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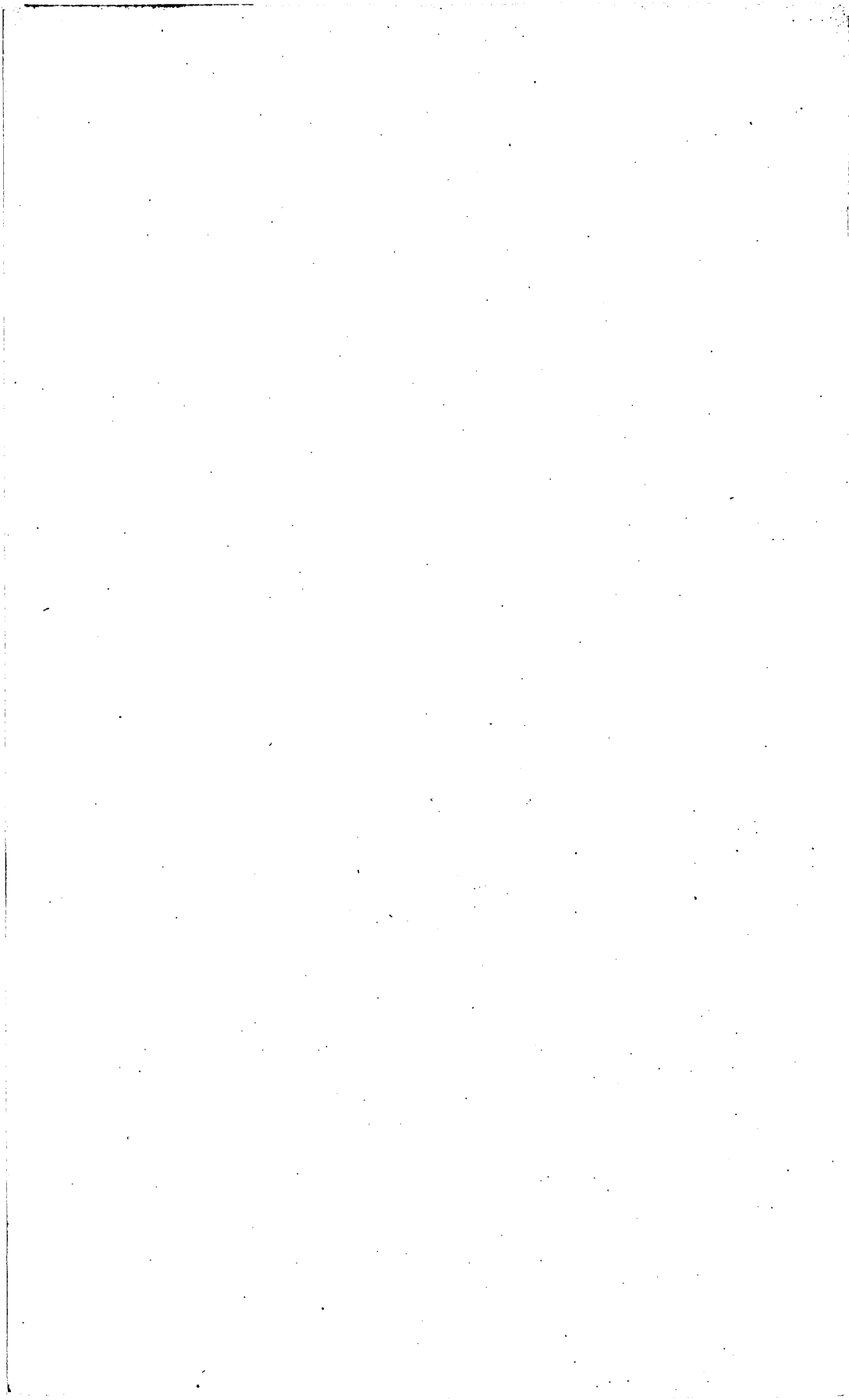
RESULTS OF SPIRIT LEVELING IN
KANSAS AND NEBRASKA

1896 TO 1909, INCLUSIVE

R. B. MARSHALL, CHIEF GEOGRAPHER



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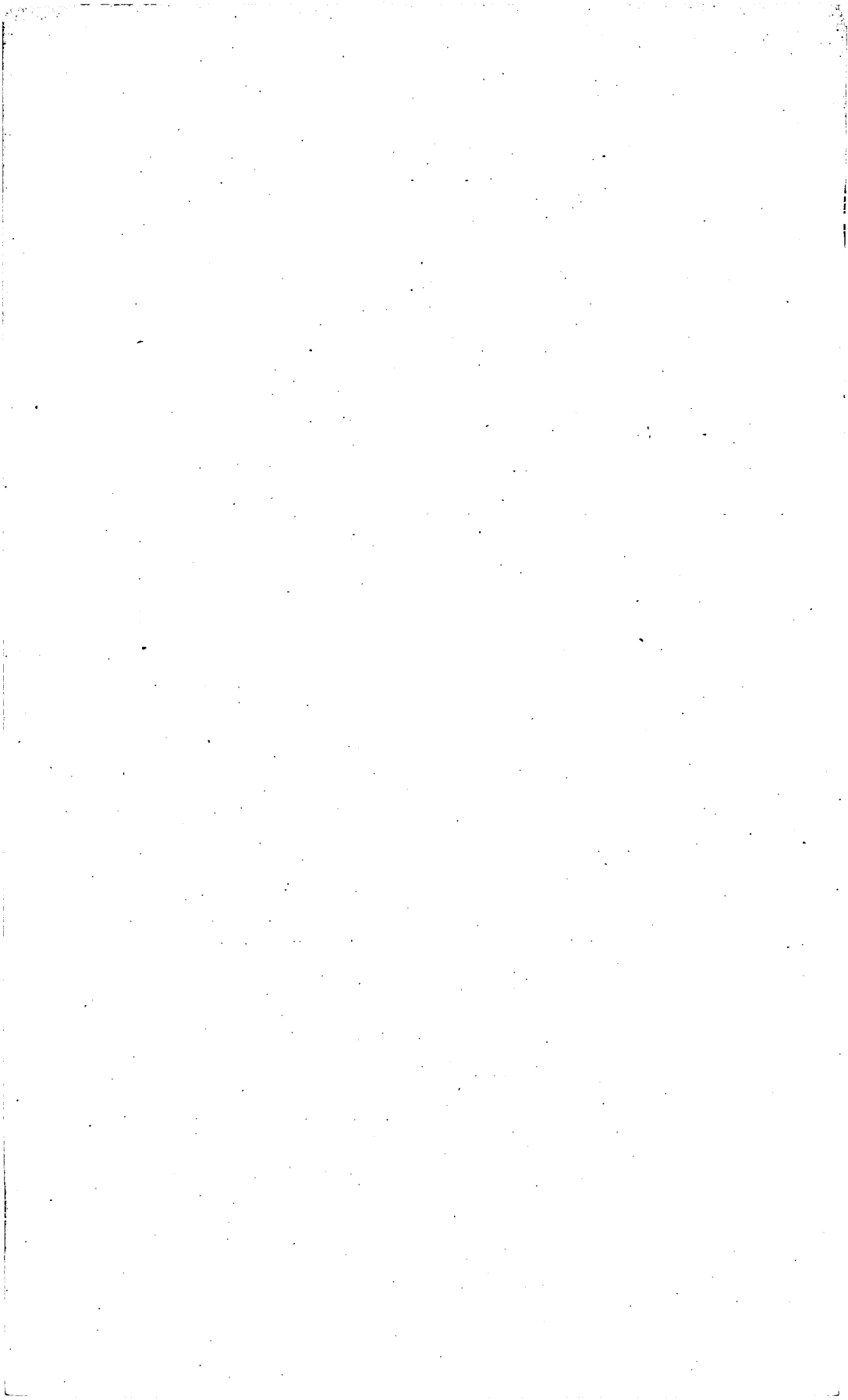


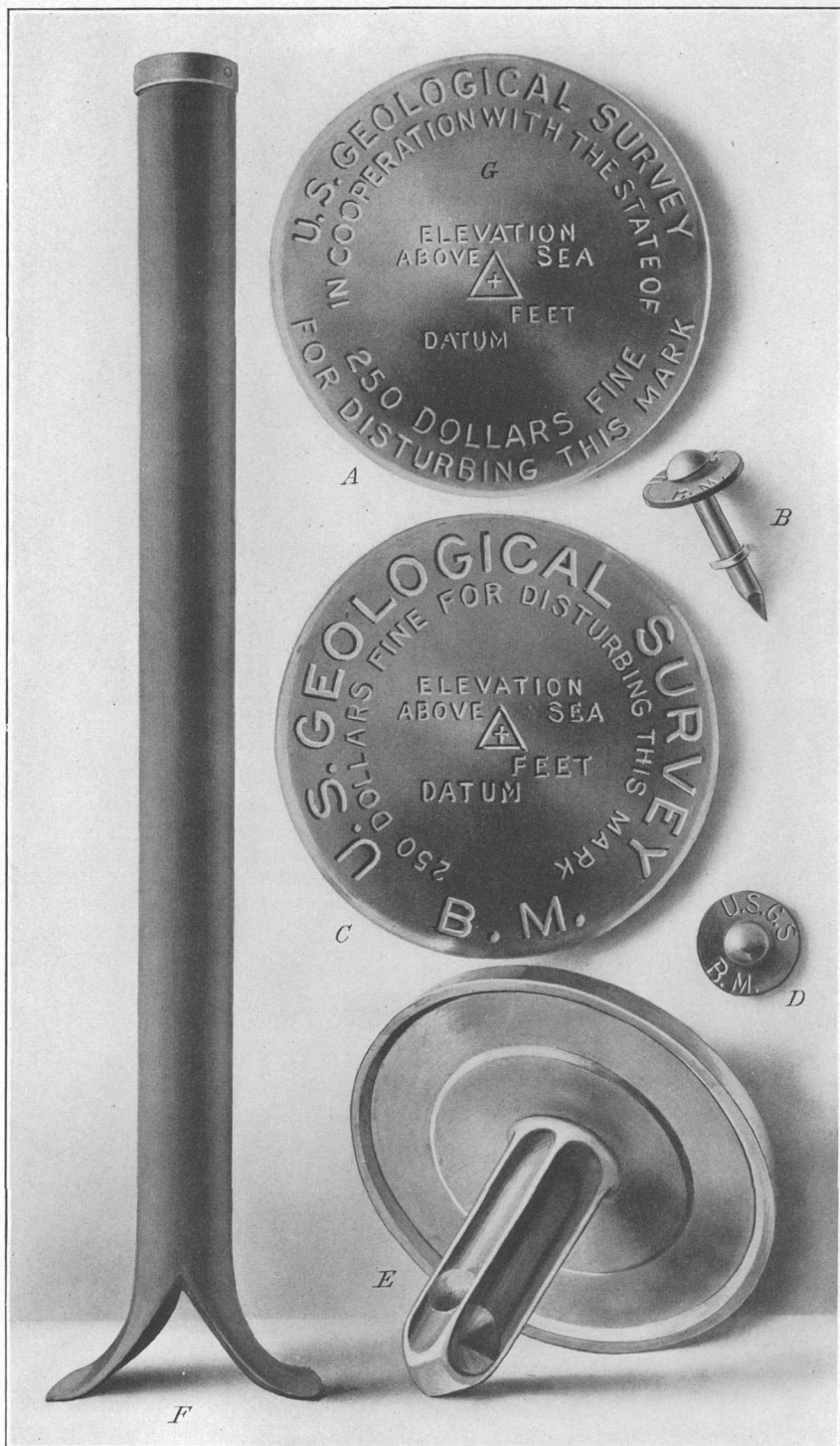
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GEOLOGICAL SURVEY BENCH MARKS.

A, Tablet used in cooperating States. The State name is inserted at *G*.
B and *D*, Copper temporary bench mark, consisting of a nail and copper washer.
A, *C*, and *E*, Tablets for stone or concrete structures.
F, Iron post used where there is no rock.

RESULTS OF SPIRIT LEVELING IN KANSAS AND NEBRASKA, 1896 TO 1909, INCLUSIVE.

R. B. MARSHALL, Chief Geographer.

INTRODUCTION.

Scope of the work.—All results of spirit leveling in Kansas and Nebraska previously published by the United States Geological Survey and all the results of later work are included in this report, rearranged by quadrangles. Elevations are based on heights of bench marks along precise-level lines of the Coast and Geodetic Survey and of the Missouri River Commission, as adjusted in 1907. The elevation of bench marks in the western part of both States are based on railroad data, and are, therefore, only approximate.

Personnel.—The field work previous to 1903 was done under the general direction of J. H. Renshawe, geographer; that for 1903 to 1906, inclusive, under H. M. Wilson, geographer; and the later work under W. H. Herron, geographer. The names of the various levelmen are given in the introduction to each list. The office work of computation, adjustment, and preparation of lists was done mainly by S. S. Gannett, geographer, and D. H. Baldwin, topographer, and since 1907 under the general direction of E. M. Douglas, geographer.

Classification.—No precise leveling has been done by the United States Geological Survey in Kansas and Nebraska. For primary lines standard Y levels are used; lines are run in circuits or are closed on precise lines, with an allowable closing error in feet represented by $0.05\sqrt{D}$, in which D is the length of the circuit in miles, sufficient care being given to the work to maintain this standard. For levels of this class careful office adjustments are made, the circuit errors being distributed over the lines.

Bench marks.—The standard bench marks are of two forms. The first form is a circular bronze or aluminum tablet (C and E, Pl. I), $3\frac{1}{2}$ inches in diameter and one-quarter inch thick, having a 3-inch stem, which is cemented in a drill hole in solid rock in the wall of some public building, a bridge abutment, or other substantial masonry structure. The second form (F, Pl. I), used where masonry or rock is not available, consists of a hollow wrought-iron post $3\frac{1}{2}$ inches in

outer diameter and 4 feet in length. The bottom is spread out to a width of 10 inches in order to give a firm bearing on the earth. A bronze or aluminum-bronze cap is riveted over the top of the post, which is set about 3 feet in the ground. A third style of bench mark with abbreviated lettering (B and D, Pl. I) is used for unimportant points. This consists of a special copper nail $1\frac{1}{2}$ inches in length driven through a copper washer seven-eighths inch in diameter. The tablets, as well as the caps on the iron posts are appropriately lettered, and cooperation by States is indicated by the addition of the State name (G, Pl. I).

The numbers stamped on the bench marks described in the following pages represent the elevations to the nearest foot as determined by the levelman. These numbers are stamped with $\frac{3}{16}$ -inch steel dies on the tablets or post caps, to the left of the word "feet." The office adjustment of the notes and the reduction to mean sea level datum may so change some of the figures that the original markings are 1 or 2 feet in error. It is assumed that engineers and others who have occasion to use the bench-mark elevations will apply to the Director of the United States Geological Survey, at Washington, D. C., for the adjusted values, and will use the markings as identification numbers only.

Datum.—All United States Geological Survey elevations are referred to mean sea level, which is the level that the sea would assume if the influence of winds and tides were eliminated. This level is not the elevation determined from the mean of the highest and the lowest tides, nor is it the half sum of the mean of all the high tides and the mean of all the low tides, which is called the half-tide level. *Mean sea level is the average height of the water, all stages of the tide being considered.* It is determined from observations made by means of tidal gages placed at stations where local conditions, such as long, narrow bays, rivers, and like features, will not affect the height of the water. To obtain even approximately correct results these observations must extend over at least one lunar month, and if accuracy is desired they must extend over several years. At ocean stations the half-tide level and the mean sea level usually differ but little. It is assumed that there is no difference between the mean sea level as determined from observations in the Atlantic Ocean, the Gulf of Mexico, or the Pacific Ocean.

The connection with tidal stations for bench marks in certain areas that lie at some distance from the sea coast is still uncertain, and this fact is indicated by the addition of a letter or word to the right of the word "datum" on tablets or posts. For such areas corrections for published results will be made from time to time as the precise-level lines of the United States Geological Survey or other Government organizations are extended.

Topographic maps.—Maps of the following quadrangles wholly or partly in Kansas and Nebraska have been published by the United States Geological Survey up to May 1, 1911. They may be obtained, except as noted, for 5 cents each or \$3 a hundred, on application to the Director of the Survey at Washington, D. C.

KANSAS.

