

LOUISIANA.

PRIMARY TRAVERSE.

Blanchard, Bossier, Hosston, Keithville, and Plain Dealing quadrangles.

BOSSIER AND CADDO PARISHES.

The following geographic positions on approximate North American datum were determined in 1915 by F. W. Crisp, jr., topographer, and are based upon United States Army Corps of Engineers permanent bench mark 45, near Bossier, and a Coast and Geodetic Survey bench mark 600 feet east of station at Greenwood.

Positions located in 1905 by Sledge Tatum, topographer, in the Blanchard quadrangle, published in Bulletin 310, have been readjusted and are included.

BLANCHARD QUADRANGLE.

North along highways and Texas & Pacific Railway from Shreveport to Belcher.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	<i>Feet.</i>
Shreveport, Market Street; center of bridge over bayou (outlet of Cross Lake).....	32 31 09.3	93 45 05.9	.....
Shreveport, intersection of La Salle and Arkansas avenues; center of streets.....	32 31 32.4	93 45 15.0	2, 462
Shreveport, 2 miles north of, T road south; center of asphalt road.....	32 32 03.4	93 45 45.9	4, 104
Shreveport, 3 miles north of; crossing of Shreveport-Belcher asphalt road with railroad.....	32 32 49.6	93 46 17.5	5, 396
Shreveport, 3.3 miles north of, asphalt road crossing; center of track.....	32 33 18.7	93 46 11.8	.....
T road east, center of asphalt road at.....	32 34 00.0	93 46 03.9	4, 224
T road 70 feet east of railroad.....	32 34 56.2	93 46 19.5	5, 833
Cash Point, 1 mile south of, road crossing; center of track.....	32 35 57.5	93 46 14.1	6, 216
Cash Point, crossing of road and railroad at.....	32 36 44.0	93 46 08.8	4, 726
Cash Point, 1.1 miles north of, road crossing; center of track.....	32 37 35.6	93 46 37.8	5, 778
Pickett, 0.8 mile south of; crossing of asphalt road.....	32 38 01.2	93 46 57.0	3, 060
Pickett crossing, 170 feet southeast of north cattle guard, 25 feet southwest of south cattle guard, 20 feet northeast of fence corner on right of way of Texas & Pacific Ry. and 120 feet southeast of sharp turn in levee on west bank of Red River; iron post stamped "Prim. Trav. Sta. No. 8, 1915".....	32 38 32.2	93 47 20.6	3, 723
T road east on asphalt road.....	32 38 54.9	93 47 50.2	3, 422
Cattle guard on railroad, T road east at.....	32 39 23.7	93 48 34.2	4, 750
Dixie, 2 miles south of, concrete culvert on Shreveport-Belcher road, top of east end; bronze tablet stamped "Prim. Trav. Sta. No. 6, 1915".....	32 39 53.5	93 49 19.3	4, 895
Dixie, 0.25 mile south of, 50 feet west of railroad; crossroads.....	32 41 18.6	93 50 02.7	9, 362
Dixie station, 100 feet north of, road crossing; center of main track.....	32 41 40.1	93 50 02.1	2, 180
Hayti crossing, 60 feet west of track; crossroads.....	32 42 46.1	93 50 02.6	6, 665
Uni, 50 feet north of station, 60 feet west of track; T roads.....	32 44 07.3	93 50 02.4	8, 205
Public road crossing, center of track at.....	32 44 49.3	93 50 01.6	4, 254

BLANCHARD QUADRANGLE—Continued.

Along highways near north border of quadrangle from Belcher to Oil City.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Horseshoe Bayou, center of iron bridge over.....	32 44 47.0	93 50 46.4	3,832
Dooley Bayou, wooden bridge; T road north at west end of.....	32 44 47.4	93 51 50.4	5,467
T road north; center of intersection.....	32 44 47.1	93 52 06.1	1,347
Fence corner, center of road at.....	32 44 46.0	93 53 10.5	5,499
Crossroads, center of.....	32 44 45.4	93 53 32.2	1,850
Wooden bridge over bayou, 90 feet west of center of; T road north.	32 44 45.0	93 53 48.6	1,410
Crossroads, center of.....	32 44 45.0	93 54 29.7	3,510
Stumpy Bayou, T roads in east side of; center of triangle at inter- section.....	32 43 52.0	93 54 35.2	5,368
Black Bayou; east ferry landing.....	32 43 30.6	93 54 26.8	2,280
Crossroads, in woods northeast of oil well.....	32 43 25.9	93 55 41.0	6,361
Oil well, 150 feet southeast of, crossroads and telephone line; center of crossing.....	32 43 28.5	93 56 09.9	2,482
Pipeline, second-class road crossing at.....	32 43 41.1	93 56 29.0	2,070
Railroad spur track to Arkansas Gas Co.'s plant, center of road crossing on.....	32 44 01.6	93 57 22.2	4,992
Oil City station, 0.5 mile south of, crossing of highway and Kan- sas City Southern Ry.; center of main track.....	32 44 11.8	93 58 04.2	3,731

