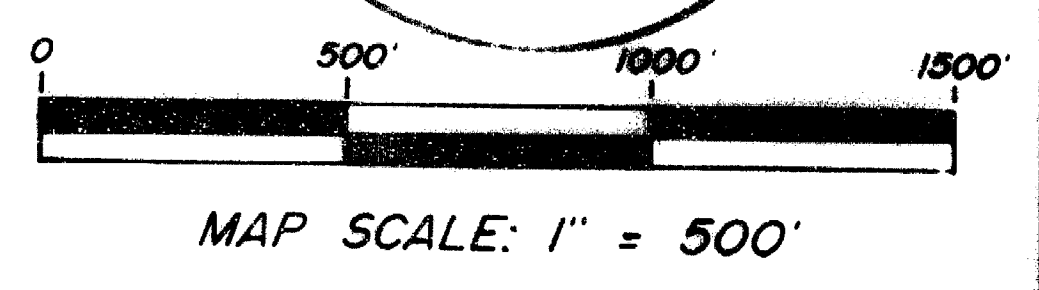


MERIDIAN IS BASED ON SOLAR OBSERVATION.

**** RECEIVED ****
 Date: 1-3-94 By: [Signature]
 This survey consists of:
 1 sheet(s) Map
 10 page(s) Narrative
 JACKSON COUNTY SURVEYOR



SURVEYED BY:
GERALD V. NYGREN
 522 BARKER DRIVE
 MERLIN, OREGON 97532
 PH. (503) 478-7034

REGISTERED PROFESSIONAL LAND SURVEYOR
 [Signature]
GERALD V. NYGREN
 AUGUST 22, 1975
 1035
 EXPIRES 12-31-94

EXAMINED AND ACCEPTED FOR THE U.S.D.A. FOREST SERVICE THIS 6TH DAY OF December, 1993.
 [Signature] COR
 I CERTIFY THAT THIS SURVEY WAS PERFORMED AT THE REQUEST OF THE UMPQUA NATIONAL FOREST SUPERVISOR.
 [Signature] 12/13/93
 SIGNATURE DATE

- LEGEND**
- * INDICATES RECORD PER 1980 SURVEY.
 - CORNER USED TO CONTROL 1980 SURVEY AND THIS SURVEY. (SEE NARRATIVE)
 - CORNER USED TO CONTROL THIS SURVEY.
 - REPLACED 1980 SURVEY MONUMENT WITH 5/8" X 30" IRON ROD WITH YELLOW PLASTIC CAP MARKED "NYGREN LS 1035" AND REMOVED 1980 CORNER ACCESSORIES.
 - RESET 1980 SURVEY MONUMENT STAMPED "RESET 1993" AND ESTABLISHED NEW CORNER ACCESSORIES.
 - CORNER INFORMATION DOCUMENTED IN SURVEY NARRATIVE.
 - TRUE LINE POSTED WITH STEEL AND ALUMINUM POSTS AND GOVERNMENT PROPERTY SIGNS AND BLAZED.
- 1980 SURVEY REFERS TO DOUGLAS COUNTY SURVEY NO. M79-53 AND JACKSON COUNTY SURVEY NO. 8498.
 SURVEY NARRATIVE IS A SEPARATE DOCUMENT.
 SEE SURVEY HISTORY IN SURVEY NARRATIVE.

CERTIFICATE OF SURVEY
 I, GERALD V. NYGREN, A REGISTERED LAND SURVEYOR IN THE STATE OF OREGON, HEREBY CERTIFY THAT THIS PLAT AND THE NOTES HEREON ARE A CORRECT REPRESENTATION OF A SURVEY I PERFORMED AT THE REQUEST OF THE U.S.D.A., FOREST SERVICE, IN ACCORDANCE WITH THE STATUTES OF THE STATE OF OREGON AND THE ARTICLES OF MY CONTRACT.
 11-30-93
 DATE
 [Signature]
 GERALD V. NYGREN, PLS 1035

PLAT OF RESURVEY FOR
 THE UNITED STATES DEPARTMENT OF AGRICULTURE
UMPQUA NATIONAL FOREST
 CONTRACT NO. 53-0411-146
 JACK CADASTRAL SURVEY
 LOCATED IN GOVT. LOTS 1 THRU 12,
 SECTION 2, T.32S., R.1W., W.M.
 DOUGLAS COUNTY, OREGON
 DATE: JULY, 1991 TO SEPTEMBER, 1993.

SURVEY NARRATIVE to comply with O.R.S. 209.250

DATE: July, 1991 to September, 1993.

SURVEYED FOR: United States Department of Agriculture
Umpqua National Forest
P.O. Box 1008
Roseburg, Oregon 97470

SURVEYED BY: Gerald V. Nygren, PLS
522 Barker Drive
Merlin, Oregon 97532

LOCATION: Section 2, Township 32 South, Range 1 West,
Willamette Meridian, Douglas County, Oregon.

NOTE: The 1980 survey referred to in this narrative
is recorded in the Douglas County Surveyor's
Office as No. M79-53 and in the Jackson County
Surveyor's Office as No. 8498.

PURPOSE: Reestablish the East and West Quarter corners
of said Section 2. Resubdivide said
Section 2. Reset corners established in the
1980 survey. Resurvey and mark the South line
of Lots 9, 10, 11, & 12. Resurvey and mark from
the Southwest corner of said Section 2 to the
East One-sixteenth corner on the South line of
said Section 2. Mark the West line of said
Section 2 from the Southwest corner of said
Section 2 to the North One-sixteenth corner on
the West line of said Section 2.

