

SURVEY NARRATIVE
to comply with
PARAGRAPH 209.250, OREGON REVISED STATUTES
FILED

SURVEY FOR:

UMPQUA NATIONAL FOREST
P.O. Box 1008
2900 N.W. Stewart Parkway
ROSEBURG, OREGON 97470

Date 11-27-95 By JP
This survey consists of
Map _____
Narrative: C.S. 63/164-2
Corner Rpt. C.S. 63/164-2

PURPOSE OF THIS SURVEY:

DOUGLAS COUNTY
SURVEYOR

The purpose of this survey is to establish horizontal Geodetic control for Deadman (HES 141) and Andriaeff (HES 179) Cadastral Survey projects.

LOCATION OF SURVEY:

The project area is primarily located in Township 29 South, Range 2 West, Section 35 and Township 29 South, Range 1 East, Section 1, Willamette Meridian, Douglas County, Oregon. The general location is 6.7 MI Northeast (Deadman) and 18.5 MI Northeast (Andriaeff) of Tiller Ranger Station.

PROCEDURE:

This project was completed using (1) Trimble 4000 SE and (2) Trimble 4000 ST single frequency GPS receivers in the static mode for simultaneous collection of NAVSTAR satellite signals at each station as noted in the GPS Descriptions (pages 1-5) of this narrative.

Douglas County B-Order Stations **DREW** and **28S2W1 ECC (Red Butte ECC)** GPS Stations as adjusted by National Geodetic Survey (NGS) in October, 1995 were held for horizontal control. The NGS adjustment utilized NAD 83(91) adjustment for horizontal coordinates and NAVD 88 for vertical. For the purpose of this current survey, NGVD 29 datum was utilized rather than using the NAVD 88 datum. Vertical control station (second-order) held for control was Benchmark 16 D 17, near Station Drew. The NGVD 29 elevation as published by NGS (#NZ0253) for this station was held. There is some question as to the "correct" elevation for Benchmark 16 D 17. Rather than hold the 1992 elevation established by Douglas County, or the un-published elevation for Bureau of Public Roads Benchmark found near GPS 5179 (Andriaeff), I held the published NGS elevation for Benchmark 16 D 17. Vertical accuracy was not a priority for this current GPS survey, and should not be considered as accurate to a precision greater than 0.5 FT per station.

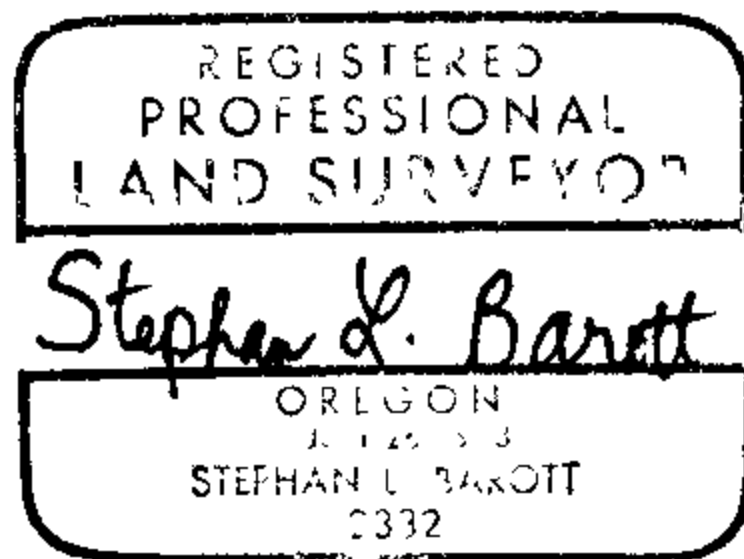
Ellipsoid Separation/Geoid Height was determined by GEOID93 modeling. Trimvec Vesion E and Trimnet software was utilized for primary data reduction and network adjustment. State Plane coordinate conversion

[NAD83(91)] for the final product was computed utilizing Trimnet software and U.S. Army Corps of Engineers "CORCON Ver. 3.01" software. Only the final coordinates are shown in this narrative. All other GPS data is on file in the Rogue River National Forest Engineering/Surveying office in Medford, Oregon as Project No. ROR-95-24.

PRECISION: FGCC Class (C) 2-I 1:50,000.