Along Kansas City Southern Railway and highways in western part of quadrangle from Oil City via Morningsport to Greenwood.

Milepost 538, 180 feet north of, road crossing; center of track at....	32 42 47.8	93 57 36.2	8,819
Road crossing, center of track at.....	32 42 34.4	93 57 31.7	1,410
Ferry Lake, north side of, Southwestern Gas & Electric Co.'s power station; road crossing.....	32 42 21.7	93 57 30.3	1,279
Morningsport, 100 feet north of station; road crossing.....	32 41 38.8	93 57 27.0	4,345
Morningsport, 0.4 mile south of, road crossing at section house; center of main track.....	32 41 16.1	93 57 27.0	2,297
Old St. Lee Church, 100 feet southeast of, at crossroads, General Land Office, section corner on township line between Tps. 19 and 20 N., R. 16 W., probably secs. 1, 2, 35, and 36; iron post stamped "Prim. Trav. Sta. No. 4, 1915".....	32 40 37.1	93 57 53.3	4,539
T road east; center of intersection.....	32 40 06.0	93 58 24.9	4,143
Wooden bridge over bayou, center of.....	32 39 52.2	93 58 49.4	2,526
Wooden bridge; center of.....	32 39 21.2	93 59 18.7	4,009
T road south, center of intersection.....	32 39 19.0	93 59 31.1	1,084
Road forks in pine woods.....	32 38 44.1	93 58 52.8	4,816
Road forks in pine woods.....	32 38 38.6	93 58 49.1	634
T road east; center of intersection.....	32 38 14.5	93 58 50.5	2,442
T road southwest, center of main road at.....	32 38 02.5	93 58 51.2	1,216
Crossroads, second-class road east-west.....	32 37 06.8	93 58 58.3	5,658
T road west to Robert Cushman's place, in triangle at intersection of; iron post stamped "Prim. Trav. Sta. No. 5, 1915".....	32 36 30.8	93 58 54.5	3,657
Mount Zion Church, 150 feet north of; T road east.....	32 35 50.9	93 58 48.4	4,066
Mount Zion Church, 0.5 mile south of; crossroads.....	32 35 21.4	93 58 58.8	3,110
T road east.....	32 34 54.8	93 58 54.0	2,716
Road forks to west.....	32 34 40.6	93 58 51.9	1,450
T road east.....	32 34 28.2	93 58 39.6	1,638
Private road east.....	32 34 05.0	93 58 36.0	2,356
Longwood schoolhouse, 0.5 mile south of, in southwest corner of crossroads; iron post stamped "Prim. Trav. Sta. No. 6, 1915".....	32 33 35.2	93 58 37.8	3,018
Sojourner post office, 200 feet south of; center of crossroads.....	32 32 44.0	93 58 20.9	5,366
T road east.....	32 32 16.2	93 58 21.0	2,815
Crossroads, center of.....	32 31 50.2	93 58 22.9	2,638
T road east.....	32 31 30.2	93 58 25.1	2,025
Wooden bridge 200 feet southeast of sawmill, center of.....	32 31 10.8	93 58 24.7	1,964
Star Light Church, center of road opposite.....	32 30 38.2	93 58 14.9	3,403

Magnetic declination near north border of quadrangle, 7° 34' E.; near west border, 8° 12' E.; along Texas & Pacific Ry., in eastern part, 7° 21' E.

The following geographic positions in the Blanchard quadrangle, originally published in Bulletin 310, were determined in 1905 by Sledge Tatum. They have been readjusted to fit lines run by F. W. Crisp in 1915.

