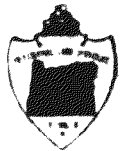


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LOT SURVEYS  
SUBDIVISIONS  
ENGINEERING SURVEYS

OFFICE 656-0152

RES. OL 4 3641

## BOUNDARY SURVEYS

IN SECTIONS 11, 12, 13 &amp; 14, T 3 N, R 7 E, W.M.

SKAMANIA COUNTY, WASHINGTON

for

CROWN ZELLERBACH CORPORATION  
ALBERT AALVIK

WASHINGTON STATE DEPT. OF NATURAL RESOURCES

by Bert Mason, Jr., Oregon City, Oregon

Wash. Cert. #5266

December, 1966

This survey was performed under a joint survey agreement between Crown Zellerbach Corporation and Albert Aalvik, of Stevenson, Washington, with the Washington State Department of Natural Resources agreeing to furnish labor for clearing of random lines and to place concrete monuments at corners found or restored by the surveyor.

Field work was commenced on July 27, 1966, and completed on November 10, 1966. Five miles of random line were run, as shown on the accompanying plat of survey, controlled by nine solar observations at the termini of all lines, at all junction points and at the vicinities of the  $\frac{1}{4}$  corner between Sections 11 and 14 and the  $\frac{1}{4}$  corner between Sections 11 and 12. Temporary hubs or iron rods were set at all corners indicated on the plat of survey, to be replaced with concrete monuments by the Washington State Department of Natural Resources.

The original survey of this township was performed in 1893 by Jacob Richardson, whose work appears to have been unusually good. Except when passing over the gorges of Rock Creek, where he apparently developed distance errors of from 30 to 60 feet, both his chainage and his bearings are remarkably close to modern measurement. Certain characteristics have been noted in retracing his work:

He incurred chaining errors in crossing gorges.

He marked BTs unusually high.

His calls for creeks are to the edge of the creek as he approached it.

He apparently used only bark blazes and notches on offline-trees and line-trees. No evidence of a blaze or notch, other than on a BT has been found anywhere in this retracement.

*Bert Mason Jr.*



## BOUNDARY SURVEYS

SECTIONS 11, 12, 13 &amp; 14, T3N, R7E, W.M.

NOTE 1: July 27, 1966, accompanied by Robert L. McCullough and Phillip W. Renyer, at the corner common to Sections 14, 15, 22 & 23, T3N, R7E, W.M., I find a cedar northwest and a fir southwest, the fir bearing a tag by DTC and CQ marked "6.4 N33°E to corner". (Field notes call 11 lks. S23°W from corner to fir.)

From the face of the blaze, I set a stake N23°E 7.2 feet. The cedar bears N68°W as per field notes. From the center of the blaze on the cedar I measure 34 lks. (22.7 ft.), falling 1.7 ft. easterly from my stake. I reset my stake 1.7 easterly for the corner, setting the corner by distances from two trees.

Notes call a fir 48" N 41° E 122 lks. (80.5 ft). A fir stub, 48" diameter, N 41° E measures 49.7 feet on 23 $\frac{1}{2}$ ° slope. I find what I believe to be scribe marks. I nail the chip to the stub and check fir stubs about 80 feet northeasterly, but find no evidence. I check for maple southeast but find no trace.

I note that the cedar and fir are blazed unusually high.

NOTE 2: The vicinity of the  $\frac{1}{4}$  corner between Sections 14 and 15, T 3 N, R 7 E, W. M., is at the brink of the upper of a succession of cliffs, each about 10 feet high, facing south. It is 3.50 chains north of a very definite creek flowing in a gorge between bluffs. The ascent is steep and of approximately even slope. My calculations would place the corner about 16 feet east of my random line and 31 feet south of my station 26 + 49.

This point falls about 10 feet north of the brink of the cliff and about 60 feet east of a charred 30" snag with a catface on the east side, which someone has labeled "Probable 30" BT". Notes call for a fir 30" West 83 lks. From a point 54.8 feet East of this snag, the 6" fir S 68° E 15 lks. would have stood at the very brink of the cliff.

Two charred axe marks occur on the east face of the 30" snag above the catface. An intensive examination reveals no other markings of any kind. I believe this to be the original 30" fir bearing tree.

I set a hub for the corner August 31, 1966, in the presence of Otto M. Staples, at a point 54.8 feet East of the 30" fir stub. The point for the corner is 10 feet N 70° W from the brink of a notch between two projecting rocks of the cliff facing southeast.

A fir 7" N 70° W 0.5 feet unmarked

A fir 7" S 69° W 22.4 feet mkd  $\frac{1}{4}$ S BT

A fir 9" N 12° E 15.6 feet mkd  $\frac{1}{4}$ S '66 BT

All distances are to centers of trees.

I find the present magnetic declination to be N 20 $\frac{1}{2}$ ° E.



NOTE 3: After several intensive searches, accompanied at various times by Dean T. Callahan, R. L. McCullough, Phillip W. Renyer, Otto M. Staples and Alfred Opdahl, in the vicinity of the corner common to Sections 10, 11, 14 and 15, T 3 N, R 7 E, W.M., I find a 48" fir snag having a catface on the northeast side, beneath which is a notch cut with an edged tool prior to the time of burning. I believe this to be an original bearing tree for the following reasons:

The tree is of the species and size called for in the notes.

