

DEPARTMENT OF THE INTERIOR  
UNITED STATES GEOLOGICAL SURVEY  
GEORGE OTIS SMITH, DIRECTOR

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BULLETIN 486

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# RESULTS OF SPIRIT LEVELING IN COLORADO

1896 TO 1910, INCLUSIVE

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R. B. MARSHALL, CHIEF GEOGRAPHER



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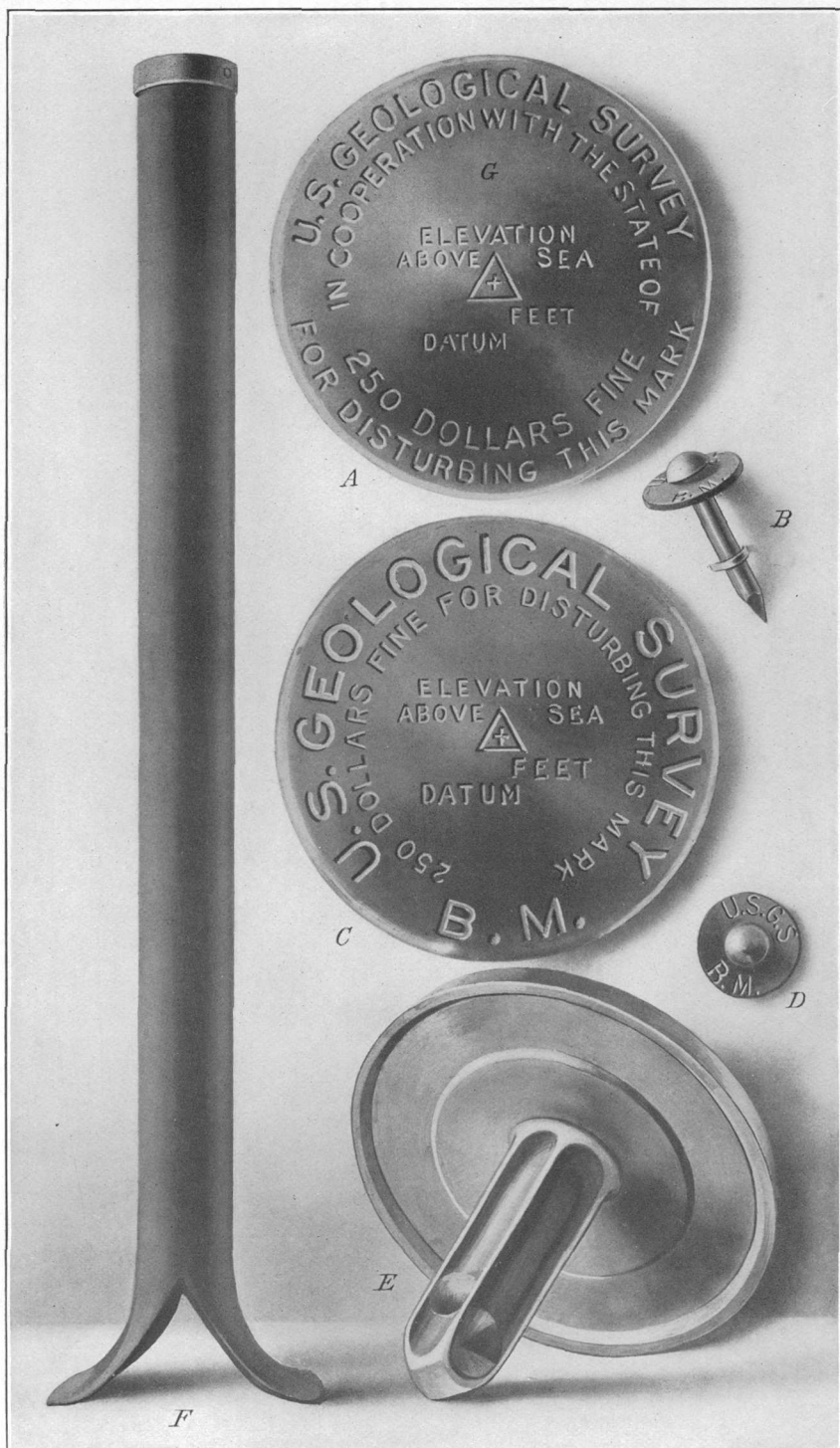
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GEOLOGICAL SURVEY BENCH MARKS.

*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 COLORADO, 1896 TO 1910, INCLUSIVE.

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R. B. MARSHALL, Chief Geographer.

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## INTRODUCTION.

*Scope of the work.*—All results of spirit leveling in Colorado previously published by the United States Geological Survey and all the results of later work are included in this report, rearranged by quadrangles. Nearly all elevations are based on preliminary 1911 adjustment heights of bench marks along the precise level lines of the Coast and Geodetic Survey from Colorado Springs, Colo., via Denver to Laramie, Wyo., and on Coast and Geodetic Survey precise bench marks near Albuquerque, N. Mex., connection having been made by precise and primary leveling of the United States Geological Survey.

*Personnel.*—The field work from 1896 to 1906, inclusive, was done under the general direction of E. M. Douglas, geographer; that for 1907 to 1909, inclusive, under E. C. Barnard, geographer; and the later work under Sledge Tatum, geographer, under the general direction of R. B. Marshall, chief 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.*—The elevations are classified as precise or primary, according to the methods employed in their determination. For precise-level lines instruments and rods of the highest grade are used, each line is run in both forward and backward directions, and every precaution is taken to guard against error. The allowable divergence between the forward and the backward lines in feet is represented by the formula  $0.017\sqrt{D}$ , in which  $D$  is the distance in miles between bench marks. 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 both classes careful office adjustments are made, the small outstanding errors being distributed over the lines. Orthometric corrections have been applied in determining the following elevations.

*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-fourth 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 after being split at the bottom and expanded 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 of an inch in diameter.

The tablets, as well as the caps on the iron posts, are appropriately lettered, and State cooperation 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 tides and winds 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<sup>\*</sup> marks in certain areas that lie at some distance from the seacoast 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 of 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 Colorado, have been published by the United States Geological Survey up to May 6, 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.:

Abajo (Utah-Colo.).	Denver (double sheet). <sup>2</sup> 10 cents.
Albany (Colo.-Kans.).	Durango. <sup>3</sup>
Anthracite.	* East Denver. <sup>2</sup>
Apishapa.	East Tavaputs (Utah-Colo.).
* Arkansas River drainage basin.	Eaton.
Arroyo.	Elmoro.
Ashley (Utah-Colo.).	Encampment special (Wyo.-Colo.).
Aspen.	Engineer Mountain.
Aspen special.	Fort Collins. <sup>4</sup>
Big Springs.	Georgetown.
Blackhawk. <sup>1</sup>	Granada (Colo.-Kans.).
Boulder.	Grand Hogback.
Breckenridge special.	Greeley.
Canon City.	Higbee.
Castle Rock.	Huerfano Park.
Catlin.	Idaho Springs special.
Central City.	Ignacio.
Central City special.	Jensen (Utah-Colo.).
Cheyenne Wells (Colo.-Kans.).	Kit Carson.
Colorado Springs.	Lake City.
Crested Butte.	Lamar.
Cripple Creek special.	La Plata.
Danforth Hills.	La Sal (Utah-Colo.).

\* Out of print.

<sup>1</sup> Shows wooded areas.

<sup>2</sup> Denver double sheet includes East Denver sheet and the results of surveys of about half the similar quadrangle next west.

<sup>3</sup> Durango sheet, on scale of 1:62500, has been reduced and forms part of Ignacio sheet, on scale of 1:125000.

<sup>4</sup> Fort Collins sheet, on scale of 1:62500, has been reduced and forms part of Livermore sheet, on scale of 1:125000.



Las Animas.  
Leadville.  
Leadville special.  
Limon.  
Livermore.<sup>1</sup>  
Loveland.  
Medicine Bow (Wyo.-Colo.).  
Mesa de Maya.  
Mount Carrizo.  
Mount Olympus.  
Needle Mountains.  
Nepesta.  
Niwot.  
Ouray.  
Pikes Peak.  
Pikes Peak special. 10 cents.  
Platte Canyon.  
Pueblo.

Rangely.  
Rico.  
Rico special.  
Sanborn.  
San Cristobal.<sup>2</sup>  
Silver Plume special.  
Silverton.  
Spanish Peaks.  
Springfield.  
Telluride.  
Tenmile district special.  
Timpas.  
Two Butte.  
Uncompahgre.  
Vilas (Colo.-Kans.).  
Walsenburg.  
White River.

### PRECISE LEVELING.

Cameo, Como, Delta, Denver, Eagle, Glenwood Springs, Grand Junction, Hotchkiss, Leadville, Montrose, Mount Powell, Platte Canyon, and Rifle quadrangles.

ARAPAHOE, DELTA, DOUGLAS, EAGLE, GARFIELD, JEFFERSON, LAKE, MESA, MONTROSE, OURAY, PARK, AND SUMMIT COUNTIES.

The elevations in this list are based on a bench mark of the Coast and Geodetic Survey near Denver, Colo., described as follows: "Petersburg, 1 mile north of, bottom of a chiseled square on second step of northeast abutment of the Denver & Rio Grande Railroad bridge." Its elevation is accepted as 5,281.101 feet by the preliminary adjustment of 1911.

The leveling was done in 1908 by C. H. Semper.

### DENVER QUADRANGLE.

Denver via Denver & Rio Grande R. R. to Acequia, thence west along road and Colorado & Southern Ry. to Platte Canyon.

Petersburg, 1 mile north of, on second step from top of north stone abutment of Denver & Rio Grande R. R. bridge, east of track; bottom of chiseled square (Coast and Geodetic Survey bench mark)	Feet. 5,281.101
Littleton, 1.09 miles north of, on top step, east side of south abutment of railroad bridge; bottom of chiseled hole	5,327.43
Littleton, Denver & Rio Grande R. R. station, in the end of a copper bolt in stone; intersection of cross (Coast and Geodetic Survey bench mark)	5,362.076
Wolhurst, opposite station; top of rail	5,404.9
Wolhurst, 1,075 feet south of, in top of retaining wall at south end of railroad culvert west of track; aluminum tablet stamped "5409"	5,407.820

<sup>1</sup> Fort Collins sheet, on scale of 1:62500, has been reduced and forms part of Livermore sheet, on scale of 1:125000.

<sup>2</sup> Shows wooded area.

Acequia, 0.5 mile north of, on top of northeast end of retaining wall for railroad culvert; chiseled square, lettered	Feet.
U S } (Coast and Geodetic Survey bench mark)-----	5, 503. 637 C. S.
□	
B M }	5, 503. 457 G. S.
Acequia, 0.91 mile northwest of, in root of poplar tree north of road, between Denver & Rio Grande R. R. and Colorado & Southern Ry., at three corners; spike-----	5, 411. 73
Willard, 1.14 miles north of, 100 feet east of track, in southwest abutment of highway bridge; aluminum tablet stamped "5404"-----	5, 402. 849
Willard, 1.71 miles south of, in northeast abutment of culvert; aluminum tablet stamped "5455"-----	5, 454. 460

## PLATTE CANYON QUADRANGLE.

## Platte Canyon along Colorado &amp; Southern Ry. to Bailey.

Platte Canyon, in front of station; top of rail-----	Feet. 5, 509. 4
Platte Canyon, 1.04 miles south of, 25 feet west of track, 3 feet north of telegraph pole, at north end of trestle 1037, in granite outcrop; aluminum tablet stamped "5544"-----	5, 542. 865
Platte Canyon, 2.10 miles south of, 210 feet north of head gate in Platte River, 5 feet west of track, on top of large boulder; square, marked "U. S. 5592 B. M."-----	5, 591. 452
Platte Canyon, 3.72 miles south of, in top of wing wall of southwest abutment of steel bridge over Platte River; aluminum tablet stamped "5671"-----	5, 670. 247
Mill Gulch, in front of signboard; top of rail-----	5, 686. 4
Strontia Springs, 1.52 miles north of, 15 feet east of track, on boulder; point in square marked "U. S. B. M. 5736"-----	5, 735. 600
Strontia Springs, 0.67 mile north of, east of track, on boulder; point in square marked "U. S. B. M. 5798"-----	5, 796. 859
Strontia Springs, in front face of Strontia Springs Hotel; aluminum tablet stamped "5864"-----	5, 862. 971
Strontia Springs, 1.24 miles south of, west of track, on boulder; point in square marked "U. S. B. M. 5994"-----	5, 993. 710
Strontia Springs, 2.25 miles south of, west of track, on boulder; point in square marked "U. S. B. M. 6087"-----	6, 086. 342
South Platte, in front of station; top of rail-----	6, 093. 1
South Platte, 160 feet south of, at west edge of park fence, in boulder; aluminum tablet stamped "6094"-----	6, 093. 369
South Platte, 1.12 miles south of, west of track at small flume crossing river, on rock; point in square marked "U. S. B. M. 6138"-----	6, 137. 666
Dome Rock, 900 feet north of, west of track, on rock; point in square marked "U. S. B. M. 6208"-----	6, 207. 230
Dome Rock, in front of station; top of rail-----	6, 215. 8
Dome Rock, 800 feet south of, in top of front foundation of water tank; aluminum tablet stamped "6229"-----	6, 228. 791
Dome Rock, 1.05 miles south of, west of track, on rock; point in square marked "U. S. B. M. 6266"-----	6, 265. 835
Dome Rock, 2.28 miles south of, 60 feet west of track, in small flat, on large boulder; point in square marked "U. S. B. M. 6359"---	6, 358. 760

	Feet.
Stone, 204 feet south of signboard, in west side of stone abutment of culvert; aluminum tablet stamped "6425"-----	6,424.449
Petershead, in front of station sign; top of rail-----	6,485.9
Petershead, 120 feet south of, 6 feet east of track, on large granite boulder; point in square marked "U. S. B. M. 6488"-----	6,487.215
Ferndale, 1,100 feet north of, 12 feet west of track, in granite outcrop; aluminum tablet stamped "6539"-----	6,538.618
Ferndale, in front of signboard; top of rail-----	6,548.7
Ferndale, 0.57 mile south of, west of track, in boulder; point in square marked "U. S. B. M. 6596"-----	6,595.111
Riverview, in front of signboard; top of rail-----	6,604.0
Buffalo, in front of station; top of rail-----	6,629.7
Buffalo, in front face of J. W. Green's store; aluminum tablet stamped "6634"-----	6,633.377
Buffalo, 1 mile west of, north of track, on rock; point in square marked "U. S. B. M. 6680"-----	6,678.976
Pine Grove, in front of station; top of rail-----	6,754.4
Pine Grove, 295 feet west of station, 80 feet north of track, in east corner stone of fence around Columbine Cottage; aluminum tablet stamped "6766"-----	6,765.436
Crystal Lake, in front of signboard; top of rail-----	6,762.9
Crystal Lake, 0.46 mile west of, north of track, on rock; point in square marked "U. S. B. M. 6789"-----	6,788.726
Carla, in front of signboard; top of rail-----	6,844.5
Carla, 0.29 mile west of, north of track, on rock; point in square marked "U. S. B. M. 6854"-----	6,853.439
Glenmore Lakes, in front of signboard; top of rail-----	6,880.5
Cliff, 950 feet north of, 6 feet east of track, in top of large boulder; aluminum tablet stamped "6916"-----	6,915.470
Cliff, in front of station; top of rail-----	6,923.4
Cliff, 1.66 miles west of, south of track, on rock; point in square marked "U. S. B. M. 7068"-----	7,067.337
Crosson, in front of signboard; top of rail-----	7,071.4
Crosson, 15 feet north of track, 150 feet north of milepost 49, in boulder; aluminum tablet stamped "7236"-----	7,235.619
Crosson, 1.22 miles west of, on top of retaining wall of northeast abutment of steel bridge over Platte River; square marked "U. S. B. M. 7388"-----	7,387.522
Crosson, 2.27 miles west of, 150 feet east of milepost 51, south of track, on rock: point in square marked "U. S. B. M. 7529"-----	7,528.400
Estabrook, 1,800 feet west of, in southeast abutment of steel bridge over river; aluminum tablet stamped "7572"-----	7,571.743
Insmont, 650 feet east of, 160 feet west of milepost 53, north of track, on outcrop of rock; point in square marked "U. S. B. M. 7660"-----	7,659.580
Insmont, in front of station; top of rail-----	7,660.5
Fairview, in front of station; top of rail-----	7,689.5
Fairview, 700 feet west of, north of track, on boulder; point in square marked "U. S. B. M. 7693"-----	7,692.488
Bailey, in front of station; top of rail-----	7,729.9
Bailey, 620 feet west of station, 50 feet south of track, 20 feet east of small bridge over Platte River, in granite outcrop; aluminum tablet stamped "7733"-----	7,732.300

## COMO QUADRANGLE.

Bailey west along Colorado &amp; Southern Ry. to Bakers Tank.

	Feet.
Bailey, 1.13 miles west of, on top of bolt in top of northwest bent of bridge 1081; point in square marked "U. S. B. M. 7794"-----	7, 793. 2
Glenisle, in front of station; top of rail-----	7, 830. 9
Grousemont, in front of station; top of rail-----	7, 925. 2
Grousemont, 40 feet west of station, 30 feet north of track, in large bowlder; aluminum tablet stamped "7931"-----	7, 930. 200
Maddox, in front of signboard; top of rail-----	7, 989. 9
Altruria, in front of signboard; top of rail-----	8, 022. 6
Shawnee, in front of station; top of rail-----	8, 065. 7
Shawnee, 325 feet west of station, 20 feet south of track, in large bowlder; aluminum tablet stamped "8066"-----	8, 066. 1
Boxwood Spur, in front of station sign; top of rail-----	8, 184. 6
Boxwood Spur, 0.32 mile west of, north of track, in base of whistle post; spike marked "U. S. B. M. 8206"-----	8, 206. 0
Long Meadow, in front of signboard; top of rail-----	8, 239. 0
Kline, 40 feet east of station signboard south of track, on rock; point in square marked "U. S. B. M. 8287"-----	8, 286. 612
Chase, in front of station; top of rail-----	8, 351. 7
Chase, 290 feet west of, 50 feet south of track, in large bowlder; aluminum tablet stamped "8361"-----	8, 360. 315
Cassells, 130 feet west of station, at cattle guard, south of track, on rock; point in square marked "U. S. B. M. 8423"-----	8, 422. 97
Cassells, in front foundation of Cassells Hotel; aluminum tablet stamped "8445"-----	8, 445. 146
Cassells, 1.30 miles west of, north of track, 15 feet south of road, on rock; point in square marked "U. S. B. M. 8505"-----	8, 504. 33
Grant, in front of station; top of rail-----	8, 575. 0
Grant, 0.18 mile west of, 5 feet north of track, 20 feet south of road, at east end of cut, in bowlder; aluminum tablet stamped "8591"-----	8, 590. 444
Grant, 1.52 miles west of, south of track, on rock; point in square marked "U. S. B. M. 8769"-----	8, 768. 68
Webster, 0.01 mile west of station, 20 feet south of track, 15 feet west of wooden bridge, in bowlder; aluminum table stamped "9020"-----	9, 019. 778
Webster, 0.96 mile west of, 15 feet north of track, 80 feet west of bridge, on rock; point in square marked "U. S. B. M. 9180"-----	9, 179. 90
Hoosier, 1.17 miles east of, 65 feet east of road crossing, 5 feet north of track, in cut; aluminum tablet stamped "9541"-----	9, 541. 016
Hoosier, 1.07 miles west of, 425 feet east of milepost 75, 25 feet south of track, on rock at base of telegraph pole; point in square marked "U. S. B. M. 9843"-----	9, 843. 32
Kenosha, in front of station; top of rail-----	9, 990. 4
Kenosha, 120 feet east of east corner of station, 100 feet west of north corner of section house, 140 feet north of track, in granite outcrop; aluminum tablet stamped "9992"-----	9, 991. 698
Kenosha, 0.85 mile west of, 250 feet west of milepost 77, north of track, on rock; point in square marked "U. S. B. M. 9834" (should be marked "9857")-----	9, 857. 09
Kenosha, 2.54 miles west of, 20 feet north of track, 65 feet south of fence, 160 feet west of cattle guard, in bowlder; aluminum tablet stamped "9587"-----	9, 586. 826

	Feet.
Jefferson, in front of station; top of rail-----	9, 507. 6
Jefferson, northwest corner of front face of schoolhouse; aluminum tablet stamped "9500"-----	9, 499. 903
Michigan, 225 feet south of track, in front foundation of C. E. Whitten's ranch house; aluminum tablet stamped "9504"-----	9, 503. 803
Michigan, in front of signboard; top of rail-----	9, 514. 9
Como, in front of station; top of rail-----	9, 794. 9
Como, in front face of railroad hotel, southwest corner; aluminum tablet stamped "9796"-----	9, 796. 333
Como, 1.07 miles west of, north of track, on bowlder; point in square marked "U. S. B. M. 9908"-----	9, 908. 20
Como, 2.09 miles west of, south of track, on bowlder; point in square marked "U. S. B. M. 9996"-----	9, 996. 33
Peabodys, 20 feet west of signboard, 12 feet south of track, in large rock, aluminum tablet stamped "10097"-----	10, 097. 587
Peabodys, 1 mile northwest of, west of track, on rock; point in square marked "U. S. B. M. 10284"-----	10, 284. 213
Halfway, 0.10 mile west of station, 160 feet east of milepost 94, 15 feet west of old water tank, 15 feet north of track, in granite outcrop; aluminum tablet stamped "10577"-----	10, 577. 457
Halfway, 1 mile northwest of, 150 feet north of milepost 95, 15 feet east of track, on rock; point in square marked "U. S. B. M. 10766"-----	10, 765. 77
Halfway, 3.22 miles northwest of, 95 feet west of snowshed, 35 feet north of track, 0.14 mile west of milepost 97; aluminum tablet stamped "11176"-----	11, 176. 625
Boreas, in front of station; top of rail-----	11, 489. 27
Boreas, 350 feet west of station, 65 feet southeast of west end of snowshed, in top of granite bowlder; aluminum tablet stamped "11482"-----	11, 482. 786
Farnham, 0.74 mile northwest of, east of track, on bowlder; point in square marked "U. S. B. M. 11133"-----	11, 133. 05
Dwyer, in front of signboard; top of rail-----	11, 096. 7
Bakers Tank, 0.06 mile northwest of, 115 feet northwest of water tank, 15 feet east of track, in outcrop of red stone; aluminum tablet stamped "10860"-----	10, 860. 483
Bakers Tank, 1.06 miles northwest of, 200 feet northwest of sign reading "1 mile to water tank," east of track, on rock; point in square marked "U. S. B. M. 10692"-----	10, 692. 38

## LEADVILLE QUADRANGLE.

## Argentine along Colorado &amp; Southern Ry. to Leadville.

Argentine, in front of signboard; top of rail-----	10, 603. 8
Argentine, 0.46 mile northwest of, 160 feet southeast of milepost 104, east of track, on rock; point in square marked "U. S. B. M. 10545"-----	10, 545. 10
Pittsburg, in front of signboard; top of rail-----	10, 337. 2
Pittsburg, 353 feet northwest of signboard, west of track, on rock; point in square marked "U. S. B. M. 10326"-----	10, 326. 51
Washington, 300 feet northwest of signboard, 5 feet north of rail, in granite bowlder; aluminum tablet stamped "10231"-----	10, 231. 100
Breckenridge, 3.10 miles southeast of, north of track, on rock; point in square marked "U. S. B. M. 10053"-----	10, 053. 60

Breckenridge, 2.13 miles southeast of, north of track, on rock; point in square marked "U. S. B. M. 9883"-----	Feet. 9, 883. 20
Breckenridge, 1.80 miles south of, 350 feet south of track, 150 feet south of siding, east of public road, in large granite boulder; aluminum tablet stamped "9844"-----	9, 844. 537
Puzzle, in front of signboard; top of rail-----	9, 803. 8
Breckenridge, in front of station; top of rail-----	9, 564. 7
Breckenridge, in front face of H. C. Finding's store; aluminum tablet stamped "9577"-----	9,577. 282
Wheeler, 1.50 miles southwest of, east of track, point on rock marked "U. S. B. M. 10002"-----	10, 001. 43
Johnson, in front of signboard; top of rail-----	10, 044. 18
Harrison, in front of signboard; top of rail-----	10, 194. 8
Harrison, 0.17 mile southwest of, 270 feet north of milepost 129, 400 feet southwest of culvert 1332, 30 feet west of track, in granite boulder; aluminum tablet stamped "10226"-----	10, 226. 133
Wilder, in front of signboard; top of rail-----	10, 258. 9
Wilder, 1.25 miles southwest of, east of track, on boulder; point in square marked "U. S. B. M. 10375"-----	10, 374. 56
Kokomo, 0.72 mile north of, east of track, on rock; point in square marked "U. S. B. M. 10494"-----	10,494. 36
Kokomo, 160 feet north of, north end of snowshed, 15 feet east of track, in large granite boulder; aluminum tablet stamped "10618"-----	10, 618. 392
Robinson, in front of signboard; top of rail-----	10, 855. 2
Robinson, 0.95 mile south of station, 100 feet west of Colorado & Southern Ry. track, 120 feet east of Denver & Rio Grande R. R. track, 50 feet northwest of miner's abandoned cabin, 15 feet west of old mine shaft, in flat granite boulder; aluminum tablet stamped "11003"-----	11, 003. 114
Buffer, 30 feet north of signboard, 8 feet east of track, on top of granite boulder; point in square marked "U. S. B. M. 11146"---	11, 146. 15
Buffer, in front of signboard; top of rail-----	11, 148. 25
Climax, 100 feet south of signboard, 25 feet east of main track, 8 feet north of telegraph pole, in top of granite boulder; aluminum tablet stamped "11320"-----	11, 320. 195
Climax, 1.06 miles south of, east of track, on rock; point in square marked "U. S. B. M. 11250"-----	11, 249. 84
Wortmans, 0.92 mile south of, 45 feet west of culvert 1352, south of track; point on rock marked "U. S. B. M. 11158"-----	11, 158. 41
Wortmans, 1.70 miles west of, 310 feet west of milepost 140, north of track; point on rock marked "U. S. B. M. 11082"-----	11, 081. 80
Wortmans, 2.65 miles west of, 40 feet west of sign "1 mile to water tank," 50 feet east of milepost 141, 15 feet north of track, in top of granite boulder; aluminum tablet stamped "10994"-----	10, 994. 319
French Gulch, 35 feet north of signboard, in west front stone foundation of water tank; chiseled square marked "U. S. B. M. 10901"-----	10, 900. 68
Birdseye, 1.21 miles north of, 1,050 feet north of milepost 143, east of track, south end of cut, on rock; point in square marked "U. S. B. M. 10783"-----	10, 783. 42
Birdseye, 40 feet north of signboard, 90 feet east of handcar house, 5 feet north of siding, in large granite boulder; aluminum tablet stamped "10673"-----	10, 672. 902

Birdseye, 0.68 mile south of, 350 feet west of milepost 145, 8 feet south of track; top of large boulder marked "U. S. B. M. 10611"	Feet. 10, 611. 41
Birdseye, 1.67 miles south of, east of track, 125 feet south of milepost 146, 165 feet north of sign "1 mile to water tank;" point on rock marked "U. S. B. M. 10522"	10, 522. 59
Birdseye, 2.73 miles south of, 300 feet south of milepost 147, in south foundation of water tank; aluminum tablet stamped "10416"	10, 416. 514
Birdseye, 3.6 miles south of, opposite milepost 148, 3 feet east of track, on rock; point in square marked "U. S. B. M. 10352"	10, 352. 47
Birdseye, 4.62 miles south of, opposite milepost 149, east of track, on rock; point in square marked "U. S. B. M. 10324"	10, 323. 81
Leadville, crossing of Colorado & Southern Ry. and Denver & Rio Grande R. R.; no record of mark, probably top of rail	10, 235. 5
Leadville, in front of Colorado & Southern R. R. station; top of rail	10, 207. 0
Leadville, southwest corner, front face of post office; aluminum tablet stamped "10153"	10, 153. 396
Leadville, southeast corner, front face of courthouse; aluminum tablet stamped "10140"	10, 140. 690

Leadville along Denver & Rio Grande R. R. to Pando.

Leadville, in front of Denver & Rio Grande R. R. station; top of rail	10, 184. 4
Leadville, 0.65 mile west of Denver & Rio Grande R. R. station, 370 feet east of sign "Leadville 1 mile," north of track, on rock; point in square marked "U. S. B. M. 10101"	10, 101. 02
Leadville, 1.99 miles west of, 90 feet east of wooden box culvert, 850 feet east of milepost 278, north of track, on rock; point in square marked "U. S. B. M. 9909"	9, 909. 21
Leadville Junction, in front of station; top of rail	9, 744. 5
Leadville Junction, 0.28 mile north of, 50 feet south of east end of wooden bridge, 30 feet south of road, 5 feet south of fence, 10 feet east of Tennessee River, in top of granite boulder; aluminum tablet stamped "9755"	9, 755. 537
Keeldar, opposite milepost 277, 45 feet west of track, 75 feet north-west of switch stand, south end of siding, east of fence, in granite boulder; aluminum tablet stamped "9936"	9, 936. 051
Keeldar, in front of signboard; top of rail	9, 958. 6
Tennessee Pass, in front of station; top of rail	10, 218. 8
Tennessee Pass, 430 feet north of station, in north foundation stone of water tank; aluminum tablet stamped "10223"	10, 222. 788
Mitchell, in front of signboard; top of rail	9, 914. 6
Mitchell, 915 feet north of signboard, 600 feet south of milepost 284, west of track, in granite boulder; aluminum tablet stamped "9890"	9, 890. 112
Mitchell, 3.25 miles north of, 175 feet south of milepost 287, west of track, in face of granite boulder; aluminum tablet stamped "9415"	9, 415. 205
Pando, 2.27 miles north of, 80 feet south of milepost 291, in south-west abutment of bridge 290-B over Eagle River; aluminum tablet stamped "9042"	9, 042. 234

## MOUNT POWELL QUADRANGLE.

## Bartholomew along Denver &amp; Rio Grande R. R. to Minturn.

	Feet.
Bartholomew, in front of signboard; top of rail-----	9, 378. 8
Breckenridge, 2.03 miles northwest of, on northwest abutment of steel bridge over river; center of square marked "U. S. B. M. 9534"-----	9, 354. 08
Braddock, in front of signboard; top of rail-----	9, 241. 2
Dickey, 340 feet south of station, in front face of stone pump house; aluminum tablet stamped "9009"-----	9, 008. 786
Dickey, 2.12 miles southwest of, at southeast end of bridge 1324, south bank of creek, on large granite boulder; point in square marked "U. S. B. M. 9121"-----	9, 120. 40
Frisco, 45 feet southeast of station, 30 feet east of track, in face of large granite boulder; aluminum tablet stamped "9097"-----	9, 096. 777
Frisco, in front of station; top of rail-----	9, 097. 3
Curtin, in front of signboard; top of rail-----	9, 295. 9
Curtin, 0.99 mile southwest of, at aerial tramway, 20 feet west of track, 12 feet north of bunk house, in granite boulder; aluminum tablet stamped "9454"-----	9, 453. 784
Curtin, 4.12 miles southwest of, 45 feet east of water tank, 5 feet east of track, in granite boulder; aluminum tablet stamped "9739"-----	9, 739. 136
Red Cliff, in front of station; top of rail-----	8, 599. 6
Red Cliff, 160 feet north of station, 40 feet west of platform, 50 feet west of small tool house, 10 feet west of track; aluminum tablet stamped "8598"-----	8, 598. 224
Rock Creek, 0.22 mile north of, 45 feet north of milepost 297, 15 feet east of track, in face of cut; aluminum tablet stamped "8266"---	8, 265. 597
Minturn, 1.95 miles south of, 120 feet south of milepost 300, east of track, in top of concrete culvert; aluminum tablet stamped "7968"-----	7, 968. 044
Minturn, 0.05 mile south of station, east of track, in northwest corner, front face of section house; aluminum tablet stamped "7819"-----	7, 818. 865
Minturn, in front of station; top of rail-----	7, 814. 64
Minturn, 3.98 miles west of, 250 feet east of milepost 306, 20 feet south of track, in top of large granite boulder; aluminum tablet stamped "7571"-----	7, 570. 638

## EAGLE QUADRANGLE.

## Avon along Denver &amp; Rio Grande R. R. to Gypsum.

Avon, in front of station; top of rail-----	7, 455. 9
Avon, 1.16 miles west of, 550 feet west of milepost 309, north of track, south of fence, in top of granite boulder; aluminum tablet stamped "7379"-----	7, 378. 263
Avon, 2.88 miles west of, 900 feet east of milepost 311, 270 feet east of private road crossing to Frank Germon's farm, in top of large granite boulder; aluminum tablet stamped "7300"-----	7, 299. 326
Allenton, 80 feet east of signboard, 175 feet north of bridge over Eagle River, 60 feet south of track, in large granite boulder; aluminum tablet stamped "7135"-----	7, 134. 475



	Feet.
Allenton, in front of signboard; top of rail-----	7, 135. 3
Wolcott, 2.16 miles east of, 525 feet east of milepost 317, 160 feet northeast of northeast corner of wooden bridge over Eagle River, 25 feet south of track, 21 feet north of fence, in top of flat granite rock; aluminum tablet stamped "7041"-----	7, 040. 159
Wolcott, 1.06 miles east of, north of track, 120 feet east of milepost 318; point on rock marked "U. S. B. M. 6997"-----	6, 996. 00
Wolcott, in front of station; top of rail-----	6, 966. 1
Wolcott, 45 feet north of northeast corner of Eagle River Inn fence, 40 feet west of southwest corner of O. E. Smith's blacksmith shop, 100 feet south of southeast corner of wooden bridge over Eagle River, 5 feet east of road, in top of large granite boulder; aluminum tablet stamped "6955"-----	6, 954. 493
Sherwood, 1.68 miles west of, 20 feet west of track, 35 feet west of milepost 323, in top of flat granite boulder; aluminum tablet stamped "6864"-----	6, 863. 514
Ortega, 2.34 miles west of, 310 feet east of milepost 326, 15 feet south of track, 10 feet north of fence, in granite boulder; aluminum tablet stamped "6718"-----	6, 717. 190
Eagle, in front face of northwest corner of Eagle Club building; aluminum tablet stamped "6602"-----	6, 601. 242
Eagle, in front of station; top of rail-----	6, 590. 0
Eagle, 2.75 miles west of, 250 feet south of track at crossroads, in northwest corner of Mr. Shirley R. Tuck's house; aluminum tablet stamped "6493"-----	6, 491. 986
Gypsum, east side of front steps of schoolhouse, on top of third step; aluminum tablet stamped "6334"-----	6, 333. 141
Gypsum, 2.16 miles west of, south of track, 80 feet south of milepost 338, 25 feet north of fence, in top of flat granite boulder; aluminum tablet stamped "6267"-----	6, 266. 023

#### GLENWOOD SPRINGS QUADRANGLE.

##### Dotsero along Denver & Rio Grande R. R. to New Castle.

Dotsero, 0.7 mile east of, 215 feet west of milepost 342, 90 feet south of track, 3 feet inside of fence, at east end of old wooden gate, in top of small granite boulder; aluminum tablet stamped "6162"-----	6, 161. 465
Dotsero, in front of signboard; top of rail-----	6, 157. 6
Dotsero, 1.3 miles west of, 130 feet east of milepost 344, south of track, in face of side rock cut; aluminum tablet stamped "6151"-----	6, 149. 860
Shoshone, 3.5 miles east of, 190 feet east of milepost 347, 10 feet north of track, in top of large granite boulder; aluminum tablet stamped "6132"-----	6, 131. 110
Shoshone, 0.5 mile east of, 75 feet west of milepost 350, 75 feet west of west end of tunnel, south of track, in rock cut; aluminum tablet stamped "6118"-----	6, 116. 936
Shoshone, in front of station; top of rail-----	6, 109. 4
Shoshone, 1.36 miles west of, 675 feet east of milepost 352, in west end of northwest stone abutment of bridge 351-A; aluminum tablet stamped "6057"-----	6, 056. 466
Shoshone, 4.52 miles west of, near east end of Grizzly spur, 12 feet north of side track, 275 feet east of milepost 355, in top of granite boulder; aluminum tablet stamped "5865"-----	5, 863. 932

	Feet.
Grizzly, in front of signboard, top of rail-----	5, 858. 7
Glenwood Springs, 2.2 miles east of, 210 feet west of milepost 358, 20 feet north of track, in top of large granite bowlder; aluminum tablet stamped "5785"-----	5, 783. 831
Glenwood Springs, 0.91 mile east of, north of track, at west end of tunnel, on rock; point in square marked "U. S. B. M. 5779"-----	5, 778. 25
Glenwood Springs, 400 feet west of station, 15 feet north of track, top of abutment of highway bridge over Grand River; marked point in square-----	5, 739. 70
Glenwood Springs, in front of station; top of rail-----	5, 747. 4
Glenwood Springs, in face of retaining wall at west end of station, 75 feet south of track; aluminum tablet stamped "5751"-----	5, 750. 416
Glenwood Springs, in face of stone column at main entrance of Colorado Hotel; aluminum tablet stamped "5764"-----	5, 763. 226
Glenwood Springs, north side of Grand River, 40 feet west of bath house No. 3, in west end of retaining wall of highway; copper plug stamped "5728.3" (Central Colorado Power Co. bench mark) -----	5, 740. 379
Glenwood Springs, 2.66 miles west of, 115 feet east of large yellow barn with red roof, in top of northeast corner of railroad culvert; aluminum tablet stamped "5707"-----	5, 706. 476
Glenwood Springs, 3.75 miles west of, north of trail, at foot of milepost 364; point on rock-----	5, 688. 36
Chacra, 2.2 miles east of, north of track, 70 feet east of milepost 366, in face of large granite bowlder; aluminum tablet stamped "5654"-----	5, 652. 927
New Castle, 3.65 miles east of, 80 feet west of milepost 369, north of track, in top of large granite bowlder; aluminum tablet stamped "5613"-----	5, 611. 819

## RIFLE QUADRANGLE.

New Castle along Denver &amp; Rio Grande R. R. to Grand Valley.

