork west.	37 16 08.2	93 49 11.9	3,214
Olinger, 0.5 mile south of, at crossroads at schoolhouse, line between secs. 1 and 2, T. 29 N., R. 27 W.	37 16 10.1	93 50 12.6	4,917
T. 29 N., R. 27 W., line between secs. 2 and 3, road south and east and lane north, 1,280 feet north of T road west.	37 16 11.4	93 51 18.7	
T. 29 N., R. 27 W., line between secs. 3 and 4, center of east and west road at fence north.	37 15 59.3	93 52 23.2	5,358
Crossroads.	37 15 59.6	93 52 56.2	2,665
T. 29 N., R. 27 W., line between secs. 4 and 5, at north and south fence line, center of east and west road.	37 16 00.1	93 53 28.6	2,626
Round Grove, at northeast corner of crossroads; iron post stamped "Prim. Trav. Sta. No. 6, 1268, 1916 Mo."	37 16 00.6	93 54 18.4	4,024
T. 29 N., R. 27 W., line between secs. 5 and 6, T lane north.	37 16 00.6	93 54 35.5	1,380
T. 29 N., Rs. 27 and 28 W., line between secs. 1 and 6, crossroads.	37 16 01.2	93 55 37.3	4,995
T. 29 N., R. 28 W., line between secs. 1 and 2, crossroads.	37 16 02.4	93 56 44.3	5,340
T. 29 N., R. 28 W., line between secs. 2 and 3, T road east at schoolhouse.	37 16 04.0	93 57 48.5	5,276
T. 29 N., R. 28 W., line between secs. 3 and 4.	37 15 39.5	93 58 53.6	5,826
Salem Church, T. 29 N., R. 28 W., 20 feet west of line between secs. 4 and 5, at northwest corner of crossroads; iron post stamped "Prim. Trav. Sta. No. 7, 1205, 1916 Mo."	37 15 41.1	93 59 58.0	5,209

Magnetic declination for south border of quadrangle, 7.3° E.

HALLTOWN QUADRANGLE.

South along St. Louis-San Francisco Ry. (By J. H. Wilson in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
T. 27 N., R. 24 W., corner of secs. 4, 5, 8, and 9.	37 04 06.9	93 33 14.9	<i>Feet.</i>
Billings station.	37 04 00.2	93 33 16.4	
Logan, section corner just east of.	37 01 03.8	93 36 34.5	
Logan station (Bull. 496 point corrected).	37 00 48.6	93 36 57.5	

HALLTOWN QUADRANGLE—Continued.

Along highways near southeast border of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
Marionville, 1.25 miles east of, 0.25 mile west of Lawrence-Christian county line at southeast corner of crossroads; iron post stamped "Prim. Trav. Sta. No. 12, 1909 Mo." (Bull. 496 point corrected)	° ' "	° ' "	Feet.
T. 27 N., Rs. 24 and 25 W., quarter corner between secs. 31 and 36, Lawrence-Christian county line	37 00 11.3	93 36 50.9	.....
T. 27 N., R. 24 W., quarter corner between secs. 31 and 32, crossroads	37 00 11.3	93 36 35.0	1,294
T. 27 N., R. 24 W., quarter corner between secs. 32 and 33, T road west	37 00 10.8	93 35 31.0	5,190
T. 27 N., R. 24 W., corner of secs. 28, 29, 32, and 33, T road east	37 00 10.0	93 34 25.1	5,341
T. 27 N., R. 24 W., corner of secs. 27, 28, 33, and 34, T road north	37 00 36.2	93 34 24.7	2,650
T. 27 N., R. 24 W., corner of secs. 26, 27, 34, and 35	37 00 35.3	93 33 19.2	5,316
T. 27 N., R. 24 W., corner of secs. 25, 26, 35, and 36	37 00 34.4	93 32 12.7	5,391
Railroad crossing	37 00 33.0	93 31 07.3	5,310
T. 27 N., R. 24 W., 20 feet south by 15 feet west of east corner of secs. 25 and 36, 55 feet south by 15 feet west of west corner of secs. 30 and 31, T. 27 N., R. 23 W., at southwest corner of crossroads; iron post stamped "Prim. Trav. Sta. No. 1, 1916 Mo."	37 00 32.7	93 30 48.2	1,545
T. 27 N., R. 24 W., east corner of secs. 24 and 25, T road west; 15 feet north of above corner is west corner of secs. 19 and 30, T. 27 N., R. 23 W.	37 00 31.6	93 30 02.0	3,751
	37 01 24.8	93 30 00.5	5,380

Southwest along highways in north center of quadrangle.

T. 29 N., R. 25 W., east corner of secs. 1 and 12, at bend in road, on Lawrence-Greene county line, 0.25 mile east of crossroads	37 14 39.8	93 36 19.2	.....
T. 29 N., R. 25 W., corner of secs. 1, 2, 11, and 12, at crossroads; iron post stamped "Prim. Trav. Sta. No. 4, 1916 Mo."	37 14 39.0	93 37 24.7	5,295
T. 29 N., R. 25 W., corner of secs. 11, 12, 13, and 14, crossroads	37 13 46.9	93 37 25.9	5,276
T. 29 N., R. 25 W., corner of secs. 13, 14, 23, and 24, T road east	37 12 54.7	93 37 27.4	5,285
T. 29 N., R. 25 W., corner of secs. 23, 24, 25, and 26, center of north and south road at east and west fence line	37 12 02.5	93 37 28.6	5,280
Halltown, crossroads at east edge of, quarter corner between secs. 25 and 26, T. 29 N., R. 25 W.	37 11 36.5	93 37 29.25	2,631
T. 29 N., R. 25 W., quarter-corner stone in center of sec. 26, T road south	37 11 37.2	93 38 02.1	2,656
T road west	37 10 56.9	93 38 19.4	4,313
T road south (180 feet jog at township line between Tps. 28 and 29 N.)	37 10 19.1	93 38 22.3	3,826
T. 28 N., R. 25 W., quarter-corner stone between secs. 2 and 11, at Roper schoolhouse crossroads	37 09 23.8	93 38 06.7	5,744
T. 28 N., R. 25 W., stone quarter-corner between secs. 11 and 14, crossroads	37 08 31.5	93 38 07.3	5,289
Sycamore schoolhouse, district 6, on north side of east and west road, opposite front door; iron post stamped "Prim. Trav. Sta. No. 1, 1909 Mo." (Bull. 496 point corrected)	37 07 39.5	93 37 51.0	5,424

West along highways near north border of quadrangle.

T. 29 N., R. 25 W., corner of secs. 2, 3, 10, and 11, just west of Pilgrim's Rest Church, center of east and west road at fence line	37 14 40.4	93 38 30.2	.....
Lawrenceburg, corner of secs. 3, 4, 9, and 10, T. 29 N., R. 25 W., at T road east	37 14 41.6	93 39 36.3	5,346

Near northwest corner of quadrangle.

T. 29 N., R. 26 W., corner of secs. 2, 3, 10, and 11, T lane south	37 14 47.3	93 44 51.5
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Along highways near west border.

T. 28 N., R. 26 W., north corner of secs. 2 and 3, at bend in road; 35 feet east of above corner is T. 29 N., R. 26 W., south corner of secs. 34 and 35	37 10 25.4	93 44 58.7
T. 28 N., R. 26 W., corner of secs. 2, 3, 10, and 11, bend in road	37 09 33.4	93 44 59.8	5,257

Magnetic declination (1916) for southeast corner of quadrangle, 7.2° E.; for east and west borders of quadrangle, 7.5° E.; for north border of quadrangle, 7.7° E.; for north center of quadrangle, 7.8° E.

JOPLIN DISTRICT QUADRANGLE.

South along highways near east border of quadrangle. (By J. H. Wilson in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
T. 29 N., R. 31 W., 25 feet north by 25 feet west of east corner of secs. 12 and 13, and 100 feet north by 25 feet west of west corner of secs. 7 and 18, T. 29 N., R. 30 W., at northwest corner of crossroads; iron post stamped "Prim. Trav. Sta. No. 9, 1916, Elev. 1,006 feet"	37 14 33.2	94 15 10.2	<i>Fcet.</i>
T. 29 N., R. 31 W., east corner of secs. 18 and 19, T road west	37 13 40.4	94 15 11.6	5,339
NOTE.—75 feet south of above corner is west corner stone of secs. 13 and 24, T. 29 N., R. 30 W., T road east.			
T. 29 N., Rs. 30 and 31 W., corner of secs. 19, 30, 24, and 25, crossroads	37 12 47.5	94 15 13.2	5,351
T. 29 N., Rs. 30 and 31 W., corner of secs. 30, 31, 25, and 36, 50 feet west of T road north	37 11 54.9	94 15 14.8	5,322
Maxville, road forks	37 11 55.0	94 16 04.1	3,983
Tps. 28 and 29 N., R. 31 W., at town line, center of road	37 11 03.2	94 16 05.8	5,240
Spring River, east end of bridge	37 10 49.7	94 16 02.7	1,382
T road east	37 10 09.6	94 16 07.4	4,076
T. 29 N., R. 30 W., west corner of secs. 6 and 7, T road south	37 10 10.7	94 15 19.0	3,924
T. 28 N., R. 31 W., east corner of secs. 12 and 13, in line with road west	37 09 18.4	94 15 20.7	5,292
NOTE.—60 feet south of above corner is T. 28 N., R. 30 W., west corner of secs. 7 and 18, in line with road east, Knight station signpost is 4,690 feet south by 1,771 feet east of above station.			
T. 29 N., Rs. 30 and 31 W., corner of secs. 19, 30, 24, and 25, crossroads at Pleasant Grove schoolhouse.	37 07 33.4	94 15 23.7	.....
NOTE.—5,299 feet north by 124 feet east of above is corner of secs. 18, 19, 13, and 24, T. 29 N., Rs. 30 and 31 W., at crossroads.			
T. 29 N., Rs. 30 and 31 W., corner of secs. 30, 31, 25, and 36, T road west	37 06 41.2	94 15 25.4	5,274
Tps. 27 and 28 N., Rs. 30 and 31 W., 30 feet south by 30 feet west of stone corner, at southwest corner of crossroads at church; iron post stamped "Prim. Trav. Sta. No. 10, 1916 Mo." Elev. 1,074 feet.	37 05 48.6	94 15 27.4	5,329
T. 27 N., R. 31 W., east corner stone of secs. 1 and 12	37 04 56.4	94 15 28.8	5,281
NOTE.—50 feet south of above corner is T. 27 N., R. 30 W., west corner of secs. 6 and 7, T road east.			
T. 27 N., R. 31 W., east corner of secs. 12 and 13	37 04 03.9	94 15 30.5	5,316
NOTE.—50 feet south of above corner is T. 27 N., R. 30 W., west corner of secs. 7 and 18, T road east.			
T. 27 N., Rs. 30 and 31 W., east corner of secs. 13 and 24, 40 feet north of west corner of secs. 18 and 19, crossroads on Jasper-Newton county line	37 03 11.7	94 15 32.2	5,281
T. 27 N., Rs. 30 and 31 W., corner of secs. 30, 31, 25, and 36, crossroads	37 01 26.4	94 15 35.6	10,654
Tps. 26 and 27 N., Rs. 30 and 31 W., 45 feet south by 25 feet west of corner, at crossroads, close to hedge fence; iron post stamped "Prim. Trav. Sta. No. 3, 1914 Mo."	37 00 33.9	94 15 37.8	5,310

From Knights station west along St. Louis-San Francisco Ry. to State line (1900 traverse line).

T. 28 N., R. 31 W., corner of secs. 11, 12, 13, and 14, 460 feet north of north and south road crossing and 500 feet east of east and west road crossing	37 09 17.3	94 16 25.4	.....
Carthage, at station, 150 feet northwest of Main Street crossing	37 11 03.0	94 18 35.4	14,999
T. 28 N., R. 31 W., quarter corner between secs. 16 and 17, 105 feet west of road crossing	37 10 36.1	94 20 42.6	10,651
North and south road crossing, elevation 998 feet	37 10 41.0	94 21 53.7	5,765
Macy, at station signboard	37 11 08.5	94 23 48.2	9,665
Mansur, at station	37 11 37.4	94 25 07.6	7,058
Boysur, at north and south road crossing 1,390 feet east of crossroads	37 11 43.0	94 26 45.3	7,919
Joplin Junction, headblock	37 11 40.5	94 27 44.9	4,827
T. 29 N., R. 33 W., corner of secs. 25, 26, 35, and 36, 850 feet north of north and south road crossing	37 11 59.8	94 29 25.3	8,351
T. 28 N., R. 33 W., north corner of secs. 4 and 5, 550 feet north of north and south road crossing	37 11 13.9	94 32 41.1	16,508
Missouri Pacific R. R. crossing on St. Louis-San Francisco Ry.	37 11 05.1	94 32 50.5	1,167
Carl Junction, crossing of railroad	37 10 43.3	94 33 51.7	5,411
Smithfield, at station	37 10 07.4	94 36 10.5	11,803
Missouri-Kansas Stateline crossing on St. Louis-San Francisco Ry.	37 09 58.4	94 37 04.4	4,449

Magnetic declination for north border of quadrangle, 8.4° E.; for east border of quadrangle, 8.0° E.; for center line of quadrangle, 8.8° E.

JOPLIN DISTRICT QUADRANGLE—Continued.

West along highways near north border of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Fect.
T. 29 N., R. 31 W., corner of secs. 11, 12, 13, and 14, crossroads.....	37 14 31.4	94 16 15.9	.....
T. 29 N., R. 31 W., corner of secs. 10, 11, 14, and 15, crossroads.....	37 14 30.9	94 17 20.8	5, 247
T. 29 N., R. 31 W., corner of secs. 9, 10, 15, and 16, crossroads.....	37 14 31.5	94 18 25.2	5, 205
T. 29 N., R. 31 W., corner of secs. 8, 9, 16, and 17, crossroads.....	37 14 31.6	94 19 30.8	5, 310
T. 29 N., R. 31 W., corner of secs. 7, 8, 17, and 18, crossroads.....	37 14 31.7	94 20 36.1	5, 275
T. 29 N., R. 31 W., west corner of secs. 7 and 18; 20 feet south is east corner of secs. 12 and 13, T. 29 N., R. 32 W.....	37 14 33.0	94 21 46.7	5, 711
T. 29 N., R. 32 W., 25 feet east by 10 feet north of corner of secs. 11, 12, 13, and 14, on east side of road at T road west; iron post stamped "Prim. Trav. Sta. No. 11, 1916 Mo.".....	37 14 32.0	94 22 51.4	5, 233
T. 29 N., R. 32 W., corner of secs. 10, 11, 14, and 15, T road east... Alba, cross streets, just east of end of electric line, on line between secs. 15 and 16, T. 29 N., R. 32 W.....	37 14 31.8	94 23 57.4	5, 337
Purcell, south edge of, T road north, on line between secs. 16 and 17, T. 29 N., R. 32 W., at southeast corner of cemetery.....	37 14 19.5	94 25 02.7	5, 424
Spring River, east end of bridge over.....	37 14 20.3	94 26 07.7	5, 256
T. 29 N., R. 32 W., on line between secs. 17 and 18, road forks.....	37 13 59.2	94 27 00.9	4, 796
T road west.....	37 13 55.3	94 27 14.1	1, 139
T. 29 N., R. 33 W., corner of secs. 11, 12, 13, and 14, crossroads at schoolhouse.....	37 14 35.3	94 28 01.7	5, 591
T. 29 N., R. 33 W., 25 feet east by 15 feet north of corner of secs. 10, 11, 14, and 15, at northeast corner of crossroads; iron post stamped "Prim. Trav. Sta. No. 12, 1916 Mo.".....	37 14 36.9	94 29 20.8	6, 397
T. 29 N., R. 33 W., corner of secs. 9, 10, 15, and 16, crossroads.....	37 14 38.6	94 30 25.3	5, 215
T. 29 N., R. 33 W., corner of secs. 8, 9, 16, and 17, crossroads.....	37 14 40.6	94 31 31.0	5, 320
T. 29 N., R. 33 W., corner of secs. 7, 8, 17, and 18, T road south.....	37 14 42.6	94 32 37.0	5, 340
T. 29 N., R. 33 W., west corner of secs. 7 and 18, T road east; east corner of secs. 12 and 13, T. 29 N., R. 34 W., is 195 feet north, at T road west.....	37 14 44.5	94 33 42.0	5, 254
Waco, corner of secs. 11, 12, 13, and 14, T. 29 N., R. 34 W., crossroads.....	37 14 45.2	94 34 38.7	4, 586
T. 29 N., R. 34 W., corner of secs. 10, 11, 14, and 15, at fence south. Waco, 1 mile west of, 25 feet east of Kansas-Missouri boundary line, 25 feet east by 20 feet south of west corner of fractional secs. 10 and 15, T. 29 N., R. 34 W., at road east; iron post stamped "Prim. Trav. Sta. No. 14, 1916 Mo.".....	37 14 48.8	94 35 43.7	5, 269
	37 14 50.3	94 36 49.2	5, 295
	37 14 50.4	94 37 03.8	1, 184

Along highways south through center of quadrangle.

T. 29 N., R. 33 W., corner of secs. 14, 15, 22, and 23, crossroads.....	37 13 46.5	94 30 27.1	.....
T. 29 N., R. 33 W., corner of secs. 22, 23, 26, and 27, crossroads.....	37 12 54.3	94 30 28.5	5, 281
T. 29 N., R. 33 W., corner of secs. 26, 27, 34, and 35, crossroads.....	37 12 02.2	94 30 30.1	5, 270
T. 29 N., R. 33 W., south corner of secs. 34 and 35, T road north; north corner of secs. 2 and 3, T. 28 N., R. 33 W., at T road south, is 75 feet east.....	37 11 10.2	94 30 31.7	5, 265
T. 28 N., R. 33 W., corner of secs. 2, 3, 10, and 11, center of north and south road at fence line.....	37 10 18.5	94 30 33.3	5, 232
Center Creek, north end of bridge over.....	37 10 03.2	94 30 44.6	1, 799
T. 28 N., R. 33 W., corner of secs. 10, 11, 14, and 15, road east.....	37 09 26.6	94 30 35.3	3, 778
T. 28 N., R. 33 W., corner of secs. 14, 15, 22, and 23, crossroads.....	37 08 34.4	94 30 37.6	5, 280
Joplin, 2 miles north of, on Main Street road, at southeast corner of crossroads, 30 feet south by 20 feet east of corner of secs. 22, 23, 26, and 27; iron post stamped "Prim. Trav. Sta. No. 13, 1916 Mo.".....	37 07 42.0	94 30 39.8	5, 310
T. 28 N., R. 33 W., corner of secs. 26, 27, 34, and 35, T road west.....	37 06 50.3	94 30 42.4	5, 234
Joplin, intersection of Broadway and Main Street.....	37 05 27.0	94 30 46.6	8, 435
Joplin, Main Street crossing on Missouri Pacific R. R. near station.....	37 04 49.2	94 30 48.4	3, 825
Joplin, intersection of 20th and Main streets.....	37 04 11.0	94 30 49.8	3, 860
T. 27 N., R. 33 W., corner of secs. 14, 15, 22, and 23, on Jasper-Newton county line, crossroads.....	37 03 19.0	94 30 50.6	5, 268
T. 27 N., R. 33 W., corner of secs. 22, 23, 26, and 27, T road west.....	37 02 27.1	94 30 52.8	5, 248
Shoal Creek, north end of bridge over (determined by McNair in 1914).....	37 01 15.4	94 30 44.2	7, 280

SARCOXIE QUADRANGLE.

South along highways near north half of east border of quadrangle. (By J. H. Wilson in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
T. 29 N., R. 28 W., corner of secs. 8, 9, 16, and 17, T road east, 0.5 mile east by 0.25 mile north of Red Oak.....	° ' '' 37 14 09.6	° ' '' 94 00 00.2	<i>Fect.</i>
T. 29 N., R. 28 W., stone corner of secs. 16, 17, 20, and 21, at fence line west.....	37 13 17.2	94 00 01.3	5, 286
T. 29 N., R. 28 W., corner of secs. 20, 21, 28, and 29, T road north.....	37 12 25.0	94 00 02.4	5, 281
T. 29 N., R. 28 W., stone corner at center of crossroads, 0.25 mile west of corner of secs. 28, 29, 32, and 33.....	37 11 33.1	94 00 19.8	5, 441
Tps. 28 and 29 N., R. 28 W., 0.25 mile west of corner of secs. 4, 5, 32, and 33, at crossroads.....	37 10 40.9	94 00 20.8	5, 286
T. 28 N., R. 28 W., quarter corner between secs. 5 and 8, T road south, just north of schoolhouse.....	37 09 47.6	94 00 38.0	5, 568
Road east, 25 feet northwest of red gate.....	37 08 48.2	94 00 39.3	6, 008
T. 28 N., R. 28 W., 30 feet south of corner of secs. 17, 18, 19, and 20, at T road south.....	37 08 03.9	94 01 13.0	5, 249
Bull. 496, p. 47, value.....	37 08 07.1	94 01 14.0	.....

Near northwest corner of quadrangle.

T. 29 N., R. 30 W., stone corner of secs. 7, 8, 17, and 18, crossroads at schoolhouse.....	37 14 30.5	94 14 03.4
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From Reeds station along St. Louis-San Francisco Ry. to Knights. (1900 traverse line.)

Reeds, at station (Bull. 496, corrected to approximate North American datum).....	37 07 02.9	94 10 03.5	.....
T. 28 N., R. 30 W., corner of secs. 17, 18, 19, and 20, 30 feet south of north and south road crossing.....	37 08 23.9	94 14 14.0	21, 874
Knights, at station (tied by 1916 traverse): north and south road crossing is 63 feet north by 308 feet west.....	37 08 32.1	94 14 58.9	3, 726

Magnetic declination for north half of east border of quadrangle, 7.6° E.; for west border of quadrangle, 8.0° E.; for north border of quadrangle, 7.7° E.

From Wentworth station northwest along St. Louis-San Francisco Ry. to Reeds. (From Bull. 181, page 170, corrected; 1900 traverse line.)

Talmage station.....	37 00 54.4	94 05 34.9	.....
Talmage, section corner at.....	37 01 12.0	94 05 45.0	1, 955
T. 27 N., R. 29 W., quarter corner between secs. 20 and 21.....	37 02 32.0	94 06 47.2	9, 525
Sarcoxie station.....	37 03 59.5	94 07 00.0	8, 904
T. 28 N., R. 30 W., east corner between secs. 25 and 36.....	37 06 31.0	94 08 50.4	17, 736

SPRINGFIELD QUADRANGLE.

North along highways near west border of quadrangle. (By J. H. Wilson in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
T. 27 N., Rs. 23 and 24 W., corner of secs. 18, 19, 13, and 24, crossroads.....	° ' " 37 02 17.8	° ' " 93 29 59.5	Feet.....
T. 27 N., R. 24 W., east corner of secs. 12 and 13, fence west; 20 feet north of above corner is T. 27 N., R. 23 W., west corner of secs. 7 and 18, fence east.....	37 03 11.0	93 29 58.1	5,376
T. 27 N., R. 23 W., west corner of secs. 6 and 7; 40 feet south is T. 27 N., R. 24 W., east corner of secs. 1 and 12.....	37 04 03.8	93 29 56.7	5,340
T. 27 N., R. 23 W., north quarter corner of sec. 6, fence east; 65 feet west is T. 28 N., R. 23 W., south quarter corner of sec. 31, fence west.....	37 04 56.0	93 29 24.0	5,911
T. 28 N., R. 23 W., quarter-corner stone between secs. 30 and 31, 25 feet north of T road, on south Christian-Greene county line.....	37 05 48.6	93 29 22.9	5,324
T. 28 N., R. 23 W., corner of secs. 29, 30, 31, and 32, crossroads, 1.5 miles south of Republic, on Christian-Greene county line.....	37 05 48.0	93 28 50.4	2,636
T. 28 N., R. 23 W., corner of secs. 19, 20, 29, and 30, crossroads.....	37 06 40.5	93 28 48.9	5,309
Republic, at southwest corner of crossroads, 175 feet south of railroad crossing, just east of station; iron post stamped "Prim. Trav. Sta. No. 2, 1916 Mo.".....	37 07 06.7	93 28 48.4	2,646
Republic, at railroad station.....	37 07 08.0	93 28 49.4	155
Republic, quarter corner between secs. 19 and 20, T. 28 N., R. 23 W. Republic, cross streets at corner of secs. 17, 18, 19, and 20, T. 28 N., R. 23 W.....	37 07 06.7	93 28 48.7	143
T. 28 N., R. 23 W., corner of secs. 7, 8, 17, and 18, T road west.....	37 07 33.3	93 28 47.1	2,690
T. 28 N., R. 23 W., corner of secs. 5, 6, 7, and 8, crossroads.....	37 08 25.6	93 28 45.2	5,300
T. 29 N., R. 23 W., south corner stone of secs. 31 and 32, T road west; 30 feet east of above corner is T. 28 N., R. 23 W., north corner of secs. 5 and 6.....	37 09 18.2	93 28 43.6	5,320
T. 29 N., R. 23 W., corner of secs. 29, 30, 31, and 32, T road west, 780 feet south of Jonas schoolhouse.....	37 10 13.3	93 28 42.6	5,576
T. 29 N., R. 23 W., stone corner of secs. 19, 20, 29, and 30, east and west fence line.....	37 11 05.7	93 28 40.7	5,300
T. 29 N., R. 23 W., corner of secs. 17, 18, 19, and 20, in line with road north.....	37 11 58.2	93 28 38.5	5,316
T. 29 N., R. 23 W., quarter corner between secs. 7 and 18, crossroads.....	37 12 50.8	93 28 36.4	5,328
T. 29 N., R. 23 W., 20 feet north by 15 feet west of quarter corner between secs. 6 and 7, at northeast corner of crossroads, at Wyandotte schoolhouse; iron post stamped "Prim. Trav. Sta. No. 3, 1916 Mo.".....	37 13 43.5	93 29 07.2	5,883
T. 29 N., R. 23 W., west corner of secs. 6 and 7, in line with road east at crossroads; 35 feet north is T. 29 N., R. 24 W., east corner of secs. 1 and 12, in line with road west.....	37 14 36.1	93 29 05.6	5,325
Railroad crossing.....	37 14 36.8	93 29 39.2	2,719
	37 15 05.2	93 29 38.7	2,875

Along St. Louis-San Francisco Ry.

Springfield station.....	37 13 50.4	93 17 12.4	.....
Springfield astronomical pier.....	37 13 12.8	93 17 13.2	.....
Dorchester station.....	37 12 33.3	93 23 09.1	.....
T. 28 N., R. 23 W., quarter corner north side of sec. 2.....	37 10 08.8	93 24 52.7	.....
Brookline station.....	37 09 47.1	93 25 08.7	.....
Nichols Junction.....	37 13 07.1	93 21 48.7	.....
Elwood station.....	37 13 32.2	93 25 51.7	.....
T. 29 N., R. 23 W., corner of secs. 9, 10, 15, and 16.....	37 13 40.1	93 26 23.9	.....

Magnetic declination (1916) for west border of quadrangle, 7.5° E.

STOTTS CITY QUADRANGLE.

South along highways near east border of quadrangle. (By J. H. Wilson in 1916.)

Station.	Latitude.			Longitude.			Distance between stations.
	°	'	''	°	'	''	
Stinson, at southwest corner of crossroads; iron post stamped "Prim. Trav. Sta. No. 5, 1916 Mo.".....	37	14	47.5	93	45	08.3	Feet.
T. 29 N., R. 26 W., quarter corner between secs. 10 and 15, T road south.....	37	13	55.4	93	45	26.0	5,457
T. 29 N., R. 26 W., quarter corner between secs. 15 and 22, in line with road north and fence east.....	37	13	02.9	93	45	27.4	5,310
T road east.....	37	12	23.7	93	45	28.2	3,968
T road east.....	37	11	58.6	93	46	34.8	5,960
T. 29 N., R. 26 W., quarter corner between secs. 28 and 33, crossroads.....	37	11	19.1	93	46	35.8	3,991
Crossroads.....	37	10	52.2	93	45	46.8	4,809
T. 28 N., R. 26 W., corner of secs. 10, 11, 14, and 15, crossroads.....	37	08	40.8	93	45	00.8	.....
T. 28 N., R. 26 W., corner of secs. 14, 15, 22, and 23, crossroads (Bull. 496, p. 217).....	37	07	48.3	93	45	01.8	5,316

Magnetic declination for north half of east border of quadrangle, 7.4° E.; for north border of quadrangle, 7.3° E.; for north half of west border of quadrangle, 7.6° E.

MISSOURI, KANSAS, AND NEBRASKA.

PRIMARY TRAVERSE.

Atchison, Hiawatha, Maitland, Rulo, Skidmore, and Tarkio quadrangles.

HOLT COUNTY, MO.; BROWN COUNTY, KANS.; RICHARDSON COUNTY, NEBR.

The following geographic positions, on approximate North American datum, were determined by J. H. Wilson in 1916 and are based on primary traverse positions described in Bulletin 644 and upon Missouri River Commission triangulation stations Craig and Napier.

For other positions in Kansas see U. S. Geological Survey bulletins 122, 181, 216, 245, 440, and 644, U. S. Coast and Geodetic Survey Report for 1902, and Missouri River Commission reports for 1887, 1890, and 1891.

ATCHISON QUADRANGLE, KANS.

East along highways near north border of quadrangle. (By J. H. Wilson in 1916.)

Station.	Latitude.			Longitude.			Distance between stations.
	°	'	''	°	'	''	
T. 1 S., R. 17 E., quarter corner between secs. 1 and 12, 10 feet east of T road north.....	39	59	10.8	95	27	40.1	Feet.
T. 1 S., Rs. 17 and 18 E., corner of secs. 1, 12, 9, and 7, crossroads.....	39	59	10.8	95	27	00.0	2,660
T. 1 S., R. 18 E., corner of secs. 5, 6, 7, and 8, crossroads.....	39	59	11.2	95	26	01.4	5,032
T. 1 S., R. 18 E., corner of secs. 4, 5, 8, and 9, crossroads.....	39	59	11.8	95	24	53.6	5,280
T. 1 S., R. 18 E., quarter corner between secs. 4 and 9, crossroads.....	39	59	12.0	95	24	19.7	2,635
T. 1 S., R. 18 E., corner of secs. 3, 4, 9, and 10, T lane north.....	39	59	12.2	95	23	45.9	2,640
T. 1 S., R. 18 E., corner of secs. 2, 3, 10, and 11, fence south.....	39	59	12.7	95	22	38.1	5,250
T. 1 S., R. 18 E., quarter corner between secs. 2 and 11.....	39	59	13.0	95	22	04.2	2,680
T. 1 S., R. 18 E., corner of secs. 1, 2, 11, and 12, crossroads.....	39	59	13.6	95	21	30.3	2,598
Road west.....	39	59	13.6	95	20	56.7	2,616

Magnetic declination for north border of quadrangle, 11° 17' E.

East along Nebraska-Kansas State line: (By J. H. Wilson in 1916.)

