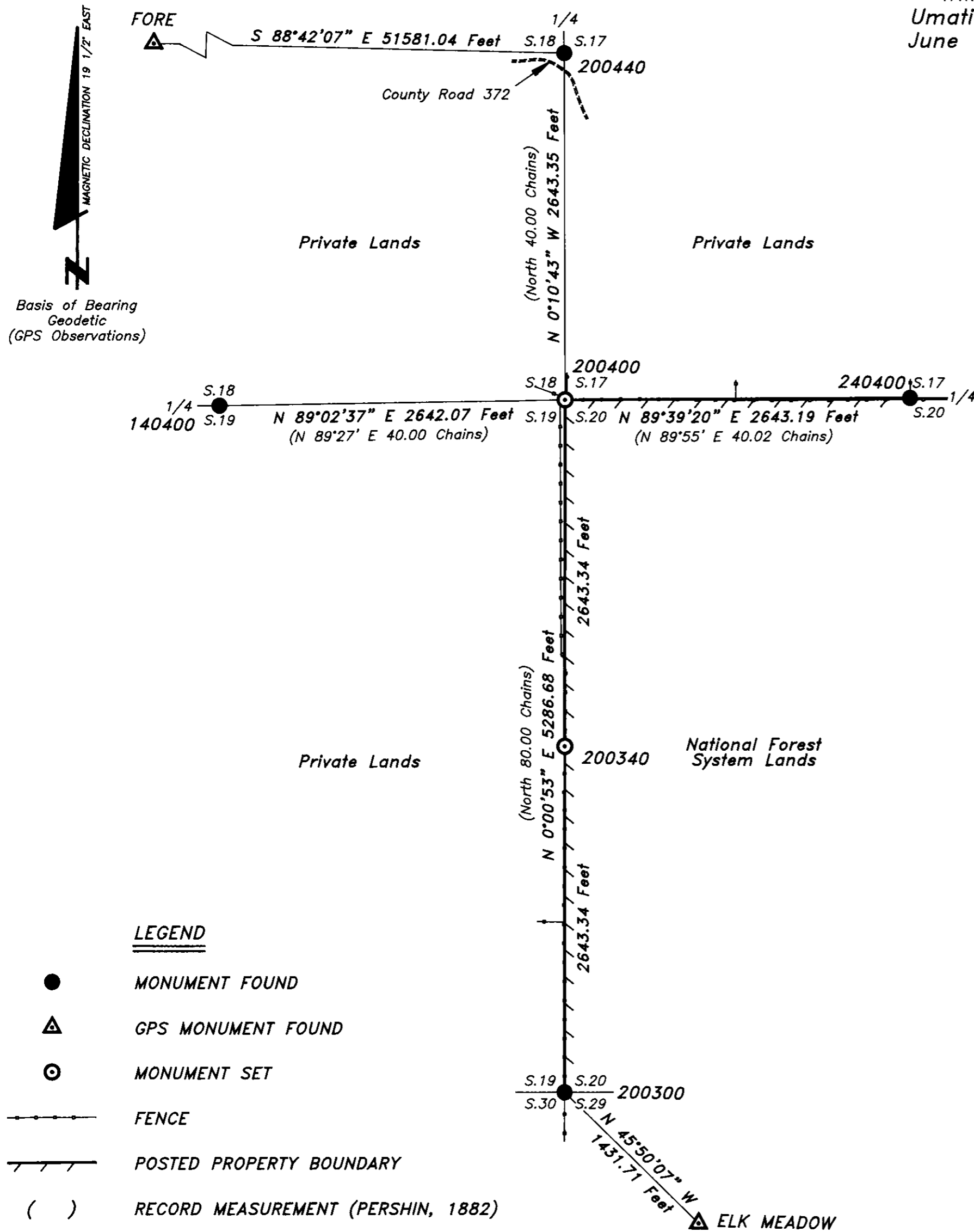
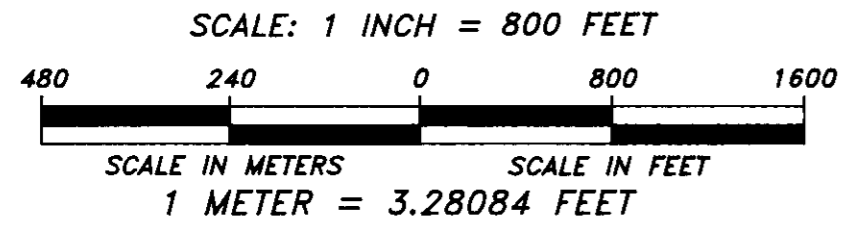