The tree was marked approximately nine years before the date of the Yacolt Burn. On a tree of this size, the scar would pitch up, but not heal over before the burn. The scar would be sure to be burned while the portion covered by bark might not. This tree has a catface on the side where the scar would have been, while the adjacent portions of the tree did not scorch.

This tree bears a notch on the root collar below the catface. It was common practice among surveyors of the era during which this corner was set to notch the root collar below the blaze.

A point set the noted distance and bearing from this tree matches the call for the first ridge east and the first creeks north and south well within the limits of identification of these features.

No other tree or combination of trees in the general vicinity of the corner matches all of the surveyor's calls as harmoniously as does this one.

On August 31, 1966, in the presence of Otto M. Staples, I set a hub for the corner common to Sections 10, 11, 14 and 15, T 3 N, R 7 E, W.M., from which:

A fir snag	48"	S 50° W	22 lks (14.5 ft)	with catface and notch
A fir	8"	S 58° W	14.2 feet	mkd S 15 1966 BT
A fir	6"	N 86° W	12.5 feet	mkd S 10 BT
A fir	9"	N 32° E	3.75 feet	mkd S 11 T3N R7E BT
A fir	8"	S 45° E	20.6 feet	mkd S 14 BT

All distances are to centers of living trees.

NOTE 4: On August 11, 1966, in the presence of R. L. McCullough, Fred Martin and Phillip Renyer, in the vicinity of the  $\frac{1}{4}$  corner between Sections 10 and 11, T 3 N, R 7 E, W.M., I make a diligent search for the accessories of the corner. I find no evidence of the corner.

On October 25, 1966, in the presence of Otto M. Staples, I again make an exhaustive search for the corner or its accessories without success. I conclude that this corner is lost.



NOTE 5: After several intensive searches at various times in the company of Dean T. Callahan, R. L. McCullough, Otto M. Staples, Alfred Opdahl, Phillip W. Renyer and Fred Martin, I conclude that the corner common to Sections 2, 3, 10 and 11, T 3 N, R 7 E, W.M., is lost. No evidence whatsoever of any original bearing tree has been found. An 18" hemlock tree bearing many cruisers' marks and yellow tags is shown by borings to have been large enough to have been marked for a bearing tree at the date of the government survey. It is not, however, the corner--Richardson says he set a post. Nor is it a bearing tree--he says he marked only firs at this corner.

NOTE 6: After running a random line eastward along the line between Sections 11 and 14, T 3 N, R 7 E, W.M., and mapping topography along the line, I predict a location for the corner common to Sections 11, 12, 13 and 14. I make two intensive searches of this location, accompanied first by Phillip W. Renyer, a Dean T. Callahan and Alfred Opdahl and second by Otto M. Staples. I find no evidence of the original corner or its accessories.

I carefully map the first creeks north, south, east and west and find that the distance between creeks north and south checks Richardson's notes exactly. The distance between creeks east and west is approximately 36 feet longer than called in 1100 feet. I traverse between the original  $\frac{1}{4}$  corners north and south of this section corner and find that at exactly the distance called for north of my location for the corner the line strikes a snag of species and size called for in the notes for a line tree. I also find that the bearing of the line between the  $\frac{1}{4}$  corners is only three minutes different from the bearing given by Richardson.

I therefore use the line between the  $\frac{1}{4}$  corners for longitudinal control and the distances to creeks north and south and line tree north for latitudinal control to set the corner. Since the final position falls in the completely rotted remnant of an old stump, I am sure that it is not the exact point occupied by the original corner, but I feel that it is the most logical position to satisfy the calls of the original work.

For the corner I set a temporary hub, from which:

A fir 8" N  $88\frac{1}{2}^{\circ}$  E 37.8 feet mkd S 12 T3N BT

A fir 12" S  $4^{\circ}$  E 27.0 feet mkd S12/1966 BT

A fir 9" S  $76\frac{1}{2}^{\circ}$  W 25.8 feet mkd S14/5266/BT

A fir 6" N  $55\frac{3}{4}^{\circ}$  W 18.6 feet mkd S11 R7E BT

A fir snag 40" N  $11^{\circ}$  W 57.6 feet mkd with an old notch on south side

NOTE 7: For the  $\frac{1}{4}$  corner between Sections 11 and 12, T 3 N, R 7 E, W.M., I find a Skamania County Engineer Dept. brass cap in galvanized pipe from which an original cedar bearing tree bears N  $36^{\circ}$  E 17.2 feet.



NOTE 8: For the  $\frac{1}{4}$  corner between Sections 13 and 14, T 3 N, R 7 E, W.M., I find a Skamania County Engineer Dept. brass cap in a pipe from which an old stub bearing old scribe marks bears westerly. I do not have notes available to check the validity of the stub, but my bearing for the line between this monument and the  $\frac{1}{4}$  corner one mile north differs by only three minutes of arc from that given by Richardson. I have no reason to question the validity of this restoration.