Abilene.	Kingman.
Albany (Colo.-Kans.).	Kinsley.
Anthony.	Lakin.
Arapahoe (Nebr.-Kans.).	Larned.
Ashland. ¹	Lawrence.
Atchison (Kans.-Mo.).	Leavenworth (Kans.-Mo.).
Beloit.	Lyons.
Burden.	Mankato.
Burlingame.	Marysville.
Burlington.	Meade.
Caldwell.	Medicine Lodge.
Cheyenne Wells (Colo.-Kans.).	Minneapolis.
Clay Center.	Mound City (Kans.-Mo.).
Coldwater.	Ness.
Concordia.	Newton.
Cottonwood Falls.	Norton.
Dodge.	Olathe (Kans.-Mo.).
Eldorado.	Osborne.
Ellis.	Oskaloosa (Kans.-Mo.).
Ellsworth.	Parkerville.
Emporia.	Parsons.
Eskridge.	Phillipsburg.
Eureka.	Plainville.
Fort Scott (Kans.-Mo.).	Pratt.
Fredonia.	Red Cloud (Nebr.-Kans.).
Garden.	Russell.
Garnett.	Salina.
Granada (Colo.-Kans.).	Sedan.
Great Bend.	Seneca.
Hays.	Sitka. ¹
Hebron (Nebr.-Kans.).	Smith Center.
Hiawatha.	Spearville.
Hill.	Superior (Nebr.-Kans.).
Holdrege (Nebr.-Kans.).	Syracuse.
Hutchinson.	Topeka.
Independence.	Vilas (Colo.-Kans.).
Iola.	Wamego.
Joplin (Kans.-Mo.-Okla.).	Washington.
Joplin district (Mo.-Kans.-Okla.), double sheet (10 cents).	Wellington.
Junction City.	Wichita.
Kansas City (Kans.-Mo.).	Wyandotte (Okla.-Mo.-Kans.).

¹ Sitka sheet, on scale of 1:62500, has been reduced and forms part of Ashland sheet, on scale of 1:125000.

NEBRASKA.

Arapahoe (Nebr.-Kans.).	Nebraska City (Nebr.-Iowa-Mo.).
Browns Creek.	North Platte.
Camp Clarke.	Oelrichs (S. Dak.-Nebr.).
Chappell.	Ogalalla.
David City.	Omaha and vicinity (Nebr.-Iowa) (10 cents).
Edgemont (S. Dak.-Nebr.).	Patrick (Wyo.-Nebr.).
Elk Point (S. Dak.-Nebr.-Iowa).	Paxton.
Fremont.	Red Cloud (Nebr.-Kans.).
Goshen Hole (Wyo.-Nebr.).	St. Paul.
Gothenburg.	Scotts Bluff.
Grand Island 30'. ¹	Sidney.
*Grand Island 15'. ¹	Stromsburg.
Hebron (Nebr.-Kans.).	Superior (Nebr.-Kans.).
Holdrege (Nebr.-Kans.).	Wahoo.
Kearney 30'. ²	Weeping Water.
Kearney 15'. ²	Whistle Creek.
*Kenesaw. ³	Wood River 30'. ³
Lexington.	*Wood River 15'. ³
Lincoln.	York.
Loup.	
Minden. ³	

KANSAS.

PRIMARY LEVELING.

Joplin District.

CHEROKEE COUNTY.

The elevations published in the following list are based on bench mark "CIII" of the Coast and Geodetic Survey at Carthage, Mo., at the southwest corner of Main and Limestone streets, a cross cut on the rounded top of a 6 by 6 inch limestone post buried in the ground 2.3 feet west of intersection of the inside lines of sidewalk. The elevation of this bench mark, as corrected by the 1907 adjustment of that survey, is accepted as 942.000 feet above mean sea level.

The leveling was done in 1904 by D. C. Wray.

All bench marks dependent upon this datum are stamped with the letters "CRTHG" in addition to the figures of elevation.

For additional data for the same area see Bulletin 459; "Results of spirit leveling in Missouri."

* Out of print.

¹ Grand Island sheet, on scale of 1:62500, has been reduced and forms part of Grand Island sheet, on scale of 1:125000.

² Kearney 15' sheet, on scale of 1:62500, has been reduced and forms part of Kearney 30' sheet, on scale of 1:125000.

³ Kenesaw, Minden, and Wood River 15' sheets, on scale of 1:62500, have been reduced and form parts of Wood River 30' sheet, on scale of 1:125000.

JOPLIN DISTRICT.

T. 35 S., R. 25 E., northeast corner of sec. 11, 24 feet west of corner stone; iron post stamped "1016 CRTHG".....	Feet. 1, 016. 027
Galena, west side of Euclid Avenue, between Seventh and Eighth streets, 2 feet north of southeast corner of foundation of schoolhouse; aluminum tablet stamped "976 CRTHG".....	976. 157
Baxter Springs, 51 feet west of southeast corner of city hall, in third course of stone below water table; aluminum tablet stamped "842 CRTHG".....	842. 316
T. 33 S., R. 25 E., SE. $\frac{1}{4}$ sec. 12, 45 feet south of corner stone, at west side of State line road; iron post stamped "914 CRTHG".....	913. 851
T. 32 S., R. 25 E., northwest corner of sec. 19, 4 feet east of corner fence post, southeast of crossroads; iron post stamped "904 CRTHG".....	903. 765
T. 33 S., R. 24 E., northeast corner of sec. 1, 40 feet south and 15 feet west of corner stone in center of crossroads; iron post stamped "893 CRTHG".....	892. 813
T. 34 S., R. 24 E., northeast corner of sec. 1, 40 feet south and 30 feet west of corner stone in center of crossroads; iron post stamped "862 CRTHG".....	861. 730

Iola and Parsons Quadrangles.

ALLEN, BOURBON, CRAWFORD, LABETTE, AND NEOSHO COUNTIES.

The elevations in the following list are based on an aluminum tablet stamped "968 IOLA" in the northeast corner of Northup's National Bank at Iola, Kans., the elevation of which is accepted as 971.489 feet above mean sea level. The initial point upon which this work depends is the bronze tablet established by the Indian Territory levels in the school building at Chetopa, Kans., the elevation of which as now accepted is 4.850 feet higher than published in Bulletin 175.

The leveling was done in 1902 by Fox Wood.

PARSONS QUADRANGLE.

Chetopa north along Missouri, Kansas & Texas Ry. to Erie, thence along highway to La Harpe. (Double-rodged line.)	
Erie, in east wing of courthouse; bronze tablet stamped "892 IOLA".....	Feet. 895. 080
T. 26 S., R. 20 E., northeast corner of sec. 31, in north end of stone pier at south end of iron bridge over Big Creek; aluminum tablet stamped "940 IOLA".....	943. 033
T. 25 S., R. 19 E., southeast corner of sec. 36, in south side of schoolhouse, near corner of sections; bronze tablet stamped "1068 IOLA".....	1, 071. 293
T. 24 S., R. 19 E., southeast corner of sec. 36; iron post stamped "1032 IOLA".....	1, 035. 267

IOLA QUADRANGLE.

Erie along highway east and around Tps. 27 and 28 S., R. 21 E.

T. 29 S., R. 21 E., 0.25 mile east of northwest corner of sec. 6, north side of schoolhouse; bronze tablet stamped "896 IOLA".....	899. 075
T. 28 S., R. 22 E., 0.25 mile south of northwest corner of sec. 31, east side of road, north end of bridge over Big Walnut Creek, in rock abutment; bronze tablet stamped "897 IOLA".....	900. 242
T. 27 S., R. 21 E., southeast corner of sec. 36; iron post stamped "952 IOLA".....	955. 171
Portersville, northeast corner of schoolhouse; aluminum tablet stamped "1008 IOLA".....	1, 011. 130

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Savonburg, in west wing of schoolhouse; bronze tablet stamped "1057 IOLA".....	Feet. 1,060.758
T. 27 S., R. 20 E., southeast corner of sec. 36; iron post stamped "1022 IOLA".....	1,025.206
T. 27 S., R. 19 E., southeast corner of sec. 36, in northeast corner of church; bronze tablet stamped "1004 IOLA".....	1,007.132
T. 26 S., R. 18 E., southeast corner of sec. 36; iron post stamped "997 IOLA".....	1,000.496
North Valley, southeast corner of sec. 36, T. 27 S., R. 18 E., in southeast corner of schoolhouse; bronze tablet stamped "909 IOLA".....	911.314
Northeast corner of T. 26 S., R. 19 E., west through Humboldt and south along range line between Rs. 17 and 18 E., thence along township line between Tps. 28 and 29 S.	
Humboldt, 3 miles east of, northwest corner of Central Avenue schoolhouse; bronze tablet stamped "976 IOLA".....	979.612
T. 26 N., R. 18 E., southwest corner of sec. 30, in southwest corner of schoolhouse; aluminum tablet stamped "953 IOLA".....	955.823
T. 27 S., R. 17 E., southeast corner of sec. 36; iron post stamped "981 IOLA".....	983.909
T. 28 S., R. 17 E., southeast corner of sec. 36; iron post stamped "957 IOLA".....	960.138
Urbana, southeast corner of church; aluminum tablet stamped "954 IOLA".....	957.304
T. 24 S., R. 20 E., southeast corner of sec. 36; iron post stamped "1091 IOLA".....	1,094.358
T. 24 S., R. 21 E., southeast corner of sec. 36; iron post stamped "1062 IOLA".....	1,065.993
T. 23 S., R. 21 E., southeast corner of sec. 36; iron post stamped "1043 IOLA".....	1,045.707
T. 24 S., R. 20 E., northeast corner of sec. 1, on north side of schoolhouse; bronze tablet stamped "1024 IOLA".....	1,027.143
T. 24 S., R. 20 E., sec. 7, northwest corner of schoolhouse; bronze tablet stamped "1059 IOLA".....	1,062.041
La Harpe west along railroad and highway and around T. 25 S., Rs. 18 and 19 E.	
Iola, in northeast corner of Northup's National Bank; bronze tablet stamped "968 IOLA".....	971.489
T. 24 S., R. 17 E., southeast corner of sec. 25; iron post stamped "1010 IOLA".....	1,012.742
T. 23 S., R. 18 E., southeast corner of sec. 31; iron post stamped "1050 IOLA".....	1,052.860
T. 23 S., R. 19 E., northeast corner of sec. 1, in northeast corner of schoolhouse; bronze tablet stamped "1022 IOLA".....	1,024.845

Independence Quadrangle.

MONTGOMERY AND WILSON COUNTIES.

The elevations in the following list are based on an aluminum tablet stamped "824 INDEPENDENCE" in the northwest corner of the courthouse at Independence, Kans., the elevation of which is accepted as 827.637 feet above mean sea level. The initial point upon which these levels depend is the bronze tablet established by the Indian Territory (now part of Oklahoma) levels at Coffeyville, Kans., the

accepted elevation of which is 4.854 feet higher than that published on page 88, in Bulletin 175.

The leveling was done in 1903 by Fox Wood.

INDEPENDENCE QUADRANGLE.

Coffeyville west along highway 6 miles to Deering, thence north 30 miles, thence east 6 miles, thence south to Coffeyville.¹

Coffeyville, Ried Building; bronze tablet stamped "731 INDEPENDENCE" (see Indian Territory levels, Bulletin 175).....	Feet. 736. 226
Coffeyville, 4 miles west of, on township line, south side of bridge across Onion Creek, in east pier; chiseled cross	740. 79
Deering, in southwest corner of store of H. L. Towles; aluminum tablet stamped "763 INDEPENDENCE".....	766. 954
T. 34 S., R. 16 E., northwest corner of sec. 6, in northwest corner of Meyers's residence; aluminum tablet stamped "882 INDEPENDENCE".....	884. 884
Independence, northwest corner of courthouse; aluminum tablet stamped "824 INDEPENDENCE".....	827. 637
Sycamore, southeast corner of schoolhouse; aluminum tablet stamped "829 INDEPENDENCE".....	831. 847
Neodesha, southeast corner of Fourth and Main streets, in north side of brick building (Dr. F. T. Allen's store); aluminum tablet stamped "817 INDEPENDENCE".....	820. 270
Tps. 29 and 30 S., R. 16 E., on line between secs. 3 and 34, 12 feet from east rail, in east end of concrete railroad culvert; aluminum tablet stamped "842 INDEPENDENCE".....	845. 770
T. 30 S., R. 17 E., 0.25 mile east of northwest corner of sec. 6, in northeast corner of Mrs. Ann Clegg's house; aluminum tablet stamped "871 INDEPENDENCE".....	874. 066
T. 31 S., R. 17 E., 0.1 mile east of northwest corner of sec. 6, in northeast corner of schoolhouse (District 80); aluminum tablet stamped "901 INDEPENDENCE".....	904. 404
T. 32 S., R. 16 E., northeast corner of sec. 12, in wall of schoolhouse; aluminum tablet stamped "843 INDEPENDENCE".....	895. 524
T. 33 S., R. 16 th E., northwest corner of sec. 1, in northwest corner of church; aluminum tablet stamped "758 INDEPENDENCE".....	762. 141
Liberty, southeast corner of Methodist-Church; aluminum tablet stamped "757 INDEPENDENCE".....	761. 377
Deering west along highway 6 miles to Fawn, thence north about 30 miles to sec. 35, T. 29 S., R. 14 E., thence west 2 miles; return line south from Elk City and Havana to southwest corner T. 24 S., R. 14 E., thence east 6 miles to Fawn.	
Tyro, in northeast corner of schoolhouse, aluminum tablet stamped "896 INDEPENDENCE." (Reported destroyed in 1909).....	898. 627
T. 33 S., R. 15 E., sec. 36, in northwest corner of schoolhouse; aluminum tablet stamped "831 INDEPENDENCE".....	833. 633
T. 32 S., R. 15 E., northwest corner of sec. 30, in northwest corner of schoolhouse; aluminum tablet stamped "821 INDEPENDENCE".....	823. 642
T. 31 S., R. 14 E., near sec. 23, southeast corner of schoolhouse; aluminum tablet stamped "918 INDEPENDENCE".....	920. 626
La Fontaine, in southeast corner of schoolhouse; aluminum tablet stamped "918 INDEPENDENCE".....	920. 731
T. 29 S., R. 14 E., near sec. 36, in southwest corner of schoolhouse; aluminum tablet stamped "928 INDEPENDENCE".....	930. 512

¹ The error distributed in this line is excessive.

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Buxton, northeast corner of Christian Church; aluminum tablet stamped "979 INDEPENDENCE".....	Feet. 981.384
T. 30 S., R. 14 E., sec. 33, in northwest corner of Henry Cox's residence; aluminum tablet stamped "891 INDEPENDENCE".....	893.636
Elk City, in wing of brick schoolhouse; aluminum tablet stamped "833 INDEPENDENCE".....	835.887
T. 32 S., R. 14 E., sec. 30, residence of C. Curtis, in west foundation of front porch; aluminum tablet stamped "853 INDEPENDENCE".....	855.832
Havana, in schoolhouse; aluminum tablet stamped "762 INDEPENDENCE".....	764.178
T. 34 S., R. 14 E., sec. 31, in south side of house of M. M. Freidlin; aluminum tablet stamped "757 INDEPENDENCE".....	759.595

Atchison, Kansas City, and Oskaloosa 30' Quadrangles, including Easton and Leavenworth 15' Quadrangles.

ATKINS AND LEAVENWORTH COUNTIES.

The elevations are based on bench marks of the Missouri River Commission.

The leveling was done by S. K. Atkinson in 1906 and by G. E. Heebink in 1908-9.

KANSAS CITY 30' QUADRANGLE.

Standard bench marks of the Missouri River Commission.

P. B. M. 247, Connor, about 2.5 miles above, 1,265 feet below first road crossing below Pope's Siding, 1,315 feet below bridge 79, across small creek, 220 feet above center of small bridge where the Gilman or bottom road turns east away from track, about 0.5 mile east of houses of E. Piper and Mr. Tull, 33 feet west of center of track on line of right of way; copper bolt in bench mark stone.....	Feet. 756.023
Top of cap.....	760.073
P. B. M. 248-77-1, Leavenworth Junction, 2 miles below, opposite foot of Spar Island, 970 feet above milepost 303, 1,610 feet above railroad trestle 81, on second bench from foot of bluff, 120 feet from Missouri Pacific Ry. track; top of copper bolt in bench-mark stone (could not be found in 1909).....	799.886
Top of cap.....	803.964

United States Geological Survey elevations—Point 2.5 miles north of Connor west to Sec. 20, T. 8 S., R. 22 E., and north to Bowling.

Lipps, 310 feet west of post-office box, on south side of road, 6 inches below surface of embankment, marked by large piece of limestone; iron stake marked "803".....	802.49
T. 9 S., R. 23 E., at intersection of Dalton and Maltby Roads, on highest part of section corner stone; square marked "882".....	882.18
T. 9 S., R. 23 E., southwest corner of sec. 32; corner stone, marked "928".....	927.71
Lansing, 2 miles south of by 0.4 mile east of, Leavenworth and Kansas City Road north of Maltby Road, in limestone 3 by 3 feet by 1.5 feet forming abutment of small bridge; aluminum tablet stamped "860".....	860.255
T. 9 S., R. 23 E., southwest corner of sec. 31, on stone; chiseled square marked "878".....	878.10
Lansing, 0.5 mile south by 1.5 miles west of, intersection of Brighton and Lambourn Roads, quarter corner west side of sec. 26, T. 9 S., R. 22 E.; gas pipe with bronze cap marked "963".....	962.385

T. 9 S., R. 22 E., quarter corner on north side of sec 34, near Spring Hill schoolhouse, at T road south, on stone; chiseled square marked "956"...	Feet. 955.54
T. 9 S., R. 22 E., southwest corner of sec. 28, at west end of New Lawrence Road, on stone; chiseled square.....	1,018.19
T. 9 S., R. 22 E., quarter corner on east side of sec. 29, east end of old Lawrence Road, set 3 feet in ground and projecting 1 foot above ground; iron pipe stamped "1043".....	1,042.787
T. 9 S., R. 22 E., southwest corner of sec. 20, on granite boulder; chiseled square marked "966".....	965.99
Bowling, 1 mile northeast of, on southeast corner of Atchison, Topeka & Santa Fe Ry. bridge 17; bolt painted white and marked "U. S. 914"....	914.02

LEAVENWORTH 15' (KANSAS CITY 30') QUADRANGLE.

