

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

BULLETIN 556

RESULTS OF SPIRIT LEVELING IN OREGON

1896 TO 1913, INCLUSIVE

R. B. MARSHALL, CHIEF GEOGRAPHER

WORK DONE IN COOPERATION WITH THE STATE
FROM 1905 TO 1913, INCLUSIVE
JOHN H. LEWIS, STATE ENGINEER



WASHINGTON
GOVERNMENT PRINTING OFFICE
1914

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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 OREGON, 1896 TO 1913, INCLUSIVE.

R. B. MARSHALL, Chief Geographer.

INTRODUCTION.

Cooperation.—The State of Oregon contributed financially to the cooperative work from 1905 to 1913, inclusive.

Scope of the work.—All results of spirit leveling in the State of Oregon previously published by the United States Geological Survey and all the results of later work are included in this report, rearranged by quadrangles. Most of these elevations were published in Bulletin 462 and were based on the 1905 adjustment; but as the 1912 adjustment changed many of them nearly a foot it was thought advisable for convenience to include in this publication all results of leveling from 1896 to 1913, inclusive. All elevations are based on the precise-level line of the Coast and Geodetic Survey from Seattle, Wash., to Huntington, Oreg., as adjusted by that Survey in 1912, and on the precise-level line of the United States Geological Survey between Portland, Oreg., and the California-Oregon State line.

Personnel.—The field work previous to 1903 was done under the general direction of R. U. Goode, geographer; that for 1903 to 1906, inclusive, under E. M. Douglas, geographer; that for 1907 under R. B. Marshall, geographer; and the later work under T. G. Gerdine, geographer, under the general direction of R. B. Marshall, chief geographer. The names of the levelmen are given in the introductions to the several lists. The office work of computation, adjustment, and preparation of lists was done mainly by S. S. Gannett, geographer, 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 lines instruments and rods of the highest grade known are used; each line is run both forward and backward, and every precaution taken to guard against error. The allowable divergence between the forward and 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 of $0.05 \sqrt{D}$, in which formula D equals the length of the circuit in miles, sufficient care being given 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.

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 $\frac{1}{4}$ inch thick, having a 3-inch stem, which is cemented in a drill hole in solid rock, in the wall of some public building, bridge abutment, or other substantial masonry structure. The second form (F , Pl. I), which is set in the ground where no masonry or rock is available, consists of a hollow wrought-iron post $3\frac{1}{2}$ inches in outside diameter and 4 feet long. The bottom is spread out to a width of 10 inches in order to give a firm bearing on the earth. A bronze or aluminum-bronze cap is riveted over the top of the post. 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 $\frac{3}{8}$ inch in diameter. The tablets, as well as the caps on the iron posts, are appropriately lettered, and where States have cooperated in the work the fact of such cooperation is indicated by the addition of the State name (at G , Pl. I). The numbers stamped on the bench marks described in the following pages are 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 their adjusted values, using the markings as identification numbers only.

Datum.—All Geological Survey elevations are referred to mean sea level, which is the level that the sea would assume if the influence of winds and tides were eliminated. This level is not the elevation determined from the mean of the highest and 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 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 great accuracy is desired they must extend over several years. At ocean stations the half-tide level and mean sea level usually differ but little. It is assumed that there is no difference between the mean sea levels as determined from observations in the Atlantic Ocean, the Gulf of Mexico, or the Pacific Ocean.

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

Topographic maps.—Maps of the following quadrangles wholly or partly in Oregon have been published by the United States Geological Survey up to April 20, 1914. They may be obtained (except as noted) for 10 cents each, or \$3 for 50, on application to the Director of the Survey at Washington, D. C.

Ashland.	Nampa (Idaho-Oreg.).
Baker City.	Portland (Oreg.-Wash.).
Blalock Island (Oreg.-Wash.).	Port Orford.
Coos Bay.	Riddles.
Crater Lake National Park (with descriptive text on the back).	Roseburg.
Grants Pass.	Sumpter.
Eugene.	Telocaset.
Halsey.	Umatilla (Oreg.-Wash.).
Ironside Mountain.	Weiser (Idaho-Oreg.).
Klamath.	Willamette Valley, sheets 1, 2, 3, and 4, comprising portions of Eugene 15'
Mitchell Butte (Oreg.-Idaho).	quadrangle (40 cents each).
Mount Hood (Oreg.-Wash.).	

PRECISE LEVELING.

Albany, Ashland, Dothan, Drain, Eugene, Grants Pass, Halsey, Mount Angel, Oregon City, Portland, Riddles, Roseburg, Salem, and Shelburn quadrangles.

CLACKAMAS, DOUGLAS, JACKSON, JOSEPHINE, LANE, LINN, MARION, AND MULTNOMAH COUNTIES.

The elevations in the following list are the results of a double simultaneous precise-level line run by C. H. Semper, from Benicia, Cal., in 1902, and extended through Oregon in 1903 along the Southern Pacific Railroad to Portland. The elevation accepted at Portland is that determined by a double primary-level line run in 1898 by J. H. Carlock from Coast and Geodetic Survey bench marks at Astoria. A Buff & Berger precise level and two double-faced non-extensible target rods were used.

ASHLAND 1° QUADRANGLE.

[Latitude 42°-43°; longitude 122°-123°.]

From California-Oregon State line to Portland, Oreg. (part of line).

	Feet.
Cole, 1.5 miles north of, west side of railroad, 450 feet north of milepost 406, at telegraph pole; iron post stamped "2997 B 1903"-----	2, 998. 027
Cole, 4.3 miles north of, east side of railroad, 150 feet south of milepost 409, at telegraph pole; iron post stamped "3445 B 1903"-----	3, 445. 739
Coleston, in front of station; top of rail-----	3, 714. 0
Coleston, 1.2 miles north of, east side of railroad, 150 feet north of milepost 412, at telegraph pole; iron post stamped "3922 B 1903"---	3, 922. 473
Siskiyou, in front of station; top of rail-----	4, 113. 8
Siskiyou, 1.1 miles north of, east side of railroad, 300 feet north of milepost 415, at telegraph pole; iron post stamped "3918 B 1903"---	3, 919. 351
Wall Creek flag station, 0.6 mile south of, 510 feet southeast of milepost 418, 20 feet east of east rail; iron post stamped "3486 B 1903"-----	3, 487. 464
Steinman, 360 feet south of station, 80 feet north of milepost 421, east side of railroad, at telegraph pole; iron post stamped "3036 B 1903"-----	3, 037. 341
Steinman, in front of station; top of rail-----	3, 027. 2
Steinman, 2.7 miles north of, east side of railroad, at fence line, 80 feet south of milepost 424; iron post stamped "2561 B 1903"-----	2, 562. 210
Steinman, 5.6 miles north of, west side of railroad, 100 feet north of milepost 427, at telegraph pole; iron post stamped "2180 B 1903"---	2, 180. 960
Ashland, 1,800 feet south of station, at Mountain Avenue crossing, 42 feet east of rail, south side of street; iron post stamped "1874 B 1903"-----	1, 874. 807
Ashland, in front of station; top of rail-----	1, 868. 8
Ashland, 2.5 miles north of, east side of railroad, 5 feet from milepost 433; iron post stamped "1755 B 1903"-----	1, 756. 159
Talent, in front of station; top of rail-----	1, 635. 2
Talent, northwest corner of station, 4 feet north of milepost 436, 11 feet east of rail; iron post stamped "1633 B 1903"-----	1, 634. 541
Phoenix, in front of station; top of rail-----	1, 543. 7
Phoenix, 0.8 mile north of, east side of railroad, fence line at second telegraph pole north of milepost 439; iron post stamped "1513 B 1903"-----	1, 513. 899
Medford, in front of station; top of rail-----	1, 374. 8
Medford, Nash Hotel, west face at entrance; aluminum tablet stamped "1376 B 1903"-----	1, 377. 097
Medford, 3.1 miles north of, highway crossing, 30 feet east of track, on south margin of highway; iron post stamped "1292 B 1903"---	1, 293. 144
Central Point, in front of station; top of rail-----	1, 273. 0
Central Point, 2 miles north of, T. 36 S., R. 2 W., near center of sec. 33, at highway crossing, 11 feet east of rail, south side of highway; iron post stamped "1214 B 1903"-----	1, 215. 414
Tolo, 4.8 miles north of Central Point, east side of railroad, 150 feet south of milepost 452, at telegraph pole; iron post stamped "1164 B 1903"-----	1, 165. 507

GRANTS PASS 30' QUADRANGLE.

[Latitude 42°-42° 30'; longitude 123°-123° 30'.]

From California-Oregon State line to Portland, Oreg. (part of line).

Central Point, 7.9 miles north of, east side of railroad, 750 feet north of milepost 455, at telegraph pole; iron post stamped "1137 B 1903"	Feet. 1, 138. 284
Gold Hill, in front of station; top of rail	1, 084. 1
Gold Hill, 15 feet east of track, 24 feet north of station; iron post stamped "1084 B 1903"	1, 085. 056
Gold Hill, 2.4 miles north of, east side of railroad, 200 feet north of milepost 461, at telegraph pole; iron post stamped "1049 B 1903"	1, 050. 060
Gold Hill, 5.4 miles north of, east side of railroad, 3 feet south of milepost 464; iron post stamped "1018 B 1903"	1, 019. 419
Woodville, in front of station; top of rail	999. 7
Woodville, 0.7 mile north of, east side of railroad, 3 feet north of milepost 467; iron post stamped "993 B 1903"	994. 128
Woodville, 6.6 miles north of, east side of railroad, 5 feet north of milepost 473; iron post stamped "945 B 1903"	946. 287
Grants Pass, in front of station; top of rail	938. 0
Grants Pass, high school, west face, south corner; aluminum tablet stamped "956 B 1903"	956. 807
Grants Pass, 3.7 miles north of, east side of railroad, 10 feet from rail, 200 feet south of milepost 479; iron post stamped "1218 B 1903"	1, 218. 590
Grants Pass, 6.7 miles north of, 15 feet east of railroad, 25 feet south of highway, at milepost 482; iron post stamped "1050 B 1903"	1, 050. 935

RIDDLES 30' QUADRANGLE.

[Latitude 42° 30'-43°; longitude 123°-123° 30'.]

From California-Oregon State line to Portland, Oreg. (part of line).

Merlin, in front of station; top of rail	910. 5
Merlin, 90 feet west of railroad, 50 feet north of Mitchell's store, at fence line; iron post stamped "900 B 1903"	900. 504
Merlin, 4.2 miles north of, at highway crossing, 15 feet east of track, 15 feet south of north margin of highway; iron post stamped "1252 B 1903"	1, 253. 177
Hugo, in front of station; top of rail	1, 290. 4
Hugo, 2.4 miles north of, west side of railroad, opposite milepost 491, 25 feet from rail; iron post stamped "1459 B 1903"	1, 459. 542
Tunnel 9, 1.7 miles north of, east side of railroad, 40 feet south of milepost 494, 18 feet east of track; iron post stamped "1330 B 1903"	1, 331. 445
Leland, in front of station; top of rail	1, 191. 6
Leland, 1.6 miles north of, east side of railroad, 5 feet north of milepost 497; iron post stamped "1098 B 1903"	1, 098. 668
Leland, 4.4 miles north of, east side of railroad, at first telegraph pole south of milepost 500, 20 feet east of track; iron post stamped "1150 B 1903"	1, 150. 878

Wolf Creek, 400 feet south of station, 40 feet east of track, near telegraph pole; iron post stamped "1289 B 1903"-----	Feet. 1, 290. 364
Wolf Creek, in front of station; top of rail-----	1, 293. 8
Wolf Creek, 2.7 miles north of, 10 feet west of track, 30 feet south of trestle, 65 feet south of milepost 506; iron post stamped "1516 B 1903"-----	1, 516. 658
Glendale, in front of station; top of rail-----	1, 417. 9
Glendale, 14 feet northeast of southeast corner of Hotel Glendale; iron post stamped "1425 B 1903"-----	1, 426. 237
Glendale, 2.6 miles north of, highway crossing, 25 feet north of track, 5 feet west of east fence; iron post stamped "1366 B 1903"-----	1, 367. 243
West Fork, 16.2 miles north of, 300 feet south of milepost 539, on side of track, at fence line; iron post stamped "752 B 1903"-----	753. 161
Glenbrook, 90 feet east of sign post, 60 feet west of prune drier, on line with front of building, 78 feet north of main track, 8 feet east of creek; iron post stamped "721 B 1903"-----	722. 104
Riddles, 30 feet in front of Riddle Hotel, at edge of walk to station; iron post stamped "705 B 1903"-----	706. 096
Riddles, in front of station; top of rail-----	709. 2
Riddles, 3.5 miles north of, west side of railroad, at fence line opposite milepost 549; iron post stamped "642 B 1903"-----	642. 396

DOTHAN QUADRANGLE.

[Latitude 42° 30'–43°; longitude 123° 30'–124°.]

From California-Oregon State line to Portland, Oreg. (part of line).

Glendale, 5.8 miles north of, 250 feet north of milepost 515, 25 feet east of track; iron post stamped "1288 B 1903"-----	1, 288. 846
Glendale, 8.6 miles north of, 35 feet east of railroad, 120 feet south of old white house, 200 feet south of milepost 518; iron post stamped "1188 B 1903"-----	1, 188. 367
Glendale, 11.7 miles north of, 7 feet east of track, 10 feet south of milepost 521; iron post stamped "1099 B 1903"-----	1, 099. 996
West Fork, in front of station; top of rail-----	1, 024. 0
West Fork, 1.5 miles north of, 180 feet north of milepost 524, 12 feet east of rail; iron post stamped "993 B 1903"-----	993. 983
West Fork, 4.3 miles north of, 10 feet north of railroad, 360 feet south of milepost 527; iron post stamped "930 B 1903"-----	931. 334
West Fork, 8.4 miles north of, 300 feet north of milepost 531, 10 feet north of track; iron post stamped "853 B 1903"-----	853. 983
West Fork, 10.3 miles north of, 15 feet south of milepost 533, 10 feet east of railroad; iron post stamped "824 B 1903"-----	825. 277
West Fork, 13.3 miles north of, 10 feet north of milepost 536, 10 feet east of track; iron post stamped "793 B 1903"-----	793. 646

ROSEBURG QUADRANGLE.

[Latitude 43°–43° 30'; longitude 123°–123° 30'.]

From California-Oregon State line to Portland, Oreg. (part of line).

Myrtle Creek, 15 feet east of track, on line with end of station; iron post stamped "612 B 1903"-----	612. 859
Myrtle Creek, in front of station; top of rail-----	613. 9
Myrtle Creek, 3.3 miles north of, east side of railroad, at fence line, 135 feet south of milepost 555; iron post stamped "586 B 1903"--	586. 855

	Feet.
Ruckels, in front of station; top of rail-----	572. 0
Ruckels, 1.7 miles north of, east side of railroad fence line, 4 feet from milepost 558; iron post stamped "570 B 1903"-----	570. 636
Ruckels, 4.7 miles north of, east side of railroad, at fence line, 65 feet south of milepost 561; iron post stamped "553 B 1903"-----	553. 382
Dillard, in front of station; top of rail-----	521. 6
Dillard, 0.9 mile north of, west side of railroad, at fence line, 600 feet north of milepost 564; iron post stamped "512 B 1903"-----	513. 211
Dillard, 3.6 miles north of, east side of railroad, at highway crossing, 25 feet east of track; iron post stamped "558 B 1903"-----	559. 120
Green, in front of station; top of rail-----	513. 7
Green, 1 mile north of, east side of railroad, at fence line, 30 feet north of milepost 570; iron post stamped "501 B 1903"-----	501. 637
Roseburg, in front of station; top of rail-----	463. 1
Roseburg, corner of Pine and Oak streets, northeast angle of streets, 180 feet east of rail; iron post stamped "464 B 1903"-----	464. 705
Roseburg, 2.1 miles north of, west side of railway, 5 feet from fence, 105 feet north of milepost 576; iron post stamped "500 B 1903"---	500. 741
Roseburg, 5 miles north of, east side of railroad, at fence line, 3 feet south of milepost 579; iron post stamped "472 B 1903"-----	473. 173
Winchester, in front of station; top of rail-----	458. 3
Wilbur, 0.8 mile south of, east side of railroad, at fence line, 190 feet south of milepost 582; iron post stamped "497 B 1903"-----	497. 684
Wilbur, in front of station; top of rail-----	465. 1
Wilbur, 2.3 miles north of, west side of railroad, 8 feet from fence, 150 feet south of milepost 585; iron post stamped "486 B 1903"---	486. 481
Wilbur, 5.4 miles north of, at road crossing, 15 feet west of track, south side of road, at old warehouse; iron post stamped "538 B 1903"-----	539. 021
Oakland, 150 feet east of main track, at railway station, north margin of highway, 75 feet west of front face of Hotel Thomas; iron post stamped "429 B 1903"-----	429. 586
Oakland, in front of station; top of rail-----	427. 1
Oakland, 3.4 miles north of, east side of railroad, at fence line, 135 feet south of milepost 594; iron post stamped "464 B 1903"-----	464. 521

DRAIN QUADRANGLE.

[Latitude 43° 30'–44°; longitude 123°–123° 30'.]

From California-Oregon State line to Portland, Oreg. (part of line).

Oakland, 6.4 miles north of, east side of railroad, at fence line, 3 feet south of milepost 597; iron post stamped "584 B 1903"-----	584. 672
Oakland, 9.5 miles north of, at highway crossing, 14 feet east of track, 20 feet south of fence line; iron post stamped "617 B 1903"-----	617. 606
Oakland, 12.3 miles north of, east side of railroad, at fence line, 300 feet south of milepost 603; iron post stamped "389 B 1903"-----	389. 577
Yoncalla, in front of station; top of rail-----	354. 6
Yoncalla, 1.9 miles north of, east side of railroad, at fence line, 4 feet south of milepost 607; iron post stamped "329 B 1903"-----	329. 726
Drain, in front of station; top of rail-----	295. 6
Drain, 585 feet north of north end of station, 15 feet west of main track, at east end of margin of highway; iron post stamped "298 B 1903"-----	298. 667

Leona, 40 feet south of station, east side of track, at fence line, 4 feet north of milepost 613; iron post stamped "324 B 1903"-----	Feet. 324. 250
Leona, in front of station; top of rail-----	324. 1
Leona, 3 miles north of, east side of railroad, at fence line, 3 feet south of milepost 616; iron post stamped "370 B 1903"-----	370. 853
Comstock, 0.2 mile south of, east side of railroad, 165 feet north of milepost 619, at fence line; iron post stamped "438 B 1903"-----	438. 224
Comstock, in front of station; top of rail-----	449. 0
Comstock, 2.9 miles north of, 530 feet north of milepost 622, 15 feet west of track, at telegraph pole; iron post stamped "676 B 1903"-----	677. 030
Divide, 1.7 miles north of, west side of railroad, at fence line, opposite milepost 625; iron post stamped "690 B 1903"-----	690. 835
Cottage Grove, in front of station; top of rail-----	642. 2
Cottage Grove, 250 feet north of station, 25 feet east of main track, northwest corner of planing mill; iron post stamped "642 B 1903"-----	642. 518
Saginaw, in front of station; top of rail-----	610. 3
Saginaw, 0.8 mile north of, east side of railroad, at fence line, 150 feet south of milepost 631; iron post stamped "603 B 1903"-----	603. 359
Walker, in front of station; top of rail-----	599. 1
Walker, 2.2 miles north of, east side of railroad, at fence line, 3 feet north of milepost 634; iron post stamped "572 B 1903"-----	572. 865
Creswell, in front of station; top of rail-----	541. 3
Creswell, 0.3 mile north of, east side of railroad, at fence line, 90 feet north of milepost 637; iron post stamped "546 B 1903"-----	547. 016
Creswell, 3.2 miles north of, at highway crossing, 8 feet west of rail, north margin of highway; iron post stamped "513 B 1903"-----	513. 380
Goshen, in front of station; top of rail-----	500. 2

EUGENE QUADRANGLE.

[Latitude 44°-44° 15'; longitude 123°-123° 15'.]

From California-Oregon State line to Portland, Oreg. (part of line).

Goshen, 0.8 mile north of, west side of railroad, 135 feet south of milepost 643, at fence line; iron post stamped "493 B 1903"-----	493. 960
Henderson, 30 feet west of main track, 35 feet south of station sign; iron post stamped "446 B 1903"-----	447. 160
Henderson, in front of station; top of rail-----	446. 5
Eugene, University of Oregon grounds, northeast corner, front face of Villard Hall; aluminum tablet stamped "449 B 1903"-----	449. 317
Eugene, in front of station; top of rail-----	426. 4
Eugene, 1.5 miles north of, east side of railroad, 4 feet south of milepost 650; iron post stamped "407 B 1903"-----	407. 865
Eugene, 4.9 miles north of, highway crossing, east side of track, north margin of highway; iron post stamped "382 B 1903"-----	382. 463
Irving, in front of station; top of rail-----	376. 8
Irving, 1.8 miles north of, east side of railroad, 5 feet from fence, at milepost 656; iron post stamped "363 B 1903"-----	363. 480
Irving, 4.7 miles north of, east side of railroad, 8 feet from fence, at milepost 659; iron post stamped "340 B 1903"-----	340. 799
Junction City, in front of station; top of rail-----	325. 8
Junction City, 1.2 miles north of, east side of railroad, at first telegraph pole north of milepost 663, 11 feet from fence; iron post stamped "319 B 1903"-----	319. 211

HALEY QUADRANGLE.

[Latitude 44° 15'–44° 30'; longitude 123°–123° 15'.]

From California-Oregon State line to Portland, Oreg. (part of line).

Harrisburg, 140 feet south of station, 15 feet east of track, at telegraph pole; iron post stamped "307 B 1903"-----	Feet. 307.653
Harrisburg, in front of station; top of rail-----	309.2
Harrisburg, 2.7 miles north of, east side of railroad, 4 feet from fence line, third telegraph pole south of milepost 669; iron post stamped "302 B 1903"-----	302.779
Harrisburg, 5.8 miles north of, east side of railroad, at milepost 672, 3 feet from fence line; iron post stamped "291 B 1903"-----	291.589
Halsey, 100 feet north of station, 18 feet east of track, on line with north margin of street east; iron post stamped "281 B 1903"-----	281.562
Halsey, in front of station; top of rail-----	282.4
Halsey, 3.2 miles north of, east side of railroad, 4 feet from milepost 678, at fence line; iron post stamped "266 B 1903"-----	266.594
Shedd, in front of station; top of rail-----	262.8
Shedd, 1.9 miles north of, east side of railroad, at fence line, third telegraph pole south of milepost 682; iron post stamped "249 B 1903"-----	249.485

ALBANY QUADRANGLE.

[Latitude 44° 30'–44° 45'; longitude 123°–123° 15'.]

From California-Oregon State line to Portland, Oreg. (part of line).

Shedd, 4 miles north of, east side of railroad, fence line at first telegraph pole south of milepost 684; iron post stamped "242 B 1903"-----	242.819
Tangent, in front of station; top of rail-----	245.3
Tangent, 1.3 miles north of, east side of railroad, at fence line, first telegraph pole south of milepost 687; iron post stamped "240 B 1903"-----	240.761
Tangent, 4.3 miles north of, east side of railroad, 4 feet from fence line, at milepost 690; iron post stamped "221 B 1903"-----	221.763
Albany, in front of station; top of rail-----	214.1
Albany, 3.1 miles north of, highway crossing, 16 feet east of railroad, 3 feet north of milepost 695; iron post stamped "210 B 1903"-----	211.025
Millersburg, in front of station; top of rail-----	245.0
Millersburg, 1.6 miles north of, east side of railroad, 8 feet from fence, at second telegraph pole north of milepost 698; iron post stamped "214 B 1903"-----	214.256
Jefferson, in front of station; top of rail-----	241.1

SHELBURN QUADRANGLE.

[Latitude 44° 30'–45°; longitude 122° 30'–123°.]

From California-Oregon State line to Portland, Oreg. (part of line).

Jefferson, 3.4 miles north of, east side of railroad, at fence line, second telegraph pole south of milepost 704; iron post stamped "287 B 1903"-----	287.961
Marion, in front of station; top of rail-----	300.6

Marion, 1.8 miles north of, west side of railroad, fence line opposite milepost 707; iron post stamped "327 B 1903"-----	Feet. 327. 868
Marion, 4.9 miles north of, west side of railroad, fence line 110 feet north of milepost 710; iron post stamped "308 B 1903"-----	308. 809
Turner, in front of station; top of rail-----	284. 3
Turner, 1.4 miles north of, west side of railroad at fence line, 30 feet north of milepost 713; iron post stamped "261 B 1903"-----	261. 862

SALEM QUADRANGLE.

[Latitude 44° 45'–45°; longitude 123°–123° 15'.]

From California-Oregon State line to Portland, Oreg. (part of line).

Turner, 4.8 miles north of, east side of railroad, 15 feet from rail, 6 feet south of road crossing, at fence line; iron post stamped "207 B 1903"-----	207. 940
Salem, in front of station; top of rail-----	163. 0
Salem, State capitol, south face, at entrance; aluminum tablet stamped "171 B 1903"-----	171. 388
Salem, 2.8 miles north of, east side of railroad, 8 feet from fence, at milepost 722; iron post stamped "162 B 1903"-----	162. 219

MOUNT ANGEL QUADRANGLE.

[Latitude 45°–45° 15'; longitude 122° 45'–123°.]

From California-Oregon State line to Portland, Oreg. (part of line).

Chemawa, in front of station; top of rail-----	162. 1
Chemawa, 50 feet north of entrance to Indian training school, 20 feet east of track; iron post stamped "163 B 1903"-----	163. 411
Brooks, in front of station; top of rail-----	182. 8
Brooks, 215 feet north of station, 11 feet east of track; iron post stamped "183 B 1903"-----	183. 248
Brooks, 4.2 miles north of, east side of railroad, at first telegraph pole north of milepost 732, 8 feet from fence; iron post stamped "182 B 1903"-----	182. 124
Gervais, in front of station; top of rail-----	184. 7
Gervais, 1 mile north of, east side of railroad, at fence line, 5 feet south of milepost 734; iron post stamped "183 B 1903"-----	183. 952
Woodburn, 210 feet south of station, 36 feet east of main track; iron post stamped "181 B 1903"-----	181. 927
Woodburn, in front of station; top of rail-----	181. 2
Hubbard, in front of station; top of rail-----	182. 7
Hubbard, 240 feet north of station, 12 feet east of main track; iron post stamped "183 B 1903"-----	183. 412
Hubbard, 3.2 miles north of, east side of railroad, at first telegraph pole south of milepost 743, 18 feet from fence; iron post stamped "184 B 1903"-----	184. 000
Aurora, in front of station; top of rail-----	119. 7

OREGON CITY QUADRANGLE.

[Latitude 45° 15'–45° 30'; longitude 122° 30'–122° 45'.]

From California-Oregon State line to Portland, Oreg. (part of line).

Barlow, 50 feet north of station, 25 feet east of main track; iron post stamped "100 B 1903"-----	100. 391
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Canby, 1.1 miles north of, at second telegraph pole south of milepost 749, 18 feet east of track; iron post stamped "130 B 1903"-----	Feet. 130.032
New Era, in front of station; top of rail-----	91.9
New Era, 0.9 mile north of, east side of railroad at milepost 752, at fence line; iron post stamped "89 B 1903"-----	89.257
Oregon City, 1.5 miles south of, 7 feet north of milepost 755, 7 feet east of rail, at fence line; iron post stamped "66 B 1903"-----	66.822
Oregon City, in front of station; top of rail-----	75.2
Paper mill, 200 feet south of, 16 feet east of track, at first telegraph pole; iron post stamped "45 B 1903"-----	45.122
Paper mill, in front of station; top of rail-----	47.2
Clackamas, 248 feet south of station, 27 feet east of main track, at telegraph pole; iron post stamped "108 B 1903"-----	108.928
Clackamas, in front of station; top of rail-----	111.2
Clackamas, 3 miles north of, east side of railroad, at fence line, 3 feet north of milepost 764; iron post stamped "109 B 1903"-----	108.970
Milwaukee, in front of station; top of rail-----	95.7
Willsburg, in front of station; top of rail-----	59.9
Willsburg, 0.5 mile north of, 360 feet north of milepost 767, east side of track; iron post stamped "56 B 1903"-----	56.176

PORTLAND QUADRANGLE.

[Latitude 45° 30'–45° 45'; longitude 122° 30'–122° 45'.]

From California-Oregon State line to Portland, Oreg. (part of line).

Portland, 100 feet from center of post office, south side of yard, 40 feet from east-west street, near latitude pier; iron post stamped "51 A"-----	51.016
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NOTE.—Owing to an addition to the post-office building, the above bench mark was replaced in September, 1903, by the following:

Portland, north front of post office, 2 feet east of doorway, first course of stone above water table; aluminum tablet stamped "54 A"---	54.106
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Birch Creek, Burns, Drewsey, Goldendale, Harney, Heisler, Mitchell Butte, Moro, Paulina, Prineville, Riley, Round Mountain, Weiser, and Westfall quadrangles.

CROOK, HARNEY, MALHEUR, SHERMAN, AND WASCO COUNTIES.

The elevations in the following list are the results of a line of precise leveling begun at Ontario and run west along a stage road to Riley, thence northwest to Prineville, thence north to Biggs.

The line connects with the line run from Huntington, Oreg., via Weiser, Idaho, to Ontario, Oreg., the bench marks on which were checked by the transcontinental precise-level party of the Coast and Geodetic Survey. The elevations are based upon the 1912 adjusted heights at Ontario, and no adjustment has been made between that point and Biggs, except that for orthometric correction this line furnishing the accepted elevation at Biggs to which the primary line from Astoria to Pasco is adjusted.

The leveling was done by C. H. Semper in 1903 and 1904, by the double-rodde simultaneous method.

The standard bench marks are stamped with the letter "H" in addition to figures of elevation 8 feet too low, the correction to the original being +8.3 feet.

WEISER QUADRANGLE.

[Latitude 44°-44° 30'; longitude 116° 30'-117°.]

At Ontario.

	Feet.
Ontario, in front of station; top of rail-----	2, 153. 5
Ontario, Main Street and road to station, 12 feet east of northeast corner, at Brown's Hotel; iron post stamped "2143 H"-----	2, 151. 595

BIRCH CREEK QUADRANGLE.

[Latitude 44°-44° 30'; longitude 117°-117° 30'.]

From Ontario west along stage road 6 miles.

Ontario, 3.1 miles west of, south side of road, at corner of wire fence and road to ranch house; iron post stamped "2154 H"-----	2, 162. 546
Ontario, 6 miles west of, south side of road, at crossing of irrigating ditch; iron post stamped "2173 H"-----	2, 181.201

MITCHELL BUTTE QUADRANGLE.

[Latitude 43° 30'-44°; longitude 117°-117° 30'.]

From point 6 miles west of Ontario along stage road to point 16 miles west of Vale.

Ontario, 9.1 miles west of, north side of road in front of Jerry Brosnahan's ranch house at fence line; iron post stamped "2195 H"-----	2, 203. 694
Ontario, 12.3 miles west of, south side of highway, telephone pole at margin of unused ditch; iron post stamped "2214 H"-----	2, 222. 399
Vale, northeast corner of courthouse; aluminum tablet stamped "2235 H"-----	2, 242. 943
Vale, 3 miles west of, 50 feet south of roadway; iron post stamped "2395 H"-----	2, 403. 337
Vale, 7 miles west of, directly opposite schoolhouse on north side of road and on line with east face of building; iron post stamped "2308 H"-----	2, 316. 496
Vale, 10.6 miles west of, Louis Paddick's ranch, south margin of road, 50 feet east of side of house; iron post stamped "2334 H"-----	2, 342. 719
Vale, 13.7 miles west of, in Malheur Canyon, at crossing of road and railroad bed, on south side of railroad bed; iron post stamped "2359 H"-----	2, 367. 295

WESTFALL QUADRANGLE.

[Latitude 43° 30'-44°; longitude 117° 30'-118°.]

From point 16 miles west of Vale along stage road via Harper ranch to Westfall.

Vale, 16 miles west of, 10 feet north of railroad bed, at railroad borrow pit; iron post stamped "2384 H"-----	2, 392. 821
Vale, 20.3 miles west of, lower end of Little Valley, 20 feet north of road; iron post stamped "2434 H"-----	2, 442. 622

Vale, 22.3 miles west of, foot of road up big hill leading to lower	Feet.
Harper ranch, south side of railroad; iron post stamped "2460 H"	2, 467. 898
Lower Harper ranch, 1 mile west of, gate leading to main road to	
Westfall, 10 feet east of gate on fence line; iron post stamped	
"2504 H"-----	2, 512. 564
Lower Harper ranch, 3.1 miles west of, 15 feet north of road, 250 feet	
east of point of hill; iron post stamped "2585 H"-----	2, 593. 676
Lower Harper ranch, 6 miles west of, 20 feet south of road; iron	
post stamped "2712 H"-----	2, 720. 619
Lower Harper ranch, 10.1 miles west of, 15 feet east of road; iron	
post stamped "2965 H"-----	2, 973. 087

From Westfall west along stage road via Beulah to point 4.6 miles west of stage station.

Westfall, between Jones's store and stone warehouse, at side of	
store; iron post stamped "2994 H"-----	3, 002. 194
Westfall, 3.1 miles west of, 10 feet north of road, 20 feet east of	
small creek bottom; iron post stamped "3108 H"-----	3, 116. 271
Westfall, 6.2 miles west of, 15 feet south of road; iron post stamped	
"3239 H"-----	3, 247. 365
Westfall, 9.4 miles west of, 10 feet south of road; iron post stamped	
"3426 H"-----	3, 434. 061
Westfall, 12 miles west of, 20 feet south of road, halfway up hill;	
iron post stamped "3786 H"-----	3, 794. 800
Stage station, 1.6 miles west of, 10 feet north of road; iron post	
stamped "4052 H"-----	4, 060. 319
Stage station, 4.6 miles west of, on south margin of road at big bend,	
near foot of hill; iron post stamped "4535 H"-----	4, 543. 161

DREWSEY QUADRANGLE.

[Latitude 43° 30'–44°; longitude 118°–118° 30']

From point 4.6 miles west of stage station along stage road via Beulah and Drewsey to point 8.3 miles west of Drewsey.

Stage station, 7.7 miles west of, 15 feet north of road; iron post	
stamped "4454 H"-----	4, 462. 295
Billy Wilson's, 1.5 miles west of, fence line at northwest angle of road	
to J. S. Hunter's house; iron post stamped "4103 H"-----	4, 110. 953
Billy Wilson's, 3.4 miles west of, 10 feet north of road; iron post	
stamped "3957 H"-----	3, 965. 330
Billy Wilson's, 6 miles west of, in Agency Valley, in front of	
T. L. Arnold's house, 15 feet south of gate; iron post stamped	
"3471 H"-----	3, 479. 160
Beulah, 25 feet east of, at east end of iron bridge over Malheur	
River, on north margin of road; iron post stamped "3269 H"-----	3, 276. 915
Beulah, 2.8 miles west of, in valley at top of Agency Mountain, on	
south margin of road; iron post stamped "3838 H"-----	3, 846. 635
Beulah, 6 miles west of, 15 feet south of road, on south side of creek	
bottom; iron post stamped "3779 H"-----	3, 787. 143
Beulah, 8.6 miles west of, on north margin of road, 25 feet west of	
gate to Altnow's ranch house, at fence line; iron post stamped	
"3612 H"-----	3, 619. 975

Beulah, 12.1 miles west of, 90 feet east of bridge over Warm Spring Creek, 30 feet north of wire fence; iron post stamped "3523 H"--	Feet. 3, 531. 320
Drewsey, southwest corner of A. J. Johnson & Bros. store; iron post stamped "3508 H"-----	3, 516. 711
Drewsey, 2.6 miles west of, 20 feet west of bridge over Stinking Water Creek, south side of stream; iron post stamped "3538 H"--	3, 545. 996
Drewsey, 5.4 miles west of, on new road over Stinking Water Mountain, 15 feet north of road; iron post stamped "3596 H"-----	3, 604. 769
Drewsey, 8.3 miles west of, on Stinking Water Mountain grade, 30 feet south of road; iron post stamped "4099 H"-----	4, 107. 197

HARNEY QUADRANGLE.

[Latitude 43° 30'–44°; longitude 118° 30'–119°.]

From point 8.3 miles west of Drewsey along stage road via Harney to Burns.

Drewsey, 12.3 miles west of, top of Stinking Water Mountain, 20 feet south of road; iron post stamped "4718 H"-----	4, 726. 418
Drewsey, 14.5 miles west of, at upper end of Nigger Flat, 10 feet south of road; iron post stamped "4652 H"-----	4, 660. 060
Drewsey, 17.5 miles west of, in canyon 15 feet north of road, 1.1 miles east of old stage station; iron post stamped "4483 H"-----	4, 491. 497
Drewsey, 20.4 miles west of, 1 mile west of east end of Harney Valley, at west end of turnout in road; iron post stamped "4174 H"--	4, 182. 220
Drewsey, 23.3 miles west of, in Harney Valley, 70 feet north of road; iron post stamped "4132 H"-----	4, 140. 253
Drewsey, 26.4 miles west of, in Harney Valley, 0.3 mile west of old schoolhouse, south side of road; iron post stamped "4133 H"-----	4, 141. 541
Harney, 1.7 miles east of, at junction of main road and road to Steens Mountain, south side of road, 6 feet east of signpost; iron post stamped "4147 H"-----	4, 155. 123
Harney, at northeast corner of town hall, 7 feet from fence; iron post stamped "4161 H"-----	4, 169. 915
Harney, 2.9 miles west of, directly opposite William Krzeska's house, on side of road at fence line; iron post stamped "4138 H"-----	4, 146. 335
Harney, 6.2 miles west of, 65 feet west of bridge on north margin of road; iron post stamped "4131 H"-----	4, 139. 447
Harney, 9.7 miles west of, at northeast corner of Poison Creek schoolhouse fence, on margin of road; iron post stamped "4146 H"--	4, 154. 950

BURNS QUADRANGLE.

[Latitude 43° 30'–44°; longitude 119°–119° 30'.]

From Burns along stage road at Riley.

Burns, front yard of county courthouse, 10 feet from fence and 4 feet north of walk leading to building; iron post stamped "4177 H"--	4, 185. 949
Burns, 3.1 miles west of, 25 feet east of road; iron post stamped "4147 H"-----	4, 155. 611
Burns, 6.2 miles west of, at foot of hill, 10 feet south of road; iron post stamped "4160 H"-----	4, 168. 280
Burns, 8.9 miles west of, 50 feet west of Jenkins ranch house, on north side of road at fence line; iron post stamped "4138 H"-----	4, 146. 288
Burns, 12.9 miles west of, on south margin of road at fence line, 4 feet west of gate leading to Calkins ranch house; iron post stamped "4195 H"-----	4, 203. 333

Burns, 16 miles west of, in foothills, 15 feet south of road; iron post stamped "4404 H"-----	Feet. 4, 412. 515
Burns, 19.2 miles west of, 30 feet north of road; iron post stamped "4552 H"-----	4, 560. 877
Burns, 21.9 miles west of, 600 feet west of summit of small hill, 40 feet south of road; iron post stamped "4153 H"-----	4, 161. 348
Riley, 2.9 miles east of, 15 feet south of road; iron post stamped "4318 H"-----	4, 326. 567
Riley, at fence front of Fred Oakerman's house, opposite post office; iron post stamped "4210 H"-----	4, 218. 566

RILEY QUADRANGLE.

[Latitude 43° 30'–44°; longitude 119° 30'–120°.]

From Riley west along stage road to Street's ranch.

Riley, 4.1 miles west of, at corner of road leading to schoolhouse, near wire-fence line; iron post stamped "4264 H"-----	4, 272. 601
Riley, 7.3 miles west of, W. B. Johnson's upper ranch house at southwest corner of yard fence; iron post stamped "4295 H"-----	4, 303. 364
Riley, 11 miles west of, north margin of road, on line with south face of Cecil ranch house; iron post stamped "4345 H"-----	4, 353. 755
Cecil's, 2.8 miles west of, 0.3 mile east of Dry Lake, 20 feet south of road; iron post stamped "4761 H"-----	4, 769. 807
Cecil, 5.8 miles west of, 21 feet south of road, 100 feet north of small hill with boulders along top; iron post stamped "4722 H"-----	4, 730. 308
Cecil's, 9 miles west of, south side of stage road at forks of road leading to spring; iron post stamped "5058 H"-----	5, 066. 306
Cecil's, 12.4 miles west of, west side of pine woods, at edge of clearing, 20 feet south of road; iron post stamped "5408 H"-----	5, 416. 869
Cecil's, 14.9 miles west of, in canyon 0.5 mile east of junction of road to Paulina; iron post stamped "5061 H"-----	5, 069. 849
Street's, gate leading into yard of James Street's ranch, at line of fence; iron post stamped "4776 H"-----	4, 784. 763

PAULINA QUADRANGLE.

[Latitude 44°–44° 30'; longitude 119° 30'–120°.]

From Street's ranch north along stage road via Paulina to point 5.8 miles west of Paulina.

Street's, 3.8 miles north of, south side of small hill, 12 feet east of road; iron post stamped "4791 H"-----	4, 799. 361
Street's, 6.7 miles north of, north end of pasture fence, 1,000 feet north of deserted house, 45 feet east of road; iron post stamped "4602 H"-----	4, 610. 469
Street's, 11 miles north of, west side of road at mail-box post; iron post stamped "H 4478 H 1903"-----	4, 486. 189
Street's, 13.1 miles north of, northwest corner of Hardin's yard; iron post stamped "4507 H"-----	4, 515. 089
Hardin's, 2.6 miles north of, at summit of hill, 30 feet west of road; iron post stamped "4757 H"-----	4, 765. 540
Hardin's, 5 miles north of, 25 feet north of creek crossing, at fence line east of road; iron post stamped "4290 H"-----	4, 297. 858

Smith's, in front of F. M. Smith's ranch house, 15 feet south of gate, on line of fence; iron post stamped "3963 H"-----	Feet. 3, 971. 345
Smith's 3.4 miles north of, at top of hill, 400 feet north of forks of road; iron post stamped "3925 H"-----	3, 933. 148
Smith's, 6.8 miles north of, 25 feet east of road, 600 feet north of top of small hill; iron post stamped "3767 H"-----	3, 775. 297
Paulina, southwest corner of Paulina Hall, 1 foot from building; iron post stamped "3676 H"-----	3, 684. 516
Paulina, 2.6 miles west of, on line with east side of J. D. Dunkle's house, 20 feet from road; iron post stamped "3660 H"-----	3, 668. 046
Paulina, 5.8 miles west of, near gate leading to Gilchrist ranch house, 150 feet east of bridge over Crooked River, on north fence line; iron post stamped "3625 H"-----	3, 633. 089

ROUND MOUNTAIN QUADRANGLE.

[Latitude 44°-44° 30'; longitude 120°-120° 30'.]

From point 8.8 miles west of Paulina west along stage road to point 10.9 miles west of Post.

Paulina, 8.8 miles west of, near gate leading to corral at stage station, on line of fence; iron post stamped "3583 H"-----	3, 591. 207
Paulina, 12.5 miles west of, at Roberts & Nelson ranch, 100 feet west of house, at corner of fence; iron post stamped "3558 H"-----	3, 566. 014
Paulina, 14.6 miles west of, small bridge over creek, in front of Henry Cox's ranch, south fence line; iron post stamped "3536 H"-----	3, 544. 455
Stewart's, 2 miles west of, in front of ranch house of W. W. Harris, at fence; iron post stamped "3473 H"-----	3, 480. 871
Stewart's, 3.9 miles west of, 20 feet north of road, opposite juniper tree with two mail boxes of W. R. Kelley; iron post stamped "3526 H"-----	3, 534. 295
Stewart's, 7.4 miles west of, north fence line between deserted log house and barn; iron post stamped "3409 H"-----	3, 417. 525
Stewart's, 10.2 miles west of, forks of road to left, 0.25 mile east of post office, north side of road, 10 feet from fence; iron post stamped "3388 H"-----	3, 396. 223
Post, 3.4 miles west of, at corner of wire fence, in front of G. F. Wellborn's house; iron post stamped "3339 H"-----	3, 347. 331
Post, 6.9 miles west of, in front of Williamson & Gesnor ranch house, at northwest corner of yard fence; iron post stamped "3289 H"-----	3, 296. 815
Post, 10.9 miles west of, in front of Davis ranch house, at northwest corner of yard fence; iron post stamped "3261 H"-----	3, 269. 595

PRINEVILLE QUADRANGLE.

[Latitude 44°-44° 30'; longitude 120° 30'-121°.]

From point 10.9 miles west of Post north along stage road via Prineville to Grizzly.

Post, 14.3 miles west of, at Ralph Porfly's upper ranch, north corner of lane leading to house, on line with road fence; iron post stamped "3708 H"-----	3, 715. 855
Post, 16.8 miles west of, east corner of fence at road leading to house of R. W. Breeser; iron post stamped "4027 H"-----	4, 035. 408

Breaser ranch, 3.5 miles west of, 15 feet east of east face of S. W.	Feet.
Yengey's house; iron post stamped "4023 H"-----	4, 031. 604
Breaser ranch, 7.5 miles west of, in front of Fewerhelm Radloff's house, at line of picket fence; iron post stamped "3215 H"-----	3, 223. 301
Prineville, county courthouse, at main entrance gate, 10 feet from fence, 2 feet from walk; iron post stamped "2860 H"-----	2, 868. 235
Prineville, 3.1 miles north of, northeast corner of W. T. Davenport's yard fence, at margin of road; iron post stamped "2849 H"-----	2, 856. 702
Prineville, 6.7 miles north of, 250 feet northeast of Fred Stewart's ranch house, east margin of road, at telephone pole; iron post stamped "2962 H"-----	2, 970. 602
Prineville, 8.6 miles north of, C. W. Circle's ranch, 150 feet north of house, at gate to barn; iron post stamped "3127 H"-----	3, 135. 434
Prineville, 12.2 miles north of, near top of mountain, 20 feet north of L. M. Delano's house, on line with front fence; iron post stamped "3975 H"-----	3, 982. 874
Grizzly, 0.5 mile north of, at southwest corner of Wills Bros.' store; iron post stamped "3692 H"-----	3, 700. 259

HEISLER QUADRANGLE.

[Latitude 44° 30'–45°; longitude 120° 30'–121°.]

From Grizzly north along stage road via Hay Creek to Shaniko.

Grizzly, 4.7 miles north of, in front of W. M. Joslin's house, southwest corner of yard; iron post stamped "3643 H"-----	3, 651. 267
Grizzly, 7.4 miles north of, forks of road, near signboard "Prineville 21 miles, Rim Rock Springs 8 miles;" iron post stamped "3152 H"-----	3, 159. 981
Hay Creek, southwest corner of yard of ranch house, at line of road; iron post stamped "2938 H"-----	2, 946. 334
Hay Creek, 2.1 miles north of, in front of R. Parish's ranch, 15 feet south of gate at fence line; iron post stamped "2757 H"-----	2, 764. 978
Hay Creek, 7.2 miles north of, lane leading to McPherson ranch house, 60 feet west of highway; iron post stamped "1965 H"-----	1, 972. 863
Heisler station, east side of yard, 20 feet south of northeast corner; iron post stamped "1869 H"-----	1, 877. 196
Heisler, 3.7 miles north of station, in front of Friday Bros. ranch house, south corner of lane to house and highway, at fence line; iron post stamped "1686 H"-----	1, 694. 027
Heisler, 5.9 miles north of; surface of water in Trout Creek at bridge, June 1, 1904-----	1, 765. 9
Heisler, 7.3 miles north of, in front of J. J. Haight's ranch house, farm gate leading to house; iron post stamped "1848 H"-----	1, 856. 274
Heisler, 11.6 miles north of, in front of C. B. Durbin's ranch house, northwest corner of yard fence; iron post stamped "2127 H"-----	2, 134. 661
Heisler, 17.4 miles north of, in front of Polk May's ranch house, 10 feet north of gate, at fence line; iron post stamped "2484 H"-----	2, 491. 915
Antelope, Main Street, southeast corner of cart house No. 1, 3 feet from walk; iron post stamped "2622 H"-----	2, 630. 441
Antelope, 1.5 miles north of, in front of small house owned by village of Antelope, 7 feet north of gate; iron post stamped "3083 H"-----	3, 091. 303
Shaniko, southwest corner of lot of Leader office building, 300 feet north of Moody's warehouse, on line of street; iron post stamped "3334 H"-----	3, 341. 695

MORO QUADRANGLE.

[Latitude 45°-45° 30'; longitude 120° 30'-121°.]

From Shaniko north along Oregon-Washington R. R. & Navigation Co.'s track to Moro.

Shaniko, 4.1 miles north of, 540 feet south of road crossing, 37 feet west of track; iron post stamped "3112 H"-----	Feet. 3, 120. 193
Shaniko, 6.6 miles north of, at road crossing, 30 feet west of rail, 30 feet north of highway; iron post stamped "3018 H"-----	3, 026. 183
Shaniko, 9.8 miles north of, 50 feet south of south end of trestle 59, 22 feet east of track; iron post stamped "2810 H"-----	2, 818. 305
Wilcox, 200 feet south of warehouse, 17 feet east of track, 14 feet north of telephone pole; iron post stamped "2623 H"-----	2. 630. 993
Kent, 14 feet east of road crossing, north end of warehouse; iron post stamped "2701 H"-----	2, 708. 895
Kent, 2.5 miles north of, at private-road crossing, 25 feet east of track, 40 feet south of crossing; iron post stamped "2699 H"-----	2, 707. 272
Kent, 6.6 miles north of, at Oregon-Washington Railroad & Navigation Co.'s warehouse, east end of west building, 11 feet from track; iron post stamped "2467 H"-----	2, 475. 181
Kent, 9.7 miles north of, at railroad crossing, 25 feet west of track, 4 feet from crossing sign; iron post stamped "2457 H"-----	2, 464. 739
Kent, 11.9 miles north of, at railroad crossing on main highway, 18 feet east of track at crossing signpost; iron post stamped "2379 H"-----	2, 386. 974
Grass Valley, in front of station; top of rail-----	2, 269. 3
Grass Valley, at south end of railroad station, 10 feet east of track, 3 feet from sidewalk; iron post stamped "2261 H"-----	2, 268. 878
Grass Valley, 2.1 miles north of, road crossing at I. O. O. F. cemetery, 20 feet west of track, 10 feet south of road; iron post stamped "2383 H"-----	2, 390. 898
Grass Valley, 7 miles north of, at crossing on Grass Valley-Moro main road, 12 feet west of track, 3 feet south of crossing sign; iron post stamped "2155 H"-----	2, 162. 758
Grass Valley, 9.3 miles north of, 35 feet east of road crossing at Leonard More's ranch house, 40 feet north of crossing sign; iron post stamped "1935 H"-----	1, 943. 085
Moro, in front of station; top of rail-----	1, 790. 9
Moro, 15 feet north of station, 30 feet west of track; iron post stamped "1782 H"-----	1, 790. 439

GOLDENDALE QUADRANGLE.

[Latitude 45° 30'-46°; longitude 120° 30'-121°.]

From Moro along Oregon-Washington R. R. & Navigation Co.'s track to Biggs.

De Moss, 60 feet south of station, 12 feet east of track, at crossing signpost; iron post stamped "7565 H"-----	1, 572. 531
McDonald's bridge, southwest corner of office; iron post stamped "1325 H"-----	1, 333. 515
Klondyke, 1 mile east of, 100 feet west of road crossing, 15 feet north of track at corner of fence; iron post stamped "1527 H"-----	1, 534. 726
Klondyke, in front of station; top of rail-----	1, 548. 1
Klondyke, 2 miles west of, in front of C. C. Kliney's ranch house, 50 feet east of east face of house, 28 feet north of track at corner of fence; iron post stamped "1446 H"-----	1, 454. 024

Wasco station, 25 feet south of, north margin of highway, 18 feet east of track; iron post stamped "1263 H"-----	Feet. 1, 270. 496
Wasco, 2.9 miles north of, 100 feet north of road crossing at Sink ranch, 10 feet east of track; iron post stamped "1021 H"-----	1, 029. 250
Biggs, 0.5 mile east of Oregon-Washington Railroad & Navigation Co.'s Y, 330 feet east of water tank, 140 feet west of bridge over Spanish Hollow Creek, 27 feet south of Oregon-Washington Railroad & Navigation Co.'s main track; iron post stamped "164 H"---	171. 859

PRIMARY LEVELING.

Arlington, Astoria, Baker City, Birch Creek, Blalock Island, Cathlamet, Gibbon, Goldendale, Kalama, La Grande, Pendleton, Pine, Portland, Stevenson, St. Helen, Telocaset, The Dalles, Troutdale, and Umatilla quadrangles.

BAKER, CLATSOP, COLUMBIA, GILLIAM, MORROW, MULTNOMAH, SHERMAN, UMATILLA, UNION, AND WASCO COUNTIES.

The elevations in the following list are corrected values along double-rodged lines previously published in appendixes to the Twentieth and Twenty-first Annual Reports of the United States Geological Survey. They are based primarily upon bench marks of the Coast and Geodetic Survey at Astoria, and between that place and Portland the original figures have been retained. Between Huntington and the Washington-Oregon State line the line was resurveyed, many of the bench marks were redetermined and some were reset by the transcontinental precise-level party of the Coast and Geodetic Survey, and all the bench marks have been adjusted to accord with the 1912 results obtained by that survey. They also accord at Biggs with the elevation brought by precise leveling via Prineville from the corrected height at Ontario. On account of closures on Blalock Island and Umatilla quadrangles in 1906 and 1907, respectively, the adjustment made in 1905 was abandoned between Biggs and Pendleton, Oreg., and between Umatilla and Wallula, Wash., and a new adjustment made as follows: First, a rod correction of 0.001 foot per foot, increasing original differences; has been applied to the line published in the twenty-first annual report, as was found necessary by comparison with the Coast and Geodetic Survey work; second, a remaining closure error of 1.4 feet in circuit via Umatilla from Wallula, Wash., to Pendleton, has been distributed; and third, the line between Arlington and Umatilla has been raised to agreement without additional adjustment, and the remaining error, 1.3 feet, distributed on the line between Biggs and Arlington.

The leveling from Astoria to Arlington was done in 1898 by J. H. Carlock and the leveling along the other lines was done in 1899 by H. S. Crowe.

The standard bench marks are stamped with the letter "A." Some of the figures of elevation as stamped are as much as 8 feet too low near the Huntington end of the line.

ASTORIA QUADRANGLE.

[Latitude 46°-46° 30'; longitude 123° 30'-124°.]

From Astoria along Astoria & Columbia River R. R. to Goble (part of line).

John Day, 200 feet southwest of station, west end of bridge over John Day River, 150 feet north of residence of Mr. Keefe; iron post stamped "22 A"-----	Feet. 21.579
Svenson, in front of station; top of rail-----	9.0
Svenson, 85 feet south of station and post office, 5 feet west of north-south road; iron post stamped "8 A"-----	8.499
Knappa, 130 feet north of station, 50 feet west of north-south road, 300 feet south of Knappa Hotel; iron post stamped "9 A"-----	8.729
Aldrigos Point, 5 miles east of Knappa, 40 feet north of track, 600 feet east of flag station, 300 feet north of house on hill, 300 feet west of milepost 82; iron post stamped "10 A"-----	9.740

CATHLAMET QUADRANGLE.

[Latitude 46°-46° 30'; longitude 123°-123° 30'.]

From Astoria along Astoria & Columbia River R. R. to Goble (part of line).

Clifton, 80 feet northeast of station, 70 feet north of track, 80 feet south of water's edge in river; iron post stamped "8 A"-----	8.419
Westport and Clifton, about midway between, 100 feet south of house, 9 telegraph poles east of milepost 76, 5 telegraph poles west of bridge, 40 feet south of track; iron post stamped "12 A"-----	12.087
Westport, 200 feet southwest of station, 70 feet south of track, 40 feet east of water's edge, in Plympton Creek, 60 feet west of road; iron post stamped "20 A"-----	20.168
Westport, in front of station; top of rail-----	20.0
Marshland, 75 feet southwest of station, 40 feet south of track, 8 feet west of road; iron post stamped "15 A"-----	15.092
Marshland, in front of station; top of rail-----	14.0
Clatskanie, in front of station; top of rail-----	16.0
Clatskanie, 200 feet east of station, 75 feet south of railroad, 20 feet south of public road; iron post stamped "23 A"-----	22.638
Quincy, in front of station; top of rail-----	17.0
Quincy, 40 feet southeast of station, 400 feet south of house, 60 feet south of track; iron post stamped "18 A"-----	18.415
Mayger, 250 feet southwest of station, 200 feet south of track, 220 feet north of Mayger's residence; iron post stamped "18 A"-----	17.953
Mayger, in front of station; top of rail-----	18.0
Pyramid, in front of station; top of rail-----	19.0
Rinearson's slough, 150 feet south of bridge over, 40 feet southeast of water's edge, 80 feet northwest of residence of Mr. Smith; iron post stamped "9 A"-----	9.163

KALAMA QUADRANGLE.

[Latitude 46°-46° 30'; longitude 122° 30'-123°.]

NOTE.—For elevations in Washington in this quadrangle see Bulletin 557.

From Astoria along Astoria & Columbia River R. R. to Goble (part of line).

Ranier, 200 feet east of post office, 200 feet southeast of Smith's Hotel, 40 feet east of house, 100 feet south of railroad; iron post stamped "26 A"-----	26.016
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Goble, 1,100 feet southwest of station, 300 feet northeast of G. S. Foster's house, 10 feet west of public road, 70 feet south of railroad; iron post stamped "29"-----	Feet. 29.165
From Goble along Astoria & Columbia River R. R. to Portland (part of line).	
Goble, in front of station; top of rail-----	27.0

ST. HELEN QUADRANGLE.

[Latitude 45° 30'-46°; longitude 122° 30'-123°.]

From Goble along Astoria & Columbia River R. R. to Portland (part of line).	
Deer Island, in front of station; top of rail-----	49.0
Deer Island, 130 feet southwest of station, 100 feet southeast of post office, 100 feet west of track; iron post stamped "51 A"-----	50.818
Columbia, 60 feet north of station, 40 feet south of public road, 80 feet northeast of track; iron post stamped "78 A"-----	77.595
Columbia, in front of station; top of rail-----	80.0
Houlton, in front of station; top of rail-----	103.0
Houlton, 210 feet south of station, 40 feet east of post office, 60 feet west of railroad, 100 feet south of wagon road; iron post stamped "99 A"-----	98.700
Warren, in front of station; top of rail-----	48.0
Warren, 70 feet northeast of station, 60 feet east of railroad, 10 feet north of public road, 100 feet northwest of post office; iron post stamped "48 A"-----	48.407
Scappoose, 100 feet east of station, 90 feet northeast of track, 20 feet south of public road, 300 feet northeast of post office; iron post stamped "61 A"-----	60.727
Holbrook, 200 feet northwest of station platform, 230 feet east of store and house, 100 feet east of road, 120 feet west of railroad track; iron post stamped "35 A"-----	34.899

PORTLAND QUADRANGLE.

[Latitude 45° 30'-45° 45'; longitude 122° 30'-122° 45'.]

NOTE.—For elevations in Washington in this quadrangle see Bulletin 557.

From Goble along Astoria & Columbia River R. R. to Portland (part of line).	
Linnton, 210 feet east of station, 300 feet east of post office, 55 feet east of railroad track, 10 feet south of road; iron post stamped "40 A"-----	40.330
Portland, in front of station; top of rail-----	29.26
From Portland along Oregon-Washington R. R. & Navigation Co.'s track to Oregon-Washington State line 6.2 miles south of Wallula, Wash. (part of line).	
Portland, north front of post office, 2 feet east of doorway, first course of stone above water table; aluminum tablet stamped "54 A"-----	54.106
Portland, steel bridge across Willamette River, in top of stone pier at south side of east end; copper bolt stamped "29"-----	30.947
East Portland, in front of station; top of rail-----	31.0
Portland Center, 55 feet south of track, 30 feet east of road, 10 feet north of road, 200 feet east of house; iron post stamped "183 A"---	183.118

Clarnie, 250 feet northwest of platform for station, 150 feet east of bunk house, 60 feet north of track, 90 feet west of section house; iron post stamped "205 A"-----	Feet. 204.753
Clarnie, in front of station; top of rail-----	212.0

TROUTDALE QUADRANGLE.

[Latitude 45° 30'–46°; longitude 122°–122° 30'.]

From Portland along Oregon-Washington R. R. & Navigation Co.'s track to Oregon-Washington State line 6.2 miles south of Wallula, Wash. (part of line).

Fairview, in front of station; top of rail-----	114.0
Fairview, 70 feet west of hotel, 140 feet east of Cleone post office, 110 feet south of track, and 50 feet south of wagon road; iron post stamped "114 A"-----	113.662
Troutdale, 100 feet northeast of station, 40 feet north of switch leading to Union Meat Co.'s establishment, 223 feet north of main track, in edge of field belonging to D. F. Buckridge; iron post stamped "41 A"-----	41.500
Corbett, 30 feet west of post office, 25 feet south of road, on line with post office, 60 feet south of main track; iron post stamped "46 A"-----	45.761
Lataurelle, in front of station; top of rail-----	44.4
Lataurelle, 50 feet south of station, 100 feet south of track, 50 feet north of road, 80 feet north of post office, 10 feet east of sidewalk, and 25 feet east of road; iron post stamped "57 A"-----	57.596
Bridal Veil, in front of station; top of rail-----	40.5
Bridal Veil, 80 feet south of track, 40 feet south of public road, in yard, 30 feet northeast of A. H. Willett's residence; iron post stamped "56 A"-----	55.836
Multnomah Falls, 320 feet north of base of, 70 feet south of track, 100 feet west of creek, 80 feet east of abandoned house; iron post stamped "46 A"-----	46.097

STEVENSON QUADRANGLE.

[Latitude 45° 30'–46°; longitude 121° 30'–122°.]

From Portland along Oregon-Washington R. R. & Navigation Co.'s track to Oregon-Washington State line 6.2 miles south of Wallula, Wash. (part of line).

Warrendale, 150 feet south of post office, 50 feet south of track, 8 feet south of road, 90 feet southwest of platform for station; iron post stamped "77 A"-----	77.288
Bonneville, in front of station; top of rail-----	50.6
Bonneville, 75 feet southeast of station, 200 feet northwest of dancing pavilion in park, 250 feet south of hotel, 130 feet south of track; iron post stamped "53 A"-----	52.972
Cascade Locks, 330 feet northeast of post office, 400 feet northwest of station, 80 feet south of engineer's office, on Government reservation, 50 feet north of track; iron post stamped "99 A"-----	98.948
Wyeth, 40 feet east of bunk house, 49 feet west of section house, 40 feet south of road, 90 feet south of track; iron post stamped "97 A"-----	97.268

Viento, in front of station; top of rail-----	Feet. 102.9
Viento, 70 feet northeast of station, 30 feet southwest of store and post office, 20 feet north of switch, 80 feet north of track; iron post stamped "103 A"-----	103.373

THE DALLES QUADRANGLE.

[Latitude 45° 30'–46°; longitude 121°–121° 30'.]

From Portland along Oregon-Washington R. R. & Navigation Co.'s track to Oregon-Washington State line 6.2 miles south of Wallula, Wash. (part of line).

Hood River, in front of station; top of rail-----	100.2
Hood River, 45 feet southeast of southeast corner of station, 130 feet north of hotel, 65 feet south of track, 30 feet west of wagon road; iron post stamped "103 A"-----	103.685
Mosier, 100 feet southeast of station, 100 feet north of A. Stewart's store, 60 feet west of wagon road, 80 feet south of track; iron post stamped "105 A"-----	105.667
Rowena, 200 feet southeast of station, 20 feet northeast of section house, 100 feet south of track; iron post stamped "146 A"-----	147.228
Milepost 83, 300 feet east of, 55 feet south of track, at switch head, 15 feet east of public road; iron post stamped "202 A"-----	202.768
The Dalles, 20 feet from southeast corner of Wasco County courthouse, 75 feet north of center of Third Street, and 75 feet west of center of Union Street; iron post stamped "103 A"-----	103.694
The Dalles, in front of Umatilla House; top of rail-----	96.9
Seufert's switch, west connection of; top of rail-----	134.3
Summit switch, 50 feet west of station, 290 feet northwest of station post, 55 feet north of track, and close to bank of Columbia River; iron post stamped "187 A"-----	188.185
Cello, 120 feet west of station, 60 feet south of post office in cannery building, 200 feet east of Taffe's house, 25 feet north of track; iron post stamped "159 A"-----	159.694
Cello, in front of station; top of rail-----	158.9

GOLDENDALE QUADRANGLE.

[Latitude 45° 30'–46°; longitude 120° 30'–121°.]

From Portland along Oregon-Washington R. R. & Navigation Co.'s track to Oregon-Washington State line 6.2 miles south of Wallula, Wash. (part of line).

