

TEXAS.

TRIANGULATION STATIONS.

Archer City, Eschite, Henrietta, and Walker quadrangles.

ARCHER, CLAY, AND WICHITA COUNTIES.

Late in the season of 1914 J. R. Ellis extended triangulation west from United States Coast and Geodetic Survey stations Cube and Myers on North American datum. Eighteen new stations were occupied and 14 points were located by intersections.

ARCHER CITY COURTHOUSE, ARCHER COUNTY, TEX. (Not occupied.)

Sighted from two stations only.

Station mark: Center of cupola.

[Latitude 33° 35' 42.34". Longitude 98° 37' 29.84".]

o station—	Azimuth.	Back azimuth.	Distance.	
			Log. meters.	Miles.
Schrader.....	° ' " 195 06 27	° ' " 15 08 28	4.33196	13.345
Eskridge.....	210 22 59	30 27 26	4.38947	15.234

BLUFF, NEAR ARCHER-WICHITA COUNTY LINE, TEX.

On a prominent hill on land owned by Rosa Nitschke, located about 1.2 miles south of the Wichita Falls-Holliday wagon road and about 9 miles southwest of Wichita Falls.

Signal: A 15-foot upright carrying cross arms to which black cloth targets were attached. Signal is 2.2 feet southwest of station mark.

Station mark: A standard iron post projecting 8 inches above surface of ground, under which a small flat stone, with cross cut on one side, was buried.

[Latitude 33° 50' 24.37". Longitude 98° 38' 23.28".]

To station—	Azimuth.	Back azimuth.	Distance.	
			Log. meters.	Miles.
Holliday, Methodist Episcopal Church spire.....	° ' " 57 34 09	° ' " 237 32 24	3.75913	3.569
Riggs.....	62 52 40.67	242 48 08.57	4.1502967	8.783
Tree on hill.....	89 22 43	269 19 04	4.00504	6.286
Hamilton.....	96 42 46.37	276 33 49.03	4.3973160	15.512
Fowlkes.....	126 27 45.16	306 20 54.15	4.3714888	14.616
Iowa Park elevator.....	169 53 24	349 52 37	4.09058	7.655
Lindsey.....	185 54 39.24	5 55 22.37	4.2844554	11.962
Wichita.....	245 08 17.79	65 13 21.06	4.1877978	9.575
Schrader.....	312 43 29.48	132 46 00.28	3.9773246	5.898

BURKBURNETT SCHOOLHOUSE, WICHITA COUNTY, TEX. (Not occupied.)

Sighted from two points only.

Station mark: Center of cupola.

[Latitude 34° 05' 38.20". Longitude 98° 34' 07.16".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	Log. meters.	Miles.
Lindsey.....	27 00 11	206 58 31	4.00468	6.281
Friberg.....	315 21 52	135 25 37	4.16728	9.133

BYERS OIL DERRICK, NORTHEAST OF PEROLIA, CLAY COUNTY, TEX. (Not occupied.)

Sighted from two stations only.

Station mark: Center of derrick.

[Latitude 34° 01' 35.06". Longitude 98° 11' 42.38".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	Log. meters.	Miles.
Petrolia.....	59 27 42	239 26 38	3.53413	2.126
Lone oil derrick near Petrolia.....	73 40 05	253 38 00	3.77803	3.727

CUBE, CLAY COUNTY, TEX.

A station of the Coast and Geodetic Survey 9.5 miles south and 2.5 miles west of Henrietta, 3 miles east and 1.5 miles south of Hernville, near southeast corner of a tract of land designated as "Abstract No. 307, Montague County School Land Survey No. E," on land of M. Cueba, on highest part of hill between house and barn.

Azimuth and distances to points are as follows: To reference mark, in southeast corner of Cueba's land, a tile pipe filled with cement and 60-penny nail in top is 333° 16' 39", 223.174 meters; to east end of ridge of barn 21° 42' 07", 47.66 meters; to southwest corner of stone of chimney of house 236° 21' 30", 52.46 meters

Station mark is two tile pipes set one above the other, filled with cement and 60-penny nails in tops, top of pipe even with ground.

[Latitude 33° 55' 37.314". Longitude 98° 07' 12.930".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	Log. meters.	Miles.
Henrietta.....	29 32 12.91	209 29 41.63	4.1510695	8.799
Jolly.....	81 59 13.72	261 51 33.31	4.3306312	13.304
Maupin.....	84 04 06	264 00 48	3.96248	5.700
Water tank at pump station.....	120 37 28	300 34 07	4.02996	6.657
Petrolia.....	133 17 28.51	313 13 53.80	4.1318464	8.418
Monument.....	208 35 35.42	28 42 29.71	4.5969291	.....
Benton.....	229 22 00.48	49 29 49.40	4.4520790	.....
Blue.....	290 58 21.89	111 11 33.48	4.5925657	.....

DUNDEE, ARCHER COUNTY, TEX.

On land owned by Mr. E. E. Griffin, on a small red gravel butte about half a mile east of large stone school building at Dundee. Station is a little nearer east end of butte.

Signal: A 15-foot upright, carrying black cloth targets, 2 feet southeast of station mark.

Station mark: A standard iron post projecting 1 foot above surface.

[Latitude 33° 44' 41.71". Longitude 98° 53' 35.02".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	Log. meters.	Miles.
Hamilton.....	174 13 50.27	354 13 20.87	4.1307126	8.396
Fowlkes.....	190 22 32.32	10 24 09.74	4.3966652	15.489
Lone oil derrick.....	238 55 17	58 58 18	3.99132	6.091
Riggs.....	249 17 39.72	69 21 34.67	4.0655070	7.225

DUNDEE, LONE TREE ON HILL NORTHEAST OF, WICHITA COUNTY, TEX. (Not occupied.)

[Latitude 33° 50' 20.64". Longitude 98° 44' 56.72".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	Log. meters.	Miles.
Riggs.....	21 12 02	201 11 09	3.83231	4.223
Fowlkes.....	147 57 02	327 53 45	4.22045	10.323
Bluff.....	269 19 04	89 22 43	4.00504	6.286

ELECTRA, WICHITA COUNTY, TEX.

Situating on a high knob in the east part of Electra.

Signal: A 16-foot upright, carrying black cloth targets, 2.6 feet west of station mark.

Station mark: A standard iron post projecting 9 inches above surface, under which was buried a square-headed iron bolt $\frac{1}{4}$ inch in diameter by 9 inches in length.

[Latitude 34° 02' 15.14". Longitude 98° 54' 21.13".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	Log. meters.	Miles.
Hamilton.....	0 31 19.75	180 31 15.78	4.2790717	11.815
Electra elevator.....	58 11 26	238 10 56	3.20988	1.007
Tank in oil derrick.....	76 33 40	256 32 56	3.31325	1.278
New oil derrick.....	162 30 48	342 30 29	3.46821	1.826
Sunshine.....	255 12 51.48	75 16 31.67	4.0182932	6.481
Lone oil derrick.....	268 48 22	88 49 30	3.49744	1.953
Fowlkes.....	324 26 37.03	144 28 40.60	3.9892544	6.062

ELECTRA ELEVATOR, WICHITA COUNTY, TEX. (Not occupied.)

Station mark: Center of elevator.

[Latitude 34° 01' 47.40". Longitude 98° 55' 14.84".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	Log. meters.	Miles.
Electra.....	238 10 56	58 11 26	3.20988	1.007
Fowlkes.....	315 07 06	135 09 40	3.99971	6.209
Hamilton.....	356 11 51	176 12 20	4.26004	11.308

524 TRIANGULATION AND PRIMARY TRAVERSE, 1913-1915.

ELECTRA, NEW OIL DERRICK NORTHWEST OF, WICHITA COUNTY, TEX. (Not occupied.)

Sighted from two points only.

Station mark: Center of derrick.

[Latitude 34° 03' 46.12". Longitude 98° 54' 55.57".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	Log. meters.	Miles.
Electra.....	342 30 29	162 30 48	3.46821	1.826

ELECTRA, TANK IN OIL DERRICK NORTHWEST OF, WICHITA COUNTY, TEX. (Not occupied.)

Sighted from two stations only

Station mark: Center of tank.

[Latitude 34° 01' 59.62". Longitude 98° 55' 39.12".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	Log. meters.	Miles.
Electra.....	256 32 56	76 33 40	3.31325	1.278

ELECTRA, LONE OIL DERRICK EAST OF, WICHITA COUNTY, TEX. (Not occupied.)

Sighted from two points only.

Station mark: Center of derrick.

[Latitude 34° 02' 17.26". Longitude 98° 52' 18.60".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	Log. meters.	Miles.
Electra.....	88 49 30	268 48 22	3.49744	1.953

ESKRIDGE, ARCHER COUNTY, TEX.

On farm owned by Mrs. W. M. Fuller, about 8 miles south of Wichita Falls, about 4 miles south and 3.5 miles west of the northeast corner of Archer County. The southeast corner of residence occupied by Mr. Eskridge bears northwest from the station 185.1 feet.

Signal: A 16-foot upright, with black cloth targets tacked to cross-arms. Signal is 2.8 feet south and 10° W. of station mark.

Station mark: A stamped iron post projecting 8 inches above surface of ground, under which a round brown bottle was buried.

[Latitude 33° 47' 08.56". Longitude 98° 29' 27.86".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	Log. meters.	Miles.
Archer City courthouse.....	30 27 26	210 22 59	4.38947	15.234
Schrader.....	86 34 33.54	266 32 06.51	3.8334791	4.235
Wichita.....	181 01 49.72	1 01 54.59	4.0970216	7.769
Jolly.....	225 56 12.58	46 00 56.47	4.2606983	11.325
Edwards.....	285 56 05.19	106 02 14.97	4.2507210	11.068

FOWLKES, WICHITA COUNTY, TEX.

On a high ridge about 2.5 miles south of Fowlkes station.

Signal: A 15-foot upright, carrying black cloth targets, 2.9 feet north of station mark.

Station mark: A standard iron post projecting 9 inches above surface.

[Latitude 33° 57' 57.49". Longitude 98° 50' 40.16".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	Log. meters.	Miles.
Dundee.....	10 24 09.74	190 22 32.32	4.3966652	15.489
Hamilton.....	27 51 33.88	207 49 26.82	4.0977662	7.782
Electra elevator.....	135 09 40	315 07 06	3.99971	6.209
Electra.....	144 28 40.60	324 26 37.03	3.9892544	6.062
Sunshine.....	202 38 07.12	22 39 43.50	4.0599447	7.133
Lindsey.....	255 59 38.00	76 07 13.13	4.3330507	13.378
Iowa Park elevator.....	276 11 28	96 17 32	4.22679	10.475
Bluff.....	306 20 54.15	126 27 45.16	4.3714888	14.616
Long tree on hill.....	327 53 45	147 57 02	4.22045	10.323
Riggs.....	342 38 48.71	162 41 06.87	4.3300916	13.287

FRIBERG CHURCH, CLAY COUNTY, TEX.

About 7 miles northeast of Wichita Falls. Theodolite was mounted in church belfry and observations taken during a high wind.

Signal: Center of Friberg Church spire.

Station mark: Center of Friberg Church spire.

[Latitude 33° 59' 58.55". Longitude 98° 27' 24.74".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	Log. meters.	Miles.
Wichita.....	14 40 27.32	194 39 23.45	4.0644730	7.208
Lindsey.....	95 37 34.28	275 32 09.18	4.1757277	9.313
Sullivan.....	126 03 03.04	305 57 39.55	4.2628997	11.383
Burkburnett schoolhouse.....	135 25 37	315 21 52	4.16728	9.133
Petrolia.....	266 36 23.80	86 44 06.61	4.3277977	13.217
Jolly.....	318 03 03.24	138 06 39.15	4.1720189	9.234

GLASS FACTORY, WATER TANK, WICHITA COUNTY, TEX. (Not occupied; position not checked.)

On high wooden tower at glass factory southwest of Wichita Falls.

Station mark: Center of water tank.

[Latitude 33° 52' 50.62". Longitude 98° 32' 08.37".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	Log. meters.	Miles.
Schrader.....	13 43 23	193 42 25	4.05191	7.003
Wichita.....	245 42 11	65 48 45	3.67865	2.965

HAMILTON, WICHITA COUNTY, TEX.

On a sharp rocky hill on the divide between the forks of Wichita River. On land owned by Mr. Hamilton about half a mile south of his residence.

Signal: A 15-foot upright carrying black cloth targets S. 21° 27' W. of and 2.2 feet distant from station mark.

Station mark: A bronze tablet set in top of a large boulder which projects 8 inches above surface.

[Latitude 33° 51' 58.04". Longitude 98° 54' 27.87".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	Log. meters.	Miles.
Electra elevator.....	176 12 20	356 11 51	4.26004	11.308
Electra.....	180 31 15.98	0 31 19.75	4.2790717	11.815
Fowlkes.....	207 49 26.82	27 51 33.88	4.0977662	7.782
Bluff.....	276 33 49.03	96 42 46.37	4.3973160	15.512
Riggs.....	307 19 30.66	127 23 55.40	4.1871801	9.562
Dundee.....	354 13 20.87	174 13 50.27	4.1307126	8.396

HENRIETTA, CLAY COUNTY, TEX.

Signal and station mark: Center of cupola on courthouse.

[Latitude 33° 48' 57.36". Longitude 98° 11' 44.36".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	Log. meters.	Miles.
Myers.....	12 54 53.86	192 53 10.25	4.3328974	13.374
Edwards.....	51 09 16.93	231 05 35.59	4.1191566	8.175
Jolly.....	123 14 27.15	303 09 18.63	4.2307367	10.570
Lone oil derrick.....	165 14 26	345 12 18	4.35022	13.918
Maupin.....	169 17 30	349 16 43	4.06340	7.190
Petrolia.....	172 22 00.53	352 20 57.57	4.3384627	13.562
Cube.....	209 29 41.63	29 32 12.91	4.1510695	8.799

HOLLIDAY M. E. CHURCH SPIRE, ARCHER COUNTY, TEX. (Not occupied.)

Station mark: Center of church spire.

[Latitude 33° 48' 44.36". Longitude 98° 41' 31.75".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	Log. meters.	Miles.
Riggs.....	66 27 46	246 24 58	3.92595	5.240
Bluff.....	237 32 24	57 34 09	3.75913	3.569
Schrader.....	285 50 19	105 54 35	4.08948	7.635

IOWA PARK ELEVATOR, WICHITA COUNTY, TEX. (Not occupied.)

[Latitude 33° 56' 58.00". Longitude 98° 39' 47.50".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	Log. meters.	Miles.
Fowlkes.....	96 17 32	276 11 28	4.22679	10.475
Lindsey.....	210 32 51	30 34 27	3.91132	5.066
Bluff.....	349 52 37	169 53 24	4.09058	7.655

JOLLY, CLAY COUNTY, TEX.

On land owned by J. T. White, 2.2 miles due north of Jolly post office. Mr. White's residence is on a prominent hill, and the station is 10 feet north and 4 feet west of his windmill and just west of the residence. Instrument elevated 20 feet.

Signal: Center of steel windmill tower in garden; 10.4 feet distance from signal to station mark.

Station mark: An iron post set in Mr. White's garden 10 feet north and 4 feet west of windmill and well. A round quart bottle was buried under bench-mark post.

[Latitude 33° 53' 59.67". Longitude 98° 20' 58.12".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	Log. meters.	Miles.
Eskridge.....	46 00 56.47	225 56 12.58	4.2606983	11.325
Wichita.....	89 18 11.01	269 13 31.59	4.1096878	7.999
Friberg.....	138 06 39.15	318 03 03.24	4.1720189	9.234
Lone oil derrick.....	214 33 33	34 36 38	4.17585	9.315
Petrolia.....	222 36 35.71	42 40 41.98	4.2230102	10.384
Maupin.....	260 18 07	80 22 29	4.08810	7.611
Cube.....	261 51 33.31	81 59 13.72	4.3306312	13.304
Henrietta.....	303 09 18.63	123 14 27.15	4.2307367	10.570
Edwards.....	347 09 15.62	167 10 42.26	4.2558103	11.199

DUNDEE OIL DERRICK, ARCHER COUNTY, TEX. (Not occupied.)

Lone oil derrick 6 miles northeast of Dundee. Sighted from two points only.

Station mark: Center of derrick.

[Latitude 33° 47' 25.82". Longitude 98° 48' 08.69".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	Log. meters.	Miles.
Dundee.....	58 58 18	238 55 17	3.99132	6.091
Riggs.....	290 58 16	110 59 10	3.42439	1.651

EDWARDS, CLAY COUNTY, TEX.

On land owned by Dr. A. B. Edwards on the east side of the Henrietta-Halsell wagon road, about 3 miles northeast of Halsell station and three-quarters of a mile southwest of the road crossing of the Southwestern Railway at a spur. Perpendicular distance from center of wagon road southeast to station is 208 feet.

Signal: A 12-foot tripod covered on three sides with white cloth and centered over station mark.

Station mark: A stamped iron post set in center of small mound in pasture, under which a small sandstone, with cross cut on one face, was buried.

[Latitude 33° 44' 29.33". Longitude 98° 18' 22.46".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	Log. meters.	Miles.
Eskridge.....	106 02 14.97	285 56 05.19	4.2507210	11.068
Jolly.....	167 10 42.26	347 09 15.62	4.2558103	11.199
Henrietta.....	231 05 35.59	51 09 16.93	4.1191566	8.175
Myers.....	336 48 19.47	156 50 16.75	4.1410935	8.599

LINDSEY, WICHITA COUNTY, TEX.

In Mr. Joseph Lindsey's orchard, 7 miles south and 2 miles west of Burkburnett station, is about 2 feet west of the east garden fence and due west of the northwest corner of Mr. Lindsey's residence.

Signal: A 15-foot upright carrying black cloth targets, 2.5 feet northwest of station mark.

Station mark: A standard iron post projecting 9 inches above surface.

[Latitude 34° 00' 45.86". Longitude 98° 37' 06.02'']

To station—	Azimuth.	Back azimuth.	Distance.	
			Log. meters.	Miles.
Bluff.....	5 55 22.37	185 54 39.24	4.2844554	11.962
Iowa Park elevator.....	30 34 34	210 33 08	3.91132	5.066
Willard oil derrick.....	75 07 01	255 03 36	3.98848	6.051
Fowlkes.....	76 07 13.13	255 59 38.00	4.3330507	13.378
Sunshine.....	108 13 47.15	288 07 47.90	4.2387939	10.768
Sullivan.....	180 33 09.39	0 33 11.35	3.9690418	5.786
Burkburnett schoolhouse.....	206 58 31	27 00 11	4.00468	6.281
Friberg.....	275 32 09.18	95 37 34.28	4.1757277	9.313
Wichita.....	316 34 09.94	136 38 30.73	4.2418001	10.843

MAUPIN, CLAY COUNTY, TEX. (Not occupied.)

Petrolia, 6.5 miles south of, at southeast corner of T road south on Petrolia-Henrietta road.

Signal and station mark: A pole nailed to corner fence post.

[Latitude 33° 55' 06.40". Longitude 98° 13' 08.08'']

To station—	Azimuth.	Back azimuth.	Distance.	
			Log. meters.	Miles.
Jolly.....	80 22 29	260 18 07	4.08810	7.611
Petrolia.....	175 49 40	355 49 24	4.01131	6.378
Cube.....	264 00 48	84 04 06	3.96248	5.700
Henrietta.....	349 16 43	169 17 30	4.06340	7.190

MYERS, CLAY COUNTY, TEX.

A Coast Survey station 14 miles S. 12° 30' W. of Henrietta, 3.5 miles S. 8° W. of Blue Grove, between Henrietta and Antelope road to northwest and Henrietta and Jacksboro road to east, on wooded ridge, S. 76° W., 413 meters of W. H. Myers's house, and N. 7° 35' E., 185 meters of broken rocky bluff at end of hill, about 140 meters northeast of highest part of hill, on land known as Carleton Thompson survey, owned by W. H. Myers. Azimuths and distances to points are: Reference mark, in center of a rocky break, 28 meters south of north end of central promontory, is a hole $\frac{1}{2}$ inch in diameter, by 3 inches deep circumscribed by an equilateral triangle (one point directed to station), 10 inches on a side, deeply cut in top surface of a prominent rock and filled with concrete; azimuth, 8° 17' 57.2'', 156.174 meters; to west gable of Myers's house, 256° 55', 413 meters.

Station mark: A hole 6 inches deep, 6 inches in diameter, filled with concrete with a spike in it; above this are 2 tile pipes filled with cement, and 6-penny nails in tops, top of top pipe even with ground, and both incased in concrete.

[Latitude 33° 37' 36.423''. Longitude 98° 14' 50.995'']

To station—	Azimuth.	Back azimuth.	Distance.	
			Log. meters.	Miles.
Edwards.....	156 50 16.75	336 48 19.47	4.1410935	8.599
Lone oil derrick.....	178 46 02	358 43 38	4.62990	26.500
Henrietta.....	192 53 10.25	12 54 53.86	4.3328974	13.374
Cube.....	199 27 15.03	19 31 29.70	4.5480950	.....
Blue.....	248 10 54.37	68 28 17.12	4.7164528	.....

PETROLIA, CLAY COUNTY, TEX.

Flagstaff on center of cupola to Petrolia high school. Instrument was set in school-house belfry.

Signal and station mark: Flagstaff on Petrolia high school.

[Latitude 34° 00' 38.64". Longitude 98° 13' 37.21".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	<i>Log. meters.</i>	<i>Miles.</i>
Jolly.....	42 40 41.98	222 36 35.71	4.2230102	10.384
Friberg.....	86 44 06.61	266 36 23.80	4.3277977	13.217
Lone oil derrick.....	91 01 57	271 00 56	3.44875	1.746
Byers oil well.....	239 26 38	59 27 42	3.53413	2.126
Cube.....	313 13 53.80	133 17 28.51	4.1318464	8.418
Water tank at pumping station.....	350 26 34	170 26 48	3.58938	2.414
Henrietta.....	352 20 57.57	172 22 00.53	4.3384627	13.546
Maupin.....	355 49 24	175 49 40	4.01131	6.378

PETROLIA, WATER TANK AT PUMPING STATION NEAR, CLAY COUNTY, TEX. (Not occupied.)

[Latitude 33° 58' 34.30". Longitude 98° 13' 12.10".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	<i>Log. meters.</i>	<i>Miles.</i>
Petrolia.....	170 26 48	350 26 34	3.58938	2.414
Cube.....	300 34 07	120 37 28	4.02996	6.657

PETROLIA, LONE OIL DERRICK WEST OF, CLAY COUNTY, TEX. (Not occupied.)

Station mark: Center of derrick.

[Latitude 34° 00' 40.26". Longitude 98° 15' 26.70".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	<i>Log. meters.</i>	<i>Miles.</i>
Jolly.....	34 36 38	214 33 33	4.17585	9.315
Byers oil derrick.....	253 38 00	73 40 05	3.77803	3.727
Petrolia.....	271 00 56	91 01 57	3.44875	1.746
Henrietta.....	345 12 18	165 14 26	4.35022	13.918

RIGGS, ARCHER COUNTY, TEX.

On the highest part of a ridge of land owned by Mr. H. C. Riggs, about 1 mile east of Mankins station.

Signal: A 15-foot upright carrying black cloth targets, 2.5 feet southeast of station mark.

Station mark: A standard iron post projecting 9 inches above surface, under which a flat conglomerate stone 6 inches in diameter was buried.

[Latitude 33° 46' 54.95". Longitude 98° 46' 32.26".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	<i>Log. meters.</i>	<i>Miles.</i>
Dundee.....	69 21 34.67	249 17 39.72	4.0655070	7.225
Lone oil derrick.....	110 59 10	290 58 16	3.42439	1.651
Hamilton.....	127 23 55.40	307 19 30.66	4.1871801	9.562
Fowlkes.....	162 41 06.87	342 38 48.71	4.3300916	13.287
Tree on hill.....	201 11 09	21 12 02	3.83231	4.223
Bluff.....	242 48 08.57	62 52 40.67	4.1502967	8.783
Holliday Methodist Episcopal Church.....	246 24 58	66 27 46	3.92595	5.240
Schrader.....	269 54 42.12	90 01 44.70	4.2912176	12.150

SCHRADER, ARCHER COUNTY, TEX.

On the highest part of a bare hill on John Schrader's farm, about 1.75 miles northwest of Hoff station and about 0.7 mile north of Schrader's residence.

Signal: A 16-foot upright carrying cross arms, to which black cloth targets were attached. Signal is 2.4 feet southwest of station mark.

Station mark: A standard iron post projecting 9 inches above surface of ground, under which a small bottle was buried.

[Latitude 33° 46' 55.27". Longitude 98° 33' 52.28".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	Log. meters.	Miles.
Archer City courthouse.....	15 08 28	195 06 27	4.33196	13.345
Riggs.....	90 01 44.70	269 54 42.12	4.2912176	12.150
Holliday Methodist Episcopal Church.....	105 54 35	285 50 19	4.08948	7.635
Bluff.....	132 46 00.28	312 43 29.48	3.9773246	5.898
Water tank at glass factory.....	193 42 25	13 43 23	4.05191	7.003
Wichita.....	208 31 30.96	28 34 03.08	4.1672407	9.133
Eskridge.....	266 32 06.51	86 34 33.54	3.8334791	4.235

SULLIVAN, WICHITA COUNTY, TEX.

On Mr. J. Sullivan's farm 2 miles southwest of Burkburnett and just north of the Burkburnett-Electra wagon road. Station is about 600 feet west of Mr. Sullivan's residence.

Signal: A 15-foot upright carrying black cloth targets, 2.5 feet southwest of station mark.

Station mark: A standard iron post projecting 9 inches above surface.

[Latitude 34° 05' 48.07". Longitude 98° 37' 02.52".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	Log. meters.	Miles.
Lindsey.....	0 33 11.35	180 33 09.39	3.9690418	5.786
Sunshine.....	76 46 21.14	256 40 19.54	4.2304723	10.564
Grandview water tower.....	156 26 35	336 24 19	4.18972	9.618
Devol water tower.....	193 49 03	13 49 59	4.03186	6.687
Friberg.....	305 57 39.55	126 03 03.04	4.2628997	11.383

SUNSHINE, WICHITA COUNTY, TEX.

At southeast corner of Sunshine school yard, on a prominent hill. Station is just north of the Burkburnett-Electra wagon road, about 8 miles northeast of Electra and about 12 miles southwest of Burkburnett, 21 feet east and 18 feet north to corner of school fence.

Signal: A 15-foot upright carrying black cloth targets.

Station mark: A standard iron post projecting 9 inches above surface, under which a brickbat was buried.

[Latitude 34° 03' 41.36". Longitude 98° 47' 47.87".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	Log. meters.	Miles.
Fowlkes.....	22 39 43.50	202 38 07.12	4.0599447	7.133
Electra.....	75 16 31.67	255 12 51.48	4.0182932	6.481
Grandview water tower.....	209 43 25	29 47 12	4.31886	12.948
Devol water tower.....	233 01 48	53 08 44	4.37840	14.851
Sullivan.....	256 40 19.54	76 46 21.14	4.2304723	10.564
Lindsey.....	288 07 47.90	108 13 47.15	4.2387939	10.768
Willard oil derrick.....	318 14 33	138 17 07	4.02546	6.589

WICHITA FALLS ELEVATOR, WICHITA COUNTY, TEX.

Situated in the city of Wichita Falls, on top of the Kemp and Kell concrete grain elevator.

Signal: An upright carrying targets of black cloth, which was centered over the station mark.

Station mark: Center of the iron tubing for supporting flagstaff on top of elevator.

[Latitude 33° 53' 54.31". Longitude 98° 29' 19.11".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	<i>Log. meters.</i>	<i>Miles.</i>
Eskridge.....	1 01 54.59	181 01 49.72	4.0970216	7.769
Schrader.....	28 34 03.08	208 31 30.96	4.1672407	9.133
Water tank at glass factory.....	65 43 45	245 42 11	3.67865	2.965
Bluff.....	65 13 21.06	245 08 17.79	4.1877978	9.575
Lindsey.....	136 38 30.73	316 34 09.94	4.2418001	10.843
Friberg.....	194 39 23.45	14 40 27.32	4.0644730	7.208
Jolly.....	269 13 31.59	89 18 11.01	4.1096878	7.999

WILLARDS OIL DERRICK, WICHITA COUNTY, TEX. (Not occupied.)

Sighted from two stations only.

Station mark: Center of derrick.

[Latitude 33° 59' 24.53". Longitude 98° 43' 12.72".]

To station—	Azimuth.	Back azimuth.	Distance.	
	° ' "	° ' "	<i>Log. meters.</i>	<i>Miles.</i>
Sunshine.....	138 17 07	318 14 33	4.02546	6.589
Lindsey.....	255 03 36	75 07 01	3.98848	6.051

PRIMARY TRAVERSE.

Dallas quadrangle.

DALLAS AND WAXAHATCHIE COUNTIES.

The following geographic positions on approximate North American datum were determined by primary traverse in 1915 by E. L. McNair. They are based on Trinity River traverse of the United States Corps of Engineers.

DALLAS QUADRANGLE.

Along river bottoms on south side of Trinity River.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	<i>Feet.</i>
Crabtree Ferry, about 2 miles below, by road, 500 feet north of a cabin, 10 feet west of river bank and between it and roadway, telephone line passes nearly over bench mark; an iron post 15 inches long set in concrete monument, 4 feet long. It is not as yet marked with elevation or number.....	32 32 34.52	96 31 45.13	.....
Crabtree Ferry, 2.30 miles below, about 400 feet southeast of negro cabin, at right angle in road and telephone line; in concrete monument 4 feet long and 1 foot square, an iron post 15 inches long. No number or elevation marked on post.....	32 32 32.15	96 31 50.29	888
South side of road and telephone line on root of oak tree (tack in) notch. Is station No. 108 of "Trinity River Traverse" of 1912.....	32 32 24.40	96 32 05.97	1,552
T road corners, in notch on root of oak tree. Is station No. 107 of "Trinity River Traverse" of 1912.....	32 32 20.14	96 32 15.49	919

DALLAS QUADRANGLE—Continued.

Along river bottoms on south side of Trinity River—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
River bank, 70 feet southwest of, 50 feet southwest of level T. B. M. on hackberry tree, near road and telephone line in (tack) a notch cut in root of elm tree. Is station 106 of Trinity River Traverse of 1912.	° ' "	° ' "	<i>Feet.</i>
T. b. m. No. 1 close to edge of woods in wire fence line azimuth of which is 60° and 240°; an elm tree, blazed, scribed, and painted black, "U. S. B. M. No. 1," nail in root of.	32 32 30.63	96 32 38.00	2,200
T. b. m. No. 2, at corner of clearing and edge of woods in wire fence azimuth of which is 60° and 240°; in root of hackberry tree, blazed, scribed, and painted black, "U. S. B. M. No. 2," nail.	32 32 36.95	96 33 04.47	2,354
T. b. m. No. 3, 30 feet south of road in edge of timber clearing on west; in root of Bois d'Arc tree blazed, scribed, and painted black "U. S. B. M. No. 3," nail.	32 32 37.26	96 33 37.39	2,817
T. b. m. No. 4, 300 feet east of bridge across Tenmile Creek, just south of road; in root of elm tree blazed, scribed, and painted black "U. S. B. M. No. 4," nail.	32 32 42.50	96 34 00.57	2,055
T. b. m. No. 21, 20 feet south of the Ferris and Crabtree Ferry road, near west side of Trinity River bottom land, 15 feet west of a neighborhood road, running south, 8 feet south of corner post of wire fence and 2 feet east of fence; an iron post stamped "Prim. Trav. Sta. No. 21, 1915".	32 32 30.15	96 34 26.44	2,542
T. b. m. No. 5, in edge of woods, 50 feet north of levee which runs 60° and 240° in azimuth, between open field and woods; in root of hackberry tree blazed, scribed, and painted black, "U. S. B. M. No. 5," nail.	32 32 17.80	96 34 51.85	2,508
P. b. m. No. 22, on straight road leading to river, between the Ferris-Crabtree Ferry road and road to Lock No. 4, at foot of hill near edge of bottom, on north side of road, 1 foot from wire fence and south 54° west and 50 feet distance from a large leaning pecan tree marked with three hack; iron post stamped "Prim. Trav. Sta. No. 22, 1915".	32 32 37.13	96 35 21.82	3,223
T. b. m. No. 6, in open cultivated field 40 feet west of a small house; in root of elm tree, blazed, scribed, and painted black, "U. S. B. M. No. 6".	32 32 40.99	96 35 56.22	2,970
T. b. m. No. 7, 0.25 mile northeast from foot hills, on north side of road leading straight northeast from foot hills to Lock No. 4; in root of pecan tree standing alone; tree is blazed, scribed, and painted black, "U. S. B. M. No. 7," nail.	32 33 07.62	96 36 02.97	2,751
P. b. m. No. 23, about 0.75 mile below public road bridge over Ten Mile Creek and about 500 feet north of creek, 20 feet west and 10 feet south of corner of house of W. E. Nix, on point of hill between Trinity River and Tenmile Creek bottoms; iron post stamped "Prim. Trav. Sta. No. 23, 1915".	32 33 30.01	96 36 20.23	2,702
T. b. m. No. 8, 1,200 feet northwest of a small graveyard, and at about the edge of foothills and bottom land; in root of large cottonwood tree, scribed, blazed, and painted black, "U. S. B. M. No. 8," nail.	32 33 55.48	96 36 29.03	2,683
T. n. m. No. 9, about 0.75 mile below Hurley's store at gravel slough, in root of pecan tree at edge of foothills; tree is blazed, scribed, and painted black, "U. S. B. M. No. 9," nail.	32 34 20.77	96 36 47.05	2,983
P. T. No. 24, 240 feet east of iron bridge over slough 10 feet south and 5 feet west of corner of Hurley's store building at Gravel Slough; iron post stamped "Prim. Trav. Sta. No. 24, 1915".	32 34 50.99	96 36 39.98	3,114
T. b. m. No. 10, about 0.25 mile west of Malloy bridge over Trinity River, 0.25 northwest of Mr. Perry's house, in wire fence line; in root of elm tree, blazed, scribed, and painted black, "U. S. B. M. No. 10," nail.	32 35 20.90	96 36 20.53	3,451
T. b. m. No. 11, about 600 feet south and west of Mr. Perry's house, near small slough bridge; in root of elm tree; blazed, scribed, and painted black, "U. S. B. M. No. 11," nail.	32 35 39.59	96 35 40.65	3,900
T. b. m. No. 12, near corner of woods, close to wire fence line bearing northeast and southwest on southeast side of road; in root of elm tree, blazed, scribed, and painted black, "U. S. B. M. No. 12," nail.	32 35 17.79	96 35 28.73	2,427
T. b. m. No. 13, about 200 feet west of river bank, 50 feet south of cabin belonging to Mr. Carpenter of Ferris; in root of oak tree, blazed, scribed, and painted "U. S. B. M. No. 13," nail.	32 35 01.94	96 35 25.29	1,631
Lock No. 4, in concrete foundation of corner fence post of Government reservation at cross. About 8 inches south of iron pipe in center of concrete, and is south 37° west and distant 163 feet from southwest corner of lock keeper's house. This point is station No. 89 of U. S. Corps of Engineers, traverse of 1912.	32 34 42.20	96 34 56.69	3,158
Magnetic declination 9° 08' east. Tie line across circuit.	32 34 20.79	96 34 33.13	2,960
Station 36 at t. b. m.	32 33 30.06	96 36 20.16	.....
T. b. m. No. 14, 1.14 miles S. 60° W. from Lock No. 4, close to middle of Ferris-Lock No. 4 road; in root of elm tree, blazed and marked in red "U. S. B. M. No. 14," nail.	32 33 52.51	96 35 34.07	4,551
Station 89 (1912 traverse U. S. Corps of Engineers)	32 34 20.79	96 34 33.13	.....

DALLAS QUADRANGLE—Continued.

Across river bottom from Trinity River to Parsons Slough.

Station.	Latitude.	Longitude.	Distance between stations.
Dallas, Kaufman, and Ellis counties, corner of, on east line of C. W. Harris's land, at corner of wire fence; marked by a Bois d'Arc post about 8 inches square, 30 inches above surface of ground.	° ' "	° ' "	Feet.
T. b. m. No. 19, about 700 feet east of river, in woods; in root of oak tree blazed, scribed, and painted black, "U. S. B. M. 19," nail.	32 32 36.87	96 31 22.08	.....
T. b. m. No. 20, about 150 feet north of river bank; in root of hackberry tree blazed, scribed, and painted black, "U. S. B. M. 20," nail.	32 32 12.41	96 31 20.20	2,477
T. b. m. No. 21, in thick woods; in root of elm tree blazed, scribed, and painted black "U. S. B. M. 21," nail.	32 32 11.27	96 30 48.62	2,706
T. b. m. No. 22, 5 feet from west bank of Parsons Slough; at base of dead ash tree blazed, scribed, and painted black, "U. S. B. M. 22," nail.	32 32 07.88	96 30 25.11	2,042
	32 32 05.61	96 30 07.99	1,484

At edge of river bottom on east side of Parsons Slough.

P. b. m. No. 25, 250 feet east of bank of Parsons Slough, above thick woods, at lower end of Chester Harlan's field, 2 feet north of wire fence running southwesterly, 10 feet northeast of large oak tree marked with three hacks; iron bench-mark post stamped "Prim. Trav. Sta. No. 25, 1915".	32 32 34.54	96 30 02.89	2,956
T. b. m. No. 23, about 50 feet north of edge of woods and lowland, and 15 feet west of wire fence line; in root of spotted-oak tree blazed, scribed, and painted black "U. S. B. M. 23," nail.	32 32 54.88	96 30 17.59	2,410
T. b. m. No. 24, on land of Dr. Glenn at Seagoville, 12 feet north-west of fence line; in root of dead post-oak tree blazed, scribed, and painted black, "U. S. B. M. 24," nail.	32 33 20.88	96 30 24.02	2,685
P. b. m. No. 26, on the Ferris-Crabtree-Terry and Seagoville road, about 3 miles north of Parsons Slough Bridge, 50 feet north of flat bottom land, 2.5 feet from wire fence line; iron bench-mark post stamped "Prim. Trav. Sta. No. 26, 1915".	32 33 38.30	96 30 58.41	3,431
T. b. m. No. 25, at edge of lowland and open ground; in root of small ash tree blazed, scribed, and painted black "U. S. B. M. 25," nail.	32 34 08.39	96 31 16.39	3,409
Dallas and Kaufman county line, marked by a Bois d'Arc post 8 inches square and 30 inches above ground; post is milepost 28 and is 2 miles north of county corner.	32 34 22.35	96 31 20.80	1,461
P. b. m. No. 27, on C. W. Hain's land, on west side of lane leading to wooden bottom land, about 700 feet north of edge of timber and 1 foot from fence line; iron bench-mark post stamped "Prim. Trav. Sta. No. 27, 1915".	32 34 29.79	96 31 34.39	1,386
T. b. m. No. 31, about 400 feet S. 70° west from Mr. Tyler's house; in root of oak tree blazed, scribed, and painted black, "U. S. B. M. 31," nail.	32 34 57.85	96 31 48.16	3,071
T. b. m. No. 32, near edge of woods and about 30 feet northwest of wire fence; in root of large pecan tree blazed, scribed, and painted black, "U. S. B. M. 32," nail.	32 35 19.87	96 32 08.82	2,843
T. b. m. No. 33, 150 feet north of woods, in open field, in root of large pecan tree blazed, scribed, and painted black, "U. S. B. M. 33," nail.	32 35 23.49	96 32 39.25	2,629
P. b. m. No. 28, on road to slough falls crossing, on east side of road, about 60 feet N. 30° W. from Mr. Finley's house, 4 feet from fence line, and at approximately high-water mark of 1908; iron bench-mark post stamped "Prim. Trav. Sta. No. 28, 1915".	32 35 40.57	96 32 58.60	2,392
T. b. m. No. 34, 350 feet east of levee, north 35° east, 65 feet from house in open field; in root of hackberry tree blazed, scribed, and painted black, "U. S. B. M. No. 34," nail.	32 36 08.21	96 32 51.55	2,857
T. b. m. No. 35, at edge of lowland in lane running northeast and southwest; in root of pecan tree blazed, scribed, and painted black, "U. S. B. M. 35," nail.	32 36 33.01	96 32 45.71	2,555
P. b. m. No. 29, about 1 mile east of Parsons Slough Bridge, on the Seagoville-Ferris Road, 150 feet east of levee, 7 feet west of wire fence, on high ground several feet above high-water mark rising to east; iron bench-mark post stamped "Prim. Trav. Sta. No. 29, 1905".	32 36 57.06	96 32 40.08	2,479
P. b. m. No. 30, on the Seagoville-Ferris road, 67 feet north from corner of wagon bridge across Parsons Slough, on top of levee, at gateway 20 feet east of center of road; iron bench mark post stamped "Prim. Trav. Sta. No. 30, 1915".	32 37 05.96	96 33 35.72	4,844

DALLAS QUADRANGLE—Continued.

Across river bottom to point east of Malloy Bridge.

Station.	Latitude.	Longitude.	Distance between stations.
T. b. m. No. 36, about 0.70 mile southwest of Parsons Slough bridge, 50 feet northeast of center of road; in root of hackberry tree blazed, scribed, and painted black, nail.....	° ' " 32 36 39.97	° ' " 96 34 02.01	<i>Feet.</i> 3,458
P. b. m. No. 31, 1 mile east of Malloy Bridge, 210 west of slough bridge on north side of road, 25 feet north of road, 4 feet from wire fence; iron bench-mark post stamped "Prim. Trav. Sta. No. 31".....	32 36 16.92	96 34 29.27	3,295
P. b. m. No. 32, 132 feet east of pier at east end of Malloy Bridge across Trinity River, on grade landing up to bridge and in line with driveway across bridge; iron bench-mark post stamped "Prim. Trav. Sta. No. 32, 1915.....	32 35 50.13	96 35 13.10	4,626

From Crabtree Ferry east across river bottom to point east of Parsons Slough Bridge.