Missouri River Commission bench marks.

P. B. M. 249, Leavenworth Junction, 93 feet above center of station, 100 feet above head block at junction, 18 feet east of center of track, 29.5 feet above lower head block of siding; bolt in bench-mark stone.....	756.837
Top of cap.....	760.902
P. B. M. 250-78-1, Leavenworth, on shelf of bluff $1\frac{1}{2}$ miles below station opposite East Leavenworth, on lower side of small ravine, 200 feet from river and 20 feet west of center of siding leading to coal mine; copper bolt in bench-mark stone.....	808.290
Top of cap.....	812.356
P. B. M. 251, Leavenworth, north side of the Great Western Stove Co.'s brick building, one block south of Union Station, 3.4 feet west of northeast corner and 5 feet above ground; copper bolt leaded horizontally set in rock, with letters "U. S. \odot 415 P. B. M." cut in rock, large enough to be readily seen and deep enough to last many years.....	782.300
P. B. M. 252, Leavenworth, in brick building occupied by Rohlfing Bros., grocers, southeast corner of Third and Cherokee Streets, on west end of stone window sill, Cherokee Street side; top of copper bolt leaded vertically and marked "U. S. 415 \odot P. B. M.".....	787.136
P. B. M. 253, Leavenworth, in retaining wall at northwest corner of Main and Cherokee Streets, 59 feet north of south end of wall, 78 feet south of south end of station; copper bolt leaded horizontally in fourth course of masonry above ground, lettered "U. S. \odot P. B. M.".....	775.409
P. B. M. 254-79-1, Fort Leavenworth, 30 feet below south face of west abutment of Chicago, Rock Island & Pacific Ry. bridge, 27 feet from center of Missouri Pacific Ry. track, and 8 feet above grade; copper bolt in bench-mark stone.....	788.228
Top of cap.....	792.314
P. B. M. 255, Fort Leavenworth, in west abutment of Chicago, Rock Island & Pacific Ry. bridge, south side, 3.5 feet back from east face; copper bolt leaded horizontally in fourth course of masonry above ground at southeast corner, lettered "U. S. \odot P. B. M.".....	788.682
P. B. M. 256, Fort Leavenworth, northeast corner of Government stone ice house on river bank, 7 inches west of east face, and 5.2 feet above ground; copper bolt leaded vertically into building, lettered "U. S. \odot P. B. M.".....	776.177
P. B. M. 257, Fort Leavenworth, 0.8 mile above; 1.25 miles above Chicago, Rock Island & Pacific Ry. bridge across Missouri River, 525 feet below wagon-road crossing, 505 feet below center of bridge across small creek at lower edge of wagon road, 150 feet below point of bluff, 28 feet from center of road on side toward bluff; copper bolt set in bench-mark stone.....	773.519
Top of cap.....	777.587

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P. B. M. 258-80-1, Fort Leavenworth, about 2.25 miles above Chicago, Rock Island & Pacific Ry. bridge, 350 feet above lower head block of Wade siding, on bluff side of track, 2 feet inside right-of-way fence; copper bolt in bench-mark stone.....	Feet. 769. 361
Top of cap.....	773. 439
P. B. M. 259, Kickapoo, 1.8 miles below, 9 feet above upper end of Missouri Pacific Ry. bridge 95 over Salt Creek, on bluff side, 24 feet from center of track; copper bolt in bench-mark stone.....	773. 966
Top of cap.....	778. 022
P. B. M. 260, Kickapoo, 0.25 mile below, 285 feet below trestle, 1,035 feet above milepost 316, 85 feet above upper end of small bridge, over drain for cut, on bluff side of track, 9.7 feet from center and 2.5 feet above grade; copper bolt leaded horizontally in face of natural ledge, lettered "U. S. \odot P. B. M.".....	794. 670
P. B. M. 261-81-1, Kickapoo, on upper side of small ravine, 30 feet from vertical bank of small stream, bluff side of track, 80 feet from center; George Sharp's house bears S. 88° W. (Mag.) 130 feet distant; copper bolt in bench-mark stone.....	801. 567
Top of cap.....	805. 630
P. B. M. 262, Oak Mills, 0.9 mile below, 70 feet below center of railroad bridge over small creek coming out of valley, on bluff side of track, 3 feet east of wire fence directly opposite south point of bluff; copper bolt in bench-mark stone.....	774. 637
Top of cap.....	778. 677
P. B. M. 263, Oak Mills, in northwest side of stone building facing northeast, 65 feet southeast of John Davitz's store, 6 feet above ground and 8 inches from front face of building; copper bolt leaded horizontally, lettered "U. S. \odot P. B. M.".....	790. 370
P. B. M. 264-82-1, Oak Mills, in John Davitz's front yard, 19 feet below his store and 2 feet inside tight board fence; copper bolt in bench-mark stone.....	781. 084
Top of cap.....	785. 150
P. B. M. 265, Oak Mills, 2.3 miles, 0.9 mile above Little Walnut Creek, 180 feet below railroad bridge 99, 16 feet toward the river from wagon road running parallel to river, near forks in road, on bluff side of track, 65 feet from center; copper bolt in bench-mark stone.....	785. 551
Top of cap.....	789. 589
P. B. M. 266-83-1, About 5.5 miles below Atchison, 30 feet below lower end of iron bridge across Walnut Creek, on bluff side of track, 68 feet from center and 45 feet north of T. B. M. 541; copper bolt in bench-mark stone.....	784. 806
Top of cap.....	788. 832
Leavenworth west to Hund, thence south 1 mile (United States Geological Survey bench marks).	
Hund, 40 feet south of Union Pacific R. R. tracks, 20 feet west of wagon road; iron post stamped "834".....	833. 341
Hund, 1 mile south of, on stone abutment of steel bridge 130; chiseled square marked "846".....	830. 12

OSKALOOSA 30' QUADRANGLE.

Springdale south to Ackerland, thence east along railroad to Bolling.

Springdale, 1.5 miles south of, at crossroads near mail box 60, in north root of forked oak tree; nail.....	948. 209
Ackerland, 1 mile north of, northeast corner of sec. 36, T. 9 S., R. 20 E.; section stone marked "1006".....	1,006

Ackerland, 300 feet east of station, intersection of railroad with main north and south pike; point on track, marked "1041".....	Feet. 1, 040. 08
Ackerland, 1 mile east of, 2 miles west of Jarbalo, on southwest corner of railroad bridge 32, bolt painted white and marked "U. S. 971".....	970. 89
Milepost 15; top of rail.....	965. 96
Jarbalo, 1 mile west of, railroad crossing; joint on south rail, marked "919".....	918. 55
Jarbalo, 120 feet east of station, 30 feet south of tracks; iron post stamped "871".....	871. 223
Jarbalo, 1 mile east of, southwest corner of bridge 29; bolt painted white and marked "857".....	856. 75
Jarbalo, 2 miles east of, in southeast corner of bridge 26; bolt painted white and marked "866".....	865. 05
Milepost 11; top of vertical rail.....	874. 19
Bowling, in front of sign; top of rail.....	916. 6
Bowling, 200 feet northeast of station, 3 feet south of main track; large iron cylinder set in ground, marked "U. S. 914".....	913. 37
Corner of secs. 14, 15, 22, and 23, T. 9 S., R. 20 E., south 1.5 miles, thence west 2.5 miles, thence north to sec. 17.	

T. 9 S., R. 20 E., quarter corner between secs. 26 and 27, 5.2 feet from ground, near crotch in 20-inch elm tree at T road; 40-penny nail.....	998. 20
T. 9 S., R. 20 E., quarter corner between secs. 27 and 28; iron post.....	1, 049. 008
T. 9 S., R. 20 E., quarter corner between secs. 28 and 29, cross corner, in telephone post; two 40-penny nails.....	1, 065. 84
T. 9 S., R. 20 E., center of sec. 29, 10 feet from corner fence post, 18 inches above ground, in brace of corner fence post; 40-penny nail.....	1, 104. 32

EASTON 15' (OSKALOOSA 30') QUADRANGLE.

Point near Bowling north to point near Hund.

Bowling, near, in old ravine near where road crosses creek bed of west fork of Little Stranger Creek; stone marked "U. S. 913".....	912. 78
Lansing, 5 miles west of, at intersection of roads, northeast corner of sec. 24, T. 9 S., R. 21 E., 50 feet west of bridge 92, south side of road; iron pipe with brass cap stamped "972".....	971. 451
T. 9 S., R. 22 E., northwest corner of sec. 18, at crossroads near High Prairie schoolhouse, on limestone; chiseled square marked "1075".....	1, 074. 80
T. 9 S., R. 22 E., quarter corner on west side of sec. 7, south side of Compton Road; marked "1066".....	1, 066. 24
T. 8 S., R. 22 E., southwest corner of sec. 31, at intersection of roads, in Possum Hollow; in stone; aluminum tablet marked "924".....	925.310

Hund west along Union Pacific Railroad to point 7 miles west of Easton.

T. 8 S., R. 21 E., near quarter corner on east side of sec. 13, on Union Pacific R. R., at intersection of road with railroad crossing; pole marked "U. S. 873".....	872. 6
Pleasant Ridge, southwest corner of box-car station, in platform; 40-penny nail.....	1, 050. 37
Easton, main crossing; top of rail.....	903. 7
Easton, intersection of Riley Street and main north and south road; on southwest corner of H. Boyle's place; iron post stamped "904".....	903. 443
Easton, in stone step of Methodist Episcopal Church, 0.3 mile west of intersection of Riley Street with main north and south road, at end of Riley Street; aluminum tablet stamped "909".....	908. 590
T. 8 S., R. 20 E., quarter corner between secs. 18 and 19; iron post.....	1, 171. 265

Pleasant Ridge northeast to Oak Mills.

T. 8 S., R. 21 E., center of sec. 3, intersection of roads, in center of road, in limestone section corner at northeast corner of Squire's place; aluminum tablet stamped "1098." (Bench mark has been disturbed.)	Feet. 1, 098. 212
T. 7 S., R. 21 E., center of sec. 34, west side of road on piece of limestone; chiseled square; marked "1086"	1, 085. 86
T. 7 S., R. 21 E., quarter corner between secs. 23 and 24, northwest corner of Joe Adams's place, southeast corner of intersecting roads; iron post stamped "1008"	1, 007. 843
Oak Mills, in John Davitz's front yard, 19 feet below his store and 2 feet inside of his tight board fence; iron pipe set 4 feet in ground, cap terminating in round knob taken as bench mark, stamped "Missouri River Commission P. B. M. No. 264 -82-1"	785. 150

Oak Mills west and south to Easton.

Oak Mills, 1.5 miles south of and 1.5 miles west of, on half section road at corner of Henry Paseway's place; large granite bowlder marked "U. S. 1028"	1, 027. 88
Oak Mills, 1.5 miles south of and 3.5 miles west of, at crossroads, quarter corner on east side of sec. 21, R. 21 E., T. 7 S.; iron post stamped "1054"	1, 054. 039
T. 7 S., R. 21 E., center of sec. 21, at intersection of roads; stone marked "U. S. 1054"	1, 054. 26
Potter, 2 miles east of, southeast corner of NE. $\frac{1}{4}$ sec. 19, T. 7 S., R. 21 E., at crossroads; iron pipe stamped "1008"	1, 007. 607
Easton, 3.5 miles north of, on west side of main pike, in front of Henry Seute's farm; center of large stone marked "997"	997. 05
Easton, 3 miles north of, 0.25 mile east of Melwood, at fork in road, near Max Blecher's mail box; iron post stamped "924"	924. 217
Easton, 1.5 miles north of, on bridge 158, northeast corner of, on railing; nail with white square, marked "906"	906. 34

Easton south to point 1.5 miles south of Springdale.

Easton, 1 mile south of, southeast corner of bridge 179; bolt painted "U. S. 887"	887. 40
Springdale, 4 miles north of, southwest corner of front door step of W. A. Haste's place; marked "U. S. 923"	923. 59
Easton, 3.3 miles south of, at base of telegraph pole; highest point on rock painted "940"	940
Easton, 4.6 miles south of, west of road, northwest of white house on east side of road, in root of tree; 40-penny nail	881. 15
Springdale, on main east and west road, in front of John McQuillan's residence on north side of road; iron pipe stamped "1048"	1, 046. 173
Springdale, 1.5 miles south of, forks in road, northeast corner of Ezra Martz's place; stone marked "U. S. 979"	978

Springdale west 5.5 miles, thence north to point 1 mile north of Cummings, thence east and north to point near Parnell.

Springdale, 1 mile west of, in brace of corner fence post; 40-penny nail	1, 056. 45
T. 9 S., R. 20 E., corner of secs. 14, 15, 22, and 23, in corner fence post; 40-penny nail	1, 042. 24
Edmunds Church corner, 50 feet from corner fence post, in root of elm tree 7 inches in diameter; 40-penny nail	1, 063. 63
T. 9 S., R. 20 E., 35 feet north of and 15 feet east of quarter corner between secs. 18 and 19, on east side of north-south road; iron post stamped "Prim. Trav. Sta. No. 7-1906"	1, 092. 209

	Feet.
T. 9 S., R. 20 E., quarter corner between secs. 7 and 18.....	1, 076. 35
T. 9 S., R. 20 E., quarter corner between secs. 6 and 7, at crossroad, in corner fence post; 40-penny nail.....	1, 011. 94
Tps. 8 and 9 S., R. 20 E., quarter corner between secs. 6 and 31; iron post..	1, 090. 055
Tps. 8 and 9 S., Rs. 19 and 20 E., corner of secs. 1, 6, 31, and 36; at crossroad; top of corner stone.....	1, 100. 16
T. 8 S., Rs. 19 and 20 E., corner of secs. 25, 30, 31, and 36; top of cornerstone.	1, 123. 36
T. 8 S., Rs. 19 and 20 E., quarter corner between secs. 30 and 25, in telephone post; three 40-penny nails.....	1, 092. 20
T. 8 S., R. 20 E., center of sec. 30, at crossroad, in telephone post; three 40-penny nails.....	1, 124. 30
T. 8 S., R. 20 E., quarter corner between secs. 18 and 19; iron post.....	1, 171. 265
T. 8 S., R. 20 E., quarter corner between secs. 6 and 7, at crossroad, in telephone post; two 40-penny nails.....	1, 125. 17
Corpus Christi Church, 0.5 mile west of, at crossroad, in corner fence post; three 40-penny nails.....	1, 120. 46
Corpus Christi Church, 1 mile west of Tps. 7 and 8 S., Rs. 19 and 20 E.; iron post stamped "Prim. Trav. Sta. No. 9-1906".....	1, 092. 178
T. 7 S., Rs. 19 and 20 E., quarter corner between secs. 30 and 25, at crossroad, in corner fence post; four 40-penny nails.....	1, 128. 98
T. 7 S., Rs. 19 and 20 E., corner of secs. 19, 30, 24 and 25, T corner, in root of 8-inch locust tree; 40-penny nail.....	1, 045. 96
T. 7 S., Rs. 19 and 20 E., corner of secs. 13, 18, 19, and 24, on southeast corner of east abutment of iron bridge; painted square.....	966. 80
T. 7 S., R. 19 E., quarter corner between secs. 13 and 24, on east side of north and south road, 10 feet from corner fence post; iron post.....	991. 808
T. 7 S., R. 19 E., quarter corner between secs. 12 and 13, in west root of tree; 40-penny nail.....	1, 087. 00
T. 7 S., R. 19 E., center of sec. 12, in corner fence post at northwest corner of crossing; two 40-penny nails.....	1, 030. 15
T. 7 S., R. 19 E., quarter corner between secs. 1 and 12, T corner, in telephone post near E. W. Kaufman's general store; three 40-penny nails...	984. 09
Cummings, 1 mile north of Tps. 6 and 7 S., R. 19 E., quarter corner between secs. 1 and 36, T corner, in yard of house at end of T road; iron post....	1, 063. 746
Tps. 6 and 7 S., Rs. 19 and 20 E., township corner; top of section corner stone.....	985. 17
Hawthorne, opposite station, in telephone pole east of tracks; three 40-penny nails.....	960. 82
Bridge 13, northwest abutment of; painted square.....	969. 08
Bridge 12, southwest abutment of; painted square.....	1, 010. 62

Sec. 19, T. 7 S., R. 21 E., west to Potter, thence northwest along Atchison, Topeka & Santa Fe Ry. to Hawthorne.