Along Kansas & Texas Railway near Shreveport.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Shreveport, near Kansas City Southern Ry. crossing.....	32 29 34.9	93 45 36.2	.....
Cattle guard, Kansas City Southern Ry., 40 feet east of track; iron post stamped "Prim. Trav. Sta. No. 153," station mark.....	32 29 57.6	93 47 16.6	.....

Along Kansas City Southern Railway near Ananias.

Road crossing.....	32 31 22.8	93 49 04.6	.....
Milepost 552, road crossing.....	32 32 35.8	93 50 43.6	.....
Milepost 550.....	32 33 46.7	93 52 11.6	.....
Milepost 549, road crossing 500 feet north of.....	32 34 25.0	93 52 59.1	.....
Blanchard, 1,900 feet north of, 35 feet west of track, at south side of wagon-road crossing; iron post stamped "Prim. Trav. Sta. No. 184," station mark.....	32 35 13.0	93 53 42.8	.....
Road crossing.....	32 37 04.7	93 54 45.8	.....
Milepost 544, road crossing.....	32 38 06.2	93 55 31.9	.....
Milepost 542.....	32 39 22.3	93 56 54.1	.....
Mooringsport, 1 mile south of, 36 feet east of track, 340 feet north of road crossing; iron post stamped "Prim. Trav. Sta. No. 213," station mark.....	32 40 40.4	93 57 14.7	.....
Mooringsport, 100 feet north of station, road crossing.....	32 41 38.8	93 57 27.0	.....
Caddo flag station, road crossing, 30 feet west of track, south of road; iron post stamped "Prim. Trav. Sta. No. 259," station mark.....	32 45 28.0	93 58 25.3	.....
Ananias flag station, road crossing.....	32 44 39.1	93 58 14.3	.....

Positions of the following triangulation stations were taken from blue prints furnished October 20, 1914, by the office of the United States Army Corps of Engineers at Dallas, Tex. They were given on an assumed position for Shreveport courthouse, but from connection made by United States Geological Survey primary traverse in 1915 from bench mark 45, near Shreveport, with Shreveport courthouse a correction of 45.73" has been added to latitudes and 56.92" added to longitudes to reduce them to approximate North American datum. No descriptions of triangulation points are available, but each is marked by a 3-inch galvanized-iron post set in concrete.

	Latitude.	Longitude.	Eleva- tion.
	° ' "	° ' "	Feet.
Shreveport courthouse.....	32 30 45.73	93 44 56.92	.....
East base.....	32 32 23.67	93 44 22.52	173.752
West base.....	32 32 07.23	93 45 39.35	174.253
Noel.....	32 33 44.66	93 46 14.32	210.818
New Mouth.....	32 33 53.82	93 45 41.10	176.537
T. S. & N.....	32 35 18.11	93 46 14.95	177.650
Grindstone.....	32 35 55.85	93 48 06.91	212.680
Albany Point.....	32 36 45.89	93 49 49.81	225.230
Albany Flats.....	32 38 07.25	93 50 25.04	167.887
Howell.....	32 37 27.24	93 50 40.85	221.858
Gum Springs.....	32 38 24.97	93 52 04.54	172.875
Cottonwood.....	32 40 01.46	93 51 58.84	170.162

BOSSIER QUADRANGLE.

From bench mark 45 along Vicksburg, Shreveport & Pacific and St. Louis Southwestern railways to Aiden Bridge.