REPORT DOCUMENTS: This Geodetic Survey Report consists of a two page narrative, five pages of GPS Descriptions, and a one page Vertical Datum Report.

Survey Commenced: June 27, 1995
Survey Completed: October 20, 1995



STEPHAN L. BAROTT
Registered Professional Land Surveyor
Oregon Certificate No. 2332

Certificate Expires 12/31/95

ROGUE RIVER NATIONAL FOREST
1319 East McAndrews Road
Medford, Oregon 97504

*****G.P.S. DESCRIPTION*****

October 20, 1995

	NAD 83 (91)	OREGON--SOUTH ZONE
LATITUDE:	42° 59' 24.25800" North	149388.9392 North
LONGITUDE:	122° 42' 43.43505" West	1319636.1320 East
θ:	-1° 30' 48.1631"	SCALE: 0.999899438823
	NGVD 29	
ELEVATION:	686.860 M. ELLIPSOID	709.314 M ORTHOMETRIC
PID: 5058	DESIGNATION: 30S1E4 UMP 058	
LOCATION:	T.30 S., R. 1 E., NW 1/4 Section 4, Willamette Meridian	
COUNTY:	DOUGLAS STATE: OREGON	
SURFACE MARK: STATION IS A 2½ INS. DIAM. BRASS DISK SET IN A 5-INS. DIAM. CONCRETE MONUMENT, SET FLUSH WITH THE GROUND.		
SET BY: UMPQUA NATIONAL FOREST IN 1986, Chief of Party LEH.		
OCCUPIED THIS SURVEY BY: ROGUE RIVER NATIONAL FOREST, Chief of Party, Stephan L. Barott OREGON CERTIFICATE: LS2332		

HOW TO REACH: To reach station from the intersection of Highway 227 and County Road 46 in Tiller, Oregon, go North-Northeast for 8.16 KM (5.1 MI) on County Road 46. Turn right and go East-Southeast for 17.6 KM (11.0 MI) on USFS Road 29. Turn left and go North-Northwest for 2.88 KM (1.8 MI) on USFS Road 2980 to station in median area at intersection of USFS Road 2980 and 2980-100. The station is a standard USFS brass cap monument set in concrete, stamped USFS CONTROL GPS 30S1E4 1986. Located 16.15 M (53 FT) Southeast from a 12-ins. diam. pine tree, 14.84 M (48.7 FT) Northwest from a 6-ins. by 6-ins. wood post with a USFS Road 100 sign attached, and 1 M (3.2 FT) South of an aluminum post with a USFS Land Survey Monument sign attached. In addition, the station is located 1.6 KM (1 MI) south of the South Umpqua Experimental Forest. The NAD 83 coordinates established in 1986 are on file with the U.S. Forest Service.

*****G.P.S. DESCRIPTION*****

October 20, 1995

	NAD 83 (91)	OREGON--SOUTH ZONE
LATITUDE:	43° 09' 54.76127" North	169213.7175 North
LONGITUDE:	122° 52' 51.47262" West	1306421.3012 East
θ:	-1° 37'44.1504"	SCALE: 0.999894609323
	NGVD 29	
ELEVATION:	1584.300 M. ELLIPSOID	1606.735 M ORTHOMETRIC
PID: 5034	DESIGNATION: 28S2W1 ECC RESET	
LOCATION:	T.28 S., R. 2 W., NE 1/4 Section 1, Willamette Meridian	
COUNTY:	DOUGLAS	STATE: OREGON
SURFACE MARK: STATION IS A 2 INS. DIAM. BRASS TABLET SET IN A DRILL HOLE IN A ROCK OUTCROP (FOUND LOOSE). I RESET BRASS TABLET IN SAME DRILL HOLE WITH EPOXY.		
SET BY: UMPQUA NATIONAL FOREST IN 1986, Chief of Party LEH.		
OCCUPIED THIS SURVEY BY: ROGUE RIVER NATIONAL FOREST, Chief of Party, Stephan L. Barott		
OREGON CERTIFICATE: LS2332		

HOW TO REACH: To reach from Glide, Oregon, proceed south and east on County Road 17C for approximately 25.7 KM (16.0 MI) to Coolwater Campground and end of County Road. Continue Easterly on U.S.F.S. Road No. 27 (Little River Road) for 0.4 MI. Turn right onto U.S.F.S. Road 2792 (Red Butte Road) and proceed South for 6.5 MI. Turn right onto U.S.F.S. Road 2792-176 (note sign marked "Red Butte L.O. 3") and proceed West for 2 MI. Turn left onto U.S.F.S. Road 2792-190 (note sign marked "Red Butte L.O. 1") and proceed East for 0.7 MI to lookout tower. Leave truck at parking area south of lookout tower and walk south on a trail for approximately 90 FT to station.

