

Survey for
Umatilla National Forest
of
A Portion of Sections 21 and 22,
Township 1 North, Range 36 East,
Willamette Meridian
Umatilla County, Oregon
July - November, 2002

NARRATIVE

PURPOSE:

The purpose of this survey was to monument and mark the property boundary between Private and National Forest System Lands.

HISTORY:

1882, Herman D. Gradon, U.S. Deputy Surveyor, subdivided the township under General Land Office Contract No. 452.

1923, Martin and Tillie McLaughlin sell a portion of the NW1/4 of the NE1/4 of section 21 (Tax Lot 1591 Map 1N 36) to the Oregon-Washington Railroad and Navigation Company (Umatilla County Deed Records Book 123 Pages 84-85).

1951, Martin A. and Matilda McLaughlin sell the NW1/4 of the NE1/4, the S1/2 of the NE1/4, the NW1/4, the W1/2 of the SW1/4, and the E1/2 of the SE1/4 of section 21 to the United States, in consideration of an equal value of timber, (Umatilla County Deed Records Book 202 Pages 544-545).

1983-84, Robert J. Chappel, Lawrence D. Holmes, and Harold W. Heimark, Bureau of Land Management (BLM) Cadastral Surveyors, remonumented the corner of sections 15, 16, 21 and 22 from original evidence, while resurveying a portion of the township subdivisional lines (Approved July 2, 1987).

1989, David Evans and Associates establish the Horizontal Position of stations "BOUNDARY" and "C-486 ECC" while conducting a GPS Geodetic Control Survey for the Umatilla and Wallowa-Whitman National Forests. This survey is readjusted in 1992 by David Evans and Associates to the NAD83(1991) datum (survey on file at the Umatilla and Wallowa-Whitman National Forests).

1997-99, Richard S. Kaiser, Philip G. Griffin, and Bryan S. Seibold, BLM Cadastral Surveyors, performed a corrective dependent resurvey of the mile between sections 34 and 35, resurveyed a portion of the subdivisional lines, subdivided sections 4, 5, 6, 9, 15, 16, 21, 22, 25, 26, 27, and 34, and performed a metes and bounds survey of portions of the westerly right-of-way boundary of the Union Pacific Railroad in sections 27, 34, and 35 (Approved March 17, 2000).

2000, David L. Haddock, Registered Land Surveyor 852, while posting property boundaries in sections 21 and 22, for the Umatilla National Forest found Gradon's 1/4 corner of sections 15 & 21, 1/4 corner of sections 21 & 22, and the 1/4 corner of sections 22 & 27. The BLM Surveyor's not finding these corners had reestablished or restored them by other methods. The BLM was informed about the recovery of Gradon's corners and Haddock's work for the Umatilla National Forest was terminated. Prior to the recovery of Gradon's corners Haddock had marked additional bearing trees for the now erroneously established BLM corners at the 1/4 corner of sections 22 & 27, and the C1/4 corner of section 21. As these corners would be moved when the BLM corrected their survey, the information about the bearing trees marked by Haddock was not filed at the Umatilla County Surveyor's Office.

2001, Richard S. Kaiser, BLM Cadastral Surveyor, performed a corrective dependent resurvey of a portion of the subdivisional lines, the corrective survey of the subdivision of sections 16, 21, 22, 27, and 34, and the corrective survey of a portion of the westerly right-of-way boundary of the Union Pacific Railroad in section 27 (Approved June 21, 2002).

PROCEDURES:

The survey was conducted using three Trimble 4600LS Surveyor GPS Receivers (L1 frequency) and a Topcon GPT-6005C Total Station.

The GPS measurements were conducted using fast static techniques with stations "BOUNDARY" and "C-486 ECC" being used to provide geodetic control for the survey. The GPS measurements were processed using Trimble's Geomatics Office Software (version 1.50).

All GPS measurements were made in accordance with "Standards and Guidelines For Cadastral Surveys Using Global Positioning Methods" dated May 9, 2001, version 1.0 by U.S. Department of Agriculture, Forest Service and U.S. Department of Interior, Bureau of Land Management.

The Topcon GPT-6005C Total Station was used to run random traverses between GPS established points, set the corners established by this survey and make measurements to bearing trees and reference monuments.

Bureau of Land Management's WinCMM (version 2.0.2) software program was used to adjust the traverse measurements using a least squares adjustment, compute corner positions, corner moves and pacing offsets.