HISTORY: The North line of Section 2 was first
established by Rufus Moore in 1883. In 1922,
Mensch, G.L.O. surveyor, reran the Township
line at the direction of the G.L.O. and labeled
Moore's corners as angle points. Mensch
monumented the Northwest corner of said Section
2 with brass cap stamped "CC" (Closing Corner).
In 1968 the remaining corners that control the
North line of said Section 2 were perpetuated
with brass caps set by the Douglas County
Surveyor. The South, East, and West lines of
said Section 2 were established by Rufus Moore
in 1883. In 1949 the West Quarter corner of
said Section 2 was set by Art Boyer per C.S.
40/214 and found out of position per this
survey. In 1955 the Southwest corner of said
Section 2 was perpetuated with brass cap set by
the General Land Office.

In 1980, Gerald Nygren, under contract with the
United States Department of Agriculture,
subdivided said Section 2. Nygren established
the North Quarter corner by single proportion.
Nygren re-established the South Quarter corner

(continued on page 2)

(continued from page 1)

by single proportion but the original corner has since been found. Nygren re-established the East and West Quarter corners by single proportion.

In 1991, Harold Center, surveyor for the United States Forest Service, contacted Nygren and expressed his concern about the method used to re-establish the East and West Quarter corners in the 1980 survey and that an alternate method may be feasible. Nygren agreed with Center and a contract was made to check the feasibility of an alternate method and re-subdivide said Section 2 if an alternate method was found, using for control the same corners used in his 1980 survey with the exception of the East, West and South Quarter corners.

It is apparent in my 1980 survey that said Section 2 is several hundred feet longer than record along the East and West closing lines and that it was probable that Rufus Moore stubbed the East and West Quarter corners in by running North from the Southeast and Southwest Section corners the record distance of 40.00 chains. To confirm this possibility, I retraced his original notes and found the distance to his original topographic calls to be reasonably close for 40.00 chain and the topographic calls North of 40.00 chains were very erratic. The proportioned West Quarter corner per my 1980 survey falls North of the creek called at 44.00 chains whereas if I used record distance from the Southwest Section corner the West Quarter corner would fall on the South side of the creek as indicated in the original notes. The proportioned East Quarter corner per my 1980 survey falls on a West slope a short distance North of a small creek which was not called in the original notes whereas if I used record distance from the nearest definite call to the South of the East Quarter corner it would fall on a East slope as indicated in the original notes and also as indicated by Robert E. Kleiner (see exhibit "A") who recovered the East Quarter corner in 1949.

Considering the above evidence, I conclude that the West Quarter corner of said Section 2 should be re-established at record distance from the nearest definite record call to the South which would be the Southwest Section corner and the East Quarter corner of said Section 2 should be re-established at record distance from the nearest definite record call to the South which would be the creek call at

(continued on page 3)

(continued from page 2)

22.10 chains North of the Southeast Section corner. The alignment from the Southeast Section corner to the North-sixteenth corner on the East line and from the Southwest Section corner to the North-sixteenth corner on the West line is along or near original blazed trees and old cut lines.

All appurtenant information was submitted to Harold L. Center, Land surveyor for the Rogue River National Forest, who corresponded with Wayne M. Gardner, Branch Chief for the Bureau of Land Management, dated March 31, 1993. See Exhibit "A" filed with this narrative.

Correspondence from Wayne M. Gardener to Harold L. Center, dated April 16, 1993, concurs with this alternate method of re-establishing the lost one-quarter corners. See Exhibit "B" filed with this narrative.

PROCEDURE: I recovered and used my 1980 survey control to execute this survey. I did not visit the corners situated on or near the North line of said Section 2. I will refer to my 1980 survey for corner assessories to corners not visited this survey.

The following described corners were used to control this survey or were set in this survey:

- (1) See 1980 survey. The Northwest corner of said Section 2 (closing corner) was monumented with a General Land Office Brass Cap . Not visited this survey.
- (2) See 1980 survey. Angle Point on Township line was monumented with County Surveyor Brass Cap. Not visited this survey.
- (3) See 1980 survey. The North Quarter corner of said Section 2 was monumented with Aluminum Cap per 1980 survey. Not visited this survey.
- (4) See 1980 survey. Angle Point on Township line was monumented with County surveyor Brass Cap. Not visited this survey.
- (5) See 1980 survey. The Northeast corner of said Section 2 (closing corner) was monumented with County Surveyor Brass Cap. Not visited this survey.
- (6) See 1980 survey. Angle Point on Township line was monumented with County Surveyor Brass Cap. Not visited this survey.

(continued on page 4)

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Survey No. _____
Page 4 of 10

(continued from page 3)

- (7) At the 1/16 80 corner (Northeast corner of Lot 9)
I set a 2 1/2" X 30" Aluminum Pipe with aluminum cap
stamped:

T32S R1W WM
1/16
S2 S1
80
RESET 1993
PLS 1035 1980

New references established this survey:

A Douglas Fir, 12 inches in diameter, bears N4°E, 155.6
feet distance, scribed "1/16 80 S1 BT", this tree was
scribed and used for bearing tree in 1980 survey.

A Douglas fir, 10 inches in diameter, bears N25°W, 175.8
feet distance, scribed "1/16 80 S2 BT", this tree was
scribed and used for bearing tree in 1980 survey.

A 5/8" X 30" iron rod with yellow plastic cap marked
"NYGREN LS1035", bears N0°20'55"W, 100.24 feet distance.