Brass Tablet is stamped USDA FOREST SERVICE 28S2W1 ECC 1986 1995. USGS Station Red Butte bears (solar) N 28° 12'43"E, 153.42 FT. Union Peak (in Crater Lake National Park) bears S 55° 37'23"E.

The published NGS (1995) B-Order coordinates were held for horizontal control.

*******G.P.S. DESCRIPTION*******

October 20, 1995

	NAD 83 (91)	OREGON--SOUTH ZONE
LATITUDE:	42° 52' 10.88903" North	136405.4573 North
LONGITUDE:	122° 52' 59.83416" West	1305298.4542 East
θ:	-1° 37' 49.8709"	SCALE: 0.999908142565
	NGVD 29	
ELEVATION:	417.070 M ELLIPSOID	439.737 M ORTHOMETRIC
PID: 5016	DESIGNATION: DREW	
LOCATION:	T.31 S., R. 2 W., NE 1/4 Section 24, Willamette Meridian	
COUNTY:	DOUGLAS	STATE: OREGON
SURFACE MARK: STATION IS A STANDARD NGS BRASS TABLET SET FLUSH IN A CONCRETE FILLED BELL TILE, 8 INS. DIAMETER, 42 INS. LONG, SET 42 INS. IN THE GROUND.		
SET BY: DOUGLAS CO. SURVEYOR IN 1993, Chief of Party RWS.		
OCCUPIED THIS SURVEY BY: ROGUE RIVER NATIONAL FOREST, Chief of Party, Stephan L.Barott		
		OREGON CERTIFICATE: LS2332

HOW TO REACH: Station is located 10.67 M (35.01 FT) NE of the centerline of the Trail-Tiller Highway (State Hwy 227), 29.26 M (96.00 FT) SE of the centerline of a private drive with sign marked "34620", 0.61 M (2.00 FT) SW of a white metal witness post and an orange fiberglass witness post (both of which are set in a barbed wire fence line, which bears SE and NW). The published B-Order NGS (1995) coordinates for this station were held for horizontal control. Additionally, the station is located 20.614 M (67.63 FT) NW of a Bureau of Public Roads Brass Tablet Stamped "16 D 17 1928 31SR2W|R1W 24|19," set in an 8 ins. diam. concrete post and located in the fenceline. The published 2nd-Order elevation for this Benchmark was held for vertical control for this current GPS Survey. Refer to National Geodetic Survey (NGS) # NZ0253.

From the Drew store, located on Highway 227 in Drew, Oregon, proceed SE on State Highway 227 for 2.4 KM (1.5 MI) to the station mark on the left.

*******G.P.S. DESCRIPTION*******

October 20, 1995

	NAD 83 (91)	OREGON--SOUTH ZONE
LATITUDE:	43° 04' 31.19164" North	158747.4340 North
LONGITUDE:	122° 39'38.87719" West	1324059.5763 East
θ:	-1°28'41.8983"	SCALE: 0.999895926672
	NGVD 29	
ELEVATION:	515.780 M. ELLIPSOID	538.069 M ORTHOMETRIC
PID: 5179	DESIGNATION: HES 179 (UMP 179) ANDRIAEFF	
LOCATION:	T.29 S., R. 1 E., NW 1/4 Section 1, Willamette Meridian	
COUNTY:	DOUGLAS	STATE: OREGON
SURFACE MARK: STATION IS A 1½ INS. DIAM. ALUMINUM CAP SET ON A ⅝-INS. DIAM. BY 12-INS. LONG IRON PIN, SET FLUSH WITH THE GROUND. I STABILIZED THE MONUMENT BY SURROUNDING IT WITH CONCRETE.		
SET BY: UMPQUA NATIONAL FOREST IN 1992, Chief of Party LEH.		
OCCUPIED THIS SURVEY BY: ROGUE RIVER NATIONAL FOREST, Chief of Party, Stephan L. Barott		
OREGON CERTIFICATE: LS2332		