T. 1 S., R. 17 E., north corner of secs. 2 and 3, T road south.....	39	59	59.6	95	29	23.4	.....
T. 1 N., R. 17 E., south corner of secs. 34 and 35, T road north.....	39	59	59.5	95	28	56.9	2,070
T. 1 S., R. 17 E., north corner of secs. 1 and 2, church, T road south. Road east.....	39	59	59.3	95	28	15.3	3,235
T. 1 S., R. 18 E., quarter corner on north side of sec. 1, T road south, Kansas-Nebraska State line.....	39	59	58.5	95	27	39.9	2,763
T. 1 S., R. 18 E., quarter corner on north side of sec. 1, T road south, Kansas-Nebraska State line.....	39	59	59.2	95	20	56.6	.....
Kansas-Nebraska State line, railroad post.....	40	00	00.0	95	19	52.1	5,020

HIAWATHA QUADRANGLE, KANS.-NEBR.

Along Nebraska-Kansas State line. (By J. H. Wilson in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
Preston, 2 miles south by 0.3 mile west of, 280 feet east of north corner of secs. 4 and 5, T. 1 S., R. 17 E., on north side of State line road, in south foundation wall of barn; aluminum tablet stamped "1028 Prim. Trav. Sta. No. 22, Nebr. 1913".....	° ' "	° ' "	Feet.
T. 1 N., R. 17 E., line between secs. 28 and 29, railroad crossing....	40 00 02.4	95 31 35.1	.....
T. 1 S., R. 17 E., north corner of secs. 3 and 4, T road south.....	39 59 59.6	95 30 30.6	5,028
T. 1 N., R. 17 E., south corner of secs. 33 and 34, T road north.....	39 59 59.6	95 30 04.6	2,030

Magnetic declination for southeast corner of quadrangle, 9° 55' E.

RULO QUADRANGLE, NEBR.

West along Burlington Route and highways in south part of quadrangle. (By J. H. Wilson in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
Railroad trestle, center of.....	° ' "	° ' "	Feet.
Namaha River, west end of railroad bridge over.....	40 01 28.0	95 21 31.9	.....
T. 1 N., R. 17 E., line between secs. 28 and 29, railroad crossing....	40 01 33.6	95 22 58.4	6,748
T. 1 N., R. 17 E., line between secs. 20 and 29, railroad crossing....	40 01 26.0	95 24 24.6	6,750
Rulo, west end of railroad bridge over Missouri River, 18 feet east of flagman's shanty.....	40 01 42.4	95 25 26.8	5,118
	40 03 12.9	95 25 23.8	9,159

Magnetic declination for south border of quadrangle, 8° 57' E.

MAITLAND QUADRANGLE, MO.

North along highways near west border of quadrangle. (By J. H. Wilson in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
T road west.....	° ' "	° ' "	Feet.
T. 61 N., R. 39 W., center of sec. 36, T road north.....	40 02 53.6	95 14 45.0	.....
T. 61 N., R. 39 W., quarter corner between secs. 25 and 36, fence east.....	40 03 06.9	95 14 55.7	1,580
T. 61 N., R. 39 W., quarter corner between secs. 24 and 25, crossroads.....	40 03 33.0	95 14 55.7	2,635
T. 61 N., R. 39 W., quarter corner between secs. 13 and 24, east-west fence line.....	40 04 25.2	95 14 55.7	5,290
T. 61 N., R. 39 W., quarter corner between secs. 12 and 13, T road west.....	40 05 17.5	95 14 55.2	5,295
T. 61 N., R. 39 W., quarter corner between secs. 1 and 12, fence east.....	40 06 10.1	95 14 54.7	5,320
Railroad crossing.....	40 07 02.3	95 14 54.2	5,280
Mound City, 1 mile west of, on north side of Mound City-Bigelow road, 40 feet north of center of T road south on line through center of sec. 1, T. 61 N., R. 39 W.; iron post stamped "Prim. Trav. Sta. No. 3, 1916".....	40 07 21.8	95 14 53.7	1,980
Mound City, intersection of State and Seventh streets.....	40 07 37.4	95 14 53.4	1,578
Road forks, at road north on range line.....	40 07 56.0	95 13 57.5	4,732
T. 62 N., R. 38 W., west corner of secs. 35 and 36.....	40 08 30.1	95 14 18.9	3,837
T. 62 N., R. 39 W., east corner of secs. 24 and 25, T road west; 50 feet south to west corner of secs. 19 and 30, T. 62 N., R. 38 W....	40 08 46.1	95 14 18.5	1,624
T. 62 N., R. 39 W., east corner of secs. 13 and 24, in line with road west; 30 feet south to road east at west corner of secs. 18 and 19 T. 62 N., R. 38 W.....	40 09 38.8	95 14 18.5	5,329
T. 62 N., R. 39 W., east corner of secs. 12 and 13; 100 feet south to west corner of secs. 7 and 18, T. 62 N., R. 38 W.....	40 10 31.2	95 14 18.7	5,305
T. 62 N., R. 39 W., east corner of secs. 1 and 12, in line with road west; 50 feet south to west corner of secs. 6 and 7, T. 62 N., R. 38 W., in line with road east.....	40 11 24.0	95 14 18.5	5,340
Tps. 62 and 63 N., Rs. 38 and 39 W., center of crossroads.....	40 12 16.3	95 14 18.5	5,300
T. 63 N., Rs. 38 and 39 W., corner of secs. 30, 31, 25, and 36.....	40 13 09.0	95 14 18.0	5,325
T. 63 N., R. 39 W., east corner of secs. 24 and 25, in line with road west; 50 feet north to T road east at west corner of secs. 19 and 30, T. 63 N., R. 38 W.....	40 14 01.4	95 14 16.8	5,306
	40 14 53.2	95 14 15.6	5,244

Magnetic declination along west border of quadrangle, 9° 45' E.

RULO QUADRANGLE, MO.

Along highways and Chicago, Burlington & Quincy R. R. in north part of quadrangle. (By J. H. Wilson in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
T. 63 N., R. 40 W., corner of secs. 22, 23, 26, and 27, T road west.	40 14 54.8	95 23 20.4	.....
T. 63 N., R. 40 W., line between secs. 27 and 28, north-south fence line.	40 14 42.1	95 24 28.6	5, 440
T. 63 N., R. 40 W., corner of secs. 20, 21, 28, and 29, fence south, 1,300 feet west of bridge over Big Tarkio River.	40 14 56.5	95 25 38.6	5, 626
T. 63 N., R. 40 W., corner of secs. 19, 20, 29, and 30, 515 feet west of railroad crossing.	40 14 57.4	95 26 47.1	5, 311
Corning, 900 feet northwest of depot, 75 feet west and 15 feet north of railroad crossing; iron post stamped "Prim. Trav. Sta. No. 6, 1916".	40 14 57.8	95 27 24.3	2, 891
T. 63 N., R. 40 W., line between secs. 29 and 32, railroad crossing.	40 14 04.5	95 26 08.3	7, 989
T. 62 N., R. 40 W., line between secs. 3 and 4, north-south road crossing.	40 12 59.7	95 24 36.0	9, 705
T. 62 N., R. 40 W., line between secs. 10 and 11, north-south road crossing.	40 12 10.8	95 23 26.4	7, 324
Craig, railroad crossing at north side of depot, main track.	40 11 30.6	95 22 29.2	6, 021
T. 62 N., R. 40 W., corner of secs. 1, 2, 11, and 12, 10 feet north of T lane east.	40 12 17.3	95 22 15.7	4, 848
Craig triangulation station, Missouri River Commission, is on the left bank, in a wooded pasture, on a hill 1.5 miles north by west from Craig, Mo., just east of the road, and in the northeast corner of sec. 2, T. 62 N., R. 40 W.; station mark: an iron post, which was dug up by farmer in 1916; post is lying near by, point shown by farmer; witness tree marked "U. S." about 90 feet southwest and on opposite side of road.	40 13 02.05	95 22 41.71	4, 958

East along Burlington Route and highways in southeast part of quadrangle.

Missouri River, east end of railroad bridge over.	40 03 18.8	95 24 58.8	.....
T. 61 N., R. 40 W., line between secs. 26 and 27, north-south road crossing.	40 03 39.5	95 23 30.1	7, 215
T. 61 N., R. 40 W., line between secs. 35 and 36, north-south road crossing.	40 03 19.5	95 22 22.5	5, 634
Railroad crossing, north-south road.	40 03 11.7	95 21 48.0	2, 794
T. 61 N., Rs. 39 and 40 W., probably on line between, center of trestle 5-19, in line with fence north through lake.	40 03 11.4	95 21 11.7	2, 830
T. 61 N., R. 39 W., line between secs. 31 and 32, north-south road crossing.	40 03 10.6	95 20 00.9	5, 505
Fortescue, railroad crossing, 300 feet west of depot.	40 03 10.1	95 19 08.9	4, 050
Tps. 60 and 61 N., R. 39 W., line between secs. 6 and 31, center of north-south road, at fence east.	40 02 43.5	95 19 12.2	2, 708
T. 60 N., R. 39 W., quarter corner between secs. 6 and 7, T road north.	40 02 33.1	95 19 12.3	1, 050
T. 60 N., R. 39 W., corner of secs. 5, 6, 7, and 8, T road south.	40 02 32.7	95 18 38.4	2, 640
T. 60 N., R. 39 W., line between secs. 17 and 18, telephone pole at bend in road.	40 01 22.8	95 18 39.4	7, 080
Road forks at road east, center of triangle.	40 00 47.9	95 17 55.8	4, 893
T. 60 N., R. 39 W., quarter corner between secs. 16 and 21, T road west, lane east.	40 00 47.8	95 16 58.6	4, 452
T. 60 N., R. 39 W., quarter corner between secs. 15 and 22, center of north-south road, in line with fence east, 980 feet south of Exodus schoolhouse.	40 00 47.9	95 15 51.3	6, 570
T. 60 N., R. 39 W., quarter corner between secs. 3 and 10, T road south.	40 02 31.9	95 15 50.4	10, 525
Napier, 0.5 mile southeast of, railroad crossing, center of track.	40 02 31.5	95 15 05.2	3, 515
Napier triangulation station is on the left bank, on a narrow, bare ridge, three-fourths of a mile east-south-east of Napier railroad station, and just east of the graveyard on the hillside; station mark: an iron post.	40 02 47.22	95 14 35.89	2, 783

Magnetic declination for south border of quadrangle, 8° 57' E.; for north part of quadrangle, 9° 24' E.

ATCHISON QUADRANGLE, MO.

(By J. H. Wilson in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
T. 60 N., R. 39 W., quarter corner between secs. 21 and 28.....	39 59 55.6	95 16 59.1	.....
T. 60 N., R. 39 W., 0.25 mile south of quarter corner between secs. 22 and 27, 30 feet north and 20 feet east of large elm tree on east side of north and south road; iron post stamped "Prim. Trav. Sta. No. 2, 1916".....	39 59 43.0	95 15 51.3	5,433

SKIDMORE QUADRANGLE, MO.

In southwest portion of quadrangle. (By J. H. Wilson in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
T. 63 N., R. 39 W., east corner of secs. 13 and 24, 45 feet north and 18 feet east of, and T. 63 N., R. 38 W., 15 feet north and 18 feet east of west corner of secs. 18 and 19, at northeast corner of crossroads, on north side of road, on Atchison-Holt county line; iron post stamped "Prim. Trav. Sta. No. 4, 1916".....	40 15 46.2	95 14 14.3	.....

TARKIO QUADRANGLE, MO.

West along highways near south border of quadrangle. (By J. H. Wilson in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
T. 63 N., R. 39 W., corner of secs. 13, 14, 23, and 24, crossroads.....	40 15 46.0	95 15 22.8	.....
T. 63 N., R. 39 W., corner of secs. 14, 15, 22, and 23, crossroads.....	40 15 45.9	95 16 31.5	5,320
T. 63 N., R. 39 W., corner of secs. 15, 16, 21, and 22, crossroads.....	40 15 45.6	95 17 39.9	5,310
T. 63 N., R. 39 W., corner of secs. 16, 17, 20, and 21, crossroads.....	40 15 45.8	95 18 48.6	5,325
T. 63 N., R. 39 W., corner of secs. 17, 18, 19, and 20, T road north..	40 15 45.8	95 19 58.6	5,425
T. 63 N., Rs. 39 and 40 W., corner of secs. 18, 19, 13, and 24, in line with road east.....	40 15 46.2	95 21 03.1	5,005
T. 63 N., Rs. 39 and 40 W., quarter corner between secs. 19 and 24, T road west, lane east.....	40 15 20.1	95 21 03.4	2,640
T. 63 N., R. 40 W., quarter corner between secs. 23 and 24, 10 feet south and 5 feet west of, on south side of east-west road at T road north; iron post stamped "Prim. Trav. Sta. No. 5, 1916".....	40 15 20.7	95 22 11.3	5,261
T. 63 N., R. 40 W., quarter corner stone between secs. 22 and 23, T road east.....	40 15 21.0	95 23 20.5	5,370

Magnetic declination along east part of south border of quadrangle, 9° 19' E.

NEBRASKA AND IOWA.

PRIMARY TRAVERSE.

FORT OMAHA BALLOON FIELD.

Arlington, Ascot, Blair, Calhoun, Chalco, Elkhorn, Florence, Irvington, Kennard, Ralston, and Waterloo $7\frac{1}{2}$ quadrangles, Nebraska; Florence, Honey Creek, and Omaha vicinity quadrangles, Iowa.

DOUGLAS AND WASHINGTON COUNTIES, NEBR., POTTAWATTAMIE COUNTY, IOWA.

The following geographic positions on approximate North American datum were determined by Oscar Jones, in 1917, and are based on positions of the Missouri River Commission triangulation stations near Omaha.

For other positions in Nebraska see U. S. Geological Survey Bulletins 201, 276, and 644, Part I of the Eighteenth and Nineteenth Annual Reports, Special Publication No. 19 of the U. S. Coast and Geodetic Survey, and Annual Reports for 1901 and 1911 of the latter Survey; see also Reports of the Missouri River Commission for 1891 and 1893.

For other positions in Iowa see U. S. Geological Survey Bulletins 181, 201, 276, 440, 496, 551, and 644, and Eighteenth Annual Report, Part I, Reports of the Missouri River Commission for 1891 and 1893, and Reports of the Mississippi River Commission for 1893, 1894, and 1895.

ARLINGTON QUADRANGLE, NEBR.

West and south along highways and section lines. (By Oscar Jones in 1917.)

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
T. 17 N., R. 10 E., corner of secs. 13, 14, 23, and 24, crossroads.....	41 26 11.7	96 15 07.3	.....
T. 17 N., R. 10 E., corner of secs. 14, 15, 22, and 23, crossroads.....	41 26 12.0	96 16 16.8	5,290
T. 17 N., R. 10 E., corner of secs. 15, 16, 21, and 22, T road north.....	41 26 11.9	96 17 26.2	5,285
T. 17 N., R. 10 E., 30 feet north by 30 feet east of crossroads, corner of secs. 16, 17, 20, and 21; iron post stamped "Prim. Trav. Sta. No. 28, 1292, 1917".....	41 26 12.2	96 18 34.8	5,231
Center of overhead bridge, Chicago & Northwestern Ry.....	41 25 46.3	96 18 35.4	2,627
T. 17 N., R. 10 E., corner of secs. 20, 21, 28, and 29, T road east.....	41 25 19.6	96 18 35.4	2,700
T. 17 N., R. 10 E., quarter corner between secs. 28 and 29, T road west.....	41 24 53.6	96 18 35.3	2,625
Center of bridge.....	41 24 33.3	96 18 26.5	2,170
Center of bridge.....	41 23 39.2	96 17 52.0	6,059
T. 16 N., R. 10 E., corner of secs. 3, 4, 9, and 10.....	41 22 43.8	96 17 32.7	5,802
T. 16 N., R. 10 E., southwest corner of sec. 3, north side of road, at road fork southeast; iron post stamped "Prim. Trav. Sta. No. 29, 1144, 1917".....	41 22 44.0	96 17 29.5	242
T. 16 N., R. 10 E., south corner of secs. 2 and 3, fence line.....	41 22 43.5	96 16 22.2	5,130
Crossroads, 0.5 mile north of Elk City.....	41 22 43.5	96 16 05.0	1,318
T. 16 N., R. 10 E., north corner of secs. 2 and 3, 0.5 mile east of T road south.....	41 23 34.8	96 16 04.4	5,201
T. 16 N., R. 10 E., corner of secs. 1 and 2.....	41 23 34.9	96 15 11.9	4,000
T. 17 N., R. 10 E., corner of secs. 34 and 35, T road north.....	41 23 34.8	96 15 07.2	362

ASCOT QUADRANGLE, NEBR.

Southeast along highways. (By Oscar Jones in 1917.)

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
T. 17 N., R. 13 E., quarter corner of secs. 7 and 18, fence line.....	41 27 03.7	95 59 33.4	.....
T. 17 N., R. 13 E., 35 feet north by 25 feet west of corner of secs. 7, 8, 17, and 18, at crossroads; iron post stamped "Prim. Trav. Sta. No. 10".....	41 27 03.8	95 58 58.9	2,625
T. 17 N., R. 13 E., quarter corner between secs. 19 and 20, crossroads.....	41 25 45.0	95 58 59.0	7,974
T. 17 N., R. 13 E., near west quarter corner of sec. 29, northeast corner of crossroads; iron post stamped "Prim. Trav. Sta. 11, 1116, 1917".....	41 24 54.1	95 58 58.6	5,159
Road fork.....	41 23 38.0	95 58 58.5	7,698
T. 17 N., R. 13 E., south corner of secs. 31 and 32, Douglas-Washington county line.....	41 23 34.7	95 58 59.0	339
T. 16 N., R. 13 E., road fork, 310 feet east of quarter corner between secs. 5 and 6.....	41 23 16.2	95 59 03.6	1,900
Road fork at school.....	41 22 30.9	95 58 36.8	5,027
T road north, on line between secs. 8 and 9, T. 16 N., R. 13 E.; 50 feet east is T road south at north end of bridge.....	41 22 35.6	95 57 58.9	2,920
Center of iron bridge.....	41 22 36.0	95 57 24.0	2,662

Magnetic declination for southeast quarter of quadrangle, 8.9° E.

ASCOT QUADRANGLE, NEBR.—Continued.

Along Chicago, St. Paul, Minneapolis & Omaha Ry. in southwest part of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Railroad crossing, center of	41 25 06.8	95 59 40.6	.....
Railroad crossing	41 24 32.8	95 59 47.6	3,481
Coffman station, 500 feet north of, at road crossing	41 24 23.8	95 59 49.2	920

West along highways in south part of quadrangle.

Road fork	41 23 07.5	95 56 45.3	.....
Douglas-Washington county line crossing road	41 23 34.4	95 56 38.2	2,787
Old Rockport, 260 feet northwest of bridge and road fork; iron post stamped (?) "Prim. Trav. Sta. No. 14" (M. R. C. p. b. m.)	41 23 50.3	95 56 32.3	1,672
Road fork at well	41 24 25.0	95 56 46.3	3,671
Road fork	41 24 49.4	95 57 07.2	2,940
Road fork	41 24 58.89	95 57 15.5	1,159
T road south	41 25 19.0	95 57 15.9	2,034
Road fork	41 25 44.6	95 57 32.9	2,896
T. 17 N., R. 13 E., quarter corner between secs. 20 and 21, T road north	41 25 44.8	95 57 50.3	1,320
Road fork	41 25 31.7	95 58 23.2	2,829
Crossroads at school	41 24 43.5	95 58 23.3	4,890

Magnetic declination for southwest quarter of quadrangle, 9.1° E.

BLAIR QUADRANGLE, NEBR.

Northwest along highways. (By Oscar Jones in 1917.)

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Crossroads, 100 feet west is corner of section	41 30 32.3	96 06 58.3	.....
T road west (Blair triangulation station not found)	41 30 58.4	96 07 32.4	3,707
Blair, 1 mile south of, near center of sec. 13, T. 18 N., R. 11 E., at southwest corner of T road south, road fork; iron post stamped "Prim. Trav. Sta. No. 7, 1120, 1917"	41 31 46.4	96 07 35.4	4,860
Blair, Union Soldiers' Monument	41 32 26.3	96 08 09.6	4,810
Blair, Danish College cupola (Missouri River Commission tie point)	41 33 03.16	96 09 22.06	6,656

North to base line.

T. 18 N., R. 11 E., quarter corner between secs. 1 and 12, crossroads	41 33 08.8	96 07 34.9	.....
Tps. 18 and 19 N., R. 11 E., quarter corner between secs. 1 and 36, T road east	41 34 01.0	96 07 34.8	5,290
T. 19 N., R. 11 E., quarter corner between secs. 25 and 36, crossroads	41 34 53.6	96 07 34.8	5,320
T. 19 N., R. 11 E., center of sec. 25, crossroads	41 35 19.7	96 07 34.7	2,650
T. 19 N., R. 11 E., quarter corner between secs. 24 and 25, T road east	41 35 45.7	96 07 34.6	2,630
Blair, 5 miles north, on base line, 3,417 feet west of East Base station, on east side of north-south road, 0.25 mile north of south quarter post of sec. 14, T. 19 N., R. 11 E., 0.25 mile south of W. Tyson's house; copper bolt in tile surmounted by iron pipe, iron post (Mo. R. Comm. b. m. 128/2)	41 36 51.4	96 07 33.9	6,649
Copper bolt, elev., 1,013.41 feet.			
Cap on pipe, elev., 1,017.49 feet.			
Blair, East Base, Missouri River Commission station, on right bank, 0.25 mile southeast from W. Tyson's house, near center of SW. ¼ sec. 18, T. 19 N., R. 12 E. (not found in 1917)	41 36 51.41	96 06 48.83	3,417

Southeast along highways.

Road fork	41 31 09.3	96 06 10.1	.....
Road fork, road west on section line	41 31 00.7	96 05 55.8	1,397
Road fork	41 30 48.4	96 05 18.1	3,119
Road fork	41 30 31.6	96 04 29.4	4,081

BLAIR QUADRANGLE, NEBR.—Continued.

Southeast along highways near south border of quadrangle. (By Oscar Jones in 1917.)

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
T road west.....	41 30 58.4	96 07 32.4	.....
T. 18 N., R. 11 E., center of sec. 24.....	41 30 58.2	96 07 35.1	210
T. 18 N., R. 11 E., fence line, quarter corner between secs. 24 and 25.....	41 30 32.2	96 07 35.4	2,630
T. 18 N., R. 11 E., T road west, center of sec. 35.....	41 30 06.0	96 07 35.6	2,652
T. 18 N., R. 11 E., T road south, quarter corner between secs. 25 and 26.....	41 30 06.0	96 08 10.0	2,620
T. 18 N., R. 11 E., crossroads at school, center of sec. 26.....	41 30 06.0	96 08 44.8	2,650
T. 18 N., R. 11 E., fence line, quarter corner between secs. 26 and 27.....	41 30 06.2	96 09 19.6	2,650
Road fork.....	41 30 06.2	96 09 34.4	1,119

CALHOUN QUADRANGLE, NEBR.

Northeast along highways. (By Oscar Jones in 1917.)

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
T. 16 N., Rs. 11 and 12 E., corner of secs. 1, 6, 7, and 12, crossroads.....	41 22 44.4	96 07 10.8	.....
T. 17 N., R. 11 E., 680 feet west of southeast corner of sec. 36 on Douglas-Washington county line, 30 feet north of corner of secs. 1 and 6, T. 16 N., Rs. 11 and 12 E., on north side of road opposite T road south; iron post stamped "Prim. Trav. Sta. No. 8, 1248".....	41 23 35.2	96 07 11.0	5,136
T. 17 N., Rs. 11 and 12 E., corner of secs. 31 and 36, T road north.....	41 23 34.9	96 07 02.1	878
T. 16 N., R. 12 E., quarter corner of sec. 6, T road south.....	41 23 35.0	96 06 37.3	1,890
T. 16 N., R. 12 E., corner of secs. 5 and 6, fence line.....	41 23 35.1	96 06 02.8	2,630
T. 17 N., R. 12 E., corner of secs. 31 and 32, T road north.....	41 23 35.1	96 05 53.1	739
T. 17 N., R. 12 E., corner of secs. 29, 30, 31 and 32, T road west.....	41 24 27.2	96 05 53.0	5,280
T. 17 N., R. 12 E., quarter corner between secs. 29 and 30, crossroads at school.....	41 24 53.2	96 05 52.7	2,630
T. 17 N., R. 12 E., corner of secs. 19, 20, 29, and 30, T road east.....	41 25 19.4	96 05 52.7	2,650
T. 17 N., R. 12 E., corner of secs. 7, 8, 17, and 18, T road south.....	41 27 03.4	96 05 52.8	5,240
T road south.....	41 27 03.5	96 05 35.1	1,348
Road fork.....	41 27 25.9	96 05 13.4	2,802
Road fork.....	41 27 56.7	96 05 52.1	4,286
T. 17 N., R. 12 E., fence line, 0.25 mile north of corner of secs. 5, 6, 7, and 8.....	41 28 08.6	96 05 52.3	1,214
T. 17 N., R. 12 E., quarter corner between secs. 5 and 6, road fork.....	41 28 18.7	96 05 52.4	1,020
Road fork.....	41 28 23.1	96 05 52.3	950
Tps. 17 and 18 N., R. 12 E., 140 feet east of quarter corner between secs. 6 and 31, at road fork; iron post stamped (?) "Prim. Trav. Sta. No. 6".....	41 28 47.9	96 06 21.3	2,972
Center of iron bridge.....	41 29 18.9	96 06 25.5	3,155
Large cottonwood tree on west side of road.....	41 29 45.6	96 06 39.3	2,901

Southeast along highways.

Center of concrete culvert.....	41 29 59.1	96 03 47.5	.....
DeSoto, in angle of east-west and north-south roads, 250 feet northeast from J. E. Markel's house, in SE $\frac{1}{4}$ sec. 28, T. 18 N., R. 12 E., 890 feet west of east line and 1,300 feet north of south line of section; copper bolt in tile surmounted by iron pipe; iron post stamped "Prim. Trav. Sta. No. 8, Mo. R. Comm. 5. m. 126/1".....	41 29 52.3	96 03 45.2	708
Copper bolt, elevation, 1,016.80 feet.			
Cap on pipe, elevation, 1,020.87 feet.			
Center of concrete culvert.....	41 28 59.7	96 03 05.6	6,124
Road fork.....	41 28 47.0	96 02 45.4	2,000
North end of iron bridge.....	41 28 27.2	96 01 53.2	4,449
T. 17 N., R. 12 E., right angle turn in road, 0.25 mile south of quarter corner of secs. 2 and 11.....	41 27 45.1	96 01 50.0	4,258
Crossroads.....	41 27 27.9	96 01 38.8	1,937
Fort Calhoun, cross streets at Washington County Bank.....	41 27 20.2	96 01 34.2	854
Old Fort Calhoun, 800 feet south of site of old fort, in corner of yard of A. M. Beals, 650 feet N., 1° W. (mag.) from south quarter post of sec. 12, T. 17 N., R. 12 E.; copper bolt in tile surmounted by iron pipe; iron post stamped "Prim. Trav. Sta. No. 11, and U. S. Mo. R. b. m. (Mo. R. Comm. b. m. 125/1)".....	41 27 09.1	96 00 55.6	3,146
Copper bolt, elevation, 1,064.73 feet.			
Cap on pipe, elevation, 1,068.82 feet.			
T. 17 N., R. 11 E., corner of secs. 7, 12, 13, and 18, center of road.....	41 27 03.6	96 00 07.5	3,793

CALHOUN QUADRANGLE, NEBR.—Continued.

Northeast along Chicago & Northwestern Ry.

Station.	Latitude.	Longitude.	Distance between stations.
			Feet.
Road crossing.....	41 22 31.4	96 00 36.9	.....
Center of steel bridge.....	41 22 55.4	96 00 26.2	2,569
Douglas-Washington county line.....	41 23 34.8	96 00 22.1	4,004
North end of trestle.....	41 23 59.8	96 00 03.9	2,882

Magnetic declination for northeast part of quadrangle, 9.4° E.; for southeast part of quadrangle, 8.8° E.

Along highways west through center of quadrangle.

Quarter-section corner.....	41 27 03.2	96 01 43.5	.....
Bridge, center of.....	41 27 03.8	96 02 41.0	4,381
Bridge, center of.....	41 27 03.2	96 02 52.0	832
T. 17 N., R. 12 E., corner of secs. 9, 10, 15, and 16.....	41 27 03.6	96 03 33.6	3,169
T. 17 N., R. 12 E., quarter corner between secs. 15 and 16, crossroads.....	41 26 37.0	96 03 33.7	2,690
T. 17 N., R. 12 E., center of sec. 16, T road east.....	41 26 37.3	96 04 08.8	2,670
T. 17 N., R. 12 E., between secs. 9 and 16, fence line.....	41 27 03.3	96 04 03.3	2,670
T. 17 N., R. 12 E., center of sec. 9, crossroads.....	41 27 25.9	96 04 08.2	2,320
T. 17 N., R. 12 E., in S. E. ¼ sec. 8, at road forks; iron post stamped "Prim. Trav. Sta. No. 18, 1130, 1917".....	41 27 19.0	96 04 51.8	3,400

Along highways west through south half of quadrangle.

Stone bridge, center of.....	41 24 27.1	96 00 46.0	.....
T. 17 N., R. 12 E. and 13 E., corner of secs. 25, 30, 31, and 36, crossroads.....	41 24 27.2	96 01 16.8	2,350
T. 17 N., R. 12 E., 1,386 feet east of corner of secs. 26, 27, 34, and 35, T road south.....	41 24 27.1	96 02 07.6	3,879
T. 17 N., R. 12 E., on line through center of sec. 35, center of road at fence line.....	41 24 01.1	96 02 12.7	2,664
T. 17 N., R. 12 E., quarter corner of sec. 2, crossroads on Douglas-Washington county line.....	41 23 34.9	96 01 59.9	2,827
T. 17 N., R. 12 E., south corner of secs. 34 and 35, fence line north.....	41 23 34.8	96 02 23.4	1,790
T. 17 N., R. 12 E., quarter corner, south side of sec. 34, T road north.....	41 23 34.8	96 03 00.1	2,800
T. 16 N., R. 12 E., quarter corner on north side of sec. 3, T road south.....	41 23 34.8	96 03 09.0	680
T. 17 N., R. 12 E., southwest corner of sec. 34, 20 feet north by 30 feet east of T road north; (primary traverse station No. 15) iron post stamped "Prim. Trav. Sta. No. —, 1237, 1917.....	41 23 35.2	96 03 34.2	1,930
T. 17 N., R. 12 E., quarter corner on south side of sec. 33, fence line.....	41 23 34.9	96 04 09.3	2,670
T. 17 N., R. 12 E., corner of secs. 32 and 33, T road north.....	41 23 34.9	96 04 43.8	2,630
T. 16 N., R. 12 E., corner of secs. 4 and 5, T road south.....	41 23 34.9	96 04 52.8	690

Along highways in east part of quadrangle.

