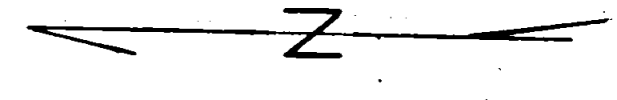
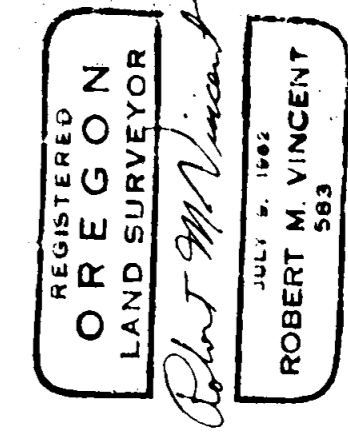
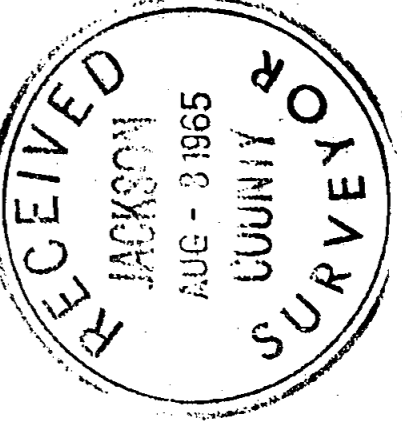


# SURVEY MAP

REESTABLISHMENT 1/4 COR. SECS. 20 AND 29  
 TOWNSHIP 32 SOUTH, RANGE 1 EAST, WILLAMETTE MERIDIAN  
 APRIL 23, 1965  
 MERIDIAN BY SOLAR OBSERVATION  
 SCALE - 1 INCH = 500 FEET

- Original Corner Found
- Corner Reestablished By Survey
- Reestablished Corner Found



SOLAR OBSERVATION SHEET

Date 3/22/63 Sec 20 Twp 32S R 1E Obs. by Brandt  
 Instrument No. 170451 Inst. Corr: Horiz. — Vert. —  
 Compass Brg. of Ref. Line Due W Mag. Decl. 20°E  
 Latitude 142° 46.0' Elevation 1950 Temperature 50°  
 Inst. at Sta. Sec. Cor 24' Pointing at Sta. #1 Hor. & turned Counterclockwise

POINTING SUN

TIME

Position	Horiz. &	Vert. &	Time
1 Ave D&E ⊕	143° 38 1/2'	32° 47'	9:24 AM
2 " ⊕	142° 46'	33° 19 1/2'	9:28
3 " ⊕	142° 04'	33° 45 1/2'	9:31

Std. Time 120 th Merid 9:27 AM  
 Corr for 24 Hr Basis + —  
120 th Merid. Time 9:27  
 Corr for Time Zone + 8  
 Greenwich Civil Time 17:27

1 SUN'S ALTITUDE "h"  
 Measured Alt 32° 47.0'  
 Refract. & Par.  $(1.49) \cdot 4(1.00) + (.13) = \underline{-1.3}$   
 True Altitude "h" = 32° 45.7'

Sun's "d" on GCT N 0° 15.5'  
 Change/Hr .99 x 17.45 Hrs = 17.3  
 Sun's "d" at Time of Obs. N 0° 32.8'

2 SUN'S ALTITUDE "h"  
 Measured Alt 33° 19.5'  
 Refract. & Par.  $(1.46)(.94)(1.00) + (.12) = \underline{1.3}$   
 True Altitude "h" = 33° 18.2'

3 SUN'S ALTITUDE "h"  
 Measured Alt 33° 45.5'  
 Refract. & Par.  $(1.43)(.94)(1.00) + (.12) = \underline{1.2}$   
 True Altitude "h" = 33° 44.3'

FORMULA

Z = Sun's Brg. (E of N in AM & W of N in PM). Minus val. of Cos Z indicates Z is greater than 90°.  $\text{Cos } Z = \frac{\sin \delta}{\text{Cos } h \text{ Cos } \phi}$  - [then then]