Survey for  
Umatilla National Forest  
of  
A Portion of Section 20,  
Township 5 South, Range 33 East,  
Willamette Meridian  
Umatilla County, Oregon  
June - November, 2002



- LEGEND**
- MONUMENT FOUND
  - ▲ GPS MONUMENT FOUND
  - ⊙ MONUMENT SET
  - FENCE
  - POSTED PROPERTY BOUNDARY
  - ( ) RECORD MEASUREMENT (PERSHIN, 1882)



BEARINGS SHOWN ARE MEAN GEODETIC BEARINGS AND DISTANCES ARE GROUND MEASUREMENTS BASED ON A MEAN PROJECT ELEVATION OF 4400 FEET.

REVIEWED BY:	
<i>Mike Schwartz</i>	1-26-03
SIGNATURE	DATE
I CERTIFY THAT THIS SURVEY WAS PERFORMED AT THE REQUEST OF THE UMATILLA NATIONAL FOREST.	
<i>David A. Schlaich</i>	1/29/03
FOREST SUPERVISOR	DATE

REGISTERED PROFESSIONAL LAND SURVEYOR
<i>David A. Schlaich</i>
OREGON JULY 16, 1987 DAVID A. SCHLAICH 2308
RENEWAL DATE: 06/30/2004

I, David A. Schlaich, a Registered Land Surveyor in the state of Oregon, hereby certify that this plat and the notes hereon are a true and correct representation of a survey I conducted from June 27 to November 22 of 2002, at the request of the Umatilla National Forest, in accordance with the statutes of the state of Oregon and the Bureau of Land Management's 1973 Manual of Surveying Instructions.

*David A. Schlaich*

DAVID A. SCHLAICH -- RLS 2308  
UMATILLA NATIONAL FOREST  
2517 S.W. HAILEY AVENUE  
PENDLETON, OREGON 97801  
PHONE: (541) 278-3716

**NARRATIVE**

**PURPOSE:**  
The purpose of this survey was to correct Umatilla County Survey No. 85-43-B by reestablishing the corner of sections 17, 18, 19 and 20, and the 1/4 corner of sections 19 and 20 using the correct record measurements. The Property Boundary of National Forest System Lands was also reposted using the reestablished corners.

**HISTORY:**  
1882, George S. Pershin, U.S. Deputy Surveyor, subdivided the township under General Land Office Contract No. 430.  
1976, Duane I. Griffith, Registered Land Surveyor 644, remonumented the 1/4 corner of sections 17 and 20 from original evidence (Corner Recordation form on file at the Umatilla County Surveyor's Office).  
1977, Craig L. Wanless, BLM Cadastral Surveyor, remonumented the 1/4 corner of sections 17 and 18, and the corner of sections 19, 20, 29 and 30, from original evidence (Group No. 350 approved January 23, 1980).  
1984, David H. Krumbein, Registered Land Surveyor No. 933, of Krumbein Engineering surveyed sections 20 and 21 for the Umatilla National Forest (Umatilla County Survey No. 84-155-B), revised 12/20/84 and refiled (Umatilla County Survey No. 85-43-B).  
1989, David Evans and Associates establish the Horizontal Coordinates of station "ELK MEADOW" 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).  
1991, The National Geodetic Survey establish the Horizontal Coordinates of station "FORE" by GPS observations.  
1995, The Bureau of Land Management while reviewing surveys for use in the computing of Horizontal Coordinates for PLSS (Public Land Survey System) Corners as part of the Geodetic Coordinate Data Base (GCDB) discover that Krumbein used an incorrect record measurement (38.84 chains) between the 1/4 corner of sections 18 & 19 and the corner of sections 17, 18, 19 & 20 when he reestablished the corner of sections 17, 18, 19 & 20, and the 1/4 corner of sections 19 & 20.

**PROCEDURES:**  
The survey was conducted using three Trimble 4600LS Surveyor GPS (L1 frequency) Receivers, a Topcon GPT-6005C Total Station and a Warren-Knight Surveyor's Compass (Sipe-Sumner Pattern).  
The GPS measurements were conducted using fast static techniques with stations "FORE" and "ELK MEADOW" 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 traverse measurements using a least squares adjustment, compute corner proportioning, corner moves and posting offsets.  
A Warren-Knight Surveyor's Compass (Sipe-Sumner Pattern), magnetic declination 19 1/2' East, was used to verify corner references at the 1/4 corner of sections 17 and 18, and the 1/4 corner of sections 18 and 19. The Topcon GPT-6005C was used for corner verification at all of the other corners tied in this survey.  
Distance measurements to the bearing trees were measured at the tree's side center 1 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 by the "BT" scribing.  
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.

