

EXHIBIT "A"

M 118-20



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

FILED *PC*

JAN 5 1994

COUNTY SURVEYOR
DOUGLAS COUNTY, ORE.

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-6200-286(4/88)

C.S. File No. 63134-5

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°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° 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° 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.



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.





Wayne M. Gardner, BLM

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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

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