- (8) At the North One-sixteenth corner common to Sections 2
and 3, I set a 2 1/2" X 30" aluminum pipe with aluminum
cap stamped:

T32S R1W WM
N1/16

S3 S2

Reset 1993
1980
PLS 1035

New references established this survey:

A Douglas Fir, 9 inches in diameter, bears N17°E, 2.1
feet distance, scribed "N1/16 S2 BT".

A Douglas Fir, 8 inches in diameter, bears N66°W, 12.4
feet distance, scribed "N1/16 S3 BT".

A 5/8" X 30" iron rod with yellow plastic cap marked
"NYGREN LS1035", bears N0°32'44"W, 196.16 feet distance.

- (9) At the Center North One-sixteenth corner of said Section
2, I set a 2 1/2" X 30" aluminum pipe with aluminum cap
stamped:

T32S R1W WM
CN1/16 S2
RESET 1993
1980
PLS 1035

New references established this survey:

(continued on page 5)

(continued from page 4)

A Douglas Fir, 16 inches in diameter, bears N53°W, 11.0 feet distance, scribed "CN1/16 S2 BT".

A Douglas Fir, 16 inches in diameter, bears N50°E, 30.0 feet distance, scribed "CN1/16 S2 BT".

A 5/8" X 30" iron rod with yellow plastic cap marked "NYGREN LS1035", bears N06°39'10 E, 183.22 feet distance.

- (10) At the North One-sixteenth corner common to Sections 1 and 2, I set a 2 1/2 inch diameter aluminum pipe with aluminum cap stamped:

T32S R1W WM
N1/16

S2 S1

RESET 1993
1980
PLS 1035

New references established this survey:

A Douglas Fir, 15 inches in diameter, bears S41°E, 3.9 feet distance, scribed "N1/16 S1 BT".

A Douglas Fir, 9 inches in diameter, bears S85°W, 24.7 feet distance, scribed "N1/16 S2 BT".

A 5/8" X 30" iron rod with yellow plastic cap marked "NYGREN LS1035", bears N0°20'55"W, 167.49 feet.

- (11) At the West Quarter of said Section 2, I set a 2 1/2" X 30" aluminum pipe with aluminum cap stamped:

T32S R1W WM
1/4

S3 S2

RESET 1993
1980
PLS 1035

New references established this survey:

A Hemlock, 8 inches in diameter, bears S16°E, 3.4 feet distance, scribe "1/4 S2 BT".

A Hemlock, 10 inches in diameter, bears N26°E, 3.3 feet distance, scribed "1/4 S2 BT".

A Douglas Fir, 10 inches in diameter, bears N36°W, 11.2 feet distance, scribed "1/4 S3 BT".

(continued on page 6)

(continued from page 5)

A Hemlock, 17 inches in diameter, bears S30°W, 16.5 feet distance, scribed "1/4 S3 BT".

A 5/8" X 30" iron rod with yellow plastic cap marked "NYGREN LS1035", bears N0°32'44"W, 275.07 feet distance.

The position of the one-quarter corner common to Sections 1 and 2 established by Art Boyer per C.S. file 40/214, bears N13°52'W, 224.45 feet. The stump hole of a Fir, 20 inches in diameter which is dead and down with visible scribe, bears N78°W, 28.0 feet from this position.

- (12) At the Center Quarter corner of said Section 2, I set a 2 1/2 inch diameter aluminum pipe with aluminum cap stamped:

T32S R1W WM

C1/4 S2

RESET 1993

1980

PLS 1035

New references established this survey:

A Douglas Fir, 6 inches in diameter, bears S35°W, 12.8 feet distance, scribed "C1/4 S2 BT".

A Douglas Fir, 11 inches in diameter, bears S65°E, 37.7 feet distance, scribed "C1/4 S2 BT".

A 5/8" X 30" iron rod with yellow plastic cap marked "NYGREN LS1035", bears N6°39'14"E, 256.86 feet distance.

A Douglas Fir, 14" inches in diameter, bears N07°40'E, 259.0 feet distance, this tree was scribed and used for bearing tree in 1980 survey.

- (13) At the East Quarter corner of said Section 2, I set a 2 1/2" X 30" aluminum pipe with aluminum cap stamped:

T32S R1W WM

1/4

S2 S1

RESET 1993

1980

PLS 1035

New references establish this survey:

A Douglas Fir, 9 inches in diameter, bears N60°W, 12.7 feet distance, scribed "1/4 S2 BT".

(continued on page 7)

(continued from page 6)

A Douglas Fir, 7 inches in diameter, bears N18°W, 10.7 feet distance, scribed "1/4 S2 BT".

A Hemlock, 15 inches in diameter, bears S82°E, 23.8 feet distance, scribed "1/4 S1 BT".

A Douglas Fir, 7 inches in diameter, bears S8°W, 8.8 feet distance, scribed "1/4 S2 BT".

A 5/8" X 30" iron rod with yellow plastic cap stamped "NYGREN LS1035", bears N0°20'55"W, 234.74 feet distance.

- (14) At the Southwest corner of said Section 2, I found a 2 1/2" iron pipe pipe (bent) with brass cap stamped:

U.S. GENERAL LAND OFFICE SURVEY
T32S R1W
S3 S2
S10 S11
1955

NOTE: Iron pipe is bent Northerly, the following bearings and distances were measured from that portion of pipe which is vertical and below bend.

References found this survey:

A Douglas Fir snag, 48 inches in diameter, bears N70°E, 34.8 feet distance, healed blaze.