The corners of Umatilla County Tax Lot 1591 of Assessor Map 1N 36 were established as follows. Corners, witness points 1 (346400) and 2 (349400), were established on the section line, as called for in the deed, using deed record distances, as there was no ground evidence to help in making a different determination. For corner, angle point 3 (346378), I determine that the deed record distances should be controlling factors and therefore use the distance-distance intersection method to establish this corner.

The NE1/16 corner of section 21 was established at the intersection point of the North-South and East-West centerlines of the NE1/4 of section 21, using the found monuments as control.

Corner references were verified using the Topcon GPT-6005C. Distance measurements to the bearing trees were measured at the tree's side center one foot above the root crown. Bearing tree diameter's were measured at breast height. All new bearing trees are double blazed and have a 3/4" diameter brass washer stamped "RLS 2308" nailed to the lower blaze between the scribed "B T".

The property boundary was posted by setting 6 foot steel fence posts with "National Forest Property Boundary" signs attached within one foot of the surveyed boundary.

The survey crew for this project consisted of Matthew Duffy, Civil Engineering Technician Umatilla National Forest, and David A. Schlaich, Land Surveyor Umatilla National Forest.

The field notes for this survey are on file at the Supervisor's Office of the Umatilla National Forest located at Pendleton, Oregon.

The geodetic positions of the Public Land Survey Corners have an expected Local Accuracy of 0.030 meters (0.10 feet) and a Network Accuracy of 0.075 meters (0.25 feet) at the 95% confidence level.

DATUM: NAD83(1991) Oregon High Accuracy Reference Network

STATE PLANE COORDINATES: Oregon North Zone in International Feet	Latitude	Longitude	Northing(Y)	Eastng(X)
BOUNDARY	45°35'38.88698" N	118°23'02.74456" W	709801.678	8743659.607
C-486 ECC	45°32'44.98429" N	118°18'34.42020" W	692703.485	8763209.406
340340	45°33'04.52537" N	118°19'05.74664" W	694621.581	8760927.432
340400	45°33'30.98767" N	118°19'05.51426" W	697301.174	8760871.592
346400	45°33'30.99871" N	118°19'00.76896" W	697311.411	8761209.063
346378	45°33'29.92043" N	118°18'59.92683" W	697203.861	8761271.923
349400	45°33'31.00724" N	118°18'57.10985" W	697319.310	8761469.287
360360	45°33'17.69900" N	118°18'47.06080" W	695991.273	8762220.487
360400	45°33'31.03024" N	118°18'47.23002" W	697340.852	8762171.908
400300	45°32'38.21242" N	118°18'28.75140" W	692028.819	8763631.285
400340	45°33'04.22464" N	118°18'28.03675" W	694663.763	8763610.648
400360	45°33'17.64150" N	118°18'28.49534" W	696021.247	8763541.148
420340	45°33'04.13051" N	118°18'09.81737" W	694689.448	8764006.892
420400	45°33'30.44497" N	118°18'10.25372" W	697352.768	8764803.382
440300	45°32'38.86099" N	118°17'51.63283" W	692166.315	8766270.168

BOUNDARY

Found a 3 1/4" diameter aluminum cap, surrounded with concrete, set flush with the ground, marked as shown, from which:

Post, with Land Survey Monument sign, set in the fence located on the Umatilla Indian Reservation Boundary, bears N 76° W, 19.5 feet.

C-486 ECC

Found a 3 1/4" diameter aluminum cap, surrounded with concrete, set flush with the ground, marked as shown, from which:

U channel steel post, with Land Survey Monument sign, bears N 10° E, 3.1 feet.

340340

C 1/4 corner of section 21

Found a 2 1/2" diameter stainless steel pipe, with 3 1/4" diameter brass cap, projecting 4" out of the ground, surrounded by a ring of stones, marked as shown, from which:

34" Ponderosa Pine bears N 12° E, 46.5 feet, with scribing visible on pitched over blaze.
18" Douglas Fir bears S 56 1/2° W, 9.0 feet, with scribing visible on an unheated blaze.

New References:

19" Douglas Fir bears S 1 1/4° E, 58.6 feet, scribed "C1/4 S21" "BT".
21" Douglas Fir bears W 10 1/4° W, 19.6 feet, scribed "C1/4 S21" "BT".

In addition I also find 2 trees marked by Haddock to reference the corner erroneously established by the BLM in 1977-79. I obliterate the marks on these trees.

340400

1/4 corner of sections 16 and 21

Found a 2 1/2" diameter stainless steel pipe, with 3 1/4" diameter brass cap, projecting 2" out of the ground, marked as shown, from which:

21" Douglas Fir bears S 35 1/4° E, 39.5 feet, with scribing visible on pitched over blaze.
Root hole, with uprooted 28" Douglas Fir lying alongside, with scribing visible on sawn open blaze, record <S 12° W, 11.2 feet>.
27" Douglas Fir bears N 70° W, 13.9 feet, with scribing visible on sawn open blaze.
18" Ponderosa Pine bears N 22 1/2° W, 57.2 feet, with scribing visible on pitched over blaze facing S 5° W.