HOW TO REACH: To reach station from the intersection of Highway 227 and County Road 46 in Tiller, Oregon, go North-Northeast for 35.5 KM (22 MI) on County Road 46 (USFS Road 28) to Andriaeff Meadows (HES 179). The station is located at the east end of a large gravel flat south of Road 28. The aluminum cap is stamped USFS HES 179 GPS 1992. Located 20 M (65.7 FT) S.31°W., from a 9-ins. diam. Cedar, 43.3 M (142.0 FT) S.45½°E., from a spike set at a driveway junction with Road 28, and 0.6 M (2 FT) East of an aluminum post with a USFS Land Survey Monument sign attached.

*******G.P.S. DESCRIPTION*******

October 20, 1995

NAD 83 (91)		OREGON--SOUTH ZONE
LATITUDE:	43° 01' 09.82338" North	153093.1769 North
LONGITUDE:	122° 54' 40.46734" West	1303494.1387 East
θ:	-1° 38' 58.7188"	SCALE: 0.999897982539
NGVD 29		
ELEVATION:	457.820 M. ELLIPSOID	480.521 M ORTHOMETRIC
PID: 5141	DESIGNATION: HES 141 "DEADMAN GPS"	
LOCATION: T.29 S., R. 2 W., NE 1/4 Section 35, Willamette Meridian		
COUNTY: DOUGLAS STATE: OREGON		
SURFACE MARK: STATION SET THIS SURVEY; A 2½-INS. DIAM. BY 30-INS. LONG IRON POST, SET FLUSH WITH THE GROUND, AND SURROUNDED BY CONCRETE, WITH A 2½-INS. DIAM. BRASS CAP ATTACHED.		
SET BY: ROGUE RIVER NATIONAL FOREST, Chief of Party SLB, for UMPQUA NATIONAL FOREST "DEADMAN CADASTRAL."		
OCCUPIED THIS SURVEY BY: ROGUE RIVER NATIONAL FOREST, Chief of Party, Stephan L. Barott OREGON CERTIFICATE: LS2332		

HOW TO REACH: To reach station from the intersection of Highway 227 and County Road 46 in Tiller, Oregon, go North-Northeast for 8.0 KM (5 MI) on County Road 46 to Deadman Creek Road 13.0. This road is 0.2 MI South of the County Road 46-USFS Road 29 Junction. Follow Deadman Creek Road 13.0 Northwesterly for 7.2 KM (4.5 MI). The station is located north of this road at the north end of a grassy meadow, near the tree line. A 5/8-ins. diam. iron pin with a 1-ins. diam. yellow plastic cap set on the north edge of Deadman Creek Road bears (solar bearing) S. 30° 47' 10" W., 281.29 FT. from GPS Station. The GPS Station is stamped USFS GPS HES 141 1995 LS 2332. An aluminum post with a USFS Land Survey Monument sign attached is set 1 M (3.2 FT) East. Umpqua National Forest "Deadman Cadastral Survey" was completed earlier this year to monument a portion of HES 141. Refer to Douglas County M122-66 and Narrative 63/151-2. HES 141 Corner No. 4 bears S.71° 46' 38" W., 424.59 Ft. distance from this GPS Station. This GPS Station is located on private land.

UMPQUA N.F. GPS--1995

TRIMBLE 4000 SE/ST
TRIMVEC REV. E
VERTICAL DATUM NGVD 29



GPS

GPS STATION NAMES	ORTHO. FEET MSL	ORTHO. METERS MSL	GEOID93 METERS	ELLIPSE METERS
RED BUTTE RESET 28S2W1 ECC GPS 5034	5271.440	1606.735	-22.435	1584.300
HES 141 DEADMAN GPS 5141	1576.512	480.521	-22.701	457.820
DREW 1993 DCSO GPS 5016	1442.707	439.737	-22.667	417.070
HES 179 ANDRAIEFF (1992) GPS 5179	1765.318	538.069	-22.289	515.780
UMP 058 30S1E4 (1986) GPS 5058	2327.146	709.314	-22.454	686.860