Potter, 1.8 miles east of, south of road; cross on stone.....	982. 88
Potter, in front of station; top of rail.....	934. 3
Mount Pleasant, northwest corner of station; top of rail.....	946. 1
Mount Pleasant, 2 miles northwest of, at railroad culvert 5; top of south rail.....	963. 7
Hawthorne, in front of station, in telephone pole east of track; three 40-penny nails.....	960. 82
Hawthorne, northwest abutment of bridge 13; painted square.....	969. 08

ATCHISON 30' QUADRANGLE.

Parnell northeast along Atchison, Topeka & Santa Fe Ry. to Atchison, thence south along Missouri Pacific Ry. to P. B. M. 267, Missouri River Commission.

	Feet.
Parnell, 35 feet west of general store and post office; iron post.....	1,054.477
Bridge 10, Atchison, Topeka & Santa Fe Ry., northwest corner of north abutment; painted square.....	954.78
Bridge 9, northwest corner of north abutment; painted square.....	929.76
Bridge 8, north side of east abutment; painted square.....	907.42
Parnell, 3 miles north of, near railroad crossing; iron post.....	907.729
Bridge 7, north end of east abutment; painted square.....	871.80
Bridge 6, north end of east abutment; painted square.....	860.60
Bridge 5, Atchison, Topeka & Santa Fe Ry., west abutment; painted square.....	849.96
Bridge 106, Missouri Pacific Ry., west end of north abutment; painted square.....	790.640
Atchison, 3 miles below union station, 130 feet below milepost 327, on side of track near bluff, 59 feet from center of track, 10 feet above grade, 16 feet toward river from wagon road, and 8 feet southeast of 10-inch crab-apple tree; copper bolt in bench-mark stone. (Top of copper bolt set in regulation bench-mark stone 18 by 18 by 4 inches thick, 3.5 feet underground, over and concentric with which is set an iron pipe 4 feet long provided with a flange at the bottom 10 inches in outer diameter and cap at top terminating in a rounded knob, which is also taken as a permanent bench mark. The top surface of flat stone is marked "B. M."; copper bolt ...	796.356
Top of cap.....	800.418

Garden, Lakin, Syracuse, and Tribune Quadrangles.

FINNEY, GRANT, HAMILTON, KEARNEY, AND STANTON COUNTIES.

The elevations in the following list are based on the bronze tablet marked "2832," in the southwest corner of the courthouse at Garden, the accepted elevation of which is 2,832.034 feet above mean sea level. The initial height from which this bench mark is established is the top of the rail on the main track of the Atchison, Topeka & Santa Fe Ry., in front of the telegraph office at Garden, using the railroad company's elevation, 2,829 feet.

The leveling in this area was done by M. C. McFarlane in 1897, J. C. Barber in 1896, and F. C. French in 1898.

GARDEN QUADRANGLE.

Garden along Atchison, Topeka & Santa Fe Ry. to Sec. 7, T. 24 S., R. 33 W.

	Feet.
Garden, Atchison, Topeka & Santa Fe Ry., in front of telegraph office; top of rail.....	2,829
Garden, southwest corner of courthouse; copper plate stamped "G. C. 2832".....	2,832.034
Garden, First National Bank, southwest side of main entrance; bronze tablet stamped "G. C. 2830".....	2,830.185
T. 24 S., R. 33 W., on north and south line through center of sec. 15, 48 feet south of Atchison, Topeka & Santa Fe Ry. track, between Garden and Sherlock; iron post stamped "G. C. 2853".....	2,853.022
T. 24 S., R. 33 W., 450 feet north and 70 feet west of east quarter corner of sec. 7, south side of Atchison, Topeka & Santa Fe Ry. track; iron post stamped "G. C. 2870".....	2,869.964

LAKIN QUADRANGLE.

Bench marks established near public land corners.

	Feet.
T. 29 S., R. 37 W., southwest corner of sec. 18; iron post stamped "G. C. 3098"	3, 098. 008
T. 29 S., R. 37 W., southeast corner of sec. 13; iron post stamped "G. C. 2978"	2, 977. 752
T. 29 S., R. 36 W., southeast corner of sec. 16; iron post stamped "G. C. 3016"	3, 015. 693
T. 29 S., R. 36 W., southeast corner of sec. 13; iron post stamped "G. C. 3023"	3, 022. 951
T. 29 S., R. 35 W., southeast corner of sec. 16; iron post stamped "G. C. 3010"	3, 010. 008
T. 29 S., R. 35 W., southeast corner of sec. 13; iron post stamped "G. C. 3020"	3, 020. 262
T. 28 S., R. 38 W., southeast corner of sec. 36; iron post stamped "G. C. 3049"	3, 049. 049
T. 28 S., R. 38 W., southeast corner of sec. 33; iron post stamped "G. C. 3106"	3, 106. 486
T. 28 S., R. 37 W., southeast corner of sec. 9; iron post stamped "G. C. 3053"	3, 053. 185
T. 28 S., R. 37 W., southeast corner of sec. 29; iron post stamped "G. C. 3050"	3, 049. 598
T. 28 S., R. 36 W., southwest corner of sec. 34; iron post stamped "G. C. 3048"	3, 047. 667
T. 28 S., R. 36 W., southwest corner of sec. 31; iron post stamped "G. C. 3059"	3, 059. 232
T. 28 S., R. 35 W., southwest corner of sec. 34; iron post stamped "G. C. 3020"	3, 020. 412
T. 28 S., R. 35 W., southwest corner of sec. 31; iron post stamped "G. C. 3048"	3, 047. 640
T. 28 S., R. 34 W., southwest corner of sec. 34; iron post stamped "G. C. 2999"	2, 999. 367
T. 28 S., R. 34 W., southwest corner of sec. 31; iron post stamped "G. C. 3007"	3, 006. 790
T. 27 S., R. 38 W., southeast corner of sec. 33; iron post stamped "G. C. 3092"	3, 091. 805
T. 27 S., R. 38 W., southeast corner of sec. 36; iron post stamped "G. C. 3078"	3, 078. 245
T. 27 S., R. 37 W., southeast corner of sec. 16; iron post stamped "G. C. 3055"	3, 054. 867
T. 27 S., R. 37 W., southeast corner of sec. 33; iron post stamped "G. C. 3060"	3, 060. 400
T. 27 S., R. 36 W., southwest corner of sec. 34; iron post stamped "G. C. 3094"	3, 093. 825
T. 27 S., R. 36 W., southwest corner of sec. 31; iron post stamped "G. C. 3016"	3, 016. 146
T. 27 S., R. 35 W., southwest corner of sec. 34; iron post stamped "G. C. 3076"	3, 076. 041
T. 27 S., R. 35 W., southwest corner of sec. 31; iron post stamped "G. C. 3119"	3, 118. 557
T. 27 S., R. 34 W., southwest corner of sec. 34; iron post stamped "G. C. 3074"	3, 073. 887
T. 27 S., R. 34 W., southwest corner of sec. 31; iron post stamped "G. C. 3054"	3, 054. 285

20 SPIRIT LEVELING IN KANSAS AND NEBRASKA, 1896 TO 1909.

	Feet.
T. 26 S., R. 38 W., southeast corner of sec. 36; iron post stamped "G. C. 3089".....	3, 089. 083
T. 26 S., R. 38 W., southeast corner of sec. 33; iron post stamped "G. C. 3177".....	3, 177. 267
T. 26 S., R. 37 W., south side of sec. 16, 120 feet west of Hartland-Ulysses wagon road; iron post stamped "G. C. 3048".....	3, 048. 417
T. 26 S., R. 37 W., southeast corner of sec. 33; iron post stamped "G. C. 3069".....	3, 068. 838
T. 26 S., R. 36 W., southwest corner of sec. 33; iron post stamped "G. C. 3084".....	3, 083. 716
T. 26 S., R. 36 W., southwest corner of sec. 31; iron post stamped "G. C. 3080".....	3, 079. 725
T. 26 S., R. 35 W., southwest corner of sec. 34; iron post stamped "G. C. 3026".....	3, 026. 328
T. 26 S., R. 35 W., southwest corner of sec. 31; iron post stamped "G. C. 3098".....	3, 097. 876
T. 26 S., R. 34 W., southwest corner of sec. 34; iron post stamped "G. C. 2990".....	2, 990. 128
T. 26 S., R. 34 W., 620 feet east of southwest corner of sec. 31; iron post stamped "G. C. 3010".....	3, 009. 998
T. 25 S., R. 34 W., northwest corner of sec. 6; iron post stamped "G. C. 2967".....	2, 966. 901
T. 25 S., R. 35 W., northwest corner of sec. 3; iron post stamped "G. C. 2984".....	2, 984. 394
T. 25 S., R. 35 W., northwest corner of sec. 6; iron post stamped "G. C. 2975".....	2, 975. 357
T. 25 S., R. 37 W., near south side of township, west side of Hartland-Ulysses wagon road; iron post stamped "G. C. 3039".....	3, 038. 718
T. 25 S., R. 36 W., 40 feet southeast from northwest corner of sec. 2; iron post stamped "G. C. 2990".....	2, 989. 798
T. 25 S., R. 38 W., 650 feet west of east side of sec. 3, south of Atchison, Topeka & Santa Fe Ry. track; iron post stamped "G. C. 3112".....	3, 112. 044
T. 25 S., R. 37 W., line between secs. 7 and 8, north of Atchison, Topeka & Santa Fe Ry. track; iron post stamped "G. C. 3063".....	3, 063. 102
T. 25 S., R. 37 W., 600 feet north of southeast corner of sec. 10, north of Atchison, Topeka & Santa Fe Ry. track; iron post stamped "G. C. 3040".....	3, 039. 891
T. 25 S., R. 36 W., 1,050 feet south of northwest corner; iron post stamped "G. C. 3013".....	3, 012. 963
T. 24 S., R. 36 W., 60 feet east of line between secs. 26 and 27; south side of Atchison, Topeka & Santa Fe Ry. track; iron post stamped "G. C. 2991".....	2, 990. 914
T. 24 S., R. 35 W., 6 feet west of line between secs. 17 and 18, south of Atchison, Topeka & Santa Fe Ry. track; iron post stamped "G. C. 2969".....	2, 968. 966
Deerfield, 2,200 feet west of station; 6 feet west of line between secs. 10 and 11, T. 24 S., R. 35 W., south side of Atchison, Topeka & Santa Fe Ry. track; iron post stamped "G. C. 2940".....	2, 940. 104
T. 24 S., R. 34 W., 1,417 feet south of east quarter corner of sec. 6, south of Atchison, Topeka & Santa Fe Ry. track; iron post stamped "G. C. 2908".....	2, 908. 059
T. 24 S., R. 34 W., 1,100 feet south and slightly west of east quarter corner of sec. 3, south of Atchison, Topeka & Santa Fe Ry. track; iron post stamped "G. C. 2892".....	2, 892. 095
T. 24 S., R. 36 W., southeast corner of sec. 3; iron post stamped "G. C. 3125".....	3, 125. 493
T. 24 S., R. 37 W., northeast corner of sec. 21; iron post stamped "G. C. 3244".....	3, 243. 950

T. 24 S., R. 38 W., southeast corner of sec. 13; iron post stamped "G. C. 3267"	Feet. 3, 267. 141
Hartland, 0.5 mile west of; iron post stamped "G. C. 3040"	3, 039. 891
T. 24 S., R. 37 W., near quarter corner on west side of sec. 34, triangulation station; iron post stamped "G. C. 3249"	3, 248. 939

SYRACUSE QUADRANGLE.

Bench marks established near public-land corners.

T. 29 S., R. 38 W., southwest corner of sec. 18; iron post stamped "G. C. 3139"	3, 138. 822
T. 28 S., R. 41 W., quarter corner east side of sec. 33; iron post stamped "G. C. 3375"	3, 375. 345
T. 28 S., R. 42 W., southeast corner of sec. 36; iron post stamped "G. C. 3408"	3, 407. 600
T. 28 S., R. 42 W., southeast corner of sec. 33; iron post stamped "G. C. 3446"	3, 446. 344
T. 28 S., R. 41 W., southeast corner of sec. 36; iron post stamped "G. C. 3329"	3, 328. 581
T. 28 S., R. 41 W., southwest corner of sec. 13; east side Syracuse-Johnson wagon road; iron post stamped "G. C. 3341"	3, 341. 298
T. 28 S., R. 40 W., southeast corner of sec. 36; iron post stamped "G. C. 3222"	3, 222. 096
T. 28 S., R. 40 W., southeast corner of sec. 33; iron post stamped "G. C. 3276"	3, 275. 937
T. 28 S., R. 39 W., southeast corner of sec. 36; iron post stamped "G. C. 3117"	3, 117. 370
T. 28 S., R. 39 W., southeast corner of sec. 33; iron post stamped "G. C. 3187"	3, 186. 517
T. 27 S., R. 42 W., southeast corner of sec. 33; iron post stamped "G. C. 3477"	3, 476. 965
T. 27 S., R. 42 W., southeast corner of sec. 36; iron post stamped "G. C. 3396"	3, 396. 443
T. 27 S., R. 41 W., southeast corner of sec. 33; iron post stamped "G. C. 3351"	3, 351. 435
T. 27 S., R. 41 W., southwest corner of sec. 36; iron post stamped "G. C. 3304"	3, 304. 393
T. 27 S., R. 40 W., southeast corner of sec. 33; iron post stamped "G. C. 3264"	3, 264. 377
T. 27 S., R. 40 W., southeast corner of sec. 36; iron post stamped "G. C. 3193"	3, 192. 658
T. 27 S., R. 39 W., southeast corner of sec. 33; iron post stamped "G. C. 3164"	3, 164. 082
T. 27 S., R. 39 W., southeast corner of sec. 36; iron post stamped "G. C. 3126"	3, 126. 269
T. 27 S., R. 41 W., southwest corner of sec. 36, east of Syracuse-Johnson wagon road; iron post stamped "G. C. 3304"	3, 304. 343
T. 27 S., R. 41 W., southwest corner of sec. 13, east of Syracuse-Johnson wagon road; iron post stamped "G. C. 3284"	3, 283. 775
T. 26 S., R. 39 W., northwest corner of sec. 6; iron post stamped "G. C. 3409"	3, 408. 531
T. 26 S., R. 39 W., quarter corner of east side of sec. 14; iron post stamped "G. C. 3322"	3, 321. 580
T. 26 S., R. 40 W., northeast corner of sec. 6; iron post stamped "G. C. 3470"	3, 470. 236

22 SPIRIT LEVELING IN KANSAS AND NEBRASKA, 1896 TO 1909.

T. 26 S., R. 40 W., northeast corner of sec. 3; iron post stamped "G. C. 3437"	Feet. 3, 436. 912
T. 26 S., R. 42 W., northeast corner of sec. 5; iron post stamped "G. C. 3434"	3, 433. 710
T. 26 S., R. 42 W., northeast corner of sec. 2; iron post stamped "G. C. 3430"	3, 430. 353
T. 26 S., R. 41 W., southwest corner of sec. 36, east of Syracuse-Johnson wagon road; iron post stamped "G. C. 3265"	3, 265. 164
T. 26 S., R. 41 W., 30 feet west and 30 feet south of northeast corner of sec. 23, on wagon road from Syracuse to Johnson; iron post stamped "G. C. 3362"	3, 362. 130
T. 25 S., R. 38 W., southwest corner of sec. 31; iron post stamped "G. C. 3254"	3, 254. 289
T. 25 S., R. 39 W., northeast corner of sec. 4; iron post stamped "G. C. 3176"	3, 175. 511
T. 25 S., R. 39 W., southeast corner of sec. 3; iron post stamped "G. C. 3381"	3, 381. 016
T. 25 S., R. 41 W., southeast corner of sec. 33; iron post stamped "G. C. 3430"	3, 430. 353
T. 25 S., R. 42 W., northeast corner of sec. 4; iron post stamped "G. C. 3489"	3, 489. 429
T. 25 S., R. 42 W., southeast corner of sec. 16; iron post stamped "G. C. 3522"	3, 522. 101
T. 25 S., R. 41 W., 30 feet west of Johnson wagon road; iron post stamped "G. C. 3392"	3, 392. 481
Syracuse, about 8 miles south of, triangulation station on west side of Johnson road; iron post stamped "G. C. 3508"	3, 507. 505
T. 25 S., R. 40 W., southwest corner of sec. 31; iron post stamped "G. C. 3489"	3, 488. 934
T. 25 S., R. 38 W., 70 feet southeast of northwest corner of sec. 6; iron post stamped "G. C. 3147"	3, 146. 576
T. 24 S., R. 41 W., near center of sec. 2; iron post stamped "G. C. 3247"	3, 246. 611
T. 24 S., R. 42 W., southeast corner of sec. 36; iron post stamped "G. C. 3435"	3, 435. 419
T. 24 S., R. 42 W., east side of sec. 1, at fence corner 50 feet south of Arkansas River; iron post stamped "G. C. 3267"	3, 266. 986
T. 24 S., R. 41 W., 10 feet east of fence between secs. 3 and 4, 47 feet south of Atchison, Topeka & Santa Fe Ry. track; iron post stamped "G. C. 3254"	3, 254. 315
T. 24 S., R. 40 W., 1,765 feet south and 30 feet east from northwest corner of sec. 7, 47.5 feet south of Atchison, Topeka & Santa Fe Ry. tracks; iron post stamped "G. C. 3230"	3, 230. 315
T. 24 S., R. 40 W., 15 feet west of line between secs. 15 and 16, 46.5 feet south of Atchison, Topeka & Santa Fe Ry. tracks; iron post stamped "G. C. 3198"	3, 198. 401
T. 24 S., R. 39 W., 15 feet east and 10 feet south of northwest corner of sec. 19, 46 feet south of Atchison, Topeka & Santa Fe Ry. tracks; iron post stamped "G. C. 3175"	3, 175. 261
T. 24 S., R. 39 W., 12 feet west of line between secs. 22 and 21, south of Atchison, Topeka & Santa Fe Ry. track; iron post stamped "G. C. 3152"	3, 152. 234
T. 24 S., R. 38 W., 150 feet east of west side of sec. 30, north of Atchison, Topeka & Santa Fe Ry. tracks; iron post stamped "G. C. 3123"	3, 122. 988

TRIBUNE QUADRANGLE.