Station.	Latitude.	Longitude.	Distance between stations.
P. b. m. 45, northwest base of 1892, on west side of levee about 15 feet south of northeast and southwest wagon road on south side of track, b. m. is 840 feet east of Bossier end Vicksburg, Shreveport & Pacific Ry. bridge and 113 feet southeast from railroad; a cottonwood tree in front of W. H. Barbour's house bears S. 32° W. 126 feet, the northeast corner of garden lot of W. H. Barbour's house bears S. 53° E. 45 feet.....	32 30 59.4	93 44 17.7	Feet. 2,710
T road north, center of.....	32 31 05.4	93 43 46.9	1,347
Road and railroad crossing, center of track at.....	32 31 05.4	93 43 31.1	1,900
Shreveport, 1 mile east of, 120 feet southwest of railroad crossing; forks of macadamized roads.....	32 30 58.6	93 43 10.5	2,627
St. Louis Southwestern and Vicksburg, Shreveport & Pacific railways; center of crossing of.....	32 31 24.3	93 43 06.2	3,531
East-west road crossing; center of main track at.....	32 31 57.4	93 43 19.5	2,196
Road crossing; center of track at.....	32 32 16.9	93 43 30.7	7,207
Honore, road crossing at; center of track.....	32 33 26.4	93 43 49.6	5,452
Brownlee station, road crossing at; center of track.....	32 34 20.3	93 43 51.1	7,987
Plantation road crossing, center of track at.....	32 35 39.3	93 43 54.2	3,484
Vanceville, 200 feet northwest of station, 85 feet west of center of track, 53 feet east of northeast corner of base of brick chimney in the northeast corner of yard of J. P. McCain; iron post stamped "Prim. Trav. Sta. No. 1, 1915".....	32 36 12.3	93 44 06.0	4,728
Macadam road; center of crossroads on.....	32 36 57.8	93 44 19.1	4,580
Trestle No. 79, 80 feet northeast of; center of crossroads.....	32 37 41.4	93 44 33.6	9,341
Willow Chute station, 0.8 mile south of, crossroads; center of macadam road at.....	32 39 12.1	93 44 54.7	4,720
Willow Chute station, 600 feet north of crossroads; center of macadam road.....	32 39 58.6	93 44 49.1	6,442
Benton station, 1 mile south of, 100 feet east of railroad; center of crossroads.....	32 41 02.0	93 44 41.3	5,511
Benton station, 100 feet south of; road crossing center of main track.....	32 41 55.1	93 44 26.9	14,760
Benton station, 2.5 miles north of; center of track opposite gate.....	32 44 16.4	93 43 43.2	

Along streets in Shreveport.

Marshall and Crockett streets, center of intersection of.....	32 30 42.1	93 44 50.6	.....
Shreveport, courthouse; dome of.....	32 30 45.7	93 44 56.9	660
Shreveport, post office, in northeast corner of yard of; iron post U. S. C. E. b. m.....	32 30 49.7	93 44 57.7	411

Magnetic declination along railroad near west border of quadrangle, 8° 15' E.

HOSSTON QUADRANGLE.

Along highways near south border of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
Swans Ferry, 1 mile east of; center of crossroads.....	32 47 28.7	93 45 39.8	Feet. 2,786
T roads; center of intersection of.....	32 47 39.3	93 46 10.0	5,746
Swans Ferry, at west side of Red River, at crossing of levee; center of road.....	32 47 30.3	93 47 16.4	12,778
Telephone line, east side of bayou; center of road at crossing.....	32 46 40.7	93 49 34.1	
Belcher station, 40 feet south of, 47 feet east of main track of railroad, in southeast corner of station yard; iron post stamped "Prim. Trav. Sta. No. 3, 1915".....	32 45 10.8	93 50 02.1	9,391

KEITHVILLE QUADRANGLE.

Along highways near northwest corner of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	<i>Feet.</i>
Lanes east and west, center of main road at.....	32 29 56.3	93 58 13.5	.....
Greenwood, 3 miles north of, T road north, 15 feet south of, inter- section; iron post stamped "Prim. Trav. Sta. No. 7, 1915".....	32 29 12.7	93 58 13.0	4,405
T road east, center of intersection of.....	32 28 38.7	93 58 42.8	4,282
T road west, center of intersection of.....	32 28 18.8	93 58 52.2	2,168
Cross Creek, center of wooden bridge over.....	32 28 07.9	93 58 55.9	1,148
Greenwood, 600 feet east of station, in concrete abutment; C. & G. S. bench-mark tablet.....	32 26 54.9	93 58 18.2	8,316

PLAIN DEALING QUADRANGLE.

Along St. Louis Southwestern Railway and highways near southwest corner of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	<i>Feet.</i>
Crossing of abandoned railroad, center of St. Louis Southwestern track at.....	32 45 40.2	93 43 17.4	.....
Alden Bridge, about 400 feet northwest of station, in yard of aban- doned house, on east-west fence line 90 feet from corner; U. S. C. E. bench-mark post.....	32 46 26.5	93 43 06.2	4,782
Alden Bridge, 1,000 feet northwest of station, 155 feet southwest of railroad crossing opposite sawmill, in northeast corner of yard of vacant house; iron post stamped "Prim. Trav. Sta. No. 2, 1914".....	32 46 32.9	93 43 02.8	704
Alden Bridge, 1 mile northwest of, T roads on east-west road; center of intersection.....	32 47 25.4	93 43 11.1	5,354
T road north; center of intersection.....	32 47 24.9	93 44 21.4	6,000
White church, three corners at.....	32 47 24.4	93 44 50.1	2,448

MISSISSIPPI.

