



LAMBERT COORDINATES

DESCRIPTION	NORTH	EAST
Control Station BUST	390527.330	1404021.530
Control Station EC-23	391032.800	1404336.670
Sec cor 4, 5, 8, 9	392802.084	1404747.710
Sec cor 8, 9, 16, 17	387691.763	1404337.979
Sec cor 9, 10, 15, 16	387446.567	1409755.971
Sec cor 10, 11, 14, 15	387371.791	1415157.834
Sec cor 15, 16, 21, 22	382226.792	1409635.587
1/4 cor Sec 4/9	392750.794	1407335.675
1/4 cor Sec 8/9	390247.106	1404543.134
1/4 cor Sec 9/10	390056.460	1409937.274
1/4 cor Sec 9/16	387569.165	1407046.975
C 1/4 Sec cor	390153.523	1407190.965
W 1/16 Sec 9/16	387630.464	1405692.477
N 1/16 Sec 8/9	391524.595	1404645.422
W 1/16 Sec 4/9	392776.430	1406041.575
CW 1/16	390200.315	1405867.050
CN 1/16	391452.158	1407263.320
NW 1/16	391488.378	1405954.313
E-W 1/64 Sec 4/9	392763.612	1406688.625
C-E-NW 1/64	391470.268	1406608.816

PROJECT BOUNDARY

W 1/16 Sec 9/16	387630.464	1405692.477
9/16-01-L S 87°24'31.7" E	599.206	387603.374
9/16-02-L S 87°24'31.7" E	318.374	387588.980
9/16-03-L S 87°24'31.7" E	83.576	387585.202
1/4 Sec 9/16 S 87°24'31.7" E	354.727	387585.202
1/4 Sec 9/16 N 3°11'20.4" E	150.014	387569.165
9-01-L N 3°11'20.4" E	413.669	387718.946
9-02-L N 3°11'20.4" E	537.019	388131.974
9-03-L N 3°11'20.4" E	537.019	388668.162
9-04-L N 3°11'20.4" E	296.482	388964.185
9-05-L N 3°11'20.4" E	308.001	389271.709
9-06-L N 3°11'20.4" E	324.901	389596.107
9-07-L N 3°11'20.4" E	371.538	389967.070
9-08-L N 3°11'20.4" E	186.742	389967.070
C 1/4 N 87°58'33.0" W	220.003	390153.523
9-09-L N 87°58'33.0" W	80.077	390164.123
9-10-L N 87°58'33.0" W	491.896	390181.497
CW 1/16 N 87°58'33.0" W	532.767	390200.315
9-11-L N 3°52'32.6" E	599.958	390798.900
9-12-L N 3°52'32.6" E	270.719	390798.900
9-13-L N 3°52'32.6" E	103.231	391069.000
9-14-L N 3°52'32.6" E	317.108	391171.995
NW 1/16 S 88°24'54.2" E	189.569	391488.378
9-14-L S 88°24'54.2" E	422.929	391483.135
9-15-L S 88°24'54.2" E	422.929	391471.437
C-E-NW 1/64 S 88°24'54.2" E	42.255	391471.437
9-16-L N 3°31'51.9" E	255.117	391470.268
9-17-L N 3°31'51.9" E	488.231	391724.901
9-18-L N 3°31'51.9" E	488.231	392212.205
9-19-L N 3°31'51.9" E	432.117	392643.501
E-W 1/64 Sec 4/9 N 3°31'51.9" E	120.339	392763.612

- Refer to sheet 2 for horizontal control details -

U.S. ARMY ENGINEER DISTRICT, PORTLAND

ROGUE RIVER BASIN  
 ELK CREEK LAKE  
 PROJECT BOUNDARY MONUMENTATION  
 SECTION 9, TOWNSHIP 33 SOUTH, RANGE 1 EAST, W.M.  
 JACKSON COUNTY, OREGON

SUPERVISED: *RRR* DRAWN: H-P CAM Ref: Real Estate Segment Map 2  
 NPPEN-SY-86-50

DATE: JULY, 1988 SHEET: 1 of 2 PREPARED BY: HOFFBUHR & ASSOCIATES, INC. MEDFORD, OREGON

SURVEY NARRATIVE TO COMPLY WITH PARAGRAPH 209.250  
OREGON REVISED STATUTES

SECTION CONTROL - (Bearings oriented to true north)

LOCATION: Section 9, Township 33 South, Range 1 East of the Willamette Meridian, Jackson County, Oregon.

PURPOSE: To monument the boundary corners and post line markers along that portion of the Elk Creek Project Boundary being in Section 9, as shown on Segment 2 of the Corps of Engineers Elk Creek Lake Real Estate drawings. The survey was performed during August 1987 through June 1988.

PROCEDURE: Establishing Lambert State Plane Coordinate control:

Second order control monument Station BUST, located in the northeast quarter-section of adjoining Section 8 and established by the Corps of Engineers in 1964, was used as a basis of Lambert State Plane Coordinates (South Zone). The 1974 adjusted coordinates were used. The line from Station BUST to Station EC-23, also established in 1964 and also located in the northeast quarter-section of Section 8, was used as a basis of bearing. The USCE record bearing from BUST to EC-23 = North 31°56'30.7" East.