T. 17 N., R. 12 E., 720 feet east by 30 feet north of corner of secs. 22, 23, 26, and 27, northeast corner of crossroads; iron post stamped (?) "Prim. Trav. Sta. No. 16, 1338, 1917".....	41 25 19.5	96 02 16.6	.....
Road fork.....	41 26 16.3	96 02 07.5	5,792
Road fork at L. Lundman.....	41 26 47.5	96 01 55.4	3,291
Road fork.....	41 26 54.1	96 01 34.3	1,750

Magnetic declination for center of quadrangle, 9.6° E.; for south part and east part of quadrangle, 9.5° E.

Southeast along highways in northeast corner of quadrangle. (By Oscar Jones in 1917.)

T. 17 N., line between Rs. 11 and 12 E., near corner of secs. 7, 18, 12, and 13.....	41 26 55.9	96 07 02.0	.....
Large cottonwood tree, north side of road.....	41 26 55.0	96 06 46.0	1,219
Road fork.....	41 26 03.5	96 05 35.1	5,469

CHALCO QUADRANGLE, NEBR.

South along range line near east border of quadrangle. (By Oscar Jones in 1917.)

Station.	Latitude.	Longitude.	Distance between stations.
T. 15 N., Rs. 10 and 11 E., corner of secs. 19, 24, 25, and 30, crossroads.....	° ' "	° ' "	<i>Feet.</i>
T. 15 N., Rs. 10 and 11 E., corner of secs. 25, 30, 31, and 36, crossroads.....	41 14 53.2	96 14 04.6	.....
T. 15 N., Rs. 10 and 11 E., quarter corner between secs. 31 and 36, T road west.....	41 14 01.0	96 14 04.4	5, 283
Tps. 14 and 15 N., Rs. 10 and 11 E., 35 feet south by 30 feet east of crossroads at township corner; iron post stamped "Prim. Trav. Sta. No. 36, 1262, 1917".....	41 13 34.9	96 14 04.2	2, 649
Center of concrete bridge.....	41 13 08.4	96 14 03.8	2, 676
T. 14 N., Rs. 10 and 11 E., stone corner of secs. 1, 6, 7, and 12, crossroads.....	41 12 42.6	96 14 04.2	2, 620
T. 14 N., Rs. 10 and 11 E., stone corner of secs. 1, 6, 7, and 12, crossroads.....	41 12 16.6	96 14 04.1	2, 624

East along highways through center of quadrangle.

Center of wooden bridge.....	41 12 17.0	96 13 24.4	3, 040
T. 14 N., R. 11 E., corner of secs. 5, 6, 7, and 8, crossroads.....	41 12 17.3	96 12 56.5	2, 130
T. 14 N., R. 11 E., corner of secs. 4, 5, 8, and 9, crossroads.....	41 12 17.8	96 11 47.8	5, 249
T. 14 N., R. 11 E., crossroads, 40 feet south by 35 feet west of corner of secs. 3, 4, 9, and 10; iron post stamped "Prim. Trav. Sta. No. 37, 1169, 1917".....	41 12 17.5	96 10 39.1	5, 249
T. 14 N., R. 11 E., quarter corner between secs. 3 and 10, T road south.....	41 12 17.9	96 10 03.9	2, 685
T. 14 N., R. 11 E., corner of secs. 2, 3, 10, and 11, crossroads.....	41 12 18.3	96 09 29.4	2, 640
T. 14 N., R. 11 E., corner of secs. 1, 2, 11, and 12, crossroads.....	41 12 18.5	96 08 19.6	5, 330
T. 14 N., R. 11 E., quarter corner between secs. 1 and 12, T road west.....	41 12 18.0	96 07 45.1	2, 638

Magnetic declination through center of quadrangle, 9.6° E.

South along highways near middle of quadrangle. (By Oscar Jones in 1917.)

T. 15 N., R. 11 E., corner of secs. 21, 22, 27, and 28, crossroads.....	41 14 54.0	96 10 37.0	.....
T. 15 N., R. 11 E., corner of secs. 27, 28, 33, and 34, crossroads.....	41 14 01.5	96 10 36.9	5, 305
Tps. 14 and 15 N., R. 11 E., corner of secs. 3, 4, 33, and 34, crossroads.....	41 13 09.4	96 10 37.7	5, 280
T. 14 N., R. 11 E., Prim. Trav. Sta. No. 37 (previously described).....	41 12 17.5	96 10 39.1	5, 254

ELKHORN QUADRANGLE, NEBR.

North along highways. (By Oscar Jones in 1917.)

Station.	Latitude.	Longitude.	Distance between stations.
Tps. 15 and 16 N., R. 11 E., corner of secs. 1, 2, 35, and 36, crossroads.....	° ' "	° ' "	<i>Feet.</i>
T. 16 N., R. 11 E., corner of secs. 25, 26, 35, and 36, crossroads.....	41 18 23.2	96 08 19.2	.....
T. 16 N., R. 11 E., corner of secs. 23, 24, 25, and 26, crossroads.....	41 19 15.5	96 08 19.4	5, 288
T road north, east end of bridge.....	41 20 07.8	96 08 19.9	5, 301
T. 16 N., R. 11 E., quarter corner between secs. 13 and 24, T road east.....	41 20 07.8	96 07 41.8	2, 902
T. 16 N., R. 11 E., quarter corner between secs. 13 and 24, T road east.....	41 21 00.2	96 07 44.8	5, 311

South along highways near west border of quadrangle.

Elkhorn, T road west opposite Farmers Bank.....	41 16 59.0	96 14 13.2	.....
Tie point (1032).....	41 16 52.0	96 14 04.3	982
T. 15 N., Rs. 10 and 11 E., corner of secs. 13, 18, 19, and 24, 30 feet east by 20 feet south of crossroads, iron post stamped "Prim. Trav. Sta. No. 35, 1244, 1917".....	41 15 45.3	96 14 04.1	6, 753
T. 15 N., Rs. 10 and 11 E., quarter corner between secs. 19 and 24, fence line.....	41 15 19.3	96 14 04.8	2, 632

ELKHORN QUADRANGLE, NEBR.—Continued.

East along highways near north border of quadrangle. (By Oscar Jones in 1917.)

Station.	Latitude.	Longitude.	Distance between stations.
T. 16 N., R. 10 E., quarter corner between secs. 13 and 24, fence line.....	° ' "	° ' "	Feet.
T. 16 N., Rs. 10 and 11 E., corner of secs. 13, 18, 19, and 24, 43 feet south by 30 feet west of crossroads; iron post stamped "Prim. Trav. Sta. No. 40, 1295, 1917".....	41 20 58.9	96 14 38.4	.....
T. 16 N., R. 11 E., quarter corner of secs. 18 and 19.....	41 20 58.4	96 14 03.9	2,625
Center of bridge.....	41 20 58.9	96 13 32.9	2,363
T. 16 N., R. 11 E., quarter corner between secs. 17 and 20, T road south.....	41 20 59.0	96 13 09.7	1,773
T. 16 N., R. 11 E., corner of secs. 16, 17, 20, and 21, T road north.....	41 20 59.1	96 12 23.4	3,526
T. 16 N., R. 11 E., center of concrete culvert.....	41 20 59.4	96 11 49.0	2,622
T. 16 N., R. 11 E., about 500 feet south of corner of secs. 15, 16, 21, and 22, 1 mile south by 1 mile west of Bennington, 20 feet northeast of crossroads; iron post stamped "Prim. Trav. Sta. No. 41, 1185, 1917".....	41 20 59.6	96 11 14.9	2,597
T road south.....	41 20 55.5	96 10 39.1	2,761
T. 16 N., R. 11 E., quarter corner between secs. 22 and 23, T road west.....	41 20 33.6	96 09 54.0	4,091
Crossroads at school.....	41 20 33.5	96 09 30.2	1,812
T. 16 N., R. 11 E., corner of secs. 23, 24, 25, and 26, crossroads.....	41 20 07.5	96 09 09.0	3,092
	41 20 07.8	96 08 19.9	3,747

North along highways through center of quadrangle.

T. 16 N., R. 11 E., corner of secs. 16, 17, 20, and 21, T road north.....	41 20 59.4	96 11 49.0	.....
T. 16 N., R. 11 E., quarter corner between secs. 16 and 17, fence line.....	41 21 25.4	96 11 48.9	2,638
T. 16 N., R. 11 E., corner of secs. 8, 9, 16, and 17, crossroads.....	41 21 51.6	96 11 49.0	2,645
Center of wooden bridge.....	41 22 15.1	96 11 49.1	2,389

South along highways near center of quadrangle.

T. 16 N., R. 11 E., quarter corner between secs. 17 and 20, T road south.....	41 20 59.1	96 12 23.4	.....
T. 16 N., R. 11 E., center of sec. 20, fence line.....	41 20 33.2	96 12 23.2	2,627
T. 16 N., R. 11 E., quarter corner between secs. 20 and 29, crossroads.....	41 20 07.1	96 12 23.0	2,651
Center of concrete bridge.....	41 19 45.5	96 12 22.8	2,180
T. 16 N., R. 11 E., quarter corner between secs. 29 and 32, T road north.....	41 19 14.9	96 12 22.5	3,103
T. 16 N., R. 11 E., corner of secs. 28, 29, 32, and 33, T road south.....	41 19 14.9	96 11 47.8	2,645
Tps. 15 and 16 N., R. 11 E., corner of secs. 4, 5, 32, and 33, crossroads.....	41 18 22.7	96 11 47.1	5,287

North and east along highways.

T. 15 N., Rs. 10 and 11 E., tie point.....	41 16 52.0	96 14 04.3	.....
T. 15 N., R. 10 and 11 E., corner of secs. 1, 6, 7, and 12, crossroads.....	41 17 30.0	96 14 04.1	3,840
Tps. 15 and 16 N., Rs. 10 and 11 E., 35 feet north by 30 feet east of crossroads, corner of secs. 1, 6, 31, and 36; iron post stamped "Prim. Trav. Sta. No. 43, 1258, 1917".....	41 18 22.6	96 14 03.7	5,323
Tps. 15 and 16 N., R. 11 E., corner of secs. 5, 6, 31, and 32, fence line.....	41 18 22.4	96 12 56.4	5,130
Center of wooden bridge.....	41 18 22.6	96 12 13.1	3,300
Tps. 15 and 16 N., R. 11 E., corner of secs. 4, 5, 32, and 33, crossroads.....	41 18 22.7	96 11 47.1	1,984
Tps. 15 and 16 N., R. 11 E., 30 feet north by 35 feet west of crossroads, corner of secs. 3, 4, 33, and 34; iron post stamped "Prim. Trav. Sta. No. 42, 1216, 1917".....	41 18 23.1	96 10 38.4	5,238
Tps. 15 and 16 N., R. 11 E., corner of secs. 2, 3, 34, and 35, crossroads.....	41 18 23.1	96 09 28.7	5,312
Tps. 15 and 16 N., R. 11 E., corner of secs. 1, 2, 35, and 36, crossroads.....	41 18 23.2	96 08 19.2	5,300

South along highways near center of quadrangle.

Prim. Trav. Sta. No. 42 (previously described).....	41 18 23.1	96 10 38.4	.....
T. 15 N., R. 11 E., corner of secs. 3, 4, 9, and 10, crossroads.....	41 17 30.7	96 10 38.6	5,303
T. 15 N., R. 11 E., corner of secs. 9, 10, 15, and 16, crossroads.....	41 16 38.5	96 10 37.7	5,287
T. 15 N., R. 11 E., corner of secs. 15, 16, 21, and 22, 35 feet south by 30 feet east of crossroads; iron post stamped "Prim. Trav. Sta. No. 44, 1127, 1917".....	41 15 45.8	96 10 37.0	5,335
T. 15 N., R. 11 E., quarter corner between secs. 21 and 22, fence line.....	41 15 23.0	96 10 37.2	2,310

Magnetic declination for north border of quadrangle, 8.9° E.; for line through center of quadrangle, 8.4° E.; for two lines near center of quadrangle, 9.2° E.; for north and east borders of quadrangle, 9.1° E.

FLORENCE QUADRANGLE, NEBR.

West along highways. (By Oscar Jones in 1917.)

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Omaha, west end of steel truss.....	41 15 30.8	95 55 22.9	.....
Omaha, west abutment of bridge.....	41 15 30.7	95 55 37.8	1,139
Omaha, center of Davenport and Twelfth streets.....	41 15 41.3	95 55 54.2	1,650
Omaha, center of Davenport and Nineteenth streets.....	41 15 41.6	95 56 27.7	2,553
Omaha, in old Capitol grounds (present High School), U. S. C. & G. S. astronomic pier (old pier; tied to in 1917); (see Report of Chief of Engineers, 1891, p. 3782)	41 15 35.94	95 56 35.72	836
Omaha, astronomic pier (new, in 1912) (not tied to by Jones 1917), U. S. C. & G. S.....	41 15 37.22	95 56 39.58	.....
Omaha, center of Cumming and Nineteenth streets.....	41 16 04.3	95 56 27.6	.....
Omaha, center of Cumming and Twenty-seventh streets.....	41 16 04.2	95 57 05.8	2,913
Omaha, center of Cumming and Thirty-second streets.....	41 16 04.2	95 57 36.8	2,370
Omaha, center of Cumming and Fortieth streets.....	41 16 04.1	95 58 22.0	3,455
Omaha, center of Stewart Street and Military Avenue.....	41 16 26.4	95 58 40.8	2,679
T. 15 N., R. 13 E., corner of secs. 7, 8, 17, and 18, Blondo and Forty-Eighth streets.....	41 16 39.8	95 59 07.1	2,422
T. 15 N., R. 13 E., quarter corner between secs. 7 and 18, Blondo and Fifty-Second streets.....	41 16 39.4	95 59 40.4	2,545

Southeast along highways.

Center of concrete culvert, 100 feet south of road fork.....	41 22 25.4	95 57 12.0	.....
Fence line east and west on section line between secs. 9 and 16, T. 16 N., R. 13 E.....	41 21 52.1	95 57 30.4	3,662
Center of concrete bridge at road fork.....	41 21 33.2	95 57 39.0	2,033
Florence (Mo. R. Comm. base); iron post stamped "Prim. Trav. Sta. No. 12".....	41 20 34.4	95 57 30.6	5,996
Florence Water Works, flagstaff on pump house (Mo. R. Comm. secondary station).....	41 20 34.90	95 57 32.67	165
Florence Water Works steel flag staff erected about 1890.....	41 20 35.0	95 57 30.5	169

Southeast along Chicago, St. Paul, Minneapolis & Omaha Ry.

Road fork, 100 feet south of Florence station.....	41 20 05.6	95 57 20.6	.....
Road crossing, railroad above road.....	41 19 37.2	95 56 58.3	3,337
Road crossing.....	41 19 23.2	95 56 42.0	1,882
Tps. 15 and 16 N., R. 13 E., 35 feet south by 40 feet east of quarter corner between secs. 3 and 34; iron post Prim. Trav. Sta. No. 13, cap gone (Mo. R. Comm. b. m. 122-1).....	41 18 23.3	95 56 13.4	6,444
Ames Avenue, crossing of.....	41 17 58.3	95 56 05.4	2,602
Omaha, center of Locust and Thirteenth streets, 0.25 mile east of sec. 10, T. 15 N., R. 13 E.; iron post.....	41 17 06.1	95 55 56.9	5,322
Omaha, center of Locust Street and Illinois Central R. R. crossing.....	41 17 05.4	95 54 58.0	4,492
Omaha, center of Locust and Twenty-Eighth streets.....	41 17 05.3	95 53 42.4	5,770
Omaha, west abutment of Illinois Central R. R. bridge over Wisconsin River.....	41 16 47.4	95 53 36.5	1,881
West end of steel truss.....	41 16 44.1	95 53 31.4	512

West along Chicago & Northwestern Ry. from Florence to Coffman.

Road crossing.....	41 20 35.9	95 58 23.3	.....
Road crossing.....	41 20 36.6	95 58 56.9	2,506
Road crossing.....	41 20 55.2	95 59 48.9	4,389

West along highways.

Fort Omaha Reservation, near southeast gate of; iron post stamped "Prim. Trav. Sta. No. 19".....	41 18 24.3	95 57 23.7	.....
Chicago & Northwestern Ry. bridge, center of north face of east concrete pier.....	41 18 29.1	95 58 14.7	3,920
T road north.....	41 18 36.9	95 59 15.8	4,737
Crossroads.....	41 18 36.8	95 59 41.5	1,960

IRVINGTON QUADRANGLE, NEBR.

West along highways. (By Oscar Jones in 1917.)

Station.	Latitude.	Longitude.	Distance between stations.
Omaha, Blondo and Fifty-Eighth streets, T. 15 N., Rs. 12 and 13 E., 20 feet north by 20 feet west of corner of secs. 7, 12, 13, and 18; iron post stamped "Prim. Trav. Sta. No. 1, 1231, 1917".....	° ' "	° ' "	<i>Feet.</i>
T. 15 N., R. 12 E., quarter corner between secs. 12 and 13.....	41 16 39.6	96 00 17.1	.....
T. 15 N., R. 12 E., corner of secs. 11, 12, 13, and 14, crossroads.....	41 16 39.3	96 00 51.1	2,597
Crossing of Chicago & Northwestern Ry.....	41 16 39.6	96 01 25.4	2,620
T. 15 N., R. 12 E., quarter corner between secs. 10 and 15, crossroads.....	41 16 39.6	96 02 37.2	5,480
T. 15 N., R. 12 E., 20 feet south by 20 feet east of quarter corner between secs. 9 and 16 at T road south; iron post stamped "Prim. Trav. Sta. No. 2, 1168, 1917".....	41 16 39.5	96 03 09.0	2,430
T. 15 N., R. 12 E., corner of secs. 8, 9, 16, and 17, crossroads.....	41 16 39.3	96 03 43.2	2,610
T. 15 N., R. 12 E., quarter corner between secs. 8 and 9, T road west.....	41 16 39.3	96 04 52.5	5,290
T. 15 N., R. 12 E., corner of secs. 4, 5, 8, and 9, fence.....	41 17 05.6	96 04 52.6	2,659
Crossroads.....	41 17 31.6	96 04 52.8	2,680
Tps. 15 and 16 N., R. 12 E., corner of secs. 4, 5, 32, and 33, crossroads.....	41 17 39.6	96 04 52.7	820
Tps. 15 and 16 N., R. 12 E., quarter corner between secs. 5 and 32, fence line.....	41 18 23.4	96 04 52.6	4,427
Tps. 15 and 16 N., R. 12 E., corner of secs. 5, 6, 31, and 32, crossroads.....	41 18 23.2	96 05 27.1	2,640
Tps. 15 and 16 N., Rs. 11 and 12 E., 25 feet north by 30 feet west of corner of secs. 1, 6, 31, and 36 and crossroads; iron post stamped "Prim. Trav. Sta. No. 3, 1207, 1917".....	41 18 23.3	96 06 01.9	2,650
T. 16 N., Rs. 11 and 12 E., 20 feet south and 35 feet west of corner of secs. 13, 18, 19, and 24; iron post stamped "Prim. Trav. Sta. No. 4, 1126, 1917"; azimuth to railroad crossing sign, 93° 07'.....	41 18 23.6	96 07 10.5	5,238
T. 16 N., Rs. 11 and 12 E., corner of secs. 7, 12, 13, and 18, T road east.....	41 20 59.8	96 07 11.0	.....
	41 21 52.2	96 07 10.7	5,307

West along highways.

Tps. 15 and 16 N., Rs. 11 and 12 E., a quarter of a mile north of township corner; 20 feet south by 30 feet east of crossroads; iron post stamped "Prim. Trav. Sta. No. 20, 1251".....	41 18 36.6	96 00 15.7	.....
T. 16 N., Rs. 11 and 12 E., 0.25 mile south of corner of secs. 25, 30, 31, and 36, crossroads.....	41 19 03.0	96 00 16.2	2,675
T. 16 N., R. 11 E., 0.25 mile south of quarter corner between secs. 25 and 36, T road north.....	41 19 02.8	96 00 50.7	2,646
Debolt Place, crossing of Chicago & Northwestern Ry. at.....	41 19 27.8	96 00 58.2	2,588
T. 16 N., R. 12 E., 0.25 mile north of corner of secs. 25, 26, 35, and 36, crossroads.....	41 19 29.0	96 01 25.3	2,073
T. 16 N., R. 12 E., corner of secs. 23, 24, 25, and 26, crossroads.....	41 20 08.1	96 01 25.3	3,960
T road north.....	41 20 08.1	96 01 42.4	1,305
T. 16 N., R. 12 E., quarter corner between secs. 23 and 26, crossroads.....	41 20 08.0	96 01 59.7	1,325
T. 16 N., R. 12 E., corner of secs. 22, 23, 26, and 27, fence line.....	41 20 08.0	96 02 34.1	2,625
T road south.....	41 20 08.0	96 03 02.4	2,165
Center of wooden bridge.....	41 20 08.0	96 03 10.6	634
T. 16 N., R. 12 E., corner of secs. 21, 22, 27, and 28, 30 feet north by 20 feet west of crossroads; iron post stamped "Prim. Trav. Sta. No. 21, 1233, 1917".....	41 20 08.3	96 03 43.4	2,506
Center of wooden bridge.....	41 20 34.0	96 03 43.1	2,599
T. 16 N., R. 12 E., corner of secs. 15, 16, 21, and 22, crossroads.....	41 21 00.2	96 03 43.2	2,655
Crossroads.....	41 21 00.2	96 04 52.0	5,257
Center of steel bridge.....	41 21 00.2	96 05 23.8	2,428
T. 16 N., R. 12 E., corner of secs. 17, 18, 19, and 20, T road south.....	41 21 00.2	96 06 00.4	2,790
Center of wooden bridge over Chicago & Northwestern Ry.....	41 21 00.2	96 06 29.7	2,240

West and north along Chicago & Northwestern Ry.

Briggs, 315 feet west of, 40 feet south by 20 feet east of road crossing near southwest corner of sec. 18, T. 16 N., R. 13 E.; iron post stamped "Prim. Trav. Sta. No. 22, 1129".....	41 21 08.4	96 00 16.2	.....
Road crossing.....	41 22 11.4	96 00 31.6	6,488

IRVINGTON QUADRANGLE, NEBR.—Continued.

South along highways.

Station.	Latitude.	Longitude.	Distance between stations.
T. 16 N., Rs. 11 and 12 E., corner of secs. 13, 18, 19, and 24, T road west.	° ' "	° ' "	<i>Feet.</i>
Railroad crossing on Chicago & Northwestern Ry.	41 21 00.3	96 00 16.6	.....
T. 16 N., Rs. 12 and 13 E., quarter corner between secs. 19 and 24, T road west.	41 20 43.8	96 00 16.5	1,680
T. 16 N., Rs. 12 and 13 E., corner of secs. 19, 24, 25, and 30, T road west.	41 20 34.1	96 00 16.5	980
T road east.	41 20 08.1	96 00 16.4	2,630
Railroad crossing, Chicago & North Western Ry. overhead bridge.	41 19 55.1	96 00 16.3	1,320
T. 16 N., Rs. 12 and 13 E., corner of secs. 25, 30, 31, and 36, fenceline.	41 19 18.0	96 00 16.2	3,750
Tps. 15 and 16 N., Rs. 12 and 13 E., corner of secs. 1, 6, 31, and 36, fenceline.	41 19 15.9	96 00 16.2	220
T road east.	41 18 23.9	96 00 16.3	.....
T. 15 N., Rs. 12 and 13 E., corner of secs. 1, 6, 7, and 12, T road east.	41 18 10.5	96 00 16.4	1,350
T. 15 N., Rs. 12 and 13 E., quarter corner between secs. 7 and 12, crossroads.	41 17 31.7	96 00 16.6	3,930
	41 17 05.4	96 00 16.7	2,670

Magnetic declination for quadrangle, 9.8° E.

North along highways near center of quadrangle.

T. 15 N., R. 12 E., quarter corner between secs. 15 and 22, crossroads.	41 15 47.3	96 03 08.7	.....
Center of bridge.	41 16 19.0	96 03 09.0	3,205
T. 15 N., R. 12 E., quarter corner between secs. 12 and 15, crossroads.	41 16 39.5	96 03 09.0	2,075

South along highways near west border of quadrangle.

Tps. 15 and 16 N., Rs. 11 and 12 E., Prim. Trav. Sta. No. 3, previously described.	41 18 23.6	96 07 10.5	.....
T. 15 N., Rs. 11 and 12 E., corner of secs. 1, 6, 7 and 12, crossroads.	41 17 31.1	96 07 10.2	5,313
T. 15 N., Rs. 11 and 12 E., corner of secs. 7, 12, 13, and 18, crossroads.	41 16 38.8	96 07 10.2	5,290
Center of steel bridge.	41 16 10.4	96 07 10.2	2,825
T. 15 N., Rs. 11 and 12 E., 30 feet south by 40 feet east of crossroads at corner of secs. 13, 18, 19, and 24; iron post stamped "Prim. Trav. Sta. No. 25, 1121, 1917"	41 15 46.3	96 07 09.8	2,490

North and east along highways. (By Oscar Jones in 1917.)

Tps. 15 and 16 N., R. 12 E., corner of secs. 4, 5, 32, and 33, crossroads.	41 18 23.4	96 04 52.6	.....
T. 16 N., R. 12 E., quarter corner between secs. 32 and 33, T road east.	41 18 49.6	96 04 52.6	2,652
T. 16 N., R. 12 E., corner of secs. 28, 29, 32, and 33, fenceline.	41 19 15.9	96 04 52.4	2,655
T. 16 N., R. 12 E., quarter corner between secs. 28 and 33, fenceline.	41 19 15.8	96 04 17.9	2,640
T. 16 N., R. 12 E., corner of secs. 27, 28, 33, and 34, fenceline.	41 19 15.9	96 03 43.7	2,612
Crossing of Chicago & Northwestern Ry.	41 19 16.0	96 03 29.3	1,105
Road fork.	41 19 16.1	96 03 17.6	893
Road fork.	41 19 39.7	96 03 48.1	3,329
Prim. Trav. Sta. No. 21 (previously described).	41 20 08.3	96 03 43.5	2,914

Magnetic declination north and east along highways, 9.2° E.

KENNARD QUADRANGLE, NEBR.

Southeast along highways. (By Oscar Jones in 1917.)

Station.	Latitude.			Longitude.			Distance between stations.
	°	'	"	°	'	"	
Center of east face of concrete bridge.....	41	29	49.0	96	09	57.2	
Road fork.....	41	29	40.2	96	10	09.2	1,286
Crossroads, 140 feet west of concrete bridge.....	41	29	23.7	96	10	28.9	2,283
Tps. 17 and 18 N., R. 11 E., 25 feet south of T road east, corner of secs. 3, 4, 33, and 34; iron post stamped "Prim. Trav. Sta. No. 23, 1189, 1917".....	41	28	47.7	96	10	29.0	3,637
T. 17 N., R. 11 E., quarter corner between secs. 3 and 4, crossroads.....	41	28	22.0	96	10	29.6	2,604
T. 17 N., R. 11 E., center of sec. 3, fence line.....	41	28	22.0	96	09	54.9	2,639
T. 17 N., R. 11 E., quarter corner between secs. 2 and 3, T road south.....	41	28	22.1	96	09	20.3	2,635
T. 17 N., R. 11 E., center of sec. 2, T road north.....	41	28	22.1	96	08	45.5	2,645
Road fork.....	41	27	55.8	96	08	25.8	3,054
Road fork, opposite signboard painted "Omaha 21 miles".....	41	27	20.1	96	08	11.2	3,777
T. 17 N., R. 11 E., in NW $\frac{1}{4}$ sec. 13, 900 feet east of Maney schoolhouse at road fork, west side of road; iron post stamped "Prim. Trav. Sta. No. 24, 1334".....	41	27	00.6	96	08	00.9	2,127
T. 17 N., R. 11 E., corner of secs. 11, 12, 13, and 14, crossroads.....	41	27	04.0	96	08	11.0	837
T. 17 N., R. 11 E., corner of secs. 13, 14, 23, and 24, crossroad.....	41	26	11.6	96	08	11.4	5,305
T. 17 N., R. 11 E., corner of secs. 23, 24, 25, and 26, crossroad.....	41	25	19.6	96	08	11.6	5,260
T. 17 N., R. 11 E., corner of secs. 25, 26, 35, and 36, crossroad.....	41	24	27.3	96	08	11.4	5,300
T. 17 N., R. 11 E., corner of secs. 35 and 36, T road north, Douglas-Washington county line.....	41	23	35.0	96	08	11.3	5,300
T. 16 N., R. 11 E., quarter corner on north side of sec. 1, T road south.....	41	23	34.8	96	07	45.9	1,939

South along highways.

T. 17 N., R. 11 E., quarter corner between secs. 3 and 4, crossroads.....	41	28	22.0	96	10	29.6	
Center of bridge.....	41	27	53.4	96	10	29.7	2,895
T. 17 N., R. 11 E., quarter corner between secs. 9 and 10, fence line.....	41	27	29.8	96	10	29.8	2,390
T. 17 N., R. 11 E., corner of secs. 9, 10, 15, and 16, crossroads.....	41	27	03.6	96	10	29.8	2,650
Center of concrete bridge.....	41	26	41.2	96	10	29.5	2,276
T. 17 N., R. 11 E., corner of secs. 15, 16, 21, and 22, 30 feet north by 20 feet west of crossroads, at Peaceful Hill schoolhouse; iron post stamped "Prim. Trav. Sta. No. 31, 1241, 1917".....	41	26	11.9	96	10	30.4	2,966
T. 17 N., R. 11 E., quarter corner between secs. 21 and 22, fence line.....	41	25	45.4	96	10	30.2	2,685
T. 17 N., R. 11 E., corner of secs. 21, 22, 27, and 28, crossroads.....	41	25	19.4	96	10	29.8	2,631
T. 17 N., R. 11 E., quarter corner between secs. 22 and 27, fence line.....	41	24	53.2	96	10	29.8	2,649
T. 17 N., R. 11 E., corner of secs. 27, 28, 33, and 34, crossroads.....	41	24	27.2	96	10	30.0	2,635
T. 17 N., R. 11 E., quarter corner between secs. 33 and 34, fence line.....	41	24	01.0	96	10	29.9	2,660
T. 16 N., R. 11 E., 50 feet west by 30 feet south of T road south, corner of secs. 3 and 4; iron post stamped "Prim. Trav. Sta. No. 32, 1130".....	41	23	34.6	96	10	40.2	2,787
T. 16 N., R. 11 E., quarter corner between secs. 3 and 4, fence line.....	41	23	34.9	96	09	55.3	3,423
T. 16 N., R. 11 E., corner of secs. 1 and 2, T road south.....	41	23	34.8	96	09	30.0	1,925
T. 17 N., R. 11 E., corner of secs. 35 and 36, T road north.....	41	23	34.9	96	09	20.4	732

West and south along highways.