PRIMARY TRAVERSE.

Bovina, Vicksburg, Yokena, and Milliken Bend quadrangles.

WARREN COUNTY.

The following geographic positions were determined by primary traverse and are based on United States Army Corps of Engineers position of courthouse at Vicksburg and bench mark 192 and on United States Geological Survey position of Bovina station and an overhead crossing 3 miles west of same determined in 1902-3, published in Bulletin 216. All positions are on approximate North American datum. This work was done by J. R. Ellis in 1914.

BOVINA QUADRANGLE.

Along highways near west border of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Fect.
Bovina, 3 miles north and 1 mile west of center of crossroads.....	32 23 31.3	90 45 00.0	.....
Bovina, about 2 miles northwest of, opposite front-yard gate at white house; center of road.....	32 22 27.2	90 44 26.0	7,099
Bovina, 0.80 mile north of, in forks of road near center of triangle; iron bench-mark post stamped "Prim. Trav. Sta. No. 5, 1914".....	32 21 44.0	90 43 44.7	5,628
Bovina station, center of track opposite.....	32 21 06.0	90 44 04.0	4,179

VICKSBURG QUADRANGLE.

Along highways near east border of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Fect.
Redwood, 15 feet north and 15 feet west of center of crossroads, at southeast corner of blacksmith shop; iron bench mark post stamped "Prim. Trav. Sta. No. 4, 1914".....	32 28 40.0	90 48 20.6	.....
Redwood, about 1 mile east of, center of bridge over Skilletelah Creek, near old sawmill.....	32 28 31.7	90 47 18.6	5,381
Redwood, 1 mile south and $1\frac{1}{2}$ miles east of, forks of road, about 40 feet south to hackberry tree.....	32 27 52.3	90 46 50.8	4,639
Redwood, 2 miles south and 1.6 miles east of, dim road to north-east.....	32 26 56.5	90 46 41.6	5,703
Villa Nova post office, center of T road northeast, 25 feet south-east to guide board.....	32 26 02.2	90 46 36.0	5,511
Villa Nova post office, about 0.8 mile southwest of, just south of old church, center of forks of road.....	32 25 23.4	90 46 50.2	4,101
Villa Nova post office, about 1.4 miles southwest of, at forks of road at Mr. Tucker's residence, 30 feet north to "V" point in angle of forks.....	32 24 50.8	90 46 54.2	3,317
Villa Nova post office, $1\frac{1}{2}$ miles south and $1\frac{1}{2}$ miles east of, center of T road south, 10 feet west to center of Δ	32 24 30.1	90 45 20.4	8,305
Newman triangulation station, 1.50 miles west of, overhead road crossing of Alabama & Vicksburg R. R.	32 20 14.4	90 40 35.6	.....
Overhead road crossing Alabama & Vicksburg R. R., center of.....	32 20 12.7	90 47 18.1	1,511
Forks of road, center of small bridge at.....	32 19 05.5	90 46 53.8	7,106
T road north, center of.....	32 18 18.0	90 46 58.8	4,824
T road east in cut.....	32 18 14.8	90 48 09.6	6,084
T road west, center of.....	32 17 33.5	90 47 55.0	4,357
Forks of road, center of triangle at.....	32 16 51.8	90 47 50.6	4,237

VICKSBURG QUADRANGLE—Continued.

Along highways near south border of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	<i>Feet.</i>
Asbury Church, about 1.5 miles north of, center of forks of road.....	32 16 13.7	90 48 50.5	6,425
Asbury Church, 0.50 mile north of, 10 feet north and 10 feet east of center of T road west; iron bench mark post stamped "Prim. Trav. Sta. No. 2, 1914".....	32 15 12.0	90 48 37.7	6,337
T. 15 N., R. 6 W., corner secs. 20, 21, 28, and 29; iron gas pipe.....	32 15 02.4	90 49 24.5	4,139
Antioch Church, 1 mile northeast of, T road north.....	32 15 08.7	90 49 58.3	2,973
Grange Hall, forks of road at guide post on south side of triangle.....	32 15 25.8	90 52 18.0	.....
Intersection of Vicksburg, Fishers Ferry, and Warrenton roads, center of triangle at T road north.....	32 15 34.3	90 53 07.6	4,338
Mail box 30, center of T road south at.....	32 15 25.6	90 53 42.1	3,094
Cedar station, east and west road crossing at.....	32 15 20.5	90 55 30.9	.....