Crabtree Ferry, 100 feet from, 20 feet south of road, close to telephone pole on small levee, river road makes straight angle turn near bench mark; concrete monument with 15-inch iron post set in it, no number on elevation (Corps of Engineers b. m.)....	32 33 12.40	96 32 59.34	.....
Crabtree Ferry, 962 feet from above-described bench mark at; 15-inch iron post in concrete monument on top of small levee, no number on elevation (U. S. C. E. M.).....	32 33 04.22	96 32 53.59	962
Station 103; U. S. Engineer Corps Station 101 (1912).....	32 33 12.89	96 32 59.63	.....
T. b. m. No. 15, about 1,200 feet southeast from Crabtree Ferry, near negro cabin on north side of road; in root of spotted-oak tree blazed, scribed, and painted black, "U. S. B. M. 15, nail.....	32 33 10.90	96 32 44.64	1,299
T. b. m. No. 16, 6 feet north of wire fence along road, in root of ash tree blazed, scribed, and painted black, "U. S. B. M. 16," nail.....	32 33 10.35	96 32 14.55	2,577
T. b. m. No. 17, near right angle in road, 6 feet north of wire fence line; in root of elm tree blazed, scribed, and painted black, "U. S. B. M. 17," nail.....	32 33 16.97	96 32 07.81	883
T. b. m. No. 18, about 0.75 mile west of bridge over Parsons Slough, about middle of east and west road line; in root of ash tree blazed, scribed, and painted black, "U. S. B. M. 18," nail.....	32 33 16.78	96 31 38.66	2,495
T. b. m. No. 26, about 400 feet south of bridge over Parsons Slough; in root of large oak tree on east side of road blazed, scribed, and painted black, "U. S. B. M. 26," nail.....	32 33 22.28	96 31 17.90	1,862

Northwest up Bois d'Arc Island to Malloy Bridge road.

T. b. m. No. 27, in open field; at base of large pecan tree blazed, scribed, and painted black, "U. S. B. M. 27," nail.....	32 33 40.70	96 32 00.10	.....
T. b. m. No. 28, in woods; at base of ash tree blazed, scribed, and painted black, "U. S. B. M. 28," nail.....	32 34 01.75	96 32 23.02	2,893
T. b. m. No. 29, in north and south wire fence line, cleared ground to west, brush and timber to south and east; in root of hackberry tree blazed, scribed, and painted black, "U. S. B. M. 29," nail.....	32 34 18.47	96 32 47.08	2,665
T. b. m. No. 35, about 1.5 miles east of lock No. 4, about 750 feet north of negro cabin, at north end of clearing, close to fence corner north, east, and west, neighborhood road northeast crossing of slough; iron bench-mark post stamped "Prim. Trav. Sta. No. 35, 1915".....	32 34 44.64	96 33 03.65	3,002
T. b. m. No. 30, 18 feet north of east and west farm roadway and fenceline, woods north, south, and west; in root of large pecan tree blazed, scribed, and painted black, "U. S. B. M. 30," nail.....	32 34 52.77	96 33 34.42	2,759
T. b. m. No. 39, at edge of small strip of timber, with cleared land on south; in root of persimmon tree blazed, scribed, and painted black, "U. S. B. M. 39," nail.....	32 35 10.26	96 33 44.87	1,982
Iron bench-mark post No. 36.....	32 35 16.99	96 33 42.40	712
T. b. m. No. 38, in thick woods, at base of large dead ash tree blazed, scribed, and painted black, "U. S. B. M. 38," nail.....	32 35 39.79	96 33 47.93	2,352
T. b. m. No. 37, in thick woods; at base of ash tree, blazed, scribed, and painted black, "U. S. B. M. 37," nail.....	32 35 55.74	96 34 11.68	2,594

From Hurley's store to Wilmer Bridge.

T. b. m. No. 40, on west side of small slough and east side of cultivated field; in root of cottonwood tree blazed, scribed, and painted black, "U. S. B. M. 40".....	32 35 46.53	96 36 26.76	.....
T. b. m. 41, about 1 mile above Hurley's store, 100 feet west of road across Gravel Slough, in root of hackberry tree in fence line; tree is blazed, scribed, and painted black, "U. S. B. M. 41," nail.....	32 36 01.78	96 36 50.27	2,532

DALLAS QUADRANGLE—Continued.

From Hurley's store to Wilmer Bridge—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
T. b. m. No. 42, 6 feet north of east end of small bridge across gravel slough; in root of hackberry tree blazed, scribed, and painted black, "U. S. B. M. 42," nail.....	° ' " 32 35 53.00	° ' " 96 37 19.89	<i>Feet.</i> 2,685
T. b. m. No. 43, in open field with scattering pecan trees; in root of large pecan tree blazed, scribed, and painted black, "U. S. B. M. 43," nail.....	32 35 56.38	96 37 46.36	2,291
T. b. m. No. 44, 75 feet southeast of right angle turn in road in lane bearing south 40° east; in root of pecan tree blazed, scribed, and painted black, "U. S. B. M. 44," nail.....	32 36 13.35	96 38 08.42	2,550
P. b. m. No. 33, about 1.5 miles southwest from river bridge, 70 feet northwest from small bridge, on north side of Wilmer-Lock No. 2 road; iron bench-mark post stamped "Prim. Trav. Sta. No. 33, 1915".....	32 36 17.86	96 38 55.80	4,079
T road north, at center of Wilmer road, at southwest corner of woods.....	32 36 38.40	96 38 04.58	4,849
P. b. m. No. 34, about 700 feet west of west approach to Wilmer Bridge, 3 feet southwest of corner fence post at southeast corner junction of roads; iron bench-mark post stamped "Prim. Trav. Sta. 34, 1915".....	32 36 55.04	96 37 26.90	3,636
T. b. m. No. 46, 30 feet south of southeast corner of woods; in center of road, in top of Bois d'Arc stump, nail.....	32 36 26.25	96 37 08.72	3,300
T. b. m. No. 47, 50 feet west of river bank, 60 feet southeast of concrete well, 150 feet southeast of cabin; in root of pecan tree, nail.....	32 36 34.72	96 36 22.53	4,042
T. b. m. No. 48, 50 feet west of southwest corner of clearing and 15 feet southwest of old tramway trestle; in root of Bois d'Arc tree, nail.....	32 36 19.60	96 35 57.18	2,651
T. b. m. No. 49, open field to south, in wire fence line; in root of hackberry tree, nail.....	32 36 06.18	96 35 37.06	2,193

Magnetic declination for district, 9° 08' east.

Mineola and Willspoint quadrangles.

SMITH AND WOOD COUNTIES.

The following geographic positions on approximate North American datum were determined by primary traverse in February, 1915, by E. L. McNair. The line starts at crossing of Texas & Pacific Railway and Cotton Belt Route at Big Sandy, previously located by primary traverse described on page 219, Bulletin 310, and was double chained along Texas & Pacific Railway to Mineola. From Mineola several small circuits were run in the Sabine River bottom lands.

MINEOLA QUADRANGLE.

Along Texas & Pacific Railway from Big Sandy to Mineola (double chained).

Station.	Latitude.	Longitude.	Distance between stations.
Big Sandy, crossing of Texas & Pacific Ry. and Cotton Belt Route.....	° ' " 32 34 53.28	° ' " 95 06 32.38	<i>Feet.</i>
Road crossing under Texas & Pacific Ry., 820 feet east of milepost 114, at bridge 114 B.....	32 34 56.86	95 07 32.76	5,180
Milepost 115, 860 feet east of, 39 feet south of center of track, 30 feet west of gate leading to land south, 300 feet to a cabin; iron post stamped "Prim. Trav. Sta. No. 1, 1915".....	32 35 00.13	95 08 35.87	5,409
Upshur-Wood county line, center of track opposite post.....	32 35 02.49	95 09 12.27	3,124
Second-class road crossing, at Farmers Spur, 110 feet west of head block.....	32 35 05.35	95 10 02.46	4,305
Public road crossing.....	32 35 07.75	95 10 44.96	3,646
Hawkins station, 1,160 feet east of, 200 feet east of road under railway, 37 feet north of center of track, 18 inches south of right of way fence, 8 feet south of telephone pole; iron post stamped "Prim. Trav. Sta. No. 2, 1915".....	32 35 12.71	95 12 05.95	6,948

MINEOLA QUADRANGLE—Continued.

Along Texas & Pacific Railway from Big Sandy to Mineola (double chained)—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Milepost 119, center of track opposite.....	32 35 14.74	95 12 48.29	3,629
Milepost 120, 500 feet east of, center of short trestle.....	32 35 18.15	95 13 48.83	5,191
Milepost 121, 215 feet east of, 43 feet north of center of track, 2 feet south of right of way fence; iron post stamped "Prim. Trav. Sta. No. 3, 1915".....	32 35 29.67	95 14 49.24	5,298
Bryan siding, 0.9 mile southeast of, center of track, opposite water tank.....	32 35 41.91	95 15 22.62	3,113
Bryan siding, head block at west end of.....	32 36 01.28	95 16 13.52	4,774
Milepost 123, center of track opposite.....	32 36 12.57	95 16 43.15	2,780
Fouke Lumber Co.'s spur, 620 feet east of headblock at, nearly opposite small station platform 43 feet south of center of track, at right-of-way fence, 80 feet west of private road crossing; iron post stamped "Prim. Trav. Sta. No. 4, 1915".....	32 36 37.65	95 17 50.16	6,268
Crow station, public road crossing at.....	32 26 56.63	95 18 51.62	5,596
Lake Fork siding, at east end of, switchstand.....	32 37 22.42	95 19 53.53	5,902
Lake Fork siding, 0.6 mile northwest of, 75 feet east of milepost 127, 40 feet south of track, on low ground, 1 foot north of right of way fence; iron post stamped "Prim. Trav. Sta. No. 5, 1915".....	32 37 34.44	95 20 26.17	3,046
Milepost 128, center of track opposite, at west end of long trestle across Lake Fork.....	32 27 49.33	95 21 29.10	5,588
Lake Fork trestle, about 1.2 miles northwest of road crossing.....	32 38 06.58	95 22 36.11	5,990
Hoard siding, 1,100 feet west of road crossing at, 120 feet west of switchstand at west end of siding, 38 feet south of center of track, 1 foot north of right-of-way fence, near milepost 130; iron post stamped "Prim. Trav. Sta. No. 6, 1915".....	32 38 21.80	95 23 23.08	4,301
Milepost 130, 1.75 miles northwest of, road crossing.....	32 38 51.70	95 25 04.94	9,219
Harts spur, 325 feet west of road crossing, 115 feet west of milepost 133, 50 feet south of main track, 1 foot north of right-of-way fence; iron post stamped "Prim. Trav. Sta. No. 7, 1915".....	32 39 03.58	95 26 23.66	6,838
Harts spur, 1.5 miles northwest of, road crossing.....	32 29 23.72	95 27 52.02	7,824
Mineola station, 1,250 feet east of, 45 feet north of center of track, on bank 18 inches south of right-of-way fence; iron post stamped "Prim. Trav. Sta. No. 8, 1915".....	32 39 41.18	95 29 07.52	6,692
Mineola station, 200 feet west of, street crossing.....	32 29 44.46	95 29 24.09	1,456

WILLSPOINT QUADRANGLE.

Near Mineola.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Feet.
Mineola, crossing of Texas & Pacific and Missouri, Kansas & Texas railways.....	32 39 55.32	95 30 12.35	4,270
Farm crossing, 1,060 feet east of milepost 138.....	32 40 08.56	95 31 11.13	5,200
Macks siding, 190 feet southeast of switchstand at east end of, road crossing under track.....	32 40 18.45	95 31 55.09	3,890
Macks siding, 110 feet west of switchstand at, 20 feet east of milepost 139, 47 feet south of center of track, 18 inches north of right of way fence; iron post stamped "Prim. Trav. Sta. No. 9, 1915".....	32 40 23.61	95 32 20.07	2,198
Macks siding, about 0.8 mile northwest of, center of track at trestle over creek.....	32 40 34.35	95 33 05.44	4,027
Sabine River, west end of bridge over, opposite post between Smith and Wood counties; center of track at.....	32 40 14.33	95 34 05.78	5,540
Milepost 141, 105 feet east of, 870 feet west of Smith and Wood county line post, 45 feet south of track, 23 feet west of fence line southeast; iron post stamped "Prim. Trav. Sta. No. 10, 1915".....	32 40 10.64	95 34 14.92	866

On south side of Sabine River, in bottom lands.

Sabine River, about 0.50 mile south of Texas & Pacific Ry. bridge over; in root of leaning oak tree, blazed, scribed, and painted black, "T. B. M. No. 1," nail.....	32 39 47.61	95 34 19.87	2,367
Sabine River Bridge, about 1 mile south of, 75 feet west of a creek, on a little higher ground than apparent high water; in root of sweet-gum tree, blazed, scribed, and painted black, "U. S. B. M. No. 2," nail.....	32 39 39.10	95 34 44.55	2,278
Sabine River Bridge, about 0.60 miles south of; nail in root of water oak, blazed, scribed, and painted "U. S. B. M. No. 3".....	32 39 40.35	95 34 16.67	2,387
Sabine River Bridge, about 0.80 mile southeast of, 500 feet south of river, 100 feet east of creek; in root of a post-oak tree, blazed, scribed, and painted black, "U. S. B. M. No. 4," nail.....	32 39 48.15	95 33 50.16	2,398

WILLSPPOINT QUADRANGLE—Continued.

Mineola district.

Station.	Latitude.	Longitude.	Distance between stations.
T. b. m. No. 5, 300 feet south of creek, near edge of lowland, in root of post-oak tree, blazed, and painted black, "U. S. T. B. M. No. 5," nail.....	° ' " 32 39 37.42	° ' " 95 33 49.94	<i>Feet.</i> 1,084
T. b. m. No. 6, 80 feet east of a lake; in root of post-oak tree 30 inches in diameter, blazed, and painted, "U. S. T. B. M. No. 6," nail.....	32 39 31.39	95 33 22.70	2,406
T. b. m. No. 7, 300 feet south of the Callaway Crossing Road; in root of pin-oak tree, about 18 inches in diameter; nail.....	32 39 06.67	95 33 15.39	2,575
Permanent bench mark.....	32 38 54.55	95 32 50.80	2,223
T. b. m. No. 8, 300 feet south of bridge over slough, on east side of Callaway Crossing Road, near edge of overflow; in root of water-oak tree 18 inches in diameter, blazed, scribed, and painted "U. S. B. M. No. 8".....	32 38 25.68	95 33 11.56	3,856
T. b. No. 9, in woods in flat ground, in root of water-oak tree 20 inches in diameter, blazed, scribed, and painted black "U. S. B. M. No. 9," nail.....	32 38 04.60	95 32 59.08	2,383
T. b. m. No. 10, 100 feet north of rising ground, in root of post-oak tree, about 18 inches in diameter, blazed, scribed, and painted black "U. S. B. M. No. 10;" nail.....	32 37 44.27	95 32 40.44	2,600
T. b. m. No. 11, in root of water oak, blazed, scribed, and painted black, "U. S. B. M. No. 11," nail.....	32 37 32.96	95 32 10.80	2,782
T. b. m. No. 13, in root of oak tree, blazed but not painted; nail....	32 36 59.59	95 31 31.62	4,754
Burleson Lake, 0.25 mile southeast of outlet of, about 125 feet south of old ford probably dry at low water, on bank among scrub timber and brush; iron bench-mark post stamped "Prim. Trav. Sta. No. 11, 1915." Reference marks: A 6-inch post-oak tree S. 62° E., distant 17 feet, and an 8-inch red-oak tree, south 10° east, distant 28 feet; both trees blazed and marked with three hacks.....	32 36 53.36	95 31 16.75	1,420
T. b. m. No. 14, 250 feet west of cotton field, 200 feet south of slough, in root of elm tree in wire-fence line; tree is blazed, scribed, and painted black, U. S. B. M. No. 14," nail.....	32 36 56.88	95 30 55.66	1,839
T. b. m. No. 15, 75 feet north of a roadway, 50 feet west of west edge of an open field; in root of gum tree blazed, scribed, and painted black, "U. S. B. M. No. 15," nail.....	32 36 47.09	95 30 29.26	2,466
T. b. m. No. 16, 50 feet northwest of bottom road, in root of pin oak blazed, scribed, and painted black, "U. S. B. M. No. 16," nail..	32 36 46.85	95 30 06.37	1,957

MINEOLA QUADRANGLE.

Mineola district.

Station.	Latitude.	Longitude.	Distance between stations.
P. b. m. No. 12, beside wire fence north of cotton field at approximate right angle in old road, N. 25° E., distant 30 feet to oak tree, and S. 85° W., distant 32 feet to oak tree, south 29° west, 38 feet to oak tree; all blazed and marked with three hacks; iron bench-mark post stamped "Prim. Trav. Sta. No. 12, 1915".....	° ' " 32 36 43.61	° ' " 95 29 51.13	<i>Feet.</i> 1,345
T. b. m. No. 17, in root of 8-inch elm tree nearly in middle of bottom road, about 0.50 mile west of south end of "Dump Road"; tree is blazed, scribed, and painted black, "U. S. B. M. No. 17," nail.....	32 36 44.44	95 29 21.76	2,513
T. b. m. No. 18, in root of gum tree, about 80 feet east of bridge over slough at south end of "Dump Road," the road leading south from Mineola across the Sabine River bottom; tree is blazed, scribed, and painted black, "U. S. B. M. No. 18," nail..	32 36 42.46	95 29 07.61	1,225
T. b. m. No. 19, 150 feet north of high-water mark, open field on south, 35 feet east of wire fence; in root of "over cup" oak tree, blazed, scribed, and painted, "U. S. B. M. No. 19," nail.....	32 36 21.29	95 28 55.36	2,383
P. b. m. No. 13, 500 east of creek, 150 feet north of knoll 20 feet high, in forest, S. 52° E., distant 15 feet to oak, S. 60° W., distant 25 feet to oak, N. 48° W., distant 30 feet to gum tree; iron bench-mark post stamped "Prim. Trav. Sta. No. 13, 1915." All trees marked with three hacks.....	32 36 10.25	95 28 25.74	2,770
T. b. m. No. 20, 50 feet north of wire fence at edge of swamp, cotton field on south; tree blazed, scribed, and painted black, "U. S. B. M. No. 20," nail in root of pin-oak tree.....	32 36 16.83	95 28 00.19	2,285
T. b. m. No. 21, in root of pecan tree, 8 feet north of fence close to small creek; tree blazed, scribed, and painted black, "U. S. B. M. No. 21," nail.....	32 36 18.10	95 27 25.87	2,938

MINEOLA QUADRANGLE—Continued.

Along International & Great Northern Railway to Mineola.

Station.	Latitude.	Longitude.	Distance between stations.
P. b. m. No. 14, 76 feet east of center of track at Eads flag station, on the International & Great Northern Ry., 15 inches west of wire fence line, 40 feet southeast of corner of cabin, and approximately 200 feet from south end of railroad bridge across Sabine River; iron bench-mark post stamped "Prim. Trav. Sta. No. 14, 1915"	° ' " 32 36 20.74	° ' " 95 26 53.63	<i>Feet.</i> 2,770
Eads flag station, about 0.30 mile northwest of; north end of long trestle	32 36 36.31	95 27 05.00	1,849
Eads flag station, about 1.30 miles northwest of; switch stand at spur to sawmill	32 37 13.70	95 27 29.82	4,337
Milepost No. 42, 320 feet northwest of; road crossing	32 38 15.18	95 28 13.08	7,231
Milepost No. 43, about 0.25 mile southeast of; private road crossing	32 38 44.12	95 28 40.34	3,742
Mineola, about 0.75 mile southeast of; switch stand at north end of Y	32 39 17.91	95 28 50.78	3,530

From International & Great Northern Railway up north side of Sabine River.

International & Great Northern milepost No. 42, 2,200 feet southeast of, 37 feet west of center of track, 15 feet east of right of way fence, about 150 feet north of edge of river bottom; iron bench-mark post stamped "Prim. Trav. Sta. No. 15, 1915"	32 37 54.32	95 27 57.30	.....
T. b. m. No. 22, about 100 feet north of brush and timber line, at edge of lowland, in open field; in root of walnut tree, blazed, scribed, and painted black, "U. S. B. M. No. 22," nail	32 38 08.85	95 28 28.68	3,059
T. b. m. No. 23, about 0.50 mile below "Dump Road," 1,000 feet northwest of edge of timber line, near wire-fence line; in base of post-oak tree top broken off; tree is blazed, scribed, and painted black, "U. S. B. M. No. 23," nail	32 38 00.22	95 28 46.34	1,744
P. b. m. No. 16, on Mineola-Tyler road, at north edge of Sabine River bottom, in line with "Dump Road" going south, 70 feet southwest to center of road and 2 feet south of wire fence; iron bench-mark post stamped "Prim. Trav. Sta. No. 16, 1915"	32 37 52.33	95 29 03.13	1,640
T. b. m. No. 26, 40 feet south of fence at edge of field, in root of leaning post-oak tree, 24 inches in diameter; tree is blazed, scribed, and painted black, "U. S. B. M. No. 26," nail	32 37 50.38	95 29 27.93	2,130
T. b. m. No. 27, in open field, with few scattering trees near by; in root of 30-inch pin-oak tree, blazed, scribed, and painted black, "U. S. B. M. No. 27"	32 37 54.22	95 29 58.61	2,653

WILLSPPOINT QUADRANGLE.

Up north side of Sabine River.

Station.	Latitude.	Longitude.	Distance between stations.
P. b. m. No. 17, 150 feet north of level bottom land, at south end of north and south land or private road, 2 feet south of east and west fence line and 3 feet west of corner fence post; iron bench-mark post stamped "Prim. Trav. Sta. No. 17, 1915"	° ' " 32 38 09.23	° ' " 95 30 25.89	<i>Feet.</i> 2,782
T. b. m. No. 28, at edge of woods and overflowed land; in root of gum tree, blazed, scribed, and painted black, "U. S. B. M. No. 28," nail	32 38 15.05	95 30 55.51	2,602
T. b. m. No. 29, at edge of timber line and overflowed ground, 6 feet south of east and west wire fence, south of cotton field; in root of elm tree, blazed, scribed, and painted black, "U. S. B. M. No. 29," nail	32 38 41.63	95 31 05.57	2,821
T. b. m. No. 30, at edge of timber and lowland, 15 feet south of east and west wire fence; nail in root of post-oak tree blazed, scribed, and painted black, "U. S. B. M. No. 30"	32 38 56.03	95 31 29.74	2,528
T. b. m. No. 31, about 1,000 feet east of Callaway Road, in woods; in root of oak tree blazed, scribed, and painted black, "U. S. B. M. No. 31," nail	32 39 01.06	95 32 09.16	3,409
P. b. m. No. 18, on Callaway Crossing Road, 50 feet northeast of end of bridge over slough, at foot of hill on north side of bottom, 2 feet from wire fence on north side of road; iron bench-mark post stamped "Prim. Trav. Sta. No. 18, 1915"	32 39 08.79	95 32 13.80	875
T. b. m. No. 32, in lowland, field on east; in root of elm tree, blazed, scribed, and painted black, "U. S. B. M. No. 32," nail	32 39 36.90	95 32 21.09	2,909

WILLSPPOINT QUADRANGLE—Continued.**Up north side of Sabine River—Continued.**

Station.	Latitude.	Longitude.	Distance between stations.
T. b. m. No. 33, 150 feet east of slough, 10 feet north of wire fence north and west of open field; in root of elm tree blazed, scribed, and painted, "U. S. B. M. No. 33," nail.....	32 40 01.55	95 32 38.89	<i>Feet.</i> 2,921
T. b. m. No. 34, in forest and overflowed land; in root of pin-oak tree, blazed, scribed, and painted black, "U. S. B. M. No. 34," nail.....	32 40 14.53	95 33 00.03	2,232
P. b. m. No. 20, 1,500 feet southeast of Texas & Pacific Ry. bridge over Butler Lake, on east side of Sabine River bottom, about 450 feet east along fence from Butler Lake, 3 feet south of east and west wire fence, 5 feet from braced fence post in angle at fence line; iron bench-mark post stamped "Prim. Trav. Sta. No. 20, 1915".....	32 40 11.84	95 33 27.61	2,373
T. b. m. No. 35, 300 feet east of Silver Lake, 55 feet south of track, in edge of timber; in root of pin-oak tree blazed, scribed, and painted black, "U. S. B. M. No. 35," nail.....	32 40 23.20	95 33 48.03	2,088

Across Sabine River bottom along Dump road.

T. b. m. No. 24, 20 feet east of public road; in root of post-oak tree, blazed, scribed, and painted black, "U. S. B. M. No. 24," nail.....	32 37 22.51	95 29 03.57	.....
T. b. m. No. 25, 30 feet west of center of road; in root of locust tree blazed, scribed, and painted black, "U. S. B. M. No. 25," nail....	32 36 58.78	95 29 05.86	2,400

Cross line near Callaway Bridge.

Sabine River, center of bridge over, at concrete pier at west end..	32 39 00.54	95 32 38.92	.....
Sabine River Bridge, 1,000 feet west of, 100 feet south of end of small pond, S. 4° 30' W., distant 45 feet to post-oak tree, north 85° east, distant 32 feet to post-oak tree, N. 33° E., distant 26 feet to post-oak tree; all blazed and marked with 3 hacks; iron bench-mark post stamped "Prim. Trav. Sta. No. 19, 1915".....	32 38 59.56	95 32 50.81	1,018

Magnetic declination 8° 7' E.

Addicks, Aldine, Alief, Almeda, Ashford, Bellaire, Burnett Bay, Cedar Bayou, Clodine, Crosby, Cypress, Deepwater, Fauna, Harmaston, Hillendahl, Hockley, Holik, Houston Heights, Huffman, Humble, Katy, La Porte, Louetta, Morgans Point, Mykawa, New Caney, Park Place, Pauli, Rosehill, Scott Ranch, Seabrook, Settegast, Spring, Stuebner, Sugarland, Swanson, Waller, Walley, Webster, and Weedon 7½ quadrangles.

BRAZORIA, FORT BEND, GALVESTON, HARRIS, AND LIBERTY COUNTIES.

The following geographic positions on North American datum were determined by E. L. McNair in 1915. They are based on positions of stations Thayer, Tory Hill, and Morgans Point of the United States Corps of Engineers as given in Coast and Geodetic Survey Special Publication 17.. Starting from these stations in the southeast part of Harris County, lines were run in circuits mostly following public roads and extending over all of Harris County, with a few positions extending over into the adjoining counties mentioned. In all 708 miles of traverse were run and 216 permanent bench marks were established. In addition 22 permanent marks of Coast and Geodetic Survey and United States Corps of Engineers were located.

The elevations were determined by primary leveling and accord with the 1912 adjustment. The leveling was done by R. R. Monbeck in 1915 and by D. S. Birkett in 1916. The work was done in cooperation with Harris County.

ADDICKS QUADRANGLE.

Along highways near east border of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
Addicks station (Missouri, Kansas & Texas Ry.), 200 feet east of, 100 feet south and 25 feet east of public-road crossing, on line of right of way, 2 feet northeast of corner fence post; iron post with 3-inch cap. Coast and Geodetic Survey bench-mark C8; "Prim. Trav. Sta. No. 72, 1915," (not stamped), elevation 96.332 feet....	° ' " 29 47 04.78	° ' " 95 38 29.49	Feet.
Private road crossing, top of rail; elevation 90.4 feet.....			
Addicks, 0.8 mile east of, 35 feet north of public road; copper nail in root of lone oak tree, painted "U. S. B. M. 153," elevation 82.19 feet.....	29 47 06.64	95 37 40.09	4,356
Addicks, 1 mile east of, on northwest corner of 200-foot wagon bridge over creek, floor of bridge; elevation 88.62 feet.....			
Addicks, 0.8 mile north of, 480 feet north of bridge, 120 feet south of another bridge across creek, 10 feet east of road; copper nail in root of oak tree painted "U. S. B. M. 164," elevation 90.23 feet....	29 47 45.78	95 38 42.02	.....
Addicks, 1.75 miles north of, 1,200 feet south of German Methodist Church, 30 feet east of road, 6 inches from corner post on fence east; copper nail in hub, post painted "U. S. B. M. 165," elevation 98.13 feet.....	29 48 35.47	95 38 41.73	5,020
Addicks, 2.3 miles north of, 2,000 feet north of German Methodist Church, 30 feet west of center of road, 3 feet from corner post on fence line west; iron post stamped "Prim. Trav. Sta. No. 74, 1915," elevation 104.707 feet.....	29 49 06.34	95 38 43.58	3,124
Addicks, 3.15 miles north of, 30 feet south and 25 feet east of T road west, 4 feet from corner fence post at fence line east, 8 inches from telephone pole; copper nail in hub, pole painted "U. S. B. M. 166," elevation 106.96 feet.....	29 49 48.72	95 38 43.38	4,281
Addicks, 4 miles north of, 25 feet east of center of road, 6 inches from telephone pole painted "U. S. B. M. 167"; copper nail in hub, elevation 115.28 feet.....	29 50 35.02	95 38 43.85	4,677
Addicks, 4.6 miles north of, T road south.....	29 51 06.42	95 38 44.48	3,173
Addicks, 4.6 miles north and 0.4 mile east of, about 150 feet south and 200 feet east of Grigsby schoolhouse, 4 feet from corner fence post; iron post stamped "Prim. Trav. Sta. 75, 1915," elevation 119.170 feet.....	29 51 06.75	95 38 23.64	1,835
Grigsby schoolhouse, about 0.6 miles northeast of, 800 feet north of small bridge at bend of road, 20 feet west of center of road; in root of oak tree painted "U. S. B. M. 168"; copper nail, elevation 109.67 feet.....	29 51 30.81	95 37 57.96	3,318
Grigsby schoolhouse, 0.5 mile east and 1.4 mile north of, 25 feet east of center of road, 6 inches from telephone pole, at corner of fence and lane east; t. b. m. 169; copper nail in hub, elevation 124.23 feet.....	29 52 18.11	95 37 57.78	4,779

Along highways north and west in south-central part of quadrangle.

Barker, 2 miles south of, 220 feet south of bridge over Buffalo Bayou, 60 feet west of road; copper nail in root of oak tree painted "U. S. B. M. 91," elevation 85.94 feet.....	29 45 19.35	95 41 05.82	.....
Barker, 1 mile south of, 25 feet east of center of road, 1 foot from corner post on fence line east at south end of gate; copper nail in hub, post painted "U. S. B. M. 92," elevation 90.11 feet.....	29 46 11.62	95 41 06.73	5,280
Barker, 20 feet east of station on Missouri, Kansas & Texas Ry. 115 feet south of center of track, 35 feet west by 25 feet south of T road south, at corner post of fence; iron post primary traverse station No. 43 (not stamped) U. S. Coast and Geodetic Survey bench-mark B8, elevation 105.476 feet.....	29 47 05.49	95 41 07.90	5,443
Barker, 0.8 mile west of, 250 feet southeast of "Yard Limit" sign-board, about 30 feet south of center of road and about 125 feet south of Missouri, Kansas & Texas Ry., 2 feet north of telephone pole, copper nail in hub, pole painted "U. S. B. M. 93," elevation 111.15 feet.....	29 47 05.71	95 41 59.80	4,575
Barker, 1.7 miles west of, 900 feet east of road crossing, 20 feet north of center of public road, about 60 feet south of Missouri, Kansas & Texas Ry., 1 foot from telephone pole; copper nail in hub, pole painted "U. S. B. M. 94," elevation 115.88 feet.....	29 47 06.48	95 42 55.04	4,870
Road crossing; top of rail 119.0 feet.....			

ADDICKS QUADRANGLE—Continued.

Along highway north and west in south-central part of quadrangle—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
Barker, 2.5 miles west of, 980 feet east of switch stand, about 60 feet south of Missouri, Kansas & Texas Ry. track, 20 feet north of center of road, 1.5 feet south of wire fence line, 4 feet east of telephone pole; iron post stamped "Prim. Trav. Sta. No. 44, 1915," elevation 124.051 feet.....	° ' " 29 47 06.75	° ' " 95 43 40.05	<i>Feet.</i> 3,968
Katy, 4.6 miles east of, 115 feet south of Missouri, Kansas & Texas Ry. track, at a point 50 feet west of Delhi flag station, 30 feet south of public road, 2 feet north of corner post on fence line south; a stone post 6 inches square lettered "U. S. B. M." with 0.5-inch deep hole in center. United States Coast and Geodetic Survey bench mark A8, primary traverse station No. 45 (not marked); elevation, 124.816 feet.....	29 47 06.44	95 44 39.49	5,240

East along highways to Addicks.

Barker, 4,500 feet east of, 25 feet south of center of public road, 6 inches from telephone pole; copper nail in hub, pole painted "U. S. B. M. 151," elevation, 99.04 feet.....	29 47 05.21	95 40 16.84	.....
Barker, 1.7 miles east of, 30 feet north of center of road, 50 feet south of Missouri, Kansas & Texas Ry. track, 6 inches from telephone pole; copper nail in hub, pole painted "U. S. B. M. 152," elevation, 97.33 feet.....	29 47 05.48	95 39 25.68	4,508

Near northwest corner of quadrangle.

Cypress, 6.8 miles south by 1.9 miles west of, 6 feet south of northwest corner of fence around house; copper nail in hub, fence painted "U. S. B. M. 123," elevation, 140.82 feet.....	29 52 12.52	95 43 43.05	.....
Katy, 5.4 miles north by 4.6 miles east of, about 0.8 miles west of crossing of Bear Creek on east and west road, 35 feet north of road, 10 feet north of fence corner; iron post stamped "Prim. Trav. Sta. No. 59, 1915," elevation, 143.839 feet.....	29 51 53.33	95 44 43.03	5,629

Along highways near north border of quadrangle.

Brink schoolhouse, 0.2 mile south and 1.8 miles west of, 15 feet south of road; copper nail in hub, witness stake painted "U. S. B. M. 169" (should be 170), elevation, 137.21 feet.....	29 52 26.00	95 42 47.76	.....
Brink schoolhouse, 0.2 mile south and 0.9 mile west of, 20 feet north of center of road; copper nail in hub, witness stake painted "U. S. B. M. 170" (should be 171), elevation, 135.08 feet...	29 52 26.72	95 41 53.24	4,800
Brink schoolhouse, 0.2 mile south and 750 feet west of, 30 feet northeast of corner of bridge over Langham Creek, 40 feet west of pine tree 3 feet in diameter; iron post stamped "Prim. Trav. Sta. No. 77, 1915," elevation, 128.303 feet.....	29 52 26.81	95 41 08.22	3,964

Magnetic declination in quadrangle, 8° 30' E.

ALDINE QUADRANGLE.

Near southwest corner of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
West Montgomery road, forks of road, road north from.....	° ' " 29 55 20.06	° ' " 95 29 51.65	<i>Feet.</i> 2,587
North Houston, 1.0 mile east of, 25 feet southwest of West Montgomery Road, at bend, 3 feet east of fence post at angle in fence line; iron post stamped "Prim. Trav. Sta. No. 133, 1915," elevation, 110.001 feet.....	29 55 11.04	95 29 40.09	1,367
North Houston, 1.5 miles south 60° east of, 30 feet east of road, fences south and east, 4 inches west of corner fence post painted "U. S. B. M. 296"; copper nail in hub, elevation, 106.47 feet....	29 54 35.70	95 29 44.10	3,589

ALDINE QUADRANGLE—Continued.

Near southwest corner of quadrangle—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
Fairbanks, 3.45 miles north and 1.7 miles east of, 30 feet east of center of road, at north end of gate, fences north, south, and east, 4 inches from corner fence post painted "U. S. B. M. 297"; copper nail in hub, elevation, 105.93 feet.....	° ' " 29 53 49.86	° ' " 95 29 43.59	<i>Fect.</i> 4,632
Fairbanks, 2.9 miles north and 1.75 miles east of, 60 feet northeast of Trinity & Brazos Valley Ry., 170 feet north and 25 feet east of road crossing, 2½ feet east of corner post on right-of-way fence; iron post stamped "Prim. Trav. Sta. No. 134, 1915," elevation 97.873 feet.....	29 53 18.95	95 29 39.85	3,141
Fairbanks, 2.6 miles north and 1.75 miles east of, T road corners north, south, and east.....	29 53 03.82	95 29 39.62	1,530
Fairbanks, 2 miles north and 1.75 miles east of, 520 feet south of bridge, 30 feet east of center of road, ash tree painted "U. S. B. M. 298"; copper nail in root, elevation 87.25 feet.....	29 52 30.30	95 29 40.60	3,389

In north end of quadrangle along public road.

Cypress Creek Bridge on "air line" road, about 1.25 miles south and 0.9 mile east of, near south edge of woods, 30 feet northeast of road; oak tree painted "U. S. B. M. 271"; copper nail in root, elevation 121.04 feet.....	29 59 09.01	95 29 49.20	.....
Pemble's store, 3.4 miles southwest of, on Erhart Road, 3,000 feet S. 20° W. from crossroads, 35 feet northwest of center of road, in open prairie; iron post stamped "Prim. Trav. Sta. No. 132, 1915," elevation 117.915 feet.....	29 58 15.06 29 58 43.40	95 29 41.94 95 29 29.93	..... 3,052
Crossroads.....	29 59 26.50	95 29 12.24	4,625
Pemble's store, 1.9 miles southwest of, 25 feet southeast of road, oak tree painted "U. S. B. M. 272"; copper nail in hub, elevation 120.16 feet.....	29 59 45.20	95 28 59.02	2,220
Pemble's store, 1.4 miles southwest of, on Erhart road, 75 feet northeast of house of W. T. Krimmel, 20 feet southeast of road and 20 feet west of fence line; iron post stamped "Prim. Trav. Sta. No. 123, 1915," elevation 122.366 feet.....	29 59 46.00	95 27 18.98	.....
Pemble's store, 0.9 mile southeast of, on Erhart road, 20 feet west of road at bend; iron post stamped "Prim. Trav. Sta. No. 124, 1915," elevation 112.919 feet.....	29 59 14.30	95 26 41.60	4,589
Premble's store, 1.8 miles southeast of, 2.2 miles northwest of forks of E. Montgomery road, 120 feet south of gateway to small house, 25 feet west of road, 6 inches from fence corner, witness stake painted "U. S. B. M. 275"; copper nail in hub, elevation 105.48 feet.....	29 58 40.38	95 26 01.97	4,888
Aldine, 3.15 miles north and 3.1 miles west of, 1.25 miles north of forks of E. Montgomery road, 150 feet south of small house, 20 feet east of road, 6 inches from corner fence post painted "U. S. B. M. 276"; copper nail in hub, elevation 102.82 feet.....	29 57 55.86	95 25 07.84	6,551
Aldine, 2.3 miles north and 2.3 miles west of, 25 feet east of E. Montgomery road, opposite forks of road, 55 feet north of road going east in open prairie; iron post stamped "Prim. Trav. Sta. No. 125, 1915," elevation 100.508 feet.....	29 57 57.16	95 24 17.06	4,471
Aldine, 2.3 miles north and 1.5 miles west of, 1 mile west of International & Great Northern Ry., 135 feet north of road; gum tree, one of a group of five, painted "U. S. B. M. 277"; copper nail in root, elevation 101.38 feet.....			

Along road close to railroad near east border of quadrangle.

Westfield, 2 miles south of, 30 feet west of center of road, 0.60 mile north of milepost 134, 1 foot east of right-of-way fence; copper nail in hub, post and witness stake painted "U. S. B. M. 238," elevation 101.18 feet.....	29 59 39.91	95 23 44.33	.....
Westfield, 2.70 miles south of, 650 feet south of milepost 134, 108 feet east of track, 25 feet east of center of road, 4 feet from corner fence post; iron post stamped "Prim. Trav. Sta. No. 107, 1915," elevation 102.747 feet.....	29 59 03.10	95 23 34.49	3,820
Road crossing, top of rail, elevation 103.5 feet.....			
Aldine, 2.65 miles north of, 1,800 feet north of a road crossing, 25 feet west of center of road, 4 feet east of right-of-way fence line, 15 feet east of telegraph pole; copper nail in hub, witness stake 3 feet west painted, pole painted "U. S. B. M. 239," elevation 97.217 feet.....	29 58 13.62	95 23 22.77	5,103
Aldine, 2.30 miles north of, public road crossing International & Great Northern Ry.....	29 57 56.21	95 23 19.06	1,789
500 feet southeast of two-story white house; top of rail, elevation 96.1 feet.....			

ALDINE QUADRANGLE—Continued.

Along road close to railroad near east border of quadrangle—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
Aldine, 1.75 miles north of, 40 feet east of center of railroad track, 45 feet west of public road, 1 foot east of telegraph pole, painted "U. S. B. M. 240," elevation 87.92 feet.....	° ' " 29 57 26.07	° ' " 95 23 11.08	<i>Feet.</i> 3, 126
International & Great Northern Ry. bridge 280, over Green's Bayou, top of rail, 87.4 feet.....			

Along road close to railroad near west border of quadrangle.

Aldine, 1.10 miles north of, 240 feet south of south end of highway bridge over Greens Bayou, 60 feet east of center of railroad track, 25 feet west of center of road, 8 feet east of telephone pole; iron post stamped "Prim. Trav. Sta. No. 108, 1915," elevation 82.465 feet.....	29 56 53.83	95 23 02.77	3, 339
Aldine, 1,400 feet north of station, 25 feet west of center of road, 120 feet southwest of store, 1 foot from telegraph pole painted "U. S. B. M. 241"; copper nail in hub, elevation 81.595 feet.....	29 56 10.62	95 22 52.04	4, 467
Aldine, 75 feet east of station, road crossing the International & Great Northern Ry.; top of rail, 85.7 feet.....	29 55 56.42	95 22 48.20	1, 474
Aldine, about 0.75 mile south of, 30 feet west of center of road, 50 feet east of railroad track, about 50 feet north of steps over fence, 2 feet east of telephone pole painted "U. S. B. M. 242"; copper nail in hub, elevation 81.56 feet.....	29 55 18.79	95 22 39.05	3, 887
Aldine, 1.20 miles south of, 55 feet east of center of track, 30 feet west of center of road, 300 feet south of small wooden bridge, 3 feet east of right-of-way fence line; iron post stamped "Prim. Trav. Sta. No. 109, 1915," elevation 81.122 feet.....	29 54 55.51	95 22 32.97	2, 412

ALIEF QUADRANGLE.

Along Westheimer road.