New Castle, 1,480 feet east of station, in top of east side of north abutment of Colorado Midland Ry. bridge; bronze tablet stamped "5552"-----	5, 551. 074
New Castle, in front of station; top of rail (Colorado Midland Ry. track)-----	5, 551. 0
West New Castle, in front of station sign; top of rail-----	5, 544. 6
NOTE.—The Colorado Midland Ry. and the Denver & Rio Grande R. R. use the same track from this point west.	
New Castle, 2.95 miles west of, 225 feet east of milepost "NC-No. 3," 40 feet north of west end of railroad bridge 2-A, 40 feet north of track, 5 feet east of gate leading to ranch, at corner of fence, in top of rock; aluminum tablet stamped "5542"-----	5, 541. 777
Silt, in front of station; top of rail-----	5, 432. 0
Silt, in southeast corner of front face of foundation of section house; aluminum tablet stamped "5434"-----	5, 432. 669
Silt, 2.24 miles west of, 60 feet west of milepost "NC-No. 9," north of track, 25 feet below tracks, in top of wing wall of arch cul- vert; aluminum tablet stamped "5394"-----	5, 392. 819

Rifle, 2.66 miles east of, 12 feet north of track, 0.32 mile west of milepost "NC-No. 11," in top of concrete railroad culvert; aluminum tablet stamped "5362"-----	Feet. 5, 361. 159
Rifle, in front of station; top of rail-----	5, 299. 3
Rifle, 35 feet north of west end of Denver & Rio Grande R. R. station, in top of concrete manhole at margin of highway; aluminum tablet stamped "5302"-----	5, 300. 876
Rifle, 3.11 miles west of, 575 feet west of milepost "NC-No. 17," 155 feet west of railroad bridge 17-A, 10.3 feet north of north rail, in top of small bowlder; aluminum tablet stamped "5263"-----	5, 261. 659
Lacy, 1.2 miles west of, 40 feet north of milepost "NC-No. 20," 50 feet north of track, at south margin of fence, in top of sandstone rock; aluminum tablet stamped "5214"-----	5, 212. 831
Morris, in front of station; top of rail-----	5, 203. 5
Morris, 0.5 mile west of, 30 feet north of tracks, 25 feet south of fence, 215 feet east of small log cabin, in top of large granite bowlder; aluminum tablet stamped "5202"-----	5, 200. 661
Grand Valley, 6.07 miles east of, 1,115 feet west of milepost "NC-No. 25," 11.5 feet north of track, in center of coping stone of railroad culvert; aluminum tablet stamped "5165"-----	5, 163. 653

## CAMEO QUADRANGLE.

## Grand Valley along Denver &amp; Rio Grande R. R. to Grand Junction.

Grand Valley, 2.25 miles east of, 235 feet west of milepost "NC-No. 29," 30 feet south of track, 20 feet north of fence, 185 feet east of railroad bridge 29-A, in top of granite bowlder; aluminum tablet stamped "5118"-----	5, 117. 372
Grand Valley, 2 miles east of, 12 feet north of track, in top of foundation of pillar of water tank; bronze tablet stamped "5095"-----	5, 094. 405
Grand Valley, in front of station; top of rail-----	5, 094. 0
Grand Valley, 2.4 miles west of, north of west end of railroad bridge 33-B, in top of flat granite bowlder; aluminum tablet stamped "5031"-----	5, 030. 260
Una, in front of station; top of rail-----	5, 015. 6
Una, 1 mile west of, opposite milepost "NC-No. 37," 55 feet south of track, 50 feet north of fence, in top of granite bowlder; aluminum tablet stamped "5024"-----	5, 022. 756
De Beque, 2.78 miles east of, 360 feet west of milepost "NC-No. 41," 40 feet south of track, in top of sandstone rock; aluminum tablet stamped "4962"-----	4, 961. 401
De Beque, in front of station; top of rail-----	4, 935. 1
De Beque, 3.11 miles west of, 200 feet west of milepost "NC-No. 47," in top of stone culvert; aluminum tablet stamped "4959"-----	4, 957. 792
Akin, 0.1 mile west of, 85 feet northeast of milepost "NC-No. 51," 75 feet north of main track, in face of large granite bowlder; aluminum tablet stamped "4835"-----	4, 833. 998
Akin, 2.1 miles west of, 110 feet east of milepost "NC-No. 53," 35 feet south of track on bank of river, in top of granite bowlder; aluminum tablet stamped "4833"-----	4, 831. 998
Tunnel, in front of station; top of rail-----	4, 807. 9

Tunnel, 1 mile west of, 80 feet west of west end of tunnel, 30 feet west of milepost "NC-No. 56," 6 feet north of track, in top of bottom foundation stone of old water tank; aluminum tablet stamped "4794" -----	Feet. 4, 793. 291
Tunnel, 4 miles west of, 20 feet east of milepost "NC-No. 59," 12 feet north of track, in face of granite boulder; aluminum tablet stamped "4773" -----	4, 772. 005
Palisade, 2.41 miles east of, 138 feet west of milepost "NC-No. 62," 20 feet north of track, in top of large boulder; aluminum tablet stamped "4742" -----	4, 741. 449
Palisade, in front of station; top of rail-----	4, 731. 2
Palisade, in front face of southwest corner of main entrance to Jordan Inn; aluminum tablet stamped, "4729"-----	4, 727. 709
Palisade, 3.95 miles west of, 0.45 mile west of milepost "NC-No. 68," 268 feet east of road crossing, 15 feet south of track, in top of railroad culvert; aluminum tablet stamped "4709"-----	4, 708. 058
Clifton, 1.11 miles west of, 600 feet west of milepost "NC-No. 71," north of track, in top of parapet wall around iron pipe; aluminum tablet stamped "4685"-----	4, 684. 584
Fruitvale, in front of signboard; top of rail-----	4, 652. 7

## GRAND JUNCTION QUADRANGLE.

## Grand Junction along Denver &amp; Rio Grande R. R. to Whitewater.

Grand Junction, 2.29 miles east of, on Teller Institute grounds, in west face of north end of brick barn; aluminum tablet stamped "4598" -----	4, 597. 478
Grand Junction, in front of station; top of rail-----	4, 574. 6
Grand Junction, at station, in front face of baggage room; aluminum tablet stamped "4579"-----	4, 577. 943
Grand Junction, in front face of southeast corner of Grand Valley National Bank; aluminum tablet stamped "4587"-----	4, 586. 525
Grand Junction, north side of Carnegie Library building; iron post stamped "4606.2" (Reclamation Service bench mark)-----	4, 595. 513
Grand Junction, 1.3 miles southeast of, 312 feet southeast of milepost "D-423," 20 feet north of railroad bridge 422-A, on rock; point in square marked "U. S. B. M."-----	4, 567. 28
Grand Junction, 3.22 miles southeast of, 40 feet southeast of milepost "D-421," 12 feet south of track, in top of granite boulder; aluminum tablet stamped "4587"-----	4, 586. 139
Grand Junction, 6.25 miles southeast of, 315 feet southeast of milepost "D-418," 50 feet east of track, in top of granite boulder; aluminum tablet stamped "4612"-----	4, 610. 635
Unaweep, in front of signboard; top of rail-----	4, 615. 8
Grand Junction, 9.16 miles southeast of, 70 feet northwest of milepost "D-415," west of track, in top of granite boulder; aluminum tablet stamped "4625"-----	4, 623. 936

## DELTA QUADRANGLE.

## Whitewater along Denver &amp; Rio Grande R. R. to Chipeta.

Whitewater, in front of station; top of rail-----	4, 644. 5
Whitewater, 25 feet southeast of east end of bridge; iron post stamped "4643"-----	4, 643. 197

Whitewater, 1.41 miles southeast of, 80 feet southeast of milepost "D-410," east of track, on rock; point in square marked "U. S. B. M. 4660"	Feet. 4, 658. 64
Whitewater, 2.38 miles southeast of, 75 feet north of milepost "D-409," 55 feet east of track, in top of large rock; aluminum tablet stamped "4662"	4, 661. 121
Kahnah, 1.96 miles southeast of, 125 feet southeast of milepost "D-406," 20 feet east of track, in top of large rock; aluminum tablet stamped "4675"	4, 674. 220
Deer Run, 0.9 mile southeast of, 45 feet west of milepost "D-402," 30 feet west of track, in top of large rock; aluminum tablet stamped "4694"	4, 692. 980
Deer Run, 3.89 miles southeast of, 200 feet southeast of milepost "D-399," east of track, in top of granite boulder; aluminum tablet stamped "4722"	4, 721. 142
Bridgeport, 0.32 mile northwest of, 145 feet southeast of milepost "D-398," 20 feet east of track, on rock; point in square marked "U. S. B. M. 4735"	4, 733. 83
Bridgeport, 1.61 miles southeast of, 90 feet east of milepost "D-396," 10 feet north of track, in top of granite boulder; aluminum tablet stamped "4750"	4, 749. 104
Dominguez, 1.95 miles northwest of, 115 feet northeast of milepost "D-393," 144 feet southeast of road crossing, 10 feet east of track, in top of granite boulder; aluminum tablet stamped "4770"	4, 768. 851
Dominguez, 50 feet east of milepost "D-391," 250 feet south of water tank; iron post stamped "4,788.4" (Reclamation Service bench mark)	4, 777. 715
Dominguez, 3.05 miles southeast of, 95 feet southeast of milepost "D-388," 32 feet south of track, in top of granite boulder; aluminum tablet stamped "4806"	4, 804. 977
Escalante, 0.18 mile northwest of, 515 feet west of milepost "D-385," 50 feet north of track, 950 feet west of Escalante siding, in top of granite boulder; aluminum tablet stamped "4826"	4, 825. 520
Escalante, 2.93 miles southeast of, 85 feet south of milepost "D-382," 12 feet east of track, in top of granite boulder; aluminum tablet stamped "4847"	4, 845. 725
Stratter, in front of signboard; top of rail	4, 859. 7
Roubideau, 0.44 mile northwest of, east of track, 40 feet south of milepost "D-378," on rock, point in square marked "U.S.B.M. 4874"	4, 873. 20
Roubideau, 25 feet north of track, opposite stock yard, 16 feet west of telephone box; iron post stamped "4903" (Reclamation Service bench mark)	4, 882. 41
Delta, 2.41 miles northwest of, 1,100 feet northwest of milepost "D-375," at south end of bridge; in top of east stone abutment; aluminum tablet stamped "4913"	4, 912. 638
Delta, 3 feet east of front of courthouse; iron post stamped "4974" (Reclamation Service bench mark)	4, 953. 762
Delta, in front of station; top of rail	4, 960. 37
Delta, 3.22 miles southeast of, 5 feet southeast of telephone pole 1855, 100 feet east of track, 18 telegraph poles north of white schoolhouse; iron post stamped "5102" (Reclamation Service bench mark)	5, 081. 801

	Feet.
Chipeta, in front of signboard; top of rail-----	5, 151. 5
Chipeta, 1 mile southeast of, 190 feet south of road crossing, in top of north end of retaining wall of railroad culvert; aluminum tablet stamped "5191"-----	5, 190. 769

**HOTCHKISS QUADRANGLE.****Chipeta along Denver & Rio Grande R. R. to Montrose.**

Chipeta, 2.06 miles southeast of, 5 feet south of telegraph pole 2028, 80 feet from track near culvert 365-A; iron post stamped "5250" (Reclamation Service bench mark)-----	5, 230. 348
Olathe, in front of station; top of rail-----	5, 346. 20
Olathe, 90 feet east of main track, in front of station, in line be- tween telegraph poles 2161 and 2163; iron post stamped "5368" (Reclamation Service bench mark)-----	5, 348. 439
Frosts, in front of signboard; top of rail-----	5, 446. 2
Frosts, 69 feet south of signboard, south of road to dwelling, 12 feet west of ditch; iron post stamped "5464" (Reclamation Service bench mark)-----	5, 444. 256
Montrose, 4.96 miles northwest of, 45 feet east of railroad at cross- ing, north of road, in line with railroad fence, 1,860 feet north of schoolhouse; iron post stamped "5592" (Reclamation Service bench mark)-----	5, 574. 521

**MONTROSE QUADRANGLE.****Montrose along Denver & Rio Grande R. R. to Ridgway.**

Montrose, 2.19 miles northwest of, 1,350 feet south of milepost "D-354," 300 feet south of railroad crossing, 40 feet east of tracks, 7 feet southeast of telegraph pole; iron post stamped "5722" (Reclamation Service bench mark)-----	5, 702. 177
Montrose, in front of station; top of rail-----	5, 794. 2
Montrose, northwest corner of Coor's building opposite station, at corner of sidewalk, flush with ground; iron post (Reclamation Service bench mark)-----	5, 793. 834
Montrose, 3.17 miles south of, 50 feet southeast of cattle guard just south of Chief Ouray's homestead, 45 feet east of track; iron post stamped "5945" (Reclamation Service bench mark)-----	5, 925. 363
Montrose, 4.70 miles south of, near brick schoolhouse, 43 feet south of telephone pole 2837, 1,015 feet south of milepost "D-356," at road crossing, 30 feet east of track; iron post stamped "6017" (Reclamation Service bench mark)-----	5, 997. 021
Uncompahgre, in front of signboard; top of rail-----	6, 165. 9
Uncompahgre, 55 feet southeast of corner of Fenlon's store, 4 feet northwest of telephone pole 2978 marked "Montrose, 8.5 miles," at west margin of road; iron post stamped "6184" (Reclamation Service bench mark)-----	6, 164. 100
Uncompahgre, 1.92 miles southeast of, in front face of southwest corner of foundation to Jutten's school; aluminum tablet stamped "6261"-----	6, 260. 254
Colona, in front face of northeast corner of Odd Fellows Hall; aluminum tablet stamped "6387"-----	6, 386. 174

	Feet.
Colona, in front of signboard; top of rail-----	6, 391. 6
Eldredge, in front of signboard; top of rail-----	6, 524. 7
Eldredge, 0.53 mile southeast of, 150 feet south of milepost "D-368," 40 feet west of track, in top of large granite boulder; aluminum tablet stamped "6554"-----	6, 553. 301
Eldredge, 3.14 miles southeast of, 1,875 feet north of milepost "D-371," in foundation of water tank; aluminum tablet stamped "6677"-----	6, 676. 815
Ridgway, 2.77 miles north of 105 feet south of north end of switch, 40 feet west of sidetrack, in top of 3 by 2.5 by 2.5 foot stone pier; aluminum tablet stamped "6910"-----	6, 910. 282
Ridgway, in front of station; top of rail-----	6, 985.3
Ridgway, 17 feet southeast of station; iron post marked "6990 OURAY"-----	6, 986. 543

### PRIMARY LEVELING.

Denver, Greeley, Loveland, and Niwot quadrangles.

#### ARAPAHOE, BOULDER, AND WELD COUNTIES.

The elevations in the following list are based on the elevation of the top of the lower pedestal at the southeast corner of the steps of the Colorado State capitol, at Denver. The point is marked by the letters "U.S.B.M." cut in the top of a granite block. The elevation is obtained from the Coast and Geodetic Survey transcontinental line of leveling, and is now accepted as 5,278.255 feet, according to approximate adjustment in 1911.

Leveling was done in all four quadrangles in 1897 by Thomas Winsor, and in 1899 by E. W. Glaefcke and A. E. Franklin. Additional work was done in the Loveland and Niwot quadrangles in 1902 by F. M. Taylor.

#### DENVER QUADRANGLE.

Bench marks established at Denver.

NOTE.—The first five elevations result directly from precise leveling of the Coast and Geodetic Survey, as described in their report for 1903, Appendix No. 3. The tablets were set by the United States Geological Survey.

	Feet.
Denver, east front of State capitol; lower pedestal, southeast corner of steps; "U. S. B. M." cut on top of granite block-----	5, 278. 255
Denver, southeast corner of State capitol grounds, azimuth station near steps, in top of stone post; aluminum tablet stamped "5275 DENVER"-----	5, 278. 095
Denver, in steps at northeast corner of State capitol grounds; bronze tablet (also used as azimuth mark), stamped "5275 DENVER"-----	5, 277. 285
Denver, chamber of commerce building, in granite block directly above corner stone, 4.5 feet above sidewalk; bronze tablet stamped "5224"-----	5, 222. 752

Denver, east front of union station, north side of main entrance, 2 feet above pavement; bronze tablet stamped "5184 DENVER"	Feet. 5, 186. 598
Denver, east front of union station; cross in floor of main entrance, city datum-----	5, 184. 57
Denver, South Broadway, southwest of Colorado & Southern Ry. track, 4 feet north of electric pole of Denver Tramway Co.; iron post stamped "5258 DENVER"-----	5, 260. 573
T. 4 S., R. 67 W., sec. 1, 500 feet northwest of Glendale dairy, 3 feet west of a corner stone, at fence corner on southwest side of Cherry Creek road; iron post stamped "5359 DENVER"-----	5, 361. 507

**Denver north along Union Pacific R. R. to Brighton.**

NOTE.—The bench marks on this line were set by the United States Geological Survey, but the elevations are those determined by the line afterwards run by the Coast and Geodetic Survey.

T. 3 S., R. 67 W., sec. 6, Hotel Model, 18 feet northwest of track, on north side of highway; iron post stamped "5131 DENVER"	5, 133. 437
Hazeltine. 1.2 miles southwest of, sec. 16, T. 2 S., R. 67 W., 41 feet northwest of track, on north side of highway, 200 yards north of mileboard 10; iron post stamped "5090 DENVER"-----	5, 093. 67
Henderson, 0.5 mile northwest of, sec. 35, T. 1 S., R. 67 W., 196 feet northwest of main track, on north side of highway; iron post stamped "5034 DENVER"-----	5, 035. 799
T. 1 S., R. 67 W., sec. 13, schoolhouse 10, Arapahoe County, 23 feet west of track, on north side of highway, 22 miles south of Greeley; iron post stamped "5005 DENVER"-----	5, 007. 708
Brighton. 1 mile north of, 24 feet west of track, on south side of highway known as "base-line road"; iron post stamped "4966 DENVER"-----	4, 967. 622

**Denver along Union Pacific R. R. via Magnolia to Watkins.**

NOTE.—These bench marks were set by the Geological Survey, but all except the second one have been touched upon by precise levels of the Coast and Geodetic Survey, and the elevations given herewith are the same as determined by that survey.

Denver, 6.4 miles east of, 0.2 mile south of Sand Creek slaughter- house, 14 feet south of main track; iron post stamped "5275 DENVER"-----	5, 277. 737
T. 2 S., R. 67 W., 41 feet northwest of southeast corner of sec. 33, 1.7 miles east of the intersection of south township line with Chicago, Burlington & Quincy R. R.; iron post stamped "5182 DENVER"-----	5, 184. 604
Magnolia, 0.2 mile east of, sec. 25, T. 3 S., R. 67 W., 40 feet north of track; iron post stamped "5333 DENVER"-----	5, 335. 680
T. 3 S., R. 66 W., 0.2 mile south of Grippen's ranch, 100 feet north of track; iron post stamped "5400 DENVER"-----	5, 402. 583
T. 3 S., R. 66 W., sec. 36, 1.1 miles southeast of Behren's ranch, 50 feet south of track, 60 feet east of bridge 803; iron post stamped "5484 DENVER"-----	5, 486. 712
Watkins, 0.2 mile east of, sec. 36, T. 3 S., R. 65 W., 180 feet north of track; iron post stamped "5513 DENVER"-----	5, 515. 503



## Watkins north to sec. 36, T. 1 S., R. 65 W.

T. 2 S., R. 65 W., 9 feet north and 3 feet east of southwest corner of sec. 36; iron post stamped "5399 DENVER"-----	Feet. 5, 401. 409
T. 2 S., R. 64 W., northwest corner of sec. 30, 0.5 mile north of Creutz's ranch, 42 feet southeast of intersection of forks of roads; iron post stamped "5279 DENVER"-----	5, 281. 419
T. 1 S., R. 65 W., 27 feet north of southwest corner of sec. 36, 1.3 miles northwest of Wellenkotter's ranch; iron post stamped "5206 DENVER"-----	5, 208. 205

## Denver along Chicago, Burlington &amp; Quincy R. R. to Erie.

Denver, 3.5 miles north of, 200 yards southeast of Utah Junction, sec. 15, T. 3 S., R. 68 W., 64 feet west of track; iron post stamped "5219 DENVER"-----	5, 221. 552
Harris, 0.2 mile south of, sec. 6, T. 3 S., R. 68 W., 38 feet southwest of Union Pacific R. R.; iron post stamped "5293 DENVER"-----	5, 295. 494
Semper, 0.2 mile north of, 22 feet east of Union Pacific R. R. track, 350 feet west of Semper schoolhouse, on north side of public highway; iron post stamped "5438 DENVER"-----	5, 440. 430
Churches, sec. 11, T. 2 S., R. 69 W., 31 feet southeast of Union Pacific R. R., on east side of public highway; iron post stamped "5331 DENVER"-----	5, 333. 427
Burns Junction, 0.2 mile northwest of, sec. 34, T. 1 S., R. 69 W., 82 feet northeast of track, north side of public highway; iron post stamped "5413 DENVER"-----	5, 415. 451
Clarkston, sec. 23, T. 1 S., R. 69 W., 32 feet east of main track, north side of public highway, 700 feet east of northwest corner of section; iron post stamped "5214 DENVER"-----	5, 216. 339

Golden to Denver Edgewater.<sup>1</sup>

Golden, entrance to the Woods-Rubey National Bank, top of stone steps; aluminum tablet stamped "5675 DENVER"-----	5, 674. 709
Gear farmhouse, 180 feet east of gate, 50 feet northeast of wagon bridge across Rocky Mountain irrigating ditch, 15 feet north of road; iron post stamped "5560 DENVER"-----	5, 559. 880
Kirk's farmhouse, 90 feet east of gate, northwest corner of cross-roads; iron post stamped "5575 DENVER"-----	5, 574. 765
Denver Edgewater, southwest corner of Highland Avenue and Sheridan Boulevard, in foundation southeast corner of Edgewater grocery; aluminum tablet stamped "5353 DENVER"-----	5, 353. 373

## Golden via Coal Creek to summit of Dory Hill divide.

Golden Pressed Brick Co.'s plant, 1.8 miles north of, at road fork, west side of road, in top of granite boulder; aluminum tablet stamped "5932 DENVER"-----	5, 931. 567
Mesa between Ralston and Lyden creeks, 0.8 mile north of Ralston Creek bridge, 20 feet west of Golden-Coal Creek road, in top of sandstone ledge; aluminum tablet stamped "6008 DENVER"---	6, 007. 321

<sup>1</sup>The error distributed in this line is excessive.

## GREELEY QUADRANGLE.

Brighton north along Union Pacific R. R. to Greeley.

T. 1 N., R. 66 W., sec. 17, 200 yards west of Bryan's ranch, 40 feet west of track, on north side of public highway; iron post stamped "4936 DENVER" -----	Feet. 4, 937. 593
Fort Lupton, northeast corner of schoolhouse grounds, sec. 5, T. 1 N., R. 66 W., 190 feet west of track; iron post stamped "4904 DENVER" -----	4, 905. 567
T. 2 N., R. 66 W., sec. 20, 0.2 mile east of Knowlton's ranch, 26 feet west of track, on south side of public highway; iron post stamped "4869 DENVER" -----	4, 870. 517
T. 2 N., R. 66 W., sec. 6, 0.2 mile west of Cheese's ranch, 31 feet west of track, on south side of public highway, 300 feet east of main road between Platteville and Fort Lupton, 60 feet south of mileboard 32; iron post stamped "4837 DENVER" -----	4, 838. 423
Platteville, 0.5 mile south of, sec. 19, T. 3 N., R. 66 W., 30 feet west of track; iron post stamped "4819 DENVER" -----	4, 820. 400
T. 3 N., R. 66 W., sec. 6, 0.2 mile south of Moehrle's ranch, 36 feet west of track, north side of public highway, 2.2 miles north of Platteville; iron post stamped "4795 DENVER" -----	4, 796. 350
T. 4 N., R. 66 W., 0.2 mile east of northwest corner of sec. 23, 0.2 mile northeast of Lucerne's ranch, 20 feet west of track, south side of public highway; iron post stamped "4724 DENVER" -----	4, 725. 367
La Salle, 0.8 mile north of, sec. 32, T. 5 N., R. 65 W., 60 feet west of track, 200 feet south of old Pikes Peak road; iron post stamped "4650 DENVER" -----	4, 651. 355
Greeley, 9 feet north of south line of Tenth Street, 17 feet west of most westerly track, 12 feet south of warning signpost; iron post stamped "4651 DENVER" -----	4, 652. 291

Sec. 36, T. 1 S., R. 65 W. north to sec. 28, T. 5 N., R. 65 W.

T. 1 N., R. 65 W., at quarter corner on south side of sec. 35, 200 yards north of Mooney's ranch, 27 feet north of forks of roads; iron post stamped "5098 DENVER" -----	5, 099. 907
T. 2 N., R. 65 W., sec. 36, 53 feet northwest of Chicago, Burlington & Quincy R. R. track, 106 feet southwest of face of west abutment of bridge across Boxelder Creek, 2.6 miles northeast of Hudson station; iron post stamped "4918 DENVER" -----	4, 920. 035
Boxelder Creek, 200 yards west of, 200 yards south of Oster's ranch, 36 feet southwest of intersecting crossroads; iron post stamped "4851 DENVER" -----	4, 852. 770
T. 3 N., R. 65 W., sec. 36, 0.8 mile south of school 41, Weld County, 36 feet west of east range line; iron post stamped "4817 DENVER" -----	4, 818. 884
T. 3 N., R. 64 W., southeast corner of sec. 18, 44 feet southwest of an old well, 3 feet east of fence corner; iron post stamped "4807 DENVER" -----	4, 808. 713
T. 3 N., R. 65 W., northwest corner of sec. 1, 14 feet south and 3 feet east of fence; iron post stamped "4817 DENVER" -----	4, 818. 677
T. 4 N., R. 65 W., 50 feet north of crossroads at southwest corner of sec. 14, 320 feet east of schoolhouse 5; iron post stamped "4693 DENVER" -----	4, 694. 590

T. 5 N., R. 65 W., southeast corner of sec. 28, 0.5 mile north of Luper's ranch, 38 feet northwest of forks of road; iron post stamped "4656 DENVER"-----	Feet. 4, 657. 470
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## At Lafayette.

Lafayette, 0.2 mile north of station, sec. 35, T. 1 N., R. 69 W., 20 feet east of track, north side of public highway known as Base Line road; iron post stamped "5174 DENVER"-----	5, 176. 382
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## St. Vrain along Union Pacific R. R. to Dry Creek.

St. Vrain, 800 feet west of, 35 feet northeast of intersection of Union Pacific R. R. with wagon road; iron post stamped "5119 DENVER"-----	5, 118. 246
Dick, about 850 feet west of, 42 feet northeast of intersection of Union Pacific R. R. with wagon road; iron post stamped "5130 DENVER"-----	5, 129. 104
Dry Creek, 1 mile east of, 53 feet south of Union Pacific R. R., near wagon road; iron post stamped "5046 DENVER"-----	5, 044. 119

## Erie via public roads north to Windsor.

T. 2 N., R. 68 W., 4 feet north of southeast corner of sec. 33, 1 mile north of White House coal mine, 30 feet north of forks of roads; iron post stamped "5015 DENVER"-----	5, 014. 195
Rinn, 0.5 mile south of post office, southeast corner of sec. 15, T. 2 N., R. 68 W., 45 feet northeast of crossroads; iron post stamped "4882 DENVER"-----	4, 881. 114
T. 2 N., R. 67 W., southwest corner of sec. 18, 0.8 mile northwest of Ely coal mine, 60 feet east of fence corner; iron post stamped "4913 DENVER"-----	4, 912. 111
Scott's ranch, 100 yards south of, northwest corner of sec. 6, T. 2 N., R. 67 W., 45 feet southeast of intersection of crossroads; iron post stamped "4814 DENVER"-----	4, 813. 096
T. 3 N., R. 67 W., northeast corner of sec. 19, 125 feet east of school 28, Weld County, 30 feet southeast of forks of road; iron post stamped "4881 DENVER"-----	4, 880. 044
T. 3 N., R. 68 W., southeast corner of sec. 10, 1 mile southeast of Archer's ranch, 44 feet northwest of intersection of roads; iron post stamped "4949 DENVER"-----	4, 947. 991
T. 3 N., R. 68 W., at northeast corner of sec. 3, 0.2 mile north of Woodley's ranch, 44 feet southeast of intersection of crossroads; iron post stamped "5086 DENVER"-----	5, 084. 934
T. 3 N., R. 67 W., northeast corner of sec. 6, 1 mile south of Hills Lake, 45 feet southeast of intersection of crossroads; iron post stamped "4929 DENVER"-----	4, 927. 826
T. 4 N., R. 67 W., northeast corner of sec. 19, 200 feet east of Davis's ranch, 50 feet southeast of intersection of crossroads; iron post stamped "4835 DENVER"-----	4, 833. 895
T. 4 N., R. 68 W., northwest corner of sec. 22, 1 mile south of Sunny-side schoolhouse, district 36, Weld County, 45 feet southeast of intersection of crossroads; iron post stamped "4904 DENVER"-----	4, 902. 779
T. 4 N., R. 68 W., northwest corner of sec. 3, 0.5 mile west of Twin Mound schoolhouse, district 38, Weld County, 35 feet southwest of forks of road; iron post stamped "5101 DENVER"-----	5, 099. 666

T. 4 N., R. 67 W., northeast corner of sec. 6, 0.8 mile north of Dilly Chapel, 45 feet southeast of forks of road; iron post stamped "4887 DENVER" -----	Feet. 4, 885.728
T. 5 N., R. 67 W., northwest corner of sec. 19, 0.8 mile south of Dells ranch, 45 feet southeast of intersection of forks of roads; iron post stamped "4878 DENVER" -----	4, 876.642
T. 5 N., R. 68 W., southeast corner of sec. 10, 200 feet west of Spear's ranch, on northeast side of public highway, 30 feet west of fence corner; iron post stamped "4947 DENVER" -----	4, 945.674
T. 5 N., R. 68 W., sec. 3, 1.2 miles north of Boyd Lake, 30 feet south of fence corner; iron post stamped "5015 DENVER" -----	5, 013.638
T. 5 N., R. 67 W., northeast corner of sec. 5, 1 mile north of schoolhouse 22, Weld County, 106 feet southeast of stone; iron post stamped "4921 DENVER" -----	4, 919.539
New Windsor, 500 feet east of station, T. 6 N., R. 67 W., 35 feet southwest of Colorado & Southern Ry. track, on north side of public highway; iron post stamped "4795 DENVER" -----	4, 793.565

## Windsor to Greeley.

T. 6 N., R. 67 W., sec. 25, 0.2 mile west of Rawlinson's ranch, 27 feet south of Colorado & Southern Ry. track, on east side of public highway; iron post stamped "4748 DENVER" -----	4, 746.527
Farmers, 500 feet west of, T. 6 N., R. 66 W., 46 feet southwest of Colorado & Southern Ry. track, south side of public road; iron post stamped "4712 DENVER" -----	4, 710.526
Boys, 500 feet southeast of, southeast corner of sec. 35, T. 6 N., R. 66 W., 100 feet northwest of intersection of crossroads, 250 feet south of Union Pacific R. R.; iron post stamped "4672 DENVER" -----	4, 670.578
Greeley, east front of Weld County courthouse, on north side of main entrance, on stone coping; bronze tablet stamped "4464 DENVER" -----	4, 662.547

## Farmers south and east to Union Pacific R. R.

T. 5 N., R. 66 W., sec. 3, 0.5 mile north of Haymaker's ranch, 5 feet west of fence corner, at forks of roads; iron post stamped "4836 DENVER" -----	4, 834.537
T. 5 N., R. 66 W., quarter corner on south side of sec. 21, 150 feet north of schoolhouse, district 24, Weld County, 50 feet northwest of intersection of crossroads; iron post stamped "4830 DENVER" -----	4, 828.496
T. 4 N., R. 66 W., sec. 2, 0.2 mile south of Dunbar's ranch, 30 feet north of forks of roads; iron post stamped "4675 DENVER" -----	4, 673.609

## Greeley via Lucerne and Kersey to Greeley.

T. 6 N., R. 65 W., quarter corner on west side of sec. 29, 200 feet southwest of Henry's ranch house; iron post stamped "4718 DENVER" -----	4, 716.067
Lucerne, southwest corner of sec. 17, T. 6 N., R. 65 W., sixth principal meridian, in brick church, in stone foundation of west wall; aluminum tablet stamped "4749 DENVER." (Elevation by Coast and Geodetic Survey) -----	4, 746.575

T. 6 N., R. 65 W., southwest corner of sec. 13, 150 feet south of Hilton's ranch house, at base of northeast fence post; iron post stamped "4700 DENVER"-----	Feet. 4, 698. 366
T. 6 N., R. 64 W., northeast corner of sec. 20, 7 miles east of Lucerne; iron post stamped "4784 DENVER"-----	4, 782. 331
T. 5 N., R. 64 W., quarter corner on east side of sec. 5, at base of southwest fence post; iron post stamped "4628 DENVER"-----	4, 625. 803
T. 5 N., R. 64 W., southeast corner of sec. 17, 0.5 mile north of Kersey, at base of northwest fence post; iron post stamped "4616 DENVER"-----	4, 613. 896
Greeley, 2.8 miles east of, 0.8 mile east of cemetery, 25 feet north of road to Kersey; iron post stamped "4643 DENVER"-----	4, 641. 213

## Kersey to sec. 13, T. 3 N., R. 65 W.

T. 4 N., R. 64 W., 7 miles south of Kersey, 5 miles north of J. P. Klug's ranch, 8 feet west of road; iron post stamped "4642 DENVER"-----	4, 639. 893
T. 4 N., R. 64 W., J. P. Klug's ranch, 25 feet north of fence, west of road, on big flat; iron post stamped "4682 DENVER"-----	4, 680. 090
T. 3 N., R. 64 W., northwest corner of sec. 10, southeast corner of fence around J. P. Klug's house; iron post stamped "4730 DENVER"-----	4, 727. 990
J. P. Klug's ranch, 4 miles north of, north side of fence, 4 feet east of gate; iron post stamped "4906 DENVER"-----	4, 904. 876
T. 2 N., R. 64 W., north edge of, 0.2 mile north of Herman Lewis's ranch, at forks of road; iron post stamped "4880 DENVER"-----	4, 878. 166

## Boxelder Creek to T. 1 N., R. 64 W., sixth principal meridian.

Boxelder Creek, 2.4 miles east of, 92 feet north of Chicago, Burlington & Quincy R. R., at northeast corner of right of way fence; iron post stamped "4984 DENVER"-----	4, 983. 018
Early ranch, 0.8 mile southeast of, just north of fence running west and 450 feet west of the southeast corner of fence around pasture; iron post stamped "4978 DENVER"-----	4, 977. 305
Early ranch, 3 miles southeast of, on northeast slope of divide, 300 yards southeast of gulch; iron post stamped "5083 DENVER"-----	5, 081. 846

## NIWOT QUADRANGLE.

## At Mitchell.

Mitchell, 0.5 mile south of, sec. 30, T. 1 N., R. 68 W., 6 feet north of a telegraph pole near the edge of wagon road; iron post stamped "5084 DENVER"-----	5, 086. 290
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## Point near Erie.

Erie, 1 mile northeast of, sec. 7, T. 1 N., R. 68 W., 35 feet north of Union Pacific R. R. track, opposite where wagon road leads south-east to Boulder Valley coal mine; iron post stamped "5076 DENVER"-----	5, 075. 197
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## Point near Berthoud along Colorado &amp; Southern Ry. to Longmont.

Longmont, 3.5 miles north of, 0.2 mile north of Garret Clawson's farm, northwest corner, at crossing of highways; iron post stamped "5126 DENVER"-----	5, 124. 121
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Longmont, 1 mile north of, 15 feet west of southwest corner of sec. 35. T. 3 N., R. 69 W., 200 yards north of cemetery; iron post stamped "5006 DENVER"-----	Feet. 5, 004. 193
Longmont, T. 2 N., R. 69 W., sec. 2, in northeast corner of city hall; aluminum tablet stamped "4980 DENVER"-----	4, 978. 259

## Longmont along Colorado &amp; Southern Ry. via Boulder to Erie.

T. 2 N., R. 69 W., sec. 20, 250 yards south of Williamsen's farm, northeast corner of road crossing, cattle guard 15 feet east of center of tracks; iron post stamped "5034 DENVER"-----	5, 032. 948
Niwot, 150 feet west of station, 200 yards east of Niwot Hall, southwest of highway; iron post stamped "5096 DENVER"-----	5, 094. 348
T. 2 N., R. 70 W., 30 feet southwest of northeast corner of sec. 33, 0.5 mile south of Haystack Mountain, at southwest corner of crossroads; iron post stamped "5242 DENVER"-----	5, 240. 273
T. 1 N., R. 70 W., sec. 9, 0.8 mile southwest of Beasley's reservoir, west side of highway, in front of Josinas farmhouse; iron post stamped "5236 DENVER"-----	5, 234. 535
T. 1 N., R. 69 W., sec. 19, 0.33 mile west of Lewis's farm, at right angle, north side of highway, at fence; iron post stamped "5103 DENVER"-----	5, 101. 588
Canfield, 100 yards west of station, 100 feet north of railroad tracks, at fence corner; iron post stamped "5047 DENVER"-----	5, 045. 551
Erie, northeast corner of Wells and Pierce streets, southwest front corner of Richards's brick block; aluminum tablet stamped "5018 DENVER"-----	5, 016. 788

## Lyons via Hygiene to Longmont.

Lyons, 3 miles east of, south side of road, opposite house of Elias Whaley, beside telephone pole; iron post stamped "5207 DENV"-----	5, 205. 395
Longmont, 3 miles west of, north side of road, at corner of yard fence, in front of Mr. Hill's house; iron post stamped "5091 DENV"-----	5, 089. 442

## LOVELAND QUADRANGLE.

## New Windsor to Loveland.

T. 6 N., R. 68 W., 250 yards east of bridge over Cache la Poudre Creek on north side of road; iron post stamped "4800 DENVER"-----	4, 798. 102
T. 6 N., R. 69 W., sec. 14, 0.2 mile northwest of Benson's Lake, 100 yards south of C. S. Bate's farmhouse, on west side of road between Loveland and Fort Collins; iron post stamped "5040 DENVER"-----	5, 038. 214
T. 6 N., R. 69 W., 10 feet south of north line of sec. 32, 0.5 mile west of Proctor schoolhouse, 20 feet east from center of Colorado & Southern Ry. tracks south side of highway; iron post stamped "5057 DENVER"-----	5, 055. 114
Loveland, 2 miles north of, 10 feet north of south line of sec. 2, T. 5 N., R. 69 W., 40 feet east of center of Colorado & Southern Ry. track, north side of crossing; iron post stamped "5022 DENVER"-----	5, 020. 084

## Loveland via Colorado &amp; Southern Ry. to Berthoud.

T. 5 N., R. 69 W., 2 miles south of Loveland, at road crossing, 20 feet east of center of tracks, on north side of public highway; iron post stamped "5050 DENVER"-----	5, 048. 335
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Berthoud, 1.5 miles northeast of, sec. 11, T. 4 N., R. 69 W., 150 feet southeast of Munson's farmhouse, west side of highway, 0.5 mile east of railroad; iron post stamped "5082 DENVER"-----	Feet. 5, 080. 085
Berthoud, sec. 14, T. 4 N., R. 69 W., northwest corner of Mount Avenue and Third Street, northeast corner of bank building; aluminum tablet stamped "5030 DENVER"-----	5, 028. 867
Berthoud, 2 miles south of, 0.5 mile northwest of Frankie's reservoir, at road crossing, 30 feet east of center of tracks, north side of highway; iron post stamped "5060 DENVER"-----	5, 058. 173

**Bench marks established near Arkins.**

Arkins, 0.8 mile south of, T. 6 N., R. 70 W., junction of roads at railroad crossing; iron post stamped "7249 DENV"-----	5, 247. 210
Arkins, 3.5 miles southwest of, 1 mile south of Big Thompson Canyon, 10 feet west of road, in rock; aluminum tablet stamped "5352 DENV"-----	5, 350. 723
T. 5 N., R. 70 W., SW. $\frac{1}{4}$ NW. $\frac{1}{4}$ sec. 9, Goodwins cabin, 2 feet south of road, 0.2 mile west of bridge 40, in flat rock; aluminum tablet stamped "5535 DENV"-----	5, 534. 050

**Bench mark established near Masonville.**

Masonville, 0.5 mile south of, sec. 15, T. 6 N., R. 70 W., 150 feet south of schoolhouse 51; bronze tablet stamped "5317 DENV"---	5, 315. 207
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**Point near Pinewood east along road to Loveland.**

Loveland, 9 miles west of, sec. 27, T. 5 N., R. 70 W., 1,000 feet east of base of Bald Mountain, beside telephone pole at side of road; iron post stamped "5440 DENV"-----	5, 438. 457
Loveland, 6 miles west of, sec. 23, T. 5 N., R. 70 W., junction of roads; iron post stamped "5242 DENV"-----	5, 239. 842
Loveland, 3 miles west of, sec. 20, T. 5 N., R. 69 W., between lakes, small summit in road; iron post stamped "5104 DENV"-----	5, 102. 293

**Noland north along Chimney Hollow trail to Dry Creek.**

Noland, 3 miles north of, sec. 16, T. 4 N., R. 70 W., 50 feet west of trail, near Goforth's homestead, in top of rock cliff; bronze tablet stamped "5596 DENV"-----	5, 594. 896
Noland, 6 miles north of, sec. 4, T. 4 N., R. 70 W., on Reed's ranch, 500 feet southeast of house, in top of rock, west side of trail; bronze tablet stamped "5769 DENV"-----	5, 767. 156

**Blackhawk, Boulder, Central City, and Georgetown quadrangles.**

**BOULDER, CLEAR CREEK, AND GILPIN COUNTIES.**

The elevations in the following list are based on the elevation of the top of the lower pedestal at the southeast corner of the steps of the Colorado State capitol at Denver. The point is marked by the letters "U. S. B. M.," cut in the top of a granite block, and its elevation, obtained from the Coast and Geodetic Survey transcontinental line of levels, is accepted as 5,278.255 feet by the preliminary adjustment of 1911.