Survey for  
Umatilla National Forest  
of  
A Portion of Section 20,  
Township 5 South, Range 33 East,  
Willamette Meridian  
Umatilla County, Oregon  
June - November, 2002

CORNER INFORMATION

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

No.	Latitude	Longitude	Northing(Y)	Eastng(X)
FORE	45°08'15.86357" N	118°57'27.86562" W	540108.994	8600034.257
ELK MEADOW	45°06'36.20226" N	118°45'14.23087" W	531088.621	8652825.983
140400	45°07'37.80070" N	118°46'05.36670" W	537246.388	8649026.099
200300	45°06'46.04905" N	118°45'28.54835" W	532063.417	8651777.995
200340	45°07'12.14254" N	118°45'28.53882" W	534705.326	8651721.703
200400	45°07'38.23602" N	118°45'28.52927" W	537347.236	8651665.412
200440	45°08'04.32946" N	118°45'28.64420" W	539988.953	8651600.200
240400	45°07'38.39285" N	118°44'51.67167" W	537420.253	8654306.764

**FORE**

Found a 10" square concrete monument with a 4" diameter brass disk, set flush with the ground, marked as shown, from which:

U Channel Steel Post bears S 5° W, 3.9 feet, with Site Marker sign stamped "GPS STA. FORE 1989" 4 FT. RP".



**ELK MEADOW**

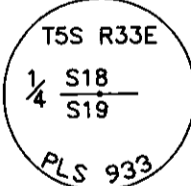
Found a 3 1/4" diameter aluminum cap, surrounded with concrete, projecting 3" out of the ground, marked as shown, from which:

Steel Fence Post, with Land Survey Monument sign, bears North, 3.1 feet.



**140400**  
1/4 corner of sections 18 and 19

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



20" stump bears N 13° E, 35.0 feet, with no marks.  
14" Ponderosa Pine bears S 42 1/2° E, 32.0 feet, with healed blaze.  
21" burnt stump bears S 51° W, 77.2 feet, with fragmentary scribing visible.  
15" Ponderosa Pine bears N 22 1/4° W, 101.0 feet, with healed blaze.

New References:  
13" Ponderosa Pine bears S 20 1/4° E, 94.1 feet, scribed 1/4 S19 "BT".  
12" Ponderosa Pine bears S 13 1/4° W, 62.9 feet, scribed 1/4 S19 "BT".

**200300**  
Corner of sections 19, 20, 29 and 30

Found a 2 1/2" diameter iron pipe, with 3 1/4" diameter brass cap, projecting 9" out of the ground, 0.6 feet East of a North-South fenceline, marked as shown, from which:

22" Ponderosa Pine bears N 56° E, 262.3 feet, with healed blaze.  
43" Ponderosa Pine bears S 65 1/2° E, 184.1 feet, with healed blaze previously chopped open.

New References:  
7" Ponderosa Pine bears S 52° E, 186.6 feet, scribed "TSS R33E S29" "BT".  
RM, 5/8" diameter by 24" long rebar with 1 1/4" diameter red plastic cap stamped "UMATILLA N.F.", set 16" in the ground, bears N 0°23' W, 61.81 feet.

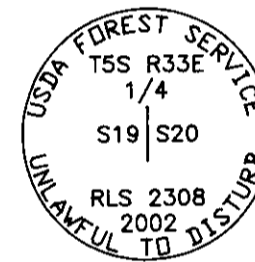


**200340**  
1/4 corner of sections 19 and 20

Set at proportionate distance a 2 1/2" diameter by 30" long aluminum pipe, with 3 1/4" diameter aluminum cap, 18" in the ground, with white SURV-KAP magnetic reference set in the bottom of the hole, surrounded by a rock mound 2 feet in diameter by 1 feet high, in a North-South fenceline, marked as shown, from which:

17" Ponderosa Pine bears S 87 3/4° E, 26.6 feet, scribed 1/4 S20 "BT".  
12" Ponderosa Pine bears S 41 1/2° E, 58.3 feet, scribed 1/4 S20 "BT".  
19" Ponderosa Pine bears S 10 3/4° W, 47.9 feet, scribed 1/4 S19 "BT".  
11" Ponderosa Pine bears N 62 1/4° W, 40.1 feet, with scribing visible on partially healed blaze.  
The 1/4 corner of sections 19 and 20, erroneously established by Krumbein in 1984, bears S 86°37'37" W, 19.43 feet. Monumented with 2 1/2" diameter iron pipe with a 2 1/2" diameter brass cap firmly set, in a mound of stones, with brass cap marked and witnessed as described in the county records.