All bearings and distances shown are on State Plane Coordinate grid. Coordinates and distances are shown to .xxx feet and bearings to .x seconds for mathematical consistency only and are not intended to imply accuracy of survey.

An average latitude and elevation were used to compute a single grid factor for each individual survey traverse. The grid factor at Station BUST is:

Scale factor (latitude N 42°42'58") = 0.9999256  
Elevation factor (1700') = 0.9999187  
Combined (grid) factor = 0.9998443

All horizontal control established by this survey meets requirements of 3rd Order, Class 1, National Oceanic and Atmospheric Administration specifications for geodetic control.

Establishing section subdivision control:

The project boundary within Section 9 is dependent upon the subdivisional lines of the section. A series of traverses were run, using an electronic "total station" 1 second theodolite and distance meter, to locate the controlling section monuments and establish coordinates.

Only the northwest section corner and north and east quarter-section corners of Section 9 have been perpetuated from original evidence. The southwest corner of the section was monumented by the BLM in 1965, using a 3-way fence intersection, 50 year old unrecorded bearing trees, and the fact that the location had been used for many years as the corner.

The west quarter-section corner had evidently been set at single proportionate position on an unrecorded survey in 1965, most likely an Elk Lumber Company survey. A ground search was made but no evidence was found of the original survey. The monument was found to be within 0.3 ft. of the computed proportionate position, and was accepted and used for this survey.

The southeast corner of Section 9 was monumented at a double proportionate position by the BLM in 1974, using the southwest corner of the section, the section corner common to Sections 10, 11, 14, and 15 to the east, the section corner common to Sections 15, 16, 21 and 22 to the south, and the quarter-section corner common to Sections 9 and 10 to the north. The latter two corners have been perpetuated from original evidence. The south quarter-section corner of Section 9 was then monumented by the BLM at single proportionate position, and the center quarter-section and the center-west sixteenth-section corners of Section 9 set. The west sixteenth-section corner between Sections 4 and 9 was also established by the BLM in 1974.

As shown on the map on sheet 1, the monuments found at the southeast corner of Section 9, the south and center quarter-section corners, and the center-west sixteenth-section corner were not used for this survey. They were considered to be outside of the allowable "limits of closure" as outlined in the 1947 and 1979 editions of the Manual of Surveying Instructions, using a ratio of 1/1280 for latitude and departure independently. No monument was set at the computed position of the southeast corner of Section 9.

Using the section control determined as described above, Section 9 was subdivided and monumented as shown on the plat on sheet 1. The intermediate project boundary monuments were positioned for intervisibility.

FOUND:

Southwest corner of Section 9: Found, the BLM brass cap set in 1965, on a 2" diameter pipe exposed 12", and the following bearing trees:  
15" black oak, blazed in 1965, bears N 73°11' E 76.1 ft.  
16" fir with lower healed blaze of unknown origin, bears S 51°36' E 111.6 ft.

Southeast corner of Section 9: No monument found or set at the computed double-proportionate position. The 1974 BLM brass cap intended to be set at the double-proportionate position bears S 16°58' W 26.73 ft., from which the following bearing trees, marked in 1974, bear:  
11" diameter fir stump bears N 40° E 10.9 ft.  
13" fir bears S 42° E 29.9 ft.  
11" fir snag bears South 7.7 ft.  
8" fir snag bears N 80° W 10.8 ft.

Corner common to Sections 10, 11, 14, and 15: Found, the 1956 BLM brass cap on a 2" pipe, exposed 15" and leaning southwesterly 0.15 ft., from which bears the following original bearing trees:  
27" dead fir snag with healed blazes bears N 45°55' W 42.5 ft.  
Trees marked in 1956 were found as follows:  
16" dead fir snag with healed blazes bears N 20°48' E 33.6 ft.  
6" oak with healed lower blaze bears S 24°54' W 22.4 ft.  
12" oak with healed blazes bears N 55°36' W 15.3 ft.

Corner common to Sections 15, 16, 21 and 22: Found, exposed 24" and loose in a mound of stone, the 2.5" diameter galvanized reducer, filled with lead, on a 1.5" diameter iron pipe which was set on Filed Survey No. 2338, and the following original bearing trees:  
18" white oak bears N 58°39' E 11.7 ft.  
29" oak stump with ax marks bears S 66°56' E 47.9 ft.  
The stump hole of a dead and down 10" oak with scribing visible bears S 85°40' W 16.4 ft.  
Trees marked on Survey 2338 in 1963 found as follows:  
10" fir, dead, with healed blazes, bears N 17°37' E 16.0 ft.  
11" oak with healed blazes bears S 21°33' E 43.4 ft.  
12" fir with healed blazes bears S 62°13' W 8.4 ft.  
14" fir, dead, with healed blazes bears N 7°39' W 22.8 ft.

