

JERRY A. MOORE
REGISTERED
CIVIL ENGINEER
PENDLETON, OREGON

September 28, 1947

Phone 667
Res. Phone 416

TO: Frank Hayes
County Surveyor
Umatilla, County, Oregon

SUBJECT: Re-establishing of a Lost Corner

LOCATION: Southwest Corner of the SE $\frac{1}{4}$ of the SW $\frac{1}{4}$,
Sec. 14, T5N, R27E, Willamette Meridian
Umatilla County, Oregon.

Having found a concrete monument which was set at the section corner between Sections 14, 15, 22 and 23, I proceeded according to the best information available to search for other similar monuments on the south line of Sec. 14. These monuments were set by the Oregon Land & Water Company which is now defunct, however the plats of the subdivision of Sec. 14, and others, were found to be available in the office of the Watermaster of Morrow County. According to these plats, concrete monuments were established at the section corners, the quarter corner on the south line of Sec. 14, and at the quarter-quarter corners on the south line.

A concrete monument was found at the southeast corner of the SW $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Sec. 14, as described on the plat; however, extensive digging in the area of the quarter corner and the southwest corner of the SE $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Sec. 14 failed to disclose any monuments at these points. This digging was done in the areas where the corners were generally supposed to be by old residents and others.

Under these conditions I decided to chain out the locations of the two missing monuments, using the distance between the two monuments found.

A point was established on the south line of Sec. 14 from which both monuments were visible; however it was found expedient to use an offset line parallel to the section line and 24.0 feet south of it. I therefore turn at right angles southerly and chain 24.0 feet, where I set a temporary hub. I then set up over the monument at the southeast corner of the SW $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Sec. 14, backsight to the point set on the section line, turn at right angles southerly and chain 24.0 feet, where I set a temporary hub. The same procedure was repeated at the section corner found at the southwest corner of Sec. 14.

Q-109

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Beginning at the east end of my offset line, I proceed to chain west along said offset line until I reach the point originally established on the offset line. I note in passing that this point is at Sta. 9+89.8.

Proceeding westward, at Sta. 28+00, I find that from there to the end of the offset line, the line is badly obstructed by sagebrush and greasewood. I therefore decided to triangulate the remaining distance, in view of the fact that this is seen to be possible from this point.

I therefore turn southerly at right angles and chain 437.36 feet to a point, where I establish a temporary hub. Setting up over this point, I turn the angle between my hub at Sta. 28+00 and the end of my offset line; By repeating this angle three times, I find it to be $68^{\circ} 19'$. The required distance from Sta. 28+00 to the end of my offset line is therefore $467.4 \tan 68^{\circ} 19'$ which is equal to 1175.5 feet.

Adding to 2800 feet my remaining distance of 1175.5 feet, I find my station at the end of my offset line to be Sta. 39+75.5.

According to the Government Record, this distance is officially .75(80.29)(66) which equals 3974.4 feet.

In order to find my station at the sixteenth corner, I compute the government station as $3974.4(.667)$ which equals 2649.6. Multiplying $2649.6(3975.5/3974.4)$ I get 2650.4, or 26+50.4 as my correct station at the sixteenth corner. This point lies across an access road, easterly, from the point where I had previously been informed the corner should be. I therefore locate this station on my offset line, and turn northerly at right angles, chain 24.0 feet to the point where the corner should be located.

Before establishing a monument at this point, I proceed to dig a hole approximately six feet in diameter and two feet deep, in search of a monument. Failing to find a monument in this area, I proceed to set one, consisting of a $1\frac{1}{4}$ inch pipe, 30 inches long, having my registration number stamped near its upper end. This I bury at such a depth that its upper end is about six inches below ground.

I next proceed to locate the quarter corner. For its station I compute the government station as $3974.4(.333)$ which equals 1324.8. Multiplying $1324.8(3975.5/3974.4)$, I get

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1325.2, or Sta. 13+25.2 as my station at the quarter corner.

I proceed to locate my Sta. 13+25.2 on my offset line, and set up at this point; turning at right angles northerly I chain 24.0 feet and find this place to be some twenty feet east of the place where the monument had previously been supposed to be, although on the recommendation of one resident I had previously dug near this place .

Digging in the area now located, a monument was found. This I related to my own stations, and it was found to be at Sta. 13+24.4.

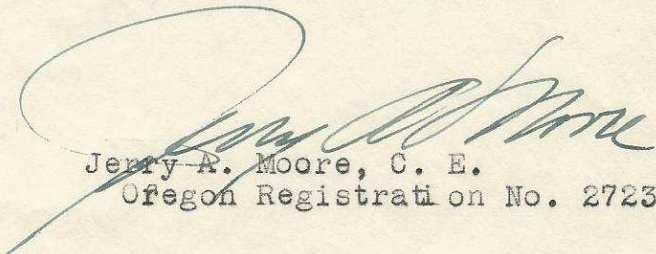
Having found this little disagreement between calculated station and actual location of the quarter corner, I considered the latter to hold. The government station at the quarter corner as found, must be 13+24.8; while mine is 13+24.4.

On the basis of these stations at the quarter corner, my distance to the section corner is 39+75.5 - 13+24.4 which equals 2651.1 feet. The government distance is 2649.6 feet. This introduces a different factor by which the proportional measurement to the sixteenth corner must be done, and the sixteenth corner must be corrected.

My proportional distance to the sixteenth corner is 1324.8 ($2651.1 / 2649.6$) which is 1325.6; and therefore my station at the true location of the sixteenth corner is 13+24.4 + 13+25.6 which equals Sta. 26+50.

The sixteenth corner was accordingly reestablished, and my location of it is now at Sta. 26+50.

Respectfully Submitted



Jerry A. Moore, C. E.
Oregon Registration No. 2723