T. 17 N., R. 11 E., quarter corner between secs. 3 and 4.....	41	28	22.0	96	10	29.6	
T. 17 N., R. 11 E., in sec. 4, T road south.....	41	28	22.2	96	11	04.3	2,645
Center of steel bridge.....	41	28	22.4	96	11	51.8	3,615
Kennard, on Chicago & Northwestern Ry., opposite semaphore, center of track.....	41	28	20.2	96	12	03.4	927
T. 17 N., R. 11 E., quarter corner between secs. 5 and 6, T road north.....	41	28	22.2	96	12	48.1	3,400
T. 17 N., Rs. 10 and 11 E., quarter corner between secs. 1 and 6, west side of road, at T road east; iron post stamped "Prim. Trav. Sta. No. 27, 1180, 1917".....	41	28	22.2	96	13	58.0	5,318
T. 17 N., Rs. 10 and 11 E., corner of secs. 1, 6, 7, and 12, crossroads.....	41	27	56.2	96	13	57.6	2,640
T. 17 N., Rs. 10 and 11 E., quarter corner between secs. 7 and 12, T road east.....	41	27	30.0	96	13	57.7	2,646
T. 17 N., Rs. 10 and 11 E., quarter corner between secs. 13 and 18, T road east.....	41	26	37.8	96	13	58.0	
T. 17 N., Rs. 10 and 11 E., 25 feet north by 30 feet east of crossroads, corner of secs. 13, 18, 19, and 24; iron post stamped "Prim. Trav. Sta. No. 26".....	41	26	11.8	96	13	57.6	2,628
T. 17 N., Rs. 10 and 11 E., corner of secs. 19, 24, 25, and 30, T road east.....	41	25	19.3	96	13	58.0	5,318
T. 17 N., Rs. 10 and 11 E., quarter corner between secs. 25 and 30, crossroads.....	41	24	53.2	96	13	58.0	2,640
T. 17 N., Rs. 10 and 11 E., corner of secs. 25, 30, 31, and 36, crossroads.....	41	24	27.1	96	13	57.9	2,647
Center of wooden bridge.....	41	23	54.5	96	13	57.8	3,300
T. 17 N., Rs. 10 and 11 E., corner of secs. 31 and 36, T road north.....	41	23	34.9	96	13	57.9	1,980
Crossing of Chicago & Northwestern Ry.....	41	23	34.8	96	13	35.8	1,678
T. 16 N., R. 11 E., corner of secs. 5 and 6, T road south.....	41	23	34.8	96	12	58.7	2,827
T. 17 N., R. 11 E., corner of secs. 31 and 32, T road north.....	41	23	34.8	96	12	44.5	1,083
T. 16 N., R. 11 E., corner of secs. 4 and 5, T road south.....	41	23	34.7	96	11	49.1	4,226

KENNARD QUADRANGLE, NEBR.—Continued.

East along highways.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	<i>Feet.</i>
Crossing of Chicago & Northwestern Ry.....	41 23 34.7	96 14 22.9	.....
T. 16 N., R. 11 E., corner of secs. 4, 5, 8, and 9, crossroads.....	41 22 43.9	96 11 49.2	.....
Tps. 16 and 17 N., R. 11 E., corner of secs. 4, 5, 32, and 33.....	41 23 34.7	96 11 49.1	5, 151
T. 16 N., Rs. 10 and 11 E., 20 feet south by 35 feet west of T road south at north corner of secs. 1 and 6; iron post stamped "Prim. Trav. Sta. No. 30, 1917".....	41 23 34.7	96 14 03.6	1, 470
T. 17 N., Rs. 10 and 11 E., corner of secs. 31 and 36, T road north.....	41 23 34.9	96 13 57.9	435

Magnetic declination for the quadrangle, 8.8° E.

RALSTON QUADRANGLE, NEBR.

North near west border and east near north border of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	<i>Feet.</i>
Millard, railroad crossing (Union Pacific R. R.).....	41 12 35.1	96 07 25.5	.....
T. 14 N., R. 11 E., quarter corner between secs. 1 and 6, crossroads.....	41 12 43.7	96 07 10.1	1, 463
Tps. 14 and 15 N., Rs. 11 and 12 E., corner of secs. 1, 6, 31, and 36, 25 feet east of crossroads at section line fence; iron post stamped "Prim. Trav. Sta. No. 38, 1160, 1917".....	41 13 09.8	96 07 09.9	2, 647
T. 15 N., Rs. 11 and 12 E., corner of secs. 23, 30, 31, and 36, crossroads.....	41 14 02.1	96 01 10.2	5, 285
T. 15 N., R. 12 E., corner of secs. 29, 30, 31, and 32, T roads south.....	41 14 02.2	96 06 02.4	5, 175
T. 15 N., R. 12 E., quarter corner between secs. 29 and 32, T road north.....	41 14 02.3	96 05 27.8	2, 645
T. 15 N., R. 12 E., corner of secs. 28, 29, 32, and 33, T road south.....	41 14 02.4	96 04 53.1	2, 652
T road south on section line.....	41 13 59.5	96 03 43.7	5, 302
T. 15 N., R. 12 E., quarter corner between secs. 27 and 34, 35 feet north by 30 feet west of T road north; iron post stamped "Prim. Trav. Sta. No. 39, 1021, 1917".....	41 14 02.7	96 03 09.4	2, 639
T. 15 N., R. 12 E., quarter corner between secs. 22 and 27, crossroads.....	41 14 54.8	96 03 08.8	5, 273

South near west border of quadrangle.

T. 15 N., Rs. 11 and 12 E., corner of secs. 19, 24, 25, and 30, crossroads.....	41 14 54.4	96 07 10.4	.....
T. 15 N., Rs. 11 and 12 E., corner of secs. 25, 30, 31, and 33.....	41 14 02.1	96 07 10.2	5, 295

Magnetic declination for north edge of quadrangle, 9.3° E.

WATERLOO QUADRANGLE, NEBR.

South and east along highways near east border of quadrangle. (By Oscar Jones in 1917.)

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	<i>Fect.</i>
T road west, at Elk City, opposite brick school.....	41 22 17.3	96 16 04.8	.....
T. 16 N., R. 10 E., T road east, 0.25 mile east of corner of secs. 10, 11, 14, and 15.....	41 21 51.2	96 16 04.8	2,640
T. 16 N., R. 10 E., 0.25 mile east of corner of secs. 14, 15, 22, and 23, road east.....	41 20 58.9	96 16 05.0	5,292
T. 16 N., R. 10 E., 75 feet north of T road west; iron poststamped "Prim. Trav. Sta. No. 33".....	41 20 07.5	96 16 31.0	5,575
Center of wooden bridge.....	41 19 11.0	96 16 26.7	5,730
Center of wooden bridge.....	41 18 26.4	96 16 24.0	4,513
Waterloo, 1 mile northeast of, at road fork north, south side of road; iron post stamped "Prim. Trav. Sta. No. 34, 1121".....	41 17 40.5	96 16 37.0	4,757
Center of concrete bridge.....	41 17 40.9	96 15 51.5	3,465
Road fork.....	41 17 34.9	96 15 14.1	2,922
Road fork.....	41 17 30.3	96 15 00.0	1,172
T. 16 N., R. 10 E., 0.25 mile east of corner of secs. 14, 15, 22, and 23.....	41 20 58.9	96 16 05.0	.....
T. 16 N., R. 10 E., corner of secs. 13, 14, 23, and 24, crossroads.....	41 20 59.0	96 15 13.5	3,930

Magnetic declination for east border of quadrangle, 9.4° E.

FLORENCE QUADRANGLE, IOWA.

West along highways. (By Oscar Jones in 1917.)

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	<i>Fect.</i>
Council Bluffs, center of Broadway and Twenty-eighth streets....	41 15 42.7	95 53 20.3	.....
Council Bluffs, north side of Broadway, at angle of street, first post on Missouri River approach: iron street lamp-post.....	41 15 42.6	95 54 34.9	5,697
Council Bluffs, south abutment of bridge over Missouri river.....	41 15 33.2	95 55 03.2	2,362
Council Bluffs, east end of steel truss.....	41 15 31.5	95 55 17.8	1,125

At Council Bluffs.

Council Bluffs, east abutment of Illinois Central R. R. bridge.....	41 16 35.2	95 53 21.8	.....
Council Bluffs, road crossing.....	41 16 32.2	95 52 45.7	2,772

HONEY CREEK QUADRANGLE, IOWA.

In Council Bluffs on Illinois Central R. R. (By Oscar Jones in 1917.)

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	<i>Fect.</i>
Council Bluffs, road crossing.....	41 16 04.5	95 52 14.6	.....
Council Bluffs, center of Broadway crossing.....	41 15 42.5	95 52 14.0	2,235

Magnetic declination for Council Bluffs, about 9° E.

In Council Bluffs.

Council Bluffs, center of Sixteenth Street and Fifth Avenue.....	41 15 25.1	95 52 02.8	.....
Council Bluffs, center of Sixteenth Street and Broadway.....	41 15 42.3	95 52 02.8	1,749

OMAHA AND VICINITY QUADRANGLE, IOWA.

Along streets in Council Bluffs. (By Oscar Jones in 1917.)

Station.	Latitude.	Longitude.	Distance between stations.
Bluff triangulation station, (Mo. R. Comm.) Report of Chief of Engineers, 1891, part 6, p. 3781, corrected to North American datum.....	° ' " 41 14 34.44	° ' " 95 50 33.93	Feet.
Council Bluffs, at Sixteenth Avenue and High Street, center of sewer manhole.....	41 14 47.4	95 50 47.8	1,683
Council Bluffs, at Sixteenth Avenue and Tenth Street, at turn of car line.....	41 14 47.6	95 51 31.9	3,365
Council Bluffs, Sixteenth Avenue and Sixteenth Street, center....	41 14 47.9	95 52 03.2	2,389

Magnetic declination for Council Bluffs, about 9° E.

OKLAHOMA.

PRIMARY TRAVERSE.

Agra, Belford, Claremore, Foraker, Gray Horse, Hominy, Kaw, Mallon, Newkirk, Nowata, Pawhuska, Prague, Sac and Fox, Skedee, and Yale quadrangles.

CREEK, KAY, OSAGE, PAYNE, LINCOLN, OKFUSKEE, PAWNEE, AND TULSA COUNTIES.

The following geographic positions, on North American datum, were determined by primary traverse in 1916 by B. H. Yoakum and W. F. Hicks and are based on U. S. Geological Survey triangulation stations, Cox, Cushing, Flint, and Phantom, and primary traverse positions determined in 1914.

The work in most of Claremore, Pawhuska and the northern part of Hominy quadrangles was done by Hicks; that in the other quadrangles named above and in part of Hominy quadrangle was done by Yoakum.

For other positions in Oklahoma see U. S. Geological Survey Bulletins 122, 175, 310, 440, and 644, and U. S. Coast and Geodetic Survey Report for 1903.

AGRA QUADRANGLE.

Along highways in the northeast corner of quadrangle. (By B. H. Yoakum in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
T. 17 N., R. 5 E., corner of secs. 3, 4, 9, and 10, 1 mile southeast of Cushing, crossroads; iron pipe.....	° ' " 35 58 16.0	° ' " 96 46 02.7	Feet. 5,363
T. 17 N., R. 5 E., approximate corner of secs. 4, 5, 8, and 9, 1.5 miles southwest of Cushing post office, crossroads.....	35 58 16.0	96 47 05.4	5,149
Cushing triangulation station, about 1 mile southwest of the town of Cushing and 1,000 feet south of corner of secs. 4, 5, 8, and 9, T. 17 N., R. 5 E.; the station is on wagon road right of way about 3 feet from west fence. Station mark: A bronze triangulation tablet cemented in stone set flush with ground.....	35 58 01.2	96 47 05.2	1,490

Magnetic declination for the extreme northeast corner of quadrangle, 9° 18' E.

BELFORD QUADRANGLE.

South along highways near west border of quadrangle. (By B. H. Yoakum in 1918.)

Station.	Latitude.	Longitude.	Distance between stations.
T. 24 N., R. 3 E., corner of secs. 20, 21, 28, and 29, in southwest corner of crossroads, 6 feet west of J. W. Brasier's mail box; iron post stamped "Prim. Trav. Sta. No. 24, 1916".....	° ' " 36 32 08.1	° ' " 96 59 47.7	Feet.
T. 24 N., R. 3 E., quarter corner between secs. 32 and 33, center of north-south road at east-west fence line.....	36 30 51.5	96 59 47.4	7,740
Tps. 23 and 24 N., R. 3 E., corner of secs. 4, 5, 32, and 33, T road east; iron stake.....	36 30 25.4	96 59 45.9	2,643

Magnetic declination for west border of quadrangle, 10° 30' E.

East along highways near south border of quadrangle.

Tps. 23 and 24 N., R. 3 E., quarter corner between secs. 4, and 33, at north and south fence line; iron stake.....	36 30 25.5	96 59 15.0	2,525
Tps. 23 and 24 N., R. 3 E., corner of secs. 3, 4, 33, and 34, 80 feet east of crossroads; stone.....	36 30 25.5	96 58 42.7	2,635
Tps. 23 and 24 N., R. 3 E., corners of secs. 2, 3, 34, and 35, T road south.....	36 30 25.4	96 57 38.1	5,275
Tps. 23 and 24 N., R. 3 E., quarter corner between secs. 2 and 35; iron stake.....	36 30 25.6	96 57 05.7	2,640
Tps. 23 and 24 N., R. 3 E., corner of secs. 1, 2, 35, and 36, at crossroads; iron stake.....	36 30 25.7	96 56 33.4	2,640
Tps. 23 and 24 N., R. 3 E., quarter corner between secs. 1 and 36, T road north; iron stake.....	36 30 25.6	96 56 01.0	2,640
Tps. 23 and 24 N., Rs. 3 and 4 E., corner of secs. 1, 6, 31, and 36, center of east-west road, 20 feet east of fence line south; General Land Office; iron post.....	36 30 25.6	96 55 28.7	2,640
Tps. 23 and 24 N., R. 4 E., corner of secs. 5, 6, 31, and 32, at north and south fence line; General Land Office iron post with cap missing.....	36 30 25.7	96 54 23.9	5,289
Tps. 23 and 24 N., R. 4 E., quarter corner between secs. 5, and 32, center of east-west road in line with road south; General Land Office stake with cap missing.....	36 30 25.7	96 53 51.7	2,630
Tps. 23 and 24 N., R. 4 E., corner of secs. 4, 5, 32, and 33, at T road south; General Land Office stake with cap missing.....	36 30 25.8	96 53 19.3	2,640
Tps. 23 and 24 N., R. 4 E., quarter corner between secs. 4 and 33, at T road north; General Land Office stake with cap missing.....	36 30 25.9	96 52 33.8	3,717
T. 24 N., R. 4 E., corner of secs. 3, 4, 33, and 34, in northeast corner of crossroads at Belford schoolhouse, district 42; iron post stamped "Prim. Trav. Sta. No. 25, 1916".....	36 30 26.1	96 52 14.5	1,578
Tps. 23 and 24 N., R. 4 E., quarter corner between secs. 3 and 34.....	36 30 25.9	96 51 42.6	2,600
Tps. 23 and 24 N., R. 4 E., corner of secs. 2, 3, 34, and 35, 0.4 mile west of Belford, center of east-west road at T road north.....	36 30 25.9	96 51 10.4	2,626
Center of east end of bridge over the east pier of wagon bridge over Arkansas River, about 1.2 miles east of Belford, formerly Belford, P. O.....	36 30 26.0	96 50 27.7	3,490
Tps. 23 and 24 N., R. 2 E., corner of secs. 1, 2, 35, and 36, at crossroads; stone corner.....	36 30 26.0	96 50 05.9	1,777
Tps. 23 and 24 N., R. 4 E., quarter corner between secs. 1 and 36, at north and south fence line; stone.....	36 30 26.0	96 49 33.6	2,640
Tps. 23 and 24 N., Rs. 4 and 5 E., corner of secs. 1, 6, 31, and 36, at T road north; stone.....	36 30 26.2	96 49 01.2	2,642
Tps. 23 and 24 N., R., 5 E., corner of secs. 5, 6, 31, and 32, at crossroads; stone.....	36 30 25.9	96 47 58.5	5,124
Tps. 23 and 24 N., R. 5 E., quarter corner between secs. 5 and 32, at north-south fence line; stone.....	36 30 25.8	96 47 26.3	2,629
Tps. 23 and 24 N., R. 5 E., approximate corner of secs. 4, 5, 32, and 33, center of east and west road at T road south, 75 feet east of T road north.....	36 30 25.6	96 46 54.1	2,627
Tps. 23 and 24 N., R. 5 E., quarter corner between secs. 4 and 33, at north and south fence line.....	36 30 25.5	96 46 21.9	2,624
Tps. 23 and 24 N., R. 5 E., corner of secs. 3, 4, 33, and 34, at crossroads; stone.....	36 30 25.4	96 45 49.7	2,629
Tps. 23 and 24 N., R. 5 E., sixteenth corner 1,326 feet east of corner of secs. 3, 4, 33, and 34; stone.....	36 30 25.4	96 45 33.5	1,326

Magnetic declination for south border of quadrangle, 10° 01' E.

BELFORD QUADRANGLE—Continued.

West along highways through center of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
T. 25 N., R. 5 E., quarter corner between secs. 15 and 22; iron stake with cap.....	° ' " 36 38 13.2	° ' " 96 45 11.5	Feet.
T. 25 N., R. 5 E., corner of secs. 15, 16, 21, and 22, north-south fence line; iron stake with cap.....	36 38 13.4	96 45 43.8	2,637
T. 25 N., R. 5 E., corner of secs. 16, 17, 20, and 21, fence line south; iron stake with cap.....	36 38 13.2	96 46 47.8	5,219
T. 25 N., R. 5 E., corner of secs. 17, 18, 19, and 20, about 50 feet southwest of gate, in line with fence west, at north-south road; iron stake with cap.....	36 38 13.6	96 47 52.6	5,285
T. 25 N., Rs. 4 and 5 E., corner of secs. 13, 18, 19, and 24, 100 feet west of Middle Fork of Dogg Creek, 60 feet southwest of fence corner; iron stake.....	36 38 13.9	96 48 56.8	5,226
T. 25 N., R. 4 E., quarter corner between secs. 13 and 24; iron stake with cap.....	36 38 14.0	96 49 29.1	2,641
T. 25 N., R. 4 E., corner of secs. 13, 14, 23, and 24, fence line south; iron stake with cap.....	36 38 13.9	96 50 01.4	2,635
T. 25 N., R. 4 E., quarter corner between secs. 14 and 23, east and west fence line, at foot of brace on fence post; iron stake with cap.....	36 38 14.0	96 50 33.8	2,640
T. 25 N., R. 4 E., corner of secs. 14, 15, 22, and 23, corner of fence line east and south; iron stake with cap.....	36 38 14.2	96 51 06.3	2,644
T. 25 N., R. 4 E., quarter corner between secs. 15 and 22, iron stake with cap.....	36 38 14.1	96 51 38.6	2,640
T. 25 N., R. 4 E., corner of secs. 15, 16, 21, and 22, 700 feet northwest of high ridge, 200 feet west of small stream flowing south, at public land survey iron stake with cap; iron post stamped "Prim. Trav. Sta. No. 26, 1916".....	36 38 14.1	96 52 11.0	2,642
T. 25 N., R. 4 E., quarter corner between secs. 16 and 21; iron stake with cap.....	36 38 14.4	96 52 43.1	2,618
T. 25 N., R. 4 E., corner of secs. 16, 17, 20, and 21, on east bank of Drurn Creek, west side of road at T road east; iron stake with cap.....	36 38 13.8	96 53 15.3	2,621
T. 25 N., R. 4 E., corner of secs. 17, 18, 19, and 20; iron stake with cap.....	36 38 13.7	96 54 19.4	5,226
T. 25 N., R. 4 E., quarter corner between secs. 18 and 19; T road south; iron stake with cap.....	36 38 13.7	96 54 51.7	2,635
T. 25 N., Rs. 3 and 4 E., corner of secs. 13, 18, 19, and 24; iron stake with cap.....	36 38 13.7	96 55 24.1	2,640
T. 25 N., R. 3 E., quarter corner between secs. 13 and 24, center of east-west road; iron stake with cap.....	36 38 13.7	96 55 56.5	2,644
T. 25 N., R. 3 E., corner of secs. 13, 14, 23, and 24, center of cross-roads.....	36 38 13.8	97 56 29.0	2,653
T. 25 N., R. 3 E., quarter corner between secs. 14 and 23; iron stake with cap.....	36 38 13.9	96 57 01.2	2,622
T. 25 N., R. 3 E., corner of secs. 14, 15, 22, and 23; iron stake with cap.....	36 38 14.1	96 57 33.5	2,637
T. 25 N., R. 3 E., quarter corner between secs. 15 and 22; iron stake with cap.....	36 38 13.7	96 58 05.8	2,630
T. 25 N., R. 3 E., corner of secs. 15, 16, 21, and 22; iron stake with cap.....	36 38 13.9	96 58 38.2	2,642
Prim. Trav. Sta. No. 23, 1916.....	36 37 47.85	97 00 15.36	8,347

Magnetic declination through center of quadrangle (east-west), 10° 13' E.

Along highways and Atchison, Topeka & Santa Fe Ry.

T. 26 N., R. 5 E., quarter corner between secs. 9 and 10; iron stake with cap.....	36 44 44.2	96 45 41.4	.....
Kaw, 5 miles southeast of, about 1,100 feet southeast of milepost 22, on railroad, 25 feet south by 145 feet east of east-west road crossing, near fence line; iron post stamped "Prim. Trav. Sta. No. 1, 1916," elevation 1,029 feet.....	36 44 17.9	96 45 23.8	3,020

CLAREMORE QUADRANGLE.

North along public roads near southwest corner of quadrangle. (By B. H. Yoakum in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
T. 18 N., R. 12 E., corner of secs. 25, 26, 35, and 36, center of crossroads at Poog schoolhouse.....	36 00 10.6	95 59 36.7	Feet.
T. 18 N., R. 12 E., corner of secs. 13, 14, 23, and 24, crossroads.....	36 01 55.1	95 59 36.5	10, 570
T. 18 N., R. 12 E., corner of secs. 11, 12, 13, and 14, crossroads.....	36 02 47.6	95 59 36.5	5, 305
T. 18 N., R. 12 E., corner of secs. 1, 2, 11, and 12, T road west, second class road north.....	36 03 39.8	95 59 36.5	5, 280

From Tulsa north via highways and Midland Valley R. R. to Sperry.

NOTE.—An error of about 2.4" in latitude and 1.6" in longitude exists between Tulsa and Sperry.			
Tulsa, 323 feet north of intersection of "Frisco" Ry. and First Street, south side of First Street; top of curbing painted "675"...	36 09 10.7	95 59 54.1	.....
T. 20 N., R. 12 E., corner of secs. 25, 26, 35, and 36, crossroads.....	36 10 37.0	95 59 35.8	.....

Along public roads near southwest corner of quadrangle.

T. 20 N., R. 12 E., 0.3 mile west of northeast corner of sec. 24, east side of Midland Valley R. R. and south side of wagon road; iron post stamped "Prim. Trav. Sta. No. 48, 1916".....	36 12 21.4	95 58 45.2	11, 346
T. 20 N., Rs. 12 and 13 E., 0.25 mile west of corner of secs. 1, 6, 7, and 12, road crossing of Midland Valley R. R.....	36 14 03.4	95 58 46.7	10, 315
T. 20 N., R. 12 E., corner of secs. 1, 2, 11, and 12, crossroads.....	36 14 03.2	95 59 34.4	3, 910
T. 20 N., Rs. 12 and 13 E., north corner of secs. 1 and 6; iron post stamped "Prim. Trav. Sta. No. 50, 1916. Elev. 627".....	36 14 55.6	95 58 29.7	.....
T. 21 N., R. 12 E., 0.25 mile west of northeast corner of sec. 36, at railroad crossing on section line, on east side of railroad and south side of wagon road; iron post stamped "Prim. Trav. Sta. No. 51, 1916. Elev. 621 Okla.".....	36 15 47.6	95 58 34.1	5, 262

Along public roads near southwest corner of quadrangle.

The following adjusted positions are on a circuit which closes satisfactorily.

Sperry, 1.25 miles southeast of, road crossing of Midland Valley R. R.	36 16 42.5	95 59 00.1	5, 666
T. 21 N., R. 12 E., corner of secs. 23, 24, 25, and 26, T road north..	36 16 42.4	95 59 20.7	1, 690

Position by F. W. Hicks.

Sperry, Main Street crossing of Midland Valley R. R.....	36 17 47.5	95 59 29.1	6, 986
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From Sperry north to northwest corner of quadrangle.

Crossroads.....	36 18 26.5	95 59 29.4	3, 950
Sperry, 1.25 miles north of, south end of bridge over Hominy Creek; top of nut on east cylinder pier.....	36 18 55.5	95 59 29.4	2, 927
Crossroads.....	36 19 50.9	95 59 28.6	5, 603
Small bridge.....	36 20 26.5	95 59 28.5	3, 600
Crossroads.....	36 21 03.7	95 59 28.6	3, 760
T road south.....	36 21 55.9	95 59 28.5	5, 274
Bird Creek, center of bridge, under name plate.....	36 23 43.1	95 59 28.4	10, 840
Crossroads.....	36 24 32.6	95 59 28.8	5, 010
Corner fence post at T fence west.....	36 25 42.7	95 59 05.0	7, 351
Road corner, roads south and east, at section corner.....	36 26 16.8	95 59 04.7	3, 453
Swinging gate.....	36 26 36.3	95 58 56.6	2, 076
Road crossing under double telephone line.....	36 27 35.0	95 59 28.6	6, 491
Rock cairn on bare ridge, east side of double telephone line.....	36 28 09.0	95 59 28.6	3, 440
Road crossing at double telephone line.....	36 28 44.5	95 59 28.8	3, 590

Magnetic declination for northwest quarter of quadrangle, 9° 15' E.; for southwest quarter of quadrangle, 9° E.

FORAKER QUADRANGLE.

West along highways in northwest corner of quadrangle. (By B. H. Yoakum in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
T. 29 N., R. 5 E., closing corner on north side of secs. 14 and 15; iron stake with cap.....	° ' " 36 59 56.2	° ' " 96 44 28.3	<i>Feet.</i> 2,605
T road north.....	36 59 56.2	96 44 11.6	1,355
T. 29 N., R. 5 E., closing corner on north side of secs. 13 and 14; iron stake with cap.....	36 59 56.3	96 43 22.6	3,973

West along highways near west border of quadrangle.

T. 28 N., R. 5 E., corner of secs. 25, 26, 35, and 36.....	36 52 07.9	96 43 30.2	.....
T. 28 N., R. 5 E., quarter corner between secs. 26 and 35; iron stake with cap.....	36 52 08.0	96 44 02.8	2,640

Magnetic declination along north border in northwest corner of quadrangle, 10° 10' E.

West along highways near south border of quadrangle.

Tps. 26 and 27 N., Rs. 5 and 6 E.; General Land Office iron post.....	36 46 02.2	96 42 26.8	.....
Tps. 26 and 27 N., R. 5 E., corner of secs. 1, 2, 35, and 36, fence line north from corner; no stake.....	36 46 02.5	96 43 31.6	5,274
Tps. 26 and 27 N., R. 5 E., quarter corner between secs. 2 and 35; iron stake with cap.....	36 46 02.3	96 44 03.8	2,623
Tps. 26 and 27 N., R. 5 E., corner of secs. 2, 3, 34, and 35; iron stake with cap.....	36 46 02.4	96 44 36.3	2,642

GRAY HORSE QUADRANGLE.

North along highways and Atchison, Topeka & Santa Fe Ry. near west border of quadrangle. (By B. H. Yoakum in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
T. 26 N., R. 5 E., about 360 feet north of corner of secs. 14, 15, 22, and 23, 0.40 mile southeast of milepost 23 on railroad, north and south road crossing.....	° ' " 36 43 29.4	° ' " 96 44 37.0	<i>Feet.</i>
Burbank, 1.20 miles northwest of, north end of trestle painted "B-24".....	36 42 54.2	96 43 41.3	5,765
Burbank, 150 feet southeast of station, 100 feet east of crossing, on north side of road; iron post stamped "Prim. Trav. Sta. No. 2, 1916." Elevation 935 feet.....	36 41 53.6	96 43 30.2	6,192
Burbank, 1.25 miles south of, opposite milepost 27, at south end of tangent, center of track.....	36 40 51.2	96 43 07.7	6,573
Burbank, 2.25 miles south of, opposite milepost 28, center of track.....	36 40 03.8	96 42 42.4	5,215
T. 25 N., Rs. 5 and 6 E., corner of secs. 1, 6, 7, and 12, at corner of fence line in field, about halfway between railroad and Salt Creek at bend in creek; iron stake with cap.....	36 39 57.1	96 42 29.2	1,273
Remington station, 1.16 miles north of, 55 feet south of trestle "28-A" (marked U. S. 899) on west side of track, milepost 29.....	36 39 19.8	96 43 12.0	5,143
Remington station, opposite center of, center of track.....	36 38 24.2	96 42 42.2	6,122
Remington station, 0.25 mile southwest of road crossing.....	36 38 15.2	96 42 30.7	1,311
Remington station, 0.75 mile southeast of, 200 feet east of milepost 31, on north side of railroad, in a 3-foot rock; aluminum tablet stamped "Prim. Trav. Sta. No. 3, 1916." Elevation 881 feet.....	36 38 02.9	96 42 02.0	2,646
Remington station, 1.6 miles south of, 120 feet south of railroad bridge 31-C, road crossing.....	36 37 19.0	96 41 54.4	4,474
Remington station, 2.65 miles south of, opposite milepost 33, center of track.....	36 36 26.0	96 42 07.4	5,466
Remington station, 3.65 miles south of, 88 feet S. 78° 15' E. to milepost 34, 3 feet from fence line, on west side of track; iron post stamped "Prim. Trav. Sta. No. 4, 1916." Elevation 851 feet.....	36 36 01.6	96 43 03.3	5,185
Fairfax, 2.27 miles north of, opposite milepost 35, marked "U. S. 854," center of track.....	36 35 32.9	96 43 55.8	5,177
Fairfax, 1.6 miles north of, opposite milepost 36, center of track.....	36 34 57.7	96 43 53.3	3,558
Fairfax, 0.60 mile north of, opposite milepost 37, center of track.....	36 34 43.6	96 42 52.4	5,164
Fairfax, 15 feet south of station, in angle of brick platform; iron post stamped "Prim. Trav. Sta. No. 5, 1916." Elevation 843 feet.....	36 34 32.3	96 42 15.0	3,264
Fairfax, 1.3 miles south of, opposite milepost 39, marked "U. S. 814," center of track.....	36 33 25.1	96 42 14.3	6,705

GRAY HORSE QUADRANGLE—Continued.