The leveling was done in 1902 and 1903 by F. M. Taylor and in 1904 by J. C. Fitterer.

#### BOULDER QUADRANGLE.

##### Boulder via stage road up Boulder Creek to Cochran's mill.

	Feet.
Boulder, 20 feet west of main entrance to courthouse; aluminum tablet stamped "5351 DENVER"-----	5, 349. 154
Oredel, east end of north abutment of bridge over Boulder Creek, in capstone; bronze tablet stamped "5732 DENVER"-----	5, 729. 922
Coburn mill, at forks of road, between mill and house, in rock ledge; aluminum tablet stamped "6036 DENVER"-----	6, 034. 498
Cochran's mill, 0.5 mile west of, south side of bridge over Boulder Creek, in top of shelf of road; aluminum tablet stamped "6541 Denver"-----	6, 540. 075

##### Boulder via Salina to Gold Hill.

Boulder Springs, sec. 2, T. 1 N., R. 71 W., north side of road, 50 feet south of confectionery factory, in face of rock; bronze tablet stamped "6261 DENV."-----	6, 258. 907
Salina, sec. 17, T. 1 N., R. 71 W., south side of railroad track opposite station, in rock cliff; aluminum tablet stamped "8571 DENV"-----	6, 568. 719
T. 1 N., R. 72 W., sec. 11, front face of Gold Hill schoolhouse, southeast corner of foundation; bronze tablet stamped "8297 DENV."-----	8, 295. 516

##### Chipmunk Gulch along road north to St. Vrain Creek, thence along creek road to Lyons.

Ward, 1 mile north of, 200 feet south of San Blas mill, in top of rock, east side of road; bronze tablet stamped "8901 DENV."-----	8, 898. 789
Ward, 4 miles north of, between new house and old log stable, 1,000 feet north of junction of roads to Allen Park and Gresham, in large boulder; bronze tablet stamped "8573 DENV"-----	8, 571. 637
Ward, 8 miles north of, south side of road on summit 100 feet south of Miller Rock, in shelf of rock; bronze tablet stamped "8633 DENV"-----	8, 630. 75
Raymond's ranch, 2 miles east of, north side of road, 50 feet west of bridge across stream, in top of large boulder; bronze tablet stamped "7449 DENV."-----	7, 447. 411
Lyons, 11 miles west of, north side of road, at junction of Middle and South St. Vrain creeks, at Sam Parish's place, in rock; bronze tablet stamped "6992 DENV"-----	6, 990. 113
Lyons, 9 miles west of, north side of road, 20 feet south of stable at Bummersville, in top of rock; bronze tablet stamped "6601 DENV."-----	6, 599. 346
Lyons, 6 miles west of, south side of road, 3 miles east of Bummersville, in top of large rock; bronze tablet stamped "5786 DENV."-----	5, 784. 425
Lyons, 2.5 miles west of, south side of road, 1,000 feet west of toll-gate, in face of rock ledge; bronze tablet stamped "5493 DENV."-----	5, 491. 096
Lyons, sec. 18, T. 3 N., R. 70 W., in southeast corner of face of town hall; aluminum tablet stamped "5375 DENV."-----	5, 373. 281



## Lyons northwest on Estes Park stage road.

Lyons, 3 miles northwest of, NE. $\frac{1}{4}$ sec. 11, T. 3 N., R. 71 W., north side of road, opposite slab ice house; iron post stamped "5580 DENVER."	Feet. 5, 578. 085
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**BLACKHAWK QUADRANGLE.**

## Bench marks established near Eureka.

Eureka, 1 mile west of, on small summit near pine tree, north side of road, in "Narrows," in top of rock; bronze tablet stamped "7347 DENVER "	7, 345. 943
Nederland, 3.5 miles east of, 30 feet west of bridge over creek, in "Castle Rock "; aluminum tablet stamped "7777 DENVER "	7, 776. 077

## Nederland via Giggey's ranch and Gregory Canyon to Boulder.

Pine Glade schoolhouse, 100 feet west of, in top of rock; aluminum tablet stamped "8553 DENVER "	8, 551. 715
Pine Glade schoolhouse, 3 miles east of, 300 feet west of old stable, south side of road, in top of rock; aluminum tablet stamped "7801 DENVER "	7, 800. 395
Summit of ridge between Skates ranch and Gregory Canyon, north side of road, in top of rock; aluminum tablet stamped "7954 DENVER "	7, 953. 747
Summit, 1 mile west of stone house, north side of road, in top of rock; bronze tablet stamped "8002 DENVER "	8, 000. 332
Boulder, 1.2 miles southwest of, south side of road, 30 feet west of stream crossing, at mouth of Gregory Canyon, in top of boulder; aluminum tablet stamped "5696 DENVER "	5, 695. 209

## Blackhawk via Rollinsville to Nederland.

Blackhawk, Colorado & Southern Ry. station, south wall between window and door of office, in face of rock; aluminum tablet stamped "8041 DENVER "	8, 041. 045
Blackhawk, 3 miles north of, 100 feet south of junction of roads leading to Rollinsville, Golden, and Summit, in top of rock; aluminum tablet stamped "9269 DENVER "	9, 268. 578
Blackhawk, 6 miles north of, east side of road, 600 feet north of summit at turn in road to west, in top of boulder; aluminum tablet stamped "9181 DENVER "	9, 181. 184
Rollinsville, 2.5 miles south of, 100 feet north of summit, 40 feet east of road, at turn west of Gilpin post office, in top of flat rock; aluminum tablet stamped "9019 DENVER "	9, 020. 234
Rollinsville, 50 feet back of post office, in top of large boulder; aluminum tablet stamped "8443 DENVER "	8, 443. 252

## Head of Lake Gulch to Justice mine.

Justice mine, 290 feet west of shaft house, in top of ledge, north side of road; aluminum tablet stamped "8721 DENVER "	8, 720. 482
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Summit of Dory Hill divide, 3 miles north of Blackhawk, via Golden to Denver.<sup>1</sup>

Kriley's ranch house, 0.2 mile west of, 130 feet north of road, in stone ledge, 3 feet above ground; aluminum tablet stamped "8420 DENVER"-----	Feet. 8, 419. 549 <sup>0</sup>
Junction Hill, summit of, 25 feet north of road, in top of stone ledge at surface of ground; aluminum tablet stamped "8740 DENVER"-----	8, 739. 746
Guy Hill, summit of divide, in top of granite boulder, 10 feet north of road, 3 feet above ground; aluminum tablet stamped "7751 DENVER"-----	7, 750. 816
Tucker and Crawford gulches, forks of, 35 feet north of wagon road, 4 feet above ground, in top of granite ledge; aluminum tablet stamped "6907 DENVER"-----	6, 906. 787
Tucker and Half Mile gulches, 275 feet west of forks of, 10 feet south of road, in north side of large granite boulder; aluminum tablet stamped "6219 DENVER"-----	6, 218. 716

## Coal Creek west along highways to Gilpin.

Coal Creek, Denver, Northwestern & Pacific Ry. bridge across, in top of west concrete pier, south side of road, 6 feet above ground; aluminum tablet stamped "6599 DENVER"-----	6, 598. 343
Coal Creek, 3 miles from mouth of canyon, west side of road, 3 feet above ground, in top of large granite boulder; aluminum tablet stamped "7330 DENVER"-----	7, 329. 203
Beaver Creek, 0.2 mile southwest of Bengson's ranch house, in top of large granite boulder, east side of road; aluminum tablet stamped "7751 DENVER"-----	7, 750. 326
Beaver Hill, near summit of, 10 feet east of old road, in top of granite ledge; aluminum tablet stamped "8807 DENVER"-----	8, 806. 194
Belcher's ranch, 1 mile east of, 45 feet north of road, 1 foot above ground, in top of granite ledge; aluminum tablet stamped "9113 DENVER"-----	9, 111. 560
Rollinsville, intersection of Blackhawk, Golden, and Coal Creek roads, north side of road, 900 feet east of guidepost, in top of granite boulder; aluminum tablet stamped "8998 DENVER"-----	8, 996. 900

## CENTRAL CITY QUADRANGLE.

## Nederland via Eldora, Baltimore, and Apex to Blackhawk.

Nederland, 50 feet east of post office, in top of rock; bronze tablet stamped "8237 DENVER"-----	8, 235. 996
Eldora, north side of road, in top of east end of large rock; aluminum tablet stamped "8643 DENVER"-----	8, 641. 380
Peterson Lake; surface of water, July 11, 1903-----	9, 244
Baltimore, 2.5 miles north of, 50 feet west of junction of roads leading to Eldora, Rollins Pass, and Baltimore, in rock; bronze tablet stamped "9330 DENVER"-----	9, 328. 814
Baltimore, 50 feet east of post office, on line between lots 12 and 13, block 1, on large flat rock; aluminum tablet stamped "8913 DENVER"-----	8, 912. 548

<sup>1</sup>The error distributed in this line is excessive.

Baltimore, 3 miles south of, 50 feet north of intersection of roads on summit of mountain, 0.5 mile north of Apex, in top of pointed rock; aluminum tablet stamped "10217 DENVER"-----	Feet. 10, 217. 229
Apex, 200 feet east of schoolhouse, sec. 21, T. 2 S., R. 73 W., north end of town, at west side of road, in rock; aluminum tablet stamped "9857 DENVER"-----	9, 856. 750
Apex, 2 miles south of, 50 feet west of junction of roads, 40 feet north of Pine Creek, in top of rock; aluminum tablet stamped "9154 DENVER"-----	9, 154. 244
Blackhawk, 3 miles west of, at junction of roads leading to Gilpin, Missouri Lake, and Pine Creek, 200 feet east of Quartz Valley schoolhouse, beside telephone pole, in top of rock; aluminum tablet stamped "8514 DENVER"-----	8, 514. 143

## Near Nederland.

Nederland, 2 miles south of, east side of road, 200 feet south of road crossing, near Beaver Creek, in top of rock; aluminum tablet stamped "8419 DENVER"-----	8, 419. 313
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## Kingston via Alice and Idaho Springs to Dover mines.

Kingston, south side of road, at junction of roads in village, in large flat rock; aluminum tablet stamped "10531 DENVER"-----	10, 530. 174
Yankee, 1 mile east of, 30 feet north of shaft house of North Star mine, in top of large rock; aluminum tablet stamped "10512 DENVER"-----	10, 510. 823
Alice, 50 feet northeast of post office, in top of flat rock; aluminum tablet stamped "10084 DENVER"-----	10, 083. 718
Alice, 3 miles east of, small summit 1,000 feet east of Seemann tunnel, north side of road, in top of rock; bronze tablet stamped "9167 DENVER"-----	9, 166. 169
Alice, 5.5 miles east of, junction of roads at mouth of Hamlin Gulch, north side of road beside mail box, in rock; bronze tablet stamped "8432 DENVER"-----	8, 430. 876
Idaho Springs, 3 miles west of, at bottom of dump, 100 feet north of power house, at Lucania tunnel, in top of flat rock; bronze tablet stamped "7818 DENVER"-----	7, 816. 414
Dover mines, 160 feet east of wagon bridge across Fall River, 35 feet north of road, in top of large boulder; aluminum tablet stamped "7722 DENVER"-----	7, 721. 401

## Point near Idaho Springs to Central City.

Idaho Springs, 3 miles north of, in top of Clear Creek-Gilpin Counties boundary monument No. 163, at summit of ridge at head of Virginia Canyon; aluminum tablet stamped "9363 DENVER"---	9, 361. 786
Russel Gulch, in face of southeast corner of brick and stone post-office building; aluminum tablet stamped "9105 DENVER"-----	9, 103. 837
Nevadaville, in south face of corner stone under southeast corner of building; aluminum tablet stamped "9027 DENVER"-----	9, 025. 739
Central City, at east end of new brick schoolhouse, in large capstone at entrance; aluminum tablet stamped "8422 DENVER"-----	8, 420. 974

## Idaho Springs to Empire.

Dumont, 1 mile east of, junction of road leading up North Spring Gulch, at Mackay mine shaft, in rock; aluminum tablet stamped "7827 DENVER"-----	Feet. 7, 825. 519
Dumont, west end of, north side of road, 30 feet east of bridge over Mill Creek, in top of large rock; aluminum tablet stamped "7955 DENVER"-----	7, 954. 051
Lawson, 20 feet west of post office, in top of rock; aluminum tablet stamped "8143 DENVER"-----	8, 142. 019
Empire, 50 feet north of Colorado & Southern Ry. station, north side of road, in top of rock; aluminum tablet stamped "8250 DENVER"-----	8, 248. 517
Empire, 5 feet north of northeast corner of brick schoolhouse, in rock; aluminum tablet stamped "8603 DENVER"-----	8, 601. 454

## Idaho Springs via Virginia Canyon to Sun and Moon mine, thence by Gibson Gulch to Colorado &amp; Southern Ry. and return to Idaho Springs.

Idaho Springs, 1.1 miles north of, 125 feet south of junction of Idaho Springs, Central City, and Boomerang Gulch wagon roads, 3 feet above ground, at east side of road, in face of rock; aluminum tablet stamped "8084 DENVER"-----	8, 083. 238
Sun and Moon mine, 225 feet east of shaft house, in top of watch tower concrete pier; aluminum tablet stamped "9291 DENVER"-----	9, 289. 805
Summit mine, 50 feet southwest of shaft house, in top of granite stone at roadside; aluminum tablet stamped "8982 DENVER"---	8, 980. 812

## Point 3 miles north of Idaho Springs at summit of ridge at head of Virginia Canyon southwest to summit of Belleview Mountain (triangulation station).

Belleview Mountain, summit of, in top of bed rock; bronze triangulation tablet stamped "9684 DENVER"-----	9, 683. 528
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## Point 3 miles north of Idaho Spring southeast to Comstock mine.

Comstock mine, 70 feet northeast of shaft house entrance, in top of bed rock; aluminum tablet stamped "9156 DENVER"-----	9, 155. 552
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## Russell Gulch via Alps mine to Nevadaville.

Alps mine, small knob west of, at summit, triangulation station; bronze tablet stamped "9594 DENVER"-----	9, 593. 272
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## Russell Gulch via Gettysburg and Baldwin mine to Saratoga mine and return to Russell Gulch via Gilpin tram.

Gettysburg mine, 150 feet southeast of, 20 feet east of road, in top of stone ledge; aluminum tablet stamped "9009 DENVER"-----	9, 008. 577
Baldwin mine, 65 feet northwest of power house, in top of granite ledge; aluminum tablet stamped "8730 DENVER"-----	8, 729. 234

## Point near Saratoga mine to Kokomo mine.

Kokomo mine, 250 feet west of, ground at top of ledge; aluminum tablet stamped "8950 DENVER"-----	8, 949. 299
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**Blackhawk via road to Tucker mill.**

Tucker's mill, 125 feet east of, 20 feet west of Hayseed Tunnel, in top of granite ledge 2 feet above ground; aluminum tablet stamped "8551 DENVER"-----	Feet. 8, 550. 046
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**Blackhawk via road to Wheeler's mill.**

Wheeler's mill, 225 feet west of, in face of granite ledge 2 feet above ground, north side of road; aluminum tablet stamped "8354 DENVER"-----	8, 353. 505
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**GEORGETOWN QUADRANGLE****Idaho Springs to Stanley Mills.**

Idaho Springs, northwest corner of Sixteenth Avenue and Miner Street, in water table of First National Bank; aluminum tablet stamped "7541 DENVER"-----	7, 540. 077
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Stanley Mills, 40 feet east of shaft house, in top of masonry road wall, 2 feet from end; aluminum tablet stamped "7667 DENVER"-----	7, 666. 496
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**Empire Pass via Georgetown to point 3 miles southwest of Idaho Springs.**

Georgetown, 2 miles north of, summit of Empire Pass, on west side of road, at junction of roads, in rock; aluminum tablet stamped "8780 DENVER"-----	8, 778. 561
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Georgetown, 10 feet south of east entrance of brick high school, in top of foundation stone; aluminum tablet stamped "8507 DEN- VER"-----	8, 505. 915
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Georgetown, 2 miles east of, summit of Griffith Mountain, 300 feet north of Comet mine, between electric light lines, in top of rock; bronze tablet stamped "11000 DENVER"-----	10, 999. 015
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Georgetown, 5 miles east of, north side of Cascade Creek, by trail, at old sawmill, in top of large flat rock; bronze tablet stamped "9593 DENVER"-----	9, 591. 914
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Idaho Springs, 6 miles east of, junction of roads up Chicago and Cascade Creeks, 20 feet north of bridge over Cascade Creek, in top of rock; aluminum tablet stamped "8532 DENVER"-----	8, 530. 747
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Idaho Springs, 3 miles southwest of, 2,000 feet north of Peters tunnel, west side of road, in rock; aluminum tablet stamped "7919 DENVER"-----	7, 917. 608
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**Georgetown via public road and trail to point 0.8 mile south of Cedar Lake.**

Clear Lake; surface of water, September 24, 1903-----	9, 869
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Georgetown, 3.5 miles south of, at south end of swamp, 30 feet west of road, 0.7 mile south of Clear Lake, in top of large rock; alu- minum tablet stamped "9991 DENVER"-----	9, 989. 955
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**Junction of Cascade and Chicago creeks via trail up South Chicago Creek to bench mark 4 miles south of junction.**

Cascade and Chicago creeks, 4 miles south of junction of, west side of trail, in top of shelf of large granite boulder; aluminum tablet stamped "9662 DENVER"-----	9, 661. 194
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**Georgetown along Colorado & Southern Ry. via Silver Plume to Terrible mine.**

Georgetown, 10 feet south of east entrance to brick high school, in top of foundation stone; aluminum tablet stamped "8507 DEN- VER"-----	8, 505. 941
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Silver Plume, 75 feet northeast of railroad station, 4.5 feet north of southeast corner of brick building, in foundation stone of west wall, 2 feet above ground; aluminum tablet stamped "9114 DENVER" -----	Feet. 9, 113. 328
Terrible mine, 25 feet west of tunnel entrance, 2 feet above ground, in face of granite wall; aluminum tablet stamped "9271 DENVER" -----	• 9, 270. 144

## Silver Plume along wagon roads to 730 mine.

Pelican Tunnel, 120 feet southwest of, in face of granite rock; aluminum tablet stamped "9592 DENVER" -----	9, 591. 15
730 mine, 120 feet southeast of tunnel mouth, in face of granite rock, 5 feet above ground; aluminum tablet stamped "10451 DENVER" -----	10, 450. 398

## Fort Collins, Livermore, Long Peak, and Mount Olympus quadrangles.

## LARIMER COUNTY.

The elevations in the following list are based on the elevation of the lower pedestal at the southeast corner of the steps of the Colorado State capitol, at Denver. The elevation is obtained from the Coast and Geodetic Survey transcontinental line of levels and is accepted as 5,278.255 by the approximate adjustment of 1911.

The leveling was done in 1905 by G. A. Joslin.

The line from Belleview to Livermore was run as a precise line. The circuit from Forks Hotel via Alvord and return to Forks Hotel was a single line using the same level. The balance of level lines were run with a Y level and New York rods.

## FORT COLLINS QUADRANGLE.

Fort Collins southeast 3 miles along road, thence east to sec. 9, T. 7 N., R. 68 W., thence to crossroads 2 miles north of Wellington, thence west to corner of secs. 23, 24, 25, and 26, T. 9 N., R. 69 W.

Fort Collins, in west end of stone doorsill, main entrance to First National Bank; bronze tablet stamped "4981 DENVER" -----	4, 979. 134
Fort Collins, 3 miles east of, sec. 17, T. 7 N., R. 68 W., east side of road, junction with road turning north, 500 feet southeast of Slackett's ranch; iron post stamped "4927 DENVER" -----	4, 925. 699
T. 7 N., R. 68 W., 0.2 mile north of corner of sec. 9, 1 mile north of Pitcher's house, 30 feet west of road; iron post stamped "4937 DENVER" -----	4, 935. 489
T. 8 N., R. 68 W., southeast corner of sec. 28, 4 miles north of Pitcher's house, near telephone pole; iron post stamped "5021 DENVER" -----	5, 019. 120
T. 8 N., R. 68 W., northeast corner of sec. 16, 3 miles south of Wellington, in front of Carter's house; iron post stamped "5127 DENVER" -----	5, 125. 699
Wellington, west side of First National Bank Building in second stone step; bronze tablet stamped "5202 DENVER" -----	5, 200. 749
T. 9 N., R. 68 W., northeast corner of sec. 29, 1.8 miles east of Poudre Valley Irrigation Co. reservoir No. 2, at foot of telephone pole; iron post stamped "5254 DENVER." -----	5, 252. 255

T. 9 N., R. 69 W., 600 feet east of corner of secs. 23, 24, 25, and 26, 9.5 miles north of Fort Collins, 150 feet southeast of Annie D. Winter's farmhouse, 16 feet west of gate; iron post stamped "5290 DENVER" -----	Feet. 5,288.167
<b>Fort Collins along road to La Porte, thence by Union Pacific R. R. via Bellevue to old Stout post office.</b>	
T. 7 N., R. 69 W., corner of secs. 4, 5, 8, and 9, corner of Wm. S. Smith's property, at foot of telegraph pole; iron post stamped "5116 DENVER" -----	5,114.407
La Porte, opposite post office, at foot of telegraph pole; iron post stamped "5063 DENVER" -----	5,061.549
Bellevue, top step, north side Bellevue Mercantile Co. building; aluminum tablet stamped "5125 DENVER" -----	5,123.988
Bellevue, 3.7 miles south of, sec. 7, T. 7 N., R. 69 W., 200 feet from bridge 260, north end of gate to Lamb's ranch; iron post stamped "5303 DENVER" -----	5,301.693
T. 7 N., R. 69 W., between secs. 29 and 30, 1.5 miles north of Stout, 0.3 mile south of Johnson spur, at switch, east side of road, foot of fence post; iron post stamped "5322 DENVER" -----	5,320.670
Stout, abandoned post office, sec. 7, T. 6 N., R. 69 W.; chisel mark on west end of doorsill -----	5,275.371

**Point near Masonville.**

Masonville, 2.5 miles northwest of, sec. 9, T. 6 N., R. 70 W., 4 feet north of L. A. Sheldons ranch gate; iron post stamped "5478 DENVER" -----	5,476.646
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**Point near Bellevue to sec. 18, T. 9 N., R. 70 W.**

Bellevue, 3.2 miles northwest of, opposite gate of G. Shipp's ranch, north side of road; iron post stamped "5227 DENVER" -----	5,225.318
Engleside, 2.3 miles south of, sec. 1, T. 8 N., R. 70 W., west of road, 2 feet south of telephone pole; iron post stamped "5378 DENVER" -----	5,376.761
Engleside, 1.2 miles north of, sec. 18, T. 9 N., R. 70 W., 0.2 mile south turn in telegraph line west, west side of road, foot of telegraph pole; iron post stamped "5587 DENVER" -----	5,585.521

**Bench marks near Fort Collins.**

Fort Collins, 3.5 miles south of, corner of secs. 25, 26, 35, and 36, T. 7 N., R. 69 W., southwest corner of sec. 25, at fence corner; iron post stamped "5027 DENVER" -----	5,025.147
Fort Collins, State agricultural building, at east entrance to main building, in north end of first stone step; aluminum tablet stamped "4998 DENVER" -----	4,996.478
Fort Collins, 4 miles north of, 800 feet west of A. F. Stauff's farmhouse, west of road, at southwest fence corner at mouth of lane running west; iron post stamped "5111 DENVER" -----	5,109.118
Fort Collins, 6.5 miles north of, top of ridge, 6 feet east of road and 20 feet west of railroad grade; iron post stamped "5268 DENVER" -----	5,266.071

## Masonville via Stout post office to Fort Collins.

Masonville, 2.5 miles northeast of, sec. 1, T. 6 N., R. 70 W., summit of divide between Redstone and Spring Canyon; iron post stamped "5766 DENV."	Feet. 5,763.548
Fort Collins, 5.5 miles southwest of, between secs. 33 and 34, T. 7 N., R. 69 W., 1 mile east of Stout post office, at intersection of roads; iron post stamped "5150 DENV."	5,147.991

## LIVERMORE QUADRANGLE.

## Bench marks established near public-land corners.

T. 6 N., R. 70 W., sec. 5, summit of Fletcher Hill, 5 feet west of road, 5 feet east of fence, in low rock; aluminum tablet stamped "6047 DENVER"	6,046.203
T. 7 N., R. 71 W., probably sec. 14, summit of Little Dead Man Hill, 40 feet north of road, in low rock, near stone monument; aluminum tablet stamped "6492 DENVER"	6,490.752
T. 7 N., R. 71 W., sec. 15 or 16, 2.5 miles northwest of Little Dead Man Hill, 1.4 miles northwest of forks of road, 30 feet northwest of creek, south side of road, large rock, beside stone monument; aluminum tablet stamped "6516 DENVER"	6,514.067
T. 7 N., R. 71 W., sec. 17, 5.5 miles northwest of Little Dead Man Hill, 0.9 mile north of deserted cabin, south edge of road, in low rock; aluminum tablet stamped "6943 DENVER"	6,941.398
T. 7 N., R. 72 W., 800 feet south of Miller's ranch house, crossing old hill road with new creek road, between creek and road, in rock; aluminum tablet stamped "7288 DENVER"	7,286.537
T. 7 N., R. 71 W., southwest corner of sec. 4, 1.5 miles southwest of Stove Prairie schoolhouse, in gully near dugout, 20 feet east of pine tree, south side of road, in rock; aluminum tablet stamped "7272 DENVER"	7,270.464
T. 8 N., R. 71 W., sec. 29, 1.5 miles northeast of Stove Prairie schoolhouse, 100 feet northwest of road crossing of creek, foot of little hill, east edge of grove of quaking aspens, 20 feet west of road, 10 feet southeast of pine tree; aluminum tablet stamped "7086 DENVER"	7,084.732
Stove Prairie Landing, 0.8 mile south of, sec. 4, T. 8 N., R. 71 W., cabin on creek bank, west edge of road; east bank of creek, in large flat rock; aluminum tablet stamped "6314 DENVER"	6,312.285
Stove Prairie Landing, 1.2 miles west of, sec. 1, T. 8 N., R. 72 W., 150 feet west of rock monument at end of railroad grade, 60 feet south of pine tree opposite mouth of dry gulch, 100 feet from river, in boulder, 25 feet high; aluminum tablet stamped "6115 DENVER"	6,113.420
Stove Prairie Landing, 2.7 miles north of, sec. 30, T. 9 N., R. 71 W., 100 feet from summit of pass, 50 feet east of road, by pile of rocks, low flat rock; aluminum tablet stamped "6927 DENVER"	6,926.112
Log Cabin, 5 miles east of, sec. 24, T. 9 N., R. 72 W., 200 feet west of town line, 40 feet north of road, near fence corner, in granite rock; aluminum tablet stamped "7050 DENVER"	7,048.852
Livermore, 6.9 miles east of, sec. 9, T. 9 N., R. 71 W., west edge of road, in rock in road opposite telegraph pole; aluminum tablet stamped "6533 DENVER"	6,531.723



Livermore, 3.4 miles east of, sec. 35, T. 10 N., R. 71 W., above road on south side, in rock; aluminum tablet stamped "5994 DENVER"	Feet. 5,993.278
Livermore, west edge of hotel steps, in cement walk; aluminum tablet stamped "5733 DENVER"-----	5,731.814
Forks Hotel, 2.5 miles southwest of, sec. 2, T. 9 N., R. 70 W., 0.2 mile north of F. W. Rigdon's post box, in small rock by pile of stone; aluminum tablet stamped "5927 DENVER"-----	5,925.748
Forks Hotel, sec. 23, T. 10 N., R. 70 W., between forks of road, 200 feet east of windmill, in sandstone rock; aluminum tablet stamped "5887 DENVER"-----	5,885.792

**Forks Hotel via road to Alford, thence east to State road and south to Livermore.**

Forks Hotel, 3 miles northwest of, sec. 20, T. 10 N., R. 70 W., turn in road to St. Cloud at foot of signboard "St. Cloud to Latimar River"; iron post stamped "5999 DENVER"-----	5,997.633
Alford, 2.2 miles south of, sec. 13, T. 10 N., R. 71 W., 800 feet above mouth of canyon, west side of road, east edge of creek, in low granite rock; aluminum tablet stamped "6141 DENVER"-----	6,140.081
Alford, hill back of town, sec. 9, T. 10 N., R. 71 W., south edge of road, in surface rock 20 feet square; aluminum tablet stamped "6353 DENVER"-----	6,351.850
Alford, 3 miles west of, sec. 5, T. 10 N., R. 71 W., 0.2 mile north of Virginia Dale road with St. Cloud road, south edge of hill, west edge of road, in large rock; aluminum tablet stamped "6635 DENVER"-----	6,633.565
T. 11 N., R. 70 W., sec. 36, 7.8 miles north of Forks Hotel, 600 feet south of telegraph line crossing road, east side of road, in rock; aluminum tablet stamped "6516 DENVER"-----	6,514.276
T. 10 N., R. 70 W., sec. 8, 4.9 miles south of Forks Hotel, top of hill, south side of road, in granite rock; aluminum tablet stamped "6287 DENVER"-----	6,285.123

**Bench marks established at public-land corners.**

T. 10 N., R. 72 W., sec. 12, 100 feet west of line fence, 150 feet northwest of gate to Bullards ranch, 50 feet east of corner to fence, in round rock 4 feet high and 7 feet in diameter; aluminum tablet stamped "6701 DENV"-----	6,699.176
T. 11 N., R. 72 W., in east part of sec. 36, summit of hill, 15 feet south of fence, in rock cairn 2 feet high; aluminum tablet stamped "6825 DENV"-----	6,823.877

**Waverly north along road to Brennigan Spring.**

McGimleys farmhouse, 0.8 mile northeast of, 60 feet west of railroad grade, at wire fence east and west; iron post stamped "5416 DENVER"-----	5,414.182
Boxelder Creek crossing, 1,900 feet south of, at fence corner, 45 feet east of public road, on old railroad grade; iron post stamped "5528"-----	5,526.325
Warren sheep camp, 2 miles south of, 100 feet west of railroad grade, 60 feet southwest of road forks, at fence corner; iron post stamped "5631 DENVER"-----	5,629.066

Warren sheep camp, 1 mile north of, at point of curve east, 30 feet west of old railroad grade, 15 feet east of wagon road; iron post stamped "5805 DENVER"-----	Feet. 5, 803. 232
Jack Spring ranch, 1,000 feet south of, 6 feet west of gate, 900 feet east of corner of secs. 5, 6, 7, and 8, T. 11 N., R. 68 W.; iron post stamped "6045 DENVER"-----	6, 043. 210
Brennigan Spring, 1,000 feet north of, on ridge by wire-fence line between Rs. 68 and 69 W.; iron post stamped "6569 DENVER"-----	6, 567. 063

## LONGS PEAK QUADRANGLE.

## Boston mine to Ward.

Ward, 1 mile south of, sec. 7, T. 1 N., R. 72 W., 500 feet north of Boston mine, in face of rock east side of road; bronze tablet stamped "8594 DENV."-----	8, 591. 744
Ward, sec. 1, T. 1 N., R. 78 W., in southeast corner of wall of railroad station; aluminum tablet stamped "9254 DENV."-----	9, 252. 613

## Vicinity of Estes Park (single spur line).

Estes Park, sec. 25, T. 5 N., R. 72 W., 300 feet northwest of post office, north side of road, in top of rock; aluminum tablet stamped "7549 DENV."-----	7, 546. 877
Estes Park, 2 miles northwest of, sec. 35, T. 5 N., R. 72 W., 700 feet north of south bank of Thompson River, in rock beside pine tree; bronze tablet stamped "7626 DENV."-----	7, 623. 697

## MOUNT OLYMPUS QUADRANGLE.

## Lyons via stage road to point near Dunraven ranch, Estes Park.

Lyons, 5.5 miles northwest of, top of Jordan Hill, north side of road; iron post stamped "6650 DENV."-----	6, 648. 169
Lyons, 8 miles northwest of, 75 feet north of bridge across Little Thompson River, at junction of Allen Park and Estes Park roads; iron post stamped "6704 DENV."-----	6, 702. 217
Lyons, 11 miles northwest of, 8 feet north of road, at foot of pine tree; iron post stamped "7329 DENV."-----	7, 326. 955
Lyons, 14 miles northwest of, 0.25 mile northwest of Meadowdale stock ranch, pine tree north side of road; iron post stamped "7824 DENV."-----	7, 822. 902
Estes Park, 5 miles east of, sec. 28, T. 5 N., R. 72 W., at junction of Estes Park and Loveland roads; iron post stamped "7594 DENV."-----	7, 591. 835

## Point near Estes Park east by road to Pinewood.

Estes Park, 6 miles east of, sec. 25, T. 5 N., R. 72 W., 300 feet west of summit, rock south side of road, set in top of; bronze tablet stamped "8584 DENV."-----	8, 582. 442
Estes Park, 9 miles east of, sec. 23, T. 5 N., R. 71 W., 500 feet west of W. L. Walker's ranch, in top of rock, south side of road; bronze tablet stamped "7599 DENV."-----	7, 597. 285
Pinewood, 0.5 mile west of, sec. 26, T. 5 N., R. 71 W., 200 feet west of house, in face of rock, south side of road; bronze tablet stamped "6673 DENV."-----	6, 671. 370

Pinewood, 0.5 mile northeast of, in sec. 11, T. 5 N., R. 70 W., north side of road at summit of Bald Mountain; iron post stamped "6772 DENV."	Feet. 6, 771. 490
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Lyons to Noland.

T. 3 N., R. 70 W., sec. 5, southwest corner of Noland schoolhouse; aluminum tablet stamped "6025 DENV."	6, 023. 275
Sec. 1, T. 5 N., R. 71 W., along stage road to point 5 miles east of Estes Park.	
T. 5 N., R. 71 W., sec. 6, 900 feet west of bridge 5, 50 feet south of creek, 2 feet north of road, in small rock; aluminum tablet stamped "5808 DENVER"	5, 806. 828
T. 6 N., R. 71 W., sec. 33, 0.5 mile northwest of forks of Big Thompson Creek, in front of Hersman place; iron post stamped "6343 DENVER"	6, 341. 579
T. 5 N., R. 71 W., sec. 3, 0.3 mile west of forks of Big Thompson Creek, on south fork, 100 feet west of turn of creek, 100 feet east of cabin, 10 feet south of road, in large rock; aluminum tablet stamped "6201 DENVER"	6, 199. 700
T. 5 N., R. 71 W., sec. 8, 0.4 mile west of bridge 9, 3 feet south of road, flat rock; aluminum tablet stamped "6778 DENVER"	6, 776. 359
T. 5 N., R. 72 W., sec. 13, 200 feet south of creek, 0.9 mile west of bridge 11, west end of little flat, 5 feet south of road; iron post stamped "7003 DENVER"	7, 001. 974
T. 5 N., R. 72 W., sec. 22, 500 feet east of bridge 13, south edge of road, in large rock; aluminum tablet stamped "7269 DENVER"	7, 267. 411
Estes Park, 0.5 mile east of, junction of Estes Park and Loveland roads; iron post stamped "7594 DENVER"	7, 591. 900

Eaton quadrangle.

LARIMER AND WELD COUNTIES.

The elevations in the following list are based upon the precise level line of the Coast and Geodetic Survey traversing this area.

The leveling was done in 1905 by C. I. Anderson, in 1906 by G. A. Joslin, and in 1908 by W. R. Winstead.

EATON QUADRANGLE.

Fort Collins east along wagon road to Eaton.