1  $\text{Cos } Z = \frac{.00954}{.84093 \times .73413} - .64351 \times .92493$   $\frac{143^\circ 38 \frac{1}{2}'}{54 \ 34}$   
589° 04 1/2' W  
 =  $\frac{.00954}{.61735} - .59520$   
 =  $.01545 - .59520 = -.57975$  Z = 554° 34' E Ans. 589° 04 1/2' W

2  $\text{Cos } Z = \frac{.00954}{.83578 \times .73413} - .65696 \times .92493$   $\frac{142^\circ 46'}{53 \ 42}$   
89° 04'  
 =  $\frac{.00954}{.61357} - .60764$   
 =  $.01555 - .60764 = -.59209$  Z = 553° 42' E Ans. 589° 04' W

3  $\text{Cos } Z = \frac{.00954}{.83158 \times .73413} - .66789 \times .92493$   $\frac{141 \ 64}{142^\circ 04'}$   
52° 59'  
89° 05'  
 =  $\frac{.00954}{.61049} - .61775$   
 =  $.01563 - .61775 = -.60212$  Z = 552° 59' E Ans. 589° 05' W

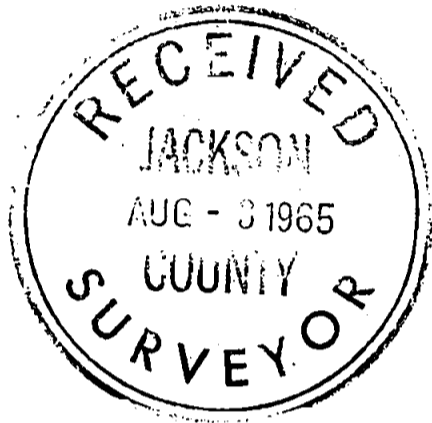
Ave. 589° 04 1/2' W

From this monument an 11 inch Douglas fir bears S09°00'E 19.9 feet, and a 17 inch Douglas fir bears N01°00'E 23.3 feet. Both trees are double blazed and scribed "RS583" in the upper blaze and "BT" in the lower.

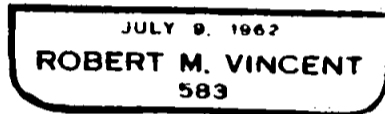
Compass variation was set at 20°00' East and distances were measured to face of blaze.

MERIDIAN - By solar observation.

Field work completed April 8, 1965.



*Robert M. Vincent*



7. It is a matter of agreement among local surveyors who have done extensive retracement work in this Township that, while Moore did not actually survey all the lines in the manner indicated by his report, he recorded numerous calls for topography and did a considerable amount of blazing on those lines which he actually surveyed. Moore's record for the lines not actually covered on the ground usually show a complete absence of calls for terrain features, and the few which are given are grossly inaccurate unless in the immediate vicinity of the terminal point of his work.
8. Sections 20 and 29 have been shown by survey to be distorted sections, with the north half of the west line of Section 29 being 901.8 feet longer than the record distance from the original survey. There were no blazes on this line and the major features of topography were omitted from the record, indicating that the line between Sections 20 and 29 was stubbed in from the south as far as the quarter section corner common to Sections 20 and 29 and terminated at that point. The only line out of the section corner  $\frac{19}{20}$ / $\frac{30}{29}$  showing old blazes and having topographic features called in the official record is to the north between Sections 19 and 20, indicating that this corner was set from the north and was the point of termination of that portion of the subdivision of the township. At the section corner  $\frac{20}{21}$ / $\frac{29}{28}$  found old blazes and line calls for the full mile to the East, one-half mile to the South, and one-half mile to the West, indicating that the section corner  $\frac{20}{21}$ / $\frac{29}{28}$  was set from the East and that the quarter corner for Sections 28 and 29 was stubbed in to the south and the quarter corner common to Sections 20 and 29 was stubbed in to the west with no closure upon the section corner for Sections  $\frac{19}{20}$ / $\frac{30}{29}$ .
9. There being considerable evidence that the original surveyor had made no attempt to place the quarter section corner common to Sections 20 and 29 in its proper relation to the adjacent section corners, and there also being evidence of his actual route, in the form of identified off-line blazes and definite terrain features called in the record, I am convinced that the method of single proportionate measurement could not properly be applied to the reestablishment of this quarter section corner.
10. All the pertinent information available on this matter was assembled and forwarded to the office of the Chief, Branch of Cadastral Engineers, B. L. M., at the State Office, with a request for his consideration of the facts and suggestions as to the proper method of handling this specific situation. Upon receipt of his reply, I reestablished the quarter corner common to Sections 20 and 29 in accordance with suggested procedure, using the mean course of the old blazed line to control latitude and the midpoint in departure between adjacent section corners for the departure coordinate of the corner point.