Deschutes, 80 feet southeast of station sign, 80 feet northwest of hotel, 100 feet south of track, 40 feet north of road; iron post stamped "166 A"-----	167.132
Biggs, 80 feet east of Henderson Hotel, 150 feet southeast of post office, 100 feet south of Oregon-Washington R. R. & Navigation Co.'s main line track, 100 feet north and 40 feet east of point of Y on Shaniko branch; iron post stamped "177 A"-----	177.735
Grant's, 270 feet southwest of station, 50 feet east of Wilson Hotel, 50 feet west of livery stable, 180 feet west of post office, 260 feet south of track; iron post stamped "171 A"-----	171.812
Grant's, in front of station; top of rail-----	175.4

Rufus, 150 feet southwest of station, 250 feet southeast of wheat elevator, 50 feet from southeast corner of Union warehouse, and about 700 feet north of post office, 130 feet south of track; iron post stamped "179 A"-----	Feet. 179. 884
John Days, 60 feet north of track, 30 feet northeast of section house, 200 feet west of bunk house, 1,000 feet west of west end of bridge over John Days River; iron post stamped "191 A"-----	192. 191
Squally Hook, 80 feet northwest of station, 260 feet northwest of mile sign 123, 40 feet north of main track, 100 feet northeast of east connection of switch; iron post stamped "193 A"-----	194. 242

ARLINGTON QUADRANGLE.

[Latitude 45° 30'–46°; longitude 120°–120° 30'.]

NOTE.—For elevations in Washington in this quadrangle see Bulletin 557.

From Portland along Oregon-Washington R. R. & Navigation Co.'s track to Oregon-Washington State line 6.2 miles south of Wallula, Wash. (part of line).

Quinn, 0.75 mile west of section house, 30 feet northwest of station board, 500 feet northeast of mile sign 127, 40 feet north of track; iron post stamped "226 A"-----	228. 120
Blalocks, in front of station; top of rail-----	219. 2
Blalocks, 140 feet southeast of station, 170 feet south of track, 180 feet southwest of water tank, 30 feet northeast of Hotel Bates; iron post stamped "214 A"-----	215. 876
Arlington, in front of station; top of rail-----	226. 2
Arlington, 80 feet east of station, 30 feet south of main track, 40 feet north of switch, 50 feet west of tool house, 50 feet northwest of warehouse 1, and 400 feet west of section house; iron post stamped "225 A"-----	226. 971

From Arlington to Umatilla (part of line from Portland to State line near Wallula, Wash.).

Arlington, 4 miles east of, 30 feet east of fifth telegraph pole west of milepost 146, 100 feet south of track, 20 feet south of granite bowlder; iron post stamped "225 A"-----	226. 891
Heppner Junction, 18 feet west of station, 10 feet south of track; iron post stamped "240 A" (reset by railroad company and by 1906 levels) -----	242. 299

BLALOCK ISLAND QUADRANGLE.

[Latitude 45° 30'–46°; longitude 119° 30'–120°.]

NOTE.—For elevations in Washington in this quadrangle see Bulletin 557.

From Arlington to Umatilla (part of line from Portland to State line near Wallula, Wash.).

Milepost 157, 360 feet east of, 21 feet south of center of track, above small fill on hillside; iron post stamped "240 A"-----	241. 747
Castle Rock, 90 feet east of east end of station, 15 feet south of milepost 162; iron post stamped "240 A"-----	242. 613
Castle Rock, at section house, center of track; base of rail-----	243. 1
Milepost 167, 75 feet southeast of, 45 feet south of track; iron post stamped "247 A"-----	249. 3
Coyote, in front of section house; base of rail-----	254. 0

Milepost 172, 90 feet west of, 21 feet south of center of track; iron post stamped "271 A"-----	Feet. 273.594
Milepost 177, 35 feet west of, 36 feet south of center of track; iron post stamped "278 A"-----	280.430

UMATILLA QUADRANGLE.

[Latitude 45° 30'–46°; longitude 119°–119° 30'.]

NOTE.—For elevations in Washington in this quadrangle see Bulletin 557.

From Arlington to Umatilla (part of line from Portland to State line near Wallula, Wash.).

Milepost 182, 18 feet south of, 30 feet south of center of track; iron post stamped "288 A"-----	290.062
Umatilla River, at end of steel bridge; base of rail-----	295.5
Umatilla, 48 feet east of northeast corner of water tank, in lot between tank and roadmaster's office, 24 feet west of northwest corner of roadmaster's office, 25 feet north of center of track; iron post stamped "294 A"-----	296.354
Umatilla, in front of station; top of rail-----	296.1

From Umatilla to Washington-Oregon State line (part of line from Portland).

Milepost 192, 45 feet north of, 15 feet north of track; iron post stamped "378 A"-----	380.204
Cold Springs, 57 feet southwest of corner of section house, 25 feet north of center of track; iron post stamped "362 A"-----	363.739
Juniper, at mouth of Juniper Canyon, 4 feet west of west corner of fence at section house, 18 feet northeast of center of track; iron post stamped "313 A"-----	314.646

From Umatilla along Oregon-Washington R. R. & Navigation Co.'s track to Pendleton (part of line).

Milepost 192, 9 feet southeast of, 24 feet south of center of track; iron post stamped "451 A"-----	453.508
Maxwell, center of track; base of rail-----	457.6
Milepost 197, 90 feet northeast of, 55 feet north of center of track, 4 feet southeast of telegraph pole; iron post stamped "590 A"-----	593.157
Foster, 3 feet east of corner of fence at section house, 120 feet northeast of milepost 202; iron post stamped "591 A"-----	593.579
Echo, in front of station; top of rail-----	639.3
Echo, 1.3 miles east of, 21 feet northeast of center of track, 50 feet east of crossing; iron post stamped "656 A" (removed in 1904)---	658.628
Nolin, 4 feet south of fence at road crossing, 54 feet northeast of center of track; iron post stamped "732 A" (elevation as reset in 1907)-----	734.297
Milepost 217, 0.6 mile east of, 27 feet south of center of track, 15 feet north of fence; iron post stamped "847 A" (redetermined in 1907)---	850.173

PENDLETON QUADRANGLE.

[Latitude 45° 30'–46°; longitude 118° 30'–119°.]

From Umatilla along Oregon-Washington R. R. & Navigation Co.'s track to Pendleton (part of line).

Barnhart, 230 feet west of west end of warehouse, 6 feet west of signpost "Barnhart," 20 feet south of track; iron post stamped "908 A"---	911.108
Pendleton, 3 miles west of, 72 feet north of track; 2 feet east of gate in fence at road crossing; iron post stamped "994 A"-----	997.427

	Feet.
Pendleton, in front of station; top of rail.....	1, 070. 3
Pendleton, in second block of pilaster, base of west entrance of south side of Umatilla County courthouse, facing Alta Street; iron post stamped "1074 A".....	1, 078. 015

From Pendleton along Oregon-Washington R. R. & Navigation Co.'s track to Huntington (part of line).

Milepost 236, 750 feet northeast of, 25 feet north of center of track, 6 feet east of telegraph pole; iron post stamped "1205 A".....	1, 209. 147
Mission, base of rail opposite warehouse.....	1, 221. 3
Milepost 241, 900 feet west of, 21 feet south of center of track, 2 feet north of fence, 15 feet north of wagon road; iron post stamped "1355 A".....	1, 358. 722
Cayuse, opposite warehouse; base of rail.....	1, 413. 3

GIBBON QUADRANGLE.

[Latitude 45° 30'–46°; longitude 118°–118° 30'.]

From Pendleton along Oregon-Washington R. R. & Navigation Co.'s track to Huntington (part of line).

Bingham Springs, in front of station; base of rail.....	1, 748. 5
Bingham Springs, 158 feet east of corner of station, 36 feet north of center of track, 45 feet east of road crossing, 4 feet east of first telegraph pole from station; iron post stamped "1744 A".....	1, 749. 383
Milepost 258, 0.5 mile east of, 22 feet south of track, 35 feet east of whistling post; iron post stamped "2023 A".....	2, 027. 949
Wilbur, in front of section house; base of rail.....	2, 270. 6
Wilbur, 150 feet east of section house, at corner of fence near telegraph office, 32 feet south of center of track; iron post stamped "2264 A".....	2, 269. 490
Bridge 115, 540 feet east of east end of, 30 feet south of center of track, 5 feet east of telegraph pole; iron post stamped "2570 A".....	2, 575. 894
Huron, 300 feet west of signboard, 30 feet south of center of track, 45 feet west of tool house, 85 feet east of water tank; iron post stamped "2906 A".....	2, 912. 612
Milepost 278, 12 feet east of, 15 feet south of center of track; iron post stamped "3454 A".....	3, 460. 750
Meacham, 5 feet west of west end of platform, 15 feet north of center of track, 2 feet south of fence around log-cabin eating house; iron post stamped "3672 A".....	3, 679. 478

LA GRANDE QUADRANGLE.

[Latitude 45°–45° 30'; longitude 118°–118° 30'.]

From Pendleton along Oregon-Washington R. R. & Navigation Co.'s track to Huntington (part of line).

Milepost 284, 30 feet southwest of, 24 feet south of center of track; iron post stamped "3958 A".....	3, 965. 384
Kamela, 1.5 feet south of platform, 44 feet east of northeast corner of telegraph office, 1.5 feet west of west corner of tank building, 14 feet south of center of track; iron post stamped "4199 A".....	4, 206. 172

Milepost 292, 120 feet east of, 18 feet south of center of track; iron post stamped "3581 A"-----	Feet. 3, 588. 427
Hilgard, 2 feet west of first telegraph pole west of station, 24 feet north of center of track; iron post stamped "3001 A"-----	3, 007. 586
Perry, 2 feet east of east end of office of Grande Ronde Co., 45 feet north of center of track; iron post stamped "2897 A"-----	2, 903. 010
La Grande, in front of telegraph office; top of rail-----	2, 784. 5
La Grande, 165 feet northeast of First Street crossing, 30 feet north of northwest corner of railroad tool house, 24 feet west of telegraph pole; iron post stamped "2773 A"-----	2, 779. 338
La Grande, corner of Chestnut Street and Adams Avenue, in third course of plaster-faced brick wall on Chestnut Street side of Foley Hotel; aluminum tablet stamped "2782 A"-----	2, 787. 775

TELOCASET QUADRANGLE.

[Latitude 45°-45° 30'; longitude 117° 30'-118°.]

From Pendleton along Oregon-Washington R. R. & Navigation Co.'s track to
Huntington (part of line).

Milepost 311, 3,600 feet east of, 50 feet south of center of track, 1 foot north of fence; iron post stamped "2696 A"-----	2, 701. 837
Hot Lake, base of south rail-----	2, 701. 2
Milepost 317, 55 feet northeast of, 5 feet west of telegraph pole, 7 feet south of fence; iron post stamped "2705 A"-----	2, 711. 424
Union, in front of station; top of rail-----	2, 716. 8
Union, 1,000 feet west of second snowshed east of, 15 feet south of track, 4 feet west of fence of cattle guard; iron post stamped "3021 A"-----	3, 027. 126
Telocaset, opposite telegraph office; base of rail-----	3, 447. 5
Telocaset, 3 feet east of east corner of fence at section house, 18 feet north of center of track; iron post stamped "3440 A"-----	3, 446. 614
Milepost 332, 0.5 mile south of, 180 feet north of north portal of tunnel 5, 14 feet east of track; iron post stamped "3228 A"-----	3, 235. 356
North Powder, opposite telegraph office; base of rail-----	3, 242. 5
North Powder, 120 feet southwest of station, 32 feet south of center of track, at northeast corner of fence, 15 feet south of wagon road; iron post stamped "3235 A"-----	3, 244. 160

BAKER CITY QUADRANGLE.

[Latitude 44° 30'-45°; longitude 117° 30'-118°.]

From Pendleton along Oregon-Washington R. R. & Navigation Co.'s track to
Huntington (part of line).

Milepost 342, 28 feet north of, 42 feet north of center of track; iron post stamped "3372 A"-----	3, 379. 663
Haines, 0.5 miles south of, 45 feet east of track, in stone masonry; bronze tablet stamped "3322 A"-----	3, 329. 410
Wingville, 1.5 miles north of, on main road between Haines and Baker City, 65 feet west of track, 600 feet east of Jennings's house; iron post stamped "3338 A"-----	3, 346. 115
Baker City, front yard of public school, in astronomical pier; bronze tablet stamped "3433 A"-----	3, 440. 871
Norton siding, 150 feet north of section house; iron post stamped "3646 A"-----	3, 654. 261

	Feet.
Norton siding; top of rail-----	3, 652. 4
Encina, in front of station; top of rail-----	3, 964. 9
Pleasant Valley, in front of station; top of rail-----	3, 825. 0
Pleasant Valley, 15 feet south of west corner of railroad building, 50 feet south of station, 99 feet south of track; iron post stamped "3818 A"-----	3, 826. 839
Unity, 185 feet north of section house, at forks of road; iron post stamped "3139 A"-----	3, 146. 547
Unity, opposite section house; top of north rail-----	3, 130. 7

PINE QUADRANGLE.

[Latitude 44° 30'–45°; longitude 117°–117° 30'.]

From Pendleton along Oregon-Washington R. R. & Navigation Co.'s track to Huntington (part of line).

Durkee, 30 feet east of telegraph office, 36 feet north of track, 1 foot west of southwest corner of fence at section house; iron post stamped "2647 A"----- 2, 654. 666

BIRCH CREEK QUADRANGLE.

[Latitude 44°–44° 30'; longitude 117°–117° 30'.]

From Pendleton along Oregon-Washington R. R. & Navigation Co.'s track to Huntington (part of line).

Tunnel 6, 600 feet west of west end of, 45 feet north of track, 8 feet from east corner of fence; iron post stamped "2369 A"----- 2, 376. 821
 Bridge 356, 360 feet south of, 30 feet east of railroad track, 13 feet west of fence; iron post stamped "2215 A"----- 2, 222. 908
 Huntington, Washington Street front of building of Oregon Commercial Co., near stairway between grocery and drug store, in sixth row of brick above stone foundation, second row of horizontal bricks; aluminum tablet stamped "2105 A"----- 2, 113. 336
 Huntington, in front of station; top of rail----- 2, 102. 1
 Huntington, 2.4 miles east of, 3.5 feet east of west end of steel bridge over Snake River; aluminum tablet stamped "2079 A"----- 2, 086. 463

Birch Creek, Mitchell Butte, and Weiser quadrangles.

MALHEUR COUNTY.

The elevations in the following list are based on bench marks established by C. H. Semper in 1903 at Weiser, Ontario, and Vale, and are stamped with the letter "H." The transcontinental precise-level party of the Coast and Geodetic Survey determined the elevation of the Huntington and other bench marks and made a correction of plus 8.4 feet on Semper's line. All the bench marks stamped with the letter "H," in addition to the figures of elevation, are stamped 8 feet too low.

Bench marks set in 1905 are stamped "Adj 1903" in addition to figures denoting field elevations.

The leveling of 1904 was done by the Reclamation Service, that of 1905 by Messrs. Morrow, Higley, Harris, and Evans of the Geological Survey, and that of 1911 in Birch Creek quadrangle by D. S. Birkett.

MITCHELL BUTTE QUADRANGLE.

[Latitude 43° 30'–44°; longitude 117°–117° 30'.]

From Vale via Valley Road to schoolhouse 7 miles west of Vale.

Vale, 3.2 miles southwest of, turn of road at Gillerman place, 0.5 mile north of southwest corner of sec. 1, T. 19 S., R. 44 E.;	Feet.
iron post stamped "2268 H"-----	2, 276. 238
Vale, 7 miles west of, on north side of road, opposite schoolhouse, on line with east side of building; iron post stamped "2308 H"-----	2, 316. 506

From Vale southwest along road southwest of Malheur River to Malheur Canyon, 13.7 miles west of Vale.

Vale, 3 miles south of, west of road at 3-mile post, 0.3 mile south of Morrigan house; iron post stamped "2270 H"-----	2, 278. 364
Vale, 7.3 miles southwest of, 150 feet north of and in line with east side of J. M. Griffin's house; iron post stamped "2293 H"-----	2, 301. 570
Vale, 10 miles southwest of, 10 feet south of road, on line with east fence of M. Hansen's ranch; iron post stamped "2330 H"-----	2, 338. 423
Vale, 13.1 mile southwest of, 15 feet north of road, near point of hill, 0.8 mile from F. M. Vine's place; iron post stamped "2331 H"-----	2, 339. 349

From Ontario along road to Owyhee.

Nyssa, 2 miles south and 2 miles west of, 0.5 mile south of center of sec. 6, T. 20 S., R. 47 E.; iron post stamped "2197 H"-----	2, 205. 242
Biglows, north side of road opposite; iron post stamped "2236 H"-----	2, 225. 028
Owyhee, opposite schoolhouse, 15 feet west of telegraph pole; iron post stamped "2236 H"-----	2, 244. 279

From Nyssa along road to Ontario.

Ontario, 10 miles south of, 2 miles west of, in southwest angle of crossroads, by fence post; iron post stamped "2201 H"-----	2, 209. 277
Ontario, 5.5 miles south by 2 miles west of, at foot of telegraph pole at W. G. Jenkins's gate; iron post stamped "2177 H"-----	2, 185. 400
Ontario, 2 miles south by 2 miles west of, 30 feet west of road, in line with south side of schoolhouse; iron post stamped "2175 H"-----	2, 183. 333
Ontario, 3.1 miles west of, south of road at corner of wire fence and road to ranch house; iron post stamped "2154 H"-----	2, 162. 574

From Griffin ranch, 7.3 miles southwest of Vale, by road west and south to Twin Springs.

Vale, 7.3 miles southwest of, at Griffin ranch, south side of road, 100 feet north of house; iron post stamped "2293"-----	2, 301. 570
Griffin ranch, 3 miles southwest of, 10 feet east of road; iron post stamped "2386 Adj 1903"-----	2, 386. 910

Griffin ranch, 6 miles southwest of, near Willow Springs, 15 feet east of road, 600 feet east of house; iron post stamped "2484 Adj 1903"	Feet. 2, 484. 786
Willow Springs, 2.5 miles southwest of, 10 feet east of road, 20 feet east of dry creek bed; iron post stamped "2613 Adj 1903"	2, 613. 942
Willow Springs, 5.5 miles southwest of, 25 feet west of road, in rock; aluminum tablet stamped "2834 Adj 1903"	2, 834. 407
Willow Springs, 8.5 miles southwest of, 20 feet northwest of road; iron post stamped "3117 Adj 1903"	3, 118. 191
Twin Springs, 5.6 miles north of, at intersection of Sagebrush and Vale roads; iron post stamped "3251 Adj 1903"	3, 252. 154
Twin Springs, 2.9 miles north of, at intersection of Nyssa and Vale roads; iron post stamped "3357 Adj 1903"	3, 358. 022
Twin Springs, 10 feet east of road, 200 feet north of house; iron post stamped "3246 Adj 1903"	3, 247. 182

From intersection of Vale and Sagebrush roads near Nigger Rock east and north to Owyhee schoolhouse.

Intersection of Vale and Sagebrush roads, 6 miles east of, 10 feet south of road; iron post stamped "3316 Adj 1903"	3, 317. 545
Intersection of Vale and Sagebrush roads, 9 miles east of, at west side of road; aluminum tablet stamped "3182 Adj 1903"	3, 182. 597
Intersection of Vale and Sagebrush roads, 12 miles east of, near creek crossing, 7 feet north of road; iron post stamped "2922 Adj 1903"	2, 922. 809
Owyhee, 4 miles west of, at summit just north of Mitchell Butte, 15 feet north of road; iron post stamped "2629 Adj 1903"	2, 631. 973
Owyhee, 1 mile west of, 35 feet north of canal crossing near farmhouse; iron post stamped "2232 Adj 1903"	2, 233. 406

From Twin Springs to Freezeout Spring.

Twin Springs, 3 miles southwest of, at top of watershed 10 feet south of road; iron post stamped "3767 Adj 1903"	3, 768. 221
Freezeout Spring, 250 feet east of, 10 feet south of drain from spring, 35 feet north of road; aluminum tablet stamped "3794 Adj 1903"	3, 795. 145

From Twin Springs south and east to Board Corral, thence to Muller & Bain ranch and to Owyhee schoolhouse.

Twin Springs, 3 miles south of, 400 feet west of sharp turn in dry creek bed, 6 feet west of road, in ledge of rock; aluminum tablet stamped "2920 Adj 1903"	2, 920. 989
Twin Springs, 7.8 miles southeast of, 1,500 feet west of Owyhee River, 10 feet north of road, at foot of boulder-strewn slope; aluminum tablet stamped "2497 Adj 1903"	2, 498. 252
Twin Springs, 11 miles southeast of, 800 feet east of river, 150 feet north of dry creek, 10 feet north of Owyhee River-Board Corral road, in large flat rock; aluminum tablet stamped "2559 Adj 1905"	2, 560. 342
Board Corral, 4.1 miles west of, 15 feet east of dry creek bed, in line with two large peaks, one on each side of creek, in large rock; aluminum tablet stamped "3578 Adj 1903"	3, 578. 920
Board Corral, 50 feet north of spring, 150 feet north of corral, 6 feet northeast of shack; iron post stamped "4489 Adj 1903"	4, 490. 524
Board Corral, 3.3 miles south of, 10 feet south of road; iron post stamped "3864 Adj 1903"	3, 863. 864

Isaacs ranch, 5.6 miles west of, 1,000 feet west of rocky cut, 15 feet east of road; iron post stamped "3747 Adj 1903"-----	Feet. 3, 748. 332
Isaacs ranch, 1.8 miles west of, 200 feet south of creek bed, 30 feet north of road, in rock; aluminum tablet stamped "2740 Adj 1903"__	2, 740. 909
Isaacs ranch, 3 miles north of, 0.25 mile south of where road forks to Alkali Springs, on small divide, 15 feet west of road; iron post stamped "2797 Adj 1903"-----	2, 797. 860
Muller & Bain ranch, 4.7 miles south of, at forks of road, 30 feet south of road; iron post stamped "2512 Adj 1903"-----	2, 513. 443
Muller & Bain ranch, 1.3 miles south of ranch house, 400 feet west of irrigation ditch crossing road, on small rise, 30 feet south of road, 50 feet south of fence; iron post stamped "2244 Adj 1903"-----	2, 245. 252
Muller & Bain ranch, 1.8 miles north of, 30 feet west of road, 60 feet south of drain, in rock; aluminum tablet stamped "2253 Adj 1903"__	2, 254. 597
Owyhee bridge, 3.3 miles south of, 20 feet east of road; iron post stamped "2238 Adj 1903"-----	2, 239. 709

From point 4 miles south of Twin Springs up Sand Hollow.

Twin Springs, 6 miles south of, 200 feet southeast of sand slide in side of hill, 10 feet east of road; iron post stamped "2961 Adj 1903"---	2, 962. 562
Twin Springs, 9 miles south of, 80 feet east of dry creek bed, 100 feet north of Saddle Hills, 10 feet west of road; iron post stamped "3186 Adj 1903"-----	3, 186. 941

From Isaacs ranch east to Homedale.

Isaacs ranch, 2.7 miles east of, on divide between Sucker Creek and Snake River valleys, 30 feet south of road; iron post stamped "2809 Adj 1903"-----	2, 810. 127
Homedale, 6.1 miles west of, at Graveyard Point, 30 feet north of road; iron post stamped "2416 Adj 1903"-----	2, 417. 546

From Owyhee schoolhouse northwest to Vale.

Owyhee schoolhouse, 3.1 miles north of, 40 feet west of road, in rock; aluminum tablet stamped "2344 Adj 1903"-----	2, 344. 392
Owyhee schoolhouse, 6.2 miles north of, 30 feet east of road, in rock; aluminum tablet stamped "2516 Adj 1903"-----	2, 517. 097
Vale, 7.4 miles south of, on summit, 30 feet west of road; iron post stamped "2909 Adj 1903"-----	2, 909. 994
Vale, 4.5 miles south of, 30 feet south of road to Nyssa, 20 feet east of main road; iron post stamped "2544 Adj 1903"-----	2, 545. 352

From point 4 miles southwest of Griffin ranch up Sand Hollow.

Intersection of Red Butte and Vale road, 2.6 miles west of, on Sand Hollow road at forks of two roads, 300 feet southwest of sand bank; aluminum tablet stamped "2471 Adj 1903"-----	2, 471. 712
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From point 8 miles north and east of Intersection of Vale and Sagebrush road south toward Grassy Mountain.

Intersection of Nigger Rock and Owyhee road, 2.1 miles south of, on small rise, 500 feet north of deep gulch, 300 feet northwest of round knoll, 20 feet west of road, in rock; aluminum tablet stamped "2711 Adj 1903"-----	2, 711. 631
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BIRCH CREEK QUADRANGLE.

[Latitude 44°-44° 30'; longitude 117°-117° 30'.]

From Vale along road up west side of Willow Creek to Coles.

Vale, 3.6 miles north of, 10 feet west of road, in line with Mitchell house; iron post stamped "2278 H"-----	Feet. 2, 286. 189
Vale, 7 miles north of, 10 feet west of road, 1,000 feet northeast of Harris house; iron post stamped "2310 H"-----	2, 318. 398
Vale, 10.5 miles north of, midway between schoolhouse and Faulkner place; iron post stamped "2343 H"-----	2, 351. 352
Vale, 14 miles north of, 15 feet west of road, 0.3 mile south of Scott house; iron post stamped "2398 H"-----	2, 406. 351
Vale, 17.5 miles north of, 500 feet south of drain to J. Norwood's house, 10 feet west of road; iron post stamped "2490 H"-----	2, 498. 308
Vale, 21 miles north of, 300 feet north of spring, 15 feet west of road; iron post stamped "2508 H"-----	2, 516. 279
Vale, 24.5 miles north of, 10 feet east of road at fence; iron post stamped "2592 H"-----	2, 599. 825

From Huntington northeast along Oregon Short Line R. R.

Huntington, Washington Street, in front wall of building of Oregon Commercial Co., near stairway between grocery and drug stores, in sixth row of brick above stone foundation; aluminum tablet stamped "2105 A"-----	2, 113. 336
Huntington, 2 miles east of, at east end and south side of railroad bridge No. 380, on top of concrete abutment; painted cross in circle of paint, marked "U. S. 2086 B. M."-----	2, 086. 83
Huntington, 2.4 miles east of, 3.5 feet east of west end of steel bridge over Snake River; aluminum tablet stamped "2079 A"-----	2, 086. 465
Huntington, 3.6 miles northeast of, 1.1 miles north of bridge over Snake River, 300 feet north of milepost 1, 10 feet west of Huntington-Homestead branch of Oregon Short Line R. R., on rock of railroad cut; point in circle of paint, marked "U. S. 2051 B. M."-----	2, 051. 44
Gypsum, 2.1 miles south of, 220 feet north of milepost 2, 25 feet east of railroad, on large boulder; point in circle of paint, marked "U. S. 2056 B. M."-----	2, 056. 78
Gypsum, 1 mile south of, 210 feet north of milepost 3, 0.6 mile south of tunnel, 120 feet south of sign "Gypsum 1 mile," 30 feet south of Huntington-Homestead branch of Oregon Short Line R. R., on top of large granite mass in place; bronze tablet stamped "2039 1911 1"-----	2, 039. 483
Gypsum, in front of signboard; top of rail-----	2, 031. 0
Gypsum, 70 feet north of signboard, 15 feet west of railroad, in base of loading chute at lower end of tramway leading up to gypsum mine; copper nail marked "U. S. 2031 B. M."-----	2, 031. 80
Gypsum, 1 mile north of, 135 feet north of sign "Gypsum 1 mile," 15 feet east of railroad, on rock; point in circle of paint, marked "U. S. 2020 B. M."-----	2, 021. 00
Gypsum, 2 miles north of, 100 feet north of milepost 6, 45 feet east of railroad, in flat rock 4 by 2 by 2 feet; bronze tablet stamped "2017 1911 2"-----	2, 017. 452
Buchan, 1 mile south of, 390 feet north of milepost 7, 10 feet east of railroad, in cut, 30 feet south of sign "Buchan 1 mile," on rock; point in circle of paint, marked "U. S. 2002 B. M."-----	2, 003. 68

Buchan, 0.2 mile south of, 170 feet south of milepost 8, 40 feet west of railroad, on top of large boulder; point in circle of paint, marked "U. S. 1991 B. M."-----	Feet. 1, 993. 02
Buchan, 0.8 mile north of, 210 feet south of milepost 9, 25 feet east of railroad, in top of large red boulder; aluminum tablet stamped "1976 1911 3"-----	1, 976. 321
Buchan, 1.8 miles north of, 420 feet north of milepost 10, 12 feet west of railroad, on rock; point in circle of paint, marked "U. S. 1983 B. M."-----	1, 983. 95
Marble, 0.8 mile south of, opposite house on "Baker Upper" place, 300 feet north of milepost 11, 15 feet west of railroad, on top of boulder; point in circle of paint, marked "U. S. 1989 B. M."-----	1, 989. 39
Marble, 270 feet north of milepost 12, 40 feet west of railroad, 15 feet west of side track, in top of large boulder; aluminum tablet stamped "1992 1911 4"-----	1, 992. 314

WEISER QUADRANGLE.

[Latitude 44°-44° 30'; longitude 116° 30'-117°.]

NOTE.—For elevations in Idaho in this quadrangle see Bulletin 567.

At Ontario.

Ontario, corner of Main Street and road to station, 12 feet east of northeast corner of Brown's hotel (Carko House); iron post stamped "2143 H"-----	2, 151. 595
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From Ontario north along road via Mesquite to Weiser.¹

Ontario, 4.1 miles north of, west angle of forks of road where road turns up gulch; iron post stamped "2145 H"-----	2, 153. 674
Ontario, 6.7 miles north of, northeast corner of Rockfellow's fruit orchard, 9 feet from corner, in line with east-west fence, 25 feet west of road; iron post stamped "2133 H"-----	2, 140. 405
Ontario, 9.7 miles north of, 400 feet west of Applegate's house, 70 feet from corner near canal; iron post stamped "2124 H"-----	2, 132. 332
Weiser, 6.5 miles south of, Mesquite, in small gulch which road follows to Mesquite Flat, 15 feet west of road; iron post stamped "2132 H"-----	2, 140. 160
Weiser, 2 miles south of, 0.25 mile south of M. A. Patch's house, at bottom of hill; iron post stamped "2104 H"-----	2, 112. 142
Weiser station, 30 feet east of main track; iron post stamped "2107 H"-----	2, 115. 057

Baker City, Caviness, Pine, Sumpter, and Susanville quadrangles.

BAKER, GRANT, AND UNION COUNTIES.

The elevations in the following list are based upon 1912 adjustments by the Coast and Geodetic Survey, which connected with bench marks of the Geological Survey along the Oregon-Washington R. R. & Navigation Co.'s track. For other elevations in the Baker City quadrangle, see line from Astoria to Huntington.

Most of the leveling was done in 1898-99 by W. R. Manning. Some work was done in Sumpter quadrangle in 1900 by C. L. Nelson, in the Baker City quadrangle by C. H. Semper in 1904, and by D. S.

¹ The error in this line is excessive.

Birkett in 1911, in the Susanville quadrangle by Homer Hadley in 1905, and in the Pine quadrangle by D. S. Birkett in 1911.

Elevations indicated on the standard bench marks stamped "B. C." are generally 6 feet too high, and most of those on later bench marks stamped "A" are about 8 feet too low.

BAKER CITY QUADRANGLE.

[Latitude 44° 30'–45°; longitude 117° 30'–118°.]

From Baker City west along county road to Pocahontas, thence north to school house 1 mile north of Haines, thence to Baker City via Flagstaff Well.

Baker City, in yard and at east side of brick public schoolhouse, in top of small masonry pier; bronze tablet stamped "3433 A"-----	Feet. 3,440.871
T. 9 S., R. 39 E., sec. 6, 300 feet west of Pocahontas schoolhouse, south of road, opposite fork of road to north; iron post stamped "3673 B. C."-----	3,666.985
T. 8 S., R. 39 E., NW. $\frac{1}{4}$ sec. 4, 1 mile south of Haines, 20 feet south-east of Olson house; iron post stamped "3342 B. C."-----	3,336.508
T. 8 S., R. 39 E., sec. 3, 1.2 miles southeast of Haines, east of rail-road track, in stone masonry of North Base triangulation station; bronze tablet stamped "3335"-----	3,329.435
Haines, Oregon-Washington R. R. & Navigation Co.'s station, in front of; top of rail-----	3,334.2
T. 7 S., R. 39 E., NW. $\frac{1}{4}$ sec. 28, 70 feet northeast of Richman house, west of road; iron post stamped "3334 B. C."-----	3,328.268
T. 8 S., R. 39 E., sec. 23, 1 mile north by 1 mile east of Wingville, 65 feet west of Oregon-Washington R. R. & Navigation Co.'s track, 600 feet east of Jennings' house; iron post stamped "3352 B. C."--	3,346.108
T. 9 S., R. 40 E., NE. $\frac{1}{4}$ sec. 1, 1.2 miles northwest of Flagstaff mine, at northeast angle of forks of road; iron post stamped "3495 B. C."--	3,489.209

From Haines west to Rock Creek schoolhouse.

T. 7 S., R. 38 E., 750 feet northwest of southeast corner of sec. 36, 150 feet southwest of Rock Creek schoolhouse, 250 feet west of road; iron post stamped "3446 A"-----	3,450.971
T. 8 S., R. 38 E., 200 feet south by 20 feet west of northeast corner of sec. 1, south of Rock Creek schoolhouse; iron post stamped "3443"-----	3,453.923

From Haines along county road via Slough house to schoolhouse 4.5 miles north of Baker City.

T. 7 S., R. 40 E., sec. 31, 2 miles northwest of Slough house, in east angle of forks of road; iron post stamped "3344 B. C."-----	3,345.190
T. 8 S., R. 40 E., sec. 9, 0.7 mile southeast of Slough house, 100 feet east of Clark house; iron post stamped "3344 B. C."-----	3,338.383

From Flagstaff Well northeast to P. H. Miles's house, thence southeast to Keating and return, thence southwest to Palmer House, thence west to Flagstaff Well.

T. 8 S., R. 41 E., NE. $\frac{1}{4}$ sec. 7, northwest of road, 600 feet southwest of steep grade; iron post stamped "3553 B. C."-----	3,547.841
T. 7 S., R. 41 E., near center of sec. 35, 15 feet northeast of Emily schoolhouse, 80 feet southwest of road; iron post stamped "2788 B. C."-----	2,782.435

Keating, T. 8 S., R. 42 E., east side of sec. 26, 50 feet south of corner of house, in post-office yard at corner of fence; iron post stamped "2695 B. C."-----	Feet. 2, 690. 457
T. 9 S., R. 42 E., sec. 27, 50 feet northwest of Palmer house, south of road, near milepost 13; iron post stamped "3097 B. C."-----	3, 092. 538
T. 9 S., R. 41 E., sec. 10, northwest angle of forks of roads; iron post stamped "3341 B. C."-----	3, 336. 918

From Miles's house north to Beagle Creek, thence southeast via Burkemont to Keating.

T. 6 S., R. 41 E., SW. $\frac{1}{4}$ sec. 35, 0.2 mile west of Beagle Creek, 125 feet north of right angle in road, east side of road; iron post stamped "3191 B. C."-----	3, 186. 069
T. 7 S., R. 42 E., east side of sec. 29, 1 mile south of Table Mountain, top of rocky hill between forks of roads to Table Mountain, 0.2 mile north of road to Burkemont; aluminum tablet stamped "3452 B. C."-----	3, 447. 560

From point near White Swan mine south via Pritchard Flat and Pritchard Creek to Unity.

T. 10 S., R. 43 E., NW. $\frac{1}{4}$ sec. 7, on top of bare ridge, 1.7 miles north of house on west side of Pritchard Creek, 0.2 mile west of north-south road, south of dim east-west road; iron post stamped "3917 B. C."-----	3, 914. 658
Unity, in front of station; top of rail-----	3, 129. 1
Unity, sec. 1, T. 11 S., R. 42 E., 180 feet north of section house, east of main road, in forks; iron post stamped "3139 A"-----	3, 146. 509

From Unity southeast to Burnt River valley, thence west to mouth of Cave Creek, thence north via Deer Creek and Sheep Flat to Pleasant Valley.

T. 11 S., R. 42 E., NE. $\frac{1}{4}$ sec. 22, 2.5 miles northwest of Powell stone house, east of wood road, top of sandstone in place 18 by 15 feet and 3 feet out of ground; aluminum tablet stamped "3912 B. C."--	3, 908. 540
T. 12 S., R. 42 E., NE. $\frac{1}{4}$ sec. 6, 300 feet south of Lander house, south angle of forks of road at mouth of Cave Creek; iron post stamped "3126 B. C."-----	3, 121. 416
T. 11 S., R. 41 E., NW. $\frac{1}{4}$ sec. 21, above headwaters of Deer Creek, on flat summit of divide 5 feet west of road; iron post stamped "5257 B. C."-----	5, 252. 074

From Baker City southwest via Bowen ranch and Lockhart station to Whipple Gulch.

T. 9 S., R. 40 E., south side of sec. 32, 400 feet southwest of Bowen house, in forks of road; iron post stamped "3519 B. C."-----	3, 513. 184
T. 10 S., R. 39 E., north side of sec. 22, 1.3 miles southeast of Auburn, 175 feet south of junction of Prairie City and Hereford roads, on east side of Hereford road and east of white house owned by Mr. Littlefield; iron post stamped "3915 B. C."-----	3, 908. 930
Lockhart station, on Sumpter Valley Ry.; top of rail-----	3, 717. 9
T. 11 S., R. 39 E., north side of sec. 18, main divide between Powder River and Burnt River, summit of road between Baker City and Hereford, 30 feet west of road; iron post stamped "5669 B. C."---	5, 663. 401

From Hereford east along county road down Burnt River to Bridgeport, thence north to Bowen.

T. 12 S., R. 40 E., sec. 29, 0.3 mile east of Mill Creek, 10 feet north of road and 75 feet west of dry drain; iron post stamped "3499 B. C."-----	Feet. 3,493.482
T. 11 S., R. 40 E., sec. 28, divide between Burnt River and Powder River, main summit of road between Baker City and Bridgeport, 10 feet west of road and 160 feet north of junction with dim road southwest; iron post stamped "6127 B. C."-----	6,121.332

Near Keating.

Keating, 0.4 mile south of, under bridge 0.4 mile southwest of pink house on H. B. Cronston's place (former site of Keating post office); surface of water in Powder River, October 21, 1911-----	2,654.7
Keating, T. 8 S., R. 42 E., east side of sec. 26, 50 feet south of corner of house, in post-office yard, at corner of fence; iron post stamped "2695 B. C. and 2690"-----	2,690.457

CAVINESS QUADRANGLE.

[Latitude 44°-44° 30'; longitude 117° 30'-118°.]

Bench mark in sec. 27, T. 12 S., R. 39 E.

T. 12 S., R. 39 E., sec. 27, 30 feet south of road, 80 feet west of house owned by T. M. Reed, in corner of fence; iron post stamped "3559 B. C."-----	3,553.321
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SUMPTER QUADRANGLE.

[Latitude 44° 30'-45°; longitude 118°-118° 30'.]

From Whipple Gulch south to Hereford.

T. 11 S., R. 38 E., north side of sec. 26, 150 feet northwest of mouth of Whipple Gulch, 50 feet west of road; iron post stamped "4457 B. C."-----	4,451.521
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From California Gulch west via Sumpter Valley Ry. to McEwen.

McEwen, in front of station; top of rail-----	4,106.1
McEwen, SE. $\frac{1}{4}$ sec. 12, T. 10 S., R. 37 E., 0.6 mile west of post office, north of road, at fork of road to Prairie City; iron post stamped "4168 B. C."-----	4,162.274

From McEwen southwest to burnt cabin 3 miles east of Clifford, thence southeast to Hereford.

T. 10 S., R. 37 E., NE. $\frac{1}{4}$ sec. 16, 1 mile southwest of Young house, 20 feet north and 10 feet east of road to Sumpter; iron post stamped "4356 B. C."-----	4,350.352
T. 11 S., R. 36 E., south side of sec. 12, 2.8 miles southeast of Trout Creek, 40 feet north and 15 feet east of summit of road, in top of flat boulder; bronze tablet stamped "4691 A"-----	4,698.743
T. 11 S., R. 37 E., sec. 30, 0.5 mile north of King house, 12 feet north-east of road, in boulder; copper bolt stamped "3946 A"-----	3,954.373
T. 12 S., R. 37 E., SE. $\frac{1}{4}$ sec. 5, 175 feet southeast of Hardman house, 25 feet south of gate, at roadside; iron post stamped "3908 A"-----	3,916.171

From McEwen northwest via Sumpter to Granite.

Sumpter, south side of sec. 29, T. 9 S., R. 37 E., 45 feet north of north-east corner of station; iron post stamped "4429 B. C."-----	Feet. 4, 423. 496
T. 9 S., R. 36 E., SE. $\frac{1}{4}$ sec. 22, 1,000 feet east of saloon, 10 feet north-east of and 6 feet above road, in bowlder; tablet stamped "5325 A"-----	5, 333. 244
Granite, east side of sec. 4, T. 9 N., R. 35 $\frac{1}{2}$ E., north side of Grand Hotel, 10 feet west of corner of steps; iron post stamped "4680 A"-----	4, 688. 304

From Granite south via Red Boy mine to Robinsonville, thence east to Clifford.

T. 9 S., R. 35 E., SW. $\frac{1}{4}$ sec. 11, Red Boy mine, 450 feet northeast of stamp mill, 20 feet southwest of west end of Clear Creek bridge, 20 feet south of road; iron post stamped "4610 A"-----	4, 618. 338
Robinsonville, 0.2 mile south of post office, sec. 10, T. 10 S., R. 35 E., 25 feet south of road at summit, in top of rock 4 inches above ground; tablet stamped "6249 A"-----	6, 257. 102
Geiser, sec. 10, T. 10 S., R. 35 $\frac{1}{2}$ E., 450 feet west of Bonanza mill concentrator, north of road; iron post stamped "5140 A"-----	5, 148. 350
Clifford, T. 10 S., R. 36 E., sec. 19, 100 feet north of house, 2 feet east of Bonanza road, in top of bowlder; bronze tablet stamped "4269 A"-----	4, 278. 849

From Granite north via Crane Flats to Trout Creek meadow and to Chicken Hill.

T. 8 S., R. 35 $\frac{1}{2}$ E., sec. 15, 8 feet west of summit of road, north of Lucas Gulch, on Crane Flats, 15 feet north of fork of road to Monumental mine; iron post stamped "5666 A"-----	5, 674. 557
T. 7 S., R. 35 $\frac{1}{2}$ E., east side of sec. 34, 20 feet northeast of bridge over North Fork of John Day River, at north edge of Crane Flats, 10 feet east of road; iron post stamped "5195 A"-----	5, 203. 361
Chicken Hill, SW. $\frac{1}{4}$ sec. 1, T. 7 S., R. 35 $\frac{1}{2}$ E., on county line, 10 feet west of road, 75 feet northeast of sheep corral; iron post stamped "5929 A"-----	5, 937. 505
T. 7 S., R. 35 E., east side sec. 24, Trout Creek meadow, 60 feet southeast of log house, 200 feet south of east fork of Trout Creek, 2 miles west of Pendleton road; iron post stamped "5401 A"-----	5, 409. 394

At North Fork of John Day River, on spur east from Crane Flats.

T. 7 S., R. 36 E., sec. 32, North Fork of John Day River, 4 miles east of bridge over, 30 feet northeast of ford, 5 feet southeast of road; iron post stamped "5497 A"-----	5, 505. 331
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From Crane Flats east to Monumental mine (spur line).

Monumental mine, sec. 19 (unsurveyed), T. 8 S., R. 36 E., 50 feet northeast of hotel; iron post stamped "6352 A"-----	6, 360. 443
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From Lawton north to Saunder's mill (spur line).

T. 8 S., R. 35 E., east side of sec. 35, 1 mile northwest of Lawton, 50 feet east of bridge over Three Cent Creek, 250 feet southeast of Saunder's mill; iron post stamped "4443 A"-----	4, 451. 403
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From Sumpter north to Bourne.

T. 9 S., R. 37 E., sec. 5 (unsurveyed), 50 feet northeast of Scarf's house, 15 feet north of Silver Creek road, in granite rock; aluminum tablet stamped "5013 B.C."-----	5, 007. 271
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Bourne, east side of sec. 32 (unsurveyed), T. 8 S., R. 37 E., 65 feet northeast of J. P. Fox's house, 20 feet west of Eureka and Excelsior mine; iron post stamped "5403 B.C."----- Feet. 5, 397. 128

From Clifford southwest to Austin, thence east to Hereford.

T. 10 S., R. 35½ E., SW. ¼ sec. 26, 250 yards west of bridge over North Fork of Burnt River, in top of large bowlder; aluminum tablet stamped "4368 A"----- 4, 377. 713
 T. 10 S., R. 35½ E., west side of sec. 34, 12 feet northwest of road, at southwest corner of small flat on summit, in top of large bowlder; bronze tablet stamped "5107 A"----- 5, 114. 862
 Austin, west side of sec. 21, T. 11 S., R. 35 E., 30 feet west of store, 20 feet west of road, in top of large bowlder; aluminum tablet stamped "4074 A"----- 4, 081. 857
 T. 11 S., R. 35½ E., sec. 34 (unsurveyed), 450 feet east of log house, 100 feet east of new log barn, 50 feet south of road, in top of large bowlder; copper bolt stamped "4324 A"----- 4, 333. 457

SUSANVILLE QUADRANGLE.

[Latitude 44° 30'–45°; longitude 118° 30'–119°.]

From Austin via Susanville to Pendleton road near Long Creek (unchecked spur line).

T. 11 S., R. 35 E., west side of sec. 21, 30 feet west of store, 20 feet west of road, in top of bowlder; aluminum tablet stamped "4074 A"----- 4, 081. 857
 Austin, 3.2 miles west of, 800 feet north of Finland ranch house, 120 feet north of road, in highest surface of bowlder; aluminum tablet stamped "4032 Adj 1903"----- 4, 032. 971
 Austin, 5.2 miles west of, on summit of first divide west of Finland ranch, 20 feet north of road, highest point on set rock; "U. S. G. S. 4099" painted on rock----- 4, 099. 83
 Austin, 6.2 miles west of, on hillside 800 feet northwest of bridge over Bowlder Creek, 30 feet east of road, highest surface of set bowlder; aluminum tablet stamped "4109 Adj 1903"----- 4, 109. 235
 Thompson ranch, 1.1 miles west of, on north edge of road, in large rock; aluminum tablet stamped "3946 Adj 1903"----- 3, 946. 165
 Thompson ranch, 2 miles west of, at bend in road, 10 feet south of road, 75 feet north of Middle Fork of John Day River, in large set bowlder; aluminum tablet stamped "3666 Adj 1903"----- 3, 666. 134
 Ballancis ranch, 1.1 miles east of, 750 feet northeast of small log cabin with extension roof, 25 feet north of and about 15 feet above road, in large bowlder; aluminum tablet stamped "3566 Adj 1903"----- 3, 566. 634
 Susanville, at north corner of Badger Mining Co.'s stamp mill, highest face of large serpentine bowlder; aluminum tablet stamped "3765- Adj 1903"----- 3, 765. 516
 Mouth of Camp Creek, 1.1 miles above, 50 feet south of fence, 30 feet east of wagon trail; iron post stamped "3559 Adj 1903"----- 3, 559. 152
 Mouth of Camp Creek, 4.3 miles above, 100 feet above point where wagon trail crosses creek, 75 feet east of creek, 10 feet east of wagon road, 5 feet north of small spring, in large rock; aluminum tablet stamped "3854 Adj 1903"----- 3, 854. 670
 Galena, at east corner of hotel, 10 feet southeast of main street; iron post stamped "3410 Adj 1903"----- 3, 410. 403

Griggs ranch house, 0.6 mile east of, 900 feet east of bridge over river, 200 feet northwest of Little Mosquito Creek, 25 feet north of road, highest surface of set rock; aluminum tablet stamped "3340 Adj 1903"	Feet. 3, 340. 362
John Day River, Middle Fork of, on top of iron bridge over, bolt over center pier and on south side of bridge; "3326" painted on bridge timber	3, 326. 845
McMahon ranch, 0.8 mile east of, on summit of first divide west of Griggs ranch, 300 feet north of road, in large upright rock; aluminum tablet stamped "3765 Adj 1903"	3, 765. 602
Cross Hollow Creek, 800 feet west of, summit of first hill, 30 feet north of old stone fence, 20 feet west of road, in large rock; aluminum tablet stamped "3669 Adj 1903"	3, 669. 624
Slide Creek, 1.2 miles east of, on summit of first hill east of creek, 10 feet south of road; highest point of set rock, painted "U. S. G. S. 3644"	3, 644. 923
King ranch house, 500 feet southeast of, 30 feet southwest of road, 5 feet northwest of small stream, highest surface of flat rock; aluminum tablet stamped "3550 Adj 1903"	3, 550. 472
Woodall ranch, 50 feet in front of ranch house, on north edge of road, in base of large stump; 6-inch spike painted "U. S. G. S. 3347.6"	3, 348. 210
Middle Fork and Long Creek valleys, summit between, 60 feet north of road, inside of fence, in highest part of set rock; aluminum tablet stamped "4314 Adj 1903"	4, 314. 118
Forks of Pendleton and Susanville roads, bow in fence, 20 feet east of guldepost; iron post stamped "3814 Adj 1903"	3, 814. 677

PINE QUADRANGLE.

[Latitude 44° 30'–45°; longitude 117°–117° 30'.]

From Marble northeast along Oregon Short Line R. R. to mouth of Powder River, thence west along highway up Powder River to point near Keating.

Marble, 0.9 mile north of, 500 feet north of milepost 13, 10 feet west of railroad; point on rock in circle of paint marked "U. S. 1979 B. M."	1, 979. 55
Mineral, 1 mile south of, 300 feet south of sign "Water tank 1 mile," on north end of railroad trestle, on east side; top of bolt in circle of paint, marked "U. S. 1975 B. M."	1, 975. 37
Mineral, 700 feet south of milepost 15, 15 feet west of railroad, in concrete foundation of water tank, on north side; aluminum tablet stamped "1971 1911 5"	1, 971. 763
Mineral, 1.1 miles north of, 1.3 miles south of Winslow, 150 feet north of milepost 16, 45 feet west of railroad, on top of boulder; point in circle of paint marked "U. S. 1963 B. M."	1, 963. 71
Winslow, 0.1 mile south of, 30 feet north of cattle guard, 50 feet north of milepost 17, 10 feet west of railroad, on boulder; point in circle of paint marked "U. S. 1951 B. M."	1, 952. 35
Winslow, opposite signboard; top of rail	1, 952. 8
Winslow, 0.8 mile north of, 90 feet south of milepost 18, 15 feet west of railroad, in top of large boulder; aluminum tablet stamped "1949 1911 6"	1, 950. 019
Winslow, 1.8 miles north of, 120 feet south of milepost 19, 15 feet west of railroad, on top of large boulder; point in circle of paint marked "U. S. 1943 B. M."	1, 943. 86

Park, 1.6 miles south of, 240 feet north of milepost 20, 10 feet east of railroad, on rock; point in circle of paint marked "U. S. 1945 B. M."-----	Feet. 1, 945. 80
Park, 0.9 mile south of, 0.4 mile south of milepost 21, 8 feet above roadbed, 10 feet east of track, in top of concrete siphon drain under railroad; aluminum tablet stamped "1950 1911 7"-----	1, 950. 847
Park, opposite signboard; top of rail-----	1, 939. 7
Park, 0.4 mile north of, 300 feet north of milepost 22, 15 feet west of railroad, on top of bowlder; point in circle of paint, marked "U. S. 1937 B. M."-----	1, 938. 29
Park, 1.4 miles north of, 60 feet north of milepost 23, 20 feet west of railroad; point of large basalt bowlder in circle of paint marked "U. S. 1932 B. M."-----	1, 932. 60
Park, 2.4 miles north of milepost 24, 25 feet east of railroad, in top of large basalt bowlder; aluminum tablet stamped "1934 1911 8"-----	1, 934. 804
Sturgill, 3.2 miles south of, 10 feet south of milepost 25, on top of basalt bowlder; point in circle of paint marked "U. S. 1928 B. M."-----	1, 928. 94
Sturgill, 1.6 miles south of, 120 feet north of milepost 26, 10 feet west of railroad, on rock of railroad cut; point in circle of paint marked "U. S. 1929 B. M."-----	1, 929. 63
Sturgill, 0.5 mile south of, south of road crossing, in cut of railroad, 15 feet east of track, in top of rock; aluminum tablet stamped "1924 1911 9"-----	1, 925. 406
Sturgill, opposite signboard; top of rail-----	1, 912. 72
Sturgill, 0.8 mile north of, 450 feet south of milepost 28, 30 feet east of railroad, on large bowlder; point in circle of paint marked "U. S. 1898 B. M."-----	1, 898. 77
Sturgill, 2 miles north of, 420 feet north of milepost 29, 40 feet west of railroad, on top of basalt bowlder; point in circle of paint marked "U. S. 1892 B. M."-----	1, 893. 01
Powder River, mouth of, 1 mile south of, 2.3 miles south of Robinette, 0.3 mile south of milepost 30, in second cut south of above milepost, west of railroad, on rock ledge, 2 feet above ground; aluminum tablet stamped "1884 1911 10"-----	1, 884. 701
Powder River, mouth of, 200 feet west of junction with Snake River, 0.9 mile south of Robinette, north end west side of railroad steel bridge over Powder River, on top of concrete abutment of approach; aluminum tablet stamped "1878 1911 11"-----	1, 879. 189
Powder River, mouth of, 1.1 miles west of, 20 feet south of Powder River road, on small ridge in big bend in road, 100 feet north of river, on good-sized basalt bowlder; point in circle of paint marked "U. S. 1925 B. M."-----	1, 926. 01
Robinette, 3 miles west of, NW. $\frac{1}{4}$ sec. 22, T. 9 S., R. 46 E., 170 feet north of Powder River, 75 feet north of road, 35 feet west of private road to house, at John Green place, in top of very large basalt bowlder; aluminum tablet stamped "1992 1911 12"-----	1, 992. 824
Powder River, mouth of, 4.3 miles west of, 1.1 miles west of John Green place, 10 feet north of Powder River road, in base of telephone pole; spike marked "1993 U. S. B. M."-----	1, 993. 80
Powder River, mouth of, 5.4 miles west of, 2 miles east of Harvel place, 150 feet north of Powder River, 10 feet south of road, on top of basalt bowlder; point in circle of paint marked "U. S. 2016 B. M."-----	2, 017. 11

Richland, 3.1 miles east of, 0.5 mile east of house on Harvel place, 500 feet down river from point where Powder River makes big turn to east, 50 feet north of river, 5 feet north of road, on ledge of basalt 4 feet above level of road, rock painted "S. B. M. No. 13"; aluminum tablet stamped "2034 1911 13"-----	Feet. 2, 034. 514
Richland, 2.5 miles east of, west side of road near Harvel place, 200 feet south by 110 feet west of house, on Daily Creek road, 350 feet south of intersection with Powder River road, at corner, in base of large fence post; spike marked "U. S. 2067 B. M."-----	2, 068. 43
Richland, 1 mile east of, intersection with a private road leading south, 700 feet west of white ranch house on south side of road; telephone pole marked "U. S. 2148"-----	2, 149. 0
Richland, Eagle Valley State bank building, on top of concrete steps in front of; aluminum tablet stamped "2213 1911 14"-----	2, 213. 535
Richland, 2.7 miles west of, junction of two roads, at northwest corner of road, in base of corner fence post; spike marked "U. S. 2234 B. M."-----	2, 234. 92
Richland, 2.5 miles west of, northwest corner of Sunnyside School (district 21), in sandstone foundation, at level of ground banked about building; aluminum tablet stamped "2280 1911 15"-----	2, 281. 460
Richland, 3.5 miles west of, 0.7 mile northwest of Sunnyside School, 0.5 mile north of road, 50 feet south of junction of lateral ditch with main Waterberry Ditch, on basalt boulder; point in circle of paint, marked "U. S. 2400 B. M."-----	2, 400. 55
Richland, 3.8 miles west of, on Richland-Rich road, at T in roads in front of Padgett place, in west post of gate of road leading to house; spike at base, marked "U. S. 2414 B. M."-----	2, 414. 60
Pleasant Ridge School, 4 miles west of Richland, at northeast corner of building, in sandstone foundation; aluminum tablet stamped "2583 1911 16"-----	2, 583. 852
Pleasant Ridge School, 0.3 mile north of, at angle in road on top of hill, on north side of road, in base of corner fence post; spike marked "U. S. 2588 B. M."-----	2, 589. 21
Pleasant Ridge School, 1.4 miles northwest of, 0.4 mile east of house on "Farley place," at northeast corner of his field, point where Baker City road descends hill from schoolhouse to Powder River, in base of corner fence post; spike marked "U. S. 2258 B. M."-----	2, 258. 84
Black Bridge over Powder River, 1 mile east of, 300 feet west of house, on "Samonis place," 6 feet north of road, on boulder; point in circle of paint, marked "U. S. 2291 B. M."-----	2, 291. 76
Black Bridge over Powder River, 70 feet south of southeast corner, 40 feet east of road; iron post stamped "2298 1911 17"-----	2, 298. 808
Black Bridge over Powder River, 1.2 miles west of, opposite point where road turns up hill; surface of Powder River-----	2, 323. 7
Black Bridge over Powder River, 1.4 miles west of, 8.8 miles west of Richland, 200 feet east of point where road turns up hill leaving river, 2 feet south of road, on rock; point in circle of paint, marked "U. S. 2330 B. M."-----	2, 331. 293
Black Bridge over Powder River, 1.9 miles west of, 9.5 miles west of Richland, 0.6 mile from point where road leaves Powder River and turns up hill, 150 feet west of second turn in road, on top of basalt boulder; in circle of paint, marked "U. S. 2599 B. M."-----	2, 599. 93

Rich ranch, 1 mile east by 0.3 mile south of, at top of steep ascent 1 mile west of Powder River, 400 feet east of fenced lane, at base of fence post (used for signal by topographer); spike painted white marked "U. S. 3095 B. M."-----	Feet. 3, 096. 34
Rich ranch, 0.7 mile east of, 11 miles west of Richland, SW. $\frac{1}{4}$ sec. 9, T. 9 S., R. 44 E., at west end of fenced lane, on north side at fence corner; point in circle of paint on top, marked "3237 U. S. B. M."-----	3, 238. 57
Rich ranch, SE. $\frac{1}{4}$ sec. 8, T. 9 S., R. 44 E., 11.5 miles west of Richland, 68 feet east by 30 feet north of ranch house, west side of road, 1 foot east of board fence; iron post stamped "3263 1911 18"-----	3, 264. 145
Five Mile Creek, 0.7 mile east of, 1.4 miles north of Baker City road, on large bowlder; point in circle of paint, marked "U. S. 3152 B. M."--	3, 153. 26
Five Mile Creek, 14.3 miles west of Richland, 11 miles southeast of Keating, 2.4 miles west of Rich ranch, in sec. 8, T. 9 S., R. 44 E., on northeast slope of ridge, 175 feet west of Five Mile Creek, 25 feet west of Baker City road, 300 feet southwest of bridge over creek; iron post stamped "2997 1911 19"-----	2, 998. 273
Love Creek, 7.8 miles southeast of Keating, 140 feet south by 70 feet east of wooden bridge over Love Creek on Richland-Baker road (via Rich ranch), 40 feet east of creek, on east slope of bench, 20 feet above level of creek, in basalt rock painted "S. B. M. No. 20" in white; aluminum tablet stamped "2792 1911 20"-----	2, 793. 522
Love Creek, 0.4 mile west of, on top of ridge, 50 feet north of Baker road, on top of basalt bowlder; point in circle of paint, marked "2846 U. S. B. M."-----	2, 846. 94
T. 8 S., R. 43 E., SE. $\frac{1}{4}$ sec. 31, 3.5 miles southeast of Keating, on F. E. Love's place, 90 feet south by 20 feet west of house, 100 feet west of culvert over dry creek, 10 feet north of Richland-Baker road; iron post stamped "2695 1911 21"-----	2, 695. 439

Ironside Mountain quadrangle.

BAKER AND MALHEUR COUNTIES.

The elevations in the following list are based on a bronze tablet stamped "3433 A," set in the astronomical pier in front yard of the public school at Baker City. The elevation of this bench mark is accepted as 3,440.871 feet, as determined by the precise line of levels run along the Oregon-Washington R. R. & Navigation Co.'s track by the Coast and Geodetic Survey.

The leveling was done in 1905 by Stuart T. Penick and Homer D. Hadley.

IRONSIDE MOUNTAIN QUADRANGLE.

[Latitude 44°-44° 30'; longitude 118°-118° 30'.]

From Hereford southwest via Unity road to point about 2 miles from Unity, thence south and east along Ironside road to Moore ranch, thence southwest along Military road to Little Malheur River, thence south and east along road to Hunter ranch.

T. 12 S., R. 37 E., sec. 30, 300 feet southwest of McCullough cabin, 150 feet west of road, 15 feet west of ditch, in top of bowlder; aluminum tablet stamped "3951 A"-----	Feet. 3, 961. 010
Hereford, 60 feet southeast of post office, 75 feet east of road, 150 feet north of Trimble house; iron post stamped "3664 B. C."-----	3, 658. 351

Hereford, 3 miles west of, 700 feet east of Camp Creek, 170 feet north of Merrick Hough's house, 25 feet north of road; iron post stamped "3703 Adj 1903"-----	Feet. 3, 703. 477
Hereford, 6 miles west of, 150 feet south of drain, 10 feet north of road on summit of small hill; iron post stamped "3936 Adj 1903"-----	3, 936. 481
Hereford, 8.75 miles southwest of, 30 feet south of junction of Hereford-Unity road and Hereford-Ironside road; iron post stamped "3936 Adj 1903"-----	3, 936. 625
Hereford, 12 miles southwest of, 800 feet north of road forks, 250 feet west of fence, on small rise 6 feet northeast of road; iron post stamped "4142 Adj 1903"-----	4, 142. 657
Beams ranch, 7.8 miles northwest of, 8 feet west of road on summit of hill; iron post stamped "4640 Adj 1903"-----	4, 641. 542
Beams ranch, 3.5 miles northwest of, 75 feet south of Eldorado ditch, 10 feet east of road; iron post stamped "4662 Adj 1903"-----	4, 663. 576
Beams ranch, 0.5 mile north of, 200 feet southeast of clump of quaking aspen, 15 feet north of road; iron post stamped "4123 Adj 1903"-----	4, 124. 425
Moore ranch, 0.25 mile southeast of, 200 feet west of Willow Creek, at west end of lane, 20 feet southwest of road; iron post stamped "3987 Adj 1903"-----	3, 988. 477
Board cabin, 0.25 mile southwest of, 800 feet southwest of field, 200 feet northwest of Willow Creek, 15 feet northwest of road; iron post stamped "4196 Adj 1903"-----	4, 197. 770
Cobin ranch, 2.25 miles southwest of, 300 feet northwest of Willow Creek, 10 feet southeast of road, at northeast corner of Cobin ranch upper pasture; iron post stamped "4452 Adj 1903"-----	4, 453. 824
Cobin ranch, 5.25 miles southwest of, 600 feet southwest of creek forks, 30 feet north of creek, 4 feet north of road; iron post stamped "4844 Adj 1903"-----	4, 845. 669
Tureman ranch, 0.75 mile east of, 100 feet north of creek, 6 feet north of road, in large rock; aluminum tablet stamped "4715 Adj 1903"-----	4, 716. 501
Tureman ranch, 2 miles southwest of, 0.5 mile southeast of Little Malheur River, 10 feet southeast of road; iron post stamped "4589 Adj 1903"-----	4, 590. 639
Tureman old ranch, 2.6 miles south of, 900 feet north of rail corral, 300 feet east of Little Malheur River, 20 feet east of road; iron post stamped "4348 Adj 1903"-----	4, 349. 779
Hunter ranch, 8.5 miles north of, 10 feet northeast of road, on summit of divide between Lost Creek and Bully Creek; iron post stamped "5573 Adj 1903"-----	5, 574. 783
Hunter ranch, 5.5 miles north of, 300 feet north of where road crosses small drain, 20 feet east of road; iron post stamped "5126 Adj 1903"-----	5, 127. 749
Hunter ranch, 2.5 miles north of, 20 feet west of road at foot of rocky ridge; aluminum tablet stamped "4268 Adj 1903"-----	4, 269. 688
Billy Wilson's, 1.5 miles west of, northwest angle of road to J. S. Hunter's house at fence line; iron post stamped "4103 Adj 1903"-----	4, 110. 853

From Hereford southwest along road to point on Unity-Ironside road 5.5 miles southeast of Unity.