Fort Collins, 3 miles southeast of, sec. 17, T. 7 N., R. 68 W., 500 feet southeast of Slocett's ranch, at junction of road north, on east side of road; iron post stamped "4927 DENVER"	Feet. 4, 925. 723
Timnath, 2.5 miles north of, northeast corner of sec. 22, T. 7 N., R. 68 W., at crossroads, on southwest corner of intersection, 25 feet south of corner, opposite H. M. Lewis's farmhouse; iron post stamped "4916 DENVER"	4, 914. 589
Timnath, southeast corner of Timnath schoolhouse, in corner stone, third course from ground; aluminum tablet stamped "4877"	4, 875. 941
T. 7 N., R. 68 W., southeast corner of, 2.5 miles southeast of Timnath, north side of road, 4 feet west of fence corner; iron post stamped "4881 DENVER"	4, 879. 594

Windsor, 3 miles north of, 800 feet south of northeast corner of sec. 4, T. 6 N., R. 67 W., on west corner of road intersection at Geo. Breminan's ranch house, 500 feet south of Windsor reservoir; iron post stamped "4924 DENVER"-----	Feet. 4, 922. 646
Severance, 1 mile east of, southwest corner of sec. 36, T. 7 N., R. 67 W., 6 miles west of Eaton, northwest corner of road intersection, at Walter Baldridge ranch; iron post stamped "4894 DENVER"-----	4, 892. 649
Eaton, 3 miles west of, 2 feet east of southwest corner of sec. 34, T. 7 N., R. 66 W., north side of wagon road; iron post stamped "4862 DENVER"-----	4, 860. 516
Eaton, southwest corner of sec. 31, T. 7 N., R. 66 W., southwest corner of schoolhouse lot; iron post stamped "4826 DENVER"-----	4, 824. 681
Eaton east 7 miles, north 6 miles, west 1 mile, north 2 miles, and west to Pierce.	
Eaton, 3 miles east of, southwest corner of sec. 34, T. 7 N., R. 65 W., northeast corner of crossroads, 150 feet east of bridge over Lone Tree Creek, at John Ward's ranch house; iron post stamped "4774 DENVER 1906"-----	4, 772. 753
Canal, 0.2 mile south of, sec. 18, T. 7 N., R. 64 W., east side of road beside fence; iron post stamped "4851 DENV 1906"-----	4, 849. 517
T. 8 N., R. 64 W., sec. 32, summit of little ridge; iron post stamped "5007 DENV 1906"-----	5, 004. 722
T. 8 N., R. 64 W., southwest corner of sec. 19, 6 feet east of corner stake; iron post stamped "5021 DENV 1906"-----	5, 018. 812
Pierce, 5 miles east of, at foot of fence corner opposite Olive Branch school district 62; iron post stamped "4950 DENV 1906"-----	4, 957. 848
Pierce, 1.8 miles east of, road corner, 5 feet from fence corner post on south side of road; iron post stamped "5054 DIENV 1906"-----	5, 051. 595
Pierce west along first wagon road north of Pierce to Blackhollow, thence southwest to Fort Collins road to sec. 28, T. 8 N., R. 68 W.	
Pierce, 3 miles west of, north side of road, 4 feet east of north and south fence, foot of third post north of fence corner; iron post stamped "5160 DENV 1906"-----	5, 158. 563
Pierce, 5.8 miles west of, 0.6 mile west of Walker's ranch house, summit of hill, north side of road; iron post stamped "5280 DENV 1906"-----	5, 278. 463
Blackhollow, 0.8 mile southwest of, summit of hill west of first draw west of Blackhollow, 15 feet north of road; iron post stamped "5171 DENV 1906"-----	5, 169. 258
T. 8 N., R. 67 W., northwest corner of section 31, on line between Larimer and Weld Counties; iron post stamped "5159 DENV 1906"-----	5, 157. 321
Dover north along Union Pacific R. R. to Carr.	
Dover, in front of section house; top of rail-----	5, 409
Dover, 3 miles northwest of, 0.25 mile northwest of section post, 0.5 mile southeast of "Decker 1 mile" post, east side of track, by telegraph pole; iron post stamped "5524 DENV 1906"-----	5, 522. 480

Carr, 2.9 miles southeast of, 1,000 feet north of cut, east side of track, 6 feet west of road, beside telegraph pole; iron post stamped "5632 DENV 1906"-----	Feet. 5, 630. 487
Carr, in front of station; top of east rail-----	5, 704. 0

Carr southeast along road via Slayton's ranch to sec. 28, T. 10 N., R. 65 W., thence south to sec. 6, T. 9 N., R. 65 W., thence west to Dover.

Carr, 2.9 miles southeast of, summit of first ridge east of Lone Tree Creek, 10 feet north of road; iron post stamped "5650 DENV 1906"-----	5, 648. 497
Carr, 6.4 miles southeast of, 1.8 miles northwest of Slayton's ranch house, summit of ridge between Little Owl Creek and Owl Creek, 10 feet north of road; iron post stamped "5639 DENV 1906"-----	5, 637. 528
T. 10 N., R. 66 W., northwest corner of sec. 12, 1 mile southeast of Slayton's ranch house, at forks of southeast and east roads, on line with east and west fence on west side of Owl Creek; iron post stamped "5460 DENV 1906"-----	5, 458. 452
Slayton's ditch camp, 1.1 miles southeast of west side of Eastman Creek, 100 feet north of sheep corral, 50 feet from road; iron post stamped "DENV 5336 1906"-----	5, 334. 502
T. 10 N., R. 65 W., southeast corner of NW. $\frac{1}{4}$ sec. 28, Eastman Creek, Fred Abbott's ranch, at foot of fence post, 10 feet west of road; iron post stamped "5258 DENV 1906"-----	5, 256. 559
T. 9 N., R. 65 W., northeast corner of sec. 6, 30 feet southwest of crossing of plowed furrows; iron post stamped "5345 DENV 1906"-----	5, 343. 338
Dover, 3.3 miles east of, north line of sec. 2, T. 9 N., R. 66 W., near northwest corner, 300 feet east of creek, 0.3 mile north of sheep corral; iron post stamped "5290 DENV 1906"-----	5, 288. 566

Point 3 miles east of Olive Branch schoolhouse along highways north and west to Dover.

T. 8 N., R. 64 W., southwest corner of sec. 19, 3 miles east of Olive Branch schoolhouse, 6 feet east of corner stake; iron post stamped "5021 DENV 1906"-----	5, 018. 812
T. 8 N., R. 64 W., southwest corner of sec. 7, 3 feet east of fence corner, Harry Stapp's ranch; iron post stamped "5092 DENVER 1908"-----	5, 090. 638
T. 9 N., R. 64 W., southwest corner of sec. 19, 3 feet east of fence corner, 150 feet southeast of house; iron post stamped "5210 DENVER 1908"-----	5, 208. 397
T. 9 N., R. 65 W., southeast corner of sec. 15, 3 feet south of fence corner, 500 feet southwest of house; iron post stamped "5208 DENVER 1908"-----	5, 206. 385
T. 9 N., R. 65 W., northeast corner of sec. 17, 30 feet southeast of fence corner, 3 feet east of corner stone; iron post stamped "5175 DENVER 1908"-----	5, 172. 840
T. 9 N., R. 66 W., northeast corner of sec. 14, 2,640 feet south of house, north of fence corner 3 feet; iron post stamped "5230 DENVER 1908"-----	5, 228. 808
Dover, 3 miles southeast of, northeast corner of sec. 9, T. 9 N., R. 66 W., 1,200 feet north of house, 3 feet southeast of fence corner; iron post stamped "5306 DENVER 1908"-----	5, 304. 047

Dover, in southeast corner of section yard, on top of rock; square marked "U. S.  $\square$  B. M." (Coast and Geodetic Survey bench mark) ----- Feet.  
5,407.237

Point 0.85 mile southeast of Dover south along Union Pacific R. R. to Nunn, thence west, north, and east to point of beginning.

Dover, 2.3 miles southeast of, at milepost 75, 60 feet west of track, near wire fence; iron post stamped "5320 DENVER 1908"----- 5,318.680  
Nunn, 500 feet southwest of station, northeast corner of amusement hall at Kent Hotel, 500 feet east of center of sec. 33, T. 9 N., R. 66 W.; iron post stamped "5186 DENVER 1908"----- 5,184.899  
Nunn, 3 miles northwest of, northeast corner of sec. 36, T. 9 N., R. 67 W., 30 feet southwest of corner stone; iron post stamped "5235 DENVER 1908"----- 5,232.982  
Nunn, 6 miles northwest of, northeast corner of sec. 12, T. 9 N., R. 67 W., 4 feet east of fence; iron post stamped "5337 DENVER 1908"----- 5,335.235

Nunn south along Union Pacific R. R. to Eaton.

Nunn, 2.6 miles southeast of, about center of secs. 10 and 15, T. 9 N., R. 66 W., 500 feet west of house, 60 feet west of track, north of road, at road crossing; iron post stamped "5112 DENVER 1908"----- 5,110.353  
Pierce, 1,000 feet west of station, 5.3 miles southeast of Nunn, in southwest corner of west face of Shafer & Stovall's brick store; aluminum tablet stamped "5041 DENV 1908"----- 5,039.488  
Pierce, 2 miles southeast of, 600 feet east of quarter corner on south side of sec. 35, T. 8 N., R. 66 W., on the south township line of T. 8 N., 60 feet west of track, north of road at road crossing; iron post stamped "4990 DENVER 1908"----- 4,988.217  
Ault, 300 feet southwest of station, in southeast corner of east face of W. N. Williamson's real estate and insurance office; aluminum tablet stamped "4840 DENVER 1908"----- 4,939.863  
Ault, 2 miles southeast of, 60 feet west of track, north of road, 1,200 feet east of quarter corner on south side of sec. 24, T. 7 N., R. 66 W., at road crossing 60-D-60-E; iron post stamped "4867 DENVER 1908"----- 4,865.250

Carr north along Union Pacific R. R. to Athol, Wyo.

Carr, in southeast corner of the yard of railroad section house, on top of granite post; square (Coast and Geodetic Survey bench mark) ----- 5,702.976  
Carr, 3 miles north of, 600 feet north of milepost 89, 63 feet east of track, 3 feet east of wire fence, 10 feet west of road, 21 feet south of house; iron post stamped "5840 DENVER 1908"----- 5,838.236  
Carr, 6 miles north of, 300 feet north of milepost 92, 600 feet south of electric signal, 63 feet east of track, 3 feet east of wire fence, 2,000 feet northwest of tent, 150 feet west of road; iron post stamped "5993 DENVER 1908"----- 5,991.481

Northwest corner of sec. 12, T. 10 N., R. 66 W., east 2 miles, north 1.5 miles, east 7.5 miles, south 4.5 miles, thence west to sec. 28, T. 10 N., R. 65 W.

T. 10 N., R. 66 W., northwest corner of sec. 12, 1 mile southeast of Slayton's ranch house at forks of southeast and east roads, on line with east and west fence, west side of Owl Creek; iron post stamped "5460 DENV 1906"-----	Feet. 5, 458. 352
T. 11 N., R. 65 W., SW. $\frac{1}{4}$ sec. 32, 0.2 mile northeast of section corner at crossroad, in northwest corner of roads; iron post stamped "5433 DENVER 1908"-----	5, 431. 398
T. 11 N., R. 65 W., center of sec. 34, 3 feet north of fence corner; iron post stamped "5544 DENVER 1908"-----	5, 542. 866
T. 11 N., R. 64 W., on township line, quarter corner of sec. 36, 30 feet northeast of corner stone; iron post stamped "5394 DENVER 1908"-----	5, 392. 254
T. 10 N., R. 64 W., about center of sec. 33, 1 mile east and 1.3 miles north of Willow Creek, on top of large hill; iron post stamped "5413 DENVER 1908"-----	5, 411. 872
T. 10 N., R. 64 W., about center of sec. 16, 1.7 miles south of Willow Creek, 1 mile north of big hill, 500 feet west of old road, on top of small hill; iron post stamped "5403 DENVER 1908"-----	5, 401. 754
T. 10 N., R. 65 W., near northwest corner of sec. 24, 1,000 feet southeast of section stone, 0.8 mile north of house; iron post stamped "5427 DENVER 1908"-----	5, 425. 778

Carr northwest along highways to point 1 mile north of Warren's siding.

Carr, 5 miles northwest of, at road to North Cheyenne and Fort Collins telephone line, 30 feet east of road; iron post stamped "5907 DENVER 1908"-----	5, 904. 905
Carr, 6.5 miles northwest of, at second-class road fork east, 1,200 feet west of house, 80 feet west of road; point on rock marked "5958"-----	5, 955. 98

#### Holyoke quadrangle.

#### SEDGWICK COUNTY.

The approximate elevations in the following list depend on the bench mark established in the season of 1896 at Sidney, Nebr., consisting of a copper bolt set in the astronomic monument in the parade grounds of old Fort Sidney, marked "U.S.G.S. 4086 feet B.M." The elevation of this bench mark has been accepted as 4,086.279 feet above mean sea level, based on Union Pacific Railroad datum.

The leveling was done by R. C. Cornish in 1897.

#### HOLYOKE QUADRANGLE.

#### Bench marks near Julesburg.

T. 12 N., R. 45 W., at section corner on Nebraska-Colorado State line, 0.5 mile west of Lodgepole Creek; iron post stamped "SIDNEY 3591"-----	Feet. 3, 590. 886
Julesburg, T. 12 N., R. 45 W., in astronomical monument; bronze tablet stamped "SIDNEY 3560"-----	3, 560. 480
Julesburg, T. 12 N., R. 44 W., at railroad station; iron post stamped "SIDNEY 3469"-----	3, 469. 064

Castle Rock and Colorado Springs quadrangles, and Pikes Peak special quadrangle.

EL PASO, PUEBLO, AND TELLER COUNTIES.

The elevations in the following list are based on the transcontinental line of precise levels of the Coast and Geodetic Survey along the Atchison, Topeka & Santa Fe and the Chicago, Rock Island & Pacific railways in this section.

The leveling in the Colorado Springs quadrangle was done in 1903 by J. E. Chapson, in 1905 by C. I. Anderson, and in 1906 by G. A. Joslin; that in the Pikes Peak special quadrangle in 1903 by J. E. Chapson and in 1907 by Charles Hartman; and that in the Castle Rock quadrangle in 1905 by C. I. Anderson.

COLORADO SPRINGS QUADRANGLE.

Colorado Springs via Denver & Rio Grande R. R. to Adams Crossing, thence along roads to Garden of the Gods and return to Colorado Springs.

Colorado Springs, 2,000 feet north of station, west of track, north abutment of railroad bridge over Monument Creek; bottom of square hole in second rock from end where offsets begin (bench mark A, Coast and Geodetic Survey)-----	Feet. 5,987.455
Colorado Springs, 2,000 feet north of station, in west end of north abutment of plat girder bridge over Monument Creek, on first stone where offsets begin, 4 feet west of Coast Survey bench mark; aluminum tablet stamped "5988 ADJ 1903"-----	5,987.473
Cathedral Rock, in south face, 2 feet above ground; aluminum tablet stamped "6432 ADJ 1903"-----	6,431.532
Cathedral Rock, east side of, in rock at gate to Garden of the Gods, 5 feet above ground; aluminum tablet stamped "6415 ADJ 1903"-----	6,414.065
Colorado Springs, 2 miles west of, top of hill opposite Brewer house, 30 feet south of road; iron post stamped "6310 ADJ 1903"-----	6,309.023

Colorado Springs via Denver & Rio Grande R. R. to Fountain, thence via Colorado & Southern Ry to Manitou Junction, thence along roads and Chicago, Rock Island & Pacific Ry. to Elsmere.

Colorado Springs, 1.5 miles southeast of, twelfth stone from top of upper face of southeast wing wall of masonry culvert; aluminum tablet stamped "5874 ADJ 1903"-----	5,872.917
Colorado Springs, 5 miles southeast of, at Skinner ranch, 300 feet east of gate, outside fence corner, in sec. 3, T. 15 S., R. 66 W.; iron post stamped "5777 ADJ 1903"-----	5,776.298
Crews, 300 feet north of station, T. 15 S., R. 65 W., 2 feet west of fence corner; iron post stamped "5651 ADJ 1903"-----	5,649.943
Fountain, on southeast corner of store building of F. E. Torbit, 5 feet above walk, in lava rock; aluminum tablet stamped "5547 ADJ 1903"-----	5,545.979
Fountain, 2.7 miles northeast of, fence corner east of right of way, at summit; iron post stamped "5612 ADJ 1903"-----	5,611.060
Franceville Junction, 1 mile south of, southwest corner of sec. 15, T. 15 S., R. 65 W., 11 feet east of track, at fence; iron post stamped "5742 ADJ 1903"-----	5,740.882



Franceville, 1.2 miles northwest of, east of track, 60 feet east of telephone pole, south of second trestle, and west of road crossing under trestle; iron post stamped "5981 ADJ 1903"-----	Feet. 5,979.962
Manitou Junction, 0.5 mile southeast of, road crossing at west gate of Richfield Springs, 50 feet west of railroad, 40 feet north of road; iron post stamped "6278 ADJ 1903"-----	6,277.018
Bierstadt, 500 feet west of schoolhouse, 50 feet east of Chicago, Rock Island & Pacific Ry. crossing, 40 feet north of wagon road; iron post stamped "6536 ADJ 1903"-----	6,534.921
Elsmere, southwest corner of stone under support at each side of water tank; bottom of square offset lettered V (Coast and Geodetic Survey bench mark)-----	6,420.727
Elsmere, 0.8 mile west of, corner of Tps. 13 and 14 S., Rs. 65 and 66 W., south of track, west of road; iron post stamped, "6390 ADJ 1903"-----	6,389.122

**Falcon along roads south and east to Amo, south 12 miles, and west to Fountain.**

Falcon, Colorado & Southern Ry. and Denver & Rio Grande R. R. bridge over Chicago, Rock Island & Pacific Ry. bridge, northeast end of abutment, top of stone forming third course, in first of series of steps, 5 inches northeast of Coast Survey bench mark; aluminum tablet stamped "6813 ADJ 1903"-----	6,812.140
Grandview, 1,000 feet west of schoolhouse, T. 13 S., Rs. 64 and 65 W., Gandry's ranch, at northwest angle of crossroads; iron post stamped "6687 ADJ 1903"-----	6,686.248
Amo, 3 miles west of, southwest corner of sec. 33, T. 13 S., R. 64 W.; iron post stamped "6627 ADJ 1903"-----	6,626.268
Amo, 40 feet west of northwest corner of sec. 1, T. 14 S., R. 64 W.; iron post stamped "6370 ADJ 1903"-----	6,369.411
Amo, 3 miles south of, southeast corner of sec. 14, T. 14 S., R. 64 W., on high hill, south of Kennedy's ranch; iron post stamped "6339 ADJ 1903"-----	6,338.375
T. 14 S., R. 64 W., southeast corner of sec. 35, 0.2 mile northeast of Ashley's ranch; iron post stamped "6125 ADJ 1903"-----	6,124.335
T. 15 S., R. 64 W., northeast corner of sec. 23, 2.8 miles south of Ashley's ranch, in boulder buried 3 feet in ground; aluminum tablet stamped "5920 ADJ 1903"-----	5,919.189
T. 15 S., R. 64 W., southeast corner of sec. 35, 5.8 miles south of Ashley's ranch; iron post stamped "5795 ADJ 1903"-----	5,794.441
T. 15 S., R. 64 W., southwest corner of sec. 33, at William's ranch, on top of first high hill; iron post stamped "5787 ADJ 1903"-----	5,786.699
Fountain, 4 miles east of, southwest corner of sec. 36, T. 15 S., R. 65 W.; iron post stamped "5610 ADJ 1903"-----	5,609.554

**Falcon along roads north 8 miles.**

Falcon, northwest end of abutment of Colorado & Southern Ry. and Denver & Rio Grande R. R. bridge over Chicago, Rock Island & Pacific Ry., on top of stone third course of first step; bottom of square cut (Coast and Geodetic Survey bench mark)-----	6,812.095
Falcon, 1.5 miles north of, northeast corner of Tps. 12 and 13 S., Rs. 64 and 65 W.; iron post stamped "6971 ADJ 1903"-----	6,970.144
Falcon, 4.7 miles north of, 0.3 mile south of northwest corner of sec. 19, T. 12 S., R. 64 W., on summit of high bald hill east of road; iron post stamped "7306 ADJ 1903"-----	7,305.216

## Fountain along Denver &amp; Rio Grande R. R. to Pinyon.

Buttes, 1.5 miles north of, opposite Thomas Owens ranch, west of track, in field near fence corner, south of fork of road; iron post stamped "5435 ADJ 1903"-----	Feet. 5,434.188
Buttes, 1.8 miles south of, southeast of road crossing at fence corner in field; iron post stamped "5330 ADJ 1903"-----	5,328.930
Wigwam, 0.2 mile north of, east of track in field near fence corner; iron post stamped "5217 ADJ 1903"-----	5,216.063
Wigwam, 2.2 miles north of, west of track in field, at northeast angle of fork road to Toof ranch; iron post stamped "5152 ADJ 1903"-----	5,150.932

## Colorado Springs along Colorado Springs &amp; Cripple Creek District Ry. to Saderlind.

Colorado Springs, east end of Huerfano Street viaduct, in coping stone of northeast corner of retaining wall, near iron post; aluminum tablet stamped "5989 COLO SP"-----	5,988.211
Colorado Springs, 1.1 miles west of, in coping stone 8 by 2 by 5 feet, on retaining wall 6 feet high, at back of recess 100 feet east of northeast corner of brick office building of Portland mill; aluminum tablet stamped "6101 COLO SP"-----	6,099.845
Colorado Springs, 3.3 miles west of, 70 feet north of track, on a sandstone boulder 2 by 2 by 3 feet; aluminum tablet stamped "6525 COLO SP"-----	6,524.205
Colorado Springs, 4.3 miles west of, 60 feet west of railroad track, 1,000 feet north of cut, west side of small patch of oak brush, in sandstone boulder 2 by 2 by 1 foot; aluminum tablet stamped "6706 COLO SP"-----	6,704.828
Sublime, 8 feet south of track, 300 yards west of whistling post, on bench of granite rock in a cut; aluminum tablet stamped "7299 COLO SP"-----	7,298.357
Fairview, 30 feet south of track on mail line, 80 feet east of west end of switch, in outcropping boulder 4 by 3 by 3 feet; bronze tablet stamped "7935 COLO SP"-----	7,934.347
Fairview, South Cheyenne Canyon, 2 miles west of, 12 feet north of railroad track, 100 feet east of water tank, in a granite boulder 8 by 4 by 4 feet; aluminum tablet stamped "COLO SP S301"-----	8,300.148
St. Peters, section house, 10 feet south of railroad track, in granite boulder 14 by 8 by 4 feet; aluminum tablet stamped "8755 COLO SP"-----	8,754.280
Duffield, 0.2 mile west of flag station, 12 feet south of railroad track, in granite boulder 10 by 10 by 10 feet; bronze tablet stamped "9349 COLO SP"-----	9,348.489
Summit, 60 feet north of railroad track, 50 feet west of post office, in outcropping granite boulder; bronze tablet stamped "9913 COLO SP"-----	9,911.669
Saderlind, 100 yards west of switch, 20 feet north of track, on outcropping boulder 3 by 5 feet, 3 feet above grade; bronze tablet stamped "9971 COLO SP"-----	9,969.870
Quarry Spur via Colorado Midland Ry. to Green Mountain Falls (unchecked spur line).	
Manitou, in front of Colorado Midland Ry. station, top of rail-----	6,412.1
Manitou, Manitou Soda Spring, stone facing south side of creek, east end of bow at spring, foot of handrail post; aluminum tablet stamped "6336 1906"-----	6,334.657

	Feet.
Iron Springs, in front of station house; top of rail-----	6,522
Crags, 350 feet east of signpost, at switch; top of rail-----	7,004
Crags, in front of signpost; top of rail-----	7,015.9
Crags, 400 feet north of, north side of Fountain Creek, 100 feet north of bend of road, 20 feet west of road, in top of large round boulder; aluminum tablet stamped "7026 1906"-----	7,024.888
Cascade Canyon, in front of station; top of rail-----	7,393.25
Cascade Canyon, southeast corner of porch of agent's house; iron post stamped "7391 1906"-----	7,390.111
Culver, in front of signpost; top of rail-----	7,482.9
<b>Colorado Springs south along road via Lytle to Turkey Creek, thence east to Wigwam.</b>	
Colorado Springs, 3.6 miles south of, 10 feet east of gate of Cheyenne Mountain ranch, 6 feet from fence; iron post stamped "6087 1906." (This bench mark has been moved S. 89° W. 30 feet, but the elevation is not changed)-----	6,087.266
Colorado Springs, 6.5 miles south of, south edge of Little Pass, east edge of road, in top of boulder; aluminum tablet stamped "5955 1906"-----	5,954.429
Colorado Springs, 8.4 miles south of, road corner, north side of little knoll, opposite fence corner; iron post stamped "5847 1906"-----	5,846.520
Colorado Springs, 12.4 miles south of, 0.7 miles east of Hake's ranch, south edge of road, in flat surface of 1.5-foot rock, in pile; alumi- num tablet stamped "6104 1906"-----	6,103.221
Deadmans Canyon, 0.5 mile above ranch house, 15 feet east of pine tree on side of drain, east of dugout cabin, 20 feet west of road; iron post stamped "6393 1906"-----	6,392.204
Lawton's ranch, 1.5 miles south of, 800 feet south of road corner, 10 feet north of pine tree east of road, beside fence, in sandstone; aluminum tablet stamped "6381 1906"-----	6,380.310
Lytle, 1.4 miles south of schoolhouse, summit of hill east of Turkey Creek, in boulder; aluminum tablet stamped "6170 1906"-----	6,169.173
Lytle, 4.5 miles south of schoolhouse, 200 feet north of gate leading to ranch on creek, east side of road, beside fence; iron post stamped "5990 1906"-----	5,980.262
Lytle, 7.6 miles south of schoolhouse, edge of bluff at head of small canyon, 10 feet west of road; iron post stamped "5911 1906"-----	5,910.194
Greenley's ranch, 1 mile east of, on line with lone poplar, edge of drain, and lone pine tree, on sandy point, 10 feet west of old road; iron post stamped "5451 1906"-----	5,450.500
Greenley's ranch, 4.4 miles east of, 1,000 feet northeast of cotton- wood tree by creek, 0.4 mile west of spring, 10 feet north of old road; iron post stamped "5305 1906"-----	5,304.390
Wigwam, 0.3 mile north of station, 30 feet east of Denver & Rio Grande R. R. tracks, at corner fence post; iron post stamped "5217"-----	5,216.073

**CASTLE ROCK QUADRANGLE.**

Point 7.5 miles north of Falcon to Husted.

Falcon, 7.5 miles north of, southwest corner of Tps. 11 and 12 S., Rs. 64 and 65 W., in Myer pasture, 2 feet west of fence corner; iron post stamped "7524 ADJ 1903"-----	7,523.146
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T. 11 S., R. 65 W., in center of sec. 34, at K. K. ranch-house gate, 6 feet west of fence and 10 feet south of shed, in sandstone slab ; aluminum tablet stamped "7559 ADJ 1903"-----	Feet. 7, 558. 433
T. 11 S., R. 65 W., at southwest corner of sec. 32, west of road, in McBroom's pasture, 20 feet west of fence; iron post stamped "7629 ADJ 1903"-----	7, 628. 296
T. 11 S., R. 66 W., 300 feet east of northwest corner of sec. 36, in 6 by 10 by 4 foot sandstone slab, at Sam Brown's ranch gate; aluminum tablet stamped "7505 ADJ 1903"-----	7, 504. 725
Stout ranch, 800 feet north of, in southwest angle of crossroads, in side fence; iron post stamped "7153 ADJ 1903"-----	7, 152. 460
Husted, 0.5 mile west of Denver & Rio Grande R. R. station, in southeast angle of forks of roads, inside fence in pasture; iron post stamped "6663 ADJ 1903"-----	6, 662. 343
Husted, 1.2 miles south of, opposite E. P. Moon's house, second step from top of north abutment of bridge 63 A; bottom of square (Coast and Geodetic Survey bench mark)-----	6, 516. 817

## PIKES PEAK SPECIAL QUADRANGLE.

Manitou northwest along Manitou & Pikes Peak Ry. (cog-wheel road) to Pikes Peak, thence west to Clyde (unadjusted line closing 2 feet high).

Manitou, Manitou & Pikes Peak Ry. station, 7 feet from east side, 50 feet west of entrance, in face of wall; aluminum tablet stamped "6571"-----	6, 570. 333
Manitou, 2 miles west of, north side of track, 75 feet east of section house at Minnehaha, in face of rock; aluminum tablet stamped "8332"-----	8, 331. 881
Manitou, 2.6 miles north of, on top of small rise west and about 300 feet north of Halfway House, north side of track, in rock; aluminum tablet stamped "9010"-----	9, 010. 290
Manitou, 4.7 miles west of, south side of track, 100 feet south of "Gulch Tank," in bowlder; aluminum tablet stamped "10012"-----	10, 012. 115
Manitou, 5.8 miles north of, west side of track, 0.5 mile west of "Grecian Bend," in large bowlder; aluminum tablet stamped "11005"-----	11, 005. 898
Manitou, 6 miles west of, at west side entrance of Windy Point House; aluminum tablet stamped "12129"-----	12, 130. 138
Manitou, 8 miles west of, east side of track, 1 mile south of summit of Pikes Peak, in ledge of rock; aluminum tablet stamped "13006"-----	13, 006. 937
Manitou, 9 miles west of, main entrance to sleeping apartment of Summit House on top of Pikes Peak, in water table; aluminum tablet stamped "14084 1906-7"-----	14, 085. 330
Pikes Peak, 500 feet west of Summit House, in bowlder 5 by 6 feet situated on the very top of Pikes Peak; aluminum tablet stamped "14109"-----	14, 108. 873
Pikes Peak, 500 feet west of Summit House, in side of bowlder on summit, aluminum plate 4.8 inches wide and 7.1 inches long, engraved as follows: "U. S. Geological Survey, George Otis Smith, Director, PIKES PEAK, Latitude 38° 50' 26'', Longitude 105° 02' 37'', U. S. Standard, Elevation above sea 14109 feet, 1908."	
Pikes Peak, in monument of rocks on summit of Pikes Peak; alumi- num tablet stamped "14107 1906-7"-----	14, 109. 069

Windy Point, 3 miles south of, 400 yards north of Dam No. 4, at Seven Lakes, 100 yards south of forks of roads, east side of road, in boulder 4 by 5 feet; aluminum tablet stamped "10902"-----	Feet. 10,902.707
Windy Point, 6 miles south of, 1.5 miles north of Clyde, 150 feet above and east of creek, 200 yards east of prominent cliff, west side of road, in boulder 5 by 6 feet; aluminum tablet stamped "9983"-----	9,983.136

## Saderlind to Love.

Saderlind, 3.6 miles west of, 10 feet northeast of railroad track, 200 yards west of milepost 28, at east end of cut, on bench of granite rock, 3 feet above rail; bronze tablet stamped "9631 COLO SP"-----	9,630.302
Clyde, 0.6 mile west of station, 10 feet northeast of track, 300 yards west of Colorado Springs & Cripple Creek District Ry. tunnel, in granite boulder 10 by 3 by 3 feet; aluminum tablet stamped "9385 COLO SP"-----	9,384.423
Love, 0.2 mile west of station, in a cut 15 feet south of track, in granite ledge; aluminum tablet stamped "COLO SP 9693"-----	9,692.089

## Cripple Creek special quadrangle.

## TELLER COUNTY.

The elevations in the following list are based on an aluminum tablet stamped "9494 C C" in the south wall of the National Hotel, Cripple Creek, the height of which is accepted as 9,493.119 feet above mean sea level in accordance with the preliminary 1911 adjustment by the Coast and Geodetic Survey.

The leveling was done in 1904 by M. S. Bright.

## CRIPPLE CREEK SPECIAL QUADRANGLE.

## Circuits in Cripple Creek.

Cripple Creek, opposite Midland Terminal Ry. station; top of rail--	Feet. 9,517.8
Cripple Creek, southwest corner of city hall; city bench mark-----	9,493.534
Cripple Creek, National Hotel, 3 feet west of south entrance, in stone foundation; aluminum tablet stamped "9494 C C"-----	9,493.119
Cripple Creek, Teller County jail, in east end of stone doorsill, north entrance; aluminum tablet stamped "9508 C C"-----	9,507.529
Cripple Creek northwest and north via Red Mountain up Spring Creek to pipe line, thence south via Hoosier Pass, Vista Grande, Windy Point, Elk, and Anaconda to Cripple Creek.	
Cripple Creek, 1.5 miles northwest of, on saddle at northeast foot of Mount Pisgah, 40 feet north of road forks, near line of telegraph poles, in granite outcrop; aluminum tablet stamped "9454 C C"-----	9,453.423
Standard tunnel, 0.2 mile south of, 10 feet north of road, 50 feet north of Spring Creek, in rock outcrop; aluminum tablet stamped "9328 C C"-----	9,325.911
Standard tunnel, at mouth; top of east rail-----	9,522.9

Midway dairy, 120 feet north of road, in rock outcrop; aluminum tablet stamped "9817 C C"-----	Feet. 9, 814. 798
Midway dairy, 1 mile east of, 1 mile south of Lincoln mine, 50 feet east of pipe line, in triangle of roads; iron post stamped "10088 C C"-----	10, 085. 694
Hoosier Pass, between main line of Colorado Springs & Cripple Creek District Ry. and siding, 12 feet west of public road between two posts supporting Hoosier Pass signboard; iron post stamped "10315 C C"-----	10, 312. 726
Vista Grande (Midway station), 13 feet west of, near Florence & Cripple Creek R. R. track, 1 foot south of signpost "Vista Grande"; iron post stamped "10487 C C"-----	10, 484. 732
Elkton, in south corner of stone foundation of south stack of Elkton Consolidated Mining & Milling Co.; aluminum tablet stamped "9734 C C"-----	9, 731. 736
Anaconda, 400 feet south of Midland Terminal Ry. station, 6 feet east of track, in wall of rock cut; aluminum tablet stamped "9525 C C"-----	9, 522. 799
Anaconda, 1 mile northwest of, 450 feet north of World's Fair, 8 feet west of Midland Terminal Ry. track, in granite outcrop; aluminum tablet stamped "9534 C C"-----	9, 532. 017

**Head of Spring Creek via Gillett, Victor Pass, and Goldfield to Elkton.**

Gillett, 1.2 miles west of, 600 feet south of Lincoln mine, 20 feet west of road forks, in phonite rock outcrop; aluminum tablet stamped "10021 C C"-----	10, 019. 113
Gillett, in stone foundation of electric light plant, in west wall, 1 foot north of southwest corner; aluminum tablet stamped "9940 C C"-----	9, 937. 725
Gillett, in front of Midland Terminal Ry. station; top of rail-----	9, 932. 3
Cameron, 2 miles east of, 100 feet south of milepost 17, in granite wall 8 feet west of Midland Terminal Ry. track; aluminum tablet stamped "9841 C C"-----	9, 838. 735
Cripple Creek Sampler & Ore Co., 425 feet east of, in Victor Pass, 12 feet south of Midland Terminal Ry. track, 1 foot east of telephone pole; iron post stamped "10202 C C"-----	10, 199. 959
Goldfield, north side of Ninth Street, between Main and Portland streets, entrance to Red Men's Hall, in west end of stone doorsill; aluminum tablet stamped "9903 C C"-----	9, 901. 180

**Goldfield to Victor along railroad.**

Goldfield, in front of Florence & Cripple Creek R. R. station; top of rail-----	9, 880. 8
Stratton Junction; top of railroad frog-----	9, 807. 1
Victor, in front of Colorado Springs & Cripple Creek District Ry. station; top of rail-----	9, 705. 7
Victor, Trading & Trust Co. building, northeast corner of Diamond Avenue and Third Street, in north end of stone doorsill; bronze tablet stamped "9718 C C"-----	9, 715. 731
Victor, in front of Florence & Cripple Creek R. R. station; top of rail-----	9, 272. 4
Victor, in front of Midland Terminal Ry. station; top of rail-----	9, 769. 8

World's Fair mine No. 50, Anaconda, southwest down Cripple Creek along third-class road and west to Pony Gulch, thence north-northeast to Cripple Creek.

Mount, 0.5 mile southwest of, west side of Cripple Creek, 200 feet south of road, in granite outcrop; aluminum tablet stamped "9232 C C" -----	Feet. 9, 229. 820
Field's ranch, 0.8 mile southwest of, 200 feet east of road forks, on saddle, south side of Dead Ox Gulch, in granite outcrop; aluminum tablet stamped "9133 C C" -----	9, 130. 587
Arlington dairy, 2,000 feet north of, west side of Pony Gulch, east edge of road, in granite outcrop; aluminum tablet stamped "9113 C C" -----	9, 110. 835
Cripple Creek, 1.2 miles south of, 700 feet north of powder magazines, at road forks, in granite outcrop; bronze tablet stamped "9393 C C" -----	9, 390. 857

#### Apishapa, Nepesta, and Pueblo quadrangles.

#### LAS ANIMAS, OTERO, AND PUEBLO COUNTIES.

The elevations in the following list are determined by primary leveling extended from Colorado Springs. The lines southeast from Pueblo were originally based upon an elevation at Pueblo determined from leveling of the Denver & Rio Grande Railroad, corrected to accord with the 1906 accepted height of a bench mark at Colorado Springs. The values here given, however, result from a double connection by the U. S. Geological Survey in 1911, and accord with the preliminary 1911 adjustment of the Coast and Geodetic Survey. Orthometric corrections have also been applied, increasing the instrumental values cumulatively toward the south.

The leveling was done in 1896 by J. C. Barber, except that on the line from Pinyon to Pueblo, which was done in 1905 by C. I. Anderson, and the connection at Pueblo in 1911 by C. P. Gross.

#### PUEBLO QUADRANGLE.

##### Pinyon along Denver & Rio Grande Ry. to Pueblo.<sup>1</sup>

Pinyon, 0.7 mile south of, east track, in field at fence corner, at north boundary of M. S. Sutherland's ranch; iron post stamped "5045 ADJ 1903" -----	Feet. 5, 044. 050
Pinyon, 2.5 miles south of, west of track, northwest of road crossing, opposite Sam Link's ranch house, inside field; iron post stamped "4962 ADJ 1903" -----	4, 961. 274
Eden, 0.5 mile north of, west of road, inside field at fence corner; iron post stamped "4901 ADJ 1903" -----	4, 900. 167
Pueblo, 3 miles north of, 6 feet north of gate at J. W. Craig's milk ranch; iron post stamped "4782 ADJ 1903" -----	4, 781. 250
Pueblo, 4 feet north of west entrance of Centennial schoolhouse, in brownstone water table; aluminum tablet stamped "4708 ADJ 1903" (set vertically) -----	4, 707. 310

<sup>1</sup> This line is based on Coast and Geodetic Survey bench marks at Colorado Springs, and is checked by two runnings.

