



DESCRIPTION	LAMBERT NORTHING	COORDINATES EASTING
Control Station ELK	373477.320	1398712.240
Control Station JANET	376120.274	1396370.547
Sec cor 19, 20, 29, 30	377028.674	1398810.693
Sec cor 29, 30, 31, 32	371923.962	1398561.124
Sec cor 28, 29, 32, 33	371870.577	1403846.966
Sec cor 20, 21, 28, 29	377173.344	1404073.092
1/4 cor Sec 20/29	377101.009	1401441.893
1/4 cor Sec 29/32	372008.492	1401219.015
1/4 cor Sec 29/28	374521.927	1403959.893
1/4 cor Sec 30/29	374476.318	1398685.908
C 1/4	374499.167	1401328.021
W 1/16 Sec 29/32	371956.227	1399890.070
S 1/16 Sec 30/29	373200.140	1398623.516
SW 1/16	373226.985	1399948.517
CW 1/16	374487.743	1400006.965
CS 1/16	373253.829	1401273.518
CN 1/16	375800.088	1401384.957

PROJECT BOUNDARY			
Sec cor 29, 30, 31, 32			
29/32-01-L	N 88 10 42.3 E	253.591	371923.962 1398561.124
29/32-02-L	N 88 10 42.3 E	357.994	371932.023 1398814.587
29/32-03-L	N 88 10 42.3 E	349.960	371943.403 1399172.400
W 1/16 Sec 29/32	N 88 10 42.3 E	368.073	371954.527 1399522.183
29-01-L	N 2 39 15.4 E	492.617	371966.227 1399890.070
29-02-L	N 2 39 15.4 E	500.025	372458.315 1399912.882
SW 1/16	N 88 50 21.7 E	269.470	372957.803 1399936.038
29-03-L	N 88 50 21.7 E	438.532	373226.985 1399948.517
29-04-L	N 88 50 21.7 E	499.091	373235.868 1400386.959
29-05-L	N 88 50 21.7 E	110.829	373245.977 1400885.948
CS 1/16	N 88 50 21.7 E	276.821	373248.222 1400996.754
29-06-L	N 2 30 21.6 E	489.287	373253.829 1401273.518
29-07-L	N 2 30 21.6 E	260.800	373742.648 1401294.912
29-08-L	N 2 30 21.6 E	150.592	374003.199 1401306.315
29-09-L	N 2 30 21.6 E	217.911	374153.646 1401312.899
C 1/4	N 2 30 21.6 E	127.941	374371.349 1401322.427
29-10-L	N 2 30 21.6 E	415.596	374499.167 1401328.021
29-11-L	N 2 30 21.6 E	148.966	374914.366 1401346.193
29-12-L	N 2 30 21.6 E	370.079	375063.189 1401352.706
29-13-L	N 2 30 21.6 E	283.324	375432.914 1401368.887
CN 1/16	N 2 30 21.6 E	84.201	375715.967 1401381.275
29-13A-L	N 2 30 21.6 E	268.358	375800.088 1401384.957
29-14-L	N 2 30 21.6 E	160.574	376068.190 1401396.691
29-15-L	N 2 30 21.6 E	239.301	376228.610 1401403.711
29-16-L	N 2 30 21.6 E	71.510	376467.682 1401414.175
29-17-L	N 2 30 21.6 E	131.164	376539.124 1401417.301
1/4 Sec 20/29	N 2 30 21.6 E	431.259	376670.162 1401423.036
			377101.009 1401441.893

- Refer to sheet 2 for horizontal control details -

Section corner.  
No evidence found.  
Location by references  
taken by others prior  
to destruction.

**\*\* RECEIVED \*\***  
Date 5/17/88 By SK  
This survey consists of  
2 sheet(s) Map  
0 page(s) Narrative  
JACKSON COUNTY  
SURVEYOR

REGISTERED  
PROFESSIONAL  
LAND SURVEYOR  
*Roger R. Roberts*  
ROGER R. ROBERTS  
1956

I, Roger R. Roberts, registered land surveyor in the State of Oregon, hereby certify that this plat and notes hereon, or attached, are a correct representation of a survey I performed during April, 1987, through March, 1988, at the request of the U.S. Army Corps of Engineers, in accordance with the survey recording act of the State of Oregon, and articles of the Department of the Army, Portland District, Corps of Engineers, Contract No. DACW57-87-C-0054.