Hereford, 4 miles south of, 150 feet north of road forks, 10 feet west of road, on summit of divide; iron post stamped "4357 Adj 1903"-----	4, 357. 441
Hereford, 7 miles south of, 1 mile east of Murray ranch, 10 feet east of road on summit of divide; iron post stamped "4346 Adj 1903"-----	4, 346. 555

From point on Hereford-Unity road 6 miles southwest of Hereford west to Whitehead ranch, thence up Eldorado Ditch valley to West Camp Creek and down West Camp Creek valley to Hereford-Unity road.

McGlennan & McCarthy ranch, south side of lane, 1 foot north of fence, 400 feet southwest of house; iron post stamped "3851 Adj 1903" -----	Feet. 3, 851. 357
Royal schoolhouse, 1.2 miles southwest of, on South Fork Valley road, on slight rise in hillside, 20 feet west of road; iron post stamped "3999 Adj 1903" -----	3, 999. 723
Carlyle ranch, 150 feet southeast of, 100 feet south of bend in road, 1 foot east of fence; iron post stamped "4086 Adj 1903" -----	4, 086. 489
Hardman ranch, 750 feet southeast of house, 15 feet south of county road; iron post stamped "4321 Adj 1903" -----	4, 321. 262
At forks of canyon at South Fork of Burnt River, 40 feet east of abandoned log stable; iron post stamped "4494 Adj 1903" -----	4, 494. 811
Hardman ranch, 3 miles south of, 30 feet south of Eldorado Ditch, on northwest slope of Bull Run Mountain, in large open clearing, 50 feet southwest of small sluice box of old placer mine; iron post stamped "4986 Adj 1903" -----	4, 986. 296
East Bull Run Mountain, 350 feet west of Jobs Creek, 50 feet south of Eldorado Ditch, on north slope; iron post stamped "4963 Adj 1903" -----	4, 963. 500
From Tureman old ranch west along The Dalles military road to point 0.9 mile west of Crane Prairie, thence south along Drewsey road to Altnow ranch.	
Bear Creek valley, on hillside 400 feet south of Bear Creek, 60 feet east of road, in set rock; aluminum tablet stamped "5073 Adj 1903" -----	5, 074. 915
Bear Creek, 3.3 miles west of North Fork of Malheur River, 50 feet northwest of road, in boulder; aluminum tablet stamped "4814 Adj 1903" -----	4, 815. 295
North Fork of Malheur River, 1,000 feet east of, at road crossing, 100 feet southeast of first summit east of river, 5 feet west of road, in mass of rock; aluminum tablet stamped "4721 Adj 1903" -----	4, 722. 281
Crane Creek valley, 2.6 miles above junction with North Fork of Malheur River, 60 feet north of creek, 10 feet north of road, in highest surface of rock; aluminum tablet stamped "4771 Adj 1903" -----	4, 772. 994
Crane Creek valley, 1,200 feet below Crane Prairie, 60 feet east of creek, 3 feet south of road, in highest part of boulder; aluminum tablet stamped "5213 Adj 1903" -----	5, 215. 191
Crane Prairie, 0.65 mile south of, 0.7 mile north of summit between Crane Prairie and Cottonwood Creek valley, 10 feet west of road; iron post stamped "5423 Adj 1903" -----	5, 424. 928
Att's sawmill, 2.55 miles northwest of, 0.3 mile southeast of bare ridge, 15 feet west of road; iron post stamped "5518 Adj 1903" -----	5, 519. 321
Att's sawmill, 150 feet southwest of, 50 feet south of Alder Creek, 25 feet west of road, in highest surface of large flat-topped boulder; aluminum tablet stamped "5570 Adj 1903" -----	5, 571. 421
Antelope Springs, 2.72 miles north of, in open clearing free from sage-brush, 15 feet west of road; iron post stamped "5441 Adj 1903" -----	5, 442. 801
Antelope Springs, 0.71 mile south of, on summit of first divide south of springs, 100 feet east of road, in rock; aluminum tablet stamped "5499 Adj 1903" -----	5, 500. 958

Head Spring of Squaw Creek, 0.7 mile north of, 20 feet west of road, in rock; aluminum tablet stamped "4680 Adj 1903"-----	Feet. 4, 681. 449
Brittingham ranch, 1.25 miles north of, 500 feet east of summit of small flat-topped lava-capped hill, 15 feet east of east fork of Drewsey road, in boulder; aluminum tablet stamped "3958. Adj 1903"-----	3, 960. 031
Beulah, 8.6 miles west of, north side of road, 25 feet west of gate leading to Altnow ranch house, at fence line; iron post stamped "3612 H"-----	3, 619. 975

From point 2.6 miles south of Tureman old ranch down Little Malheur River to mouth of Lost Creek.

Little Malheur River valley, 2.61 miles north of mouth of Lost Creek, 150 feet west of river, 10 feet east of wagon trail, in boulder; aluminum tablet stamped "4199 Adj 1903"-----	4, 201. 025
Junction of Little Malheur River and Lost Creek, 300 feet north-east of, 200 feet southwest of wagon road; iron post stamped "4051 Adj 1903"-----	4, 053. 084

Elgin, Telocaset, and Wallowa Lake quadrangles.

UNION AND WALLOWA COUNTIES.

The elevations in the following list are based on heights of bench marks determined by precise leveling of the Coast and Geodetic Survey along the Oregon-Washington R. R. & Navigation Co.'s track and on the 1912 adjustment.

The leveling was done in Telocaset quadrangle in 1905 by Homer L. Hadley; and in Elgin, Telocaset, and Wallowa Lake quadrangles in 1903 by T. R. Berry.

TELOCASET QUADRANGLE.

[Latitude 45°-45° 30'; longitude 117° 30'-118°.]

From Union to North Powder.¹

Union, Main Street crossing on railroad track, north side of dry-goods store, 0.6 meter from northeast corner, in stone sill; red metal disk (C. & G. S. b. m. Z 2)-----	Feet. 2, 789. 093
Union, at southeast corner of foundation of Masonic Temple; bronze tablet stamped "2788"-----	2, 788. 585
Union, in front of Oregon-Washington R. R. & Navigation Co.'s station; top of rail-----	2, 716. 8
Union, 0.8 mile north of station, 80 feet north of milepost 317, 50 feet east of track; iron post stamped "2711"-----	2, 711. 424
(This bench mark has been disturbed. The cap was found hammered in in the middle and a hole was punched through it, apparently with the sharp end of a crowbar.)	
Hot Lake, north end of station; top of rail-----	2, 701. 2
Hot Lake, 2.8 miles west of, 15 feet south of junction of La Grande, North Powder, and Hot Lake roads, on east edge of La Grande-North Powder road; inner post stamped "2785 Adj 1903"-----	2, 785. 676

¹ This line failed to close at North Powder by -2.674 feet. No adjustment of this error has been made.

Wendt ranch, 300 feet east of ranch house, 20 feet north of bridge over small creek, 15 feet northeast of road; iron post stamped "3516"	Feet. 3, 516. 830
At summit of Ladds Canyon, 3 feet south of fence; iron post stamped "3757"	3, 757. 764
T. 5 S., R. 39 E., center of sec. 20, on east side of road, 1,000 feet south of deserted ranch house on Clover Creek; iron post stamped "3363"	3, 363. 969
North Powder, 4.9 miles north of, at bend in road, 10 feet south of fence corner; iron post stamped "3346"	3, 346. 194
North Powder, 2.2 miles north of, 1 mile north of Wolf Creek, on summit of first hill north of creek, east edge of road; iron post stamped "3389"	3, 389. 333
North Powder, 50 feet west of station, at fence corner; iron post stamped "3235"	3, 242. 160
North Powder, southeast wall (limestone) of I. O. O. F. building, 4 feet southwest of east corner, 5 feet above ground; intersection of cross lines on copper bolt stamped "U. S. G. S."	3, 256. 478

From permanent bench mark near Medical Springs to Union.¹

Medical Springs, 2.6 miles southwest of, at bend in Telocaset road, 600 feet west of Beagle Creek; iron post stamped "3186"	3, 186. 019
Medical Springs, in front of hotel, 2 feet west of fence; iron post stamped "3387"	3, 388. 075
Medical Springs, 2 miles northwest of, on summit of divide between springs and The Park, 5 feet west of road; iron post stamped "3811"	3, 811. 667
The Park, on summit of first rise north of, 20 feet west of road, in foot of blazed pine tree; nail marked "T. B. M. 4154"	4, 158. 62
Divide between The Park and Catherine Creek, on summit of, 10 feet south of road; iron post stamped "4177 A"	4, 178. 083
Catherine Creek valley, 3.9 miles below Seek's sawmill, 15 feet north of valley road from the north; iron post stamped "3218 A"	3, 218. 462
Union, 5.2 miles southeast of, in valley of Catherine Creek; iron post stamped "3023"	3, 023. 920
Union, 2 miles east of, at forks of road 650 feet north of Little Creek, 2 feet west of rock 6 by 6 by 6 feet; iron post stamped "2863"	2, 864. 227

From Union station along county roads via Union, Cove, Nibley, and Island City to Le Grande.

T. 4 S., R. 40 E., near quarter corner at center of sec. 6, east side of road; iron post stamped "2740 A"	2, 746. 861
Cove, opposite Cove Hotel, at northeast corner of block; iron post stamped "2886 A"	2, 892. 685
Nibley, 42 feet east of northeast corner of fence around schoolhouse; iron post stamped "2728 A"	2, 734. 305
T. 2 S., R. 39 E., 45 feet southeast of quarter corner between secs. 26 and 27, 5 feet south of northwest corner of schoolhouse; iron post stamped "2688 A"	2, 394. 447
T. 2 S., R. 39 E., near quarter corner between secs. 29 and 30, at southeast corner of schoolhouse fence; iron post stamped "2708 A"	2, 714. 353

¹ An excessive error has been distributed in this line.

From point 2.5 miles southeast of Nibley along county road to Elgin, thence along county road via Imbler and Alicel to point 1 mile west of Pierce brothers' farmhouse.

Tps. 2 and 3 S., R. 40 E., 2.5 feet west of corner of secs. 4, 5, 32, and 33; iron post stamped "2690 A"-----	Feet. 2, 696. 107
Schoolhouse of District No. 9, in south corner of grounds; iron post stamped "2775 A"-----	2, 781. 528
Rhinehart siding, 0.5 mile east of, on truss bridge over Grande Ronde River; in coping stone of east abutment; bronze tablet stamped "2671 A"-----	2, 676. 632
Imbler, in stone mitre sill of engine room, north door of Imbler Milling Co.'s mill; bronze tablet stamped "2706 A"-----	2, 711. 584
Alicel, N. $\frac{1}{2}$ SE. $\frac{1}{2}$ sec. 7, T. 2 S., R. 39 E., 4 feet east of southwest corner of fence; iron post stamped "2749 A"-----	2, 754. 859

From Union along county road to Medical Springs, thence along county road to Telocaset.

S. S. Turner's farmhouse, 0.4 mile west of, 30 feet north of road, in flat stone; aluminum tablet stamped "3425"-----	3, 430. 179
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ELGIN QUADRANGLE.

[Latitude 45° 30'–46°; longitude 117° 30'–118°.]

Center of sec. 26, T. 1 N., R. 39 E.

T. 1 N., R. 39 E., near quarter corner in center of sec. 26, east side of road, on summit between Indian and Clarkes creeks; iron post stamped "2826 A"-----	2, 831. 617
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From Elgin along county road to Wallowa (single spur line).

Elgin, Main Street entrance to First National Bank, in east end of lower step; bronze tablet stamped "2664 A"-----	2, 669. 807
Highland, north side of road, in southeast corner of schoolhouse yard; iron post stamped "3222 A"-----	3, 227. 864
T. 1 N., R. 40 E., 1,275 feet north by 135 feet west of quarter corner on south boundary of sec. 2, in center of north line of Pine Grove Church yard; iron post stamped "3560 A"-----	3, 565. 839
East side of road, on point of projecting bedrock; aluminum tablet stamped "3509 A"-----	3, 514. 099
Wallowa bridge, 50 feet west of west end of, in top of granite boulder; bronze tablet stamped "2535"-----	2, 540. 726
North edge of road, in top of boulder; aluminum tablet stamped "2643"-----	2, 648. 795
J. E. Wallace's farmhouse, 400 feet north of, on shelf projection on face of basalt rock bluff; bronze tablet stamped "2708"-----	2, 714. 624
Road junction where Joseph and Elgin stage road merges from Wallowa Canyon into Wallowa Valley, in top of basalt boulder; bronze tablet stamped "2769"-----	2, 774. 951
Wallowa, at northeast corner of public school; iron post stamped "2934"-----	2, 940. 654
North side of road, in top of large boulder; bronze tablet stamped "3029"-----	3, 035. 896

WALLOWA LAKE QUADRANGLE.

[Latitude 45°-45° 30'; longitude 117°-117° 30'.]

From Wallowa along roads to point near Enterprise (single spur line).

	Feet.
Angle in road; iron post stamped "3111"-----	3, 117. 32
Lostine, at southwest corner of high-school grounds; iron post stamped "3356"-----	3, 362. 14
W. W. Wade's farmhouse, 100 feet east of, south side of road at angle; iron post stamped "3365 A"-----	3, 371. 356
Summit between Lostine and Enterprise, south side of road, at west end of lane; iron post stamped "3983 A"-----	3, 988. 818
Enterprise, near southwest corner of Hotel Enterprise, in footing course on west face; bronze tablet stamped "3749 A"-----	3, 755. 533
Road junction; iron post stamped "3903 A"-----	3, 909. 084

Arlington, Blalock Island, Condon, Heppner, and Umatilla quadrangles.

GILLIAM, MORROW, AND UMATILLA COUNTIES.

The elevations in the following list are based upon corrected heights along the Oregon-Washington R. R. & Navigation Co.'s track on a double-rodged line run in 1899 by H. S. Crowe. The original results of that line were published in the appendix to the Twenty-first Annual Report of the United States Geological Survey. The new adjustment, first, applies a rod correction of 0.001 foot per vertical foot increasing differences of elevations (a correction determined by comparison with Coast and Geodetic Survey elevations south of Pendleton, Oreg.); second, adjusts a remaining closure error of 1.4 feet from Wallula, Wash., via Umatilla to Pendleton, Oreg.; and, third, raises the line between Arlington and Umatilla to agreement without additional adjustment.

The leveling in the Arlington, Blalock Island, and Heppner quadrangles was done in 1906 by John R. Evans and that in the Umatilla quadrangle in 1907 by T. J. McClain. Additional leveling in Arlington quadrangle was done in 1912 by L. R. Ebert and D. H. Watson and in 1913 by D. S. Birkett. The leveling in Condon quadrangle was done in 1913 by Birkett.

The leveling was done in cooperation with the State, and the bench marks were stamped with the State name.

ARLINGTON QUADRANGLE.

[Latitude 45° 30'-46°; longitude 120°-120° 30'.]

NOTE.—For elevations in Washington in this quadrangle see Bulletin 557.

From Heppner Junction south along Heppner Branch of Oregon-Washington R. R. & Navigation Co.'s track to milepost 161.

	Feet.
Heppner Junction, T. 4 N., R. 22 E., sec. 35, 18 feet west of corner of station, 10 feet south of track; iron post stamped "240 A"-----	242. 299
T. 3 N., R. 22 E., sec. 12, 3.45 miles south of Heppner Junction, 60 feet west of road; iron post stamped "298 1906"-----	298. 931

T. 3 N., R. 22 E., north side of sec. 26, 6.4 miles south of Heppner Junction, 50 feet east of railroad, 200 feet west of road; iron post stamped "382 1906"-----	Feet. 383. 634
T. 2 N., R. 22 E., sec. 1, 8.9 miles south of Heppner Junction, at milepost 161, in rock cut 400 feet south of crossing, 15 feet west of track; aluminum tablet stamped "453 1906"-----	454. 533
From Arlington south along Oregon-Washington R. R. & Navigation Co. (Condon Branch) and highway to Rock Creek, thence along highway northwest to McDonald's ferry, thence north to Blalock.	
Eddy, 1 mile north of, at sign reading "Eddy 1 Mile"; spike in milepost, marked "306"-----	305. 93
Eddy, milepost 1 mile south of; spike marked "459"-----	459. 68
Arlington, 3.9 miles south of, 100 feet east of railroad track, at forks of Pendleton and Heppner wagon roads, 10 feet west of telegraph pole, in rock; aluminum tablet stamped "525 Ore"-----	525. 484
Shuttlers; spike in signboard, marked "704"-----	704. 15
Shuttlers station, 1,500 feet east of, at forks of Condon and Dalles roads, at signboard; aluminum tablet stamped "710 Ore"-----	709. 926
Shuttlers station, 2.5 miles south of, on east side of Condon road, opposite fence corner on west side of road, 5 feet south of telephone pole, in rock; aluminum tablet stamped "885 Ore"-----	884. 831
Second-class road east from Condon road, in telephone pole; spike marked "1178"-----	1, 178. 66
McDonald's ferry, 3 feet south of signboard, southwest corner of forks of Condon and John Day River Bridge roads, in rock; aluminum tablet stamped "1199 Ore"-----	1, 199. 625
McDonald's ferry road, small bridge on, 25 feet west of road crossing; spike marked "1212"-----	1, 212. 29
McDonald's ferry road, 25 feet north of, on uphill side, at head of draw going west to Rock Creek; spike in fence post, marked "1177"-----	1, 176. 90
Tablet in loose rock (no description given)-----	1, 046. 394
Rock Creek station, 4.5 miles upstream from, 0.1 mile from Locust Grove schoolhouse, 2 feet from fence at junction of roads, in rock; aluminum tablet stamped "803 Ore"-----	803. 516
Locust Grove schoolhouse, 4.4 miles from Rock Creek station, in top step of schoolhouse; spike marked "787"-----	786. 80
Second-class road going up gulch, near small house on one side of road and barn on other; spike in base of fence post, marked "731"-----	731. 28
Turn in long, straight road; spike in base of leaning corner fence post, marked "724"-----	723. 84
Rock Creek station, 265 feet northeast of point where wagon road goes under Oregon-Washington R. R. & Navigation Co.'s bridge, 170 feet west of post office and store, in large rock; aluminum tablet stamped "728 Ore"-----	728. 477
Third post from gate at west end of long, straight stretch of road; spike in base of fence post, marked "663"-----	663. 60
On public road, 300 feet from private road north up a gulch, 15 feet up the hillside; chiseled sharp rock-----	658. 05
Rock Creek station, 3 miles west from, on uphill side of road, 160 feet east of section-line fence on one side of road and private road going up a gulch on the other, in rock; aluminum tablet stamped "542 Ore"-----	542. 457

Junction of fences, 100 feet west of point where bluff comes up to road on one side and Rock Creek on the other, in base of fence post; spike marked "471"-----	Feet. 471. 11
Rock Creek and John Day River, near schoolhouse at junction of, 50 feet west of road forks, at junction of fences; spike in base of fence post, marked "424"-----	424. 64
McDonald's ferry over John Day River, 950 feet east of, at T road, 15 feet west of fence corner, 2 feet from fence, in rock; aluminum tablet stamped "407 Ore"-----	407. 414
McDonald's ferry; surface of water in John Day River, November 16, 1912-----	395. 1
Mouth of gulch where road starts to climb out of John Day Canyon, in southeast corner of small building; spike marked "446"-----	446. 59
Y roads, in base of signboard post, sign reads "Arlington 16 Mi., John Day 2 Mi." on one side and "Blalock 8 Mi." on the other; two spikes marked "885.4"-----	885. 75
Blalock, 9.2 miles from, west side of road, 15 feet from gate near where telephone wire from the south joins the fence and turns west on fence, in rock under fence; aluminum tablet stamped "943 Ore"-----	943. 543
Summit at junction of three roads, 550 feet north of ranch house, on section line between secs. 25 and 26; two spikes in base of telephone pole, marked "1122.3"-----	1, 122. 47
Smith ranch, center of sec. 15, T. 2 N., 5 feet west of 475-foot well, in rock; aluminum tablet stamped "1210 Ore"-----	1, 210. 030
Junction of three small drains near dug well, first telephone pole east of; spike in base, marked "1023.5"-----	1, 023. 73
Blalock, 3 miles from, 75 feet northwest of McKinney's house, in corner of front yard, 2 feet from fence, between two small trees, in rock; aluminum tablet stamped "951 Ore"-----	950. 949
Uphill side of trail, directly below juniper bush on top of ridge; goosehead-shaped chiseled rock, marked with three crosses-----	749. 20
Long regular curve of trail, 50 feet uphill from; chiseled outcrop marked with three crosses-----	437. 04
Foot of bluff, where trail turns at right angle following along bluff to Blalock, in base of telephone pole; two spikes marked "249"---	249. 43
Blalock, surface of water in Columbia River, Nov. 26, 1912-----	172. 7

From McDonald's ferry south 7.4 miles up John Day River.

McDonald's ferry over John Day River, 950 feet east of, 15 feet west of fence corner, at T road, 2 feet from fence, in rock; aluminum tablet stamped "407"-----	407. 414
Rock Creek and John Day River, junction of, at schoolhouse, in roads, 50 feet west of forks, in base of fence post at junction of fences; spike marked "424"-----	424. 65
John Day River, 1.2 miles above Rock Creek, east side, 15 feet west of road, at Huff's ranch dooryard, in base of southeast corner fence post; spike marked "U. S. 424 B. M."-----	424. 40
John Day River, east bank of, 2.4 miles above Rock Creek, 0.2 mile above orchard on west bank, 4 feet east of road, on large boulder; circle of paint marked "U. S. 437 B. M."-----	436. 70
John Day River, east bank, 2.8 miles above Rock Creek, 60 feet east by 20 feet south of L. C. Gow's ranch house, at corner of fence; iron post stamped "442 Ore. 1913"-----	442. 240

John Day River, east bank, 80 feet south of mouth of Scott Canyon, 20 feet east of road, on top of large rock; circle of paint marked "U. S. 466 B. M."-----	Feet. 465. 52
John Day River, 1 mile below Hay Creek, opposite and 500 feet below deserted cabin, 200 feet east of river, 10 feet west of road, in base of fence post; spike marked "U. S. 472 B. M."-----	471. 62

From point near Olex north along highway 3.5 miles.

T. 1 S., R. 21 E., quarter corner between secs. 2 and 11, 0.7 mile east of Olex, at top of hill, east side of road at crossroad, in base of fence post; spike marked "U. S. 1445 B. M."-----	1, 444. 40
Olex, 1.5 miles north of, southwest corner of sec. 35, T. 1 N., R. 21 E., northeast fence corner at forks of road; iron post stamped "1339 Ore. 1913"-----	1, 339. 04
McDonald's ferry, about 9 miles southeast of, 3 feet south of sign- board, southwest corner of forks of Condon and John Day River bridge roads, in rock; aluminum tablet stamped "1199 Ore."-----	1, 199. 625

BLALOCK ISLAND QUADRANGLE.

[Latitude 45° 30'-46°; longitude 119° 30'-120°.]

NOTE.—For elevations in Washington in this quadrangle see
Bulletin 557.

From milepost 165 south along Heppner Branch of Oregon-Washington R. R. &
Navigation Co.'s track to Ione.

T. 2 N., R. 23 E., sec. 17, 1,500 feet south of milepost 164, on high bluff, 20 feet east of railroad, in rock; aluminum tablet stamped "546 A 1906"-----	546. 721
Cecilis, T. 2 N., R. 23 E., sec. 29, 45 feet east of railroad, 20 feet south of road; iron post stamped "617 A 1906"-----	618. 714
T. 1 N., R. 23 E., NE. $\frac{1}{4}$ sec. 16, 270 feet south of milepost 170, at a small cut, 15 feet east of railroad, in rock; aluminum tablet stamped "722"-----	722. 887
Douglas, T. 1 N., R. 23 E., sec. 22, 100 feet east of milepost 172, 20 feet south of road, 45 feet east of railroad; iron post stamped "790 A 1906"-----	791. 246
T. 1 S., R. 23 E., sec. 2, 1,100 feet north of milepost 176, 800 feet south of road crossing, 10 feet east of county road, 40 feet west of rail- road, in rock; aluminum tablet stamped "918 A 1906"-----	919. 355

From point 2.5 miles south of Heppner Junction on Oregon-Washington R. R. &
Navigation Co.'s line east 1.6 miles to crossroads (double spur line).

T. 3 N., R. 23 E., sec. 6, crossroads at small rise; iron post stamped "533 A 1906"-----	533. 817
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From milepost 161, 9 miles south of Heppner Junction on Oregon-Washington
R. R. & Navigation Co.'s line, 2.7 miles northeast to Dalreed Butte (double
spur line).

Dalreed Butte, top of, T. 3 N., R. 23 E., sec. 29, 2.7 miles east of mile- post 161, in rock; aluminum tablet stamped "763 A 1906"-----	764. 375
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From Ione north via Ella to Castle Rock.

T. 1 N., R. 24 E., northwest corner of sec. 34, 2.9 miles north of Ione, southeast corner of intersection of two roads, 5 feet south of sign- board; iron post stamped "1441 A 1906"-----	1, 442. 356
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T. 1 N., R. 24 E., sec. 9, 6.24 miles north of Ione, at foot of hill, 60 feet north of intersection of two roads, 60 feet north of gulch; iron post stamped "1094"-----	Feet. 1,095.511
Ella, T. 2 N., R. 24 E., east side of sec. 28, 100 feet east of school-house, 30 feet west of center of road; iron post stamped "830"---	831.557
T. 2 N., R. 24 E., sec. 3, 3.08 miles north of Ella, 500 feet east of canyon, at mouth of gulch, on small round knoll, 140 feet north of lone juniper tree, in rock 10 by 10 by 18 inches; aluminium tablet stamped "725"-----	726.924
T. 3 N., R. 24 E., NE. $\frac{1}{4}$ sec. 34, 5.1 miles north of Ella, 250 feet west of road, in white rock 2 by 3 by 4 feet; aluminum tablet stamped "655"-----	656.849
T. 3 N., R. 24 E., sec. 15, 7.02 miles south of Castle Rock, 20 feet west of road, on small rise; iron post stamped "631"-----	632.739
T. 4 N., R. 24 E., sec. 34, 3.89 miles south of Castle Rock, 300 feet from small rise, 10 feet east of road; iron post stamped "494"-----	495.670

From crossroads 2.9 miles south of Ione along road east and north via Wells Springs to Coyote.

T. 1 N., R. 25 E., near quarter corner south side of sec. 30, 3.67 miles east of Ione-Ella road, 10 feet north of road, 30 feet south of shack; iron post stamped "1490 A 1906"-----	1,491.075
T. 1 N., R. 25 E., near quarter corner south side of sec. 17, 6.08 miles south of Wells Springs, at foot of mileboard at crossroads; iron post stamped "1187"-----	1,187.831
T. 1 N., R. 25 E., near quarter corner west side of sec. 4, 3 miles south of Wells Springs, southeast of intersection of two roads; iron post stamped "1070"-----	1,070.887
Wells Springs, T. 2 N., R. 25 E., sec. 20, 75 feet north of well, 125 feet northeast of house, in rock; aluminum tablet stamped "822"---	822.781
T. 2 N., R. 25 E., sec. 5, 3.21 miles north of Wells Springs, 60 feet west of corral north of Wells Springs Canyon, on hillside; iron post stamped "722"-----	723.065
T. 3 N., R. 25 E., sec. 21, 6.87 miles north of Wells Springs, 9.03 miles south of Coyote, 200 feet north of old road, on flat; iron post stamped "650"-----	651.184
T. 3 N., R. 25 E., sec. 4, 6.15 miles south of Coyote, 1,200 feet south of shack; iron post stamped "586"-----	587.107
T. 4 N., R. 25 E., sec. 22, 3.47 miles south of Coyote, 0.3 mile north-east of sand dune, on small rise; iron post stamped "415"-----	416.113

From crossroads 2 miles west of Strawberry by road east to South Springs, thence north via Finley ranch to milepost 177.

Strawberry, T. 1 N., R. 25 E., southwest corner of sec. 14, across road from post office; iron post stamped "1205"-----	1,205.881
South Springs, 3.3 miles east of Strawberry post office, T. 1 N., R. 26 E., southwest corner of sec. 17, 20 feet north of post office; iron post stamped "1160"-----	1,161.039
T. 1 N., R. 26 E., near quarter corner east side of sec. 6, 2.62 miles north of South Springs, at forks of roads, in northwest corner; iron post stamped "1128"-----	1,129.011
T. 2 N., R. 26 E., sec. 28, 5.53 miles north of South Springs, 1.36 miles southwest of Finley house, 30 feet north of road, at fence; iron post stamped "1001"-----	1,002.091

T. 2 N., R. 26 E., sec. 9, south side of, 7.72 miles east of Wells Springs, at intersection of two roads; iron post stamped "892"-----	Feet. 893. 169
T. 2 N., R. 26 E., NW. $\frac{1}{4}$ sec. 2, 2.4 miles north of emigrant road, 10 feet east of Sand Hollow road; iron post stamped "755"-----	756. 208
T. 3 N., R. 26 E., sec. 23, 5.75 miles north of emigrant road, 10 feet east of Sand Hollow road; iron post stamped "619"-----	620. 213
T. 3 N., R. 26 E., sec. 1, 6.29 miles south of Henkle ranch, 10 feet east of road; iron post stamped "620"-----	621. 237
T. 4 N., R. 26 E., sec. 14, 2.77 miles south of Henkle ranch, 30 feet northeast of forks of roads; iron post stamped "547"-----	548. 212
T. 5 N., R. 26 E., sec. 35, south side of, 100 feet north of barn of Henkle ranch, 400 feet north of road, in firm rock 5 by 6 by 8 feet; aluminum tablet stamped "331"-----	332. 133

From Cecils by emigrant road via Ella and Wells Springs to Finley ranch.

T. 2 N., R. 23 E., northwest corner of sec. 36, 6.72 miles west of Ella, 3.24 miles east of Cecils, east line of road at turn; iron post stamped "907"-----	908. 286
T. 2 N., R. 24 E., north side of sec. 29, 2.84 miles west of Ella, 7.12 miles east of Cecils, on small rise east of gulch, 30 feet south of county road; iron post stamped "820"-----	821. 636
T. 2 N., R. 25 E., near northwest corner of sec. 30, 3 miles east of Ella, 100 feet east of township line, 50 feet south of road, on hillside, in firm rock; aluminum tablet stamped "855"-----	856. 887
T. 2 N., R. 25 E., SW. $\frac{1}{4}$ sec. 14, 3 miles east of Wells Springs, at mouth of canyon, 600 feet east of creek in Juniper Canyon, 10 feet north of emigrant road, in firm rock; aluminum tablet stamped "693"-----	694. 342

From South Springs east to point near quarter corner on south side of sec. 13,
T. 1 N., R. 26 E.

T. 1 N., R. 26 E., near quarter corner on south side of sec. 13, 4.74 miles southwest of Pine City, on South Springs road, at southwest corner of long cemetery; iron post stamped "1474"-----	1, 475. 372
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From Castle Rock south to Juniper Reservoir, thence east to Dry Lakes (U. S. Reclamation Service line).

Juniper Reservoir site, west end, at Carty's east fence, near road; iron post-----	603. 437
Dry Lakes, 1,000 feet northwest of lake and about 1,000 feet south-east of east dam site of Juniper Reservoir site; iron post-----	650. 877

CONDON QUADRANGLE.

[Latitude 45°-45° 30'; longitude 120°-120° 30'.]

From point 7.4 miles south of McDonald's ferry south along highway to point near Ajax, thence southeast to Condon, thence east and north to Olex.

John Day River and Hay Creek, junction of, opposite ford, 115 feet north of intersection of Ford road and road leading up Hay Creek, 100 feet east of fence, 15 feet west of road; iron post stamped "473 Ore. 1913"-----	473. 327
Hay Creek, 0.2 mile from John Day River, south side, corner of Weatherford's alfalfa field, in base of 1-foot square post; spike scribed "U. S. 481 B. M."-----	481. 43

Hay Creek, 1.4 miles above mouth of, upper end of Weatherford's alfalfa field, on north bank of creek, north-south fence, in base of post; spike marked "U. S. 574 B. M."-----	Feet. 573.68
Hay Creek, 0.5 mile south of, on Spring Hollow grade, 200 feet east of fenced spring, in base of fence post north of road; spike marked "U. S. 815 B. M."-----	815.45
Lewis ranch, southeast corner of dooryard, west side of road, in base of corner fence post; spike marked "1480"-----	1,480.15
T. 1 S., R. 20 E., 0.2 mile north of center of sec. 29, 40 feet east by 15 feet north of Lewis schoolhouse building, in line of fence, in yard; iron post stamped "1631 Ore. 1913"-----	1,630.665
T. 1 S., R. 20 E., southeast corner SW. $\frac{1}{4}$ sec. 29, at southeast corner of graveyard, in base of corner fence post; spike marked "U. S. 1787 B. M."-----	1,787.15
T. 1 S., R. 20 E., southwest corner of sec. 32, 0.2 mile east of corner, 80 feet east of turn in road to south, north side of road, in base of fence post; spike marked "U. S. 1878 B. M."-----	1,877.59
T. 2 S., R. 20 E., 0.2 mile north of quarter corner between secs. 5 and 6, west side of road, in base of fence post; spike marked "U. S. 1987 B. M."-----	1,987.07
T. 2 S., R. 20 E., 0.2 mile south of northeast corner of sec. 7, 200 feet southwest of angle in road, west of road, 60 feet south of private gate, in base of fence post; spike marked "U. S. 2137 B. M."-----	2,137.23
T. 2 S., R. 20 E., 0.1 mile west of southeast corner of sec. 7, at turn of road, in southeast corner of field; iron post stamped "2302 Ore. 1913"-----	2,302.273
T. 2 S., R. 19 E., 0.2 mile south of southeast corner of sec. 12, west side of road, in line of east-west fence, in base of fence post; spike marked "U. S. 2414 B. M."-----	2,413.99
T. 2 S., R. 19 E., near southeast corner of sec. 13, turn in road, west side of road, 90 feet north of corner, in base of fence post; spike marked "U. S. 2595 B. M."-----	2,594.77
Devils Butte triangulation station, probably in northwest quarter of sec. 24, T. 2 S., R. 19 E., 960 feet west of road; iron post stamped "2741 Ore. 1913"-----	2,740.494
T. 2 S., R. 20 E., in SW. $\frac{1}{4}$ sec. 30, 1,000 feet southwest of G. Burre's ranch house, south side of road, in base of fence post; spike marked "U. S. 2585 B. M."-----	2,584.76
T. 2 S., R. 20 E., in SE. $\frac{1}{4}$ sec. 30, 160 feet west of north-south fence, at top of hill, north side of road, in base of fence post; spike marked "U. S. 2513 B. M."-----	2,512.99
T. 2 S., R. 20 E., in SE. $\frac{1}{4}$ sec. 29, at jog in road to southeast across corner, at corner of fence, south side of road, in base of fence post; spike marked "U. S. 2591 B. M."-----	2,591.03
T. 2 S., R. 20 E., southwest corner of sec. 33, 600 feet south of, opposite York's ranch house, 6 feet north of corner, in line of fence; iron post stamped "2579 Ore. 1913"-----	2,578.668
County well, 1.9 miles northwest of, T. 3 S., R. 20 E., probably quarter corner between secs. 9 and 10, 20 feet north of east-west fence, east of road, in base of fence post; spike marked "U. S. 2594 B. M."---	2,593.52
County well, 0.7 mile northwest of, on north side of road, in line of north-south fence, in base of fence post; spike marked "U. S. 2687 B. M."-----	2,686.63

T. 3 S., R. 20 E., quarter corner between secs. 15 and 22, 0.2 mile north of County well, at turn in road, on east side of road, in line of fence; iron post stamped "2698 Ore. 1913"-----	Feet. 2, 697. 988
County well, 0.8 mile southeast of, at turn of road to south, at corner of fence on south side of road, on top of rock; circle of paint marked "U. S. 2810 B. M."-----	2, 810. 13
Condon, 7.7 miles northwest of, 2.1 miles southeast of County well, 0.3 mile northwest of center of sec. 26, T. 3 S., R. 20 E., east of road at turn to southeast, at corner of fence; iron post stamped "2899 Ore. 1913"-----	2, 899. 240
Condon, 6.3 miles northwest of, 0.7 mile northwest of sign "Ajax" at road forks, 120 feet northwest of bend in road, east side of road, in base of fence post; spike marked "U. S. 3069 B. M."-----	3, 069. 20
Condon, 5.6 miles west of, at forks of road at sign "Ajax," south side of road at junction of fences, in base of fence post; spike marked "U. S. 3120 B. M."-----	3, 120. 11
T. 4 S., R. 20 E., in NE. $\frac{1}{4}$ sec. 12, 5 miles west of Condon, road forks to west and to Ajax, north of road, in line of fence opposite sharper corner; iron post stamped "3173 Ore. 1913"-----	3, 172. 520
Condon, 4 miles west of, at angle of road from north to east, south side of road, 80 feet east of private road gate, in base of fence post; spike marked "U. S. 3079 B. M."-----	3, 078. 58
Condon, 3 miles west of, south side of road, opposite junction of roads, in base of fence post; spike marked "U. S. 2969 B. M."-----	2, 968. 79
Condon, 2.6 miles west of, 0.2 mile west of artificial pond, 440 feet west of line of north-south fence, north side of road, in line of fence; iron post stamped "2963 Ore. 1913"-----	2, 962. 751
Condon, 1 mile west of, at forks of Fossil and Ajax roads, 280 feet east of, south side of road opposite signboards, in base of fence post; spike marked "U. S. 2788 B. M."-----	2, 788. 08
Condon, east entrance to Gilliam County courthouse, north end of top concrete step; bronze tablet stamped "2859 Ore. 1913"-----	2, 858. 420
Condon, entrance of First National Bank, in top of bottom step; chiseled square-----	2, 834. 41
Condon, at schoolhouse, Oregon-Washington R. R. & Navigation Co. L. bench mark (railroad elevation, 2,851.905)-----	2, 853. 97
Condon, 1 mile east of, far side of hill, 70 feet east of corner, south side of road, in base of telephone pole; spike marked "U. S. 2860 B. M."-----	2, 859. 56
Condon, 1.5 miles east of, northwest corner of sec 13, T. 4 S., R. 21 E., southeast of intersection of roads; ground elevation outside of fence corner, marked on fence "2837"-----	2, 836. 5
T. 4 S., R. 21 E., northeast corner of sec. 13, 275 feet west of, 2.5 miles east of Condon, at foot of hill, south of road, on boulder at base of telephone pole, marked "U. S. 2744 B. M."-----	2, 743. 61
T. 4 S., R. 22 E., 900 feet east of quarter corner between secs. 7 and 18, north side of road, in base of telephone pole; spike marked "U. S. 2698 B. M."-----	2, 697. 53
T. 4 S., R. 22 E., near southeast corner of sec. 7, 4.6 miles east of Condon, northwest corner of crossroads, at fence corner; iron post stamped "2754 Ore. 1913"-----	2, 754. 004
T. 4 S., R. 22 E., at center of sec. 7, at road forks; ground at corner of fence; marked "2775"-----	2, 774. 8

T. 4 S., R. 22 E., 600 feet east of northwest corner of sec. 7, north side of road, in base of corner fence post; spike marked "U. S. 2861 B. M."-----	Feet. 2, 860. 73
Condon, 2.5 miles northeast of, northwest corner of T roads, north, T. 4 S., R. 21 E., W. C. southeast corner sec. 1, in base of corner fence post; spike marked "U. S. 2994 B. M."-----	2, 993. 98
T. 4 S., R. 21 E., one-fourth corner between secs. 1 and 2, northeast corner of ballasted fence post, at road corners, in base of post of fence; spike marked "U. S. 2887 B. M."-----	2, 886. 38
T. 3 S., R. 21 E., witness corner at southwest corner of sec. 36, 3 miles northeast of Condon, 40 feet north of corner on west side of road at crossroads, in line of fence; iron post stamped "2804 Ore. 1913"-----	2, 804. 199
T. 3 S., R. 21 E., corner of secs. 25, 26, 35, and '36, district No. 20, schoolhouse, 50 feet north by 70 feet west of, between railroad track and road, in base of brace pole; spike marked "U. S. 2707 B. M."-----	2, 706. 40
Condon, 5.3 miles north of, in base of milepost 40; spike marked "U. S. 2689 B. M."-----	2, 688. 82
Condon, 6 miles north of, on line between secs. 13 and 24, T. 3 S., R. 21 E., east of railroad track and road, opposite ranch house and 800 feet south of, in line of telephone poles; iron post stamped "2663 Ore. 1913"-----	2, 663. 234
South cattle guard, 0.2 mile south of milepost 39, road crossing railroad; top of rail, painted "2634 B. M."-----	2, 633. 8
Condon, 7.3 miles north of, 150 feet south of milepost 38, in base of telegraph pole; spike marked "U. S. 2596 B. M."-----	2, 595. 84
Gwendolen, 1 mile south of, 100 feet north of sign "Gwendolen 1 mile," on east side of track, in base of gatepost in fence; spike marked "U. S. 2538 B. M."-----	2, 537. 63
Gwendolen, opposite station sign; top of rail-----	2, 507. 6
Gwendolen, 140 feet north of store, east side of road, inside of corner of fence; iron post stamped "2508 Ore. 1913"-----	2, 507. 687
Gwendolen, 0.7 mile north of, 180 feet south of second road crossing, in base of telephone pole west of track; spike marked "U. S. 2528 B. M."-----	2, 527. 82
Wolf Hollow road, 1.2 miles east of railroad track, north side of road, in base of telephone pole; spike marked "U. S. 2167 B. M."-----	2, 166. 32
Wolf Hollow road, 3 miles east of railroad, 1.7 miles west of Rock Creek, south side of road, in base of telephone pole; spike marked "U. S. 1769 B. M."-----	1, 769. 23
T. 2 S., R. 22 E., SW. $\frac{1}{4}$ sec. 15, 740 feet west of seat of steel bridge, 15 feet north of road, where Wolf Hollow road crosses Rock Creek, on shelf 4 feet high and in solid rock; aluminum tablet stamped "1351 Ore. 1913"-----	1, 350. 624
Wolf Hollow grade, 0.4 mile east of Rock Creek, 20 feet north of road, in base of fence post; spike marked "U. S. 1513 B. M."-----	1, 513. 05
T. 2 S., R. 22 E., center of sec. 10, 1.3 miles east of Rock Creek (telephone line turns east), line of east-west fence and 100 feet west of road forks at top of hill; iron post stamped "1978 Ore. 1913"-----	1, 977. 977
Isolated old house, 0.8 mile west of Spencer's ranch; ground at northeast corner, marked on building "2005"-----	2, 004. 2
T. 2 S., R. 22 E., 700 feet south of center of sec. 11, 0.5 mile northwest of isolated house, on Olex road, at corner of fence on east side of road, in base of fence post; spike marked "U. S. 1990 B. M."-----	1, 989. 45

T. 1 S., R. 22 E., about 500 feet north of center of sec. 3, 80 feet north of turn in road and corner of fence, on east side of road, in base of fence post; spike marked "U. S. 1956 B. M."-----	Feet. 1, 955. 53
Tps. 1 and 2 S., R. 22 E., one-fourth corner between secs. 34 and 3, 70 feet north of east-west fence and private road, east side of road, in line of fence; iron post stamped "1886 Ore. 1913"-----	1, 885. 780
Phillips ranch, 1,000 feet southeast of, at turn in road, south side of road, in base of corner fence post; spike marked "U. S. 1788 B. M."--	1, 787. 51
T. 1 S., R. 22 E., in N. $\frac{1}{2}$ sec. 29, 5.5 miles southeast of Olex, at corner of fence (jog in line), south side of road; iron post stamped "1865 Ore. 1913"-----	1, 864. 935
Olex, 4.3 miles southeast of, north side of road at turn, near telephone pole; spike in base of fence post, marked "U. S. 1726 B. M."--	1, 725. 36
Olex, 3 miles southeast of, north side of road, in base of fence post; spike marked "U. S. 1605 B. M."-----	1, 604. 22
Olex, 2 miles southeast of, near corner of secs. 11, 12, 13, and 14, T. 1 S., R. 21 E., in forks of road at sign "Ione," in line of east-west fence; iron post stamped "1514 Ore. 1913"-----	1, 514. 077

HEPPNER QUADRANGLE.

[Latitude 45°-45° 30'; longitude 119° 30'-120°.]

At Ione.

Ione, T. 1 S., R. 24 E., sec. 9, 1,360 feet west of station, 300 feet east of road crossing, 20 feet south of railroad, 15 feet north of road; iron post stamped "1068 A 1906"-----	1, 069. 394
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UMATILLA QUADRANGLE.

[Latitude 45° 30'-46°; longitude 119°-119° 30'.]

NOTE.—For elevations in Washington in this quadrangle see Bulletin 557.

From Yoakum north in R. 30 E. to Cold Springs.

T. 3 N., R. 30 E., southwest corner of sec. 25, 40 feet northeast of, 3 miles northeast of Yoakum siding, crossroads; iron post stamped "1306"-----	1, 306. 734
T. 3 N., R. 30 E., 30 feet southwest of quarter corner east side of sec. 11, 6.5 miles northeast of Yoakum siding, where road turns west; iron post stamped "1064"-----	1, 064. 397
T. 4 N., R. 30 E., corner of secs. 23, 24, 25, and 26, 2.25 miles northeast of Foster ranch, at road forks, south side of Spain Gulch; iron post stamped "933"-----	933. 681
Vinson ranch, 0.75 mile northeast of, T. 5 N., R. 30 E., on line between secs. 25 and 26, 40 feet south of center of road, in Cold Spring Canyon; iron post stamped "856"-----	857. 019
T. 5 N., R. 30 E., south of center of sec. 15, 2.5 miles northeast of Vinson ranch, north side of road, 600 feet east of road forks to Sand Spur and Cold Springs; iron post stamped "1008"-----	1, 008. 477

At Cold Springs (U. S. Reclamation Service bench mark).

Cold Springs, T. 5 N., R. 29 E., corner of secs. 11, 12, 13, and 14; iron post-----	311. 359
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From point 2.8 miles south of Henkle ranch east to east line of R. 27 E., thence south to Stanfield ranch.

T. 4 N., R. 27 E., east of center of sec. 20, north side of road; iron post stamped "543"-----	Feet. 544.405
T. 4 N., R. 27 E., northeast of center of sec. 23, north side of Echo road; iron post stamped "591"-----	592.448
T. 4 N., R. 28 E., southwest corner, 40 feet north and east of stake at corner; iron post stamped "602"-----	603.503
Lower Stanfield ranch, on west side of Butter Creek; iron post stamped "625" (U. S. Reclamation Service B. M.)-----	627.415

From Stanfield ranch south to Pine City, thence west to South Springs.

T. 2 N., R. 27 E., northeast corner of sec. 1; iron post stamped "793"-----	793.715
T. 2 N., R. 27 E., southwest corner of sec. 14, 1.23 miles southwest of O. F. Thompson's ranch, on east side of road by fence corner; iron post stamped "916"-----	916.823
T. 1 N., R. 27 E., northeast corner of sec. 3, 1.47 miles north of Pine City, 10 feet south of fence corner, 30 feet east of fork of Butter Creek and Heppner roads; iron post stamped "1084"-----	1,084.784
T. 1 N., R. 27 E., southwest part of sec. 16, 2.15 miles west of Pine City, 150 feet west of forks of Heppner and South Spring roads, between forks; iron post stamped "1430"-----	1,431.487

From Pine City east to Alkali triangulation station, thence northwest 7.4 miles, thence west to southeast corner of sec. 1, T. 2 N., R. 27 E.

T. 1 N., R. 27 E., near northeast corner of sec. 23, at forks of Big Butter Creek and Ridge roads; iron post stamped "1225"-----	1,226.448
T. 1 N., R. 28 E., near northwest corner of sec. 28, north side of road at mouth and on west side of Ayers Canyon; iron post stamped "1389"-----	1,390.454
T. 1 N., R. 28 E., south side of sec. 13, on south side of Ridge road 1.65 miles northeast of the Joe Vaie ranch, beside fence; iron post stamped "2102"-----	2,103.591
T. 1 N., R. 29 E., northwest corner of sec. 22, 5.81 miles northeast of the Joe Vaie ranch, on south side of Ridge road, east slope of knoll 800 feet west of crossroads; iron post stamped "2152"-----	2,153.367
Alkali triangulation station, T. 1 N., R. 30 E., center of sec. 29, 0.75 mile northeast of Slusher ranch; triangulation tablet stamped "2713"-----	2,713.794
T. 1 N., R. 29 E., north of center of sec. 13, 3.5 miles north of Slusher ranch on Echo road, at first crossroad north of Ridge road, on east side of Echo road and south side of crossroads; iron post stamped "2262"-----	2,263.633
T. 2 N., R. 29 E., southwest of center of sec. 26, 7.4 miles northwest of Slusher ranch, 20 feet east of Echo road, 200 feet from where it leaves Big Alkali Canyon, 0.5 mile north of Winkie ranch; iron post stamped "1311"-----	1,311.983
T. 2 N., R. 28 E., 30 feet northwest of quarter corner on east side of sec. 13, 700 feet west of the white house on the Vaie ranch; iron post stamped "998"-----	999.079
Job triangulation station, on highest point on Sarvis Butte, northwest corner of sec. 22, T. 2 N., R. 28 E.; iron post stamped "1684"-----	1,685.618

From point 7.4 miles north of Alkali triangulation station north to Echo.

T. 2 N., R. 29 E., at southeast corner of sec. 4, on west side of Echo road; iron post stamped "1119"-----	Feet. 1, 121. 097
T. 3 N., R. 29 E., south side of sec. 22, U. S. Reclamation Service diversion dam, west end of top, at north end of weir; aluminum tablet stamped "662"-----	663. 936
Echo, 1.8 miles south of, U. S. Reclamation Service diversion dam, 200 feet northwest of Reclamation Service permanent bench mark; iron post stamped "660"-----	661. 855

From Dry Lakes east to Echo (U. S. Reclamation Service line).

Red Point, 5 miles west of Stanfield ranch, near road; iron post----	665. 848
Lower Stanfield ranch, west side of Butter Creek; iron post stamped "625"-----	627. 415
Echo, 6 miles west of, 140 feet north of road; iron post-----	663. 770
Echo, 2 miles west of, point overlooking Butter Creek ditch; iron post-----	659. 770

Cazadero, Mount Hood, Oregon City, Reedville, Stevenson, and Troutdale quadrangles.

CLACKAMAS, MULTNOMAH, AND WASCO COUNTIES.

The elevations are based on bench marks of a double-rodged primary-level line along the Oregon-Washington R. R. & Navigation Co.'s track and on the double simultaneous precise-level line south of Portland, as determined by the 1912 adjustment. The elevations along the railroad in Troutdale and Stevenson quadrangles are given in another list.

The leveling in the Mount Hood and Stevenson quadrangles was done in 1907 by S. N. Stoner; in the Troutdale quadrangle in 1906 by George Neuner, jr., and in 1907 by Stoner; in the Cazadero quadrangle in 1906 by Neuner, in 1907 by Stoner, in 1910 and 1911 by E. M. Bandli; and in Oregon City and Reedville 15' quadrangles in 1911 by Bandli. Additional leveling in Reedville quadrangle was done in 1913 by L. F. Biggs.

TROUTDALE QUADRANGLE.

[Latitude 45° 30'–46°; longitude 122°–122° 30'.]

From Troutdale along public road to point about 1.3 miles north of Powell Valley.

Troutdale, 100 feet northeast of station, 40 feet north of switch leading to Union Meat Co.'s establishment, 223 feet north of main track, in edge of field belonging to D. F. Buckridge; iron post stamped "41 A"-----	Feet. 41. 500
Troutdale, 1.7 miles south of, southwest corner of intersection of Portland base and Troutdale road, at corner of fence; point on rock, marked "U. S. 217"-----	216. 65

From Brower northeast to Bridal Veil.

Brower, 150 feet west of Wittenburg house, 20 feet north of Wittenburg road, in firm rock; aluminum tablet stamped "1622"----- Feet.
1, 622. 457

CAZADERO QUADRANGLE.

[Latitude 45°-45° 30'; longitude 122°-122° 30'.]

From point north of Powell Valley southeast along roads to Bull Run post office, thence northeast along roads to Brower.

Orient, in front of post office; hitching post----- 548. 58
Bull Run, post office and store, 15 feet south of northwest corner of; iron post marked with red paint "647"----- 647. 147
Aims, northeast of, at junction of Walker, Prairie, and Troutdale roads, 30 feet east of bridge; iron post stamped "1104"----- 1, 104. 069
Aims schoolhouse, 2.1 miles northwest of, 20 feet west of junction of Troutdale road and road to A. C. Wihlon & Co.'s sawmill, about 2 miles south of Gordon Creek crossing, in triangle formed by three fir trees 6 inches in diameter, each bearing inscription "U.S.B.M." pointing toward post; iron post marked with red paint "969"----- 969. 166
Aims, 3.1 miles east of, 660 feet west of Walker Prairie, 5 feet south of road, in firm rock 4 by 6 by 6 feet; aluminum tablet stamped "1955"----- 1, 954. 665
Aims, 5.4 miles northeast of, on Lookout Point, 10 feet west of Larch Mountain trail, in firm rock in rock mound; aluminum tablet stamped "2633"----- 2, 633. 306
Aims, 8.8 miles northeast of, 5 miles north of North Branch of Gordon Creek, in rock 8 feet west of railroad; aluminum tablet stamped "2274"----- 2, 273. 694

From Bull Run southeast along roads via Sandy and Firwood to point about 1.2 miles east of Salmon post office.

Sandy, 5 feet north of east line of Bull Run road, 50 feet north of forks of road; iron post stamped "1012"----- 1, 012. 102
Firwood, at road forks, north edge of Salmon road, at base of signboard; iron post stamped "1206"----- 1, 206. 612
Firwood, 2.9 miles east of, on small rise, 300 feet south of Cedar Creek, north of road, in fence line; iron post stamped "1246"----- 1, 246. 256
Salmon, 4.5 miles west of, 0.4 mile west of Alder Creek, at Copper place, 20 feet south of Salmon road opposite Copper road, in cluster of trees; iron post stamped "895"----- 895. 351
Salmon, 0.9 mile west of, at intersection of Sandy and Marmot roads, 30 feet south of county bridge across Sandy River, 5 feet north of signboard; iron post stamped "999"----- 999. 240

From Clarnie via Boring, Sandy, and Dover to Eagle Creek.

Clarnie, 250 feet northwest of station platform, 150 feet east of bunk house, 60 feet north of track, 90 feet west of section house; iron post stamped "205 A"----- 204. 753
Clarnie, 2.6 miles southeast of, 1 foot north of southwest corner fence post, 30 feet southwest of crossroad intersection, on base line road, in southwest corner of crossroads; iron post stamped "291"----- 290. 910

Rockwood, 1 foot northeast of northeast corner of lot, 27 feet west of northwest corner of K. O. T. M. hall No. 61, 75 feet southeast of T road intersection from north, south of base line road; iron post stamped "245." (This b. m. has been disturbed, elevation uncertain.) -----	Feet. 242
Rockwood, 1 mile southeast of, at T road south from base line road, in southeast corner of road intersection, in root of fir tree (12 inches in diameter); copper nail marked "258.3"-----	258.26
Rockwood, 2.5 miles southeast of, at first crossroad in Gresham coming from north, boulder in southwest corner near sidewalk; circle of paint marked "314.1"-----	314.04
Gresham, Portland Railway, Light & Power Co.'s station, 30 feet south of west end of, 10 feet south of track, 12 feet southwest of track and road intersection; iron post stamped "Prim. Trav. Sta. No. 1308"-----	307.750
Boring, 130 feet north of station, 10 feet west of track, 20 feet north of road at crossing near station; iron post stamped "502"-----	501.882
Kelso, in northeast corner of T. 2 S., R. 4 E., sec. 9, in northwest corner of C. T. Gindall's yard, 2 feet south of fence, 1 foot east of fence corner opposite store, 60 feet southeast of crossroad intersection; iron post stamped "703"-----	700.404
T. 2 S., R. 4 E., in east center of sec. 14, 45 feet southwest of road intersection, in root of large tree; copper nail marked "905.4"-----	905.19
Sandy, 5 feet north of east line of Bull Run road, 50 feet north of forks of road; iron post stamped "1012"-----	1,012.102
Firwood, north edge of Salmon road, 30 feet north of T road intersection, at base of signboard; iron post stamped "1206"-----	1,206.612
Firwood, 0.5 mile south of, near west center of sec. 29, T. 2 N., R. 4 E., 30 feet northwest of road intersection, 15 feet from large fir tree, in root of tree; copper nail marked "1330.7"-----	1,330.48
Dover, 70 feet west by 10 feet north of intersection of crossroads north of Canyon Dover; iron post stamped "1231"-----	1,231.114
T. 3 S., R. 4 E., east center of sec. 3, 0.5 mile west of Dover, 0.25 mile south of H. S. Gibson's place, and 0.25 mile west of E. T. Paulfrey's place, 50 feet southeast of mail box; iron post stamped "943"-----	942.270
T. 3 S., R. 4 E., in center of sec. 3, 115 feet southeast of intersection of T road north, in root of small oak tree; copper nail marked "838.3"-----	838.07
Eagle Creek, 2.4 miles east of, 25 feet south of road intersection, in northwest root of large fir tree; copper nail marked "572.2"-----	571.90
Eagle Creek, on Portland Railway, Light & Power Co.'s right of way, 300 feet south of station, 40 feet west of track, opposite G. R. Morse's store, in corner of fence; iron post stamped "338"-----	337.823
From Boring via Eagle Creek, Cazadero, and George to bench mark 2.4 miles east of Eagle Creek.	
Barton, 27 feet southwest of county road, 45 feet west of track, 300 feet south of station; iron post stamped "263"-----	263.126
Eagle Creek, 300 feet south of station, 40 feet west of track, in corner of fence opposite Morse's store; iron post stamped "337.9"-----	337.823
Currinsville, in front of station; top of rail-----	405.3

Estacada, 400 feet southeast of station, in southeast corner of Estacada Hotel yard, 1 foot from southeast corner fence post; iron post stamped "464"-----	Feet. 463. 841
Cazadero, 2 feet from northwest corner of station, 12 feet southwest of track; iron post stamped "509"-----	509. 134
Cazadero, 5.5 miles northeast of, 25 feet east of road, 5 feet east of southeast corner fence post, 4 feet west of mail box, 2 feet north of Bowerman's fence; iron post stamped "1256"-----	1, 256. 174
George, 2.5 miles east of, 30 feet east of T road south, 2 feet north of southeast corner fence post; iron post stamped "1511"-----	1, 511. 081
George, 30 feet northeast of intersection with T road east, in northeast fence corner, 20 feet east of road; iron post stamped "1175"-----	1, 175. 045
Firwood, 6.7 miles southwest of, 2.4 miles east of Eagle Creek, 25 feet southeast of road intersection, in northwest root of large fir tree; copper nail marked "572.3"-----	571. 90

From Estacada along highways south to Elwood, thence southwest to Cedardale school, thence north to point 3.5 miles north of Clarks (line run twice).

Estacada, 400 feet southeast of station, in southeast corner of Estacada Hotel yard, 1 foot from southeast corner fence post; iron post stamped "464"-----	463. 841
Estacada, 0.4 mile south of, 80 feet southeast of road intersection at Y roads, 10 feet west of north-south road, in top of southwest corner fence post; copper nail marked "521.9"-----	521. 78
Estacada, 1.7 miles south of, at T road west, 6 feet southeast of corner, 10 feet northwest of road intersection, in northeast end of culvert; copper nail marked "1046.9"-----	1, 046. 72
Estacada, 2.5 miles south of, 60 feet northeast of road intersection, in top of root of stump; copper nail marked "1094.9"-----	1, 094. 67
Springwater, 35 feet southeast of intersection with T road east, in top of southeast corner fence post; copper nail marked "1115.3"-----	1, 115. 10
Springwater, 1 mile southeast of, 35 feet southeast of intersection with T road south, 3 feet east of signpost, 1 foot northwest of southeast corner fence post; iron post stamped "Prim. Trav. Sta. No. 12, 1200"-----	1, 200. 252
Springwater, 1.7 miles southeast of, in northeast corner at Y road intersection, 20 feet east of intersection, 10 feet from road; spike in root of large fir tree, marked "1016.2"-----	1, 016. 08
Springwater, 3.2 miles southeast of, 20 feet northeast of road intersection at T road south, in top of stump; copper nail marked "869. 9"-----	869. 89
Springwater, 2.8 miles south of, 15 feet northeast of northeast corner of Clear Creek bridge, at Y road, in top of fence post; copper nail marked "712.9"-----	712. 86
Springwater, 3.8 miles south of, 1.5 miles east of Elwood, 6 feet southeast of road intersection, at T road east, in top of southeast corner fence post; copper nail marked "1096.4"-----	1, 096. 41
Elwood, in southeast corner of school yard, 2 feet northwest of southeast corner fence post, 30 feet northwest of crossroad intersection; iron post stamped "1099"-----	1, 098. 867
Elwood, 0.4 mile south of, 30 feet east of Y road intersection, in northeast corner, in top of small fir stump; copper nail marked "1062.8"-----	1, 062. 89

Elwood, 2.5 miles southwest of, 60 feet northwest of intersection with private road south, in top of fir stump; copper nail marked "896.9" -----	Feet. 896. 99
Elwood, 4 miles southwest of, 20 feet southeast of Y road intersection, in top of fence post in southeast corner; copper nail marked "731.3" -----	731. 42
Elwood, 5.6 miles southwest of, 40 feet west of intersection of Y road, 12 feet north of road, near bridge, in top of fir stump; copper nail marked "629.9" -----	630. 15
Colton, 110 feet south of road, west of T road south, 2 feet west of northwest corner of Swedish Church belfry; iron post stamped "705" -----	705. 616
Colton, 0.3 mile west of, 60 feet northwest of intersection at T road north, 27 feet northwest of northwest fence corner, inside of fence, in top of fir stump; spike marked "600.9" -----	601. 13
Colton, 1.3 miles west of, at Cedardale School (district 53), 21 feet northwest of southwest corner of schoolhouse, 75 feet northeast of intersection at crossroads, in root of tree; copper nail marked "496.2" -----	496. 55
Colton, 3.3 miles northwest of, 1.5 miles south of Clarks, 35 feet northeast of intersection with T road east, in root of large maple tree; copper nail marked "862.5" -----	862. 85
Colton, 4 miles northwest of, 1 mile south of Clarks, 30 feet southeast of intersection with T road east, in top of southeast corner fence post at sign post; copper nail marked "862.0" -----	862. 36
Clarks, 2 feet east of Methodist Church, in southeast corner of yard, 45 feet west of road, 400 feet northwest of store at crossroads; iron post stamped "885" -----	884. 756
Clarks, 1.3 miles northwest of, 20 feet north of Y road intersection, in top of northwest corner fence post; copper nail marked "882.5" -----	882. 84
Clarks, 2.3 miles north of, along road to Viola, 0.3 mile south of first crossroad south of Highland new schoolhouse, 10 feet west of road at foot of hill, in top of large stump; copper nail marked "1035.3" -----	1, 035. 973
Clarks, 2.5 miles north of, 20 feet north of road, 50 feet northwest of crossroads intersection, in top of northwest corner fence post; copper nail marked "1068.9" -----	1, 069. 23
Clarks, 3.5 miles north of, 35 feet northwest of crossroads intersection, 1 foot north of G. R. Miller's garden fence in yard; iron post stamped "Prim. Trav. Sta. No. 16, 963" -----	963. 104

From point near Clarks north along highway to Barton.

Clarks, 5.2 miles north of, 60 feet south of Y road intersection, in large stump at edge of road; copper nail marked "696.5" -----	697. 57
Redland, 1.3 miles east of, 4 feet north of road, 30 feet west of barnyard gate, in top of short post holding watering trough; copper nail marked "664.2" -----	661. 43

From Sycamore south along highway to Damascus, thence west 2 miles, thence south to point near Redland.