Bench marks established near public-land corners.

T. 23 S., R. 42 W., 12 feet east of fence between secs. 31 and 36, 47 feet south of Atchison, Topeka & Santa Fe Ry. tracks; iron post stamped "G. C. 3278"	Feet. 3, 277. 882
T. 23 S., R. 42 W., 1,848 feet south of northwest corner of sec. 27, 48 feet south of Atchison, Topeka & Santa Fe Ry. track; iron post stamped "G. C. 3303"	3, 302. 939
T. 23 S., R. 42 W., 12 feet east of west side of sec. 19, 48 feet south of Atchison, Topeka & Santa Fe Ry. tracks, 1.8 miles east of Coolidge; iron post stamped "G. C. 3337"	3, 337. 015
T. 23 S., R. 43 W., 423 feet south of northwest corner of sec. 22, 48 feet south of Atchison, Topeka & Santa Fe Ry. track; iron post stamped "G. C. 3353"	3, 352. 684

NEBRASKA.

PRIMARY LEVELING.

Elk Point Quadrangle.

DIXON COUNTY.

The elevations in the following list were determined by primary leveling extended from bench marks of the Missouri River Commission. A correction of +0.755 foot has been added to the values published in Part 3 of the Report of the Chief of Engineers, United States Army, for 1894, at and west of Elk Point, a junction point with a precise level line of the Coast and Geodetic Survey, which crosses this quadrangle along the Chicago, Milwaukee, & St. Paul Ry.

The leveling was done in 1898 by D. C. Wray.

Elevations in South Dakota and Iowa in this quadrangle are given in Bulletins 472 and 460 respectively.

ELK POINT QUADRANGLE.

Ponca Ferry south to corner of Tps. 29 and 30 N., Rs. 6 and 7 E., thence west to line of Rs. 5 and 4, thence north to line of Tps. 30 and 31 N., thence east to line of Rs. 5 and 6.

P. B. M. 355-1, Missouri River Commission (redetermined by Coast and Geodetic Survey), west bank, at foot of bluffs, about 0.5 mile below Ponca Landing, in farm yard of John Austin, about 300 feet southwest from his dwelling house and 250 feet south of road between Ponca and Ponca Landing; copper bolt in bench mark stone set 4 feet under ground, covered by a 3-inch iron pipe marked "U. S. B. M"	Feet. 1, 119. 332
T. 30 N., R. 6 E., one-fourth mile west from southwest corner of sec. 36; iron post stamped "YNKTN 1348"	1, 348. 685
T. 29 N., R. 6 E., northwest corner of sec. 6, in schoolhouse yard; iron post stamped "YNKTN 1211"	1, 212. 244
T. 29 N., R. 5 E., northwest corner of sec. 6; iron post stamped "YNKTN 1465"	1, 465. 987
T. 30 N., R. 5 E., northwest corner of sec. 6; iron post stamped "YNKTN 1466"	1, 467. 181

Ponca northwest along highway to T. 32 N., R. 4 E.

T. 31 N., R. 5 E., southwest corner of sec. 36; iron post stamped "YNKTN 1296".....	Feet. 1, 297. 211
T. 31 N., R. 5 E., northwest corner of sec. 6; iron post stamped "YNKTN 1166".....	1, 167. 105

Nehawka, Omaha, and Weeping Water quadrangles.

CASS, JOHNSON, LANCASTER, OTOE, AND SARPY COUNTIES.

The elevations in the following list are based on bench marks of the Missouri River Commission in the vicinity of Omaha, Nebr., and on stone lines at Plattsmouth and Nebraska City run from the main precise level line bench marks 336 and 327 on the Iowa side of the Missouri River.

The leveling in the Nehawka and Omaha quadrangles and in the north half of the Weeping Water quadrangle was done in 1902 by M. A. Steele; that in the south half of the Weeping Water quadrangle was done in 1902 by John Wilson.

OMAHA QUADRANGLE.

At Plattsmouth.

Plattsmouth, at railroad bridge across the Missouri River, 10 feet south and on line with first trestle bent west of west pier; copper bolt in bench mark stone (Missouri River Commission bench mark "336 B").....	Feet. 954. 059
Plattsmouth, in courthouse yard, 6 inches east of masonry base of cannon; iron post stamped "990 OMAHA".....	989. 245
Plattsmouth, in front of station; top of rail.....	1, 063. 1

NEHAWKA QUADRANGLE.

Mynard south via Missouri Pacific Railway to Murray.

Mynard, in front of station; top of rail.....	1, 086. 8
Murray, in front of station; top of rail.....	1, 146. 0
Murray, in northwest corner of schoolhouse yard, 23 feet north of northwest corner of building; iron post stamped "1189 OMAHA".....	1, 188. 216

WEEPING WATER QUADRANGLE.

Southwest corner of Sec. 15, T. 11 N., R. 12 E., along highways to southwest corner of Sec. 2, T. 10 N., R. 12 E.

T. 11 N., R. 12 E., southwest corner of sec. 15, 36.5 feet north and 21 feet east of center of crossroads; iron post stamped "1251 OMAHA".....	1, 250. 910
T. 11 N., R. 11 E., southeast corner of sec. 16, 10 feet north and 2 feet east of 15-inch cottonwood tree; iron post stamped "1302 OMAHA".....	1, 302. 027
T. 11 N., R. 10 E., southeast corner of sec. 16, 33 feet west and 36 feet north of center of crossroads; iron post stamped "1282 OMAHA".....	1, 281. 278
T. 11 N., R. 9 E., southwest corner of sec. 15, 32 feet east and 37.5 feet north of center of crossroads; iron post stamped "1256 OMAHA".....	1, 256. 022
T. 11 N., R. 8 E., 0.25 mile south of northwest corner of sec. 24, 2 feet east and 2 feet south of corner fence post at south corner of intersection of north-south and east-west roads; iron post stamped "1143 OMAHA"....	1, 142. 710
T. 12 N., R. 12 E., northwest corner of sec. 34, 40.5 feet north and 44 feet west of northwest corner of schoolhouse; iron post stamped "1218 OMAHA".....	1, 217. 352

T. 10 N., R. 12 E., southwest corner sec. 2, in southeast corner of school-house yard, 66 feet south and 57 feet east of southeast corner of building (schoolhouse 38); iron post stamped "1119 OMAHA"..... 1, 118. 515 Feet.

Center of T. 11 N., R. 9 E., south to center of T. 9 N., R. 9 E.

T. 10 N., R. 9 E., northwest corner of sec. 27, 34.5 feet east and 42 feet south of center of crossroads; iron post stamped "1329 OMAHA"..... 1, 328. 295

Center of T. 11 N., R. 9 E., north 5 miles, thence east 5 miles, thence south 5 miles.

T. 12 N., R. 9 E., southeast corner of sec. 21, 37.5 feet north and 31.5 feet west of center of crossroads; iron post stamped "1113 OMAHA"..... 1, 112. 627

T. 12 N., R. 10 E., northwest corner of sec. 33, 22 feet east and 22 feet south of center of crossroads; iron post stamped "1221 OMAHA"..... 1, 220. 530

Southeast corner of Sec. 14, T. 11 N., R. 11 E., south 5 miles, thence west 2 miles, thence south 7 miles to center of T. 9 N., R. 11 E.

Weeping Water, in front of station; top of rail..... 1, 080. 0

Weeping Water, 97.5 feet north by 95.5 feet east of northeast corner of High School Building, in school yard; iron post stamped "1084 OMAHA".... 1, 083. 838

Center of T. 10 N., R. 11 E., west 6 miles, thence north to center of T. 11 N., R. 10 E.

Elmwood, 3 feet south by 3 feet east of northwest corner of water tower; iron post stamped "1295 OMAHA"..... 1, 294. 573

Dunbar west along Missouri Pacific Ry. to point near center of T. 8 N., R. 12 E., thence north to center of T. 9 N., R. 12 E., and return.

Dunbar, in front of Missouri Pacific Railway station; top of rail..... 1, 049. 98

Dunbar, in front of Chicago, Burlington & Quincy R. R. station; top of rail. 1, 049. 35

T. 8 N., R. 12 E., corner of secs. 9, 10, 15, and 16, 2 feet east of southeast corner of crossroads; iron post stamped "1101 OMAHA"..... 1, 100. 435

T. 9 N., R. 12 E., southeast corner of sec. 16, in southwest corner of school-house yard; iron post stamped "1215 OMAHA"..... 1, 214. 798

Dunbar west to Syracuse, thence north to center of T. 9 N., R. 9 E., west through T. 9 N., south in R. 9 E., and east through T. 8 N., to Syracuse with checked spur east into R. 8 E.

Syracuse, 1 mile north of, at northwest corner of sec. 15, T. 8 N., R. 11 E., 2 feet south and 8 feet east of southeast corner of road crossing; iron post stamped "1132 OMAHA"..... 1, 131. 690

T. 9 N., R. 11 E., northwest corner of sec. 27, in northwest corner of school-house yard; iron post stamped "1262 OMAHA"..... 1, 261. 566

T. 9 N., R. 10 E., southeast corner of sec. 16, 25 feet north and 1 foot east of northwest corner of road crossing; iron post stamped "1259 OMAHA". 1, 259. 736

T. 9 N., R. 9 E., northeast corner sec. 21, in southeast corner of schoolhouse yard; iron post stamped "1310 OMAHA"..... 1, 309. 446

T. 9 N., R. 8 E., southwest corner sec. 24, east of schoolhouse; iron post stamped "1313 OMAHA"..... 1, 312. 057

T. 8 N., R. 9 E., northwest corner sec. 14, 20 feet east and 1 foot north of southeast corner of road crossing; iron post stamped "1150 OMAHA".... 1, 151. 741

Unadilla, 2 miles south of, at southeast corner of sec. 15, T. 8 N., R. 10 E., 12 feet west and 1 foot south of road crossing; iron post stamped "1231 OMAHA"..... 1, 230. 697

26 SPIRIT LEVELING IN KANSAS AND NEBRASKA, 1896 TO 1909.

Palmyra south through R. 9 E., thence east in T. 7 N. and north in R. 12 E. to point near Dunbar, with checked spur east into R. 8 E. and south into T. 6 N.

T. 8 N., R. 9 E., northwest corner of sec. 35, 35 feet due east of corner stone; iron post stamped "1316 OMAHA"	Feet. 1, 315. 915
Douglas, 0.5 mile south of, at southwest corner of sec. 11, T. 7 N., R. 9 E., 6 feet south and 3 feet west of southeast corner of road crossing; iron post stamped "1265 OMAHA"	1, 264. 658
T. 7 N., R. 10 E., southeast corner of sec. 16, in southeast corner of schoolhouse (district 107) yard; iron post stamped "1289 OMAHA"	1, 288. 890
T. 7 N., R. 11 E., southeast corner of sec. 15, 8 feet north and 1 foot east of northwest corner of crossroads; iron post stamped "1064 OMAHA"	1, 063. 368
T. 7 N., R. 12 E., northwest corner of sec. 23, 20 feet east and 2 feet north of southeast corner of crossing of roads; iron post stamped "982 OMAHA"	981. 326
T. 7 N., R. 8 E., northeast corner of sec. 14, near schoolhouse northeast of road crossing, in southeast corner of schoolhouse yard; iron post stamped "1424 OMAHA"	1, 423. 944
T. 6 N., R. 9 E., southwest corner of sec. 2, 2 feet south and 2 feet west of southwest corner of crossroads; iron post stamped "1333 OMAHA"	1, 334. 472
Cook, in southeast corner of water table of Farmer's Bank; aluminum tablet stamped "1062 OMAHA"	1, 061. 622

Nebraska City Quadrangle.

CASS, NEMAHA, AND OTTOE COUNTIES.

The elevations in the following list depend on a bench mark established by the Missouri River Commission 3,884 feet north of the railroad station at Nebraska City Junction, Iowa—a buried stone with copper bolt 3 feet underground, surmounted by an iron post with a cap terminating in a rounded knob, marked "Missouri River Commission." The accepted elevation of the top of the cap is 924.589 feet.

The leveling was done in 1905 by F. W. Hughes.

NEBRASKA CITY QUADRANGLE.

Point 2 miles west of Nebraska City Junction west to Nebraska City.

Nebraska City Junction, 2 miles west of, 40 feet south of crossing, 30 feet east of center of road; iron post stamped "923 ADJ 1903"	Feet. 923. 191
T. 8 N., R. 14 E., center of sec. 23, 460 feet west of railroad crossing, opposite bridge over Four Mile Creek; iron post stamped "927 ADJ 1903"	926. 671
Minersville, near center of north line of sec. 12, T. 7 N., R. 14 E., northeast corner of church; iron post stamped "933 ADJ 1903"	932. 406
Barney, near center of NE. $\frac{1}{4}$ sec. 30, T. 7 N., R. 15 E., 120 feet northwest of grain elevator; iron post stamped "913 ADJ 1903"	912. 717
T. 7 N., R. 14 E., about center of south line of sec. 25, 200 feet northeast of bridge over Camp Creek, 2 feet southeast of 2-foot walnut and 20 feet southwest of 2-foot walnut at T road north; iron post stamped "929 ADJ 1903"	928. 357
T. 6 N., R. 14 E., northeast corner of sec. 4, opposite Pleasant Valley schoolhouse; iron post stamped "1012 ADJ 1903"	1, 011. 482
Julian, southwest corner of SE. $\frac{1}{4}$ sec. 32, T. 7 N., R. 14 E., 100 feet north of center of road, opposite main street through Julian; iron post stamped "1041 ADJ 1903"	1, 040. 443

T. 6 N., R. 13 E., northwest corner of sec. 1, 30 feet south and 30 feet east of crossroads; iron post stamped "1152 ADJ 1903".....	Feet. 1, 151. 596
T. 6 N., R. 13 E., northwest corner of sec. 4, 40 feet south and 30 feet east of crossroads; iron post stamped "971 ADJ 1903".....	971. 064

Nebraska City north along Missouri Pacific Railway to point near Wyoming, thence west and south along highways via Sunnyside and Baker schoolhouses to sec. 4, T. 6 N., R. 13 E.

Nebraska City, at north entrance to post office, in second step above pavement, 1 foot east of building; aluminum tablet stamped "1030 ADJ 1903".	1, 029. 699
Walnut Creek Mills, 0.25 mile south of northwest corner of sec. 31, T. 9 N., R. 14 E., 600 feet south of Walnut Creek mills, 180 feet south of railroad crossing, 20 feet east of center of road; iron post stamped "999 ADJ 1903".	998. 826
Wyoming, 250 feet south of station, in edge of orchard; iron post stamped "Prim. Trav. Sta. No. 8 1120 ADJ 1903".....	1, 119. 803
T. 9 N., R. 13 E., northwest corner of NE. $\frac{1}{4}$ sec. 21, 40 feet south and 20 feet east of road forks; iron post stamped "1111 ADJ 1903".....	1, 110. 610
Sunnyside schoolhouse, 0.8 mile west of, northwest corner of sec. 4, T. 8 N., R. 13 E., 20 feet south and 30 feet east of center of T road; iron post stamped "1218 ADJ 1903".....	1, 217. 809
T. 8 N., R. 13 E., southeast corner of sec. 17, 20 feet west and 30 feet north of center of crossroads; iron post stamped "1150 ADJ 1903".....	1, 149. 579
T. 7 N., R. 13 E., 50 feet south and 20 feet east of northwest corner of sec. 4; iron post stamped "1230 ADJ 1903".....	1, 229. 417
T. 7 N., R. 13 E., northwest corner of sec. 21, 30 feet south and 30 feet east of center of crossroads; iron post stamped "1149 ADJ 1903".....	1, 148. 708

Point 7 miles south of Baker schoolhouse west to sec. 23, T. 7 N., R. 12 E.