*Roger R. Roberts*  
Roger R. Roberts

- LEGEND**
- △ = Found USCE brass disc, second order control monument
  - ⊙ = Found brass disc set by Bureau of Land Management
  - ⊙ = Found brass disc set by Jackson County Surveyor
  - ⊙ = Found 5/8 inch diameter iron pin set on private survey
  - = No monument set. See sheet 2 for additional information
  - = Set Berntsen aluminum monument stamped with point number, date, and "L.S. 1956". Alongside, set metal post with boundary sign.
  - ( ) = General Land Office record measurements \*
  - (( )) = Bureau of Land Management record measurements \*
  - < > = Filed Survey No. 9503 (ALS 1358) record measurements \*
  - - - = Fencelines

\* not reduced to grid

**U.S. ARMY ENGINEER DISTRICT, PORTLAND**

ROGUE RIVER BASIN  
ELK CREEK LAKE  
PROJECT BOUNDARY MONUMENTATION  
SECTION 29, TOWNSHIP 33 SOUTH, RANGE 1 EAST, W.M.  
JACKSON COUNTY, OREGON

SUPERVISED: <i>R.R. Roberts</i>	DRAWN: H-P CAM	Ref: Real Estate Segment Map 1 NPPEN-SY-86-50
DATE: MARCH, 1988	SHEET: 1 of 2	PREPARED BY: HOFFBUHR & ASSOCIATES, INC. MEDFORD, OREGON

**SURVEY NARRATIVE TO COMPLY WITH PARAGRAPH 209.250  
OREGON REVISED STATUTES**

**LOCATION:** Section 29, Township 33 South, Range 1 East of the Willamette Meridian, Jackson County, Oregon.

**PURPOSE:** To monument the boundary corners and post line markers along the southerly and easterly boundaries of that portion of Tract A being in Section 29, as shown on Segment 1 of the Corps of Engineers Elk Creek Lake Real Estate drawings. The survey was performed during April 1987 through March 1988.

**PROCEDURE:** Establishing Lambert State Plane Coordinate control:

Second order control monument Station ELK, established by the Corps of Engineers in 1964, was used as a basis of Lambert State Plane Coordinates (South Zone). The 1968 adjusted coordinates were used. The line from Station ELK to Station JANET, established in 1974 and located in the northeast quarter of adjoining Section 30, was used as a basis of bearing. The USCE record bearing from ELK to JANET = North 41°32'29.0" West.

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 the center 1/4 corner of Section 29 is:  
Scale factor (latitude N 42°40'20") = 0.9999319  
Elevation factor (2000') = 0.9999043  
Combined (grid) factor = 0.9998362

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

**Establishing section subdivision control:**

The portion of Tract A being in Section 29 is described as the "NW 1/4, N1/2 of the SW1/4, and SW 1/4 of the SW 1/4". It was therefore necessary to subdivide 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.

The location of the northwest corner of the section falls in the construction area of the Elk Creek dam. The monument and all accessories were destroyed by excavation work. Two methods were considered to determine the location of this missing section corner:

- USCE record coordinates as determined in 1965 by transit and chain survey.
- Coordinates as determined by a registered surveyor (Oregon LS 1069) in 1986, just prior to its necessary destruction.

The coordinates of the section corner as defined in Method B above were determined by direct measurements from second order control stations EC-42 and EC-44, and would fall South 66°29' East 4.22 feet from those defined by Method A. After contacting the surveyor to discuss his method of measurement and degree of accuracy attained, it was decided that the section corner coordinates as determined by Method B were probably the more accurate representation of the position of the section corner monument.

The three remaining section corners and the south quarter-section corner have been perpetuated from original evidence. Single proportionate positions were computed for the west, north and east quarter-section corners and a ground search made for evidence of the original survey. None was found. The monument at the west quarter-section corner was found to be out of position by 7.37 feet, and the monument at the north quarter-section corner out of position by 28.76 feet, as shown on the plat. These were determined to be outside of the allowable "limits of closure" as outlined in the 1947 and 1973 editions of the Manual of Surveying Instructions, using a ratio of 1/1280 for latitude and departure independently. Therefore, the computed proportionate positions for these two quarter-section corners were used. No monument was set at the west quarter-section corner. The north quarter-section corner, being an angle point on the project boundary, was monumented. Using the section control determined as described above, Section 29 was subdivided and monumented as shown on the plat on sheet 1. The intermediate project boundary monuments were positioned for intervisibility.

**SECTION CONTROL - (Bearings oriented to true north)**

**FOUND:**

Southwest corner of Section 29: Found, the 1974 BLM brass cap on a 2.5" diameter pipe, exposed 9" in a mound of stone, and the following bearing trees:  
19" dia. white oak, marked by the County Surveyor in 1929, with scribing visible in the upper blaze, the lower blaze rotted out, bears N 88°29' E 104.3 ft.  
17" dia. white oak, marked by the GLO (General Land Office), no scribing visible in upper or lower blazes, bears S 10°25' W 57.3 ft.  
19" dia. black oak, marked by the County Surveyor in 1970, no scribing visible in upper or lower blazes, bears S 82°51' W 43.9 ft.

Southeast corner of Section 29: Found, the 1960 County Surveyor brass cap on 1.5" diameter pipe, exposed 7", and the following bearing trees, marked by the County Surveyor in 1960:  
8" black oak with healed blazes bears S 60° W 21.1 ft.  
8" white oak with healed blazes bears N 65°02' W 30.2 ft.  
10" white oak with healed blazes bears S 39°35' E 41.3 ft.  
Also found was a 5" white oak with scribing visible (including "1358" in upper blaze) bears N 77°25' E 27.2 ft. This tree is not of record, but was apparently marked during Survey No. 9503 (County records) in 1983.