Pueblo, 5 feet south of west entrance of Centennial schoolhouse; square cut on northwest corner of sandstone step leading to basement-----	Feet. 4, 703. 869
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**Pueblo east along Atchison, Topeka & Santa Fe Ry. to Baxter.**

Pueblo, 12 feet west of northeast corner of courthouse; bronze tablet stamped "6490"-----	4, 694. 500
Pueblo, Grand Opera House, 20 feet west of northeast corner; bronze tablet stamped "4665"-----	4, 669. 107
Pueblo, north side of main entrance to city hall; cross on lintel----	4, 661. 09
Baxter, 720 feet west of, between tracks of Atchison, Topeka & Santa Fe Ry. and the Missouri Pacific Ry.; iron post stamped "4624"---	4, 628. 427

**NEPESTA QUADRANGLE.**

**Baxter east along Atchison, Topeka & Santa Fe Ry. to Fowler.**

Chico, 1,000 feet east of railroad station, between Atchison, Topeka & Santa Fe Ry. and Missouri Pacific Ry. tracks; iron post stamped "4540"-----	4, 544. 927
Boone, 2,500 feet west of Missouri Pacific Ry. station, 300 feet east of Atchison, Topeka & Santa Fe. Ry. milepost 599, and 52 feet north of Atchison, Topeka & Santa Fe Ry. tracks; iron post stamped "4477"-----	4, 481. 383
Boone, in front of Missouri Pacific Ry. telegraph office; top of rail--	4, 470. 7
Nepesta, 3.5 miles west of, 50 feet west of center of private road, on property line between Atchison, Topeka & Santa Fe Ry. and Missouri Pacific Ry.; iron post stamped "4405"-----	4, 409. 281
Nepesta, NW. $\frac{1}{4}$ sec. 32, T. 21 S., R. 60 W., Atchison, Topeka & Santa Fe Ry. bridge across Arkansas River; 5 feet below capstone, 15 feet above bed of river channel, east end of north pier; bronze tablet stamped "4368"-----	4, 372. 310
Fowler, 3 miles west of, NW. $\frac{1}{4}$ sec. 12, T. 22 S., R. 60 W., 5 feet south of corner fence post at angle in county road 600 feet south of Arkansas River, 150 feet south of railroad tracks; iron post stamped "4343"-----	4, 347. 152
Fowler, SE. $\frac{1}{4}$ sec. 17, T. 22 S., R. 59 W., 1,200 feet west of railroad station, 48 feet south of Atchison, Topeka & Santa Fe Ry. tracks; iron post stamped "4331"-----	4, 335. 377

**Boone via Rattlesnake Buttes to Huerfano.**

Boone, 2.2 miles southwest of, midway between road on west side of Huerfano River and edge of bluff bordering marsh, 200 feet south of bend in road, 500 feet south of row of six trees in pasture; copper nail in root of cottonwood tree-----	4, 475. 66
Boone, 3 miles southwest of, 0.2 mile northwest of river, 0.5 mile east and slightly north of log hut at foot of mesa, 0.8 mile north- east of residence, 900 feet north of graveyard on roadside; wire nail in root of double cottonwood tree alone in pasture-----	4, 495. 66
Boone, 4.2 miles southwest of, at side of abandoned irrigation ditch, 0.8 mile southwest of adobe residence and brick building; spike in cottonwood tree at north end of row of four-----	4, 517. 13
Boone, 5 miles southwest of, 17 feet south of east quarter corner of sec. 27, T. 21 S., R. 62 W.; iron post stamped "4532"-----	4, 536. 385



Boone, 6 miles southwest of, 700 feet east of residence at foot of hill, 100 feet west of river bank; spike in root of tallest of a bunch of four cottonwood trees-----	Feet. 4, 552. 88
Boone, 10 miles southwest of, 30 feet east of west quarter corner of sec. 19, T. 22 S., R. 62 W.; iron post stamped "4699"-----	4, 703. 638
Huerfano Bridge, sec. 8, T. 23 S., R. 63 W., capstone south pier, west end of; copper bolt stamped "U. S. G. S. 4774 Ft. B. M."-----	4, 778. 927

**NE.  $\frac{1}{4}$  sec. 29, T. 23 S., R. 59 W., to Fowler.**

T. 23 S., R. 59 W., NE. $\frac{1}{4}$ sec. 29, 800 feet west of road, 1 mile west of Apishapa River, on top of knoll S. 26° W. from northernmost of a group of three buttes on opposite side of river; iron post stamped "4449"-----	4, 453. 508
Fowler, 4 miles south of, SW. $\frac{1}{4}$ sec. 4, T. 23 S., R. 59 W., 0.5 mile west of river, 255 feet east of road; iron post stamped "4432"---	4, 436. 456

**Doyle's ranch to Butler's pasture.**

Huerfano Bridge, 1.8 miles southwest of, 75 feet east of Huerfano River, 35 feet west of foot of bluff 80 feet high, 0.5 mile south of residence in Peck's pasture; spike in cottonwood tree 3 feet in diameter-----	4, 814. 15
Butler's pasture, 0.8 mile southwest of Pressley's house, 250 feet east of Huerfano River, 40 feet east of abandoned irrigation trench; chiseled cross and circle on rock 2 by 3 feet-----	4, 889. 96
T. 23 S., R. 63 W., northeast corner of sec. 28, 15 feet south of stone, 0.8 mile northeast of Pressley's house, 500 feet southeast of edge of bank of Huerfano River, 0.2 mile east of Mexican's house on opposite side of river, 0.2 mile west of bluff; iron post stamped "4863"-----	4, 867. 515

**Huerfano Bridge to Rattlesnake Buttes (portion of line).**

T. 23 S., R. 63 W., sec. 31, 4 miles southeast of Huerfano Bridge, 0.8 mile northwest of Mexican's residence, 20 feet north of gate in east-west fence; iron post stamped "4958"-----	4, 962. 550
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**APISHAPA QUADRANGLE.**

**Butler's pasture southwest to sec. 5, T. 24 S., R. 63 W.**

T. 24 S., R. 63 W., east side of sec. 5, 250 feet from gate in east-west wire fence; copper bolt in west end of rock 20 by 12 by 2.5 feet, marked "U. S. G. S. 5019 Ft. B. M."-----	5, 023. 622
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**Huerfano Bridge to Rattlesnake Buttes (portion of line).**

T. 24 S., R. 62 W., NW. $\frac{1}{4}$ sec. 19, 35 feet west of road, 4 feet east of wire fence, 150 feet north of gate; iron post stamped "5074"-----	5, 078. 555
Hog Ranch Canyon, 0.8 mile south of mouth of, 100 feet east of road, 75 feet west of Doyle's Arroyo, 60 feet south of north end of stone ledge; chiseled cross on rock-----	5, 183. 82
T. 24 S., R. 63 W., SW. $\frac{1}{4}$ sec. 25, 200 feet southwest of road, 1,000 feet north of mouth of Hog Ranch Canyon; iron post stamped "5194"-----	5, 198. 555
Hog Ranch Canyon, 1.8 miles southwest of crossing, 800 feet east of road, 8 inches above ground, south side of depression; chiseled cross mark on rock-----	5, 328. 48
T. 25 S., R. 63 W., SE. $\frac{1}{4}$ sec. 10, 3 miles north of south edge of Butler's pasture, 40 feet east of road, 0.2 mile west of canyon; iron post stamped "5514"-----	5, 518. 537

Butler's pasture, 2.8 miles north of south edge, 150 feet west of road, eastern of four flat rocks; chiseled cross mark on top of, 1 foot from ground-----	Feet. 5, 574. 56
Butler's pasture, 0.5 mile north of south side, 15 feet west of road crossing long ledge on south side of clearing; chiseled cross 1 foot south of large pine tree-----	5, 679. 66
T. 25 S., R. 63 W., NW. $\frac{1}{4}$ sec. 34, 300 feet southwest of gate in south fence of Butler's pasture, 150 feet west of road to Cucharas Junction, 15 feet northeast of tree; copper bolt in top of flat rock, stamped "U. S. G. S. 5742 Ft. B. M."-----	5, 747. 084
T. 26 S., R. 63 W., NE. $\frac{1}{4}$ sec. 10, 2.5 miles southeast of gate in south fence of Butler's pasture, 30 feet east of road; iron post stamped "5927"-----	5, 931. 632

## Rattlesnake Buttes to Apishapa Ford.

Rattlesnake Buttes, 0.8 mile east of, SW. $\frac{1}{4}$ sec. 22, T. 26 S., R. 63 W., 50 feet northeast of crossroads; iron post stamped "6184"-----	6, 188. 61
Rattlesnake Buttes crossroads, 2 miles east of, 400 feet north of road; chiseled cross on stone 8 inches high, 4 feet west of the highest of a group of six-----	6, 095. 96
Rattlesnake Buttes crossroads, 3 miles east of, NW. $\frac{1}{4}$ sec. 19, T. 26 S., R. 62 W., 50 feet north of road; iron post stamped "6009"-----	6, 013. 703
Rattlesnake Buttes crossroads, 6.2 miles east of, SW. $\frac{1}{4}$ sec. 15, T. 26 S., R. 62 W., 0.2 mile east of head of canyon, 300 feet north of road; copper bolt in rock 4 by 6 feet, 8 inches high, marked "U. S. G. S. 5735 Ft. B. M."-----	5, 739. 558
Rattlesnake Buttes crossroads, 7.8 miles east of, 50 feet north of road, large rock, 2 feet high, split on top; cross on south end----	5, 618. 66
Rattlesnake Buttes crossroads, 8.2 miles east of, 35 feet south of road, southeast edge of a group of a dozen rocks; chiseled cross on northeast side of rock, 6 by 6 feet, 2.5 feet high-----	5, 566. 47
Rattlesnake Buttes crossroads, 10 miles east of, south side of sec. 18, T. 26 S., R. 61 W., 650 feet north of road, on west side of group of large rocks about 8 feet high; copper bolt in east end of rock 6 by 10 feet, 2.5 feet high, marked "U. S. G. S. 5444 Ft. B. M."----	5, 448. 675
Apishapa Ford, 6.2 miles west of, 0.2 mile south of road, 150 feet south of ravine, 80 feet east of dead cedar tree, on southeast side of small knoll bearing several cedar trees; chiseled cross on light rock-----	5, 300. 24
Apishapa Ford, 5 $\frac{1}{2}$ miles west of, SW. $\frac{1}{4}$ sec. 15, T. 26 S., R. 61 W., 2,000 feet south of road, 1,000 feet south of Buffalo Arroyo, on north side of rock outcrop covered with cedars and pines, 100 feet west of tree on northeast corner of group; copper bolt in light sandstone rock 15 by 8 feet, 4 feet high; marked "U. S. G. S. 5215 Ft. B. M."-----	5, 219. 658
Buffalo Arroyo, north bank, near mouth of canyon, 20 feet north of bushy cedar tree, the third on north bank from road crossing below; chiseled cross on light stone 3 by 1 $\frac{1}{2}$ feet, 1 foot high-----	5, 041. 29
Apishapa Ford, 2.8 miles west of, SE. $\frac{1}{4}$ sec. 13, T. 26 S., R. 61 W., 2,000 feet southeast of road crossing over Buffalo Arroyo, 1,000 feet south of road; rock outcrop covered with cedars and cactus, 150 feet southwest of northeast corner; copper bolt in rock 25 by 12 by 4 feet, stamped "U. S. G. S. 4929 Ft. B. M."-----	4, 933. 646

Apishapa Ford, 1,000 feet northeast of, NW.  $\frac{1}{4}$  sec. 21, T. 26 S., R. 60 W., 250 feet southwest of road; bronze tablet in largest rock of group near center of small knoll, stamped "4814"----- Feet.  
4, 818. 618

**Apishapa Canyon north to southwest corner of sec. 5, T. 24 S., R. 59 W.**

Apishapa Ford, 3.5 miles northeast of, NE.  $\frac{1}{4}$  sec. 3, T. 26 S., R. 60 W., near mouth of canyon, 0.5 mile west of river, on narrow east-west ridge, 200 feet west of road; iron post stamped "4734"----- 4, 738. 72  
T. 25 S., R. 60 W., NW.  $\frac{1}{4}$  sec. 25, 1.8 miles north of adobe house, 1.5 miles south of road crossing over Sanders Arroyo, 0.8 mile west of river, 35 feet west of road; iron post stamped "4664"----- 4, 668. 733  
Sanders Arroyo, 100 feet west of mouth of, 100 feet west of river; large wire nail 5 feet above ground, in crotch of cottonwood tree----- 4, 618. 60  
T. 25 S., R. 59 W., SW.  $\frac{1}{4}$  sec. 5, 10 feet east of corner stone at southwest corner of section 5; iron post stamped "4605"----- 4, 609. 436  
T. 24 S., R. 59 W., 20 feet southwest of northeast corner of sec. 30; iron post stamped "4600"----- 4, 604. 438  
T. 24 S., R. 59 W., 1,700 feet south of northeast corner of sec 19, west side of knoll; chiseled cross on small stone----- 4, 611. 02  
T. 24 S., R. 59 W., southwest corner of sec. 5, on top of ridge, 0.8 mile west of road, 1 mile south of Mustang Creek, 1 mile S.  $84^{\circ}$  W. of lake; iron post stamped "4487"----- 4, 491. 513

**Doyles Arroyo to Mustang Creek.**

T. 24 S., R. 62 W., north side of sec. 25, 1.8 miles northwest of dwelling house in Gilpen pasture, 30 feet southwest of road to Pueblo; iron post stamped "4958"----- 4, 962. 689  
T. 24 S., R. 61 W., east side of sec. 29, 1.5 miles east of dwelling in Gilpen pasture, 60 feet south of Fowler-Cucharas road; iron post stamped "4836"----- 4, 840. 654  
T. 24 S., R. 61 W., west side of sec. 24, 5 miles east of Gilpen residence, 1 mile northwest of house on Yellowbank ranch, 30 feet southeast of road from Fowler to Cucharas; iron post stamped "4695"----- 4, 699. 596  
T. 24 S., R. 60 W., NE.  $\frac{1}{4}$  sec. 17, 0.6 miles southeast of Mustang Creek, 0.6 mile west of east side of John Rensselaer's pasture; iron post stamped "4617"----- 4, 621. 398  
T. 24 S., R. 60 W., SE.  $\frac{1}{4}$  sec. 10, 1.5 miles east of east edge of John Rensselaer's pasture, 0.4 mile south of Mustang Creek, 100 yards south of edge of sagebrush; iron post stamped "4560"----- 4, 564. 375

**Gilpen pasture to Sanders Arroyo.**

T. 25 S., R. 62 W., SE.  $\frac{1}{4}$  sec. 3, 3.5 miles southwest of house in Gilpen pasture, 20 feet west of road to Cucharas, at gate in west fence of pasture; iron post stamped "5026"----- 5, 030. 7  
T. 25 S., R. 62 W., center of sec. 14, 30 feet northeast of gate on southeast side of the Jim Peck pasture, 0.2 mile southwest of Gilpen pasture; iron post stamped "5055"----- 5, 059. 677  
T. 25 S., R. 61 W., south side of sec. 16, 0.5 mile west of wire fence on east side of Gilpen pasture; iron post stamped "5012"----- 5, 016. 655

T. 25 S., R. 61 W., NW. $\frac{1}{4}$ sec. 13, 2.8 miles east of the Twin Teepee Buttes, 0.8 mile northwest of Yellowbank ranch, on east side of Sanders Arroyo, 1,000 feet northwest of small arroyo heading at Twin Teepee Buttes, on top of slight divide; iron post stamped "4860"-----	Feet. 4, 864. 695
T. 25 S., R. 60 W., NW. $\frac{1}{4}$ sec. 16, 5.8 miles east of Twin Teepee Buttes, 0.5 mile north of Sanders Arroyo, on edge of sagebrush; iron post stamped "4749"-----	4, 753. 542

**Apishapa Ford to Thatcher.**

Apishapa Ford, 0.8 mile south of, 20 feet from south end and 40 feet from west edge of long rocky stream bed running northeast; chiseled cross and circle on rock-----	4, 870. 53
Apishapa Ford, 4.5 miles southeast of, T. 27 S., R. 60 W., SE. $\frac{1}{4}$ sec. 3, 0.2 mile southwest of foot of range of Sawtooth Hills, 0.5 mile west of corner of ridge; iron post stamped "5117"-----	5, 121. 722
T. 27 S., R. 60 W., south side of sec. 36, 1,000 feet south of head of Christian Canyon, 45 feet east of wagon road, rock 6 by 10 by 2.5 feet high, at north end of a group of dome-shaped light sandstone rocks; copper bolt in north end marked "U. S. G. S. 5164 Ft. B. M."-----	5, 168. 755
T. 28 S., R. 60 W., NE. $\frac{1}{4}$ sec. 13, 2.8 miles south of head of Christian Canyon, 30 feet east of road; iron post stamped "5270"-----	5, 274. 842
Thatcher, 1.5 miles north of station, T. 28 S., R. 60 W., south side of sec. 27, 700 feet west of road, 300 feet south of rocky arroyo, 130 feet east of a cedar tree, in top of south end of light sandstone rock 1.5 feet high; copper bolt marked "5360 Ft. B. M."---	5, 364. 896
Thatcher, 0.2 mile southwest of railroad station, T. 29 S., R. 60 W., SE. $\frac{1}{4}$ sec. 4, on southeast edge of group of rocks at east end of loose rock dam across Timpas Creek; copper bolt in northwest end of rock 20 by 12 by 3 feet, marked "U. S. G. S. 5398 Ft. B. M."-----	5, 402. 863

**Thatcher to Rattleslake Buttes.**

Thatcher, 2 miles west of, 130 feet south of road; large wire nail near ground in crotch of half-dead cedar tree-----	5, 556. 97
Thatcher, 3.2 miles west of, on top of mesa, 300 feet north of road; nail in south side of cedar stump-----	5, 687. 91
Thatcher, 4.5 miles northwest of, T. 28 S., R. 61 W., east side of sec. 35, 500 feet north of lake, 40 feet north of road; iron post stamped "5736"-----	5, 740. 966
Apishapa Ford, 1.8 miles southeast of, at head of canyon, 100 feet north of road, 300 feet northwest of prospecting hole; wire nail in root of solitary cedar tree-----	5, 532. 09
Apishapa Ford, 1.2 miles southeast of, 30 feet northeast of road near east edge of cedar ridge; wire nail in cedar snag-----	5, 456. 51
Apishapa Ford, NE. $\frac{1}{4}$ sec. 20, T. 28 S., R. 61 W., 300 feet northwest of, 350 feet north of old corral, 1,000 feet north of Smith's abandoned adobe house, at head of main canyon of the Apishapa River; copper bolt in rock 30 by 30 by 4 feet, 12 ft. north of edge, marked "U. S. G. S. 5331 Ft. B. M."-----	5, 335. 835

Apishapa Ford, 2 miles northwest of, 30 feet north of road, 200 feet east of rock outcrop crossing road; chiseled cross on stone 3 by 3 by 1 foot-----	Feet. 5, 469. 01
Apishapa Ford, NW. $\frac{1}{4}$ sec. 14, T. 28 S., R. 62 W., 3.5 miles northwest of, 300 feet north of road, 800 feet south of timbered ridge, 1,000 feet northwest of small outcropping dike, 30 feet from west end of rock 120 by 20 feet, 3 feet high in center; copper bolt marked "U. S. G. S. 5548 Ft. B. M."-----	5, 552. 949
T. 28 S., R. 62 W., west side of sec. 7, 1.5 miles north of cedar bluffs, near southwest corner of a ledge on north side of a prominent draw, pile of small stone on top of rock, in south side of a flat sandstone rock 1 foot above ground; copper bolt marked "U. S. G. S. 5756 Ft. B. M."-----	5, 760. 804
T. 27 S., R. 63 W., NE. $\frac{1}{4}$ sec. 33, 8 miles south of Rattlesnake Buttes, 0.8 mile east of crossroads, 0.5 mile northwest of abandoned cabin and corral, near dripping springs, 100 feet north of arroyo emptying in dripping spring, 50 feet north of a similar rock 12 by 25 by 6 feet high; copper bolt 8 inches above ground in light rock at east end of a black rock, 8 by 14 by 6 feet, marked "U. S. G. S. 5941 Ft. B. M."-----	5, 945. 875
T. 27 S., R. 63 W., SW. $\frac{1}{4}$ sec. 16, 4.2 miles south of South Rattlesnake Butte, 300 feet northwest of road, 300 feet southeast of arroyo, 1,000 feet west of head of canyon, in southeast corner of dark rock, 25 by 10 by 10 feet, near north side of group, 150 by 300 feet; copper bolt, 15 inches from ground, marked "U. S. G. S. 5924 Ft. B. M."-----	5, 929. 063
Rattlesnake Buttes crossroads, 4 miles south of, 30 feet east of road, 2 feet north of forked cedar tree; chiseled cross on stone----	6, 010. 55
<b>Point near Dripping Spring (8 miles south of Rattlesnake Buttes) south and east to head of Apishapa Canyon.</b>	
T. 28 S., R. 63 W., center of sec. 9, 10 miles south of Rattlesnake Buttes, 2.5 miles south of crossroads, 900 feet east of north-south wagon road, 20 feet northeast of a pile of loose rock 5 feet high, in black rock, 5 by 5 by 1 foot; copper bolt marked "U. S. G. S. 5930 Ft. B. M."-----	5, 934. 785
T. 28 S., R. 63 W., SE. $\frac{1}{4}$ sec. 21, 1.2 miles southwest of windmill, 1,000 feet west of road, 2,000 feet southeast of an arroyo, 100 feet northeast of foot of cedar bluffs, 300 feet east of a large slabbed rock, 20 by 8 by 4 feet, half way up the side of bluff, northwest side of group, in top of rock, 3 by 7 by 1 foot; copper bolt marked "U. S. G. S. 5957 Ft. B. M."-----	5, 961. 774
T. 29 S., R. 63 W. SW. $\frac{1}{4}$ sec. 4, 16 miles south of Rattlesnake Buttes, 2.2 miles west of Black Summit Butte, in gap on divide, 800 feet wide, 300 feet northeast of small dome-shaped butte, 50 feet east of road, 60 feet west of edge of timber; iron post stamped "6224"-----	6, 228. 659
T. 29 S., R. 62 W., NE. $\frac{1}{4}$ sec. 1, 3.2 miles southwest of abandoned adobe house, at head of Apishapa Canyon, 0.8 mile northwest of Apishapa River, top of hill 20 feet high, on east face; iron post stamped "5505"-----	5, 509. 861
<b>Head of Apishapa Canyon northwest to Rattlesnake Buttes.</b>	
Apishapa Canyon, 5 miles northwest of head of, 70 feet east of road, 0.5 mile north of arroyo; wire nail in base of solitary cedar tree-----	5, 462. 30

T. 27 S., R. 62 W., north side of sec. 34, east of road, 100 feet east of arroyo, 150 feet northwest of northwest corner of rocky ledge on northeast side of arroyo, triangular-shaped knoll, 100 feet on sides, 15 feet high on west side, 20 feet north of south corner; copper bolt marked "U. S. G. S. 5435 Ft. B. M."-----	Feet. 5, 439. 670
T. 27 S., R. 62 W., east side of sec. 24, on southeast side of a prairie ridge, 1.5 miles northwest of cedar ridge, 1 mile southeast of canyon, 20 feet south of north side of group of rock, in center of row of six cedar trees, in top of sandstone rock, 12 by 10 by 2 feet; copper bolt marked "U. S. G. S. 5471 Ft. B. M."-----	5, 475. 850
T. 27 S., R. 62 W., SW. $\frac{1}{4}$ sec 6, 2.5 miles south of Sanche Lake, 1,400 feet west of road, 400 feet north of arroyo, 100 feet north-east of solitary cedar tree, in west end of sandstone ledge, 45 by 6 by 5 feet high, vertical on south face; copper bolt marked "U. S. G. S. 5855 Ft. B. M."-----	5, 860. 13

**Apishapa Ford east, south, and west to Thatcher.**

T. 26 S., R. 59 W., NE. $\frac{1}{4}$ sec. 19, 4.5 miles east of ford at mouth of of Apishapa Canyon, 0.5 mile south and slightly east of lake, 30 feet south of road, 0.5 mile west of range of yellow hills; iron post stamped "4877"-----	4, 881. 998
T. 27 S., R. 59 W., center of sec. 7, 5.2 miles south of lake, 300 feet southwest of bluffs, 1 mile southeast of southwest corner of bluffs, on top of slight ridge, 30 feet from solitary cedar tree; iron post marked "5166"-----	5, 170. 774
T. 28 S., R. 59 W., NW. $\frac{1}{4}$ sec. 20, 5.5 miles northeast of Thatcher, 600 feet southwest of southwest end of pile bridge 62, 65 feet southeast of Atchison, Topeka & Santa Fe Ry. tracks; iron post stamped "5141"-----	5, 145. 763
Thatcher, 4.5 miles east of, east side of sec. 5, T. 29 S., R. 59 W., 1,800 feet northwest of cabin, 450 feet south of wagon road, 1,000 feet west of arroyo, 600 feet south of branch arroyo; iron post stamped "5345"-----	5, 349. 738
Thatcher, 2. 2 miles east of, 500 feet northwest of Sugar Loaf Butte, 100 feet north of road, on southeast side of timber, large wire nail in pinyon tree-----	5, 480. 43
Thatcher, 4.8 miles southwest of, southwest corner of sec. 24, T. 29 S., R. 61 W., 1.4 miles northwest of Atchison, Topeka & Santa Fe Ry. tracks, 40 feet north of wagon road; iron post stamped "5612"-----	5, 616. 781

**Breckenridge special quadrangle.****SUMMIT COUNTY.**

The elevations in the following list depend on the heights of a precise-level bench mark at Braddock.

The leveling was done by C. H. Semper in 1908.

**BRECKENRIDGE SPECIAL QUADRANGLE.****Braddock via Swan City to Breckenridge.**

Braddock, 90 feet south of signboard, 15 feet west of railroad track, in top of granite boulder; aluminum tablet stamped "9242"-----	Feet. 9, 241. 435
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Braddock, 3.44 miles east of, 4 feet south of road at small stream crossing road, in top of granite boulder; aluminum tablet stamped "9489"-----	Feet. 9, 488. 886
Swan City, 55 feet north of road, 100 feet east of cabin at east end of broken-down barn, in root of pine tree; spike marked "U. S. B. M. 9576"-----	9, 576. 17
Swan City, 1.09 miles east of, on south side of road where creek and highway come together; rock marked "U. S. B. M. 9688"-----	9, 687. 28
Swan City, 2.05 miles east of, at Sneider's mining camp, 55 feet north of highway, 65 feet east of east margin of north cabin, in top of granite boulder; aluminum tablet stamped "9823"-----	9, 822. 673
Swan City, 2.75 miles east of, 190 feet west of forks of road, north of road; point in square on rock marked "U. S. B. M. 9980"-----	9, 979. 47
Swan City, 3.75 miles east of, Farncombe Hill, 690 feet north of Boss mine mill, 60 feet west of log cabin; nail in root of pine tree; board nailed to tree marked "U. S. B. M. 10607"-----	10, 606. 81
Breckenridge, 4.78 miles east of, on top of Farncombe Hill, 20 feet east of road, 35 feet east of southeast end of Johnson's log cabin, in top of buried boulder; aluminium tablet stamped "11069"-----	11, 068. 747
Breckenridge, 3.79 miles east of, upper end of Lincoln mining camp, 75 feet west of frame house with stone foundation, 15 feet south of highway at end of small log cabin, point on rock; telegraph pole marked "U. S. B. M. 10258"-----	10, 257. 84
Breckenridge, 2.41 miles east of, on road to Lincoln, 560 feet east of road running northeast, 15 feet south of road, in large granite boulder; aluminum tablet stamped "9940"-----	9, 940. 069
Breckenridge, 1.2 miles east of, south of highway, 110 feet north of white frame house; point on rock marked "U. S. B. M. 9709"---	9, 708. 52
<b>Glenwood Springs, Leadville, Mount Jackson, and Snowmass Mountain 30' quadrangles.</b>	

#### EAGLE, GARFIELD, LAKE, AND PITKIN COUNTIES.

The elevations in the following list were determined by primary leveling extended from bench marks at Glenwood Springs and Leadville, on the precise-level line from Denver.

The leveling was done in 1909 by F. J. McMaugh.

#### GLENWOOD SPRINGS QUADRANGLE.

Glenwood Springs southeast along Denver & Rio Grande R. R. to Cardiff.

Glenwood Springs, main entrance to Colorado Hotel, in face of stone column; aluminum tablet stamped "5764"-----	Feet. 5, 763. 226
Glenwood Springs, at highway bridge; surface of water, May 22, 1909, at 8.50 a. m.-----	5, 727. 3
Glenwood Springs, 2.9 miles southeast of, 360 feet south of grain shed near road forks and about midway between railroad and upper road, in red sandstone boulder; aluminum tablet stamped "5867 1909"-----	5, 866. 181

## SNOWMASS MOUNTAIN QUADRANGLE.

Cardiff southeast along Denver & Rio Grande R. R. via Carbondale and Emma to point 1.8 miles east of junction of Denver & Rio Grande R. R. and Colorado Midland Ry.

Glenwood Springs, 6.1 miles southeast of, 1,650 feet southeast of milepost D-366, 10 feet west of track, on large red sandstone boulder painted "5964 B. M." ; chisel mark-----	Feet. 5,963.28
Glenwood Springs, 6.7 miles southeast of, 525 feet west of railroad crossing, 15 feet north of track, 6 feet west of small cedar tree, in ledge; aluminum tablet stamped "5987 1909"-----	5,985.750
Carbondale, 2.4 miles northwest of, 50 feet west of public road, 50 feet east of track, in large boulder; aluminum tablet stamped "6086 1909"-----	6,084.815
Carbondale, in front of railroad station, opposite telegraph window; top of north rail-----	6,171.1
Carbondale, at northwest corner, in north face of I. O. O. F. building; aluminum tablet stamped "6181 1909"-----	6,180.377
Carbondale, 3 miles east of, 90 feet north of railroad, east end of south abutment of highway bridge over Roaring Fork; aluminum tablet stamped "6278 1909"-----	6,276.845
Leon, 800 feet east of station, 65 feet southwest of switch stand, in small flat boulder; aluminum tablet stamped "6430 1909"-----	6,429.418
Emma, in south face at southeast corner of Emma Mercantile Co.'s building; aluminum tablet stamped "6606 1909"-----	6,605.264
Junction of Denver & Rio Grande R. R. and Colorado Midland Ry., 0.6 mile east of, 340 feet west of milepost D-386, 50 feet north of track, in large boulder; aluminum tablet stamped "6854 1909"---	6,852.865
Junction of Denver & Rio Grande R. R. and Colorado Midland Ry., 1.8 miles east of, 490 feet east of milepost D-387, 50 feet east of road crossing, 10 feet north of track, on red sandstone boulder marked "6895"; chisel mark-----	6,894.64
Junction of Denver & Rio Grande R. R. and Colorado Midland Ry. along Colorado Midland Ry. northwest to Basalt, thence 3.6 miles east.	
Basalt, at northwest corner on west side of public school building, in stone foundation; aluminum tablet stamped "6625 1909"---	6,624.070

## MOUNT JACKSON QUADRANGLE.

Point 2.7 miles east of junction of Denver & Rio Grande R. R. and Colorado Midland Ry. southeast along former to Aspen, thence northwest along latter to Snowmass.

Junction of Denver & Rio Grande R. R. and Colorado Midland Ry., 4.6 miles east of, 540 feet west of milepost D 390, 25 feet north of track, in small granite boulder; aluminum tablet stamped "7068 1909"-----	7,066.864
Woody Creek, at station, 120 feet northwest of road crossing, 90 feet north of water tank, in boulder; aluminum tablet stamped "7275 1909"-----	7,274.709
Woody Creek, 1.8 miles east of, 7 feet east of track, on granite boulder; chiseled square marked "7461"-----	7,460.54
Woody Creek, 2.4 miles southeast of, 30 feet southwest of track and about 1,000 feet west of Gray's ranch house, in large boulder; aluminum tablet stamped "7516 1909"-----	7,514.769



Aspen, 2.5 miles northwest of, 50 feet west of milepost D 399, 15 feet south of track, in ledge; aluminum tablet stamped "7676 1909"-----	Feet. 7, 675. 720
Aspen, 1.2 miles northwest of, 40 feet south of signpost "Station 1 mile," 20 feet west of track, on granite boulder marked "7792"; chisel mark-----	7, 791. 41
Aspen, opposite Denver & Rio Grande R. R. station, east rail of main track; marked "7871"-----	7, 870. 6
Aspen, Pitkin County courthouse, in south face, at southwest corner; aluminum tablet stamped "7909 1909"-----	7, 908. 145
Aspen, opposite doorway under sign "Aspen" at station; top of north rail of north track-----	7, 936. 0
Aspen, 4.4 miles northwest of, Stapleton's ranch, 160 feet south of south end of siding, 10 feet east of track, on small boulder, marked "7728"; chisel mark-----	7, 727. 43
Aspen, 5.5 miles northwest of, west side and 8 feet south of north end of trestle over dry gulch; top of bolt in guard rail, marked "7627"-----	7, 626. 61
Rathbone, in front of station; top of east rail-----	7, 488. 5
Watson's, at road crossing; top of north rail, marked "7148"-----	7, 147. 9
Watson's, 1.2 miles northwest of, 850 feet northwest of milepost 7, 20 feet north of track, on red sandstone boulder, marked "7048 B. M."; chisel mark-----	7, 047. 51
Watson's, 3.7 miles northwest of, 10 feet south of track, on boulder, marked "6913 B. M."; chisel mark-----	6, 912. 01
Snowmass, opposite, center of platform; top of south rail, marked "6881"-----	6, 880. 9

**Point 3.6 miles east of Basalt southeast along Colorado Midland Ry. to Busk tunnel.**

Basalt, 3.6 miles east of, 240 feet east of milepost 182, 10 feet north of track, in ledge; aluminum tablet stamped "6901 1909"-----	6, 900. 295
Castles, opposite platform; top of north rail, marked "6959"-----	6, 958. 0
Castles, 1.8 miles east of, 60 feet west of milepost 179, 40 feet north of track, in ledge; aluminum tablet stamped "7027 1909"-----	7, 026. 238
Peachblow, opposite station signboard; top of south rail-----	7, 099. 1
Sloss, in west face at southwest corner of E. P. Sloss's house; aluminum tablet stamped "7180 1909"-----	7, 179. 980
Hopkins Spur, 0.2 mile east of, 200 feet west of milepost 174, 20 feet south of track, in large boulder; aluminum tablet stamped "7350 1909"-----	7, 349. 034
Ruedi, 540 feet west of station, 85 feet north of main track, in south face of chimney of hotel; aluminum tablet stamped "7563 1909"-----	7, 563. 000
Ruedi, in front of station; top of north rail of main track, marked "7570"-----	7, 569. 5
Meredith, in front of station; top of north rail, marked "7777"-----	7, 777
Meredith, 60 feet northwest of milepost 167, 45 feet north of track, about 100 feet south of old hotel building, in boulder; aluminum tablet stamped "7773 1909"-----	7, 772. 596
Thomasville, 140 feet northeast of station, in boulder; aluminum tablet stamped "7970 1909"-----	7, 969. 676

	Feet.
Muckawango, in front of station; top of north rail, marked "8242"-----	8, 241. 7
Norrie, 70 feet northeast of road crossing, 90 feet northwest of station platform, 40 feet southwest of post office, in bowlder; aluminum tablet stamped "8444 1909"-----	8, 443. 776
Norrie, in front of station platform; top of south rail, marked "8440"-----	8, 439. 4
Nast, 35 feet northwest of station, 20 feet north of track, in bowlder; aluminum tablet stamped "9060 1909"-----	9, 059. 483
Sellar, 970 feet north of station, 90 feet north of main track, 40 feet east of section house, in bowlder; aluminum tablet stamped "9609 1909"-----	9, 609. 112
Sellar, opposite station; south rail of main track, marked "9604"-----	9, 603. 4
Mallow, 90 feet southeast of, 20 feet south of side track, in large bowlder; aluminum tablet stamped "10170 1909"-----	10, 170.000
Brockway, 0.4 mile east of, 470 feet east of milepost 147, 15 feet north of track, in bowlder; aluminum tablet stamped "10570 1909"-----	10, 569. 576
Ivanhoe, in front of station; top of south rail, marked "10936"-----	10, 936. 4
Ivanhoe, 220 feet southeast of station, 170 feet south of track, in large bowlder; aluminum tablet stamped "10930 1909"-----	10, 929. 719

## LEADVILLE QUADRANGLE.

Busk east along Colorado Midland Ry. to Leadville.

Busk, in front of station; top of south rail-----	10, 790
Busk, 170 feet southeast of railroad station, 150 feet south of track; point on large bowlder, marked "10791 B.M." (probably railroad bench mark)-----	10, 790. 20
Busk, 1.6 miles east of, 275 feet west of milepost 140, 10 feet south of track, in ledge; aluminum tablet stamped "10541 1909"-----	10, 541. 249
Arkansas Junction, 3.5 miles west of, 190 feet west of milepost 137, 7 feet south of track, in ledge; aluminum tablet stamped "10080 1909"-----	10, 080. 151
Arkansas Junction, 60 feet north of track, 720 feet north of station, 8 feet west of west fence of stock pen, in bowlder; aluminum tablet stamped "9697 1909"-----	9, 696. 869

Elkhead, Hahns Peak, Lay, Meeker, North Park, Pagoda, Rabbit Ears, and Rifle quadrangles.

## GARFIELD, RIO BLANCO, AND ROUTT COUNTIES.

The elevations in the following list were determined by primary leveling extended from a precise level bench mark at Rifle. Orthometric corrections have been applied and adjustment made to accord with corrected primary level elevations in Wyoming.

The leveling was done in 1910 by C. H. Semper, except that in the northern portion of the Elkhead quadrangle, which was done by Donnell Miller in 1901 and by P. W. McMillan in 1910, and that in the North Park quadrangle, which was done by Donnell Miller in 1901.

## RIFLE QUADRANGLE.

Rifle north along highway to point 5.6 miles south of Meeker.