Sycamore, 150 feet southeast of Y road intersection, 3 feet southeast of northwest corner fence post of school yard; iron post stamped "339" -----	339. 066
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Sycamore, 0.8 mile southeast of, in top of southeast corner fence post at Y road; copper nail marked "371"-----	Feet. 371.03
Sycamore, 1.25 miles southeast of, 20 feet east of road intersection, in root of large ash tree opposite T road west; copper nail marked "358.0"-----	359.84
Sycamore, 1.8 miles southeast of, in top of corner fence post on Foster road opposite T road east; copper nail marked "412.6"-----	412.62
Sycamore, 2.25 miles southeast of, at forks of road, in top of post; copper nail marked "407.8"-----	407.83
Sycamore, 3.25 miles southeast of, at T road west, on top of southwest corner fence post; copper nail marked "640.3"-----	640.31
Damascus, at T road north, 35 feet northeast of road intersection, 9 feet east of northeast corner fence post, 1 foot south of fence; iron post stamped "Prim. Trav. Sta. No. 21, 526"-----	525.748
Damascus, 1.5 miles southwest of, 30 feet south of road intersection, in top of post; copper nail marked "492.2"-----	492.24
Damascus, 2 miles west of, 35 feet northeast of intersection at T road north, in top of northeast corner fence post; copper nail marked "414.0"-----	414.00
Clackamas, 3.5 miles east of, 15 feet north of center of road, top of hill at Smalley ranch, about 0.4 mile east of Rock Creek; iron post stamped "Prim. Trav. Sta. No. 2, 298.9"-----	298.926
Stone, 200 feet north of fork of roads, at schoolhouse, 7 feet north of southwest corner, 1 foot from wall; iron post stamped "Prim. Trav. Sta. No. 20. 158.0"-----	158.571
Stone, at covered bridge crossing Clackamas River, at forks of road, in southwest corner of bridge, in top of timber; copper nail marked "109.3"-----	109.31
Clarks, 5.6 miles north of, 130 feet west of intersection at fork of road, 10 feet north of road, in top of large stump; copper nail marked "709.2"-----	710.21
Redland, 2.3 miles southeast of, 36 feet east of road intersection, 30 feet north of road, 1 foot southwest of southwest corner of A. M. Kirchem's garden fence; iron post stamped "654"-----	654.916
Clarks, 8.4 miles north of fork of private road northwest, in top of large stump west of road at barn; copper nail marked "632.6"-----	633.67
Fishers Mill, at Clear Creek road crossing, 70 feet north of bridge over Clear Creek, 40 feet east of road, in Fisher's yard; iron post stamped "Prim. Trav. Sta. No. 17, 290"-----	291.310
Fisher, 0.3 mile east of, opposite T road southeast, in top of fence post; copper nail marked "320.2"-----	321.32
Logan, first crossroad north of Harding Grange Hall, in top of northwest corner fence post; copper nail marked "481.3"-----	482.40
Logan, 1.8 miles north of, 35 feet west of center of road, in top of fence post at private road east; copper nail marked "306.5"-----	307.56
Logan, 2.2 miles north of, 90 feet south of crossroad, in top of fir stump; copper nail marked "303.0"-----	304.12
Barton, 0.9 mile west of, near northeast bank of Clackamas River, at ferry to farmhouse, 6 feet south of fence, in top of stump; copper nail marked "155.0"-----	156.11

From point 8 miles southeast of Oregon City east to point 3.5 miles north of Clarks.

Oregon City, 9.7 miles southeast of, 45 feet north of T road intersection, 3 feet east of edge of road, in top of stay post; copper nail marked "683.8"-----	Feet. 683. 63
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Oregon City, 10.8 miles south of, 10 feet west of private gateway to south, 30 feet southwest of, in top of post at corner; copper nail marked "717.8"-----	717. 61
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From point 1.5 miles west of Redland southeast to point 2.3 miles southeast of Redland.

Redland, 1.5 miles northwest of, 60 feet north of intersection at forks of road, 9 feet west of Portland road, in top of fir stump; copper nail marked "340.5"-----	340. 51
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Redland, 2 feet west of southwest corner of school yard, 30 feet north of road, 75 feet from corner of schoolhouse; iron post stamped "Prim. Trav. Sta. No. 19, 592"-----	592. 339
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Stone, at forks of road to southeast, 900 feet south of Clackamas River bridge, opposite sign post "6 miles to Linn's Mill, 13 miles to Springwater," on large boulder; ring of white paint marked "114.2"-----	114. 21
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Stone, 1.4 miles south of Clackamas River bridge, 35 feet east of Y road intersection, on west side of road, in top of fence post; copper nail marked "228.1"-----	228. 1
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Oregon City, 6.1 miles east of, 60 feet north by 9 feet west of road intersection, in top of fir stump; copper nail marked "340.5"-----	340. 51
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Oregon City, 6 miles east of, on Redland road, 30 feet east of road intersection, in top of stump at sign post; copper nail marked "344.1"-----	344. 07
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From Cazadero southeast 5 miles (spur line run twice).

Cazadero, 2 feet from northwest corner of station of Portland Railway, Light & Power Co., 12 feet southwest of track; iron post stamped "509"-----	509. 134
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Cazadero, 1.4 miles southeast of, 3 feet west of track along Clackamas River, in root of stump; copper nail marked "598.3"-----	598. 34
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Cazadero, 2.5 miles southeast of, along Clackamas River, 11 feet north of Portland Railway, Light & Power Co.'s new grade, in top of 2-foot stump; copper nail marked "653.4"-----	653. 47
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Cazadero, 2.9 miles southeast of, along Portland Railway, Light & Power Co.'s track, 9 feet northeast of grade at edge, in top of rock at edge of ditch; aluminum tablet stamped "665.5"-----	665. 554
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Cazadero, 4.1 miles southeast of, along Clackamas River, 6 feet northeast of trail, in top of 3-foot stump; copper nail marked "692.3"-----	692. 29
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Cazadero, 5.1 miles southeast of, on North Fork of Clackamas River, at Duncans Camp, 12 feet southeast of curve in road to camp, in top of 4-foot stump; copper nail marked "687.9"-----	687. 92
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Cazadero, 5 miles southeast of, near Duncans Camp on North Fork of Clackamas River, at north edge of road in hillside, in top of large rock; aluminum tablet stamped "703"-----	702. 740
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At Lenhard Mountain (by a checked spur line).

Lenhard Mountain, top of north point, 0.4 mile north of Lenhard's house, in firm bowlder; aluminum tablet stamped "2116"----- Feet.
2, 115.886

OREGON CITY QUADRANGLE.

[Latitude 45° 15'–45° 30'; longitude 122° 30'–122° 45'.]

From Willsburg east to Sycamore.

Willsburg, 0.5 mile north of, 360 feet north of milepost 767, on east side of track; iron post stamped "56 B 1903"-----	56.176
Willsburg, 1.5 miles south of, at first road crossing south of Willsburg station on Southern Pacific R. R., in timber of cattle guard; copper nail marked "97.3"-----	97.35
Willsburg, 1 mile southeast of, at T road east, first road intersection north of Lambert, in top of gatepost; copper nail marked "145.1"-----	145.10
Errol, at road crossing on Portland Railway, Light & Power Co.'s track, west side of road, top of southwest corner post; copper nail marked "101.5"-----	101.50
Stanley, at road crossing on Portland Railway, Light & Power Co.'s track, in top of southwest corner fence post, edge of right of way; copper nail marked "135.0"-----	134.98
Wichita, at road crossing on Portland Railway, Light & Power Co.'s track, in top of southeast corner fence post, edge of right of way; copper nail marked "140.4"-----	140.39
Bell, at road crossing on Portland Railway, Light & Power Co.'s track, 100 feet north of road, west edge of road, in top of stump; copper nail marked "162.4"-----	162.41
Luther, at road crossing on Portland Railway, Light & Power Co.'s track, in northwest corner of bridge over Johnsons Creek, in top of stringer; copper nail marked "187.0"-----	186.98
Kendall, road crossing on Portland Railway, Light & Power Co.'s track, 50 feet northwest of road and track intersection, in top of small stump; copper nail marked "198.1"-----	198.15
Lents Junction station, 750 feet east of road crossing, 5 feet south of track; iron post stamped "Prim. Trav. Sta. No. 1, 207"-----	207.047
Lents Junction, 1 mile east of, at crossroads, in top of northwest corner fence post; copper nail marked "276.9"-----	276.95
Lents Junction, 1.5 miles east of, 30 feet northwest of road intersection, in top of northwest corner fence post at T road; copper nail marked "268.2"-----	268.19
Lents Junction, 2.8 miles east of, 55 feet northeast of intersection with T road north, 3 feet in pasture, in top of large stump; copper nail marked "256.0"-----	256.12
Lents Junction, 3 miles east of, at T road north, in northwest corner of bridge stringer; copper nail marked "316.8"-----	316.80

From point 3 miles east of Clackamas west to Clackamas.

Clackamas, 3 miles east of, at northeast corner of Rock Creek bridge (covered bridge), in top of stringer; copper nail marked "162.6"-----	162.64
Clackamas, 1.4 miles east of, at T road south, in top of southwest corner fence post; copper nail marked "132.4"-----	132.38
Clackamas, 0.5 mile east of, 20 feet west of road intersection, in top of fence post; copper nail marked "115.7"-----	115.73

Clackamas, 248 feet south of station, 27 feet east of main track at telegraph pole; iron post stamped "108 B 1903"-----	Feet. 108.928
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From point 5 miles east of Oregon City west to point near Oregon City, thence north to Park Place.

Oregon City, 5 miles east of, 12 feet north of road on hill at T. N. Smith's house, 300 feet west of mail box; iron post stamped "526"-----	525.985
Oregon City, 4 miles east of, 30 feet southeast of T road intersection to south, opposite five mail boxes, in top of southeast corner fence post; copper nail marked "468.5"-----	468.46
Oregon City, 2.5 miles east of, 150 feet east of schoolhouse (district 61), in corner of yard, 20 feet south of road; iron post stamped "Prim. Trav. Sta. No. 31, 89"-----	89.291
Oregon City, 2 miles east of, at T road, in top of southwest corner fence post; copper nail marked "71.7"-----	71.74
Oregon City, 1.5 miles east of, opposite T road north, 30 feet south of road intersection, in top of post; copper nail marked "35.4"-----	35.41
Oregon City, 0.9 mile east of, in top of southeast corner fence post at T road east; copper nail marked "35.551"-----	35.55
Oregon City, 0.5 mile east of, 18 feet from end of bridge 65 over Abenathy Creek, southwest of crossroads intersection; copper nail in stringer, marked "41.7"-----	41.71
Park Place paper mill, 200 feet south of where station once was, 16 feet east of track, at first telegraph pole south of road crossing; iron post stamped "45 B 1903"-----	45.122

From Oregon City southeast along highway 8 miles, thence west to point near Canby.

Oregon City, 1.5 miles south of, 7 feet north of milepost 755, 7 feet east of rail at fence line; iron post stamped "66 B 1903"-----	66.822
Canamah Park, 2 miles south of, 12 feet southwest of corner of fence north side of road, opposite E. E. Parker's barn, in top of stump; copper nail marked "472.7"-----	472.86
Oregon City, 2.5 miles south of, 105 feet northwest of T road intersection, at northeast corner of town hall, in Twilight school yard; b. m. on ring of white paint, marked "442.6"-----	442.58
Oregon City, 1.5 miles south of, 75 feet northwest of road intersection, 10 feet west of road, in top of fence post north of gate and northwest of T road east; copper nail marked "457.2"-----	457.14
Oregon City, 1 mile south of, 7 feet northwest of telephone pole west of road, 40 feet northwest of road intersection at T road east, top of second concrete post north of gate at road to house-----	477.38
Oregon City, 1.5 miles southeast of, 45 feet northeast of crossroads, 1 foot south of fence, 12 feet northeast of fence corner post; iron post stamped "478"-----	477.640
Oregon City, 1.5 miles southeast of, 140 feet northwest of T road, 0.5 mile south of Ely, in top of northwest corner fence post; copper nail marked "453"-----	452.96
Oregon City, 1.8 miles southeast of, 80 feet southeast of road intersection, in top of southeast corner fence post at T road east; copper nail marked "441.8"-----	441.84
Oregon City, 2.5 miles southeast of, in top of post in northeast corner of railing of bridge; copper nail marked "369.3"-----	369.77

Oregon City, 3.5 miles southeast of, 10 feet north of road, opposite E. W. Smith's house on north side of road; iron post stamped "Prim. Trav. Sta. No. 8, 427"-----	Feet. 426.919
Oregon City, 4.5 miles southeast of, northeast corner at T road east, in southwest corner of Schackey's garden; copper nail in corner fence post, marked "556.1"-----	556.06
Oregon City, 5 miles southeast of, 30 feet northeast of intersection at T road east, in top of northeast corner fence post; copper nail marked "547.4"-----	547.30
Oregon City, 5 miles southeast of, at Beaver Creek, 50 feet southwest of road intersection at crossroads, opposite store, in top of southwest corner fence post; copper nail marked "527.9"-----	527.78
Oregon City, 6.25 miles southeast of, 35 feet southwest of crossroads, in top of southwest corner fence post; copper nail marked "546.0"-----	545.90
Oregon City, 7 miles southeast of, 4 feet south of southeast corner fence post at T road south, 2 feet west of fence, 35 feet southeast of road intersection; iron post stamped "Prim. Trav. Sta. No. 7, 616"-----	616.071
Oregon City, 8 miles southeast of, 30 feet northeast of road intersection; bench mark on top of northeast corner fence post at road east, marked "664.4"-----	664.35
Oregon City, 8.5 miles southeast of, 55 feet southwest of road intersection at forks of road, in top of large stump; copper nail marked "803.8"-----	803.77
Oregon City, 8 miles southeast of, 50 feet northeast of road intersection, in top of stump; copper nail marked "833.7"-----	833.68
Canby, 7.8 miles east of, 28 feet southwest of road intersection at T road east, 15 feet south of road, in southwest corner fence post; copper nail marked "698.9"-----	698.90
Canby, 7 miles east of, 8 miles southeast of Oregon City, at top of hill, 3 feet south of edge of road; iron post stamped "Prim. Trav. Sta. No. 6, 681.5"-----	681.537
Canby, 6.2 miles east of, 45 feet southwest of crossroads (intersection of Mollala and Canby roads), 10 feet south of Canby road at corner near mail boxes, in top of large stump; copper nail marked "529.5"-----	529.46
Canby, 4.25 miles east of, 15 feet south of road at farm house on same side, 30 feet east of fork of road, in top of gate post; copper nail marked "542.1"-----	542.03
Canby, 3.5 miles east of, 25 feet northeast of crossroad intersection, 2 feet west from southwest corner fence post of church yard, 20 feet east of north-south road; iron post stamped "Prim. Trav. Sta. No. 5, 322.8"-----	322.729
Oregon City, 8 miles south of, 2 miles east of Canby, 36 feet northeast of road intersection, in top of northeast corner fence post; copper nail marked "184.1"-----	183.93
Oregon City, 7.5 miles south of, 57 feet southwest of road intersection, 5 feet north of road, in top of small fir stump; copper nail marked "192.6"-----	192.50
Oregon City, 7 miles south of, 16 feet southwest of road intersection, inside of corner fence post at T road south; copper nail marked "167.3"-----	167.17
Canby, 1.1 miles south of, at second telegraph pole south of milepost 749, 18 feet east of track; iron post stamped "130 B"-----	130.032

Near Barlow.

Barlow, 2 miles northwest of, 35 feet southwest of road intersection, in top of southwest corner fence post at T road; copper nail marked "186.4" -----	Feet. 186.32
From point near Wilsonville northeast to Stafford, thence east to Oregon City.	
Wilsonville, 1.5 miles northeast of, 45 feet northwest of road intersection at crossroads, in top of large stump; copper nail marked "220.4" -----	220.36
Wilsonville, 3 miles northeast of, 35 feet northeast of road intersection, 2 feet west of northeast corner fence post, 15 feet east of road; iron post stamped "215" -----	215.056
Wilsonville, 4.1 miles northeast of, 75 feet northeast of T road east, in northeast root of oak tree on east side of road; copper nail marked "271.9" -----	271.87
Wilsonville, 4.4 miles northeast of, 20 feet west of fork of road, near telephone pole; copper nail in top of fence, marked "273.8" -----	273.83
Wilsonville, 5.6 miles northeast of, 0.5 mile south of Stafford; copper nail in top of northwest corner fence post at forks of road, corner of church yard, marked "429.0" -----	429.04
Stafford, opposite store in southeast corner at T road, 30 feet southeast of road intersection, 3 feet south of southeast corner fence post; iron post stamped "412" -----	412.175
Stafford, 0.4 mile east of, 35 feet northwest of road intersection, in telephone pole at forks of road; copper nail marked "438.0" -----	438.01
Stafford, 1.8 miles east of, 2 miles west of Willamette, 60 feet north of forks of road, in top of north corner fence post at forks of road; copper nail marked "166.3" -----	166.33
Willamette, opposite G. Graves's store, 45 feet northwest of road intersection, in top of corner fence post; spike marked "214.4" -----	214.00
Willamette River; surface of water, July 24, 1911 -----	51
From Oregon City northwest to Greenwood Cemetery, Portland, thence east to Willsburg.	
Oregon City, south of, at Canamah Park, on rock embankment at east bank of Willamette River above falls; bench mark on ring of paint marked "62.9" -----	62.87
Oregon City, at west end of Willamette River Bridge, 60 feet south of southwest corner of bridge at T road, in root of small tree; copper nail marked "106.6" -----	106.65
Bolton, 54 feet northeast of road, in top of southeast corner fence post of school yard; copper nail marked "231.5" -----	231.48
Bolton, 1.9 miles northwest of, 12 feet northeast of road, 65 feet east of telephone pole No. 187; iron post stamped "116" -----	115.757
Oswego, 0.5 mile south of, 150 feet southwest of forks of road, 20 feet south of road, at forks of Salem, Portland, and Oregon City roads, in top of stump; copper nail marked "100.9" -----	100.88
Oswego, 200 feet southwest of station, 27 feet northwest of track, 3 feet north of telephone pole 36/7 at road crossing on Southern Pacific R. R. track; iron post stamped "98" -----	97.747
Oswego, 1.25 miles west of, 9 feet south of road, in top of stump; copper nail marked "308.2" -----	308.12

Oswego, 2.25 miles northwest of, 16 feet west of road intersection, in top of fence post opposite fork of road; copper nail marked "486.1"	Feet. 486.10
Oswego, 3 miles northwest of, 0.25 mile northeast of schoolhouse, 30 feet northwest of road intersection at forks of road, 3 feet north of northwest corner fence post, 2 feet south of telephone pole; iron post stamped "369"	368.599
Oswego, 3.5 miles northwest of, 6 feet west of southwest corner of bridge over Tri Anne Creek, in top of stump; copper nail marked "160.4"	160.39
Portland, near south limits of, 48 feet northeast of road intersection at T road east, 3 feet west of southwest corner of Soldiers' Cemetery (Greenwood); iron post stamped "442"	441.643
Portland, in city, 5 miles south of courthouse, north of road intersection near Jewish Cemetery, in top of post; copper nail marked "374.0"	373.96
Fulton (in south Portland), T road intersection at end of River View car line, at northwest corner of curb; bench mark on ring of paint, marked "58.5"	58.40
Sillwood (in south Portland) at southwest corner of Spokane Avenue and East Eleventh Street, on top of water-plug fire hydrant; marked "118.9"	118.80
From Oswego south along Southern Pacific R. R. 4.5 miles, thence east and south to Stafford.	
Bryant, 100 feet east of, north of track at road crossing; top of post at cattle guard, marked "154.9"	154.93
Cook, 500 feet east of, in top of cattle guard north of track; copper nail marked "161.2"	161.21
Cook, 0.5 mile southwest of, 45 feet northeast of track and road intersection, 2 feet west of fence, 27 feet east of railroad crossing signpost; iron post stamped "167"	166.558
Cook, 1.4 miles southwest of, 5 feet south of road, 20 feet east of track, in top of fence post; copper nail marked "161.9"	161.86
Oswego, 3 miles south of, 18 feet southeast of intersection of road, at south edge of road, in side of telephone pole opposite forks of road; copper nail marked "253.2"	253.23
Stafford, 2 miles northeast of, south of forks of road, 1 foot east of Hazelia schoolhouse, at northeast corner of building; iron post stamped "383"	382.800
Stafford, 1 mile north of, in top of southwest corner fence post at crossroads; copper nail marked "185.1"	185.13
Oregon City, 5 miles southwest of, 40 feet northeast of T-road intersection, in top of northeast corner fence post; copper nail marked "320.5"	320.50
Stafford, 0.4 mile east of, 35 feet northwest of road intersection; copper nail in telephone pole marked "438.0"	438.01

REEDVILLE QUADRANGLE.

[Latitude 45° 15'–45° 30'; longitude 122° 45'–123°.]

Near Wilsonville.

Barlow, 2.5 miles northwest of, 2 miles north of Aurora, 3 feet east of northwest corner fence post, 45 feet northwest of crossroad intersection, 20 feet west of road; iron post stamped "190 Prim. Trav. Sta. No. 11, 1911"	190.445
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Barlow, 4.25 miles northwest of, 40 feet east of road intersection at T road, 10 feet south of road, in top of stump; copper nail marked "101.391" -----	Feet. 101.27
Barlow, 5 miles northwest of, 60 feet south of T-road intersection, 6 feet east of southeast corner fence post, north of fence; iron post stamped "153" -----	152.96
Wilsonville; surface of water in Willamette River, July 25, 1911.----	53
Wilsonville, 0.4 mile north of, 35 feet southeast of road intersection, in top of corner fence post; copper nail marked "153.8" -----	153.78
Wilsonville, 1 mile northeast of, 30 feet northeast of intersection with T road northwest, 6 feet northwest of fence, in top of C. L. Lepleheiser's mail-box post; copper nail marked "194.6" -----	194.58
From point 2.5 miles northwest of Barlow west along highways to Newberg, thence northeast along Southern Pacific R. R. to Tualatin.	
Barlow, 2.5 miles northwest of, 3 feet east of northwest corner fence post, 45 feet northwest of crossroad intersection, 20 feet west of road, 2 miles north of Amora; iron post stamped "Prim. Trav. Sta. No. 11, 190, Ore., 1911" -----	190.445
Butterville station, 1 mile east of, at crossroads, north side of road, in telephone pole; spike painted "190" -----	190.05
Butterville, 100 feet south of Oregon Electric R. R. station, east edge of right of way, south side of road; iron post stamped "Prim. Trav. Sta. No. 59, 186, Ore., 1913" -----	185.923
Butterville, 0.9 mile southeast of, at crossroads, in sign post; spike painted -----	190.52
Butterville, northeast intersection of streets, 15 feet southwest of Masonic Hall; iron post stamped "Prim. Trav. Sta. No. 60, 102, Ore., 1913" -----	102.220
Butterville, 0.5 mile southwest of, at T road west, in corner fence post; spike marked "193" -----	192.93
Butterville, 1.6 miles west of, northwest corner of bridge; copper nail, aluminum tag stamped "83" -----	82.74
Champoeg mill, 0.1 mile east of, at T road south, in base of telephone pole; spike, aluminum tag stamped "134" -----	130.98
Champoeg mill, northeast corner of bridge over creek; copper nail, aluminum tag stamped "97" -----	96.13
Champoeg (store and post office closed), northeast intersection of roads; iron post stamped "Prim. Trav. Sta. No. 61, 133, Ore., 1913" -----	132.980
Champoeg, 0.5 mile west of, east corner of school yard, at crossroad south, in telephone pole; spike painted "133" -----	133.00
Champoeg, 1.8 miles west of, south edge of road, in base of oak tree; copper nail scribed "120" -----	119.27
Newberg, 4 miles southeast of, 2.5 miles west of Champoeg, at T road north to ferry, iron post stamped "Prim. Trav. Sta. No. 62, 117, Ore., 1913" -----	116.775
Gearns Ferry, 50 feet north of north landing of ferry, east side of road, in base of cottonwood tree; copper nail scribed "64" -----	63.61
Ferry; surface of water, Sept. 26, 1913.-----	52.0
Gearns Ferry, 0.3 mile north of, at angle in road at top of hill, east side of road, in base of tree; spike scribed "169" -----	168.09

Newberg, 1.6 miles east of, at T road north, in floor of bridge; copper nail stamped "108"-----	Feet. 107.84
Newberg, 1.4 miles east of, at angle in road near new steel bridge, in base of telephone pole; spike marked "166"-----	165.42
Newberg, at Seventh and Washington streets; top of hydrant, stamped "167"-----	166.22
Newberg, city hall, north entrance; iron post stamped "Prim. Trav. Sta. No. 64, 175, Ore., 1913"-----	174.893
Newberg, 150 feet east of station, 5 feet south of track, west edge of sidewalk on main street; aluminum tablet stamped "Prim. Trav. Sta. No. 63, 181, Ore., 1913"-----	180.717
Newberg, road crossing northeast of; top of rail painted and aluminum tag stamped "193"-----	192.3
Newberg, 1 mile northeast of, south end of bridge 25 A, at copper nail in railing; aluminum tag stamped "200"-----	198.99
Springbrook, 200 feet south of station, in foundation of railroad water tank; aluminum tablet stamped "Prim. Trav. Sta. No. 65, 248, Ore., 1913"-----	247.491
Springbrook, in front of station; top of rail-----	248.3
Springbrook, at road crossing northeast of; top of rail marked "270"-----	269.6
Nebb, east end of bridge 23 B, in railing; copper nail marked "318"-----	317.86
Rex, northwest corner of school yard; iron post stamped "Prim. Trav. Sta. No. 66, 431, Ore., 1913"-----	431.233
Rex, 1 mile east of, in south end of bridge 20 F; copper nail marked "365"-----	365.37
Chehalem, in front of station; top of rail-----	334.7
Votaw, 150 feet southwest of station signboard, spike in guy pole; aluminum tag stamped "307"-----	307.21
Middleton, 20 feet east of railroad crossing, in guy pole; spike marked "220"-----	220.29
Middleton, at road crossing; top of rail-----	221.3
Bridge 17 B, in west end of; copper nail, aluminum tag stamped "190"-----	189.76
Sherwood, 150 feet north of station, at southwest corner of Carlson & Sherk store; iron post stamped "Prim. Trav. Sta. No. 67, 192, Ore., 1913"-----	192.175
Sherwood, at road crossing east of; top of rail-----	197.0
Sherwood, 1 mile east of, east end of bridge 16 A; copper nail in railing, aluminum tag stamped "166"-----	166.20
Cipole, at road crossing; top of rail-----	155.8
Milepost 15, spike in second pole east of; aluminum tag marked "138"-----	137.54
Hermann, 100 feet west of signboard, on north edge of right of way, at fence corner; iron post stamped "Prim. Trav. Sta. No. 68, 133, Ore., 1913"-----	133.372
Tualatin, 4 miles west of, north side of track at second-class road crossing; spike in base of power pole, aluminum tag stamped "124"-----	123.46
Tualatin, in front of station; top of north rail-----	133.1
Tualatin, railroad bridge over Tualatin River; top of southeast pier-----	134.30
Galbreath, at road crossing; top of north rail-----	142.2
Tualatin, 0.8 mile east of, south side of track at road crossing, in base of guy pole; spike, aluminum tag stamped "158"-----	157.7

	Feet.
Tualatin, 0.8 mile east of, at road crossing; top of rail-----	158.7
Cork, 0.5 mile southwest of, 45 feet northeast of track and road inter- section, 2 feet west of fence, 27 feet east of railroad crossing sign- post; iron post stamped "Prim. Trav. Sta. No. 16, 167, Ore., 1911"-----	166.558
From Sherwood along highways northwest to Scholls, thence east to Robinson, thence south to Tualatin.	
Sherwood, 1 mile north of, at crossroads, in base of telephone pole; spike painted "207"-----	206.78
Sherwood, 2 miles north of, 0.2 mile north of small church, near T road west, in floor of bridge; copper nail, aluminum tag stamped "139"-----	138.90
Sherwood, 2.7 miles north of, at T road south, in base of mail-box post; nail marked "168"-----	166.54
Sherwood, 4 miles north of, at angle in road west near corner of secs. 18, 19, 13, and 24, Rs. 1 and 2 W., T. 2 S., 20 feet west of fence corner; iron post stamped "157, Ore., 1913"-----	157.002
Scholls, 3.8 miles southeast of, northeast corner of bridge; copper nail in floor, aluminum tag stamped "260"-----	259.43
Scholls, 3 miles southeast of, at southeast corner of bridge; copper nail stamped "243"-----	242.71
Scholls, 1.7 miles southeast of, stone corner of secs. 10, 11, 14, and 15, T. 2 S., R. 2 W., marked "157"-----	156.51
Scholls store, 0.8 mile northeast of, 20 feet north of store, in top of fence post near telephone pole; copper nail, aluminum tag stamped "153"-----	152.48
Scholls 1.3 miles northeast of, in northeast corner of bridge over Tualatin River; copper nail, aluminum tag marked "137"-----	137.26
Scholls, 2 miles northeast of, at T road south, in corner fence post; spike, tag stamped "193"-----	192.93
Scholls, 2.5 miles northeast of, north side of road at T road north; iron post stamped "Prim. Trav. Sta. No. 78, Ore., 165, 1913"-----	165.003
Scholls, 3.5 miles northeast of, at angle in road northeast, in telephone pole; spike marked "191"-----	191.18
Kinton School, district No. 37, 0.4 mile west of, south side of road at T road south; point on boulder painted "263"-----	262.34
Kinton School, district No. 37, at T road north, in base of telephone pole; spike marked "285"-----	284.56
Kinton School, 1 mile east of, at angle in road northeast, east side of road; iron post stamped "Prim. Trav. Sta. No. 79, 328, Ore., 1913"-----	327.563
Robinson, 2.6 miles west of, 200 feet east of top of hill, at T road north, in root of large fir tree; copper nail scribed "364"-----	363.59
Robinson, 2 miles west of, east edge of sec. 32, at T road north, in corner fence post; spike-----	214.92
Robinson, 1 mile west of, south side of road, on section line; top of E. Alson's mail box, marked "235"-----	235.15
Robinson, 0.3 mile west of, bridge over creep; top of southeast founda- tion, marked "162"-----	162.25
Robinson, east edge of right of way, north edge of road, 150 feet north of station; iron post stamped "Prim. Trav. Sta. No. 69, 197, Ore., 1913"-----	196.527

Greenburg, 600 feet north of, in base of semaphore; bolt marked "176.3"-----	Feet. 176.33
Greenburg, at northwest frog, crossing of Oregon Electric and Southern Pacific railroads; top of rail, marked "176.8"-----	176.8
Tigard, at road crossing on Southern Pacific R. R.; top of rail, marked "161"-----	161.3
Tree, 200 feet north of, west side of Southern Pacific R. R. track, in base of power pole; spike marked "156"-----	156.50
Bonita, 600 feet north of, at road crossing; top of Southern Pacific R. R. rail, marked "151"-----	150.9
Bonita, in front of Oregon Electric R. R. station; top of rail-----	143.9
Bonita, 500 feet south of station, northwest corner of trestle 13½; copper nail marked "145"-----	144.57
Durham, 200 feet south of, at road crossing; top of rail, marked "137"-----	137.1
Oregon Electric R. R., in southwest corner of bridge 14.3; copper nail stamped "129"-----	128.59
Tualatin, 0.5 mile north of, in southwest corner of Oregon Electric R. R. bridge over Tualatin River; copper nail, aluminum tag stamped "129"-----	128.63
Tualatin, in front of station; top of north rail-----	133.1
From Scholls along highways west to Laurel, thence north to Hillsboro.	
Scholls, 60 feet southeast of store, east edge of road at T road west; iron post stamped "Prim. Trav. Sta. No. 77, Ore., 176, 1913"-----	175.867
Scholls, 0.3 mile west of south edge of road, at angle in road, in root of cedar tree; railroad bench mark marked "159.58"-----	160.95
Scholls, 1.4 miles northwest of, at angle in road west, in telephone pole; spike marked "187"-----	186.74
Center of sec. 8, T. 2 S., R. 2 W., 20 feet northeast of Philip Shea's mail box; top of iron stake-----	194.16
Laurel, 1 mile east of, 150 feet east of corner of secs. 5, 6, 7, and 8, north edge of road, in base of pine tree; copper nail scribed "183"-----	182.82
Laurel, 40 feet northeast of corner of secs. 6, 7, 1 and 12, T. 2 S., Rs. 1 and 2 W., north edge of road, opposite store; iron post stamped "Prim. Trav. Sta. No 76, 193, Ore., 1913"-----	192.932
Laurel, 1.2 miles north of, at west side of crossroad, in base of large fir tree; copper nail marked "193"-----	192.96
Laurel, 2 miles north of, north side of road at crossroad; iron post stamped "Prim. Trav. Sta. No. 75, 170, Ore., 1913"-----	170.316
Hillsboro, 4.7 miles south of, west edge of road, in oak tree; copper nail marked "180" (R. R. B. M. Elev. 179.14)-----	180.14
Hillsboro, 3.9 miles south of, at crossroads, in telephone pole; spike marked "162"-----	161.84
Hillsboro, 3 miles south of, south edge of road at T road north; iron post stamped "Prim. Trav. Sta. No. 74, 184, Ore., 1913"-----	183.600
Hillsboro, 1.3 miles south of, in floor of Tualatin River bridge; copper nail, aluminum tag stamped "146"-----	146.02
From Robinson along highways north to Beaverton, thence west to Witchazel.	
Robinson, 150 feet north of station, east edge of right of way, north edge of road; iron post stamped "Prim. Trav. Sta. No. 69, 197, Ore., 1913"-----	196.527
Fanno, 100 feet north of road crossing, in base of power pole; spike marked "197"-----	197.46

	Feet.
Fanno, 0.8 mile north of, in power pole; spike marked "194"-----	194.08
Beaverton, road crossing east of; top of rail-----	184.3
Beaverton, 340 feet west of station, 25 feet north of track, west edge of road at road crossing; iron post stamped "Prim. Trav. Sta. No. 70, 188, Ore., 1913"-----	188.059
Beaverton, west of, at road crossing 11 C; top of rail-----	192.4
St. Mary's, in front of station; top of rail-----	195.0
St. Mary's, 0.2 mile west of, in northwest corner of bridge 12 D; copper nail marked "179"-----	179.05
Huber, northeast corner of cement sidewalk at northwest corner of Huber Mercantile Co.'s store; chiseled cross marked "192"-----	192.09
Aloha, south edge of right of way, west edge of road at crossing; iron post stamped "Prim. Trav. Sta. No. 71, 212, Ore., 1913"-----	212.532
Aloha, 0.5 mile west of, road crossing 14 E D; top of rail, marked "222"-----	221.8
Reedville, 0.3 mile east of; first telephone pole east of road cross- ing, marked "218"-----	218.28
Reedville, opposite station; top of rail, on power pole, is painted "228"-----	228.2
Road crossing 16 C B; top of rail, marked "206"-----	205.8
Witchhazel, 150 feet east of station, north edge of right of way, south edge of road at fence corner; iron post stamped "Prim. Trav. Sta. No. 72, 192, Ore., 1913"-----	192.108

MOUNT HOOD QUADRANGLE.

[Latitude 45°-45° 30'; longitude 121° 30'-122°.]

From point 1.2 miles east of Salmon post office northeast along roads to point
about 2.4 miles northeast of Lost Lake.

Salmon, 2.1 miles southeast of, at northeast corner of Rossalsky's meadow, 500 feet north of barn, 10 feet south of road; iron post stamped "1206"-----	1,206.287
Salmon, 4.2 miles east of, 30 feet south of road, 300 feet east of junc- tion of toll road and Welche's road, 75 feet north of schoolhouse; iron post stamped "1335"-----	1,335.237
Salmon, 7.8 miles east of, 0.4 mile northwest of Sandy River, 5 feet north of Lost Lake trail, 100 feet north of ranch house, in firm boulder; aluminum tablet stamped "1626"-----	1,625.856
Salmon, 11.6 miles east of, 650 feet north of Clear Fork Camp, 200 feet east of Clear Fork, at west base of Last Chance Mountain on Lost Lake trail, in firm boulder; aluminum tablet stamped "2140"-----	2,140.211
Clear Fork Camp, 2 miles northeast of, 4.2 miles south of Bull Run Lake, 200 feet east of North Branch of Clear Fork, north of trail, on steep point, in firm boulder; aluminum tablet stamped "2538"-----	2,538.000
Bull Run Cabin, 0.5 mile east of, 0.97 mile south of Bull Run Lake, 5.23 miles north of Clear Fork Camp, 10 feet east of Lost Lake trail, in firm boulder; aluminum tablet stamped "3714"; painted on tree near boulder "B. M. 3714"-----	3,714.635
Lost Lake, 0.8 mile south of, 10 feet west of Lost Lake trail, on divide between Jouis Creek and Lost Lake, in firm boulder; aluminum tablet stamped "3902"-----	3,902.493
Lost Lake, 2.2 miles northeast of, on Lost Lake trail, 0.4 mile east of divide, 30 feet south of road, in firm boulder; aluminum tablet; painted on boulder "3214"; painted on tree north of boulder "B. M. U. S. G. S."-----	3,214.49

STEVENSON QUADRANGLE.

[Latitude 45° 30'–46°; longitude 121° 30'–122°.]

From point 2.4 miles northeast of Lost Lake along roads to Hood River station.

Lost Lake, 4.7 miles east of, on ridge between West Fork of Hood River and Lake Branch, in clearing, 20 feet south of bunch of trees, 15 feet west of road, in firm boulder; aluminum tablet; painted on tree north of boulder "2007 U. S."-----	Feet. 2,007.360
Lost Lake, 7.5 miles northeast of, 0.5 mile east of Markley ranch house, 300 feet west of bridge, 400 feet west of mouth of Lake Branch, 5 feet north of road, in firm boulder; aluminum tablet stamped "1277"-----	1,277.708
Winans, 3.1 miles west of, 600 feet west of old lumber camp, opposite Gordon place, 600 feet south of dam, 10 feet west of road, in firm boulder; aluminum tablet stamped "1194"; painted on tree "B.M."-----	1,194.050
Winans, 500 feet west of station, 250 feet east of bridge across Hood River, on first bench above creek, 15 feet east of road, in firm boulder; aluminum tablet stamped "863"; painted on tree 15 feet east of boulder "B.M."-----	863.680
Blucher, 0.7 mile east of station, 150 feet east of 12-mile post, 30 feet south of center of railroad, in firm boulder; aluminum tablet stamped "855"-----	855.558
Tucker, 1.1 miles north of, 4.5 miles south of Hood River, on divide, 500 feet south of church, 20 feet west of center of road, in firm boulder; aluminum tablet stamped "671"-----	671.000

Riddles quadrangle.

DOUGLAS, JACKSON, AND JOSEPHINE COUNTIES.

The elevations in this list are based on the latest adjusted elevations on the precise-level line run in 1903 along the Southern Pacific R. R. from the Oregon-California State line to Portland.

The leveling was done in 1901 by C. L. Nelson.

The stamped elevations on the bench marks were based upon railroad data and differ considerably from the adjusted values.

RIDDLES QUADRANGLE.

[Latitude 42° 30'–43°; longitude 123°–123° 30'.]

From Glendale northeast along county roads to Galesville, thence north to Canyonville and west to Riddles.

Glendale, at station; top of rail-----	Feet. 1,417.9
Galesville, 30 feet southeast of hotel, 40 feet north of road; iron post stamped "1551 G"-----	1,531.888
Summit, 8 feet west of road; iron post stamped "2046 G"-----	2,026.661
Canyon Creek, 100 feet north of, 200 feet southeast of Pickett house; iron post stamped "988 G"-----	968.708
Canyonville, 1 foot south of southwest corner of Masons' Hall; iron post stamped "766 G"-----	747.300
T. 30 S., on line between sec. 30, R. 5 W., and sec. 25 R. 6 W., 100 yards southwest of P. Ulam's house, 80 yards south of small summit, 16 feet west of road; iron post stamped "717 G"-----	697.767

From Canyonville east along county road up Umpqua River to Perdue school-house.

Days Creek, 70 feet east of schoolhouse, on line with its south side, 80 feet south of Days Creek and 50 feet south of bridge; iron post stamped "797 G"-----	Feet. 777.288
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Days Creek, 80 feet northwest of schoolhouse, 18 feet west of small creek bed, 345 feet north of Umpqua River, 6 feet south of road; iron post stamped "911 G"-----	891.773
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From Days Creek post office northeast along county road to house of John Gilbo.

John Gilbo's house, 250 yards northeast of, 135 feet north of Days Creek, 8 feet south of road, on township line; iron post stamped "937 G"-----	917.751
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From Johns ranch east along county road up Cow Creek to Binger.

Binger meadows, 180 feet southwest of southwest corner of rail fence, 72 feet east of Sugar Creek, 10 feet north of road; iron post stamped "1960 G"-----	1,940.822
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From Redfield's house south along old stage road to Wolf Creek.

T. 33 S., R. 6 W., sec. 2, 20 feet west of road, at summit; iron post stamped "1949 G"-----	1,929.571
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Wolf Creek, 80 feet north of McKinsey Hotel, 100 yards north of Wolf Creek bridge, 3 feet east of fence; iron post stamped "1295 G"-----	1,276.322
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From Wolf Creek south along old stage road to Merlin.

T. 34 S., R. 6 W., sec. 2, 200 yards northeast of Espe house, 25 feet northeast of intersection of roads, at foot of signpost; iron post stamped "1247 G"-----	1,227.873
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Merlin, 100 feet south of Harris Creek, 200 feet east of Jump-off- Joe Creek, on property of D. W. Mitchell, 100 feet west of track; iron post stamped "920 G"-----	900.504
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From Grave post office east along county road up Grave Creek to Pease ranch.

Placer, 0.5 mile northeast of, 4.5 feet south of section post at corner of sections 4, 5, 8, and 9; iron post stamped "1600 G"-----	1,580.181
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Pease ranch house, 400 yards northwest of, 12 feet east of ditch, at north corner between sections 5 and 6; iron post stamped "2493 G"-----	2,473.874
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From schoolhouse 2.5 miles east of Merlin east to Winona.

Winona, 1 mile northwest of, 0.3 mile southeast of Pollock ranch house, 900 feet south of county road, 0.3 mile south of Jump-off-Joe Creek, 100 feet south of line between secs. 5 and 6, Tps. 34 and 35 S., R. 5 W., 100 yards east of line between secs. 5 and 6, T. 35 S., R. 5 E.; iron post stamped "1448 G"-----	1,428.776
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From Woodville north along county road via Wimer to Clark house.

Wimer, 30 feet west of post office and store, 6 feet south of line along front of store; iron post stamped "1160"-----	1,134.577
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Clark house, at southeast corner of lot owned by E. Cameron, 150 feet east of Pleasant Creek, 35 feet east of intersection of county road with ranch road; iron post stamped "1399 W"-----	1,373.712
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From Wimer northeast via county road up Evans Creek to Rock Creek.

T. 35 S., R. 3 W., north part of sec. 5, southwest corner of May's schoolhouse, 250 feet east of Mays Creek; iron post stamped "1333 W" -----	Feet. 1, 308. 137
T. 34 S., R. 3 W., near northeast corner of sec. 26, Briscoe house (owned by W. Bybee), 5 feet southeast of southwest corner; iron post stamped "1494 W" -----	1, 468. 685
Rock Creek and Evans Creek, 190 feet north of junction of, 500 yards northwest of cabin property of E. G. Borden on knoll; iron post stamped "1886 W" -----	1, 860. 531

Grants Pass, Kerby, and Medford quadrangles.

JACKSON AND JOSEPHINE COUNTIES.

These elevations are based on the latest adjustment of the precise-level line run in 1903 along the Southern Pacific R. R. from the Oregon-California State line to Portland.

The leveling was done in 1904 by E. M. Fry.

GRANTS PASS QUADRANGLE.

[Latitude 42°-42° 30'; longitude 123°-123° 30'.]

From Grants Pass west along highways to mouth of Applegate Creek, thence southeast via Murphy, Provolt, and Applegate to Ruch.

Grants Pass, 4.5 miles southwest of, 1,200 feet southeast of house on Neighbor ranch, at west side of road; iron post stamped "914 B 1904" -----	Feet. 914. 783
Grants Pass, 8 miles southwest of, 2 miles east of Applegate Creek bridge, 1,200 feet south of house on Joss ranch, at forks of Wilderville and Jerome Prairie roads; iron post stamped "964 B 1904" -----	964. 808
Murphy, 3.9 miles northwest of, 150 feet north of Stringer ranch house, 70 feet northwest of front gate, north side of road; iron post stamped "1084 B 1904" -----	1, 084. 856
Murphy post office, 50 feet west of store and post-office building, 800 feet north of bridge over Applegate Creek, 25 feet southeast of road forks; iron post stamped "1061 B 1904" -----	1, 061. 970
Williams Creek, 0.5 mile northeast of mouth of, 10 feet east of east end of Williams Creek bridge, 300 feet west of house on Provolt ranch, at south side of road; iron post stamped "1161 B 1904" -----	1, 161. 931
Applegate, 40 feet southeast of store and post office, 650 feet northwest of bridge over Applegate Creek, east side of county road; iron post stamped "1275 B 1904" -----	1, 275. 616
Applegate post office, 2.9 miles east of, on ranch of Mrs. Sarah O'Brien in south wall of brick drying house; aluminum tablet stamped "1332 B 1904" -----	1, 332. 965
Ruch post office, 150 feet north of store and post office, 100 feet northwest of well and 100 feet west of blacksmith shop, in forks of road; iron post stamped "1525 B 1904" -----	1, 526. 080

From Woodville south along Southern Pacific R. R. to Bolt, thence south along highways via Foots and Forest creeks to Ruch.

Woodville, 0.7 mile north of, east side of Southern Pacific R. R. track, 3 feet north of milepost 467; iron post stamped "993 B" -----	994. 128
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Draper, 2 miles northwest of, 300 feet northwest of Ruble ranch house, 100 feet south of reservoir, north side of road; iron post stamped "1367 B 1904"-----	Feet. 1, 367. 861
Summit of divide, between Left Fork of Footh Creek and Forest Creek (Jacksons Creek), 10 feet south of road; iron post stamped "2981 1904"-----	2, 981. 948

From bridge over Applegate Creek near Wilderville west and north to Merlin.

Timpy Creek, 2 miles north of mouth, in rock ledge at north end of bridge; aluminum tablet stamped "863 B 1904"-----	863. 777
Merlin, 4.5 miles southwest of, 150 feet southwest of Robinson ranch house, 75 feet east of barn, east side of road at corner of yard fence; iron post stamped "871 B 1904"-----	871. 942
Merlin, 90 feet west of railroad, 30 feet north of Mitchell's store; iron post stamped "900 B"-----	900. 504

From point near Wilderville via Mooney Mountain road to Dryden.

Wilderville, 75 feet southeast of post office, 100 feet west of store, 50 feet north of B. Smith's shop, north side of road, near fence; iron post stamped "936 B 1904"-----	934. 783
Wilderville, 5.5 miles south of, 600 feet north of Burrows ranch house, 25 feet north of fence corner, 10 feet west of road at foot of Mooney Mountain, on grade; iron post stamped "1219 B 1904"-----	1, 219. 687
Deer Creek Forks, 0.5 mile northeast of, 0.5 mile east of Evans ranch house, 300 feet east of fence corner, 400 feet northwest of foot of old road grade, in stone in place; aluminum tablet stamped "1778 B 1904"-----	1, 778. 896
Divide between Murphy Creek and East Fork of Deer Creek at west side of trail at summit; iron post stamped "3126 B"-----	3, 127. 122
Case Creek, 200 feet west of mouth, 10 feet north of creek, 20 feet west of trail at Case Creek crossing, 200 feet south of double log cabin, in top of rock; aluminum tablet stamped "1594 B 1904"-----	1, 595. 251

From Provolt south along road via Williams to Thompson Creek schoolhouse.

Williams post office, 3 miles east of, 100 feet northwest of San Francisco Mining Co.'s bunk house, 300 feet east of barn, east side of road; iron post stamped "1301 B 1904"-----	1, 301. 953
Williams post office, 2 feet north of store and post office, 150 feet south of David John's residence, west side of road, near fence; iron post stamped "1368 B 1904"-----	1, 369. 007
Baltimore schoolhouse, 0.2 mile north of, 20 feet south of road forks, 4 feet west of fence; iron post stamped "1510 B 1904"-----	1, 511. 099
Thompson Creek schoolhouse, 0.2 mile south of; iron post stamped "1684 B"-----	1, 684. 845

From Applegate post office south along road to Thompson Creek schoolhouse.

Applegate post office, 40 feet southeast of store and post office, 650 feet northwest of bridge over Applegate Creek, east side of county road; iron post stamped "1275 B 1904"-----	1, 275. 616
Applegate post office, 3.1 miles south of, 1,000 feet south of Elmore ranch house, 4 feet from west end of wagon bridge over Thompson Creek, in top of stone; aluminum tablet stamped "1495 B 1904"-----	1, 495. 835

From Thompson Creek schoolhouse south along road through Steamboat to Watkins, thence northeast to Ruch post office.

Thompson Creek schoolhouse, 0.2 mile southwest of, 150 feet north of bridge over Thompson Creek, west side of road near forks; iron post stamped "1684 B"-----	Feet. 1, 684. 845
Houston ranch, 0.7 mile south of, 10 feet east of road, 600 feet east of Thompson Creek; iron post stamped "2093 B 1904"-----	2, 094. 105
Steamboat, 3.5 miles northwest of, 15 feet east of small bridge over Ozuc ditch, at summit of divide between Thompson Creek and O'Brien Fork of Applegate River, 10 feet east of road; iron post stamped "3196 B 1904"-----	3, 197. 389
Steamboat, 250 feet west of stamp mill, 150 feet west of house, 300 feet north of barn, 1 foot from fence at west side of road; iron post stamped "2445 B 1904"-----	2, 446. 316
Steamboat, 3.5 miles southwest of, 2 miles northwest of Watkins, at summit of divide, in stone 100 feet north of trail; aluminum tablet stamped "3318 B 1904"-----	3, 319. 694
Watkins post office, 800 feet south of, 150 feet north of Applegate River, 570 feet southwest of corner of sec. 35, T. 40 S., R. 4 W., 10 feet west of big gate; iron post stamped "1849 B 1904"-----	1, 850. 911
Watkins post office, 3 miles northeast of, 200 feet east of Watkins's ranch house, 15 feet east of wagon road; iron post stamped "1811 B 1904"-----	1, 813. 132
Kreman's sawmill, 0.7 mile northeast of, 20 feet southwest of Silva ranch house, east side of road, 1 foot southwest of corner of yard fence; iron post stamped "1672 B 1904"-----	1, 674. 481
Neds Gulch, 0.1 mile northeast of mouth of, 75 feet north of bunk house of Swain mine, 200 feet north of post office, 10 feet east of road; iron post stamped "1541 B 1904"-----	1, 543. 595
Forks of Applegate River, 0.1 mile east of, 600 feet east of Cameron ranch house, at forks of road, 1 foot outside of rail fence; iron post stamped "1462 B 1904"-----	1, 464. 874

MEDFORD QUADRANGLE.

[Latitude 42°-42° 30'; longitude 122° 30'-123°.]

From Ruch east to Medford.

Jacksonville, south wall of United States Hotel, at California and Fifth streets, 2 feet above sidewalk near southwest corner of building; aluminum tablet stamped "1568 B 1904"-----	1, 568. 551
Medford, in west wall of Hotel Nash; aluminum tablet stamped "1376 B"-----	1, 377. 097

KERBY QUADRANGLE.

[Latitude 42°-42° 30'; longitude 123° 30'-124°.]

From Wilderville southwest along road via Anderson and Selma to Dryden.

Wilderville, 3.5 miles southwest of, 75 feet southwest of Wonder store and post office, 1 foot north of fence; iron post stamped "1077 B 1904"-----	1, 077. 815
Louis station, 12 feet northeast of front steps to hotel, 100 feet northwest of stage barn, at west side of road, 1 foot outside of fence; iron post stamped "1226 B 1904"-----	1, 226. 832

Selma, 2.2 miles northeast of, 20 feet east of house at Anderson station, 200 feet north of barn, 1 foot outside of fence; iron post stamped "1454 B"-----	Feet. 1, 454. 884
Selma, 6 feet south of post office, 100 feet southwest of platform scales, corner of fence at west side of principal street; iron post stamped "1323 B 1904"-----	1, 323. 831
Selma, 2.6 miles east of, 4 feet from southeast corner of Cemetery schoolhouse building, 200 feet west of road, 1 foot east of schoolhouse; iron post stamped "1378 B 1904"-----	1, 379. 002

From point 5.5 miles south of Wilderville southwest to Dryden.

Mooney Mountain, summit, 15 feet east of road, on side at highest point of wagon road; iron post stamped "2491 B 1904"-----	2, 491. 619
Dryden post office, 0.4 mile north of, 12 feet from northwest corner of Dryden schoolhouse; iron post stamped "1437 B 1904"-----	1, 437. 696

From Dryden east along road 1.3 miles.

Dryden post office, 1.3 miles east of, 0.25 mile northwest of Harman ranch house, 150 feet north of bridge over Deer Creek, 10 feet east of road; iron post stamped "1482 B 1904"-----	1, 482. 918
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Ashland and Klamath 1° quadrangles; Cline Falls, Crescent, Lava, Maiden Peak, and Prineville 30' quadrangles; and Crater Lake National Park.

CROOK, JACKSON, AND KLAMATH COUNTIES.

The bench marks in the following lists were established by a line of primary levels extended from Ashland to Prineville, Oreg., by L. F. Biggs in 1908. The elevation of the initial bench mark at Ashland, stamped "1874 B 1903," was accepted as 1,874.807 feet, and the elevation of the closing bench mark, an iron post stamped "2867 H" near the courthouse at Prineville, was accepted as 2,868.235 feet above mean sea level.

ASHLAND QUADRANGLE.

[Latitude 42°-43°; longitude 122°-123°.]

From Ashland via Dead Indian Mountain to Pelican Bayou, Lower Klamath Lake, thence to Fort Klamath.

Ashland, 1,800 feet south of station, 42 feet east of Mountain Avenue crossing, south side of street; iron post stamped "1874 B 1903"---	Feet. 1, 874. 807
Ashland, 2.4 miles east of, south of road, opposite white house, in base of 36-inch oak tree; spike with aluminum tag stamped "1913 B. M. 2"-----	1, 913. 54
Ashland, 4 miles northeast of, 20 feet south of road, above creek, opposite Indian Head Rock, in boulder; aluminum tablet stamped "2002 B 1908 B. M."-----	2, 003. 45
Ashland, 6 miles north of, south of road, on west bank of creek, in base of 20-inch oak tree; spike with aluminum tag stamped "2179 B. M. 5"-----	2, 179. 824
Ashland, 7.2 miles north of, 50 feet west of road, 200 feet north of junction of roads, on boulder; chisel point painted "2660 B. M. 7"---	2, 660. 32
Ashland, 8.2 miles northeast of, 15 feet west of road, 200 feet north of house on point of hill, in large boulder; aluminum tablet stamped "2944 B 1908 B. B."-----	2, 945. 047

Summit of Dead Indian Mountain, 15 feet south of road, in large boulder; aluminum tablet stamped "5232 B 1908 B. C."-----	Feet. 5, 232. 978
Summit of Dead Indian Mountain, 1.1 miles northeast of, north of road, in base of 30-inch fir tree; spike with aluminum tag stamped "4833 B. M. 15"-----	4, 834. 33
Lilyglen, 100 feet west of post office, at fence; iron post stamped "4537 B 1908 B. D."-----	4, 538. 201
Deadwood, 300 feet east of stage station, 150 feet west of barn, west of road, in base of 36-inch pine tree; spike with aluminum tag stamped "4634 B. M. 21"-----	4, 635. 05
Deadwood, 3 miles northeast of, 200 feet north of Butte Creek, north of road, in large boulder; aluminum tablet stamped "4847 B 1908 B. E."-----	4, 847. 837
Deadwood, 5.8 miles northeast of, 25 feet north of road, 600 feet south of cabin, 0.7 mile southwest of summit, in large boulder; aluminum tag stamped "5031 B. M. 30"-----	5, 031. 6
Lake of the Woods, 4 miles southwest of, 25 feet south of road, at junction of road to Buck Lake; iron post stamped "5134 B 1908 B. G."-----	5, 134. 96
Lake of the Woods, 1.9 miles southwest of, south of road, on summit of ridge, in base of 48-inch larch tree; spike with aluminum tag stamped "5372 B. M. 29"-----	5, 373. 72
Lake of the Woods, 0.9 mile southwest of, south of road, 150 feet south of creek, in base of 24-inch tamarack tree; spike with aluminum tag stamped "5031 B. M. 30"-----	5, 031. 6
Lake of the Woods, southeast corner of, 100 feet east of lake, 40 feet west of road; iron post stamped "4960 B 1908 B. H."-----	4, 960. 099
Lake of the Woods, northeast end of, southwest end of flat, north of road, in base of 36-inch fir tree; spike with aluminum tag stamped "4968 B. M. 33"-----	4, 967. 98
Lake of the Woods, 1.5 miles northeast of, north of road, 1,000 feet north of large draw, 10 feet south of fir tree blazed on east side, in large boulder; aluminum tablet stamped "4998 B 1908 B. I."-----	4, 998. 444
Pelican Bay Lodge, 4.4 miles southwest of, at intersection of roads to Odessa and Pelican Bay; iron post stamped "4202 B 1908 B. K."-----	4, 202. 154
Pelican Bay Lodge, 0.2 mile west of, 25 feet north of road, 300 feet east of junction of roads, in large boulder; aluminum tablet stamped "4153 B 1908 B. L."-----	4, 152. 711
Pelican Bay Lodge, at boat landing; U. S. Geological Survey water gage zero-----	4, 135. 997
Pelican Bay Lodge, 2.3 miles northeast of, north of road, at road to old cabin, in base of 36-inch fir tree; spike with aluminum tag stamped "4207 B. M. 42"-----	4, 210. 44
Pelican Bay Lodge, 5.1 miles northeast of, north of road, where road runs down to marsh, flat boulder under 12-inch fir tree blazed on east side; aluminum tablet stamped "4150 B 1908 B. M."-----	4, 149. 747
Crystal, 200 feet south of schoolhouse, 60 feet north of junction of road to Brown's ranch; iron post stamped "4163 B 1908 B. N."-----	4, 162. 978
Crystal, 2.7 miles northeast of, east of road, 50 feet north of Cherry Creek, in base of 36-inch pine tree; spike with aluminum tag stamped "4221 B. M. 48"-----	4, 221. 21
Crystal, 5.2 miles northeast of, north of road, at small meadow, 300 feet south of fence, at bend of road, in large boulder; aluminum tablet stamped "4176 B 1908 B. O."-----	4, 175. 694

Fort Klamath, 6.9 miles southwest of, south of road, in base of 36-inch pine tree; spike with aluminum tag stamped "4180 B. M. 52"-----	Feet. 4, 180. 55
Fort Klamath, 4.7 miles southwest of, at intersection of roads from east; iron post stamped "4152 B 1908 B. P."-----	4, 151. 738
Fort Klamath, 1.9 miles northwest of, east of road at bend, in base of fence post; spike with aluminum tag stamped "4204 B. M. 65"-----	4, 204. 26
Fort Klamath, 4.8 miles northwest of, 150 feet west of road junction, 25 feet north of 40-inch pine tree blazed on east side; iron post stamped "4317 B 1908 S. B."-----	4, 316. 898
Fort Klamath, 6.5 miles northwest of, east of road, 25 feet west of bank of creek, in base of 50-inch pine tree; spike with aluminum tag stamped "4536 B. M. 69"-----	4, 536. 18
Crater Lake National Park, south border of, 5 feet west of road, 3 feet west of park line post; iron post stamped "4780 B 1908 B. T."-----	4, 779. 946

KLAMATH QUADRANGLE.

[Latitude 42°-43°; longitude 121°-122°.]

At Fort Klamath.

Fort Klamath, 0.5 mile west of, south of road, 100 feet east of creek, 100 feet west of house, in base of 30-inch white-birch tree; spike with aluminum tag stamped "4185 B. M. 55 A."-----	4, 185. 39
Fort Klamath, 50 feet south of northeast corner of schoolhouse, 6 feet north of fence; iron post stamped "4184 B 1908 B. V."-----	4, 183. 543

From Fort Klamath south to boat landing of Klamath Indian Agency.

Fort Klamath, 4.4 miles south of, in cap of bridge over Wood River: spike scribed and painted "4151 B. M. 59"-----	4, 152. 76
Fort Klamath, 7.4 miles south of, east of road at bend, 200 feet east of creek, 150 feet east of house, in large boulder; aluminum tablet stamped "4157 B 1908 B. R."-----	4, 156. 788
Klamath Indian Agency, northeast corner of water tower, in stone foundation; aluminum tablet stamped "4169 B 1908 B. S."-----	4, 168. 678
Klamath Indian Agency, 2.9 miles south of, 50 feet south of road at intersection of roads, 100 feet east of gate to cabin, in base of 36-inch pine tree; spike scribed and painted "4212 B. M. 63"-----	4, 211. 85
Klamath Indian Agency, boat landing; surface of water, July 17, 1908-----	4, 138. 5
Klamath Indian Agency, 75 feet south of boat landing, in base of 30-inch pine tree; spike scribed and painted "4144 B. M. 64"-----	4, 143. 52

From Fort Klamath northeast along road.

Fort Klamath, 1.3 miles east of, north of road at intersection of agency and sawmill roads, in base of 30-inch pine tree; spike with aluminum tag stamped "4176 B. M. 112"-----	4, 176. 69
Fort Klamath, 3.4 miles northeast of, east of road, north bank of drain, in base of 40-inch pine tree; spike with aluminum tag stamped "4199 B. M. 114"-----	4, 198. 799

From Fort Klamath north along county road.

Fort Klamath, 2.2 miles north of, west of road, 50 feet south of barn, in base of 24-inch pine tree; spike with aluminum tag stamped "4218 B. M. 116"-----	4, 217. 62
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Fort Klamath, 4.5 miles north of, 10 feet east of Sun Creek, north of road, at point where road crosses creek; iron post stamped "4305 B 1908 B. J. 1"-----	Feet. 4, 305. 027
Fort Klamath, 7.5 miles northeast of, 5 feet south of road, 0.2 mile west of summit of ridge; iron post stamped "5329 B 1908 B. K. 1"-----	5, 328. 912
Fort Klamath, 9.7 miles northeast of, south of road, in base of 30-inch black-pine tree; spike with aluminum tag stamped "5242 B. M. 121"-----	5, 241. 90
Sand Creek, 6.7 miles southwest of, 15 feet north of road, 50 feet north of 60-inch pine tree broken at top; iron post stamped "5035 B 1908 B. L. 1"-----	5, 036. 036
Sand Creek, 3 miles southwest of, north of road, in base of 40-inch pine tree; spike with aluminum tag stamped "4673 B. M. 124"-----	4, 673. 02
Sand Creek, 50 feet north of, south of road, at camp ground; iron post stamped "4561 B 1908 B. M. 1"-----	4, 561. 178
Cow Creek, 0.8 mile south of, west of road, in base of 30-inch pine tree; spike with aluminum tag stamped "4544 B. M. 127"-----	4, 543. 96
Cow Creek, 20 feet east of, 150 feet east of road, in ledge; aluminum tablet stamped "4549 B 1908 B. M. 1"-----	4, 549. 186
Cow Creek, 2.9 miles northeast of, north of road, 15 feet north of junction of road to Jackson's ranch; iron post stamped "4551 B 1908 B. O. 1"-----	4, 551. 149
Big Spring, 150 feet north of spring, on top of bank, 15 feet east of road; iron post stamped "4566 B 1908 B. P. 1"-----	4, 565. 685

CRATER LAKE NATIONAL PARK.

[Latitude 42° 48'-43° 04'; longitude 122°-122° 16'.]

From superintendent's house, Crater Lake Park, east and north to head of South Fork of Bear Creek, thence west and south to initial point.