Station.	Latitude.	Longitude.	Distance between stations.
Houston, 6.3 miles west of city limits, on Westheimer road, about 1 mile north and 0.5 mile east of Jeanetta, 25 feet south and 20 feet east of T road corner, 2.5 feet from corner fence post; iron post stamped "Prim. Trav. Sta. No. 9, 1915," elevation 72.583 feet.....	° ' " 29 44 13.55	° ' " 95 30 50.58	<i>Feet.</i> 2, 200
T road corners, roads east, west, and north.....	29 44 13.52	95 31 15.54	
Houston, 7.4 miles west of city limits, on Westheimer road, 25 feet north of center of road, on line of north and south fence, close to corner fence post; copper nail in hub; post painted "U. S. B. M. No. 17," elevation 74.53 feet.....	29 44 13.35	95 31 54.66	3, 449
Houston, 8.3 miles west of city limits, on Westheimer road, 25 feet north of center of road, in line with fence line north, 1 foot from corner fence post; copper nail in hub, painted on post "U. S. B. M. No. 18," elevation 79.36 feet.....	29 44 12.56	95 32 52.99	5, 142
Alief, 2 miles east and 1.5 mile north of, on Westheimer road, 25 feet south and 20 feet west of T road south, 2 feet from fence corner, about 350 feet north of large new house; iron post stamped "Prim. Trav. Sta. No. 10, 1915," elevation 81.030 feet.....	29 44 11.55	95 33 35.26	3, 728
Alief, 2 miles east of, about 0.5 mile north of San Antonio & Aransas Pass Ry., 20 feet west of center of north and south road, 1 foot from corner fence post, at fence line west; post painted "U. S. B. M. No. 19"; copper nail in hub, elevation 80.48 feet.....	29 43 31.45	95 33 34.42	4, 052
Alief, about 2.25 miles southeast of, 80 feet north of east and west road, north and south road crossing over San Antonio & Aransas Pass Ry.....	29 43 03 45	95 33 33.56	2, 829
Alief, about 1.6 miles east of, 30 feet north of center of public road and about 60 feet south of San Antonio & Aransas Pass Ry., 1 foot from telephone pole painted "U. S. B. M. No. 20"; copper nail in hub, elevation 79.80 feet.....	29 43 00.92	95 33 58.88	2, 247
Alief, about 1.1 miles east of, 30 feet south of center of public road, 100 feet south of San Antonio & Aransas Pass Ry., opposite railroad post marked "1 Mile to Station"; iron post stamped "Prim. Trav. Sta. No. 11, 1915," elevation 80.667.....	29 42 57.98	95 34 27.89	2, 575
Brays Bayou, San Antonio & Aransas Pass Ry. bridge over; top of rail, elevation 83.5 feet.....			
Alief station, 50 feet south and 60 feet east of, 170 feet west of road north, across track, 1 foot north of telephone pole painted "U. S. B. M. No. 21"; copper nail in hub, elevation 79.53 feet.....	29 42 53.15	95 35 33.41	5, 797

ALIEF QUADRANGLE—Continued.

Along Westheimer road—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
Alief, 1 mile south of, opposite L. L. Holland's residence, 1 foot from gatepost at entrance to barnyard; copper nail in hub, "U. S. B. M. No. 22," elevation 82.09 feet.....	° ' " 29 41 56.38	° ' " 95 35 45.10	<i>Feet.</i> 5,827
Alief, 1.75 miles south of, 25 feet west of center of north and south road, 2 feet from gatepost in wire fence line; iron post stamped "Prim. Trav. Sta. No. 12, 1915," elevation 82.533 feet.....	29 41 19.60	95 41 45.01	3,715
Alief, 2.6 miles south of, 25 feet south of east and west road, known as Richmond Road, 2 feet north of gatepost, painted "U. S. B. M. No. 23"; copper nail in hub, elevation 87.06 feet.....	29 40 32.39	95 35 44.05	4,770
Alief, 2.6 miles south by 0.8 mile east of floor of wooden culvert, elevation 86.4 feet.....			
Alief, 2.6 miles south by 1.1 miles east of, 25 feet north of center of road, 1,200 feet southwest from two-story white house; copper nail in hub, post painted "U. S. B. M. No. 24," elevation 83.95 feet.....	29 40 27.31	95 34 28.00	6,729
Alief, 2.6 miles south and 1.7 miles east of, on Richmond Road, on open prairie, no fences, N. 67° W., distant 0.5 mile to two-story white house with windmill and red barn, 1,200 feet east of small angle in road, 35 feet north of center of road; iron post stamped "Prim. Trav. Sta. No. 13, 1915," elevation 81.593 feet..	29 40 26.91	95 33 53.06	3,082
Alief, 2.6 miles south by 2.4 miles east of, 55 feet north of east and west road; in root of lone tree on prairie; copper nail, tree painted "U. S. B. M. No. 25," elevation 75.05 feet.....	29 40 28.94	95 33 24.65	2,516
Alief, 2.6 miles south by 3.5 miles east of, 1 foot from fence post in front of one and one-half story house; copper nail in hub, post painted "U. S. B. M. No. 26," elevation 72.48 feet.....	29 40 32.79	95 32 15.87	6,080
Missouri City, about 4.2 miles north of, 60 feet east of road south, in line with road west; iron post stamped "Prim. Trav. Sta. No. 14, 1915," elevation 66.899 feet.....	29 40 34.27	95 31 40.80	3,098
Missouri City, 3 miles north and 0.6 mile east of, 35 feet east of center of north and south road, 6 inches from corner fence post at fence line east; copper nail in hub, post painted "U. S. B. M. No. 27," elevation 71.43 feet.....	29 39 46.15	95 31 40.26	4,861
Missouri City, 2.6 miles north of, 1.25 miles south of Richmond Road, 20 feet north and 25 feet east of right angle in road, 1 foot east of corner fence post painted "U. S. B. M. No. 25"; copper nail in hub, elevation 73.29 feet.....	29 39 21.82	95 32 10.52	3,628
Missouri City, about 1.7 miles north of, on south side of angle in road to southwest, 30 feet south of wooden bridge over ditch; iron post stamped "Prim. Trav. Sta. No. 15, 1915," elevation 72.764 feet.....	29 38 34.02	95 32 09.07	4,831
Missouri City, 1.2 miles north of, on east side of road, 1.5 feet from corner fence post, fence line southeast; copper nail in hub, post painted "U. S. B. M. No. 29," elevation 74.66 feet.....	29 38 12.87	95 32 31.82	2,933
Missouri City, 1 mile northwest of, 50 feet south and 10 feet east from T road corner, 1 foot from corner fence post painted "U. S. B. M. No. 30"; copper nail in hub, elevation 78.38 feet.....	29 37 42.26	95 32 59.90	3,962
Missouri City, about 1.75 miles northeast of, on road to Houston, 40 feet northwest of center of road, 40 feet from center of Southern Pacific R. R. track, 1 foot from telephone pole painted "U. S. B. M. No. 32"; copper nail in hub, elevation 70.27 feet.....	29 37 43.37	95 30 44.23	4,488
Missouri City, 2 miles northeast of; road crossing top of rail, elevation 74.2 feet.....			
Bellaire, about 3 miles west of, on Richmond road, 10 feet north of center of road, in wetserly one of two mesquite trees; copper nail in notch at base, tree painted "U. S. B. M. No. 79," elevation 67.89 feet.....	29 41 07.34	95 30 39.27	
Bellaire, about 2.25 miles west of, on Richmond Road, 45 feet south of center of road, 5 feet from corner fence post at north and south fence line, 10 feet east of gatepost; iron post stamped "Prim. Trav. Sta. No. 39, 1915," elevation 66.650 feet.....	29 41 26.02	95 30 00.43	3,928
Bellaire, about 2.2 miles west of; Richmond Road, about 0.4 mile north of, at corner of fence in open prairie, 6 inches from corner post painted "U. S. B. M. No. 80"; copper nail in hub, elevation 68.37 feet.....	29 41 47.37	95 30 00.82	2,036
Jeanetta, about 1 mile southeast of, about 150 feet south of old dredging machine in open prairie; copper nail in hub, witness stake painted "U. S. B. M. No. 81," elevation 72.18 feet.....	29 42 38.67	95 30 05.72	5,200
Jeanetta, about 1 mile southeast of, 300 feet west of ditch, in root of lone elm tree on prairie; copper nail, tree painted "U. S. B. M. No. 82," elevation 72.14 feet.....	29 42 52.55	95 30 07.05	1,403
Jeanetta, about 1 mile east of, 50 feet north of San Antonio & Aransas Pass Ry. track, 1 foot from telephone pole painted "U. S. B. M. No. 83"; copper nail in hub, elevation 70.43 feet..	29 43 20.51	95 30 09.70	2,834

ALIEF QUADRANGLE—Continued.

Along Jeanetta-Hillendahl road.

Station.	Latitude.	Longitude.	Distance between stations.
Westheimer road, 1,700 feet north of Jeanetta-Hillendahl road, 25 feet north and 25 feet east of right angle bend in road, 6 inches from corner fence post painted "U. S. B. M. No. 149;" copper nail in hub, elevation 72.22 feet.....	° ' "	° ' "	Feet.
Buffalo Bayou, Jeanetta-Hillendahl wagon road bridge over; center of floor, elevation 64.8 feet.....	29 44 30.71	95 31 22.37	.....

Magnetic declination for quadrangle, 8° 21' E.

From Alief west along San Antonio & Aransas Pass Railway.

San Antonio & Aransas Pass Ry. bridge No. 15.9; top of rail, elevation 85.2 feet.....			
Alief, about 1.1 miles west of, 36 feet north of wagon road, 35 feet south of railroad, 2 feet from telephone pole painted "U. S. B. M. 85;" copper nail in hub, elevation 81.97 feet.....	29 42 47.65	95 36 40.51	.....
San Antonio & Aransas Pass Ry. bridge No. 15.5; top of rail, elevation 86.2 feet.....			

ALMEDA QUADRANGLE.

Along International & Great Northern Railway near north border of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
Almeda, 0.8 mile north of International & Great Northern Ry. bridge 13; top of rail above ditch, elevation 56.4 feet.....	° ' "	° ' "	Feet.
Almeda, 0.9 mile north of, 40 feet east of track; copper nail in hub 1 foot from telephone pole painted "U. S. B. M. 42," elevation 53.44 feet.....	29 36 59.31	95 25 04.05	.....
Almeda, 0.7 mile north of; center of track at road crossing.....	29 36 47.99	95 25 09.03	1, 225
Almeda station, about 115 feet south and 90 feet east of, 30 feet north of east and west road, 2 feet from corner fence post; iron post stamped "Prim. Trav. Sta. No. 21, 1915," elevation 61.962 feet.....	29 36 14.49	95 25 21.25	3, 551
Almeda, about 0.6 mile east of, T road west.....	29 36 14.59	95 24 47.39	2, 990
Almeda, about 0.75 mile southeast of, crossroads 35 feet northeast of; 1.5 feet east of telephone pole painted "U. S. B. M. 43," 2 feet from corner fence post; copper nail in hub, elevation 63.29 feet.....	29 35 56.13	95 24 47.12	1, 865
Almeda, about 1.5 miles east by 0.3 mile south of, 25 feet north of center of road; 1 foot south of telephone pole painted "U. S. B. M. 44," copper nail in hub, elevation 63.41 feet.....	29 35 57.07	95 23 55.42	4, 565
Almeda, about 2.4 miles east by 0.3 mile south of, 30 feet southwest of small bridge over ditch, 35 feet south of east and west road, 25 feet west of ditch, on top of small embankment inside of field; iron post stamped "Prim. Trav. Sta. No. 22, 1915," elevation 60.991 feet.....	29 35 57.10	95 23 02.71	4, 654
Almeda, about 2.9 miles east by 0.6 mile south of, 20 feet south of east and west road; 1 foot from telephone pole painted "U. S. B. M. 45," copper nail in hub, elevation 58.18 feet.....	29 35 38.36	95 22 36.91	2, 962

Magnetic declination near north border of quadrangle, 8° 27' E.

ASHFORD QUADRANGLE.

From a point on Houston & Texas Central Railroad, 1.65 miles northwest of Satsuma, northeast along public road.

Station.	Latitude.	Longitude.	Distance between stations.
Satsuma, 1.5 miles north and 0.5 mile west of, 15 feet south of center of road in open prairie; witness stake painted "U. S. B. M. 286;" copper nail in hub, elevation 128.06 feet.....	° ' "	° ' "	Feet.
Satsuma, 1.75 miles north of, 50 feet south of public road, 80 feet southeast of small bridge; ash tree painted "U. S. B. M. 287;" copper nail in root, elevation 122.46 feet.....	29 55 14.44	95 36 22.73	.....
	29 55 29.04	95 35 50.89	3, 167

ASHFORD QUADRANGLE—Continued.

From a point on Houston & Texas Central Railroad, 1.65 miles northwest of Satsuma, northeast along public road—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
Satsuma, 2.3 miles north and 0.8 mile east of, 35 feet north and 20 feet east of crossroads in open prairie; iron post stamped "Prim. Trav. Sta. No. 129, 1915," elevation 127.880 feet.....	29 55 57.94	95 35 04.44	<i>Fect.</i> 5,023
Satsuma, 2.6 miles north and 1.2 miles east of, 0.5 mile northeast of crossroads, near center line of road; oak tree painted "U. S. B. M. 238"; copper nail in root, elevation 128.74 feet.....	29 56 12.45	95 34 39.92	2,609
Satsuma, 3 miles north and 1.9 miles east of, 20 feet north of road; in root of oak tree on wire fence line, painted "U. S. B. M. 289"; copper nail, elevation 129.71 feet.....	29 56 36.75	95 34 00.87	4,223
Satsuma, 4 miles north and 2.1 miles east of, 25 feet north and 25 feet east of crossroads; iron post stamped "Prim. Trav. Sta. No. 130, 1915," elevation 128.763 feet.....	29 57 29.74	95 33 49.47	5,446
North Houston, 1.8 miles north and 1.5 miles west of, 1.3 miles west of Trinity & Brazos Valley Ry., 25 feet north of center of road in open prairie; witness stake painted "U. S. B. M. 290"; copper nail in hub, elevation 124.31 feet.....	29 57 12.61	95 32 51.42	5,392
North Houston, 1.5 miles north and 1.3 miles west of, 20 feet north and 5 feet east of crossroads, 1 foot from northeast corner of small bridge painted "U. S. B. M. 291"; copper nail in hub, elevation 123.26 feet.....	29 57 05.92 29 56 56.34	95 52 28.80 95 31 56.69	2,100 2,986
Satsuma, 3.4 miles north and about 4 miles east of, T road corners. North Houston, about 1.3 miles northwest of, 215 feet southeast of crossroads of West Montgomery road and Trinity & Brazos Valley Ry., 55 feet east of center of track, 30 feet west of public road, 6 feet from corner fence post; iron post stamped "Prim. Trav. Sta. No. 131, 1915," elevation 121.672 feet.....	29 56 36 51	95 31 31.80	2,968
Pemle's store, 5.3 miles southwest of, Trinity & Brazos Valley Ry. and West Montgomery road crossing, 0.9 mile northeast of, 12 feet north of wire fence line which bears N. 57° E., true; oak tree painted "U. S. B. M. 292"; copper nail in root, elevation 121.15 feet.....	29 57 10.13	95 30 53.70	4,774
Pemle's store, 4.3 miles southwest of, Trinity & Brazos Valley Ry. and West Montgomery road crossing, 1.1 miles north and 1.4 miles east of, 1.5 miles southwest of "air line" road, 100 feet southeast of Emily Hargreaves' house; mulberry tree painted "U. S. B. M. 293"; copper nail in root, elevation 118.36 feet.....	29 57 37.41	95 30 05.53	5,055

In northeast corner of quadrangle along Air-line road.

Cypress Creek Bridge, 0.7 mile southeast of, on Air-line road, 20 feet west of center of road, 3 feet from corner post, on fence line west; iron post stamped "Prim. Trav. Sta. No. 122, 1915," elevation 120.421 feet.....	29 59 54.65	95 30 22.90
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Southeast from crossing of Trinity & Brazos Valley Railway and West Montgomery road.

North Houston station, about 0.7 mile north of, on West Montgomery road, 30 feet northeast of center of road, at junction of wire and board fences, 6 inches from corner fence post, painted "U. S. B. M. 294"; copper nail in hub, elevation 117.90 feet.....	29 56 09.02	95 30 55.61	.....
North Houston, about 0.5 mile N. 60° E. from, 20 feet southwest of center of road, 6 inches from corner post; on fence line west, painted "U. S. B. M. 295"; copper nail in hub, elevation 111.51 feet.....	29 55 36.73	95 30 13.96	4,906

Along public road.

Satsuma, 1.7 miles northwest of, 50 feet north of railroad crossing, 30 feet south of road, 18 inches south of corner fence post; copper nail in hub, pole painted "U. S. B. M. 133," elevation 130.54 feet.....	29 54 52.51	95 37 11.33	.....
Satsuma, 0.75 mile northwest of, 800 feet northwest of milepost 19, 50 feet north of railroad, 30 feet south of road; 1 foot from telephone pole painted "U. S. B. M. 134"; copper nail in hub, elevation 124.81 feet.....	29 54 22.52	95 36 28.87	4,811
Satsuma, 75 feet south of store and post office, 150 feet northwest of station signboard, 80 feet north of railroad; iron post stamped "Prim. Trav. Sta. No. 64, 1915," elevation 120.704 feet.....	29 53 57.75	95 35 52.54	4,060
Private road crossing, 600 feet northeast of house, top of rail, elevation 121.6 feet.....			.....
Satsuma, 1 mile southeast of, 50 feet west of T road north, 60 feet north of railroad, 30 feet south of road; 1 foot from telephone pole painted "U. S. B. M. 135"; copper nail in hub, elevation 117.22 feet.....	29 53 22.54	95 35 03.61	5,587

ASHFORD QUADRANGLE—Continued.

Along public road—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
Satsuma, 2.1 miles southeast of, 60 feet northeast of railroad crossing, 35 feet south of T road southwest; 1 foot from fence corner post painted "U. S. B. M. 136"; copper nail in hub, elevation 112.95 feet.....	° ' " 29 52 48.73	° ' " 95 34 15.58	<i>Feet.</i> 5,435
Satsuma, 2.65 miles southeast of, 35 feet north of center of public road, 4 feet east of telephone pole; iron post stamped "Prim. Trav. Sta. No. 65, 1915," elevation 112.020 feet.....	29 52 30.37	95 33 48.40	3,028

Along highways near south border of quadrangle.

Brink schoolhouse, about 4.3 miles east of, about 2.5 miles west of Houston & Texas Central R. R., 15 feet south of road, in open prairie; copper nail in hub, witness stake painted "U. S. B. M. 175," elevation 123.94 feet.....	29 52 44.89	95 36 41.91	.....
Brink schoolhouse, 5.3 miles east of, Houston & Texas Central R. R., 1.4 miles west of, 15 feet south of center of road in open prairie; copper nail in hub, witness stake painted "U. S. B. M. 176," elevation 120.24 feet.....	29 52 46.71	95 35 41.43	5,328
Houston & Texas Central R. R., 0.6 mile west of, 20 feet north of center of east and west road, 1 foot from fence line; copper nail in hub; witness stake painted "U. S. B. M. 177," no elevation..	29 52 47.90	95 34 53.72	4,201

Magnetic declination for quadrangle, 8° 30' E.

BELLAIRE QUADRANGLE.

Along highway in north half of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
Houston, Blodgett subdivision, 320 feet southeast of intersection of Southern Pacific R. R. and San Antonio & Aransas Pass Ry. tracks, 30 feet from center of and in line with fence on south side of Fannin Street; iron post stamped "Prim. Trav. Sta. No. 6, 1915," elevation 53.693 feet.....	° ' " 29 43 54.36	° ' " 95 22 59.13	<i>Feet.</i>
Houston, Blodgett subdivision, crossing of Southern Pacific R. R. and San Antonio & Aransas Pass Ry.; top of rail at intersection 56.9 feet.....	29 43 54.56	95 23 02.78	323
Montrose, northeast corner of intersection of Mount Vernon Avenue and Richmond Road; 6 inches from telephone pole painted "U. S. B. M. No. 11"; copper nail in hub, elevation 56.10 feet.....	29 44 03.15	95 23 36.61	3,105
Houston, city limits on Richmond Road, 20 feet north of center line of road at bend, 28 feet north of mail box No. 13; at corner post on fence line west; copper nail in hub, "U. S. B. M. No. 12," elevation 56.56 feet.....	29 44 02.44	95 24 45.90	6,109
Houston, 1,800 feet west of city limits, intersection of north and south road and Richmond Road.....	29 43 50.57	95 25 06.70	2,191
Houston, 1,800 feet west of city limits, 230 feet west of John Smith schoolhouse, 25 feet south of Westheimer road, 5 feet from corner of blacksmith shop; iron post stamped "Prim. Trav. Sta. No. 7, 1915," elevation 60.211 feet.....	29 44 30.99	95 25 06.81	4,083
Houston, about 1.25 miles west of city limits, on Westheimer road, on south end of west side of stone culvert; chiseled square, "U. S. B. M. No. 13," elevation 64.49 feet.....	29 44 29.82	95 26 00.90	4,770
Railroad crossing, Stella cut off; top of rail, elevation 67.4 feet.....			.....
Houston, about 2.1 miles west of city limits, 80 feet west of railroad, 20 feet north of road; 1 foot from telephone pole painted "U. S. B. M. No. 14;" copper nail in hub, elevation 64.75 feet.....	29 44 29.01	95 26 53.84	4,668
Houston, 3 miles west of city limit, 200 feet west of Post Oaks schoolhouse, opposite Fairview store, 1 foot from fence, 30 feet south of road; iron post stamped "Prim. Trav. Sta. No. 8, 1915," elevation 65.862 feet.....	29 44 25.64	95 27 41.22	4,190
Houston, 4.1 miles west of city limit, on Westheimer road, 1 mile west of Fairview store, 60 feet east of V. S. Ulrich's mail box; 6 inches from telephone pole painted "U. S. B. M. No. 15;" copper nail in hub, elevation 65.10 feet.....	29 44 15.06	95 28 37.68	5,091
Houston, 5.2 miles west of city limit, about 2 miles west of Fairview store, at east end of railing of small wooden bridge; copper nail in hub, "U. S. B. M. No. 16," elevation 70.43 feet.....	29 44 14.45	95 29 43.85	5,833

BELLAIRE QUADRANGLE—Continued.

Along highways in south half of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
Missouri City, 2.65 miles northeast of, 25 feet northwest of center of road, 50 feet southeast of center of Southern Pacific R. R. track, 1 foot from wire fence line; iron post stamped "Prim. Trav. Sta. No. 17, 1915," elevation 70.391 feet.....	29 38 03.35	95 29 52.12	Feet. 5,022
Missouri City, 3.5 miles northeast of, 50 feet southeast of Southern Pacific R. R. track, 40 feet northwest of shell road; 2 feet from telephone pole, painted "U. S. B. M. No. 33"; copper nail in hub, elevation 70.30 feet.....	29 38 21.34	95 29 05.71	4,482
Missouri City, 4.4 miles northeast of, 40 feet southeast of Southern Pacific R. R. track, 40 feet northeast of road, 400 feet west of house; 2.5 feet from telephone pole painted "U. S. B. M. No. 34"; copper nail in hub, elevation 69.60 feet.....	29 38 39.31	95 28 19.01	4,502
Missouri City, 5.2 miles northeast of, 25 feet northwest of road, 55 feet southeast from Southern Pacific R. R. track, about 350 feet northeast of signboard "Station 1 mile"; 1 foot from wire fence; iron post stamped "Prim. Trav. Sta. No. 18, 1915," elevation 69.056 feet.....	29 38 56.08	95 27 35.24	4,218
Missouri City, 5.6 miles northeast of, 45 feet southeast of Southern Pacific R. R., about 70 feet southeast from shell road crossing of railroad; 3 feet from telephone pole painted "U. S. B. M. No. 35"; copper nail in hub, elevation 66.49 feet.....	29 39 09.40	95 27 00.88	3,317
Stella, 2.5 miles southwest of, 2,000 feet southwest of section house, 50 feet southeast of Southern Pacific R. R. track, 20 feet northwest of second-class road; 2 feet from telephone pole painted "U. S. B. M. No. 36"; copper nail in hub, elevation 65.56 feet.....	29 39 27.97	95 26 12.79	4,640
Stella, 1.5 miles southwest of, opposite signboard "1 mile to station," 42 feet southeast of center of Southern Pacific R. R. track; iron post stamped "Prim. Trav. Sta. No. 19, 1915," elevation 60.251 feet.....	29 39 44.17	95 25 24.21	4,588
Stella, 0.4 mile southwest of, 275 feet southwest of whistle post, 50 feet southeast of Southern Pacific R. R. track; 1.5 feet from post in right-of-way fence, painted "U. S. B. M. No. 37"; copper nail in hub, elevation 50.04 feet.....	29 40 01.93	95 24 25.02	5,523
Stella station; top of rail opposite semaphore, elevation 56.7 feet.....	29 40 13.84	95 23 47.16	3,551
Pierce Junction, center of tracks at; top of rail, elevation 55.2 feet.....			

Along International & Great Northern Railway.

Pierce Junction, 332 feet south of, 35 feet east of track, 35 feet west of center of public road; 1 foot from telephone pole painted "U. S. B. M. No. 38"; copper nail in hub, elevation 52.45 feet.....	29 40 10.63	95 23 47.99	332
Pierce Junction, 0.9 mile south of, 40 feet east of track, 150 feet south of sign "1 mile to R. R. crossing"; 1 foot from telephone post painted "U. S. B. M. No. 39"; copper nail in hub, elevation 59.28 feet.....	29 39 28.32	95 24 04.70	4,492
Pierce Junction, 1.75 miles south of, 900 feet south of switch, 40 feet east of track; 1 foot from telephone pole painted "U. S. B. M. No. 40"; copper nail in hub, elevation 56.92 feet.....	29 38 46.53	95 24 21.45	4,501
Alameda, 2.6 miles north of, 48 feet east of track, opposite mile board No. 9, nearly opposite white house west of road; iron post stamped "Prim. Trav. Sta. No. 20, 1915"; elevation 56.100 feet.....	29 38 27.50	95 24 28.91	2,030
Alameda, 2.1 miles north of, I. & G. N. Ry. bridge No. 17; top of rail, elevation 55.9 feet.....			
Alameda, 1.8 miles north of, 450 feet north of T road west to white house, 35 feet east of track; 1 foot from telephone pole painted "U. S. B. M. No. 41"; copper nail in hub, elevation 55.46 feet.....	29 37 44.09	95 24 46.29	4,645
Blodgett, 1 mile south of, on south end of east side of Southern Pacific R. R. bridge 5 C; copper nail and washer painted "U. S. B. M. No. 66," elevation 52.94 feet.....	29 43 05.80	95 22 48.45	
Southern Pacific R. R. bridge over Brays Bayou, No. 6 A; top of rail, elevation 51.4 feet.....			

Along Southern Pacific Railroad.

Blodgett, 2 miles south of, 50 feet north of T road west, 30 feet west of Alameda road; 1 foot from telephone pole painted "U. S. B. M. No. 67"; copper nail in hub, elevation 48.37 feet.....	29 42 14.29	95 23 05.60	5,418
Blodgett, 2.6 miles south of, about 450 feet west of small bungalow on east side of road, in fence corner, 35 feet northeast of T road east to house; iron post stamped "Prim. Trav. Sta. No. 33, 1915," elevation 50.934 feet.....	29 41 49.77	95 23 13.27	2,567
Pierce Junction, about 1 mile northeast of, on east side of track and west side of Alameda road, 1 foot from telephone pole painted "U. S. B. M. No. 68"; copper nail in hub, elevation 50.59 feet.....	29 41 03.56	95 23 29.78	4,889

BELLAIRE QUADRANGLE—Continued.**Along Southern Pacific Railroad**—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
Pierce Junction, about 0.3 mile north and 0.9 mile east of, 80 feet south of signboard "R. R. crossing 1 mile," 45 feet southeast from center of railroad track; iron post stamped "Prim. Trav. Sta. No. 34, 1915," elevation 52.612 feet.....	° ' "	° ' "	<i>Feet.</i>
Jeannetta, about 1.5 miles east of, 0.4 mile north of railroad track, in open prairie, 50 feet west of drainage ditch; copper nail in hub, witness stake painted "U. S. B. M. No. 84," elevation 69.95 feet.....	29 40 29.97	95 22 51.80	.....
	29 43 42.97	95 29 44.12	.....

Near north border of quadrangle.

Houston, intersection of Westheimer and Shepherd dam roads, 30 feet north and 30 feet west of, 6 inches from corner fence post painted "U. S. B. M. 148"; copper nail in hub, elevation 58.63 feet.....	29 44 32.55	95 24 38.54
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Magnetic declination in quadrangle, 8° 13' E.

BURNETT BAY QUADRANGLE.**Along public road between Crosby and Lynchburg.**

Station.	Latitude.	Longitude.	Distance between stations.
Crosby, 3.0 miles south and 0.4 mile east of, 25 feet west of road, 30 feet south of drain pipe under road, 1 foot east of telephone pole painted "U. S. B. M. 382"; copper nail in hub, elevation 46.01 feet.....	° ' "	° ' "	<i>Feet.</i>
Crosby, 3.5 miles south and 0.5 mile east of, 1,100 feet south of angle in road, 25 feet west of road and 15 feet north of gateway, 2½ feet from wire fence; iron post stamped "Prim. Trav. Sta. No. 164, 1915," elevation 49.148 feet.....	29 51 55.86	95 03 40.50	.....
Crosby, 4.2 miles south and 0.6 mile east of, 250 feet northeast of a residence, 25 feet west of road at wire fence line; pine tree painted "U. S. B. M. 383"; copper nail in root, elevation 46.80 feet.....	29 51 30.09	95 03 34.44	2,658
Crosby, 5.3 miles south and 0.6 mile east of, 140 feet south of south end of bridge, 25 feet east of road; willow tree painted "U. S. B. M. 384"; copper nail in root, elevation 22.76 feet.....	29 50 54.26	95 03 30.50	3,638
Elena post office, 250 feet south of, 150 feet south of canal at San Jacinto Rice Co.'s plantation, 25 feet west of road and 10 feet south of gateway iron post stamped "Prim. Trav. Sta. No. 165, 1915," elevation 44.723 feet.....	29 49 55.21	95 03 27.06	5,971
Elena, 0.6 mile south of; crossroads.....	29 49 35.28	95 03 27.06	2,015
Elena, 0.9 mile south of, 1,870 feet south of crossroads, 25 feet east of road; persimmon tree painted "U. S. B. M. 385"; copper nail in root, elevation 41.03 feet.....	29 49 06.89	95 03 26.50	2,871
Elena, 1.9 miles south and 0.1 mile east of, 25 feet west of road; oak tree painted "U. S. B. M. 386"; copper nail in root, elevation 39.40 feet.....	29 48 48.55	95 03 25.64	1,856
Lynchburg, 1.75 miles north and 1.25 miles east of, 25 feet west and 20 feet north of T road east, 3 feet from fence line; iron post stamped "Prim. Trav. Sta. No. 166, 1915," elevation 39.431 feet.....	29 47 57.94	95 03 22.18	5,122
Lynchburg, 1 mile north and 0.9 mile east of, 35 feet west of center of road, in woods; ash tree painted "U. S. B. M. 387"; copper nail in root, elevation 4.08 feet.....	29 47 22.89	95 03 28.16	3,581
Lynchburg, 0.1 mile north and 1,800 feet east of, on what is known as Tory Hill, the northeast corner of fence around the residence of E. Sandow is distant 102 feet and the southeast corner of fence is distant 54.5 feet. Station is marked by a U. S. Corps of Engineers standard station mark, elevation 28.121 feet. There are two U. S. Corps of Engineers standard reference marks set flush with the ground, one 105.6 feet N. 89° 40' W., in line with a large cedar tree 138 feet from the station, and the other 83.6 feet N. 0° 50' W., in line with a large hackberry tree, 34 feet from the station.....	29 46 41.35	95 03 49.63	4,604
Lynchburg, about 0.4 mile south and 0.5 mile west of, about 1,500 feet north of San Jacinto battleground reservation, 200 feet north of schoolhouse, 70 feet north of road to ferry and 140 feet west of Lynchburg-Deer Park road; cottonwood tree painted "U. S. B. M. 388"; copper nail in root, elevation 5.90 feet.....	29 45 57.47	95 04 23.51	5,347
	29 45 33.35	95 05 15.76	5,210

BURNETT BAY QUADRANGLE—Continued.

Along public road between Crosby and Lynchburg—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
Lynchburg, 1.25 miles west of, 0.6 mile northwest of upper ferry across ship channel, 25 feet northeast of center of road, on bluff at edge of old river channel; elm tree painted "U. S. B. M. 389"; copper nail in root, elevation 26.72 feet.....	° 4' " 29 45 45.40	° 4' " 95 05 57.10	Feet. 3,841
Floor of bridge over drain, elevation 7.2 feet.....			
Lynchburg, 0.3 mile north and 2.1 miles west of, 20 feet south of road at edge of pine woods, 480 feet west of bridge over ravine; iron post stamped "Prim. Trav. Sta. No. 167, 1915," elevation 32.804 feet.....	29 46 09.04	95 06 48.42	5,116

Near west border of quadrangle.

Lynchburg, 1.5 miles north and 2.75 miles west of, 25 feet east of center of road; pine tree painted "U. S. B. M. 406"; copper nail in root, elevation 40.40 feet.....	29 47 11.44	95 07 28.23	7,214
Lynchburg, 2.5 miles north and 2.7 miles west of, 25 feet east of road and 10 feet south of a private road east; 3 feet from tall post at gateway; iron post stamped "Prim. Trav. Sta. No. 175, 1915, elevation 44.345 feet.....	29 48 06.14	95 07 25.97	5,528
Sheldon, 1,800 feet northeast of, 50 feet southeast of center of road; oak tree painted "U. S. B. M. 344"; wire nail in root, elevation 49.70 feet.....	29 52 26.12	95 06 48.05	
Sheldon, 500 feet southwest of Texas & New Orleans station, 75 feet south of track, on west end of steel culvert, in top of pine post; copper nail painted "U. S. 49.5 B. M.," elevation 49.70 feet.....			
Sheldon, opposite operator's window, top of nearest rail, elevation 52.5 feet.....			
Lynchburg, 0.3 mile north by 2.6 miles west of crossroads, in floor of wooden culvert, southwest corner; copper nail painted "U. S. 34.7 B. M.," elevation 34.93 feet.....			

Near northeast border of quadrangle.

Crosby, 2.25 miles south and 2.7 miles east of, T road easterly.....	29 52 15.30	95 01 02.33	.....
Crosby, 2.5 miles south and 3 miles east of, 25 feet northeast of center of road; 1 foot west of telephone pole painted "U. S. B. M. 424"; copper nail in hub, elevation 42.70 feet.....	29 52 00.29	95 00 44.88	2,159

Along Cedar Bayou-Lynchburg road.

Lynchburg, 0.9 miles south and 2.5 miles east of, near place formerly known as Wooster, in front of house of Junius Brown, 20 feet south of road, in top of concrete horse block; bronze tablet stamped "Prim. Trav. Sta. No. 185, 1915," elevation 30.162 feet.....	29 45 03.24	95 02 09.28	.....
Lynchburg, 0.15 mile south and 2.8 miles east of, 20 feet east of center of road; oak tree painted "U. S. B. M. 439"; copper nail in root, elevation 31.28 feet.....	29 45 43.83	95 01 55.10	4,286
Lynchburg, 0.5 mile north and 2.8 miles east of, 20 feet west of road; oak tree painted "U. S. B. M. 440"; copper nail in root, elevation 32.50 feet.....	29 46 19.55	95 01 55.16	3,608
Lynchburg, 1.5 miles north and 2.8 miles east of, 20 feet south and 25 feet east of T road south, 20 feet west of rice irrigation canal, 15 feet north of corner fence post; iron post stamped "Prim. Trav. Sta. No. 186, 1915," elevation 37.123 feet.....	29 47 12.13	95 01 55.63	5,311
Lynchburg, 1.6 miles north and 2 miles east of, 20 feet north of center of road; oak tree on wire fence line painted "U. S. B. M. 441"; copper nail in root, elevation 35.94 feet.....	29 47 17.53	95 02 45.98	4,470

Magnetic declination for west side of quadrangle, 8° 15' E.; for center, 8° 10' E.; for northeast quarter, 8° 10' E.; for southeast quarter, 8° 10' E.

CEDAR BAYOU QUADRANGLE.

Along Crosby-Cedar Bayou road.

Station.	Latitude.	Longitude.	Distance between stations.
Cedar Bayou post office, 7 miles north and 4.2 miles west of, 25 feet northeast of road, 30 feet northwest of gateway at entrance to farmyard; 1 foot from telephone pole painted "U. S. B. M. 425"; copper nail in hub, elevation 40.58 feet.....	° ' "	° ' "	Feet.
Cedar Bayou post office, 6.4 miles north and 3.5 miles west of, 1,170 feet northwest of angle in road, 25 feet southwest of road, 10 feet southeast of gateway, nearly opposite frame house across road; iron post stamped "Prim. Trav. Sta. No. 179, 1915," elevation 41.265 feet.....	29 51 20.33	94 59 59.51	.....
Cedar Bayou post office, 6.4 miles north and 2.6 miles west of, 25 feet north and 25 feet east of T road south, under wire fence line; 2 feet east of telephone pole painted "U. S. B. M. 426"; copper nail in hub, elevation 36.00 feet.....	29 59 42.75	94 59 17.59	5,295
Cedar Bayou post office, 5.5 miles north and 2.4 miles west of, 30 feet northeast of center of road, opposite frame house across road; 18 inches northeast of telephone pole painted "U. S. B. M. 427"; copper nail in hub, elevation 37.32 feet.....	29 50 42.42	94 58 23.66	4,750
Cedar Bayou post office, 4.6 miles north and 2.3 miles west of, 40 feet south and 10 feet west of crossroads, 12 feet southwest of corner of small bridge; iron post stamped "Prim. Trav. Sta. No. 180, 1915," elevation 37.039 feet.....	29 49 52.36	94 58 12.90	5,145
Cedar Bayou post office, 3.8 miles north and 2.1 miles west of, Ellis League brick schoolhouse, No. 15, in lower concrete step, southwest corner, painted "U. S. B. M. 428"; chiseled square, elevation 38.00 feet.....	29 49 24.41	94 58 07.56	2,863
Cedar Bayou post office, 3.8 miles north and 2 miles west of, T road south.....	29 48 27.89	94 57 53.53	5,842
Cedar Bayou post office, 2.9 miles north and 1.35 miles west of, 40 feet east of road at forks; 1 foot west of telephone pole painted "U. S. B. M. 429"; copper nail in hub, elevation 32.50 feet....	29 48 28.10	94 57 43.85	855
Cedar Bayou post office, 2.15 miles north and 1.5 miles west of, 45 feet east and 20 feet south of crossroads, 3 feet north of corner fence post; iron post stamped "Prim. Trav. Sta. No. 181, 1915," elevation 34.970 feet.....	29 47 49.94	94 57 35.17	3,940
Cedar Bayou post office, 2 miles north and 1 mile west of, crossroads. Cedar Bayou post office, 1.8 miles north and 0.9 miles west of, 1,500 feet northwest of forks or road, 30 feet southeast of road, close to fence line; 1 foot southeast of telephone pole painted "U. S. B. M. 430"; copper nail in hub, elevation 30.57 feet.....	29 47 27.50	94 57 17.19	2,757
Cedar Bayou post office, 0.9 mile north and 0.6 mile west of, 30 feet north and 30 feet west of crossroads; 1 foot south of large corner fence post painted "U. S. B. M. 431"; copper nail in hub, elevation 32.16 feet.....	29 46 50.99	94 56 47.99	4,497
Cedar Bayou post office, 1 mile north of, 30 feet north of center of road and just west of angle in road; oak tree painted "U. S. B. M. 432"; copper nail in root, elevation 25.24 feet.....	29 46 43.65	94 56 41.68	926
Cedar Bayou post office, 1 mile north and 0.6 mile east of, 1 mile east of ferry across bayou, at forks of road, 115 feet S. 16° W. from corner of R. J. Tompkin's house; iron post stamped "Prim. Trav. Sta. No. 182, 1915," elevation 23.553 feet.	29 45 56.17	94 56 22.75	5,079
Cedar Bayou post office, 0.3 mile north and 0.2 mile east of, 900 feet northeast of Masonic Hall, 15 feet southeast of road on top of concrete culvert wall, painted "U. S. B. M. 433"; chiseled square, elevation 21.03 feet.....	29 46 02.04	94 55 45.29	3,355
Cedar Bayou post office, about 550 feet northeast of, in top of east end of concrete culvert; chiseled square painted "U. S. B. M. 434"; elevation 6.41 feet.....	29 46 04.54	94 55 12.35	2,914
	29 45 25.54	94 55 36.54	4,480

Magnetic declination for center of quadrangle, 8° 07' E.; for south side, 8° 02' E.

CLODINE QUADRANGLE.

Along San Antonio & Aransas Pass Railway.

Station.	Latitude.	Longitude.	Distance between stations.
Alief, 2 miles west of, 30 feet north of wagon road, 40 feet south of railroad, 1 foot from telephone pole milepost 17; copper nail in hub, pole painted "U. S. B. M. 86"; elevation 83.52.....	° ' "	° ' "	Feet.
Clodine, 2.7 miles east of, 45 feet northeast of T road north, 55 feet southeast of railroad crossing north and south road, 1 foot from fence corner, 200 feet west of milepost 18; iron post stamped "Prim. Trav. Sta. 40, 1915, 85," elevation 85.498.....	29 42 43.15	95 37 35.41	.....
	29 42 38.08	95 38 36.95	5,453

CLODINE QUADRANGLE—Continued.

Along San Antonio & Aransas Pass Railway—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
San Antonio & Aransas Pass Ry. bridge 18.5 top of rail, elevation 89.1.....	° ' "	° ' "	Feet.
Clodine, 1.7 miles east of, 50 feet northeast of T road north, 40 feet southeast of railroad crossing, 1 foot from fence corner post, 250 feet northeast of a small bungalow; copper nail in hub, post painted "U. S. B. M. 87," elevation 89.850.....	29 42 33.20	95 39 36.70	5,290
Clodine, 1 mile east of, 49 feet north of railroad track, 20 feet south of wagon road, about 200 feet south of small yellow house; copper nail in hub, "U. S. B. M. 88," elevation 93.53.....	29 42 30.93	95 40 16.10	3,483
Clodine station, about 1,000 feet northeast of, at corner of county; a concrete monument 12 inches square and 15 inches above ground marked "10 miles," no elevation.....	29 42 34.62	95 41 09.23	4,700
Clodine, about 240 feet south of road crossing, which is 140 feet west of San Antonio & Aransas Pass Ry. station, 25 feet west of center of north and south road and about 1.5 feet from corner fence post; iron post stamped "Prim. Trav. Sta. No. 41, 1915," elevation 95.202 feet.....	29 42 22.98	95 41 17.10	1,364

Along Clodine-Barker road.

Clodine, 1 mile north of, 25 feet west of center of road, 3 feet south of fence corner at fence line west; copper nail in hub, post painted "U. S. B. M. 89," elevation 93.24.....	29 43 16.59	95 41 16.59	5,416
Clodine, about 2 miles north of, 50 feet north of T road corners, roads east, west, and north, 1 foot from fence post; copper nail in hub, post painted "U. S. B. M. 90," elevation 92.12.....	29 44 05.06	95 41 16.30	4,896
Clodine, about 2.7 miles north of, 2.6 miles south of Barker, 0.7 mile south of bridge over Buffalo Bayou, on east side of road, close to wire fence, opposite small wooden bridge; iron post stamped "Prim. Trav. Sta. No. 42, 1915," elevation 87.716.....	29 44 46.61	95 41 06.17	4,291

Magnetic declination for north half of quadrangle, 8° 30' E.