	Feet.
Rifle, Denver & Rio Grande R. R. station, 35 feet north of west end, in top of concrete manhole at margin of highway; aluminum tablet stamped "5302"-----	5,300.876
Rifle, 2.2 miles north of, on west side of road, 300 feet south of ranch house; spike in telegraph pole, marked "5469"-----	5,468.109
Rifle, 3.2 miles north of, 60 feet south of J. C. Cook's ranch house yard fence corner, 15 feet east of road, in top of rock; aluminum tablet stamped "5544"-----	5,542.530
Rifle, 4.3 miles north of, on east side of road; spike in base of telephone pole, marked "5606"-----	5,604.956
Rifle, 5.3 miles north of, on east side of road; spike in second telephone pole south of wire fence, marked "5709"-----	5,708.336
Rifle, 6.3 miles north of, 0.3 miles north of Howard Coulter's house, on west side of road, in front face on pile of rock; aluminum tablet stamped "5812"-----	5,811.341
Rifle, 7.4 miles north of, fourth telephone pole south of milepost 8, on west side of road; spike in telephone pole, marked "5944"---	5,942.588
Rifle, 8.3 miles north of, on east side of road; spike in first telephone pole south of milepost No. 9, marked "6035"-----	6,033.658
Rifle, 9.5 miles north of, 600 feet north of milepost 10, 5 feet west of road, 50 feet west of telephone pole, point of hill comes close to road in top of bowlder, 6 inches above ground; aluminum tablet stamped "6182"-----	6,180.941
Rifle, 10.6 miles north of, on west side of road, 50 feet south of creek crossing; spike in telephone pole, marked "6315"-----	6,314.329
Rifle, 11.4 miles north of, first telephone pole north of Reese's ranch house, on west side of road; spike in telephone pole, marked "6423"-----	6,422.313
Rifle, 11.9 miles north of, 1050 feet south of milepost 13, at top of rise and angle in road to west, 5 feet east of road, in top of large bowlder; aluminum tablet stamped "6531"-----	6,529.616
Rifle, 13.0 miles north of, at milepost 14; spike in telephone pole, marked "6658"-----	6,657.311
Rifle, 14 miles north of, 390 feet south of milepost 15, 20 feet south of bridge, on west side of road, top of bowlder; chiseled square marked "U. S. B. M. 6863"-----	6,861.571
Rifle, 15.3 miles north of, 475 feet north of milepost 16, on west margin of road, in top of 5 by 5 foot bowlder; aluminum tablet stamped "7050"-----	7,048.726
Rifle, 16.1 miles north of, north of milepost 17, 30 feet east of road, top of bowlder; chiseled square marked "U. S. B. M. 7333"-----	7,332.000
Rifle, 17 miles north of, spike in first telephone pole north of milepost 18, marked "U. S. B. M. 7440"-----	7,438.430
Rifle, 17.7 miles north of, spike in second telephone pole south of milepost 19, marked "7320"-----	7,318.840
Rifle, 18.7 miles north of, southeast corner of yard fence of J. A. Alley's ranch house (Rioblanco post office), in top of stone post; aluminum tablet stamped "7196"-----	7,194.920
Rioblanco (Alley's ranch), 0.9 mile north of; spike in first telephone pole south of milepost 21, marked "7244"-----	7,242.979

Rioblanco, 1.6 miles north of, 750 feet north of angle in road to west, 8 feet east of road, in top of large boulder; aluminum tablet stamped "7265"-----	Feet. 7, 264. 128
Rioblanco, 3.3 miles north of; spike in base of telephone pole, marked "7283"-----	7, 281. 551
Rioblanco, 4 miles north of, on west side of road; spike in second telephone pole north of milepost 20, marked "7193"-----	7, 191. 958
Rioblanco, 5 miles north of, in front of Engstrands ranch house, at gate leading to corral, in top of stone post; aluminum tablet stamped "7210"-----	7, 209. 066
Rioblanco, 6.4 miles north of, 2 posts set at culvert in road at foot of hill; spike in base of east post, marked "7156"-----	7, 154. 307
Rioblanco, 7 miles north of; spike in second telephone pole north of milepost 17, marked "7113"-----	7, 112. 156
Rioblanco, 7.8 miles north of, 270 feet northeast of milepost 16, 310 feet east of road, near summit of hill, top of rock; aluminum tablet stamped "7216"-----	7, 214. 602
Rioblanco, 9 miles north of, 1,500 feet north of milepost 15, west side of road; spike in telephone pole, marked "7213"-----	7, 211. 384
Rioblanco, 10.3 miles north of, directly opposite Balance Rock; spike in telephone pole, marked "7067"-----	7, 065. 995
Rioblanco, 10.5 miles north of, 50 feet south of milepost 13, 100 feet east of road, in top of boulder; aluminum tablet stamped "7036"-----	7, 035. 043
Rioblanco, 11.7 miles north of, near top of small rise, at base of telephone pole, top of rock; chiseled square marked "U. S. B. M. 6942"-----	6, 941. 089
Rioblanco, 12.4 miles north of; spike in first telephone pole south of milepost 11, marked "6843"-----	6, 841. 729
Rioblanco, 13.3 miles north of, spike in second telephone pole south of milepost 10, marked "U. S. B. M. 6785"-----	6, 784. 052
Rioblanco, 14.3 miles north of, 180 feet north of milepost 9, 100 feet northeast of Grove's ranch house, 12 feet east of road, in top of boulder; aluminum tablet stamped "6699"-----	6, 697. 623
Rioblanco, 15.5 miles north of, east side of road, in big flat; spike in telephone pole, marked "U. S. B. M. 6540"-----	6, 538. 347
Rioblanco, 16.5 miles north of, near eleventh telephone pole north of milepost 7, 150 feet east of road, in west face of one of three boulders, 55 feet long by 20 feet high; aluminum tablet stamped "6488"-----	6, 486. 901
Meeker, 5.6 miles south of, 200 feet north of milepost 6, 15 feet east of road, top of rock; chiseled square marked "U. S. B. M. 6395"-----	6, 394. 060

## MEEKER QUADRANGLE.

Point 5.6 miles south of Meeker along highway via Axial to Craig.

Meeker, 4.6 miles south of, opposite milepost 5; spike in telephone pole, marked "U. S. B. M. 6259"-----	6, 257. 471
Meeker, 3.6 miles south of, east side of road; spike in second telephone pole north of milepost 4, marked "U. S. B. M. 6142"-----	6, 140. 599
Meeker, 3.3 miles south of; floor of south end of bridge over White River-----	6, 127. 7
Meeker, 3.2 miles west of, at east gate to cross L (L) ranch, owned by U. S. Montgomery, 4 feet north of north gate post, in top of stone post; aluminum tablet stamped "6150"-----	6, 149. 220

	Feet.
Meeker, 1.8 miles west of, 60 feet east of milepost 2, south margin of road on rock; chiseled square marked "U. S. B. M. 6221"-----	6, 219. 807
Meeker, 1 mile west of, at forks of road, at base of telephone pole; chiseled square, top of rock marked "U. S. B. M. 6247"-----	6, 245. 972
Meeker, front face of Meeker Hotel; aluminum tablet stamped "6240"-----	6, 238. 943
Meeker, 2.4 miles north of; spike in telephone pole 15 feet east of road, marked "U. S. B. M. 6466"-----	6, 464. 288
Meeker, 3.1 miles north of, at top of small rise, west margin of road, at wire fence, in top of stone post; aluminum tablet stamped "6578"-----	6, 576. 562
Meeker, 4.1 miles north of, on east side of road; spike in telephone pole, marked "U. S. B. M. 6781"-----	6, 779. 999
Meeker, 5.6 miles north of, at lane leading into W. H. Miller's ranch house, north angle, east side, in top of rock; aluminum tablet stamped "6777"-----	6, 776. 190
Meeker, 6.8 miles north of, east side of road; spike in second telephone pole north of small reservoir, marked "U. S. B. M. 6900"-----	6, 898. 292
Meeker, 7.8 miles north of, at base of third telephone pole north of milepost 8; painted square on rock marked "U. S. B. M. 6985"-----	6, 983. 184
Meeker, 8.5 miles north of, at southeast corner of ranch-house yard of Harp & Moulton, in top of stone post; aluminum tablet stamped "7051"-----	7, 049. 816
Meeker, 9.8 miles north of, on south slope of Ninemile Hill, 50 feet south of culvert west margin of road, top of rock; chiseled square marked "U. S. B. M. 7279"-----	7, 277. 964
Meeker, 10.3 miles north of, on summit of Ninemile Hill, 15 feet east of old road and between roads, top of stone post; chiseled square marked "U. S. B. M. 7496"-----	7, 494. 204
Meeker, 11.5 miles north of, 1.2 miles north of Ninemile Hill, at top of small rise, 10 feet east of road, in top of stone post; aluminum tablet stamped "7403"-----	7, 401. 899
Meeker, 12.4 miles north of, 8 feet west of road, top of rock; chiseled square marked "U. S. B. M. 7219"-----	7, 218. 024
Meeker; 13.5 miles north of, at gate leading into J. Freund's ranch house, top of rock; chiseled square marked "U. S. B. M. 7108"-----	7, 106. 944
Meeker, 14.6 miles north of, 1 mile north of J. Freund's ranch, at bridge across creek, 30 feet west of bridge, 25 feet south of wire fence, top of stone post; aluminum tablet stamped "6910"-----	6, 908. 319
Meeker, 15.8 miles north of, spike in telephone pole on west side of road, marked "U. S. B. M. 6805"-----	6, 803. 436
Meeker, 16.6 miles north of, 0.3 mile north of James's ranch; spike in telephone pole, marked "U. S. B. M. 6740"-----	6, 738. 714
Axial, 3.4 miles south of, 1.6 miles south of Joe Collums's, directly opposite small log cabin, in meadow, at fence line, in top of stone post; aluminum tablet stamped "6661"-----	6, 659. 560
Axial, 2.5 miles south of, 0.7 mile south of Joe Collums's, south of sharp angle in road, on west margin at fence line, top of large rock; chiseled square marked "U. S. B. M. 6616"-----	6, 614. 676
Axial, 1.8 miles south of, directly opposite Joe Collums's ranch house, in highway, top of stone post; aluminum tablet stamped "6587"-----	6, 585. 887
Axial, at northwest corner of J. W. Huguss's old store, top of stone post; aluminum tablet stamped "6460"-----	6, 458. 741

	Feet.
Axial, 1 mile north of, at forks of road, at top of hill; spike in telephone pole, marked "U. S. B. M. 6500"-----	6, 498. 872
Axial, 2 miles east of, on east slope of hill; spike in telephone pole, marked "U. S. B. M. 6499"-----	6, 497. 147
Axial, 3.8 miles east of, 160 feet east of bridge over Milk Creek, 10 feet north of road, in top of stone post; aluminum tablet stamped "6241"-----	6, 239. 162
Axial, 5 miles east of, on east slope of hill; spike in telephone pole marked "U. S. B. M. 6285"-----	6, 283. 333
Axial, 5.8 miles east of, 0.6 mile west of Iles's ranch house, on north side of road; spike in telephone pole marked "U. S. B. M. 6258"-----	6, 256. 728
Axial, 6.4 miles east of, at gate leading into T. H. Iles's ranch, at fence, top of stone post; bronze tablet stamped "6272"-----	6, 270. 374
Axial, 7.4 miles east of; spike in telephone pole 12 feet inside of fence, marked "U. S. B. M. 6294"-----	6, 293. 040
Axial, 8 miles east of, on west slope of hill; spike in telephone pole marked "U. S. B. M. 6370"-----	6, 368. 344
Axial, 9 miles east of, 2.7 miles east of Iles's ranch, at top and south side of small rise, in top of stone post; aluminum tablet stamped "6525"-----	6, 523. 716
Axial, 10.2 miles east of, 0.5 mile west of stage station, at division wire fence, top of stone post; chiseled square marked "U. S. B. M. 6509"-----	6, 508. 042
Axial, 11 miles east of, at angle in road to north, in north corner fence post; spike marked "U. S. B. M. 6494"-----	6, 492. 838
Axial, 11.5 miles east of, at top of summit, north side of road, top of stone post; chiseled square marked "U. S. B. M. 6622"-----	6, 620. 122
Axial, 12 miles east of, 2.3 miles south of Williams Fork, at top of summit, 12 feet east of road, top of stone post; aluminum tablet stamped "6712"-----	6, 710. 774
Axial, 13.2 miles east of, 1.2 miles south of Williams Fork, on west margin of road, top of rock; chiseled square marked "U. S. B. M. 6466"-----	6, 464. 827
Williams Fork (Hamilton's ranch), south side of river, 10 feet east of abutment; iron post stamped "6238" (supposed to be Reclamation Service bench mark)-----	6, 235. 325
Axial, 16.8 miles east of, in canyon on west margin of road, top of rock; chiseled square marked "U. S. B. M. 6255"-----	6, 253. 464
Axial, 17.8 miles east of, 200 feet north of alfalfa field, on north margin of road, top of large boulder; chiseled square marked "U. S. B. M. 6223"-----	6, 221. 529
Axial, 18.2 miles east of, at gate leading into George Pitchford's ranch house, 10 feet east of gate, 10 feet north of wire fence, in top of large boulder; aluminum tablet stamped "6225"-----	6, 223. 031
Axial, 19.3 miles east of, on west margin of road, 20 feet north of wire fence corner, top of rock; chiseled square marked "U. S. B. M. 6178"-----	6, 176. 691
Axial, 21.1 miles east of, at top of hill, 0.5 mile east of Williams Fork Creek at angle in wire fence, top of stone post; aluminum tablet stamped "6449"-----	6, 447. 138
Axial, 22.5 miles east of; spike in telephone pole where line crosses road, marked "U. S. B. M. 6383"-----	6, 381. 450
Axial, 23.7 miles northeast of, 100 feet north of bridge, on west side of road; spike in telephone pole, marked "6276"-----	6, 274. 637

	Feet.
Craig, 5.1 miles south of, at gate leading into Big Bottom ranch, at fence line, top of stone post; aluminum tablet stamped "6206"-----	6, 204. 572
Craig, 4.4 miles south of, 125 feet east of road; spike in telephone pole, marked "U. S. B. M. 6311"-----	6, 309. 197
Craig, 2.8 miles south of, about 1,000 feet south of summit, east side of road in top of stone post; aluminum tablet stamped "6422"-----	6, 420. 898
Craig, 1.6 miles south of, at forks of road up hill, on east side, at gate; spike in telephone pole, marked "U. S. B. M. 6190"-----	6, 188. 481
Craig, 1.4 miles south of Bear River, under bridge; surface of water, September 30, 1910-----	6, 175. 9

**LAY QUADRANGLE.**

Craig along highway east 2.8 miles.

Craig, front face town hall; aluminum tablet stamped "6191"-----	6, 191. 996
Craig, 0.9 mile east of, at angle in road to southeast; spike in telephone pole, marked "U. S. B. M. 6201"-----	6, 202. 252
Craig, 2.1 miles east of, at summit of small rise, south side of road; spike in telephone pole, marked "U. S. B. M. 6319"-----	6, 317. 218
Craig, 2.8 miles east of, at summit of hill, on south side of road, top of stone post; aluminum tablet stamped "6377"-----	6, 375. 886

**ELKHEAD QUADRANGLE.**

Point 2.8 miles east of Craig along highway east to point 4 miles west of Bear River.

Craig, 4.2 miles east of, 350 feet east of small log cabin, on south side of road; spike in telephone pole, marked "U. S. B. M. 6244"-----	6, 242. 825
Craig, 6.6 miles east of, iron bridge over Elkhead Creek, west abutment, south side wing wall, top of; aluminum tablet stamped "6239"-----	6, 237. 709
Craig, 7.4 miles east of, 0.8 mile east of Elkhead Creek, on south side of road; chiseled square top of boulder, marked "U. S. B. M. 6244"-----	6, 242. 887
Craig, 8.6 miles east of, 2 miles east of Elkhead Creek, south side of road at corner of wire fence; spike in telephone pole, marked "U. S. B. M. 6314"-----	6, 312. 738
Craig, 9.5 miles east of, 2.9 miles east of Elkhead Creek, at gate leading into lower Cary ranch, 6 feet east of, top of stone post; aluminum tablet stamped "6314"-----	6, 312. 084
Craig, 10.4 miles east of, 3.8 miles east of Elkhead Creek, where road turns up horseshoe bend, on north side of road; spike in telephone pole, marked "U. S. B. M. 6279"-----	6, 277. 068

Smith's ranch northwest along highway to Honnold, on Wyoming line.

Palmer's ranch, 600 feet northeast of house, south end of rocky ridge, east edge of road; set in large granite boulder; aluminum tablet stamped "7722"-----	7, 723. 573
Gardner's ranch, 150 feet south of house, north edge of road; iron post stamped "7024"-----	7, 025. 473
Hancock's ranch, 0.2 mile southwest of house, in river bottom, 400 feet south of river, 200 feet north of road, in rock 6 by 4 and 2 feet high; aluminum tablet stamped "6953"-----	6, 954. 458

NOTE.—The following bench marks were established by a spur line run by Donnell Miller in 1901 from the Encampment special (Wyo.) quadrangle.

Salisbury's ranch along wagon road up Snake River via Honnold post office to Slater Park.

Honnold, at front gate to post office, 5 miles east of Salisbury's ranch, NW. $\frac{1}{4}$ of sec. 15, T. 12 N., R. 87 W., in sandstone; bronze tablet stamped "6851 LARAMIE"-----	Feet. 6, 852. 116
Honnold, 4.1 miles south of, stone 50 feet east of south corner of Fleming's cabin, sec. 33, T. 12 N., R. 87 W., 200 feet east of road; bronze tablet stamped "7008 LARAMIE"-----	7, 009. 089
Honnold, 6.6 miles south of, stone set in ground 50 feet west of road at crossing of Willow Creek, at point where roads fork to Slater post office and Slater Park; bronze tablet stamped "7191 LARAMIE"-----	7, 192. 411
Honnold, 9.8 miles south of, 40 feet east of road, about 1 mile north of divide at Columbus Mountain, in stone; bronze tablet stamped "8306 LARAMIE"-----	8, 307. 369

NOTE.—The following bench marks were established from leveling in the Medicine Bow (Wyo.) quadrangle by Donnell Miller in 1901.

#### NORTH PARK QUADRANGLE.

Point 3.6 miles southwest of Mountain Home southwest to Pinkhampton, thence northwest to Colorado-Wyoming State line.

Mountain Home, 3.6 miles southwest of, 50 feet east of road, 10 feet south of fence corner at ranch, between telephone poles 1576-1577; iron post stamped "8611 LARAMIE"-----	8, 612. 123
Mountain Home, 6.5 miles southwest of, 50 feet east of road, 10 feet west of telephone pole 1683, 500 yards east of ranch house; iron post stamped "8437 LARAMIE"-----	8, 438. 141
Pinkhampton, 30 feet north of post office, 7 feet north of road; iron post stamped "8033 LARAMIE"-----	8, 034. 110
Pinkhampton, 4 miles northwest of, 50 feet east of Platte River, 200 feet north of ford across same, 10 feet east of road, iron post stamped "7831 LARAMIE"-----	7, 831. 956
Pinkhampton, 6.5 miles northwest of, top of small divide, 30 feet north of road; iron post stamped "7952 LARAMIE"-----	7, 953. 104
Pinkhampton, 9 miles northwest of, 20 feet north of county road, between telephone poles 3097-3098; iron post stamped "7990 LARAMIE"-----	7, 990. 986

#### PAGODA QUADRANGLE.

Point 4 miles west of Bear River east along highway to Pool.

Elkhead Creek, 4.7 miles east of, at summit of hill, north side of road; spike in telephone pole, marked U. S. B. M. 6440"-----	6, 438. 778
Elkhead Creek, 5.7 miles east of, at upper Cary ranch, at east corner of fence, at iron gate leading into ranch, top of stone post; aluminum tablet stamped "6325"-----	6, 323. 222



	Feet.
Elkhead Creek, 7.3 miles east of, at forks of road to Hayden, 200 feet south of fork; spike in telephone pole, marked "U. S. B. M. 6392"-----	6,390. 869
Bear River, bridge over, top of north abutment west wing wall; aluminum tablet stamped "6308"-----	6,306. 109
Bear River; surface of water under bridge, October 8, 1910-----	6,294. 3
Bear River, 1.1 miles east of, at west corner of wire fence around green house; spike in telephone pole, marked "U. S. B. M. 6232"-----	6,230. 090
Hayden, 1.3 miles west of, on north side of road; spike in telephone pole, marked "U. S. B. M. 6334"-----	6,332. 829
Hayden, southeast corner foundation of town pump; aluminum tablet stamped "6351"-----	6,349. 262
Hayden, 1 mile east of, north side of road; spike in telephone pole, marked "U. S. B. M. 6370"-----	6,368. 597
Hayden, 2.3 miles east of, in front of Mrs. A. S. Williams house, north side of road; spike in telephone pole, marked "U. S. B. M. 6395"-----	6,393. 372
Hayden, 3 miles east of, at road to north, northwest corner of fence, in top of stone post; aluminum tablet stamped "6406"-----	6,404. 073
Hayden, 4.3 miles east of, north side of road; spike in telephone pole, marked "U. S. B. M. 6407"-----	6,405. 939
Hayden, 4.8 miles east of, at forks of road leading to river bridge, north side of road; spike in telephone pole, marked "U. S. B. M. 6418"-----	6,416. 764
Hayden, 5.7 miles east of, north end of bridge over Bear River, 40 feet east of river, 30 feet east of road, in top of stone post; aluminum tablet stamped "6406"-----	6,404. 972
Hayden, 8.1 miles east of, in canyon, on east margin of road, top of rock; chiseled square marked "U. S. B. M. 6462"-----	6,460. 547
Hayden, 8.9 miles east of, 650 feet northwest of small wooden road bridge, at sharp curve in road, 15 feet north of road, in top of stone post; aluminum tablet stamped "6491"-----	6,480. 868
Hayden, 10 miles east of, 600 feet east of old log cabin on north margin of road, top of boulder; chiseled square marked "U. S. B. M. 6448"-----	6,446. 187
Hayden, 10.6 miles east of, at corner of wire fence, on south side of road, top of boulder; chiseled square marked "U. S. B. M. 6448"-----	6,446. 895
Hayden, 11.6 miles east of, on south margin of road; spike in telephone pole, marked "U. S. B. M. 6534"-----	6,532. 744
Hayden, 12.5 miles east of, directly opposite Wilbur Rule's ranch house, at south margin of road, in top of large boulder; aluminum tablet stamped "6467"-----	6,465. 063
Hayden, 13.6 miles east of, 230 feet east of George Marshall's house, south margin of road, top of boulder; chiseled square marked "U. S. B. M. 6473"-----	6,471. 892
Hayden, 14.5 miles east of, south side of road, 600 feet west of ranch house; spike in telephone pole, marked "U. S. B. M. 6511"-----	6,509. 554
Pool, southwest corner of yard in front of Pool post office, in top of stone post; aluminum tablet stamped "6643"-----	6,641. 535
Pool, 0.9 mile east of, at top of hill, south side of road; spike in telephone pole, marked "U. S. B. M. 6628"-----	6,626. 811

**RABBIT EARS QUADRANGLE.****Pool east along highway to Steamboat Springs.**

Pool, 2.2 miles east of, south margin of road; spike in telephone pole, marked "U. S. B. M. 6561"-----	Feet. 6, 559. 862
Steamboat Springs, 1 mile west of, at forks of road to Hayden and Hahns Peak, in fork, top of stone post; aluminum tablet stamped "6676"-----	6, 674. 055
[NOTE.—A double line was run from this bench mark to Steamboat Springs, the closure error being +0.001 foot.]	
Steamboat Springs, spring house, 200 feet northwest of Cabin Hotel, top of concrete post of railing; aluminum tablet stamped "6701"-----	6, 699. 210
Steamboat Springs, southwest corner of road bridge over Bear River; spike in stringer (Denver, Northwestern & Pacific Ry. bench mark, railway elevation 6,679.80 feet)-----	6, 690. 538
Steamboat Springs, in front of station; top of rail-----	6, 693. 5
Steamboat Springs, 0.5 mile east of, 125 feet south of track; spike in root of cottonwood tree in clump of trees (Denver, Northwestern & Pacific Ry. bench mark, railway elevation 6,687.46 feet)-----	6, 698. 462

**HAHNS PEAK QUADRANGLE.****Pool east along highway to Steamboat Springs.**

Pool, 3 miles east of, 40 feet west of gate leading to F. Coleman's ranch house, south side of road, top of stone post; aluminum tablet stamped "6600"-----	6, 597. 862
Steamboat Springs, 6.6 miles west of, bridge over Elk River, west abutment, south end, at top; aluminum tablet stamped "6593" (set by other parties)-----	6, 591. 004
Surface of water under bridge, October 19, 1910-----	6, 580
Steamboat Springs, 5.5 miles west of, at west corner of wire fence, gate leading to ranch house; spike in corner post marked "U. S. B. M. 6712"-----	6, 710. 727
Steamboat Springs, 4.7 miles west of, summit of divide between Bear and Elk rivers, south side of road, at fence, top of stone post; aluminum tablet stamped "6872"-----	6, 870. 168
Steamboat Springs, 3.7 miles west of, north side of road; spike in telephone pole marked "U. S. B. M. 6716"-----	6, 714. 479
Steamboat Springs, 1.8 miles west of, north side of road, at fork in road to Hahns Peak; spike in telephone pole marked "U. S. B. M. 6714"-----	6, 711. 988

**Steamboat Springs north along highway to point 5.3 miles north of Columbine.**

Steamboat Springs, 2.1 miles north of, on east side of road; spike in telephone pole, marked "U. S. B. M. 6739"-----	6, 737. 813
Steamboat Springs, 4.1 miles north of, on summit of divide between Elk River and Bear River, 18 feet west of road; iron post stamped "6903"-----	6, 901. 377
Steamboat Springs, 4.9 miles north of, at forks of road, 60 feet north of fork on west side of road; spike in telephone pole marked "U. S. B. M. 6738"-----	6, 736. 256

Steamboat Springs, 6.5 miles north of, at bridge over Mad Creek, 90 feet south of bridge, 15 feet east of road; iron post stamped "6747"-----	Feet. 6, 745. 920
Steamboat Springs, 7.5 miles north of, west side of road, in canyon; top of granite rock marked "U. S. B. M. 6766"-----	6, 764. 042
Steamboat Springs, 9.7 miles north of, in front of C. E. Hempstreet's ranch house, 25 feet south of south side of house, 20 feet east of road; iron post stamped "6898"-----	6, 896. 255
Steamboat Springs, 12.7 miles north of, opposite Moon Hill school- house, at northeast corner of yard fence around V. C. Adams's ranch house; iron post stamped "7000"-----	6, 998. 771
Steamboat Springs, 14 miles north of; floor of bridge over Elk River.	7, 015. 6
Steamboat Springs, 14 miles north of, under bridge; Elk River, sur- face of water, October 29, 1910-----	7, 004. 4
Steamboat Springs, 15.5 miles north of, at Franz's ranch, 210 feet north of north side of house, 20 feet west of road; iron post stamped "7118"-----	7, 116. 082
Steamboat Springs, 18.1 miles north of, at Ducey's ranch house, 60 feet north of north side of house, at west road fence line, at fork of road to northeast; iron post stamped "7274"-----	7, 272. 358
Steamboat Springs, 21.3 miles north of, in canyon, 400 feet north- east of Mike Condlin's ranch house, at west margin of road, in top of stone post; aluminum tablet stamped "7893"-----	7, 891. 373
Hahns Peak, 3.3 miles south of, under bridge over Willow Creek; surface of water, October 31, 1910-----	7, 875. 2
Hahns Peak, southeast corner of county courthouse, near sidewalk; iron post stamped "8153"-----	8, 151. 084
Hahns Peak, 2.7 miles north of, 150 feet north of Cap Smith's cabin, 10 feet west of road; iron post stamped "8389"-----	8, 387. 336
Columbine, 300 feet west of Carson's store, 35 feet south of road, in edge of timber; iron post stamped "8699"-----	8, 697. 627
Columbine, 2.3 miles north of, 110 feet north of north end of cut-off road, 15 feet north of main road, on side hill, in top of boulder outcrop; aluminum tablet stamped "8272"-----	8, 269. 750
Columbine, 5.3 miles north of, at top of small rise north of gully, 0.7 mile north of Smith's ranch, 5 feet east of road, in granite boulder outcrop; aluminum tablet stamped "7870"-----	7, 871. 723

## De Beque special quadrangle.

## MESA COUNTY.

The elevations in the following list are based on unchecked spur lines based on the precise level line at De Beque.

The leveling was done by F. H. Nelson in 1910.

## DE BEQUE SPECIAL QUADRANGLE.

De Beque northwest up Roan Creek valley to point near junction of Roan Creek and Clear Creek (single spur line).

De Beque, Denver & Rio Grande R. R. water tower, 150 west of sta- tion, west of Main Street, northwest pier of water tank, in ped- estal; aluminum tablet stamped "4937"-----	Feet. 4, 935. 904
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De Beque, 3 miles northwest of, junction of Roan Creek and Dry Fork, on main road north, 120 feet south of Placer Corner section; top of rock-----	Feet. 5, 075. 29
De Beque, 7 miles northwest of, at schoolhouse, on main road north up Roan Creek, southwest corner foundation of school; chisel mark-----	5, 264. 79
De Beque, 12 miles northwest of, junction of roads, at junction of Roan Creek and Clear Creek, 1,000 feet east of large rock; aluminum tablet stamped "5593"-----	5, 590. 782
Junction of Roan Creek and Kimball Creek roads west 3 miles along Kimball Creek road (single spur line).	
De Beque, 11 miles northwest of, on southeast pier of bridge over Roan Creek; chisel mark-----	5, 386. 02
De Beque, 13 miles northwest of, 350 feet northwest of house, on rock on wash north of Kimball Creek road; aluminum tablet stamped "5841"-----	5, 829. 138
Tps. 7 and S S., Rs. 97 and 98 W., 250 feet southwest of corner of, just west of bridge over Roan Creek, in ledge; aluminum tablet stamped "5185"-----	5, 183. 267

## Grand Junction quadrangle.

## MESA COUNTY.

The elevations in the following list were determined by a double line of primary leveling, and constitute the Colorado portion of the results of a line extended from Salt Lake, Utah, along the Denver & Rio Grande Railroad to Grand Junction, Colo. Corrections have been applied as in precise leveling, including orthometric corrections and adjustment of closure error of about 1 foot. The elevations adopted at Salt Lake and Grand Junction were determined in accordance with a preliminary adjustment by the Coast and Geodetic Survey in 1911.

The leveling was done in 1910 by L. F. Biggs.

## GRAND JUNCTION QUADRANGLE.

Utaline northeast to Mack, thence southeast to Grand Junction along the Denver & Rio Grande R. R.

	Feet.
Milepost 295, in base of; spike with aluminum tag stamped "4345"-----	4, 346. 378
Milepost 296, in base of; spike with aluminum tag stamped "4358"-----	4, 359. 233
Milepost 297, in base of; spike with aluminum tag stamped "4358"-----	4, 360. 611
Milepost 298, in base of; spike with aluminum tag stamped "4378"-----	4, 380. 606
Milepost 299, in base of; spike with aluminum tag stamped "4377"-----	4, 379. 497
Shale, 0.2 mile west of milepost 300, 30 feet north of track, in red sandstone ledge; aluminum tablet stamped "4390, 73"-----	4, 391. 798
Milepost 300, in base of; spike with aluminum tag stamped "4393"-----	4, 395. 01
Milepost 301, in base of; spike with aluminum tag stamped "4401"-----	4, 402. 838
Milepost 302, in base of; spike with aluminum tag stamped "4394"-----	4, 395. 314
Milepost 303, in base of; spike with aluminum tag stamped "4391"-----	4, 392. 170

	Feet.
Milepost 304, in base of; spike with aluminum tag stamped "4411" -	4, 412. 899
Ruby, 200 feet north of station, 25 feet west of track, opposite small - building, in bowlder; aluminum tablet stamped "4415, 74"-----	4, 416. 776
Milepost 305, in base of; spike with aluminum tag stamped "4410" -	4, 411. 815
Milepost 306, in base of; spike with aluminum tag stamped "4422" -	4, 423. 731
Milepost 307, in base of; spike with aluminum tag stamped "4442" -	4, 445. 719
Milepost 308, in base of; spike with aluminum tag stamped "4480" -	4, 483. 197
Mack, 300 feet east of station, in fence corner at road crossing; iron post stamped "4531, 75"-----	4, 532. 488
Mack, 250 feet southwest of station, west edge of right of way; concrete pier (U. S. Reclamation Service bench mark)-----	4, 529. 012
Milepost 310, in base of; spike with aluminum tag stamped "4565" -	4, 568. 592
Milepost 311, in base of; spike with aluminum tag stamped "4560" -	4, 563. 342
Milepost 312, in base of; spike with aluminum tag stamped "4520" -	4, 522. 558
Loma, 340 feet south of station, opposite blacksmith shop, south edge of right of way, in fence corner; iron post stamped "4510" -	4, 511. 776
Milepost 313, in base of; spike with aluminum tag stamped "4497" -	4, 498. 28
Milepost 314, in base of; spike with aluminum tag stamped "4471" -	4, 472. 92
Milepost 315, in base of; spike with aluminum tag stamped "4463" -	4, 474. 47
Milepost 316, in base of; spike with aluminum tag stamped "4482" -	4, 483. 746
Fruita, 0.5 mile west of, north end of east abutment of bridge 361B; aluminum tablet stamped "4486, 77"-----	4, 487. 493
Milepost 317, in base of; spike with aluminum tag stamped "4489" -	4, 491. 097
Milepost 318, in base of; spike with aluminum tag stamped "4505" -	4, 506. 992
Milepost 319, in base of; spike with aluminum tag stamped "4518" -	4, 519. 523
Milepost 320, in base of; spike with aluminum tag stamped "4516" -	4, 517. 716
Rohne, 0.2 mile west of, 300 feet west of road crossing, opposite brick schoolhouse, in south end of concrete culvert; aluminum tablet stamped "4517, 78"-----	4, 518. 565
Milepost 321, in base of; spike with aluminum tag stamped "4519" -	4, 520. 341
Milepost 322, in base of; spike with aluminum tag stamped "4514" -	4, 515. 667
Milepost 323, in base of; spike with aluminum tag stamped "4520" -	4, 521. 373
Grand Junction, 4.6 miles west of, south edge of railroad right of way, opposite Columbine schoolhouse; iron post stamped "4526, 79"-----	4, 528. 148
Milepost 324, in base of; spike with aluminum tag stamped "4528" -	4, 529. 595
Milepost 325, in base of; spike with aluminum tag stamped "4535" -	4, 536. 823
Milepost 326, in base of; spike with aluminum tag stamped "4543" -	4, 545. 335
Milepost 327, in base of; spike with aluminum tag stamped "4547" -	4, 548. 509

Lake City and Ouray 15' quadrangles; Montrose and Uncompahgre Peak 30' quadrangles.

#### GUNNISON, HINSDALE, MONTROSE, AND OURAY COUNTIES.

The elevations in the following list were determined by primary leveling extended from Ridgway and Montrose on the precise level line run from near Denver in 1908, and accord with the 1911 preliminary adjustment of precise leveling.

The leveling was done in the Ouray 15' (Montrose 30') quadrangle in 1901 by Chester Irvine in the Lake City 15' (Uncompahgre Peak 30') quadrangle in 1903 by J. E. Chapson; in the Montrose and

Uncompahgre Peak 30' quadrangles n 1908 by R. P. Thompson; and in the Montrose quadrangle in 1909 by J. A. Burris and F. J. McMaugh.

The bench marks set in 1908 were not stamped with the figures of elevation.

**OURAY 15' (MONTROSE 30') QUADRANGLE.**

**Ouray along Ouray and Silverton stage road to old tollgate.**

Ouray, in front of Denver & Rio Grande R. R. station; top of rail (railroad company's elevation 7,706)-----	Feet. 7,706.6
Ouray, 16 feet southeast of Denver & Rio Grande R. R. station, at corner of platform near telegraph pole; iron post stamped "7712 OURAY"-----	7,708.517
Ouray, in southwest corner of Miners & Merchants Bank, under Beaumont Hotel, 18 inches above sidewalk; bronze tablet stamped "7806 OURAY"-----	7,802.728
Ouray, 2.8 miles southeast of, 150 feet west of tollgate, on south side of road, in granite boulder; bronze tablet stamped "8557 OURAY"-----	8,553.726

**Ouray north along Denver & Rio Grande R. R. to Bachelor Switch, thence north along wagon road to Ridgway.**

Bachelor switch, 85 feet northwest of north end of siding, 35 feet west of main track, northwest of railroad crossing and west side of wagon road; iron post stamped "7586 OURAY"-----	7,582.539
Portland, 0.5 mile north of, 5.6 miles southeast of Ridgway, on east side of road at bend, near gate to Jackson's ranch; iron post stamped "7237 OURAY"-----	7,233.592
Ridgway, 3.5 miles southeast of, 17 feet northeast of gate to Stanton's ranch, west of road; iron post stamped "7181 OURAY"-----	7,177.259

**Ridgway east up Cow Creek and Owl Creek to pass of West Fork of Cimarron Creek.<sup>1</sup>**

Ridgway, 2.7 miles northwest of, 120 feet west of bridge over Dry Creek, southwest of crossroads and northeast of Swanson's ranch, on line between secs. 3 and 10; iron post stamped "7024 OURAY"-----	7,020.217
Ridgway, 5.7 miles northeast of, 0.4 mile west and 0.1 mile south of northeast corner of, T. 45 N., R. 8 W., 25 feet west of road near gate to Couchman's ranch; iron post stamped "7326 Ouray"-----	7,322.433
Ridgway, 9.1 miles northeast of, at end of Upper Cow Creek county road, near gate to Critchfield's ranch; iron post stamped "7604 OURAY"-----	7,599.876
Ridgway, 11.2 miles east of, south side of Owl Creek, 20 feet south of wagon road and west of salt lick, in boulder; bronze tablet stamped "8163 OURAY"-----	8,158.460

**American Flat east to North Fork of Henson Creek.<sup>1</sup>**

Ouray, 12.8 miles east of, at timber line 2 miles east of lake, at east end of American Flat, 45 feet southwest of Bent's cabin, at east end of mine road, in boulder; bronze tablet stamped "11687 OURAY"-----	11,683.431
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<sup>1</sup> An excessive error was distributed in this line.