A Douglas Fir stump, 63 inches in diameter, bears S75°W, 11.2 feet distance, healed blaze.

A Douglas Fir, 36 inches in diameter, bears S89°E, 67.0 feet distance, healed blaze.

A Douglas Fir, 30 inches in diameter, bears N65°W, 82.5 feet distance, healed blaze.

A Douglas Fir, 46 inches in diameter, bears N50°W, 22.6 feet distance, healed blaze.

A Douglas Fir, 10 inches in diameter, bears S46°W, 6.0 feet distance, visible scribe.

New reference established this survey:

A Douglas Fir, 6 inches in diameter, bears N6°E, 8.9 feet distance, scribed "T32S R1W S2 BT".

- (15) At the South Quarter corner of said Section 2, I found a 2" X 32" galvanized iron pipe with a 2 1/2" diameter brass cap stamped:

(continued on page 8)

(continued from page 7)

T32S R1W
S2
1/4
S11
C.S. 1981

References found this survey:

A Douglas Fir, 11 inches in diameter, bears S28°W, 17.0 feet distance, visible scribe.

A Hemlock, 15 inches in diameter, bears N64°W, 21.1 feet distance, visible scribe.

New references established this survey:

A Hemlock, 11 inches in diameter, bears S77°W, 18.4 feet distance, scribed "1/4 S11 BT"

A Douglas Fir, 9 inches in diameter, bears N80°E, 23.2 feet distance, scribed "1/4 S2 BT".

A 5/8" X 30" iron rod with yellow plastic cap marked "NYGREN LS1035", bears S86°26'27"E, 48.75 feet distance.

- (16) At the East One-sixteenth corner on the South line of said Section 2, I set a 2 1/2" X 30" aluminum pipe with aluminum cap stamped:

T32S R1W WM
S2
E1/16
S11
RESET 1993
1980
PLS 1035

New references established this survey:

A Douglas Fir, 13 inches in diameter, bears N2°W, 19.3 feet distance, scribed "E1/16 S2 BT".

A Douglas Fir, 11 inches in diameter, bears S82°E, 29.5 feet distance with healed blaze, this tree was scribed and used for bearing tree in 1980 survey.

A 5/8" X 30" iron rod with yellow plastic cap marked "NYGREN LS1035", bears S85°17'12"E, 23.83 feet distance.

- (17) At the Southeast corner of said Section 2, I found a 2 1/2" X 30" aluminum pipe with aluminum cap stamped:

(continued on page 9)

(continued from page 8)

T32S R1W WM
S2 S1

S11 S12

PLS 1035 1980

References found this survey:

A Douglas Fir, 10 inches in diameter, bears N30°W, 3.5 feet distance, healed blaze.

A Douglas Fir, 18 inches in diameter, bears N34°E, 3.6 feet distance, visible scribe.

A Live Oak, 6 inches in diameter, bears S7°E, 22.8 feet distance, visible scribe.

A Douglas Fir, 18 inches in diameter, bears S48°W, 26.1 feet distance, visible scribe.

(18) See 1980 survey. The Quarter common to Sections 1 and 12 was tied to in 1980 survey. The measured bearing and distance from the South Quarter corner common to Sections 1 and 12 to the Southeast corner of Section 2 was shown incorrectly on filed 1980 survey map. The correct bearing and distance is South 89°30'45" West, 2534.63 feet distance.

(19) At the Section corner common to Section 11, 12, 13, and 14, I found a 2" diameter galv. iron pipe with a 2 1/2" diameter brass cap stamped:

T32S R1W
11 12

14 13
C.S.
1981

References found this survey:

A Douglas Fir, 14" in diameter, bears S39°E, 25.1 feet distance, healed blaze.

A Douglas Fir, 24" in diameter, bears S18°W, 9.7 feet distance, healed blaze.

A Douglas Fir, 15" in diameter, bears N30°E, 24.7 feet distance, healed blaze.

A Douglas Fir, 18" in diameter, bears N20°W, 29.0 feet distance, healed blaze.

(continued on page 10)

Survey No. 13811
Page 10 of 10

(continued from page 9)

A monument sign, bearing tree sign and a 6" red band was either placed or found and/or repainted, on all bearing trees mentioned in this survey narrative. A 1/2" brass washer stamped "LS1035" was nailed to lower blaze on all bearing trees scribed this survey.

Using the correct South Quarter corner for alignment, I re-surveyed, posted and blazed the West 3/4 miles of the South line of said Section 2. I removed the posts set per 1980 survey.

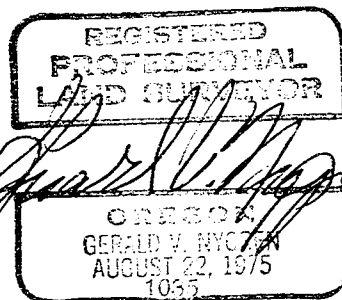
I re-surveyed and posted and blazed the North lines of Lots 13, 14, 15, and 16 of said Section 2. I removed the posts set per 1980 survey.

I maintained by brushing, posting and blazing, the West line of said Section 2 from the Southwest corner to the North One-sixteenth corner, using same alignment as 1980 survey.

Meridian is based on Solar Observation.

A Wild T-16 theodolite, Mac 1E EDM, and Mac 1H EDM were used to execute this survey.