CROSBY QUADRANGLE.

Along Huffman-Crosby road.

Station.	Latitude.	Longitude.	Distance between stations.
Crosby, 5.5 miles north and 1.4 miles west of, 20 feet west of center of road, on south side of private road west, opposite gate on east side of road, 1 foot north of telephone pole, painted "U. S. B. M. 336;" wire nail in hub, elevation 63.53 feet.....	29 59 20.44	95 05 29.33	.....
Crosby, 4.6 miles north and 1.2 miles west of, 100 feet north of a fence corner 25 feet west of road, 1 foot east of telephone pole painted "U. S. B. M. 337;" wire nail in hub, elevation 64.37 feet.....	29 58 35.27	95 05 18.60	4,660
Crosby, 4.1 miles north and 1.1 miles west of, 30 feet east and 30 feet south of T road east, 3 feet southeast of corner fence post; iron post stamped "Prim. Trav. Sta. No. 146, 1915," elevation 60.778 feet.....	29 58 08.97	95 05 11.92	2,722
Crosby, 3.7 miles north and 1 mile west of; T road west, near Gum Gulley schoolhouse.....	29 57 45.17	95 05 07.45	2,438
Crosby, 3.2 miles north and 0.8 mile west of, 3,000 feet south of Gum Gulley schoolhouse, 30 feet west of center of road, at north end of gate; 6 inches from gate post, painted "U. S. B. M. 338;" wire nail in hub, elevation 57.48 feet.....	29 57 19.10	95 04 53.46	2,907
Crosby, 2.5 miles north and 0.4 mile west of, 50 feet east of road at angle; gum tree painted "U. S. B. M. 339;" wire nail in root, elevation 55.77 feet.....	29 56 44.44	95 04 32.37	3,963
Crosby, 1.5 miles north and 0.3 mile west of, 30 feet west of public road and nearly opposite a residence on east side of road, 10 feet north of gate into field, and 4 feet west of fence line; iron post stamped "Prim. Trav. Sta. No. 147, 1915," elevation 53.907 feet.....	29 55 52.00	95 04 22.86	5,364
Crosby, 0.7 mile north of, 160 feet south of T road east, 40 feet west of center of road; pine tree painted "U. S. B. M. 340;" wire nail in root, elevation 50.07 feet.....	29 55 10.05	95 04 14.68	4,302
Crosby station, Texas & New Orleans R. R., 100 feet northeast of, public road crossing.....	29 54 34.11	95 04 06.12	3,710
Crosby, 410 feet southeast of road crossing, on top of concrete culvert guard wall, east side of culvert, 6 inches from north end of wall; chiseled square painted "U. S. B. M. 341," elevation 49.35 feet.....	29 54 31.03	95 04 03.14	407

CROSBY QUADRANGLE—Continued.

Along Crosby-Houston road.

Station.	Latitude.	Longitude.	Distance between stations.
Crosby, 1.1 miles south and 0.3 mile east of, 30 feet west of center of road, 15 feet east of fence line, 3 feet northwest of telephone pole; iron post stamped "Prim. Trav. Sta. No. 148, 1915," elevation 49.913 feet.....	29 53 36.82	95 03 48.67	Feet. 5,623
Crosby, 2 miles south and 0.3 mile east of, 30 feet south and 25 feet east of intersection of roads; top of wing wall of concrete culvert, painted "U. S. B. M. 342;" chiseled square, elevation 45.88 feet.....	29 52 46.40	95 03 47.43	5,096
Crosby, 2.1 miles south and 0.8 mile west of, about 0.8 mile east of San Jacinto River, 30 feet south of public road near bend; gum tree painted "U. S. B. M. 343;" wire nail in root, elevation 19.17 feet.....	29 52 45.83	95 04 54.01	5,863
Crosby, 2.3 miles south and 1.7 miles west of 680 feet west of center pier of iron bridge over San Jacinto River, 20 feet north of center of road; iron post stamped "Prim. Trav. Sta. No. 149, 1915," elevation 27.407 feet.....	29 52 33.64	95 05 47.08	4,831

Near southeast corner of quadrangle.

Sheldon, about 0.5 mile north and 1,000 feet west of, 6 feet east of road in woods; oak tree painted "U. S. B. M. 348;" wire nail in root, elevation 29.51 feet.....	29 52 46.10	95 07 17.53
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Along road toward Cedar Bayou and north near east side of quadrangle.

Crosby, 2.0 miles south and 1.25 miles east of, 25 feet south of road at lane south; 8 inches south of telephone pole painted "U. S. B. M. 422;" copper nail in hub, elevation 54.68 feet.....	29 52 47.00	95 02 49.37
Crosby, 2.3 miles south and 2.0 miles east of, 30 feet north and 35 feet east of crossroads; 6 inches east of telephone pole painted "U. S. B. M. 423;" copper nail in hub, elevation 48.90 feet.....	29 52 35.25	95 02 08.58	3,782
Crosby, 2.3 miles south and 2.7 miles east of; at angle in road, 35 feet northeast of center of road going to Cedar Bayou and 65 feet east of T road north, 4 feet west of corner fence post at angle in fence; iron post stamped "Prim. Trav. Sta. No. 178, 1915," elevation 47.051 feet.....	29 52 35.57	95 01 24.56	3,876
Crosby, 1.5 miles south and 2.7 miles east of, 25 feet north and 25 feet west of crossroads; 1 foot north of corner fence post painted "U. S. B. M. 479;" copper nail in hub, elevation 49.43 feet.....	29 53 15.63	95 01 25.97	4,050
Crosby, 0.75 mile south of, and 2.6 miles east of, 100 feet southwest of schoolhouse, 25 feet north and 25 feet east of T road north; 6 inches southwest of corner fence post, painted "U. S. B. M. 480;" copper nail in hub, elevation 50.98 feet.....	29 53 54.91	95 01 29.38	3,980
Crosby, 2.5 miles east of, 30 feet north and 30 feet east of T road west, in open prairie; iron post stamped "Prim. Trav. Sta. No. 200, 1915," elevation 53.753 feet.....	29 54 40.20	95 01 39.47	4,661
Crosby, 0.9 mile north and 2.3 miles east of, 20 feet east of road at fence lines north and east; 1 foot west of corner fence post painted "U. S. B. M. 481;" copper nail in hub, elevation 55.23 feet.....	29 55 21.96	95 01 48.89	4,301
Crosby, 1.8 miles north and 2.1 miles east of, 50 feet south of Texas & New Orleans R. R., 20 feet north of public road at T road south; 1 foot east of telephone pole painted "U. S. B. M. 482;" copper nail in hub, elevation 55.55 feet.....	29 56 09.90	95 02 00.18	4,945
Crosby, 2.3 miles north and 2.7 miles east of, 30 feet south of public road and 75 feet west of corner of schoolhouse, 8 feet northeast of corner fence post; iron post stamped "Prim. Trav. Sta. No. 201, 1915," elevation 51.718 feet.....	29 56 35.82	95 01 25.48	4,022
Crosby, 2.9 miles north and 3.7 miles east of, 60 feet south of Texas & New Orleans R. R., 20 feet north of public road, at southwest end of gate; 1 foot south of gate post painted "U. S. B. M. 483;" copper nail in hub, elevation, 57.18 feet.....	29 57 06.25	95 00 46.65	4,595
Crosby, 3.5 miles north and 4 miles east of, 40 feet south of center of road; pine tree painted "U. S. B. M. 484;" copper nail in root, elevation 56.74 feet.....	29 57 36.17	95 00 05.76	4,699
Crosby, 3.6 miles north and 3.4 miles east of, 90 feet west of road; sassafras tree painted "U. S. B. M. 485;" copper nail in root, elevation, 60.19 feet.....	29 57 40.52	95 00 44.56	3,442
Crosby, 3.5 miles north and 2.8 miles east of; T road corner east, west, and north.....	29 57 37.79	95 01 16.21	2,799
Crosby, 3.8 miles north and 2.8 miles east of, 30 feet east of road; 6 inches west of corner fence post painted "U. S. B. M. 486;" copper nail in hub, elevation 60.30 feet.....	29 57 55.25	95 01 17.43	1,768
Crosby, 4.8 miles north and 2.8 miles east of, 35 feet west of road, on small mound in open prairie; iron post stamped "Prim. Trav. Sta. No. 203, 1915," elevation 65.594 feet.....	29 58 47.25	95 01 18.95	5,256
Crosby, 5.6 miles north and 2.6 miles east of, 830 feet west of right angle in road, 35 feet north of road; ash tree painted "U. S. B. M. 487;" copper nail in root, elevation 62.38 feet.....	29 59 28.87	95 01 28.60	4,290

CROSBY QUADRANGLE—Continued.

On prairie west of Cedar Bayou.

Station.	Latitude.	Longitude.	Distance between stations.
Crosby, 5.6 miles north and 2 miles east of, at north edge of prairie and south edge of timber fringing Cedar Bayou; ash tree painted "U. S. B. M. 488," copper nail in root, elevation 60.39 feet.....	° ' " 29 59 29.15	° ' " 95 02 07.89	<i>Feet.</i> 3,456
Crosby, 6 miles north and 1.4 miles east of, group of about 25 small gum trees on prairie, one of which is painted "U. S. B. M. 489"; copper nail in root, elevation 62.77 feet.....	29 59 48.79	95 02 42.42	3,628

On unchecked spur line west from Crosby-Huffman road.

Crosby, 2.7 miles north and 0.6 mile west of T road corner north, south, and west.....	29 56 56.18	95 04 39.73	.....
Crosby, 2.7 miles north and 1.2 miles west of, near center of road; pine tree painted "U. S. B. M. 542," copper nail in root, elevation 58.07 feet.....	29 56 55.86	95 05 16.31	3,218
Crosby, 2.6 miles north and 2.15 miles west of, 50 feet south of small house and 25 feet north of road; oak tree painted "U. S. B. M. 543," copper nail in root, elevation 64.85 feet.....	29 56 53.02	95 06 15.92	5,252
Crosby, 2.6 miles north and 3 miles west of, in thick woods, 78 feet south of a wire fence, which bears about 5° south of west, north side of a dim road, iron post stamped "Prim. Trav. Sta. No. 223, 1915," elevation 68.772 feet.....	29 56 52.28	95 07 06.19	4,424

Near Crosby.

Crosby, Texas & New Orleans R. R. station, opposite operator's window; top of rail, elevation 48.8 feet.....	.....	.....	.....
Crosby, 3.3 miles northeast of, 1.6 miles northeast of Adlong schoolhouse, at T road northwest, 100 feet south of cattle guard 337B, 75 feet southeast of Texas & New Orleans R. R. track, in top of sawed-off post; copper nail painted "U. S. 59.4 B. M.," elevation 59.29 feet.....	.....	.....	.....
Crosby, 2.75 miles north of, at private T road west, 400 feet southeast of frame dwelling, west side of culvert, southwest corner of wooden bridge, in floor; copper nail painted "U. S. 58.6 B. M.," elevation 58.68 feet.....	.....	.....	.....

Magnetic declination for northwest quarter of quadrangle, 8° 30' E.; for center, 8° 26' E.; for east side, 8° 23' E.; for south side; 8° 23' E.

CYPRESS QUADRANGLE.

Along Washington road.

Station.	Latitude.	Longitude.	Distance between stations.
Cypress, 3.3 miles northwest of, about 800 feet east of mile board "1 mile to Swanson," 25 feet south of center of road and 50 feet north of railroad, 6 inches from telephone pole; copper nail in hub, pole painted "U. S. B. M. 114," elevation 157.83 feet.....	° ' " 29 59 22.21	° ' " 95 44 46.91	<i>Feet.</i>
Cypress, 2.3 miles northwest of, about halfway between mileposts 28 and 29, 60 feet north of Houston & Texas Central R. R., 30 feet south of public road, 2 feet north of telephone pole; iron post stamped "Prim. Trav. Sta. No. 55, 1915," elevation 155.826 feet..	25 59 04.30	95 43 59.45	4,548
Azimuth from primary traverse station 55 to church steeple equals 233° 50'.....	.....	.....	.....
Cypress, 1.2 miles northwest of, 60 feet north of Houston & Texas Central R. R., 50 feet south of public road, 1 foot from telephone pole; copper nail in hub, pole painted "U. S. B. M. 115," elevation 154.13 feet.....	29 58 39.14	95 42 52.96	6,377
Cypress, 0.5 mile northwest of, 25 feet south of wagon road, 60 feet north of track, 1 foot from telephone pole; copper nail in hub, pole painted "U. S. B. M. 116," elevation 152.14 feet.....	29 58 25.63	95 42 17.79	3,381
Cypress, 140 feet east of station, Houston & Texas Central R. R., 50 feet north of center of track, 20 feet south of center of road, 3 feet west of telephone post, 3 feet north of fence line, 60 feet southwest of corner of Ingeren's saloon; iron post stamped "Prim. Trav. Sta. No. 56, 1915," elevation 150.275 feet.....	29 58 08.21	95 41 52.05	2,869

CYPRESS QUADRANGLE—Continued.
Along Washington road—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
Cypress, 0.9 mile southeast of, 30 feet south of road, 40 feet north of railroad, 6 inches from telephone pole; copper nail in hub, pole painted "U. S. B. M. 129," elevation 142.58 feet.....	29 57 38.64	95 41 09.34	<i>Feet.</i> 4,800
Cypress, 1.8 miles southeast of, 35 feet south of road, 60 feet north of railroad, 1,000 feet east of Big Cypress Creek, 18 inches from telephone pole; copper nail in hub; pole painted "U. S. B. M. 130," elevation 145.27 feet.....	29 57 11.13	95 40 29.62	4,462
Cypress, 2.8 miles southeast of, 35 feet north of road, 130 feet north of Houston & Texas Central R. R., 4 feet east of corner fence post; iron post stamped "Prim. Trav. Sta. No. 62, 1915," elevation 143.018 feet.....	29 56 38.31	95 39 41.19	5,398
Cypress, 3.3 miles southeast of, T road south; top of rail at road crossing, elevation 144.3 feet.....			
Cypress, 3.7 miles southeast of, 30 feet south of road, 70 feet north of railroad, 40 feet south of T road north, 1 foot from telephone pole; copper nail in hub, pole painted "U. S. B. M. 131," elevation 140.35 feet.....	29 56 07.68	95 38 58.21	4,886
Cypress, 4.4 miles southeast of, 100 feet east of railroad crossing, 25 feet south of road, 60 feet north of railroad, 1 foot from telephone pole; copper nail in hub, pole painted "U. S. B. M. 132," elevation 136.37 feet.....	29 55 44.24	95 38 24.82	3,774
Satsuma, 2.6 miles southwest of, 400 feet east of milepost 21, 5 feet west of corner fence post, 30 feet north of road, 100 feet north of railroad; iron post stamped "Prim. Trav. Sta. No. 63, 1915," elevation 134.619 feet.....	29 55 23.62	95 37 54.49	3,385

From Cypress south and southwest along highways to southwest corner of quadrangle.

Cypress, 4,200 feet southwest of, about 1,000 feet east of house, 1 foot from north gatepost; copper nail in hub (T. B. M. 117), no elevation.....	29 57 51.70	95 42 32.93	.....
Cypress, 1 mile southwest of, on road to Bain's ranch, 2,200 feet south to t. b. m. 117, by north gatepost; copper nail in hub, elevation 145.89 feet.....			
Cypress, 1 mile south by 0.8 mile west of, 400 feet north of Cypress Creek, at ranch of Mr. Anderson (Mr. Bain, lessee), at corner of barbed and woven wire fence, in roof of water oak; copper nail, tree painted "U. S. B. M. 118," elevation 143.68 feet.....	29 57 13.45	95 42 40.48	3,622
Cypress, 2 miles south by 0.8 mile west of, 0.8 mile south of Bain ranch, 20 feet south of east and west fence line, at gateway in open prairie; iron post stamped "Prim. Trav. Sta. No. 57, 1915," elevation 153.279 feet.....	29 56 22.82	95 42 39.91	5,115
Cypress, 2.9 miles south by 0.9 mile west of, 1.7 miles south of Bain ranch, in open pasture about 60 feet west of roadway leading through, on slight knoll; wire nail in hub, witness stake painted "U. S. B. M. 119," elevation 149.82 feet.....	29 55 36.63	95 45 45.23	4,690
Cypress, 3.6 miles south by 1 mile west of, at east and west line fence between two large pastures, 2 feet east of gatepost; wire nail in hub, post painted "U. S. B. M. 120," elevation 147.78 feet.....	29 55 01.17	95 42 52.12	3,633
Cypress, 4.5 miles south by 1.2 miles west of, in open prairie on small mound; wire nail in hub with witness stake painted "U. S. B. M. 121".....	29 54 15.84	95 43 05.15	4,722
Cypress, 5.2 miles south by 1.4 miles west of, 3 feet south of east and west line, 25 feet west of gateway; iron post stamped "Prim. Trav. Sta. 58, 1915," elevation 144.653 feet.....	29 53 38.27	95 43 19.50	4,000
Cypress, 6.2 miles south by 1.7 miles west of, in open prairie, 3,500 feet north, 12° W. of house (true bearing); wire nail in hub, witness stake painted "U. S. B. M. 122," elevation 140.16 feet.....	29 52 46.23	95 43 33.45	5,400

Along highways near south border of quadrangle.

Brink schoolhouse, T road east at.....	29 52 42.83	95 40 59.43	1,794
Brink schoolhouse, 2,250 feet east of, 20 feet north of center of road; copper nail in hub; witness stake painted "171" (should be 172), elevation 130.58 feet.....	29 52 43.16	95 40 33.99	2,240
Brink schoolhouse, 1.5 miles east of, 15 feet south of road in open prairie; copper nail in hub; witness stake painted "U. S. B. M. 173," elevation 127.26 feet.....	29 52 43.20	95 39 25.84	6,000
Brink schoolhouse, 2.6 miles east of, 20 feet south of center of east and west road; copper nail in hub, 6 inches from telephone pole painted "U. S. B. M. 174," elevation 127.23 feet.....	29 52 43.80	95 38 24.55	5,397
Brink schoolhouse, 3 miles east of, T road south.....	29 52 44.29	95 37 58.37	2,305
Brink schoolhouse, 3.4 miles east of, 180 feet west of center of wood bridge with railing, 25 feet south of center of road, 9 feet north of fence line; iron post stamped "Prim. Trav. Sta. No. 76, 1915," elevation 119.162 feet.....	29 52 44.36	95 37 33.01	2,233

CYPRESS QUADRANGLE—Continued.

Northeast from Cypress along public road toward Louetta.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	<i>Fect.</i>
Cypress, 0.8 mile northeast of, center of crossroads.....	29 58 23.15	95 41 13.33	3,726
Cypress, 1 mile northeast of, 45 feet north of center of road; small lone oak tree painted "U. S. B. M. 253"; copper nail in root, eleva- tion 148.82 feet.....	29 58 23.91	95 41 00.82	1,163
Cypress, 0.8 mile north, and 1.85 miles east of, about the center of public road; oak tree painted "U. S. B. M. 254"; copper nail in root, elevation 148.72 feet.....	29 58 47.20	95 40 00.21	5,712
Cypress, 1 mile north, and 2.5 miles east of, in open prairie, 35 feet south and 10 feet west of public crossroads; iron post stamped "Prim. Trav. Sta. No. 115, 1915," elevation 143.215 feet.	29 59 03.37	95 39 24.61	3,532
Cypress, 1.65 miles north and 3 miles east of, 10 feet north of road; oak tree painted "U. S. B. M. 255"; copper nail in root, eleva- tion 146.62 feet.....	29 59 34.32	95 38 52.43	4,218

Along highways in northern part of quadrangle.

Cypress, 1.80 miles north of; T road north.....	29 59 48.70	95 41 50.58	.....
Cypress, about 1.60 miles north of, 900 feet south of T road south, 30 feet west of center of road; 1 foot east of fence post painted "U. S. B. M. 213"; copper nail in hub, elevation 153.36 feet.....	29 59 38.83	95 41 57.44	1,162
Cypress, 0.70 mile north of, 30 feet west of center of road; 6 inches south of large corner fence post painted "U. S. B. M. 214"; cop- per nail in hub, elevation 151.62 feet.....	29 58 51.40	95 41 56.85	4,792
Cypress, 140 feet east of station, 50 feet north of center of track, 20 feet south of center of road, 3 feet west of telephone pole, 3 feet north of fence line; iron post stamped "Prim. Trav. Sta. No. 56, 1915," elevation 150.275 feet.....	29 58 03.21	95 41 52.05	4,384

Magnetic declination in quadrangle, 8° 45' E.

DEEPWATER QUADRANGLE.

Along highways in north half of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	<i>Fect.</i>
Deer Park, 0.9 mile west of, 250 feet southeast of bungalow, on north side of road; 1 foot from fence post painted "U. S. B. M. B."; copper nail in hub, elevation 36.1.....	29 42 41.49	95 08 21.28	.....
Deepwater, about 0.9 mile east of, 40 feet east of two-story house, on north side of road; 1 foot from fence post painted "U. S. B. M. C"; copper nail in hub, elevation 37.49 feet.....	29 42 42.80	95 09 12.36	4,507
Deepwater station, 320 feet west of, 50 feet north of center of track, 23 feet south and 40 feet west of intersection of roads, about 4 feet from telephone pole; iron post stamped "Prim. Trav. Sta. No. 1, 1915," elevation 38.967 feet.....	29 42 43.96	95 10 17.90	5,779
Deepwater, about 0.75 mile west of, 140 feet west of private T road north; 2 feet from telephone pole painted "U. S. B. M. No. 1," in hub; copper nail and washer, elevation 35.76 feet.....	29 42 45.14	95 11 01.93	3,884
Pasadena, 0.75 mile east of, 65 feet northwest of public crossing Southern Pacific R. R., 2 feet from telephone pole painted "U. S. B. M. No. 2," in hub; copper nail, elevation 33.12 feet....	29 42 43.56	95 11 56.05	4,774
Pasadena, 300 feet west of railroad station, 56 feet north of railroad track, about 5 feet from telephone pole; iron post stamped "Prim. Trav. Sta. No. 2, 1915," elevation 31.489 feet.....	29 42 39.82	95 12 36.93	3,625
Pasadena, about 1.1 miles west of, 20 feet east of crossroads, 2 feet from telephone pole painted "U. S. B. M. No. 3," in hub; copper nail, elevation 32.81 feet.....	29 42 33.86	95 13 41.34	5,711
Pasadena, 2.2 miles west of, about 350 feet east of road crossing Southern Pacific R. R., at El Buey flag station, 60 feet east of small station shelter; 6 inches from telephone pole painted "U. S. B. M. No. 4," hub with copper nail and washer, eleva- tion 35.07 feet.....	29 42 23.49	95 14 43.47	5,504

DEEPWATER QUADRANGLE—Continued.

Along highways and interurban railway in south half of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
Genoa, 0.4 mile north by 1.7 miles west of interurban station, 30 feet north of center of road, 75 feet west of corner of house, 2 feet from gate post painted "U. S. B. M. No. 53"; copper nail in hub, elevation 47.82 feet	29 37 37.99	95 14 38.08	<i>Fect.</i>
Genoa, 0.4 mile north by 0.8 mile west of station on interurban railway, 25 feet north of center of road, at southeast corner of yard fence at residence painted "U. S. B. M. No. 54"; copper nail in hub, elevation 42.77 feet	29 37 39.06	95 13 47.35	4,479
Genoa, 0.5 mile northwest of interurban station, road crossing interurban railway; top of rail, elevation 50 feet	29 37 39.60	95 13 14.84	2,870
Genoa, 0.8 mile east of Galveston, Houston & Henderson R. R. station, 1,200 feet west of right angle in road, 25 feet south of road; copper nail in hub, witness stake painted "U. S. B. M. No. 56," elevation 46.03 feet	29 37 35.44	95 11 10.00	.....
Genoa station, about 1.4 miles east and 0.25 mile north of, about 0.4 mile east of right angle in road, 80 feet north of center of east and west road, 1 foot west of north and south fence; iron post stamped "Prim. Trav. Sta. No. 28, 1915," elevation 43.479 feet	29 37 49.62	95 10 30.77	3,747
Genoa station, about 2.3 miles east and 0.25 mile north of, 25 feet north of center of road, on small knoll; copper nail in hub, with witness stake painted "U. S. B. M. No. 57," elevation 41.60 feet	29 37 50.38	95 09 35.74	4,858
Genoa station, 3.2 miles east by 0.3 mile north of, about 900 feet west of end of road at north and south wire fence, 25 feet north of center of road; copper nail in hub, witness stake painted "U. S. B. M. No. 58," elevation 38.80 feet	29 37 51.63	95 08 42.98	4,658
Genoa station, 4 miles east by 0.4 mile north of, 1 mile west of Middle Bayou, 25 feet north of center of untraveled road; iron post stamped "Prim. Trav. Sta. No. 29, 1915," elevation 30.419 feet	29 37 59.45	95 07 53.21	4,463
Deer Park, about 3 miles south and 0.3 mile west of, 30 feet north and 30 feet west of intersection of Red Bluff road and Main Street and La Porte road; 2 feet from corner fence post painted "U. S. B. M. No. 62"; copper nail in hub, elevation 33.73 feet	29 39 48.16	95 07 57.94	.....

Along highways in western part of northeast quarter of quadrangle.

Deepwater, 0.85 mile north of, 45 feet west of road, in pasture; in root of cottonwood tree painted "U. S. B. M. 414"; copper nail, elevation 34.64 feet	29 43 29.12	95 10 19.13	.....
Deepwater, 1.8 miles north of, 40 feet west of road, at north end of gateway leading to old pump house; 6 inches east of gatepost painted "U. S. B. M. 415"; copper nail in hub, elevation 26.90 feet	29 44 18.87	95 10 20.21	5,062
Deepwater, 2 miles north and 0.9 mile east of, 20 feet east of center of road at angle in road, in root of oak tree painted "U. S. B. M. 416"; copper nail, elevation 5.50 feet	29 44 09.24	95 09 35.89	4,026
Penn City Ferry, 575 feet west of, on north side of Buffalo Bayou, 75 feet from bank, in open pasture, U. S. Corps of Engineers permanent bench mark (their station 79+642); a concrete monument 6 inches square, with a bronze tablet marked "U. S. Eng. Dept." in top of, elevation 16.950 feet	29 44 25.84	95 09 23.70	1,990
Penn City ferry, about 0.7 mile north of, 30 feet east of road at northwest corner of yard around two-story brick schoolhouse; chiseled square on top of concrete monument post painted "U. S. B. M. 417," elevation 35.49 feet	29 44-57.92	95 09 18.52	3,273

Spur line down ship channel. (Checked.)

These bench marks are probably all bronze tablets marked "U. S. Engineer Department," set in top of concrete posts, 6 inches square on top and protruding above ground. The letters R and L of the descriptions refer to right and left bank going downstream and the distances given are probably the approximate distances from the bank.

Station 107+526, 300 R, elevation 21.797 feet			
Station 107+331, 300 R, elevation 16.006 feet			
Station 104+691, 300 R, elevation 12.316 feet			
Station 94+267, 300 R, elevation 15.094 feet			
Station 93+460, 300 R, elevation 9.338 feet			
Station 92+769, 300 R, elevation 14.988 feet			
Station 91+947, 300 R, elevation 14.571 feet			
Station 91+190, 300 R, elevation 14.138 feet			
Station 90+270, 300 R, elevation 10.930 feet			

DEEPWATER QUADRANGLE—Continued.

Spur line down ship channel—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Fect.
Bench marks—Continued.			
Station 89+186, 300 R, elevation 9.109 feet.....			
Station 88+010, 300 R, elevation 12.503 feet.....			
Station 87+310, 300 R, elevation 8.644 feet.....			
Station 86+459, 300 R, elevation 14.098 feet.....			
Station 85+209, 300 R, elevation 11.858 feet.....			
Station 84+608, 250 R, elevation 11.296 feet.....			
Station 84+042, 250 R, elevation 9.670 feet.....			
Station 114+685, 300 L, elevation 12.856 feet.....			
Station 113+791, 300 L, elevation 8.804 feet.....			
Station 112+730, 300 L, elevation 10.248 feet.....			
Station 111+230, 300 L, elevation 17.341 feet.....			
Station 110+404, 300 L, elevation 11.956 feet.....			
Station 109+500, 300 L, elevation 15.446 feet.....			
Station 108+491, 300 L, elevation 11.696 feet.....			
Station 107+526, 300 L, elevation 16.103 feet.....			
Station 104+691, 300 L, elevation 17.941 feet.....			
Station 103+231, 300 L, elevation 23.992 feet.....			
Station 102+051, 300 L, elevation 12.368 feet.....			
Station 101+295, 300 L, elevation 12.278 feet.....			
Station 100+133, 300 L, elevation 19.973 feet.....			
Station 99+299, 300 L, elevation 9.198 feet.....			
Station 98+223, 200 L, elevation 9.032 feet.....			
Station 96+864, 300 L, elevation 16.292 feet.....			
Station 89+186, 300 L, elevation 17.322 feet.....			
Station 89+453, 300 L, elevation 12.227 feet.....			
Station 88+010, 300 L, elevation 10.854 feet.....			
Station 87+310, 300 L, elevation 9.119 feet.....			
Station 86+459, 300 L, elevation 14.098 feet.....			
Station 86+209, 300 L, elevation 11.831 feet.....			
Station 85+209, 300 L, elevation 7.592 feet.....			
Station 84+608, 300 L, elevation 9.047 feet.....			
Station 84+496, 400 L, elevation 10.082 feet.....			
Station 84+042, 400 L, elevation 8.517 feet.....			
Station 82+042, 400 L, elevation 4.808 feet.....			
Station 80+036, 400 L, elevation 19.388 feet.....			
Station 79+642, 400 L, Penn City Ferry, 575 feet west of, on north side of Buffalo Bayou, 75 feet from bank, in open pasture, top of concrete monument 6 inches square, bronze tablet marked "U. S. Engr. Dept.," elevation 16.950 feet.....			
Station 78+142, 300 L, elevation 10.093 feet.....	29 44 13.90	95 09 13.54	
Station 77+910, 300 L, elevation 8.659 feet.....	29 44 12.75	95 09 12.42	152
Station 76+919, 300 L, elevation 7.374 feet.....	29 44 09.88	95 09 03.44	843
Station 76+146, 300 L, elevation 4.928 feet.....	29 44 10.54	95 08 55.50	703
Station 74+646, 300 L, elevation 2.844 feet.....	29 44 11.97	95 08 38.56	1,500
Station 73+612, 300 L, elevation 2.640 feet.....	29 44 12.95	95 08 26.89	1,034
Station 72+553, 300 L, elevation 5.020 feet.....	29 44 11.84	95 08 13.71	1,167
Station 71+776, 300 L, elevation 7.076 feet.....	29 44 08.31	95 08 04.86	860
Station 71+003, 300 L, elevation 6.834 feet.....			
Station 70+553, 300 L, elevation 9.356 feet.....	29 44 02.37	95 07 53.51	1,167
Station 70+083, 300 L, elevation 9.572 feet.....	29 44 01.18	95 07 49.04	413
Station 69+786, 300 L, elevation 9.694 feet.....	29 44 00.59	95 07 45.74	297
Station 68+965, 300 L, elevation 5.994 feet.....			
Harrisburg, 4.25 miles southeast of, on the right of way of the Galveston, Houston & Henderson R. R., 120 feet northwest of mile board 10, on steel and concrete bridge, 6 feet northeast of the tracks, in the center of the horizontal surface of the north abutment; copper bolt (Coast and Geodetic Survey bench mark "P8"), elevation 38.287 feet.....			
Genoa, 3.25 miles northwest of, 27 feet southwest of mile board 11, on range with the telegraph poles outside of the right-of-way fence; bottom of hole in top of stone post; (Coast and Geo- detic Survey bench mark "Q8"), elevation 37.212 feet.....			
Genoa, 2.25 miles northwest of, on the right of way of the Gal- veston, Houston & Henderson R. R., 65 feet southeast of mile board 12 and 50 feet southwest of the tracks; cross on top of section rail (Coast and Geodetic Survey bench mark "M. M. 12"), elevation 41.306 feet.....			

Magnetic declination of quadrangle, 7° 18' E.; in northwest quarter, 8° 14' E.

FAUNA QUADRANGLE.

Along highways near south border of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
Carpenters Bayou, 1.1 miles east of, 280 feet west of T road north, 25 feet north of road; in root of oak tree painted "U. S. B. M. 390"; copper nail, elevation 33.02 feet.....	° ' " 29 46 18.10	° ' " 95 07 30.69	Feet.
Bridge over small creek; center of floor, elevation 20.6 feet.....			
Carpenters Bayou, 1,000 feet east of crossing, about 20 feet north of road; in root of oak tree, painted "U. S. B. M. 391"; copper nail, elevation 28.00 feet.....	29 46 16.72	95 08 24.57	4,751
Carpenters Bayou Bridge, floor of; elevation 2.03 feet.....			
Carpenters Bayou, 3,450 feet west of, 25 feet north of road; iron post stamped "Prim. Trav. Sta. No. 168, 1915," elevation 25.315 feet.....	29 46 16.30	95 09 13.63	4,323
Carpenters Bayou, 1.55 miles west of, 20 feet south of center of road; in root of oak tree painted "U. S. B. M. 392"; copper nail, elevation 34.03 feet.....	29 46 14.70	95 10 07.68	4,767
Greens Bayou, 0.7 mile east of lower ferry, 25 feet north of center of road, opposite a cabin, in root of oak tree painted "U. S. B. M. 393"; copper nail, elevation 32.58 feet.....	29 46 14.14	95 10 55.85	4,246
Greens Bayou, 600 feet west of lower ferry, 20 feet south of road; iron post stamped "Prim. Trav. Sta. No. 169, 1915," elevation 26.888 feet.....	29 46 07.11	95 11 35.33	3,552
Greens Bayou, 1 mile west of lower ferry, 15 feet north of center of road, in root of pine tree painted "U. S. B. M. 394"; copper nail, elevation 36 feet.....	29 46 02.36	95 12 26.69	4,551
Greens Bayou, 1.9 miles west of lower ferry across, 400 feet east of small creek, 35 feet south of center of road; in root of pine tree painted "U. S. B. M. 395"; copper nail, elevation 28.49 feet.....	29 45 59.31	95 13 21.00	4,797
Greens Bayou, about 2.3 miles west of lower ferry, 45 feet south of center of road, at edge of timber; in root of small oak tree painted "U. S. B. M. 396"; copper nail, elevation 33.63 feet.....	29 46 02.42	95 13 43.49	2,007
Greens Bayou, about 2.7 miles west of lower ferry, 25 feet north of center of road, 6 feet east of corner fence post; iron post stamped "Prim. Trav. Sta. No. 170, 1915," elevation 36.297 feet.....	29 46 02.74	95 14 11.72	2,489
Penn City Ferry, about 1.7 miles north of, 30 feet west of center of road at edge of woods; in root of oak tree painted "U. S. B. M. 418"; copper nail, elevation 35.92 feet.....	29 45 49.20	95 09 20.74	

Along public road beside Texas & New Orleans Railroad from Sheldon toward Houston.

Sheldon, 3,000 feet southwest of, 500 feet northeast of a road south, 25 feet northwest of center of road, 30 feet southwest of milepost 346, between fence post and telephone pole; painted "U. S. B. M. 345"; wire nail in hub, elevation 47.20 feet.....	29 52 05.89	95 07 36.83	
Sheldon, 6,000 feet southwest of, 840 feet southwest of culvert, 35 feet southeast of center of road, 2 feet from wire fence; iron post stamped "Prim. Trav. Sta. No. 150, 1915," elevation 45.418 feet.....	29 51 51.76	95 08 08.21	3,109
Sheldon, 2.25 miles southwest of, 25 feet northwest of center of road, in stump of old telephone pole; 1 foot east of pole painted "U. S. B. M. 346"; wire nail, elevation 46.71 feet.....	29 51 30.60	95 08 58.83	4,943
Sheldon, 3.2 miles southwest of, opposite east end of trestle 349A on Texas & New Orleans R. R., 30 feet northeast of end of highway bridge, 25 feet from center of road, in stump of old telephone pole, 2 feet from standing pole painted "U. S. M. B. 347"; wire nail, elevation 43.67 feet.....	29 51 05.73	95 09 56.65	5,678

Along public road beside Texas & New Orleans Railroad from Sheldon toward Houston.

Fauna flag station, Texas & New Orleans R. R., 0.3 mile northeast of, nearly opposite a residence on southeast side of road, 30 feet northwest of center of road, 5 feet from telephone pole; iron post stamped "Prim. Trav. Sta. No. 151, 1915," elevation 46.674 feet.....	29 50 50.71	95 10 31.83	3,449
Fauna, 0.5 mile southwest of, 45 feet south of road; large pine tree painted "U. S. B. M. 363"; copper nail in root, elevation 44.01 feet.....	29 50 30.65	95 11 16.27	4,408
Fauna, 1.5 miles southwest of, 80 feet south of mile post 351, 45 feet south of center of road; live-oak tree painted "U. S. B. M. 364"; copper nail in root, elevation 42.06 feet.....	29 50 09.69	95 12 05.40	4,817

FAUNA QUADRANGLE—Continued.

Along public road beside Texas & New Orleans Railroad from Sheldon toward Houston—Contd.

Station.	Latitude.	Longitude.	Distance between stations.
Fauna, 2.25 miles southwest of, 1.1 miles northeast of Greens Bayou Bridge, 30 feet south of road, 3 feet from fence; 13 feet west of pine tree painted "U. S. B. M."; iron post stamped "Prim. Trav. Sta. No. 156, 1915," elevation 42.762 feet.....	° ' " 29 49 51.93	° ' " 95 12 47.20	<i>Fect.</i> 4,090
Greens Bayou Bridge, 700 feet northeast of center of, 30 feet south of road; concrete abutment of drain pipe, painted "U. S. B. M. 365"; chiseled square on north end of, elevation 36.93 feet.....	29 49 29.50	95 13 39.31	5,119
Green's crossing, 550 feet northeast of, 45 feet north of T road south; 6 inches from fence post painted "U. S. B. M. 366"; copper nail in hub, elevation 43.12 feet.....	29 49 10.05	95 14 26.26	4,580

South from Green's crossing.

Green's crossing, 1.1 miles south and 0.1 mile west of, 35 feet west of road, pine tree painted "U. S. B. M. 412"; copper nail in root, elevation 42.77 feet.....	29 48 16.40	95 14 26.05	5,418
Green's crossing, 1.8 miles south and 0.6 mile west of, 50 feet north of road and 75 feet east of small house, 8 feet east of gate and wooden bridge over road ditch; small oak tree painted "U. S. B. M. 411"; copper nail in root, elevation 39.16 feet.....	29 47 40.13	95 14 55.13	4,470
Greens, top of rail nearest signboard, elevation 47.9 feet.....			

Unchecked spur line north from Fauna.

Fauna, opposite station, top of nearest rail, elevation 49.6 feet.....			
Fauna, about 0.5 mile west and 900 feet north of; pine tree standing alone in open prairie, about 1,800 feet northwest of railroad crossing, painted "U. S. B. M. 419"; copper nail in root, elevation 45.66 feet.....	29 50 52.53	95 11 19.48	
Fauna, 1 mile west and about 0.8 mile north of, along woods road, just north of a small clearing, 15 feet west of road; pine tree painted "U. S. B. M. 420"; copper nail in root, elevation 50.24 feet.....	29 51 25.40	95 11 50.85	4,320
Fauna, 1.5 miles north and 1.25 miles west of, along woods road, 3 feet west of wagon track; pine tree painted "U. S. B. M. 421"; copper nail in root, elevation 52.41 feet.....	29 52 05.32	95 12 05.91	4,245
Fauna, 1.9 miles north and 1.1 miles west of, in small farm clearing, 160 feet east of a cabin, 100 feet southeast of well and 2 feet north of wire fence line; iron post stamped "Prim. Trav. Sta. No. 177, 1915," elevation 52.623 feet.....	29 52 23.60	95 11 53.45	2,148

Along east border of quadrangle.

Sheldon, 3,500 feet southwest of, at T road south, on southwest corner of wooden culvert, in plank; copper nail painted "U. S. 47.3 B. M.," elevation 47.43.....			
Sheldon, 0.6 mile west and 0.3 mile south of, T road south.....	29 52 03.62	95 07 41.65	
Sheldon, 0.6 mile west and 1.25 miles south of, 50 feet south of bridge over old irrigation canal, 25 feet east of road, 1 foot west of gatepost at north end of gate painted "U. S. B. M. 409"; copper nail in hub, elevation 44.55 feet.....	29 51 12.55	95 07 40.49	5,162
Sheldon, 0.6 mile west and 2.1 miles south of, 25 feet west of road, in line with fence east, private road east along fence, 4 feet east of fence, iron post stamped "Prim. Trav. Sta. No. 176, 1915," elevation 45.672 feet.....	29 50 27.76	95 07 40.16	4,525
Sheldon, 0.6 mile west and 3.2 miles south of, 35 feet west of road, 15 feet north of a fence line east; oak tree painted "U. S. B. M. 408"; one of a group of four trees; copper nail in root, elevation 46.74 feet.....	29 49 32.85	95 07 39.15	5,550
Sheldon, 0.5 mile west and 4.2 miles south of, about 290 feet west of road, in small grove of trees, about 200 feet south of small wooden bridge; gum tree painted "U. S. B. M. 407"; copper nail in root, elevation 41.25 feet.....	29 49 13.06	95 07 38.12	2,000
	29 48 38.75	95 07 34.99	3,477

Magnetic declination for north half of quadrangle, 8° 30' E.; for east side, 8° 15' E.; for south side, 8° 20' E.

HARMASTON QUADRANGLE.

Along public highways between Humble and Huffman.