New Reference:

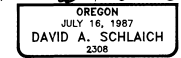
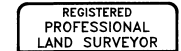
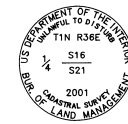
17" Ponderosa Pine bears S 87 3/4° W, 17.8 feet, with "1/4 S21" "BT".

346400

Witness Point 1 of sections 16 and 21 (Tax Lot 1591)

Set a 2 1/2" diameter by 30" long aluminum pipe, with 3 1/4" diameter aluminum cap, 23" in the ground, with a White DEEP-1 magnetic reference set in the bottom of the hole, surrounded by a ring of stones, marked as shown, from which:

14" Douglas Fir bears N 77 1/2° E, 19.7 feet, scribed "WP1 S16" "BT".
17" Ponderosa Pine bears S 62 3/4° W, 19.6 feet, scribed "WP1 S21" "BT".



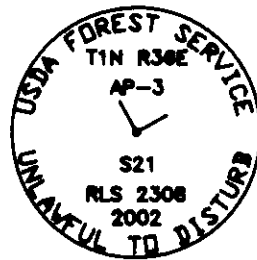
Handwritten notes: 2-33, 1-33, 2-31-B

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346378
Angle Point 3 of section 21 (Tax Lot 1591)

Set a 2 1/2" diameter by 30" long aluminum pipe, with 3 1/4" diameter aluminum cap, 23" in the ground, with a White DEEP-1 magnetic reference set in the bottom of the hole, marked as shown, from which:

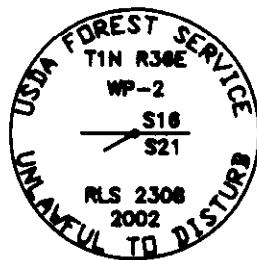
29" Ponderosa Pine bears S 12 1/4' E, 37.2 feet, scribed "AP3 S21" "BT".
15" Douglas Fir bears N 73 1/2' W, 29.9 feet, scribed "AP3 S21" "BT".



349400
Witness Point 2 of sections 16 and 21 (Tax Lot 1591)

Set a 2 1/2" diameter by 30" long aluminum pipe, with 3 1/4" diameter aluminum cap, 27" in the ground, marked as shown, from which:

8" Ponderosa Pine bears N 67 1/2' E, 34.1 feet, scribed "WP2 S16" "BT".
11" Ponderosa Pine bears S 58 1/2' W, 37.1 feet, scribed "WP2 S21" "BT".



380380
NE 1/16 corner of section 21

Set a 2 1/2" diameter by 30" long aluminum pipe, with 3 1/4" diameter aluminum cap, 25" in the ground, with a White SURV-KAP magnetic reference set in the bottom of the hole, marked as shown, from which:

7" Ponderosa Pine bears N 23 1/4' E, 31.9 feet, scribed "NE1/16 S21" "BT".
9" Ponderosa Pine bears N 89' E, 35.4 feet, scribed "NE1/16 S21" "BT".



380400
E 1/16 corner of sections 16 and 21

Found a 2 1/2" diameter stainless steel pipe, with 3 1/4" diameter brass cap, projecting 8" out of the ground, surrounded by a ring of stones, marked as shown, from which:

15" Ponderosa Pine bears S 4 1/4' W, 5.8 feet, with scribing visible on pitched over blaze facing N 35' W.
17" Ponderosa Pine bears N 74 1/4' W, 62.7 feet, with scribing visible on pitched over blaze.



400300
Corner of sections 21, 22, 27, and 28

Found a 2 1/2" diameter stainless steel pipe, with 3 1/4" diameter brass cap, projecting 7" out of the ground, surrounded by a ring of stones, located on the West edge of a dirt road, marked as shown, from which:

8" Ponderosa Pine bears N 7 1/2' E, 83.1 feet, with scribing visible on pitched over blaze.
14" Ponderosa Pine bears S 72 1/2' E, 68.4 feet, with scribing visible on pitched over blaze.
11" Ponderosa Pine bears S 12 1/4' W, 8.0 feet, with scribing visible on pitched over blaze.
6" Ponderosa Pine bears N 57' W, 32.1 feet, with scribing visible on partially healed blaze.