** REC'D **
Date 1-3-94 By BS
This survey consists of:
1 sheets Map
10 pages Narrative
JACKSON
SURVEY



EXPIRES 12-31-94

EXHIBIT "A"

United States
Department of
Agriculture

Forest
Service

Umpqua National Forest
PO Box 1008
Roseburg, OR 97470
(5030-672-6601)

Reply to: 7150

Date: March 31, 1993

Wayne M. Gardner, Branch Chief
Bureau of Land Management
Branch of Cadastral Surveys
Oregon State Office
P.O. Box 2965
Portland, OR 97208

RE: Jack Cadastral Survey, Umpqua N.F.,
Section 2, Township 32 South, Range 1 West, W.M.

Dear Mr. Gardner:

Please refer to your letters of May 12, 1992 and April 24, 1992. Additional information has been recovered and developed by the Forest Service. The 1949 and 1980 positions of the West one quarter corner of section 2 and the 1980 position of the East one quarter corner of section 2 have not been properly reestablished. Upon careful review of this information, we anticipate your concurrence with our recommended procedure for restoration of these two corners. We accept the 1980 position of the Southeast corner of section 2 as the best position for this corner.

The following information was compiled/recovered by Forest Service personnel.

1. Topographic Calls of the Original Field Notes, 1883

This is an update of our retracement versus Rufus Moore's 1883 original field notes of topographical calls, based on recent ties to Mr. Nygren's control traverse. This report is attached as Exhibit A.

Only the following section lines run by Mr. Nygren are included in the exhibit:

- A) the West line of section 12,
- B) the West half of the North line of section 12,
- C) the East line of section 2,
- D) the South line of section 2, and
- E) the West line of section 2.



Caring for the Land and Serving People

FS-6200-28M4/88)

Except for the section line between sections 11 and 12 (line A), it should be noted that Moore says his measurements were on the random line, not the true line. However, his true lines were only several minutes from his random lines and wouldn't change the distances of his topographical calls, except for topography nearly paralleling the section lines.

Our retracement of the topographical calls on the South line of section 2 (line D) are very close to Moore's record, evidence that Moore returned accurate distances on his topography ties. On the other section lines, the topography is reasonable (within 1 chain of the found conditions) except as noted on the following lines. Items of topography north of the one quarter corner (40 chains) positions on both the East and West lines of section 2 (lines C and E), and between the creek and ridge calls on the North line of section 12 (line B), differ significantly and are unreliable, indicating Moore did not run these lines. In addition, several items of topography were not called by Moore on the northern half of the East and West lines of section 2, further evidence that these portions of the lines were not run.

On the East line of section 2, the East slope conditions for Moore's one quarter corner position are found between 35 and 40 chains North of Nygren's Southeast corner of section 2. This is harmonious with Moore's record.

The discrepancy on both the East and West lines of section 2 can be isolated to the portions North of the respective one quarter corners. Per section 5-23 of the Manual, "Whenever it is possible to do so, the manifest errors in measurement are removed from the general average difference and placed where the blunder was made." The approximate 11.5 chains of excess distance must be placed North of the one quarter corners on these two lines.

Generally, it also appears that items of topography measured to the nearest link are bona fide measurements, whereas, calls shown to the nearest chain are estimates.

2. Blazed Lines of Original G.L.O. Survey, 1883

Ancient bark and healed blazes were found on the identified portions of the following section lines:

- the South 40 chains of the West line of section 12,
- the South 23 chains of the East line of section 2, and
- the West 30 chains of the South line of section 2.

The absence of blazes on the following portions of the section lines around section 2 can be attributed to logging activities:

- the East 50 chains of the South line,
- the North 60 chains of the West line, and
- the mid 40 chains of the East line.



The North 60 chains of the East and West lines of section 2 are through virgin timber. The lack of original blazes on these lines is further evidence that these lines were not surveyed by Rufus Moore.

On the East line of section 2 the blazed trees were tied to the control survey and the healed blazes core-drilled or chopped out. The overgrowth ring count dated these blazes to the time of the original survey. The most northerly of the blazed trees is at the original 22.10 chain creek call. The locus of the identified original trees form a line, with a bearing of $N.0^{\circ}53'W.$, from Mr. Nygren's 1980 monument for the Southeast corner of section 2.

3. Rufus Moore's Original Field Notes of the Exterior of T. 32 S., R. 1 W., 1883

On page 345 of Rufus Moore's field notes, Moore states he found the closing of the township exterior not in limits. On pages 346 through 367 of his field notes, he then retraces the North boundary of the township. These notes are attached as Exhibit B.

Dennis Hathorn in 1857 originally ran a portion of the North boundary in his subdivision of T. 31 S., R. 1 W. Hathorn's line was run on a cardinal direction. On page 367, Moore finds Hathorn's line to be out of alignment by 12.42 chains (an average of $2-1/2^{\circ}$ from cardinal). This made Moore's West boundary of the township close within limits. However, subsequent retracements have found Hathorn's line to be only $1/2^{\circ}$ from cardinal.

Apparently Moore discovered a misclosure in the exterior of this township. This error is actually on the East boundary of the township between the one quarter corner of sections 1 and 6 and the township corner to Townships 31 and 32 South, Range 1 East. Moore says this distance was 40 chains (page 410-412 of Moore's field notes), but it scales and computes to be 51.1 chains. (See the Composite Retracement Diagram, hereinafter described). Instead of the 12.42 chains on the North boundary of the township, as stated by Moore, the misclosure is about 11.1 chains on the East boundary. This 11.1 chain error is consistent with the 11.5 chains of excess found in the East and West lines of section 2. Moore apparently didn't close this line of the East boundary and created the skew on the North boundary to close in limits.