**CORNER -**

For corner monument set a 1 inch by 36 inch galvanized steel pipe driven 10 inches in the ground to bedrock and surrounded with a mound of stone to 12 inches from the top. This pipe is capped with a 1-1/2 inch to 1 inch galvanized bell reducer filled with pot metal and stamped as shown in 1/8 inch letters and numerals -

1965  
T32S R1E WM  
S 20  
S 29

1/4 COR  
RS583

SURVEY NARRATIVE TO COMPLY WITH O. R. S. 209.250, REVISED BY CHAPTER 555,  
O. L. 1963

FOR - ELK LUMBER COMPANY  
P. O. BOX 606, MEDFORD, OREGON

PURPOSE -

1. To reestablish the quarter section corner common to Sections 20 and 29, Township 32 South, Range 1 East, Willamette Meridian.
2. To determine and mark the true section line between the above mentioned Sections 20 and 29, T32S, R1E.

PROCEDURE -

1. Located and identified the section corner common to Sections 20, 21, 28, and 29 and the section corner common to Sections 19, 20, 29, and 30, T32S, R1E.
2. Traversed with transit and tape westerly from the section corner <sup>20/21</sup>~~29/28~~ to the section corner <sup>19/20</sup>~~30/29~~, following a line of old blazes for approximately the first half mile. Found a difference in latitude between the two corners of 506.4 feet and a shortage in measurement of 249.1 feet from the record distance.
3. After diligent and repeated searches was unable to find either the stone monument or accessories to the quarter corner common to Sections 20 and 29. The terminus of the old blazed line falls within an old burned area. The tree species in this area is predominately madrone, and there are dozens of stones of the approximate dimensions of the original monument in the immediate vicinity.
4. Sampled several blazes on the old line with an increment borer and opened one blaze with an axe, finding the overgrowth to indicate the proper age for original work.
5. Used data from previous surveys by our crews and made additional surveys to complete a closed transit and tape traverse around Section 29, finding the length of the north half of the section line between Sections 30 and 29 to be 901.8 feet greater than the record distance. Other pertinent information from these surveys is shown on the map which is a part of this report.
6. It is a known fact that the south and east boundaries of this Township contain errors in alignment not indicated in the record of the original survey by Rufus Moore in 1883. The survey covered by this report and other recent surveys showing grossly distorted sections within the interior of this Township indicate beyond doubt that Moore completely disregarded the prescribed pattern and procedure for subdividing Townships; and did, in fact, stub in both latitudinal and meridional section lines, following the pattern which best expedited the progress of his work. In many cases he made no attempt to place quarter section corners midway between adjacent section corners or to make ties between independent surveys originating at various points on the exterior lines of the Township.

7. It is a matter of agreement among local surveyors who have done extensive retracement work in this Township that, while Moore did not actually survey all the lines in the manner indicated by his report, he recorded numerous calls for topography and did a considerable amount of blazing on those lines which he actually surveyed. Moore's record for the lines not actually covered on the ground usually show a complete absence of calls for terrain features, and the few which are given are grossly inaccurate unless in the immediate vicinity of the terminal point of his work.
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1965  
T32S R1E WM  
 $\frac{S}{S}$   $\frac{20}{29}$

1/4 COR  
RS583

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O. L. 1963

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Found CS 2" Pipe  
4 CS BT's  
3 Orig BT's (Down) 18