North along highways and Atchison, Topeka & Santa Fe Ry. near west border of quadrangle—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
T. 24 N., Rs. 5 and 6 E., corner of secs. 13, 18, 19, and 24.....	36 33 01.2	96 42 36.3	Feet. 3, 015
Fairfax, 2.3 miles southwest of, opposite milepost 40, marked "U. S. 807," center of track.....	36 32 34.6	96 42 31.0	2, 713
Fairfax, 2.5 miles southwest of, 900 feet south of stone milepost 40, 250 feet south of east and west road crossing at trestle "40-A," 65 feet west of track, 25 feet east of wire fence, on bank; iron post stamped "Prim. Trav. Sta. No. 6, 1916." Elevation 819 feet.....	36 32 27.4	96 42 37.6	909
Fairfax, 3.80 miles southwest of, west end of bridge "41-A" over Arkansas River.....	36 31 51.0	96 43 49.6	6, 933
Ralston, 1.13 miles northwest of, opposite milepost 42, marked "U. S. 807," center of track.....	36 31 27.2	96 43 58.5	2, 510
Ralston, 193 feet southwest of station, 48 feet south of southwest corner of scale house, 3 feet east of wire fence line; iron post stamped "Prim. Trav. Sta. No. 7, 1916".....	36 30 28.1	96 43 59.7	5, 978

East along highways near south border of quadrangle.

Ralston, 0.62 mile east of, south end of wagon bridge over Arkansas River.....	36 30 07.5	96 43 28.9	3, 268
Tps. 23 and 24 N., Rs. 5 and 6 E., corner of secs. 1, 6, 31, and 36, in center of east and west road; General Land Office iron post.....	36 30 25.0	96 42 36.6	4, 622
Tps. 23 and 24 N., R. 6 E., corner of secs. 5, 6, 31, and 32; crossroads.....	36 30 25.4	96 41 33.9	5, 119
Tps. 23 and 24 N., R. 6 E., corner of secs. 4, 5, 32, and 33; iron post with cap.....	36 30 25.7	96 40 28.2	5, 361
Tps. 23 and 24 N., R. 6 E., quarter corner between secs. 4 and 33; iron stake with cap.....	36 30 25.8	96 39 55.8	2, 648
Tps. 23 and 24 N., R. 6 E., corner of secs. 3, 4, 33 and 34; iron stake with cap.....	36 30 25.9	96 39 23.2	2, 600
Tps. 23 and 24 N., R. 6 E., quarter corner between secs. 3 and 34; iron stake with cap.....	36 30 25.7	96 38 50.8	2, 636
Tps. 23 and 24 N., R. 6 E., corner of secs. 2, 3, 34, and 35; iron stake with cap.....	36 30 25.3	96 38 18.5	2, 644
T. 23 N., R. 6 E., 22 feet south by 30 feet east of corner of secs. 1, 2, 35, and 36; iron post stamped "Prim. Trav. Sta. No. 8, 1916".....	36 30 26.0	96 37 13.6	5, 205
Tps. 23 and 24 N., R. 6 E., quarter corner between secs. 1 and 36; iron stake with cap.....	36 30 26.5	96 36 41.6	2, 606
Tps. 23 and 24 N., Rs. 6 and 7 E., corner of secs. 1, 6, 31, and 36; General Land Office iron post.....	36 30 26.9	96 36 09.4	2, 635
Tps. 23 and 24 N., R. 7 E., corner of secs. 5, 6, 31, and 32; iron stake with cap.....	36 30 26.3	96 35 09.9	4, 852
Tps. 23 and 24 N., R. 7 E., quarter corner between secs. 3 and 34; iron stake with cap.....	36 30 25.7	96 32 28.3	13, 190
Tps. 23 and 24 N., R. 7 E., corner of secs. 2, 3, 34, and 35; iron stake with cap.....	36 30 25.6	96 31 56.0	2, 642
Tps. 23 and 24 N., R. 7 E., quarter corner between secs. 2 and 35; iron stake with cap.....	36 30 25.0	96 31 23.6	2, 642
Tps. 23 and 24 N., R. 7 E., corner of secs. 1, 2, 35, and 36; iron stake with cap.....	36 30 25.1	96 30 51.2	2, 638
Tps. 23 and 24 N., R. 7 E., 1,110 feet east of quarter corner between secs. 1, and 36 on west side of road, 15 feet west of "black-jack" tree, on township line; iron post stamped "Prim. Trav. Sta. No. 9, 1916".....	36 30 24.8	96 30 05.4	3, 745

North along highways near east border of quadrangle.

T. 24 N., R. 7 E., west side of sec. 24, on west bank of Hominy Creek, 100 feet north of sharp bend in creek to west, 10 feet north of blazed white-oak tree marked "U. S. G. S. Prim. Trav. Line".....	36 32 26.1	96 30 47.1	12, 735
T. 24 N., R. 7 E., quarter corner between secs. 23 and 24 at fence corner; iron stake with cap.....	36 32 34.7	96 30 52.1	956
T. 24 N., R. 7 E., quarter corner between secs. 13 and 14; iron stake.....	36 33 26.2	96 30 52.5	5, 207
T. 24 N., R. 7 E., corner of secs. 11, 12, 13, and 14; iron stake with cap.....	36 33 52.1	96 30 52.7	2, 624
T. 24 N., R. 7 E., corner of secs. 1, 2, 11, and 12; iron stake with cap.....	36 34 44.1	96 30 52.9	5, 258
T. 24 N., R. 7 E., quarter corner between secs. 1 and 2; iron stake with cap.....	36 35 10.2	96 30 53.0	2, 642
T. 24 N., R. 7 E., north side of secs. 1 and 2, correction corner; iron stake with cap.....	36 35 36.1	96 30 53.0	2, 616
T. 25 N., R. 7 E., corner of secs. 25, 26, 35, and 36; iron stake with cap.....	36 36 28.9	96 30 40.1	5, 445
T. 25 N., R. 7 E., quarter corner between secs. 25 and 26; iron stake with cap.....	36 35 55.3	96 30 39.4	2, 671

GRAY HORSE QUADRANGLE—Continued.

North along highways near east border of quadrangle—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
T. 25 N., R. 7 E., corner of secs. 23, 24, 25, and 26; iron stake with cap.....	° ' '' 36 37 21.5	° ' '' 96 30 39.1	<i>Fect.</i> 2,645
T. 25 N., R. 7 E., quarter corner between secs. 23 and 24.....	36 37 45.8	96 30 36.5	2,472
T. 26 N., R. 7 E., quarter corner between secs. 13 and 24; iron stake with cap.....	36 43 26.9	96 30 04.0	.....
T. 26 N., R. 7 E., corner of secs. 13, 14, 23, and 24; iron stake with cap.....	36 43 26.5	96 30 36.3	2,631
T. 26 N., R. 7 E., quarter corner between secs. 14 and 23; iron stake with cap.....	36 43 26.8	96 31 09.1	2,670
T. 26 N., R. 7 E., corner of secs. 14, 15, 22, and 23; iron stake with cap.....	36 43 27.0	96 31 41.4	2,629
T. 26 N., R. 7 E., corner of secs. 15, 16, 21, and 22; iron stake with cap.....	36 43 27.8	96 32 46.4	5,202
Flint triangulation station, on highest point on long range of prairie hills locally known as the Flint Hills. Road running west from Pawhuska into the Kaw Reservation passes about 1 mile south of station at point where it crosses the Flint Hills (about 14 miles from Pawhuska). Station mark: A stone post, 25 by 7 by 7 inches, with copper bolt marked "U. S. G. S." sunk in center of top.....	36 44 05.85	96 33 17.45	4,612

West along highways through center of quadrangle.

T. 25 N., R. 7 E., corner of secs. 15, 16, 21 and 22; iron stake with cap.....	36 38 12.0	96 32 48.4	.....
T. 25 N., R. 7 E., quarter corner between secs. 16 and 21; iron stake with cap.....	36 38 12.4	96 33 20.6	2,625
T. 25 N., R. 7 E., corner of secs. 16, 17, 20, and 21; iron stake with cap.....	36 38 12.9	96 33 52.9	2,628
T. 25 N., R. 7 E., corner of secs. 17, 18, 19, and 20; iron stake with cap.....	36 38 13.4	96 34 58.0	5,308
T. 25 N., R. 7 E., quarter corner between secs. 18 and 19; iron stake with cap.....	36 38 12.7	96 35 30.2	2,618
T. 25 N., Rs. 6 and 7 E., corner of secs. 13, 18, 19, and 24; iron stake with cap.....	36 38 12.5	96 36 02.0	2,592
T. 25 N., R. 6 E., 1 foot north of corner of secs. 13, 14, 23, and 24; iron post stamped "Prim. Trav. Sta., No. 12, 1916".....	36 38 12.8	96 37 06.5	5,259
T. 25 N., R. 6 E., corner of secs. 17, 18, 19, and 20, at T road south near schoolhouse; iron stake with cap.....	36 38 13.3	96 41 25.1	21,082
T. 25 N., R. 6 E., quarter corner between secs. 18 and 19.....	36 38 13.2	96 41 57.6	2,646

Magnetic declination for north border of quadrangle, 9° 42' E.; for south border of quadrangle, 9° 48' E.; for east border of quadrangle, 9° 46' E.; for west border of quadrangle, 9° 55' E.; for center of quadrangle, 9° 49' E.

Along highways in the extreme southwest corner of quadrangle.

Tps. 23 and 24 N., R. 5 E., corner of secs. 2, 3, 34, and 35, crossroads; stone.....	36 30 25.2	96 44 45.1	.....
Tps. 23 and 24 N., R. 5 E., quarter corner between secs. 2 and 35, at Ralston City boundary line; stone.....	36 30 25.0	96 44 12.9	2,631
Ralston City at intersection of Main and Second streets.....	36 30 25.1	96 44 08.2	384
Station 833=Station 126. Tie point.....	36 30 13.9	96 43 57.2	.....

Magnetic declination for southwest corner of quadrangle, 10° 01' E.

Along highways near west center of quadrangle.

Station 835=Station 68.....	36 38 15.48	96 42 31.09	.....
T. 25 N., R. 5 E., quarter corner between secs. 14 and 23; iron stake with cap.....	36 38 13.2	96 44 06.8	7,803
T. 25 N., R. 5 E., corner of secs. 14, 15, 22, and 23, north-south fence line; iron stake with cap.....	36 38 13.1	96 44 39.1	2,635

HOMINY QUADRANGLE.

North along highways near west border of quadrangle, north half. (By W. F. Hicks in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
T. 20 N., Rs. 7 and 8 E., 38 feet south by 65 feet east of north corner of secs. 1 and 6, and T road south at, in southeast angle of road forks, 2 feet north of east-west fence line; iron post stamped "Prim. Trav. Sta. No. 30, 1916".....	° ' " 36 14 45.9	° ' " 96 29 57.6	Feet. 9,619
T. 21 N., Rs. 7 and 8 E., south corner of secs. 31 and 36, T road north.....	36 14 46.6	96 29 46.7	893
T. 21 N., Rs. 7 and 8 E., corner of secs. 25, 30, 31, and 36, center of crossroads.....	36 15 38.3	96 29 46.6	5,231
T. 21 N., Rs. 7 and 8 E., corner of secs. 19, 24, 25, and 30 at crossroads; iron pipe.....	36 16 30.4	96 29 46.5	5,270
Oil loading station, Missouri, Kansas & Texas Ry., north-south road crossing at.....	36 16 49.6	96 29 46.6	1,940
T. 21 N., Rs. 7 and 8 E., corner of secs. 13, 18, 19 and 24, at stone schoolhouse, T road west.....	36 17 22.5	96 29 46.6	3,330
T. 21 N., Rs. 7 and 8 E., approximate corner of secs. 7, 12, 13, and 18, 2 miles west of Cleveland, Okla., at W. J. Searey's mail box, crossroads.....	36 18 14.7	96 29 46.9	5,275
Souter Bend ferry, on south bank of Arkansas River.....	36 18 25.1	96 29 59.8	1,490
Souter post office, south edge of Gypsy Oil Co.'s camp, T road west. Tps. 21 and 22 N., Rs. 7 and 8 E., corner of, 1 mile north of Souter post office; General Land Office iron post with cap.....	36 19 07.5	96 29 54.9	.....
T. 22 N., R. 8 E., sec. 31, residence of Andy Fox, on Black Dog Creek, at road forks, center of triangle.....	36 19 58.8	96 29 46.7	5,235
T. 22 N., R. 7 E., southeast corner of sec. 24, road forks.....	36 20 22.4	96 29 18.2	3,338
T. 22 N., R. 7 E., northwest quarter of sec. 17, T road forks south-west.....	36 22 01.1	96 29 36.9	10,093
T. 22 N., R. 8 E., quarter corner between secs. 5 and 8, on east side of north-south road, near head of drain; iron stake with cap.....	36 23 17.6	96 28 37.6	9,134
Tps. 22 and 23 N., R. 8 E., 1,300 feet east of corner of secs. 5, 6, 31, and 32, near road forks, at gate, center of east-west road.....	36 24 16.7	96 28 09.5	6,398
Tps. 22 and 23 N., R. 8 E., corner of secs. 5, 6, 31, and 32; on north side of east-west road; iron stake with cap.....	36 25 11.5	96 28 27.3	4,818
Tps. 22 and 23 N., Rs. 7 and 8 E., corner of, residence of C. W. Carter, road forks at, on west bank of small stream; stone and General Land Office iron post with cap.....	36 25 10.9	96 28 43.9	1,353
T. 23 N., R. 8 E., 0.4 mile northeast of corner of, on top of ridge, crossroads.....	36 25 11.0	96 29 46.7	5,135
Crossroads, in east-west fence line; center of gate.....	36 25 28.2	96 29 33.7	2,036
T. 23 N., R. 8 E., east line of sec. 30, 70 feet northwest of forks of roads running north-west, south-east and south, at gate on north-south fence line, center of road.....	36 25 45.9	96 29 25.5	1,912
T. 23 N., R. 8 E., quarter corner between secs. 19 and 30, 100 feet west of angling road, at gate on east-west fence; iron stake with cap.....	36 26 37.7	96 28 56.9	5,737
Road forks.....	36 26 55.7	96 29 15.8	2,386
T. 23 N., Rs. 7 and 8 E., quarter corner between secs. 13 and 18, about 600 feet west of wagon road along east-west fence line; iron stake with cap.....	36 27 35.3	96 29 32.3	4,225
T. 23 N., Rs. 7 and 8 E., corner of secs. 7, 12, 13, and 18, near residence of Mr. Cox, at farm fence corners; iron stake with cap.....	36 28 13.3	96 29 47.1	4,030
	36 28 39.6	96 29 46.9	2,660

Magnetic declination on west border of quadrangle, 9° 36' E.

Near west border of quadrangle.

T. 22 N., R. 8 E., quarter corner between secs. 6 and 7; iron stake with cap.....	36 24 19.0	96 29 14.3	.....
T. 22 N., Rs. 7 and 8 E., corner of secs. 1, 6, 7, and 12; iron stake with cap.....	36 24 19.0	96 29 46.6	2,639

Along highways near south border of quadrangle (southwest corner).

T. 18 N., R. 8 E., corner of secs. 29, 30, 31, and 32, crossroads; stone.....	36 00 10.9	96 29 39.4	5,350
Happy Corner Church, 250 feet west of, in southwest corner of crossroads, 10 feet north and 12 feet west of T. 18 N., R. 8 E., stone corner of secs. 28, 29, 32, and 33; iron post stamped "Prim. Trav. Sta. No. 4, 1914".....	36 00 10.9	96 28 35.0	5,283

HOMINY QUADRANGLE—Continued.

North along highways near west border of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
T. 18 N., R. 8 E., corner of secs. 20, 21, 28, and 29, crossroads.....	36 01 03.2	96 28 34.8	5,288
T. 18 N., R. 8 E., corner of secs. 16, 17, 20, and 21, 0.25 mile north of Olive post office, 15 feet north of T road east; iron pipe.....	36 01 55.4	96 28 35.1	5,286
T. 18 N., R. 8 E., corner of secs. 17, 18, 19, and 20, T road north, 10 feet west of private lane south.....	36 01 55.5	93 29 39.7	5,307
T. 18 N., R. 8 E., corner of secs. 7, 8, 17, and 18, T road east.....	36 02 47.8	93 29 39.6	5,295
T. 18 N., R. 8 E., corner of secs. 5, 6, 7, and 8, T road west; stone.....	36 03 40.2	93 29 39.6	5,303
T. 18 N., R. 8 E., quarter corner between secs. 5 and 6, second-class T road east.....	36 04 06.3	96 29 39.5	2,638
Tps. 18 and 19 N., R. 8 E., corner of secs. 5, 6, 31, and 32, center of crossroads.....	36 04 32.6	93 29 39.6	2,654
T. 19 N., R. 8 E., corner of secs. 29, 30, 31, and 32, crossroads; stone.....	36 05 24.8	96 29 39.4	5,288
T. 19 N., R. 8 E., corner of secs. 19, 20, 29, and 30, 21 feet north by 18 feet east of center of crossroads, 3 feet southwest of jack oak tree; iron post stamped "Prim. Trav. Sta. No. 36, 1916".....	36 06 17.5	96 29 39.4	5,325
T. 19 N., R. 8 E., quarter corner between secs. 17 and 18, on east-west fence line at telephone line north-south, 300 feet north of bluff on north side of Cimarron River; stone.....	36 07 35.6	96 29 39.5	7,902
T. 19 N., R. 8 E., corner of secs. 7, 8, 17, and 18, 30 feet south of jog in north-south fence line and fence line east on north side of gate; stone.....	36 08 01.8	96 29 39.4	2,645
T. 19 N., R. 8 E., 1,250 feet west of corner of secs. 5, 6, 7, and 8, near top of ridge, prairie-road crossing.....	36 08 54.3	96 29 54.4	5,451
T. 20 N., R. 8 E., closing corner on south side of secs. 31 and 32, at Pawnee-Creek county line, 30 feet south of actual road forks, in line with fence line east-west.....	36 09 48.8	96 28 54.4	7,391
T road fork, at east end of bridge over Horse Creek, 1.5 miles southeast of Terlton, Okla.....	36 10 26.9	96 28 52.1	3,800
Terlton, 0.75 mile southeast of, center of road crossing St. Louis-San Francisco Ry.....	36 10 41.1	96 28 53.2	1,445
Terlton, 0.4 mile southeast of, on east side of north-south road in angle of railroad property fences, 50 feet north of tracks, 175 feet northwest of milepost 455; iron post stamped "Prim. Trav. Sta. No. 37, 1916." Elevation, 780 feet, Okla.....	36 11 01.7	96 29 21.0	3,081
Terlton, on east side of quarter corner between secs. 19 and 30, T. 20 N., R. 8 E., crossstreets.....	36 11 17.1	96 29 23.8	1,579
T. 20 N., R. 8 E., quarter corner between secs. 18 and 19, crossroads 1 mile north of Terlton, Okla., stone.....	36 12 09.9	96 29 25.2	5,340
T. 20 N., R. 8 E., quarter corner between secs. 7 and 18, center of crossroads.....	36 13 02.1	96 29 25.8	5,285
T. 20 N., Rs. 7 and 8 E., corner of secs. 7, 12, 13, and 18, center of crossroads.....	36 13 02.1	96 29 58.2	2,665
T. 20 N., Rs. 7 and 8 E., corner of secs. 1, 6, 7, and 12, crossroads known as Dog Center; stone.....	36 13 54.4	96 29 58.0	5,299

Magnetic declination along west border of quadrangle, south half, 9° 36' E.

North along public roads from southeast corner of quadrangle to West Tulsa. (By B. H. Yoakum in 1916.)

T. 18 N., R. 12 E., corner of secs. 27, 28, 33, and 34, Tulsa-Creek county line, T road south.....	36 00 10.7	96 01 45.5	.....
T. 18 N., R. 12 E., corner of secs. 26, 27, 34, and 35, T road south.....	36 00 10.8	96 00 41.2	5,290
T. 18 N., R. 12 E., corner of secs. 2, 3, 10, and 11; iron post at center of crossroads.....	36 03 40.0	96 00 41.2	.....
Tps. 18 and 19 N., R. 12 E., corner of secs. 2, 3, 34, and 35; iron post at T road east.....	36 04 31.3	96 00 41.2	5,179
T. 19 N., R. 12 E., corner of secs. 26, 27, 34, and 35; stone at crossroads.....	36 05 23.6	96 00 41.1	5,290
T. 19 N., R. 12 E., quarter corner between secs. 26 and 27, T road west.....	36 05 49.8	96 00 41.1	2,648
T. 19 N., R. 12 E., corner of secs. 22, 23, 26, and 27; stone at T road west.....	36 06 16.0	96 00 40.8	2,651
T. 19 N., R. 12 E., 30 feet north by 30 feet west of crossroads, at corner of secs. 10, 11, 14, and 15, 0.5 mile southwest of West Tulsa, 245 feet south of St. Louis-San Francisco Ry. crossing; iron post stamped "Prim. Trav. Sta. No. 61, 1916".....	36 08 01.0	96 00 40.8	10,614
West Tulsa station, 120 feet south of, Mitchell Street crossing of St. Louis-San Francisco Ry., center of middle track.....	36 08 15.6	96 00 30.2	1,713

HOMINY QUADRANGLE—Continued.

Along St. Louis-San Francisco Ry. from West Tulsa to Mannford.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
T. 19 N., R. 12 E., corner of secs. 9, 10, 15, and 16, crossroads.....	36 08 00.5	96 01 45.1	.....
Price station, 370 feet east of northeast corner of station platform, 20 feet south of center of Frisco Line's track, between main track and siding, on east side of north-south private road crossing; iron post stamped "Prim. Trav. Sta. No. 60. Elev. 656".....	36 08 08.1	96 03 52.8	10,504
Lost City, 275 feet southwest of station signboard, road crossing..	36 07 26.2	96 05 55.9	10,950
Milepost 431, 700 feet west of, private-road crossing.....	36 07 16.0	96 06 28.7	2,884
Lost City, 1.3 miles west of, 900 feet east of Frisco Line's bridge over Fisher Creek, 50 feet south of center of track, on east side of private-road crossing; iron post stamped "Prim. Trav. Sta. No. 59, 1916. Elev. 649".....	36 07 16.0	96 07 14.2	3,734
Fisher, 0.2 mile southeast of, on west side of north-south highway crossing, 100 feet south of center of Frisco Line's track; iron post stamped "Prim. Trav. Sta. No. 58, 1916. Elev. 653".....	36 07 42.1	96 08 45.0	7,901
Fisher, 1 mile west of, road crossing.....	36 08 01.2	96 09 46.6	5,405
Milepost 345, 370 feet west of, private-road crossing.....	36 08 11.8	96 10 30.7	3,772
Private-road crossing.....	36 08 19.2	96 11 14.4	3,660
Frisco Line's bridge 437.2, center of.....	36 08 21.2	96 12 47.7	7,656
Keystone, 4 miles southeast of, 70 feet south of milepost 438, 50 feet south of center of Frisco Line's track; iron post stamped "Prim. Trav. Sta. No. 57. Elev. 683 Okla.".....	36 08 18.4	96 13 37.0	4,053
Frisco Line's bridge 439.5, center of track at underneath road crossing.....	36 08 28.0	96 15 08.1	7,531
Keystone, 0.5 mile southeast of, at road crossing, center of track..	36 09 43.7	96 16 31.1	10,240
Keystone station, 520 feet east of, 75 feet north of road crossing, in east side of north-south highway; iron post stamped "Prim. Trav. Sta. No. 62, 1916. Elev. 684 Okla.".....	36 09 55.4	96 16 55.5	2,324
Keystone, 1.5 miles west of, road crossing.....	36 09 19.6	96 18 11.4	7,200
Keystone, 1.8 miles southwest of, 210 feet northeast of milepost 444, at east end of cut, 50 feet north of center of track; iron post stamped "696 Okla.".....	36 09 06.0	96 18 40.5	2,757
Salt Creek, west end of bridge over.....	36 08 39.9	96 19 53.5	6,540
Mannford, 2.2 miles east of, T. 19 N., R. 9 E., 960 feet north of corner of secs. 3, 4, 9, and 10, 47 feet north by 15 feet west of road crossing; iron post stamped "Prim. Trav. Sta. No. 63, 1916. Elev. 772".....	36 09 03.9	96 21 05.8	6,405
Mannford station, 0.1 mile east of, 75 feet north of road crossing, in northeast corner of crossroads (north-south road between secs. 5 and 6); iron post stamped "Prim. Trav. Sta. No. 64, 1916. Elev. 740".....	36 09 08.1	96 23 13.8	10,509

From Mannford south and west along public highway to west border of quadrangle.

Mannford, T road west at brick schoolhouse, corner of secs. 5, 6, 7, and 8, T. 19 N., R. 9 E.....	36 08 54.4	96 23 14.3	1,390
T. 19 N., R. 9 E., corner of secs. 7, 8, 17, and 18, T road east.....	36 08 02.1	96 23 14.1	5,284
T. 19 N., R. 9 E., corner of secs. 17, 18, 19, and 20; stone at center of crossroads.....	36 07 03.7	96 23 14.0	5,301
T. 19 N., Rs. 8 and 9 E., corner of secs. 13, 18, 19, and 24, center of east-west road at T road south.....	36 07 09.8	96 24 17.3	5,180
T. 19 N., R. 8 E., corner of secs. 13, 14, 23, and 24, T road south.....	36 07 03.8	96 25 21.7	5,283
T. 19 N., R. 8 E., quarter corner between secs. 14 and 23, in center of road; stone.....	36 07 09.7	96 25 54.0	2,647
T. 19 N., R. 8 E., corner of secs. 14, 15, 22, and 23, near vacant house; 30 feet northeast of fence corner.....	36 07 09.7	96 26 26.3	2,648
T. 19 N., R. 8 E., near center of sec. 22, road forks.....	36 06 45.2	96 26 56.6	3,513
T. 19 N., R. 8 E., near quarter corner between secs. 21 and 28, center of east-west road at gate in north-south fence line.....	36 06 17.4	96 28 02.8	6,114
T. 19 N., R. 8 E., approximate corner of secs. 20, 21, 28, and 29, midway between private roads north and south, center of east-west road.....	36 06 17.2	96 28 35.3	2,659
T. 19 N., R. 8 E., corner of secs. 19, 20, 29, and 30, 21 feet north by 18 feet east of center of crossroads; iron post stamped "Prim. Trav. Sta. No. 36, 1916".....	36 06 17.5	96 29 39.4	5,262

HOMINY QUADRANGLE—Continued.

Along public road from Keystone south to Phantom triangulation station.

Station.	Latitude.	Longitude.	Distance between stations.
T. 19 N., R. 10 E., sec. 18, 900 feet north of residence of Mr. Alexander, center of north-south road, at gate in east-west fence line.	° ' "	° ' "	Feet.
T. 19 N., R. 10 E., gate in fence line between secs. 18 and 19, center of road.	36 07 50.4	96 17 18.6	.....
T. 19 N., R. 10 E., near line between secs. 19 and 30, road forks.	36 07 10.0	96 17 16.4	4,090
T. 19 N., R. 10 E., on line between secs. 30 and 31, center of road at gate.	36 06 19.8	96 17 24.7	5,121
Tps. 18 and 19 N., R. 10 E., between secs. 31 and 6, on Tulsa-Creek county line, 1,800 feet southwest of residence of Jack Lowden, center of road at gate in fence.	36 05 25.4	96 17 10.8	5,613
T. 18 N., R. 10 E., stone quarter corner between secs. 6 and 7, 30 feet east of road in open prairie.	36 04 32.9	96 17 01.0	5,378
T. 18 N., R. 10 E., near center of sec. 7, road forks.	36 03 40.7	96 17 18.0	5,459
T. 18 N., R. 10 E., in southwest part of sec. 8; Phantom triang. station, on the highest part of a timbered ridge 15 miles from Red Fork, 5 miles southwest of Mr. Rockhammer's house, the corner common to secs. 7, 8, 17, and 18, T. 18 N., R. 10 E., may be reached from station by going due west 24.90 chains to north-south line, thence south 2.25 chains. Theodolite elevated 40 feet; iron b. m. post set in 1914 by C. B. Kendall.	36 03 08.6	96 17 19.9	3,248
	36 02 49.81	96 16 27.25	4,724

East along public highways from west border of triangle to Prue.

T. 20 N., Rs. 7 and 8 E., 38 ft. south by 65 feet east of north corner of secs. 1 and 6, at T road south, in southeast angle of road forks, 2 feet north of east-west fence line; iron post stamped "Prim. Trav. Sta. No. 30, 1916"	36 14 45.9	96 29 57.6	.....
T. 20 N., R. 8 E., north corner of secs. 5 and 6, T road south.	36 14 46.1	96 23 55.1	5,119
T. 20 N., R. 8 E., stone quarter corner on north side of sec. 5, fence line south.	36 14 45.9	96 23 23.0	2,628
T. 20 N., R. 8 E., north corner of secs. 4 and 5, stone at T road south.	36 14 45.8	96 27 51.0	2,624
T. 21 N., R. 8 E., south corner of secs. 32 and 33, stone at T road north.	36 14 45.7	96 27 38.0	1,063
T. 20 N., R. 8 E., north corner of secs. 3 and 4, T road south.	36 14 45.4	96 26 46.0	4,257
T. 21 N., R. 8 E., south corner of secs. 33 and 34, T road north.	36 14 45.3	96 26 33.9	995
Crossroads at Oklahoma Petroleum & Gasoline Co.'s plant.	36 14 45.3	96 25 13.7	6,568
T. 20 N., R. 8 E., north corner of secs. 1 and 2, T road south.	36 14 45.1	96 24 37.3	2,980
T. 21 N., R. 8 E., south corner of secs. 35 and 36, T road north.	36 14 45.3	96 24 25.0	1,015
T. 21 N., R. 8 E., corner of secs. 25, 26, 35, and 36, stone at crossroads.	36 15 37.2	96 24 25.6	5,245
T. 21 N., R. 8 E., quarter corner between secs. 25 and 36, in center of road at fence line north and south; stone.	36 15 36.4	96 23 53.4	2,640
T. 21 N., Rs. 8 and 9 E., corner of secs. 25, 30, 31, and 36, 90 feet east of angle in road; stone on hillside.	36 15 36.9	96 23 20.8	2,673
T. 20 N., R. 9 E., north corner of secs. 5 and 6, 0.5 mile north of Dixiestore, T road south.	36 14 45.1	96 22 32.4	6,565
T. 20 N., R. 9 E., quarter corner on north side of sec. 5, 450 feet west of frame house, on east bank of creek; stone.	36 14 45.1	96 22 00.2	2,640

Southeast along Missouri, Kansas & Texas Ry. from point about 2.5 miles west of Prue to Osage-Tulsa county-line post near Appalachia. (By B. H. Yoakum in 1916.)