Corner common to Sections 4, 5, 8, and 9: Found, the 2.5" diameter BLM brass cap set in 1965, and the following original bearing tree:  
32" dia. fir stump with scribing visible bears S 35°37' E 16.8 ft.  
Trees marked by the BLM in 1956 were found as follows:  
11" vine maple with healed blazes bears N 65°29' E 58.5 ft.  
30" fir with healed blazes bears S 48°27' E 24.3 ft.  
30" fir with healed blazes bears S 35°59' W 59.1 ft.  
17" fir with healed blazes bears N 35°44' W 31.8 ft.

Quarter-section corner common to Sections 9 and 10: Found, the 2.5" diameter lead-filled reducer on a 1.5" diameter pipe, exposed 13", set by Elk Lumber Company, from which bear the following original bearing trees:  
8" white oak with healed blazes bears S 45° W 37.9 ft.  
18" pine snag, no blaze visible, bears S 20° E 63 ft.

Quarter-section corner common to Sections 4 and 9: Found, a 3" diameter brass cap on a 2" pipe, exposed 3", stamped "Oregon State Board of Forestry, LS 359, 1964" from which bears the following original bearing trees:  
47" oak with scribing visible bears N 14°09' W 149.0 ft.  
A bearing tree marked in 1964, now a 14" fir snag with scribing visible, bears S 42° E 59 ft.

Quarter-section corner common to Sections 8 and 9: Found, a 2.5" diameter lead-filled reducer on a 1.5" pipe, exposed 12", stamped "1965 ... prop cor", evidently set at proportionate position, origin unknown, from which bear the following:  
13" fir with healed blazes bears N 74° E 29.7 ft.  
11" fir with healed blazes bears S 88° W 27.7 ft.

West sixteenth-section corner between Sections 4 and 9: Found, the 3.5" diameter brass cap on a 2.5" pipe, set by the BLM in 1974, exposed 7", and the following bearing trees:  
19" fir with healed blazes bears N 42°25' E 52.0 ft.  
14" pine with healed blazes bears S 14°36' E 33.4 ft.

SET:

South quarter-section corner of Section 9: Set a 30" long Berntsen aluminum monument, exposed 3", at single proportionate position, stamped as shown here, from which the 1974 BLM brass cap monument intended to be set at the corner position bears N 75° W 4.50 ft.  
From the new monument, the trees marked by the BLM bear as follows:  
16" fir with healed blazes bears N 19°00' W 24.4 ft.  
12" fir, dead snag, with scribing visible, bears S 34°39' W 82.2 ft.  
A new tree was marked to replace the dead fir; 10" fir marked "1/4 S 16 BT" bears S 86° W 95.8 ft.

West sixteenth-section corner between Sections 9 and 16: Set a 30" long Berntsen aluminum monument, stamped as shown here, and marked the following bearing trees:  
6" pine marked "W 1/16 S 9 BT" bears N 46° W 39.3 ft.  
10" white oak marked "W 1/16 S 16 BT" bears S 45° W 27.3 ft.  
The monument falls in a deep cut through the earthen dam of a dry stock pond.

Center quarter-section corner: Set a 30" long Berntsen aluminum monument, exposed 3", stamped as shown here, from which a BLM brass cap monument, intended to mark the center-quarter position, bears N 85°19' W 3.66 ft.  
From the found monument bear the following trees marked by the BLM in 1974:  
13" fir with healed blazes bears N 5°38' W 31.3 ft.  
16" fir with healed blazes bears S 25°43' E 53.3 ft.

Center west sixteenth-section corner: Set a 30" long Berntsen aluminum monument, exposed 2", stamped as shown here, from which a BLM brass cap monument, intended to mark the corner position, bears N 89°44' W 2.68 ft.  
From the found monument bear the following trees marked by the BLM in 1974:  
13" oak with healed blazes bears S 18°47' W 44.0 ft.  
17" pine with healed blazes bears N 00°31' E 196.0 ft.

Northwest sixteenth-section corner: Set a 30" long Berntsen aluminum monument, flush, stamped as shown here, and marked the following bearing trees:  
7" fir bears S 62° W 23.9 ft.  
8" fir bears N 17° W 11.6 ft.  
Both trees are marked "NW 1/16 S 9 BT".

REGISTERED  
PROFESSIONAL  
LAND SURVEYOR

*Roger R. Roberts*

OREGON  
JULY 14, 1978  
ROGER R. ROBERTS  
1656

U.S. ARMY ENGINEER DISTRICT, PORTLAND

ROGUE RIVER BASIN

ELK CREEK LAKE

PROJECT BOUNDARY MONUMENTATION

SECTION 9, TOWNSHIP 33 SOUTH, RANGE 1 EAST, W.M.

JACKSON COUNTY, OREGON

SUPERVISED: <i>RPR</i>	DRAWN: H-P CAM	Ref: Real Estate Segment Map 2 NPPEN-SY-86-50
DATE: July, 1988	SHEET: 2 of 2	PREPARED BY: HOFFBUHR & ASSOCIATES, INC. MEDFORD, OREGON