Station.	Latitude.	Longitude.	Distance between stations.
Humble, 2.25 miles south and 1.5 miles east of, 1.75 miles north-east of forks of road, on east end of concrete culvert, painted "U. S. B. M. 327"; hollow square chiseled in concrete, elevation 75.32 feet.....	29 57 54.09	95 14 25.22	Feet.
Humble, 1.75 miles south and 2.15 miles east of, 80 feet east of concrete culvert at angle of road, 20 feet south of center of road; pine tree painted "U. S. B. M. 328"; copper nail in root, elevation 79.27 feet.....	29 58 20.96	95 13 45.84	4,401
Humble, 1.25 miles south and 3 miles east of, 1,000 feet west of angle in road, 20 feet north of road in line with telephone poles; iron post stamped "Prim. Trav. Sta. No. 142, 1915", elevation 76.077 feet.....	29 58 47.83	95 12 57.03	5,078
Humble, 0.9 mile south and 3.8 miles east of, 20 feet south of road, oak tree painted "U. S. B. M. 329"; copper nail in root, elevation 70.82 feet.....	29 59 05.36	95 12 09.15	4,568
Humble, 0.6 mile south and 4.6 miles east of, 37 feet north of road; pine tree painted "U. S. B. M. 330"; copper nail in root, elevation 71.74 feet.....	29 59 22.98	95 11 18.23	4,815
Humble, 5.25 miles east of, 125 feet east of a road north to oil derrick, 20 feet south of center of road; iron post stamped "Prim. Trav. Sta. No. 143, 1915", elevation 69.515 feet.....	29 59 35.44	95 10 33.83	3,684
Humble, 6.15 miles east of, just east of a bend in road, 25 feet north of road; pine tree painted "U. S. B. M. 331"; copper nail in root, elevation 66.98 feet.....	29 59 52.52	95 09 45.18	5,027
Humble, 7 miles east of, $\frac{1}{4}$ mile west of house on south side of road, 25 feet north of road; oak tree painted "U. S. B. M. 332"; copper nail in root, elevation 59.04 feet.....	29 59 51.24	95 08 51.78	4,700
Humble, 7.7 miles east of, 0.5 mile west of San Jacinto River, 25 feet north of road; iron post stamped "Prim. Trav. Sta. No. 144, 1915", elevation 40.186 feet.....	29 59 49.08	95 08 09.85	3,694
Huffman, 1.9 miles south and 2.5 miles west of, 750 feet east of ferry across San Jacinto River, 50 feet south of road; gum tree painted "U. S. B. M. 333"; copper nail in root, elevation 30.38 feet.....	29 59 50.28	95 07 32.43	3,292

Along second-class road between Sheldon and Victor.

Sheldon, 0.6 mile north by 0.6 mile west of, 50 feet south of road, on top of old trail pump, copper nail; painted "U. S. 51.7 B. M.", elevation 51.87 feet.....			
Sheldon, 0.7 mile north and 0.7 mile west of, 10 feet south of a winding woods road; elm tree painted "U. S. B. M. 349"; wire nail in root; not found in 1916.....	29 52 51.88	95 07 46.39	
Sheldon, 0.7 mile north and 1.1 miles west of, 600 feet east of a fenced clearing on a newly cleared right of way for road; gum tree painted "U. S. B. M. 350"; wire nail in root, elevation 50.38 feet.....	29 53 00.67	95 08 14.97	2,588
Sheldon, 0.9 mile north and 1.7 miles west of, 15 feet north of a cleared east and west right of way for road; iron post stamped "Prim. Trav. Sta. No. 152, 1915", elevation 55.628 feet.....	29 53 08.71	95 08 49.97	3,187
Sheldon, 0.8 mile north and 2.4 miles west of, 500 feet east of a greenhouse, 4 feet south of an east and west wire fence; gum tree (one of a group) painted "U. S. B. M. 351"; wire nail in root, elevation 52.67 feet.....	29 53 00.22	95 09 30.66	3,683
Sheldon, 1.4 miles north and 2.8 miles west of, 30 feet west of prairie road; gum tree painted "U. S. B. M. 352"; wire nail in root, elevation 54.18 feet.....	29 53 35.15	95 09 57.04	4,225
Sheldon, 2.3 miles north and 3.5 miles west of, 700 feet northwest of bend in road, 1,200 feet southeast of edge of woods, 25 feet northeast of road, near small group of pine trees; iron post stamped "Prim. Trav. Sta. No. 153, 1915", elevation 56.818 feet.....	29 54 22.74	95 10 39.29	0,078
Victor, 0.9 mile south and 1.2 miles east of, 55 feet southwest of road at edge of prairie and timber; pine tree painted "U. S. B. M. 353"; wire nail in root, elevation 56.77 feet.....	29 54 53.40	95 11 24.32	5,030
Victor, 0.6 mile south and 0.7 mile east of, 55 feet north of road; large oak tree painted "U. S. B. M. 354"; wire nail in root, elevation 54.67 feet.....	29 55 08.84	95 11 54.55	3,085
Victor siding, Beaumont, Sour Lake & Western Ry, 470 feet northeast of road crossing, 55 feet southeast of track, opposite sidings sign post, 2 feet from fence line; iron post stamped "Prim. Trav. Sta. No. 154, 1915", elevation 57.424 feet.....	29 55 39.22	95 12 37.16	4,847

HARMASTON QUADRANGLE—Continued.

Along Beaumont, Sour Lake & Western Railway from Victor to Harmaston.

Station.	Latitude.	Longitude.	Distance between stations.
Victor, 1 mile northeast of, 40 feet southeast of center of track; 8 inches from telegraph pole painted "U. S. B. M. 355"; wire nail in hub, elevation 58.27 feet.....	° ' " 29 56 15.01	° ' " 95 12 00.35	<i>Feet.</i> 4,854
Victor, 1.9 miles northeast of, 40 feet southeast of center of track; 1 foot from telegraph pole painted "U. S. B. M. 356"; wire nail in hub, elevation 59.51 feet.....	29 56 50.53	95 11 23.74	4,821
Spencer, opposite signpost, top of rail, elevation 64.6 feet.....			
Victor, 2.8 miles northeast of, 50 feet northwest of center of track; hickory tree painted "U. S. B. M. 357"; wire nail in root, elevation 63.01 feet.....	29 57 25.71	95 10 48.88	4,694
Victor, 3.7 miles northeast of, 50 feet southeast of center of track; oak tree painted "U. S. B. M. 358"; wire nail in root, elevation 66.75 feet.....	29 57 59.29	95 10 12.65	4,654
Harmaston, 660 feet northeast of signboard, 40 feet southeast of center of track, near road crossing, 10 feet from corner of fence at section house, 2½ feet from telegraph pole; iron post stamped "Prim. Trav. Sta. No. 155, 1915," elevation 68.919 feet.....	29 58 37.37	95 09 33.53	5,161
Harmaston, 1 mile northeast of, 38 feet southeast of center of track, 8 inches from telegraph pole painted "U. S. B. M. 359"; copper nail in hub, elevation 55.24 feet.....	29 59 10.93	95 08 47.20	5,300
Trestle 336-5, middle of, top of rail, elevation 50.4 feet.....			
Harmaston, 2.1 miles northeast of, 15 feet southwest of southwest corner of trestle, 10 feet from center of track; in top of square post beside warning sign post painted "U. S. B. M. 360"; copper nail, elevation 48.63 feet.....	29 59 36.94	95 07 50.29	5,653

Near southwest corner of quadrangle.

Dyersdale station, Beaumont, Sour Lake & Western Ry., about 500 feet south of, 70 feet east and 20 feet south of public-road crossing; iron post stamped "Prim. Trav. Sta. No. 161, 1915," elevation 56.972 feet.....	29 53 29.47	95 14 50.70	.....
Dyersdale station, 800 feet south and ½ mile east of; oak tree painted "U. S. B. M. 413"; copper nail in root (not found, 1916).....	29 53 25.61	95 14 19.23	2,797

Magnetic declination for quadrangle, 8° 30' E.

HILLEDAHL QUADRANGLE.

Along Washington road.

Station.	Latitude.	Longitude.	Distance between stations.
Fairbanks, 2.1 miles northwest of, 65 feet east of railroad crossing, 25 feet south of road, 2 feet from corner fence post; copper nail in hub, t. b. m. 137, elevation 103.16 feet.....	° ' " 29 52 01.74	° ' " 95 33 08.84	<i>Feet.</i>
Fairbanks, 1.2 miles northwest of, 230 feet east of milepost 14, 60 feet north of railroad, 20 feet south of road; 1 foot from telephone pole painted "U. S. B. M. 138"; copper nail in hub, elevation 99.51 feet.....	29 51 32.61	95 32 27.48	4,683
Fairbanks station (Houston & Texas Central R. R.), about 350 feet northwest of, 35 feet north of public road, 50 feet south of store and post office, 2 feet from telephone pole; iron post stamped "Prim. Trav. Sta. No. 66, 1915," elevation, 96.113 feet.....	29 50 53.01	95 31 30.84	6,393
Fairbanks, about 0.8 mile southeast of, 500 feet east of milepost 12, 25 feet south of center of road; 6 inches from telephone pole painted "U. S. B. M. 139"; copper nail in hub, elevation 92.86 feet.....	29 50 24.10	95 30 51.06	4,561
Fairbanks, about 1.6 miles southeast of, 150 feet northwest of milepost 11, 65 feet east of railroad crossing, 25 feet south of road; 6 inches from telephone pole painted "U. S. B. M. 140"; copper nail in hub, elevation 87.00 feet.....	29 49 57.54	95 30 13.71	4,245

HILLEDAHL QUADRANGLE—Continued.

Along Jeanetta-Hillendahl road.

Station.	Latitude.	Longitude.	Distance between stations.
Hillendahl, 1 mile east by 2.2 miles south of, about 0.7 mile northeast of Buffalo Bayou bridge, 60 feet east of angle in road; copper nail in root of oak tree in edge of timber, tree painted "U. S. B. M. 150," elevation 71.59 feet.....	° ' " 29 45 02.65	° ' " 95 31 01.92	Feet.
Hillendahl, 1 mile east by 1.2 miles south of, 30 feet east of center of north and south road, 2.5 feet southwest of corner fence post, timber on both sides of road; iron post stamped "Prim. Trav. Sta. No. 70, 1915," elevation 80.655 feet.....	29 45 57.90	95 31 01.98	5,580
Hillendahl, 1 mile east of, 65 feet northeast of intersection of main shell road and railroad track, 50 feet north of track, in line with right-of-way fence; iron post with 3-inch cap (not stamped) is a Coast and Geodetic Survey bench mark; also "Prim. Trav. Sta. No. 71, 1915," elevation 78.628 feet.....	29 47 03.71	95 30 48.91	6,748

Along Hillendahl-Fairbanks road.

Hillendahl, 0.9 mile north and 1 mile east of, 6 inches from corner fence post, painted "U. S. B. M. 160"; copper nail in hub, elevation 83.62 feet.....	29 47 51.07	95 30 55.19	4,817
Hillendahl, 1.3 miles north and 1.8 miles east of, 30 feet north of center of east and west road; in root of oak tree painted "U. S. B. M. 161"; copper nail, elevation 83.99 feet.....	29 48 10.14	95 30 06.68	4,687

Along Missouri, Kansas & Texas Railway.

Addicks, 1.5 miles east of, 240 feet east of T road north, 20 feet south of public road, 50 feet north of Missouri, Kansas & Texas Ry.; iron post stamped "Prim. Trav. Sta. No. 73, 1915," elevation 91.600 feet.....	29 47 05.83	95 36 58.66	.....
Addicks, about 2 miles east of, 20 feet north of road; in root of oak tree close to fence line; copper nail, tree painted "U. S. B. M. 154," elevation 86.39 feet.....	29 47 06.17	95 36 33.90	2,182
Addicks, about 2.4 miles east of, 75 feet north of road crossing Missouri, Kansas & Texas Ry.; T road south.....	29 47 05.74	95 36 07.80	2,300
Addicks, about 2.8 miles east of, 25 feet south of road; 6 inches from telephone pole painted "U. S. B. M. 155"; copper nail in hub, elevation 93.11 feet.....	29 47 05.46	95 35 42.49	2,230
Addicks, about 3.7 miles east of, 25 feet south of road; 6 inches from telephone pole painted "U. S. B. M. 156"; copper nail in hub, elevation 93.24 feet.....	29 47 05.15	95 34 48.07	4,796

Along public road.

Hillendahl, 2 miles west of, 820 feet east of mileboard 1071, 75 feet west of small bridge, 2.5 feet south of telephone pole; copper nail in hub under wire fence, pole painted "U. S. B. M. 157," elevation 81.92 feet.....	29 47 04.81	95 33 55.02	4,675
Hillendahl, 1.3 miles west of, 25 feet south of public road, 400 feet east of mileboard 1072, 6 inches from telephone pole painted "U. S. B. M. 158"; copper nail in hub, elevation 88.11 feet.....	29 47 04.51	95 33 00.24	4,827
Hillendahl, 0.7 mile west of, on top of center of north end of concrete culvert; chiseled square (probably a Coast and Geodetic Survey bench mark), elevation 87.073 feet.....	29 47 04.00	95 32 24.32	3,165
Hillendahl, 0.3 mile east of, 30 feet south of road, 6 inches from telephone pole painted "U. S. B. M. 159"; copper nail in hub, elevation 83.02 feet.....	29 47 03.89	95 31 32.36	4,579
Hillendahl, 0.9 mile east of, T road south; top of rail at crossing, elevation 82.7 feet.....			

Along wagon road in northeast corner of quadrangle.

Fairbanks, 1.25 miles north and 1 mile east of, 20 feet north of east-and-west road and 25 feet east of road north, 6 inches from corner fence post; copper nail in hub, "T. B. M. 284," elevation 94.13 feet.....	29 51 55.6	95 30 24.1	4,787
Fairbanks, 3,500 feet north and 0.5 mile east of, 4,500 feet N. 30° E. from water tank, 125 feet south of small creek in open prairie; copper nail in hub, "T. B. M. 285," elevation 92.55 feet.....	29 51 23.0	95 30 54.3	4,235
Fairbanks, iron post No. 66.....	29 50 53.0	95 31 30.8	4,423

Magnetic declination, 8° 46' E.

HOCKLEY QUADRANGLE.

From point near Hockley southeast along highway to southeast corner of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
Hockley, 1.7 miles west by 0.4 mile south of, 150 feet southwest of white house, 20 feet north by 25 feet west of T road north, 8 inches from corner fence post; copper nail in hub, post painted "U. S. B. M. 191," elevation 233.05 feet.....	30 01 17.55	95 52 24.63	.....
Hockley, 1.9 miles northwest of, 15 feet south by 30 feet west of intersection of roads, 6 inches from telephone pole; copper nail in hub, pole painted "U. S. B. M. 180," elevation 238.65 feet.....	30 02 13.50	95 52 25.71	5,653
Hockley, 1.1 miles northwest of, 120 feet south of Houston & Texas Central R. R. track, 25 feet south of center of public road, 6 inches from corner post, on fence line south; copper nail in hub, post painted "U. S. B. M. 179," elevation 227.68 feet.....	30 01 56.49	95 51 40.28	4,346
Hockley, 600 feet west of Houston & Texas Central R. R. station, opposite milepost 36, 105 feet south of main track, 30 feet south of center of public road; iron post stamped "Prim. Trav. Sta. No. 78, 1915," elevation 221.210 feet.....	30 01 36.79	95 50 48.19	4,993
Hockley depot, opposite semaphore; top of rail, elevation 223 feet.....			.....
Hockley, 1 mile southeast of, 1 foot from telephone pole opposite railroad sign "1 mile to Hockley," 25 feet south of road; copper nail in hub, pole painted "U. S. B. M. 178," elevation 213.99 feet.....	30 01 14.61	95 49 44.94	5,994
Hockley, 1.9 miles southeast of, 120 feet north by 20 feet west of road crossing Houston & Texas Central R. R., 25 feet north of shell road, 1 foot from telephone pole; copper nail in hub, pole painted "U. S. B. M. 110," elevation 207.91 feet.....	30 00 56.00	95 48 54.16	4,844
Hockley, 2.6 miles southeast of, 25 feet south of center of shell road, about 60 feet north of center of Houston & Texas Central R. R., 1 foot from telephone pole; copper nail in hub, pole painted "U. S. B. M. 111," elevation 202.94 feet.....	30 00 37.26	95 48 05.89	4,647
Hockley, 3.7 miles southeast of, 100 feet north of railroad track, 40 feet north of section house; copper nail in root of china berry tree, tree painted "U. S. B. M. 112," elevation 203.05 feet.....	30 00 15.33	95 47 05.78	5,730

Along highway north near center of south border of quadrangle.

Hockley, 1 mile south of Houston & Texas Central R. R., at a crossing 1.9 miles southeast of station, 2,400 feet north of right-angle turn in road, 30 feet east of center of roadway, 2 feet from fence post; iron post stamped "Prim. Trav. Sta. No. 53, 1915," elevation 203.814 feet.....	30 00 06.27	95 48 53.41	.....
Bench mark 110, described in preceding line.....	30 00 56.00	95 48 54.16	5,024

Along highways through center of quadrangle.

Hockley, 3.75 miles north and 1 mile west of, 25 feet south of center of road, opposite house of Charles Imhol, 3.5 feet from corner fence post; iron post stamped "Prim. Trav. Sta. No. 88, 1915," elevation 274.862 feet.....	30 04 53.71	95 51 57.22	.....
Hockley, 3.7 miles north and 0.2 mile west of, 30 feet north of road, 150 feet west of T road south, 8 inches from fence post; copper nail in hub, witness stake painted "U. S. B. M. 200," elevation 273.49 feet.....	30 04 54.48	95 51 09.39	4,202
Hockley, 3.7 miles north and 0.3 mile east of, 170 feet south of T road west, 25 feet west of center of road; in root of oak tree painted "U. S. B. M. 201," copper nail, elevation 224.47 feet.....	30 04 52.81	95 50 30.05	3,461
Hockley, 2.90 miles north and one-fourth mile east of, T road east.....	30 04 08.08	95 50 29.30	4,521
Hockley, 2.90 miles north and 0.60 mile east of, 1,800 feet east of T road east, 25 feet north of center of road, 4 feet south of wire fence; iron post stamped "Prim. Trav. Sta. No. 89, 1915," elevation 263.880 feet.....	30 04 08.55	95 50 08.47	1,831
Hockley, 2.9 miles north and 1.5 miles east of, 1,550 feet west of T road south, 25 feet north of center of road, 1 foot east of corner post on fence line north; copper nail in hub painted "U. S. B. M. 202," elevation 241.74 feet.....	30 04 09.11	95 49 13.38	4,841
Hockley, 2.9 miles north and 2.5 miles east of, 30 feet south of center of road, 60 feet west of lane north, 1 foot from fence post painted "U. S. B. M. 203," copper nail in hub, elevation 236.96 feet.....	30 04 09.19	95 48 16.63	4,988
Hockley, 2.70 miles north and 2.90 miles east of, 30 feet west of T road east, 4 feet southeast of gatepost, 2 feet from wire fence line; iron post stamped "Prim. Trav. Sta. No. 90, 1915," elevation 227.768 feet.....	30 03 58.92	95 47 54.63	2,193

HOCKLEY QUADRANGLE—Continued.

Along highways through center of quadrangle—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
Hockley, 2.70 miles north and 3.80 miles east of, 700 feet west of T road west, 20 feet south of center of road, at corner fence post painted "U. S. B. M. 204"; copper nail in hub, elevation 216.46 feet.....	° ' "	° ' "	Feet.
Hockley, 3 miles north and 4.2 miles east of, 25 feet south of Hockley-Rosehill road; 1 foot from east gatepost and corner post on fence line south; copper nail in hub, "U. S. B. M. 205," elevation 230.80 feet.....	30 03 59.60	95 47 00.70	4,740
Rosehill, 3 miles west of, on the Rosehill-Hockley road, 20 feet north of road at point where a dim road crosses north and south; 750 feet southwest of fence corner; iron post stamped "Prim. Trav. Sta. No. 91, 1915," elevation 230.891 feet.....	30 04 17.82	95 46 14.70	4,442
	30 04 38.02	95 45 30.21	4,411

Magnetic declination for south half of quadrangle, 8° 30' E.

HOUSTON HEIGHTS QUADRANGLE.

Along public road.

Station.	Latitude.	Longitude.	Distance between stations.
Fairbanks station, 2.4 miles southeast of, about 1,000 feet northwest of milepost 10, 40 feet north of road; 7 feet from corner fence post; iron post stamped "Prim. Trav. Sta. No. 67, 1915," elevation 81.077 feet.....	° ' "	° ' "	Feet.
Fairbanks station, 3.3 miles southeast of, 850 feet northwest of railroad crossing, 20 feet south of road; 6 inches from telephone pole painted "U. S. B. M. 141"; copper nail in hub, elevation 82.54 feet.....	29 49 31.00	95 29 35.38	.....
Fairbanks, 4.2 miles southeast of, 2,100 feet northwest of milepost 8, 20 feet south of road; 6 inches from telephone pole painted "U. S. B. M. 142"; copper nail in hub, elevation 77.80 feet.....	29 49 00.38	95 28 53.73	4,798
Eureka, 1.75 miles northwest of, about halfway between mileposts 7 and 8, 60 feet north and 30 feet west of forks of road at T road north; 5 feet from fence corner; iron post stamped "Prim. Trav. Sta. No. 68, 1915," elevation 76.615 feet.....	29 48 31.18	95 28 13.59	4,604
Eureka, 0.8 mile northwest of, 125 feet east of culvert, "R. R. 6 c," 20 feet south of road; 1 foot from telephone pole painted "U. S. B. M. 143"; copper nail in hub, elevation 72.01 feet.....	29 48 00.83	95 27 31.21	4,831
Eureka, crossing of Missouri, Kansas & Texas Ry. and Houston & Texas Central R. R., about 84 feet east and 15 feet north of, 6 feet east of cattle guard at road crossing, 25 feet south of public road; in 3-inch by 4-inch post 4 inches above ground; copper nail; pole painted "U. S. B. M. 144," elevation 68.82 feet.....	29 47 29.44	95 26 49.06	4,883
Eureka, crossing of Houston & Texas Central R. R. and Missouri, Kansas & Texas Ry.....	29 47 01.22	95 26 10.03	4,467
Eureka, 480 feet east of intersection of Missouri, Kansas & Texas Ry. and Houston & Texas Central R. R. tracks, block signal at north side of Missouri, Kansas & Texas track; bottom of square hole in concrete foundation, Coast and Geodetic Survey bench mark, "H8," elevation 65.595 feet.....	29 47 01.11	95 26 10.97	85
Eureka, 0.9 mile southeast of, 25 feet south of center of Washington Road; 6 inches from telephone pole painted "U. S. B. M. 145"; copper nail in hub, elevation 62.23 feet.....	29 46 27.92	95 25 34.18	4,663
Houston, city limits on Washington Avenue, about 0.5 mile west of, 530 feet west of Birdsall Avenue, 30 feet north of center of road, 5 feet east of corner fence post; 8 feet from telephone pole; iron post stamped "Prim. Trav. Sta. No. 69, 1915," elevation 60.259 feet.....	29 46 14.98	95 25 18.25	1,918
Houston, intersection of Bruner Avenue and Houston & Texas Central R. R. track; top of rail, elevation 63.2 feet.....	29 46 12.58	95 24 47.76	2,696
Houston city limits, at center of Washington Avenue.....			
Houston, about 270 feet east of city limit, 0.4 mile south of Washington Avenue, 20 feet west of center of Roy Street; in root of oak tree 2 feet in diameter; copper nail and washer; telephone painted "U. S. B. M. 146," elevation 61.28 feet.....	29 45 51.34	95 24 44.35	2,168
Buffalo Bayou, center of iron truss bridge on Shepherd Dam road.....	29 45 37.14	95 24 31.02	1,855
Buffalo Bayou Bridge, on Shepherd Dam road, 150 feet south of south end of bridge; east end of concrete spillway; chiseled square, elevation 46.14 feet.....			

HOUSTON HEIGHTS QUADRANGLE—Continued.

Along public road—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
Buffalo Bayou Bridge, on Shepherd Dam road, 0.4 mile southwest of, 0.8 mile north of Westheimer road, 18 feet east of center of Shepherd Dam road, 20 feet south of fence corner; 6 inches from fence post painted "U. S. B. M. 147"; copper nail in hub, elevation 60.07 feet.....	° ' "	° ' "	Feet.
Hillendahl, 1.8 miles north and 2.1 miles east of, 150 feet south of house, 30 feet north of road, 30 feet east of lane north; in root of oak tree painted "U. S. B. M. 162"; copper nail, elevation 76.94 feet.....	29 45 16.16	95 24 37.70	2,200
Hillendahl, 1.8 miles north and 2.8 miles east of, 25 feet south of center of road opposite white house; in root of mulberry tree painted "U. S. B. M. 163"; copper nail, elevation 76.42 feet.....	29 48 09.37	95 29 05.40	.....
Durkee schoolhouse, 0.7 mile east of, 0.4 mile east of East Montgomery Road, 40 feet north of road; in root of lone oak tree on prairie; copper nail (t. b. m. 278), elevation 83.15 feet.....	29 48 08.97	95 28 24.36	3,615
Durkee schoolhouse, 0.25 mile east of, crossroads at East Montgomery Road.....	29 52 11.66	95 22 40.87	4,734
Durkee schoolhouse, 500 feet west of, 40 feet east and 30 feet north of crossroads; in root of poplar tree at fence line; copper nail (t. b. m. 279), elevation 83.20 feet.....	29 52 11.00	95 23 05.16	2,140
Durkee schoolhouse, 1.25 miles west of, 30 feet west of Houston-Staubner "airline" road, 15 feet south of T road east; iron post stamped "Prim. Trav. Sta. No. 126, 1915," elevation 83.413 feet.....	29 52 11.02	95 23 27.55	1,970
Durkee schoolhouse, about 1.75 miles west of, in open field about halfway between "air line" road and West Montgomery road; in root of lone persimmon tree, painted (t. b. m. 280); copper nail, elevation 85.42 feet.....	29 52 09.86	95 24 34.82	5,924
West Montgomery road; T road west.....	29 51 54.13	95 24 59.56	2,697
West Montgomery road, about 0.4 mile west of, at point 1.5 miles north of junction of "air line" and West Montgomery roads, 30 feet south of center of road and 4 feet north of fence line; iron post stamped "Prim. Trav. Sta. No. 127, 1915," elevation 91.885 feet.....	29 51 47.77	95 25 41.26	3,729
West Montgomery road, 1.25 miles west of, 1.8 miles east of Trinity & Brazos Valley R. R., on Fairbanks and Montgomery link road, 40 feet south of road; in root of pine tree painted "U. S. B. M. 281"; copper nail, elevation 89.18 feet.....	29 51 47.30	95 26 06.94	2,262
West Montgomery road, 2 miles west of, 1 mile east of Trinity & Brazos Valley R. R., on Fairbanks-Montgomery link Road, 25 feet south of road at bend; in root of oak tree painted "U. S. B. M. 282"; copper nail (t. b. m. 282), elevation 82.02 feet.....	29 51 45.74	95 26 57.47	4,452
T road corners, road southeast.....	29 51 46.86	95 27 45.66	4,245
Fairbanks, 1 mile north and 2.7 miles east of, about 930 feet south and 590 feet east of public road crossing of Trinity & Brazos Valley R. R., northeast side of road at right angle, 120 feet east of Trinity & Brazos Valley R. R.; 3 feet from corner fence post; iron post stamped "Prim. Trav. Sta. No. 128, 1915," elevation 87.049 feet.....	29 51 46.70	95 28 24.25	3,398
Fairbanks, 1.25 miles north and 2.25 miles east of, 1,550 feet west of Trinity & Brazos Valley R. R.; crossroads.....	29 51 46.88	95 28 46.96	2,000
Fairbanks, 1.2 miles north and 1.9 miles east of, 0.6 mile west of Trinity & Brazos Valley R. R.; 25 feet south of public road and 6 inches west of corner fence post; copper nail in hub (t. b. m. 283), elevation 90.56 feet.....	29 51 55.98	95 29 11.25	2,329
	29 51 55.45	95 29 29.70	1,626

Along Missouri, Kansas & Texas Railway in southeast quarter of quadrangle.

Houston, in 1st Ward, 600 feet west of Taylor Street, 32 feet north of center of Missouri, Kansas & Texas Ry. track, 4 feet south of fence line; in root of pecan tree painted "U. S. B. M. 251"; copper nail, elevation 56.92 feet.....	29 46 29.76	95 22 59.94	.....
Houston, at northwest corner of city limits, 240 feet east of Oxford Street and between Tenth and Eleventh streets, Houston Heights; concrete monument, 8 inches square, with hole in top.....	29 47 23.43	95 23 28.14	3,339
Houston Heights, on boulevard, center of parking, 84 feet south of center of Missouri, Kansas & Texas Ry. track, midway between the two electric tracks; iron post top flush with ground; Coast and Geodetic Survey bench mark "I8," "Prim. Trav. Sta. No. 114," elevation 61.017 feet.....	29 46 58.47	95 23 50.80	5,340
Houston, 140 feet south and 35 feet west of Brunner Avenue crossing of Missouri, Kansas & Texas Ry.; on root of oak tree painted "U. S. B. M. 252"; copper nail, elevation 58.34 feet.....	29 46 57.38	95 24 35.00	3,898
Houston, Missouri, Kansas & Texas Ry. trestle over White-oak Bayou; top of rail, elevation 32.4 feet.....			

HUFFMAN QUADRANGLE.

From southeast corner of quadrangle to Huffman.

Station.	Latitude.	Longitude.	Distance between stations.
Huffman, 1.4 miles south and 1.75 miles west of, 200 feet east of crossing of Beaumont, Sour Lake & Western Ry., 30 feet south of center of road; oak tree painted "U. S. B. M. 334"; wire nail in root, elevation 58.00 feet.....	30 00 13.38	95 06 50.57	Feet.
Huffman, 1.4 miles south and 0.9 mile west of, 0.4 mile west of T road corners, 30 feet north of center of road; oak tree painted "U. S. B. M. 335"; wire nail in root, elevation 71.32 feet.....	30 00 14.56	95 06 00.78	4,380
Huffman, 1.4 miles south and 0.5 mile west of, 20 feet east of T road corners, 2 feet from wire fence; iron post stamped "Prim. Trav. Sta. No. 145, 1915," elevation 70.708 feet.....	30 00 14.60	95 05 35.38	2,233
Huffman, 0.7 mile south and 0.5 mile west of, 300 feet south of pipe line crossing road, 20 feet east of road; gum tree painted "U. S. B. M. 442"; copper nail in root, elevation 68.92 feet.....	30 00 51.59	95 05 32.80	3,744
Huffman, 0.35 mile west of, road crossing Beaumont, Sour Lake & Western Ry.; top of rail, elevation 72.8 feet.....			
Huffman, 700 feet south and 1,600 feet west of, public road crossing Beaumont, Sour Lake & Western Railway.....	30 01 19.23	95 05 24.50	2,885

From Huffman north to Austin Scott's farms, near county line.

Huffman, 0.35 mile north and 0.2 mile west of, about 600 feet north of schoolhouse, 30 feet east of road, opposite dwelling house; cottonwood tree painted "U. S. B. M. 443"; copper nail in root, elevation 70.91 feet.....	30 01 44.51	95 05 16.87	2,637
Huffman, 1 mile north and 0.25 mile west of, 300 feet northeast of church, 20 feet west of road and 6 feet south of a fence corner; iron post stamped "Prim. Trav. Sta. No. 187, 1915," elevation 74.117 feet.....	30 02 22.39	95 05 21.84	3,852
Huffman, 1.2 miles north of, by 0.25 mile west of T road west, west side of north-south road, northeast corner of small wooden bridge, in plank; copper nail painted "U. S. 73.1 B. M.," elevation 73.12 feet.....			
Huffman, 2 miles north and 0.1 mile west of, 15 feet west of road at angle; gum tree painted "U. S. B. M. 444"; copper nail in root, elevation 74.11 feet.....	30 03 10.39	95 05 13.84	4,900
Huffman, 2.3 miles north and 0.5 mile east of, 70 feet north of public road in pasture, about 400 feet southeast of Mr. J. J. Simmon's house; lone oak tree painted "U. S. B. M. 445"; copper nail in root, elevation 74.99 feet.....	30 03 26.33	95 04 36.39	3,664
Huffman, 3.3 miles north and 0.4 mile east of, 20 feet north of dim road and 25 feet north of large oak tree painted "U. S. P. B. M."; iron post stamped "Prim. Trav. Sta. No. 188, 1915," elevation 76.155 feet.....	30 04 17.57	95 04 42.68	5,205
Huffman, 3.5 miles north and 0.4 mile west of, 200 feet south of ford crossing Loose Bayou, 5 feet north of road; oak tree painted "U. S. B. M. 446"; copper nail in root, elevation 50.70 feet.....	30 04 27.98	95 05 30.57	4,338
Huffman, 4 miles north and 0.9 mile west of, 0.9 mile northwest of Loose Bayou ford, 10 feet west of road, magnolia tree painted "U. S. B. M. 447"; copper nail in root; not found in 1916.....	30 04 58.33	95 06 00.66	4,049
Huffman, 4 miles north by 0.9 mile west of, 0.9 mile northwest of Loose Bayou ford, 5 feet west of road, in root of oak tree; wire nail painted erroneously "U. S. 72.9 B. M.," elevation 75.92 feet.....			
Huffman, 4.9 miles north and 0.9 mile west of, 15 feet south of double gate in east and west fence line, 8 feet east of road; oak tree painted "U. S. B. M. 448"; copper nail in root, elevation 79.96 feet.....	30 05 33.44	95 06 02.15	3,550
Huffman, 5.2 miles north and 0.9 mile west of, 0.3 mile north of double gate just east of wagon road; iron post stamped "Prim. Trav. Sta. No. 189, 1915," elevation 83.852 feet.....	30 05 49.76	95 06 01.07	1,652
Huffman, 6 miles north and 0.9 mile west of, 10 feet east of road; magnolia tree painted "U. S. B. M. 449"; copper nail in root, elevation 90.68 feet.....	30 06 33.94	95 06 01.95	4,464
Huffman, 6.7 miles north and 1.3 miles west of, 5 feet northeast of road; pine tree painted "U. S. B. M. 450"; copper nail in root, elevation 96.66 feet.....	30 07 07.17	95 06 23.66	3,861

From Huffman northwest on old road to Porter.

Huffman, 1.3 miles north and 1 mile west of, 5,000 feet west of gate at public road, at south side of wagon track; oak tree painted "U. S. B. M. 460"; wire nail in root, elevation 70.29 feet.....	30 02 38.12	95 06 04.43	.....
Huffman, 1.3 miles north and 1.7 miles west of, 5 feet southwest of road, gum tree painted "U. S. B. M. 461"; copper nail in root, elevation 63.06 feet.....	30 02 33.68	95 06 46.90	3,740
Huffman, 1.4 miles north and 2.3 miles west of, 150 feet east of San Jacinto River, just below mouth of Loose Bayou; large gum tree painted "U. S. B. M. 462"; copper nail in root, elevation 34.08 feet.....	30 02 24.18	95 07 25.60	3,535

HUFFMAN QUADRANGLE—Continued.

East and north of Huffman, mostly on prairie.

Station.	Latitude.	Longitude.	Distance between stations.
Huffman, 1 mile south and 1.85 miles east of, probably just on east side of Cedar Bayou, which is here indefinite, on west side of a grove of gum trees surrounded by a group of haw trees and bushes; small gum tree painted "U. S. B. M. 490"; copper nail in root, elevation 64.98 feet.	° ' "	° ' "	Feet.
Huffman, 0.2 mile south and 2.1 miles east of, 2,000 feet north of pipe line, on east side of a grove of about 100 small gum trees; one painted "U. S. B. M. 491"; ^a copper nail in root, elevation 66.47 feet.	30 00 36.87	95 03 15.08	.....
Huffman, 0.6 mile north and 2.5 miles east of, on prairie near small round concrete-lined reservoir for stock-water supply, on south-east corner of concrete watering trough painted "U. S. B. M. 492"; ^a chiseled mark, elevation 71.82 feet.	30 01 15.66	95 03 00.42	4,126
Huffman, 0.8 mile north and 1.8 miles east of, opposite west end of small bridge across Cedar Bayou, which is line between Harris and Liberty counties, 54 feet north of center of Beaumont, Sour Lake & Western Ry. track; elm tree painted "U. S. B. M. 493"; copper nail in root, elevation 69.71 feet.	30 02 00.39	95 02 39.08	4,893
Huffman, 1 mile north and 0.75 mile east of, 100 feet north of east and west road on south side of group of gum trees, one of which is painted "U. S. B. M. 494"; copper nail in root, elevation 68.90 feet.	30 02 08.31	95 03 16.20	3,361
	30 02 18.63	95 04 19.73	5,682

^a T. b. ms. 491 and 492 are in Liberty County.

Magnetic declination for quadrangle, 8° 27' E.

WEEDEN QUADRANGLE.

Along Westfield-Humble road.

Station.	Latitude.	Longitude.	Distance between stations.
Westfield, 0.25 mile south and 1.8 miles east of, 50 feet north of center of road; lone pine tree painted "U. S. B. M. 309"; copper nail in root, elevation 95.44 feet.	° ' "	° ' "	Feet.
Westfield, 0.5 mile south and 2.7 miles east of, 30 feet south of center of road, 6 feet north of fence post at angle in fence line; iron post stamped "Prim. Trav. Sta. No. 136, 1915," elevation 90.117 feet.	30 01 07.90	95 22 22.92	.....
Westfield, 0.5 mile south and 3.1 miles east of; forks of road; road southwest.	30 00 57.53	95 21 28.97	4,857
Westfield, 0.6 mile south and 3.7 miles east of, 45 feet north of road, nearly north of small wooden bridge; large pine tree painted "U. S. B. M. 310"; copper nail in root, elevation 90.77 feet.	30 00 53.56	95 21 04.15	2,218
Westfield, 0.8 mile south and 4.5 miles east of, 30 feet south of center of road; small oak tree painted "U. S. B. M. 311"; copper nail in root, elevation 93.83 feet.	30 00 47.91	95 20 29.36	3,112
Westfield, 1 mile south and 5 miles east of, 30 feet south of center of road; iron post stamped "Prim. Trav. Sta. No. 137, 1915," elevation 93.623 feet.	30 00 35.48	95 19 36.60	4,806
Humble, 0.3 mile north and 2.6 miles west of T road southeast.	30 00 24.84	95 19 08.84	2,667
Humble, 0.15 mile north and 2.25 miles west of, 55 feet south of center of road at angle; gum tree painted "U. S. B. M. 312"; copper nail in root, elevation 91.89 feet.	30 00 10.93	95 18 31.96	3,535
Humble, 0.2 mile north and 1.5 miles west of, 40 feet north of center of road; gum tree painted "U. S. B. M. 313"; copper nail in root, elevation 89.58 feet.	30 00 02.89	95 18 12.37	1,905
Humble, 0.2 mile north and 0.7 mile west of, 100 feet east of angle in road; 30 feet north of center of road; iron post stamped "Prim. Trav. Sta. No. 138, 1915," elevation 88.965 feet.	20 00 04.15	95 17 27.36	3,960
	30 00 04.35	95 16 36.44	4,477

WEEDEN QUADRANGLE—Continued.

From Spring to Humble through woods and along log tramroad.

Station.	Latitude.	Longitude.	Distance between stations.
Spring, 0.75 mile south and 3 miles east of, 400 feet N. 78° W. from residence of Mrs. Reardon, 120 feet south of a fence corner, 25 feet west of roadway; oak tree painted "U. S. B. M. 306"; copper nail in root, elevation 108.21 feet.....	30 04 05.37	95 21 59.16	Feet.....
Spring, 0.85 mile south and 3 miles east of, about 400 feet south 40° west from residence of Mrs. Reardon; 15 feet northwest of large oak tree; iron post stamped "Prim. Trav. Sta. No. 135, 1915," elevation 108.363 feet.....	30 04 01.17	95 21 57.16	459
Spring, 0.9 mile south and 3.8 miles east of, about 0.3 mile northwest of Mr. Scanlon's house; in woods, at south side of road; oak tree painted "U. S. B. M. 307"; copper nail in root, elevation 103.19 feet.....	30 04 00.04	95 21 11.92	3,978
Spring, 1.15 miles south and 4.2 miles east of, 1,100 feet southeast of Mr. Scanlon's house, 20 feet south of fence corner at southeast corner of his field; pine tree painted "U. S. B. M. 316"; copper nail in root, elevation 98.99 feet.....	30 03 46.06	95 20 48.02	2,532
Humble, 4 miles north and 4.6 miles west of, 2.2 miles northwest of tramway crossing of Cypress Creek, 35 feet southwest of center of tramroad, in clearing; live-oak tree painted "U. S. B. M. 317"; copper nail in root, elevation 99.68 feet.....	30 03 23.62	95 20 31.46	2,693
Humble, 3.4 miles north and 4 miles west of, 50 feet east of tramroad and 90 feet north of a dim road crossing; oak tree painted "U. S. B. M. 318"; copper nail in root, elevation 102.66 feet.....	30 02 51.16	95 19 57.89	4,412
Humble, 2.63 miles north by 3.6 miles west of, 0.3 mile northwest of crossing of Cypress Creek, 12 feet south of tramway, in top of stump 15 inches high; copper nail painted "U. S. 80.4 B. M." elevation 80.40 feet.....			
Humble, 2.65 miles north and 3.7 miles west of, 0.4 mile northwest of crossing of Cypress Creek, 8 feet east of tramroad; oak tree painted "U. S. B. M. 319"; copper nail in root not found in 1916.....	30 02 12.10	95 19 38.65	4,293
Humble, 2.3 miles north and 3.45 miles west of, 100 feet northwest of center of tramroad, bridge across Cypress Creek, 13 feet west of track; gum tree painted "U. S. B. M. 320"; copper nail in root, elevation 61.05 feet.....	30 01 56.23	95 19 22.11	2,166
Humble, 1.85 miles north and 3 miles west of, 3,300 feet southeast of tramroad crossing of Cypress Creek, 15 feet west of track; oak tree painted "U. S. B. M. 321"; copper nail in root, elevation 97.78 feet.....	30 01 32.21	95 18 57.13	3,274
Humble, 1.4 miles north and 2.6 miles west of, 15 feet north of tramroad track; pine tree painted "U. S. B. M. 322"; copper nail in root, elevation 98.46 feet.....	30 01 08.88	95 18 30.97	3,293
Humble, 1.25 miles north and 2.1 miles west of, 115 feet west of dim settlement road crossing tramway (road leads to Evans ford on Spring Creek), 17 feet south of track in small clearing; iron post stamped "Prim. Trav. Sta. No. 139, 1915," elevation 96.985 feet.....	30 01 01.66	95 18 01.43	2,699
Humble, 0.9 mile north and 1.3 miles west of, 15 feet south of center of track; oak tree painted "U. S. B. M. 323"; copper nail in root, elevation 90.73 feet.....	30 00 42.73	95 17 14.65	4,537
Humble, 0.6 mile north and 0.6 mile west of, 8 feet north of tramroad; oak tree painted "U. S. B. M. 324"; copper nail in root, elevation 89.28 feet.....	30 00 24.49	95 16 31.18	4,243

Along Houston, East & West Texas Railway.

Humble, 1 mile north of, about 200 feet north of post marked "1 mile to Humble," 70 feet east of center of track; at edge of woods; gum tree painted "U. S. B. M. 472"; copper nail in root, elevation 65.88 feet.....	30 00 44.28	95 15 35.55	.....
Humble, 1.9 miles north of, opposite south end of trestle approach to bridge across San Jacinto River, 50 feet east of track and 20 feet lower in corner of right-of-way fence; iron post stamped "Prim. Trav. Sta. No. 196, 1915," elevation 48.359 feet.....	30 01 29.61	95 15 17.98	4,833
Humble, 2.5 miles north of, 350 feet north of wooden spur switch stand, 50 feet east of center of track at road crossing, pine tree painted "U. S. B. M. 471"; copper nail in root; not found in 1916.....	30 01 49.42	95 15 11.17	2,089
Weeden, opposite sign post Houston East & West Texas Ry., top of rail, elevation 62.9 feet.....			.....