Crater Lake Park, 6.3 miles south of superintendent's house, east of road, 25 feet west of edge of Annie Canyon, in base of 24-inch tamarack tree; spike with aluminum tag stamped "5121 B. M. 72"-----	5, 121. 16
Crater Lake Park, 4.4 miles south of superintendent's house, 20 feet west of road, on small flat, 125 feet west of Annie Canyon; iron post stamped "5508 B 1908 B. U."-----	5, 508. 482
Crater Lake Park, 2.5 miles south of superintendent's house, 300 feet east of Bridge Creek, east of road at sharp bend, 50 feet south of draw, in base of 36-inch larch tree; spike with aluminum tag stamped "5833 B. M. 75"-----	5, 833. 03
Crater Lake Park, 150 feet east of superintendent's house, 5 feet north of gate; iron post stamped "6016 B 1908 B. V."-----	6, 016. 099
Crater Lake, lowest point on rim of, 130 feet east of road, in base of larch tree; spike with aluminum tag stamped "7035 B. M. 81"-----	7, 034. 55
Crater Lake, south rim of, at head of trail to lake, in large boulder; aluminum tablet stamped "7076 B 1908 B. W."-----	7, 076. 109
Crater Lake, 150 feet east of boat landing; surface of water, July 28, 1908-----	6, 177. 30
Crater Lake, 150 feet east of boat landing, 2 feet above water level, 50 feet east of small stream, in bed rock; aluminum tablet stamped "6179 B 1908 B. Y."-----	6, 178. 955

Crater Lake Park, 1.9 miles east of boat landing, 50 feet south of spring, on west slope of ridge between Anna and Sun creeks, at large meadow, on bowlder painted "7091 B. M. 86"; chisel mark...	Feet. 7,088.27
Crater Lake Park, 4 miles east of superintendent's house by route, west slope of ridge between Anna and Sun creeks, due north of Crater Peak, at large meadow, on rocky point, at fir tree trimmed 10 feet from top, in large bowlder; aluminum tablet stamped "6924 B 1908 B. Z." (stamped 101 feet too low)-----	7,025.034
Crater Lake Park, on summit of ridge between Sun and Sand creeks, due north of Mount Scott; paint point on small bowlder at base of signal, painted "7289" (stamped 101 feet too low)-----	7,389.60
Crater Lake Park, east slope of ridge, between Sun and Sand creeks, 630 feet east of summit, 20 feet west of cliff, on line between Mount Scott and Union Peak, in large bowlder marked by monument; aluminum tablet stamped "7260 B 1908 B. A. 1" (stamped 101 feet too low)-----	7,361.147
Crater Lake Park, summit of knob between east and west forks of Sand Creek, S. 60° W. from Mount Scott, 20 feet east of trimmed tree, midway between two creeks, in bowlder 1 by 2 by 3 feet; aluminum tablet stamped "6987 B 1908 B. B. 1" (stamped 101 feet too low)-----	7,088.079
Crater Lake Park, in large meadow, east of Anderson Spring, on line between Mount Scott and Duttoncliff, 200 feet east of timber, on point of rock at monument; chiseled square painted "7261" (painted 101 feet too low)-----	7,361.79
Crater Lake Park, northwest of Mount Scott, at head of north fork of Bear Creek, on point on perpendicular cliff, in base of 36-inch fir tree; spike with aluminum tag stamped "7345 B. M. 90" (stamped 101 feet too low)-----	7,446.26
Crater Lake Park, at head of south fork of Bear Creek, 20 feet south of falls, 15 feet south of 40-inch black-pine tree broken at top and blazed and scribed on south side, in bed rock; aluminum tablet stamped "6331 B 1908 B. C. 1" (stamped 101 feet too low)-----	6,431.688
Crater Lake Park, 2 miles north of Cascade Spring, S. 70° W. of round knob, on round point of small ridge, in base of 36-inch pine tree; spike with aluminum tag stamped "5844 B. M. 93" (stamped 101 feet too low)-----	5,944.42
Crater Lake Park, 4 miles northwest of Cascade Spring, S. 20° E. of Timber Crater, north slope of ridge, in base of 72-inch pine tree; spike with aluminum tag stamped "5488 B. M. 95" (stamped 101 feet too low)-----	5,587.75
Crater Lake Park, 150 feet south of Dry Creek, 520 feet east of Crater Peak, north slope of ridge, at head of north fork of Bear Creek, in bowlder marked by a monument; aluminum tablet stamped "5660 B 1908 B. D. 1" (stamped 101 feet too low)-----	5,760.143
Crater Lake Park, 1 mile west of east end of Pumice Desert, on summit of small round hill, 1 mile north of Grass Hill, 500 feet north of edge of timber, in lava rock; aluminum tablet stamped "5909 B 1908 B. E. 1" (stamped 101 feet too low)-----	6,009.980
Crater Lake Park, west end of Pumice Desert, on direct line between Desert Cone and Red Cone, south edge of desert, in base of 24-inch black-pine tree; spike with aluminum tag stamped "5920 B. M. 101" (stamped 101 feet too low)-----	6,020.39

Crater Lake Park, 1 mile S. 60° W. of Red Cone, 100 feet west of spring in meadow, in large boulder; aluminum tablet stamped "6164 B 1908 B. F. 1" (stamped 101 feet too low)-----	Feet. 6, 264. 693
Crater Lake Park, 3 miles southwest of Red Cone, on south bank of large canyon, in base of 48-inch fir tree; spike with aluminum tag stamped "6266 B. M. 104" (stamped 101 feet too low)-----	6, 366. 700
Crater Lake Park, 1 mile west of Glacier Peak, east end of large meadow, on summit of small ridge, S. 80° W. of Glacier Peak, in large boulder; aluminum tablet stamped "5819 B 1908 B. G." (stamped 101 feet too low)-----	5, 920. 038
Crater Lake Park, where Biber's sheep trail crosses north fork of Castle Creek, 15 feet west of trail, in base of 24-inch pine tree; spike with aluminum tag stamped "5792 B. M. 107" (stamped 101 feet too low)-----	5, 893. 13
Crater Lake Park, 0.7 mile south of, north fork of Castle Creek, on trail to Biber's sheep cabin, east of trail at small flat, in large boulder; marked by monument with aluminum tablet stamped "5829 B 1908 B. H. 1" (stamped 101 feet too low)-----	5, 929. 402
Crater Lake Park, 100 feet south of Hirschburger cabin, 50 feet west of creek, north of trail, in base of 24-inch black-pine tree; spike with aluminum tag stamped "5890 B. M. 10" (stamped 101 feet too low)-----	5, 991. 16
Crater Lake Park, 2 miles northwest of superintendent's house, 50 feet west of junction of Old Crater Lake road and Biber's sheep trail, in large boulder; aluminum tablet stamped "5985 B 1908 B. L. 1" (stamped 101 feet too low)-----	6, 085. 995

CRESCENT QUADRANGLE.

[Latitude 43°-43° 30'; longitude 121° 30'-122°.]

From Big Spring north along county road through Odell.

Big Spring, 4.5 miles northeast of, 15 feet east of road, 20 feet west of center one of four yellow-pine trees; iron post stamped "4649 B 1908 B. Q. 1"-----	4, 649. 17
Big Spring, 6 miles northeast of, east of road, in base of 24-inch pine tree; spike with aluminum tag stamped "4681 B. M. 135"-----	4, 680. 66
Beaver Marsh, 2.9 miles south of, 50 feet north of junction of road to Silver Lake; iron post stamped "4655 B 1908 B. R. 1"-----	4, 654. 645
Beaver Marsh, 1 mile northeast of, east of road, in base of 30-inch black-pine tree; spike with aluminum tag stamped "4673 B. M. 138"-----	4, 671. 46
Beaver Marsh, 2.5 miles northeast of, 50 feet east of road, 100 feet north of proposed railroad right of way; iron post stamped "4694 B 1908 B. T. 1"-----	4, 693. 846
Beaver Marsh, 6.7 miles northeast of, east of road, in base of 24-inch black-pine tree; spike with aluminum tag stamped "4760 B. M. 142"-----	4, 760. 19
Beaver Marsh, 7.7 miles northeast of, west of road, 6 feet north of junction of Prineville and Eugene roads; iron post stamped "4720 B 1908 B. V. 1"-----	4, 720. 163
Beaver Marsh, 12.7 miles northeast of, east of road, west edge of Black Butte; iron post stamped "4638 B 1908 B. V. 1"-----	4, 638. 615

Beaver Marsh, 15.2 miles northeast of, east of road, in base of 30-inch yellow-pine tree; spike with aluminum tag stamped "4656 B. M. 148"-----	Feet. 4, 655.90
Odell, 6.1 miles southwest of, 1.5 miles southwest of spring, 15 feet west of road; iron post stamped "4508 B 1908 B. W. 1"-----	4, 507.833
Odell, 3.7 miles southwest of, east of road, south slope of ridge, in base of 40-inch black-pine tree; spike with aluminum tag stamped "4570 B. M. 151"-----	4, 570.08
Odell, 1.3 miles southwest of, west of road, on summit of ridge, in base of 24-inch black-pine tree; spike with aluminum tag stamped "4502 B. M. 153"-----	4, 501.83
Odell, 60 feet north of post office, at small gate; iron post stamped "4453 B 1908 B. X. 1"-----	4, 452.552
Odell, 2.2 miles northeast of, 20 feet east of road, in base of 48-inch yellow-pine tree; spike with aluminum tag stamped "4392 B. M. 155"-----	4, 391.71
Odell, 4.6 miles northeast of, 15 feet west of road, west bank of drain; iron post stamped "4401 B 1908 B. Y. 1"-----	4, 400.674

MAIDEN PEAK QUADRANGLE.

[Latitude 43° 30'-44°; longitude 121° 30'-122°.]

From Odell northeast along road to Rosland.

Odell, 7.9 miles northeast of, 1,000 feet north of large barn on Taylor ranch, west of road, in base of 20-inch black-pine tree; spike with aluminum tag stamped "4315 B. M. 159"-----	4, 314.43
Rosland, 10.2 miles southwest of, 40 feet east of corner of secs. 11, 12, 13, and 14, T. 23 S., R. 9 E.; iron post stamped "4297 B 1908 B. Z. 1"-----	4, 296.345
Rosland, 7.9 miles southwest of, 10 feet east of road, at Klamath-Crook county line; iron post stamped "4284 B 1908 B. A. 2"-----	4, 284.273
Rosland, 5.2 miles southwest of, west of road, in base of 40-inch yellow-pine tree; spike with aluminum tag stamped "4248 B. M. 113"-----	4, 248.93
Rosland, 1.7 miles southwest of, west of road, in base of 30-inch black-pine tree; spike with aluminum tag stamped "4238 B. M. 166"-----	4, 238.03

LAVA QUADRANGLE.

[Latitude 43° 30'-44°; longitude 121°-121° 30'.]

From Rosland north along road to point near Bend.

Rosland, southeast corner of post office, 10 feet east of building; iron post stamped "4227 B 1908 B. B. 2"-----	4, 226.476
Rosland, 4.7 miles northeast of, 10 feet west of road, 25 feet north of telephone pole; iron post stamped "4205 B 1908 B. C. 2"-----	4, 205.263
Rosland, 7.3 miles northeast of, 20 feet west of road, 500 feet west of house, in base of 24-inch black-pine tree; spike with aluminum tag stamped "4183 B. M. 172"-----	4, 187.79
Rosland, 9.4 miles northeast of, 60 feet east of road, west slope of small ridge, in lava rock; aluminum tablet stamped "4197 B 1908 B. D. 2"-----	4, 196.595
Rosland, 11.4 miles northeast of, 1,000 feet north of Vandwert ranch house, west of road, at fence line, in base of 48-inch yellow-pine tree; spike with aluminum tag stamped "4182 B. M. 175"-----	4, 181.615

Rosland, 13.4 miles northeast of, west of road, in base of 20-inch black-pine tree; spike with aluminum tag stamped "4167"-----	Feet. 4, 166. 76
Rosland, 14.8 miles northeast of, 125 feet east of road, 0.3 mile north of F. A. Shenquest's house, in lava rock; aluminum tablet stamped "4234 B 1908 B. E. 2"-----	4, 233. 380
Rosland, 16.7 miles northeast of, south slope of ridge, west of road, in base of 36-inch black-pine tree; spike with aluminum tag stamped "4247 B. M. 180"-----	4, 246. 75
Rosland, 17.8 miles northeast of, east of road, south slope of ridge, in base of 36-inch yellow-pine tree; spike with aluminum tag stamped "4362 B. M. 181"-----	4, 363. 06
Rosland, 19.8 miles northeast of, summit of ridge, east slope of Lava Butte, 40 feet east of road, in lava rock; aluminum tablet stamped "4507 B 1908 B. F. 2"-----	4, 506. 839
Bend, 9.2 miles southwest of, west of road, in base of 40-inch yellow-pine tree; spike with aluminum tag stamped "4180 B. M. 184"-----	4, 180. 18
Bend, 6.9 miles southwest of, 15 feet west of road, 1,000 feet north of Wet Weather Spring, 200 feet south of second-class road, in lava rock; aluminum tablet stamped "3948 B 1908 B. G. 2"-----	3, 947. 804
Bend, 5.9 miles southwest of, west of road, in base of 36-inch yellow-pine tree; spike with aluminum tag stamped "3021 B. M. 186"-----	3, 920. 29

CLINE FALLS QUADRANGLE.

[Latitude 44°-44° 30'; longitude 121°-121° 30'.]

From Bend northeast to point 9 miles southwest of Prineville.

Bend, 3.9 miles southwest of, west of road, in base of 36-inch yellow-pine tree; spike with aluminum tag stamped "3839 B. M. 188"-----	3, 839. 25
Bend, 2.3 miles southwest of, west of road, south bank of irrigation ditch, 5 feet west of bridge, in lava rock; aluminum tablet stamped "3742 B 1908 B. H. 2"-----	3, 742. 032
Bend, east end of town, west of road, 200 feet east of water tower, in lava rock; aluminum tablet stamped "3647 B 1908 B. I. 2"-----	3, 646. 347
Bend, 163 feet west of old schoolhouse, 11 feet east of Pilot Butte stable, west side of Wall Street, at sidewalk line, 250 feet north of intersection of Wall and Nevada streets, in lava rock; aluminum tablet stamped "3629 B 1908 B. J. 2"-----	3, 626. 817
Bend, 4 miles northeast of, south of road, on lava rock painted "3478 B. M. 194"; chisel point-----	3, 477. 801
Bend, 4.8 miles northeast of, 20 feet west of road, 100 feet north of fence corner, 0.2 mile south of house, in lava rock; aluminum tablet stamped "3439 B 1908 B. K. 2"-----	3, 438. 867
Bend, 5.7 miles northeast of, west of road, 500 feet east of house, in base of 20-inch juniper tree; spike with aluminum tag stamped "3417 B. M. 195"-----	3, 417. 02
Bend, 8.1 miles northeast of, where road turns east around rocky ridge, 20 feet south of road, in lava rock; aluminum tablet stamped "3342 B 1908 B. L. 2"-----	3, 341. 877
Bend, 9.8 miles northeast of, east of road, in base of 20-inch juniper tree; spike with aluminum tag stamped "3327 B. M. 198"-----	3, 326. 45
Powell Butte stage station, 5.8 miles southwest of, 20 feet west of road, on small ridge, in lava rock; aluminum tablet stamped "3256 B 1908 B. M. 2"-----	3, 254. 991

Powell Butte stage station, 2.5 miles southwest of, west bank of old river channel, 50 feet east of road, 0.7 mile east of section line between secs. 17 and 18, T. 16 S., R. 14 E., in lava rock; aluminum tablet stamped "3170 B 1908 B. M. 2"-----	Feet. 3, 169. 645
Powell Butte stage station, 1.1 miles southwest of, 200 feet south of forks of road, 50 feet east of road, in base of corner fence post; spike with aluminum tag stamped "3145 B. M. 203"-----	3, 144. 32
Powell Butte stage station, 0.2 mile east of, at intersection of road, corner of secs. 3, 4, 9, and 10, T. 16 S., R. 14 E., in lava rock 10 by 10 feet flush with ground; aluminum tablet stamped "3251 B 1908 B. O. 2"-----	3, 250. 467
Powell Butte stage station, 4 miles northeast of, 15 feet north of road, 0.3 mile east of county road to Shepherd schoolhouse, in lava rock; aluminum tablet stamped "3121 B 1908 B. P. 2"-----	3, 120. 467
Powell Butte stage station, 5.2 miles northeast of, north of road, on lava rock painted "3146 B. M. 209"; chisel point-----	3, 146. 02

PRINEVILLE QUADRANGLE.

[Latitude 44°-44° 30'; longitude 120° 30'-121°.]

From point 9 miles southwest of Prineville northeast along road to Prineville.

Prineville, 6.1 miles southwest of, 40 feet east of road, in lava rock; aluminum tablet stamped "3257 B 1908 B. Q. 2"-----	3, 256. 73
Prineville, 3.8 miles southwest of, 15 feet east of road, in base of 24-inch juniper tree; spike with aluminum tag stamped "3240 B. M., 214"-----	3, 239. 02
Prineville, 1.9 miles southwest of, 10 feet west of road, 0.2 mile west of stone quarry, on summit of hill, in lava rock; aluminum tablet stamped "3230 B 1908 Q. 3"-----	3, 229. 559
Prineville, county courthouse, at main entrance gate, 10 feet from fence, 2 feet from walk; iron post stamped "2867 H"-----	2, 868. 235
Prineville, county courthouse, northeast corner of, 4 feet above ground; aluminum tablet stamped "2872 B 1908 B. R. 2"-----	2, 871. 901

Portland quadrangle (Oreg.-Wash.).

MULTNOMAH COUNTY.

The elevations in the following list are based on the height of a bench mark at Portland determined in 1898 by a double-rodged line from Astoria, Oreg., by which leveling an 1896 bench mark was re-determined.

The elevations for the Washington part of this quadrangle are given in Bulletin No. 457.

The leveling was done by C. C. Ward in 1896 and by J. H. Carlock in 1898.

PORTLAND QUADRANGLE.

[Latitude 45° 30'-45° 45'; longitude 122° 30'-122° 45'.]

At Portland.

Portland, on south side of Front Street, near Seventeenth Street, opposite E. & J. A. Martin's lumber mill; in top of 2-mile stone; copper bolt stamped "28"-----	Feet. 30. 073
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Portland, city hall, in stone base of center pillar of Fifth Street entrance; bronze tablet stamped "75"-----	Feet. 76.385
Portland, at Schuyler and Thirteenth streets, in stone base of iron water tower, 3.7 feet in front of post at foot of stairway, 3.3 feet from base of tower; copper bolt stamped "145"-----	146.927
Portland, at left of entrance to university building, in stone foundation; bronze tablet stamped "175"-----	177.258
Portland, 3 feet from corner of fence at northeast angle of crossing of Vancouver Avenue and Columbia Slough Road; iron post stamped "42"-----	44.060

From Portland along Columbia Slough and base line roads to city boundary.

T. 1 N., R. 2 E., NE. $\frac{1}{4}$ sec. 21, intersection of Sandy and Columbia roads, in southwest corner of yard of large white house north of road; iron post stamped "72"-----	74.210
Rs. 2 and 3 E., wagon road on line between, east side of road, about 60 feet south of Oregon-Washington R. R. & Navigation Co.'s track; nail in root of three-pronged maple tree-----	179.6
T. 1 N., T. 1 S., Rs. 2 and 3 E., corner of rail fence at southeast angle of crossroads; iron post stamped "251"-----	253.039
8-mile stone, top of, southeast corner-----	302.5
7-mile stone, top of-----	295.3
6-mile stone, top of-----	280
4-mile stone, top of-----	301.7
City boundary, south side of road, in northwest corner of orchard, 2.5 feet from the fences, in the northwest corner of sec. 6, T. 1 S., R. 2 E.; iron post stamped "177"-----	179.155

Albany, Aumsville, Brownsville, Corvallis, Dallas, Elmira, Eugene, Halsey, Lebanon, McCoy, McMinnville, Monroe, Mount Angel, Reedville, Salem, and St. Helen 15' quadrangles.

BENTON, LANE, LINN, MARION, POLK, WASHINGTON, AND YAMHILL COUNTIES.

The elevations in the following list were determined by primary leveling in 1910, 1911, and 1913.

The leveling was done in Albany quadrangle in 1911 by J. M. Rawls and E. M. Bandli, and in 1913 by D. S. Birkett; in Lebanon quadrangle in 1911 by Rawls and A. G. Humphrey, and in 1913 by D. S. Birkett; in Brownsville quadrangle in 1910 by Alvin Finlay and in 1911 by Humphrey; in Corvallis quadrangle in 1911 by E. R. Bartlett and Bandli, and in 1913 by D. S. Birkett; in the Eugene quadrangle in 1908 by C. E. Giffin and W. R. Chenoweth and in 1909 by W. B. Kern; in the Elmira quadrangle in 1909 by Kern and L. F. Biggs; and in the Monroe, Halsey, and Brownsville quadrangles in 1909 by Biggs and in 1910 by Alvin Finlay; in Reedville and St. Helen quadrangles in 1913 by Biggs, and in the other quadrangles in 1913 by Birkett. The State cooperated in the work.

ALBANY QUADRANGLE.

[Latitude 44° 30'–44° 45'; longitude 123°–123° 15'.]

From Jefferson west along highway to Buena Vista, thence south along highway to north Albany.

Jefferson, 0.5 mile north of, at first telegraph pole north of milepost 701, 90 feet south of railroad crossing, east side of railroad, at fence line; iron post stamped "235 B 1903"-----	Feet. 235.546
Jefferson, 1 mile north of, 50 feet northwest of T road intersection, 3 feet south of northwest corner fence post; iron post stamped "Prim. Trav. Sta. No. 25, 239"-----	239.060
Jefferson, 1 mile north by 1.4 miles west of, 60 feet east of small bridge, 10 feet south of road, in top of stump, inside ring of paint; copper nail stamped "221.6"-----	221.57
Jefferson, 1 mile north by 2.4 miles west of, 30 feet west of angle in road, 45 feet northwest of J. H. Cook's mail box, in top of stump, inside of ring of paint; copper nail stamped "207.2"-----	207.22
Jefferson, 1.25 miles north by 2.8 miles west of, 30 feet north of bridge, private road to house, 18 feet south of mail box No. 18, 6 feet west of angle in road; iron post stamped "Prim. Trav. Sta. No. 26, 199"-----	199.137
Jefferson, 1.8 miles north by 2.9 miles west of, at sign "Buena Vista 4 miles," 25 feet northeast of T road intersection, opposite mail box, in southeast edge of culvert over ditch, in circle of paint; copper nail marked "199.3"-----	199.27
Jefferson, 1.8 miles north by 3.9 miles west of, 1 foot north of south line of fence, 12 feet south of road at curve to north, west corner of Dady's land; iron post stamped "Prim. Trav. Sta. No. 27, 193"-----	192.796
Jefferson, 1.8 miles north by 4.6 miles west of, 50 feet southwest of road intersection at small angle, in root of large tree, in ring of paint; copper nail stamped "187.6"-----	187.65
Jefferson, 1.8 miles north by 4.9 miles west of, 20 feet northwest of T road intersection, 4 feet west of road, in top of small stump, in ring of paint; copper nail stamped "185.9"-----	185.90
Jefferson, 1.8 miles north by 7 miles west of, 60 feet north of east-west road at T road north (new county road), in top of 16-inch stump; copper nail stamped "178.6"-----	178.63
Jefferson, 2.5 miles north by 7 miles west of, 100 feet east of T road south, in northwest corner of bridge, inside of circle of paint; copper nail stamped "170.9"-----	170.89
Buena Vista, 1 block east of post office, center of Main Street, 18 feet west of telegraph pole at angle in road, 18 feet southeast of old corner building; iron post stamped "Prim. Trav. Sta. No. 28, 240"-----	239.869
Buena Vista, 0.5 mile west of, at T road south, in side of southwest corner fence post; copper nail stamped "317.8"-----	317.82
Buena Vista, 4.1 miles southwest of, 0.5 mile north of Vanderpool house, 10 feet south of northwest corner fence post, 6 feet west of angle in road, in root of tree northwest of road, in circle of paint; copper nail stamped "176.1"-----	176.13
Buena Vista, 4.9 miles southwest of, 30 feet northwest of T road opposite A. Vanderpool's mail box, in side of northwest corner fence post, in circle of paint; copper nail stamped "183.0"-----	183.08

Buena Vista, 6.2 miles southwest of, 24 feet west of road, in side of large gate post west of private road west; copper nail stamped "191.2"-----	Feet. 191.21
Albany, 5.5 miles north of, 6.7 miles south of Buena Vista, 6 feet south of T road east, 3 feet east of four mail boxes; iron post stamped "Prim. Trav. Sta. No. 30, 249"-----	248.933
Albany, 4 miles north of, southeast corner of barn east of road near Willamette River, house is on opposite side of road, in ring of paint; copper nail stamped "196.8"-----	196.87
Albany, 2.7 miles north of, first tree west of gate to McCunus farmhouse, in root of tree facing road, inside circle of paint; copper nail stamped "189.7"-----	189.78
Albany, 1.8 miles north of, 50 feet northeast of road intersection, 6 feet from A. S. Buchanan's mail box, in top of northeast corner fence post, in circle of paint; copper nail stamped "205.8"-----	205.82
Albany, 1.5 miles northwest of, along Corvallis & Eastern R. R., at public road crossing, 12 feet northeast of road and track intersection, 3 feet south of crossing sign; iron post stamped "Prim. Trav. Sta. No. 31, 204"-----	204.333
From point near Millersburg south along highway about 2 miles, thence east to Knox Butte schoolhouse, thence north to point near Jefferson, thence west along highway about 6 miles, thence south to Millersburg.	
Albany, 3.1 miles north of, highway crossing, 16 feet east of track, 3 feet north of milepost 695; iron post stamped "210 B 1903"-----	211.025
Albany, 2 miles north of, 60 feet northeast of Y road, in northeast corner fence post; copper nail stamped "219.9"-----	218.87
Albany, 2.5 miles northeast of, 60 feet northeast of T road north, in top of second post from northeast corner fence post; copper nail stamped "226.0"-----	226.04
Albany, 4.5 miles northeast of, at Knox Butte schoolhouse (No. 19), 4 feet west of northwest corner of school yard, 400 feet northeast of crossroads; iron post stamped "Prim. Trav. Sta. No. 20, 230"-----	229.724
Albany, 5.9 miles northeast of, 30 feet northwest of crossroads, in top of northwest corner fence post; copper nail stamped "269.9"-----	269.94
Albany, 6.2 miles northeast of, 30 feet west of T road north, in top of large corner fence post; copper nail stamped "305.5"-----	305.46
Albany, 7.9 miles northeast of, 350 feet southeast of Hard Scrabble schoolhouse, 20 feet east of road, at southwest corner of garden, in top of corner fence post; copper nail stamped "368.7"-----	368.64
Jefferson, 0.8 mile southwest of, 8.7 miles northeast of Albany, at highway crossing on Southern Pacific R. R., 66 feet north of track, 21 feet west of road, 8 feet from Pacific Highway sign; iron post stamped "Prim. Trav. Sta. No. 21, 221"-----	221.445
Jefferson, 1.1 miles southwest of, fourth fence post from corner at forks to east, in top of post; copper nail stamped "217.8"-----	217.82
Jefferson, 2.3 miles southwest of, 30 feet northwest of T road north, near northwest corner fence post, in side of telegraph pole; copper nail stamped "204.8"-----	204.79
Jefferson, 3.3 miles southwest of, 15 feet southwest of T road east, at schoolhouse (district 8); copper nail stamped "191.6"-----	191.63
Jefferson, 3.6 miles southwest of, 0.25 mile south of schoolhouse (district 8), 15 feet west of T road south, in south root of 12-inch oak tree; copper nail stamped "192.2"-----	194.31

Jefferson, 4.3 miles west of, 15 feet southwest of T road north, in top of post at southeast corner of bridge across small stream; copper nail stamped "191.4"-----	Feet. 191.39
Jefferson, 5.3 miles southwest of, in southeast corner at right angle in road, 110 feet southeast of southeast corner of schoolhouse (district 20), 12 feet east of private gateway to house; iron post stamped "Prim. Trav. Sta. No. 22, 186"-----	186.312
Jefferson, 6.5 miles southwest of, 21 feet southwest of T road west, in top of southwest corner fence post; copper nail stamped "183.7"-----	183.68
Millersburg station, 3.5 miles west of, near Willamette River, 30 feet west of angle in road, in top of 3-foot stump; copper nail stamped "191.8"-----	191.74
Millersburg station, 3 miles west of, 15 feet east of T road west, 3 feet west of fence; iron post stamped "Prim. Trav. Sta. No. 23, 202"-----	201.811
Millersburg station, 1 mile west of, 120 feet southeast of T road north, in top of second post east of garden gate south of road; copper nail stamped "241.6"-----	241.58
Millersburg station, 0.3 mile west of, 40 feet southwest of T road south, 5 feet west of telephone pole, in top of southwest corner fence post; copper nail stamped "244.0"-----	243.93
Millersburg station, north of, west of road crossing, north of road, at gate leading to field, in top of west gatepost; copper nail stamped "248.4"-----	248.41
From point 4.3 miles north of Tangent north to point 1 mile north of Albany, thence southwest along Corvallis & Eastern R. R. to point 1 mile northeast of Corvallis.	
Tangent, 4.3 miles north of, east side of railroad, 4 feet from fence line, at milepost 690; iron post stamped "221 B 1903"-----	221.763
Albany, 0.3 mile south of, at highway crossing, in top of second post from southwest corner fence post; copper nail stamped "217.4"---	217.45
Albany, southwest corner of Montgomery and East Ninth streets, opposite railroad signpost, in top of post in ground with end 0.5 foot above surface; copper nail stamped "211.4"-----	211.45
Albany, 1.5 miles northwest of, on Corvallis & Eastern R. R., at public road crossing, 12 feet northeast of road and track intersection, 3 feet south of crossing sign; iron post stamped "Prim. Trav. Sta. No. 31, 204"-----	204.333
Albany, 2 miles northwest of, at Corvallis & Eastern R. R. station at North Albany, 40 feet southeast of track and road crossing, in top of first post south of track; copper nail stamped "205.5"-----	205.57
Albany, 3 miles west of, at highway crossing, in southeast corner of cattle guard, in top of stringer; copper nail stamped "212.4"-----	212.46 °
Albany, 4.3 miles west of, in top of cattle guard, south end, at highway crossing, 120 feet east of road and track intersection; copper nail stamped "210.7"-----	210.75
Albany, 5.5 miles west of, 2 feet south of fence, 3 feet west of milepost 78; iron post stamped "Prim. Trav. Sta. 225"-----	225.352
Albany, 6 miles west of, at road crossing, in top of southwest corner post; copper nail stamped "229.9"-----	229.95
Albany, 6.5 miles west of, 100 feet southwest of road and track intersection, top of corner fence post of garden, opposite road crossing track; copper nail stamped "230.7"-----	230.74

Albany, 8.4 miles west of, at private road crossing, in top of post at cattle guard, in ring of paint; copper nail stamped "230.6"-----	Feet. 230. 67
Albany, 8.5 miles west of, 24 feet north of track, 5 feet south of fence, 3 feet east of milepost 75; iron post stamped "Prim. Trav. Sta. No. 36, 228"-----	227. 921
Albany, 10.1 miles west of, at private road crossing, 30 feet southeast of track and road intersection, in top of east gatepost at private gate south, in ring of paint; copper nail stamped "222.2"-----	222. 26
From Albany southwest along highway 2 miles, thence south 2.4 miles.	
Albany, at main entrance to Linn County courthouse, in east end of first step, 4 inches from wall; aluminum tablet stamped "214"-----	213. 946
Albany, 1.3 miles southwest of, at Y road, opposite sign "Corvallis 9 miles," 60 feet northwest of road intersection, in north side of telephone pole; copper nail stamped "223.2"-----	223. 18
Albany, 1.9 miles southwest of, at T road south, at end of covered bridge; small bolt in side of telephone pole-----	198. 72
Albany, 4.3 miles southwest of, at T road west, near mail box 77, R. D. 3, near southwest corner fence post; iron post stamped "214 Ore 1911"-----	213. 689
From point 3 miles northwest of Tangent southwest to Oakville, thence northwest to point 1.3 miles southeast of Corvallis, thence northeast to point 1.9 miles southwest of Albany.	
Albany, 6.4 miles southwest of, 40 feet south of center of east-west road, 3 feet northwest of northwest corner of school yard; iron post stamped "Prim. Trav. Sta. No. 33, 230"-----	229. 518
Albany, 7.8 miles southwest of, 80 feet southeast of T road, at tree on south side of road and opposite old church, in side of large fence post; copper nail stamped "242.0"-----	242. 06
Albany, 8.4 miles southwest of, 51 feet southeast of tree with sign "Corvallis 5 miles, Tangent 5 miles, Peoria 7 miles, Shedd's 9 miles," 100 feet south of T road, in root of large oak tree on east side of road; copper nail stamped "237.8"-----	237. 78
Albany, 9 miles southwest of, 50 feet southwest of T road south, at corner near 2 mail boxes of J. F. Finch and L. Z. Adams, in side of corner fence post; copper nail stamped "241.5"-----	241. 56
Albany, 10 miles southwest of, at Oakville Church crossroads, 20 feet northwest of first telephone pole in front of church; iron post stamped "Prim. Trav. Sta. No. 34, 242"-----	242. 349
Albany, 11.4 miles southwest of, 1.4 miles west of Oakville, 80 feet northeast of T road east, 70 feet east of road, in root of maple stump, in ring of paint; copper nail stamped "243.6"-----	243. 65
Albany, 10.4 miles southwest of, at north end of gate leading to A. B. Slocum's barnyard, 15 feet east of road, in root of tree; copper nail stamped "227.4"-----	227. 49
Corvallis, 4 miles southeast of, 12 feet southwest of T road, in root of tree with signboard nailed to it, inside ring of paint; copper nail stamped "230.3"-----	230. 34
Albany, 8 miles southwest of, 3 miles east of Corvallis, 30 feet northeast of Y road, near Colwell's house; iron post stamped "224 Ore 1911"-----	223. 963
Corvallis, 2.5 miles southeast of, 20 feet north of road, in top of southeast corner fence post of school yard; copper nail stamped "222.1"-----	222. 16

Corvallis, 1.3 miles east of, 40 feet southeast of T road, near southeast corner fence post; iron post stamped "Prim. Trav. Sta. No. 35, 220"-----	Feet. 220. 414
Albany, 7.9 miles southwest of, 2.4 miles east of Corvallis, in top of east gatepost of private drive to south, in ring of paint; copper nail stamped "213.2"-----	213. 24
Corvallis, 3 miles east of, at T road south, opposite George Baynes's house, on 14-inch stump; marked "223.9"-----	223. 93
Albany, 6.3 miles southwest of, 50 feet northwest of Y road, at southeast corner of church, opposite four mail boxes on bunch of trees, in top of 12-inch fir stump, in ring of paint; copper nail stamped "230.7"-----	230. 72
Albany, 5 miles southwest of, at T road east, 36 feet north of road intersection, 2 feet southeast of fence, 2 feet southwest of telephone pole 291; iron post stamped "Prim. Trav. Sta. No. 42, 229"-----	228. 641
Albany, 3.8 miles west of, at Y road, in front of schoolhouse (district 24), in telephone pole; nail marked "221.8"-----	221. 83
Albany, 2.9 miles west of, 36 feet northeast of angle in road, at private road to barn, 2 feet west of telephone pole; iron post stamped "Prim. Trav. Sta. No. 41, 219"-----	218. 644
Albany, 2.4 miles west of, at T road north, 25 feet northeast of road intersection, at northeast corner fence post, in south side of telephone pole; copper nail stamped "211.7"-----	211. 72
Albany, 1.5 miles west of, southeast corner at T road south, at west end of covered bridge (second bridge leaving Albany to west), in base of telephone pole; spike marked "198.6"-----	198. 72
From point near Albany east and southeast along highway to point near Tallman.	
• Tangent, 4.3 miles north of, east of railroad, at milepost 690, 4 feet from fence; iron post stamped "221 B 1903"-----	221. 763
Albany, about 0.6 mile southeast of, at road crossing, 10 feet east of track, 6 feet north of road, in base of signpost; spike marked "214.7"-----	214. 74
Albany, about 0.6 mile southeast of, southeast corner, at T road south, in base of telephone pole; spike marked "224.6"-----	224. 56
Albany, about 1 mile east of, at road forks to northwest, in base of telephone pole; spike marked "220.7"-----	220. 75
Albany, about 1.5 miles east of, at T road south, in southeast angle of forks, in base of fence post; spike marked "224.4"-----	224. 39
Albany, about 3 miles southeast of, about 200 feet east of crossroads, about 3 feet from northwest corner of fourteenth district schoolhouse; iron post stamped "242 Ore 1911"-----	242. 430
Albany, 3.9 miles southeast of, in northeast angle of four corners, in base of telephone pole; spike marked "254.3"-----	254. 36
Albany, about 5 miles southeast of, in southwest angle of road forks to north, in base of telephone pole; spike marked "261.7"-----	261. 80
Albany, about 6.3 miles southeast of, about 1,200 feet north of T road east, in southwest angle of road fork, just inside fence corner; iron post stamped "271 Ore 1911"-----	270. 970
Tallman, about 2.4 miles north of, about 300 feet south of T road west, 200 feet northeast of church, in northeast angle of bend to east, in base of telephone pole; spike marked "280.5"-----	280. 59

From Lawson west along highway to point near Tangent.

Lawson, 250 feet south of station, 50 feet east of track, 25 feet south of road, just inside of fence; iron post stamped "294 Ore 1911"---	Feet. 294.404
Lawson, 1.1 miles west of, 150 feet southwest of a one-story frame dwelling, about 800 feet west of schoolhouse, in base of telephone pole; spike marked "280.1"-----	280.22
Lawson, 2 miles west of, 3 miles east of Tangent, in northeast angle of crossroads, about 300 feet northwest of church, in base of telephone pole; spike marked "271.4"-----	271.46
Tangent, 2 miles east of, in southeast angle of crossroads, 2 feet from corner fence post, in inclosure; iron post stamped "256 Ore 1911"---	255.702
Tangent, 2.7 miles southeast of, at jog east (going south) in road, on east side of road, in bottom of telephone pole; spike marked "259.9"-----	259.92
Tangent, 3.3 miles southeast of, in southeast angle at T road south, in telephone pole; spike marked "257.4"-----	257.41
Tangent, 4 miles southeast of, in northwest angle at road forks to west, 1.5 feet from fence post; iron post stamped "252 Ore 1911"---	251.770
Shedd, 4 miles north of, at first telephone post south of milepost 684, east of railroad, at fence line; iron post stamped "242 B 1903"---	242.819

From Sand Ridge west to point 2.6 miles north of Saddle Butte.

Plainview, 1.5 miles north of, in base of railroad crossing signpost; spike marked "284.5"-----	284.70
Sand Ridge schoolhouse, 1.7 miles west of, 1,000 feet east of large white house and large red barn, in base of telephone pole; spike marked "276.8"-----	276.92
Plainview, 1.7 miles north by 1.8 miles west of, at southwest corner of crossroads; iron post stamped "271"-----	270.980

From Tangent north along highway to Albany.

Tangent, 1.3 miles north of, east of railroad, at fence line at first telephone pole south of milepost 687; iron post stamped "240 B 1903"-----	240.761
Tangent, 1.3 miles north by 1.1 miles west of, south side of road, opposite white house, in base of telephone pole; spike marked "U. S. B. M."-----	230.00
Tangent, 1.6 miles north by 2 miles west of, 550 feet east of crossroads, in west end of covered bridge; spike painted "U. S. B. M. 225.4"-----	225.40
Albany, 4 miles south of, east side of road opposite large white house, in base of telephone pole; spike painted "U. S. B. M."-----	218.18
Albany, 3.8 miles south of, at T road west, near mail box 77 R. D. 3, painted U. S. B. M. on corner fence post; iron post stamped "214 Ore 1911"-----	213.689
Albany, 2 miles south of, 800 feet north of white house on east side of road, in south end of east stringer of small bridge; bolt painted "U. S. B. M."-----	212.19
Albany, 1 mile southwest of, at T road south, 500 feet west of covered bridge, in base of pole; spike marked "U. S. B. M. 198.6"-----	198.68

Albany, southwest outskirts of, at crossroads, in base of telephone pole; spike painted "U. S. B. M. 214.3"-----	Feet. 214.39
Albany, south of station, at crossroads, in base of crossing signpost; spike marked "214.7"-----	214.74

From point 1 mile east of Albany north along highway and railroad to Shelburn (single-spur line).

Albany, 1.5 miles northeast of, at railroad crossing, on south side of highway and east of track, in base of crossing signal post; spike marked "220.8"-----	220.834
Albany, about 1.8 miles northeast of, 100 feet north of residence of J. W. Burkhart, about 1,100 feet east of railroad crossing, in northwest corner of crossroads; iron post stamped "223 Ore 1911"-----	223.168
Albany, about 2.4 miles northeast of, 240 feet north of milepost 85, on east side of trestle No. 156; bolt in sill marked "219.1"-----	219.087
Albany, about 3.9 miles northeast of, on west side of track, about 4 feet above ground in telegraph pole milepost 86; spike marked "227"-----	227.059
Albany, about 4.2 miles northeast of, on east side of track and south side of road, in base of crossing signal post; spike marked "231"-----	231.061
Albany, about 5 miles northeast of, about 330 feet north of road crossing, 100 feet west of windmill, 40 feet west of track, in inclosure; iron post stamped "234 Ore 1911"-----	234.447

Near Suver.

Suver, 1.5 miles west of; drainage culvert marked "216"-----	216.1
Suver, 1 mile west of, south side of road, at T road north, in base of telephone pole; railroad spike marked "U. S. 214 B. M."-----	213.97
Suver, 800 feet south of station, road crossing railroad tracks, east side of track, south edge of road; iron post stamped "Prim. Trav. Sta. No. 46, 207, Ore., 1911"-----	206.521
Suver, 0.3 mile east of; top of culvert, marked "202"-----	202.3
Suver, 1.5 miles east of, southwest corner of T road intersection, in base of corner fence post; railroad spike marked "U. S. 200 B. M."-----	200.05

Near Jefferson.

Jefferson, 1.8 miles north of, at first angle of road north of Jefferson, near telephone pole 11-5, in brace; railroad spike marked "U. S. 265 B. M."-----	264.99
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BROWNSVILLE QUADRANGLE.

[Latitude 44° 15'-44° 30'; longitude 122° 45'-123°.]

From point 4 miles southeast of Shedd east and north to point 1.3 miles west of Plainview.

Shedd, 0.7 mile south by 3.4 miles east of, 0.5 mile south by 0.5 mile east of Saddle Butte, on east side of road; iron post stamped "271 Ore"-----	271.045
Shedd, 0.8 mile north by 3.4 miles east of, at northwest corner of T road west, 500 feet south of schoolhouse (district 29) in base of telephone pole; spike with aluminum tag stamped "265"-----	265.39

From point 1 mile southwest of Brownsville to point 2.9 miles northwest of Brownsville.

Brownsville, 1 mile southwest of, west side of right of way, south side of road, at railroad crossing; iron post stamped "319"-----	Feet. 318.559
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From Brownsville east 2.7 miles.

Brownsville, 1.9 miles east of, at north end of jog in road, in root of cottonwood tree; copper nail with aluminum tag stamped "361"---	360.58
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From point 1 mile west of Brownsville to point 3.7 miles northeast of Brownsville (spur line).

Brownsville, 3.7 miles northeast of, 1,000 feet north of schoolhouse, west side of road, in base of 36-inch oak tree; spike scribed and painted "403"-----	403.45
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From Brownsville along highway northeast to Sodaville, thence west to Plainview.

Brownsville, 1 mile west of, south side of road at road crossing; iron post stamped "319 Ore 1910"-----	318.559
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Brownsville, at forks of road, 500 feet south of woolen mill, in base of telephone pole; spike marked "334.3"-----	334.32
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Brownsville, two blocks south by 6 blocks east of Main Street corner, in base of telephone pole; spike marked "337.6"-----	337.61
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Brownsville, 1.5 miles east by 0.5 mile south of, at turn in road near small bridge, 500 feet south of hop dryer, in base of telephone pole; spike marked "348.3"-----	348.34
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Brownsville, 2 miles east of, at turn in road, in base of ash tree; copper nail marked "360.6"-----	360.70
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Brownsville, 2.7 miles east of, west end of dam across Calapooya River, bolt in headgate. (Not marked)-----	381.11
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Brownsville, 3 miles east of, at T road north; iron post stamped "391 Ore 1911"-----	391.423
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Brownsville, 4 miles northeast of, at west corner of school yard, in fence post; spike marked "441.6"-----	438.69
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Brownsville, 6 miles northeast of, south side of road near log shed; iron post stamped "653 Ore 1911"-----	653.309
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Brownsville, 7 miles northeast of, east side of road, in base of 10-inch oak tree; spike marked "839.6"-----	839.66
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Brownsville, 7.8 miles northeast of, south side of road, 1,000 feet west of white house (lower than road), in root of 12-inch oak tree; copper nail marked "1059.4"-----	1,059.39
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Brownsville, 8.3 miles northeast of, at T road north, center of road, copper nail in root of 30-inch oak tree; aluminum tag stamped "1473"-----	1,470.72
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Brownsville, 8.6 miles northeast of, 5.5 miles southwest of Sodaville, on east side of road at summit, in top of flat rock; aluminum tablet stamped "1564 Ore 1911"-----	1,562.157
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Sodaville, 5 miles southwest of, west side of road, northeast corner of William Preston's farm, in root of 4-foot fir tree (private road to east); copper nail with aluminum tag stamped "1517"-----	1,514.29
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Sodaville, 4.5 miles southwest of, at west side of road, near washout; iron post stamped "1406"-----	1,403.712
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Sodaville, 4 miles southwest of, in root of 16-inch oak tree; copper nail marked "1446"-----	Feet. 1,443.18
Sodaville, 3.2 miles south of, at turn of road, in root of 18-inch fir tree; copper nail with aluminum tag stamped "1184"-----	1,181.62
Sodaville, 2.3 miles south of, west side of road near spring, in base of telephone pole; spike with aluminum tag stamped "752.8"-----	750.49
Sodaville, 1.3 miles south of, on east side of road, near telephone pole painted "U. S. B. M."; iron post-----	524.817
Sodaville, 0.7 mile west of, top of rise, south side of road near white house, in base of telephone pole; spike marked "461.3"-----	461.15
Sodaville, 2 miles northwest of, 3.5 miles southeast of Lebanon, at southwest corner of T road south; iron post stamped "374 Ore 1910"-----	373.962
Lebanon, 4.3 miles southwest of, in root of 5-foot pine tree; copper nail with aluminum tag stamped "403.9"-----	403.77
Plainview, 5 miles east of, 1,000 feet southeast of T road southwest, in base of telephone pole; spike marked "371.5"-----	371.27
Plainview, 3.8 miles east of, northeast corner at T road east, in base of corner fence post; spike with aluminum tag stamped "386.6"-----	386.55
Plainview, 2.8 miles east of, southwest corner at T road south; iron post stamped "315 Ore 1911"-----	315.687
Plainview, 1.9 miles east of, at north end of jog in road, in fence post; spike with aluminum tag stamped "300.4"-----	300.41
Plainview, 1.2 miles east of, northwest corner at T road west, in corner fence post; spike with aluminum tag stamped "289"-----	288.92
Plainview, 0.3 mile west of, at northeast corner of T road north; iron post stamped "274.4 Ore 1911"-----	274.368
Plainview, 1.3 miles west of, at T road south, north side of road, in base of fence post; spike with aluminum tag stamped "268"-----	268.364

From Crowsfoot south 0.8 mile (single spur line).

Crowsfoot, 0.8 mile south of, at T road west, on 2-foot fir tree, t. b. m.	388.99
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AUMSVILLE QUADRANGLE.

[Latitude 44° 45'-45°; longitude 122° 45'-123°.]

From point near Salem east along highway to Geer, thence northeast along Southern Pacific R. R. to point near Silverton.

Salem, 2.5 miles east of statehouse, southeast corner of cross-roads, in base of gatepost; railroad spike marked "U. S. 218 B. M."-----	217.76
Culvert in road, floor of; marked "214"-----	213.9
Salem, 3.5 miles east of statehouse, south edge of road, 200 feet west of slight jog in road to south; iron post stamped "Prim. Trav. Sta. No. 32, 215, Ore., 1913"-----	214.777
Bridge at base of small hill; floor of, marked "204"-----	203.6
Bridge over small creek between hills; floor of, marked "190"-----	189.9
Salem, 4.3 miles east of statehouse, at turn in road in front of F. Schrunn's place, north edge of road, in base of telephone pole; railroad spike marked "U. S. 205 B. M."-----	204.71
Salem, 5.4 miles east of, southwest corner at T road south, 300 feet east of S. Vahnsen's farmhouse, in base of fence post; railroad spike marked "U. S. 230 B. M."-----	229.88
Simple truss bridge, at foot of small hill; floor of bridge marked "191"-----	191.4

Salem, 6.2 miles east of statehouse, 150 feet west of T road north, south side of road, near red barn, in base of telephone pole; railroad spike marked "U. S. 233 B. M."-----	Feet. 232.62
Geer, 600 feet south of station, south edge of road at crossing, east side of track; iron post stamped "Prim. Trav. Sta. No. 33, 244, Ore., 1913"-----	243.634
Geer, 0.9 mile north of, 350 feet north of milepost 720, in base of cattle guard at railroad crossing; railroad spike marked "U. S. 215 B. M."-----	214.77
Durbin, opposite signpost; top of rail-----	221.8
Pratum station, 300 feet south of, at road crossing, west edge of railroad right of way, south edge of road, in base of telephone pole; railroad spike marked "U. S. 222 B. M."-----	222.36
Pratum, 0.2 mile north of, road crossing, midway between cattle guards 721 G and 721 H; top of rail-----	220.91
Pratum, 0.9 mile north of, 20 feet northeast of road crossing over railroad; iron post stamped "Prim. Trav. Sta. No. 43, 217, Ore., 1913"-----	217.428
Switzerland, in front of station on Southern Pacific R. R.; top of rail-----	211.4
Switzerland, 0.15 mile northeast of, 150 feet east of railroad crossing, south side of track, in base of telephone pole; railroad spike marked "U. S. 210 B. M."-----	209.70
Selah station, 60 feet east of, southeast corner of road crossing, in base of telephone pole; railroad spike marked "U. S. 188 B. M."-----	187.64
Silverton, 2.25 miles southwest of; railroad crossing at cattle guard 725 A, south side of right of way, west side of road; iron post stamped "Prim. Trav. Sta. No. 56, 198, Ore., 1913"-----	198.283
Silverton, 1.75 miles southwest of, T in road, cattle guard 725 F, 100 feet northwest of, at foot of telephone pole; ground marked "198"-----	197.76
Milepost 726, opposite; top of rail-----	206.5
Silverton, 0.75 mile southwest of, railroad crossing, near cattle guard 726 E, east edge of right of way, in base of telephone pole; railroad spike marked "U. S. 218 B. M."-----	218.13

From Pratum north along highway 2.4 miles.

Pratum, 1.2 miles north of, 0.33 mile west of railroad, at northwest corner of cross roads, at base of fence post; ground marked "207"-----	206.7
Pratum, 1.6 miles north of, 1 mile south of church, L in road, east edge of road, in base of telephone pole; railroad spike marked "U. S. 202 B. M."-----	202.35
Pratum, 2.4 miles north by 0.23 mile west of, southeast corner of crossroads, northwest corner of school yard, in base of telephone pole; railroad spike marked "U. S. 201 B. M."-----	200.81

From point 3.5 miles east of Chemawa southwest along highway to point 2.8 miles north of Salem.

Chemawa, 2.5 miles east of, 150 feet west of crossroads, north side of road, opposite power pole 444, in base of telephone pole; railroad spike marked "U. S. 184 B. M."-----	184.09
Culvert in road, near power pole 469; north end marked "166"-----	165.9

Chemawa, 0.7 mile east of, intersection of east-west road with Pacific Highway, northeast corner; iron post stamped "Prim. Trav. Sta. No. 46, 170, Ore., 1913"-----	Feet. 169.762
Salem, 4.7 miles north of, Y road northwest toward Chemawa, opposite telephone pole 4-23, west side of road, in base of telephone pole; railroad spike marked "U. S. 184 B. M."-----	184.40
Salem, 3.9 miles north of, 300 feet north of T road west, east side of road, in base of telephone pole; railroad spike marked "U. S. 178 B. M."-----	177.66
Wooden bridge near telephone pole 3-15, east edge of; floor marked "155"-----	154.7
From Geer south along Southern Pacific R. R. to Aumsville, thence west along highway to Turner, thence along Southern Pacific R. R. north 1.4 miles.	
Macleay, 1 mile north of, opposite signpost "Macleay one mile"; top of rail-----	303.6
Macleay, 0.55 mile north of, 300 feet north of milepost 718, in base of telephone pole; railroad spike marked "U. S. 338 B. M."-----	337.59
Macleay, 200 feet east of railroad, in front of town hall, south side of street; iron post stamped "Prim. Trav. Sta. No. 42, 401, Ore., 1913"-----	401.390
Macleay, in front of operator's window at station; top of rail-----	395.5
Macleay, 1.6 miles south of, road crossing at milepost 716, east side of track, north side of road, in base of corner fence post; railroad spike marked "U. S. 473 B. M."-----	472.68
Shaw, 100 feet southeast of station, at road crossing, east side of track, north edge of road; iron post stamped "Prim. Trav. Sta. No. 41, 437, Ore., 1913"-----	436.666
Shaw, 0.4 mile south of, cattle guard at road crossing south side of road; marked "411"-----	411.3
Shaw, 0.95 mile south of, signpost, "Shaw one mile," 300 feet north of, in base of telephone pole; railroad spike marked "U. S. 397 B. M."-----	396.7
Road crossing, north side of road; cattle guard marked "382"-----	382.5
Aumsville, 1 mile north of, 150 feet south of milepost 713, in base of telephone pole; railroad spike marked "U. S. 356 B. M."-----	355.81
Aumsville, about 200 feet west of railroad station, T road north, northwest corner; iron post stamped "Prim. Trav. Sta. No. 39, 363, Ore., 1913"-----	362.631
Aumsville, 0.6 mile west of, bridge across "Mile Creek"; south side of bridge, marked "347"-----	346.7
Aumsville, 0.9 mile west of, 100 feet west of turn in road, north side of road, in base of telephone pole; railroad spike marked "U. S. 345 B. M."-----	345.33
Aumsville, 1.2 miles west of; floor of bridge marked "337"-----	336.7
Aumsville, 2.1 miles west of, at T road north, northeast corner; iron post stamped "Prim. Trav. Sta. No. 40, 321, Ore., 1913"-----	321.072
Turner, 1.8 miles east of, near T road south, east side of Mill Creek, north side of road, in base of telephone pole; railroad spike marked "U. S. 310 B. M."-----	309.85
Turner, 1.3 miles east of bridge over Mill Creek; floor of, marked "303"-----	303.3
Turner 0.8 mile east of, Y road south, south edge of road, in base of telephone pole; railroad spike marked "U. S. 294 B. M."-----	294.50

Turner, 300 feet east of station, one block north of hotel, southeast corner of intersection of street, in base of electric-light pole; rail road spike, marked "U. S. 285 B. M."-----	Feet. 285. 07
Turner, 1.3 miles north of, T road west, southwest corner, at fence post; ground marked "262"-----	262. 4
Milepost 712, 600 feet south of, wooden bridge over Mill Creek, 200 feet east of railroad, southeast corner of bridge; on floor marked "268"-----	268. 32
Turner, 1.4 miles north of, west side of railroad at fence line, 30 feet north of milepost "713;" iron post stamped "261 B 1903" (See Bull. No. 462, p. 13.)-----	261. 826
From Aumsville south 2.5 miles along Southern Pacific R. R., thence along highways southeast to Stayton, thence southwest to point near Shelburn, thence north along Southern Pacific R. R. to North Santiam, thence southwest along highway to Marion, thence north along Southern Pacific R. R. 1.8 miles.	
Aumsville, 200 feet west of station, T road north, northwest corner; iron post stamped "Prim. Trav. Sta. No. 39, 363, Ore., 1913"-----	362. 631
Aumsville, 0.4 mile south of, cattle guard 711 E; top of rail-----	365. 3
Aumsville, 1.2 miles south of, road crossing, south side of road, east side of railroad track, in base of telephone pole; railroad spike marked "U. S. 374 B. M."-----	373. 72
Aumsville, 1.2 miles south of, 1 mile east of, turn in road to south, in base of telephone pole among scrub oaks; railroad spike marked "U. S. 391 B. M."-----	390. 56
Stayton, 1 mile north by 2.5 miles west of, 1 mile east of Southern Pacific R. R. Co.'s track, T road north, northwest corner; iron post stamped "Prim. Trav. Sta. No. 38, 398, Ore., 1913"-----	397. 604
Stayton, 1 mile north by 1.3 miles west of, 700 feet west of bridge over Mill Creek, T private road south at John Kirr mail box, south edge of road, in base of telephone pole; railroad spike marked "U. S. 424 B. M."-----	423. 95
Stayton, 1 mile north by 0.5 mile west of, north side of road, opposite T road, in base of telephone pole; railroad spike marked "U. S. 441 B. M."-----	441. 06
Stayton, 0.5 mile west of, Y road, opposite old mill, southwest corner, in base of telephone pole; railroad spike marked "U. S. 443 B. M."-----	443. 10
Stayton, at intersection of First and Water streets, 0.2 mile north of steel bridge over North Santiam River, northwest corner; iron post stamped "Prim. Trav. Sta. No. 37, 447, Ore., 1913"-----	447. 496
Bridge over North Santiam River, middle of north span of, west side of bridge; copper nail in floor, marked "460"-----	460. 28
Stayton, 0.8 mile south of, T road north; base of signpost, marked "437"-----	437. 5
Stayton, 1.2 miles south of, northwest corner of crossroads, in base of telephone pole; railroad spike marked "U. S. 429 B. M."-----	428. 72
Stayton, 1.9 miles southwest of, 100 feet north of Corvallis & Eastern R. R. crossing, opposite T road west, in base of telephone pole; railroad spike marked "U. S. 450 B. M."-----	449. 55
Shelburn, 3 miles northeast of, at road crossing on Corvallis & Eastern R. R., north edge of right of way, at T road west; iron post stamped "Prim. Trav. Sta. No. 36, 418, Ore., 1913"-----	417. 829
Shelburn, 2.7 miles northeast of, 100 feet east of turn in road, south side of road, in base of telephone pole; railroad spike marked "U. S. 392 B. M."-----	392. 54

Shelburn, 2.3 miles northeast of, bridge in road across drain ditch; floor marked "380"-----	Feet 379.9
Shelburn, 1.75 miles northeast of, opposite T road north, in base of telephone pole; railroad spike marked "U. S. 376 B. M."-----	375.61
Near cattle guard 705, at road crossing over Southern Pacific R. R. track; top of rail-----	369.8
Shelburn, 1.3 miles north of, T road south, southwest corner, at fence post; ground marked "365"-----	364.78
Shelburn, 1.6 miles northeast of, Southern Pacific R. R. bridge over North Santiam River, top of center pier, on granite capping; chiseled square marked "U. S. 370 B. M."-----	370.47
North Santiam, opposite station; top of rail-----	365.2
North Santiam, 0.8 mile north of, 25 feet east of railroad crossing, south side of road, in base of telephone pole; railroad spike marked "U. S. 384 B. M."-----	383.91
North Santiam, 0.5 mile west of, beside signboard "Marion 3 miles, Stayton 5 miles, Turner 7 miles," about 600 feet north of schoolhouse; iron post stamped "Prim. Trav. Sta. No. 52; 356, Ore., 1911"-----	356.027
Marion, 2.2 miles east of, 50 feet west of crossroads, 150 feet west of road to ferry, north edge of road, in base of telephone pole; railroad spike marked "U. S. 335 B. M."-----	335.01
Marion, 1.8 miles east of, in road; top of culvert marked "327"-----	327.20
Marion, 1.15 miles east of, 300 feet east of slight turn in road, north edge of road, in base of telephone pole; railroad spike marked "U. S. 321 B. M."-----	321.36
Marion, intersection of main street and T road east, opposite store, southeast corner of intersection, 100 feet east of Southern Pacific R. R. track, in base of telephone pole; railroad spike marked "U. S. 302 B. M."-----	302.01
Marion, 1.3 miles north of, 100 feet northwest of cattle guard 705 B, west side of road, in base of telephone pole; railroad spike marked "U. S. 318 B. M."-----	318.38
Marion, 1.8 miles north of, west side of railroad at fence line, 200 feet north of milepost 707 (now 706); iron post stamped "327 B, 1913." (See Bull. 462, p. 13.)-----	327.868

CORVALLIS QUADRANGLE.

[Latitude 44° 30'–44° 45'; longitude 123° 15'–123° 30'.]

Corvallis connected with line from Oakville and Albany.

Corvallis, at southeast corner of Monroe and Ninth streets, 0.5 foot from telephone pole, on curb; point in ring of paint marked "225.7"-----	225.8
Corvallis, at northeast corner of Benton County courthouse, about 4.5 feet from ground, in second course of stone from top of foundation; aluminum tablet stamped "230"-----	230.524
From Corvallis west along highway 5 miles, thence southwest to Philomath, thence south to point near Beulah Church.	
Corvallis, 0.7 mile west of, along Monroe Street, at forks of street to southwest, 100 feet of intersection of road, inside of first telephone pole to south; copper nail stamped "255.5"-----	255.59
Corvallis, 1.5 miles west of, at T road north, in top of northeast corner fence post, in ring of paint; copper nail stamped "266.4"-----	266.53

Corvallis, 2.5 miles northwest of, 30 feet southeast of T road south, on top of large fork of southeast corner fence post facing pasture, in ring of paint; copper nail stamped "272.9"-----	Feet. 273
Corvallis, 2.8 miles west of, at foot of Baldy, at angle in road, opposite two private gates to west, 3 feet northwest of northeast corner fence post, 8 feet northeast of angle in road; iron post stamped "287"-----	286. 91
Corvallis, 4 miles west of, on north side of Baldy, in pasture, on ledge in bottom of drain, on ring of paint marked "423.8"-----	423. 97
Corvallis, 4.5 miles west of, at northwest corner of Star's field, north side of Baldy, in top of second short post east of old gate connecting two pastures near top of low divide, in ring of paint; copper nail stamped "534.3"-----	534. 48
Philomath, 1 mile north of, on east end of gateway to private road north, 10 feet north of angle in road, in root of tree, in ring of paint; copper nail stamped "376.5"-----	376. 71
Philomath, 60 feet north of track, at second road crossing west of station, in west root of 2-foot tree, in ring of paint; copper nail stamped "281.8"-----	281. 96
Philomath, at northeast corner of Main and O streets, 40 feet northeast of street intersection, 1 foot northeast of large telephone pole, 3 feet west of sidewalk; iron post stamped "279"-----	279. 603
Philomath, 0.5 mile south of, 50 feet northeast of T road east, near northeast corner fence post, in top of stump, in ring of paint; copper nail stamped "259.2"-----	259. 44
Philomath, 1 mile south of, 50 feet southwest of T road west, in top of second fence post in southwest corner of T road, in ring of paint; copper nail stamped "262.8"-----	263. 06
Philomath, 3.2 miles southeast of, at Beulah Church, 55 feet northeast of crossroads, in southwest corner of school yard, in top of northeast corner fence post, in ring of paint; copper nail stamped "316.9"-----	317. 17
Beulah Church, 1 mile east of, 24 feet northeast of crossroads, 6 feet northeast of signpost, 3 feet east of three mail boxes (W. M. Jones, O. D. Duntin, G. W. Davis); iron post stamped "332"-----	331. 879
From Wilson's ranch north 5 miles to Corvallis, thence southwest 4 miles along Philomath road, thence south to point near Jones's ranch.	
Wilson's ranch, 5.1 miles south of Corvallis, west side of State road, in base of telephone pole; spike marked "240.0"-----	240. 12
Wilson's ranch, 0.9 mile north of, 4.2 miles south of Corvallis, at junction of private road west with State road, about 10 feet northeast of mail box 21, about 200 feet southwest of brown house, in telephone pole; large wire spike marked "238"-----	238. 59
Wilson's ranch, 1.6 miles north of, 3.5 miles south of Corvallis, at junction of lane east with State road, 100 feet southeast of F. Whitaker's house, in telephone pole; large wire spike marked "237"-----	236. 91
Wilson's ranch, 2.4 miles north of, 2.7 miles south of Corvallis, 500 feet north of O. C. Belcher's mail box, west side of State road; iron post stamped "233"-----	233. 015
Wilson's ranch, 3.3 miles north of, 1.8 miles south of Corvallis, southeast corner of bridge over slough, in top of pile; large spike marked "217"-----	216. 99
Corvallis, Oregon Agricultural College, north side of east entrance to Mechanical Hall; iron post stamped "235"-----	234. 981

Corvallis, southeast corner of 14th and B streets, in base of telephone pole; spike marked "227"-----	Feet. 227. 2
Corvallis, 2.4 miles southwest of, north side of main Corvallis-Philomath road, in root of 48-inch oak tree; large wire spike marked "250"-----	249. 75
Corvallis, 3.2 miles southwest of, on main Corvallis-Philomath road where road turns south at junction of road from west; iron post stamped "255"-----	255. 115
Corvallis, 4.1 miles southwest of, at oblique-angled turn in Corvallis Philomath road, at junction of road from west, about 150 feet south of white house, in base of telephone pole; large wire spike marked "267"-----	266. 99
Corvallis, 4.9 miles southwest of, at right-angled turn in Corvallis-Philomath road where road turns south, at junction of road from north, in base of telephone pole; large wire spike marked "282"---	282. 02
Corvallis, 5.8 miles southwest of, at right-angled turn in lane where lane turns south, about 450 feet west of large red barn, west side of road; large wire spike in telephone pole, marked "244"-----	244. 47
From point 2 miles east of Jones's ranch east to Wilson's ranch 5 miles south of Corvallis.	
Beulah Church, 2.5 miles east of, 1.3 miles east of Jones's ranch, 0.95 mile east of Muddy Creek, north side of lane where it turns north, in fence post; large wire spike marked "236"-----	236. 22
Beulah Church, 3.6 miles east of, 2.4 miles east of Jones's ranch, southeast corner of small bridge, driven in floor; large wire spike marked "237"-----	236. 92
From point near Suver to Airlie.	
Suver, 1.7 miles west of, at gate to private road south; telephone pole marked "241"-----	241. 4
Suver, 2.6 miles west of, jog in road, private road south, southwest corner of T, in base of telephone pole; railroad spike marked "U. S. 240 B. M."-----	239. 77
Schoolhouse, at telephone pole opposite; nail marked "298"-----	297. 5
Schoolhouse, 0.5 mile west of, T road north, south of road, at telephone pole; nail marked "236"-----	236. 3
Airlie, 2.6 miles east of, turn of road at Fir Lawn farm, 40 feet west of entrance, in base of telephone pole; railroad spike marked "U. S. 235 B. M."-----	234. 89
Fir Lawn farm, 0.2 mile west of entrance; top of culvert, marked "223"-----	223. 0
Airlie, 1.5 miles east of, 800 feet east of forks in road; top of culvert, marked "223"-----	223. 0
Airlie, 1.4 miles east of, forks of road, 80 feet north of mail boxes, in base of telephone pole; railroad spike marked "U. S. 227 B. M."-----	226. 71
Airlie, 1 mile east of, 0.2 mile east of Stadts farm; top of culvert, marked "270"-----	270. 4
Airlie, 0.4 mile east of, T road north, northwest corner, at telephone pole; nail marked "281"-----	281. 1
Airlie, opposite entrance of schoolhouse, north side of road; iron post stamped "Prim. Trav. Sta. No. 15, 286, Ore., 1913"-----	286. 232
Airlie, in front of Independence & Monmouth Ry. station; top of rail-	247. 9

Airlie, Main Street crossing of railroad, southern edge of road, in switch base; copper nail marked "U. S. 247 B. M."-----	Feet. 246.85
Airlie, 0.2 mile west of; top of bridge, marked "244"-----	244.1
Airlie, 0.5 mile northwest of; top of culvert, marked "241"-----	241.2

DALLAS QUADRANGLE.