T. 7 N., R. 12 E., northwest corner of sec. 23, 20 feet east and 2 feet south of southeast corner road crossing; iron post stamped "982 OMAHA"....	981. 342
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At Nebraska City.

Nebraska City, in front of Chicago, Burlington & Quincy R. R. station; top of rail.....	966. 88
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Browns Creek, Chappell, Gothenburg, North Platte, Ogalalla, Paxton, and Sidney Quadrangles.

ARTHUR, CHEYENNE, DAWSON, DEUEL, FRONTIER, KEITH, LINCOLN, LOGAN, AND McPHERSON COUNTIES.

The elevations in the following list are only approximate, as they depend on the height of the Union Pacific R. R. bridge over Lodgepole Creek, near milepost 410. The railroad company's elevation of the bridge, derived from Omaha datum, is 4,016.12 feet.

The leveling in the Browns Creek quadrangle and in part of the Sidney quadrangle was done by H. M. Trippe in 1896; that in the Chappell and Ogalalla quadrangles and in the remainder of the Sidney quadrangle by Ross C. Cornish in 1897; that in the Paxton quadrangle by C. E. Hewitt in 1898; and that in the North Platte and Gothenburg quadrangles by E. E. Sands in 1899.

SIDNEY QUADRANGLE.

Bench marks established near public land corners.

	Feet.
T. 12 N., R. 46 W., southeast corner of sec. 9; iron post stamped "SIDNEY 3908"	3,908.216
T. 13 N., R. 45 W., southeast corner of sec. 30; iron post stamped "SIDNEY 3897"	3,897.384
T. 13 N., R. 46 W., southeast corner of sec. 2; iron post stamped "SIDNEY 3757"	3,757.233
T. 13 N., R. 46 W., southeast corner of sec. 27; iron post stamped "SIDNEY 3983"	3,982.950
T. 13 N., R. 47 W., southeast corner of sec. 25; iron post stamped "SIDNEY 4078"	4,077.901
T. 13 N., R. 47 W., southeast corner of sec. 33; iron post stamped "SIDNEY 4117"	4,117.222
T. 13 N., R. 48 W., southeast corner of sec. 25; iron post stamped "SIDNEY 4131"	4,131.229
T. 13 N., R. 48 W., southeast corner of sec. 34; iron post stamped "SIDNEY 4167"	4,167.252
T. 13 N., R. 48 W., southeast corner of sec. 22; iron post stamped "SIDNEY 4162"	4,162.220
T. 13 N., R. 48 W., northeast corner of sec. 3; iron post stamped "SIDNEY 4013"	4,013.457
Lodgepole, T. 14 N., R. 46 W., sec. 30, stone monument in park; bronze tablet stamped "SIDNEY 3833"	3,832.755
T. 14 N., R. 47 W., southeast corner of sec. 12; iron post stamped "SIDNEY 4011"	4,011.418
T. 14 N., R. 47 W., west side of sec. 27, on main line Union Pacific Railroad; iron post stamped "SIDNEY 3878"	3,878.088
T. 14 N., R. 47 W., sec. 30, near milepost 403, Sunol switch; iron post stamped "SIDNEY 3921"	3,921.025
T. 15 N., R. 47 W., southeast corner of sec. 26; iron post stamped "SIDNEY 3913"	3,913.356
T. 15 N., R. 47 W., southeast corner of sec. 28; iron post stamped "SIDNEY 3960"	3,960.192
T. 15 N., R. 46 W., southwest corner of sec. 27; iron post stamped "SIDNEY 3928"	3,928.099
T. 15 N., R. 46 W., southeast corner of sec. 25; iron post stamped "SIDNEY 3896"	3,896.123
T. 15 N., R. 46 W., quarter corner on east side of sec. 13; iron post stamped "SIDNEY 3885"	3,884.953
T. 16 N., R. 46 W., southeast corner of sec. 36; iron post stamped "SIDNEY 3933"	3,933.187
T. 13 N., R. 49 W., southeast corner of sec. 7; iron post stamped "4284"	4,284.262
T. 13 N., R. 49 W., southeast corner of sec. 30; iron post stamped "4288"	4,288.272
T. 13 N., R. 49 W., southeast corner of sec. 36; iron post stamped "4233"	4,233.829
Sidney, T. 14 N., R. 49 W., Union Pacific R. R. station; doorsill of ladies' waiting room	4,093.540
Fort Sidney, T. 14 N., R. 49 W., in astronomical monument in parade ground; copper bolt stamped "4086"	4,086.279
T. 14 N., R. 49 W., near southwest corner sec. 25; iron post stamped "4025"	4,025.083
T. 14 N., R. 48 W., sec. 29, northwest corner stone in foundation of school-house; copper bolt stamped "4015"	4,015.395
T. 14 N., R. 48 W., southeast corner of sec. 7; iron post stamped "4165"	4,165.415

	Feet.
T. 15 N., R. 49 W., sec. 28; iron post stamped "4226"	4, 226. 447
T. 15 N., R. 49 W., southeast corner of sec. 13; iron post stamped "4190" ..	4, 189. 761
T. 15 N., R. 48 W. southeast corner of sec. 6; iron post stamped "4163" ..	4, 162. 851
T. 16 N., R. 49 W., southeast corner of sec. 26; iron post stamped "4194" ..	4, 194. 088
T. 16 N., R. 48 W., in wall of schoolhouse in northwest corner of sec. 26; bronze tablet stamped "4122"	4, 121. 645
T. 16 N., R. 48 W., southeast corner of sec. 11; iron post stamped "4109" ..	4, 108. 898
T. 16 N., R. 47 W., southeast corner of sec. 8; iron post stamped "4030" ..	4, 030. 328
T. 16 N., R. 47 W., southwest corner of sec. 12; iron post stamped "3993" ..	3, 992. 736
T. 17 N., R. 49 W., southeast corner of sec. 32; iron post stamped "4281" ..	4, 280. 795
T. 17 N., R. 49 W., southeast corner of sec. 36; iron post stamped "4202" ..	4, 202. 643
T. 17 N., R. 48 W., southeast corner of sec. 21; iron post stamped "4145" ..	4, 144. 664
T. 17 N., R. 47 W., northwest corner of sec. 30, in southeast corner of school- house; bronze tablet stamped "4101"	4, 101. 046
T. 17 N., R. 47 W., southeast corner of sec. 31; iron post stamped "4041" ..	4, 040. 734
T. 18 N., R. 49 W., sec. 34, North's ranch; iron post stamped "3898"	3, 897. 670
T. 18 N., R. 48 W., sec. 26, Radcliffe's ranch; iron post stamped "3728" ..	3, 728. 256
T. 18 N., R. 46 W., sec. 31, Hanna's ranch; iron post stamped "3509"	3, 509. 253
T. 17 N., R. 46 W., NW. $\frac{1}{4}$ sec. 4, north side of river road; iron post stamped "3542"	3, 541. 944
T. 17 N., R. 46 W., near center of sec. 12, at crossroads; iron post stamped "3477"	3, 476. 839
T. 17 N., R. 45 W., at gate on road near northeast corner of section 30; iron post stamped "3504"	3, 503. 667
T. 16 N., R. 46 W., at forks of road near southeast corner of section 2; iron post stamped "3608"	3, 608. 215
T. 16 N., R. 46 W., at gate on road near east side of section 27; iron post stamped "3689"	3, 688. 629

BROWNS CREEK QUADRANGLE.

Bench marks established near public-land corners.

T. 18 N., R. 49 W., southeast corner of SW. $\frac{1}{4}$ sec. 3; iron post stamped "3699"	3, 698. 789
T. 18 N., R. 48 W., on river road near northwest corner of sec. 11; iron post stamped "3564"	3, 564. 177
T. 18 N., R. 47 W., east side of sec. 19, southeast corner of Nichol's house; tablet stamped "3613"	3, 612. 762
T. 18 N., R. 47 W., NE. $\frac{1}{4}$ sec. 5, Ramsburg's ranch; iron post stamped "3545"	3, 544. 951
Belmont, near northeast corner sec. 18, T. 19 N., R. 49 W.; iron post stamped "3638"	3, 638. 225
T. 19 N., R. 49 W., southeast corner of NE. $\frac{1}{4}$ sec. 14 (Bearline's ranch); iron post stamped "3613"	3, 613. 211
T. 19 N., R. 49 W., southeast corner of sec. 30; iron post stamped "3596" ..	3, 596. 147
T. 19 N., R. 48 W., south side of sec. 27, Carl Wagner's ranch; iron post stamped "3577"	3, 577. 259
T. 19 N., R. 47 W., near southwest corner of sec. 16, 3.25 miles north of Ramsburg's ranch, forks of road; iron post stamped "4044"	4, 044. 274
T. 19 N., R. 47 W., southeast corner of NE. $\frac{1}{4}$ sec. 25; iron post stamped "4025"	4, 024. 604
T. 20 N., R. 49 W., southwest corner of sec. 32; iron post stamped "3689" ..	3, 689. 198
T. 20 N., R. 49 W., southeast corner of sec. 36; iron post stamped "3727" ..	3, 727. 331

T. 20 N., R. 48 W., NW. $\frac{1}{4}$ sec. 19, Delano's ranch; iron post stamped "3902"	Feet. 3, 902. 152
T. 20 N., R. 47 W., SW. $\frac{1}{4}$ sec. 7, at crossroads; iron post stamped "4239" ..	4, 238. 846
T. 20 N., R. 47 W., sec. 32, at side of road, between Remsburg's and Hihler's ranches; iron post stamped "4099"	4, 099. 361
T. 21 N., R. 49 W., near north side of sec. 12, crossroads; iron post stamped "4135"	4, 134. 906
T. 21 N., R. 49 W., near north side of sec. 26, forks of road; iron post stamped "4370"	4, 370. 150
T. 21 N., R. 48 W., sec. 9, Peer's ranch; iron post stamped "4041"	4, 040. 543
T. 21 N., R. 48 W., sec. 13, Haine's ranch; iron post stamped "4018"	4, 017. 769
T. 21 N., R. 47 W., SW. $\frac{1}{4}$ sec. 4 (error in General Land Office work; this should be SW. $\frac{1}{4}$ sec. 3), J. W. Rodger's ranch; iron post stamped "3946" ..	3, 945. 612
T. 21 N., R. 47 W., southwest corner of sec. 28, Hibler's ranch; iron post stamped "3989"	3, 988. 979
T. 21 N., R. 46 W., sec. 8, Margesson's ranch; iron post stamped "3897" ..	3, 896. 956
T. 22 N., R. 49 W., by side of Alliance road, near north side of sec. 2; iron post stamped "4117"	4, 116. 682
T. 22 N., R. 49 W., SE. $\frac{1}{4}$ sec. 27, at forks of road; iron post stamped "4125" ..	4, 124. 45
T. 22 N., R. 48 W., NE. $\frac{1}{4}$ sec. 1, at side of road; iron post stamped "3977" ..	3, 977. 447
T. 22 N., R. 48 W., NE. $\frac{1}{4}$ sec. 27, at forks of road; iron post stamped "4040"	4, 039. 822
T. 22 N., R. 47 W., SE. $\frac{1}{4}$ sec. 21, southwest side of Alliance road; iron post stamped "3955"	3, 954. 693
T. 22 N., R. 47 W., northeast corner of sec. 1; iron post stamped "3901" ..	3, 900. 592
T. 23 N., R. 49 W., near northwest corner of sec. 14, Rall's ranch; iron post stamped "4093"	4, 092. 374
T. 23 N., R. 49 W., near center of sec. 25, Johnson's ranch; anchor of gate south of house	4, 060. 9
T. 23 N., R. 49 W., SE. $\frac{1}{4}$ sec. 12, James's ranch; top of southeast anchor post of windmill tower	4, 043
T. 23 N., R. 48 W., sec. 17, Fleet's ranch; iron post stamped "4026"	4, 026. 143
T. 23 N., R. 48 W., northeast corner of sec. 3; iron post stamped "3969" ..	3, 969. 078
T. 23 N., R. 47 W., near southeast corner of sec. 29, 20 feet north of crossroads, 0.8 mile west from Smith's ranch; west anchor of gate	3, 966. 9
T. 23 N., R. 47 W., near east side of sec. 28, south side of gate on road from Smith's ranch to Hague's ranch; iron post stamped "3950"	3, 949. 923
T. 23 N., R. 46 W., sec. 29, at crossroads south of Wild Horse Lake; iron post stamped "3901"	3, 901. 116
T. 23 N., R. 46 W., near southwest corner of sec. 24, at side of Alliance road; iron post stamped "3890"	3, 890. 078
T. 23 N., R. 45 W., near east side of section 17, Hill's ranch; iron post stamped "3886"	3, 886. 347
T. 22 N., R. 46 W., SE. $\frac{1}{4}$ sec. 4, at forks of road; iron post stamped "3895" ..	3, 895. 482
T. 22 N., R. 46 W., near south line of sec. 13, at forks of road; iron post stamped "3878"	3, 878. 259
T. 22 N., R. 45 W., near northwest corner sec. 34, Hubble's ranch; iron post stamped "3856"	3, 855. 703
T. 21 N., R. 46 W., near center of S. $\frac{1}{4}$ sec. 1, at crossroads; iron post stamped "3865"	3, 864. 729
T. 21 N., R. 45 W., NW. $\frac{1}{4}$ sec. 29, Orlando post office; iron post stamped "3854"	3, 854. 115
T. 20 N., R. 46 W., SE. $\frac{1}{4}$ sec. 3, Slater's ranch; iron post stamped "3872" ..	3, 872. 398
T. 20 N., R. 46 W., near center of sec. 22; Richardson's ranch; iron post stamped "3866"	3, 865. 895

T. 20 N., R. 45 W., near center of N. $\frac{1}{2}$ sec. 17, at bend in road southeast of Twin Lakes; iron post stamped "3815".....	Feet. 3, 814. 691
T. 19 N., R. 46 W., E. $\frac{1}{2}$ sec. 11, in sand hills, at forks of road just south of Blowout; iron post stamped "3881".....	3, 881. 624
T. 19 N., R. 46 W., near center of sec. 23, at side of road; iron post stamped "3948".....	3, 948. 043
T. 19 N., R. 45 W., southeast corner of SW. $\frac{1}{4}$ sec. 31; iron post stamped "3952".....	3, 952. 091
T. 18 N., R. 46 W., NW. $\frac{1}{4}$ sec. 10, south edge of terrace on side of road; iron post stamped "3977".....	3, 977. 165
T. 18 N., R. 45 W., southeast corner of sec. 17; iron post stamped "3935".....	3, 935. 007

CHAPPELL QUADRANGLE.**Bench marks established near public-land corners.**

T. 12 N., R. 45 W., in section 21 on Nebraska-Colorado State line, 0.5 mile west of Lodgepole Creek; iron post stamped "SIDNEY 3591".....	3, 590. 886
T. 12 N., R. 42 W., sec. 6, milepost 365, Union Pacific R. R., iron post stamped "SIDNEY 3413".....	3, 413. 057
T. 13 N., R. 41 W., sec. 27, milepost 357, Union Pacific R. R.; iron post stamped "SIDNEY 3341".....	3, 340. 735
Bigsprings, southeast corner of sec. 25, T. 13 N., R. 42 W.; iron post stamped "SIDNEY 3370".....	3, 370. 061
T. 13 N., R. 42 W., southeast corner of sec. 1; iron post stamped "SIDNEY 3613".....	3, 613. 028
T. 13 N., R. 42 W., quarter corner on south side of sec. 17; iron post stamped "SIDNEY 3592".....	3, 591. 778
T. 13 N., R. 43 W., quarter corner on south side of sec. 14; iron post stamped "SIDNEY 3648".....	3, 647. 963
T. 13 N., R. 43 W., southeast corner of sec. 18; iron post stamped "SIDNEY 3717".....	3, 717. 196
T. 13 N., R. 44 W., southeast corner of sec. 10; iron post stamped "SIDNEY 3793".....	3, 793. 021
T. 13 N., R. 44 W., sec. 31, milepost 383, Union Pacific Railroad; iron post stamped "SIDNEY 3636".....	3, 635. 921
Chappell; railroad station, sec. 15, T. 13 N., R. 45 W.; iron post stamped "SIDNEY 3696".....	3, 696. 084
T. 14 N., R. 42 W., southeast corner of sec. 13; iron post stamped "SIDNEY 3652".....	3, 651. 791
T. 14 N., R. 42 W., southeast corner of sec. 3; iron post stamped "SIDNEY 3694".....	3, 694. 097
T. 14 N., R. 42 W., southeast corner of sec. 6; iron post stamped "SIDNEY 3723".....	3, 722. 121
T. 14 N., R. 43 W., southeast corner of sec. 10; iron post stamped "SIDNEY 3764".....	3, 764. 154
T. 14 N., R. 43 W., southeast corner of sec. 7; iron post stamped "SIDNEY 3768".....	3, 767. 974
T. 14 N., R. 44 W., southeast corner of sec. 27; iron post stamped "SIDNEY 3804".....	3, 804. 321
T. 14 N., R. 44 W., southeast corner of sec. 10; iron post stamped "SIDNEY 3796".....	3, 796. 152
T. 14 N., R. 45 W., southeast corner of sec. 2; iron post stamped "SIDNEY 3874".....	3, 874. 043
T. 14 N., R. 45 W., southeast corner of sec. 5; iron post stamped "SIDNEY 3916".....	3, 916. 072