KATY QUADRANGLE.

From point near northeast corner of quadrangle south, west, and north in northern part of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
Katy, 5.4 miles north by 4 miles east of, 20 feet north by 20 feet east of T road, corners, roads north, south, and east; 8 inches from corner fence post; wire nail in hub; post painted "U. S. B. M. 124," elevation 145.76 feet.....	° ' " 29 51 52.95	° ' " 95 45 24.66	Feet.
Katy, 4.4 miles north by 4 miles east of, 20 feet west of center of north and south road, 3,600 feet south of crossroads; 6 inches from corner fence post; wire nail in hub; post painted "U. S. B. M. 125," elevation 144.61 feet.....	29 51 02.04	95 45 24.62	5,141
Katy, 4 miles north by 4 miles east of, at crossroads.....	29 50 45.39	95 45 24.19	1,682
Katy, 4.1 miles north by 3.5 miles east of, 0.5 mile east of Stockdick schoolhouse, 25 feet south of road, 3 feet from corner fence post at north and south fence line; iron post stamped "Prim. Trav. Sta. No. 60, 1915," elevation 142.479 feet.....	29 50 44.91	95 45 54.07	2,635
Stockdick schoolhouse, crossroads at.....	29 50 44.97	95 46 24.06	2,645
Katy, 4.1 miles north by 2.6 miles east of, 1,957 feet west of crossroads at Stockdick schoolhouse, 30 feet north of center of east and west road; 1 foot from telephone pole; copper nail in hub; painted "U. S. B. M. 126," elevation 145.81 feet.....	29 50 45.08	95 46 46.25	1,957
Katy, 4.1 miles north by 1.8 miles east of, 6,641 feet west of Stockdick schoolhouse, 30 feet north of center of road; 1 foot from telephone pole; copper nail in hub; witness stake painted "U. S. B. M. 127," elevation 149.86 feet.....	29 50 44.71	95 47 39.41	4,684
Katy, 4.1 miles north by 1 mile east of, 25 feet south by 25 feet east of center of crossroads, 2.5 feet from fence corner; iron post stamped "Prim. Trav. Sta. No. 61, 1915," elevation 154.086 feet.....	29 50 43.88	95 48 23.48	3,885
Katy, 4.1 miles north of, 633 feet east of crossroads, 30 feet north of road, 1 foot from corner fence post at fence north; copper nail in hub; witness stake painted "U. S. B. M. 128," elevation 157.45 feet.....	29 50 43.91	95 49 16.77	4,696
Katy, 4.1 miles north of; center of crossroads.....	29 50 43.50	95 49 23.93	633
Katy, 4.5 miles north of, 25 feet east of center of road, 6 inches from gatepost at north end of gate, near house painted green below and yellow above; copper nail in hub; post painted "U. S. B. M. 101," elevation 160.04 feet.....	29 51 09.93	95 49 23.93	2,671
Katy, 5.6 miles north of, 2,500 feet south of white schoolhouse on west side of road, opposite private lane west, 30 feet east of center of public road; iron post stamped "Prim. Trav. Sta. No. 49, 1915," elevation 160.140 feet.....	29 52 02.07	95 49 24.36	5,268
Katy, 6.1 miles north of, 300 feet north of schoolhouse; at crossroads, center of culvert, elevation 160.18 feet.....	29 52 28.28	95 49 24.95	2,649
Katy, 6 miles north of; center of crossroads.....	29 47 07.30	95 45 37.38	.....
Katy, 3.6 miles east of, about 50 feet south of Missouri, Kansas & Texas Ry.; 6 inches from telephone pole; copper nail in hub; pole painted "U. S. B. M. 95," elevation 130.36 feet.....	29 47 07.30	95 45 37.38	.....
Katy, 2.6 miles east of, about 50 feet south of Missouri, Kansas & Texas Ry., about 1.5 feet north of telephone pole, close to wire fence; 25 feet north of public road; pole painted "U. S. P. B. M.," United States Coast and Geodetic Survey bench mark, primary traverse station No. 46, 1915, elevation 134.488 feet.....	29 47 07.58	95 46 35.08	5,086
Stone culvert, northeast corner of, 70 feet southwest of private road crossing, elevation 137.53 feet.....			
Katy, 1.8 miles east of, about 50 feet south of railroad track, 25 feet north of center of road; 6 inches from telephone pole; copper nail in hub; pole painted "U. S. B. M. 96," elevation 135.46 feet.....	29 47 07.77	95 47 26.11	4,499
Katy, 0.9 mile east of, about 60 feet south of center of Missouri, Kansas & Texas Ry., 25 feet north of center of road, 6 inches from telephone pole; copper nail in hub; pole painted "U. S. B. M. 97," elevation 137.73 feet.....	29 47 07.97	95 48 17.14	4,499
Katy, 520 feet west of station, Missouri, Kansas & Texas Ry., 42 feet south of center of track; 4 feet east by 2 feet south of telephone pole; iron post stamped "Prim. Trav. Sta. No. 47, 1915," elevation 140.984 feet.....	29 47 08.32	95 49 18.65	5,423
Katy, in southwest corner foundation of water tank of Katy Rice Milling Co., about 175 meters (574 feet) west by 100 meters (328 feet) south of station; copper bolt set in lead (Coast and Geodetic Survey bench mark) ("x7"), elevation 141.355 feet.....	29 47 05.41	95 49 19.57	305
County corner, Fort Bend, Waller, and Harris counties, on bank of branch of Buffalo Bayou, just west of town of Katy; a large stone monument (no elevation).....	29 47 17.96	95 49 32.40	1,700
Katy, 0.8 mile north of, 20 feet west of center of road, 100 feet north of road forks, 600 feet south of white house with windmill on west side of road; 6 inches from cedar telephone pole; copper nail in hub; pole painted "U. S. B. M. 98," elevation 145.91 feet.....	29 47 52.00	95 49 29.03	3,453
Katy, 1.7 miles north of, 20 feet west of center of road, opposite small house on west; copper nail in hub painted "U. S. B. M. 99," elevation 149.77 feet.....	29 48 38.95	95 49 29.55	4,748

KATY QUADRANGLE—Continued.

From point near northeast corner of quadrangle south, west, and north in northern part of quadrangle—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
Katy, 2.8 miles north of, 20 feet east of center of road; close to fence line directly opposite a one and one-half story unpainted house on west side of road and about 800 feet north of red barn with star in each gable end on east side of road; iron post stamped "Prim. Trav. Sta. No. 48," elevation 156.620 feet.....	° ' "	° ' "	<i>Feet.</i>
Katy, 3.7 miles north of, about 20 feet west of center of road, 0.5 foot from telephone pole, 3,160 feet north of crossroads; copper nail in hub; pole painted "U. S. B. M. 100," elevation 156.47 feet.....	29 49 35.61	95 49 23.10	5,752
	29 50 22.52	95 49 24.00	4,740

Magnetic declination in quadrangle, 8° 45' E.

HUMBLE QUADRANGLE.

Along public roads from Humble to Dyersdale.

Station.	Latitude.	Longitude.	Distance between stations.
Humble, station Houston East & West Texas Ry., 250 feet north of, 20 feet north of water tank, 12 feet east of center of track; 1 foot east of distance post to tank; copper nail in hub; post painted "U. S. B. M. 314," elevation 92.36 feet.....	° ' "	° ' "	<i>Feet.</i>
Humble, 0.8 mile south and 0.4 mile east of, 30 feet east of center of Humble-Houston road; 3 inches west of telephone pole; painted "U. S. B. M. 315"; copper nail in hub, elevation 87.35 feet.....	29 59 54.78	95 15 55.80	.....
Humble, 1.4 miles south and 0.25 mile east of, 35 feet west of center of Humble-Houston road; 10 feet west of line of telephone poles; iron post stamped "Prim. Trav. Sta. No. 140, 1915," elevation 84.045 feet.....	29 59 10.74	95 15 32.33	4,906
Humble, 2.3 miles south of, 30 feet east of center of road, close to lane east; 1 foot from telephone pole painted "U. S. B. M. 325"; 371"; copper nail in hub, elevation 75.25 feet.....	29 58 37.40	95 15 41.47	3,464
Humble, 2.9 miles south of, 60 feet northeast of forks of road; 1 foot from corner fence post painted "U. S. B. M. 326"; copper nail in hub, elevation 66.96 feet.....	29 57 53.84	95 15 50.93	4,479
Humble, 3.4 miles south and 0.5 mile west of; crossroads.....	29 57 20.87	95 15 58.58	3,398
Humble, 3.8 miles south and 0.9 mile west of, 15 feet southeast of center of road; at base of double pine tree painted "U. S. B. M. 371"; copper nail in hub, elevation 73.58 feet.....	29 56 55.26	95 16 26.67	3,578
Humble, 4.2 miles south and 1.35 miles west of forks of road.....	29 56 34.24	95 16 49.42	2,919
Humble, 4.6 miles south and 1.3 miles west of, 1,200 feet south 35° east from crossing of Houston-Humble road and Houston, East & West Texas Ry., 25 feet east of center of road, at small wooden bridge; iron post stamped "Prim. Trav. Sta. No. 159, 1915," elevation 67.903 feet.....	29 56 10.23	95 17 15.65	3,349
Humble, 5.6 miles south and 1.3 miles west of, in edge of timber, 20 feet west of road; gum tree painted "U. S. B. M. 372"; copper nail in hub, elevation 58.48 feet.....	29 55 50.03	95 17 14.75	2,043
Humble, 6.3 miles south and 1.3 miles west, 20 feet west of road; gum tree painted "U. S. B. M. 373"; copper nail in root, elevation 65.42 feet.....	29 54 55.99	95 17 14.54	5,459
Humble, 6.5 miles south and 1.3 miles west of; T road north.....	29 54 10.58	95 17 13.79	4,589
Dyersdale, 0.5 mile north and 2 miles west of, 1,900 feet east of T road north, 10 feet north of road; iron post stamped "Prim. Trav. Sta. No. 160, 1915," elevation 68.848 feet.....	29 53 56.89	95 17 13.40	1,384
Dyersdale, 0.5 mile north and 1 mile west of, 10 feet north of road; oak tree painted "U. S. B. M. 374"; copper nail in root, elevation 62.70 feet.....	29 53 57.22	95 16 51.60	1,920
Dyersdale, 0.5 mile north and 0.15 mile west of, 350 feet southeast of forks of road, 20 feet southwest of center of road; oak tree painted "U. S. B. M. 375"; copper nail in root, elevation 57.36 feet.....	29 53 57.97	95 15 50.74	5,357
	29 53 55.70	95 15 00.83	4,399

Along Beaumont, Sour Lake & Western Railway.

Dyersdale, 0.5 mile south and 0.15 mile west of, 50 feet northwest of center of track, just outside right of way fence; pine tree painted "U. S. B. M. 376"; copper nail in root.....	29 52 51.85	95 15 31.22	.....
Tree fallen down in 1916; copper rail in tree, elevation 61.27 feet.....			.....

HUMBLE QUADRANGLE—Continued.

On unchecked spur line near east border of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
Humble, 3.4 miles south and 0.2 mile west of, 1,500 feet east of crossroads; in pasture; pine tree painted "U. S. B. M. 361"; copper nail in root.....	° ' " 29 56 56.53	° ' " 95 16 09.43	<i>Feet.</i>
Humble, 4 miles south and 0.5 mile east of, 10 feet south of gate at south end of private lane, fences north, south, and west; 6 inches from first fence post south of gate; painted "U. S. B. M. 362"; copper nail in hub.....	29 56 25.94	95 15 26.46	4,883
Humble, 2.5 miles south and 0.7 mile east of, 4,500 feet northeast of forks on Houston-Humble Road, 20 feet west of T road north, 12 feet north of road in top of east end of concrete culvert; bronze tablet stamped "Prim. Trav. Sta. No. 141, 1915," elevation 68.884 feet.....	29 57 41.56	95 15 13.50	.....

Along highways near west border of quadrangle.

Aldine, 2.15 miles south of, 5 feet south and 50 feet east of public road crossing International & Great Northern Ry., 1 foot east of corner fence post; copper nail in hub; painted "U. S. B. M. 243" on corner post brace, elevation 76.77 feet	29 54 06.57	95 22 20.74	.....
International & Great Northern Ry. bridge 284; top of rail, elevation 79 feet			
Aldine, 3.10 miles south of, 1,500 feet south of bridge over creek, 30 feet west of center of road, 1 foot east of fence line; 15 feet east of telegraph pole painted "U. S. B. M. 244"; copper nail in hub, elevation 74.77 feet.....	29 53 18.46	95 22 08.73	4,974
Aldine, 3.70 miles south of, 55 feet east of center of track, 25 feet west of center of road, at gate in right-of-way fence, 4 feet east of north gate post; iron post stamped "Prim. Trav. Sta. No. 110, 1915," elevation 77.935 feet.....	29 52 49.44	95 22 01.44	3,002
Houston-Aldine road, 3.7 miles south of Aldine, 0.73 mile east of International & Great Northern Ry., 1 mile southwest of Halls Bayou, top of west end of concrete culvert; chiseled square painted "U. S. 73.1 B. M.," elevation 73.10 feet.....			

From point 5 miles south of Humble, southwest to point 4 miles north of Houston.

Houston-Humble road, 4 miles south of Humble, east side of road, top of concrete milepost 14, elevation 75.82 feet.....			
Humble, 4.2 miles south by 1.35 miles west of, 500 feet north of road crossing Houston East & West Texas Ry., at forks of road, northeast corner of small bridge, in plank; copper nail painted "U. S. 70.7 B. M.," elevation 70.36 feet.....			
Humble, 6 miles south of, about 1 mile south of Houston East & West Texas Ry. crossing, in bottom railing, east end of bridge; copper nail painted "U. S. 74.0 B. M.," elevation 73.32 feet.....			
Humble, 7 miles south of, 1,200 feet south of bridge over large drainage ditch, 25 feet east of road, 1 foot east of telephone pole painted "U. S. 69.0 B. M.," elevation 68.89 feet.....			
Humble, 7.25 miles south of, 0.5 mile south of bridge over large drainage ditch near T road west, in top of east head wall of brick culvert, at angle in road; chiseled square painted "U. S. 73 B. M.," elevation 72.38 feet.....			
Humble, 3 miles south of, 0.75 mile north of crossroads, 600 feet north of angle in road, in top of west brick head wall of culvert; chiseled square painted "U. S. 73 B. M.," elevation 73.00 feet....			
Humble, 8.75 miles south of, 0.6 mile southwest of Mount Houston station on Houston East & West Texas Ry., at crossroads, opposite concrete highway milepost 10, in bottom railing, east end of bridge; copper nail painted "U. S. 70 B. M.," elevation 70.15 feet.....			
Houston, 9 miles north of, on Humble road, 190 feet southwest of concrete milepost 9, in top of east end of brick culvert; chiseled square painted "U. S. 67 B. M.," elevation 66.68 feet.....			

Magnetic declination for quadrangle, 8° 30' E.

SEABROOK QUADRANGLE.

Along road from La Porte to Seabrook.

Station.	Latitude.	Longitude.	Distance between stations.
La Porte, 3.15 miles south of, 450 feet north of small wooden bridge, 25 feet west of road; 18 inches east of fence line; iron post stamped "Prim. Trav. Sta. No. 267, 1915," elevation 13.982 feet.....	° ' "	° ' "	Feet.
La Porte, 4 miles south of, 30 feet east of road, at south end of gate; 1 foot west of gate post painted "U. S. B. M. 503"; copper nail in hub, elevation 14.83 feet.....	29 37 09.50	95 01 06.23	.....
Seabrook, 2 miles north of, 490 feet north of small wooden bridge, 30 feet east of road, 10 feet north of fence corner; 1 foot west of post painted "U. S. B. M. 504"; copper nail in hub, elevation 16.37 feet.....	29 36 23.40	95 01 12.46	4, 090
Seabrook, 1.25 miles north of, 50 feet east of Southern Pacific R. R., 30 feet west of road, 50 feet south of gate and private road crossing, opposite white house; 3 feet west of wire fence; iron post stamped "Prim. Trav. Sta. No. 208, 1915," elevation 22.514 feet.....	29 35 37.99	95 01 30.31	4, 850
Seabrook, 1,840 feet north of, 30 feet west of road; 4 inches east of telephone pole painted "U. S. B. M. 505"; copper nail in hub, elevation 17.46 feet.....	29 34 54.83	95 01 44.56	4, 538
Seabrook station, just north of; public road crossing Southern Pacific R. R.....	29 34 07.81	95 01 36.74	4, 801
Seabrook, opposite station of Southern Pacific R. R.; top of rail, elevation 14.48 feet.....	29 33 49.57	95 01 34.35	1, 855
Seabrook, 1.7 miles north of, 100 feet southeast of road crossing Southern Pacific R. R., in bottom railing, west end of small wooden bridge, at angle in road; copper nail painted "U. S. 19.8 B. M.," elevation 19.90 feet.....			

From Seabrook to Webster along public road.

Seabrook station, 0.5 mile southwest of, 30 feet south of road, on top of concrete fence wall at fence corner, painted "U. S. B. M. 506"; circle chiseled around corner, elevation 2.95 feet.....	29 33 32.35	95 01 55.24	2, 537
Seabrook, 1 mile west of, 200 feet north of shore line of Clear Lake, 30 feet north of road, 10 feet west of advertising signboard marked "Houston 27 mi. 2"; iron post stamped "Prim. Trav. Sta. No. 209, 1915," elevation 15.378 feet.....	29 33 44.91	95 02 37.95	3, 980
Seabrook, 1.6 miles west of, 85 feet east of end of bridge over Taylor's Bayou, 20 feet northeast of center of road; oak tree painted "U. S. B. M. 507"; copper nail in root, elevation 15.30 feet.....	29 33 53.95	95 03 13.57	3, 275
Seabrook, 2.5 miles west of, 25 feet north of road, 3 feet north of fence line; oak tree painted "U. S. B. M. 508"; copper nail in root of stump (tree blown over in 1915), elevation 19.03 feet.....	29 33 55.05	95 04 03.55	4, 415
Webster, 1.4 miles north and 2.6 miles east of, 200 feet northeast of a bungalow, 100 feet west of end of Clear Lake, at approximate right angle in road, in line of road west; iron post stamped "Prim. Trav. Sta. No. 210, 1915," elevation 15.737 feet.....	29 33 20.25	95 04 29.60	4, 202
Webster, 1.2 miles north and 1.75 miles east of, 25 feet north of road, nearly opposite a bungalow south of road; 6 inches south of telephone pole painted "U. S. B. M. 509"; copper nail in hub, elevation 19.13 feet.....	29 33 05.22	95 05 17.69	4, 511
Webster, 0.7 mile north and 1 mile east of, 150 feet east of white house, 65 feet north of road, 35 feet north of gate; oak tree painted "U. S. B. M. 510"; copper nail in root, elevation 18.14 feet.....	29 32 50.49	95 06 05.14	4, 447
Webster, 700 feet northeast of public road crossing of Galveston, Houston & Henderson R. R., 25 feet north of T road corners, road south to League City; iron post stamped "Prim. Trav. Sta. No. 211, 1915," elevation 25.734 feet.....	29 32 20.03	95 06 57.88	5, 584
Webster, 0.3 mile southeast of, on right of way of Galveston, Houston & Henderson R. R., 40 feet southeast of mile board 22, 50 feet southwest of tracks; cross on top of section rail (C. & G. S. b. m. MM22), elevation 26.943 feet.....			
Webster, public road crossing Galveston, Houston & Henderson R. R.....	29 32 15.43	95 07 03.80	700

From Seabrook toward Deepwater along public road.

Seabrook, 1.7 miles north and 0.25 mile west of, public road crossing Southern Pacific R. R.....	29 35 18.36	95 01 49.00	.....
Seabrook, 1.8 miles north and 0.6 mile west of, 65 feet south of road, oak tree painted "U. S. B. M. 531"; copper nail in root, elevation 16.80 feet.....	29 35 23.37	95 02 10.33	1, 950
Seabrook, 1.8 miles north and 1.25 miles west of, 1,750 feet west of Taylors Bayou, 35 feet north of road; oak tree painted "U. S. B. M. 532"; copper nail in root, elevation 13.86 feet.....	29 35 21.46	95 02 47.65	3, 301

SEABROOK QUADRANGLE—Continued.

From Seabrook toward Deepwater along public road—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
Seabrook, 1.9 miles north and 1.7 miles west of, 2,000 feet north-west of a right angle in road, 1,700 feet northeast of a house; 25 feet northeast of road beside wire fence which bears N. 50° E.; iron post stamped "Prim. Trav. Sta. No. 219, 1915," elevation 17.046 feet.....	° ' " 29 35 27.87	° ' " 95 03 14.91	<i>Feet.</i> 2,492
Seabrook, 2.3 miles north and 2.25 miles west of, about 400 feet southwest of road, in field; oak tree 4 feet in diameter painted "U. S. B. M. 533"; copper nail in root, elevation 16.89 feet.....	29 35 49.59	95 03 49.80	3,781
Seabrook, 3.1 miles north and 3.1 miles west of, 50 feet southwest of road, at edge of woods; oak tree painted "U. S. B. M. 534"; copper nail in root, elevation 20.57 feet.....	29 36 32.07	95 04 41.41	6,259
Seabrook, 3.3 miles north and 3.35 miles west of, T road northeast.....	29 36 42.50	95 04 54.60	1,570
Seabrook, 3.5 miles north and 3.6 miles west of, 970 feet northwest of bridge, 20 feet southwest of road, at edge of woods; iron post stamped "Prim. Trav. Sta. No. 220, 1915," elevation 20.213 feet.....	29 36 54.29	95 05 10.78	1,859
Seabrook, 4 miles north and 4.1 miles west of, 35 feet northeast of road; oak tree painted "U. S. B. M. 535"; copper nail in root, elevation 19.54 feet.....	29 37 16.46	95 05 39.16	3,360

Magnetic declination for quadrangle, 8° 10' E.

LOUETTA QUADRANGLE.

Mostly along public roads.

Station.	Latitude.	Longitude.	Distance between stations.
Cypress, 3 miles north and 5 miles east of 1.5 miles west of West Montgomery road, 55 feet north of center of road; pine tree painted "U. S. B. M. 257"; copper nail in root, elevation 148.01 feet.....	° ' " 30 00 45.13	° ' " 95 36 51.33	<i>Feet.</i> 4,641
Kohrville, about 0.5 mile north and 0.8 mile west of, 0.5 mile west of West Montgomery road, at north side of road; in root of oak tree painted "U. S. B. M. 258"; copper nail, elevation 144.63 feet.....	30 00 45.07	95 35 55.70	4,891
Culvert, 30 feet south of crossroads, on West Montgomery road; top of painted bolt at northeast corner of culvert, elevation 144.1 feet.....			
Kohrville, about ½ mile north and ½ mile west of, T road west at junction with West Montgomery road.....	30 00 45.60	95 35 24.26	2,765
Kohrville, 0.5 mile north of, 300 feet north of a church, 25 feet west of road and 25 feet south of road west; iron post stamped "Prim. Trav. Sta. No. 117, 1915," elevation 142.128 feet.....	30 00 45.49	95 35 07.93	1,440
Louetta, 0.3 mile north of Trinity & Brazos Valley Ry. crossing, 90 feet south and 45 feet west of, 40 feet south of public road; in root of oak tree painted "U. S. B. M. 259"; copper nail, elevation 141.31 feet.....	30 01 19.71	95 34 14.24	5,850
Louetta, ½ mile northeast of, 40 feet north of Cypress-Spring road; pine tree painted "U. S. B. M. 266"; copper nail in root, elevation 140.30 feet.....	30 01 42.05	95 33 36.94	3,981
Louetta, 1.5 miles northeast of, on Cypress-Spring road, 1.15 miles west of Stuebner "air line" road, 30 feet south of road, 25 feet east of fence corner; iron post stamped "Prim. Trav. Sta. No. 120, 1915," elevation 144.007 feet.....	30 02 07.18	95 33 09.74	3,488
Spring, 3 miles south and 7.5 miles west of, 2,300 feet southwest of Stuebner "air line" road, north side of bridge across creek, at west end of bridge railing; painted "U. S. B. M. 267"; copper nail in hub, elevation 139.11 feet.....	30 02 32.14	95 32 40.92	3,574
Spring, 2.8 miles south and 7.15 miles west of; crossroads.....	30 02 43.77	95 32 18.07	2,327
Spring, 2 miles south and 6.6 miles west of, 0.6 mile east of Stuebner "air line" road, 300 feet southeast of white house, 25 feet north of road and 6 feet west of corner fence post; iron post stamped "Prim. Trav. Sta. No. 199, 1915," elevation 139.348 feet.....	30 02 58.83	95 31 37.24	3,898
Spring, 2.2 miles south and 6.2 miles west of, 450 feet south of a T road northwest at edge of pine woods; in root of pine tree painted "U. S. B. M. 478"; copper nail, elevation 132.94 feet.....	30 02 50.70	95 31 12.17	2,352
Spring, 2.5 miles south and 5.4 miles west of, 0.2 mile west of white church, 25 feet south of center of road and 6 inches from large corner fence post painted "U. S. B. M. 477"; copper nail in hub, elevation 128.93 feet.....	30 02 34.05	95 30 26.57	4,348

LOUETTA QUADRANGLE—Continued.

Along Air Line road near Cypress Creek.

Station.	Latitude.	Longitude.	Distance between stations.
Cypress Creek, 2.65 miles northwest of, 25 feet west of road, 12 feet from fence corner; large pine tree painted "U. S. B. M. 268"; copper nail in root, elevation 135.52 feet.....	30 02 17.67	95 32 12.64	Feet.
Cypress Creek, 1.75 miles northwest of, 25 feet west of road, 5 feet east of large pine tree; iron post stamped "Prim. Trav. Sta. No. 121, 1915," elevation 124.014 feet.....	30 01 35.60	95 31 48.44	4,751
Cypress Creek, 0.9 mile northwest of, 100 feet southeast of bend of road, 30 feet east of road; oak tree painted "U. S. B. M. 269"; copper nail in root, elevation 118.82 feet.....	30 01 04.08	95 31 12.38	4,492
Cypress Creek, about 40 feet southwest of north end of bridge over; in root of mangolia tree painted "U. S. B. M. 270"; copper nail, elevation 108.27 feet.....	30 00 23.38	95 30 44.06	4,807

Along West Montgomery road north from International & Great Northern Railway.

Steubner, 1.2 miles east by 1.7 miles south of, 0.4 mile north of International & Great Northern Ry., 15 feet east of road and 6 inches from base of pine tree painted "U. S. B. M. 265"; copper nail in hub, elevation 133.52 feet.....	30 06 28.83	95 32 59.19	.....
Steubner, 1 mile east and 0.8 mile south of, 1 mile north and 0.5 mile west of, International & Great Northern Ry. crossing, 0.9 mile south of T road west, 40 feet east of road; oak tree painted "U. S. B. M. 264"; copper nail in root, elevation 146.37 feet.....	30 07 05.80	95 33 14.68	3,975

Near northeast corner of quadrangle.

Rotherwood spur, International & Great Northern Ry., 1.9 miles north and 0.5 mile west of, about 1,200 feet west of farmhouse, 10 feet south of wood road; post-oak tree 18 inches in diameter, painted "U. S. B. M. 301"; copper nail in root.....	30 07 27.70	95 30 15.53	.....
NOTE.—Tree blown down. (Copper nail in top of stump, 37 feet southwest of original position of t. b. m. 301). Elevation 127.71 feet.			

Along highways near south border of north half of quadrangle.

Tomball station, about 165 feet north of Trinity & Brazos Valley Ry. depot, 20 feet west of track; in southwest corner of southeast concrete pier of water tank; bronze tablet stamped "Prim. Trav. Sta. No. 99, 1915," elevation 188.396 feet.....	30 05 55.28	95 36 50.33	5,383
Tomball, 0.75 mile east of, 90 feet north of crossroads (private road south), 15 feet east of center of north and south road; 6 feet from wire fence; in root of wild cherry tree painted "U. S. B. M. 223"; copper nail, elevation 183.64 feet.....	30 06 07.68	95 36 08.59	3,876
Hufsmith, about 0.60 mile south and 0.20 mile west of, about 900 feet south of church, 25 feet west of center of road, 6 inches from fence post, at angle in fence; painted "U. S. B. M. 224"; copper nail in hub, elevation 173.40 feet.....	30 06 50.25	95 35 58.91	4,383
Hufsmith, 200 feet northwest of station; public road crossing International & Great Northern Ry. (no elevation).....	30 07 19.24	95 35 46.69	3,118

Along International & Great Northern Railway.

Hufsmith, about 1,400 feet east of, along International & Great Northern Ry. track, 550 feet south of track, nearly opposite milepost 11, 25 feet south and 30 feet west of a right angle in road; 4 feet south of corner fence post; iron post stamped "Prim. Trav. Sta. No. 100, 1915," elevation 174.796 feet.....	30 07 06.41	95 35 33.70	1,726
Hufsmith, 1.25 miles east of, 125 feet west of public road crossing, 35 feet south of center of track; 1 foot from telegraph pole (milepost 10) painted "U. S. B. M. 225"; copper nail in hub, elevation 150.22 feet.....	30 06 41.91	95 34 41.50	5,211
Hufsmith, 2.25 miles east of, 35 feet south of track; 6 inches from telegraph pole (milepost 9) painted "U. S. B. M. 226"; copper nail in hub, elevation 152.48 feet.....	30 06 22.76	95 33 47.28	5,141

LOUETTA QUADRANGLE—Continued.

Along International & Great Northern Railway—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
Hufsmith, 2.60 miles east of, 0.30 mile east of mile post 9, 30 feet south of track, 850 feet east of a private road crossing 2½ feet north of telegraph pole; iron post stamped "Prim. Trav. Sta. No. 101, 1915," elevation 150.938 feet.....	° ' " 30 06 19.58	° ' " 95 33 29.35	<i>Feet.</i> 1,606
Hufsmith, 3.35 miles east of, 625 feet east of milepost 8, 32 feet southeast of public-road crossing, 1½ feet northeast of crossing; sign post painted "U. S. B. M. 227"; copper nail in hub, elevation 137.82 feet.....	30 06 11.30	95 32 42.20	4,226
Willow, top of rail opposite store, elevation 148 feet.....			
Hufsmith, 4.30 miles east of, 280 feet east of road crossing, 32 feet south of track; 6 inches from telegraph pole (milepost 7) painted "U. S. B. M. 228"; copper nail in hub, elevation 145.92 feet.....	30 06 01.77	95 31 49.54	4,725
Hufsmith, 5.40 miles east of, 65 feet east of east end of "Avonak siding," 45 feet south of track; 10 feet south of milepost 6; iron post stamped "Prim. Trav. Sta. No. 102, 1915," elevation 143.855 feet.....	30 05 50.28 30 05 46.85	95 30 45.76 95 30 23.95	5,722 1,947
Spring, 5.20 miles west of; road crossing.....			

MORGANS POINT QUADRANGLE.

Near Cedar Bayou.

Station.	Latitude.	Longitude.	Distance between stations.
Cedar Bayou post office, 0.2 mile south and 0.35 mile west of, 400 feet east of brick schoolhouse, 20 feet south and 20 feet east of T road south; hackberry tree in fence corner painted "U. S. B. M. 434"; copper nail in root, elevation 25.90 feet.....	° ' " 29 44 58.71	° ' " 94 56 08.88	<i>Feet.</i>
Cedar Bayou post office, 0.2 mile south and 1.35 miles west of, 25 feet north of road, opposites mail frame house; 6 feet south of fence line; iron post stamped "Prim. Trav. Sta. No. 183, 1915", elevation 38.211 feet.....	29 44 57.37	94 57 08.41	5,250
Cedar Bayou post office, 0.35 mile south and 2 miles west of, 45 feet north and 35 feet west of crossroads; 18 inches south of corner fence post painted "U. S. B. M. 435"; copper nail in hub, elevation 30.67 feet.....	29 44 50.88	94 57 50.07	3,731
Cedar Bayou post office, 0.4 mile south and 3 miles west of, 25 feet north of east end of wooden bridge, at edge of timber; oak tree painted "U. S. B. M. 436"; copper nail in root, elevation 24.01 feet.....	29 44 47.43	94 58 50.91	5,374
Cedar Bayou post office, 0.6 mile south and 3.75 miles west of, 0.6 mile west of Goose Creek at angle in road where rice irrigating canal crosses the road; 10 feet north of road and in line of canal; iron post stamped "Prim. Trav. Sta. No. 184, 1915", elevation 28.648 feet.....	29 44 57.24	94 59 32.31	3,782

Near west border of quadrangle.

La Porte, 1.7 miles northeast of, on road to Morgans Point, 400 feet southwest of railroad crossing; oak tree painted "U. S. B. M. 520"; copper nail in root, elevation 29.25 feet.....	29 40 36.09	94 59 38.47	.....
Morgans Point U. S. Corps of Engineers triangulation station. On the crest of Aliens Hill on the south side of San Jacinto Bay, on a bluff bank about 10 meters from F. Allen's fence and 18 meters southwest of an old fort or trench. The station is marked by a U. S. Corps of Engineers standard station mark and 3 feet below the ground by a rock with a copper wire in the center. There are two standard U. S. Corps of Engineers reference marks, one on range between the house on north end of Atkinsons Island and the station distant 18.29 meters; the other distant 18.41 meters in azimuth 358° 09', elevation of station mark 28.042 feet.....	29 40 51.41	94 59 09.57	2,981

Magnetic declination for north side of quadrangle, 8° 02' E.

MYKAWA QUADRANGLE.

Along highways in north half of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
Minnetax schoolhouse, 1.6 miles south and 0.45 mile west of, 20 feet south and 20 feet west of T road south, 1 foot from corner fence post painted "U. S. B. M. No. 46"; copper nail in hub, elevation 56.59 feet.....	29 35 34.74	95 21 46.55	Feet. -----
Minnetax schoolhouse, 1 mile south and 0.25 mile east of, 500 feet north of road, west, 25 feet east of north and south road, known as "Chocolate road"; iron post stamped "Prim. Trav. Sta. No. 23, 1915," elevation 55.560 feet.....	29 35 39.91	95 21 03.42	3,843
Minnetax schoolhouse, 0.6 mile south and 0.25 mile east of, 10 feet north of T road south, 28 feet east of northeast corner of bridge over ditch; copper nail in hub, witness stake, "U. S. B. M. No. 47" painted on bridge, elevation 58.93 feet.....	29 36 27.25	95 21 05.06	4,784
Minnetax schoolhouse, about 0.5 mile east of, on north side of road, 6 inches from fence post with braces on each side; copper nail in hub, post painted "U. S. B. M. No. 48," no elevation.....	29 36 59.10	95 20 49.54	3,497
Minnetax schoolhouse, 0.9 mile east of, Minnetax farmhouse, 900 feet west of, 40 feet north of culvert over drainage ditch, alongside fence post with two braces; spike in hub at foot of east brace, "T. B. M. 48 A.," elevation 51.96 feet.....			-----
Mykawa, 2 miles west of, 25 feet north of T road south, 1.5 feet from wire fence; iron post stamped "Prim. Trav. Sta. No. 24, 1915," elevation 50.729 feet.....	29 37 14.91	95 20 14.71	3,466
Mykawa, 1.2 miles west of, 25 feet north of center of east and west road, 1 foot from telephone pole painted "U. S. B. M. No. 49"; copper nail in hub, elevation 53.44 feet.....	29 37 14.71	95 19 23.05	4,560
Mykawa, 0.25 mile west of, 400 feet southwest of brick schoolhouse, 25 feet north of center of road, 1.5 feet south of telephone pole painted "U. S. B. M. No. 50"; copper nail in hub, elevation 56.04 feet.....	29 37 14.53	95 18 30.76	4,616
Mykawa station, 75 feet north of; Santa Fe R. R. at road crossing, elevation top of rail 57.5 feet.....	29 37 14.26	95 18 15.61	1,337
Mykawa station, 1,270 feet east of, 25 feet south of east and west road, 15 feet east of corner fence post, 150 feet southeast of house; iron post stamped "Prim. Trav. Sta. No. 25, 1915," elevation 56.672 feet.....	29 37 13.83	95 18 01.25	1,268
Mykawa station, about 1.15 miles east of, 500 feet south of T road east, 20 feet northeast of small wooden bridge, 6 inches from fence post in north and south fence line; copper nail in hub, bridge painted "U. S. B. M. No. 51," elevation 53.20 feet.....	29 37 14.11	95 17 06.92	4,796

In northeast quarter of quadrangle.

Friendswood, 1.8 miles north and 3.6 miles west of, 180 feet southeast of large ditch crossing road, 25 feet northeast of road, 1 foot west of gatepost, at northwest end of gate, painted "U. S. B. M. 52b"; copper nail in hub, elevation 47.53 feet.....	29 33 15.46	95 15 35.50	-----
Friendswood, 2 miles north and 4 miles west of, T road corners, road northeast.....	29 33 25.59	95 16 00.80	2,458
Friendswood, 2.35 miles north and 3.7 miles west of, 0.5 mile S. 35° W. from new bridge across Clear Creek, nearly 0.5 mile N. 35° E. from Friendswood-Pearland road, 20 feet northwest of road at fence line; iron post stamped "Prim. Trav. Sta. No. 217, 1915," elevation 47.590 feet.....	29 33 43.24	95 15 41.80	2,449
Genoa, 4.1 miles south and 3.5 miles west of, center of new bridge across Clear Creek.....	29 34 02.56	95 15 20.36	2,720

North across prairie.

Genoa, 3.3 miles south and 3.5 miles west of, in open prairie, at wire fence line which bears S. 35° W., about 1,000 feet northeast of point where fence meets Clear Creek, 6 inches east of fence post, not painted, marked with red keel "U. S. B. M. 530"; copper nail in hub, elevation 44.97 feet.....	29 34 31.95	95 15 24.57	2,992
Genoa, 2.3 miles south and 3.5 miles west of, in open prairie 0.25 mile east of Clear Creek, 6 inches south of gate post at double gate, fence down, post not painted marked with red keel "U. S. B. M. 529"; copper nail in hub, elevation 46.78 feet.....	29 35 20.41	95 15 25.78	4,896
Genoa, 1.8 miles south and 3.25 miles west of, in open prairie, water tank at Genoa bears N. 52° 30' E., nearest timber on Clear Creek is S. 37° W., about 0.75 mile, on small mound about 2 feet above level of prairie; iron post stamped "Prim. Trav. Sta. No. 218, 1915," elevation 50.053 feet.....	29 35 47.70	95 15 07.44	3,197

MYKAWA QUADRANGLE—Continued.

North across prairie—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
Genoa, 1.2 miles south and 3.2 miles west of group of mulberry trees, four out of six blown over by recent storm, most easterly tree partly blown over in 1915, painted "U. S. 53.2 B. M.," copper nail in root; elevation, 53.17 feet.....	° ' " 29 36 19.53	° ' " 95 15 05.25	<i>Feet.</i> 3, 221
Genoa, 0.4 mile south and 3.2 miles west of, 3,600 feet south of Genoa-Mykawa road on east and west fence line, between posts 55 and 56 east from fence corner; copper nail in hub; no painting; elevation, 48.26 feet.....	29 37 00.95	95 15 05.08	4, 184

Magnetic declination for quadrangle 8° 15' E.

NEW CANEY QUADRANGLE.

Near Scotts Ranch.

Station.	Latitude.	Longitude.	Distance between stations.
Scotts Ranch, 0.75 mile southwest of; oak tree painted "U. S. B. M. 452," copper nail in root, elevation 67.21 feet.....	° ' " 30 07 35.03	° ' " 95 07 43.84	<i>Feet.</i>

Magnetic declination for quadrangle, 8° 30' E.

SCOTTS RANCH QUADRANGLE.

Near Scotts Ranch.

Station.	Latitude.	Longitude.	Distance between stations.
Scotts Ranch, 0.5 mile south and 0.4 mile east of, 5 feet south of road; oak tree painted "U. S. B. M. 451," copper nail in root, elevation 97.48 feet.....	° ' " 30 07 35.90	° ' " 95 06 48.88	<i>Feet.</i>
Scotts Ranch, about 500 feet south and 100 feet east of residence of Austin Scott, 40 feet south of fence, east side of road; iron post stamped "Prim. Trav. Sta. No. 190, 1915," elevation 73.105 feet..	30 07 59.65	95 07 11.07	3, 091

Magnetic declination for quadrangle, 8° 30' E.

HOLIK QUADRANGLE.

Near east border north from center line of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
Hockley, 6.4 miles south by 1.9 miles west of, 200 feet east of corner post on fence line which bears N. 19° W. (true bearing), 6 inches from west gatepost; copper nail in hub, gate painted "U. S. B. M. 186," elevation 173.69 feet.....	° ' " 29 56 02.59	° ' " 95 52 35.49	<i>Feet.</i>
Hockley, 5.5 miles south by 2.3 miles west of, near Harris-Waller county line, 2 feet from wire fence; iron post stamped "Prim. Trav. Sta. No. 82, 1915," elevation 181.951 feet.....	29 56 51.17	95 52 56.62	5, 247
Hockley, 4.8 miles south by 2.5 miles west of, along fence near Harris-Waller county line, about 500 feet west of house in clump of china-berry trees, at south end of gateway 6 inches from gatepost; copper nail in hub, post painted "U. S. B. M. 187," elevation 191.53 feet.....	29 57 27.69	95 53 10.84	3, 895
Hockley, 3.9 miles south by 2.4 miles west of, 800 feet southwest of large white house, fifteenth fence post northwest of bend in fence line, 1 foot from fence post; copper nail in hub, post painted "U. S. B. M. 188," elevation 203.85 feet.....	29 58 12.68	95 53 03.23	4, 593

HOLIK QUADRANGLE—Continued.

Near east border north from center line of quadrangle—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
Hockley, 2.8 miles south by 2.5 miles west of, on top of what is known as "The Mound," a small hill having an elevation of about 15 feet above the surrounding prairie, 35 feet N. 40° E. (true bearing) from the most easterly one of two lone china-berry trees; iron post stamped "Prim. Trav. Sta. No. 83, 1915," elevation 244.869 feet.....	° ' " 29 59 11.32	° ' " 95 53 13.61	<i>Feet.</i> 5,993
Hockley, 2.4 miles south by 2.2 miles west of, at south end of lane, where a road turns east, 2 feet north and 1 foot west of west gate-post in east-west fence; copper nail in hub, gate painted "U. S. B. M. 189," elevation 231.66 feet.....	29 59 31.83	95 52 53.05	2,750

Magnetic declination in northeast quarter of quadrangle, 8° 30' E.