**Jacksonville along trail west and south up West Fork to point near Courthouse Mountain.**

Jacksonville, 1.5 miles northwest of, on divide between forks of Cimarron Creek, 15 feet south of trail, in low granite boulder; bronze tablet stamped "S979 OURAY"-----	Feet. 8, 974. 407
Jacksonville, 5.5 miles southwest of, west side of West Fork, in forks of trail, in 4 by 4 foot boulder; bronze tablet stamped "9707 OURAY"-----	9, 702. 487
Pass between West Fork of Cimarron and Cow creeks, north of Courthouse Mountain, 20 feet west of trail and 200 feet north of irrigating ditch, in granite boulder; bronze tablet stamped "10120 OURAY"-----	10, 116. 145

**MONTROSE QUADRANGLE.**

**Ridgway west along Rio Grande Southern R. R. to Sams.<sup>1</sup>**

Ridgway, 3.1 miles west of, 30 feet north of railroad, 400 feet west of third milepost out from Ridgway, in green boulder; aluminum tablet-----	7, 181. 703
Ridgway, 6 miles west of, 20 feet south of railroad, 250 feet east of sixth milepost, in limestone 8 by 10 feet; aluminum tablet-----	7, 525. 394
Ridgway, 9 miles west of, 60 feet east of highway, 50 feet west of a 24-inch pine tree, in one of a pile of rocks; aluminum tablet-----	7, 864. 958
Ridgway, 12.0 miles west of, 20 feet west of railroad, 150 feet north of twelfth milepost, in white sandstone 18 by 18 inches, 800 feet north of highway crossing; aluminum tablet-----	8, 734. 995
Dallas Divide, in front of section house; top of rail-----	8, 969. 6
Ridgway, 15 miles west of, 100 feet east of fifteenth milepost, 60 feet north of railroad, in sandstone 8 by 8 feet; aluminum tablet-----	8, 756. 840
Dallas, 4.0 miles west of, 800 feet west of switch below sawmill, on 3 by 6 foot sandstone; chiseled circle-----	8, 445. 93

**Montrose southwest along highway to Sams.**

Montrose, 3.2 miles southwest of, 150 feet east of intersection of Grandview and Oakgrove avenues, 70 feet northeast of corner of fence, in ledge; aluminum tablet stamped "5948 1909"-----	5, 947. 893
Montrose, 4.8 miles southwest of, southeast corner of bridge over canal; top of painted bolt marked "6019 B. M."-----	6, 018. 53
Montrose, 5.6 miles southwest of, 600 feet southwest of George Christensen's house, 60 feet west of road, 2 feet east of wire fence, in ledge; aluminum tablet stamped "6089 1909"-----	6, 088. 924
Montrose, 7.9 miles southwest of, 200 feet northeast of "Seven-mile tree," 30 feet west of road, on ledge; chisel mark, with paint mark "6519 B. M."-----	6, 519. 21
Montrose, 8.7 miles southwest of, 15 feet west of road, in ledge; aluminum tablet stamped "6733 1909"-----	6, 732. 531
Montrose, 11.8 miles southwest of, 20 feet east of road, in ledge; aluminum tablet stamped "7387 1909"-----	7, 386. 579
Brown's Spring, about 160 feet east of road, in ledge; aluminum tablet stamped "8408 1909"-----	8, 408. 182

<sup>1</sup> An error of 1 foot was distributed in this line.

Brown's Spring, 2.8 miles south of, 50 feet east of road, 20 feet north of triple pine tree, in 6 by 8 by 30 inch stone; aluminum tablet stamped "9159 1909"-----	Feet. 9, 159. 390
Finch's ranch, 120 feet northwest of house, 3 feet east of fence, 3 feet south of granary, in top of stone 6 by 10 by 24 inches, in ground; aluminum tablet stamped "8568 1909"-----	8, 568. 173
Finch's ranch, 3.6 miles south of, west side of road, at angle in road to east; iron post stamped "8950 1909"-----	8, 949. 757
Dallas Divide, 9.8 miles west of, 20 feet northeast of house, in stone in Potter's yard; aluminum tablet stamped "8842.5"-----	8, 842. 128
Dallas, 6.8 miles west of, 100 feet east of fence corner, in small sand-stone 10 feet north of highway; aluminum tablet-----	8, 899. 546

Cimarron south along highway to Jackson.<sup>1</sup>

Cimarron, 325 feet west of milepost "D 329," 25 feet west of water tank, 15 feet west of track, in stone; aluminum tablet-----	6, 892. 265
Cimarron, 2.5 miles south of, 150 feet southeast of house, west side of road, in large boulder; aluminum tablet stamped "7044 1909"-----	7, 041. 478
Cimarron, 3.7 miles south of, 100 feet northwest of intersection of road up mesa, in root of tree at gateway on west side of road; copper nail marked "7110 B. M."-----	7, 107. 66
Cimarron, 5.6 miles south of, 70 feet southwest of small bridge, 130 feet north of John Whittingham's house, in boulder; aluminum tablet stamped "7341 1909"-----	7, 338. 579
Whittingham's ranch, 4 miles south of, 100 feet south of bridge over ditch, east side of road, in large boulder; aluminum tablet stamped "8399 1909"-----	8, 397. 129
Whittingham's ranch, 6.2 miles southwest of, 400 feet south of house on cattle ranch, 10 feet north of northeast corner of bridge over ditch, mark on boulder; marked "8418"-----	8, 415. 41
Loback's cattle ranch, 1.6 miles south of, 80 feet west of ditch, 20 feet west of road, in large boulder; aluminum tablet stamped "8441 B. M."-----	8, 439. 481
Jackson, 6.8 miles north of, 15 feet west of road, near growth of small trees, in boulder; aluminum tablet stamped "8381 1909"-----	8, 379. 163
Jackson, 5 miles north of, 200 feet west of ford, 80 feet southwest of bend in road, in boulder; aluminum tablet stamped "8672 1909"-----	8, 670. 665
Jackson, 1.5 miles northwest of, on divide 0.7 mile south of junction of Cimarron and Little Cimarron creeks, 15 feet south of trail, in small boulder; bronze tablet stamped "8979 OURAY"-----	8, 974. 407

## Milepost 325 west along Denver &amp; Rio Grande R. R. to Montrose.

Cimarron, 3.1 miles east of, 2 feet northeast of milepost "D 326" in stone; aluminum tablet-----	6, 873. 111
Cimarron, 15 feet west of track, 325 feet west of milepost "D 329," 25 feet west of water tank, in stone 15 feet west of track; aluminum tablet-----	6, 892. 265
Cimarron, 3 miles west of, 50 feet west of milepost "D 332," 20 feet north of track, in rock; aluminum tablet-----	7, 471. 274
Cimarron, 6.1 miles west of, 6 feet west of track, 20 feet south-east of milepost "D 335", in boulder; aluminum tablet-----	7, 908. 806

<sup>1</sup>An excessive error was distributed in this line.



Cedar Creek, 3.3 miles east of, 20 feet north of track, 40 feet west of milepost "D 338", in bowlder; aluminum tablet-----	Feet. 7, 319. 242
Cedar Creek, at station, 20 feet east of track, in second foundation pier of water tank; aluminum tablet-----	6, 732. 772
Lujane, at west portal of Gunnison tunnel, 70 feet south of fifth telegraph pole east of milepost "D 343"; iron post (Reclamation Service elevation 6,550.919)-----	6, 531. 322
Lujane, 1.5 miles west of, 10 feet north of track, 1,200 feet west of milepost "D 344", in bowlder; aluminum tablet-----	6, 345. 685
Fairview, 1.3 miles west of, 10 feet west of road, 75 feet west of track, in east side of foundation of large water tank; aluminum tablet stamped "6009"-----	6, 004. 734
Montrose, 0.6 mile east of, 20 feet west of switch block of branch to Ouray; iron post stamped "5858 U. S. R. S. B. M." (Reclamation Service bench mark)-----	5, 837. 99

**Uncompahgre Valley; Gunnison project.**

The following Geological Survey bench marks were established by the Reclamation Service. The bench marks, marked with asterisks (\*), were redetermined by the United States Geological Survey, and the elevations given for them are the results of Geological Survey adjusted leveling. The other elevations, presumed to be approximately in agreement, were determined by subtracting 19.2 feet from Reclamation Service values.

Cedar Creek, at station (1.732 feet below bench mark established by the Geological Survey); iron post-----	Feet. 6, 731. 040
* Cedar Creek, 1.6 miles west of; iron post (Reclamation Service bench mark)-----	6, 531. 322
*Fairview, 4 feet northwest of signpost marked "Fairview siding," between Lujane and Montrose on narrow gage line of Denver & Rio Grande R. R. to Salida; iron post-----	6, 146. 476
*Montrose, 1 mile south of, 7 feet east of switch stand, at east end of Y; iron post-----	5, 837. 99
T. 49 N., R. 9 W., 1.5 feet south of southeast corner of NE. $\frac{1}{4}$ NE. $\frac{1}{4}$ sec. 36, about 0.25 mile northwest of ditch, 0.8 mile south of main line of narrow gage railroad from Montrose to Salida, set 3 feet in earth under signal at south base; iron post-----	6, 107. 078
Dry Cedar Creek, 25 feet southwest of bridge where road up Dry Cedar Creek crosses the High Line canal, 15 feet south of High Line canal and 15 feet north of lateral of the Cimarron ditch; iron post-----	6, 114. 479
Montrose & Delta canal, 13.8 feet from center of head gate, at southeast corner of section house, set 1 foot under surface of ground; iron post-----	6, 090. 771
Uncompahgre River; high ridge on west side of, 1 mile west of narrow gage track Montrose to Ouray, in saddle about 700 feet south-east of end of ridge, 50 feet east of road, in rock 3 by 3.5 by 2 feet; metal plate (Montrose & Delta canal passes around end of ridge, and is about 80 feet below this bench mark)-----	6, 126. 629
Montrose & Delta canal, bridge at crossing of Pinyon road, 2 feet north of telegraph pole 50 feet from canal and 75 feet south of southeast corner of bridge; iron post-----	6, 014. 980

Montrose & Delta canal, near bottom of Coal Creek drop, 30 feet south of south bank of canal, 20 feet west of large boulder, 20 feet north of 14-inch cedar tree; iron post-----	Feet. 5, 836. 871
Montrose & Delta canal, at top of Coal Creek drop, on sandstone ledge 30 feet southwest of jump-off, 25 feet south of blazed cedar tree; metal plate-----	5, 949. 477
Oak Grove, 35 feet northeast of northwest corner of schoolhouse, 12 feet west of line to center of double door; iron post-----	5, 928. 572

## LAKE CITY 15' (UNCOMPAGHGRE PEAK 30') QUADRANGLE.

North Fork of Henson Creek north over divide and down Cimarron Creek to Jacksonville.

Capitol City, 2 miles northwest of, 300 feet northwest of forks of road leading to Guilneau's sawmill, 20 feet northeast of road beside monument, in granite boulder; bronze tablet stamped "10436 OURAY"-----	10, 432. 266
Capitol City, 5 miles north of, on divide between North Fork of Henson Creek and Cimarron Creek, 0.6 mile southwest of Matterhorn Peak, 1.2 miles east of Wetterhorn Peak and 1.5 miles southwest of Uncompahgre Peak, 15 feet south of trail near its forks, 330 yards south of Sullivan's cabin, in granite rock; bronze tablet stamped "12463 OURAY"-----	12, 458. 909
Capitol City, 8 miles north of, 0.5 mile north of Phillips's cabin, 200 feet south of ruins of large cabin, 2 feet above ground, east side of Cimarron Creek, 6 feet west of trail, in boulder; bronze tablet stamped "10773 OURAY"-----	10, 768. 875
Jacksonville, 4.5 miles south of, 300 feet southeast of junction of Middle and South forks of Cimarron Creek, east of trail, in conglomerate boulder; bronze tablet stamped "9924 OURAY"-----	9, 919. 900
Jacksonville, 1.5 miles south of, 20 feet west of trail, in boulder 5 by 5 feet and 3 feet high; bronze tablet stamped "9207 OURAY"-----	9, 202. 684

Point 2 miles northwest of Capitol City down Henson Creek east to Lake City (line run twice).

Capitol City, 0.4 mile northwest of, road up north fork of Henson Creek, 7 feet south of road, in outcropping boulder; aluminum tablet stamped "9957 OURAY"-----	9, 952. 687
Capitol City, 60 feet northeast of two-story brick house, 50 feet south of street, in northeast corner of city, in trachyte boulder; aluminum tablet stamped "9667 OURAY"-----	9, 662. 994
Capitol City, 3.1 miles east of, 18 feet north of Henson Creek, 8 feet south of road to Lake City, in 8 by 5 by 4 foot trachyte boulder; aluminum tablet stamped "9414 OURAY"-----	9, 409. 668
Henson, 12 feet east of post office, 12 feet south of road, in middle of settlement at Ute & Ulay mine, in outcropping ledge; bronze tablet stamped "9203 OURAY"-----	9, 198. 654
Lake City, Miners & Merchants Bank, at front entrance to, in stone pillar; bronze tablet stamped "8681 OURAY"-----	8, 676. 402
Lake City, in southwest corner of yard of Lake City schoolhouse, 110 feet southwest of brick schoolhouse; bronze tablet stamped "8663 OURAY"-----	8, 658. 659

Lake City north down Lake Fork of Gunnison River to point 4 miles north of Youman (line run twice).

Lake City, 0.7 mile north of, 600 feet northwest of cemetery, 15 feet west of road down Lake Fork, at top of hill, in granite boulder 3 by 2 by 2 feet; aluminum tablet stamped "8758 OURAY"-----	Feet. 8, 753. 863
Lake City, 4.8 miles north of, 20 feet west of road, 200 yards south of entrance to canyon, opposite brick house on Baker ranch, in trachyte boulder 8 by 5 by 4 feet; bronze tablet stamped "8515 OURAY"-----	8, 510. 239
Youman, 2.4 miles south of, 200 yards east of Nine Mile ranch, 15 feet west of road, in mound of stone; iron post stamped "8527 OURAY"-----	8, 522. 396
Youman, 100 yards south of Youman water tank, 60 feet north of section house, 30 feet east of railroad track, 12 feet east of road; iron post stamped "8321 OURAY"-----	8, 315. 831
Kellogg siding, 0.8 mile north of, 100 feet south of railroad, 80 feet northwest of boulder 20 by 20 by 12 feet, 200 feet southeast of outcropping boulder 3 by 3 by 1.5 feet in boulder; bronze tablet stamped "8188 OURAY"-----	8, 182. 571
Kellogg siding, 1.8 miles north of, 400 feet northwest of milepost 336, 50 feet west of railroad, 25 feet east of wagon road, 100 yards north of small butte with conical rock on top, in mound of stone; iron post stamped "8131 OURAY"-----	8, 126. 121

#### UNCOMPAHGRE PEAK QUADRANGLE.

Kellogg siding north along Denver & Rio Grande R. R. (Lake City branch) to point near Dayton, thence along road east to Powderhorn and south to Slumgullion Pass.

Spruce Point, at north end of switch, west of track, top of rock; marked "8074.13"-----	8, 070.18
Spruce, 2.4 miles north of, 40 feet northeast of small bridge over stream, about 1,000 feet east of Denver & Rio Grande R. R. up the arroya, 30 feet from top of ridge, in top of boulder; aluminum tablet-----	8, 039. 431
Gate View ranch, 20 feet from southeast corner of ranch house, in rock at road intersection; aluminum tablet-----	7, 949. 693
Gate View ranch, 4.7 miles east of, 5 feet south of center of road at summit between Gate View ranch and Powderhorn, in ledge of rocks; aluminum tablet-----	8, 927. 512
Powderhorn, 2.2 miles southwest of, 10 feet south of road, 500 feet northwest from intersection of Powderhorn and Sapinero roads; point on rock marked "8593.90"-----	8, 589. 99
Powderhorn, 250 feet east of post office, at road intersection, in ledge of rock; aluminum tablet-----	8, 053. 742
Powderhorn, 4 miles east of, 1 foot inside fence, 15 feet from southeast corner of William Sammon's house on Beaver Creek, in small rock; aluminum tablet-----	8, 231. 842
Sammon's ranch, 3 miles southeast of, 0.5 mile north of Johnson's ranch, south of road, at rocky point at bend in road, 20 feet north of fence corner, 3 feet outside fence, in boulder; aluminum tablet-----	8, 344. 007
Cebolla Creek bridge, 30 feet southwest of, 5 feet east of road, 30 feet southeast of ford, in large boulder; aluminum tablet-----	8, 529. 381

	Feet.
Warrant's ranch, at mouth of Rock Creek, 700 feet south of, 5 feet east of road, in ledge of rock; aluminum tablet-----	8, 749. 156
Warrant's ranch, 1 mile south of, 25 feet from west side of road, in top of stump; spike marked "8809.29"-----	8, 805. 53
Cathedral, 0.25 mile northwest of post office, 100 feet northwest of road forks, 20 feet east of edge of mesa, near mouth of Spring Creek, in top of boulder; aluminum tablet-----	8, 908. 152
Howard's ranch, 4.3 miles southwest of mouth of Spring Creek, 20 feet east of spring house, in rock; aluminum tablet-----	9, 139. 541
Howard's ranch, 3 miles southwest of, 0.5 mile southwest of entrance of second canyon from Howard's ranch, west of trail, 75 feet southwest of small stream, in top of large boulder; aluminum tablet-----	9, 482. 439
Howard's ranch, 6.2 miles southwest of, 2 feet from southeast corner of boulder about 1 cubic yard in size, 25 feet west of trail, 35 feet west of Mill Creek, at southwest end of cliffs, 0.5 mile from south of Mill Creek, in small flat rock; aluminum tablet----	10, 023. 989
<b>Powderhorn north along road to Iola, thence west along Denver &amp; Rio Grande R. R. to Sapinero.</b>	
Powderhorn, 3.4 miles northeast of, at stone monument 3 feet high, 75 feet west of road, on small ridge 1,000 feet northwest of peak on east side of road, about 1 mile south of Old Lot mine, in small flat stone; aluminum tablet-----	8, 484. 154
Powderhorn, 6.1 miles northeast of, 50 feet southeast of fork of road to Spencer, 20 feet east of Iola road, in ledge of rock; aluminum tablet-----	8, 915. 727
Ninemile Hill, 100 feet east of road at summit, point on small ledge of rock; marked "8970.64"-----	8, 966. 79
Ninemile Hill, 0.8 mile northeast of, 75 feet east of forks of old and new road, 600 feet east of rocky point on west side of road, in ledge of rocks; aluminum tablet-----	8, 746. 712
Big Spring ranch, 0.8 mile northeast of entrance, 300 feet east of road, 50 feet east of small swamp, in ledge of rock; aluminum tablet-----	8, 253. 577
Iola, 2.1 miles south of, 30 feet west of road, on side of small knoll, 40 feet east of top, in ledge of rock marked by mound of stone; aluminum tablet-----	7, 770. 092
Iola, 14 feet north of the northwest corner of annex to Iola Hotel, in ledge of rock; aluminum tablet-----	7, 453. 764
Iola, 2.8 miles west of, 300 feet southwest of milepost "D 302," 45 feet south of track, in ledge of rock; aluminum tablet-----	7, 401. 510
Iola, 4.7 miles west of, in base of milepost "D 304"; spike marked "7367. 81" (railroad bench mark)-----	7, 363. 43
Iola, 5.8 miles west of, 125 feet west of milepost "D 305", 20 feet west of water tank, 15 feet north of track at Elk Creek, in small boulder; aluminum tablet-----	7, 356. 206
Cebolla, 1.1 miles west of, 600 feet southwest of milepost "D 308", 40 feet south of track at rock cut, 20 feet from bank of river, in ledge of rock; aluminum tablet-----	7, 312. 422
Cebolla, 2.9 miles west of, in side of milepost "D 310"; spike marked "7292.48" (railroad bench mark)-----	7, 288. 06
Cebolla, 4 miles northwest of, 125 feet west of milepost "D 311", 15 feet north of track, in ledge of rocks; aluminum tablet-----	7, 272. 371

Cebolla, 5 miles west of, in base of milepost "D 312"; spike marked "7264.14" (railroad bench mark)-----	Feet. 7, 259. 71
Cebolla, 6 miles west of, in base of milepost "D 313"; spike marked "7245.55" (railroad bench mark)-----	7, 241. 16
Sapinero, 100 feet north of north end of county bridge over Gunnison River, 15 feet east of road, 350 feet southwest of end of switch at Y, 450 feet south of main track of the Denver & Rio Grande R. R. in ledge of rocks; aluminum tablet-----	7, 238. 006
<b>Iola east along Denver &amp; Rio Grande R. R. to point near Elkhorn station (double spur line).</b>	
Elkhorn, 600 feet east of station, at the 10-mile bridge, in side of milepost "D 297"; spike marked "7484.98" (railroad bench mark)-----	7, 480. 66
Elkhorn, 0.8 mile east of, 25 feet north of track, on edge of Gunnison River, 300 feet east of rocky point on sharp curve, 0.2 mile west of milepost "D 296", in top of large boulder; aluminum tablet-----	7, 491. 980
<b>Gate View ranch northwest along road to forks of roads to Montrose and Sapinero, thence northeast to Sapinero.</b>	
Gate View ranch, 1 mile northwest of, 15 feet west of road, 300 feet southwest of schoolhouse; point on boulder marked "7817.14"-----	7, 813. 03
Gate View ranch, 3 miles northwest of, 2 feet west of road, 150 feet southeast of bend in road, in boulder; aluminum tablet-----	8, 077. 579
Gate View ranch, 6 miles northwest of, on top of knoll 30 feet northeast of road on top of hill, in top of ledge of rocks; aluminum tablet-----	8, 878. 148
Willow Creek, 1.5 miles west of, 10 feet southwest of road, at top of hill, in large flat rock; aluminum tablet-----	8, 848. 044
Willow Creek, 4.4 miles west of, 30 feet west of road at top of hill about 0.7 mile west of Pine Creek, in small flat rock; aluminum tablet-----	8, 901. 014
Forks of roads to Montrose and Sapinero, 2.7 miles northeast of, 25 feet southeast of road, 5 feet northwest of trail, 100 feet east of forks of road and trail, 400 feet west of ford of Pine Creek, in large boulder; aluminum tablet-----	8, 224. 748
<b>Forks of Montrose and Sapinero roads west to junction of Little Blue and Big Blue creeks (double spur line).</b>	
Forks of Montrose and Sapinero roads, 2.2 miles west of, 3 feet south of road, 150 feet southwest of junction of Little and Big Blue creeks, in boulder; aluminum tablet-----	8, 197. 688
<b>Sapinero east on Powderhorn road (double spur line).</b>	
Sapinero, 3.2 miles southeast of, on top of knoll 40 feet south of road, 300 feet west of road forks of abandoned road, marked by mound of stone, in small rock flush with ground; aluminum tablet-----	7, 800. 336
Sapinero, 6 miles southeast of, 30 feet west of road on top of small knoll, 40 feet south of small arroyo, 400 feet west of large arroyo, marked by mound of stone, in small flat rock; aluminum tablet---	8, 161. 029
<b>Sapinero northwest along road 4.5 miles (single spur line).</b>	
Sapinero, 3.1 miles northwest of, at top of needle on rim of Black Canyon, at small pine tree, 300 feet south of road at bend, between two small canyons, in rock; aluminum tablet-----	7, 623. 908

Sapinero, 4.4 miles northwest of, 3 feet south of road, 150 feet east of creek, 100 feet northwest of ruins of stone house, in top of small cone-shaped rock; aluminum tablet.....	Feet. 7,829.962
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Sapinero west along Denver & Rio Grande R. R. to milepost 325.

Sapinero, 0.8 mile west of, in base of milepost "D 315"; spike marked "7221.25" (railroad bench mark).....	7,216.79
Sapinero, 2.7 miles east of, 15 feet west of track, 20 feet south of milepost "D 317", in large boulder; aluminum tablet.....	7,170.150
Sapinero, 5.6 miles west of, 3 feet north of milepost "D 320", in boulder; aluminum tablet.....	7,094.451
Sapinero, 8.6 miles west of, 50 feet west of milepost "D 323", in small boulder; aluminum tablet.....	6,984.039

Creede, Engineer Mountain, Needle Mountains, Rico, and Silverton 15' quadrangles, and San Cristobal 30' quadrangle.

#### DOLORES, HINSDALE, LA PLATA, MINERAL, OURAY, AND SAN JUAN COUNTIES.

The elevations in the following list are based upon heights of bench marks at Montrose, Colo., established by precise leveling of the United States Geological Survey, and at Albuquerque, N. Mex., established by precise leveling of the Coast and Geodetic Survey, the connection being made by the primary level net.

The leveling in the Creede quadrangle was done in 1904 by J. E. Chapson; that in the San Cristobal quadrangle in 1899 by T. Winsor and in 1904 by Chapson; that in the Silverton quadrangle in 1899 by Winsor and in 1901 by Chester Irvine; that in the Needle Mountains quadrangle in 1898 by T. Winsor and in 1900 by J. P. Darling; that in the Engineer Mountain quadrangle in 1896 by C. W. Beach, in 1897 by A. L. Fellows, and in 1898 by Winsor; and that in the Rico quadrangle in 1898 by Winsor.

The considerable error in stamped elevations is due to the assumed datums upon which the field work was done.

#### CREEDE QUADRANGLE.

Point 3 miles northeast of Antelope northeast to Lower Creede.

Antelope Springs, 6 miles northeast of, 20 feet east of road, 100 feet south of forks of road, 650 feet north of southeast corner of pasture; iron post stamped "8762 OURAY".....	Feet. 8,757.780
Fivemile bridge, 1.6 miles east of, 150 feet west of junction of Silverton and Sunnyside roads, 100 feet east of bridge over irrigating ditch, 60 feet north of road; iron post stamped "8682 OURAY".....	8,677.920
Lower Creede, south part of town, 80 feet east of Denver & Rio Grande R. R. track, 150 feet north of section house, 120 feet west of Main Street; iron post stamped "8780 OURAY".....	8,775.262

Point 2 miles north of Lime Creek northeast to Lower Creede.

Sevenmile bridge, 1 mile northeast of, 30 feet northwest of road, in 6 by 4 by 3 foot boulder; aluminum tablet stamped "8759 OURAY".....	8,754.828
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Lower Creede, 3.2 miles south of, 100 feet south of side grade of Denver & Rio Grande R. R. bridge, 100 feet east of wire fence, 20 feet southeast of road; iron post stamped "8708 OURAY"-----	Feet. 8, 703. 727
Lower Creede, in old Maben Bank building, near south entrance; aluminum tablet stamped "8854 OURAY"-----	8, 849. 640
<b>Lower Creede via Bachelor, Park Regent mine, Phoenix Park, and East Willow Creek to Lower Creede.</b>	
Lower Creede, 1.2 miles northwest of, 100 yards north of switchback, 70 feet west of road, in 4 by 4 by 2 foot boulder; aluminum tablet stamped "9812 OURAY"-----	9, 808. 193
Bachelor, east side of principal street, 40 feet north of town well; iron post stamped "10531 OURAY"-----	10, 527. 537
Park Regent mine, 100 yards southeast of, 30 feet west of road, in boulder; aluminum tablet stamped "10454 OURAY"-----	10, 450. 496
Park Regent mine, 1.1 miles east of, 900 feet north of east branch of West Willow Creek, at old sawmill site, 20 feet east of road, in 4 by 2 by 2 foot boulder; aluminum tablet stamped "10260 OURAY"-----	10, 256. 303
Campbell Ridge, summit of, between East and West Willow creeks, in ledge with dead bearing tree north of road; aluminum tablet stamped "10601 OURAY"-----	10, 597. 599
Phoenix Park, in south part of, 200 feet southeast of cabin, 150 feet west of road up East Willow Creek; iron post stamped "9709 OURAY"-----	9, 705. 390
Mollie S. mine, 60 feet south of tram house, 20 feet east of East Willow Creek, 12 feet east of road, in 8 by 8 by 4 foot boulder; aluminum tablet stamped "9160 OURAY"-----	9, 156. 248

**SAN CRISTOBAL QUADRANGLE.**

**Lake San Cristobal southwest along road up Gunnison River (Lake Fork) to Sherman, thence northwest to Whitecross.**

Lake San Cristobal, 45 feet north of north end of lake, 40 feet east of road, 600 feet northeast of Golden Fleece tunnel; iron post stamped "9000 OURAY"-----	8, 995. 653
Lake San Cristobal, 0.25 mile southwest of south end, 10 feet west of State road, in trachyte boulder 4 by 1 by 3 feet; aluminum tablet stamped "9021 OURAY"-----	9, 016. 731
Lake San Cristobal, 3.5 miles southwest of south end, 30 feet east of junction of State road and road to Clawson's ranch, 30 feet south of small stream, in top of cropping syenite boulder; aluminum tablet stamped "9180 OURAY"-----	9, 175. 603
Wager Gulch, mouth of, on Gunnison River, 0.3 mile south of Capt. Hall's house, 15 feet south of junction of Silverton and Carson City roads, 200 feet south of river, in front of log cabin; iron post stamped "9350 OURAY"-----	9, 345. 303
Sherman, in east end of town, 200 feet south of where State road starts up mountain side; iron post stamped "9552 OURAY"-----	9, 547. 836
Sherman, 3.5 miles northwest of, 300 feet north of river, 10 feet south of road, in ledge; aluminum tablet stamped "10270 OURAY"-----	10, 266. 724
Whitecross, 1.5 miles east of, 100 feet east of Coopér Creek, at Argentum, in boulder 3 by 3 feet by 6 inches; aluminum tablet stamped "10564 OURAY"-----	10, 559. 759

Whitecross, 10 feet south of road, 150 feet north of creek, 650 feet northeast of La Belle power house; iron post stamped "10754 OURAY" -----	Feet. 10,750.439
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**Gunnison River south via Carson to Rio Grande.**

Carson Pass, 2.3 miles north or, in iron bed flats, 400 feet south of placer diggings, 6 feet west of road, in boulder; aluminum tablet stamped "11273 OURAY" -----	11,269.837
Carson Pass, summit of, 75 feet west of road; iron post stamped "12360 OURAY" -----	12,357.281
Carson Pass, 3.5 miles south of, 200 feet above and 650 feet east of Lost Trail Creek, where trail leaves pack and enters spruce timber, 5 feet east of trail, in boulder 5 by 1 by 3 feet; aluminum tablet stamped "11224 OURAY" -----	11,220.303
Carson Pass, 6.2 miles south of, 500 feet south of junction of East and West Lost Trail creeks, 5 feet west of trail, in 4 by 4 by 1 foot boulder; aluminum tablet stamped "10307 OURAY" -----	10,303.182

**Down Rio Grande east to Antelope Springs.**

Point Burwell, 0.3 mile northwest of, 50 feet southeast of old log cabin, 25 feet south of road, in top of large rock; aluminum tablet stamped "9486 DUR" -----	9,493.108
Point Burwell, 0.05 mile northwest of, in grassy flat, near large post marked "Point Burwell," 30 feet north of wagon road; iron post stamped "9479 OURAY" -----	9,474.734
Point Burwell, 3.3 miles southeast of, at base of steep slope, 75 feet north of road at point where Rio Grande makes a sweep in bend, on bench of rock ledge; aluminum tablet stamped "9384 DUR" (old bench mark) -----	9,391.187
Point Burwell, 4.1 miles south of, 100 yards south of log cabin, 200 yards north of Rio Grande ford, 50 feet west of base of bluff, 20 feet east of road, in grassy flat; iron post stamped "9386 OURAY" -----	9,381.579
Weminuche Creek, 2.1 miles east of, 80 feet north of road, 50 feet south of river, in grassy park, in 5 by 5 by 4 foot boulder; aluminum tablet stamped "9321 OURAY" -----	9,316.573
Two Lakes Creek, 1.8 miles west of, 500 feet east of head of long park, 150 feet east of old chimney of burned cabin; iron post stamped "9441 OURAY" -----	9,437.531
Two Lakes Creek, 1.1 miles southeast of, in long park, 25 feet east of road, in boulder 8 by 6 by 4 feet; aluminum tablet stamped "9275 OURAY" -----	9,271.056
Antelope Park, west edge of, 300 yards west of buildings on San Juan ranch, 50 feet north of northwest corner of ranch fence, 30 feet north of road; iron post stamped "9039 OURAY" -----	9,034.998
Antelope Park, 150 feet southeast of Brown's ranch, 40 feet north of road; iron post stamped "9001 OURAY" -----	8,996.874
Antelope Park, 20 yards west of old stage station, 20 feet south of low cliff of rocks, 20 feet north of road; iron post stamped "8938 OURAY" -----	8,933.400
Soward ranch, 0.2 mile north of Rio Grande, 20 feet east of road, at ranch road to house; iron post stamped "8928 OURAY" -----	8,924.108
Antelope Springs, 50 feet north of; iron post stamped "8960 OURAY" -----	8,956.218



**Antelope Springs northwest along road via Lake Santa Maria, Clear Creek, Cebolla Pass, and Slumgullion Gulch to Lake San Cristobal.**

Lake Santa Maria, 0.7 mile east of, 25 feet south of road, near highest point of Santa Maria Pass, in bowlder 3 by 1 by 3 feet; aluminum tablet stamped "9695 OURAY"-----	Feet. 9, 691. 438
Lake Santa Maria, on contour line as surveyed by Equitable Life Insurance Co. for reservoir, near the company's station XXII; iron post stamped "9475 OURAY"-----	9, 470. 888
Boulder Creek dam, 300 feet west of, 0.2 mile west of old Lakeman fishpond, 30 feet south of road, in 15 by 10 by 4 foot bowlder; aluminum tablet stamped "9705 OURAY"-----	9, 702. 386
Clear Creek falls, 0.1 mile southwest of, 12 feet south of road; iron post stamped "10052 OURAY"-----	10, 048. 283
Clear Creek crossing, 2 miles north of, 650 feet west of Big Spring Gulch Creek, 40 feet west of road, in bowlder 8 by 5 by 3 feet; aluminum tablet stamped "10344 OURAY"-----	10, 340. 353
Continental Divide, summit of, between Big Spring Gulch and Cebolla Creek, 50 feet east of road, 30 feet east of Lakeman ditch; iron post stamped "10901 OURAY"-----	10, 897. 289
Cebolla Creek, 450 feet southwest of southwest branch, 15 feet east of road, in 4 by 2 by 1 foot bowlder; aluminum tablet stamped "10394 OURAY"-----	10, 390. 354
Slumgullion Pass, 2.5 miles south of, 20 feet south of corduroy roads, in 4 by 4 by 2 foot blue bowlder; aluminum tablet stamped "11124 OURAY"-----	11, 120. 212
Slumgullion Pass, 0.5 mile west of, in Slumgullion Gulch, 100 feet south of road, at white dump from old tunnel, 30 feet east of sawdust pile at old mill site, in bowlder; aluminum tablet stamped "11005 OURAY" (1909 value from Montrose=11,001.654 feet)--	11, 001. 504
Slumgullion Pass, 3.1 miles west of, 8 feet southwest of road in elbow of switchback, in 3 by 2 by 2 granite rock; aluminum tablet stamped "9762 OURAY"-----	9, 757. 612

**Antelope Springs northeast 3 miles along road toward Lower Creede.**

Antelope Springs, 3 miles east of, 40 feet southeast of road, 350 yards southwest of side grade by river, in large triangular bowlder 4 by 4 by 4 feet; aluminum tablet stamped "8863 OURAY"-----	8, 858. 885
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**Soward ranch along roads south of Rio Grande to point 2 miles north of Lime Creek.**

Lime Creek, 450 feet west of, 900 feet south of river at great bend, 0.3 mile southeast of Kansas clubhouse, 1 mile northeast of Soward's house, at junction of road to south, river pass; iron post stamped "8912 OURAY"-----	8, 907. 550
Lime Creek, 2 miles north of, 20 feet west of road, in 4 by 4 by 3 foot bowlder; aluminum tablet stamped "8930 OURAY"-----	8, 926. 218

**Lost Trail Creek east along trail down Clear Creek to Clear Creek Falls.**

Rube Harris's ranch house, 0.2 mile northwest of, 200 yards southwest of small reservoir, 15 feet north of trail, in 4 by 4 by 2 foot bowlder; aluminum tablet stamped "10417 OURAY"-----	10, 413. 156
Swanks Lake, 50 yards northeast of north end of dam, 12 feet south-east of road; iron post stamped "10331 OURAY"-----	10, 327. 078

Swanks ranch, 1.2 miles northeast of house, 65 feet north of junction of roads to Creede and Lake City; iron post stamped "10287 OURAY" -----	Feet. 10, 282. 784
Swanks ranch, 4.1 miles northeast of, 300 feet southeast of gorge, 20 feet north of road, 40 feet south of Clear Creek; iron post stamped "10211 OURAY" -----	10, 207. 139
Swanks ranch, 6.1 miles east of, 100 feet south of junction of road with spur from Horse Thief trail, 600 feet east of creek, 600 feet northeast of rocky butte; iron post stamped "10143 OURAY" ---	10, 138. 658
Clear Creek crossing, 0.4 mile northwest of, 100 feet west of irrigating ditch, 20 feet west of road, in 2 by 2 by 1 foot boulder with mound of rock alongside; aluminum tablet stamped "10065 OURAY" -----	10, 061. 224

Clear Creek crossing above falls south along road to San Juan ranch.

Divide between South Clear Creek and Rio Grande, 100 yards north of, 50 feet east of road, in 10 by 6 by 4 foot boulder; aluminum tablet stamped "9530 OURAY" -----	9, 526. 315
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Forks of road to Emerald Lakes north to Point Burwell.

Los Pinos River, 0.2 mile southwest of mouth of Falls Creek, 12 miles northeast of Graham's ranch, southeast of trail, in front of 8-inch spruce tree, about 400 feet west of high waterfall on side of mountain, in top of pink granite boulder; bronze tablet stamped "8700 DUR" -----	8, 706. 575
Flint Fork, 0.25 mile south of mouth of, on east side of trail, near summit of steep ascent on south side of Flint Fork Canyon, in top of large granite boulder; bronze tablet stamped "9323 DUR" ----	9, 329. 723
Flint Fork, 2.75 miles northeast of mouth of, southeast of trail near clump of spruce trees, about 100 feet northeast of small mountain stream, in top of granite boulder; bronze tablet stamped "9904 DUR" -----	9, 909. 683
Weminuche Pass, 4 miles southwest of, on east side of and nearly level with trail, in top of granite boulder; bronze tablet stamped "10050 DUR" -----	10, 056. 987
Weminuche Pass, 9 feet east of trail, 150 feet south of summit of Continental Divide, in top of sandstone boulder; aluminum tablet stamped "10622 DUR" -----	10, 628. 774
Weminuche Pass, 1.8 miles northeast of, 10 feet northeast of small creek, 60 feet southwest of blazed twin spruce tree on southeast side of trail, in triangular-shaped boulder; aluminum tablet stamped "10336 DUR" -----	10, 342. 876

Mouth of Lost Trail Creek west up Rio Grande to Pole Creek.