Prue, 1.6 miles northwest of, 400 feet east of milepost 251, on north side of railroad, near right of way fence line at former north and south road crossing, in southeast angle of fence corner; iron post stamped "Prim. Trav. Sta. No. 65, 1916. Elev. 702 Okla."	36 14 18.9	96 20 50.2	6,308
Milepost 252, center of track opposite.	36 14 00.9	96 19 56.2	4,793
T. 20 N., R. 9 E., road crossing on line between secs. 2 and 3, 480 feet west of Prue station.	36 14 02.6	96 19 20.0	2,964
Prue, 0.9 mile east of, on north side of railroad, 600 feet south of quarter corner between secs. 1 and 2, T. 20 N., R. 9 E., on west side of private wagon road; iron post stamped "Prim. Trav. Sta. No. 66, 1916. Elev. 692 Okla."	36 14 06.0	96 18 16.2	5,238
(This post was reset and new elevation established.)			
Milepost 253, 380 feet east of, 70 feet west of trestle 255.1 over Rock Creek, private-road crossing.	36 13 53.7	96 16 41.0	7,899
T. 20 N., R. 10 E., corner of secs. 5, 6, 7, and 8, 180 feet south of, private-road crossing.	36 13 50.6	96 16 09.3	2,619
Private flag station, private-road crossing at.	36 13 01.8	96 14 29.7	9,538
Private-road crossing.	36 12 07.1	96 14 19.4	5,598
Appalachia, 1.5 miles northwest of, in SE $\frac{1}{4}$ sec. 29, T. 20 N., R. 10 E., at private-road crossing, on east side of railroad, 6 feet north of gate in property-line fence; iron post stamped "Prim. Trav. Sta. No. 67, 1916. Elev. 678 Okla."	36 10 43.7	96 15 29.1	10,182
Appalachia, 0.25 mile northwest of, in southwest angle of road crossing Missouri, Kansas & Texas Ry.; Tulsa-Osage county-line post.	36 09 43.1	96 15 34.0	6,142

HOMINY QUADRANGLE—Continued.

Tulsa to Sperry north along public roads.

An error of about 2.4" in latitude and 1.6" in longitude exists between Tulsa and Sperry.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Tulsa, intersection of Duluth Place and Osage Avenue, corner of Cherokee, Creek, and Osage nations.....	36 09 40.6	96 00 03.6	.....
T. 20 N., R. 12 E., east corner of secs. 27 and 34, Osage-Tulsa county line, T road west.....	36 10 21.6	96 00 03.8	4, 140
T. 20 N., R. 12 E., west corner of secs. 26 and 35, Osage-Tulsa county line, T road east.....	36 10 37.0	96 00 03.9	1, 560
T. 20 N., R. 12 E., quarter corner between secs. 2 and 3; this corner is 150 feet west of road, in pasture.....	36 14 14.1	96 00 04.6	.....
Tps. 20 and 21 N., R. 12 E., west corner of secs. 2 and 35, on Osage-Tulsa county line at T road east; iron post stamped "Prim. Trav. Sta. No. 49, 1916. Elev. 746".....	36 14 55.7	96 00 02.7	4, 209

From point 1.25 miles south of Sperry, southwest along highways to Missouri, Kansas & Texas Ry., about 1 mile west of Wekiwa.

Osage-Tulsa county line, center of east and west road.....	36 16 57.0	96 00 04.6	.....
T. 21 N., R. 12 E., quarter corner between secs. 21 and 22, crossroads.....	36 16 53.3	96 00 49.5	3, 690
T. 21 N., R. 12 E., center of sec. 21, crossroads at Delaware schoolhouse.....	36 16 53.5	96 01 21.6	2, 634
T. 21 N., R. 12 E., quarter corner between secs. 20 and 21, private crossroads.....	36 16 53.6	96 01 53.1	2, 573
T. 21 N., R. 12 E., quarter corner between secs. 19 and 20, T road south.....	36 16 53.9	96 02 57.7	5, 290
T. 21 N., Rs. 11 and 12 E., 30 feet east of quarter corner between secs. 19 and 24, on east side of north and south road and south side of T road east; iron post stamped "Prim. Trav. Sta. No. 52, 1916. Elev. 711".....	36 16 53.6	96 04 02.2	5, 280
T. 21 N., R. 11 E., 0.25 mile west of quarter corner between secs. 25 and 26, 50 feet west of crossroads, 10 feet southeast of gate on public road, in root of 30-inch post-oak tree; two 20-penny wire nails bent across, painted "U. S. 680 B. M.".....	36 16 01.4	96 05 23.0	8, 459
T. 21 N., R. 11 E., quarter corner between secs. 26 and 27.....	36 16 01.9	96 06 11.4	3, 963
T. 21 N., R. 11 E., 0.5 mile east of quarter corner between secs. 27 and 28, 10 feet north of gate in public road, 8 feet southwest of three-way fence corner; iron post stamped "Prim. Trav. Sta. No. 53, 1916. Elev. 732".....	36 16 01.9	96 06 43.9	2, 663
T. 21 N., R. 11 E., near quarter corner between secs. 33 and 34, on north bank of Delaware Creek, east side of public road, in top of hickory stump; two 20-penny nails bent across.....	36 15 19.8	96 07 15.2	4, 973
T. 21 N., R. 11 E., near center of sec. 33, at east and west fence and telephone line, center of gate in public road.....	36 15 09.5	96 07 39.6	2, 253
Tps. 20 and 21 N., R. 11 E., 500 feet east of quarter corner on south side of sec. 33, 300 feet north of W. C. Heaton's residence, on south side of road at gate; chiseled square in top of stone marked "U. S. 772.8 B. M.".....	36 14 43.0	96 07 54.3	2, 934
T. 20 N., R. 11 E., quarter corner between secs. 3 and 4.....	36 14 17.4	96 07 35.9	2, 995
T. 20 N., R. 11 E., 20 feet south by 35 feet west of corner of secs. 3, 4, 9, and 10, 20 feet west of gate on public road, on north side of fence; iron post stamped "Prim. Trav. Sta. No. 54, 1916. Elev. 838".....	36 13 51.1	96 07 36.3	2, 660
T. 20 N., R. 11 E., quarter corner between secs. 16 and 17.....	36 12 33.4	96 08 40.2	9, 448
T. 20 N., R. 11 E., NW ¼ sec. 20, 15 feet east of gate on public road, just north of road forks; iron post stamped "Prim. Trav. Sta. No. 55, 1916".....	36 11 56.4	96 09 21.3	5, 026
T. 20 N., R. 11 E., quarter corner between secs. 19 and 20.....	36 11 41.0	96 09 43.1	2, 374
T. 20 N., R. 11 E., SE ¼ sec. 19, on south side of road, at gap in wire fence, in root of 14-inch black-jack oak; railroad tie date nail, marked "U. S. 779.8 B. M.".....	36 11 22.3	96 09 58.6	2, 284
T. 20 N., Rs. 10 and 11 E., 150 feet south of road forks, corner of secs. 19, 24, 25, and 30.....	36 11 14.9	96 10 46.6	3, 998
T. 20 N., R. 10 E., quarter corner between secs. 24 and 25, T road east.....	36 11 15.0	96 11 18.5	2, 618
T. 20 N., R. 10 E., 55 feet north of quarter corner between secs. 25 and 36, at T road east; railroad date nail in root of 20-inch live-oak tree, marked "U. S. 768 B. M.".....	36 10 24.2	96 11 18.6	5, 135
Tps. 19 and 20 N., R. 11 E., quarter corner on south side of sec. 36, at private road west on Osage-Tulsa county line; railroad tie date nail in root of 16-inch post-oak tree, marked "U. S. 777.3 B. M.".....	36 09 40.4	96 11 24.4	4, 455
Wekiwa, 1 mile west of, 370 feet east of milepost 266, 100 feet north of T road east, 45 feet north by 25 feet east of road crossing of Missouri, Kansas & Texas Ry., 2 feet west of wire fence; iron post stamped "Prim. Trav. Sta. No. 56. Elev. 666".....	36 09 06.0	96 11 23.8	3, 475

HOMINY QUADRANGLE—Continued.

Along Missouri, Kansas & Texas Ry. west to Piatt.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	<i>Feet.</i>
Road crossing	36 09 00.5	96 12 28.6	5,344
Piatt, 1 mile east of, 265 feet west of road crossing, 30 feet north of railroad, in bottom of milepost 264; railroad spike	36 08 55.5	96 13 35.9	5,547
Piatt, 450 feet east of, road crossing	36 09 01.7	96 14 37.2	5,054

From Missouri, Kansas & Texas Ry. north through center of quadrangle.

T. 20 N., R. 10 E., corner of secs. 5, 6, 7, and 8, 180 feet north of railroad	36 13 52.4	96 16 09.2	.....
T. 20 N., R. 10 E., north corner of secs. 5 and 6, at angle in road	36 14 44.6	96 16 09.0	5,282
T. 21 N., R. 10 E., quarter corner between secs. 31 and 32, T road east	36 15 10.7	96 15 51.3	3,013
T. 21 N., R. 10 E., corner of secs. 29, 30, 31, and 32	36 15 36.8	96 15 51.3	2,631
T. 21 N., R. 10 E., quarter corner between secs. 20 and 29; iron post stamped "Prim. Trav. Sta. No. 68, 1916. Elev. 829"	36 16 28.9	96 15 19.0	5,896
T. 21 N., R. 10 E., at quarter corner between secs. 8 and 17, southeast corner of schoolhouse yard, district 65, at three-way fence corner; iron post stamped "Prim. Trav. Sta. No. 69, 1916. Elev. 853"	36 18 12.7	96 15 18.5	10,493

From point 1.25 miles south of Sperry to Missouri, Kansas & Texas Ry. about 1 mile west of Wekiwa.

T. 21 N., R. 10 E., quarter corner between secs. 5 and 8	36 19 04.8	96 15 18.2	5,267
Tps. 21 and 22 N., R. 10 E., quarter corner between secs. 5 and 32. Junction of Buck Creek and Wild Horse Creek, 0.5 mile south of, on east bank of Buck Creek, gate in public road	36 19 56.6	96 15 18.1	5,238
Private lane west, gate in public road at	36 21 12.8	96 15 21.6	7,710
T. 22 N., R. 10 E., quarter corner between secs. 20 and 29, center of east-west road at gate in fence line north	36 21 26.2	96 15 16.1	1,431
T. 22 N., R. 10 E., quarter corner between secs. 20 and 29, center of east-west road at gate in fence line north	36 21 39.6	96 15 19.4	1,378

Traverse by W. F. Hicks.

T. 22 N., R. 10 E., in SE. $\frac{1}{4}$ sec. 8, road crossing of Hominy Creek. Tps. 22 and 23 N., R. 10 E., corner of secs. 5, 6, 31, and 32, 170 feet east of ridge road	36 23 29.3	96 14 56.5	11,250
T. 23 N., R. 10 E., in sec. 32, road fork	36 25 08.9	96 15 50.8	11,005
T. 23 N., R. 10 E., in sec. 32, road fork	36 25 30.2	96 15 32.4	2,623
T. 23 N., R. 10 E., on line between secs. 29 and 32, 18-inch oak tree at east side of gate	36 26 03.8	96 15 32.9	3,397
T. 23 N., R. 10 E., corner of secs. 17, 18, 19, and 20	36 27 45.2	96 15 51.8	10,363
T. 23 N., R. 10 E., in sec. 8, crossroads	36 28 58.2	96 15 17.9	7,691
T. 23 N., R. 10 E., corner of secs. 5, 6, 7, and 8	36 29 29.7	96 15 50.6	4,314

Along north border of quadrangle. (By W. F. Hicks.)

T. 23 N., Rs. 7 and 8 E., corner of secs. 7, 12, 13, and 18	36 28 39.6	96 29 46.9	.....
T. 23 N., R. 8 E., SW. $\frac{1}{4}$ sec. 7, road fork	36 28 54.1	96 29 34.8	1,771
T. 23 N., R. 8 E., SW. $\frac{1}{4}$ sec. 5, road fork	36 29 31.6	96 27 30.2	10,964
T. 23 N., R. 8 E., in sec. 4, road crossing ridge, in saddle	36 29 49.5	96 26 52.8	3,412
T. 23 N., R. 9 E., sec. 3, road fork, 1,000 feet north of house	36 29 58.9	96 20 03.3	.....
Gate in north-south fence	36 29 52.3	96 16 52.9	.....
T. 23 N., R. 10 E., SW. $\frac{1}{4}$ sec. 6, 75 feet south of road, in small opening; iron post stamped "Prim. Trav. Sta. No. 72, 1916"	36 29 41.0	96 16 34.8	1,869
T. 23 N., R. 10 E., corner of secs. 5, 6, 7, and 8	36 29 29.7	96 15 50.6	3,787
T. 23 N., R. 10 E., SW. $\frac{1}{4}$ sec. 4, road fork	36 29 39.6	96 14 38.9	5,937
Road forks	36 29 39.2	96 13 11.7	7,126
T. 23 N., R. 10 E., in south part of sec. 2, 7 feet southwest of road where road bends from southeast to east, in large rock flush with ground; aluminum tablet stamped "Prim. Trav. Sta. No. 73, 1916"	36 29 34.3	96 12 15.1	4,642
T. 23 N., R. 11 E., 20 feet west of corner fence post at second-class road south, quarter corner between secs. 7 and 8	36 29 04.4	96 09 24.3	14,273
T. 23 N., R. 11 E., quarter corner between secs. 8 and 9, 125 feet west of gate in east and west fence	36 29 04.7	96 08 19.6	5,288
T. 23 N., R. 11 E., S. $\frac{1}{4}$ sec. 9, road forks	36 28 48.2	96 07 48.6	3,029
Gate in north and south fence, north part of	36 28 36.7	96 06 42.6	5,513

HOMINY QUADRANGLE—Continued.

Along north border of quadrangle—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
Avant, 2 miles west of, Midland Valley R. R., trestle over Bird Creek, east stone pier, 3.5 feet from ground in east fence and 1.5 feet from south face, in vertical face of sandstone block; bronze tablet stamped "Prim. Trav. Sta. No. 79, 1916"	° ' "	° ' "	<i>Feet.</i> 7,589
T. 23 N., R. 11 E., sec. 12, road crossing Midland Valley R. R.	36 29 03.0	96 05 15.6	4,541
Avant, intersection of Main Street and road from Skiatook.	36 29 00.4	96 04 20.0	3,518
Crossroads.	36 29 16.2	96 03 41.7	2,838
Concrete culvert.	36 29 31.1	96 03 12.2	5,522
Skiatook, 4 miles north of, T. 23 N., R. 12 E., near line between secs. 34 and 35, under east bank of Tyner Creek, 50 feet east of stream and 40 feet southwest of fence corner post at bend in road; iron post stamped "Prim. Trav. Sta. No. 78, 1916"	36 29 39.4	96 02 05.4	.....
	36 25 24.4	96 00 03.9	.....

East across north half of quadrangle from west border to Skiatook. (By B. H. Yoakum and W. F. Hicks in 1916.)

T. 22 N., R. 8 E., corner of secs. 9, 10, 15, and 16	36 23 27.1	96 26 33.1	.....
T. 22 N., R. 8 E., corner of secs. 10, 11, 14, and 15	36 23 25.8	96 25 29.1	5,240
T. 22 N., R. 8 E., corner of secs. 11, 12, 13, and 14, just east of T road south.	36 23 26.1	96 24 24.7	5,264
T. 22 N., R. 8 E., quarter corner between secs. 12 and 13, at private T road south.	36 23 25.9	96 23 53.1	2,590
T. 22 N., Rs. 8 and 9 E., corner of secs. 7, 12, 13, and 18, at T road south, 985 feet east of crossing of Missouri, Kansas & Texas Ry.	36 23 25.8	96 23 21.5	2,588
T. 22 N., R. 9 E., quarter corner between secs. 7 and 18, 200 feet northeast of R. M. Miller's residence.	36 23 26.1	96 22 49.3	2,630
T. 22 N., R. 9 E., corner of secs. 7, 8, 17, and 18, 22 feet north by 38 feet west of, in east side of north and south road and north side of T road east, 2 feet from fence corner; iron post stamped "Prim. Trav. Sta. No. 70, 1916"	36 23 26.5	96 22 16.6	2,680
T. 22 N., R. 9 E., quarter corner between secs. 8 and 17, center of east and west road at gate in north and south fence line.	36 23 26.1	96 21 44.8	2,596
T. 22 N., R. 9 E., corner of secs. 8, 9, 16, and 17, center of east-west road at gate in north-south fence line.	36 23 26.0	96 21 12.4	2,650
T. 22 N., R. 9 E., quarter corner between secs. 9 and 16, 300 feet west of road forks.	36 23 25.8	96 20 40.2	2,634
T. 22 N., R. 9 E., corner of secs. 9, 10, 15, and 16, at T road north.	36 23 25.6	96 20 08.1	2,629
T. 22 N., R. 9 E., in sec. 15, forks of road.	36 23 16.3	96 19 40.2	2,463
T. 22 N., R. 9 E., quarter corner between secs. 14 and 15, 150 feet north of east-west road.	36 22 59.7	96 19 03.9	3,416
Boar Creek schoolhouse, 3,000 feet northwest of forks of road.	36 22 53.5	96 18 22.9	3,408
T. 22 N., R. 9 E., corner of secs. 13, 14, 23, and 24, at Boar Creek schoolhouse, on hill at bend in road.	36 22 33.5	96 17 59.1	2,808
T. 22 N., R. 9 E., quarter corner between secs. 13 and 24, at fence line south.	36 22 33.4	96 17 27.0	2,626
T. 22 N., Rs. 9 and 10 E., corner of secs. 13, 18, 19, and 24, in center of crossroads; stone.	36 22 33.5	96 16 54.7	2,638
T. 22 N., R. 10 E., quarter corner between secs. 18 and 19, center of road at north-south fence line.	36 22 32.3	96 16 23.4	2,568
T. 22 N., R. 10 E., corner of secs. 17, 18, 19, and 20, 110 feet southwest of road forks.	36 22 32.1	96 15 51.2	2,631
T. 22 N., R. 10 E., quarter corner between secs. 17 and 20, 650 feet west of north and south road at T fence east.	36 22 31.8	96 15 19.1	2,629
T. 22 N., R. 10 E., corner of secs. 15, 16, 21, and 22, iron post stamped "Prim. Trav. Sta. No. 74, 1916. Elev. 682"	36 22 31.0	96 13 42.5	7,906
T. 22 N., R. 10 E., near quarter corner between secs. 15 and 22, road forks.	36 22 05.6	96 12 34.8	6,109
T. 22 N., R. 10 E., near corner of secs. 13, 14, 23, and 24, east part of gate, witness tree; nail in root of.	36 22 31.0	96 11 32.4	5,708
T. 22 N., Rs. 10 and 11 E., quarter corner between secs. 19 and 24, Road forks.	36 22 05.5	96 10 27.7	5,890
T. 22 N., R. 11 E., corner of secs. 20, 21, 28, and 29.	36 22 04.5	96 09 17.3	5,755
Lake View schoolhouse, 5 feet southeast of southeast corner of school yard; iron post stamped "Prim. Trav. Sta. No. 75, 1916"	36 21 40.6	96 08 18.7	5,369
Hominy Creek, center of bridge over.	36 21 14.6	96 07 45.6	3,773
T road south.	36 21 00.2	96 06 42.6	5,358
Quapaw Creek, bridge over; name plate at southwest corner.	36 21 40.7	96 04 42.8	10,625
T. 22 N., R. 12 E., corner of secs. 19, 20, 29, and 30.	36 21 40.9	96 04 07.9	2,854
T. 22 N., R. 12 E., quarter corner between secs. 20 and 21.	36 21 40.8	96 02 56.9	5,809
Crossroads.	36 22 06.4	96 01 52.2	5,890
Skiatook water tower, on north side of concrete base; bronze tablet stamped "Prim. Trav. Sta. No. 76, 1916"	36 22 06.5	96 00 47.4	5,300
	36 22 08.6	96 00 01.8	3,736

HOMINY QUADRANGLE—Continued.

Along east border of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
Skiatook 4 miles north of, T. 23 N., R. 12 E., secs. 34 and 35, under east bank of Tynor Creek, 50 feet east of stream, 40 feet southwest of fence corner post at bend in road; b. m. post stamped "Prim. Trav. Sta. No. 78, 1916, 644".....	° ' "	° ' "	Feet.
	36 25 24.42	96 00 03.86	.....

Magnetic declination for southeast quarter of quadrangle, 9° E.; for southwest quarter of quadrangle, 9° 30' E.; for northwest quarter of quadrangle, 9° 40' E.; for northeast quarter of quadrangle, 9° 15' E.

KAW QUADRANGLE.

West along highways near south border of quadrangle. (By B. H. Yoakum in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Station 353=Station 2, Book H 3376, page 2.....	36 44 35.46	96 45 41.77	.....
Milepost 21, center of track opposite.....	36 45 05.6	96 46 17.0	4,190
Milepost 20, center of track opposite.....	36 45 30.1	96 47 10.8	5,021
Soldani stockyard switch, wagon-road crossing.....	36 45 32.3	96 47 51.2	3,293
Kaw, 1.7 miles southwest of, 1,480 feet west of road crossing at Soldani stockyard switch, 500 feet east of milepost 19, on top of ridge, on north side of tracks near fence line; iron post stamped "Prim. Trav. Sta. No. 13, 1916. Elev. 1035 feet".....	36 45 38.7	96 48 07.4	1,470
Atchison, Topeka & Santa Fe Ry. bridge 18 A, over Arkansas River, west end.....	36 45 42.3	96 49 15.9	5,583
Kaw station, Atchison, Topeka & Santa Fe Ry., center of track opposite semaphore.....	36 45 53.0	96 49 55.9	3,433
T. 26 N., R. 4 E., corner of secs. 1, 2, 11, and 12, T road west.....	36 45 11.0	96 50 04.0	4,305
T. 26 N., R. 4 E., corner of secs. 2, 3, 10, and 11, T road north.....	36 45 10.6	96 51 08.6	5,256
T. 26 N., R. 4 E., quarter corner between secs. 3 and 10, on fence line north-south; stone.....	36 45 10.4	96 51 41.2	2,650
T. 26 N., R. 4 E., corner of secs. 3, 4, 9, and 10, at road angle north and east; stone.....	36 45 10.1	96 52 13.5	2,631
T. 26 N., R. 4 E., corner of secs. 4, 5, 8, and 9, in northwest corner of T road north, 1 foot north of stone corner fence post; iron post stamped "Prim. Trav. Sta. No. 14, 1916".....	36 45 10.0	96 53 17.5	5,205
T. 26 N., R. 4 E., quarter corner between secs. 5 and 8; stone marked quarter.....	36 45 10.0	96 53 49.8	2,628
T. 26 N., R. 4 E., corner of secs. 5, 6, 7, and 8, T road south; stone corner.....	36 45 10.0	96 54 21.9	2,610
T. 26 N., Rs. 3 and 4 E., corner of secs. 1, 6, 7, and 12, crossroads; stone corner.....	36 45 10.3	96 55 25.2	5,153
T. 26 N., R. 3 E., corner of secs. 1, 2, 11, and 12, center of crossroads.....	36 45 10.0	96 56 29.5	5,237
T. 26 N., R. 3 E., corner of secs. 2, 3, 10, and 11, crossroads at schoolhouse; stone cor.	36 45 10.0	96 57 34.4	5,275
T. 26 N., R. 3 E., quarter corner between secs. 3 and 10, north-south fence; stone marked quarter.....	36 45 09.9	96 58 06.5	2,613
T. 26 N., R. 3 E., corner of secs. 3, 4, 9, and 10, crossroads.....	36 45 09.7	96 58 39.2	2,660
T. 26 N., R. 3 E., corner of secs. 4, 5, 8, and 9, center of crossroads.....	36 45 09.6	96 59 44.0	5,270
T. 26 N., R. 3 E., corner of secs. 5, 6, 7, and 8, at crossroads, 2 feet southeast of stone corner fence post; iron post stamped "Prim. Trav. Sta. No. 15, 1916".....	36 45 09.2	97 00 48.0	5,209

Magnetic declination along south border of quadrangle, 10° 20' E.

KAW QUADRANGLE—Continued.

West along highways through center of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
T. 28 N., R. 5 E., quarter corner between secs. 27 and 34, on Orange-Kay county line; iron stake with cap	36 52 07.9	96 45 07.8	.....
T. 28 N., R. 5 E., corner of secs. 27, 28, 33, and 34	36 52 07.7	96 45 40.3	2,638
Tps. 27 and 28 N., R. 5 E., corner of secs. 3, 4, 33, and 34, center of T road west	36 51 16.1	96 45 40.6	5,221
Tps. 27 and 28 N., R. 5 E., quarter corner of secs. 4 and 33, center of road at north and south fence line; stone corner	36 51 15.7	96 46 13.0	2,639
Tps. 27 and 28 N., R. 5 E., approximate corner of secs. 4, 5, 32, and 33, at fence line north, center of road	36 51 15.7	96 46 45.2	2,610
Tps. 27 and 28 N., R. 5 E., 0.25 mile east of corner of secs. 5, 6, 31, and 32, on north side of road, 15 feet southeast of T fence line north; t. b. m. chiseled "U. S. 1094"	36 51 15.6	96 47 33.9	3,962
Tps. 27 and 28 N., R. 5 E., corner of secs. 5, 6, 31, and 32, T road south at jog in east and west road	36 51 15.0	96 47 50.4	1,338
Tps. 27 and 28 N., R. 5 E., corner of secs. 1, 6, 31, and 36, center of T road south; stone corner	36 51 15.0	96 48 54.8	5,233
T. 28 N., R. 4 E., 940 feet N. 73° 30' W., from center of sec. 36, 75 feet west of edge of prominent bluff, 10 feet from rock monument; aluminum tablet concreted in flat rock, stamped "Prim. Trav. Sta. No. 19, 1916. Elev. 1,180 feet"	36 51 45.4	96 49 37.4	4,634
T. 28 N., R. 4 E., corner of secs. 25, 26, 35, and 36, north side of east and west road; stone corner	36 52 07.0	96 49 59.7	2,835
T. 28 N., R. 4 E., corner of secs. 22, 23, 26, and 27, center of crossroads; stone corner	36 52 50.1	96 51 04.6	7,450
T. 28 N., R. 4 E., 615 feet west of corner of secs. 22, 23, 26, and 27, on south side of road, 3 feet from fence; iron post stamped "Prim. Trav. Sta. No. 20, 1916. Elev. 1,181 feet"	36 52 58.9	96 51 12.1	614
T. 28 N., R. 4 E., corner of secs. 21, 22, 27, and 28, center of T road north	36 52 59.0	96 52 09.6	4,670
T. 28 N., R. 4 E., corner of secs. 20, 21, 28, and 29; top of corner stone chiseled. Elev. 1,133 feet	36 52 59.2	96 53 13.7	5,210
T. 28 N., R. 4 E., quarter corner between secs. 20 and 29; 390 feet west is small bridge chiseled "U. S. B. M." Elev. 1,084 feet	36 52 59.2	96 53 46.4	2,655
T. 28 N., R. 4 E., corner of secs. 19, 20, 29, and 30; chiseled. Elev. 1,121 feet	36 52 59.2	96 54 19.0	2,650
T. 28 N., R. 4 E., quarter corner between secs. 19 and 30, center of road at north and south fence line	36 52 59.2	96 54 51.7	2,650
T. 28 N., Rs. 3 and 4 E., corner of secs. 19, 24, 25, and 30, crossroads; stone corner chiseled. Elev. 1,159 feet	36 52 59.2	96 55 24.2	2,645
T. 28 N., Rs. 3 and 4 E., 1,680 feet west of corners of secs. 19, 24, 25, and 30, on top of ridge, north side of road, 3 feet from fence line; iron post stamped "Prim. Trav. Sta. No. 21, 1916." Elev. 1,910 feet	36 52 59.5	96 55 45.0	1,690
T. 28 N., R. 3 E., center of east end of steel bridge over Arkansas River, center of floor over north steel pier; marked "U. S. B. M." Elev. 1,019 feet	36 52 58.9	96 56 43.9	4,785
T. 28 N., R. 3 E., corners of secs. 22, 23, 26, and 27, center of east and west road at T road south; elevation destroyed	36 52 58.6	96 57 33.9	4,060
T. 28 N., R. 3 E., corner of secs. 21, 22, 27, and 28, at Mound Valley schoolhouse, center of crossroads	36 52 58.6	96 58 39.1	5,299
T. 28 N., R. 3 E., 300 feet northeast of corner of secs. 20, 21, 28, and 29, on north side of crossroads, 2 feet from fence line; iron post stamped "Prim. Trav. Sta. No. 22, 1916." Elev. 1,124 feet	36 52 58.9	96 59 40.3	4,978

Magnetic declination through center of quadrangle (east-west), 10° 22' E.

East along highways near north border of quadrangle.

T. 29 N., R. 3 E., north corner of secs. 16 and 17, T road south	36 59 55.7	96 59 36.1	.....
Kansas-Oklahoma State line, milepost 109	36 59 55.9	96 58 52.8	3,510
T. 29 N., R. 3 E., north corner of sec. 15 and 16, T road south	36 59 55.9	96 58 31.0	1,765
T. 35 S., R. 4 E., south corner of secs. 14 and 15, T road north	36 59 55.9	96 58 02.2	2,340
Kansas-Oklahoma State line, milepost 108	36 59 55.8	96 57 46.7	1,260
T. 29 N., R. 3 E., north corner of secs. 14 and 15, T road south	36 59 55.8	96 57 26.2	1,660
T. 35 S., R. 4 E., south corner of secs. 13 and 14, T road north	36 59 55.9	96 56 57.1	2,365
Kansas-Oklahoma State line, milepost 107	36 59 56.0	96 56 41.7	1,250
T. 29 N., R. 3 E., north corner of secs. 13 and 14, T road south	36 59 55.7	96 56 21.2	1,660
T. 35 S., R. 5 E., quarter corner of sec. 17, T road north on Kansas-Oklahoma State line	36 59 56.2	96 54 12.7	10,429
T. 29 N., R. 4 E., north corner of secs. 16 and 17, at T road south, 1 foot south of corner stone on Kansas-Oklahoma State line; iron post stamped "Prim. Trav. Sta. No. 18, 1916"	36 59 56.3	96 53 07.9	5,252
T. 29 N., R. 4 E., north corner of secs. 15 and 16, T road south; stone corner	36 59 56.5	96 52 02.5	5,305
T. 29 N., R. 4 E., north corner of secs. 14 and 15, T road south; stone corner	36 59 56.4	96 50 57.2	5,300
T. 35 S., R. 5 E., south corner of secs. 13 and 14, T road north	36 59 56.4	96 50 26.7	2,475

KAW QUADRANGLE—Continued.