From Vicksburg to Redwood along Yazoo & Mississippi Valley Railroad.

Milepost 229, just south of; road crossing east and west.....	32 16 18.7	90 55 11.9	6,102
Milepost 230, 0.5 mile south of, road crossing.....	32 16 49.9	90 55 03.1	3,240
Stout station, road crossing at.....	32 18 01.7	90 53 56.3	9,243
Trestle No. L 222-77, creek southwest.....	32 18 41.2	90 53 41.2	4,199
Water works, overhead crossing near.....	32 19 22.6	90 53 41.4	4,179
Overhead crossing of Queen & Crescent Route R. R. at Yazoo & Mississippi Valley R. R.....	32 20 07.0	90 53 27.9	4,636
Vicksburg, cupola of Warren County courthouse, U. S. Corps of Engineers triangulation point.....	32 21 07.21	90 52 42.66	7,212
Vicksburg station, 1 mile north of, road crossing.....	32 21 54.6	90 52 31.1	4,887
Vicksburg station, 2 miles north of, 25 feet north of wagon road, 20 feet west of railroad track, at Anderson & Tully Co.'s mill; iron bench mark post stamped "Prim. Trav. Sta. No. 3, 1914".....	32 22 50.8	90 52 04.1	6,142
Vicksburg, 3 miles north of, private road crossing.....	32 23 29.6	90 51 36.6	4,568
Kings station (signal post office), road crossing at.....	32 24 03.1	90 51 12.7	3,956
Kings station, 1.25 miles northeast of, private road crossing at section house.....	32 24 50.6	90 50 21.2	6,519
Milepost 241, 660 feet north of, private road crossing.....	32 25 29.0	90 49 39.4	5,279
Blakely station, 0.60 mile southwest of, private road crossing.....	32 26 26.0	90 49 14.4	6,147
Blakely station, private road crossing at.....	32 26 56.8	90 49 07.6	3,159
Blakely station, 1 mile northeast of, road crossing.....	32 27 48.1	90 48 51.3	5,367

Along highways to point near northwest corner of quadrangle.

Guide posts at forks of road.....	32 23 12.9	90 52 24.3	.....
Chickasaw Bayou, north end of bridge over, at forks of road.....	32 24 07.0	90 53 00.1	6,276
Sweets Ferry, 2 miles south and 0.30 mile east of, center of cross roads.....	32 24 50.3	90 53 15.2	4,557
Sweets Ferry, about 1 miles southwest of, T road northeast.....	32 25 53.7	90 53 43.8	6,861
Sweets Ferry, 500 feet east of south landing at, and 10 feet north of road, U. S. Corps of Engineers bench mark.....	32 26 46.7	90 53 32.1	5,451
Sweets Ferry, 220 feet north of north landing at, on north bank of Yazoo River; iron bench-mark post stamped "Prim. Trav. Sta. No. 6, 1914".....	32 26 58.9	90 53 39.3	1,378
Sweets Ferry, 1.2 miles southwest of, on south side of road, in north side of elm tree; cross cut.....	32 26 45.0	90 54 48.5	6,094
Sweets Ferry, about 2 miles west of, 150 feet west of slough, on south side of road, in north face of poplar tree; cross cut.....	32 27 10.8	90 55 39.7	5,100
Sweets Ferry, about 3 miles west of, on south side of road, just east of turn in road, in north face of large cottonwood tree; cross cut.....	32 27 06.4	90 56 36.4	4,876
White oak tree, south side of road; cross cut.....	32 27 08.0	90 57 43.7	5,768
At east end of graded road, 35 feet south and 20 feet east to hickory snag (Issaquena-Warren county line).....	32 27 11.2	90 57 52.2	792
West end of gate at south side of timber.....	32 26 57.8	90 58 24.9	3,118
Holpina Landing, 1 mile northwest of Sam Brown's cotton gin at, at forks of road, 25 feet north and 15 feet east of 30-inch pecan tree; iron bench-mark post stamped "Prim. Trav. Sta. No. 7, 1914".....	32 27 44.3	90 59 52.9	8,884

Magnetic declination for south border of quadrangle, 5° 57' E.; east border, 6° 02' E.; north border, 6° 12' E.; center, 6° 10' E.