Northeast corner of Section 29: Found, the 1958 BLM brass cap on a 2.5" diameter pipe, exposed 9", and the following bearing trees marked by the BLM in 1958:  
16" fir with healed blazes bears N 48° E 26.7 ft.  
12" fir with healed blazes bears S 48° E 35.6 ft.  
13" fir with healed blazes bears S 48° W 16.7 ft.  
14" fir with healed blazes bears N 58° W 20.4 ft.  
Also found a 17" black oak, marked by the GLO, lower blaze open and rotted, bears S 40° E 28.0 ft.

East quarter-section corner of Section 29: Found, the 5/8" diameter iron pin with plastic cap marked "THOMPSON 1358", set at single proportionate measurement on Survey No. 9503 in 1983, and the following bearing trees marked on that survey:  
9" white oak with scribing visible bear N 30° E 18.5 ft.  
12" Ponderosa pine with scribing visible bears N 85° W 37.2 ft.

South quarter-section corner of Section 29: Found, the 1970 County Surveyor brass cap on 1.5" pipe, exposed 7" in a mound of stone, and the following bearing trees:  
12" white oak, marked by the GLO, lower blaze cut out, no scribe visible, bears N 49°57' W 53.29 ft.  
10" white oak, marked by the County Surveyor in 1929, with healed blazes bears N 43°12' E 71.4 ft.

West quarter-section corner Section 29: No monument found or set at computed single proportionate position. The 1974 BLM brass cap monument intended to be set at the proportionate position bears N 23°51' W 7.37 ft., from which the following trees, marked in 1974, bear:  
12" fir with healed blazes bears S 43°15' E 35.5 ft.  
7" fir with healed blazes bears N 62° W 17.8 ft.

**SET:**

North quarter-section corner Section 29: Set a 30" long Berntsen aluminum monument, exposed 2", with the aluminum cap stamped as shown here, from which bear the following:  
1988  
The 1958 BLM brass cap monument S 20  
intended to be set at the proportionate position bears N 25°08' E S 29  
28.76 ft. LS 1656  
A 10" fir (dead) with healed blazes bears N 7°39' W 53.1 ft.  
A 10" white oak with healed blazes bears S 60°01' E 60.8 ft. Both trees were marked by the BLM in 1958.

Center North sixteenth-section corner of Section 29: Set a Berntsen aluminum monument, with the aluminum cap stamped as shown here, and marked the following bearing trees:  
An 8" madrone bears N 66°17' E 47.7 ft. 1987  
A 14" white oak bears S 80°11' E c  
26.8 ft. N 1/16 + S 29  
Both trees are marked c  
"CN 1/16 SEC 29 BT". LS 1656

Center south sixteenth-section corner of Section 29: Set a Berntsen aluminum monument, with the aluminum cap stamped as shown here, and marked the following bearing trees:  
A 9" ponderosa pine bears 1987  
N 82°31' E 38.92 ft. c  
A 9" white oak bears S 1/16 + S 29  
S 13°10' E 10.3 ft. c  
Both trees are marked LS 1656  
"CS 1/16 SEC 29 BT".

Southwest sixteenth-section corner of Section 29: Set a Berntsen aluminum monument, with the aluminum cap stamped as shown here, and marked the following bearing trees:  
A 9" white oak bears N 46°56' E 1987  
9.8 ft. SW 1/16 + S 29  
A 9" white oak bears S 26°51' E LS 1656  
24.9 ft.  
Both trees are marked "SW 1/16 S 29 BT".

West sixteenth-section corner between Sections 29/32: Set a Berntsen aluminum monument, with the aluminum cap stamped as shown here, and marked the following bearing trees:  
A 7" pine bears N 8° W 38.3 ft. 1987  
A 9" white oak bears S 73° E S 29  
36.0 ft. W 1/16 +  
Both trees are marked S 32  
"W 1/16 S 29/32 BT". LS 1656

Center quarter-section corner of Section 29: Set a 30" long Berntsen aluminum monument, with the aluminum cap stamped as shown here, and marked the following bearing trees:  
An 8" cedar bears N 39°03' E 1987  
24.7 ft. C 1/4 + S 29  
A 10" cedar bears N 34°47' W LS 1656  
17.5 ft.  
Both trees are marked "C 1/4 S 29 BT"

REGISTERED  
**PROFESSIONAL  
LAND SURVEYOR**

*Roger R. Roberts*

OREGON  
JULY 14, 1978  
**ROGER R. ROBERTS**  
1988

**U. S. ARMY ENGINEER DISTRICT, PORTLAND**

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ELK CREEK LAKE

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<b>DATE:</b> MARCH, 1988	<b>SHEET:</b> 2 of 2	<b>PREPARED BY:</b> HOFFBUHR & ASSOCIATES, INC. MEDFORD, OREGON