4. Umpqua National Forest Index Map, 1921-1933

An index map, labeled "EM Surveys - Umpqua G.L.O. Sec. Corners", was maintained and updated annually by the Umpqua National Forest, Supervisor's Office, from 1921 to 1933. A copy of this map is attached as Exhibit C.

The map shows the Southeast section corner of section 2 as "corner positively identified" in purple. The Southwest section corner of section 2 is marked as "probable corner found" in black ink. Though later dates are coded by color, neither of these colors are dated.



This is evidence that the Southeast corner of section 2 was in existence as late as 1930.

5. Reestablishment of the West One Quarter Corner to Section 2, 1949
Arthur Boyer, Registered Engineer No. 1581, reestablished the West one quarter corner of section 2 by proportion as part of a subdivision survey of section 3 in Aug.-Sept., 1949 (Douglas County Surveyor's Office C. S. File No. 40/214). This corner position has been recovered and is 76.8 feet out of position (51 ft. in alignment and 57 ft. in distance) from Nygren's 1980 proportioned position.

We do not accept Boyer's corner as the proper proportioned position. Boyer's retracement of the West line of section 2 is within 12 feet of Nygren's measurement. However, Boyer's reestablished one quarter corner was not placed within limits.

6. Douglas County Forest Appraisal Department Report of Survey Corner Located, 1949

Two (2) Reports were recovered at the Douglas County Surveyor's Office. The Reports were compiled by Robert E. Kleiner (Mr. Kleiner was later a Registered Land Surveyor in California, and is now deceased) while performing a timber appraisal in section 2 in 1949. The property in section 2 was owned by Douglas County at this time. Copies of both reports are attached as Exhibit D.

The first Report documents that Mr. Kleiner found the original East one quarter corner to section 2 on an east slope. This Report shows the original corner was in place as late as 1949. An additional search was performed last summer for Mr. Kleiner's "cruiser marks". Nothing was found in the vicinity of the corner. However, a previously located cruiser mark "K" on an original blazed tree at the record 22.10 chain creek call is now attributed to Mr. Kleiner. This 22" hemlock has Moore's 1883 blazes, Kleiner's cruiser mark "K", and approximately 40 year old blazes.

The second Report indicates that Mr. Kleiner found Arthur Boyer's reestablished West one quarter corner of section 2 in disharmony with the original field notes. Though no evidence of the original corner was found by either Kleiner or Boyer, Mr. Kleiner reports old blazes, along with new blazes, lead northward to Boyer's corner.

7. Timber Cutting Corners in Section 2, 1954

With the new information that the East one quarter corner of section 2 was in existence in 1949, we evaluated the existing cutting limits of the private land in section 2. In addition to locating the Northeast and Northwest cutting corners, we also tied in a third corner at the intersection of two blazed lines.

The private ownership is described as the SE1/4, the SW1/4, and Government Lots 13, 14, 15 and 16 of section 2. Based on analysis of Forest Service aerial



photos and discussions with a former surveyor for Harbor Plywood (John Markham, Jr., Registered Land Surveyor No. 1261), the timber harvesting was begun in 1954 and continued for a couple of years.

Cutting limits and approximately 40 year old blazed lines along the East, West and North boundaries of the private land were tied to the control traverse. Blazed lines from the South and East were found leading into a location for the Northwest cutting corner, though the actual point has been disturbed and could not be located. At the Northeast cutting corner, a blazed tree and a 2"x 2" squared post were found at the intersection of blazed lines from the North, South, East and West.

The Northeast cutting corner is 4.5 chains longitudinally south of Mr. Nygren's 1980 North 1/16 corner of sections 1 and 2. The Northwest cutting corner is 0.9 chains longitudinally south of Mr. Nygren's 1980 North 1/16 corner of sections 2 and 3.

In the immediate vicinity of Mr. Nygren's 1980 North 1/16 corner for the sections of 1 and 2 is a four-sided blazed 4" Douglas fir snag at the intersection of blazed lines from the South and West. The blazed line from the West runs from the blazed 4" Douglas-fir snag to the Northwest cutting corner.

Mr. Markham left his employment with Harbor Plywood in 1954 and didn't have information on how the blazed lines were established. Roseburg Lumber Co., the current property owner, also had no information on file about the blazed lines.

Our analysis of the two cutting corners and the blazed corner shows the Northwest corner (position for the North 1/16 corner) was established dependent on Boyer's 1949 reestablishment of the West one quarter corner of section 2. The blazed 4" Douglas-fir snag was established at the position for the North 1/16 corner of sections 1 and 2 by someone who hadn't located the East one quarter corner of section 2. However, the Northeast cutting corner was established at the position for the North 1/16 corner of sections 1 and 2 utilizing the recovered East one quarter corner of section 2. Based on the position of the Northeast cutting corner, the East one quarter corner of section 2 position would compute to be between 37.7 and 38.2 chains North of Mr. Nygren's Southeast section corner of section 2.

8. B.L.M. Dependent Resurvey in T. 32 S., R. 1 E., W.M., 1977

A portion of T. 32 S., R. 1 E. was included in the Composite Retracement Diagram, hereinafter described, because of the gross distortion in Moore's original survey as shown by the B.L.M. 1965 to 1973 dependent resurvey. This was also a township subdivided by Rufus Moore in 1883. The westerly 2 rows of sections in this township are choice examples of Moore's original blazes only found on the portion of the lines fitting his record (i.e., only on the lines actually run) and his stubbing patterns. Selected pages of the official field notes, approved Sept. 1, 1977, are attached as Exhibit E.