PARK PLACE QUADRANGLE.

Along highways in northern part of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
Pasadena, 3 miles west of, 125 feet west of west approach to bridge over Simms Bayou, 20 feet north of center of road; iron post stamped "Prim. Trav. Sta. No. 3, 1915," elevation 19.827 feet....	° ' " 29 42 37.89	° ' " 95 15 25.37	<i>Feet.</i>
Pasadena, 3.75 miles west of, 130 feet south of Southern Pacific R. R., 20 feet east of private road south, 1 foot from telephone pole painted "U. S. B. M. No. 5"; copper nail in hub, elevation 35.27 feet.....	29 42 51.97	95 16 06.38	3,886
Harrisburg, 0.5 mile south of; T road east.....	29 42 51.61	95 16 41.51	3,098

Along Galveston, Houston & Henderson Railroad from Harrisburg to Houston.

Harrisburg station, 0.3 mile north of, center of railroad bridge over Brays Bayou, elevation 27.9 feet.....	29 43 38.45	95 16 42.96	4,734
Harrisburg station, 0.6 mile north of, on east side of track, center of top surface of concrete culvert; copper bolt set in lead and lettered "U. S. B. M." (Coast and Geodetic Survey bench mark "N8"), elevation 23.359 feet.....			.....
Harrisburg station, 1.2 miles northwest of, 270 feet east of point where Forest Hill boulevard passes under Galveston, Houston & Henderson R. R., 50 feet north of center of railroad track, 4 feet from fence line; iron post stamped "Prim. Trav. Sta. No. 4, 1915," elevation 39.215 feet.....	29 43 54.43	95 17 49.87	6,116
Houston, Second Street crossing of Galveston, Houston & Henderson R. R., 50 feet west of line of Fifteenth Street, about 30 feet south of center of railroad track, 2 feet from telephone pole painted "U. S. B. M. No. 7"; copper nail in hub, elevation 39.61 feet.....	29 44 07.16	95 18 32.98	2,388
Houston, intersection of Houston Belt & Terminal and Galveston, Houston & Henderson R. R.; top of rail, elevation 42.2 feet....			.....
Houston, road crossing 80 feet northeast of entrance to Evergreen Cemetery; top of rail, elevation 45 feet.....			.....
Houston, Dumble Street crossing of Galveston, Houston & Henderson R. R., 25 feet south and 50 feet west of center of track; 1 foot from telephone pole painted "U. S. B. M. No. 8"; copper nail in hub, elevation 43.07 feet.....	29 44 25.92	95 19 32.29	5,561
Houston, Eastwood Avenue crossing.....	29 44 30.75	95 19 46.85	1,375
Houston, Milby Street crossing, 300 feet northeast of Houston Belt & Terminal R. R.; top of rail, elevation 48.6 feet.....			.....
Houston, about 0.75 mile southeast of International & Great Northern Ry. station, in line with long tangent east on Galveston, Houston & Henderson R. R., 48 feet S. 17° 20' E. of intersection of Galveston, Houston & Henderson R. R. and San Antonio & Aransas Pass Ry. freight spur to packing house; iron post stamped "Prim. Sta. No. 5, 1915," elevation 48.631 feet.....	29 44 47.32	95 20 39.51	4,935
International & Great Northern Ry. and San Antonio & Aransas Pass Ry. branch to packing house, intersection of, elevation top of rail 49.4 feet.....	29 44 34.22	95 20 52.72	1,761
Houston, at intersection of International & Great Northern Ry. and Pierce Avenue, between tracks of Galveston-Houston Interurban Ry.; 1 foot from power-line pole, 27 feet distant from crossing; copper nail in hub; "T. B. M. No. 9," elevation 46.97 feet.....	29 44 16.14	95 21 07.05	2,220

PARK PLACE QUADRANGLE—Continued.

Along Galveston, Houston & Henderson Railroad from Harrisburg to Houston—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
Houston, intersection of San Antonio & Aransas Pass Ry. and Galveston-Houston Interurban tracks; top of rail, elevation 51.1 feet.....	° ' "	° ' "	Feet.
Houston, Pierce Avenue crossing of San Antonio & Aransas Pass Ry.....	29 44 32.77	95 21 34.55	2,950
Houston, S. 27° E. and 35 feet distant from intersection of McGowan Avenue and San Antonio & Aransas Pass Ry.; 2 feet from telephone pole painted "U. S. B. M. No. 10," 15 feet from corner of yard fence; copper nail in hub, elevation 47.11 feet.....	29 44 18.90 o	95 21 48.17	1,844

Along highways in southern part of quadrangle.

Mykawa, about 1.5 miles northeast of; right-angle turn in road....	29 37 32.38	95 16 42.32	.....
Mykawa, 1.7 miles east by 0.2 mile north of, 1,000 feet east of right angle in road, 20 feet south of center of east and west road; 1 foot from post painted "U. S. B. M. No. 52"; copper nail in hub, elevation 50.65 feet.....			.....
Mykawa, 2.6 miles east by 0.2 mile north of, 35 feet north of center of east and west road, 2.5 feet from corner fence post at small cemetery; iron post stamped "Prim. Trav. Sta. No. 26, 1915," elevation 51.727 feet.....	29 37 35.50	95 15 39.53	5,551

Along Southern Pacific Railroad cut-off.

Pierce Junction, 1.8 miles northeast of, 25 feet south of milepost No. 2, 60 feet west of crossroads; nail in hub, "T. B. M. No. 69," elevation 48.72 feet.....	29 40 44.71	95 22 02.66	.....
Pierce Junction, 2.8 miles northeast of, 800 feet northeast of road crossing, 48 feet south of center of track, 1 foot from fence post; copper nail in hub; "T. B. M. No. 70," elevation 46.06 feet.....	29 40 59.75	95 21 12.60	4,668
Santa Fe R. R. crossing, 1.4 miles west of, 50 feet south of center of track; iron post stamped "Prim. Trav. Sta. No. 35, 1915," elevation 45.412 feet.....	29 41 08.46	95 20 43.49	2,713
Santa Fe R. R. crossing, 0.4 mile west of; 50 feet south of center of track, 40 feet west of double gate; copper nail in hub; post painted "U. S. B. M. No. 71," elevation 42.08 feet.....	29 41 31.40	95 19 52.52	5,057
Santa Fe R. R. crossing of Southern Pacific R. R. cut-off to Harrisburg, elevation top of rail 44.3 feet.....	29.41 42.49	95 19 35.90	1,844
Brookline, crossing of Galveston-Houston electric line and Southern Pacific cut-off, 1 mile southwest of, 11 feet from center of track; chiseled square on corner of concrete foundation of semaphore post, "t. b. m. No. 72," elevation 44.13 feet.....	29 42 00.77	95 19 07.11	3,140
Brookline, crossing of Galveston-Houston electric line and Southern Pacific cut-off, 0.25 mile southwest of, on south side of track, on west side of wagon road, 2 feet from fence corner; iron post stamped "Prim. Trav. Sta. No. 36, 1915," elevation 42.193 feet.....	29 42 21.64	95 18 31.82	3,759
Brookline, intersection of Galveston-Houston Interurban and Southern Pacific cut-off tracks; top of rail, elevation 43.1 feet.....			.....

Along highways.

Brookline, 0.6 mile northeast of, 30 feet northwest of center of public road, 1 foot from fence corner; post painted "U. S. B. M. No. 73"; copper nail in hub, elevation 40.14 feet.....	29 42 46.94	95 17 48.46	4,599
Harrisburg station, crossing of Galveston, Houston & Henderson R. R.....	29 43 08.33	95 17 08.98	4,098
Harrisburg station, 40 feet northeast of crossing of Galveston, Houston & Henderson R. R., 15 feet north of corner of station, nearly under fence line; copper nail in hub, "U. S. B. M. No. 74," elevation 39.68 feet.....	29 43 08.45	95 17 08.49	43
Harrisburg station, 80 feet south of crossing of Galveston, Houston & Henderson R. R., at fence corner, 40 feet west of track, cross on end of section of rail driven in ground (Coast and Geodetic Survey b. m. "R. M.," value discarded equals 38.271 feet), elevation 38.400 feet.....			.....
Brookline, 0.9 mile south of, on Alvin road, 280 feet south of wooden bridge, 4 feet south of mail box No. 117, 12 feet west of center of road; copper nail in hub; post painted "U. S. B. M. No. 75," elevation 37.64 feet.....	29 41 52.17	95 18 05.13	.....

PARK PLACE QUADRANGLE—Continued.

Along highways—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
Brookline, 1.9 miles south of, Park Place, 1 mile west of, 40 feet southeast of road forks; 1 foot from corner fence post painted "U. S. B. M. No. 76"; copper nail in hub, elevation 40.20 feet....	° ' "	° ' "	<i>Feet.</i>
Brookline, 2.8 miles south of, 420 feet south of bridge over Simms Bayou, 15 feet west of center of road, opposite private lane to Ed. Drouet's house; iron post stamped "Prim. Trav. Sta. No. 37, 1915," elevation 34.270 feet.....	29 41 05.25	95 17 46.17	5,024
Brookline, 3.8 miles south of, Simms Bayou Bridge, about 1 mile south of, 25 feet east of center of road, 6 inches from corner of fence post at fence line east; copper nail in hub, post painted "U. S. B. M. No. 77," elevation 43.82 feet.....	29 40 21.02	95 17 21.17	4,979
Brookline, 4.6 miles south of, Simms Bayou Bridge, 1.8 miles south of, 25 feet west of center of road, 6 inches from fence post; copper nail in hub; post painted "U. S. B. M. No. 78," elevation 47.21 feet.....	29 39 27.97	95 17 19.72	5,360
Mykawa, 1.1 miles east by 1 mile north of, 38 feet east of center of road, 12 feet east of north and south fence line; 2 feet north of east and west fence line; iron post stamped "Prim. Trav. Sta. No. 38, 1915," elevation 49.121 feet.....	29 38 46.56	95 17 19.54	4,182
	29 38 08.91	95 17 08.00	3,934

Magnetic declination of quadrangle, 8° 13' E.

Along highways near northeast corner of quadrangle.

Fidelity addition, 1.1 miles north of Houston-Clinton road, about 800 feet southwest of a small white cabin, 20 feet west of main north-south graded road; iron post stamped "Prim. Trav. Sta. No. 171, 1915," elevation 35.614 feet.....	29 44 51.41	95 15 19.61	.....
Fidelity addition, 435 feet east of point where gravel road crosses track, 30 feet north of gravel road and 15 feet east of graded street north, on southwest corner of base of east concrete monument; chiseled mark, "U. S. B. M. 399," painted on wooden bridge, elevation 37.87 feet.....	29 43 54.59	95 15 18.14	5,741
Fidelity addition, 0.8 mile northwest of, 30 feet southwest of Houston-Clinton road, 500 feet southeast of a private road crossing on railway; in root of pine tree painted "U. S. B. M. 400"; copper nail, elevation 35.12 feet.....	29 44 15.13	95 16 02.64	4,440
Crossing of Galveston, Harrisburg & San Antonio Ry. and Houston Belt & Terminal Ry., 1.9 miles southeast of, 25 feet northeast of of Houston-Clinton road and 10 feet west of dim road crossing; iron post stamped "Prim. Trav. Sta. No. 172, 1915," elevation 37.762 feet.....	29 44 35.03	95 16 31.92	3,271
Port Houston, 555 feet south 47° west from city limit post at angle of Clinton road, about 900 feet southwest from public road crossing on Galveston, Harrisburg & San Antonio Ry., and a little below turning basin of ship channel; a stone post with a tablet marked "U. S. Engrs. B. M." set in top; post is painted on one side "300" "132+291.4," elevation 37.425 feet.....	29 44 51.61	95 17 07.10	3,526
Port Houston, near city limit post; public road crossing railway.....	29 44 58.45	95 17 00.94	878
Harrisburg, 1 miles south of, crossing of Galveston, Houston & Henderson R. R., and shell road from Harrisburg to Park Place, 50 feet south of track, 25 feet east of road; iron post with 3-inch red metal cap stamped "U. S. Coast & Geodetic Survey B. M. 'Og,'" elevation 37.503 feet.....			
Harrisburg, 3.75 miles southeast of; on the right of way of Galveston, Houston & Henderson R. R., 50 feet southeast of mile board 9 and 50 feet south west of track; cross on end of section of rail driven in ground (Coast and Geodetic Survey bench mark "M9"), elevation 35.308 feet.....			

PARK PLACE QUADRANGLE—Continued.

U. S. Corps of Engineers bench marks along Buffalo Bayou.

Station.	Latitude.	Longitude.	Distance between stations.
These bench marks are probably all bronze tablets marked "U. S. Engineer Department," set in top of concrete posts, 6 inches square on top and protruding above ground. The letters R and L of the descriptions refer to right and left bank going downstream, and the distances given are probably the approximate distances from the bank.			
Station 132+291, 300 R, elevation 25.797 feet.....	° ' "	° ' "	Feet.
Station 131+027, 300 R, elevation 29.898 feet.....			
Station 130+092, 300 R, elevation 15.897 feet.....			
Station 128+822, 300 R, elevation 15.281 feet.....			
Station 127+244, 300 R, elevation 8.086 feet.....			
Station 126+987, 300 R, elevation 16.392 feet.....			
Houston Launch Club, in southeast corner, railroad iron, elevation 26.53 feet.....			
Station 121+846, 300 R, elevation 9.452 feet.....			
Station 119+799, 300 R, elevation 18.760 feet.....			
Station 119+258, 300 R, elevation 21.123 feet.....			
Station 117+781, 300 R, elevation 26.636 feet.....			
Station 117+281, 300 R, elevation 24.312 feet.....			
Station 116+281, 300 R, elevation 13.576 feet.....			
Station 115+436, 300 R, elevation 17.846 feet.....			
Station 114+685, 300 R, elevation 23.244 feet.....			
Station 132+291, 300 L, elevation 37.425 feet.....			
Station 131+804, 300 L, elevation 22.741 feet.....			
Station 131+027, 300 L, elevation 22.996 feet.....			
Station 130+292, 300 L, elevation 17.116 feet.....			
Station 128+822, 300 L, elevation 18.362 feet.....			
Station 127+844, 300 L, elevation 27.487 feet.....			
Station 126+967, 300 L, elevation 23.296 feet.....			
Station 126+293, 300 L, elevation 15.037 feet.....			
Station 125+588, 300 L, elevation 21.534 feet.....			
Station 124+846, 300 L, elevation 24.490 feet.....			
Station 123+346, 300 L, elevation 31.624 feet.....			
Station 121+846, 300 L, elevation 22.636 feet.....			
Station 120+730, 300 L, elevation 21.672 feet.....			
Station 119+999, 300 L, elevation 22.833 feet.....			

PAULI QUADRANGLE.

Between Huffman and Ford's farm, along little-used woods road from Huffman to Porter.

Station.	Latitude.	Longitude.	Distance between stations.
Huffman, 2.7 miles west and 1.4 miles north of, 0.5 mile northwest of ford across San Jacinto River, near mouth of Loose Bayou, 20 feet north of dim road in timber; gum tree painted "U. S. B. M."; iron post stamped "Prim. Trav. Sta. No. 193, 1915," elevation 52.648 feet.....	° ' "	° ' "	Feet.
Huffman, 3.3 miles west and 1.6 miles north of, at north side of road; oak tree painted "U. S. B. M. 463"; copper nail in root, elevation 58.70 feet.....	30 02 38.77	95 07 46.80	
Huffman, 3.9 miles west and 2.1 miles north of, 50 feet north of road; oak tree painted "U. S. B. M. 464"; copper nail in root, elevation 62.94 feet.....	30 02 50.96	95 08 25.19	3,591
Huffman, 4.4 miles west by 3 miles north of, in fork of dim woods road, in notch at base of 2-foot oak tree; wire nail painted "U. S. 52.5 B. M." elevation 52.49 feet.....	30 03 19.10	95 09 01.16	4,251
Huffman, 4.3 miles west and 2.9 miles north of, 100 feet west of road, on small knoll; large oak tree painted "U. S. B. M. 465"; copper nail in root. Not found in 1916.....	30 03 57.93	95 09 26.81	4,524
Huffman, 4.6 miles west and 3.4 miles north of, 25 feet west of road, in woods; pinetree painted "U. S. P. B. M."; iron post stamped "Prim. Trav. Sta. No. 194, 1915," elevation 74.737 feet.....	30 04 22.01	95 09 43.62	2,846
Huffman, 5.25 miles west and 3.6 miles north of, 60 feet south of road, 90 feet south of southwest corner of cleared field; elm tree painted "U. S. B. M. 466"; copper nail in root, elevation 69.60 feet.....	30 04 34.52	95 10 21.85	3,588
Huffman, 5.8 miles west and 3.85 miles north of, at south side of road; white oak tree painted "U. S. B. M. 467"; copper nail in root, elevation 71.77 feet.....	30 04 47.79	95 10 54.81	3,190

PAULI QUADRANGLE—Continued.

Southwest from Scott's ranch, close to Harris-Montgomery County line, to county line crossing of Houston, East & West Texas Ry. all through woods.

Station.	Latitude.	Longitude.	Distance between stations.
Scott's ranch, 1.4 miles southwest of, 1,000 feet northerly from house in clearing, 25 feet east of road, and 25 feet east of gate in wire fence, magnolia tree painted "U. S. B. M. 453"; copper nail in root, elevation 70.70 feet.....	° ' " 30 07 17.28	° ' " 95 08 17.68	Feet.
Scott's ranch, 2 miles southwest of; large gum tree notched 4 times in 3 sides supposed to be on Harris-Montgomery county line, ground elevation 66.8 feet.....	30 07 08.03	95 08 45.47	2,614
Scott's ranch, 2.2 mile southwest of; pin-oak tree painted "U. S. B. M. 454"; copper nail in root, elevation 67.32 feet.....	30 07 01.76	95 08 53.84	971
Scott's ranch, 3 miles southwest of; near magnolia tree painted "U. S. P. B. M."; iron post stamped "Prim. Trav. Sta. No. 191, 1915," elevation 66.296 feet.....	30 06 35.68	95 09 27.23	3,943
Scott's ranch, 3.75 miles southwest of; oak tree painted "U. S. B. M. 455"; copper nail in root, elevation 69.23 feet.....	30 06 08.25	95 10 04.72	4,304
Scott's ranch, 4.5 miles southwest of; magnolia tree painted "U. S. B. M."; copper nail in root, elevation 56.90 feet.....	30 05 41.56	95 10 38.76	4,026
Scott's ranch, 5.3 miles southwest of; oak tree painted "U. S. B. M. 457"; copper nail in root, elevation 71.38 feet.....	30 05 12.24	95 11 09.23	3,992
Scott's ranch, 5.6 mile southwest of, 0.5 mile southeast of Mr. Ford's farm, 15 feet east of road; iron post stamped "Prim. Trav. Sta. No. 192, 1915," elevation 73.125 feet.....	30 05 00.58	95 11 23.80	1,740
Humble, 5.4 miles north and 4 miles east of, 300 feet south of a clearing; maple tree painted "U. S. B. M. 458"; copper nail in root, elevation 72.69 feet.....	30 04 35.26	95 11 57.04	3,883
Humble, 5 miles north and 3.3 miles east of; oak tree painted "U. S. B. M. 459"; copper nail in root, elevation 80.11 feet.....	30 04 16.42	95 12 37.31	4,018
Humble, 4.5 miles north and 2.7 miles east of; large oak tree painted "U. S. B. M. 468"; copper nail in root, elevation 80.31 feet.....	30 03 49.13	95 13 16.00	4,377
Humble, 4 miles north and 2 miles east of; near tree painted "U. S. B. M."; iron post stamped "Prim. Trav. Sta. No. 195, 1915," elevation 78.970 feet.....	30 03 23.39	95 13 51.62	4,069
Humble, 3.6 miles north and 1.5 miles east of, 500 feet north and 0.4 mile east of road crossing at McCarthys spur; pine tree painted "U. S. B. M. 469"; copper nail in root, elevation 79.07 feet.....	30 03 04.30	95 14 24.83	3,498
Humble, 3.5 miles north by 1.1 miles east of, 0.5 mile northeast of Harris-Montgomery county line, 70 feet east of road crossing, at McCarthy's spur, in top of wooden bulkhead, south side of cattle guard 21 D; copper nail painted "U. S. 82.6 B. M.," elevation 82.42 feet.....			
Humble, 3.5 miles north and 1.1 miles east of; center of road crossing Houston East & West Texas Ry. at McCarthys spur.....	30 02 59.41	95 14 50.95	2,348
Humble, 3.1 miles north and 0.9 mile east of, center of Houston East & West Texas Ry. track, opposite post marked "Harris County-Montgomery County".....	30 02 35.10	95 14 59.38	2,565
County line post, 6 inches east of; copper nail in hub, t. b. m. 470, elevation 81.01 feet.....	30 02 35.20	95 14 59.80	38

Magnetic declination for quadrangle, 8° 30' E.

ROSEHILL QUADRANGLE.

Along highways near north and east borders of southeast quarter of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
Rosehill, 2.15 miles west of, on road to Hockley, 20 feet south of road; 1 foot from corner post on fence line south, painted "U. S. B. M. 206"; copper nail in hub, elevation 231.09 feet.....	° ' " 30 04 44.39	° ' " 95 44 37.63	Feet.
Rosehill, 1.60 miles west of, crossroads.....	30 04 47.86	95 44 09.33	2,512
Rosehill, 1.25 miles west of, on Hockley Road, 30 feet north of center of road, opposite house on south side of road, 1 foot south of fence post painted "U. S. B. M. 207"; copper nail in hub, elevation 225.20 feet.....	30 04 52.69	95 43 43.83	2,293
Rosehill, 0.7 mile west of, on Hockley Road, about 500 feet southwest of yellow house, 35 feet north of center of road, 6 feet from corner of fence post; iron post stamped "Prim. Trav. Sta. No. 92, 1915," elevation 219.825 feet.....	30 04 50.22	95 43 09.68	3,012
Rosehill, about 0.70 mile north of church, 15 feet south and 15 feet east of crossroads; 1 foot from corner fence post painted "U. S. B. M. 208"; copper nail in hub, elevation 215.72 feet.....	30 04 43.95	95 42 31.53	3,412

ROSEHILL QUADRANGLE—Continued.

Along highways near north and east borders of southeast quarter of quadrangle—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
Rosehill, about 0.50 mile east of church, 10 feet south and 15 feet west of T road west, at northeast corner of bridge on road west, 1 foot east of railing post; copper nail in hub, bridge painted "U. S. B. M. 209".....	° ' " 30 04 14.26	° ' " 95 41 59.71	<i>Feet.</i> 4,099
(NOTE.—A new bridge has been built and the prim. trav. hub destroyed. A level bench mark was established at southeast corner of bridge, 1 foot east of railing post; copper nail in timber, elevation 197.60 feet.).....			
Rosehill Church, about 0.75 mile southeast of; T road south.....	30 04 00.05	95 41 49.79	1,679
Rosehill Church, about 0.70 mile south and 0.70 mile east of, 2,350 feet south of T road south, 20 feet east of center of road, 2 feet from fence line; iron post stamped "Prim. Trav. Sta. No. 93, 1915," elevation 188.444 feet.....	30 03 36.84	95 41 49.20	2,346
Cypress, 5.1 miles north of, 20 feet west of center of road, opposite gate on east side of road, 20 feet north of corner post on fence line west; iron casting 6 inches in diameter set in ground and painted "U. S. B. M. 210"; fence post 20 feet south has "B. M." painted on it, top of casting, elevation 169.24 feet.....	30 02 40.38	95 41 50.79	5,706
Cypress, 4.1 miles north of, 25 feet east of center of road; 1 foot west of large corner fence post painted "U. S. B. M. 211"; copper nail in hub, elevation 165.60 feet.....	30 01 49.28	95 41 49.66	5,163
Cypress, 3.8 miles north of; crossroads.....	30 01 27.23	95 41 49.72	2,228
Cypress, 3.2 miles north of, 700 feet north of bridge over Little Cypress Creek, 20 feet west of center of road, in group of oak trees; iron post stamped "Prim. Trav. Sta. No. 94, 1915," elevation 161.270 feet.....	30 01 03.42	95 41 49.53	2,405
Cypress, 2.40 miles north of, 520 feet north of culvert, 25 feet west of center of road, 1 foot east of fence post painted "U. S. B. M. 212"; copper nail in hub, elevation 162.63 feet.....	30 00 19.79	95 41 51.87	4,413

Along highways near south border of northeast quarter of quadrangle.

Rosehill schoolhouse, about 50 feet north of, 25 feet south of center of road, at wire fence line; in root of chinaberry tree painted "U. S. B. M. 218," elevation 222.95 feet.....	30 04 49.04	95 41 46.33	.....
Rosehill schoolhouse, about 0.90 mile east of, 20 feet north and 20 feet east of crossroads; 6 inches from corner fence post painted "U. S. B. M. 219," elevation 220.51 feet.....	30 04 44.90	95 40 53.35	4,675
Rosehill schoolhouse, about 1.35 miles east of, 25 feet south and 15 feet east of T road south and 75 feet east of T road north, 3 feet west of corner fence post; iron post stamped "Prim. Trav. Sta. No. 97, 1915," elevation 191.215 feet.....	30 04 44.52	95 40 24.57	2,529
Rosehill schoolhouse, 1.9 miles east of; T road west.....	30 04 45.03	95 39 50.85	2,965
Rosehill schoolhouse, 2.15 miles east of, 75 feet north of center of road; 6 inches from corner post on fence line north, painted "U. S. B. M. 220"; copper nail in hub, elevation 177.83 feet.....	30 04 51.98	95 39 35.15	1,546
Tomball, 2.3 miles southwest of, on Rosehill Road, 25 feet west of center of road, 3 feet west of mail box, 2 feet east of corner fence post; 6 inches from telephone pole painted "U. S. B. M. 221"; copper nail in hub, elevation 174.52 feet.....	30 05 14.11	95 39 06.43	3,370
Tomball, 1.75 miles southwest of, 25 feet south of southwest corner of schoolhouse, 30 feet north of center of road, 2 feet from wire fence; iron post stamped "Prim. Trav. Sta. No. 98, 1915," elevation 180.446 feet.....	30 05 20.57	95 38 25.26	3,677
Tomball, 1 mile southwest of, 100 feet east of forks of road, 8 feet southwest of corner fence post; 6 inches from telephone pole painted "U. S. B. M. 222," elevation 187.07 feet.....	30 05 24.02	95 37 39.95	3,996

Northeast from Cypress along public road toward Louetta.

Cypress, 2.4 miles north and 3.75 miles east of, 110 feet N. 38° E., from crossroads, oak tree painted "U. S. B. M. 256"; copper nail in root, elevation 148.12 feet.....	30 00 14.70	95 38 06.52	5,739
Cypress, 3 miles north and 3.35 miles east of; church steeple.....	30 00 42.50	95 38 31.10	5,544
Cypress, 2.5 miles north and 4.3 miles east of; in pine timber, 15 feet south of road, near a road turning southerly; iron post stamped "Prim. Trav. Sta. No. 110, 1915," elevation 145.277 feet.....	30 00 19.33	95 37 35.00	5,460

SETTEGAST QUADRANGLE.

Along highways and railroad in southwest quarter of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
Houston, in second ward, 800 feet northwest of Houston Packing Co.'s plant, 1180 feet southwest of drawbridge over Buffalo Bayou, 35 feet northwest of San Antonio & Aransas Pass Ry. track; in root of oak tree, copper nail, painted "U. S. B. M. 215," elevation 39.66 feet.....	29 45 30.29	95 20 09.28	Feet.
Buffalo Bayou, center of San Antonio & Aransas Pass Ry. drawbridge; top of rail, elevation 41.2 feet.....	29 45 38.23	95 19 59.37	1,183
Buffalo Bayou, 2,373 feet southwest of drawbridge over, crossing of Galveston, Harrisburg & San Antonio Ry. and San Antonio & Aransas Pass Ry. branch; top of rail, elevation 46.0 feet.....	29 45 56.94	95 19 43.06	2,373
Houston, about 3,100 feet south of Lyons Avenue, 600 feet north of intersection of San Antonio & Aransas Pass Transfer and Southern Pacific tracks, 40 feet east of San Antonio & Aransas Pass tracks; in root of large oak tree painted "U. S. B. M. 216"; copper nail, elevation 47.07 feet.....	29 46 02.28	95 19 42.13	544
Intersection of San Antonio & Aransas Pass Transfer and Lyons Avenue car line tracks; top of rail, elevation 51.6 feet.....			.....
Concrete post on old city limit boundary, 300 feet south of Lyons Avenue, 700 feet east of San Antonio & Aransas Pass Transfer track; paint mark on top surface, elevation 50.58 feet.....			.....
Houston, in fifth ward, 50 feet south of Texas & New Orleans R. R. 15 feet east of line of tangent south, on branch of San Antonio & Aransas Pass Ry., 8 feet east of a pine tree 2 feet in diameter; iron post stamped "Prim. Trav. Sta. No. 95, 1915," elevation 50.999 feet.....	29 46 54.42	95 19 42.95	5,267
Houston, in fifth ward, 30 feet east of center of Clark Street at point 200 feet north of end of car line; 6 inches west of telephone pole, painted "U. S. B. M. 217," copper nail in hub, elevation 52.01 feet.....	29 47 03.32	95 20 30.30	4,270
Houston, in Taylor Park, 270 feet west of Clark Street, opposite post on east side of street marked "City Limits"; a concrete monument about 8 inches square standing 15 inches above ground, in top of which is set a bronze tablet stamped "Prim. Trav. Sta. No. 96, 1915," elevation 53.382 feet.....	29 47 23.04	95 20 33.94	2,017
Houston, at city limits, 245 feet east of intersection of Hayes Street and East Montgomery road, at entrance to Hollywood Cemetery, 48 feet south of east and west road; in root of pine tree painted "U. S. B. M. 250," copper nail, elevation 51.92 feet.....	29 47 21.56	95 21 34.59	5,346
Houston, intersection of Hogan and North Main streets.....	29 46 32.98	95 21 41.63	4,949
Houston, 280 feet northeast of south end of Missouri, Kansas & Texas Ry. trestle across White-oak Bayou, 3 feet south of sidewalk line on north side of west end of Hogan Street, where ground breaks off to bayou; iron post stamped "Prim. Trav. Sta. No. 113, 1915," elevation 44.341 feet.....	29 46 28.21	95 21 55.08	5,685
Houston, at northeast corner of Willow and Baker streets; in center of supporting pillar at southeast corner of building of Peden Iron and Steel Co., red metal disk (Coast and Geodetic Survey bench mark "73"), elevation 45.006 feet.....			.....
Houston, in First Ward, intersection of Houston Avenue and Missouri, Kansas & Texas Ry. track.....	29 46 29.81	95 22 20.33	2,234

Along highways near west border of quadrangle.

Road crossing, 100 feet west of crossroads; top of rail, elevation 79.3 feet.....			.....
Aldine, 4.6 miles south of, 100 feet east of center of track, 25 feet east of center of road, 2 feet southwest of corner post on fence line east; copper nail in hub, brace painted "U. S. B. M. 245," elevation 74.775 feet.....	29 52 00.42	95 21 48.67	.....
Aldine, 5.50 miles south of, 30 feet east of center of track, 40 feet west of public road, 350 feet north of trestle, 2.5 feet east of telephone pole painted "U. S. B. M. 245"; copper nail in hub, elevation 72.26 feet.....	29 51 13.82	95 21 37.78	4,805
Houston, 3.80 miles north of city limits, 20 feet south and 60 feet east of road crossing, 25 feet west of center of road, 2.5 feet east of corner fence post; iron post stamped "Prim. Trav. Sta. No. 111, 1915," elevation 74.796 feet.....	29 50 36.62	95 21 28.37	3,850
Houston, 3.35 miles north of city limits, crossroads (no elevation).....	29 50 14.32	95 21 22.52	2,313
Road crossing, International & Great Northern Ry. main track, 80 feet west of crossroads; top of rail, elevation 77.5 feet.....			.....
Houston, 2.75 miles north of city limits, 125 feet east of International & Great Northern Ry. track, 140 feet north and 80 feet east of road crossing; in root of pine tree painted "U. S. B. M. 247," copper nail, elevation 69.73 feet.....	29 49 42.68	95 21 14.31	3,276
Houston, 2.10 miles north of city limit, about 100 feet west of crossing of International & Great Northern Ry. and Houston Belt & Terminal Ry., about 25 feet north of Houston Belt & Terminal track, and 15 feet west of public road, 1 foot from crossing sign post painted "U. S. B. M. 248"; copper nail in hub, elevation 63.73 feet.....	29 49 10.09	95 21 08.45	3,333

SETTEGAST QUADRANGLE—Continued.

Along highways near west border of quadrangle—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
Houston, 2.10 miles north of city limit, crossing of International & Great Northern Ry. and Houston Belt Terminal Ry.....	° ' " 29 49 09.89	° ' " 95 21 07.39	Feet. 95
Houston, 1.6 miles north of city limit, 20 feet south of road, 65 feet east of road crossing, 3 feet east of corner fence post; iron post stamped "Prim. Trav. Sta. No. 112, 1915," elevation 59.485 feet.....	29 48 46.40	95 21 00.86	2,441
Houston, 0.6 mile north of city limit, 40 feet north of corner post on right-of-way fence, 24 feet west of center of track, 2.5 feet from telegraph pole; copper nail in stub of telegraph pole painted "U. S. B. M. 249," elevation 53.92 feet.....	29 47 54.44	95 20 48.78	5,355
Houston, 0.30 mile north of city limit, at intersection of Houston, East & West Texas Ry. and International & Great Northern Ry.....	29 47 36.21	95 20 45.44	1,868

Along Beaumont, Sour Lake & Western Railway near Settegast.

Settegast, 1.75 miles northeast of, 20 feet east of a road crossing, 6 inches from crossing; signpost painted "U. S. B. M. 377," copper nail in hub, elevation 59.05 feet.....	29 52 16.60	95 16 06.54	.....
Settegast, about 3,000 feet northeast of, 150 feet northeast of north end of siding, 50 feet east of road crossing, 6 feet west of corner fence post; iron post stamped "Prim. Trav. Sta. No. 162, 1915," elevation 56.547 feet.....	29 51 29.78	95 16 54.26	6,328
Settegast, 0.25 mile southwest of, 70 feet southeast of center of track, opposite gate; pine tree painted "U. S. B. M. 378," copper nail in root, elevation 50.81 feet.....	29 50 57.52	95 17 27.09	4,358

Across country from Beaumont, Sour Lake & Western Railway to East Houston.

East Houston, 2.3 miles north and 1.6 miles west of, 15 feet west of a north and south ditch and in line with a ditch west, 40 feet north of a bridge over ditch, 15 inches west of a telephone pole painted "U. S. B. M. 379"; copper nail in hub, elevation 51.58 feet.....	29 50 26.32	95 17 13.24	3,380
East Houston, 1.6 miles north and 1.15 miles west of, 200 feet south of a small sawmill on slight knoll, 25 feet west of edge of pond; iron post stamped "Prim. Trav. Sta. No. 163, 1915," elevation 51.777 feet.....	29 49 51.77	95 16 47.34	4,170
East Houston, 1 mile north and 1.2 miles west of, at southeast corner of road bridge over east and west ditch, 1 foot from corner of bridge, painted "U. S. B. M. 380"; copper nail in hub, elevation 48.22 feet.....	29 49 21.39	95 16 56.85	3,084
East Houston, 0.2 miles north and 0.7 mile west of, 2,200 feet from road crossing on Texas & New Orleans Ry. in open prairie, 6 inches from a small pine tree painted "U. S. B. M. 381"; copper nail in hub, elevation 47.80 feet.....	29 48 46.02	95 16 19.06	4,540

From Settegast west to International & Great Northern Railway through woods and along road.

Settegast, about 1.15 miles north and 0.25 mile east of, in prairie near edge of timber, 40 feet west of a large ditch, at base of pine tree painted "U. S. B. M. 537"; copper nail in hub, elevation 61.59 feet.....	29 52 07.81	95 17 03.46	.....
Settegast, about 1.15 miles north and 0.5 mile west of, 160 feet west of a pole bridge over ditch, gum tree painted "U. S. B. M. 538"; copper nail in hub, elevation 64.68 feet.....	29 52 09.62	95 17 48.35	3,958
Settegast, 1 mile north and 1.5 miles west of, 20 feet south of road, and 25 feet southeast of corner of bridge over ditch 2.2 feet from corner fence post; iron post stamped "Prim. Trav. Sta. No. 221, 1915," elevation 68.920 feet.....	29 52 01.33	95 18 47.15	5,247
Settegast, 1 mile north and 2.3 miles west of, 1,630 feet east of Houston-Humble road, 50 feet north of center of road, pine tree painted "U. S. B. M. 539"; copper nail in root, elevation 60.04 feet.....	29 51 59.08	95 19 36.83	4,382
Houston-Humble road, T road east from.....	29 51 58.47	95 19 55.50	1,647
Houston-Humble road, 30 feet east of, 400 feet northeast of a T road west, large pine tree painted "U. S. B. M. 540"; copper nail in root, elevation 61.55 feet.....	29 51 36.33	95 20 07.95	2,490
Houston-Humble road, 0.4 mile west of, 25 feet south and 20 feet east of second-class crossroads, inside fence, 4 feet from corner fence post; iron post stamped "Prim. Trav. Sta. No. 222, 1915," elevation 65.882 feet.....	29 51 32.72	95 20 34.82	2,396

SETTEGAST QUADRANGLE—Continued.

From Settegast west to International & Great Northern Railway through woods and along road—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
	° ' "	° ' "	Fect.
Houston-Aldine road via Clark Street, T road east from.....	29 51 32.80	95 20 59.47	2, 173
Houston-Aldine road via Clark Street, 75 feet east of, at point 400 feet south of angle in road, just south of vacant house; willow tree painted "U. S. B. M. 541" (tree used as gatepost); copper nail in root, elevation 66.78 feet.....	29 51 56.63	95 20 58.83	2, 410

Near southeast corner of quadrangle.

Green's siding, 2.4 miles south and 0.5 mile west of, at intersection of fence lines, north, east, south, and west 6 inches from corner fence post; painted "U. S. B. M. 410"; copper nail in hub, elevation 39.00 feet.....	29 46 49.62	95 15 04.73
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On public road along Texas & New Orleans Railroad.

Green's siding, about 3,500 feet southwest of, 80 feet west of a bungalow, 40 feet south of road, 3 feet from fence; iron post stamped "Prim. Trav. Sta. No. 157, 1915", elevation 46.893 feet.....	29 48 51.98	95 15 06.83
East Houston R. R. crossing, 770 feet northeast of, 35 feet north of road; large pine tree painted "U. S. B. M. 367"; copper nail in root, elevation 48.39 feet.....	29 48 29.63	95 16 00.49	5, 239
East Houston, railroad crossing at.....	29 48 26.71	95 16 08.56	770
East Houston R. R. crossing, 3 mile southwest of, 25 feet east of telephone pole painted "U. S. B. M. 368", west end of north abutment of concrete road culvert, chiseled square, elevation 46.20 feet.....	29 48 10.47	95 16 49.23	3, 940
Englewood, 3,000 feet northeast of, about 230 feet north of crossing of St. Louis & San Francisco and Texas & New Orleans R. Rs., 35 feet south of road and 7 feet north of telephone pole painted "U. S. P. B. M."; iron post stamped "Prim. Trav. Sta. No. 158, 1915", elevation 45.800 feet.....	29 47 58.05	95 17 16.81	2, 735
Englewood, 1,800 feet southwest of, 30 feet south of road; 2 feet from telephone pole, painted "U. S. B. M. 369"; copper nail in hub, elevation 49.88 feet.....	29 47 37.04	95 18 05.93	4, 821
Englewood, 1.25 miles southwest of, 300 feet northeast of public road crossing Texas & New Orleans R. R., 6 inches from telephone pole painted "U. S. B. M. 370"; copper nail in hub.....	29 47 16.08	95 18 54.75	4, 794
Aldine, 4.6 miles south of, 1.25 miles east of East Montgomery road, 100 feet east of center of International & Great Northern Ry., 25 feet east of center of public road, 2 feet southwest of corner fence post, painted; copper nail in hub.....	29 52 00.4	95 21 48.7	.....

Along highways near south border of quadrangle.

Houston, on Clinton road, Galveston, Harrisburg & San Antonio Ry. and Houston Belt & Terminal Ry. crossing, 1,800 feet east of, 35 feet north and 40 feet east of T road corners at sign "Houston Harbor Additions," about 110 feet north of railway; in root of oak tree painted "U. S. B. M. 401"; copper nail, elevation 40.10 feet.....	29 45 24.81	95 17 38.82	.....
Houston Harbor, north side of turning basin, 80 feet south of Galveston, Harrisburg & San Antonio track, 230 feet southeast of dim road crossing, opposite forks of shell road; metal tablet in top of concrete monument (painted 134+418.5) U. S. E. D. B. M., elevation 42.005 feet.....			
Galveston, Harrisburg & San Antonio Ry. and Houston Belt & Terminal Ry. crossing.....	29 45 33.78	95 17 56.25	1, 783
Houston, on Clinton road, Galveston, Harrisburg & San Antonio Ry. and Houston Belt & Terminal Ry. crossing, 2,800 feet west of, 60 feet north of public road crossing Galveston, Harrisburg & San Antonio Ry. and in line with public road east along railway; iron post stamped "Prim. Trav. Sta. No. 173, 1915," elevation 45.277 feet.....	29 45 44.04	95 18 26.34	2, 843
Houston, on Clinton road, Galveston, Harrisburg & San Antonio Ry. and Houston Belt & Terminal Ry. crossing, 1.1 miles west of, 30 feet south of center of road, at fence line, in root of pine tree painted "U. S. B. M. 402"; copper nail, elevation 48.42 feet.....	29 45 41.21	95 19 13.57	4, 226
Houston, about 550 feet north of crossing of Galveston, Harrisburg & San Antonio Ry. and San Antonio & Aransas Pass Ry., 40 feet east of San Antonio & Aransas Pass track, 3,100 feet south of Lyons Street; in root of large oak tree painted "U. S. B. M. 216"; copper nail, elevation 47.07 feet.....	29 46 02.28	95 19 42.13	2, 755

SETTEGAST QUADRANGLE—Continued.

Along highways near southeast corner of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
Green Bayou, 3.5 miles west of Lower Ferry, 20 feet south and 30 feet west of T road north, 18 inches west of corner fence post on old picket fence; copper nail in hub; post painted "U. S. B. M. 397," elevation 38.42 feet.....	° ' " 29 46 01.50	° ' " 95 15 04.50	Feet.
Fidelity addition, 1.6 miles north of Clinton Road, 0.3 mile east of graded road north, in group of oak trees with open prairie northwest; in root of oak tree painted "U. S. B. M. 398"; copper nail, elevation 36.54 feet.....	29 45 21.69	95 15 02.54	4,024

Near Houston.