MILLIKEN BEND QUADRANGLE.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	<i>Feet.</i>
Mississippi River Commission bench mark $\frac{102}{9}$	32 27 57.12	90 01 43.70	9,581

YOKENA QUADRANGLE.

Along highways near north border of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	<i>Feet.</i>
Cedars station, 0.5 mile south of, 20 feet north to center of T road north; iron bench-mark post stamped "Prim. Trav. Sta. No. 1, 1914"	32 14 48.6	90 55 35.3	.....
Antioch Church, forks of road at	32 14 46.7	90 50 56.5	.....

Magnetic declination for north border of quadrangle, 5° 57' E.

Doloroso, McNair, and Natchez quadrangles.**ADAMS AND JEFFERSON COUNTIES.**

The following geographic positions, on approximate North American datum, were determined in 1914 by J. R. Ellis. Two circuits were run based on position of Catholic Church spire at Natchez, a Mississippi River Commission triangulation station.

DOLOROSO QUADRANGLE.

Along highways near north border of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	<i>Feet.</i>
Road forks, center of	31 29 42.8	91 21 37.1	.....
Natchez, about 6 miles southeast of; 20 feet north and 20 feet east of center of forks, on east side of the Natchez-Kinston road near second-class road east at Alexander Turner's mail box; iron post stamped "Prim. Trav. Sta. No. 9, 1914"	31 29 19.7	91 21 57.0	2,905

Magnetic declination near north border of quadrangle, 6° 21' E.

McNAIR QUADRANGLE.

Along highways near west border of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	<i>Feet.</i>
T road west, center of	31 42 09.1	91 14 59.4	.....
Church Hill post office, 40 feet north and 15 feet west of center of forks, at north end of old store; iron post stamped "Prim. Trav. Sta. No. 12, 1914"	31 42 56.9	91 14 17.0	6,064
Church Hill post office, about 1.5 miles southeast of, at old building; center of T road southwest	31 41 43.9	91 13 39.4	8,054
Church Hill post office, about 2 miles southeast of; T road east	31 41 20.0	91 13 23.1	2,796
Church Hill post office, about 3 miles southeast of; center of road at driveway to white frame church	31 40 43.4	91 14 00.4	4,906
Stanton, 2.9 miles northeast of; center of forks	31 39 24.2	91 13 44.8	8,122
Stanton, 1.1 miles northeast of; Jefferson-Adams county line; wagon axle on west side of road	31 37 51.9	91 14 05.4	9,492
Stanton, 0.87 mile northeast of; fork in road, at center of grass triangle	31 37 40.0	91 14 08.0	1,224
Stanton station, 35 feet north and 35 feet west of private road crossing at; and at northeast corner of J. N. Carpenter's barn; iron post stamped "Prim. Trav. Sta. No. 13, 1914"	31 36 56.7	91 14 24.2	4,597

Magnetic declination for west border of quadrangle, 6° 28' E.

NATCHEZ QUADRANGLE.

Along Yazoo & Mississippi Valley Railroad.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Natchez, Catholic Church spire, cross on.....	31 33 30.5	91 24 04.25	.....
Natchez, 0.9 mile east of; road crossing east of Standard Oil Co.'s plant.....	31 33 28.6	91 23 08.4	4,836
Mississippi Packing Plant, north-south road crossing at.....	31 33 55.4	91 22 13.7	5,450
Mississippi Packing Plant, 1.2 miles northeast of; about 0.6 mile north of M. P. 95 J.; private road crossing.....	31 34 49.8	91 21 34.2	6,470
Private road crossing.....	31 35 26.8	91 21 07.4	4,398
M. P. 93 J., 0.25 mile east of; road crossing.....	31 35 47.5	91 20 25.8	4,167
Poster station, north-south road crossing at.....	31 36 03.3	91 19 43.8	3,961
M. P. J. 91, 530 feet east of; trestle over creek south.....	31 36 14.4	91 18 39.0	5,710
M. P. J. 90, 305 feet east of; bridge over branch south.....	31 36 09.9	91 17 41.8	4,970
Selma station, road crossing at.....	31 36 03.6	91 16 42.8	5,141
Selma station, 1.2 miles northeast of; 0.23 mile east of M. P. J. 88; private road crossing.....	31 36 23.8	91 15 33.9	6,299

Along highways.