Point Burwell, 3 miles northwest of, 8 feet south of and nearly level with road on side of hill, in top of sandstone rock; aluminum tablet stamped "9916 DUR" -----	9, 923. 063
Timber Hill, 1.5 miles east of, 45 feet north of road near cow camp at base of hill, 2 feet above ground, in southwest face of large wedge-shaped rock 12 feet high; aluminum tablet stamped "9989 DUR" -----	9, 995. 999
Timber Hill, 1.7 miles northwest of, on edge of rocky mound, east side of road, 120 feet north of Pole Creek, in top of boulder; aluminum tablet stamped "10486 DUR" -----	10, 492. 758

## Rio Grande west 1 mile up Bear Creek.

Beartown, 3 miles northeast of, 200 feet northeast of spring branch, 1 foot to north of road, in boulder; bronze tablet stamped	Feet.
"10623 DUR"-----	10,629.275

## SILVERTON QUADRANGLE.

## Tollgate south of Ouray east via Bear Creek to American Flat.

Ouray, 5.9 miles southeast of, 150 feet south of Bear Creek trail at southwest corner of main cabin at Camp Snyder, in boulder; bronze tablet stamped "10839 OURAY"-----	10,837.088
Ouray, 8.5 miles southeast of, 40 feet south of trail at crossing of range, head of Bear Creek and west of American Flat, in boulder; bronze tablet stamped "12630 OURAY"-----	12,628.798

Point near Timber Hill northwest along road to Howardsville, thence south-  
west to Silverton and south to Molas Lake.

Stony Pass, 2.5 miles southeast of, on north side of road, 50 feet east of trail, 170 feet east of sharp bend in road, in top of boulder; bronze tablet stamped "11473 DUR"-----	11,477.889
Stony Pass, summit of, 15 feet northeast of road, in top of flat rock; aluminum tablet stamped "12594 DUR"-----	12,598.505
Howardsville, 1.7 miles southeast of, on south side of road, 150 feet east of junction with road running south up Cunningham Gulch, in top of large rock; bronze tablet stamped "10096 DUR"-----	10,100.909
Howardsville, 400 feet south of post office, on south side of road at forks, 100 feet south of bridge over Cunningham Creek, in top of boulder; aluminum tablet stamped "9670 DUR"-----	9,674.705
Silverton, 2.3 miles northeast of, on south side of public road, 15 feet north of track, 120 feet east of road crossing, about 400 feet northeast of E. G. Stoiler's residence, on top of quartz boulder; aluminum tablet stamped "9431 DUR"-----	9,435.502
Silverton, in southeast corner of Grand Hotel block, 2.5 feet above sidewalk, at northwest corner of Greene and Twelfth streets; aluminum tablet stamped "9302 DUR"-----	9,306.334
Silverton, at northwest corner of section house on opposite side of track from Denver & Rio Grande R. R. station; iron post stamped "9270 DUR"-----	9,274.565

## NEEDLE MOUNTAINS QUADRANGLE.

Point 2 miles north of fish hatchery north up Vallecito Creek, over divide,  
and down Bear Creek to its mouth.

Quartz mill, 0.5 mile north of, 90 feet north of prospect dump on trail and 150 feet south of junction of two branches of Vallecito Creek, in top of point of rock jutting into creek; aluminum tablet stamped "8426 DUR"-----	8,432.278
Quartz mill, 3.7 miles northeast of, 300 feet south of creek crossing, foot of hill on west side of creek, 3 feet left of trail, in boulder; aluminum tablet stamped "8869 DUR"-----	8,875.000
Johnson Creek, 75 feet south of, 250 feet west of its junction with Vallecito Creek, in granite boulder; aluminum tablet stamped "9166 DUR"-----	9,172.723

Vallecito Creek, west side of, 3 miles northeast of mouth of Johnson Creek, 15 feet west of spring branch, 20 feet east of trail at foot of hill; aluminum tablet stamped "9578 DUR"-----	Feet. 9, 584. 335
Vallecito Creek, west side of, 7.5 miles north of mouth of Johnson Creek, 5 feet west of trail near forks of creek, in large rock; aluminum tablet stamped "10995 DUR"-----	11, 001. 395
Hunchback Mountain Pass, summit of, 125 feet northwest of stone monument, 100 feet from west crest of divide; bronze tablet stamped "12487 DUR"-----	12, 493. 454
Beartown, lower end of, 125 feet southwest of two lower cabins on north side of road, in bowlder on rocky point; bronze tablet stamped "11157 DUR"-----	11, 162. 684

**Vallecito Creek west up Johnson Creek 3.5 miles (single spur line).**

Johnson and Vallecito creeks, 3.5 miles above junction of, 200 feet south of cabin, in bowlder 30 feet from trail; bronze tablet stamped "11077 DUR"-----	11, 083. 722
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**Point 3 miles northeast of Coal Bank Hill northeast to Molas Lake.**

Molas Lake, 2.5 miles southwest of, on west side of road, 1,000 feet south of summit of hill, in top of limestone bowlder 8 feet in diameter; aluminum tablet stamped "10790 DUR"-----	10, 796. 701
Molas Lake, 100 feet north of log house on southeast side of Silverton and Cascade toll road, in top of embedded granite bowlder; bronze tablet stamped "10506 DUR"-----	10, 513. 237

**Point near Molas Lake south along Denver & Rio Grande R. R. (Silverton branch) to point 7 miles north of Rockwood.**

Milepost "D 491", 10 feet west of, on top of granite bowlder 5 feet east of track; chiseled cross-----	9, 022. 51
Elk Park, 1 mile north of, 350 feet north of milepost "D 490", 20 feet east of track at curve, in top of flat bowlder; aluminum tablet stamped "8924 DUR"-----	8, 930. 403
Elk Park, in front of signboard; top of rail-----	8, 874. 7
Elk Park, 2 miles south of, 26 feet west of track, opposite milepost "D 487", in granite outcrop; aluminum tablet stamped "8750 DUR"-----	8, 757. 097
Needleton, 3 miles north of, 19 feet west of and 4.5 feet below track, 200 feet south of milepost "D 484", in top of granite ledge; aluminum tablet stamped "8430 DUR"-----	8, 436. 556
Milepost "D 482", 50 feet northwest of, 7 feet east of track, on granite ledge; chiseled cross-----	8, 230. 08
Needleton, 0.25 mile north of, 6 feet west of track, in outcropping rock; aluminum tablet stamped "8142 DUR"-----	8, 148. 831
Needleton, in front of platform; top of rail-----	8, 133. 8
Needleton, 3 miles southwest of, 9 feet west of track, opposite milepost "D 478", in top of granite ledge; aluminum tablet stamped "7846 DUR"-----	7, 853. 102

## ENGINEER MOUNTAIN QUADRANGLE.

## Rockwood north along Denver &amp; Rio Grande R. R. 7 miles.

Rockwood, 7.4 miles north of, 2.1 miles south of Cascade siding, east side of canyon of Animas River, 3 feet above Denver & Rio Grande R. R. (Silverton branch) and 10 feet from center of track, 800 feet north of milepost 475 D, in face of granite bluff; copper bolt stamped "U. S. G. S.—7587 ft. B. M."-----	Feet. 7, 594. 365
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## Rockwood north along wagon road to point 3 miles northeast of Coal Bank Hill.

Rockwood, 5.8 miles north of, opposite north end of low limestone butte, 12 feet west of road about two-thirds way up steep hill, 25 feet southeast of blazed quaking aspen and 520 feet south of fence corner (east side), on limestone boulder 2 by 1 foot; chisled circle-----	8, 609. 82
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Rockwood, 7.6 miles north of, 30 feet west of road in fence corner, 375 feet south of Elbert Creek, 80 feet southeast of T. Mahon's "Butter ranch;" iron post stamped "8795 DUR"-----	8, 802. 106
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Columbine Lake; surface of water-----	8, 795
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Rockwood, 9.5 miles north of, 0.2 mile south of main road forks, 15 feet east of road, 100 feet southwest of small pond, on sandstone boulder 2.5 by 4 feet; chiseled square-----	8, 833. 73
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Cascade Creek bridge, 45 feet north of north end of, 20 feet west of center of road, in granite rock 3 by 4 feet; copper bolt stamped "8721 DUR"-----	8, 727. 367
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Cascade Creek bridge, 5 miles north of, 8 feet north of road, 14 feet west of 24-inch spruce stump, 75 feet south of summit Coal Bank Hill, in diamond-faced limestone rock 3 by 3 feet; copper bolt stamped "U. S. G. S.—10654—B. M."-----	10, 660. 768
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Coal Bank Hill, 2.8 miles northeast of, on north side of road 40 feet northeast of bridge over small creek, at point where road makes a horseshoe bend, in top of embedded limestone boulder; bronze tablet stamped "9642 DUR"-----	9, 649. 131
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## West ranch on Rockwood-Silverton road west to Hermosa Park, thence south down Hermosa Creek to South Fork.

Road forks to Hermosa Park and Silverton, 0.4 mile northwest of, at top of first hill, 3 feet from north edge of outcrop and 25 feet north of road, on flat sandstone ledge; chiseled square-----	8, 972. 12
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West ranch, 2 miles northwest of, at summit in road between Hermosa Park and Rockwood-Silverton wagon road, 10 feet south of 12-inch spruce, in 2 by 2 foot sandstone boulder; copper bolt stamped "9805 DUR"-----	9, 811. 757
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Hermosa Park, 1 mile east of, 12 feet south of center of road, 300 feet west of foot of steep rocky hill, in red sandstone ledge 7 by 7 feet and 2 feet above ground; copper bolt stamped "8898 DUR"-----	8, 905. 236
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Hermosa Park, center of, 50 feet southwest of bridge over Hermosa Creek, at top of west bank, 0.5 mile north of junction of east fork; iron post stamped "8807 DUR"-----	8, 813. 996
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Hermosa Park, 1.4 miles south of, 30 feet east of trail at top of high bluff over Hermosa Creek, on sandstone boulder 2.5 by 2.5 feet; chiseled square-----	8, 808. 92
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Hermosa Park, 6.4 miles south of, 50 feet northeast by north of 16-inch fir, 80 feet west of 20-inch dead fir near knoll in park, 10 feet west of trail, 50 feet east of creek, 45 feet south of 12-inch spruce, in round red sandstone boulder 3 feet in diameter; copper bolt stamped "8219 DUR"-----	Feet. 8, 226. 434
Hermosa Park, 10.5 miles south of, at mouth of south fork of Hermosa Creek, near east wall of canyon, 150 feet east of cook cabin at tie camp, 250 feet east of stream forks, 25 feet west by north of 8-inch pine and 30 feet southeast of 15-inch spruce east of trail, in sandstone boulder 2 by 4 feet and 3 feet above ground; copper bolt stamped "7700 DUR"-----	7, 706. 862
<b>Hermosa Park north and west to Scotch Creek and down creek to point near Rico.</b>	
Hermosa Park, 1.8 miles north of, 40 feet south of 24-inch spruce tree at mouth of west fork of Hermosa Creek, in white sandstone rock; bronze tablet stamped "8986 DUR"-----	8, 992. 709
Hermosa Park, 5.25 miles northwest of, 15 feet southwest of road, at summit of divide between Hermosa Creek and Dolores River; iron post stamped "10413 DUR"-----	10, 419. 569
Rico, 6.25 miles southeast of, on north side of road, 300 feet west of where road crosses to north branch of Scotch Creek, in top of red sandstone outcrop; bronze tablet stamped "9247 DUR"-----	9, 253. 935

**RICO QUADRANGLE.****Down Scotch Creek to Rico.**

Rico, 3 miles south of, on north side of road, 150 feet east of forks of road to Durango, in top of conglomerate boulder; aluminum tablet stamped "8538 DUR"-----	8, 545. 005
Rico, 1 mile south of, at forks of road, 150 feet south of south side of cemetery, on granite boulder; chiseled cross-----	8, 722. 79
Rico, in top of west end of balustrade at south side of main entrance to courthouse; aluminum tablet stamped "8824 DUR"-----	8, 831. 015
Rico, 50 feet south of Rio Grande Southern R. R. station, near northeast corner of small park; iron post stamped "8714 DUR"---	8, 720. 825

**Rico west to summit of Expectation Mountain.**

Expectation Mountain, summit of, 20 feet northeast of triangulation station, in top of 15 by 15-inch embedded granite boulder; bronze tablet stamped "12065 DUR"-----	12, 072. 223
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**Chromo, Ignacio, and Pagosa Springs 30' quadrangles.****ARCHULETA AND LA PLATA COUNTIES.**

The elevations in the following list are based upon primary leveling in this area.

The leveling in the Ignacio quadrangle was done in 1896 by C. W. Beach, in 1899 by T. Winsor, in 1900 by J. P. Darling, in 1906 by A. R. Carver, and in 1907 by F. A. Nussle; that in the Pagosa Springs quadrangle in 1899 by Winsor, in 1906 by Carver, and in 1907 by Nussle; and that in the Chromo quadrangle in 1906 by Carver.

The considerable error in stamped elevations is due mostly to the assumed data upon which the field work was done, and partly to the errors in field computation.

#### IGNACIO QUADRANGLE.

##### Durango north to Animas, thence east to Florida Valley.

Durango, Smelter State Bank building, Newman Block, in second course of masonry, southwest corner of foundation; bronze tablet stamped "6517"-----	Feet. 6,524.351
Durango, in southwest corner of masonry foundation of courthouse, 1.5 feet above ground; bronze tablet stamped "6551"-----	6,558.667
Durango, in front of station, top of rail-----	6,510.0
Animas, 4 miles east of, 40 feet northwest of junction of Animas City and Florida Valley wagon road, on west side of Florida Valley; iron post stamped "7146"-----	7,153.403

##### Durango northeast to Bluff triangulation station.

Durango, 3.5 miles northeast of, in bed rock 2 feet south of monument, top of highest peak on ridge east of Bluff triangulation station, at head of Horse Gulch; bolt marked "U. S. G. S. S169 Ft. B. M."-----	8,175.961
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##### Durango west to Lightner Creek, thence north to Junction Creek (spur line).

Durango, 5 miles west of, in forks of Lightner Creek, 80 feet northwest of highway bridge crossing Dry Fork of Lightner Creek; iron post stamped "6944"-----	6,951.274
Animas, 4.5 miles northwest of, 7 feet north of road along Junction Creek and 0.2 mile below deserted sawmill; iron post stamped "7258"-----	7,264.767

##### Animas north along Denver & Rio Grande R. R. to Rockwood.

Trimble Springs, 2.5 miles south of, in south base of large boulder 10 by 8 by 6 feet, east side of road running along west side of Animas Valley; iron post stamped "6569"-----	6,576.296
Hermosa, near Denver & Rio Grande R. R. (Silverton branch) station, 125 feet west of tracks on south side of Durango wagon road; iron post stamped "6630"-----	6,637.509
Rockwood, 100 feet north of, within boundaries of railroad Y switch; iron post stamped "7348"-----	7,354.913

##### Hermosa northwest up Hermosa Creek to South Fork.

Hermosa, 3.5 miles northwest of, 15 feet east of trail, in flat, north of Hermosa Creek; iron post stamped "7709"-----	7,716.529
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##### Point 4 miles east of Animas on Florida River east via Spring Gulch to Columbus.

Nelson's shingle mill, 0.2 mile northeast of, 1.3 miles southwest of schoolhouse, district 14, east side of road, 35 feet north of bridge over head race; iron post stamped "7325 DUR"-----	7,332.040
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Stark's sawmill, 1 mile southwest of, on southeast side of road, 10 feet west of gate at entrance to lane leading to Eschoven's residence, 300 feet distant; iron post stamped "7547 DUR"-----	Feet. 7, 554. 279
Stark's sawmill, 1.5 miles northeast of, 5 feet south of fence corner, at forks of roads, 100 feet east of bridge over Florida River; iron post stamped "7770 DUR"-----	7, 776. 961
Columbus, 500 feet west of post office, at forks of road; iron post stamped "7321 DUR"-----	7, 327. 660
<b>Columbus northeast along Pine River to point 3 miles northeast of Graham ranch.</b>	
Columbus, 3 miles northeast of, near angle in rail fence, on east side of road, 200 feet north of bridge over drain; iron post stamped "7496 DUR"-----	7, 502. 701
Columbus, 6.5 miles north of, by a wire fence, on southeast side of road, at junction with road running up Vallecito Creek; iron post stamped "7617 DUR"-----	7, 623. 705
Graham's ranch, 0.5 mile southwest of, on north side of road, 17 feet west of bridge over Pine River, near beginning of trail up river, in top of bowlder; aluminum tablet stamped "7747 DUR"-----	7, 753. 511
<b>Vallecito north up Vallecito Creek to point 2 miles north of fish hatchery.</b>	
Fish hatchery, 0.7 mile south of, 250 feet south of small creek, in granite bowlder; aluminum tablet stamped "7720 DUR"-----	7, 726. 050
Fish hatchery, 2 miles north of, 100 feet south of branch of Vallecito Creek, at foot of large pine tree on west edge of trail, in flat rock; aluminum tablet stamped "7926 DUR"-----	7, 933. 168
<b>From milepost 413 west along Denver &amp; Rio Grande R. R. to La Boca, thence northwest along railroad to Durango.</b>	
Milepost 413, 100 feet south of, on opposite side of track, near telegraph pole, 30 feet south of track, 630 feet southeast of private road crossing and cattle guard; iron post-----	6, 341. 952
Milepost 415, 500 feet northwest of, 50 feet south of track, 20 feet east of telegraph pole, 100 feet south of private road; iron post--	6, 305. 841
La Boca, 60 feet west of track, 20 feet east of road, 300 feet north of water tank; iron post-----	6, 171. 719
La Boca, in front of station; top of rail-----	6, 167. 5
Ignacio, in front of station; top of rail-----	6, 431. 2
Ignacio, 4.4 miles southeast of, 50 feet west of track, 100 feet east of road; iron post stamped "6252"-----	6, 258. 768
Ignacio, 200 feet east of station, 100 feet east of road; iron post--	6, 427. 469
Ignacio, 2.3 miles northwest of, 50 feet northwest of road crossing, 30 feet south of track, 600 feet southeast of milepost 428; iron post -----	6, 529. 448
Ignacio, 7.2 miles northwest of, 100 feet southwest of road crossing, 40 feet south of track; iron post-----	6, 597. 022
Florida, 1.7 miles southeast of, 80 feet southwest of milepost 435, 60 feet southwest of track, 150 feet east of private road; iron post..	6, 720. 528
Florida, 50 feet south of freight platform, 250 feet northwest of bridge near telegraph pole; iron post-----	6, 690. 170
Milepost 445, 75 feet east of, 50 feet east of track, 1,500 feet north of road; iron post-----	6, 779. 973



Durango, 6.3 miles southeast of, 20 feet south of road, 500 feet south of track, on side of hill; iron post-----	Feet. 6, 728. 417
Bocea, in front of station; top of rail-----	6, 698. 1
Durango, about 3 miles south of, 150 feet southeast of east end of Florida road, wagon bridge over Las Animas River, 60 feet west of railroad, in top of large red boulder; aluminum tablet (Reclamation Service bench mark No. 3)-----	6, 416. 176

Colorado-New Mexico line north along Denver & Rio Grande R. R. to point 3 miles south of Durango, thence east to point 6 miles east of Bayfield.

NOTE.—The elevations of the first five of the following bench marks may be 3 feet greater.

Colorado-New Mexico line, 0.3 mile northwest of, in State of Colorado, 10 feet north of milepost "D 467"; iron post stamped "5936"-----	5, 933. 290
Colorado-New Mexico line, 4.2 miles north of, 0.1 mile south of milepost "D 463," opposite water tank, in line of telegraph pole; iron post stamped "5-6049"-----	6, 046. 223
Castelar, 1 mile south of post office, 30 feet west of road, on top of mesa; iron post stamped "6139"-----	6, 136. 079
Castelar, 3 miles north of, 30 feet west of road, on ridge; iron post stamped "B. M. 219 6210"-----	6, 206. 571
Castelar, 3.4 miles north of, sec. 36, T. 34 N., R. 10 W., 30 feet west of wagon road above and 150 feet west of house of Weaselskin (a Ute Indian), on right bank of Animas River, in top of buried granite boulder 3 by 4 feet, about 2 feet above ground; aluminum tablet stamped "6202" (Reclamation Service bench mark No. 4; its elevation 6,199.798 feet)-----	6, 206. 218

NOTE.—A break of 3 feet is made in the computed line here on account of circuit closure and the closure on this and a following Reclamation Service bench mark.

Castelar, 6.2 miles north of, 20 feet west of road, on top of mesa; iron post stamped "6344 B. M. 223"-----	6, 344. 319
Bocea, 0.5 mile southeast of station, 20 feet south of road, 50 feet south of railroad track, on side of hill; iron post stamped "6723 B. M. 230"-----	6, 728. 317
Bocea, 2.5 miles east by 0.5 mile north of, road forks at northeast corner of B. Bellino's field; iron post stamped "6993 B. M. 233"-----	6, 992. 275
Bocea, 4.5 miles east by 1.25 miles north of, 1 mile east of Florida River, 50 feet north of road, near lone pinion tree; iron post stamped "6917 B. M. 225"-----	6, 917. 498
Bayfield, 6.5 miles northwest of, 20 feet south of road, on top of ridge; iron post stamped "7071 B. M. 238"-----	7, 071. 639
Bayfield, 3 miles southwest of, 25 feet north of road, 60 feet west of large pressure pipe; iron post stamped "6855 B. M. 242"-----	6, 854. 754
Bayfield, 0.5 mile west of, in road forks of Durango and Ignacio road, on west side of Pine River; iron post stamped "6913 B. M. 245"-----	6, 913. 426
Bayfield, 2.8 miles east of, 20 feet west of road, on top of ridge 600 feet east of deserted mill; iron post stamped "6940 B. M. 249"-----	6, 950. 839
Bayfield, 5.9 miles east of, 20 feet west of road, 30 feet south of arroyo; iron post stamped "7224 B. M. 252"-----	7, 225. 169

## Bayfield south down Pine River to State line.

Bayfield, 3.5 miles south of, 15 feet west of road, in line with cedar bush; iron post-----	Feet. 6, 789. 303
Ignacio agency, at west end of highway bridge, old Geological Survey iron post stamped "6469 B. M. 326"-----	6, 478. 447

## PAGOSA SPRINGS QUADRANGLE.

## Graham's ranch northeast 3' miles.

Graham's ranch, 3 miles northeast of, beside wire fence, 10 feet east of gate through which trail passes, in top of granite boulder; bronze tablet stamped "7873 DUR"-----	7, 879. 156
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## At Thomas &amp; Spaeth's store.

Thomas & Spaeth's store, southeast corner of, 160 feet north of track; iron post-----	6, 221. 171
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## State line crossing near milepost 364 west along Denver &amp; Rio Grande R. R. to milepost 410.

Juanita, 150 feet southeast of post office and freight platform, 60 feet north of track, 150 feet south of Navajo River; iron post---	6, 327. 606
Pagosa Junction, southwest fence corner of W. Zabriski's store, 150 feet north of track, 200 feet northwest of station; iron post-----	6, 266. 048
Milepost 392, 75 feet east of, 40 feet north of road crossing, 200 feet north of San Juanita River, in sandstone boulder; aluminum tablet	6, 231. 805
Carracas, 90 feet south of signboard, 10 feet west of northwest corner of section house; iron post-----	6, 166. 213
Milepost 397, 300 feet northwest of, 50 feet north of track, 30 feet south of road and wire gate, in fence corner; iron post-----	6, 127. 621
Milepost 399, 15 feet south of, 50 feet north of track, 75 feet south of road; iron post-----	6, 094. 745
Arboles, northwest corner of B. A. Rodriguez store and post office, 100 feet south of track; iron post-----	6, 004. 384
Arboles, in front of station; top of rail-----	6, 007
Milepost 406, 150 feet northwest of, 70 feet northeast of road crossing; iron post-----	6, 124. 600
Milepost 409, 0.7 mile east of, 50 feet southwest of road crossing, 20 feet west of irrigating ditch, 40 feet south of track; iron post----	6, 169. 036

## Point 6 miles east of Bayfield east along road to dike.

Lange ranch, 300 feet east of ranch house, in road forks; iron post stamped "7333 B 255"-----	7, 332. 670
Mack ranch, 2.3 miles east of, top of Yellow Jacket divide, 10 feet west of road; iron post stamped "7900 B. M. 258"-----	7, 899. 822
Piedra, Charles Freeman's ranch, 15 feet north of road, on top of small ridge; iron post stamped "7024 B. M. 262"-----	7, 021. 044
Campbell's ranch, 0.4 mile south of, 20 feet east of road; iron post stamped "6670 B. M. 265"-----	6, 669. 257
Harland's ranch, forks of Bayfield-Pagosa Springs and Bayfield-Arboles roads; iron post stamped "6450 B. M. 268"-----	6, 448. 966

Harland's ranch, 2.8 miles southeast of, 15 feet east of road, on Devil Hill; iron post stamped "6751 B. M. 271"-----	Feet. 6,749.777
Harland's ranch, 6.3 miles southeast of, 15 feet west of road, on top of ridge; iron post stamped "6794 B. M. 274"-----	6,793.121

**Dike east along Denver & Rio Grande R. R. to Pagosa Springs.**

Dike, opposite signboard; top of rail-----	6,807.6
Dike, 600 feet east of post office, 12 feet north of road, 40 feet south of track; iron post stamped "6801 B. M. 277"-----	6,800.682
Dike, 3.5 miles northeast of, 50 feet north of milepost "D 411," 60 feet south of road; iron post stamped "7020 B. M. 280"-----	7,020.095
Nutria, in front of signboard; top of rail-----	7,043.7
Hatcher spur, 0.5 mile north of, 30 feet east of milepost "D 414"; iron post stamped "7379 B. M. 283"-----	7,378.519
Sumetha, in front of signboard; top of rail-----	7,508.0
Sumetha, 1.2 miles northeast of, 60 feet north of track, 20 feet east of road; iron post stamped "7463 B. M. 287"-----	7,463.119
Pagosa Springs, south end of station platform, in line with front of station; iron post stamped "7104 B. M. 290"-----	7,103.522
Pagosa Springs, in base of watering trough; aluminum tablet stamped "7079 B. M. 291"-----	7,078.954

**Point 3 miles northeast of Vallecito northeast along Pine River to junction with trail northwest to Emerald Lake.**

Graham's ranch, 6 miles northeast of, 30 feet north of trail, about 0.2 mile northeast of Pine River crossing, in top of flat triangular-shaped boulder; bronze tablet stamped "7985 DUR"-----	7,991.443
Graham's ranch, 8.5 miles northeast of, 17 feet northwest of forks at junction with trail running northwest to Emerald Lakes, 0.1 mile northwest of Lake Fork, in top of granite boulder; aluminum tablet stamped "8185 DUR"-----	8,191.582

**CHROMO QUADRANGLE.**

**Pagosa Springs southeast along road to Edith.**

Pagosa Springs, 4.1 miles southeast of, 15 feet east of road, on top of ridge; iron post stamped "7248 B. M. 296"-----	7,244.812
Pagosa Springs, 8 miles south of, 15 feet north of road, on top of Eightmile Hill, 30 feet east of road forks, in top of a 4-inch iron pipe buried in ground; aluminum tablet stamped "7521 B. M. 300"-----	7,517.868
Halfway House, 0.2 mile east of, 15 feet east of road, near burnt pine stump, in top of sandstone boulder; aluminum tablet stamped "7135 B. M. 304"-----	7,132.858
Halfway House, 3.6 miles east of, on top of divide 15 feet south of road, 50 feet east of track, in top of sandstone post; aluminum tablet stamped "7758 B. M. 307"-----	7,753.995
Halfway House, 8 miles south of, 15 feet east of road, on top of ridge, in top of sandstone post; aluminum tablet stamped "7402 B. M. 311"-----	7,398.319

Durango, La Plata, Lewis Creek, and Mancos 15' quadrangles and Cortez and Ignacio 30' quadrangles.

#### LA PLATA AND MONTEZUMA COUNTIES.

The elevations in the following list are based on heights of bench marks at Durango.

The leveling was done in 1910 by M. R. McDanal.

#### DURANGO QUADRANGLE.

Durango west along Rio Grande Southern R. R. 2 miles (double-rodde line).

	Feet.
Durango, near freight depot, west of railroad; iron pin in bowlder	6,516.19
Durango, 1 mile west of; iron pins in cross tie on trestle over Lightner Creek	6,522.46
Durango, 1.7 miles west of, near road crossing at brickkiln; iron pins in bridge over Lightner Creek	6,522.44
Durango, 2.1 miles west of; spike in base of milepost 160	6,595.52
	6,595.45
	6,659.46

#### IGNACIO 30' QUADRANGLE.

Point 4 miles west of Durango along Rio Grande Southern R. R. to point 3 miles west of Porter.

Durango, 4 miles west of, on south side of railroad; cross marks in bowlder	6,943.28
Porter, 2 miles east of, south side of wagon road, 4 feet from southwest corner of frame shack, 12 feet above road, in sandstone ledge; aluminum tablet stamped "6980"	6,943.26
Porter, 1 mile west of; nail in north side of milepost 156	6,977.128
Porter, 2 miles west of; spike in base of milepost 155	7,129.38
Porter, 3.3 miles west of, on small divide, north side of highway; bolt in top of stump	7,191.04
	7,882.66
	7,882.63

#### LA PLATA QUADRANGLE.

Point 3 miles west of Porter northwest along railroad to Menefee (double-rodde line).

Porter, 5.5 miles west of, northeast side of crossing of railroad and highway; cross in top of bowlder	8,003.93
Ute Junction, 0.1 mile east of, at north end of Y; bolts in base of switch block	8,003.91
Hesperus, south end of siding, at tool house; bolts in base of switch block	8,100.51
Hesperus, 50 feet west of station, 6 feet below level of track, in granite bowlder; aluminum tablet stamped "8113"	8,100.57
Hesperus, 1.1 miles west of, on north side of track; cross marks on top of bowlder	8,116.67
Hesperus, 1.4 miles west of; spikes in north side of base of milepost 144	8,116.71
Hesperus, 2.4 miles west of; spikes in north side of base of milepost 143	8,110.978
Hesperus, 3.5 miles west of, at branch road to north; spike in base of switch block	8,240.87
Hesperus, 3.8 miles west of, top of divide, 50 feet south of railroad, in sandstone bowlder; aluminum tablet stamped "8585"	8,241.23
	8,289.39
	8,289.34
	8,412.72
	8,412.67
	8,556.93
	8,582.310

	Feet.
Cima, west end of siding; spike in base of switch block-----	8, 581. 13
Cima, 1.3 miles west of; spikes in north side of base of milepost 140-----	8, 563. 02
Cima, 2.3 miles west of; spike in north side of base of milepost 139-----	8, 562. 81
Cima, 3.3 miles west of; spikes in base of milepost 138-----	8, 443. 94
Cima, 4.3 miles west of; spike in north side of base of milepost 137-----	8, 324. 97
Cima, 4.8 miles west of, east end of siding at Dix; spikes in base of switch block-----	8, 324. 90
Dix, 20 feet south of main track, midway between switch block at west end of siding and derail switch block, 330 feet west of station sign, in sandstone boulder; aluminum tablet stamped "8209"-----	8, 253. 70
Dix, 0.4 mile west of; spikes in north side of base of milepost 136-----	8, 217. 42
Dix, 1.4 miles west of; spikes in base of north side of milepost 135-----	8, 217. 54
Dix, 2.4 miles west of; spikes in north side of base of milepost 134-----	8, 188. 26
Grady, at east end of siding; spike in base of milepost 133-----	8, 187. 98
Grady, 1.7 miles south of, on divide between Mancos River and Cherry Creek, 25 feet south of wagon road, 200 feet south of frame shack, 25 feet north of blazed pine tree, in sandstone boulder; aluminum tablet stamped "7956"-----	8, 157. 58
Menefee, 0.3 mile west of, 520 feet east of milepost 125, 8 feet below and 10 feet north of railroad track, in sandstone boulder; aluminum tablet stamped "7263"-----	8, 157. 43
	8, 139. 88
	8, 139. 70
	8, 132. 58

## MANCOS QUADRANGLE.

Menefee southwest along Rio Grande Southern R. R. to Mancos, thence southwest along highway to Point Lookout (double-rodged line).

Menefee, 1.5 miles west of; spikes in base of milepost 124-----	7, 148. 97
Menefee, 2.3 miles west of, at siding to south; bolt in base of switch block-----	7, 080. 03
Mancos, intersection of Main Street and Grand Avenue, southwest corner of First National Bank building, in third course of masonry; aluminum tablet stamped "7035"-----	7, 032. 588
Mancos, 0.9 mile west of, in fence around McGrev's residence; spike in base of gate post-----	6, 964. 49
Mancos, 2.7 miles west of, on south side of road 250 feet east of yellow house north side of road; spike in base of gate post-----	6, 871. 64
Mancos, 3.1 miles west of, at T road south; spike in base of fence post-----	6, 788. 61
Mud Creek, 0.1 mile east of, top of hill at sharp bend in road, north side of road; spike in fence post-----	6, 694. 50
Mud Creek, 60 feet east of bridge, on fence line, north side of road, in granite boulder; aluminum tablet stamped "6631"-----	6, 628. 414
Mud Creek, 1.1 miles west of, 200 feet north of road; spike in base of telegraph pole-----	6, 683. 51
Mud Creek, 1.5 miles west of; spike in east end of truss of bridge over dry arroyo-----	6, 716. 50
Government Cabin, 40 feet southwest of, at entrance to Mesa Verde National Park, in sandstone boulder; aluminum tablet stamped "7239"-----	7, 236. 402

Government Cabin, 0.3 mile south of, divide between Mancos and Dolores rivers, just north of road at edge of park boundary; spike in base of cedar tree-----	Feet. 7,457.45
Lookout triangulation station, Mesa Verde Park, in sandstone boulder at base of pinyon tree used as signal; aluminum tablet stamped "8431"-----	8,428.451

**Point Lookout south along trail to point 3.5 miles south of Morfield Canyon (single-rodged line).**

Morfield Canyon, 0.9 mile from head of, 25 feet northeast of trail; top of sandstone boulder-----	7,742.40
Morfield Canyon, 2.2 miles from head of, quarter corner 150 feet west of large boulder, 150 feet east of blazed pine tree; top of stone-----	7,529.98
Morfield Canyon, 2.3 miles from head of, cabin, 200 feet south of, 700 feet north of windmill, in sandstone boulder; aluminum tablet stamped "7510"-----	7,507.123
Morfield Canyon, 2.4 miles from head of, in base of foundation of windmill; spike-----	7,483.00

**East Gap at head of Morfield Canyon to West Fork Canyon (single-rodged line).**

Divide between Prater and Moccasin canyons, 25 feet south of trail; nail in root of lone pine tree-----	8,325.44
Divide between Moccasin Canyon and east fork of School Section Canyon, south side of trail; top of sandstone boulder-----	8,357.51
School Section Canyon, head of east fork, on north side of trail; top of sandstone boulder-----	8,231.59
School Section Canyon, ridge between east and west forks of, on north side of trail; top of sandstone boulder-----	8,346.314
School Section Canyon, head of west fork, 25 feet north of trail, 50 feet south of rim rock, in northeast corner of sandstone boulder; aluminum tablet stamped "S155"-----	8,152.351

**Park south along trail 2 miles (single-rodged line).**

Park, triangulation station, in base of sandstone boulder; aluminum tablet-----	8,571.51
Park, 0.4 mile south of, on ridge, east side of trail; top of sandstone boulder-----	8,420.49
Park, 1.7 miles south of, on ridge, in old ruins on west side of trail; top of sandstone boulder-----	8,086.56
Park, 2.1 miles south of, on ridge, at bend, on southeast side of trail; top of sandstone boulder-----	7,982.87

**Head of Soda Canyon west to ridge between west prong of East Fork and east prong of West Fork of Little Soda Canyon (single-rodged line).**

Soda Canyon, head of, in trail 300 feet west of drain; top of sandstone boulder-----	8,154.67
Soda Canyon and prong of east fork of Little Soda Canyon, on head of ridge between, old trail; top of sandstone boulder-----	8,398.99
Little Soda Canyon, head of ridge between east and west prongs of east fork of, on north side of trail; top of sandstone boulder----	8,808.32

Little Soda Canyon, ridge between west prong of east fork and east prong of west fork of, on north side of trail; top of sandstone boulder-----	Feet. 8, 302. 48
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**LEWIS CREEK QUADRANGLE.**

Point 4.5 miles south of head of Morfield Canyon south 1.3 miles (single-rodde line).

T. 35 N., R. 14 W., 500 feet southwest of corner between secs. 32 and 33, 5.8 miles from head of Morfield Canyon, in sandstone boulder in part of old ruins; aluminum tablet stamped "7220"-----	7, 217. 226
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Point 2.7 miles south of Park south 0.3 miles.

Park, 2.7 miles south of, on ridge, east side of trail, in sandstone boulder; aluminum tablet stamped "7895"-----	7, 892. 529
Park, 3 miles south of, on ridge, east side of intersection of trails; top of sandstone boulder-----	7, 811. 24

Milepost 76.5 on Ute Reservation line to head of Spruce Tree Canyon.

Milepost 76.5, on Ute Reservation line, east side of road, in top of; spike-----	7, 357. 04
Spruce Tree Canyon, head of, 25 feet southeast of reservoir, 200 feet north of Spruce Tree House, in rim rock; aluminum tablet stamped "6932"-----	6, 929. 668

**CORTEZ 30' QUADRANGLE.**

East prong of West Fork of Little Soda Canyon south along trail to point 4 miles north of head of Spruce Tree Canyon (single-rodde line).

Little Soda Canyon, head of east prong of west fork of, 200 feet north of old trail, 300 feet east of Kelly's trail; top of sandstone boulder-----	8, 122. 35
Little Soda Canyon, summit and head of ridge between north prong of west fork of, and east fork of Navajo Canyon, 10 feet south of bluff, in sandstone boulder; aluminum tablet stamped "8338"-----	8, 335. 538
Little Soda Canyon, 1,200 feet south of head of north prong of west fork of, on east side of Kelly's trail; top of sandstone boulder----	7, 994. 93
Rim of mesa, 3.2 miles south of, 15 feet west of road, in sandstone boulder by pile of rocks; aluminum tablet stamped "7639"-----	7, 636. 946

East Fork of Navajo Canyon southwest along highway and trail to Pinyon (single-rodde line).

Navajo Canyon, head of east fork of, 25 feet west of drain, 10 feet south of bluff; top of sandstone boulder-----	8, 096. 34
Long Canyon, summit of ridge between first and second prongs of, 300 feet south of bluff, 10 feet north of old trail, in boulder; aluminum tablet stamped "8300"-----	8, 297. 570
Pinyon triangulation station, 10 feet east of bluff, in sandstone boulder at base of trimmed pinyon tree; aluminum tablet stamped "8310"-----	8, 307. 318

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