T. 15 N., R. 42 W., southeast corner of sec. 36; iron post stamped "SID-NEY 3739".....	Feet. 3, 739. 322
T. 15 N., R. 42 W., sec. 26, forks of wagon road; iron post stamped "SID-NEY 3763".....	3, 763. 153
T. 15 N., R. 42 W., sec. 3, mouth of Ash Hollow, near Rachael Patterson's grave; iron post stamped "SIDNEY 3314".....	3, 314. 206
T. 15 N., R. 43 W., southeast corner of sec. 27; iron post stamped "SID-NEY 3729".....	3, 728. 662
T. 15 N., R. 43 W., southeast corner of sec. 30; iron post stamped "SID-NEY 3833".....	3, 833. 220
T. 15 N., R. 44 W., southeast corner of sec. 27; iron post stamped "SID-NEY 3792".....	3, 792. 15
T. 15 N., R. 44 W., southeast corner of sec. 30; iron post stamped "SID-NEY 3829".....	3, 829. 382
T. 15 N., R. 45 W., southeast corner of sec. 27; iron post stamped "SID-NEY 3923".....	3, 923. 068
T. 16 N., R. 41 W., southeast corner of sec. 30; iron post stamped "SID-NEY 3309".....	3, 308. 466
T. 16 N., R. 42 W., southeast corner of sec. 12; iron post stamped "SID-NEY 3593".....	3, 592. 772
T. 16 N., R. 42 W., southeast corner of sec. 27; iron post stamped "SID-NEY 3304".....	3, 304. 008
T. 16 N., R. 42 W., sec. 31, near mouth of ravine; iron post stamped "SID-NEY 3357".....	3, 356. 959
T. 16 N., R. 43 W., quarter corner on east side of sec. 22; iron post stamped "SIDNEY 3332".....	3, 331. 748
T. 16 N., R. 43 W., sec. 18, Charles Simpson's ranch; iron post stamped "SIDNEY 3365".....	3, 364. 230
T. 16 N., R. 44 W., quarter corner on east side of sec. 10; iron post stamped "SIDNEY 3393".....	3, 392. 674
T. 16 N., R. 44 W., near northeast corner of sec. 5, south bank North Platte River; iron post stamped "SIDNEY 3427".....	3, 426. 700
T. 17 N., R. 41 W., southwest corner of sec. 31; iron post stamped "SID-NEY 3628".....	3, 628. 244
T. 17 N., R. 41 W., near southeast corner of sec. 34, on wagon road; iron post stamped "SIDNEY 3632".....	3, 631. 775
T. 17 N., R. 42 W., SW. $\frac{1}{4}$ sec. 29, side of wagon road; iron post stamped "SIDNEY 3643".....	3, 642. 903
T. 17 N., R. 42 W., NE. $\frac{1}{4}$ sec. 18, road crossing; iron post stamped "SID-NEY 3741".....	3, 740. 829
T. 17 N., R. 43 W., quarter corner on south side of sec. 11; iron post stamped "SIDNEY 3710".....	3, 709. 258
T. 17 N., R. 43 W., southwest corner of sec. 8; iron post stamped "SID-NEY 3720".....	3, 719. 491
T. 17 N., R. 44 W., southwest corner of sec. 32; iron post stamped "SID-NEY 3455".....	3, 455. 088
T. 17 N., R. 44 W., southwest corner of sec. 24; iron post stamped "SID-NEY 3428".....	3, 427. 794
T. 17 N., R. 44 W., southwest corner of sec. 1; iron post stamped "SID-NEY 3601".....	3, 600. 520
T. 17 N., R. 45 W., sec. 23, Coumbe's ranch; iron post stamped "SIDNEY 3423".....	3, 422. 450
Hartmann, sec. 34, T. 18 N., R. 44 W.; iron post stamped "SIDNEY 3595".....	3, 595. 077

OGALALLA QUADRANGLE.

Bench marks established near public land corners.

Ogalalla, railroad station, sec. 6, T. 13 N., R. 38 W.; iron post stamped	Feet.
"SIDNEY 3216".....	3, 215. 884
T. 13 N., R. 39 W., sec. 11, at Union Pacific R. R. milepost 344; iron post stamped "SIDNEY 3242".....	3, 242. 138
T. 13 N., R. 39 W., sec. 17; at Union Pacific R. R. milepost 347; iron post stamped "SIDNEY 3265".....	3, 265. 151
Brule, sec. 15, T. 13 N., R. 40 W.; iron post stamped "SIDNEY 3291"...	3, 290. 766
T. 13 N., R. 40 W., sec. 19, at Union Pacific R. R. milepost 354; iron post stamped "SIDNEY 3333".....	3, 333. 172
T. 14 N., R. 39 W., near southeast corner of sec. 13; forks of road; iron post stamped "SIDNEY 3533".....	3, 533. 079
T. 14 N., R. 39 W., quarter corner on east side of sec. 32; iron post stamped "SIDNEY 3489".....	3, 488. 754
T. 14 N., R. 40 W., southeast corner of sec. 14; iron post stamped "SIDNEY 3653".....	3, 653. 213
T. 14 N., R. 40 W., quarter corner on south side of sec. 17; iron post stamped "SIDNEY 3579".....	3, 578. 688
T. 14 N., R. 41 W., southeast corner of sec. 15; iron post stamped "SIDNEY 3712".....	3, 712. 077
T. 15 N., R. 37 W., southeast corner of sec. 31; iron post stamped "SIDNEY 3107".....	3, 106. 813
T. 15 N., R. 37 W., NW. $\frac{1}{4}$ sec. 6; iron post stamped "SIDNEY 3373"....	3, 373. 345
T. 15 N., R. 38 W., NW. $\frac{1}{4}$ sec. 13; iron post stamped "SIDNEY 3306"...	3, 306. 111
T. 15 N., R. 38 W., southeast corner of sec. 30; iron post stamped "SIDNEY 3146".....	3, 145. 921
T. 15 N., R. 39 W., sec. 26, at schoolhouse; iron post stamped "SIDNEY 3161".....	3, 161. 352
T. 15 N., R. 39 W., southeast corner of sec. 20; iron post stamped "SIDNEY 3184".....	3, 183. 873
T. 15 N., R. 40 W., southeast corner of sec. 11; iron post stamped "SIDNEY 3216".....	3, 216. 144
T. 15 N., R. 40 W., sec. 6, at Fairchild's ranch; iron post stamped "SIDNEY 3233".....	3, 233. 232
T. 16 N., R. 37 W., southeast corner of sec. 20, near Mannon's ranch; iron post stamped "SIDNEY 3435".....	3, 435. 088
T. 16 N., R. 37 W., S. $\frac{1}{2}$ sec. 8; iron post stamped "SIDNEY 3472".....	3, 472. 029
T. 16 N., R. 38 W., S. $\frac{1}{2}$ sec. 26, by side of wagon road; iron post stamped "SIDNEY 3430".....	3, 430. 175
T. 16 N., R. 38 W., SE. $\frac{1}{4}$ sec. 9, by side of wagon road in Wild Horse Valley; iron post stamped "SIDNEY 3485".....	3, 484. 798
T. 16 N., R. 39 W., S. $\frac{1}{2}$ sec. 2, at side of wagon road; iron post stamped "SIDNEY 3520".....	3, 520. 056
T. 16 N., R. 39 W., near center of sec. 16, at junction of wagon roads; iron post stamped "SIDNEY 3523".....	3, 523. 032
T. 16 N., R. 40 W., NE. $\frac{1}{4}$ sec. 36, Winslow's ranch; iron post stamped "SIDNEY 3405".....	3, 404. 659
T. 16 N., R. 40 W., southeast corner of sec. 13; iron post stamped "SIDNEY 3529".....	3, 529. 104
T. 17 N., R. 37 W., SW. $\frac{1}{4}$ sec. 27, at side of wagon road in valley; iron post stamped "SIDNEY 3490".....	3, 490. 013

34 SPIRIT LEVELING IN KANSAS AND NEBRASKA, 1896 TO 1909.

T. 17 N., R. 37 W., west side of sec. 10, at side of road in valley; iron post stamped "SIDNEY 3504".....	Feet. 3, 504. 235
T. 17 N., R. 38 W., SE. $\frac{1}{4}$ sec. 29, at side of road in valley; iron post stamped "SIDNEY 3533".....	3, 533. 370
T. 17 N., R. 38 W., east side of sec. 6, in small valley; iron post stamped "SIDNEY 3588".....	3, 587. 711
T. 17 M., R. 39 W., NE. $\frac{1}{4}$ sec. 23, at forks of wagon road; iron post stamped "SIDNEY 3575".....	3, 574. 886
T. 17 N., R. 39 W., SE. $\frac{1}{4}$ sec. 4, at side of wagon road in valley; iron post stamped "SIDNEY 3612".....	3, 611. 980
T. 17 N., R. 40 W., SE. $\frac{1}{4}$ sec. 36, at north end of valley; iron post stamped "SIDNEY 3564".....	3, 564. 185

PAXTON QUADRANGLE.

Bench marks established near public land corners.

T. 12 N., R. 36 W., southeast corner of sec. 5; iron post stamped "SIDNEY 3279".....	3, 278. 980
T. 12 N., R. 36 W., southeast corner of sec. 36; iron post stamped "SIDNEY 3244".....	3, 244. 348
T. 12 N., R. 35 W., southeast corner of sec. 12; iron post stamped "SIDNEY 3203".....	3, 202. 947
T. 12 N., R. 34 W., southeast corner of sec. 12; iron post stamped "SIDNEY 3183".....	3, 183. 178
T. 12 N., R. 33 W., near corner of sec. 13; iron post stamped "SIDNEY 3158".....	3, 158. 217
T. 13 N., R. 35 W., southeast corner of sec. 30; iron post stamped "SIDNEY 3220".....	3, 220. 358
T. 13 N., R. 34 W., southeast corner of sec. 30; iron post stamped "SIDNEY 3166".....	3, 166. 122
T. 13 N., R. 33 W., southeast corner of sec. 30; iron post stamped "SIDNEY 3138".....	3, 138. 387
T. 13 N., R. 32 W., southeast corner of sec. 18; iron post stamped "SIDNEY 3116".....	3, 116. 445
T. 13 N., R. 34 W., southeast corner of sec. 7; iron post stamped "SIDNEY 3114".....	3, 113. 978
T. 13 N., R. 33 W., southeast corner of sec. 6; iron post stamped "SIDNEY 3016".....	3, 015. 914
T. 14 N., R. 36 W., near quarter corner on south side of sec. 6; iron post stamped "SIDNEY 3090".....	3, 089. 620
T. 14 N., R. 35 W., near center of sec. 5; iron post stamped "SIDNEY 3322".....	3, 322. 228
T. 14 N., R. 36 W., near center of sec. 24, on south side North Platte River; iron post stamped "SIDNEY 3082".....	3, 081. 521
T. 14 N., R. 35 W., quarter corner on east side of sec. 30; iron post stamped "SIDNEY 3067".....	3, 067. 224
T. 14 N., R. 34 W., northeast corner of sec. 6; iron post stamped "SIDNEY 3138".....	3, 138. 266
T. 14 N., R. 34 W., northwest corner of sec. 30; iron post stamped "SIDNEY 3021".....	3, 020. 537
T. 14 N., R. 33 W., southeast corner of sec. 17; iron post stamped "SIDNEY 2989".....	2, 989. 402
T. 14 N., R. 34 W., southeast corner of sec. 18; iron post stamped "SIDNEY 2913".....	2, 912. 698

T. 14 N., R. 36 W., sec. 24, south bank of North Platte River in south edge of grove; iron post stamped "SIDNEY 3032".....	Feet. 3, 031. 521
T. 15 N., R. 36 W., near quarter corner on east side of sec. 6; iron post stamped "SIDNEY 3421".....	3, 420. 600
T. 15 N., R. 36 W., NE. $\frac{1}{4}$ sec. 30; iron post stamped "SIDNEY 3284".....	3, 283. 600
T. 15 N., R. 35 W., near center of sec. 6; iron post stamped "SIDNEY 3332".....	3, 331. 566
T. 15 N., R. 35 W., southeast corner of sec. 30; iron post stamped "SIDNEY 3248".....	3, 247. 703
T. 15 N., R. 34 W., SE. $\frac{1}{4}$ sec. 6; iron post stamped "SIDNEY 3320".....	3, 320. 304
T. 15 N., R. 34 W., NE. $\frac{1}{4}$ sec. 19; iron post stamped "SIDNEY 3291".....	3, 291. 146
T. 15 N., R. 33 W., near center of sec. 5; iron post stamped "SIDNEY 3130".....	3, 129. 963
T. 15 N., R. 33 W., NE. $\frac{1}{4}$ sec. 20; iron post stamped "SIDNEY 3129".....	3, 128. 815
T. 15 N., R. 33 W., near quarter corner on south side of sec. 32; iron post stamped "SIDNEY 2992".....	2, 991. 929
T. 15 N., R. 32 W., near southeast corner of sec. 6; iron post stamped "SIDNEY 3162".....	3, 161. 565
T. 15 N., R. 32 W., near center of sec. 7; iron post stamped "SIDNEY 3102".....	3, 101. 565
T. 15 N., R. 32 W., near quarter corner on south side of sec. 31; iron post stamped "SIDNEY 2915".....	2, 915. 289
T. 16 N., R. 36 W., near quarter corner on west side of sec. 20; iron post stamped "SIDNEY 3464".....	3, 464. 186
T. 16 N., R. 36 W., near southwest corner of sec. 3; iron post stamped "SIDNEY 3454".....	3, 453. 716
T. 16 N., R. 35 W., near quarter corner on west side of sec. 18; iron post stamped "SIDNEY 3381".....	3, 380. 548
T. 16 N., R. 34 W., near southeast corner of sec. 7; iron post stamped "SIDNEY 3314".....	3, 313. 719
T. 16 N., R. 33 W., NW. $\frac{1}{4}$ sec. 18; iron post stamped "SIDNEY 3148".....	3, 148. 062
T. 16 N., R. 32 W., near quarter corner on east side of sec. 17; iron post stamped "SIDNEY 3182".....	3, 182. 342
T. 17 N., R. 36 W., NW. $\frac{1}{4}$ sec. 3; iron post stamped "SIDNEY 3474".....	3, 474. 042
T. 17 N., R. 36 W., near southwest corner of sec. 23; iron post stamped "SIDNEY 3450".....	3, 449. 628
T. 17 N., R. 35 W., SW. $\frac{1}{4}$ sec. 4; iron post stamped "SIDNEY 3411".....	3, 410. 538
T. 17 N., R. 35 W., near center of sec. 32; iron post stamped "SIDNEY 3450".....	3, 449. 760
T. 17 N., R. 34 W., NE. $\frac{1}{4}$ sec. 20; iron post stamped "SIDNEY 3319".....	3, 318. 592
T. 17 N., R. 34 W., SW. $\frac{1}{4}$ sec. 33; iron post stamped "SIDNEY 3371".....	3, 371. 066
T. 17 N., R. 34 W., NE. $\frac{1}{4}$ sec. 12; iron post stamped "SIDNEY 3285".....	3, 285. 013
T. 17 N., R. 33 W., near quarter corner on north side of sec. 4; iron post stamped "SIDNEY 3262".....	3, 262. 336
T. 17 N., R. 33 W., near center of sec. 1; iron post stamped "SIDNEY 3236".....	3, 236. 430
T. 17 N., R. 32 W., near northwest corner of sec. 31; iron post stamped "SIDNEY 3118".....	3, 117. 967
T. 17 N., R. 32 W., near northeast corner of sec. 17; iron post stamped "SIDNEY 3264".....	3, 263. 853
T. 18 N., R. 35 W., near center of sec. 33; iron post stamped "SIDNEY 3421".....	3, 421. 241
T. 18 N., R. 34 W., SW. $\frac{1}{4}$ sec. 30; iron post stamped "SIDNEY 3353".....	3, 352. 535

36. SPIRIT LEVELING IN KANSAS AND NEBRASKA, 1896 TO 1909.

NORTH PLATTE QUADRANGLE.

Spuds east along Union Pacific Railroad to Maxwell.