Selma station, 1.30 miles south of; T road east.....	31 34 59.6	91 17 06.1	11,662
Washington, center of road forks at; 30 feet north to china berry tree.....	31 34 44.2	91 17 52.9	4,333
Washington, 0.4 mile south of; road southwest to poor farm.....	31 34 23.0	91 17 52.5	2,149
Washington, 0.85 mile south of; center of steel bridge over creek west.....	31 34 02.3	91 18 04.4	2,333
Washington, 1.8 miles southeast of, and about 0.7 mile east of Washington station; road crossing Mississippi Central R. R.....	31 33 16.5	91 17 45.1	4,918
Washington, about 3.10 miles southeast of; center of forks.....	31 32 33.1	91 16 46.9	6,676
Washington, about 4 miles south of; road north; 10 feet west to sumac sapling.....	31 31 49.5	91 17 05.0	4,677
Jeannette, about 3 miles northwest of, and about 1 mile east of Zion Watch Church, in triangle at road fork; iron post stamped "Prim. Trav. Sta. No. 8, 1914".....	31 30 36.8	91 16 56.3	7,385
Zion Watch Church, center of cross roads at.....	31 30 45.4	91 17 43.7	4,195
Zion Watch Church, 1.2 miles northwest of; T road south.....	31 30 56.8	91 18 54.8	6,263
Zion Watch Church, 1.8 miles northwest of; fork in road just north of gate.....	31 30 29.8	91 19 19.8	3,476
Highland Negro Church, 0.25 mile northeast of; center of triangle at fork in roads.....	31 30 12.1	91 20 19.1	5,442
St. Catherine's Creek bridge, 1.60 miles southeast of; road south.....	31 30 03.2	91 22 12.5	.....
St. Catherine's Creek, just southeast of steel bridge over; 15 feet north of west end of small bridge; T road south.....	31 30 59.9	91 23 27.1	8,626
Mississippi Central R. R. crossing of Natchez; Kingston road under T road east, center of.....	31 32 25.3	91 23 47.2	8,807
Jenkins's store, 150 feet south of; 20 feet southwest of south end of grass triangle at fork in road.....	31 35 02.9	91 21 59.1	.....
Jenkins's store, 1.3 miles north of; T road west.....	31 36 07.0	91 21 57.4	6,477
Jenkins's store, 1.3 miles north of; T road west.....	31 37 13.1	91 21 53.6	6,692
Pine Ridge schoolhouse, in northwest corner of grounds of; iron post stamped "Prim. Trav. Sta. No. 10, 1914".....	31 37 48.5	91 20 53.2	6,331
Pine Ridge schoolhouse, 1.1 miles northeast of; 20 feet north and 35 feet east of northeast corner of store porch; forks.....	31 38 44.0	91 20 39.5	5,730
Pine Ridge schoolhouse, 2 miles north of center of gate.....	31 39 07.9	91 21 29.1	4,918
Jenkins's plantation, 0.3 mile north of residence; T road west.....	31 40 31.8	91 22 13.2	9,293
Anna post office, south side of crossroads at; iron post stamped "Prim. Trav. Sta. No. 11, 1914".....	31 41 48.8	91 21 06.2	9,706
Anna post office, about 1 mile southeast of; dim road southwest.....	31 41 14.1	91 20 22.3	5,162
Anna post office, about 1.85 miles southeast of; 30 feet north and 20 feet east of mail box near schoolhouse; crossroads.....	31 40 50.9	91 19 38.3	4,470
Anna post office, about 2.85 miles southeast of; center of triangle of road just south of gate.....	31 41 33.5	91 19 04.0	5,227
Fairchild Creek, southeast corner of approach to south end of bridge over.....	31 41 28.9	91 17 30.3	8,114
Mr. Minjee's residence, 0.25 mile southeast of; 45 feet north of small bridge; forks of road.....	31 41 17.9	91 15 48.8	8,840

Magnetic declination for north part of north half of quadrangle, 6° 24' E.; for center, north and south, 6° 19' E.; for east border, 6° 28' E.; for south border, 6° 21' E.