NOTE 9: I run random line easterly along the line between Sections 12 and 13, T 3 N, R 7 E, W.M., and at the record distance east from my restoration of the corner common to Sections 11, 12, 13 and 14 I set a temporary stake for the corner common to Sections 12 and 13 at the line between Ranges 7 and 7 $\frac{1}{2}$  East.

From this temporary post I run a staff compass line South 237.6 feet for an 84" fir line tree, as per Richardson's notes. I fall inside the root collar of a stump. The remnants of the root collar measure twelve feet in diameter.

A 36" fir is growing from the center of this root collar. By measurement, I locate, as nearly as possible, the true center of the root collar and tie this point in to my random traverse with transit and tape. I calculate a corrected location for the section corner at 237.6 feet due North from the line tree.

From this latter point I run a very careful staff compass and tape line due north, having checked my compass against a solar observation at this point. At 746.1 feet, I strike one foot east of the center of a 42" fir snag. Richardson's notes call for a 36" fir line tree at 745.8 feet. The bark is gone from this snag and there are no visible notches; however, I am satisfied that it is the line tree. In addition to this evidence, I agree within one foot with Richardson's distance to the first creek north of the section corner.

I return to my temporary post and replace it with a 5/8" x 30" iron reinforcing rod set 24" in the ground in the westerly edge of a small creek, dry this date, and also in the roadbed of an abandoned road, from which:

A fir 18" N 70° 40' W 80.1 feet mkd S12 5266 BT

A fir 14" S 55 $\frac{1}{2}$ ° W 60.2 feet mkd S13 T3N R7E BT  
22"

A fir snag/ N 48° 20' E 26.5 feet mkd "X" on south side  
PK nail 28 above  
ground in SE side

All measurements are reduced to horizontal and are to centers of trees.

I check the magnetic declination at this point and find it to be N 20 $\frac{1}{4}$ ° E.



NOTE 10: Accompanied by Dean T. Callahan, Alfred Opdahl and Phillip Renyer, I search for the corner to Sections 11 and 14 ( $\frac{1}{4}$  cor.) and find the location to fall in a bad slide area and old logging road. No evidence of the corner or its accessories remains.

On September 29, 1966, in the presence of Otto M. Staples, I set a point midway on line between my restorations of the section corners common to Sections 11 and 14. At the calculated point for the  $\frac{1}{4}$  corner, I find insufficient distance to the creek. Having found that Richardson's calls for creeks usually refer to the foot of descent as he approached creeks in gulches, I run 7.0 feet westerly along the true line to set the corner, this being 75 links west of the foot of descent or the east edge of the creek. I believe that his call for 75 links from the creek should bear greater weight than the midpoint of a mile.

I set a temporary hub for the corner, from which:

A cedar  $30^{\circ}$  N  $54\frac{1}{4}^{\circ}$  W 125.9 feet mkd  $\frac{1}{4}$ S BT 5266

A fir  $14^{\circ}$  S  $19\frac{1}{4}^{\circ}$  E 164.0 feet mkd  $\frac{1}{4}$ S 1966 BT

This fir is across the creek from the corner.

NOTE 11: November 8, 1966, in the presence of Otto M. Staples and Peter P. Neketin, at a point midway between my restorations of the section corners common to Sections 12 and 13, T 3 N, R 7 E, W.M., I make a diligent search for the  $\frac{1}{4}$  corner and its accessories. Finding no evidence of the original corner or accessories, I set a  $5/8"$  x  $30"$  iron reinforcing rod for a witness corner as follows:

The true midpoint of the line falling in a snag, I set a witness rod 2.00 feet due north of the corner. From the rod:

A fir  $5^{\circ}$  N  $43^{\circ}$  30' W 25.15 feet mkd  $\frac{1}{4}$ S BT

A fir  $10^{\circ}$  S  $13^{\circ}$  E 4.25 feet mkd WC  $\frac{1}{4}$ S BT

It is recognized that this is not a true restoration of the original corner location; however, lacking local control, I have set the point at the midpoint of the mile.

All distances are from centers of trees.

NOTE 12: October 3, 1966, in the presence of Otto M. Staples, I set a temporary hub in a mound of stones in the bed of a creek, dry this date, for the  $1/16$  corner on line and midway between the southwest corner of Section 14 and the  $\frac{1}{4}$  corner between Sections 14 and 15, T 3 N, R 7 E, W.M., from which:

A fir  $18^{\circ}$  N  $44^{\circ}$  W 22.0 feet mkd S15 S1/16 BT

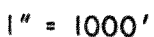
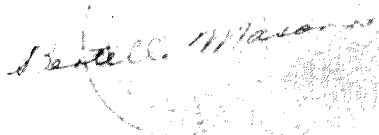
A fir  $26^{\circ}$  N  $49\frac{1}{4}^{\circ}$  E 64.6 feet mkd S14 S1/16 BT

All measurements are from centers of trees.

I find declination at this corner to be N  $20\frac{1}{4}^{\circ}$  E.



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