400340
1/4 Corner of sections 21 and 22

Found a 2 1/2" diameter stainless steel pipe, with 3 1/4" diameter brass cap, projecting 7" out of the ground, surrounded by a rock mound 2 feet in diameter by 5 inches high, marked as shown, from which:

Decayed remains of a stump bears S 61' E, 14.6 feet.
14" Douglas Fir bears S 41 1/2' E, 45.2 feet, with scribing visible on pitched over blaze.
Badly decayed stump bears S 25 3/4' W, 50.2 feet.
12" Douglas Fir bears S 86 3/4' W, 15.2 feet, with scribing visible on pitched over blaze.



New references:
17" Douglas Fir bears N 73 1/2' E, 28.1 feet, scribed "1/4 S22" "BT".
11" Ponderosa Pine bears S 10 3/4' W, 48.1 feet, scribed "1/4 S21" "BT".

400380
N 1/16 Corner of sections 21 and 22

Found a 2 1/2" diameter stainless steel pipe, with 3 1/4" diameter brass cap, projecting 13" out of the ground, surrounded by a rock mound 2 feet in diameter by 7 inches high, marked as shown, from which:

23" Ponderosa Pine bears S 15 3/4' E, 56.0 feet, with scribing visible on pitched over blaze.
19" Ponderosa Pine bears N 40 1/4' W, 90.8 feet, with scribing visible on pitched over blaze.

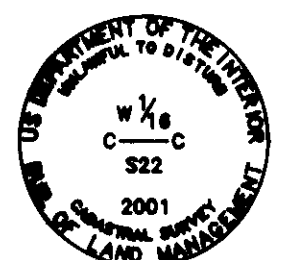


420340
CW 1/16 Corner of section 22

Found a 2 1/2" diameter stainless steel pipe, with 3 1/4" diameter brass cap, projecting 6" out of the ground, surrounded by a ring of stones, marked as shown, from which:

20" Ponderosa Pine bears NORTH, 215.6 feet, with scribing visible on pitched over blaze.

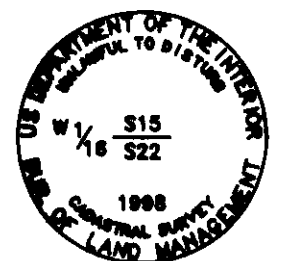
New reference:
RM, 5/8" diameter by 24" long rebar with 1 1/4" diameter yellow plastic cap stamped "UMATILLA N.F.", set 23" in the ground at the base of a rock outcrop 2 feet by 2 feet by 2 feet high, bears N 47°26' E, 44.62 feet.



420400
W 1/16 Corner of sections 15 and 22

Found a 2 1/2" diameter stainless steel pipe, with 3 1/4" diameter brass cap, projecting 10" out of the ground, surrounded by a mound of stones 2 feet in diameter by 6 inches high, marked as shown, from which:

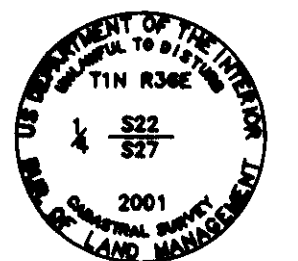
18" Douglas Fir bears N 53 1/4' E, 59.7 feet, with scribing visible on pitched over blaze.
23" Ponderosa Pine bears S 29 3/4' W, 51.1 feet, with scribing visible on pitched over blaze.



440300
1/4 Corner of sections 22 and 27

Found a 2 1/2" diameter stainless steel pipe, with 3 1/4" diameter brass cap, projecting 5" out of the ground, surrounded by a ring of stones with the original corner stone lying on the south side of the pipe, marked as shown, from which:

36" Douglas Fir bears N 16 3/4' E, 22.8 feet, with healed blaze.
11" Douglas Fir bears S 18 3/4' W, 89.9 feet, with scribing visible on pitched over blaze and a 3/4" diameter brass washer stamped "RLS 852" nailed to the bottom of the blaze.
26" Douglas Fir snag bears S 46 1/2' W, 9.9 feet, with scribing "1/4 S BT" visible on chopped open blaze.
16" Douglas Fir bears S 62 3/4' W, 84.6 feet, with scribing visible on pitched over blaze.



New reference:
16" Douglas Fir bears S 55' E, 20.7 feet, scribed "1/4 S27" "BT".

REGISTERED
PROFESSIONAL
LAND SURVEYOR

David A. Schlaich
OREGON
JULY 18, 1987
DAVID A. SCHLAICH
2308

RENEWAL DATE: 06/30/2004

RECEIVED BY
Umatilla County Surveyor
Date 2-03
Rec'd By KK
No. 03-31-B