Erst along highways near north border of quadrangle—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
T. 29 N., R. 4 E., north corner of secs. 13 and 14, T road south; stone corner.....	° ' " 36 59 56.4	° ' " 96 49 52.0	<i>Feet.</i> 2,820
T. 35 S., Rs. 5 and 6 E., south corner of secs. 13 and 18, T road north. Kansas-Oklahoma State line at boundary post painted "State Line".....	36 59 56.4	96 49 21.4	2,480
T. 35 S., R. 6 E., south corner of secs. 17 and 18, 5 feet west of north fence; stone corner.....	36 59 56.3	96 49 00.4	1,703
T. 29 N., R. 5 E., north corner of secs. 17 and 18, T road south.....	36 59 56.4	96 48 15.9	3,614
T road north.....	36 59 56.4	96 47 43.0	2,670
T. 35 S., R. 6 E., south corner of secs. 16 and 17, 1,325 feet east of T road north, on Kansas-Oklahoma State line; stone corner.....	36 59 56.3	96 47 27.1	1,285
T. 29 N., R. 3 E., closing corner on north side secs. 16 and 17, on east-west fence line, 445 feet west of Maple City-Hardy wagon road.....	36 59 56.4	96 47 10.8	1,325
T. 35 S., R. 6 E., south corner of secs. 15 and 16, Kansas-Oklahoma State line, 900 feet east of Maple City-Hardy wagon road, in Meyer Creek bottom, on east-west fence line; stone corner.....	36 59 56.4	96 46 37.4	2,705
T. 29 N., R. 5 E., north corner of secs. 15 and 16, Kansas-Oklahoma State line, east and west fence; stone corner.....	36 59 56.4	96 46 05.5	2,590
T. 29 N., R. 5 E., quarter closing corner on north side of sec. 15, corner post at northwest corner of Osage County, 6 feet east of stone closing corner of T. 35 S., R. 6 E., secs. 14 and 15; General Land Office iron post.....	36 59 56.3	96 45 33.0	2,635
T. 29 N., R. 5 E., quarter closing corner on north side of sec. 15, corner post at northwest corner of Osage County, 6 feet east of stone closing corner of T. 35 S., R. 6 E., secs. 14 and 15; General Land Office iron post.....	36 59 56.2	96 45 00.4	2,652

Magnetic declination along north border of quadrangle, 10° 10' E.

South along highways near south border of quadrangle.

Tps. 26 and 27 N., R. 5 E., quarter corner between secs. 3 and 34; iron stake with cap.....	36 46 02.5	96 45 08.8	.....
Tps. 26 and 27 N., R. 5 E., corner of secs. 3, 4, 33, and 34; iron stake with cap.....	36 46 02.5	96 45 41.2	2,636
T. 26 N., R. 5 E., quarter corner between secs. 3 and 4; iron stake with cap.....	36 45 36.2	96 45 41.3	2,655
T. 26 N., R. 5 E., corner of secs. 3, 4, 9, and 10; iron stake with cap..	36 45 10.2	96 45 41.3	2,630

MALLON QUADRANGLE.

Along highway in northwest corner of quadrangle. (By B. H. Yoakum in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
Tps. 17 and 18 N., R. 5 E., corner of secs. 2, 3, 34, and 35, 1 mile northeast of Cushing crossroads; stone.....	° ' " 35 59 08.1	° ' " 96 44 58.8	<i>Feet.</i>
T. 17 N., R. 5 E., corner of secs. 2, 3, 10, and 11, center of crossroads.	35 58 15.8	96 44 57.5	5,285

Magnetic declination for extreme northwest corner of quadrangle, 9° 18' E.

South along highways through center of quadrangle. (By B. H. Yoakum in 1916.)

Drumright, intersection of Skinner Avenue and Broadway Street, quarter corner between secs. 6 and 31, Tps. 17 and 18 N., R. 7 E..	35 59 18.6	96 36 37.8	.....
Drumright, 1.5 miles southwest of, quarter corner between secs. 6 and 7, T. 17 N., R. 7 E., at crossroads; General Land Office iron post.....	35 58 25.7	96 36 38.5	5,353
T. 17 N., R. 7 E., quarter corner between secs. 7 and 18, T road west.....	35 57 33.3	96 36 38.2	5,302
T. 17 N., R. 7 E., quarter corner between secs. 18 and 19, crossroads.	35 56 41.4	96 36 38.5	5,246
T. 17 N., R. 7 E., corner of secs. 19, 20, 29, and 30.....	35 55 48.6	96 36 05.8	5,981
Shamrock, 1 mile northwest of, corner of secs. 29, 30, 31, and 32; General Land Office iron post at T road north.....	35 54 56.6	96 36 06.1	5,257
T. 17 N., R. 7 E., west corner of secs. 30 and 31, T road east on Lincoln-Creek county line.....	35 54 56.9	96 37 11.0	5,337
T. 17 N., R. 6 E., east corner of secs. 25 and 36, T road west.....	35 54 47.0	96 37 11.1	1,002
T. 17 N., Rs. 6 and 7 E., south corner of secs. 31 and 36, on Lincoln-Creek county line, at angle in road; iron post stamped "Prim. Trav. Sta. No. 39, 1916. Elev. 977".....	35 54 04.5	96 37 11.0	4,293

MALLON QUADRANGLE—Continued.

Along highways south through center of triangle—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
T. 16 N., Rs. 6 and 7 E., north corner of secs. 1 and 6, at angle in road; iron post stamped with land number. Elev. 962.	35 54 04.5	96 37 07.3	296
T. 17 N., R. 6 E., south corner of secs. 35 and 36, T road north	35 53 54.5	96 37 27.8	1,966
T. 16 N., R. 6 E., north corner of secs. 1 and 2, T road south	35 53 54.8	96 37 40.7	1,060
T. 16 N., R. 6 E., corner of secs. 1, 2, 11, and 12, crossroads	35 53 03.8	96 37 40.6	5,154
T. 16 N., R. 6 E., quarter corner between secs. 11 and 12, crossroads	35 52 37.9	96 37 40.4	2,625
T. 16 N., R. 6 E., corner of secs. 11, 12, 13, and 14, near center of crossroads, in root of white-oak tree; two bent nails in notch	35 52 11.8	96 37 40.1	2,638
T. 16 N., R. 6 E., corner of secs. 13, 14, 23, and 24, crossroads	35 51 19.3	96 37 39.5	5,305
T. 16 N., R. 6 E., approximate corner of secs. 23, 24, 25, and 26, center of north and south road, 160 feet south of crossroads, 30 feet north of east and west fence line	35 50 26.8	96 37 39.0	5,310
T. 16 N., R. 6 E., approximate corner of secs. 25, 26, 35, and 36, crossroads	35 49 34.4	96 37 38.9	5,292
Camp Creek, center of small iron truss bridge over	35 49 01.1	96 37 38.3	3,370
Tps. 15 and 16 N., R. 6 E., corner of secs. 1, 2, 35, and 36, T road west	35 48 42.6	96 37 38.4	1,880
T. 15 N., R. 6 E., corner of secs. 1, 2, 11, and 12, crossroads	35 47 49.4	96 37 37.6	5,375
T. 15 N., R. 6 E., corner of secs. 11, 12, 13, and 14, crossroads	35 46 56.9	96 37 37.2	5,305
T. 15 N., R. 6 E., corner of secs. 13, 14, 23, and 24, crossroads	35 46 04.6	96 37 37.0	5,289
Stroud, 2 miles northeast of, 30 feet north by 30 feet west of corner of secs. 23, 24, 25, and 26, T. 15 N., R. 6 E., at northwest corner of T road north, 6 feet north of corner fence post; iron post stamped "Prim. Trav. Sta. No. 40, 1916"	35 45 13.0	96 37 37.4	5,222
T. 15 N., R. 6 E., east corner of secs. 24 and 25, T road west on Lincoln-Creek county line	35 45 12.9	96 37 11.3	2,147
T. 15 N., R. 7 E., west corner of secs. 19 and 30	35 45 18.8	96 37 10.8	600

East along highways near south border of quadrangle.

T. 15 N., R. 7 E., corner of secs. 19, 20, 29, and 30, crossroads	35 45 18.6	96 36 03.7	5,535
T. 15 N., R. 7 E., corner of secs. 20, 21, 28, and 29, T road south, in line with east and west road at road northwest	35 45 18.7	96 34 59.7	5,274
Camp Creek, east end of approach to bridge	35 45 19.0	96 34 27.3	2,670
Milfay, crossroads, stone corner of secs. 21, 22, 27, and 28, T. 15 N., R. 7 E.	35 45 18.7	96 33 55.7	2,604
T. 15 N., R. 7 E., approximate corner of secs. 22, 23, 26, and 27, T road west, 70 feet south of road forks	35 45 18.9	96 32 51.8	5,265
T. 15 N., R. 7 E., corner of secs. 23, 24, 25, and 26, road forks	35 45 19.0	96 31 47.8	5,276
T. 15 N., Rs. 7 and 8 E., corner of secs. 19, 24, 25, and 30, crossroads	35 45 19.1	96 30 43.7	5,282
T. 15 N., Rs. 7 and 8 E., corner of secs. 13, 18, 19, and 24, 19 feet northeast of bearing tree, marked "S24", 15 feet northwest of bearing tree marked "S19"; chiseled square in sandstone	35 46 11.4	96 30 43.6	5,282
T. 15 N., Rs. 7 and 8 E., 30 feet south by 25 feet east of corner of secs. 7, 12, 13, and 18, at corner of wire fence, in southeast corner of crossroads; iron post stamped "Prim. Trav. Sta. No. 7, 1914"	35 47 03.4	96 30 43.3	5,262

East along highways through center of quadrangle.

Shamrock, 0.5 mile northwest of, near quarter corner of secs. 29 and 32, T. 17 N., R. 7 E.	35 54 56.7	96 35 35.7	.....
Shamrock, railroad crossing at station, main track	35 54 47.7	96 34 26.6	5,756
T. 17 N., R. 7 E., quarter corner between secs. 27 and 34, 70 feet west of crossroads, in top of ridge; iron pipe	35 54 56.6	96 33 25.3	5,123
T. 17 N., R. 7 E., corner of secs. 26, 27, 34, and 35, crossroads	35 54 56.7	96 32 53.5	2,614
T. 17 N., R. 7 E., 850 feet north of stone marked "S C" at south corner of secs. 34 and 35, crossroads	35 54 21.3	96 32 53.3	4,492
T. 17 N., R. 7 E., south corner of secs. 35 and 36, 40 feet southeast of corner fence post; stone marked "S C"	35 54 04.4	96 31 48.8	5,365
T. 17 N., Rs. 7 and 8 E., south corner of secs. 31 and 36; iron post stamped with General Land Office numbers. Elev. 949	35 54 04.4	96 30 45.6	5,201
T. 16 N., Rs. 7 and 8 E., secs. 1 and 6, north corner of; iron post stamped with General Land Office numbers, also elevation 958; "Prim. Trav. Sta. No. 5, 1914" (112 feet west of this station is standard iron post, stamped with General Land Office numbers for T. 17 N., Rs. 7 and 8 E., secs. 31 and 36, north corner)	35 54 04.4	96 30 43.0	213

Magnetic declination north and south through center of quadrangle, $9^{\circ} 32' E.$; east and west through center of quadrangle, $9^{\circ} 22' E.$; for south border of quadrangle, $10^{\circ} 07' E.$

NEWKIRK QUADRANGLE.

North along highways near west border of quadrangle (north half). (By B. H. Yoakum in 1916).

Station.	Latitude.	Longitude.	Distance between stations.
T. 26 N., R. 3 E., corner of secs. 5, 6, 7, and 8, crossroads, 2 feet southeast of stone corner fence post; iron post stamped "Prim. Trav. Sta. No. 15, 1916"	36 45 09.2	97 00 48.0	.....
Tps. 26 and 27 N., R. 3 E., corner of secs. 5, 6, 31, and 32, center of crossroads; stone corner	36 46 01.6	97 00 49.1	5,300
T. 27 N., R. 3 E., quarter corner between secs. 31 and 32, private road west, fence line east	36 46 27.6	97 00 49.0	2,635
T. 27 N., R. 3 E., corner of secs. 29, 30, 31, and 32, center of crossroads	36 46 53.8	97 00 49.0	2,643
T. 27 N., R. 3 E., quarter corner between secs. 29 and 30, center of road at east-west fence line	36 47 19.9	97 00 48.6	2,639
T. 27 N., R. 3 E., corner of secs. 19, 20, 29, and 30, center of crossroads	36 47 45.9	97 00 48.3	2,637
T. 27 N., R. 3 E., quarter corner between secs. 19 and 20, center of road at east-west fence line	36 48 12.0	97 00 48.4	2,635
T. 27 N., R. 3 E., corner of secs. 17, 18, 19, and 20, center of crossroads	36 48 38.2	97 00 48.3	2,645
T. 27 N., R. 3 E., quarter corner between secs. 17 and 18, center of road at east-west fence line	36 49 04.2	97 00 47.9	2,635
T. 27 N., R. 3 E., corner of secs. 7, 8, 17, and 18, crossroads; stone corner	36 49 30.3	97 00 48.0	2,635
T. 27 N., R. 3 E., quarter corner between secs. 7 and 8, center of road at east-west fence line	36 49 56.3	97 00 48.0	2,635
T. 27 N., R. 3 E., corner of secs. 5, 6, 7, and 8, center of crossroads at schoolhouse 33	36 50 22.4	97 00 48.1	2,635
T. 27 N., R. 3 E., quarter corner between secs. 5 and 6, center of road at east-west fence line	36 50 48.0	97 00 48.3	2,595
T. 27 N., R. 3 E., 430 feet south of corner of secs. 5 and 6, 55 feet north by 20 feet east of north-south road crossing Atchison, Topeka & Santa Fe Ry., 2½ feet south of stone corner fence post; iron post stamped "Prim. Trav. Sta. No. 16, 1916." Elev. 1,100 feet	36 51 09.4	97 00 48.1	2,160
T. 28 N., R. 3 E., quarter corner between secs. 31 and 32, at east-west fence line	36 51 40.1	97 00 48.8	3,102
T. 28 N., R. 3 E., corner of secs. 29, 30, 31, and 32, center of crossroads	36 52 06.3	97 00 48.9	2,655
T. 28 N., R. 3 E., quarter corner between secs. 29 and 30, center of road at east-west fence line	36 52 32.3	97 00 49.1	2,630
T. 28 N., R. 3 E., corner of secs. 19, 20, 29, 30, center of crossroads	36 52 58.4	97 00 49.0	2,635
T. 28 N., R. 3 E., corner of secs. 17, 18, 19, and 20, crossroads	36 52 50.5	97 00 49.2	5,270
T. 28 N., R. 3 E., corner of secs. 7, 8, 17, and 18, center of crossroads	36 54 42.7	97 00 49.1	5,275
T. 28 N., R. 3 E., corner of secs. 5, 6, 7, and 8, at district 11 schoolhouse, center of crossroads	36 55 34.7	97 00 48.4	5,260
T. 28 N., R. 3 E., closing corner of secs. 5 and 6, T road south on township line	36 56 28.1	97 00 47.1	5,407
T. 29 N., R. 3 E., corner of secs. 31 and 32, on township line	36 56 28.1	97 00 41.2	479
T. 29 N., R. 3 E., quarter corner between secs. 31 and 32, at east-west fence line; stone corner	36 56 54.1	97 00 41.2	2,630
T. 29 N., R. 3 E., corner of secs. 29, 30, 31, and 32, at schoolhouse 78, center of crossroads	36 57 20.3	97 00 41.2	2,640
T. 29 N., R. 3 E., quarter corner between secs. 29 and 30, at east-west fence line; stone corner	36 57 46.3	97 00 41.2	2,635
T. 29 N., R. 3 E., corner of secs. 19, 20, 29, and 30, center of crossroads	36 58 12.4	97 00 41.1	2,635
T. 29 N., R. 3 E., corner of secs. 17, 18, 19, and 20, center of crossroads	36 59 04.8	97 00 41.5	5,297
T. 29 N., R. 3 E., quarter corner between secs. 17 and 18, east-west fence line; stone corner	36 59 30.7	97 00 41.7	2,623
T. 29 N., R. 3 E., north corner of secs. 17 and 18, at T road south, 22 feet south of Kansas-Oklahoma State line, 3 feet south of stone corner post; iron post stamped "Prim. Trav. Sta. No. 17, 1916"	36 59 55.5	97 00 42.2	2,508

Magnetic declination along east border of quadrangle (north half), 10° 04' E.

NEWKIRK QUADRANGLE—Continued.

Along highways near east border of quadrangle (south half).

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
T. 26 N., R. 3 E., corner of secs. 7, 8, 17, and 18; stone corner at crossroads.....	36 44 17.5	97 00 48.4	.....
T. 26 N., R. 3 E., quarter corner between secs. 17 and 18; stone at T road west.....	36 43 51.6	97 00 48.4	2, 627
T. 26 N., R. 3 E., corner of secs. 17, 18, 19, and 20; stone at crossroads.....	36 43 25.6	97 00 48.4	2, 631
T. 26 N., R. 3 E., quarter corner between secs. 19 and 20, at Oak View schoolhouse, center of road at east-west fence line.....	36 42 59.6	97 00 48.3	2, 622
T. 26 N., R. 3 E., corner of secs. 19, 20, 29, and 30, crossroads.....	36 42 33.8	97 00 48.2	2, 614
T. 26 N., Rs. 2 and 3 E., corner of secs. 19, 24, 25, and 30, T road north.....	36 42 33.3	97 01 52.4	5, 230
T. 26 N., R. 2 E., quarter corner between secs. 24 and 25, center of road at north-south fence line.....	36 42 33.1	97 02 24.5	2, 615
T. 26 N., R. 2 E., corner of secs. 23, 24, 25, and 26, T road south at fence line north.....	36 42 33.0	97 02 57.0	2, 645
Road forks at west end of small bridge, 415 feet northwest of Arkansas River.....	36 41 43.7	97 03 05.9	5, 026

Along highways near east border of quadrangle (north half).

T. 26 N., R. 2 E., southeast end of Arkansas River bridge, 1.75 miles southeast of Ponca City.....	36 41 34.9	97 02 57.6	1, 125
T. 26 N., R. 2 E., quarter corner between secs. 35 and 36, center of north-south road at T road east.....	36 41 15.9	97 02 57.0	1, 920
T. 26 N., R. 2 E., center of sec. 36, center of east-west road at north-south fence line.....	36 41 15.8	97 02 24.8	2, 621
T. 26 N., Rs. 2 and 3 E., quarter corner between secs. 36 and 31, center of east-west road at fence line north.....	36 41 15.5	97 01 52.1	2, 665
T. 26 N., R. 3 E., center of sec. 31, T road west.....	36 41 15.6	97 01 20.0	2, 610
Tps. 25 and 26 N., R. 3 E., quarter corner between secs. 6 and 31, crossroads.....	36 40 49.8	97 01 20.2	2, 614
Tps. 25 and 26 N., Rs. 2 and 3 E., corner of secs. 1, 6, 31, and 36, center of east-west road at T road south, 26 feet west of T fence line; General Land Office iron post.....	36 40 49.6	97 01 52.4	2, 610
T. 25 N., R. 3 E., quarter corner between secs. 6 and 7, T road west.....	36 39 57.8	97 01 20.3	5, 239
T. 25 N., R. 3 E., center of sec. 7, T road east.....	36 39 32.6	97 01 19.8	2, 560
T. 25 N., R. 3 E., quarter corner between secs. 7 and 8; iron stake.....	36 39 32.2	97 00 47.9	2, 598
T. 25 N., R. 3 E., corner of secs. 7, 8, 17, and 18.....	36 39 06.3	97 00 47.8	2, 625
T. 25 N., R. 3 E., quarter corner between secs. 8 and 17, T road south; iron stake.....	36 39 06.0	97 00 15.4	2, 638
T. 25 N., R. 3 E., quarter corner between secs. 17 and 20, center of road, east-west fence line.....	36 38 14.2	97 00 15.2	5, 247
T. 25 N., R. 3 E., center of sec. 20, 15 feet north of T road east, in line with fence east and west on west side of road, 1½ feet from fence post; iron post stamped "Prim. Trav. Sta. No. 23, 1916".....	36 37 47.8	97 00 15.4	2, 663
T road west.....	36 37 02.5	97 00 15.2	4, 589
T. 25 N., R. 3 E., quarter corner between secs. 29 and 32.....	36 36 29.7	97 00 15.5	3, 320
T. 25 N., R. 3 E., apparent corner of secs. 29, 30, 31, and 32; stone in center of east-west road at T fence south.....	36 36 29.8	97 00 47.1	2, 576
T. 25 N., R. 3 E., north corner of secs. 5 and 6, in Arkansas River bottom, one-half mile north of Arkansas River, 20 feet west by 25 feet south of end post of fence line east, General Land Office iron stake.....	36 35 37.7	97 00 52.7	5, 285
T. 24 N., R. 3 E., quarter corner between secs. 8 and 17; stone at four corners of fences.....	36 33 52.7	97 00 19.7	.....
T. 24 N., R. 3 E., center of sec. 17; stone at four corners of fences.....	36 33 26.9	97 00 19.0	2, 610
T. 24 N., R. 3 E., quarter corner between secs. 17 and 20, at J. E. Alexander's residence, center of east-west road at fence line north-south.....	36 33 00.8	97 00 19.5	2, 640
T. 24 N., R. 3 E., quarter corner between secs. 20 and 29; stone at center of east and west road at fences north and south.....	36 32 08.6	97 00 19.5	5, 279

Magnetic declination for east border of quadrangle, 10° 30' E., south half of SW. ¼ of quadrangle; for east border of quadrangle, 10° 25' E., north half of SW. ¼ of quadrangle.

NOWATA QUADRANGLE.

Near southwest corner of quadrangle. (By B. H. Yoakum in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
T. 23 N., R. 12 E., near northeast corner of sec. 2, road corner.....	36 30 24.7	95 59 12.8	.....

PAWHUSKA QUADRANGLE.

North along highways near west border of quadrangle. (By W. F. Hicks in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
T. 25 N., Rs. 7 and 8 E., 4 feet north of quarter corner of secs. 19 and 24; iron post stamped "Prim. Trav. Sta. No. 10, 1916." Elev. 1,071 feet.....	° ' "	° ' "	Feet.
T. 25 N., Rs. 7 and 8 E., corner of secs. 13, 18, 19, and 24; iron stake with cap.....	36 37 47.1	96 29 35.3	.....
T. 25 N., Rs. 7 and 8 E., quarter corner between secs. 13 and 18; iron stake with cap.....	36 38 13.2	96 29 35.1	2, 648
T. 25 N., Rs. 7 and 8 E., corner of secs. 7, 12, 13, and 18; iron stake with cap.....	36 38 39.4	96 29 34.6	2, 640
T. 25 N., Rs. 7 and 8 E., corner of secs. 1, 6, 7, and 12; iron stake with cap.....	36 39 05.5	96 29 34.5	2, 640
T. 25 N., Rs. 7 and 8 E., quarter corner between secs. 1 and 6; iron stake with cap.....	36 39 57.9	96 29 34.1	5, 294
Tps. 25 and 26 N., Rs. 7 and 8 E., corner of secs. 1, 6, 31, and 36; General Land Office, iron post stamped "Elev. 1,018".....	36 40 24.1	96 29 33.9	2, 648
T. 26 N., Rs. 7 and 8 E., quarter corner between secs. 31 and 36; iron stake with cap.....	36 40 50.2	96 29 33.7	2, 647
T. 26 N., Rs. 7 and 8 E., corner of secs. 25, 30, 31, and 36; iron stake with cap.....	36 41 16.5	96 29 33.1	2, 653
T. 26 N., Rs. 7 and 8 E., quarter corner between secs. 25 and 30; iron stake with cap.....	36 41 42.6	96 29 32.6	2, 642
T. 26 N., Rs. 7 and 8 E., corner of secs. 19, 24, 25, and 30; iron stake with cap.....	36 42 08.8	96 29 32.3	2, 652
T. 26 N., Rs. 7 and 8 E., quarter corner between secs. 19 and 24; iron stake with cap.....	36 42 35.0	96 29 32.0	2, 647
T. 26 N., Rs. 7 and 8 E., 1.4 feet north of corner of secs. 13, 18, 19, and 24; stamped "Prim. Trav. Sta. No. 11, 1916." Elev. 1,040 feet.....	36 43 01.2	96 29 32.0	2, 650
	36 43 27.4	96 29 32.0	2, 651

East along south border of quadrangle. (By W. F. Hicks in 1916.)

T. 23 N., R. 8 E., near line between secs. 2 and 3, 50 feet east of road fork, 150 feet west of north and south fence; nail in root of 15-inch hickory tree.....	36 30 03.6	96 25 32.0	.....
T. 23 N., R. 8 E., in sec. 2, road fork.....	36 30 08.0	96 24 56.4	2, 945
Road forks.....	36 30 16.0	96 24 43.9	1, 302
Tps. 23 and 24 N., R. 8 E., corner of secs. 1, 2, 35, and 36.....	36 30 23.4	96 24 26.6	1, 601
Tps. 23 and 24 N., R. 8 E., quarter corner between secs. 1 and 36.....	36 30 23.4	96 23 54.4	2, 630
Tps. 23 and 24 N., Rs. 8 and 9 E., at township corner, 20 feet west of intersection of crossroads.....	36 30 23.4	96 23 22.1	2, 641
Tps. 23 and 24 N., R. 9 E., in sec. 5, T road south from township line and along west side of Missouri, Kansas & Texas Ry.....	36 30 23.0	96 21 54.0	7, 192
Tps. 23 and 24 N., R. 9 E., at quarter corner between secs. 5 and 32, 750 feet east of Missouri, Kansas & Texas Ry.; iron post stamped "Prim. Trav. Sta. No. 71, 1916. Elev. 823".....	36 30 23.1	96 21 44.0	821
Center of road at section-line fence north and south.....	36 30 21.8	96 21 10.4	2, 742
T. 23 N., R. 9 E., in sec. 2, road forks.....	36 30 23.8	96 18 35.2	12, 675
Tps. 23 and 24 N., R. 12 E., east closing corner of secs. 3 and 34, 150 feet north of gate on east and west road, 25 feet west of north and south phone line; General Land Office post stamped "Prim. Trav. Sta. No. 77, 1916".....	36 30 23.6	96 00.03.3	.....

PRAGUE QUADRANGLE.

(By B. H. Yoakum in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
Paden, 3 miles east and 0.7 mile south of, 957 feet south of quarter corner between secs. 19 and 24, T. 12 N., Rs. 7 and 8 E., 38 feet north by 30 feet east of Fort Smith & Western R. R. crossing, 3 feet southwest of corner fence post of railroad property line fence; iron post stamped "Prim. Trav. Sta. No. 44, 1916".....	° ' "	° ' "	Feet.
	35 29 52.1	96 30 42.0	.....

SAC AND FOX QUADRANGLE.

Along highways south through center of quadrangle. (By B. H. Yoakum in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
St. Louis-San Francisco Ry. crossing.....	35 44 41.2	96 37 36.6	
T. 15 N., R. 6 E., corner of secs. 25, 26, 35, and 36, crossroads.....	35 44 19.4	96 37 36.9	2, 198
Tps. 14 and 15 N., R. 6 E., corner of secs. 1, 2, 35, and 36, crossroads.....	35 43 27.3	96 37 38.0	5, 260
T. 14 N., R. 6 E., corner of secs. 1, 2, 11, and 12, crossroads.....	35 42 34.9	96 37 36.9	5, 285
T. 14 N., R. 6 E., east corner of secs. 1 and 12, T road west.....	35 42 34.9	96 37 12.6	1, 993
Cox triangulation station, 2,400 feet south and 500 feet east of closing corner of Oklahoma-Indian Territory boundary line. Said closing corner is on line between secs. 1 and 12, T. 14 N., R. 6 E. Station mark: A 20-inch post-oak tree having branches and top cut off. Theodolite elevated 30 feet.....	35 42 11.36	96 37 06.51	2, 428
T road west.....	35 41 43.1	96 37 11.1	2, 881
Road southwest.....	35 41 30.1	96 37 11.6	1, 318
Road east.....	35 40 58.4	96 37 08.4	3, 215
T. 14 N., R. 6 E., corner of secs. 13, 14, 23, and 24, T road south.....	35 40 49.8	96 37 36.3	2, 457
T. 14 N., R. 6 E., corner of secs. 23, 24, 25, and 26, crossroads.....	35 39 56.5	96 37 36.3	5, 393
Deep Fork of Canadian River, center of steel bridge over.....	35 39 57.2	96 38 17.4	3, 395
Sac and Fox Agency, 1 mile east of, 44 feet north by 18 feet west of corner of secs. 22, 23, 26, and 27, T. 14 N., R. 6 E., at northwest corner of crossroads; iron post stamped "Prim. Trav. Sta. No. 41, 1916".....	35 39 57.4	96 38 40.0	1, 868
T. 14 N., R. 6 E., corner of secs. 26, 27, 34, and 35, crossroads.....	35 39 04.4	96 38 40.0	5, 359
Tps. 13 and 14 N., R. 6 E., 580 feet north of corner of secs. 2, 3, 34, and 35, in road outcrop, in center of north and south road; aluminum tablet stamped "Prim. Trav. Sta. No. 42, 1916. Elev. 823".....	35 38 17.3	96 38 39.6	4, 761
Tps. 13 and 14 N., R. 6 E., corner of secs. 1, 2, 35, and 36, T road south.....	35 38 10.7	96 37 35.5	5, 355
Tps. 13 and 14 N., R. 6 E., east corner of secs. 1 and 36, corner of Creek-Okfuskee counties on Lincoln county line; iron post stamped with Land Office numbers. Elev. 788.....	35 38 20.1	96 37 14.0	1, 977
T. 13 N., R. 6 E., corner of secs. 1, 2, 11, and 12, crossroads.....	35 37 19.6	96 37 36.4	6, 394
T. 13 N., R. 6 E., corner of secs. 11, 12, 13, and 14, center of north and south road on line with road east.....	35 36 28.2	96 37 37.1	5, 190
T. 13 N., R. 6 E., corner of secs. 13, 14, 23, and 24, crossroads.....	35 35 35.9	96 37 37.6	5, 294
T. 13 N., R. 6 E., corner of secs. 23, 24, 25, and 26, crossroads.....	35 34 44.3	96 37 37.5	5, 220
T. 13 N., R. 6 E., corner of secs. 25, 26, 35, and 36, crossroads.....	35 33 52.4	96 37 38.1	5, 248
T. 13 N., R. 6 E., south corner of secs. 35 and 36, T road north.....	35 33 00.2	96 37 38.0	5, 278
Tps. 12 and 13 N., R. 6 E., east corner of secs. 1 and 36, on Lincoln-Okfuskee county line; iron post stamped with Land Office numbers. Elev. 867.....	35 33 06.8	96 37 17.9	1, 784
T. 12 N., R. 6 E., stone quarter corner between secs. 1 and 2, at east and west fence line.....	35 32 32.8	96 37 47.5	4, 220
T. 12 N., R. 6 E., corner of secs. 21, 2, 11, and 12, T road west, 125 feet south of T road east.....	35 32 06.8	96 37 47.6	2, 625
T. 12 N., R. 6 E., corner of secs. 11, 12, 13, and 14, crossroads.....	35 31 14.5	96 37 48.2	5, 287
T. 12 N., R. 6 E., corner of secs. 13, 14, 23, and 24, crossroads.....	35 30 22.6	96 37 49.0	5, 257
Prague, 3 miles east by 1.5 miles north of, 1,043 feet south of corner of secs. 13, 14, 23, and 24, T. 12 N., R. 6 E., 36 feet north by 33 feet west of Fort Smith & Western R. R. crossing, 3 feet east of property line fence; iron post stamped "Prim. Trav. Sta. No. 43, 1916".....	35 30 12.3	96 37 49.4	1, 043

East along highways and Fort Smith & Western R. R. near south border of quadrangle.