17 ORIGINAL BLAZES & LINE CALLS

19 20  
N 0° 12' E 2598.5 (MEASURED)  
NORTH 2640.0 (RECORD)  
BLAZES & LINE CALLS

Found CS Pipe  
2 CS BT's

19 20  
N 0° 44' E 2516.0 (MEASURED)  
NORTH 2640.0 (RECORD)  
BLAZES & LINE CALLS

Found CS Pipe 19 20  
3 CS BT's OK  
1 Down CS BT  
1 Down Orig BT

N 84° 14' W 5040.1 Ft  
S 89° 21' W 5289.2 Ft

NO BLAZES OR LINE CALLS  
N 78° 52' 30" W 2555.3 (MEASURED)  
S 89° 21' W 2644.2 (RECORD)

NO BLAZES OR LINE CALLS

Fd. Orig Stone  
4 Orig BT's

24 19 BLAZES & LINE CALLS  
25 30

N 0° 16' W 2551.2 (MEASURED)  
NORTH 2640.0 (RECORD)

MERIDIAN

Fd. 2 Orig BT's

N 0° 3' W 2599.2 Ft (MEASURED)  
NORTH 2640.0 (RECORD)

WILLAMETTE

30

Fd. 3 Orig. BT's OK  
1 Orig. BT Down

25 30  
S 87° 53' W 2873.4 (MEASURED)  
S 69° 27' W 2897.4 (RECORD)

Fd. 2 Orig BT's

30 31  
S 88° 26' W 2642.7 (MEASURED)  
S 89° 27' W 2640.0 (RECORD)

BLAZES & LINE CALLS

Fd. CS Pipe  
4 CS BT's

30 31  
N 0° 39' E 2584.7 (MEASURED)  
NORTH 2640.0 (RECORD)

BLAZES & LINE CALLS

Fd. CS Pipe  
2 Orig BT's

29 30  
N 02° 47' E 3541.8 Ft. (RECORD)  
NORTH 2640.0 (RECORD)  
NO BLAZES OR LINE CALLS

29

BLAZES & LINE CALLS

Fd. CS Pipe  
2 CS BT's

32 33  
S 88° 30' W 2606.4 (MEASURED)  
S 89° 29' W 2654.5 (RECORD)

NO BLAZES OR LINE CALLS



Found CS 2" Pipe  
4 CS BT's  
3 Orig BT's (Down)

17 ORIGINAL BLAZES & LINE CALLS

19 20  
N 0° 12' E 2598.5 (MEASURED)  
BLAZES & LINE CALLS

NO BLAZES  
ONE ERRONEOUS LINE CALL

Found CS Pipe  
2 CS BT's

19 20  
N 0° 44' E 2516.0 (MEASURED)  
BLAZES & LINE CALLS

20

Found CS Pipe  
3 CS BT's OK  
1 Down CS BT  
1 Down Orig BT

19 20  
N 0° 47' E 3541.8 FT. (MEASURED)  
NO BLAZES OR LINE CALLS

N 84° 14' W 5040.1 FT (MEASURED)  
S 89° 21' W 5289.2 FT (RECORD)

NO BLAZES OR LINE CALLS  
N 78° 52' 30" W 2555.3 (MEASURED)  
S 89° 21' W 2644.6 (RECORD)

NO BLAZES OR LINE CALLS

ORIGINAL BLAZES & LINE CALLS

N 89° 48' 30" W 2507.3 (MEAS)  
S 89° 21' W 2644.6 (RECORD)  
MEAS. DIST. - 1572.8 FT.  
RECORD CALL - 1626.2 FT.

30

Found CS Pipe  
2 Orig BT's

29 30  
N 02° 47' E 2640.0 (RECORD)  
BLAZES & LINE CALLS

29

Found CS Pipe  
4 CS BT's

30 31  
S 88° 26' W 2642.7 (MEASURED)  
S 89° 27' W 2640.0 (RECORD)

BLAZES & LINE CALLS

S 88° 30' W 2606.4 (MEASURED)  
S 89° 29' W 2654.5 (RECORD)

NO ORIG. BLAZES OR LINE CALLS  
S 86° 53' W 2787.2 (MEASURED)  
S 89° 29' W 2654.5 (RECORD)

Found CS Pipe  
2 Orig BT's

29 32  
N 02° 49' W 2918.0 (MEASURED)  
BLAZES & LINE CALLS

Found CS Pipe  
2 Orig BT's

28 33  
N 02° 49' W 2640.0 (RECORD)