The B.L.M. surveyors noted original blazed lines on only half of certain section lines and the lack of original blazes on the other half. This lead B.L.M. to finding some of the original one quarter corners (i. e., the one quarter corner of sections 7 and 18). "No original line blazes were found west of this corner." (from page 29 of the field notes).

At other one quarter corners where the original evidence is gone, such as between the sections 18 and 19, the B.L.M. utilized the original blazed lines "to restore the corners in their true original location according to the best available evidence." (from the description on the face of the official plat).

"Point for the 1/4 sec. cor. of sec. 18 and 19, at proportionate distance longitudinally and controlled latitudinally by the mean bearing of the original blazed line extending from the cor. of sec. 17, 18, 19, and 20, and terminating near this point; there is no remaining evidence of the original corner."
(from page 24 of the field notes).

This method of proportion worked well where the large discrepancy was in alignment. In our case the distortions are in distance and can be isolated to one portion of the section line. We should utilize a method of proportioning that places the error where it occurs.

9. Composite Retracement Diagram of the Original 1883 Subdivision Corners of T. 32 S., R. 1 W., W.M., 1992

The composite diagram was compiled from official B.L.M. dependent resurveys and filed retracement surveys of private licensed land surveyors as a comparison of Moore's record between found original corners. Calculated measurements were computed from information on a filed survey or from a combination of adjacent surveys. Copies of the diagram and the 3 associated 7.5 quad maps are attached as Exhibit F.

Most surveys in the township were performed for the Forest Service. The southern portion of the township is lacking more retracement information because it is outside of Forest Service ownership.

Besides the lines retraced for this survey, little information is available on the found conditions of topography and of original blazes between original corners. The copies of the respective 7.5 minute quadrangle maps are included for the comparison of the topography with the original field notes.

The following information is evident from the diagram:

A) There is a discrepancy in measurement in the northern tier of sections within T. 32 S., R. 1 W. Beginning with the line between sections 4 and 5, the discrepancy increases eastward to become an excess measurement of 11 plus chains on both sides of sections 1 and 2.



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Even at the southern most tier of sections, the East boundary and the first and second meridional section lines are approximately 8 chains further South than other meridional subdivision lines within the township.

On the meridional lines of the northern tier of sections where the original section corners and the intervening one quarter corner were recovered, the error is shown to fall north of the one quarter corners, evidence that Moore did not close these lines to the North boundary.

B) It is apparent Moore visited and established all the subdivision corners in T. 32 S., R. 1 W. In the northern half of the township, 85% of the original corners have been recovered.

C) In T. 32 S., R. 1 E. the locations of the original corners and original blazed lines, recovered by the B.L.M. dependent resurvey, indicate Moore stubbed one quarter corners East and West from the fourth and fifth meridional subdivision lines when they were accessible from Flat Creek or on the same side of the creek. Otherwise, the one quarter corners were stubbed in from the ridges on either side.

D) The diagram and quad maps also show a stubbing pattern in T. 32 S., R. 1 W. Apparently Moore had a system of establishing as many corners as he could while he was down along the valleys or up on the ridges. In many cases, his one quarter corners were run in from one direction only.

The distortions of Moore's record bearings or distances, shown in these retracements between his found original corners, are located in either areas with large elevation differences between creek bottoms and high ridges or in closing on previously set corners (i.e., the township exterior).

Examples of the first type of distortions are the West half of sections 3 and 10, the East half of sections 4 and 9, the North half of sections 7 and 8, the South half of sections 8 and 9, the South half of sections 9 and 10, the South half of sections 10 and 11, and the East half of sections 20 and 29.

Examples of the second type of distortions are the North half of sections 3 and 4, the West half of sections 6 and 7, the West half of sections 7 and 18, and the West half of sections 19 and 30.

Rufus Moore developed a traverse scheme unique to each township. It appears that he established every corner, did not run almost a third of the lines he reported in the original field notes, and did not tie in on previously set corners to confirm his closure.



We intend to restore the corners as follows:

Corner to Sections 1, 2, 11 and 12

We agree with your assessment of this corner position in your letter dated April 24, 1992. With the pattern of 4 stumps supported by the evidence of original blazed lines and topographic calls, this is the best evidence for the location of the section corner. Per the second paragraph of section 5-9 of the Manual, we would call this an obliterated corner with no remaining original evidence found.

One Quarter Corner to Sections 1 and 2

We will reestablish the one quarter corner by one point control from the Southeast section corner. Per section 5-15 of the Manual, the section line will be projected on the mean bearing of the original blazed line. The distance will be at either record distance from the Southeast corner of section 2 or record distance from the last definitive topographic call (whichever method best locates the one quarter in harmony with the East slope conditions and the Northeast cutting corner). A bearing break will be created at the one quarter corner.

The 11.5 chain error in distance can be isolated in the northern half of the section line. This solution will place all of the distance blunder North of the one quarter corner where it occurred and will employ Moore's original blazed line for fixing departure. This method will reestablish the one quarter corner on the East slope conditions as stated by Rufus Moore and Robert Kleiner.

One quarter corner to Sections 2 and 3

Our solution at this time will reestablish the one quarter corner at record distance from the Southwest section corner on line with the Northwest closing corner. This will not create a bearing break at the one quarter corner.

Again, the 11.5 chain error in distance can be isolated in the northern half of the section line. This method will place the one quarter corner south of the 44.00 chain creek call, in harmony with the original field notes. The use of the record distance will also place the one quarter corner in harmony with the other found original one quarter corners in the northern tier of sections in this township.