T. 12 N., R. 7 E., railroad crossing on line between secs. 17 and 18.....	35 30 53.6	96 36 01.5	9, 852
T. 12 N., R. 7 E., railroad crossing, 395 feet west of corner of secs. 16, 17, 20, and 21.....	35 30 28.3	96 35 02.5	5, 508
T. 12 N., R. 7 E., corner of secs. 16, 17, 20, and 21, crossroads.....	35 30 28.3	96 34 57.7	395
T. 12 N., R. 7 E., corner of secs. 15, 16, 21, and 22, cross streets at Baptist Church at Paden.....	35 30 28.3	96 33 54.2	5, 245
Railroad trestle 150.3, over center of road.....	35 30 28.1	96 33 30.8	1, 939
Railroad trestle 149.7, center of.....	35 30 23.1	96 32 56.2	2, 902
Railroad trestle 149.4, center of.....	35 30 17.2	96 32 37.7	1, 644
Railroad trestle 148.8, east end of.....	35 30 01.2	96 32 07.2	2, 997
T. 12 N., R. 7 E., railroad crossing on line between secs. 23 and 24.....	35 30 00.3	96 31 46.3	1, 737

SAC AND FOX QUADRANGLE—Continued.

North along highways near east border of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
T. 12 N., Rs. 7 and 8 E., corner of secs. 13, 18, 19, and 24, crossroads.....	35 30 27.7	96 30 42.4	.....
T. 12 N., Rs. 7 and 8 E., corner of secs. 7, 12, 13, and 18; stone at second-class road east, in line with road west.....	35 31 20.0	96 30 42.4	5, 286
T. 12 N., Rs. 7 and 8 E., corner of secs. 1, 6, 7, and 12, crossroads.....	35 32 12.2	96 30 42.4	5, 284
T. 12 N., Rs. 7 and 8 E., north corner of secs. 1 and 6; stone at crossroads.....	35 33 07.3	96 30 42.5	5, 566
T. 13 N., Rs. 7 and 8 E., south corner of secs. 31 and 36; iron post stamped with Land Office numbers, "Prim. Trav. Sta. No. 45, 1916." Elev. 862.....	35 33 07.3	96 30 44.4	153
T. 13 N., Rs. 7 and 8 E., quarter corner between secs. 31 and 36, T road west.....	35 33 33.4	96 30 44.4	2, 636
T. 13 N., Rs. 7 and 8 E., stone corner of secs. 25, 30, 31, and 30, crossroads.....	35 33 59.6	96 30 44.4	2, 643
T. 13 N., Rs. 7 and 8 E., at fence west, stone corner between secs. 19 and 24.....	35 35 17.8	96 30 44.4	7, 910
T. 13 N., Rs. 7 and 8 E., stone corner of secs. 7, 12, 13, and 18, crossroads.....	35 36 36.1	96 30 44.3	7, 914
T. 13 N., Rs. 7 and 8 E., corner of secs. 1, 6, 7, and 12, crossroads. Micawber, 1 mile north by 0.25 mile west of, at corner of secs. 1, 6, 31, and 36, Tps. 13 and 14 N., Rs. 7 and 8 E., in center of crossroads; iron post stamped with Land Office numbers, also elev. 773 and "Prim. Trav. Sta. No. 46, 1916".....	35 37 28.3	96 30 44.2	5, 280
T. 14 N., Rs. 7 and 8 E., corner of secs. 19, 24, 25, and 30, crossroads.....	35 38 20.5	96 30 44.1	5, 278
T. 14 N., Rs. 7 and 8 E., quarter corner between secs. 19 and 24; stone at fence east.....	35 40 05.2	96 30 44.1	10, 580
T. 14 N., Rs. 7 and 8 E., stone corner of secs. 13, 18, 19, and 24, T road west.....	35 40 31.2	96 30 44.1	2, 629
T. 14 N., Rs. 7 and 8 E., quarter corner between secs. 13 and 18, crossroads.....	35 40 57.4	96 30 44.0	2, 652
T. 14 N., Rs. 7 and 8 E., corner of secs. 7, 12, 13, and 18, crossroads. Salt Creek, center of bridge over.....	35 41 23.6	96 30 43.9	2, 643
Tps. 14 and 15 N., Rs. 7 and 8 E., corner of, in center of crossroads; iron post stamped with Land Office numbers, elev. 765, Prim. Trav. Sta. No. 47, 1916.....	35 41 49.7	96 30 44.0	2, 640
T. 15 N., Rs. 7 and 8 E., quarter corner between secs. 31 and 36; iron pipe at fence east.....	35 42 40.6	96 30 46.2	5, 149
T. 15 N., Rs. 7 and 8 E., quarter corner between secs. 31 and 36; iron pipe at fence east.....	35 43 34.4	96 30 43.6	5, 446
T. 15 N., Rs. 7 and 8 E., corner of secs. 25, 30, 31, and 36, at Prairie View schoolhouse; crossroads.....	35 43 57.6	96 30 43.7	2, 346
T. 15 N., Rs. 7 and 8 E., corner of secs. 25, 30, 31, and 36, at Prairie View schoolhouse; crossroads.....	35 44 26.8	96 30 43.6	2, 944
T. 15 N., Rs. 7 and 8 E., quarter corner between secs. 25 and 30.....	35 44 52.9	96 30 43.7	2, 645

West along highways through center of quadrangle.

T. 13 N., R. 7 E., corner of secs. 1, 2, 11, and 12, center of east and west road at north and south fence line.....	35 37 28.5	96 31 48.1	.....
T. 13 N., R. 7 E., quarter corner between secs. 2 and 11; stone at north and south fence line.....	35 37 28.5	96 32 20.2	2, 652
T. 13 N., R. 7 E., corner of secs. 2, 3, 10, and 11, crossroads.....	35 37 28.6	96 32 52.1	2, 637
T road north, 75 feet east of T road south.....	35 37 29.1	96 33 55.9	5, 268
T. 13 N., R. 7 E., quarter corner between secs. 4 and 9, 10 feet west of crossroads.....	35 37 28.9	96 34 28.3	2, 673
T. 13 N., R. 7 E., stone corner of secs. 4, 5, 8, and 9, T road south.....	35 37 28.6	96 35 00.2	2, 635
T. 13 N., R. 7 E., stone quarter corner between secs. 5 and 8, T road north.....	35 37 28.5	96 35 32.2	2, 644
T. 13 N., R. 7 E., stone corner of secs. 5, 6, 7, and 8, crossroads.....	35 37 28.2	96 36 04.2	2, 642
T. 13 N., R. 7 E., quarter corner between secs. 6 and 7, center of east and west road, in line with T road north.....	35 37 27.0	96 36 36.1	2, 638
Okfuskee-Creek county line, stone marked for old Oklahoma-Indian Territory boundary line, on north side of angling road, in line with road east on line between secs. 6 and 7, T. 13 N., R. 7 E.....	35 37 27.9	96 37 15.0	3, 218

Magnetic declination north and south through center of quadrangle, 10° 06' E.; for south border of quadrangle, 9° 52' E.; for east border of quadrangle, 10° 44' E.; east and west through center of quadrangle, 10° 11' E.

SKEDEE QUADRANGLE.

South along highways near west border of quadrangle. (By B. H. Yoakum in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
Milepost 44, opposite, center of Atchison, Topeka & Santa Fe Ry. track.....	° ' '' 36 29 43.1	° ' '' 96 43 53.5	Feet.
Road crossing east-west.....	36 29 33.4	96 43 49.8	1,035
T. 23 N., R. 5 E., section line between secs. 11 and 12, center of crossroads.....	36 29 11.7	96 43 41.4	2,294
T. 23 N., R. 5 E., corner of secs. 11, 12, 13, and 14, crossroads.....	36 28 41.1	96 43 41.2	3,091
T. 23 N., R. 5 E., corner of secs. 13, 14, 23, and 24; stone at T road west.....	36 27 49.0	96 43 41.3	5,265
T. 23 N., R. 5 E., quarter corner between secs. 23 and 24, T road east; stone.....	36 27 23.0	96 43 41.3	2,636
T. 23 N., R. 5 E., corner of secs. 23, 24, 25, and 26, near T road west. Coal Creek, center of small iron bridge over.....	36 26 56.8	96 43 41.7	2,643
T. 23 N., R. 5 E., corner of secs. 25, 26, 35, and 36, crossroads.....	36 26 44.4	96 43 41.7	1,258
Tps. 22 and 23 N., R. 5 E., corner of secs. 1, 2, 35, and 36, Spring Creek schoolhouse, crossroads.....	36 26 04.7	96 43 41.5	4,015
T. 22 N., R. 5 E., corner of secs. 1, 2, 11, and 12, center of crossroads.....	36 25 12.6	96 43 41.2	5,265
T. 22 N., R. 5 E., corner of secs. 11, 12, 13, and 14, in northwest angle of road forks; iron post stamped "Prim. Trav. Sta. No. 27, 1916".....	36 24 20.2	96 43 41.2	5,300
T. 22 N., R. 5 E., corner of secs. 10, 11, 14, and 15, center of crossroads.....	36 23 28.3	96 43 42.1	5,252
T. 22 N., R. 5 E., corner of secs. 14, 15, 22, and 23, center of crossroads.....	36 23 28.4	96 44 45.7	5,199
T. 22 N., R. 5 E., corner of secs. 22, 23, 26, and 27; stone at sharp turn in road.....	36 22 36.1	96 44 46.2	5,286
T. 22 N., R. 5 E., quarter corner between secs. 26 and 27, center of crossroads.....	36 21 44.1	96 44 46.1	5,260
T. 22 N., R. 5 E., corner of secs. 26, 27, 34, and 35, in bottom north of Black Bear Creek, center of T road west.....	36 21 17.8	96 44 46.8	2,654
Tps. 21 and 22 N., R. 5 E., apparent corner of secs. 2, 3, 34, and 35, crossroads.....	36 20 51.8	96 44 46.1	2,630
T. 21 N., R. 5 E., quarter corner between secs. 2 and 3, on west side of north-south road, at fence line east; stone.....	36 19 59.5	96 44 46.3	5,295
T. 21 N., R. 5 E., corner of secs. 2, 3, 10, and 11, on north side of east-west road, at T road south; stone.....	36 19 33.2	96 44 46.4	2,655
T. 21 N., R. 5 E., on line between secs. 10 and 11, near telegraph pole marked "473.20," St. Louis-San Francisco Ry., second-class road crossing.....	36 19 07.1	96 44 46.5	2,639
T. 21 N., R. 5 E., corner of secs. 10, 11, 14, and 15, crossroads.....	36 18 23.2	96 44 46.7	4,442
T. 21 N., R. 5 E., corner of secs. 14, 15, 22, and 23, center of crossroads.....	36 18 15.2	96 44 47.1	811
T. 21 N., R. 5 E., corner of secs. 22, 23, 26, and 27, at T road south, in center of east-west road; stone.....	36 17 23.1	96 44 47.0	5,263
T. 21 N., R. 5 E., corner of secs. 26, 27, 34, and 35, center of crossroads.....	36 16 31.1	96 44 46.3	5,260
	36 15 39.5	96 44 46.3	5,220

Near east border of quadrangle.

Souter Bend ferry, on north bank of Arkansas River, triangle at road forks.....	36 18 32.4	96 30 16.0
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On road in northeast corner of quadrangle.

T. 23 N., R. 7 E., quarter corner between secs. 1 and 12, in pile of rocks on west side of road; iron stake with cap.....	36 29 32.6	96 30 18.8	5,963
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Magnetic declination for west border of quadrangle, 9° 55' E.

SKEDDEE QUADRANGLE—Continued.

West along highways through center of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
T. 22 N., R. 7 E., quarter corner between secs. 1 and 12; iron stake with cap.....	° ' "	° ' "	<i>Feet.</i>
T. 22 N., R. 7 E., corner of secs. 1, 2, 11, and 12, T road south at schoolhouse.....	36 24 19.4	96 30 18.8	2, 636
T. 22 N., R. 7 E., quarter corner between secs. 2 and 11, center of east and west road at gate; iron stake.....	36 24 19.6	96 30 51.0	2, 625
T. 22 N., R. 7 E., quarter corner between secs. 3 and 10, 500 feet northeast of residence of Henry King, on east hillside on south side of road, 15 feet east of hickory tree; iron stake with cap.....	36 24 20.4	96 31 23.3	2, 043
T. 22 N., R. 7 E., corner of secs. 3, 4, 9, and 10, on west side of ridge west of Big Creek, center of east-west double fence line, at fences north and south, iron stake with cap.....	36 24 21.7	96 32 27.5	5, 250
T. 22 N., R. 7 E., quarter corner between secs. 4 and 9; iron stake with cap.....	36 24 22.1	96 32 59.5	2, 618
T. 22 N., R. 7 E., corner of secs. 4, 5, 8, and 9, at T road west; iron stake with cap.....	36 24 22.2	96 33 31.9	2, 648
T. 22 N., R. 7 E., quarter corner between secs. 5 and 8, center of east and west road at fence line north; iron stake with cap.....	36 24 22.6	96 34 04.0	2, 623
T. 22 N., R. 7 E., apparent corner of secs. 5, 6, 7, and 8, at South Enterprise schoolhouse, T road east.....	36 24 22.8	96 34 36.1	2, 631
T. 22 N., R. 7 E., corner of secs. 7, 8, 17, and 18, T road east; iron stake with cap.....	36 24 22.4	96 35 08.1	2, 616
T. 22 N., R. 7 E., quarter corner between secs. 17 and 18, center of north-south road; iron stake with cap.....	36 23 30.8	96 35 08.1	5, 220
T. 22 N., R. 7 E., corner of secs. 17, 18, 19, and 20, T road north; iron stake with cap.....	36 23 04.8	96 35 08.2	2, 627
Blackburn, at T road to ferry, on north bank of Arkansas River, 230 feet east of north end of bridge.....	36 22 38.9	96 35 08.2	2, 627
Blackburn, west of post office, center of cross street.....	36 22 40.0	96 35 29.5	1, 742
T. 22 N., Rs. 6 and 7 E., corner of secs. 13, 18, 19, and 24, center of T road west; iron post stamped "Prim. Trav. Sta. No. 31, 1916".....	36 22 22.5	96 35 44.3	2, 149
T. 22 N., R. 6 E., corner of secs. 13, 14, 23, and 24, crossroads; stone with cross.....	36 22 36.7	96 36 06.7	2, 331
T. 22 N., R. 6 E., corner of secs. 14, 15, 22, and 23, at crossroads, small wooden bridge; stone with cross cut in top.....	36 22 37.4	96 37 12.0	5, 343
T. 22 N., R. 6 E., corner of secs. 15, 16, 21, and 22, center of crossroads.....	36 22 37.4	96 38 16.8	5, 294
T. 22 N., R. 6 E., corner of secs. 16, 17, 20, and 21, crossroads; stone.....	36 22 37.0	96 39 21.6	5, 297
T. 22 N., R. 6 E., corner of secs. 17, 18, 19, and 20, crossroads; stone.....	36 22 36.3	96 40 26.3	5, 295
Skedee, on west side of track at station, at southeast corner of hotel porch, 2 feet northeast of concrete foundation post; iron post stamped "Prim. Trav. Sta. No. 32, 1916. Elevation 834 feet".....	36 22 36.0	96 41 31.3	5, 322
T. 22 N., Rs. 5 and 6 E., T road forks at section line, 0.4 mile west of Skedee.....	36 22 44.0	96 42 10.4	3, 291
T. 22 N., Rs. 5 and 6 E., near corner of secs. 7, 12, 13, and 18, at T road west.....	36 22 47.4	96 42 37.1	2, 207
	36 23 27.1	96 42 37.7	4, 020

Magnetic declination through center of quadrangle, 9° 40' E.

YALE QUADRANGLE.

East along highways near north border of quadrangle. (By B. H. Yoakum in 1916.)

Station.	Latitude.	Longitude.	Distance between stations.
T. 21 N., R. 5 E., south corner of secs. 34 and 35, 40 feet southeast of T road north, on south side of east-west road, in line with fence north; iron post stamped "Prim. Trav. Sta. No. 28, 1916".....	° ' "	° ' "	<i>Feet.</i>
T. 21 N., R. 5 E., quarter corner on south side of sec. 35 at fence line north; stone.....	36 14 46.7	96 44 46.0	.....
T. 20 N., R. 5 E., north corner of secs. 1 and 2, T road south.....	36 14 47.0	96 44 14.3	2, 602
T. 20 N., Rs. 5 and 6 E., north corner of secs. 1 and 6, T road south.....	36 14 46.9	96 43 48.3	2, 125
T. 21 N., Rs. 5 and 6 E., north corner of secs. 31 and 36, at T road north; cross cut in stone.....	36 14 46.8	96 42 44.2	5, 255
T. 20 N., R. 6 E., north corner of secs. 5 and 6, T road south.....	36 14 46.8	96 42 38.0	510
T. 21 N., R. 6 E., south corner of secs. 31 and 32, T road north.....	36 14 46.8	96 41 43.3	4, 475
T. 21 N., R. 6 E., quarter corner on south side of sec. 32, 150 feet east of road crossing of Atchison, Topeka & Santa Fe R.v. at Mermec, in northwest corner of crossroads; stone with cross cut in top.....	36 14 46.8	96 41 33.7	790
T. 20 N., R. 6 E., north corner of secs. 4 and 5, T road south.....	36 14 46.7	96 41 01.4	2, 642
T. 21 N., R. 6 E., south corner of secs. 32 and 33, T road north.....	36 14 46.5	96 40 38.6	1, 873
	36 14 46.4	96 40 29.3	765

YALE QUADRANGLE—Continued.

East along highways near north border of quadrangle—Continued.

Station.	Latitude.			Longitude.			Distance between stations.
	°	'	"	°	'	"	
T. 21 N., R. 6 E., south corner of secs. 33 and 34, T road north.....	36	14	46.7	96	39	24.9	<i>Feet.</i> 5,270
T. 20 N., R. 6 E., north corner of secs. 2 and 3, T road north.....	36	14	46.7	96	38	30.3	4,474
T. 21 N., R. 6 E., south corner of secs. 34 and 35, T road north.....	36	14	46.7	96	38	20.9	770
T. 20 N., R. 6 E., north corner of secs. 1 and 2, in southeast angle of road forks; iron post stamped "Prim. Trav. Sta. No. 29, 1916".....	36	14	46.4	96	37	25.5	4,542
T. 21 N., R. 6 E., south corner of secs. 35 and 36, T road north.....	36	14	46.6	96	37	16.4	740
T. 21 N., Rs. 6 and 7 E., secs. 31 and 36 on south side of east-west road at T road north; stone with cross cut in top.....	36	14	51.1	96	36	12.2	5,277
T. 20 N., R. 7 E., north corner of secs. 5 and 6, at T road south; stone with cross cut in top.....	36	14	46.4	96	35	19.7	4,328
T. 21 N., R. 7 E., south corner of secs. 31 and 32, at T road north; stone.....	36	14	46.3	96	35	08.1	955
Hallett, northwest of; about 600 feet north of water tank; road crossing St Louis-San Francisco Ry.....	36	14	46.4	96	34	49.6	1,518
T. 20 N., R. 7 E., north corner of secs. 4 and 5, T road south to Hallett.....	36	14	46.2	96	34	15.6	2,785
T. 21 N., R. 7 E., south corner of secs. 32 and 33, T road north.....	36	14	46.3	96	34	03.8	960
Hallett, water tower, ball on top of.....	36	13	43.0	96	33	55.8	6,434
T. 20 N., R. 7 E., north corner of secs. 3 and 4, T road south.....	36	14	46.3	96	33	10.9	7,377
T. 21 N., R. 7 E., south corner of secs. 33 and 34, T road north.....	36	14	46.3	96	32	59.4	941
T. 20 N., R. 7 E., north corner of secs. 2 and 3, T road south.....	36	14	46.2	96	32	06.3	4,350
T. 21 N., R. 7 E., south corner of secs. 34 and 35, T road north.....	36	14	46.3	96	31	55.0	932

Magnetic declination for north border of quadrangle, 9° 33' E.

South along highways near west border of quadrangle.

T. 20 N., R. 5 E., corner of secs. 2, 3, 10, and 11, crossroads; stone.....	36	13	54.5	96	44	52.0	5,306
T. 20 N., R. 5 E., corner of secs. 10, 11, 14, and 15, center of crossroads.....	36	13	02.3	96	44	52.6	5,278
T. 20 N., R. 5 E., corner of secs. 14, 15, 22, and 23, at crossroads; stone.....	36	12	10.2	96	44	53.0	5,261
T. 20 N., R. 5 E., corner of secs. 22, 23, 26 and 27, center of crossroads at Lone Elm schoolhouse.....	36	11	17.9	96	44	53.3	5,291
T. 20 N., R. 5 E., corner of secs. 26, 27, 34, and 35, center of east and west road at T road north.....	36	10	25.9	96	44	53.6	5,261
Tps. 19 and 20 N., R. 5 E., corner of secs. 2, 3, 34, and 35, crossroads; stone.....	36	09	33.6	96	44	54.5	5,287
T. 19 N., R. 5 E., corner of secs. 2, 3, 10, and 11, crossroads; stone.....	36	08	41.5	96	44	55.6	5,274
T. 19 N., R. 5 E., near corner of secs. 10, 11, 14, and 15, 57 feet south of T road, in northwest corner of T fence west, 2 feet northwest of corner fence post; iron post stamped "Prim. Trav. Sta. No. 33, 1916".....	36	07	48.9	96	44	57.2	5,315
T. 19 N., R. 5 E., corner of secs. 11, 12, 13, and 14, crossroads; stone.....	36	07	49.6	96	43	53.8	5,200
T. 19 N., Rs. 5 and 6 E., corner of secs. 7, 12, 13, and 18, center of crossroads.....	36	07	49.9	96	42	48.3	5,378
T. 19 N., Rs. 5 and 6 E., corner of secs. 13, 18, 19, and 24, crossroads 1 mile west of Yale; stone.....	36	06	57.7	96	42	49.2	5,283
T. 19 N., Rs. 5 and 6 E., quarter corner between secs. 19 and 24, at T road east; stone.....	36	06	31.5	96	42	49.3	2,642
T. 19 N., Rs. 5 and 6 E., corner of secs. 19, 24, 25, and 30, center of crossroads.....	36	06	05.5	96	42	49.8	2,635
Cimarron River, 2.5 miles southwest of Yale, north end of wagon bridge.....	36	05	43.4	96	42	49.8	2,234
Cimarron River, 2.5 miles southwest of Yale, south end of wagon bridge.....	36	05	03.3	96	42	49.4	1,326
T. 19 N., Rs. 5 and 6 E., corner of secs. 25, 30, 31, and 36, at crossroads; stone.....	36	05	14.3	96	42	49.7	1,612
Tps. 18 and 19 N., Rs. 5 and 6 E., corner of secs. 1, 6, 31, and 36, center of crossroads.....	36	04	21.9	96	42	49.9	5,302
Tps. 18 and 19 N., R. 5 E., corner of secs. 1, 2, 35, and 36, at T road east; stone.....	36	04	21.7	96	43	54.1	5,264
T. 18 N., R. 5 E., corner of secs. 1, 2, 11, and 12, center of crossroads.....	36	03	29.3	96	43	54.3	5,294
T. 18 N., R. 5 E., corner of secs. 11, 12, 13, and 14, center of crossroads, 140 feet north of Santa Fe Ry. crossing at milepost 77.....	36	02	37.2	96	43	54.5	5,277
T. 18 N., R. 5 E., corner of secs. 10, 11, 14, and 15, center of crossroads.....	36	02	37.3	96	44	58.7	5,270
T. 18 N., R. 5 E., corner of secs. 14, 15, 22, and 23, at Wagoza schoolhouse, center of crossroads.....	36	01	45.0	96	44	58.6	5,288
Santa Fe Ry. crossing at Chanute Oil Refining Co.....	36	01	09.3	96	44	58.7	3,615
T. 18 N., R. 5 E., corner of secs. 22, 23, 26, and 27, 22 feet north by 5 feet west of crossroads, 350 feet south of Mo. Kans. & Texas Ry. crossing at Gano siding, 27 miles northeast of Cushing; iron post stamped "Prim. Trav. Sta. No. 34, 1916. Elevation 826 feet Okla.".....	36	00	53.0	96	44	58.8	1,645
T. 18 N., R. 5 E., corner of secs. 26, 27, 34, and 35, crossroads; iron stake.....	36	00	00.5	96	44	58.8	5,309

YALE QUADRANGLE—Continued.

East along highways near south border of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
T. 18 N., R. 5 E., corner of secs. 25, 26, 35, and 36, at Pineros school house, center of crossroads.....	° ' " 36 00 00.6	° ' " 96 43 54.8	<i>Feet.</i>
T. 18 N., Rs. 5 and 6 E., corner of secs. 25, 30, 31, and 36, center of crossroads.....	36 00 00.8	96 42 50.4	5,288
Center of Santa Fe Ry. crossing.....	36 00 01.3	96 42 12.0	3,160
T. 18 N., R. 6 E., corner of secs. 29, 30, 31, and 32, center of north-south road at T road west.....	36 00 01.5	96 41 46.9	2,060
Santa Fe Ry. crossing.....	36 00 21.6	96 41 46.8	2,030
T. 18 N., R. 6 E., quarter corner between secs 29 and 30, at T road east, center of north and south road.....	36 00 27.5	96 41 47.4	598
Santa Fe Ry. crossing.....	36 00 27.5	36 41 39.1	685
T. 18 N., R. 6 E., quarter corner between secs. 28 and 29, at Schlegel station on Santa Fe Ry., center of crossroads.....	36 00 27.3	96 40 42.4	4,655
Private T road north.....	36 00 27.3	96 40 10.4	2,631
T. 18 N., R. 6 E., quarter corner between secs. 27 and 28, at T road north, center of east-west road.....	36 00 27.3	96 39 38.3	2,641
Center of wagon bridge over creek.....	36 00 27.2	96 39 18.6	1,612
T. 18 N., R. 6 E., quarter corner between secs. 26 and 27, at T road west; stone.....	36 00 27.5	96 38 33.0	3,749
T. 18 N., R. 6 E., corner of secs. 26, 27, 34, and 35, at T road east; stone with cross on top.....	36 00 01.3	96 38 34.1	2,638
T. 18 N., R. 7 E., 32 feet south by 37 feet west of bearing tree for quarter corner between secs. 30 and 31, 1 mile north of Drumright, at center of crossroads, 59 feet south of small bearing tree in northwest corner of road forks, 6 feet south of corner fence post; iron post stamped "Prim. Trav. Sta. No. 35, 1916".....	36 00 10.5	96 36 38.8	9,514
T. 18 N., R. 7 E., corner of secs. 29, 30, 31, and 32, 1 mile north of Drumright, at angle in east-west road at telephone lines running north and south, 15 feet southwest of white-oak bearing tree; iron bolt driven in ground.....	36 00 10.8	96 36 06.1	2,688
Wheeler, center of crossroads at, 500 feet west of railroad crossing.....	36 00 10.8	96 35 49.4	1,372
Wheeler, center of east-west road crossing of the Atchison, Topeka & Santa Fe Ry.....	36 00 10.8	96 35 43.4	496
T. 18 N., R. 7 E., corner of secs. 28, 29, 32, and 35, crossroads; iron pipe.....	36 00 10.9	96 35 01.7	3,429
T. 18 N., R. 7 E., corner of secs. 27, 28, 33, and 34, center of crossroads.....	36 00 11.3	96 33 57.2	5,300
T. 18 N., R. 7 E., corner of secs. 26, 27, 34, and 35, 170 feet west of small branch, 27 feet east of fence corner; stone.....	36 00 11.0	96 32 52.8	5,286
T. 18 N., Rs. 7 and 8 E., corner of secs. 25, 30, 31, and 36, at north and south fence line, 260 feet north of gate on angling road; stone.....	36 00 10.8	96 30 44.5	10,542

YALE QUADRANGLE—Continued.

West along highways through center of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	<i>Feet.</i>
Road forks, roads east, west, and southwest.....	36 09 03.6	96 31 13.5	.....
Crossroads near top of ridge, roads north, south, northwest, and southwest, in sec. 12, T. 19 N., R. 7 E., 15 feet west of dead hickory tree blazed and marked "U. S. G. S".....	36 08 31.1	96 31 29.2	3,525
T. 19 N., R. 7 E., corner of secs. 11, 12, 13, and 14, at angle in road west and south, on south bank of Lagoon Creek, 20 feet north of road; stone.....	36 08 01.0	96 31 48.9	3,435
T. 19 N., R. 7 E., corner of secs. 13, 14, 23, and 24, center of T road west.....	36 07 09.1	96 31 48.7	5,246
T. 19 N., R. 7 E., quarter corner between secs. 14 and 23, on south side of road, 30 feet northeast of fence corner; quarter stone.....	36 07 09.2	96 32 21.2	2,659
T. 19 N., R. 7 E., corner of secs. 15, 16, 21, and 22, at road forks, center of triangle.....	36 07 09.6	96 33 57.8	7,928
T. 19 N., R. 7 E., near quarter corner between secs. 16 and 21, center of crossroads, north and south road is Oilton-Jennings, signpost reading "Jennings 3½ miles".....	36 07 09.2	96 34 29.2	2,572
T. 19 N., R. 7 E., corner of secs. 16, 17, 20, and 21, center of crossroads.....	36 07 09.1	96 35 02.8	2,751
T. 19 N., R. 7 E., approximate corner of secs. 17, 18, 19, and 20, 50 feet east of T road north, center of gate in north-south fence line.....	36 07 09.2	96 36 06.8	5,248
T. 19 N., R. 6 and 7 E., approximate corner of secs. 13, 18, 19, and 24, at fence corners, in line with fence south, center of east-west road.....	36 07 09.2	96 36 54.8	3,940
T. 19 N., R. 6 E., corner of secs. 13, 14, 23, and 24, corner of crossroads.....	36 06 59.1	96 37 28.3	2,928
T. 19 N., R. 6 E., 32 feet south by 26 feet east of stone at corner of secs. 14, 15, 22, and 23, 3 miles east of Yale, in southwest corner of crossroads, 3 feet northeast of corner fence post; iron post stamped "Prim. Trav. Sta. No. 38, 1916".....	36 06 58.7	96 38 31.9	5,220
T. 19 N., R. 6 E., corner of secs. 15, 16, 21, and 22, center of crossroads.....	36 06 59.1	96 39 36.9	5,329
T. 19 N., R. 6 E., corner of secs. 16, 17, 20, and 21, crossroads; iron stake.....	36 06 58.1	96 40 41.4	5,291
T. 19 N., R. 6 E., apparent quarter corner, between secs. 17 and 20, T road north; stone.....	36 06 58.2	96 41 14.5	2,713
Yale, ball on top of water tower.....	36 06 50.3	96 41 34.5	1,829
T. 19 N., R. 6 E., corner of secs. 17, 18, 19, and 20, a quarter of a mile west of brick school building in Yale, center of cross streets.....	36 06 57.8	96.41 46.9	1,266
T. 19 N., R. 6 E., quarter corner of secs. 18 and 19, on northwest side of Yale, at second-class road crossing; stone.....	36 06 57.8	96 42 18.5	2,588

Magnetic declination along west border of quadrangle, 9° 01' E.; along south border of quadrangle, 9° 08' E.; through center of quadrangle, east-west, 9° 08' E.