Houston, Sims Avenue and Opollusus Street, northwest corner of concrete footing of water tank of Moncrief-Lenoir Manufacturing Co.; chiseled square painted "U. S. 54.2 B. M.," elevation 54.18 feet.....			
Englewood, 1.25 miles southwest, about 360 feet southwest of signal tower, 250 feet northeast of road crossing, on north side of Texas & New Orleans R. R. track, top of concrete base of semaphore signal; chiseled square, elevation 51.64 feet.....			
Englewood, opposite operator's window, top of nearest rail, elevation 51.7 feet.....			
Settegast, opposite station signpost, top of nearest rail, elevation 56.7 feet.....			
Houston-Humble road, about 4 miles north of city limits, 100 feet southwest of T road east toward Settegast, west end of concrete and brick culvert; chiseled square painted "U. S. 62.4 B. M.," elevation 62.50 feet.....			
Houston-Aldine road, about 8 miles northwest of Houston city limits, 0.25 mile south of vacant house, on top of east end of concrete culvert over drainage ditch; chiseled square, culvert painted "U. S. 68.9 B. M.," elevation 68.97 feet.....			
Houston, city limits, 3.9 miles northwest of, 1 mile northwest of forks of Houston-Humble road and Houston-Aldine road, on the latter road, 30 feet west of lone pine tree, in top of east end of concrete culvert; chiseled square, elevation 71.69 feet.....			

Along left bank of Buffalo Bayou.

These bench marks are probably all bronze tablets marked "U. S. Engineers Department," set in top of concrete posts, 6 inches square on top and protruding above the ground. The letters R and L of the descriptions refer to right and left bank going down stream and the distance given are probably the approximate distances from the bank.			
Houston Harbor north side of turning basin, 80 feet south of Galveston, Harrisburg & San Antonio Ry. track 230 feet southeast of dim road, marked "134+418 300' L".....			42.005 feet.....
Station No. 133+792, 300' L.....			37.928 feet.....
Station No. 133+024, 300' L.....			40.308 feet.....

Magnetic declination near south border of quadrangle, 8° 18' E.

SPRING QUADRANGLE.

Along International & Great Northern Railway.

Station.	Latitude.	Longitude.	Distance between stations.
Spring, 4.85 miles west of, 380 feet east of mile post 5 22 feet south of road crossing at "Rotherwood spur," 1 foot from crossing signboard painted "U. S. B. M. 229"; copper nail in hub, elevation 143.78 feet.....	° ' " 30 05 39.82	° ' " 95 29 45.89	Feet. 3,418
Road crossing; top of rail, elevation 141.5 feet.....			
Spring, 3.80 miles west of, 500 feet east of milepost 4, 18 feet south of track at road crossing signpost; copper nail in hub; 1 foot north of post, painted on cattle guard "U. S. B. M. 230," elevation 136.38 feet.....	30 05 28.96	95 28 44.73	5,484

SPRING QUADRANGLE—Continued.

Along International & Great Northern Railway—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
Spring, 3.25 miles west of, 1,900 feet west of milepost 3, 45 feet south and 15 feet west of road crossing, 3 feet from corner fence post; iron post stamped "Prim. Trav. Sta. No. 103, 1915," elevation 140.603 feet.....	30 05 22.72	95 28 11.33	<i>Feet.</i> 3,002
Spring, 2.30 miles west of, 2,300 feet west of milepost 2, 32 feet south of track; 1 foot from telegraph pole painted "U. S. B. M. 231"; copper nail in hub, elevation 135.08 feet.....	30 05 13.04	95 27 16.24	4,940
Spring, 1.40 miles west of, 2,300 feet east of milepost 2, 970 feet west of road crossing, 30 feet south of track; 6 inches from telegraph pole painted "U. S. B. M. 232"; copper nail in hub, elevation 131.17 feet.....	30 05 03.86	95 26 24.71	4,621
Spring, 1 mile west of, 500 feet west of milepost 1, 66 feet north of track at private road crossing, 4 feet from post at west end of gate; iron post stamped "Prim. Trav. Sta. No. 104, 1915," elevation 128.903 feet.....	30 05 00.34	95 26 00.48	2,161
Spring station, 100 feet north of International & Great Northern Ry. depot, 50 feet west of main line track; 1 foot west of telegraph pole painted "U. S. B. M. 233"; copper nail in hub, elevation 120.63 feet.....	30 04 45.84	95 25 01.92	5,350

Along public road.

Spring, 0.9 mile south of, 60 feet west of track, 25 feet east of road, 1 foot west of center post under shanty painted red; copper nail in hub; post painted "U. S. B. M. 234," elevation 118.40 feet....	30 03 59.35	95 24 50.32	4,806
Spring, 2 miles south of, 52 feet west of track, 30 feet east of center of road, 20 feet north of gate; iron post stamped "Prim. Trav. Sta. No. 105, 1915," elevation 109.802 feet.....	30 03 06.69	95 24 37.18	5,443
Spring, 2.90 miles south of, 55 feet west of road crossing, 30 feet east of road, 1 foot west of corner fence post; copper nail in hub, painted on fence brace, "U. S. B. M. 235," elevation 92.44 feet....	30 02 18.20	95 24 25.05	5,015
International & Great Northern Ry. bridge No. 275, top of rail directly above Cypress Creek, elevation 92.1 feet.....			
Westfield, 1,200 feet north of, 30 feet west of center of road, corner post on fence line west; 6 inches east of corner post painted "U. S. B. M. 236"; copper nail in hub, elevation 106.19 feet....	30 01 30.88	95 24 13.94	4,879
Westfield, T road corners at, shell road west.....	30 01 20.78	95 24 11.04	1,052
Westfield, 1,050 feet south of, 65 feet south and 60 feet west of public-road crossing International & Great Northern Ry., 4 feet north of corner fence post; iron post stamped "Prim. Trav. Sta. No. 106, 1915," elevation 108.090 feet.....	30 01 09.20	95 24 08.07	1,196
Westfield, 1.1 miles south of, 30 feet west of center of road, about 50 feet east of center of track, 250 feet southeast of International & Great Northern Ry. bridge 277; copper nail in hub; witness stake painted "U. S. B. M. 237," elevation 100.99 feet.....	30 00 23.43	95 23 55.19	4,760

From Rotherwood spur, International & Great Northern Railway, north along second-class road through woods. (Unchecked spur line.)

Rotherwood spur, 0.9 mile north of, about 800 feet south of crossing of Willow Creek, 10 feet west of road, in root of large oak tree painted "U. S. B. M. 299"; 4 feet north of body of tree, copper nail, elevation 122.62 feet.....	30 06 25.38	95 29 31.99	.....
Rotherwood spur, 1.7 miles north of, 0.6 mile north of Willow Creek crossing, 15 feet east of road; in root of oak tree painted "U. S. B. M. 300"; copper nail, elevation 124.64 feet.....	30 07 02.23	95 29 49.00	.....

Along public road from Spring southwest toward Klein.

Spring, 0.7 mile west of, 300 feet north of shell road and 150 feet east of a white house; large leaning oak tree painted "U. S. B. M. 473"; copper nail in root, elevation 124.70 feet.....	30 04 38.96	95 25 49.39	.....
Spring, 1.1 miles west and 1,800 feet south of crossroads.....	30 04 27.94	95 26 09.65	2,100
Spring, 1.5 miles west and 3,000 feet south of, 25 feet north of center of road; 1 foot south of west gatepost and corner post on fence line north painted "U. S. B. M. 474"; copper nail in hub, elevation 122.88 feet.....	30 04 15.92	95 26 33.04	2,388
Spring, 2.4 miles west and 1 mile south of, 1,000 feet east of a grove of trees on south side of road, 25 feet south of center of road; iron post stamped "Prim. Trav. Sta. No. 197, 1915," elevation 130.216 feet.....	30 03 54.35	95 27 25.58	5,107

SPRING QUADRANGLE—Continued.

Along public road from Spring Southwest toward Klein—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
Spring, 3.25 miles west and 1.25 miles south of, 150 feet east of bend in road, 80 feet south of road; in open prairie; small gum tree painted "U. S. B. M. 475"; copper nail in root, elevation 129.88 feet.....	° ' "	° ' "	Feet.
Spring, 4 miles west and 1.65 miles south of, on north bank of small creek, 60 feet east of bridge, 40 feet south of road; gum tree painted "U. S. B. M. 476"; copper nail in root, elevation 122.15 feet.....	30 03 41.28	95 28 17.90	4,785
Spring, 4.5 miles west and 2 miles south of, in open prairie, 10 feet north and 25 feet west of crossroads; iron post stamped "Prim. Trav. Sta. No. 198, 1915," elevation 133.855 feet.....	30 03 19.48	95 28 58.06	4,160
	30 03 00.20	95 29 33.79	3,696

Near south border of quadrangle.

Pemble's store, 0.7 mile southwest of, at east end of a pond, 20 feet southeast of center of road; gum tree painted "U. S. B. M. 273"; copper nail in root, elevation 118.22 feet.....	30 00 04.32	95 28 24.46	.....
Pemble's store, at intersection of west fork of East Montgomery Road and Erhart road, 10 feet east and 20 feet north of crossroads; 6 inches from corner fence post painted "U. S. B. M. 274"; copper nail in hub, elevation 117.84 feet.....	30 00 24.28	95 27 49.12	3,705

From Westfield east on road to Humble.

Westfield, about 1 mile east of, 425 feet northwest of school building district No. 29, 20 feet south of center of road; pine tree painted "U. S. B. M. 308"; copper nail in root, elevation 108.83 feet.....	30 01 15.97	95 23 12.76	.....
Westfield, 1.4 miles east of; crossroads.....	30 01 11.93	95 22 48.15	2,201

From Spring east on road to Bender Lake.

Spring, 0.5 mile south and 0.7 mile east of, in woods, 40 feet north of road; pine tree 2 feet in diameter painted "U. S. B. M. 303"; copper nail in root, elevation 119.86 feet.....	30 04 21.39	95 24 21.13	.....
Spring, 0.7 mile south and 1.4 miles east of, 400 feet southeast of angle in road rounding fence corner, 15 feet southwest of road; gum tree painted "U. S. B. M. 304"; copper nail in root, elevation 114.73 feet.....	30 04 08.82	95 23 36.30	4,139
Spring, 0.9 mile south and 2.2 miles east of, in woods, 15 feet west of road; large oak tree painted "U. S. B. M. 305," copper nail in root, elevation 109.71 feet.....	30 03 59.70	95 22 49.14	4,246

LA PORTE QUADRANGLE.

Along public road from Deer Park to La Porte.

Station.	Latitude.	Longitude.	Distance between stations.
Deer Park, 160 feet north of Southern Pacific R. R. track, 25 feet north and 15 feet west of crossroads, inside plan ^c railing at culvert; iron post stamped "Prim. Trav. Sta. No. 32, 1915," elevation 36.332 feet.....	° ' "	° ' "	Feet.
Deer Park, 0.6 mile east of, 350 feet east of wooden bridge, on north side of road; copper nail in hub, painted "U. S. B. M. 'A,'" elevation 33.89 feet.....	29 42 40.62	95 07 26.59	.....
Thayer triangulation station (U. S. Engineers), about 1.25 miles east of Deer Park station, 467 feet S. 4° E. (true) from road crossing Southern Pacific R. R. between cattle guards 18A and 18B; iron post stamped "U. S. E. D.," reference mark, iron post 124.4 feet southwest (north reference mark not found), elevation 39.301 feet.....	29 42 36.36	95 06 49.90	3,265
Deer Park, 2.1 miles southeast of, 25 feet south of road; 1 foot south of telephone pole, painted "U. S. B. M. 495"; copper nail in hub, elevation 39.84 feet.....	29 42 19.96	95 06 13.90	3,582
Deer Park, 3 miles southeast of, 25 feet south of road; 6 inches south of telephone pole painted "U. S. B. M. 496"; copper nail in hub, elevation 36.03 feet.....	29 42 10.68	95 05 26.62	4,272
	29 41 56.18	95 04 38.57	4,482

LA PORTE QUADRANGLE—Continued.

Along public road from Deer Park to La Porte—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
Deer Park, 3.6 miles southeast of, 75 feet S. 34° E. of road crossing of Southern Pacific R. R., 3 feet south of right-of-way fence; iron post stamped "Prim. Trav. Sta. No. 204, 1915," elevation 35.866 feet.....	° ' " 29 41 43.44	° ' " 95 03 59.96	Feet. 3,639
La Porte, 1.8 miles north and 2 miles west of, 30 feet south of Southern Pacific R. R., 35 feet north of road; 6 inches south of telephone pole painted "U. S. B. M. 497"; copper nail in hub, elevation 30.18 feet.....	29 41 27.87	95 03 07.61	4,877
La Porte, 1.4 miles north and 1.65 miles west of, about 1,500 feet southwest of Strang station, 30 feet north and 20 feet east of crossroads; small ash tree painted "U. S. B. M. 498"; copper nail in root, elevation 27.98 feet.....	29 41 07.88	95 02 48.44	2,632
La Porte, 0.3 mile north and 1.6 miles west of, about 2,000 feet north 62° west from La Porte station, 25 feet east of center of road, opposite a T road west; iron post stamped "Prim. Trav. Sta. No. 205, 1915," elevation 28.829 feet.....	29 40 11.87	95 02 47.07	5,658
La Porte, 1.2 miles west of, about 140 feet south of La Porte Ry. station and 50 feet east of railroad track; 30 feet south of public road and 8 inches north of telephone pole painted "U. S. B. M. 499"; copper nail in hub, elevation 25.66 feet.....	29 39 53.27	95 02 20.27	3,019
La Porte, 1,650 feet west of road forks, 4,600 feet east of railroad track, 30 feet south of road; 6 inches north of telephone pole painted "U. S. B. M. 500"; copper nail in hub, elevation 27.41 feet.....	29 39 54.17	95 01 28.27	4,587
La Porte, forks of road at; roads to Seabrook, Sylvan Beach, Mergans Point, and Houston.....	29 39 54.79	95 01 09.54	1,652
La Porte, 3,300 feet northeast of forks of road, south end of concrete culvert, west end of wall; railing painted "U. S. B. M. 519"; chiseled square, elevation 23.92 feet.....	29 40 10.40	95 00 36.15	3,340
La Porte, at intersection of Main Street, Broadway and San Jacinto Avenue, in top of post 1 foot high; copper nail painted "U. S. 26.3 B. M.," elevation, 26.28 feet.....			

Along La Porte-Seabrook road.

La Porte, 0.7 mile south of, 0.5 mile west of Sylvan station, 200 feet north of a house, 25 feet west of road and 80 feet north of a lane west; iron post stamped "Prim. Trav. Sta. No. 206, 1915," elevation 22.264 feet.....	29 39 18.41	95 01 09.00	.....
La Porte, 1.4 miles south of, 300 feet south of Little Cedar Bayou, 45 feet east of road; oak tree painted "U. S. B. M. 501"; copper nail in root, elevation 16.92 feet.....	29 38 41.84	95 01 07.41	3,697
La Porte, 2.25 miles south of, 600 feet south of second-class cross-road, 25 feet east of road; cedar tree painted "U. S. B. M. 502"; copper nail in root, elevation 16.20 feet.....	29 37 57.32	95 01 06.62	1,500

Along Lynchburg-Deer Park road.

San Jacinto battle field, 2,000 feet south of, 22 feet east of center of road; in root of hackberry tree painted "U. S. B. M. 403"; copper nail, elevation 25.13 feet.....	29 44 46.76	95 05 23.79	.....
San Jacinto battle field, 1.4 miles south of, 10 feet south and 25 feet east of T road west; 6 feet north of telephone pole; iron post stamped "Prim. Trav. Sta. No. 174, 1915," elevation 33.833 feet.....	29 43 58.70	95 05 23.20	4,854
Deer Park, about 1.1 miles north and 1.2 miles east of, 60 feet southeast of center of road, in pasture; in root of one of a group of seven trees; copper nail; tree painted "U. S. B. M. 404".....	29 43 46.00	95 06 17.94	4,995
Deer Park, 1 mile north and 0.5 mile east of, 25 feet southeast of center of road, close to wire fence line; in root of oak tree painted "U. S. B. M. 405"; copper nail, elevation 30.68 feet.....	29 43 31.76	95 06 59.85	3,964

In northwest corner of quadrangle.

Cedar Bayou post office, 0.75 mile south and 5.7 miles west of, 50 feet east of a house on north side of road, 25 feet north of road; oak tree painted "U. S. B. M. 437"; copper nail in root, elevation 29.39 feet.....	29 44 53.64	95 00 30.28	.....
Cedar Bayou post office, 0.75 mile south and 6.5 miles west of, 20 feet north of road at wire fence line; oak tree painted "U. S. B. M. 438"; copper nail in root, elevation 30.41 feet.....	29 44 53.55	95 01 18.48	4,250
Cedar Bayou post office, 0.75 mile south and 7 miles west of, T road corners.....	29 44 54.32	95 01 53.32	3,074

LA PORTE QUADRANGLE—Continued.

Near west border of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
Deer Park, 5.9 miles south and 1.4 miles east of, on Red Bluff road, 50 feet west of road at edge of timber, prairie on east; oak tree painted "U. S. B. M. 536," copper nail in root, elevation 20.99 feet.....	° ' "	° ' "	Feet.
Deer Park, 5.4 miles south of, 0.5 mile west of Red Bluff road, 600 feet south of dwelling house, 25 feet north of roadway, 600 feet west of Middle Bayou, 2 feet south of corner fence post; copper nail in hub; post painted "U. S. B. M. No. 59," elevation 23.18 feet.....	29 37 33.29	95 06 02.01	.....
Deer Park, 5.25 miles south and 1 mile east of, on Red Bluff road, about 0.4 mile east of Middle Bayou, 30 feet east of road, 4 feet east of fence line in field; copper nail in hub; witness stake painted "U. S. B. M. No. 60," elevation 25.05 feet.....	29 38 00.35	95 06 56.51	5,533
Deer Park, 4.6 miles south and 0.4 mile east of, on Red Bluff road, 30 feet west of center of road, 100 feet north of fence corner and lane southwest; 6 inches from fence post painted "U. S. B. M. No. 61"; copper nail in hub, elevation 25.93 feet.....	29 38 05.22	95 06 28.29	2,540
Deer Park, 4.2 miles south of, 150 feet north of Mr. English's house, 30 feet west of road, 1.5 feet from wire fence line; iron post stamped "Prim. Trav. Sta. No. 30, 1915," elevation 31.411 feet.....	29 38 40.31	95 06 59.72	4,501
Deer Park, 3.35 miles south, 0.4 mile east of, 0.9 mile east of intersection of Red Bluff road and Main Street, La Porte road, 25 feet south of center of east and west road, 1.5 feet from wire fence; copper nail in hub; witness stake painted "U. S. B. M. No. 63," elevation 36.54 feet.....	29 39 01.48	95 07 18.38	2,698
Deer Park, 2.35 miles south of, 10 feet east of old trail on open prairie; iron post stamped "Prim. Trav. Sta. No. 31, 1915," witness stake painted "U. S. P. B. M.," elevation 41.162 feet.....	29 39 48.57	95 07 03.48	4,934
Deer Park, 1.5 miles south of, 10 feet west of dim roadway on open prairie; copper nail in hub; witness stake painted "U. S. B. M. No. 64," elevation 39.70 feet.....	29 40 39.00	95 07 23.58	5,394
Deer Park, 0.7 mile south of, on west side of road, at edge of embankment made by ditch excavation; copper nail in hub; witness stake painted "U. S. B. M. No. 65," elevation 37.47 feet.....	29 41 23.53	95 07 24.77	4,499
Deer Park, 1.6 miles north of, on north side of ship channel, U. S. Engineers' bench mark, station 67+653; tablet in top of concrete monument 6 inches square, elevation, determined from leveling by U. S. Corps of Engineers, 7.140 feet.....	29 42 02.17	95 07 25.64	3,904
	29 44 02.84	95 07 24.68	.....

Along Buffalo Bayou.

These bench marks are probably all bronze tablets marked "U. S. Engineer Department," set in top of concrete posts, 6 inches square on top and protruding above ground. The letters R and L of the descriptions refer to right and left bank going downstream and the distances given are probably the approximate distances from the bank.

Station 66+436 300 L, elevation, 3.626 feet.....

Station 65+553 300 L, elevation, 5.352 feet.....

Station 64+053 300 L, elevation, 8.016 feet.....

Magnetic declination for quadrangle, 8° 10' E.

STUEBNER QUADRANGLE.

Along highways in south part of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
Hufsmith, International & Great Northern Ry. crossing; top of rail, elevation 170.0 feet.....	° ' "	° ' "	Feet.
Hufsmith, 0.75 mile north of, 400 feet south of bridge over Spring Creek, 15 feet west of public road; gum tree painted "U. S. B. M. 260"; copper nail in root, elevation 151.09 feet.....	30 07 57.40	95 35 47.71	.....
Hufsmith, about 0.8 mile north and 0.7 east of, along a woods road near Spring Creek, 20 feet south of road and 120 feet west of a bridge over ravine; oak tree painted "U. S. B. M. 261"; copper nail in root, elevation 150.93 feet.....	30 08 02.26	95 35 12.92	3,094

STUEBNER QUADRANGLE—Continued.

Along highways in south part of quadrangle—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
Hufsmith, 0.8 mile north and 0.7 mile east of, just on north side of road; iron bar 2.5 inches in diameter and standing 3 feet high, probable land corner.....	° ' " 30 08 02.50	° ' " 95 35 04.62	Feet. 730
Hufsmith, 0.9 mile north and 1 mile east of, along road near Spring Creek, 250 feet southwest of cabin, 20 feet north of road, 12 feet west of oak tree and 3 feet from fence corner; iron post stamped "Prim. Trav. Sta. No. 118, 1915," elevation 177.882 feet.....	30 08 07.05	95 34 46.54	1,653
Stuebner (post office discontinued), 250 feet east of, 30 feet north of center of road, iron bar about 1 1/4 inches square and standing 1 foot above ground; pine tree near, painted "U. S. B. M. 262"; top of bar, elevation 182.35 feet.....	30 07 47.60	95 34 14.46	3,435
Stuebner, 0.7 mile east of, 20 feet south of center of road; pine tree painted "U. S. B. M. 263"; copper nail in root, elevation 172.28 feet.....	30 07 51.26	95 33 32.08	3,741
Stuebner, 1 mile east of, 1.5 miles south of crossing of Spring Creek, 25 feet east of center of road at T road west; iron post stamped "Prim. Trav. Sta. No. 119, 1915," elevation 165.409 feet.....	30 07 51.77	95 33 11.83	1,779

Near southeast corner of quadrangle.

Rotherwood spur, International & Great Northern Ry., 2.15 miles north and 0.6 mile west of, 2,000 feet northwest of a house, 600 feet north of woods road, along old trail; tree painted "U. S. B. M. 302"; copper nail in root (no elevation determined).....	30 07 32.04	95 30 22.07
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Magnetic declination, 8° 35' E.

SUGARLAND QUADRANGLE.

Near Missouri City.

Station.	Latitude.	Longitude.	Distance between stations.
Missouri City station, opposite southwest end of, 90 feet from public road crossing over track, 30 feet north of center of main road to Houston, 1 foot from right-of-way fence line; iron post stamped "Prim. Trav. Sta. No. 16, 1915," elevation 80.250 feet.....	° ' " 29 37 07.35	° ' " 95 32 17.34	Feet.
Missouri City, 0.8 mile northeast of, 300 feet east of public road crossing, 40 feet northwest of Houston Road, and about 40 feet from center of Southern Pacific R. R. track, 2 feet from telephone pole painted "U. S. B. M. No. 31"; copper nail in hub, elevation 71.98 feet.....	29 37 25.47	95 31 30.75	4,501

SWANSON QUADRANGLE.

Along highways north through center of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
Katy, 6.6 miles north of, 20 feet east of center of road, 0.5 mile north of white schoolhouse, 6 inches from corner fence post at fence line east; copper nail in hub; post painted "U. S. B. M. 102," elevation 163.46 feet.....	° ' " 29 52 54.34	° ' " 95 49 25.10	Feet.
Katy, 7.5 miles north of, 20 feet east of center of road, 1 foot from corner fence post at north end of gate; copper nail in hub; post painted "U. S. B. M. 103," elevation 171.04 feet.....	29 53 42.91	95 49 25.57	4,906
Katy, 8.1 miles north and 0.2 mile east of, in line with private road north, 20 feet south of center of east and west road, close to corner fence post at fence line south; iron post stamped "Prim. Trav. Sta. No. 50, 1915," elevation 165.046 feet.....	29 54 12.70	95 49 10.92	3,274

SWANSON QUADRANGLE—Continued.

Along highways north through center of quadrangle—Continued.

Station.	Latitude.	Longitude.	Distance between stations.
Katy, 8.1 miles north by 1 mile east of, 27 feet south by 26 feet west of post set at intersection of roads, 2 feet north of corner fence post; copper nail in hub; post painted "U. S. B. M. 104," elevation 159.42 feet.....	° ' " 29 54 12.97	° ' " 95 48 26.46	<i>Feet.</i> 3,915
Katy, 9 miles north by 1 mile east of, on west side of dim road, 6 inches from fence post; copper nail in hub; post painted "U. S. B. M. 105," elevation 162.21 feet.....	29 55 01.13	95 48 26.83	4,865
Katy, 10 miles north by 1 mile east of, 815 feet north of fence corner, 3 feet west of north and south fence line and 20 feet east of dim roadway; iron post stamped "No. 51, 1915," elevation 164.283 feet.....	29 55 49.65	95 48 27.19	4,900
Katy, 10.9 miles north by 1 mile east of, 1,900 feet south of Big Cypress Creek, 30 feet west of center of roadway, 6 inches from fence post; copper nail in hub; post painted "U. S. B. M. 106," elevation 160.93 feet.....	29 56 40.07	95 48 28.94	5,095
Katy, 11.3 miles north by 1 mile east of, 100 feet north of Big Cypress Creek, 25 feet north by 5 feet west of northwest corner of bridge on west side of road; copper nail and washer in root of water oak; corner of bridge painted "U. S. B. M. 107," and with an arrow, elevation 157.24 feet.....	29 57 00.11	95 48 29.46	2,024
Katy, 12.4 miles north by 1 mile east of, 1.1 miles north of Big Cypress Creek, 3.2 miles south of Houston & Texas Central R. R., 30 feet east of center of road, 2 feet from tall fence post; iron post stamped "Prim. Trav. Sta. No. 52, 1915," elevation 168.080 feet.....	29 57 95.22	95 48 30.11	5,971
Katy, 13.4 miles north by 1 mile east of, 2.1 miles north of Big Cypress Creek, 2.2 miles south of Houston & Texas Central R. R., 30 feet west of center of road, 6 inches from fence corner and gatepost; copper nail in hub; post painted "U. S. B. M. 108," elevation 180.23 feet.....	29 58 50.80	95 48 31.25	5,212
Katy, 14.4 miles north by 1 mile east of, 3.1 miles north of Big Cypress Creek, 30 feet east by 25 feet south of T road south, 1 foot from corner fence post; copper nail in hub; fence painted "U. S. B. M. 109," elevation 198.36 feet.....	29 59 42.58	95 48 32.36	5,231
Hockley, 6.5 miles south by 1.2 miles east of, 4,500 feet west of Katy and Hockley road, in open prairie; copper nail in hub with witness stake painted "U. S. B. M. 183," elevation 163.30 feet.....	29 55 42.25	95 49 18.05	.....
Hockley, 6.5 miles south by 0.6 mile east of, near gateway on a private road across prairie to Hockley, at north end of lane and near the head of timber on Big Cypress Creek, 6 feet west of gatepost and close to wire fence line; copper nail in hub; painted on gate "U. S. B. M. 184," elevation 166.02 feet.....	29 55 39.60	95 49 56.58	3,400
Hockley, 6 miles south of, about 0.8 mile northwest of head of timber of Big Cypress Creek, 4 feet southeast of gatepost at double gateway; iron post stamped "Prim. Trav. Sta. No. 81, 1915," elevation 169.512 feet.....	29 56 04.33	95 50 38.05	4,422
Hockley, 6 miles south by 1 mile west of, on prairie, 5 feet east of corner post on fence line north, 50 feet north of a jog west in fence line; copper nail in hub; post painted "U. S. B. M. 185," elevation 171.78 feet.....	29 56 03.52	95 51 44.77	5,870

Near Swanson.

Hockley, 4.5 miles southeast of, 0.6 mile northwest of Swanson, 0.6 mile southeast of section house, nearly opposite milepost 31, 55 feet north of Houston & Texas Central R. R. track, 25 feet south of shell road, 2.5 feet north of telephone pole; iron post stamped "Prim. Trav. Sta. No. 54, 1915," elevation 194.546 feet.....	29 59 57.98	95 46 21.62	.....
Swanson, 1,500 feet east of station signboard on Houston & Texas Central R. R., 25 feet south of center of shell road, 50 feet north of track, 600 feet west of milepost 30, 6 inches from telephone pole; copper nail in hub; pole painted "U. S. B. M. 113," elevation 187.62 feet.....	29 59 40.08	95 45 34.24	4,542

Magnetic declination in quadrangle, 8° 45' E.

WALLER QUADRANGLE.

Along public roads in southeast quarter of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
Hockley, 2.70 miles northwest of, 15 feet south of center of road, 4 feet from west end and in top of south abutment of concrete culvert; bronze tablet stamped "Prim. Trav. Sta. No. 79, 1915," elevation 246.121 feet.....	30 02 30.80	95 53 11.43	Feet. 4,383
Waller, 1.75 miles southeast of, about 100 feet west and 65 feet south of road crossing Houston & Texas Central R. R., 30 feet south of public road; in root of sycamore tree painted "U. S. B. M. 181"; copper nail, elevation 262.58 feet.....	30 02 48.33	95 53 58.61	4,509
Waller, 1.20 miles southeast of, crossroads.....	30 03 00.36	95 54 29.99	3,013
Waller, 0.80 mile southeast of, 25 feet south of center of road; 1 foot from telephone pole, close to fence line, painted "U. S. B. M. 182"; copper nail in hub, elevation 264.54 feet.....	30 03 08.39	95 54 51.76	2,078
Waller station, about 1,900 feet southeast of, 47 feet south of Houston & Texas Central R. R., 23 feet southeast of county line post, 2.5 feet north of fence line; iron post stamped "Prim. Trav. Sta. No. 80, 1915," elevation 241.632 feet.....	30 03 16.48	95 55 16.59	2,330
Waller station, about 1,885 feet southeast of, about 30 feet south of Houston & Texas Central R. R.; post marked "Harris County-Waller County".....	30 03 16.68	95 55 16.74	23
Waller, 0.6 mile north of, 20 feet east of road, at corner of fence where lane turns east, 6 inches from corner fence post; copper nail in hub; post painted "U. S. B. M. 192," elevation 266.29 feet.....	30 03 56.36	95 55 16.31	4,049
T road west, 200 feet north of, top of east end of small wooden culvert, elevation 265.10 feet.....			
Waller, 1.6 miles north of, 25 feet south and 25 feet east of T road east; 6 inches from corner fence post painted "U. S. B. M. 193"; copper nail in hub, elevation 274.06 feet.....	30 04 46.98	95 55 17.33	5,114
Waller, 2.4 miles north of, in line with road north at east end of 300 foot jog, 3 feet north of wire fence, 8 feet west of telephone pole; iron post stamped "Prim. Trav. Sta. No. 85, 1915," elevation 271.605 feet.....	30 05 21.92	95 55 14.56	3,539
Waller, 3.4 miles north of, 20 feet east of road, at corner post on fence line east; 6 inches from fence post painted "U. S. B. M. 194"; copper nail in hub, elevation 276.83 feet.....	30 06 13.59	95 55 15.42	5,220
Waller, about 2.9 miles north of and 0.5 mile east of, 920 feet north of T road east and 960 feet north of T road west, 20 feet east of road, 1 foot from corner post on fence line east; copper nail in hub "U. S. B. M. 195," elevation 286.72 feet.....	30 06 42.05	95 54 55.36	3,370
Waller, 4.7 miles north and about 0.5 mile east of, 0.5 mile south of Harris-Montgomery county line, at T road south and in line with road south, 2 feet south of wire fence; iron post stamped "Prim. Trav. Sta. No. 86, 1915," elevation 273.244 feet.....	30 07 25.68	95 54 56.38	4,409
Waller, 3.7 miles north and 1.6 mile east of, 25 feet north of center of road, 100 feet west of point in road opposite Bentford school-house, at east gate post; 6 inches from post painted "U. S. B. M. 196"; copper nail in hub, elevation 271.04 feet.....	30 06 33.83	95 53 45.59	8,132
Waller, 3.75 miles north and 1.80 miles east of, crossroads.....	30 06 33.82	95 53 31.97	1,196
Waller, 3.75 miles north and 2.5 miles east of, 400 feet north of old two-story house, 25 feet north of center of road; 6 inches from fence post with 2-inch by 4-inch timber supporting telephone wire painted "U. S. B. M. 197"; copper nail in hub, elevation 268.49.....	30 06 34.35	95 52 59.77	2,830
Waller, 3.7 miles north and 2.7 miles east of, 20 feet east of T road west, 3 feet from north and south fence line; iron post stamped "Prim. Trav. Sta. No. 87, 1915," elevation 266.894 feet.....	30 06 34.37	95 52 41.25	1,627
Hockley, 4.7 miles north and 1.7 miles west of, 25 feet west of center of road, 60 feet north of bridge, at corner of fence on road west; 6 inches from post painted "U. S. B. M. 198"; copper nail in hub.....	30 05 43.76	95 52 40.80	5,114
Hockley, 3.7 miles north and 1.7 miles west of, 20 feet west and 15 feet south of T road east, 25 feet north of Charles Schultz's mail box; copper nail in hub, "U. S. B. M. 199," elevation 274.12 feet.....	30 04 53.61	95 52 39.79	5,066

From point near southeast corner of quadrangle north to point 1.7 miles west of Hockley.

Hockley, 1.3 miles south by 2.5 miles west of, 1 mile south of T road south 6 inches from corner post on fence line east; copper nail in hub; post painted "U. S. B. M. 190," elevation 230.83 feet.....	30 00 24.40	95 52 54.64	.....
Hockley, 0.2 mile south by 2.5 miles west of, at T road south, in line with road south, 20 feet north of center of east and west road, 2 feet from wire fence; iron post stamped "Prim. Trav. Sta. No. 84, 1915," elevation 235.066 feet.....	30 01 17.38	95 52 56.15	5,354

Magnetic declination for southeast quarter of quadrangle, 8° 30' E.

WALLEY QUADRANGLE.

On unchecked spur line.

Station.	Latitude.	Longitude.	Distance between stations.
Crosby, about 6.3 miles northeast of, on road to Liberty, 125 feet south of Texas & New Orleans R. R., 250 feet west of bridge across Cedar Bayou, 30 feet south of public road and 6 feet north of wire fence; iron post stamped "Prim. Trav. Sta. No. 202, 1915," elevation 54.666 feet.....	° ' " 29 58 14.90	° ' " 94 59 16.33	Feet.

Magnetic declination for quadrangle, 8° 23' E.

WEBSTER QUADRANGLE.

Along highways near north border of quadrangle.

Station.	Latitude.	Longitude.	Distance between stations.
Genoa station, Galveston & Houston Electric Ry., 90 feet east and 30 feet south of road crossing, 35 feet south of center of road, 2 feet east of right-of-way fence; iron post stamped "Prim. Trav. Sta. No. 27, 1915," elevation 49.112 feet.....	° ' " 29 37 22.32	° ' " 95 12 57.20	Feet.
Genoa station, Galveston, Houston & Henderson R. R., about 440 feet north of, 60 feet west of track, 6 feet outside right-of-way fence; 3 feet from telephone pole painted "U. S. B. M. 55"; copper nail in hub (no elevation).....	29 37 25.06	95 11 54.95	5,500
Genoa station, Galveston, Houston & Henderson R. R., 180 feet north of, 25 feet west of center of track, on south side of water tank, in concrete foundation; bronze tablet; no elevation; stamped "C. and G. S. B. M. R8," elevation 49.846 feet.....	29 37 23.36	95 11 53.03	242

Along public road between Webster and Genoa.

Webster, about 0.75 mile northwest of, 40 feet northeast of center of road; 1 foot west of telephone pole painted "U. S. B. M. 511"; copper nail in hub, elevation 27.921 feet.....	29 32 44.50	95 07 31.63	.....
Webster, 1.6 miles northwest of, 55 feet southwest of center of Galveston, Houston & Henderson Ry. track, 25 feet northeast of road; 6 inches west of telephone pole painted "U. S. B. M. 512"; copper nail in hub, elevation 32.78 feet.....	29 33 18.79	95 08 03.93	4,487
Webster, 2.4 miles northwest of, 55 feet southwest of center of Galveston, Houston & Henderson R. R. track, 25 feet northeast of road; iron post stamped "Prim. Trav. Sta. No. 212, 1915", elevation 35.265 feet.....	29 33 53.16	95 08 36.07	4,485
Webster, 3.3 miles northwest of, 150 feet south of signpost "Olcott 1 mi.," 50 feet southwest of Galveston, Houston & Henderson R. R., 30 feet northeast of road; 6 inches west of telephone pole painted "U. S. B. M. 513"; copper nail in hub, elevation 29.10 feet.....	29 34 29.72	95 09 10.29	4,772
Genoa, 3.4 miles southeast of, 55 feet southwest of Galveston, Houston & Henderson R. R., 25 feet northeast of road; 6 inches southwest of telephone pole painted "U. S. B. M. 514"; copper nail in hub, elevation 29.52 feet.....	29 35 05.02	95 09 43.37	4,609
Genoa, 2.6 miles southeast of, opposite Olcott siding, 55 feet southwest of Galveston, Houston & Henderson R. R., 25 feet northeast of road, 20 feet northwest of steps over wire fence; iron post stamped "Prim. Trav. Sta. No. 213, 1915", elevation 34.144 feet.....	29 35 38.65	95 10 14.94	4,394
Genoa, 1.75 miles southeast of, 25 feet northeast of road; 6 inches south of telephone pole painted "U. S. B. M. 515"; copper nail in stub of old telephone pole, elevation 42.10 feet.....	29 36 13.51	95 10 47.70	4,557
Genoa, about 0.9 mile southeast of, 25 feet northeast of road; 6 inches west of telephone pole painted "U. S. B. M. 516"; copper nail in hub, elevation 41.06 feet.....	29 36 45.79	95 11 18.04	4,219

WEBSTER QUADRANGLE—Continued.

Along public road between Webster and Friendswood.

Station.	Latitude.	Longitude.	Distance between stations.
Webster station, Galveston-Houston Interurban R. R., near road crossing at, 10 feet northeast of center of track and 15 feet southeast of center of road; 6 inches from crossing signboard; copper nail in hub (t. b. m. 517), elevation 29.31 feet.....	° ' " 29 31 53.18	° ' " 95 07 34.68	<i>Fect.</i>
Webster, 1 mile south and 1.25 miles west of, opposite old irrigation pump house, 40 feet north of road, 4 feet from northeast corner of bridge over ditch; 6 inches from post at east end of gate, painted "U. S. B. M. 518"; copper nail in hub, elevation 23.48 feet.....	29 31 25.32	95 08 14.59	4,511
Webster, 1 mile south and 2.5 miles west of, 700 feet southwest of crossroads, 25 feet southeast of center of road, near fence corner; iron post stamped "Prim. Trav. Sta. No. 214, 1915", elevation 28.648 feet.....	29 31 26.62	95 09 31.07	6,757
Webster, 0.6 miles south and 2.8 miles west of; crossroads; shell road north, east, and southwest.....	29 31 49.73	95 09 47.54	2,751
Webster, 1 mile south and 3.15 miles west of, 50 feet south of right angle in road; 6 inches north of telephone pole painted "U. S. B. M. 521"; copper nail in hub, elevation 27.38 feet.....	29 31 30.40	95 10 08.15	2,670
Webster, 0.8 mile south and 4 miles west of, 35 feet northwest of road; 6 inches east of telephone pole painted "U. S. B. M. 522"; copper nail in hub, elevation 30.35 feet.....	29 31 37.00	95 10 55.45	4,231
Webster, 1 mile south and 4.2 miles west of, 300 feet northeast of east end of bridge across Clear Creek, 50 feet northwest of road, 10 feet inside fence line at edge of woods; iron post stamped "Prim. Trav. Sta. No. 215, 1915", elevation 18.115 feet.....	29 31 26.29	95 11 09.80	1,667

From Friendswood northwest on Pearland road.

Friendswood, about 70 feet south of crossroads, concrete post, 5 feet high at corner of fence around Friendswood Academy; painted "U. S. B. M. 523"; chiseled square on top of post, elevation 37.50 feet.....	29 31 41.26	95 11 59.65	4,655
Friendswood, 0.9 mile northwest of, 100 feet northwest of entrance to farmyard, 25 feet northeast of center of road; 6 inches west of telephone pole painted "U. S. B. M. 524"; copper nail in hub, elevation 32.24 feet.....	29 32 13.62	95 12 38.69	4,752
Friendswood, 2.35 miles northwest of, 30 feet south of crossroads, 3 feet north of corner fence post; iron post stamped "Prim. Trav. Sta. No. 216, 1915", elevation 41.855 feet.....	29 32 49.61	95 13 54.71	7,635
Friendswood, 1.35 miles north and 2.7 miles west of, just north of Marys Bayou, 60 feet southwest of road, oak tree painted "U. S. B. M. 525"; copper nail in root, elevation 43.41 feet.....	29 32 51.79	95 14 40.13	4,017

Near Genoa and Webster.

Genoa, 1.75 miles southeast of, top of vertical section rail; chiseled cross (C. & G. S. B. M. 16), elevation, 43.573 feet.....			
Webster, 1 mile northwest of, 18 telegraph poles northwest of mile board 21, 115 feet northeast of Galveston, Houston & Henderson Ry. tracks, 50 feet southwest of an artesian well, on land owned by Harvey T. D. Wilson, set in clay; on 3-inch red metal cap on iron pipe (C. & G. S. B. M. T8), elevation, 31.506 feet.....			
Webster, 1 mile south by 3.15 miles west of, 50 feet south of right angle in road, 6 inches north of telephone pole; copper nail in hub painted "U. S. 27.4 B. M. 521", elevation, 27.38 feet.....			
Genoa, about 3.5 miles southwest of, at south edge of prairie, 800 feet north of edge of timber, on fence line, 18 inches southwest of fence post; wire nail in hub painted "U. S. 33.9 B. M.", elevation, 33.90 feet.....			