[Latitude 44° 45'–45°; longitude 123° 15'–123° 30'.]

From point near Airlie north along highways to Dallas, thence east to northeast corner of T. 8 S., R. 5 E.

Airlie, 0.9 mile northwest of, T road west near new railroad grade, northwest corner, in base of telephone pole; railroad spike marked "U. S. 243 B. M."-----	243.11
Airlie, 1.2 miles northwest of; drain, marked on fence "226"-----	226.3
Airlie, 1.5 miles northwest of, T road east, northeast corner; base of telephone pole, marked "228"-----	227.8
Airlie, 1.9 miles northwest of, bridge over Luckiamute River, west edge of south approach; copper nail marked "U. S. 231 B. M."-----	230.55
Maple Grove Corners, at northeast corner of store; base of telephone pole, marked "228"-----	228.1
Lewisville, D. W. Lewis's ranch, 200 feet west of road, concrete water trough, on northwest corner; chiseled square-----	286.1
Lewisville, 0.5 mile north of, T road east, northeast corner, in base of telephone pole; railroad spike marked "U. S. 299 B. M."-----	299.43
Lewisville school, 0.1 mile south of, T road east, northeast corner, on telephone pole; nail marked "263"-----	263.0
Lewisville school, 0.2 mile northwest of; top of culvert, marked "229"-----	229.0
Lewisville school, 0.7 mile northwest of, 500 feet south of Maple Glen ranch, top of culvert; copper nail marked "U. S. 254 B. M."-----	254.15
Lewisville school, 1.7 miles northwest of, E. C. Osborne's mail box, T road west, east side of road; nail in telephone pole marked erroneously "302"-----	308.1
Lewisville school, 2.7 miles northwest of, 150 feet north of water trough, 400 feet south of T road east, east side of road, in base of fence post; railroad spike marked "U. S. 281 B. M."-----	281.49
Little Luckiamute River, 0.4 mile southwest of, bridge over slough; floor marked "249"-----	249.2
Little Luckiamute River, southwest corner of bridge; floor marked "252"-----	252.0
Airlie, 7 miles north of, 500 feet north of Little Luckiamute River, crossroads at sign "Dallas 8 miles, Lewisville 5 miles," southeast corner; iron post stamped "Prim. Trav. Sta. No. 17, 249, Ore., 1913"-----	248.710
Dallas, 5 miles south of, T road west to Falls City, northwest corner, in base of fence post; railroad spike marked "U. S. 291 B. M."-----	291.22
Dallas, 3 miles south of, 600 feet north of Guthrie School building, 300 feet north of crossroads, east edge of road; iron post stamped "Prim. Trav. Sta. No. 18, 313, Ore., 1913"-----	313.004
Bridge across slough, northwest corner; floor marked "292"-----	291.9
Dallas, 2.8 miles south of, T road east, southeast corner, in base of telephone pole; railroad spike marked "U. S. 338 B. M."-----	337.65
Dallas, 1.6 miles south of, top of hill, east side of road, at base of railroad fence post; ground marked "428"-----	427.9

Dallas, 0.9 mile south of, along Salem, Falls City & Western R. R. east edge of right of way, north side of private road crossing, in base of fence post; railroad spike marked "U. S. 334 B. M."-----	Feet. 333.96
Dallas, at intersection of main street and railroad, 0.5 mile south of courthouse, 600 feet west of sawmill; base of telephone pole, marked "313"-----	313.4
Dallas, Polk County courthouse, northwest corner, in stone railing to steps; bronze tablet stamped "Prim. Trav. Sta. No. 18, 325, Ore., 1913"-----	324.719

NOTE.—Iron post 3 miles south of Dallas also stamped "No. 18."

Dallas, 1.2 miles east of, T road south, south side of road, in base of telephone pole; railroad spike marked "U. S. 297 B. M."-----	296.91
Dallas, 2 miles east of, 400 feet east of T road north second-class road, south edge of road, in base of telephone pole; railroad spike marked "U. S. 266 B. M."-----	265.76
Dallas, 2.7 miles east of, southeast corner of bridge; floor marked "251"-----	250.7
Dallas, 3 miles east of, turn in road to south, Bowersville, 0.2 mile north of railroad crossing, in base of telephone pole; railroad spike marked "U. S. 243 B. M."-----	243.33
Dallas, 3.9 miles east of, private T road north, northwest corner, at base of fence post; marked "238"-----	238.1

From Dallas north along highway 5.5 miles.

Dallas, 0.2 mile north of, in floor of covered bridge; copper nail marked "310"-----	309.7
Dallas, 0.4 mile north of, crossroads, Rickreall road to east, at telephone pole; ground marked "347"-----	347.0
Dallas, 1.27 miles north of, top of hill, in front of Reed farmhouse, west edge of road, in base of gatepost; railroad spike marked "U. S. 425 B. M."-----	424.97
Dallas, 2 miles north of, 150 feet north of T road west, at base of hill, east edge of road, in base of telephone pole; railroad spike marked "U. S. 296 B. M."-----	295.84
Dallas, 2.5 miles north of, wooden culvert in road, northeast corner; floor marked "271"-----	271.2
Dallas, 2.7 miles north of, west edge of road, at telephone pole; ground marked "308"-----	308.3
Dallas, 2.9 miles north of, T road east, private road to Dolph farm, east edge of road, in base of telephone pole; railroad spike marked "U. S. 330 B. M."-----	330.20
Dallas, 3.6 miles north of, T road, southeast corner; iron post stamped "Prim. Trav. Sta. No. 19, 220, Ore., 1913"-----	219.738
Dallas, 3.6 miles north of, 800 feet east of primary traverse station No. 19, culvert in road; floor marked "219"-----	219.2
Dallas, 4.7 miles north of, near base of hill, east edge of road, in base of fence post; railroad spike marked "U. S. 232 B. M."-----	232.40
Dallas, 4.8 miles north of, on culvert; floor marked "213"-----	212.8
Culvert, in road; floor marked "225"-----	224.9

From Airlie northeast along Independence & Monmouth Ry. to Simpson station (double spur).

Airlie, 1.1 miles north of, private road crossing railroad, opposite red barn, in base of gatepost; railroad spike marked "U. S. 239 B. M."-----	238.63
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Airlie, 1.7 miles north of, road crossing railroad tracks, at cattle guard 77 B; top of culvert marked "231"-----	Feet. 230.5
Airlie, 2.1 miles north of, 550 feet north of milepost 77, private road crossing at Simpson's barn, in base of gatepost; railroad spike marked "U. S. 219 B. M."-----	218.95
Simpson station, road crossing, north edge of road, 10 feet west of railroad tracks; iron post stamped "Prim. Trav. Sta. No. 16, 220, Ore., 1913"-----	220.300

ELMIRA QUADRANGLE.

[Latitude 44°-44° 15'; longitude 123° 15'-123° 30'.]

From point 1 mile south of Elmira east along highway to point 0.7 mile east of Oak Hill school.

Madison, 0.9 mile south of, at fork in road (main road bends to east), on south side of road, three fir trees grown together at base, in root; copper nail and washer, blaze on small tree on east side of big trees, aluminum tag stamped "398.8"-----	398.80
Crow, 3.8 miles northeast of, 380 feet north of T road west, west side of road at fence line; iron post stamped "394.3"-----	394.325
Lewellyn, 1.1 miles east of, 300 feet west of Long Tom Creek bridge, north side of road, in base of 36-inch blazed oak tree; nail with aluminum tag stamped "378.1"-----	378.18
Lewellyn, 4.7 miles east of, 0.7 mile east of Oak Hill school, at north-south T road; iron post stamped "389"-----	388.535

From point 4 miles north of Elmira south along highway to Crow, thence north-east 3.8 miles.

Elmira, north end of bridge over Long Tom Creek, 5 feet west of telephone pole; iron post stamped "387"-----	387.070
Elmira, 1.9 miles south of, in small colony, at worm fence on north side of road; iron post stamped "486"-----	486.063
Crow, 5.1 miles south of Elmira, junction of Eugene and Elmira roads, in center of road, in base of 24-inch blazed oak tree; nail with aluminum tag stamped "549.7"-----	549.70
Crow, 0.9 mile northeast of, top of hill, at road bend, 100 feet from old cabin; iron post stamped "745.9"-----	745.887
Crow, 1.9 miles northeast of, opposite house, west of road, on fence line, in base of 12-inch blazed fir tree; nail with aluminum tag stamped "460"-----	460.06
Crow, 3.8 miles northeast of, 380 feet north of T road west, west side of road, at fence line; iron post stamped "394.3"-----	394.325

From Elmira west along highway 4.4 miles.

Elmira, 4.4 miles west of, 200 feet east of Long Tom Creek bridge, beginning of bridge approach, at foot of hill, in root on north side of 5-foot fir tree; copper nail and washer; in blaze on root, aluminum tag stamped "424.4"-----	424.41
From point 3.5 miles southwest of Irving west along highway 6 miles, thence northeast to point 5.3 miles northeast of Smithfield.	
T. 17 S., R. 4 W., center of sec. 7, south side of road, 50 feet east of lane south; iron post stamped "362"-----	362.031
Irving, 6.5 miles west of, on top of Fern Ridge, north side of road; iron post stamped, "402"-----	402.015

Irving, 3.5 miles west of, 400 feet west of white house on north side of road, in center of road, in base of blazed white-oak tree; nail; aluminum tag in blaze stamped "375"-----	Feet. 374. 62
Irving, 9.2 miles west of, at intersection of Irving road with Elmira-Smithfield road, at northeast corner of crossroads; iron post stamped "395"-----	395. 024
Smithfield, 1,200 feet north of flagpole at crossroads, at junction of Clear Lake and Smithfield-Junction City roads, in front of town hall; iron post stamped "430"-----	429. 556
Smithfield, 0.6 mile north of, at top of long hill, center of road, in base of 36-inch oak tree blazed on two sides; nail with aluminum tag stamped "517.0"-----	517. 39
Smithfield, 2.8 miles north of, at bridge over Long Tom Creek, also junction of Monroe road with Junction City road, on west side of road in front of house; iron post stamped "325"-----	324. 606
From point 5.5 miles west of Irving north along Fern Ridge road to point 5.6 miles north of Fern Ridge Church.	
Fern Ridge Church, 2.1 miles north of, at Upper Fern Ridge school, on hill back of ranch house overlooking Long Tom Creek; triangulation point; iron post stamped "375.7"-----	375. 582
From intersection of Fern Ridge-Junction City roads west along highway to Smithfield.	
Fern Ridge road, 2.2 miles west of, at top of hill overlooking Smithfield, on west side of road, in base of stump; nail painted "U. S. 419.8 B. M."-----	419. 68
From point 4 miles west of Junction City west along highway 6 miles, thence north 3 miles.	
Junction City, 4 miles west of, north edge of road at junction of T road, 200 feet east of bridge over Owens Creek, in base of 20-inch oak tree; spike with aluminum tag stamped "316"-----	315. 63
Junction City, 4.7 miles west of, south edge of road, 200 feet east of junction of second-class road, 0.7 mile west of bridge over Owens Creek, in base of 36-inch pine tree, east of similar tree; spike with aluminum tag stamped "336 B. M. 2"-----	335. 88
Junction City, 9 miles west of, 1,000 feet east of Union schoolhouse, at Frank Thompson's ranch, at junction of Monroe and Junction City roads, southeast corner of field fence; iron post stamped "384 B 1909 1"-----	383. 848
From point 9 miles west of Junction City west along highway to point 1 mile west of Union School (spur line).	
Union schoolhouse, 0.5 mile west of, at road junction, 50 feet south of fence corner, in base of 36-inch pine tree; spike with aluminum tag stamped "437"-----	436. 74
From point 5.8 miles west of Junction City south and west along highway to sawmill (spur line).	
Sawmill, 0.25 mile east of, in floor of bridge over small creek; copper nail painted "350.8"-----	350. 84

HALSEY QUADRANGLE.

[Latitude 44° 15'—44° 30'; longitude 123°—123° 15'.]

From point 2.5 miles east of Fergusen Bridge east along highway to Harrisburg.

Fergusen Bridge, 2.5 miles east of, at junction of north-south road, 0.25 mile east of James Strong's ranch house, east side of road, opposite southeast corner of field; iron post stamped "310 B 1909 4"	Feet. 310. 538
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From Lancaster schoolhouse northwest along highway to point 7 miles southeast of Bruce.

Lancaster schoolhouse, 1 mile north of, east edge of road, where road makes sharp turn, 500 feet north of C. Mortensen's ranch house, at north end of gate to field; iron post stamped "307 1909 B 5"-----	307. 414
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Lancaster schoolhouse, 3.1 miles northwest of, west one of three pine trees, on north edge of road, in south side of blazed 30-inch tree; spike with aluminum tag stamped "291 B. M. 24"-----	291. 10
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Monroe, 3 miles east of, 1 mile west of Flat Creek, 350 feet west of R. H. Hewitt's ranch house, northwest corner of field at junction of road to south; iron post stamped "280 B 1909 6"-----	280. 413
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From point 2.3 miles northeast of Monroe east along highway to Ingram's Ferry.

District 5 schoolhouse, 500 feet east of, 60 feet north of road junction, in base of 20-inch cottonwood tree; spike with aluminum tag stamped "281 B. M. 48"-----	281. 18
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Ingram's Ferry, west bank of Willamette River, 15 feet north of road, in base of 20-inch cottonwood tree; spike with aluminum tag stamped "283 B. M. 49"-----	283. 21
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From Harrisburg northwest along highway on east bank of Willamette River to Lake Creek school, thence north to township line, thence east to Brownsville.

Harrisburg, 3.2 miles north of, southwest corner of yard to white frame house at crossroads; iron post stamped "292 B 1909 13"-----	292. 156
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Harrisburg, 7 miles northwest of, northwest corner of field, 60 feet south of large barn, at V. Owens's ranch; iron post stamped "280 B 1909 14"-----	279. 700
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Lake Creek schoolhouse, 1.8 miles north of, southwest corner of field, at crossroads; iron post stamped "271 B. M. 85"-----	270. 750
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Lake Creek, 0.6 mile north of, 150 feet east of intersection of crossroads, 150 feet north of white house, northwest corner of yard, in base of 20-inch oak tree; spike with aluminum tag stamped "267 B. M. 86"-----	267. 42
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Lake Creek, 1.3 miles north of, 0.6 mile east of, north side of road, east end of cottonwood grove, in base of 24-inch cottonwood tree; spike with aluminum tag stamped "268 B. M. 87"-----	268. 52
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Halsey, 4.3 miles northwest of, at angle in road, southwest corner of field, opposite old cabin, 0.5 mile south of schoolhouse; iron post stamped "270 B 1909 21"-----	270. 513
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Halsey, 100 feet north of station, 18 feet east of track, on line with north margin of street to east; iron post stamped "281 B 1903"-----	281. 562
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Halsey, 3 miles east of, north edge of road, 800 feet east of bridge, 10 feet east of telephone pole; iron post stamped "283 B 1909 22"---	282. 742
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Brownsville, 1.8 miles west of, at junction of road south, in base of 48-inch oak tree; spike with aluminum tag stamped "307 B. M. 95"	Feet. 306.63
Brownsville, 1 mile west of, south edge of road, west edge of right of way, at railroad crossing; iron post stamped "319 B 1909 23"---	318.559
From Harrisburg east along highway to Diamond Hill school, thence northwest to Southern Pacific R. R., thence northeast along railroad to point near Brownsville.	
Harrisburg, 2.3 miles east of, northeast corner of field, at junction of north-south road, in base of 36-inch oak tree; spike with aluminum tag stamped "312 B. M. 63"-----	312.40
Harrisburg, 3.4 miles east of, where road turns east, 100 feet north of large barn, southwest corner of field; iron post stamped "314 B 1909 15"-----	314.119
Harrisburg, 6.7 miles east of, 2.6 miles west of Diamond Hill schoolhouse, south side of road, at cross fence line; iron post stamped "320 B 1909 16"-----	320.340
Diamond Hill schoolhouse, 1.2 miles northwest of, east edge of road, 500 feet north of gate to second-class road, 400 feet north of point where road turns east, 150 feet west of barn; iron post stamped "354 B 1909 17"-----	353.703
Twin Buttes station, 0.5 mile west of, 1.6 miles north of Union Center schoolhouse, 15 feet west of southeast corner of yard of frame house, opposite large barn, at intersection of road west; iron post stamped "309 B 1909 18"-----	308.940
From point 0.5 mile west of Twin Buttes station east along highway to Southern Pacific R. R.	
Halsey, 3 miles south by 2 miles east of, south side of road, 10 feet east of gate to barnyard at white frame house, in base of telephone pole; spike with aluminum tag stamped "301 B. M. 78"-----	301.20
From point 1.2 miles east of Harrisburg north along highway to point 2 miles north of Muddy Creek.	
Rowland, 1.2 miles north of, at Pikes schoolhouse (district 45), northwest corner of school yard, east edge of road; iron post stamped "303 B 1909 19"-----	302.985
From point 3.2 miles north of Halsey east along county road to point about 4 miles northeast of Halsey.	
Halsey, 3.2 miles north of, east of railroad, 4 feet from milepost 678, at fence line; iron post stamped "266 B 1903"-----	266.594
Halsey, 2.9 miles north by 2.1 miles east of covered bridge over Calapooia River, south side of west entrance; copper tack on girder -----	278.18
Halsey, 2.9 miles north by 2.9 miles east of, 25 feet from west approach to bridge over Soddum ditch, south side of road at fence line; iron post stamped "276 Oregon"-----	275.855
From point 1.8 miles west of Plainview along roads to point 2 miles north of Shedd, thence west and south to permanent bench mark 4.3 miles northwest of Halsey.	
Plainview, 1.8 miles west by 1.2 miles north of Saddle Butte, northwest corner of T road north, in base of milepost; spike with aluminum tag stamped "260"-----	260.04

Plainview, 1.7 miles north by 1.8 miles west of, 2.6 miles north of Saddle Butte, southwest corner of crossroads; iron post stamped "271 Oregon"-----	Feet. 270.980
Shedd, 1.9 miles north of, east edge of right of way of Southern Pacific R. R., at third telegraph pole south of milepost 682; iron post stamped "249 B 1903"-----	249.485
Shedd, 1.3 miles north by 3 miles west of, at northeast corner of T road north, 300 feet east of angle in road; iron post stamped "252 Ore"-----	251.691
Shedd, 3.1 miles west by 1 mile south of, 100 feet east of southeast corner of T road south; iron post stamped "270 Ore"-----	270.002
Shedd, 2.5 miles south by 3.4 miles west of, 0.7 mile north of Harmony school, at southeast corner of culvert; copper nail with aluminum tag stamped "260"-----	260.23
Halsey, 4.3 miles northwest of, 0.5 mile south of Harmony school, opposite old cabin, at southwest corner of field; iron post stamped "270"-----	270.513

From point 3.5 miles west of Shedd west along road through Peoria to point 3 miles south of Peoria.

Peoria, 0.9 mile south of, west side of road, opposite farmhouse; iron post stamped "260 Ore"-----	259.632
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From Peoria north along roads to point 4 miles northwest of Shedd.

Peoria, 2.2 miles north of, on east side of road, 1,000 feet south of large red barn; iron post stamped "238 Ore"-----	237.904
Peoria, 3.5 miles north of, at northeast corner of T road east, in root of 16-inch maple tree; copper nail with aluminum tag stamped "240"-----	240.00
Peoria, 3.5 miles north by 0.9 mile east of, 0.4 mile west of bridge over Muddy Creek, at northwest corner of turn in road; iron post stamped "232 Ore"-----	232.288
Peoria, 4.2 miles northeast of, 3 miles west by 2.4 miles north of Shedd, at northeast corner of T road east; copper tack in root of 14-inch quaking-asp tree; aluminum tag stamped "254"-----	253.84

From Peoria west 2.8 miles.

Peoria, 2.8 miles by wagon road west of, on north side of road; iron post stamped "244 Ore"-----	244.241
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From Plainview west to point 4 miles southeast of Tangent.

Plainview, 1.3 miles west of, at T road south, north side of road, in base of fence post; spike with aluminum tag stamped "268.4"-----	268.36
Plainview, 1.7 miles west of, at T road north, in base of signpost; spike with aluminum tag stamped "260.1"-----	260.08
Saddle Butte, 2 miles north of, at turn in road, in base of fence post; spike marked "264.3"-----	264.26
Saddle Butte, 2 miles north by 1 mile west of, at T road east, opposite residence of T. R. Heffley, in base of fence post; nail marked "U. S. B. M. 253.2"-----	253.05
Tangent, about 4.25 miles southeast of, in base of telephone pole, at T road east; spike with aluminum tag, stamped "254.6"-----	254.49

EUGENE QUADRANGLE.

[Latitude 44°-44° 15'; longitude 123°-123° 15'.]

From Eugene west 7 miles and north 7 miles, thence east to Irving.

Eugene, University of Oregon, in front face of Willard Hall, near northeast corner; aluminum tablet stamped "1903 B 449"-----	Feet. 449. 317
Eugene, 1 mile south and 3 miles west of, southwest corner at T road south, northwest corner of sec. 1, T. 18 S., R. 4 W.; iron post stamped "421"-----	420. 574
Eugene, 1.25 miles south and 4.5 miles west of, at bend in road south 200 feet east of T road north, at section corner; top of stone-----	405. 80
T. 18 S., R. 4 W., west-central part of sec. 4, north of road, in edge of timber, in large rock; aluminum tablet stamped "443"-----	442. 889
Eugene, 2.25 miles south and 7.5 miles west of, north of road, on rock; chiseled square-----	785. 38
T. 17 S., R. 4 W., corner of secs. 29, 30, 31, and 32, in corner of field at northwest corner of T road west; iron post stamped "389"-----	388. 535
T. 17 S., R. 5 W., sec. 24, northeast corner of, west of road, in northeast corner of Peter Carlson's yard; iron post stamped "385"-----	385. 165
T. 17 S., R. 4 W., center of sec. 7, south of road, 50 feet east of lane south; iron post stamped "362"-----	362. 031
Eugene, 4.9 miles north of, at highway crossing, east of track, north of road; iron post stamped "1903 B 382"-----	382. 463

From Eugene to Goshen.

Eugene, 2.5 miles south of, in front of white house, on stone; chiseled square-----	468. 09
T. 18 S., R. 3 W., SW. $\frac{1}{4}$ sec. 8; east of road, 100 feet northwest of white house on G. T. Roe's ranch; iron post stamped "464"-----	463. 582
Goshen, 0.8 mile north of, west of track, 135 feet south of milepost 643, at fence line; iron post stamped "1903 B 493"-----	493. 960

From Eugene via Armitage and Springfield to Henderson.

Eugene, 3 miles north of, north of road at T road south, 0.5 mile east of C. W. Young's home; iron post stamped "419"-----	419. 436
Armitage, 400 feet south of station, 10 feet west of road, 30 feet south of railroad; iron post stamped "424"-----	423. 577
T. 17 S., R. 3 W., west-central part of sec. 26, south of road, 35 feet west of railroad track; iron post stamped "443"-----	442. 915
Henderson, 30 feet west of main track, 35 feet south of station sign; iron post stamped "1903 B 446"-----	447. 160

From Armitage via Coburg to Irving.

Coburg, southern part of town, west of county road, 7 feet inside of fence, opposite first street east; iron post stamped "399"-----	399. 336
T. 17 S., R. 4 W., NE. $\frac{1}{4}$ sec. 1, 40 feet north of T road west, west of road north, 1 foot from fence; iron post stamped "376"-----	376. 174
Eugene, 4.9 miles north of, at highway crossing, east of track, north of road; iron post stamped "1903 B 382"-----	382. 463

From Coburg to Harrisburg.

Coburg schoolhouse, 2.5 miles north of, west of Brownsville road, inside fence; iron post stamped "370"-----	Feet. 370. 297
Wilkins station, 1.2 miles north and 1 mile west of, center of road in front of Wyatt schoolhouse; iron post stamped "337"-----	337. 792
Harrisburg, 1.6 miles south of, south of Harrisburg-Coburg road at bend to west, inside fence; iron post stamped "319"-----	319. 306
Harrisburg, 140 feet south of station, 15 feet east of track, at telegraph pole; iron post stamped "1903 B 307"-----	307. 653

From point 5.6 miles north of Fern Ridge Church north and east along highway to Junction City.

Smithfield, 6.3 miles north of, 3 miles west of Junction City, 500 feet east of Long Tom Creek bridge, at small culvert on south side of road; iron post stamped "317"-----	316. 538
Junction City, 1 mile northwest of, at junction of Corvallis and Junction City roads, on west side of road, in front of house; iron post stamped "318"-----	318. 375

MONROE QUADRANGLE.

[Latitude 44° 15'-44° 30'; longitude 123° 15'-123° 30'.]

From point 2.5 miles east of Fergusson Bridge west along highway up Beard Creek.

Liberty schoolhouse, 2.3 miles east of, 4.3 miles south of Monroe, 500 feet east of large house with red windmill tower at junction of north-south roads, northeast corner of field; iron post stamped "317 B 1909 3"-----	317. 287
Union schoolhouse, 1.7 miles north of, 0.7 mile west of Liberty schoolhouse, 300 feet north of Fergusson Creek, at junction of T road; iron post stamped "347 B 1909 2"-----	346. 668

Spur line.

Beard Creek, 1 mile northwest of, 50 feet east of cabin, east edge of road at clearing, in root of stump; copper nail painted "402"-----	402. 39
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From point 2.5 miles east of Fergusson Bridge northwest along highway to Monroe.

Harmony schoolhouse, 2 miles northwest of, 2.9 miles east of Monroe, north side of road, at junction of road north, southwest corner of fence at C. Tracer's ranch; iron post stamped "290 B 1909 7"-----	289. 594
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From point 4.3 miles south of Monroe north along highway to Bruce.

Monroe, 50 feet west of bridge over Long Tom Creek, south end of town, at junction of Monroe and Eugene roads, northwest corner of lot; iron post stamped "287 B 1909 8"-----	287. 131
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From point 7 miles southeast of Bruce northwest along highway to Bruce.

Monroe, 2.3 miles northeast of, 1.7 miles west of Flat Creek, at junction of road to west, in base of 36-inch cottonwood tree; spike with aluminum tag stamped "279 B. M. 26"-----	279. 00
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Bruce, 4.9 miles southeast of, 1,000 feet west of gate to J. E. Coleman's ranch, 50 feet north of road junction, west side of road, at fence line; iron post stamped "276 B 1909 12"-----	Feet. 275.969
From Monroe west along highway 2.5 miles, thence north 6 miles, thence east to Bruce.	
Monroe, 2.9 miles northwest of, southeast corner of field at junction of Bellfountain and Walters roads; iron post stamped "283 B 1909 9"-----	283.431
Bellfountain, 0.5 mile east of, 100 feet north of junction of road east, at bend of road, 200 feet west of house, in base of 36-inch oak tree; spike with aluminum tag stamped "362 B. M. 38"-----	362.49
Bellfountain, 1 mile north of, 300 feet north of white house, east edge of road, south end of gate to second-class road through Fir Grove farm, where road goes over small ridge; iron post stamped "371 B 1909 10"-----	371.108
Bellfountain, 2 miles north by 0.9 mile east of, south side of road, 0.5 mile east of F. Watkin's ranch, in base of 12-inch ash tree; spike with aluminum tag stamped "277 B. M. 41"-----	277.63
Muddy Creek, 0.3 mile east of, southeast corner of field, where road makes sharp turn to north; iron post stamped "260 B 1909 11"---	259.746
From point 3 miles northwest of Monroe southwest along highway to Glenbrook (spur line).	
Glenbrook, 50 feet west of bridge over small creek, 1,000 feet north of railroad crossing, southeast corner of yard, in base of blazed 30-inch pine tree; spike painted "354"-----	354.49
From point 4 miles west of Peoria south along roads to point 5 miles southwest of Peoria.	
Peoria, 4 miles west of, 8 miles south of Corvallis, at northeast corner of T road east, in root of 24-inch maple tree; copper tack with aluminum tag stamped "254"-----	253.68
Peoria, 4 miles west by 1.3 miles south of, 0.3 mile west of Irwin Butte, on east side of road, at fence line; iron post stamped "253 Ore"-----	252.835
From point 4.5 miles northwest of Peoria north along roads to point 4 miles south of Corvallis.	
Peoria, 4 miles west by 2 miles north of, on west side of road; iron post stamped "247 Ore"-----	247.095
Corvallis, 4.3 miles south of, on west side of State road, opposite farm house and white "Samson" windmill tank, in base of telephone pole; spike with aluminum tag stamped "240"-----	240.124
From point near Beulah Church south along highway 6 miles, thence east to point 5 miles northwest of Peoria.	
Beulah Church, 2 miles south of, 5 miles south of Philomath, 40 feet northeast of intersection of T road north, 2 feet north of northeast corner fence post; iron post stamped "281"-----	281.368
Beulah Church, 2.5 miles south of, opposite sign "Beaver Creek 1 mile," 40 feet northwest of intersection at T road south, in top of fence post, in ring of paint; copper nail stamped "347.3"-----	347.57

Beaver Creek schoolhouse, at 17 mail boxes, 27 feet northeast of T road north, near northeast corner fence post, in root of small tree, in ring of paint; copper nail stamped "298.8"-----	Feet. 299. 08
Beulah Church, 5.2 miles south of, 6 feet west of private gate on south side of road, 1.5 feet north of fence, 15 feet south of road (another private gate on north side); iron post stamped "298"-----	298. 425
Beulah Church, 5 miles southeast of, 30 feet southwest of intersection at T road west, 4 feet north of southwest corner fence post, at four mail boxes (P. Richard, I. M. Currier); iron post stamped "252"-----	252. 347
Beulah Church, 5.5 miles southeast of, 20 feet southeast of T road north, private road north at J. T. Buchanan's mail box, in timber supporting southeast end of bridge over Beaver Creek, in ring of paint; copper nail stamped "243.9"-----	244. 23
Beulah Church, 6.25 miles southeast of, 50 feet southeast of T road south, in first telephone pole east of intersection; copper nail stamped "245.3"-----	245. 66
Philomath, 11 miles southeast of, 8 miles southeast of Beulah Church, 7.25 miles southwest of Corvallis, 60 feet southwest of T road west, on top of second post south of sign post (southwest corner fence post), in circle of paint; copper nail stamped "253.8"-----	254. 2
Peoria, 4 miles west by 2 miles north of, on west side of road; iron post stamped "247 Ore"-----	247. 095

From Jones's ranch east 2 miles.

Corvallis, 8 miles southwest of, 8 miles west of Peoria, 4 miles southeast of Philomath, 1.2 miles east of Beulah Church, 100 feet northwest of Jones's ranch house, at center of crossroads; iron post stamped "332"-----	331. 879
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LEBANON QUADRANGLE.

[Latitude 44° 30'–44° 45'; longitude 122° 45'–123°.]

From point near Tallman south along highway and railroad to Sand Ridge schoolhouse.

Tallman, about 1.5 miles north of, at junction of Albany-Spicer and Albany-Tallman roads, in southeast angle of roads, in base of telephone pole; spike marked "282"-----	282. 15
Tallman, 1,000 feet east of station, at railroad crossing, 50 feet south of track, 20 feet east of road, in fence corner; iron post stamped "306 Ore 1911"-----	305. 822
Tallman, 0.6 mile south of, in southwest corner of railroad crossing, in base of danger-signal post; spike marked "303.4"-----	303. 52
Tallman, 1.2 miles south of, in northwest corner at road crossing, in base of danger-signal post; spike marked "294.7"-----	294. 81
Lawson, about 0.5 mile north of station, in southwest corner at road crossing, in base of danger-signal post; spike marked "295.6"-----	295. 72
Sand Ridge schoolhouse, 1 mile north of, at T road west, in base of telephone pole; spike marked "303"-----	302. 90
Sand Ridge schoolhouse, 125 feet north of, at fence corner; iron post stamped "351 Ore 1911"-----	351. 244

From Tallman south and east along highway to Lebanon.

Irwinville, 1,000 feet east of, at railroad crossing, in base of crossing sign; spike marked "308.7"-----	Feet. 308.80
Lebanon, 2 miles west of, at T road east, in northeast corner of fence post; bent spike marked "321.1"-----	321.23
Lebanon, 1 mile west of, on south side of road, 600 feet east of white house on north side of road, in base of telephone pole; spike marked "331.4"-----	331.59
Lebanon, in concrete steps on south side of Lebanon High School; aluminum tablet stamped "341 Ore 1911"-----	341.152

From Tallman southeast along railroad and highway to point 4 miles south of Lebanon.

Tallman, 2 miles east of, in base of milepost 700; spike scribed "318.1"-----	318.23
Lebanon, 1 mile west of station, in base of milepost "1 mile to Lebanon"; spike marked "332.2"-----	332.36
Lebanon, 1.3 miles south of, at forks of road known as "Crowsfoot Road," 350 feet south of church, on west side of road; spike in base of telephone pole-----	355.51

From Lebanon north along highway (single spur line).

Lebanon, 1 mile north of, 700 feet north of covered bridge, in base of maple tree; copper nail-----	328.756
Lebanon, 2 miles north of, east side of road, 100 feet north of prune drier, in base of oak tree; copper nail-----	313.985
Lebanon, 3 miles north of, west side of road, 150 feet north of small white house, in base of 34-inch oak tree; copper nail-----	298.393

From Lebanon west along highway 1.2 miles, thence south and east to point 3.5 miles south of Lebanon.

Lebanon, 1.2 miles west of, 900 feet south of covered bridge at cross-roads; spike in telephone pole-----	350.62
Lebanon, 1.2 miles west by 0.3 mile south of, at Y road junction, in corner; spike in telephone pole-----	355.50
Lebanon, 1.2 miles west by 1.1 miles south of, west side of road, in front of small white house; spike in telephone pole-----	361.42
Crowsfoot, west side of road, 350 feet south of church, at forks of road; spike in telephone pole-----	378.70

From point near Lebanon west to Rock Hill (single spur line).

Lebanon, 2 miles west of, 500 feet south of two houses, west side of road; spike in telephone pole-----	352.573
Lebanon, 2.6 miles west of, on east front at northeast corner of Rock Hill schoolhouse, on baseboard; t. b. m-----	372.221

From Lebanon along highway east and north to Griggs (single spur line).

Lebanon, 1.4 miles southeast of, on west end of covered bridge across Santiam River, in base of telephone pole; spike marked "346"-----	345.247
Lebanon, 2.7 miles northeast of, at forks of road, 250 feet north of covered bridge, in base of telephone pole; spike marked "371.2"-----	371.523

Griggs, 2.3 miles south of, west end of jog in road, at lane to house; iron post stamped "347 Ore 1911"-----	Feet. 347.350
Griggs, 0.6 mile south of, west side of road, in base of 3-foot fir; copper nail marked "307.2"-----	307.465
Griggs, 100 feet south of railroad crossing, west side of road, near telephone pole painted "U. S. B. M."; iron post stamped "301 Ore 1911"-----	301.127

Near Shelburn.

Shelburn, 0.75 mile northeast of, 150 feet south of Southern Pacific R. R., east edge of road; in base of telephone pole; railroad spike marked "U. S. 361 B. M."-----	360.79
Shelburn, Corvallis & Eastern R. R., at road crossing; top of rail----	363.4
Shelburn, 0.2 mile east of T road west, southwest corner; fence post marked "347" (in notebook)-----	357.1
Shelburn, 57 feet northeast of crossing of Southern Pacific and Corvallis & Eastern railroads, west of depot; iron post stamped "Prim. Trav. Sta. No. 48, 351, Ore., 1911"-----	351.448

McCOY QUADRANGLE.

[Latitude 45°-45° 15'; longitude 123°-123° 15'.]

From Perrydale along highways east 2.5 miles, thence south to Crowley.

Perrydale, 0.2 mile east of, east of store, at railroad crossing; top of rail-----	171.7
Perrydale, 1 mile east of, T road south, private road, north edge of county road, in base of telephone pole; railroad spike marked "U. S. 177 B. M."-----	176.75
Bridge across slough, floor of; bolthead marked "155"-----	155.7
McCoy, 500 feet north of station, road crossing, north edge of road at west edge of railroad right of way; iron post stamped "Prim. Trav. Sta. No. 21, 163 Ore., 1913"-----	162.808
McCoy, 0.5 mile east of, 100 feet south of crossroads, simple truss wooden bridge, in floor; copper nail marked "U. S. 161 B. M."-----	160.90
McCoy, 0.5 mile east by 0.7 mile south of, T road west, northwest corner, at fence post; ground marked "162"-----	162.47
McCoy, 0.5 mile east by 1.3 miles south of, simple truss wooden bridge, in truss on west side; copper nail marked "U. S. 164 B. M."-----	163.59
McCoy, 0.5 mile east by 2 miles south of, 100 feet south of, T road east, east edge of road; telephone pole marked "U. S. 168 B. M."-----	168.31
McCoy, 3.5 miles south of, turn in road, southeast corner, 300 feet west of railroad, in base of telephone pole; railroad spike marked "U. S. 166 B. M."-----	165.72
Rickreall, 3.5 miles north of, T road east to Crowley station; iron post stamped "Prim. Trav. Sta. No. 22, 188, Ore., 1913"-----	187.624

McMINNVILLE QUADRANGLE.

[Latitude 45°-45° 30'; longitude 123°-123° 30'.]

From point 5.5 miles north of Dallas northeast along highway to Perrydale.

Bridge in road, at base of hill; floor of bridge marked "247"-----	246.8
Dallas, 6.2 miles north of, top of hill, in front of farmhouse, east side of road, in base of fence post; railroad spike marked "U. S. 323 B. M."-----	323.12

Dallas, 6.3 miles north of, T road west, southwest corner, in base of fence post; railroad spike marked "U. S. 402 B. M."-----	Feet. 402. 25
Perrydale, 1.5 miles south of, in front of H. A. Lee farmhouse, east side of road, east-west line fence, in base of fence post; railroad spike marked "U. S. 227 B. M."-----	226. 57
Perrydale, 0.7 mile south of, bridge across creek, northeast corner; floor marked "168"-----	167. 8
Perrydale, crossroads, southeast corner, opposite store; iron post stamped "Prim. Trav. Sta. No. 30, 174, Ore., 1913"-----	173. 798

MOUNT ANGEL QUADRANGLE.

[Latitude 45°-45° 15'; longitude 122° 45'-123°.]

From point 2.4 miles north of Prater north and west to point 3.5 miles east of Chemawa.

Schoolhouse, 0.5 mile north of, 0.5 mile south of church; floor of bridge marked "177"-----	176. 8
Pratum, 3.5 miles north of, 6 miles east of Chemawa, southwest (or northwest?) corner of crossroads, 150 feet west of church; iron post stamped "Prim. Trav. Sta. No. 44, 181, Ore., 1913"-----	181. 068
Chemawa, 5 miles east of, 1 mile west of church, northeast corner of crossroads, in base of telephone pole; railroad spike marked "U. S. 186 B. M."-----	185. 58
Hazel Green schoolhouse, 0.6 mile east of, 800 feet east of covered bridge over creek, south edge of road, in base of power-line pole No. 373; railroad spike marked "U. S. 193 B. M."-----	192. 97
Covered bridge over creek, east of Hazel Green School, west end of trussed portion; floor marked "153"-----	152. 6
Chemawa, 3.5 miles east of, 300 feet northeast of Hazel Green schoolhouse, north side of road; iron post stamped "Prim. Trav. Sta. No. 45, 185, Ore., 1913"-----	185. 356

From point north of Prater north along highway to northeast corner of T. 6 S., R. 2 W., thence west and north to Gervais.

Shannon church, 1.5 miles north of, 150 feet north of private road east, west side of road, in base of telephone pole; railroad spike marked "U. S. 187 B. M."-----	187. 33
Gervais, 4 miles south by 1 mile east of, 200 feet north of North Howell school, T in road, north side of road; iron post stamped "Prim. Trav. Sta. No. 54, Ore., 1913"-----	188. 569
Gervais, 3 miles south by 1 mile east of, 300 feet north of William Oddie ranch house, east side of road, in base of telephone pole; railroad spike marked "U. S. 179 B. M."-----	178. 72
Gervais, 2 miles south by 1 mile east of, 0.2 mile south of old saw-mill, north end on east side of wooden bridge; copper nail marked "U. S. 138 B. M."-----	138. 26
Gervais, 1.5 miles south by 1.5 miles east of, 300 feet east of Parksville schoolhouse, T road north, northeast corner; iron post stamped "Prim. Trav. Sta. No. 55, 156, Ore., 1913"-----	155. 885
Gervais, 1.5 miles south by 0.5 mile east of, southeast corner of crossroads, in base of telephone pole; railroad spike marked "U. S. 178 B. M."-----	177. 50

Pacific Highway, 0.3 mile east of, on east-west road, north end of small bridge; floor marked "167"-----	Feet. 167.13
Gervais, 1.4 miles south by 0.2 mile west of, on Pacific Highway, T road east, northwest corner, in base of telephone pole; railroad spike marked "U. S. 178 B. M."-----	177.84
Gervais, 1 mile south of, on Pacific Highway, southeast corner of crossroads, in base of telephone pole; railroad spike marked "U. S. 171 B. M."-----	171.14
Brooks, 4.2 miles north of, east side of railroad, at first telegraph pole north of milepost 732 (now 731), 8 feet from fence; iron post stamped "182 B 1903"-----	182.124

From Silverton north along Southern Pacific R. R. to Woodburn.

Silverton, 0.27 mile west of, opposite milepost 727; top of rail-----	228.0
Silverton, Southern Pacific R. R. bridge (727 E) over Silver Creek, middle of bridge; top of rail-----	237.4
Silverton, opposite Southern Pacific R. R. station; top of rail-----	235.0
Silverton, 0.15 mile north of Southern Pacific R. R. station, 50 feet north of switch stand, east side of right of way, in base of telephone pole; railroad spike marked "U. S. 229 B. M."-----	228.61
Silverton, 0.9 mile north of, railroad crossing, northeast corner, in base of telephone pole; railroad spike marked "U. S. 216 B. M."-----	215.87
Downs, 0.7 mile south of, Southern Pacific R. R. steel bridge over Aberquay River, at north end on east side of, top of pier; bronze tablet stamped "Prim. Trav. Sta. No. 52, 205, Ore., 1913"-----	205.100
Downs, 40 feet north of signpost, east edge of right of way, in base of telephone pole; railroad spike marked "U. S. 203 B. M."-----	202.52
Downs, 0.4 mile north of, railroad crossing between cattle guards 730 A and 730 B; top of rail-----	187.73
Downs, 1 mile north of, opposite signpost, "Mt. Angel, one mile," east side of right of way, in base of telephone pole; railroad spike marked "U. S. 167 B. M."-----	166.53
Mount Angel, in front of Southern Pacific R. R. station; top of rail--	169.7
Mount Angel, 1,000 feet north of Southern Pacific R. R. station, railroad crossing, west edge of right of way, north side of road; iron post stamped "Prim. Trav. Sta. No. 51, 167, Ore., 1913"-----	167.300
Baron, 30 feet north of signpost, west side of track, in base of cattle guard 732 C; railroad spike marked "U. S. 189 B. M."-----	188.61
McKee, 50 feet south of station, east side right of way, in base of telephone pole; railroad spike marked "U. S. 178 B. M."-----	178.33
Townsend, 0.6 mile south of, road crossing at cattle guard 734 E; top of rail-----	169.5
Townsend, at signpost, 20 feet west of Southern Pacific R. R. tracks; iron post stamped "Prim. Trav. Sta. No. 50, 161, Ore., 1913"-----	160.592
Pudding River, middle of Northern Pacific R. R. bridge; top of rail--	135.76
Woodburn, 1.5 miles southeast of, 0.2 mile northwest of signpost "Townsend one mile," near right of way gate, east side of track, in base of telephone pole; railroad spike marked "U. S. 171 B. M."-----	171.37
Milepost 737, opposite; top of rail-----	184.6
Woodburn, 210 feet south of station, 36 feet east of main track; iron post stamped "181 B 1903"-----	181.927

From Gervais along highways west and northwest to Fairfield, thence north to point 4 miles north of St. Paul.

Gervais, 1 mile north of, east side of railroad, at fence line, 5 feet south of milepost 733 (formerly 734); iron post stamped "183 B 1903"-----	Feet. 183.952
Gervais, Southern Pacific R. R. station, 400 feet south by 200 feet west of, street intersection, southeast corner, in base of electric-light pole; railroad spike marked "U. S. 182 B. M."-----	182.14
Gervais, 1.07 mile west of, T in road, west side of, in base of gatepost; railroad spike marked "U. S. 181 B. M."-----	181.40
St. Louis station on Oregon Electric Ry., 250 feet south of, road crossing; top of rail-----	181.8
Gervais, 2.75 miles northwest of, 100 feet east of St. Louis Church, east side of road; iron post stamped "Prim. Trav. Sta. No. 84, 180, Ore., 1913"-----	179.535
St. Louis Church, 0.1 mile south by 0.5 mile west of, small wooden bridge; floor marked "165"-----	165.18
St. Louis, 1.1 miles west by 0.1 mile south of, T road east, southeast corner, in base of telephone pole; railroad spike marked "U. S. 176 B. M."-----	175.75
Fairfield, about 0.6 mile south by 1.3 miles east of, opposite gate to L. M. Webb's farm, southwest side of road, in base of telephone pole; railroad spike marked "U. S. 160 B. M."-----	159.64
Fairfield, about 0.9 mile southeast of, in front of Ditman place, at turn in road, north side of road, in base of large fence post; railroad spike marked "U. S. 163 B. M."-----	163.04
Fairfield, northeast corner at T road north, 60 feet north of store; iron post stamped "Prim. Trav. Sta. No. 83, 173, Ore., 1913"-----	173.244
Fairfield, 1 mile north of, east side of road, in base of gatepost; railroad spike marked "U. S. 174 B. M."-----	174.18
Fairfield, 1.7 miles north of, simple truss bridge; floor marked "171"-----	171.42
St. Paul, 3.5 miles south of, 2.2 miles north of Fairfield, 50 feet north of small bridge, in base of large oak tree in middle of road; railroad spike marked "U. S. 170 B. M."-----	170.05
Large oak tree in middle of road, 0.2 mile north of; top of culvert, marked "171"-----	170.91
St. Paul, 2.5 miles south of, at Tom Kerr hop yard, 150 feet south of southeast corner, west side of road, in base of telephone pole; railroad spike marked "U. S. 171 B. M."-----	170.83
Red barn, 200 feet north of; top of small culvert, marked "166"-----	165.74
St. Paul, 1.4 miles south of, 0.1 mile north of J. J. Coyle place, east side of road, in base of telephone pole; railroad spike marked "U. S. 167 B. M."-----	166.98
St. Paul, 1.15 miles south of, 100 feet south of T road east; floor of small bridge, marked "145"-----	145.18
St. Paul, in front of State Bank of St. Paul, top of concrete curb; bronze tablet stamped "Prim. Trav. Sta. No. 82, 169, Ore., 1913"-----	168.504
St. Paul, 1.06 miles north of, 0.2 mile south of, T road west, west side of road, in base of telephone pole; railroad spike marked "U. S. 161 B. M."-----	160.69
St. Paul, 1.84 miles north of, fork in road, east side of road, in base of large oak fence post; railroad spike marked "U. S. 174 B. M."--	174.01

St. Paul, 3.1 miles northeast of, T road to northwest, north corner, west side of road, in base of large fence post; railroad spike marked "U. S. 173 B. M."-----	Feet: 172. 97
Newberg, about 3 miles south of, about 4 miles north of St. Paul, at T road north to ferry; iron post stamped "Prim. Trav. Sta. No. 62, 117, Ore., 1913"-----	116. 775

ST. HELEN QUADRANGLE.

[Latitude 45° 30'-46°; longitude 122° 30'-123°.]

From Hillsboro to Witchhazel.

Hillsboro, 400 feet west of station, south edge of right of way, near northeast corner of Pacific Coast Condensed Milk Co.'s factory; iron post stamped "Prim. Trav. Sta. No. 73, 174, Ore., 1913"-----	173. 678
Fair Acres, at station; top of rail-----	176. 9
Hillsboro, 1 mile east of, at road crossing, in base of power pole; spike marked "178"-----	178. 04
Newton, northwest of station, in power pole; spike marked "173"-----	173. 26
Newton, 0.5 mile east of, in northeast corner of trestle 18 A; copper nail marked "149"-----	149. 21
Dunzer, in front of station; top of rail, marked "172"-----	172. 2
Witchhazel, 0.3 mile west of, at road crossing; top of rail, marked "182"-----	182. 1

SALEM QUADRANGLE.

[Latitude 44° 45'-45°; longitude 123°-123° 15'.]

From Robey north along Oregon Electric Ry. to Salem.

Jefferson, 1.8 miles north by 3.9 miles west of, 1 foot north of south line of fence, 12 feet south of road at curve to north, west corner of Doty's land; iron post stamped "Prim. Trav. Sta. No. 27, 193, Ore., 1913"-----	192. 795
Jefferson, 1.8 miles north by 4.9 miles west of, 20 feet northwest of T road intersection, 4 feet west of road, in top of small stump, in ring of paint; copper nail stamped "185.9"-----	185. 85
Robey, in front of station; top of rail-----	191. 3
Robey, 1 mile north of, 40 feet north of road crossing, in base of power pole near track; railroad spike marked "U. S. 190 B. M."-----	189. 88
Sidney, 0.9 mile south of, 75 feet south of road crossing, in base of power pole; railroad spike marked "U. S. 193 B. M."-----	193. 01
Sidney, in front of station; top of rail-----	200. 4
Sidney, 420 feet north of station, north edge of road, west edge of right of way; iron post stamped "Prim. Trav. Sta. No. 13, 199, Ore., 1913"-----	198. 731
Sidney, 1 mile north of, 80 feet north of subgrade road crossing (63-2), in base of power pole; railroad spike marked "U. S. 184 B. M."-----	183. 89
Sidney, 2.2 miles north of, 300 feet north of milepost 62, in base of power pole; railroad spike marked "U. S. 178 B. M."-----	178. 21
East Independence, about 3 miles south of, west edge of road, at undertrack crossing of Sidney-Independence road; iron post stamped "Prim. Trav. Sta. No. 12, 160, Ore., 1913"-----	159. 419
Orville, 0.4 mile south of, 300 feet south of milepost 60, in base of power pole; railroad spike marked "U. S. 177 B. M."-----	176. 95

Orville, 800 feet south of grade crossing, in base of power pole at crossing; railroad spike marked "U. S. 177 B. M."-----	Feet. 177.05
Orville, in front of substation; top of rail-----	177.9
East Independence, 20 feet east of station, near road milepost 59; iron post stamped "Prim. Trav. Sta. No. 11, 181, Ore., 1913"-----	181.390
Bridge 58-4, subgrade road crossing, middle of bridge; top of rail, marked "183"-----	183.1
Milepost 58, in base of power pole; railroad spike marked "U. S. 184 B. M."-----	183.95
Halls Ferry, opposite signboard; top of rail-----	189.4
Milepost 57, in base of; railroad spike marked "U. S. 194 B. M."-----	194.15
Trestle 96-7, south of; top of rail, marked "200"-----	200.0
Finzer, 0.1 mile south of, at road crossing; top of rail-----	203.5
Finzer, opposite sign board at station; top of inside rail-----	201.0
Milepost 56, 150 feet south of, in base of power pole; railroad spike marked "U. S. 197 B. M."-----	196.86
Lively station, 300 feet northeast of, T road west, southwest corner; iron post stamped "Prim. Trav. Sta. No. 10, 201, Ore."-----	201.116
Trestle 54-4, center of; top of rail, marked "165"-----	165.4
Milepost 54, in base of; railroad spike marked "U. S. 157 B. M."-----	156.78
Milepost 53, 0.8 mile south of private road crossing over railroad; top of rail-----	152.8
Salem, 2.55 miles south of, in base of milepost 53; railroad spike marked "U. S. 150 B. M."-----	149.57
Road crossing, 0.2 mile north of milepost 53; top of rail-----	150.4
Salem, 2.4 miles south of, road crossing, 0.4 mile north of milepost 53, at gatepost; ground marked "150"-----	150.2
Salem, 1.46 miles south of, 600 feet north of milepost 52, 160 feet south of water tank, in base of power pole; railroad spike marked "U. S. 150 B. M."-----	150.07

From Orville east along highway to Sunnyside schoolhouse, thence south.

Orville, 0.6 mile east of, top of hill, near cottage on north side of road, in base of stump; three nails marked "U. S. 522 B. M."-----	522.12
Orville, 0.9 mile east of, elevation of water in draw; fence marked "465"-----	464.4
Orville, 1.2 miles east of, T road intersection, at sign "E. Independence $\frac{1}{2}$ mile," north side of road, in base of tree; railroad spike marked "U. S. 455 B. M."-----	455.23
Isolated cabin, south side of road, top of second hill, at northwest corner; painted "568"-----	568.2
Orville, 1.7 miles east of, second high hill, on north side of road, in base of tree; spike marked "U. S. 625 B. M."-----	624.74
Orville, 2.2 miles east of, orchard on south side of road, in base of fence post; spike marked "U. S. 629 B. M."-----	629.38
Orville, 3.2 miles east of, south side of road, 200 feet west of William Gleason's home, in base of telephone pole; railroad spike marked "U. S. 593 B. M."-----	592.54
Stream, west of R. Coffee's mail box; water level marked "547"-----	547.2
T. 8 S., R. 3 W., corner of secs. 17, 18, 19, and 20, in front of Roy Coffee's ranch, 40 feet east of mail box, top of section-corner stone; in circle of paint, marked "U. S. 564 B. M." (Also Prim. Trav. Sta.)-----	563.673

T. 8 S., R. 3 W., 0.3 mile northeast of southwest corner of sec. 17, road forks to Orville, Sidney, and Liberty, 20 feet north of forks, in base of telephone pole; railroad spike marked "682"-----	Feet. 681.7
Rosedale, 1.4 miles west of, G. W. Jory's ranch, across road and 200 feet north of, in base of telephone pole; railroad spike marked "U. S. 697 B. M."-----	696.88
Rosedale, 200 feet from church east edge of road, where roads lead west to Orville; iron post stamped "Prim. Trav. Sta. No. 11, 595, Ore., 1913"-----	594.863
Rosedale church, stream 0.4 mile south of; water level marked "W. L. 532"-----	531.8
Rosedale church, 0.5 mile south of, T road west, near telephone pole; ground marked "552"-----	552.3
Rosedale, 1 mile south of, T road intersection, fence corner east side of road, in base of post; railroad spike marked "U. S. 731 B. M."-----	730.82
Friends Church, 0.1 mile west of, top of hill, at fence; ground elevation marked "757"-----	757.1
Friends Church, crossroads, 80 feet south of, east side of road, in base of telephone pole; railroad spike marked "U. S. 736 B. M."-----	736.26
Sunnyside school, 0.9 mile west of, T road intersection, at fence corner; ground marked "668"-----	668.3
Sunnyside school, 0.5 mile west of, T road, in base of pole south of road; railroad spike marked "657"-----	657.4
Jefferson, 9 miles north of, southwest corner of Sunnyside school yard (district 96); iron post stamped "Prim. Trav. Sta. No. 2, 615, Ore., 1913"-----	615.139
Sunnyside school, 0.2 mile south of; bridge floor painted "562"-----	561.7
Sunnyside school, 0.5 mile south of, top of hill, west side of road; ground, painted on gatepost "751"-----	750.6
Sunnyside school, 1 mile south of, southwest corner of A. E. Bradley's door yard, in base of telephone pole; railroad spike marked "U. S. 612 B. M."-----	611.66
Sunnyside school, 1.5 miles south of, 20 feet north of road forks, in base of telephone pole; railroad spike marked "U. S. 580 B. M."-----	579.78
Telephone pole 16-34 (Hartman's traverse point); stake marked "U. S."-----	482.5
Bridge, at forks of road, southeast corner of bridge, opposite pole 16-22, cross mark-----	326.9
Jefferson, 7.1 miles north of, 140 feet south of forks of road, telephone pole 16-20; railroad spike marked "U. S. 319 B. M."-----	318.90
Bridge, 0.25 mile south of road forks (Hartman's traverse point)-----	286.0
Jefferson, 5.7 miles north of, on Old Salem road, 1.4 miles north of Pacific Highway, near pole 15-3, in truss on bridge; railroad spike marked "U. S. 254 B. M."-----	253.69
Jefferson, 4.9 miles north of, 0.5 mile north of Pacific Highway, 100 feet south of private road east, in base of telephone pole 14-8; railroad spike marked "U. S. 284 B. M."-----	284.18
Jefferson, 4.3 miles north of, west edge of road where Pacific Highway leaves north-south road; iron post stamped "Prim. Trav. Sta. No. 1, 300, Ore., 1913"-----	299.674
Bridge over creek, opposite telephone pole 12-21, marked "220"-----	220.3
Jefferson, 3.1 miles north of, T road, gate to lane opposite pole 12-16, in gatepost; railroad spike marked "U. S. 233 B. M."-----	232.78

From Buena Vista north and east along highway to Salem.

Buena Vista, one block east of post office, center of Main Street, 18 feet west of telegraph pole at angle in road, 18 feet southeast of old corner building; iron post stamped "Prim. Trav. Sta. No. 28, 240, Ore., 1911"-----	Feet. 239.869
Buena Vista, 1 mile north of, T road intersection, in base of telephone pole at northeast corner; railroad spike marked "U. S. 203 B. M."-----	202.96
Buena Vista, 1.6 miles north of, T roads, southwest corner of; base of large fence post, marked "170"-----	170.1
Buena Vista, 1.6 miles north by 0.4 mile west of, L in road, in base of fence post in outside corner; railroad spike marked "U. S. 176 B. M."-----	175.94
Buena Vista, 2.6 miles north by 0.4 mile west of, 240 feet east of T road, south side of road, in base of telephone pole; railroad spike marked "U. S. 163 B. M."-----	167.55
Buena Vista, 3.5 miles north of; northeast corner of concrete culvert, chiseled "U. S.," painted "U. S. 166 B. M." Prim. Trav. Sta., 1913-----	166.30
Buena Vista, 4 miles north of, T road east, northeast corner; base of telephone pole, marked "165"-----	164.8
Lynn's hop kiln, near turn in road, at base of telephone pole; ground marked "161"-----	160.6
Independence, 1.9 miles south of, slight bend in road, 80 feet south of private road west, in base of telephone pole; railroad spike marked "U. S. 160 B. M."-----	159.61
Independence, 1.2 miles south of, 120 feet north of T road east, east side of road, in base of telephone pole; railroad spike marked "U. S. 171 B. M."-----	171.07
Independence, south edge of town, east edge of road, about 500 feet southeast of station, opposite most southern street; iron post stamped "Prim. Trav. Sta. No. 2, 168, Ore., 1913"-----	167.843
Independence, 1.2 miles north of, 300 feet north of T road east, near telephone pole T, in base of telephone pole; railroad spike marked "U. S. 163 B. M."-----	162.68
Independence, 2.25 miles north of, T road east, west edge of road, in base of telephone pole 2-3; railroad spike marked "U. S. 165 B. M."-----	165.02
Independence, 3 miles north of, T road east, near telephone pole 2-22, in base of telephone pole; railroad spike marked "164"-----	164.2
Independence, 3.5 miles north of, east edge of road at Y road north, near telephone pole 3-11; iron post stamped "Prim. Trav. Sta. No. 7, 164, Ore., 1913"-----	164.285
Independence, 3.72 miles north of, steel truss bridge, at east edge; floor marked "162"-----	161.5
Independence, 4.35 miles north of, at east edge of road, at turn, opposite telephone pole 4-7, in base of brace; railroad spike marked "U. S. 159 B. M."-----	159.31
Independence, 5.2 miles north of, T road west, west side of road, near telephone pole 5-21, in base of telephone pole; railroad spike marked "U. S. 170 B. M."-----	170.28
Independence, 6 miles north of, at McNary road crossing; top of rail marked "174"-----	174.3
Independence, 6.25 miles north of, steel truss bridge over Rickreall River, in concrete abutment, at northeast corner; chiseled square marked "U. S. 153 B. M."-----	152.60

Eola, 1.5 miles west of, north edge of road at intersection of Dallas-Salem road with Independence road, opposite telephone pole 6-15; iron post stamped "Prim. Trav. Sta. No. 6, 202, Ore., 1913"-----	Feet. 202.190
Eola, 1.2 miles west of, T road north, bridge; floor marked "168"-----	167.5
Eola, 0.5 mile west of, T road east, north edge of road, in base of telephone pole 7-11; railroad spike marked "U. S. 180 B. M."-----	179.94
Eola store, 700 feet west of, T road north, near telephone pole 7-26; floor of bridge marked "195"-----	194.8
Eola, opposite store, near telephone pole 8, in base of telephone pole; railroad spike marked "U. S. 205 B. M."-----	204.64
Salem, 4.4 miles west of, about 1,000 feet east of "Log dump" station, north edge of road, opposite switch; iron post stamped "Prim. Trav. Sta. No. 8, 150, Ore., 1913"-----	149.500
Salem, 2.6 miles west of, T road north, northwest corner near telephone pole 10-26, near hop drier, 75 feet east of sign post "West Salem one mile," in base of telephone pole; railroad spike marked "U. S. 148 B. M."-----	148.15
West Salem, Marion-Polk county bridge over Willamette River, 200 feet from west end, T road north, northeast corner, opposite telephone pole 11-29, in base of telephone pole; railroad spike marked "U. S. 139 B. M."-----	138.99
Salem, east approach to Salem, Falls City & Western Ry. steel truss bridge over Willamette River, in concrete abutment, near intersection of Front and Union streets on Union Street; chiseled square marked "U. S."-----	153.35
Salem, State Capitol, south face, at entrance; aluminum tablet stamped "171 B 1903." (See Bull. 462, p. 14.)-----	171.388

From Salem east to North Mill Creek.

Salem, 1.5 miles east of State Capitol, 800 feet south of State penitentiary, in top of southwest corner of concrete abutment at west approach to steel truss bridge over North Mill Creek; chiseled square marked "U. S. 187 B. M."-----	187.30
North Mill Creek, bridge over; floor marked "193"-----	192.5

From Independence along highways west to Monmouth, thence south and east to Buena Vista.

