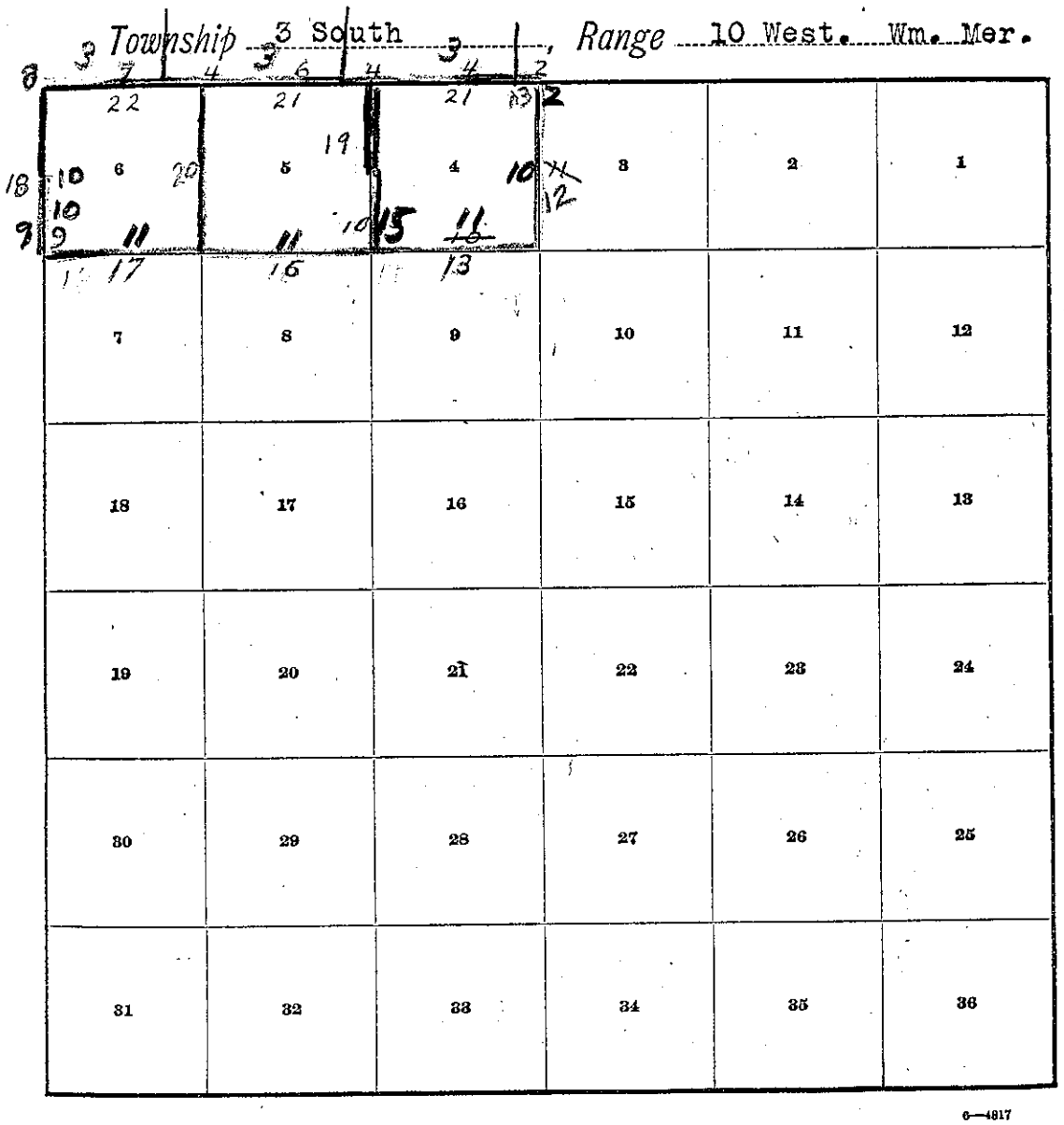
4—679 b

INDEX DIAGRAM. (1933)

Township 3 South, Range 10 West. Wm. Mer.



6—4817

Retracements indexed in red.

Resurveys indexed in blue.

Original surveys indexed in black.

See Map F-40-245

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4—679

FIELD NOTES

OF THE SURVEY OF THE

DEPENDENT RESURVEY OF A PORTION OF THE NORTH AND WEST BOUNDARIES AND

A PORTION OF THE SUBDIVISIONAL LINES, AND

THE SURVEY OF A PORTION OF THE

WEST BOUNDARY AND A

PORTION OF THE SUBDIVISIONAL LINES OF

TOWNSHIP 3 SOUTH, RANGE 10 WEST

Of the Willamette *Meridian,*

In the State of Oregon

EXECUTED BY

Ernest P. Rands, District Cadastral Engineer, and

Otis O. Gould, U. S. Transitman

In the capacity of U. S. Surveyor s, under Special Instructions dated January 10, *19*33, *issued by the District Cadastral Engineer to govern surveys included in Group* 152, *which were approved by the Commissioner of the General Land Office, February 10, 19*33, *and Assignment Instructions dated* March 1, *19*33

Survey commenced April 18, *19*33

Survey completed May 10, *19*33

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BOOK 8

Township 3 South, Range 10 West.