As per the direction of David H. Krumbein, Umatilla County Surveyor, I remove the 1984 monument and destroy the marks on the 1984 NE BT.



REGISTERED  
PROFESSIONAL  
LAND SURVEYOR

*David A. Schlaich*  
OREGON  
JULY 16, 1987  
DAVID A. SCHLAICH  
2308

RENEWAL DATE: 06/30/2004

**200400**  
Corner of sections 17, 18, 19 and 20

Set at proportionate distance a 2 1/2" diameter by 30" long aluminum pipe, with 3 1/4" diameter aluminum cap, 14" in the ground, with white SURV-KAP magnetic reference set in the bottom of the hole, surrounded by a rock mound 2 feet in diameter by 1 1/2 feet high, in a East-West fenceline, marked as shown, from which:

12" Ponderosa Pine bears N 86 1/4° E, 294.5 feet, with scribing visible on almost completely healed blaze.  
13" Ponderosa Pine bears S 56 1/2° E, 209.0 feet, with scribing visible on almost completely healed blaze and 1" diameter brass washer stamped "PLS 933" nailed to the bottom of the blaze.  
RM bears S 81°22' W, 51.29 feet, which is a 5/8" diameter rebar with 1 3/4" diameter aluminum cap projecting 10" out of the ground, stamped "KRUMBEIN ENGR RM 14.25FT PLS 933" with arrow pointing to the northeast.  
RM bears N 70°58' W, 51.79 feet, which is a 5/8" diameter rebar with 1 3/4" diameter aluminum cap projecting 12" out of the ground, stamped "KRUMBEIN ENGR RM 14.5FT PLS 933" with arrow pointing to the southeast.  
The corner of sections 17, 18, 19 and 20, erroneously established by Krumbein in 1984, bears S 87°55'34" W, 38.50 feet. Monumented with 2 1/2" diameter iron pipe with a 2 1/2" diameter brass cap firmly set, in a mound of stones, with brass cap marked and witnessed as described in the county records.

As per the direction of David H. Krumbein, Umatilla County Surveyor, I remove the 1984 monument.

**200440**  
1/4 corner of sections 17 and 18

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

16" Western Larch bears S 72 1/2° E, 17.8 feet, with healed blaze.  
18" stump bears S 26° E, 10.6 feet, with scribing visible on open blaze.  
15" Ponderosa Pine bears N 27 1/2° W, 103.6 feet, with scribing visible on almost completely healed blaze.

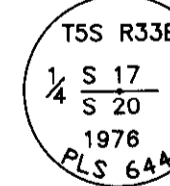
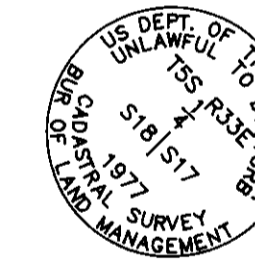
New References:  
16" Douglas Fir bears N 52 1/2° E, 76.3 feet, scribed 1/4 S18 "BT".  
7" Ponderosa Pine bears N 35° W, 18.5 feet, scribed 1/4 S17 "BT".

**240400**  
1/4 corner of sections 17 and 20

Found a 2 1/2" diameter iron pipe, with 2 1/2" diameter brass cap, projecting 10" out of the ground, marked as shown, from which:

13" Ponderosa Pine bears S 4 1/2° E, 29.6 feet, with scribing visible on almost completely healed double blaze.  
29" Ponderosa Pine bears N 87 1/2° W, 21.8 feet, with scribing visible on chopped open blaze.

New References:  
11" Ponderosa Pine bears N 28 1/4° E, 65.7 feet, scribed 1/4 S17 "BT".  
17" Ponderosa Pine bears S 48° E, 47.3 feet, scribed 1/4 S20 "BT".



RECEIVED BY  
Umatilla County Surveyor  
Date 2-03  
Rec'd By AK  
No. 03-019-B