

GPS SURVEY FOR THE
SIUSLAW NATIONAL FOREST
LANE & DOUGLAS COUNTIES
SEPTEMBER 1994
MAPLETON R.D.

FILED

Date: 2-22-96 By: AP
This survey consists of: 4 Pts
Map: M123-330
Narrative: _____
Corner Rpt: _____

DOUGLAS COUNTY
SURVEYOR *sc*

MAP FILE M123-330

9418 - GPS Point "GPS 20118" in Section 8, T.20 S., R.11 W.

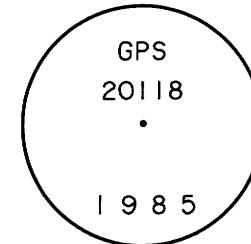
Found a 3/4" aluminum cap on an aluminum pipe in concrete at ground level, marked as shown:

1927
Latitude: 43°51'12.06744" Longitude: 124°01'56.36457"

1983(1991)
Latitude: 43°51'11.48907" Longitude: 124°02'00.72392"

Ellipsoidal Height: 217.406(m)

1983(1991) PLANE COORDINATES					
GRID	ZONE	NORTHING METERS	EASTING METERS	SCALE FACTOR	CONVERGENCE
SPC	OR S	248,884.511	1,215,984.707	0.9999660	-2°25'02.850"
UTM	10	4,856,086.432	416,933.062	0.9996849	-0°42'57.913"



9419 - Corner to Sections 4,5,8, 8 9, T.20 S., R.12 W.

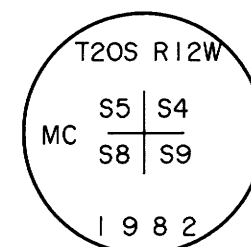
Found a BLM brass cap on an iron pipe, marked as shown:

1927
Latitude: 43°51'23.08511" Longitude: 124°08'37.98647"

1983(1991)
Latitude: 43°51'22.50818" Longitude: 124°08'42.35827"

Ellipsoidal Height: -12.526(m)

1983(1991) PLANE COORDINATES					
GRID	ZONE	NORTHING METERS	EASTING METERS	SCALE FACTOR	CONVERGENCE
SPC	OR S	249,608.590	1,207,037.800	0.9999666	-2°29'37.627"
UTM	10	4,856,544.512	407,971.043	0.9997042	-0°47'36.382"



PURPOSE:

The primary purpose of this GPS Survey was to provide coordinates for existing Public Land Survey corners and existing Geodetic Control Points on the Forest.

EQUIPMENT:

The survey was performed using two Trimble 4000ST and one Trimble 4000SE (Field Surveyor) GPS receivers with the computations being performed on a Tangent 486 computer.

FIELD PROCEDURES:

Instrument heights were measured at least two times during each observation session. During the course of the survey, observation sessions were conducted three times at points, 9409 and 9412; two times at 9402, 9403, 9405, 9406, 9407, 9408, 9410, 9414, 9416, 9417, and 9418; and the remainder of the points being occupied once. Meteorological values were not measured during the observation sessions.

A minimum of 1 1/2 hours of simultaneous data was recorder at all observation sessions.

OFFICE PROCEDURES:

Baseline computations were performed daily. Trimble's "TRIMVEC-PLUS" software was used to batch process the baselines (both trivial and non-trivial) for incorporation into the final network. Once baseline vectors were determined, the Trimvec program "TCLOSE" was used to check loop closures for the network. The poorest loop closure was 1:490,000.

Upon completion of the field work, Trimvec's least square network adjustment program "TRIMNET" was used to adjust the network. The poorest baseline vector value for the 'unconstrained' adjustment, was 1:555,000.

The network was then constrained using two of the National Geodetic System (NGS) States High Precision Geodetic Network (HPGN - NAD1983-1991) GPS points, 9401 = "PON", 9404 = "SOAM", and 9403, "AP-15" for Latitude and Longitude. "AP-15" had been controlled by Lane County and upon evaluation of a constrained position using "PON" and "SOAM", Latitude and Longitude values for "AP-15" were within less than a tenth of a foot and I therefore felt the 1983(1991) position supplied by Lane County should be held. Upon constraining the network using these three points, the poorest baseline vector was 1:218,000.

I then used the NGS North American Datum Conversion program "NADCON" (version 2.10) to compute 1927 Latitudes and Longitudes.

I, Michael J. Schwartz, a Registered Land Sureyor in the State of hereby certify that this plat and the notes hereon are a true representation of a GPS survey I conducted at the request of the USDA Forest Service, in accordance with the Statutes of the State of Oregon.

Michael J. Schwartz
Michael J. Schwartz, RLS 1922
Expiration date: 6/30/96
Phone (503) 750-7175
Siuslaw National Forest
4077 SW Research Way
Corvallis, OR 97339-1148

REGISTERED
PROFESSIONAL
LAND SURVEYOR

Michael J. Schwartz
OREGON
JULY 18, 1980
MICHAEL J. SCHWARTZ
1922

EXPIRATION DATE:
6/30/96

COUNTY SURVEYORS FILE DATA
DO NOT REMOVE FROM OFFICE

MAP FILE M123-330