Independence, steel bridge on Monmouth Street, west edge of town, southeast corner in concrete; chiseled square marked "165"-----	165.0
Independence, 1.4 miles west of, 200 feet west of T road to south, in base of telephone pole; railroad spike marked "U. S. 176 B. M."-----	175.68
Monmouth, in front of Independence & Monmouth Ry. station; top of rail-----	204.2
Monmouth, 0.8 mile south of; floor of bridge, painted "192"-----	192.2
Monmouth, 1.5 miles south of, 40 feet south of T road east, in base of telephone pole; railroad spike marked "U. S. 216 B. M."-----	216.18
Monmouth, 1.8 miles south of, T road west, northwest corner; base of fence post marked "296"-----	296.1
Monmouth, 2.7 miles south of, top of hill, west side of road; telephone pole marked "330"-----	330.1
Monmouth, 3 miles south of, T road west, southwest corner; base of post, marked "330"-----	329.7
Monmouth, 3.2 miles south of, T road east, west edge of road; iron post stamped "Prim. Trav. Sta. No. 4, 337, Ore., 1913"-----	337.374

	Feet.
Monmouth, 3.8 miles south of; small drain culvert marked "269"---	268.6
Monmouth, 4.5 miles south of, top of hill, 300 feet north of Luckiamute River, east side of road, in base of fence post; railroad spike marked "U. S. 277 B. M."-----	276.86
Luckiamute River, bridge over, northwest corner; floor marked "214"-----	213.6
Luckiamute River, 0.5 mile south of; top of culvert, marked "197"---	197.4
Suver, 3 miles north of, 30 feet south of, T road west, west side of road, in base of fence post; railroad spike marked "U. S. 218 B. M."-----	217.95
Monmouth, 6.5 miles south of, summit of wooded hill, 20 feet north of line of east-west fence, east edge of road; iron post stamped "Prim. Trav. Sta. No. 5, 413, Ore., 1913"-----	418.352
Buena Vista, 1.3 miles west by 0.7 mile south of, bridge over Luckiamute River, west side of south approach; copper nail marked "U. S. 191 B. M."-----	191.03
Buena Vista, 1.2 miles west of, 40 feet south of T road "to Albany," west side of road, in base of telephone pole; railroad spike marked "U. S. 284 B. M."-----	284.17
Buena Vista, 0.5 mile west of, southwest corner, at T road south, in corner fence post; copper nail marked "U. S. 318 B. M." (Bandli's B. M.)-----	317.82
Buena Vista, 1 block east of post office, center of Main Street, 18 feet west of telephone pole at angle in road, 18 feet southeast of old corner building; iron post stamped "Prim. Trav. Sta. No. 28, 240, Ore., 1911"-----	239.869
From Monmouth along highways north to Rickreall, thence east to point near Eola.	
Monmouth Normal School, in steps of main entrance; bronze tablet stamped "Prim. Trav. Sta. No. 8, 215, Ore., 1913"-----	214.689
Monmouth Normal School, 0.3 mile north of; floor of bridge marked "186"-----	185.7
Monmouth, 1 mile north of, 30 feet south of T road east to Independence, in southeast corner, in base of fence post; railroad spike marked "196"-----	195.8
Monmouth, 1.7 miles north of, private T road west, opposite telephone pole 4-13, in base of brace to telephone pole; railroad spike marked "U. S. 194 B. M."-----	194.22
Monmouth, 2.7 miles north of, near telephone pole 5-21; bridge marked "200"-----	200.0
Monmouth, 2.5 miles north of, at T road, east side of road, in base of telephone pole 5-4; railroad spike marked "U. S. 196 B. M."-----	196.14
Monmouth, 3 miles north of, southwest corner at crossroads; iron post stamped "Prim. Trav. Sta. No. 3, 213, Ore., 1913"-----	213.278
Monmouth, 4 miles north of, north edge of road opposite T road south, in base of telephone-pole brace; railroad spike marked "U. S. 223 B. M."-----	223.418
Monmouth, 4 miles north of, T road south, north edge of road in base of telephone pole; railroad spike marked "U. S. 223 B. M."---	223.42
Rickreall station, 0.2 mile south of; top of culvert, marked "206"---	205.6
Rickreall station, on the Salem, Falls City & Western R. R., road crossing; top of rail-----	210.8

Rickreall, 0.1 mile south of, covered bridge over Rickreall River, south end, in floor; copper nail marked "208"-----	Feet. 203. 3
Rickreall, opposite post office, at fence line; iron post stamped "Prim. Trav. Sta. No. 23, 209, Ore., 1913"-----	208. 548
Derry, on Southern Pacific R. R., crossing 150 feet south of station; top of rail-----	192. 6
Derry, 0.4 mile east of, private T road south, in base of telephone pole; railroad spike marked "U. S. 184 B. M."-----	183. 95
Derry, 1.6 miles east of, west end of covered bridge over slough running into Rickreall River, on north side; copper nail marked "U. S. 169 B. M."-----	168. 91
Derry, 2.5 miles east of, T road, southeast corner, in base of telephone pole; railroad spike marked "U. S. 181 B. M."-----	180. 95
Independence, 6.4 miles north of, 1.5 miles west of Eola, north edge of road at intersection of Dallas-Salem road with Independence road, opposite telephone pole 6-15; iron post stamped "Prim. Trav. Sta. No. 6, 202, Ore., 1913"-----	202. 190
From point near Salem along highways north, thence west to Crowley, thence south to Rickreall.	
West Salem, Marion-Polk county bridge over the Willamette River, 200 feet from west end, T road north, northeast corner, opposite telephone pole 11-29, in base of power-line pole; railroad spike marked "U. S. 139 B. M."-----	138. 99
West Salem, 1.1 miles north of, top of hill near Wisner mail box, in base of very large gatepost; railroad spike marked "U. S. 202 B. M."-----	201. 52
West Salem, 2.4 miles northwest of, east edge of road at the northern of two patent gates to pear orchard, north edge of private road; iron post stamped "Prim. Trav. Sta. No. 24, 173, Ore., 1913"-----	172. 972
West Salem, 3.2 miles northwest of, T road west, northwest corner, in base of telephone pole; railroad spike marked "U. S. 201 B. M."-----	200. 90
Private road east at iron gate, near mail box 34 (H. Benn); base of gatepost, marked "233"-----	232. 6
West Salem, 4.2 miles northwest of, 1 mile south of Lincoln schoolhouse, top of hill, east edge of road, in base of telephone pole; railroad spike marked "U. S. 231 B. M."-----	230. 77
West Salem, 5.8 miles northwest of, northwest corner of school yard, south side of road; iron post stamped "Prim. Trav. Sta. No. 25, 172, Ore., 1913"-----	171. 702
Lincoln schoolhouse, 0.5 mile west of, bridge over creek, northwest corner; floor marked "164"-----	163. 9
Lincoln schoolhouse, 1.26 miles west of, south edge of road at turn in base of telephone pole; railroad spike marked "U. S. 173 B. M."-----	172. 74
Lincoln schoolhouse, 2.1 miles west of, 75 feet west of T road north, south side of road, in base of telephone pole; railroad spike marked "U. S. 224 B. M."-----	223. 71
Zena schoolhouse, 350 feet south of; base of A. S. Clark mail-box post, marked "257"-----	257. 3
Zena schoolhouse, 600 feet south of, T road east and Salem road, northeast corner of intersection of; base of fence post, marked "284"-----	283. 3
Zena schoolhouse, 0.4 mile south of, L in road, in base of gatepost; railroad spike marked "U. S. 330 B. M."-----	330. 38

Zena schoolhouse, 1 mile southwest of, in front of McKinlay's ranch house, south side of private road, in base of fence post; railroad spike marked "U. S. 542 B. M."-----	Feet. 542.35
T. 7 S., R. 4 W. (probably), SW. $\frac{1}{4}$ sec. 2, Zena schoolhouse, 0.2 mile southwest of, 0.2 mile southwest of John Smith's farm, summit of hill, south side of road; iron post stamped "Prim. Trav. Sta. No. 26, 677, Ore., 1913"-----	677.084
Prim. Trav. Sta. No. 26, 0.2 mile southwest of; road culvert marked "504"-----	504.3
Summit of hill near John Smith's farm, 0.4 mile west of, south side of road, at old gate, in base of large gatepost; railroad spike marked "U. S. 428 B. M."-----	427.73
Oak Grove church, 1.4 miles north of, T road east, southeast corner, in base of fence post; railroad spike marked "U. S. 335 B. M."---	334.79
Oak Grove church, 1 mile north of, east of road, concrete culvert on private road leading east, near iron gate, in north abutment; bronze tablet stamped "Prim. Trav. Sta. No. 27, 254, Ore., 1913"-----	253.783
Oak Grove church, 0.6 mile north and 0.5 mile west of, north side of small bridge, in floor; copper nail marked "U. S. 228 B. M."-----	227.59
Crowley station, 0.5 mile northeast of, fork in roads, west side of road, in base of telephone pole; railroad spike marked "U. S. 198 B. M."-----	197.70
Crowley, 0.1 mile east of, culvert in road; floor marked "174"-----	174.0
Crowley station, 150 feet south of, at road crossing; top of rail-----	177.9
Rickreall, 3.5 miles north of, T road east to Crowley station; iron post stamped "Prim. Trav. Sta. No. 22, 188, Ore., 1913"-----	187.624
Rickreall, 3 miles north of, top of hill in front of Rigg's farmhouse, west side of road, at telephone pole; ground marked "214"-----	214.0
Rickreall, 2.5 miles north of, top of hill, near east edge of road, in base of telephone pole; railroad spike marked "U. S. 298 B. M."--	298.31
Rickreall, 2 miles north of, T road east, southeast corner, in base of telephone pole; railroad spike marked "U. S. 185 B. M."-----	185.05
Simple truss bridge; floor marked "185"-----	184.9
Rickreall, 1 mile north of, west edge of road, 50 feet north of, east-west line fence, in base of telephone pole; railroad spike marked "U. S. 195 B. M."-----	195.42
Rickreall, opposite post office, fence line; iron post stamped "Prim. Trav. Sta. No. 23, 209, Ore., 1913"-----	208.548

Cline Falls, Dufur, Goldendale, Lava, Madras, Maiden Peak, Moro, and Prineville quadrangles.

CROOK, SHERMAN, AND WASCO COUNTIES.

(DESCHUTES RIVER SURVEY.)

The elevations in the following list were determined by primary leveling and accord with the 1912 adjustment.

The leveling was done in Goldendale, Moro, and Dufur quadrangles in 1911 by D. S. Birkett; in Madras quadrangle in 1911 by D. S. Birkett and Paul Hegdahl; and in Cline Falls, Prineville, Lava, and Maiden Peak quadrangles in 1911 by Hegdahl.

GOLDENDALE QUADRANGLE.

[Latitude 45° 30'–46°; longitude 120° 30'–121°.]

From Biggs west to Millers, thence south along Oregon-Washington R. R. & Navigation Co.'s track up Deschutes River to Orchard Siding (part of an unadjusted line supported by railroad levels, but closing 1.026 feet below at milepost 62 on line from south).

	Feet.
Biggs, opposite new station; top of rail.....	170.1
Deschutes Junction, in front of station; top of rail.....	166.0
Deschutes (now called Millers), 80 feet southeast of station sign, 80 feet northwest of hotel, 100 feet south of track, 40 feet north of road; iron post stamped "166 A".....	167.132
Deschutes River, 1.5 miles from mouth of, 100 feet south of milepost 3, 35 feet west of track; point on top of bowlder, marked "U. S. 280 B. M.".....	279.21
Deschutes River, 2.5 miles from mouth of, 300 feet north of milepost 4, 50 feet west of track, in top of fence post; nail marked "U. S. 320 B. M.".....	319.62
Deschutes River, 3.3 miles from mouth of, 800 feet north of milepost 5, 15 feet east of track; point on basalt rock, marked "U. S. 326 B. M.".....	325.152
Deschutes River, 4.3 miles from mouth of, 800 feet south of trestle over Gordons Canyon, 600 feet east of river, 0.2 mile north of milepost 6, 25 feet east of track, north end of rock side cut, 3.1 miles north of free bridge over Deschutes River; aluminum tablet stamped "327 Ore 1911".....	325.922
Free bridge over Deschutes River, 2.9 miles north of, 400 feet north of milepost 6, 15 feet east of track; point on rock, marked "U. S. 323 B. M.".....	322.16
Free bridge over Deschutes River, 1.9 miles north of, 430 feet north of milepost 7, 15 feet east of tracks; point in circle of paint on large bowlder, marked "U. S. 325 B. M.".....	324.32
Free bridge over Deschutes River, 0.9 mile north of, 30 feet north of milepost 8, 10 feet east of track; point on basalt rock, marked "U. S. 325 B. M.".....	324.10
Milepost 8; railroad bench mark 323.67.....	326.04
Free bridge over Deschutes River, 7 miles from mouth of river, 250 feet west of track, on northeast abutment of free bridge; aluminum tablet stamped "267 Ore 1911".....	265.863
Milepost 9; railroad bench mark 321.28.....	323.67
Free bridge siding, opposite signboard; top of rail.....	323.7
Free bridge over Deschutes River, 1 mile south of, 500 feet north of milepost 10, 20 feet east of track; point on basalt bowlder, marked "U. S. 324 B. M.".....	323.72
Free bridge over Deschutes River, 2.1 miles south of, 60 feet north of milepost 11, 10 feet west of track; point on basalt rock, marked "U. S. 325 B. M.".....	324.44
Free bridge over Deschutes River, 3.1 miles south of, 110 feet north of milepost 12, 12 feet west of track; point on rock, marked "U. S. 326 B. M.".....	324.90
Orchard Siding, 1 mile north of, 4.3 miles south of county free bridge over Deschutes River, 1,000 feet south of milepost 13, 500 feet north of Harris Canyon, 100 feet north of Deschutes River, 8 feet west of track, in rock cut; aluminum tablet stamped "325 Ore 1911".....	324.271

Orchard Siding, 0.2 mile north of, 275 feet south of milepost 14, 10 feet west of track; point on top of lava bowlder. marked "U. S. 327 B. M."-----	Feet. 326.35
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MORO QUADRANGLE.

[Latitude 45°-45° 30'; longitude 120° 30'-121°.]

From Orchard Siding southwest along Oregon-Washington R. R. & Navigation Co.'s track to milepost 39 (part of an unadjusted line supported by railroad levels, but closing 1.026 feet low at milepost 62 on line from south).

Orchard Siding, in front of signboard; top of rail-----	325.6
Orchard Siding, 0.8 mile south of, 175 feet south of milepost 15, 8 feet east of track; point on basalt rock, marked "U. S. 336 B. M."-----	335.37
Orchard Siding, 2.2 miles south of, 13 miles above mouth of Deschutes River, 0.4 mile south of milepost 16, 150 feet east of river, on point of ridge, in top of basalt column of rock cut; aluminum tablet stamped "356 Ore 1911"-----	355.414
Orchard Siding, 2.8 miles south of, 300 feet north of milepost 17, 7 feet east of track; point on basalt rock, marked "U. S. 360 B. M."-----	359.23
Orchard Siding, 3.8 miles south of, 200 feet north of milepost 18, 8 feet east of track; point on basalt rock in side cut, marked "U. S. 396 B. M."-----	395.81
Orchard Siding, 4.8 miles south of, 17.5 miles above mouth of Deschutes River, 0.3 mile south of milepost 19, 150 feet east of river, 12 feet east of track, in basalt rock in side cut; aluminum tablet stamped "446 Ore 1911"-----	445.736
Bluffs Siding, 6.2 miles north of, 80 feet north of milepost 20, 20 feet east of track; marked "U. S. 474 B. M."-----	473.82
Bluffs Siding, 5.1 miles north of, 300 feet south of milepost 21, 15 feet east of track; point on basalt rock, marked "U. S. 512 B. M."-----	511.48
Bluffs Siding, 4 miles north of, 0.2 mile south of milepost 22, 200 feet east of Deschutes River, 12 feet east of track, in top of rock in side cut; aluminum tablet stamped "523 Ore 1911"-----	522.005
Bluffs Siding, 3.2 miles north of, 15 feet south of milepost 23, 12 feet east of track; point on basalt rock, marked "U. S. 520 B. M."-----	519.25
Bluffs Siding, 2.1 miles north of, 400 feet north of milepost 24, 18 feet west of track; point on basalt bowlder, marked "U. S. 521 B. M."-----	520.59
Milepost 4; railroad bench mark 519.17-----	521.43
Bluffs Siding, 1.2 miles north of, 23 miles above mouth of Deschutes River, 200 feet south of Macks Canyon, 300 feet east of river, 5 feet north of milepost 25, 12 feet east of track, in basalt rock; aluminum tablet stamped "522 Ore 1911"-----	521.551
Bluffs Siding, 1.1 miles north of, 0.1 mile south of Macks Canyon, 15 feet east of track; point on rock, in circle of paint, marked "U. S. 523 B. M."-----	522.06
Bluffs Siding, 0.2 mile north of, 120 feet north of milepost 26, 12 feet west of track; top of basalt bowlder marked "U. S. 523 B. M."-----	521.98
Bluffs Siding, in front of signboard; top of rail-----	520.4
Bluffs Siding, 0.8 mile south of, 70 feet south of milepost 27, 12 feet east of track; point on top of lava bowlder, marked "U. S. 520 B. M."-----	519.83
Bluffs Siding, 1.9 miles south of, 300 feet south of milepost 28, 250 feet east of Deschutes River, 150 feet east of ravine, 15 feet east of track, in top of basalt column of railroad side cut; aluminum tablet stamped "522 Ore 1911"-----	520.975

Tunnel One Siding, 2.8 miles north of, 130 feet south of milepost 29, 15 feet west of track; point on basalt rock, marked "U. S. 521 B. M."-----	Feet. 520. 92
Tunnel One Siding, 1.9 miles north of, 500 feet north of milepost 30, 10 feet east of track; point on basalt rock, marked "U. S. 522 B. M."-----	521. 72
Tunnel One Siding, 0.3 mile north of, 0.3 mile south of milepost 31, 0.2 mile north of Rattlesnake Canyon, 80 feet east of Deschutes River, 10 feet east of track, in basalt rock 3 feet above grade of railroad; aluminum tablet stamped "543 Ore 1911"-----	542. 839
Tunnel One Siding, in front of signboard; top of rail-----	557. 0
Tunnel One Siding, 0.2 mile south of, 300 feet south of milepost 32, 40 feet east of track; point on basalt rock, marked "U. S. 565 B. M."-----	564. 91
Milepost 32; railroad bench mark 573.545-----	575. 64
Tunnel One Siding, 1.3 miles south of, 0.3 mile south of south portal of Tunnel No. 1, 0.2 mile north of milepost 33, on south end and on west side of culvert 32 C; nail in top, marked "U. S. 582 B. M."-----	581. 28
Tunnel One Siding, 3 miles south of, 0.5 mile south of milepost 34, 900 feet southwest of large canyon, 40 feet east of Deschutes River, 15 feet east of track, in top of rock of side cut; aluminum tablet stamped "600 Ore 1911"-----	599. 03
Tunnel One Siding, 3.5 miles south of, 140 feet north of milepost 35, 15 feet east of track; point on basalt rock, marked "U. S. 601 B. M."-----	600. 02
Tunnel One Siding, 4.5 miles south of, 150 feet south of milepost 36, opposite station sign "Oakbrook," 10 feet east of track; point on basalt rock, marked "U. S. 612 B. M."-----	611. 74
Milepost 36; railroad bench mark 609.325-----	609. 33
Sherar's Bridge, 6.2 miles downstream from, 600 feet south of milepost 37, 12 feet west of track, in top of culvert 57 A; nail marked "U. S. 626 B. M."-----	625. 18
Sherar's Bridge, 5 miles downstream from, 0.1 mile south of milepost 38, 300 feet south of small island, 100 feet east of Deschutes River, 20 feet west of track, in top of big rock; aluminum tablet stamped "632 Ore 1911"-----	631. 628

DUFUR QUADRANGLE.

[Latitude 45°-45° 30'; longitude 121°-121° 30'.]

From milepost 39 south along Oregon-Washington R. R. & Navigation Co.'s track to point 3.3 miles south of McLennans (part of an unadjusted line supported by railroad levels, but closing 1.026 feet low at milepost 62 on line from south).

Sherar's Bridge, 4.1 miles north of, 150 feet south of milepost 39, 15 feet west of track; point on basalt, marked "U. S. 650 B. M."-----	649. 10
Sherar's Bridge, 2.1 miles north of, 150 feet south of milepost 41, west side and on west end of culvert 41 H; nail in circle of paint, marked "U. S. 699 B. M."-----	698. 23
Fargher, in front of signboard; top of rail-----	738. 2
Sherar's Bridge, 0.6 mile north of, 0.1 mile south of Fargher siding, 0.3 mile south of milepost 42, 200 feet east of Deschutes River, south end and on west side of steel bridge over Buck Creek Hollow; aluminum tablet stamped "744 Ore 1911"-----	743. 216
Sherar's Bridge, 600 feet south of, 300 feet south of milepost 43, 8 feet east of track; point on rock in circle of paint, marked "U. S. 773 B. M."-----	772. 48
Milepost 43, railroad bench mark 779.73-----	781. 51

Sherar's Bridge, 0.9 mile south of, 175 feet north of milepost 44, 15 feet west of track, in base of telegraph pole; spike marked "U. S. 784 B. M."-----	Feet. 783. 58
Milepost 44; railroad bench mark 773.88-----	775. 74
Sherar's Bridge, 1.9 miles south of, 10 feet south of milepost 45, 25 feet west of track; point on top of rock in circle of paint, marked "U. S. 783 B. M."-----	782. 52
Milepost 45; railroad bench mark 782.96-----	784. 84
Sherar's Bridge, 3 miles upstream from, 46 miles from mouth of Deschutes River, 0.2 mile south of milepost 46, 0.4 mile south of mouth of White River, 100 feet east of Deschutes River, 10 feet east of track, in top of basalt column in side cut, 3 feet above railroad grade; aluminum tablet stamped "787 Ore 1911"-----	786. 277
Milepost 47; railroad bench mark 782.74-----	785. 76
Sherar's Bridge, 3.9 miles upstream from, 5 feet north of milepost 47, 35 feet east of track; in top of bowlder in circle of paint, marked "U. S. 795 B. M."-----	794. 114
Hunts Ferry, 3.4 miles north of, 60 feet north of milepost 48, 10 feet east of track; point on basalt rock, marked "U. S. 816 B. M."-----	815. 506
Hunts Ferry, 2.2 miles downstream from, 0.2 mile south of milepost 49, 150 feet east of Deschutes River, 10 feet east of track, on rock bench 1 foot above railroad grade in basalt rock cut; aluminum tablet stamped "823 Ore 1911"-----	822. 210
Hunts Ferry, 1.6 miles north of, 0.2 mile north of milepost 50, 10 feet east of track, in railroad cut; point on basalt rock, marked "U. S. 837 B. M."-----	836. 09
Hunts Ferry, 0.6 mile north of, 0.4 mile north of milepost 51, 12 feet east of track; point on basalt rock in place, marked "U. S. 846 B. M."-----	845. 79
Hunts Ferry, opposite operator's window at station; top of rail-----	855. 1
Hunts Ferry, 0.5 mile upstream from, 0.2 mile north of milepost 52, 300 feet south of Stag Canyon, 60 feet east of Deschutes River, 12 feet east of track, in basalt rock shelf of railroad cut, 3 feet above grade; aluminum tablet stamped "866 Ore 1911"-----	865. 656
Hunts Ferry, 1.4 miles south of, 250 feet north of milepost 53, 12 feet east of track; point on top of rock in circle of paint, marked "U. S. 887 B. M."-----	886. 22
Hunts Ferry, 2.6 miles south of, 160 feet south of milepost 54, 10 feet west of track; point on rock in circle of paint, marked "U. S. 905 B. M."-----	904. 11
Hunts Ferry, 4 miles upstream from, 1.5 miles above mouth of Wapinitia Creek, 0.2 mile south of milepost 55, 30 feet east of Deschutes River, 25 feet west of track, in top of large rock; aluminum tablet stamped "920 Ore 1911"-----	919. 754
McLennans siding, 3.2 miles north of, 4.6 miles south of Hunts Ferry, 350 feet north of milepost 56, 8 feet east of track; point on basalt rock in circle of paint, marked "U. S. 923 B. M."-----	927. 15
McLennans siding, 2.2 miles north of, 5 feet north of milepost 57, 8 feet east of track, point on rock at cut, marked "U. S. 942 B. M."-----	941. 04
Hunts Ferry, 6.4 miles upstream from, 1 mile north of McLennans siding, 0.2 mile south of milepost 58, 250 feet north of tunnel No. 3, 150 feet east of Deschutes River, 8 feet east of track, in rock side cut, in top of basalt rock; aluminum tablet stamped "954 Ore 1911"-----	953. 133

McLennans, 0.2 mile north of, 125 feet north of milepost 59, 8 feet east of track; point on top of rock in circle of paint, marked "U. S. 957 B. M."-----	Feet. 956.56
McLennans siding, in front of signboard; top of rail-----	958.3
McLennans siding, 1.8 miles south of, 300 feet south of milepost 61, 30 feet west of track, 10 feet south of gate to field, in top of large fence post; nail marked "U. S. 982 B. M."-----	981.39
McLennans, 2.8 miles south of, 60 feet north of milepost 62, 12 feet west of track; point on top of rock in circle of paint, marked "U. S. 989 B. M."-----	988.270
McLennans, 3.3 miles south of, 0.4 mile south of milepost 62, 100 feet east of track, in top of very large lava boulder; aluminum tablet stamped "1006 Ore 1911"-----	1,005.488
Railroad bench mark 1002.24 (Oregon-Washington R. R. & Navigation Co.), elevation from north-----	1,005.674
Railroad bench mark 1002.24 (Oregon-Washington R. R. & Navigation Co.), elevation from south-----	1,006.70
From Two Springs siding north along Oregon-Washington R. R. & Navigation Co.'s track to point 3.3 miles south of McLennans (part of unadjusted line from Coleman, closing 1.026 feet high on line from Biggs).	
Two Springs, in front of signboard; top of rail-----	1,056.8
Two Springs, 0.3 mile north of, 170 feet south of milepost 67, in cut, 8 feet east of track; point in circle of paint on top of rock, marked "U. S. 1052 B. M."-----	1,053.07
Two Springs, 1.3 miles north of, 30 feet south of milepost 66, 15 feet west of track; point in circle of paint on top of boulder, marked "U. S. 1042 B. M."-----	1,043.05
Two Springs, 2.3 miles north of, 300 feet north of milepost 65, near culvert 65 A, 25 feet west of track, in top of very large boulder; aluminum tablet stamped "1026 Ore 1911"-----	1,026.167
Two Springs, 3.3 miles north of, 400 feet south of milepost 64, north end of culvert 64 A, on west side, in top of wooden bulkhead; nail marked "U. S. 1022 B. M."-----	1,023.06
Two Springs, 4.3 miles north of, 85 feet south of milepost 63, 15 feet west of track, at north end of long cut; point on top of rock, marked "U. S. 1015 B. M."-----	1,015.686

NOTE.—The error of this line, 1.026 feet, has been placed here.

MADRAS QUADRANGLE.

[Latitude 44° 30'–45°; longitude 121°–121° 30'.]

From Coleman north along Oregon Trunk Ry. to North Junction, thence along Oregon-Washington R. R. & Navigation Co.'s track to Two Springs (part of unadjusted line from Coleman, closing 1.026 feet high on line from Biggs).	
Coleman, 9 miles from Friday brothers' ranch, at mouth of Trout Creek, 100 feet south of milepost 88, 300 feet north of cattle guard, 25 feet east of track, in top of large boulder; aluminum tablet stamped "1295 Ore"-----	1,295.658
Coleman, 1.3 miles north of, 150 feet south of milepost 87, 20 feet west of track; top of boulder in circle of paint, marked "U. S. 1283 B. M."-----	1,283.8

South Junction, 0.7 mile south of, 165 feet north of milepost 86, 60 feet east of track; point on boulder in circle of paint, marked "U. S. 1273 B. M."-----	Feet. 1, 273. 4
South Junction, 400 feet south of station, at northeast corner of steel water tank, on top of concrete foundation; aluminum tablet stamped "1263 Ore 1911"-----	1, 263. 366
Milepost 88; railroad bench mark 1236.19-----	1, 236. 81
South Junction, in front of station; top of rail-----	1, 260. 9
Jersey, 0.3 mile south of, 100 feet north of milepost 84, 30 feet east of track; point in circle of paint on top of boulder, marked "U. S. 1247 B. M."-----	1, 247. 3
Jersey, 250 feet south of station, 20 feet west of track, southeast corner of water tank, in top of concrete foundation; aluminum tablet stamped "1243 Ore 1911"-----	1, 244. 006
Milepost 82; railroad bench mark 1221.66-----	1, 222. 24
Jersey, 1.7 miles north of, 130 feet north of milepost 82, 20 feet east of track; point in circle of paint on top of basalt rock, marked "U. S. 1221 B. M."-----	1, 222. 18
Kaskela, 1.5 miles south of, 60 feet south of milepost 81, 12 feet east of track; in circle of paint on top of large boulder, marked "U. S. 1219 B. M."-----	1, 219. 7
Kaskela, 0.4 mile south of, 50 feet west of track, in base of telegraph pole; spike marked "U. S. 1212 B. M."-----	1, 212. 76
Kaskela, in front of signboard; top of rail-----	1, 205. 99
Milepost 80; railroad bench mark 1206.73-----	1, 207. 27
Kaskela, 0.5 mile north of, 30 feet west of track, in base of milepost 79; spike painted white marked "U. S. 1196 B. M."-----	1, 196. 98
Kaskela, 1.1 miles north of, 0.6 mile north of milepost 79, 200 feet north of P. T. of 4th curve north of milepost 79, 300 feet north of point opposite entrance to gravel pit on west side of railroad, 35 feet east of track, in top of very large red lava boulder painted "S. B. M."; aluminum tablet stamped "1187 Ore 1911"-----	1, 187. 325
North Junction, 2.2 miles south of, 420 feet north of milepost 77, 50 feet west of track; point in circle of paint on top of basalt rock, marked "U. S. 1151 B. M."-----	1, 151. 77
Milepost 77; railroad bench mark 1149.58-----	1, 150. 13
North Junction, 1.3 miles south of, 30 feet south of milepost 76, 30 feet east of track; point on top of boulder, marked "U. S. 1131 B. M."-----	1, 131. 70
Tunnel No. 4, north portal of, 0.4 mile south of North Junction, 10 feet west of track; spike painted white marked "1120"-----	1, 120. 2
North Junction 0.2 mile south of, 30 feet south of milepost 75, 20 feet north of prospect tunnel in basalt cliff, 22 feet east of track; point in circle of paint on basalt rock, marked "U. S. 1108 B. M."-----	1, 108. 9
North Junction, in front of operator's window at station; top of rail-----	1, 107. 8
North Junction, 0.2 mile north of, south end of steel bridge over Deschutes River, 6 feet east of track, in top of concrete abutment; aluminum tablet stamped "1104 Ore 1911"-----	1, 104. 428
Cove Creek, on Oregon-Washington R. R. & Navigation Co.'s line, in front of signboard; top of rail-----	1, 084. 7

Cove Creek, 0.2 mile north of signboard, 225 feet north of milepost 70, 80 feet north of cattle guard, 10 feet west of track; point in circle of paint on top of basalt rock, marked "U. S. 1083 B. M."----	Feet. 1, 083. 18
Cove Creek, 1.2 miles north of, 240 feet north of milepost 69, 12 feet west of track; point in circle of paint on top of basalt rock, marked "U. S. 1077 B. M."-----	1, 077. 90
Two Springs, 0.7 mile south of, 60 feet south of south portal of tunnel No. 5, 5 feet north of milepost 68, 12 feet west of track, 2 feet above railroad grade, in basalt rock; aluminum tablet stamped "1068 Ore 1011"-----	1, 068. 901
From Friday brothers' ranch east along highway to Coleman, thence southwest along Oregon Trunk Ry. by two lines to Pelton, thence by one line to point 3 miles north of Squaw Creek.	
Hessler, 3.7 miles north of station, in front of Friday brothers' ranch house, south corner of lane to house and highway, at fence line; iron post stamped "1686 H"-----	1, 694. 017
Friday brothers' ranch, 1.2 miles northwest of, in narrow neck of canyon, at edge of creek; circle on top of large black boulder, marked "U. S. 1639 B. M."-----	1, 639. 21
Friday brothers' ranch house, 2 miles northwest of, 150 feet north of creek ford, 10 feet east of road, 600 feet north of ranch house of T. P. Monroe; circle on top of rock, marked "U. S. B. M. 1616"--	1, 616. 15
Friday brothers' ranch house, 3.5 miles northwest of, 5 feet north of road, 200 feet from creek, 0.6 mile southeast of G. Camper's ranch house, in top of rock; aluminum tablet stamped "1559 Ore"-----	1, 559. 155
Friday brothers' ranch house, 4.5 miles northwest of, 4 miles below G. Camper's ranch house, north edge of creek at corner of fence; circle on top of small rock, marked "U. S. 1514 B. M."-----	1, 514. 74
Friday brothers' ranch house, 5.6 miles northwest of, 1.5 miles down Trout Creek from Camper's ranch house, in point of large sharp bend, 50 feet north of creek; circle of paint on top of large black rock, marked "U. S. 1461 B. M."-----	1, 462. 04
Friday brothers' ranch house, 6.1 miles northwest of, 2.1 miles northwest of G. Camper's ranch house, in middle of horseshoe bend, 60 feet north of creek, in top of black boulder; aluminum tablet stamped "1437 Ore"-----	1, 437. 546
Friday brothers' ranch house, 7 miles northwest of, 900 feet north of James Hurt's ranch house, 50 feet south of lone tree, east edge of river; circle on top of rock, near rock marked "U. S. B. M. 1393"--	1, 393. 34
Friday brothers' ranch house, 8.5 miles northwest of, 0.25 mile east of ranch house at mouth of Trout Creek, at edge of road, at steep declivity; circle on top of rock, marked "U. S. B. M. 1326"-----	1, 362. 62
Coleman, at mouth of Trout Creek, 1,400 feet north of station sign, 300 feet north of cattle guard, 100 feet south of milepost 88, 25 feet east of track, in top of rock; aluminum tablet stamped "1295 Ore"--	1, 295. 608
Coleman, 1.5 miles south of, 15 feet east of Oregon Trunk Ry. track; circle on top of rock, marked "U. S. B. M. 1320"-----	1, 320. 73
Coleman, 2 miles south of, 15 feet west of track; circle on top of rock, marked "U. S. B. M. 1332"-----	1, 332. 46
Coleman, 3.3 miles south of, 15 feet east of track, in top of rock marked "U. S. B. M. 1338"; aluminum tablet stamped "1338 Ore"--	1, 338. 215
Coleman, 4.1 miles south of, 20 feet west of tracks; circle on top of rock, marked "U. S. B. M. 1345"-----	1, 346. 15

Coleman, 5 miles south of, 15 feet east of track, on top of rock; circle marked "U. S. B. M. 1355"-----	Feet. 1, 356. 86
Coleman, 6.2 miles south of, 900 feet south of milepost 94, 20 feet north of fourth telegraph pole north of whistle post, 0.8 mile north of Mecca, 15 feet east of track, in top of rock; aluminum tablet stamped "1367 Ore"-----	1, 367. 744
Coleman, 7.9 miles south of, on east side and 30 feet from track; circle on top of rock, marked "U. S. B. M. 1380"-----	1, 377. 36
Coleman, 8.6 miles south of, 1 mile south of Mecca, 20 feet east of track, in top of rock; aluminum tablet stamped "1409 Ore"-----	1, 410. 007
Coleman, 9.4 miles south of, 20 feet north of track, 150 feet east of tunnel sign; circle on top of rock, marked "U. S. B. M. 1454"-----	1, 454. 80
Coleman, 10.5 miles south of, 15 feet east of track; circle on top of rock, marked "U. S. B. M. 1527"-----	1, 527. 58
Coleman, 11.5 miles south of, 20 feet west of track, just north of cut; circle on top of rock, marked "U. S. B. M. 1595"-----	1, 595. 79
Coleman, 12.5 miles south of, 500 feet south of Vanora station sign, 20 feet east of main railway track; in top of lava rock; aluminum tablet stamped "1657 Ore"-----	1, 657. 953
Coleman, 13.4 miles south of, west of track, at road crossing, at gate post of fence; circle on top of rock, marked "U. S. B. M. 1703"-----	1, 703. 85
Coleman, 14.9 miles south of, halfway down the bank between the Oregon Trunk Ry. and the Deschutes River; circle on top of rock, marked "U. S. B. M. 1595"-----	1, 597. 67
Coleman, 16.7 miles south of, at mouth of Willow Creek, 3 feet from and above edge of river, in top of black rock; aluminum tablet stamped "1447 Ore"-----	1, 447. 567
Lower Bridge, 26.6 miles north of, 1.5 miles north of Big Eddy, east bank, 70 feet above river; circle on rock, marked "U. S. B. M. 1541"-----	1, 542. 84
Lower Bridge, 25.1 miles north of, 4.4 miles north of mouth of Metolius River, at Big Eddy, 20 feet east of edge of river, in large black boulder; aluminum tablet stamped "1482 Ore"-----	1, 482. 604
Lower Bridge, 24.6 miles north of, 3.9 miles north of mouth of Metolius River, about 250 feet above river, on east bank; circle on rock, marked "U. S. B. M. 1722"-----	1, 722. 34
Lower Bridge, 23.6 miles north of, 3 miles north of mouth of Metolius River, about 200 feet above river, on east bank; circle on rock, marked "U. S. B. M. 1797"-----	1, 796. 51
Lower Bridge, 22 miles north of, 1.3 miles north of mouth of Metolius River, on rocky point, about 100 feet above river; circle on rock, marked "U. S. B. M. 1720"-----	1, 720. 59
Lower Bridge, 20.7 miles north of, opposite mouth of Metolius River, on point of cliff, about 100 feet above river, in rock; aluminum tablet stamped "1668 Ore"-----	1, 668. 176
Lower Bridge, 19.5 miles north of, 1.1 miles north of mouth of Crooked River, on rock nose, about 100 feet above river; circle on top of rock, marked "1688 U. S. B. M."-----	1, 688. 44
Lower Bridge, 18.4 miles north of, at east side of mouth of Crooked River, 8 feet from edge of river, in top of rock; aluminum tablet stamped "1613 Ore"-----	1, 613. 574
Lower Bridge, 17.1 miles north of, on rocky bench, on east side of river; circle on top of rock, marked "U. S. B. M. 1843"-----	1, 843. 73

Lower Bridge, 15.7 miles north of, at east end of footbridge over Deschutes River, in large boulder; aluminum tablet stamped "1777 Ore"-----	Feet. 1, 777. 621
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PRINEVILLE QUADRANGLE.

[Latitude 44°-44° 30'; longitude 120° 30'-121°.]

From Prineville west 8.5 miles (run twice).

Prineville, northeast corner of county courthouse, in wall; aluminum tablet stamped "2872 B 1908 R 2"-----	2, 871. 901
Prineville, 1.5 miles west of, 300 feet east of Airst's ranch house, 10 feet south of military road; red circle on top of black rock, marked "U. S. B. M. 2858"-----	2, 856. 80
Prineville, 2.4 miles west of, about 0.25 mile west of A. T. Bogue's ranch house, 20 feet south of military road; red circle on top of large boulder, marked "U. S. B. M. 2849"-----	2, 847. 98
Prineville, 3.9 miles west of, 500 feet south of Aleck Davenport's ranch house, 5 feet south of military road, in top of rock; aluminum tablet stamped "2834 Ore"-----	2, 833. 224
Prineville, 4.6 miles west of, 20 feet north of military road, in base of telephone pole; spike marked "U. S. B. M. 2827"-----	2, 826. 28
Prineville, 5.9 miles west of, 0.6 mile east of J. F. Taylor's ranch house, 5 feet east of military road, in top of large black boulder; aluminum tablet stamped "2827 Ore"-----	2, 826. 230
Oneil, 7.3 miles east of, 100 feet southeast of J. F. Taylor's ranch house, on military road, in base of telephone pole; spike marked "U. S. B. M. 2818"-----	2, 816. 93
Oneil, 6.2 miles east of, 2 miles east of Charles Montgomery's ranch house, 10 feet south of military road, at base of hill, in top of rock; aluminum tablet stamped "2809 Ore"-----	2, 808. 467
Oneil, 5.3 miles east of, 1 mile east of Charles Montgomery's ranch house, north edge of military road; red circle on top of black rock, marked "U. S. B. M. 2804"-----	2, 802. 70

CLINE FALLS QUADRANGLE.

[Latitude 44°-44° 30'; longitude 121°-121° 30'.]

From logging camp 3 miles south of bend north along highway down Deschutes River to Laidlaw.

Bend, 2 miles south of, 0.9 mile north of logging camp, on top of west bank, north side of road running down to river's edge, in base of 30-inch yellow-pine tree with blaze marked "U. S. B. M. 3687"; copper nail-----	3, 687. 4
Bend, 0.5 mile south of, west bank of river, 300 feet south of sawmill; top of rock with circle, marked "U. S. B. M. 3613"-----	3, 613. 81
Bend, east end of town, west of road, 200 feet east of water-tank tower, in lava rock; aluminum tablet stamped "3647 B 1908 B I 2"-----	3, 646. 347
Bend, on southeast corner of bridge over Water, Light & Power Co.'s dam on guardrail; copper nail marked "3596"-----	3, 595. 98
Bend, west of town, 500 feet north of sawmill, southeast corner of bridge, on guardrail; copper nail marked "3596"-----	3, 594. 40
Bend, in northwest edge of, north of 5-mile bend, to left of road running close to river, 600 feet from river, 500 feet north of new water tower, on top of stump; copper nail-----	3, 600. 71

Bend, 1.5 miles north of, 100 feet north of fork in road, 300 feet from river, in base of cedar tree; copper nail marked "U. S. B. M."-----	3, 529. 59
Bend, 3 miles north of, 20 feet north of fence, on south line of sec. 17, 20 feet from river; aluminum tablet stamped "3470 Ore"-----	3, 470. 680
Bend, 4.5 miles north of, on top of north bank of river, 0.25 mile east of bend to north, near 24-inch yellow-pine tree, 20 feet from upper precipice and slightly obscured by juniper trees; top of rock with painted circle; blaze on tree marked "U. S. B. M. 3465"-----	3, 465. 65
Bend, 5 miles north of, at O. Riley's place, 300 feet north of barn, in base of juniper tree blazed "U. S. B. M. 3472"; copper nail-----	3, 472. 43
Bend, 5.9 miles north of, top of east bank, 50 feet from edge, at north edge of clump of trees, 2 feet east of blazed 16-inch yellow-pine tree; point on rock with red circle, marked "U. S. B. M. 3453"-----	3, 452. 91
Laidlaw, 1.5 miles south of, 50 feet north of bridge across Deschutes River, 20 feet east of road, in top of large red granite bowlder; aluminum tablet stamped "3204 Ore"-----	3, 204. 292
Laidlaw, 0.8 mile south of, 300 feet west of white house, between road and yard fence, in top of juniper stump marked "U. S. B. M. 3194"; copper nail-----	3, 193. 79
Laidlaw, 50 feet south of post-office store, in top of rock east of sidewalk line; aluminum tablet stamped "3181 Ore"-----	3, 180. 756

From Laidlaw north along highway to Lower Bridge, thence east to point 8.5 miles west of Prineville (run twice).

Laidlaw, 2 miles north of, 100 feet south of river, 300 feet southeast of wood bridge, in base of 36-inch black-pine tree blazed and marked "U. S. B. M. 3135"; copper nail-----	3, 135. 01
Laidlaw, 3 miles north of, on west edge of river, opposite old cabin, in black rock; aluminum tablet stamped "3117 Ore"-----	3, 117. 247
Laidlaw, 4 miles north of, top of bluff, west side of river, east edge of clearing; top of rock with red circle, marked "U. S. B. M. 3196"-----	3, 196. 11
Laidlaw, 5.3 miles north of, top of west bank of river, on fence line, 0.25 mile south of White Rock ranch house; red circle on top of large black bowlder, marked "U. S. B. M. 3094"-----	3, 093. 86
Laidlaw, 6 miles north of, close to Allen's bucket line at White Rock ranch house, at water's edge on west side of river, in top of large bowlder; aluminum tablet stamped "2984 Ore"-----	2, 983. 572
Laidlaw, 7 miles north of, 0.25 mile south of bucket line on east side of river, near trunk of old juniper tree, just below brink of west precipice; red circle on point of rock, marked "U. S. B. M. 3171"-----	3, 170. 93
Cline Falls, 2 miles south of, west side of river, 15 feet from edge of water and 8 feet above river, in rock; aluminum tablet stamped "2900 Ore"-----	2, 899. 429
Cline Falls, 0.5 mile south of, west side of river, north edge of little flat, in base of 14-inch juniper tree blazed and marked "U. S. B. M. 2851"; copper nail-----	2, 851. 13
Cline Falls, at north end of bridge above falls, 20 feet west of bridge, close to wheel track, in top of rock; aluminum tablet stamped "2839 Ore"-----	2, 839. 154
Cline Falls, 1.5 miles north of, 1,000 feet north of ranch house on east side of river, top edge of west bluff; point on rock with red circle, marked "U. S. B. M. 2877"-----	2, 876. 32

Cline Falls, 2.5 miles north of, 240 feet north of Tetherow bridge, 40 feet north of turn in road, in top of gray rock; aluminum tablet stamped "2717 Ore"-----	Feet. 2, 716. 805
Cline Falls, 3 miles north of, 300 feet west of Deschutes River, 50 feet east of storage shed, near Odin Falls; red circle on top of lava rock, marked "U. S. B. M. 2725"-----	2, 724. 17
Cline Falls, 4 miles north of, 1,000 feet south of old ranch belonging to Odin Falls Irrigation Co., at west edge of river, in line with birch tree fringe, in top of large rock; aluminum tablet stamped "2645 Ore"-----	2, 644. 666
Lower Bridge, 60 feet north of bridge, in top of rock; aluminum tablet stamped "2528 Ore"-----	2, 527. 880
Lower Bridge, 0.4 mile southeast of, top of east bluff, south side of military road where it leaves river; red circle on top of rock, painted "U. S. B. M. 2634"-----	2, 633. 69
Lower Bridge, 1.4 miles east of, 20 feet west of military road; red circle on top of black rock, marked "U. S. B. M. 2649"-----	2, 648. 21
Lower Bridge, 2.1 miles east of, 10 feet east of military road, in base of 30-inch juniper tree with blaze and marked "U. S. B. M. 2690"; copper nail-----	2, 689. 80
Lower Bridge, 3 miles east of, 10 feet south of military road, in top of flat lava rock; aluminum tablet stamped "2723 Ore"-----	2, 722. 428
Lower Bridge, 4.4 miles east of, 10 feet west of military road, at end of rocky nose; top of rock with red circle, marked "U. S. B. M. 2713"-----	2, 711. 97
Lower Bridge, 5.5 miles east of, 20 feet north of military road, in base of 16-inch juniper tree; copper nail marked "U. S. B. M. 2769"-----	2, 768. 29
Lower Bridge, 6.6 miles east of, 0.8 mile north of Hillman, 130 feet north of crossing of military and Opal City roads, in top of lava rock; aluminum tablet stamped "2824 Ore"-----	2, 823. 501
Lower Bridge, 7.3 miles east of, 3 feet south of military road, 100 feet west of road crossing; red circle on top of lava rock, marked "U. S. B. M. 2782"-----	2, 780. 99
Lower Bridge, 8.4 miles east of, south of Smiths Rocks, 15 feet south of military road, at crossing of irrigation ditch; red circle on top of large white rock, marked "U. S. B. M. 2792"-----	2, 791. 19
Lower Bridge, 9.2 miles east of, 400 feet east of W. R. Steven's ranch house, on south side of military road; red circle on top of lava rock, marked "U. S. B. M. 2842"-----	2, 841. 05
Lower Bridge, 10 miles east of, 3 feet north of military road, 3 miles west and north of Oneil, opposite northwest corner of fence, in large lava rock; aluminum tablet stamped "2906 Ore"-----	2, 905. 058
Lower Bridge, 11 miles east of, 20 feet south of military road, 1,000 feet east of ranch house; red circle on top of lava rock, marked "U. S. B. M. 2875"-----	2, 873. 79
Oneil, 1 mile north of, south edge of road; red circle on top of lava rock, marked "U. S. B. M. 2833"-----	2, 832. 01
Oneil, in corner foundation stone of shed southeast of post office; aluminum tablet stamped "2784 Ore"-----	2, 783. 626
Oneil, 1.3 miles east of, 20 feet west of gate leading to J. W. Livingstone's ranch house from military road; spike in base of telephone pole, marked "U. S. B. M. 2815"-----	2, 813. 94
Oneil, 2.4 miles east of, west side of military road; spike in base of telephone pole, marked "U. S. B. M. 2783"-----	2, 782. 40

Oneil, 3.3 miles east of, west side of military road, 1,300 feet east of ranch house, in base of telephone pole; spike marked "U. S. B. M. 2791"-----	Feet. 2,789.71
Oneil, 4.1 miles east of, 500 feet west of Charles Montgomery's ranch house, east of military road, at base of hill, in top of rock at edge of irrigation ditch; aluminum tablet stamped "2797 Ore"-----	2,796.463
From Lower Bridge north along highway to point 3 miles north of Squaw Creek.	
Lower Bridge, 1 mile north of, at edge of east cliff of Rustlers Cave; circle on top of lava rock, marked "U. S. B. M. 2621"-----	2,622.04
Lower Bridge, 2.6 miles north of, at edge of first bench above river on east side, directly opposite high knoll on west side of river; circle on top of flat lava rock, marked "U. S. B. M. 2516"-----	2,517.05
Lower Bridge, 4.4 miles north of, at E. S. Faxes watering trail, at edge of water, in top of large rock; aluminum tablet stamped "2308 Ore"-----	2,307.624
Lower Bridge, 5.1 miles north of, 0.3 mile below Steelhead Falls, on steep nose of north bank, 25 feet above river, near juniper tree; circle on rock-----	2,286.68
Lower Bridge, 6.1 miles north of, 1 mile below Steelhead Falls, 200 feet northwest of a very high and steep cliff on east side of river, in lava rock at waters edge; aluminum tablet stamped "2257 Ore"-----	2,257.680
Lower Bridge, 7.4 miles north of, at north end of bench, about 100 feet above river and 1,000 feet south of old cabin, at edge of ragged cliff; circle on top of large lava rock, marked "U. S. B. M. 2344"-----	2,344.82
Lower bridge, 9.2 miles north of, 0.5 mile south of mouth of Squaw Creek, north side of river, on edge of ledge about 100 feet directly above river; circle on point of rock, marked "U. S. B. M. 2253"-----	2,254.11
Lower Bridge, 9.7 miles north of, on rock point opposite mouth of Squaw Creek, 25 feet above river and nearly over it, in rock in place; aluminum tablet stamped "2127 Ore" (elevation is doubtful)-----	2,130.718
Lower Bridge, 10.7 miles north of, 1 mile north of mouth of Squaw Creek, top of very narrow ledge, about 100 feet above river; circle on top of rock, marked "U. S. B. M. 2086"-----	2,086.72
Lower Bridge, 11.6 miles north of, 2 miles north of mouth of Squaw Creek, about 30 feet above and east of river, on side of hill; circle on top of rock, marked "U. S. B. M. 2030"-----	2,030.94
Lower Bridge, 12.6 miles north of, 2.9 miles north of mouth of Squaw Creek, 0.25 mile north of bucket line on top of west bank, at south end of small flat with junipers, about 25 feet above river, in top of very large boulder; aluminum tablet stamped "1980 Ore"-----	1,981.053

LAVA QUADRANGLE.

[Latitude 43° 30'-44°; longitude 121°-121° 30'.]

From point 9.6 miles northeast of Pringle Falls northeast along highway to point 3 miles southwest of Bend.

Pringle Falls, 9.6 miles northeast of, 0.25 mile south of old abandoned house on west side of river, east bank of east loop of river, in base of blazed 20-inch yellow-pine tree, painted "U. S. B. M. 4191"; copper nail-----	4,191.40
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Pringle Falls, 10.9 miles northeast of, 0.9 mile south of A. D. Lewis's house, east bank of east loop of river, in base of blazed 30-inch pine tree marked "U. S. B. M. 4172"; copper nail-----	Feet. 4,172. 09
Pringle Falls, 11.3 miles northeast of, east bank of east loop of river, 100 feet north of rail fence, in base of blazed 12-inch yellow-pine tree painted "U. S. B. M. 4167"; copper nail-----	4, 167. 18
Pringle Falls, 11.8 miles northeast of, 400 feet southeast of A. B. Lewis's house on west bank of river, in base of blazed 12-inch yellow-pine tree painted "U. S. B. M. 4166"; copper nail-----	4 166. 57
Pringle Falls, 12.8 miles northeast of, second loop where river turns east, west side of river, 100 feet from water's edge, in base of blazed 36-inch yellow-pine tree painted "U. S. B. M. 4169"; copper nail-----	4, 169. 51
Pringle Falls, 13.2 miles northeast of, 0.7 mile south of Maine's foot bridge, where river turns east, near west edge of river, in base of blazed 12-inch yellow-pine tree painted "U. S. B. M. 4161"; copper nail-----	4, 161. 53
Pringle Falls, 14.6 miles northeast of, at Jim Holmes's place, at edge of west fork of river, behind ranch yard, 50 feet east of rail fence, in base of blazed yellow-pine tree painted "U. S. B. M. 4164"; copper nail-----	4, 164. 85
Rosland, 14.8 miles northeast of, 125 feet east of road, 0.3 mile north of F. A. Shenguest's house, in lava rock; aluminum tablet stamped "4234 B 1908 B E 2"-----	4, 233. 407
Banham Falls, 4.3 miles south of, at four-corner road crossing, 0.25 mile from river, west road leads to cabin by river, in base of blazed pine tree painted "U. S. B. M. 4162"; copper nail-----	4, 162. 70
Banham Falls, 3.8 miles south of, on east bank of river, back of old farm yard, 50 feet from water's edge, in base of blazed 18-inch pine tree painted "U. S. B. M. 4153"; copper nail-----	4, 153. 65
Banham Falls, 3.1 miles south of, west side of road, in base of blazed pine tree painted "U. S. B. M. 4190"; copper nail-----	4, 190. 56
Banham Falls, 1.9 miles south of, at Minor's house, on east bank of river, 100 feet northeast of house, in base of blazed 20-inch pine tree painted "U. S. B. M. 4192"; copper nail-----	4, 192. 83
Banham Falls, 0.9 mile south of, at river's edge, 1,500 feet west of Minor's house, 8 feet above edge of water, in base of blazed 36-inch pine tree painted "U. S. B. M. 4154"; copper nail-----	4, 154. 541
Banham Falls, 0.5 mile above, at railroad camp, 5 miles north of F. A. Shenguest's house, left side of road leading down to falls, in base of blazed 24-inch pine tree painted "U. S. B. M. 4153"; copper nail-----	4, 153. 20
Banham Falls, at head of, east bank, 20 feet north of large fallen pine tree overhanging river, in gray rock 6 feet high, at edge of river, 4.3 feet above water level; aluminum tablet stamped "4148 Ore"-----	4, 148. 613
Banham Falls, along road going north from falls, on west side of river, east side of road, in base of blazed 36-inch pine tree painted "4190 U. S. B. M."; copper nail-----	4, 190. 06
Ryan's house, 0.6 mile south of, where river turns east, 50 feet from edge of river, 160 feet east of fence line, near top of bank, in base of blazed 23-inch pine tree painted "U. S. B. M. 4059"; copper nail-----	4, 059. 15

Dillon Falls, at head of, 0.5 mile north of Ryan's house, where river turns east to rapids or Dillon Falls, west bank, near small pine tree at water's edge, in lava rock 1 foot above water level; aluminum tablet stamped "4038 Ore"-----	Feet. 4, 038. 906
Dillon Falls, 1.4 miles north of, southwest bend of river, 400 feet southwest of old cabin, in base of blazed 50-inch yellow-pine tree marked "U. S. B. M. 3973"; copper nail-----	3, 973. 11
Dillon Falls, 2.1 miles north of, on west bank where it commences to rise, opposite small nose of lava bed, 50 feet from river, in base of 40-inch yellow-pine tree marked "U. S. B. M. 3965"; copper nail-----	3, 965. 59
Dillon Falls, 3.4 miles north of, on top of west river bank, 0.25 mile north of south point of Lava Island, in base of blazed 30-inch yellow-pine tree marked "U. S. B. M. 3957"; copper nail-----	3, 957. 39
Dillon Falls, 5 miles north of, at west end of old log bridge, in lava bowlder; aluminum tablet stamped "3807 Ore"-----	3, 807. 544
Dillon Falls, 6 miles north of, top of west bank, where river and irrigation flume turn southeast, in base of blazed 30-inch yellow-pine tree marked "U. S. B. M. 3852"; copper nail-----	3, 852. 42
Dillon Falls, 7 miles north of, 20 feet from west edge of river, opposite point where irrigation flume turns east away from river, 3 miles south of bend, at logging camp, in top of large lava bowlder; aluminum tablet stamped "3655 Ore"-----	3, 655. 080

MAIDEN PEAK QUADRANGLE.

[Latitude 43° 30'–44°; longitude 121° 30'–122°.]

From Rosland along highway northwest to Pringle Falls, thence northeast 9.6 miles.

Rosland, 0.8 mile northwest of, north side of road, in base of 12-inch pine tree marked "U. S. B. M. 4221"; copper nail-----	4, 221. 84
Rosland, 2 miles northwest of, north side of road, in base of 6-inch Jack-pine tree marked "U. S. B. M. 4230"; copper nail-----	4, 231. 19
Rosland, 2.9 miles northwest of, north side of road, in base of 14-inch black-pine tree marked "U. S. B. M. 4238"; copper nail-----	4, 238. 95
Rosland, 4 miles northwest of, north side of road, in base of 16-inch black-pine tree marked "U. S. B. M. 4256"; copper nail-----	4, 257. 07
Pringle Falls, 4.9 miles southeast of, east side of road, in base of 14-inch black-pine tree marked "U. S. B. M. 4267"; copper nail--	4, 268. 28
Pringle Falls, 3.9 miles southeast of, east side of road, in base of 14-inch black-pine tree marked "U. S. B. M. 4280"; copper nail---	4, 281. 08
Pringle Falls, 3 miles southeast of, north side of road, in base of 36-inch yellow-pine tree marked "U. S. B. M. 4288"; copper nail---	4, 288. 54
Pringle Falls, 1.9 miles southeast of, south side of road, in base of 30-inch yellow-pine tree marked "U. S. B. M. 4304"; copper nail---	4, 304. 93
Pringle Falls, 1 mile southeast of, north side of road, in base of blazed 30-inch yellow-pine tree painted "U. S. B. M. 4307"; copper nail-----	4, 308. 24
Pringle Falls, at head of, east side of river at edge of water, in lava rock near 12-inch yellow-pine tree with lower limbs trimmed off; aluminum tablet stamped "4245 Ore"-----	4, 245. 449
Pringle Falls, 1 mile northeast of, 0.25 mile east of bend in river where it turns south to Pringle Falls, in base of blazed 50-inch yellow-pine tree painted "U. S. B. M. 4200"; copper nail-----	4, 201. 04

Pringle Falls, 2.2 miles northeast of, on east bank of river where it turns south, in base of blazed 16-inch yellow-pine tree painted "U. S. B. M. 4198"; copper nail-----	Feet. 4, 198. 99
Pringle Falls, 3.3 miles northeast of, on south bank, 50 feet south of and 25 feet above river, in base of blazed 50-inch yellow-pine tree painted "U. S. B. M. 4205"; copper nail-----	4, 205. 64
Pringle Falls, 4.3 miles northeast of, at small loop of river extending south, 50 feet from edge of river, in base of blazed 15-inch yellow-pine tree painted "U. S. B. M. 4189"; copper nail-----	4, 189. 98
Pringle Falls, 5.8 miles northeast of, on big loop of river extending southward, 0.25 mile west of south loop of old river bed, on top of south bank, in base of blazed 25-inch yellow-pine tree painted "U. S. B. M. 4226"; copper nail-----	4, 226. 96
Pringle Falls, 7.5 miles northeast of, 500 feet west of J. H. White's house, on east bank of river, in base of blazed 50-inch yellow-pine tree painted "U. S. B. M. 4174"; copper nail-----	4, 174. 41
Pringle Falls, 8.1 miles northeast of, 3.9 miles south of A. D. Lewis's house, east loop on east bank of river, north side of willow meadow, 50 feet from river, in base of blazed 14-inch yellow-pine tree painted "U. S. B. M. 4173"; copper nail-----	4, 174. 06

Coos Bay and Port Orford quadrangles.

COOS AND CURRY COUNTIES.

The elevations in the following list are based on tidal bench marks of the Coast and Geodetic Survey at Empire and Marshfield.

The leveling was done by C. C. Ward in 1896 and 1897.

COOS BAY QUADRANGLE.

[Latitude 43°-43° 30'; longitude 124°-124° 30'.]

From Myrtle Point along Coos Bay, Roseburg & Eastern R. R. to Coquille.

Myrtle Point, in north wall of Hermann & Brown's brick building, on corner of Spruce and Front streets, 30 feet from northwest corner of building, 2 feet above surface of ground; bronze tablet stamped "76" -----	Feet, 75. 916
Myrtle Point, in front of Rose's saloon in Hermann & Brown's building, on edge of curb, near barber pole; top of iron-ring socket-----	73. 89
Myrtle Point, 10 feet north of preceding bench mark; top of iron-ring socket -----	73. 96
Arago post office, near, trestle at sawmill, north of wagon road, west of railroad, 500 feet south of road crossing, in root of cedar stump; nail -----	20. 62
Yokum's logging spur and creamery, halfway between, 40 feet west of railroad track, in top of 2.5-foot myrtle stump, having a sawed face; nail -----	19. 5
Coquille, northeast corner of courthouse site, in block 29, Ellicott's addition to Coquille City, 7 feet south of street line and 6 feet west of sidewalk; iron post stamped "61"-----	60. 936
From Coquille along highway through Fairview and Gravelford to Myrtle Point.	
County poor farm, on right side of road, 150 feet east of forks of road, in root of 36-inch fir stump; nail-----	94. 9
Bullock's ranch, 200 feet up road from bend, in root of 42-inch fir tree; nail -----	172. 4

Coquille and Fairview, summit of hill between, north edge of road, in root of fir tree; nail-----	Feet. 531
Marshfield, signboard to, 125 feet beyond forks of road, in root of 30-inch fir tree; nail-----	373. 7
Fairview schoolhouse, 95 feet from bend in road, in butt of 8-inch fir tree; nail-----	138. 5
Fairview, in northeast angle of crossroads, sec. 25, T. 27 S., R. 12 W., 308 feet south of William Betty's house, 6 feet north of rail fence, 49 feet to telegraph pole; iron post stamped "134"-----	133. 834
Coquille River, north fork of, on right bank, 40 feet below bridge, in myrtle stump; nail-----	110. 6
Fairview and Lee, summit of hill between, 12 feet east of road, in butt of 12-inch fir tree; nail-----	346. 2
Lee, 300 feet south of post office, 10 feet north of wagon road, in myrtle tree; nail-----	74. 4
Lee, in Mrs. Mast's dooryard, sec. 1, T. 28 S., R. 12 W., on south edge of walk from gate to house, 29 feet from house; iron post stamped "89"-----	88. 601
Lee, 25 feet to right of road, 200 feet down river from schoolhouse, in butt of 18-inch maple tree; nail-----	65. 5
Gravel Ford, in northeast part of yard, 3 feet each way from fence, 76 feet from log house in which post office is located; iron post stamped "62"-----	62. 014
Bald Hill, at foot of, 60 feet to right of schoolhouse, in butt of alder tree; nail-----	52. 4
Bald Hill, summit of, at forks of road, 10 feet from main road, near summit, in 20-inch fir stump; nail-----	263. 95
Llewellyn's ranch, on fork of Coquille River, on north side of road, 30 feet above gate, in small myrtle stump; nail-----	26. 37 .

From Coquille along Coos Bay, Roseburg & Eastern R. R. to Marshfield.