	Feet.
Spuds, east end of stock yards; iron post stamped "SIDNEY 2852".....	2, 852. 446
North Platte, foundation of front steps, First National Bank; aluminum tablet stamped "SIDNEY 2805".....	2, 805. 049
Milepost "287 Miles West of Omaha," quarter mile west of; iron post stamped "SIDNEY 2779".....	2, 779. 500
Gannett, at Union Pacific signpost; iron post stamped "SIDNEY 2769"....	2, 769. 022
Pawnee, near east end of switch; iron post stamped "SIDNEY 2747"....	2, 747. 203
Farnam, 1,248.7 feet west of center of bridge 20 and 16.7 feet south at right angles from center of main track, in Depot Park, at west line of Broad Street; iron post stamped "SIDNEY 2729".....	2, 729. 024
Maxwell, west end of station; iron post stamped "SIDNEY 2714".....	2, 714. 457
(In 1910 permission was granted to move this to a new location. No record of the transfer has yet been received.)	

Bench marks established near public land corners.

T. 12 N., R. 30 W., SE. $\frac{1}{4}$ sec. 5, on main road south from North Platte; iron post stamped "SIDNEY 3067".....	3, 066. 926
T. 12 N., R. 29 W., sec. 18, west of schoolhouse on main road to North Platte; iron post stamped "SIDNEY 3056".....	3, 056. 047
T. 12 N., R. 28 W., sec. 5, south end of Platte River bridge; iron post stamped "SIDNEY 2714".....	2, 714. 485
T. 12 N., R. 31 W., NE. $\frac{1}{4}$ sec. 3; iron post stamped "SIDNEY 3028".....	3, 028. 230
T. 12 N., R. 29 W., NE. $\frac{1}{4}$ sec. 13, in Boxelder Canyon; iron post stamped "SIDNEY 2786".....	2, 785. 601
T. 13 N., R. 28 W., north side of sec. 3, on Maxwell wagon road; iron post stamped "SIDNEY 2888".....	2, 888. 475
T. 13 N., R. 30 W., sec. 21, on main road south from North Platte, near woven wire fence; iron post stamped "SIDNEY 2822" (this bench mark has been moved 10 feet south from its original position; the elevation has not been changed).....	2, 822. 211
T. 13 N., R. 31 W., sec. 24, on road running west from Platte River bridge; iron post stamped "SIDNEY 2833".....	2, 833. 450
T. 14 N., R. 29 W., NE. $\frac{1}{4}$ sec. 30, in valley northwest of white schoolhouse; iron post stamped "SIDNEY 2822".....	2, 821. 754
T. 14 N., R. 28 W., near north side of sec. 27; iron post stamped "SIDNEY 2866".....	2, 866. 912
T. 14 N., R. 28 W., SW. $\frac{1}{4}$ sec. 2; iron post stamped "SIDNEY 2912".....	2, 911. 744
T. 15 N., R. 28 W., SW. $\frac{1}{4}$ sec. 23; iron post stamped "SIDNEY 2954".....	2, 953. 659
T. 15 N., R. 28 W., NW. $\frac{1}{4}$ sec. 2, near house; iron post stamped "SIDNEY 3000".....	2, 999. 632
T. 15 N., R. 31 W., sec. 22, west of schoolhouse; iron post stamped "SIDNEY 2930".....	2, 930. 106
T. 15 N., R. 29 W., SE. $\frac{1}{4}$ sec. 5, on old stage road; iron post stamped "SIDNEY 2999".....	2, 999. 338
T. 15 N., R. 29 W., NE. $\frac{1}{4}$ sec. 18, on old stage road; iron post stamped "SIDNEY 3053".....	3, 053. 330
T. 15 N., R. 30 W., southeast corner of sec. 34; iron post stamped "SIDNEY 2978".....	2, 978. 133
T. 15 N., R. 31 W., NE. $\frac{1}{4}$ sec. 7, on old north-south wagon road; iron post stamped "SIDNEY 3087".....	3, 086. 543
T. 15 N., R. 31 W., southwest corner of sec. 16; iron post stamped "SIDNEY 3075".....	3, 075. 231

T. 15 N., R. 30 W., sec. 19, at Ellis schoolhouse; iron post stamped "SIDNEY 2946"	Feet. 2, 945. 822
T. 16 N., R. 29 W., east side of sec. 22, near red schoolhouse; iron post stamped "SIDNEY 3038"	3, 037. 880
T. 16 N., R. 31 W., near center of sec. 9; iron post stamped "SIDNEY 3127"	3, 127. 329
T. 16 N., R. 31 W., NE. $\frac{1}{4}$ sec. 33; iron post stamped "SIDNEY 3139"	3, 138. 549
T. 16 N., R. 28 W., near quarter corner on south side of sec. 22; iron post stamped "SIDNEY 3012"	3, 011. 586
Myrtle, T. 16 N., R. 29 W., sec. 12; iron post stamped "SIDNEY 3049"	3, 049. 452
T. 16 N., R. 28 W., SE. $\frac{1}{4}$ sec. 8; iron post stamped "SIDNEY 3035"	3, 035. 205
T. 16 N., R. 30 W., SW. $\frac{1}{4}$ sec. 10, on road north from Ellis ranch; iron post stamped "SIDNEY 3105"	3, 104. 870
T. 16 N., R. 30 W., sec. 21, on road north from Ellis ranch; iron post stamped "SIDNEY 3077"	3, 077. 258
T. 16 N., R. 30 W., south side of sec. 31, on road north from Ellis ranch; iron post stamped "SIDNEY 3043"	3, 043. 281
T. 17 N., R. 28 W., sec. 35, road crossing on line between Logan and Lincoln Counties; iron post stamped "SIDNEY 3002"	3, 001. 950
T. 17 N., R. 29 W., quarter corner on east side of sec. 1; iron post stamped "SIDNEY 2960"	2, 960. 470
T. 17 N., R. 29 W., NE. $\frac{1}{4}$ sec. 10, near Chapin's house; iron post stamped "SIDNEY 2974"	2, 974. 350
T. 17 N., R. 31 W., sec. 8, crossroads east of Newberry's ranch; iron post stamped "SIDNEY 3200"	3, 200. 253
T. 17 N., R. 31 W., SW. $\frac{1}{4}$ sec. 34, near top of high hill on road from Seely post office to Newberry's ranch; iron post stamped "SIDNEY 3183"	3, 182. 615
T. 17 N., R. 30 W., NE. $\frac{1}{4}$ sec. 1, 0.5 mile north of Clothier's house; iron post stamped "SIDNEY 3066"	3, 066. 100
T. 17 N., R. 30 W., northwest corner of sec. 36; iron post stamped "SIDNEY 3141"	3, 141. 424
T. 18 N., R. 28 W., SW. $\frac{1}{4}$ sec. 35; iron post stamped "SIDNEY 2946"	2, 945. 770
T. 18 N., R. 28 W., southeast corner of sec. 32; iron post stamped "SIDNEY 2947"	2, 946. 832
T. 18 N., R. 29 W., near southwest corner of sec. 34; iron post stamped "SIDNEY 3019"	3, 019. 280
T. 18 N., R. 30 W., sec. 33; iron post stamped "SIDNEY 3168"	3, 167. 599
T. 18 N., R. 31 W., NW. $\frac{1}{4}$ sec. 33, on road north from Newberry's ranch; iron post stamped "SIDNEY 3232"	3, 231. 849

GOTHENBURG QUADRANGLE.

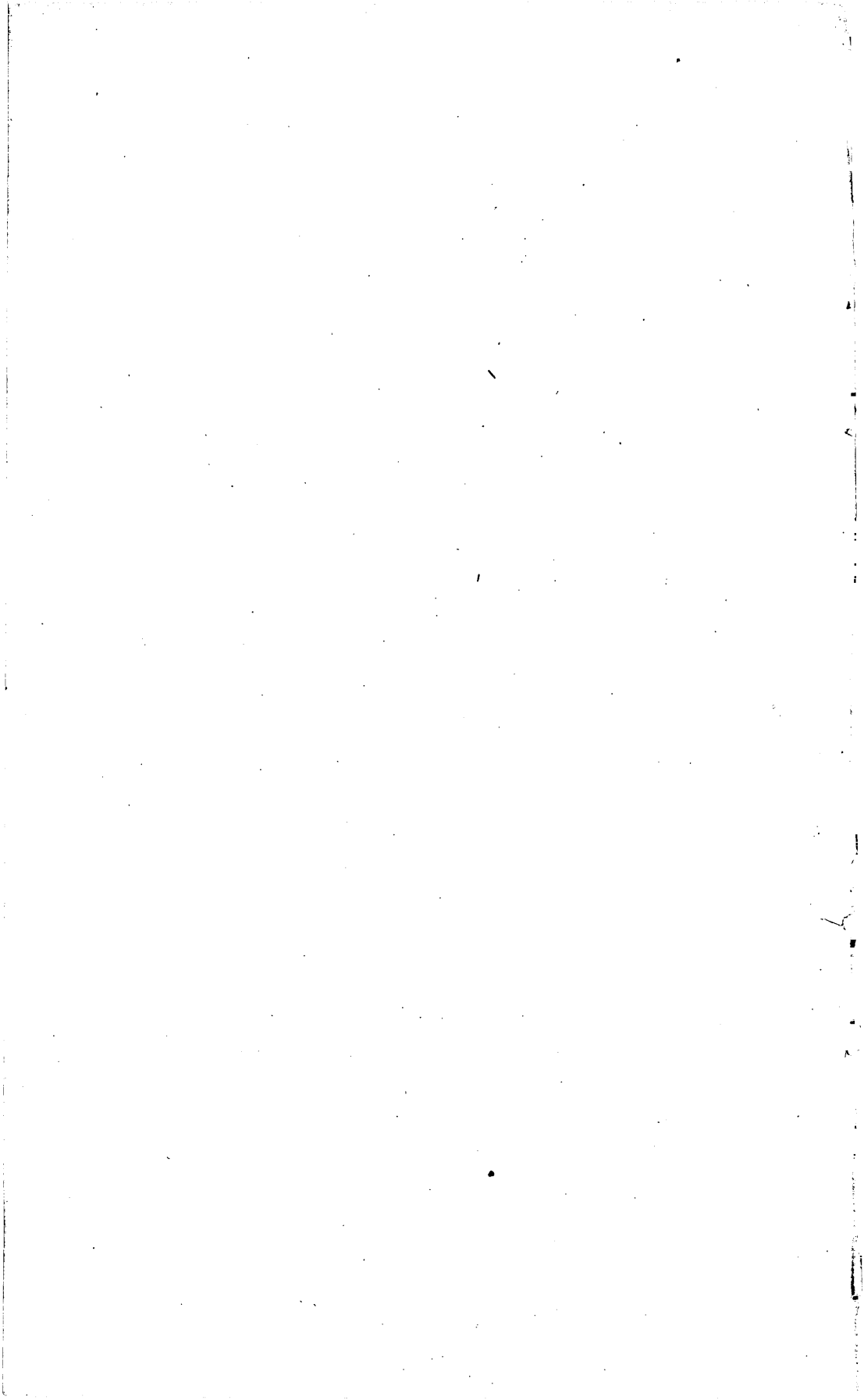
Bench marks established near public land corners.

T. 6 N., R. 24 W., northwest corner of sec. 6; iron post stamped "SIDNEY 2563"	2, 562. 895
T. 6 N., R. 25 W., northeast corner of sec. 4; iron post stamped "SIDNEY 2592"	2, 591. 955
T. 6 N., R. 26 W., northeast corner of sec. 5; iron post stamped "SIDNEY 2551"	2, 550. 925
T. 6 N., R. 27 W., NE. $\frac{1}{4}$ sec. 4, on road south from Stockville, near township line; iron post stamped "SIDNEY 2482"	2, 482. 453
T. 6 N., R. 28 W., northeast corner of sec. 1; iron post stamped "SIDNEY 2672"	2, 671. 513
T. 7 N., R. 24 W., quarter corner on north side of sec. 6; iron post stamped "SIDNEY 2668"	2, 667. 895

38 SPIRIT LEVELING IN KANSAS AND NEBRASKA, 1896 TO 1909.

T. 7 N., R. 25 W., southeast corner of sec. 13; iron post stamped "SIDNEY 2527"	Feet. 2,526.900
T. 7 N., R. 25 W., southeast corner of sec. 15; iron post stamped "SIDNEY 2636"	2,635.898
T. 7 N., R. 26 W., southeast corner of sec. 12; iron post stamped "SIDNEY 2674"	2,673.852
T. 7 N., R. 26 W., southeast corner of sec. 17; iron post stamped "SIDNEY 2650"	2,650.135
T. 7 N., R. 27 W., south side of sec. 11, on wagon road at divide between Mitchell and Medicine Creek canyons; iron post stamped "SIDNEY 2705"	2,704.661
Ingham, 293 feet west of center of railroad water tank, 318.5 feet east of center of bridge 28, 114.5 feet at right angles from center of main track; iron post stamped "SIDNEY" 2679	2,678.796
T. 7 N., R. 27 W., near northeast corner of sec. 4, on wagon road between Moorefield and Stockville; iron post stamped "SIDNEY 2671"	2,671.369
T. 7 N., R. 27 W., sec. 24, on wagon road at divide between Mitchell and Medicine creeks; iron post stamped "SIDNEY 2677"	2,677.083
T. 7 N., R. 27 W., north side of sec. 30; iron post stamped "SIDNEY 2638"	2,637.513
Stockville courthouse; iron post stamped "SIDNEY 2482"	2,482.451
T. 7 N., R. 28 W., SW. $\frac{1}{4}$ sec. 11; iron post stamped "SIDNEY 2733"	2,732.561
T. 8 N., R. 26 W., quarter corner on south side of sec. 10; iron post stamped "SIDNEY 2818"	2,817.937
Farnam, in front of railroad station; iron post stamped "SIDNEY 2729"	2,729.024
T. 8 N., R. 26 W., NE. $\frac{1}{4}$ sec. 3, in foundation of Curtis ranch house; aluminum tablet stamped "SIDNEY 2770"	2,769.851
T. 8 N., R. 24 W., near northeast corner of sec. 2, on line between Frontier and Dawson counties; iron post stamped "SIDNEY 2743"	2,742.590
T. 8 N., R. 25 W., south side of sec. 12, on Chicago, Burlington & Quincy R. R.; iron post stamped "SIDNEY 2687"	2,687.468
Eustis, water tank at railroad station; aluminum tablet stamped "SIDNEY 2624"	2,623.729
T. 8 N., R. 25 W., sec. 3, on Chicago, Burlington & Quincy R. R.; iron post stamped "SIDNEY 2691"	2,691.325
T. 8 N., R. 27 W., southwest corner of sec. 15; iron post stamped "SIDNEY 2767"	2,767.453
T. 8 N., R. 28 W., sec. 2, at ranch house in Curtis Canyon; iron post stamped "SIDNEY 2625"	2,624.743
T. 9 R., R. 28 W., NE. $\frac{1}{4}$ sec. 25, in Curtis Canyon; iron post stamped "SIDNEY 2678"	2,677.749
Moorefield, in park, 50 feet east and 26 feet south of east end of station, at right angles from center line of main track; iron post stamped "2826 SIDNEY"	2,825.848
Curtis, in park, 50 feet east and 26 feet south of east end of station, at right angles from center line of main track; iron post stamped "2560 SIDNEY"	2,560.071
T. 9 N., R. 28 W., north side of sec. 12, on wagon road down Curtis Canyon; iron post stamped "SIDNEY 2738"	2,738.086
T. 9 N., R. 27 W., sec. 34, on wagon road from Moorefield to Hill's ranch, near township line; iron post stamped "SIDNEY 2851"	2,850.925
T. 9 N., R. 27 W., sec. 15, quarter mile northwest of Hill's ranch; iron post stamped "SIDNEY 2741"	2,740.581

T. 10 N., R. 28 W., NE. $\frac{1}{4}$ sec. 12, at head of Curtis Canyon; iron post stamped "SIDNEY 2934".....	Feet. 2,934.167
T. 10 N., R. 27 W., SE. $\frac{1}{4}$ sec. 20, near Beerley's house; iron post stamped "SIDNEY 2850".....	2,850.082
T. 10 N., R. 27 W., NE. $\frac{1}{4}$ sec. 5, on wagon road at head of Conroy Canyon; iron post stamped "SIDNEY 2989".....	2,989.333
T. 11 N., R. 28 W., NE. $\frac{1}{4}$ sec. 36, at Abercrombie's windmill; iron post stamped "SIDNEY 2876".....	2,876.072
T. 11 N., R. 28 W., NE. $\frac{1}{4}$ sec. 1; iron post stamped "SIDNEY 2769".....	2,768.897
T. 11 N., R. 27 W., near north side of sec. 29, near Norlander's ranch; iron post stamped "SIDNEY 2802".....	2,801.839
T. 11 N., R. 27 W., NW. $\frac{1}{4}$ sec. 9, on small hill east of road up Conroy Canyon; iron post stamped "SIDNEY 2743".....	2,742.566
T. 12 N., R. 27 W., NW. $\frac{1}{4}$ sec. 34, 0.5 mile north of Ericson's ranch; iron post stamped "SIDNEY 2665".....	2,664.534



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