We are not convinced at this time that Moore measured past the one quarter corner to the creek. It may be an estimated distance past, like the remaining topographic calls North of the one quarter corner. Therefore, the distance from our reestablished position to the creek will be considerably shorter than Moore's record. The retraced bearings West, South, and East from the Southwest corner of section 2 are not consistent in their departure from Moore's record to provide a bearing index.



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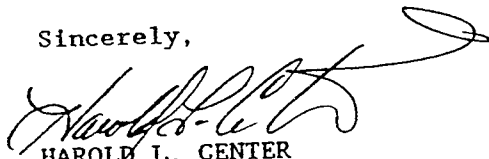
Mr. Nygren is still under contract to correct his 1980 survey. We have provided the new information to Mr. Nygren and directed him under a modification of the contract to perform corner search and gather additional information on topographical features and timber cutting limits. Mr. Nygren has performed portions of this work before being snowed out of the site this winter. The remaining work, tying to topographical features on the West line of section 2, tying to the spring at the record 28.00 chains on the East line of section 2, tying to the 2"x 2" squared post at the Northeast cutting corner, and tying to an original blazed tree on the West line of section 2, are not crucial to our corner reestablishment solutions and will only further verify our recommendations.


Mr. Nygren is reluctant to reposition his corners. We believe that he is relying on the previous opinion provided by the BLM ~~and~~, until directed to do otherwise. Mr. Nygren's position is understandable. Your concurrence with our recommended solution would resolve this situation.

We have discussed our investigation and our intent to reestablish the East and West one quarter corners of section 2 with the adjacent landowner. Mark Smalley, Land Surveyor for Roseburg Lumber Co., has reviewed our recommendations and is in agreement that additional review by B.L.M. is needed prior to reestablishment of these corners again.

If you require additional information or clarification of the information submitted, please contact Leonard Herzstein at (phone # 503-672-6601) P. O. Box 1008, Roseburg, OR 97470. Thank you for your consideration and assistance.

Sincerely,


HAROLD L. CENTER
Supv. Land Surveyor
Rogue River NF


LEONARD HERZSTEIN
Land Surveyor
Umpqua NF

Enclosures

cc: L. Herzstein
H. Center, Rogue River NF
T. Kent, RO Lands
Gerald Nygren, 522 Barker Drive, Merlin, OR 97532
Mark Smalley, Roseburg Lumber Co., P. O. Box 1088, Roseburg, OR 97470



EXHIBIT "B"



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Oregon State Office
P.O. Box 2965 (1300 N.E. 44th Avenue)
Portland, Oregon 97208



IN REPLY REFER TO:

9631 (OR 942)
Douglas Co., Or.

April 16, 1993

Harold L. Center
Supv. Land Surveyor
Rogue River National Forest
P.O. Box 520
Medford, Oregon 97501

Dear Mr. Center:

This responds to your letter/report dated March 31, 1993, concerning the Jack Cadastral Survey in T. 32 S., R. 1 W., Willamette Meridian, Oregon.

Your report contains important information that wasn't available when we responded to Gerald Nygren in our letter dated April 24, 1992. Specifically, the composite diagram of private surveys and Kleiner's record adds significantly to what we were provided before. This additional information provides a much better picture of Rufus Moore's survey patterns, and is what we consider to be necessary in order to support an alternative to single proportionate measurement in this case.

We can now state with confidence that:

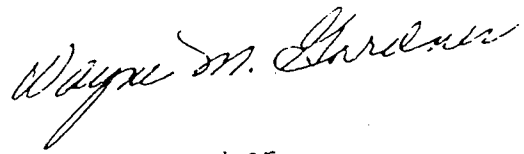
1. Moore actually set most corners.
2. In areas of steep terrain, Moore stubbed out 1/2 miles to set the 1/4 section corners.
3. Moore tied to topography with reasonable accuracy on lines he surveyed. Where topographic ties are grossly erroneous or non-existent, Moore didn't survey.
4. Moore blazed the lines that he actually surveyed.
5. The recovered original 1/4 section corners on the meridional lines of the north tier of sections indicate Moore stubbed 40 chs. north to set his 1/4 section corners on these lines. Kleiner's 1949 record of recovering the 1/4 section corner of sections 1 and 2 on an easterly slope, helps substantiate this conclusion as an easterly slope can only be found 35 to 40 chs. north of the corner of sections 1, 2, 11, and 12.

Considering the above, we feel your proposed solutions for reestablishing the 1/4 section corners on the east and west boundaries of section 2 are reasonable. Record distance can be justified in this case because your analysis shows with little doubt that Moore didn't survey north of the 1/4 section corners. The use of line blazes for alignment is in accordance with Section 5-15 of the Manual and has been used by this office on numerous occasions.

Your report indicates you've discussed this proposal with the adjacent owner, Roseburg Lumber Co., but it isn't clear whether they are in agreement. In a letter to this office dated April 23, 1981, Howard Johnstone of Roseburg Lumber Co. indicated he agreed with Nygren's resurvey. Considering Johnstone's letter and the significant difference in land area involved, it would seem to be in the best interest of the Forest Service to insure that Roseburg Lumber Co. is in agreement with your proposed solutions.

We hope this information is helpful.

Sincerely,



Wayne M. Gardner
Chief, Branch of Cadastral
Survey and Mapping Sciences

cc: Leonard Herzstein, Umpqua N.F.
Tim Kent, R.O.