Coquille, 1.25 miles downstream from, on bank of Coquille River, 40 feet from railroad, in 42-inch alder tree; nail-----	14. 2
Beaver Hill switch, 500 feet north of, 30 feet east of railroad, in upper side of 4-foot fir tree; nail-----	16. 8
Coaledo, 12.8 feet west of railroad, 743 feet north of switch where branch turns off to Beaver Hill, 3.5 feet east of section house, 5.8 feet north of southeast corner; iron post stamped "15"-----	14. 868
Beaver Hill, 90 feet east by 50 feet north of west end of railroad trestle across the flat at Beaver Hill, in sec. 17, T. 27 S., R. 13 W.; iron post stamped "10"-----	9. 682
Beaver Hill mine, in brick retaining wall at rear of boiler house; bronze tablet stamped "66"-----	66. 395
James Wall's ranch, on upper side of wagon road, at fence corner at railroad crossing, 1.5 miles below Kings Landing, in 42-inch fir stump; nail-----	11. 7
Isthmus Slough, 731 feet south of county road trestle, at James Wall's ranch, 24.5 feet west of center of railroad, on line between secs. 27 and 34, T. 26 S., R. 13 W., 40.5 feet west of quarter-section corner, 87 feet east of county road where it crosses section line; iron post stamped "10"-----	9. 761
Shingle House slough, 800 feet south of, on edge of cut on west side of railroad, in 4.5-foot fir stump; nail-----	10. 4

Marshfield, south end of first long cut south of, 10 feet east of rail-road and 175 feet north of water tank, in 12-inch cedar stump; nail-----	Feet. 18.36
Marshfield, across street from Blanco Hotel; nut of pump-----	7.6
Marshfield, in stone foundation of Merchants' Building, corner of Front and B streets, on B street side, 2 feet above cement sidewalk, 1.5 feet from corner of building; bronze tablet stamped "11"-----	10.840
Marshfield, at rear of S. D. Magnus's store, on window ledge (C. & G. S. b. m.)-----	10.63
From Marshfield along highways through Empire, Randolph, and Parkersburg to Arago.	
Empire, cemetery east of, south of road, 200 feet west of cedar tree marked "B. T., 1 mile," 50 feet east of trestle near cemetery, in butt of 36-inch fir tree; nail-----	36.6
Empire, in stone in courthouse yard, 24 feet from corner of Broadway and G Street, 1.5 feet from line of G Street; copper plug (C. & G. S. b. m.)-----	43.218
Empire, in courthouse yard, in front of building, 20 feet from each street; iron post stamped "44"-----	44.103
Rocky Point, 3 miles south of Empire City, in forks of road, in butt of 1-foot fir tree; nail-----	51.65
South and Joe Ney sloughs, summit of hill between, on right side of road in cedar stump; nail-----	139.1
Empire, 5.5 miles south of, 8 feet to right of road, 100 feet east of forks of old road to Marshfield, in 26-inch yellow-cedar stump; nail-----	101.6
South Slough Bridge, east end of, 45 feet south of, near foot of steep bank, in 8-inch alder stump; nail-----	6.9
Empire, 8-mile post from, 0.5 mile west of, left of road, in cedar stump; nail-----	372.4
South Slough, flat divide between two hills west of, to right of road, 250 feet east of signboard at forks of road, in 4-foot cedar stump; nail-----	360.7
South Slough and Pacific Ocean, summit between, 10 feet north of road, 43 feet from 12-inch fir tree with 4 blazes, 52 feet to 18-inch fir tree with 4 blazes, both trees being south of road; iron post stamped "573"-----	573.348
Rose's house, 150 feet south of road turning off to, 8 feet east of road, in 3-foot yellow-cedar tree; nail-----	186.1
Lane Mine, 10 feet north of branch road turning off to, 12 feet east of main road, 90 feet south of trestle in angle of road; iron post stamped "160"-----	159.963
Parkersburg, 0.2 mile south of, 10 feet east of road, on east bank of Bear Creek, 0.1 mile from mouth of Bear Creek, in root of 7-foot spruce tree; nail-----	7.7
Parkersburg, in brick foundation to smokestack of Parkersburg saw-mill; bronze tablet stamped "34"-----	33.589
Bear Creek, bridge across, 425 feet west of bridge on Bandon-Myrtle Point road, in 28-inch alder tree; nail-----	15.1
Randleman's garden, on Randelmans Creek, which is first branch on east side of Bear Creek, at corner of secs. 35 and 36, T. 28 S., R. 14 N., and secs. 1 and 2, T. 29 S., R. 14 W.; iron post stamped "98"-----	97.735

Lamprey Creek landing, near new schoolhouse, 15 feet from left bank of Coquille River, in butt of 5-inch spruce tree; nail-----	Feet. 7.6
J. A. Lyon's ranch, on township line between sec. 32, T. 28 S., R. 13 W. and sec. 5, T. 29 S., R. 13 W., 1.5 feet south of fence marking township line, 99 feet east of wagon gate through fence, 103 feet north of old house on ranch and about 0.25 mile above road crossing of Lamprey Creek; iron post stamped "35"-----	34.936
From Myrtle Point along highways via Cribbins Hill and South Fork of Coquille River to Etelka.	
Reeds Ford, in clump of myrtle and maple trees, at forks of road on south bank of river, northeast of residence of Ernest Hermann, in myrtle tree; nail-----	37.22
Cribbins Hill, top of, in center of small triangle at forks of road; iron post stamped "240"-----	240.008
Garter's cabin, opposite and 190 feet south of small barn, 1 mile south of Cribbins Hill, in small meadow on west side of road, in top of cedar stump 3 feet in diameter and 3 feet high; nail-----	216.75
Emanuel Hermann's residence, at forks of road south of, 40 feet west of road, on south side of small branch crossing same, in alder tree; nail-----	75.42
Forks of road to Eckley, in southeast angle, 390 feet south of schoolhouse, 1 foot north of signboard post; top of iron harrow tooth 11 inches long 4 inches below surface of ground-----	142.97

PORT ORFORD QUADRANGLE.

[Latitude 42° 30'–43°; longitude 124°–124° 30'.]

From Russell Dement's residence along highways to Etelka.

Russell Dement's residence, 29 feet east of entrance to, 1,000 feet south of forks of road to Eckley and Etelka, in SE. $\frac{1}{4}$ sec. 6, T. 30 S., R. 12 W.; iron post stamped "113"-----	113.013
Johnson's ranch, on west side of road, at south end of lane through and opposite mouth of Dement Creek, in sec. 8, T. 30 S., R. 12 E., in 18-inch fir tree; nail-----	152.21
Etelka, at foot of south gatepost on west side of road at post office, on ranch of R. P. Carman, sec. 22, T. 30 S., R. 12 W., in cedar hub 4 inches below surface of ground; nail-----	123.95
Etelka, 20 feet west of entrance to residence of R. P. Carman, on north line of sec. 22, T. 30 S., R. 12 W., 120 feet east of wagon road; iron post stamped "143"-----	143.062

From Etelka up South Fork of Coquille River to mouth of Salmon Creek, thence up Salmon Creek to Greens Prairie.

Rowland Prairie schoolhouse, 250 feet east of, 300 feet south of ford, east edge of road and north line of sec. 27, T. 30 S., R. 12 W., in 18-inch myrtle tree; nail-----	102.74
W. A. Warner's ranch, on south side of road, 500 feet west of river, at ford, between secs. 27 and 34, T. 30 S., R. 12 W., in 16-inch myrtle tree; nail-----	122.91
John Warner's cabin, 0.1 mile northwest of, on east side of road and north end of prairie, in sec. 31, T. 30 S., R. 12 W., in 4-foot fir tree; nail-----	187.71

John Warner's cabin, 14 feet west of southwest corner of, in small prairie in SW. $\frac{1}{4}$ sec. 34, T. 30 S., R. 12 W.; iron post stamped "204" -----	Feet. 204. 027
T. 31 S., R. 12 W., NE. $\frac{1}{4}$ sec. 3, near summit of hill, on north side of road, in 5-foot fir tree; nail-----	315. 81
Guy Holcomb's place, on east side of road, on top of hill north of small prairie, in sec. 3, T. 31 S., R. 12 W., in east side of 2-foot hemlock tree; nail-----	262. 31
Hood's prairie, in west end of, near line between secs. 10 and 11, T. 31 S., R. 12 W., on west side of road, 75 feet east of river, in apple tree; nail-----	173. 08
Gant's prairie, west side of sec. 12, T. 31 S., R. 13 W., on west side of road, south bank of Woodward's Creek at its mouth; bench cut in sandstone ledge-----	193. 95
Mouth of Woodward's Creek, south bank of, east side of wagon road, in north face of sandstone ledge, 1.6 feet above bed of creek and 3.8 feet below top of ledge; bronze tablet stamped "194"-----	193. 947
Slide, upper end of, on east bank of main creek and north bank of small creek at junction, in sec. 34, T. 31 S., R. 12 W., bench mark cut in top of small ledge-----	491. 3
T. 31 S., R. 12 W., sec. 34, on east bank of main creek, north bank of small creek about 3 feet above bed, on small ledge of rock; bronze tablet stamped "489"-----	489. 122
Rigg's ranch, in sec. 4, T. 32 S., R. 12 W., in leaning 18-inch maple tree between trail and creek; nail-----	623. 97
Tims Creek, at mouth of, on north bank of main creek, at crossing of Johnson Mountain trail, in sec. 8, T. 32 S., R. 12 W., in 5-foot fir tree; nail -----	710. 01
T. 32 S., R. 12 W., 410 feet west of corner of secs. 5, 6, 7, and 8, on Tims Creek, in 24-inch oak tree; nail-----	846. 27
Ed Green's residence, called Deer Park, on Tims Creek, northeast corner of yard in front of, NW. $\frac{1}{4}$ sec. 8, T. 32 S., R. 12 W.; iron post stamped "821" -----	820. 842
From Green's prairie to Eckley post office, thence down Sixes River to bridge.	
Joe Haines's ranch, forks of road, in 2-foot fir tree; nail-----	462. 30
Eckley, 420 feet southeast of Joe Haines's residence, in south face of ledge of rock in forks of creek, 2 feet above ground, 50 feet east of wagon road, on south bank of North Fork of creek, 310 feet east of forks of road, in sec. 36, T 31 S., R. 13 W.; bronze tablet stamped "441"-----	440. 924
Clark's ranch, on east side of road at north side of clearing, in sec. 1, T. 32 S., R. 13 W., in 30-inch fir tree; nail-----	417. 39
Clark's house, southwest of, on north side of road, 1,050 feet west of crossing of small creek, near line between secs. 2 and 11, T. 32 S., R. 13 W., in 14-inch tan-bark oak tree; nail-----	431. 80
Avery's residence, 90 feet southwest of west entrance, near line between secs. 10 and 11, T. 32 S., R. 13 W.; iron post stamped "364"-----	364. 158
Avery's, 0.5 mile below, on south side and near forks of Eckley-Port Orford trail, in 4-foot fir tree; nail-----	416. 17
Pilot Knob, on south side of, 1.5 miles west of Avery's, on south side of Eckley-Port Orford trail, on point of open ridge covered with oak and madrone trees, in 1-foot tan-bark oak tree; nail-----	451. 41

Eckley-Port Orford trail, on south side of, 4 miles below Avery's, on steep hillside west of an open ridge which terminates in a rock bluff forming the north wall of river gorge, in 8-inch tan-bark oak tree; nail -----	Feet. 319. 10
South Fork of Sixes River, opposite mouth of, on north side of Eckley-Port Orford trail, on bank of ditch on point of ridge immediately east of small creek, in 1-foot tan-bark oak tree; nail-----	304. 06
Elephant Rock Creek, on west bank of, near its mouth, 10 feet west of cabin, on south side of Eckley-Port Orford trail, in 18-inch oak tree 3 feet high; nail-----	203. 60
Dr. Elgin's cabin, in dooryard, 63 feet northeast of house, on west bank of Lowe Creek near its junction, in large bowlder; copper bolt stamped "196"-----	195. 998
Corbin's placer mine, on east bank of small creek emptying into river on north side, 50 feet above its mouth, in leaning 18-inch myrtle tree; nail -----	107. 99
St. Claire placer mine, opposite west end of, on gravel bar at base of cleared hill, on south side of river, in leaning 7-inch alder tree; nail-----	84. 44
J. H. Divilbliss's ranch, entrance to, at gate on west side of road nearly opposite mouth of Big Dry Creek, in 18-inch myrtle tree; nail-----	73
J. H. Divilbliss's residence, 129 feet from southeast corner of, in corner of yard, 2.3 feet from south and east fences; iron post stamped "88"-----	87. 925
Allen's ranch, west side of, at west end of gravel barn, 1 mile below mouth of Edson Creek, in forked 18-inch ash tree; nail-----	51. 515
Sixes River schoolhouse, 250 feet south of, on north side of river and wagon road, opposite mouth of Beaver Creek, in leaning 3-foot maple tree; nail-----	47. 29
Sixes River, bridge across, in ledge of rock at south end of, on main road Langlois to Port Orford; copper bolt stamped "U. S. G. S. 46"-----	45. 898

From Sixes River bridge along highway via Denmark to Langlois.

Black Lock Point, 140 feet north of forks of road to, near line between secs. 32 and 33, T. 31 S., R. 15 W., on east side of road, 3 miles north of bridge, in 1-foot black pine tree; nail-----	167. 86
T. 31 S., R. 15 W., sec. 28, 140 feet south of road, 4 miles north of Sixes River bridge, bearing tree marked "9 M XX I," in 3-foot fir tree; nail-----	144. 53
Denmark, at intersection of Second and Manning streets, in town site of Cleveland, 88 feet south of bridge across Willow Creek, in 18-inch alder tree; nail-----	98. 22
Denmark, 2 feet east and north of intersection of Second and Manning streets in town site of Cleveland, 116 feet north of bridge over Willow Creek, in sec. 15, T. 31 S., R. 15 W.; iron post stamped "98"-----	98. 114
Floras Creek, 30 feet north of north end of bridge over, on west side of road, 1 mile south of Langlois post office, in sec. 3, T. 31 S., R. 15 W., in 16-inch crooked maple tree; nail-----	42. 48
F. M. Langlois's store, northeast corner of, lot 4, block 1, town of Dairyville (Langlois post office), iron bolt three-fourths inch in diameter and 1 foot long set in ground-----	84. 20

Langlois, 3 feet north of Second and 3 feet east of Front Street, in southwest corner of yard of Laurel Inn, Dairyville, south line of sec. 35, T. 30 S., R. 15 W.; iron post stamped "89"-----	Feet. 89.068
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From Langlois along highways to Bennett Butte.

Joe Wendle's cabin, 0.5 mile west of, 12 feet east of road, in sec. 31, T. 30 S., R. 14 W., in 28-inch fir tree; nail-----	1, 109.58
Bandon, on east side of road at forks of road to, in 18-inch white-fir tree to which is nailed a letter box, in sec. 28, T. 30 S., R. 14 W.; nail-----	1, 318.78
W. W. Smith's barn, 520 feet south of, northeast side of forks of road to Bandon, 30 feet east of last bench mark, in sec. 28, T. 30 S., R. 14 W.; iron post stamped "1315"-----	1, 315.003
Floras Creek, 15 feet south of east end of bridge across, about on line between secs. 22 and 27, T. 30 S., R. 14 W., in 4-pronged 3-foot alder tree; nail-----	490.41
Rogers homestead cabin, 50 feet northeast of, 10 feet south of road, in northeast quarter of sec. 26, T. 30 S., R. 14 W., in 3-foot fir stump 3 feet high; nail-----	503.38
James Rogers's cabin, 6 feet north of, in front dooryard, on east side of road, south side of branch near its mouth, at forks of trail up east branch of Floras Creek, in sec. 26, T. 30 S., R. 14 W.; iron post stamped "503"-----	502.96
Bennett Butte (Watches triangulation station), at forks of road to, on south side of road, in sec. 30 S., R. 13 W., in 2-foot fir tree to which a letter box is nailed; nail-----	1, 901.17
Bennett Butte (Watches triangulation station), in small triangle at forks of road, on crest of mountain and on county line in sec. 20, T. 30 S., R. 13 W.; iron post stamped "1903"-----	1, 903.252
Bennett Butte (Watches triangulation station), summit of, in cedar hub, 5 inches below surface of ground, 2 feet south of stone triangulation station mark; head of nail-----	2, 184.9

From Bennetts Butte along highway via Catching Creek to Cribbins Hill.

T. 30 S., R. 13 W., near line between secs. 9 and 10, 1 mile from foot of slope, south side of road, in sharp bend of road at foot of steep slope, in 4-foot fir tree; nail-----	798.98
Catching Creek, South Fork of, 100 yards west of bridge across, 14 feet northwest of house, south side of road, near northeast corner of sec. 10, T. 30 S., R. 13 W.; iron post stamped "177"-----	177.002

From mouth of Salmon Creek up South Fork of Coquille River via Rural post office to lower end of canyon (unchecked spur line).

John Wagner's residence, 100 feet south of, in sec. 13, T. 31 S., R. 13 W., in 3-foot cedar stump 3 feet high; nail-----	274.14
Rural, 40 feet south of schoolhouse, 50 feet west and 350 feet south of corner of secs. 18 and 19, T. 31 S., R. 11 W. and secs. 13 and 24, T. 31 S., R. 12 W., in myrtle tree; nail-----	290.97
Rural schoolhouse, 350 feet north by 40 feet west of, at corner of secs. 18 and 19, T. 31 S., R. 11 W. and secs. 13 and 24, T. 31 S., R. 12 W.; iron post stamped "292"-----	292.017

T. 31 S., R. 11 W., near north line of sec. 30, east bank of river, 1 mile south of rural schoolhouse, in 12-inch alder tree (two forked); nail -----	Feet. 252.41
MacArnold's residence, in front of, on south bank of river, opposite mouth of Banner Creek, in sec. 30, T. 31 S., R. 11 W., in 3.5-foot myrtle stump 4 feet high; nail-----	271.96
John Hayes's ranch, on east bank of river, opposite a slide of rock from Sand Rock Mountain, sec. 30, T. 31 S., R. 11 W., in 12-inch myrtle tree; nail-----	277.58
Stevenson's ranch, on southwest bank of river, midway between mouth of Upper and Lower Lands creeks, in sec. 31, T. 31 S., R. 11 W., in 12-inch two-forked myrtle stump; nail-----	292.46
Miner's cabin, 650 feet east of, on north bank of river at south end of canyon, at end of trail on north bank of river, in sec. 5, T. 32 S., R. 11 W., 5 feet from end of sandstone ledge and 5 feet above bed of river; copper plug stamped "319"-----	318.930
From Myrtle Point and Langlois road down Floras Creek to Clark and Dwyers road (unchecked spur line).	
Rogers's ranch, in forks of road to, in 4-foot fir stub (decayed) 50 feet high; nail-----	558.09
Floras Creek, at ford at road crossing of Clark and Dwyers road, 10 feet north of road, on west bank of creek, 2 miles south of Rogers's residence, in sec. 2, T. 31 S., R. 14 W., in 3-foot cedar stump 3 feet high; nail-----	403.44
Floras Creek, 37 feet west of, at ford at road crossing of Clark and Dwyers road, 90 feet east of ledge of broken rock, in sec. 2, T. 31 S., R. 14 W.; iron post stamped "404"-----	404.000



APPENDIX A.

ELEVATIONS ADJUSTED BY THE COAST AND GEODETIC SURVEY FROM PRECISE LEVELING.

Baker City, Birch Creek, Gibbon, La Grande, Mitchell Butte, Pendleton, Pine,
Telocaset, and Weiser quadrangles.

BAKER, MALHEUR, UMATILLA, AND UNION COUNTIES.

The following descriptions and elevations are taken from reports and manuscript of the Coast and Geodetic Survey and are published by permission of the superintendent of that bureau. The bench marks were established by the Coast and Geodetic Survey and by the United States Geological Survey from precise leveling and were included in the 1912 adjustment by the Coast and Geodetic Survey. The elevations are likely to be changed only slightly by any future adjustment.

PENDLETON QUADRANGLE.

[Latitude 45° 30'–46°; longitude 118° 30'–119°.]

From Oregon-Washington State line along Oregon-Washington R. R. & Navigation Co.'s track to Cayuse.

Hunts Junction, 10 miles south of, 0.3 mile north of milepole 10, on right of way, 10 meters west of track; bottom of square hole in top of stone post, marked "U. S. \square B. M." (C. & G. S. b. m. R 3)---	Feet, 802. 702
Canon, 1.2 miles south of, 1 pole north of milepole 12, on right of way, 5 meters west of track; bottom of square hole in top of stone post, marked "U. S. \square B. M." (C. & G. S. b. m. P 4)-----	1, 042. 372
Stanton, 1 mile north of, at milepole 17, in concrete culvert west of track; bottom of square hole lettered "U. S. \square B. M." (C. & G. S. b. m. O 4)-----	1, 556. 528
Killian Junction, near, at milepole 18, on right of way, 15 meters west of track; red metal cap on iron pipe (C. & G. S. b. m. N 4)-----	1, 663. 931
Killian Junction, near, 1 pole south of milepole 19, east of track, on right of way; bottom of hole 3 centimeters square cut in concrete culvert (C. & G. S. b. m. M 4)-----	1, 780. 803
Helix, 1.2 miles north of, at milepole 22, on right of way, 12 meters west of track; red metal cap on iron pipe (C. & G. S. b. m. L 4)---	1, 798. 996
Warren, 1 mile north of, at milepole 27, on right of way, 10 meters west of track; red metal cap on iron pipe (C. & G. S. b. m. K 4)---	1, 739. 383
McCormack, 1 mile north of, at milepole 31, on right of way of Washington & Columbia River R. R., 10 meters north of track; red metal cap on iron pipe (C. & G. S. b. m. J 4)-----	1, 652. 563

Fulton, 2 miles southwest of, at milepole 35, on right of way of Northern Pacific Ry., 10 meters west of track; red metal cap on iron pipe (C. & G. S. b. m. I 4)-----	Feet. 1, 387. 447
Pendleton, 2.5 miles northeast of, on right of way of Northern Pacific Ry., 10 meters north of track; bottom of square hole in top of stone post, marked "U. S. \square B. M." (C. & G. S. b. m. H 4)-----	1, 173. 869
Pendleton, 1 mile east of, in west abutment of steel bridge over Umatilla River, in top of offset, north of track; red metal disk (C. & G. S. b. m. G 4)-----	1, 098. 352
Pendleton, in second block of plaster base of west entrance (on south side) of Umatilla County courthouse; aluminum tablet stamped "1074 A" (C. & G. S. b. m. 1074 A=U. S. G. S. b. m.)-----	1, 078. 015
Pendleton, in east wall of brick building of Umatilla Implement Co., 1.2 meters above ground, 0.2 meter from southeast corner; copper bolt marked "U. S. B. M." (C. & G. S. b. m. F 4)-----	1, 075. 583
Pendleton, in stone runner of entrance to brick building occupied by Delta confectionery store on Main Street; red metal disk (C. & G. S. b. m. E 4)-----	1, 069. 588
Pendleton, at entrance to brick building of Cruise Hotel, opposite side entrance of St. George Hotel, in top of west end of stone step; red metal disk (C. & G. S. b. m. D 4)-----	1, 071. 818
Mission, 225 meters northeast of milepole 236, 7.5 meters north of track, 1 meter east of telegraph pole west of switch of siding; iron post stamped "1205 A" (C. & G. S. b. m. 1205 A=U. S. G. S. b. m.)-----	1, 209. 147
Mission, 3 miles east of, 6 poles east of milepole 239, 5 meters south of track, in stone post, bottom of square hole, marked "U. S. \square B. M." (C. & G. S. b. m. C 4)-----	1, 329. 744
Mission, 5.5 miles east of, 270 meters west of milepole 241, 6 meters south of track, 4 meters north of wagon road; iron post stamped "1355 A" (C. & G. S. b. m. 1355 A=U. S. G. S. b. m.)-----	1, 358. 722

GIBBON QUADRANGLE.

[Latitude 45° 30'–46°; longitude 118°–118° 30'.]

From Cayuse along Oregon-Washington R. R. & Navigation Co.'s track to Meacham.

Cayuse, 0.3 mile west of, in east abutment of steel bridge, in offset north of track; bottom of square hole (C. & G. S. b. m. B 4)-----	1, 404. 339
Cayuse, 0.5 mile east of, one-half pole west of milepole 243, 6 meters north of track; red metal cap on iron pipe (C. & G. S. b. m. A 4)---	1, 433. 898
Cayuse, 3.5 miles east of, in top of pillar of bridge 66, 2.4 meters from south rail, 0.6 meter from west edge, 0.9 meter from south edge; bottom of square hole (C. & G. S. b. m. Z 3)-----	1, 521. 435
Cayuse, 4 miles east of, one-half mile west of milepole 247, 90 meters west of road crossing, 4 meters north of track, 1.2 meters east of telegraph pole; iron post stamped "1523 A" (C. & G. S. b. m. 1523 A=U. S. G. S. b. m.)-----	1, 528. 157
Bingham Springs (Gibbon), 2.5 miles west of, opposite milepole 250, 12 meters north of track; bottom of square hole in top of stone post, marked "U. S. \square B. M." (C. & G. S. b. m. Y 3)-----	1, 653. 474
Bingham Springs (Gibbon), 47 meters east of station, 11 meters north of track, 1.2 meters east of first telegraph pole from station; iron post stamped "1744 A" (C. & G. S. b. m. 1744 A=U. S. G. S. b. m.)-	1, 749. 383

Bingham Springs (Gibbon), 1.5 miles southeast of, in east abutment of bridge 86, in top of offset north of track; red metal disk (C. & G. S. b. m. X 3)-----	Feet. 1,819.682
Bingham Springs (Gibbon), 3.5 miles southeast of, 2 poles southeast of milepole 256, 18 meters west of track; red metal cap on iron pipe (C. & G. S. b. m. W 3)-----	1,903.328
Bingham Springs (Gibbon), 6 miles southeast of, one-half mile east of milepole 258, 7 meters south of track, 10 meters east of whistling post; iron post stamped "2023 A" (C. & G. S. b. m. 2023 A=U. S. G. S. b. m.)-----	2,027.949
North Fork, 2.5 miles northwest of, 4 poles northwest of milepole 261, in line of poles northeast of track; red metal cap on iron pipe (C. & G. S. b. m. V 3)-----	2,158.495
North Fork, 1 mile northwest of, in north abutment of bridge 106, in top of offset east of track; red metal disk (C. & G. S. b. m. U 3)---	2,247.104
North Fork, 0.5 mile north of, 45 meters, east of section house, 10 meters south of track; iron post stamped "2264 A" (C. & G. S. b. m. 2264 A=U. S. G. S. b. m.)-----	2,269.490
North Fork, 2.5 miles south of, at milepole 266, 12 meters east of track; bottom of square hole in top of stone post, marked "U.S. □ B.M." (C. & G. S. b. m. T 3)-----	2,445.908
North Fork, 3 miles south of, 0.5 mile south of milepole 266, in south abutment of steel bridge, in offset east of track; bottom of hole (C. & G. S. b. m. S 3)-----	2,480.079
North Fork, 4.5 miles west of, on railroad right of way, in north concrete abutment of bridge 115, in top of offset west of track; bottom of square hole lettered "U. S. □ B. M." (C. & G. S. b. m. R 3)-----	2,561.915
North Fork, 4.5 miles west of, on railroad right of way, 162 meters south of south end of bridge 115, 9 meters east of center of track; iron post stamped "2570 A" (C. & G. S. b. m. 2570 A=U. S. G. S. b. m.)-----	2,575.894
Meacham, 9.5 miles southeast of, on railroad right of way, 0.2 mile east of milepole 271, 12 meters south of track; red metal cap on iron pipe (C. & G. S. b. m. Q 3)-----	2,776.860
Meacham, 8 miles southeast of, on railroad right of way, in north concrete abutment of bridge 131, in top of offset east of track; bottom of square hole, lettered "U. S. □ B. M." (C. & G. S. b. m. P 3)-----	2,893.893
Meacham, 6 miles southeast of, on railroad right of way, in south abutment of bridge 137, in offset west of track; bottom of square hole, lettered "U. S. □ B. M." (C. & G. S. b. m. O 3)-----	3,061.981
Meacham, 5 miles southeast of, on railroad right of way, in southwest concrete abutment of bridge 145, in top of offset west of track; bottom of square hole, lettered "U. S. □ B. M." (C. & G. S. b. m. N 3)-----	3,188.953
Meacham, 3.5 miles east of, on railroad right of way, 2 poles south of milepole 277, 10 meters west of track; bottom of square hole in top of lava post, marked "U. S. □ B. M." (C. & G. S. b. m. M 3)---	3,351.573
Meacham, 2.5 miles east of, on railroad right of way, 4 meters east of milepole 278, 4.5 meters north of center of track; iron post stamped "3454 A" (C. & G. S. b. m. 3454 A=U. S. G. S. b. m.)-----	3,460.750
Meacham, on railroad right of way, 50 meters north of station, 5 meters east of center of track; iron post stamped "3672 A" (C. & G. S. b. m. 3672 A=U. S. G. S. b. m.)-----	3,679.478

LA GRANDE QUADRANGLE.

[Latitude 45°-45° 30'; longitude 118°-118° 30'.]

From Meacham along Oregon-Washington R. R. & Navigation Co.'s track to La Grande.

Meacham, 1.5 miles south of, on railroad right of way, 4 meters south of milepole 282, 12 meters east of track; bottom of square hole in top of lava stone post, marked U. S. \square B. M." (C. & G. S. b. m. L 3)-----	Feet. 3,757.414
Meacham, 3.5 miles south of, on railroad right of way, 9 meters southwest of milepole 284, 7 meters south of center of track; iron post stamped "3958 A" (C. & G. S. b. m. 3958 A=U. S. G. S. b. m.)-----	3,965.384
Kamela, on railroad right of way, 13 meters south of telegraph office, 0.4 meter north of railroad tank, 4 meters west of center of track; iron post stamped "4199 A" (C. & G. S. b. m. 4199 A=U. S. G. S. b. m.)-----	4,206.172
Kamela, 2.5 miles south of, on railroad right of way, 5 poles north of milepost 289, 4 poles west of signboard "Spring Spur," 15 meters east of track; red metal cap on iron pipe (C. & G. S. b. m. K 3)-----	3,358.583
Hilgard, 5.5 miles north of, on railroad right of way, 36 meters east of milepole 292, 5 meters south of center of track; iron post stamped "3581 A" (C. & G. S. b. m. 3581 A=U. S. G. S. b. m.)-----	3,588.427
Hilgard, on railroad right of way, 12 meters west of first telegraph pole west of station, 7 meters north of center of track; iron post slightly loose stamped "3001 A" (C. & G. S. b. m. 3001 A=U. S. G. S. b. m.)-----	3,007.586
Hilgard, 1.5 miles south of, on railroad right of way, 1 telegraph pole west of milepole 299, 12 meters north of track, 3 meters east of telegraph pole; red metal cap on iron pipe (C. & G. S. b. m. J 3)-----	2,967.164
Perry, 0.6 meter east of office of Grande Ronde Lumber Co., 14 meters north of center of track; iron post stamped "2897 A" (C. & G. S. b. m. 2897 A=U. S. G. S. b. m.)-----	2,903.010
La Grande, 3 miles north of, on railroad right of way, 6 poles north of milepole 303, 10 meters south of track, near road crossing; red metal cap on iron pipe (C. & G. S. b. m. I 3)-----	2,858.922
La Grande, 2.5 miles north of, on railroad right of way, in south concrete abutment of bridge 205, in an offset west of track, 1.2 meters from nearest rail, 0.2 meter from inside edge of steel stringer; bottom of square hole (C. & G. S. b. m. H 3)-----	2,847.810
La Grande, in north face of Foley Hotel, in third course of plaster facing of brick wall; aluminum tablet stamped "2782 A" (C. & G. S. b. m. 2782 A=U. S. G. S. b. m.)-----	2,787.775
La Grande, in front of brick and stone building occupied by Lewis's printing offices, near southwest corner, in top of stone stringer below window; red metal disk (C. & G. S. b. m. G 3)-----	2,786.471
La Grande, in front of brick and stone building occupied by Chicago Dry Goods Co., in limestone pillar just south of entrance to stairway, 1.2 meters from ground; red metal disk (C. & G. S. b. m. F 3)-----	2,788.160
La Grande, in north face of brick building occupied by grocery store of J. W. White, 0.3 meter from northeast corner of building, 1.2 meters above ground; copper bolt marked "U. S. B. M."-----	2,785.090
La Grande, on railroad right of way, 50 meters northeast of road crossing at First Street, 9 meters north of northwest corner of railroad tool house, 1.2 meters west of telegraph pole; iron post stamped "2773 A" (C. & G. S. b. m. 2773 A=U. S. G. S. b. m.)-----	2,779.338

La Grande, 2 miles southeast of, on railroad right of way, at trestle 212, 18 meters southwest of track; red metal cap on iron pipe (C. & G. S. b. m. D 3)-----	Feet. 2, 731. 418
La Grande, 4 miles southeast of, on railroad right of way, 5 meters northwest of first pole northwest of milepole 310 and 12 meters northeast of track; red metal cap on iron pipe (C. & G. S. b. m. C 3)-----	2, 707. 866

TELOCASET QUADRANGLE.

[Latitude 45°-45° 30'; longitude 117° 30'-118°.]

From point 6 miles northwest of Union along Oregon-Washington R. R. & Navigation Co.'s track to North Powder.

Union station, 6 miles northwest of, on railroad right of way, 0.3 mile northwest of milepole 312, 15 meters south of track; iron post stamped "2696 A" (C. & G. S. b. m. 2696 A=U. S. G. S. b. m.)-----	2, 701. 837
Union station, 3 miles northwest of, on railroad right of way, one-fourth mile southeast of milepole 315, 3 meters northwest of telegraph pole, 15 meters northeast of track; red metal cap on iron pipe (C. & G. S. b. m. B 3)-----	2, 700. 510
Union station, 0.75 mile northwest of, on right of way, 16 meters northeast of milepost 317, 2 meters south of fence; iron post stamped "2705 A" (C. & G. S. b. m. 2705 A=U. S. G. S. b. m.)-----	2, 711. 424
Union, in west face of brick building of First National Bank, 1 meter from northwest corner, 1.2 meters above ground; copper bolt lettered "U. S. B. M." (C. & G. S. b. m. A 3)-----	2, 792. 861
Union, in brick and stone building owned and occupied by Grande Ronde Valley Lodge, No. 56, of Ancient Free and Accepted Masons; in top of stone stringer on east face of building, 1 meter from southeast corner; aluminum tablet (C. & G. S. b. m. "G. S. Union"=U. S. G. S. b. m.)-----	2, 788. 585
Union, in brick building occupied by Foster Brown Co.'s dry goods store, in top of stone stringer on north side of building, 0.6 meter from northeast corner; red metal disk (C. & G. S. b. m. Z 2)-----	2, 789. 093
Union, in east face of brick and stone building occupied by Joseph Wright's store, 0.5 meter from southeast corner and 1.2 meters above ground; copper bolt marked "U. S. B. M." (C. & G. S. b. m. Y 2)-----	2, 792. 665
Union station, 1.25 miles southeast of, on railroad right of way, 8 poles southeast of milepole 319, 12 meters east of track; red metal cap on iron pipe (C. & G. S. b. m. X 2)-----	2, 812. 936
Union station, 4.25 miles south of, on railroad right of way, 300 meters west of, second snowshed southeast of Union station, 4.5 meters south of track; iron post stamped "3021 A" (C. & G. S. b. m. 3021 A=U. S. G. S. b. m.)-----	3, 027. 126
Telocaset, 3 miles north of, on railroad right of way, east of track and in line of telegraph poles, 2 meters north of milepole 325; red metal cap on iron pipe (C. & G. S. b. m. W 2)-----	3, 247. 862
Telocaset, on railroad right of way, 1 meter east of east corner of fence at section house, 5.4 meters north of center of track; iron post stamped "3440 A" (C. & G. S. b. m. 3440 A=U. S. G. S. b. m.)-----	3, 446. 614
Telocaset, 0.25 mile south of, on Oregon-Washington R. R. & Navigation Co.'s right of way, 4 poles south of milepole 328, in northwest fence corner of road crossing; bottom of square hole in top of stone post, marked "U. S. \square B. M." (C. & G. S. b. m. V 2)-----	3, 438. 368

Telocaset, 3 miles southwest of, on Oregon-Washington R. R. & Navigation Co.'s right of way, 27 meters north of track, at milepole 331; red metal cap on iron pipe (C. & G. S. b. m. U 2)-----	Feet. 3, 300. 088
North Powder, 4.5 miles northeast of, on right of way, 54 meters north of north portal of tunnel 5, 4.2 meters east of track; iron post stamped "3228 A" (C. & G. S. b. m. 3228 A=U. S. G. S. b. m.)-----	3, 235. 356
North Powder, 3.5 miles northeast of, on right of way, in west concrete abutment of bridge 270, north of track; bottom of square hole lettered "U. S. \square B. M." (C. & G. S. b. m. T 2)-----	3, 188. 746
North Powder, 3.25 miles northeast of, on Oregon-Washington R. R. & Navigation Co.'s right of way, in west concrete abutment of bridge 271, north of track; bottom of square hole lettered "U. S. \square B. M." (C. & G. S. b. m. S 2)-----	3, 189. 017
North Powder, 2.75 miles northeast of, on right of way, 0.25 mile west of milepole 334, in face of native lava rock, about 3 meters north of center of track; center of cross in square lettered "U. S. \boxtimes B. M." (C. & G. S. b. m. R. 2)-----	3, 199. 796
North Powder, in southeast wall of limestone building of I. O. O. F., 1.2 meters southwest from east corner and 1.4 meters above ground; copper bolt marked "U. S. B. M." (C. & G. S. b. m. Q 2)-----	3, 256. 478
North Powder, on right of way, 36 meters southwest of station, 10 meters south of center of track, at northeast corner of fence, 4 meters south of wagon road; iron post stamped "3233 A" (C. & G. S. b. m. 3233 A=U. S. G. S. b. m.)-----	3, 242. 160
North Powder, 2 miles southwest of, on right of way, 2½ poles south of milepole 339, 15 meters east of track, at fence corner; red metal cap on iron pipe (C. & G. S. b. m. P 2)-----	3, 292. 725

BAKER CITY QUADRANGLE.

[Latitude 44° 30'-45°; longitude 117° 30'-118°.]

From Hutchinson along Oregon-Washington R. R. & Navigation Co.'s track to Unity.

Hutchinson, on right of way, 8 meters north of milepost 342, 13 meters west of track; iron post stamped "3372 A" (C. & G. S. b. m. 3372 A=U. S. G. S. b. m.)-----	3, 379. 663
Haines, 2 miles north of, on right of way, 0.25 mile north of milepost 345, 15 meters east of track at fence corner north of road crossing; red metal cap on iron pipe (C. & G. S. b. m. O 2)-----	3, 341. 089
Haines, 1.5 miles south of, 9 miles north of Baker City, on right of way, at milepost 348, 27 meters west of track; red metal cap on iron pipe (C. & G. S. b. m. N 2)-----	3, 327. 141
Wingville, 1.5 miles north of, 6 miles north of Baker City, 180 meters east of Jennings's house, on main road between Haines and Baker City, 20 meters west of railroad track; iron post stamped "3338 A" (C. & G. S. b. m. 3338 A=U. S. G. S. b. m.)-----	3, 346. 115
Baker City, 3 miles north of, on right of way, at milepole 354, 2 meters east of track; bottom of square hole in top of limestone post, marked "U. S. \square B. M." (C. & G. S. b. m. M 2)-----	3, 372. 843
Baker City, in north face of limestone city hall building, 0.6 meter from northwest corner, 1.2 meters above ground; red metal disk (C. & G. S. b. m. L 2)-----	3, 448. 865

Baker City, in east face of limestone building of the Order of Elks known as Elks Hall, 0.6 meter from northeast corner, 1.2 meters above ground; red metal disk (C. & G. S. b. m. K 2)-----	Feet. 3, 446. 815
Baker City, in north face of brick building of Sage & Grace Mercantile Co., 3 meters east of northwest corner, 1.2 meters above ground; copper bolt marked "U. S. B. M." (C. & G. S. b. m. J 2)-----	3, 443. 521
Baker City, in astronomic pier in front yard of public high school; bronze tablet stamped "3433 A" (C. & G. S. b. m. 3433 A=U. S. G. S. b. m.)-----	3, 440. 871
Baker City, 2 miles south of, in north concrete abutment of bridge 307, east of track, in offset of abutment, 45 centimeters from east edge; bottom of square hole (C. & G. S. b. m. I 2)-----	3, 495. 679
Norton, 45 meters north of section house; iron post stamped "3646 A" (C. & G. S. b. m. 3646 A=U. S. G. S. b. m.)-----	3, 654. 261
Norton, 1 mile southeast of siding at, on right of way, 2 poles east of milepole 364, in concrete culvert south of track; bottom of square hole (C. & G. S. b. m. H 2)-----	3, 716. 150
Encina, 0.5 mile east of, 4 poles east of milepole 367, 12 meters south of track, at road crossing, 3 meters east of telegraph pole; red metal cap on iron pipe (C. & G. S. b. m. G 2)-----	3, 954. 551
Pleasant Valley, 30 meters south of track, 4.5 meters south of southwest corner of railroad house; iron post stamped "3818 A" (C. & G. S. b. m. 3818 A=U. S. G. S. b. m.)-----	3, 826. 839
Pleasant Valley, 3.5 miles southeast of, on right of way, 1.5 meters south of milepole 373; bottom of square hole in top of stone post, marked "U. S. □ B. M." (C. & G. S. b. m. F 2)-----	3, 533. 459
Unity, 0.25 mile north of station sign, in south concrete abutment of bridge 320, 4 poles north of milepole 377, in offset of abutment east of track, 0.2 meter from east edge and 0.2 meter from north edge; bottom of square hole (C. & G. S. b. m. E 2)-----	3, 140. 860
Unity, 55 meters north of section house at, east of track, just east of wagon road; iron post stamped "3139 A" (C. & G. S. b. m. 3139 A=U. S. G. S. b. m.)-----	3, 146. 547

PINE QUADRANGLE.

[Latitude 44° 30'–45°; longitude 117°–117° 30'.]

Unity along Oregon-Washington R. R. & Navigation Co.'s track to Weatherby.

Durkee, 3.25 miles west of, on right of way, 9 meters west of milepole 381, 0.6 meter from fence; bottom of square hole in top of limestone post, marked "U. S. □ B. M." (C. & G. S. b. m. D 2)-----	2, 817. 738
Durkee, 2 miles west of, in west concrete abutment of bridge 324, south of track, in offset of abutment, 0.6 meter from south edge and 0.4 meter from west edge; bottom of square hole (C. & G. S. b. m. C 2)-----	2, 736. 805
Durkee, on right of way, 0.6 meter east of station platform, 11 meters north of track; iron post stamped "2647 A" (C. & G. S. b. m. 2647 A=U. S. G. S. b. m.)-----	2, 654. 666
Durkee, 2.75 miles southeast of, on right of way, about 1 pole north of milepole 387, 15 meters east of track; red metal cap on top of iron pipe (C. & G. S. b. m. B 2)-----	2, 561. 254

Durkee, 4.75 miles south of, on right of way, 300 meters north of milepole 389, 4 meters south of wagon road, 7 meters north of track, 1.2 meters south of fence; iron post stamped "2518 A" (C. & G. S. b. m. 2518 A=U. S. G. S. b. m.)	Feet. 2,526.342
Weatherby, 0.75 mile north of, about 6.5 miles south of Durkee, in north abutment of bridge 343, east of track, in concrete offset of abutment, 45 centimeters from south edge, 62 centimeters from east edge; bottom of square hole (C. & G. S. b. m. A 2)	2,412.706
Weatherby, 0.25 mile north of station sign, 7 miles south of Durkee, on right of way, 1 pole north of milepole 391, 15 meters west of track; red metal cap on iron pipe (C. & G. S. b. m. Z)	2,409.950

BIRCH CREEK QUADRANGLE.

[Latitude 44°-44° 30'; longitude 117°-117° 30'.]

From Weatherby along Oregon-Washington R. R. & Navigation Co.'s track to Huntington.

Weatherby, 1.5 miles south of, on right of way, 180 meters west of west portal of tunnel 6, 12 meters north of track, 2.5 meters from east corner of fence; iron post stamped "2369 A" (C. & G. S. b. m. 2369 A=U. S. G. S. b. m.)	2,376.821
Huntington, 8 miles north of, 3 poles north of milepole 397, in north concrete abutment of bridge 353, in offset of abutment east of track, 1 meter from east edge, 0.3 meter from south edge; bottom of square hole (C. & G. S. b. m. Y)	2,282.796
Huntington, 6.5 miles north of, 0.5 mile north of milepole 399, in south concrete abutment of bridge 355, in offset of abutment, 2.5 meters east of track, 35 centimeters from north edge, 35 centimeters from east edge; bottom of square hole (C. & G. S. b. m. X)	2,242.728
Huntington, 5.5 miles northwest of, on right of way, 0.5 mile north of milepole 400, about 10 meters west of track, 5 meters west of whistle board; bottom of square hole in top of limestone post, marked "U. S. B. M." (C. & G. S. b. m. W)	2,228.913
Huntington, 5 miles northwest of, on right of way, 108 meters south of bridge 356, 9 meters east of track, 4 meters west of fence; iron post stamped "2215 A" (C. & G. S. b. m. 2215 A=U. S. G. S. b. m.)	2,222.908
Huntington, 3.75 miles north of, in north abutment of bridge 360, in concrete offset east of track, 0.25 meter from south edge and 0.5 meter from east edge; bottom of square hole (C. & G. S. b. m. V)	2,184.248
Huntington, 3 miles north of, in north abutment of bridge 362, in concrete offset east of track, 0.25 meter from south edge and 0.5 meter from east edge; bottom of square hole (C. & G. S. b. m. U)	2,165.436
Huntington, 2 miles north of, in north abutment of bridge 364, in concrete offset east of track, 0.25 meter from south edge, 0.5 meter from east edge; bottom of square hole (C. & G. S. b. m. T)	2,148.957
Huntington, 1 mile north of, in north abutment of bridge 365, in concrete offset east of track, 0.25 meter from south edge and 0.4 meter from east edge; bottom of square hole (C. & G. S. b. m. S)	2,131.843
Huntington, in front wall of brick building occupied by the Owl Drug Co. and post office, midway between show window and stairway, west of entrance to store, 1.2 meters above ground; copper bolt marked "U. S. B. M." (C. & G. S. b. m. R)	2,115.818

Huntington, on Washington Street, in front wall of brick building of Oregon Commercial Co., near stairway between grocery store and drug store, in sixth row of bricks above stone foundation; aluminum tablet stamped "2105 A" (C. & G. S. b. m. 2105 A=U. S. G. S. b. m.)-----	Feet. 2, 113. 336
Huntington, 1 mile northeast of, east of track, 7 poles south of milepole 540, in south abutment of bridge 382, 0.3 meter from south edge and 0.28 meter from east edge of sandstone offset east of track; bottom of square hole (C. & G. S. b. m. Q)-----	2, 096. 883
Huntington, 1.5 miles northeast of, 2 poles south of milepole 540, in north abutment of bridge 381 over Burnt River, in sandstone offset east of track, 0.2 meter from south edge and 0.25 meter from east edge; bottom of square hole (C. & G. S. b. m. P)-----	2, 126. 894
Huntington, 2 miles northeast of, 12 poles south of milepole 539, in north abutment of bridge 380 over Burnt River, in concrete offset east of track, 0.3 meter from east edge, 0.2 meter from south edge; bottom of square hole (C. & G. S. b. m. O)-----	2, 086. 885

WEISER QUADRANGLE.

[Latitude 44°-44° 30'; longitude 116° 30'-117°.]

Near Ontario.

Ontario, 1 mile north of, in top of north abutment of bridge 334 over Malheur River, in top of sandstone offset, west of track, 0.35 meter from west edge, 0.4 meter from south edge; bottom of square hole (C. & G. S. b. m. N)-----	2, 148. 577
Ontario, in south face of brick building occupied by Griffin & Staples's dry goods store, 1 meter west of southeast corner, 1.5 meters above ground; copper bolt (C. & G. S. b. m. M)-----	2, 155. 723
Ontario, in north face of brick building occupied by Oregon Forwarding Co., 1.5 meters east of northeast corner, 1.5 meters above ground; copper bolt (C. & G. S. b. m. L)-----	2, 155. 119
Ontario, in west face of brick building of Carter House, 1 meter north of side door, 1.5 meters above ground; copper bolt (C. & G. S. b. m. K)-----	2, 155. 801
Ontario, at corner of Main Street and street leading to railroad station, 3.6 meters east of northeast corner, at Carter House; iron post stamped "2143 H" (C. & G. S. b. m. 2143 H=U. S. G. S. b. m.)-----	2, 151. 595

MITCHELL BUTTE QUADRANGLE.

[Latitude 43° 30'-44°; longitude 117°-117° 30'.]

From point 5 miles south of Ontario along Oregon Short Line R. R. to Nyssa.

Ontario, 5 miles south of, one-half pole south of milepole 496, in limestone culvert, 6 meters east of track, 0.07 meter from east edge, 0.1 meter from north edge of culvert; bottom of square hole (C. & G. S. b. m. J)-----	2, 158. 430
Ontario, 4 miles south of, in north abutment of bridge 331, 6½ poles south of milepole 497, 0.2 meter from west edge and 0.2 meter from south edge of offset, in concrete; bottom of square hole (C. & G. S. b. m. I)-----	2, 160. 513

Nyssa, 2 miles north of, on railroad right of way, opposite milepole 493, 27 meters east of track; bottom of square hole in top of stone post marked "U. S. <input type="checkbox"/> B. M." (C. & G. S. b. m. H)-----	Feet. 2,167.687
Nyssa, in sandstone capstone of northeast pillar of railroad water tank, 0.1 meter from north edge and 0.1 meter from east edge; bottom of square hole (C. & G. S. b. m. G)-----	2,181.094
Nyssa, 1 mile south of, in north abutment of bridge 328 over Snake River, in sandstone offset east of track, 0.2 meter from south edge, 0.25 meter from east edge; bottom of square hole lettered "U. S. <input type="checkbox"/> B. M." (C. & G. S. b. m. F)-----	2,184.846

APPENDIX B.

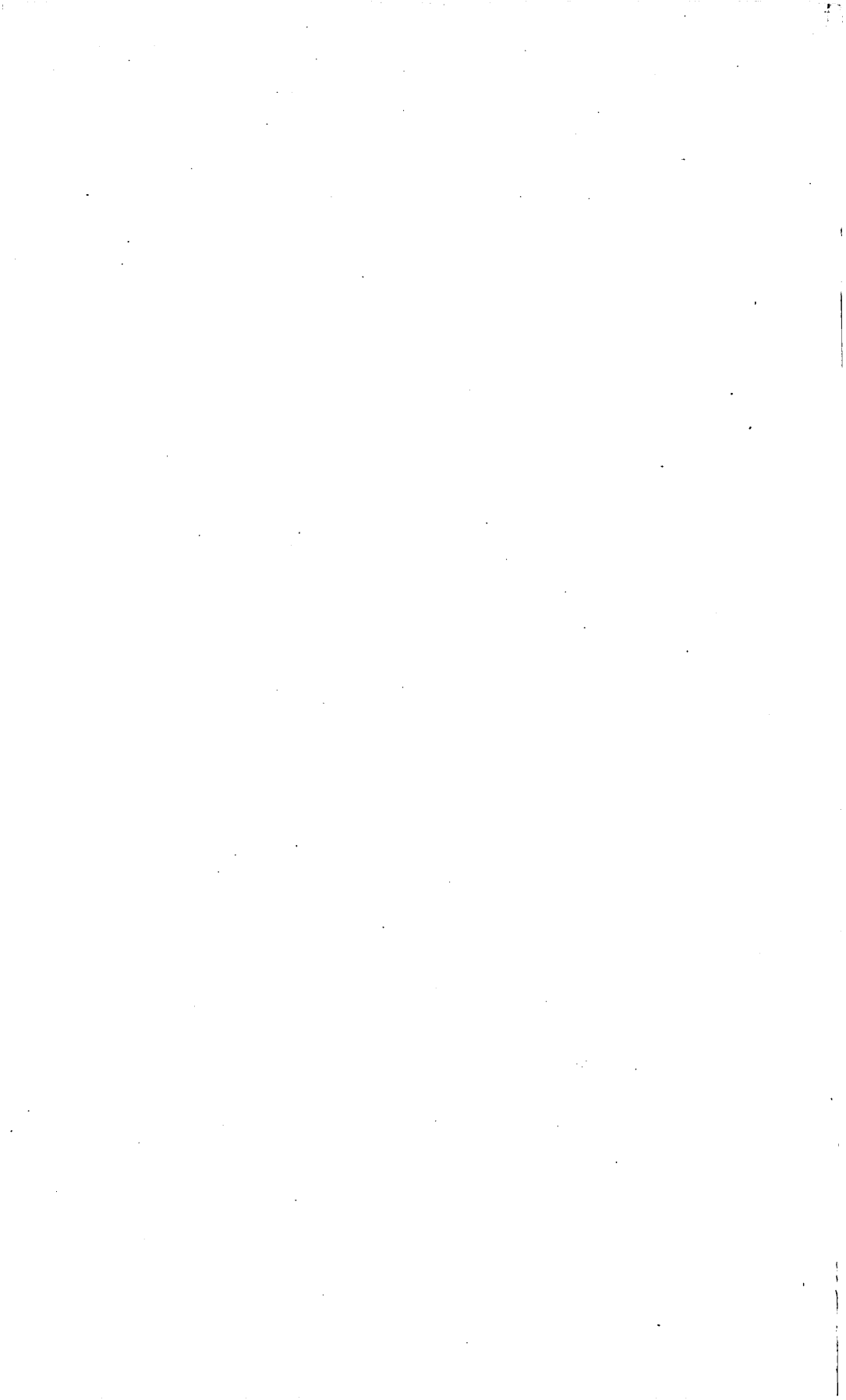
SECONDARY ELEVATIONS.

Secondary elevations from records and topographic maps of the United States Geological Survey, including vertical-angle bench marks, altitudes of well-known summits, water-surface elevations of prominent lakes, and other useful elevations are given below. These elevations are approximate only and should not be used for accurate work.

Locality.	Quadrangle.	County.	Elevation.
Alexander Butte.....	Roseburg.....	Douglas.....	1,610
Alkali triangulation station.....	Umatilla.....	Umatilla.....	2,714
Arrant Point.....	Crater Lake National Park..	Klamath.....	6,815
Bald.....	Sumpter.....	Baker-Grant.....	8,330
Bald Crater.....	Crater Lake National Park..	Klamath.....	6,474
Bald Knob.....	Port Orford.....	Coos-Curry.....	3,614
Bald Mountain.....	Baker City.....	Baker.....	6,667
Do.....	Grants Pass.....	Josephine.....	4,454
Do.....	Port Orford.....	Curry.....	2,957
Do.....	Telocaset.....	Wallowa.....	7,911
Bald Top.....	Crater Lake National Park..	Klamath.....	6,220
Baldy Mountain.....	Grants Pass.....	Josephine.....	2,735
Do.....	Ironside Mountain.....	Grant.....	7,634
Baldy Peak.....	Grants Pass.....	Jackson.....	4,633
Barklow Mountain.....	Port Orford.....	Curry-Coos.....	3,559
Bennett Butte.....	do.....	Coos.....	2,185
Big Hill.....	Telocaset.....	Union.....	4,686
Bill Peak.....	Coos Bay.....	Coos.....	1,575
Bingham Mountain.....	Port Orford.....	do.....	2,287
Black Butte.....	Ironside Mountain.....	Grant.....	5,445
Black Mountain.....	Sumpter.....	Baker.....	6,646
Bolt Mountain.....	Grants Pass.....	Josephine.....	2,222
Bray Mountain.....	Port Orford.....	Coos.....	3,251
Brushy Bald Mountain.....	do.....	Curry.....	2,493
Brushy Butte.....	Roseburg.....	Douglas.....	3,030
Brushy Mountain.....	Port Orford.....	Curry.....	3,598
Buckhorn Mountain.....	Riddles.....	Douglas.....	3,676
Buck Mountain.....	Ironside Mountain.....	Baker.....	5,160
Buck Peak.....	Roseburg.....	Douglas.....	3,380
Buck Point.....	Grants Pass.....	Josephine.....	5,261
Bulger Hill.....	Sumpter.....	Baker.....	5,109
Bullrun Rock.....	Ironside Mountain.....	do.....	7,873
Castle Rock.....	do.....	Malheur.....	6,845
Cazad Mountain.....	Roseburg.....	Douglas.....	2,600
Cedar Springs Mountain.....	Riddles.....	Douglas-Jackson.....	5,126
China Cap.....	Telocaset.....	Union.....	8,058
Chindere Mountain.....	Mount Hood.....	Hood River.....	4,666
Clark Mountain.....	Telocaset.....	Union.....	5,519
Cloudcap.....	Crater Lake National Park..	Klamath.....	8,070
Colebrook Butte.....	Port Orford.....	Curry.....	2,046
Copper Mountain.....	do.....	do.....	3,520
Coyote Point.....	Baker City.....	Baker.....	3,870
Crabtree Hill.....	Eugene.....	Lane.....	480
Craggy Mountain.....	Grants Pass.....	Josephine.....	6,320
Craig Mountain.....	Telocaset.....	Union.....	4,988
Crater Lake, water surface in 1908.....	Crater Lake National Park..	Klamath.....	6,177
Crater Lake Lodge.....	do.....	do.....	7,076
Crater Peak.....	do.....	do.....	7,265
Dalreed Butte.....	Blalock Island.....	Morrow.....	763
Dearfroff Mountain.....	Ironside Mountain.....	Baker.....	7,207
Deer Butte.....	Mitchell Butte.....	Malheur.....	3,615

Locality.	Quadrangle.	County.	Elevation.
Defiance Mountain.....	Mount Hood.....	Hood River.....	4,960
Desert Cone.....	Crater Lake National Park.....	Klamath.....	6,651
Desert Ridge.....	do.....	do.....	6,941
Dodson Mountain.....	Roseburg.....	Douglas.....	3,235
Dry Creek Butte.....	Mitchell Butte.....	Malheur.....	4,060
Dutton Cliff.....	Crater Lake National Park.....	Klamath.....	8,150
Dyer Rock.....	do.....	do.....	7,880
Eden Ridge.....	Port Orford.....	Coos.....	3,541
Edson Butte.....	do.....	Curry.....	2,781
Eightmile Prairie Mountain.....	do.....	do.....	2,363
Elkhorn Peak.....	Sumpter.....	Baker.....	8,922
Elk Mountain.....	Riddles.....	Josephine.....	4,368
Emigrant Buttes.....	Umatilla.....	Umatilla.....	759
Fielder Mountain.....	Grants Pass.....	Jackson.....	3,789
First Prairie Mountain.....	Port Orford.....	Curry.....	2,535
Frazier Mountain.....	Telocaset.....	Union.....	5,425
French Mountain.....	Grants Pass.....	Josephine.....	5,486
Garfield Peak.....	Crater Lake National Park.....	Klamath.....	8,060
Glacier Mountain.....	Ironside Mountain.....	Baker.....	7,931
Glacier Peak.....	Crater Lake National Park.....	Klamath.....	8,156
Gold Hill.....	Grants Pass.....	Jackson.....	2,640
Gold Ridge, top of, N.E. $\frac{1}{4}$ sec. 16, T. 12 S., R. 43 E., in large rock at base of cairn; aluminum tablet stamped "4812" (ver- tical-angle bench mark).	Pine.....	Baker.....	4,812
Grants Pass Peak.....	Grants Pass.....	Josephine.....	3,835
Grayback Mountain.....	do.....	do.....	7,043
Do.....	Riddles.....	Douglas.....	4,033
Green Knob.....	Port Orford.....	Curry.....	3,524
Green Mountain.....	Riddles.....	Douglas-Jackson.....	4,824
Grigsby Rock.....	Coos Bay.....	Coos.....	1,300
Grizzly Peak.....	Ashland.....	Jackson.....	6,000
Grouse Hill.....	Crater Lake National Park.....	Klamath.....	7,401
Grouse Mountain.....	Port Orford.....	Curry.....	2,521
Halfway, in northwest corner of bank building, bronze tablet stamped "2653 VA".	Pine.....	Baker.....	2,653
Hermiston Butte.....	Umatilla.....	Umatilla.....	620
Holcomb Peak.....	Grants Pass.....	Josephine.....	5,273
Hot Rock.....	Umatilla.....	Umatilla.....	484
Huckleberry Mountain.....	Sumpter.....	Baker.....	5,911
Humbug Mountain.....	Port Orford.....	Curry.....	1,748
Ironside Mountain.....	Ironside Mountain.....	Malheur.....	7,804
Johnson Mountain.....	Port Orford.....	Coos.....	2,918
Kelly Butte.....	Eugene.....	Lane.....	689
Kerby Peak.....	Grants Pass.....	Josephine.....	5,555
Kings Mountain.....	Sumpter.....	Baker.....	4,972
Lake Mountain.....	Grants Pass.....	Josephine.....	6,663
Lane Mountain.....	Roseburg.....	Douglas.....	3,500
Larch Mountain.....	Mount Hood.....	Multnomah.....	4,045
Little Baldy.....	Ironside Mountain.....	Baker-Grant.....	7,749
Little Craggy Peak.....	Grants Pass.....	Josephine.....	6,283
Little Grayback Mountain.....	do.....	Jackson.....	5,060
Little Grayback Peak.....	do.....	Josephine.....	5,453
Little Lookout triangulation station, in solid rock, with cairn 6 feet at base and 7 feet high built over it; sec. 18, T. 10 S., R. 44 E.; bronze tablet stamped "6692."	Pine.....	Baker.....	6,692
Llao Rock.....	Crater Lake National Park.....	Klamath.....	8,046
Lone Pine Mountain.....	Baker City.....	Baker.....	5,077
Lone Rock.....	Ironside Mountain.....	do.....	6,930
Lookout Mountain.....	do.....	Baker-Grant.....	8,041
Lookout Mountain, triangulation station, in center of sec. 13, T. 11 S., R. 44 E.; bronze tablet under a cairn.	Pine.....	Baker.....	7,123
Maggie Peak.....	Baker City.....	do.....	4,561
Marble Point.....	Sumpter.....	do.....	6,672
Mount Avery.....	Port Orford.....	Curry.....	2,613
Mount Butler.....	do.....	do.....	2,924
Mount Fanny.....	Telocaset.....	Union.....	7,132
Mount Harris.....	do.....	do.....	5,372
Mount Hood, the highest point in the State yet determined.	Mount Hood.....	Clackamas-Hood River.....	11,225
Mount Isabelle.....	Grants Pass.....	Jackson.....	4,503
Mount Pitt.....	Ashland.....	do.....	9,760
Mount Tabor.....	Portland.....	Multnomah.....	645
Nickel Mountain.....	Riddles.....	Douglas.....	3,533
Oak Hill.....	Eugene.....	Lane.....	648
Old Baldy.....	Grants Pass.....	Josephine.....	4,005
Panther Butte.....	Riddles.....	Douglas.....	3,517
Panther Mountain.....	Port Orford.....	Curry.....	3,170
Pebble Hill.....	do.....	do.....	3,005
Pilot Knob.....	Ashland.....	Jackson.....	6,104
Redcloud Cliff.....	Crater Lake National Park.....	Klamath.....	7,950
Red Cone.....	do.....	do.....	7,372

Locality.	Quadrangle.	County.	Elevation.
Red Mountain	Grants Pass	Josephine	5,196
Do	Sumpter	Baker	8,304
Reeves Mountain	Telocaset	Union	5,394
Rock Creek Butte triangulation station ..	Sumpter	Baker	9,097
Rock Hill	Eugene	Lane	827
Rocky Butte	Portland	Multnomah	607
Rocky Peak	Port Orford	Curry	3,023
Roundtop Mountain	do	do	1,330
Roxy Ann Peak	Ashland	Jackson	3,600
Rustler Rock	do	do	6,200
Saddle Mountain	Klamath	Klamath	6,976
St. Paul Mountain	Riddles	Josephine	4,301
Salmon Mountain	Port Orford	Coos-Curry	3,234
Sand Rock Mountain	do	Coos	2,618
Sarvis Buttes	Umatilla	Umatilla	1,685
Sawtooth Rock Mountain	Port Orford	Curry	3,433
Scott Mountain	Roseburg	Douglas	4,300
Scott Peak	Crater Lake National Park ..	Klamath	8,938
Second Prairie Mountain	Port Orford	Curry	2,743
Sevenmile Peak	do	do	2,985
Sexton Mountain	Riddles	Josephine	3,855
Sheep Mountain, 50 feet east of rock cairn on highest point of southeast end of, northeast quarter sec. 19, T. 10 S., R. 45 E., in small ledge; aluminum tablet stamped "5915"	Pine	Baker	5,915
Sheep Rock	Sumpter	do	6,017
Silver Butte	Riddles	Douglas	4,000
Siskiyou Peak	Ashland	Jackson	7,662
Skinner Butte	Eugene	Lane	681
Sparta triangulation station, center of sec. 9, T. 8 S., R. 44 E., bronze tablet in rock ..	Pine	Baker	4,955
Sterling Peak	Ashland	Jackson	7,377
Steve Peak	Grants Pass	Josephine	5,809
Sugarloaf Mountain	Port Orford	Curry	2,541
Sugarloaf Peak	Grants Pass	Josephine	4,473
Summit Rock	Ironside Mountain	Grant	7,317
Sunset, on point of spur 0.2 mile southeast of forks of Copperfield road, bronze tablet ..	Pine	Baker	2,573
Tallowbox Mountain	Grants Pass	Jackson	5,021
Timber Crater	Crater Lake National Park ..	Klamath	7,360
Timber Mountain	Grants Pass	Jackson	4,444
The Watchman	Crater Lake National Park ..	Klamath	8,025
T. 10 S., R. 43 E. NW. $\frac{1}{4}$ sec. 3, northeast end of high rocky point, in rock north- west of rock cairn; aluminum tablet stamped "4935"	Pine	Baker	4,935
T. 6 S., R. 44 E., SE. $\frac{1}{4}$ sec. 34, on west end of high, partly-timbered summit; bronze tablet in large boulder	do	do	6,663
Tyee Mountain	Roseburg	Douglas	2,655
Umatilla Butte	Umatilla	Umatilla	675
Union Peak	Crater Lake National Park ..	Klamath	7,698
Vale Butte triangulation station	Mitchell Butte	Malheur	3,167
Vidal Cliff	Crater Lake National Park ..	Klamath	8,135
Walker Mountain	Riddles	Josephine	3,849
White Rock	Roseburg	Douglas	4,010
Woodby Mountain	Port Orford	Coos	2,832
Woodruff Mountain	Roseburg	Douglas	1,660
Yainax Butte	Klamath	Klamath	7,277
Yam Say Peak	do	do	8,242
Yellow Butte	Roseburg	Douglas	2,510



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