The retracement and dependent resurvey of a portion of the north and west boundaries, and a portion of the subdivisional lines, and the survey of a portion of the west boundary and a portion of the subdivisional lines of township 3 south, range 10 west, were executed with a Burt solar compass made by W. and L. E. Gurley, Serial No. 20, U. S. G. S., constructed in accordance with the standard specifications of the General Land Office. The horizontal circle has a diameter of 5¾ ins., with opposite double verniers reading to single minutes; the sight vanes have a length of 8 ins. and a spread of 14 ins. The instrument is equipped with a Burt solar attachment; radius of latitude arc 5.4 ins., and declination arc 4¾ ins., each with verniers reading to single minutes.

The observations in camp: on Polaris for the establishment of the meridian: and the altitude observation on the sun on the meridian to verify the latitude and the reading of my watch, were executed with a light mountain solar transit made by Buff and Buff, Serial No. 9987, constructed in accordance with the standard specifications of the General Land Office. The horizontal circle has a diameter of 4½ ins., with opposite double verniers reading to single minutes; the vertical circle has a diameter of 4 ins., with one double vernier reading to single minutes: the telescope has fixed stadia wires, ratio 1:132, with focal constant of 1.2 lks. The instrument is equipped with improved Smith solar attachment: radius of latitude arc 2½ ins., and of declination arc 3½ ins., each with verniers reading to single minutes. The instruments were in good condition. having been placed in satisfactory adjustment prior to the beginning of the survey, and tested and found free from appreciable error, were approved by the district cadastral engineer on March 1, 1933. I examined all the instrumental adjustments before making the field tests hereinafter recorded.

The directions of all lines were determined by solar compass method. The measurements were made with a Lallie steel tape, 5 chs. in length, graduated every link for the first 100 lks. and the balance at intervals of 10 lks. The tape was tested by comparison with a Lufkin standard 1 ch. steel tape and found correct. The measurements were made on the slope, and the vertical angle of each interval was ascertained by a clinometer in good adjustment: the horizontal equivalents are entered in the field note record.

The data furnished with the special instructions gives the geographic position of the SE. cor. of T. 4 S., R. 8 W., as follows: latitude 45°10½'N., and longitude 123°36½'W.

April 18, 1933, in camp in the NE ¼ sec. 24, T. 2 S., R. 10 W., at 5h 56.5m a. m. l. m. t., or 6h 11.9m a. m. by my watch, which reads correct 120th meridian time as determined by radio signal I observe Polaris at eastern elongation, making two sights each with the telescope in direct and reversed positions, and place a tack at the mean point, on a peg driven firmly in the ground 10 chs. N. After sunrise, I lay off the azimuth of Polaris 1°30'01", and make a meridian mark on a second peg, 26.19 lks. (17.29 ft.) to the west of the mean point in the line determined by observation; I verify the angle by a vernier reading of the instrument.

In order to verify the latitude of this station and the reading of my watch, I make a meridian observation of the sun, first setting on the lower limb and noting the transit of the west limb, then after reversal of the instrument, setting on the upper limb and noting the transit of the east limb, as follows:

Mean observed altitude	55° 30' 00"

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	Reduced latitude	45° 23' 47"
	Mean watch time of observation	12h 15m 54s
	Watch fast of l. m. t.	15m 26s
	Same, by reference to radio time signal and calculated difference in longitude	16m 32s

Every 30 min. from 6:30 to 10:30 a. m. and from 1:30 to 5:30 p. m., I make proper setting on the arcs of the solar attachment and ascertain that the resulting orientation of the instrument, when compared with the meridian established by Polaris observation, has a maximum error of less than 1'30".

I repeat the tests of the arcs daily by noon observation, and verify the meridional indications at frequent intervals throughout the survey.

The observed magnetic declination is 21°30'E.

Chains

Resurvey of Portion of North Boundary of T. 3 S., R. 10 W.

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"Reestablishment of the survey executed by William P. Wright, U. S. Deputy Surveyor in 1882,"

Retracement.

From the cor. of secs. 33 and 34 only, T. 2 S., R. 10 W.,

East, retracing the south bdy. of sec. 34.

8.94 Fall 10 lks. N. of closing cor. of secs. 3 and 4.

39.91 Fall 21 lks. S. of the ¼ sec. cor. of sec. 34 only.

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True Line.

The position of the ¼ sec. cor. of sec. 34 only, was determined by record bearing and distance to the original SE. bearing tree.

At point for cor.

Set an iron post, 3 ft. long, 1 in. diam., 27 ins. in the ground, for ¼ sec. cor. of sec. 34 only, with br. cap mkd.

¼ S34

1933

from which

A hemlock, 36 ins. diam., bears S. 2° E., 22 lks. dist., mkd. B T ¼ S. (Old B. T.)

A rotted stump, bears N. 14° E., 15 lks. dist. (Old B. T.)

A hemlock, 30 ins. diam., bears N. 8½° E., 91 lks. dist., mkd. ¼ S 34 B T. (New B. T.)

A hemlock, 38 ins. diam., bears N. 62° W., 66 lks. dist., mkd. ¼ S 34 B T. (New B. T.)

The geographic position of the ¼ sec. cor. of sec. 34 on the S. bdy. of T. 2 S., R. 10 W. is: Latitude 45° 21' 15"N., and longitude 123° 54'W.

Thence