

CERTIFICATE OF SURVEY
A Boundary Survey in the
SE1/4 of the NW1/4 and SW1/4 of the NE1/4
of Section 20, T143N, R25W
for Dale Woodard

The Bureau of Land Management performed a Dependent Retracement Survey which included Section 20 and prepared a Plat of their work in 1976. Although they corrected their Plat in 1980 after Cass County Surveyor Gary Stevenson brought new record surveys to their attention, none of the changes had any effect on Section 20. The 1980 Amended survey is therefore irrelevant to this project.

As a general rule, a BLM Dependent survey should have no inherently greater weight than a similar project undertaken by a state licensed land surveyor. Never-the-less, the impressive monuments, the long list of signatures, and the reputation of the BLM usually means that a BLM Retracement Survey is accepted without much question. In any case, to do otherwise would mean incurring large survey costs that most clients would not appreciate.

The Bureau's 1976 running notes indicate that they only looked along the section lines for evidence from which to re-establish corners around Section 20. There is written documentation which shows that there were surveys of some sort in Section 20 in 1970, 1965, 1960, and 1935. We know of one more survey from before 1960 for which we have not seen any written records. There was also settlement within the section from the 1910s. All of these surveys could have (and did) leave evidence within the interior of the Section. This evidence could conceivably point to corner locations on the exterior of the Section which would have been traceable to the original GLO corners set in the 19th century.

Without looking for this interior evidence, the BLM ran the risk of setting a "lost" or mathematical corner where there was evidence available to re-establish the GLO by obliterated means. As there are 2 "lost" Quarter Corners on the exterior of Section 20, there was a real possibility that this had occurred. Both the N1/4 and the W1/4 were set "lost" by the BLM in 1976. Since the SW, NW, NE, E1/4, and MC 20[2] were all traceable deep into the past and sometimes directly traceable to the original GLO corner, we concentrated on looking for information that would suggest a position other than "lost" at the W1/4 and N1/4 corners. The specific information that we considered is as follows:

1) The U.S. Forest Service has maintained a record of found corners since it was established in 1909. During the 1930s, the Civilian Conservation Corps was utilized to find and document corners for the Forest Service. A small form known as Form 874-9 was used. In 1935 a form was prepared which stated that there was a 2" iron pipe at the CW1/16 corner of Section 20. No known measurements to other corners were listed on the form; but if it could be recovered, then it could be used to determine the location of the W1/4 and to a lesser degree the N1/4 of Section 20.

A good deal of effort went into finding the pipe, and failing that, into finding features (such as fences) which were traceable to it. The pipe was not found and we did not find any fences near our search area. Traces of an abandoned road were noted, but since the road ran east and west, it was compatible with the "lost" W1/4.

2) In 1960 the DNR performed a survey in Section 20. In that survey, they tied into a corner post that is essentially synonymous to the current E1/4, tied into the W1/4, tied into the SW corner, tied into a point reputedly on the south line of the section, and set 2 corners on the east-west Quarter line. Since the E1/4 and the SW corners accepted by the BLM in 1976 appear to be the same corners utilized by the DNR, it seemed likely that we could reconstruct the DNR's W1/4 which they claimed was a scribed post set by a U.S. Forest Service Engineer.

In checking this possibility, we found and tied into 2 of the DNR's set pipes and into the E1/4 and SW corner. Utilizing the DNR notes, it appears that the scribed post was approximately 42 feet west of the "lost" corner set by the BLM. The calculated position is also slightly south of the BLM monument. We unfortunately did not find the scribed stake, nor did we find a fence intersection at its location. A corner tag by Gary Stevenson was found in the area which indicates that he was also looking in the same location. Because the DNR did not set a C1/4 and did not tie into the N1/4, whether we accept the DNR position or utilize the "lost" W1/4 has little consequence for the location of the east line of the NW1/4. It would have an impact on the location of the CW1/16 but that is not our client's concern.

3) The Highway Department performed a preliminary survey in 1965 before re-aligning Hwy No. 65. In the course of that survey, they tied into various driveways in Section 20 and a capped 2" pipe which, according to their notes, was labeled "Center Sec." The pipe was located on a north-south running fence line. They also located 4 more iron pipes lying to the east of the "Center Sec." The distance from the most easterly one to the fence was 818.2 feet. In addition, they indicated that there was, at least, one more monument on the fence line, but we never found notes which tied it into their survey. On the finished Highway Department drawing, the "Center Sec", the other pipe, and the fence were purported to lie along a line which was called the "1/4 SEC. Line." Finally, the Highway Department tied into a fence intersection on the east line of Section 20 somewhat near the S1/16 corner common to Sections 20 and 21.

Northern Lights mapped the tangents of Highway No. 65 and found that the as-built Pls closely matched the design Pls. This enabled us to get onto the Highway Department's stationing. As a result we were able to place their mapping into our drawing.

We also located a capped 2" iron pipe on an extension of the same fence that the Highway Department located in 1965. The stamping on the iron pipe was "property corner" not "Center Sec." Its location appeared to be 40± feet south of the position that we had calculated from the Highway Department field notes. Our client, Mr. Woodard, indicated that he vaguely remembered another pipe about 40 feet north of the one we found. The one we found was on the fence line. We have concluded from its calculated location that the "Center Sec" was destroyed by the re-aligned highway, but that is certainly not proven.

In 2003 Milos Stefan located 2 of the 2" iron pipes that the Highway Department found in 1965. After incorporating his information into our database, we found that the distance from the most easterly pipe to the fence was 815.7 feet. With due allowance for accumulated random error in 3 field surveys, this is indicative that the 2008 mapped fence is the fence located in 1965.

Our calculations indicated that the "capped 2" iron pipe was within 2 feet of a nominal 2640 feet from the E1/4. If the "Center Sec" were a distinct, now destroyed second monument and it were located near the end of the mapped fence, it would also be within 3 feet of 2640 feet. The bearing from the E1/4 to the end of the fence incidentally lay within 2 minutes of being at right angles to the east line of the section. While not conclusive, we believe that the party who set the "Center Sec" and/or the "property corner" set it from the east without knowledge of the W1/4. Since neither the fence nor the capped pipes were mentioned before 1965, the survey record does clarify which came first.

4) Jackson's 1970 survey is the last one that we will discuss. In his survey, Jackson monumented the southerly portion of the E1/16 line. The location of that line could reveal where the CE1/16 had been calculated. Unfortunately that line appears incompatible with any plausible subdivision of Section 20 unless one assumes that Jackson made at least one 100 foot chaining blunder. His line would make sense if he measured the distance from the E1/4 to one of the capped pipes at the Center of Section as 2542± feet instead of 2642 feet. If this scenario is true, it probably wouldn't affect previous work in the SE1/4, but would make his work valueless for determining the location of the N1/4 and the W1/4.

5) The U.S. Forest Service's historical aerial photographs are another resource that we consulted. There are photos in their archives from 1939, 1947, and 1959. All three sets appear to show an occupation line along the line of the current fence. The photography was taken from a high enough altitude that individual fence posts are not visible, but it seems clear that an occupation line of some sort has been in place at its current location for nearly 70 years.

If Northern Lights were subdividing this section before the recent Landecker & Associates subdivision of the section and if the "Center Sec" were still in place at the location indicated by the 1965 Cass County Highway Department notes, we would have accepted that pipe and would have used it to determine the CW1/16, CE1/16, and the north-south quarter line in the N1/2 of the section. We say this suspecting that this pipe was set "improperly" without apparent knowledge of the location of either the W1/4 or the N1/4.

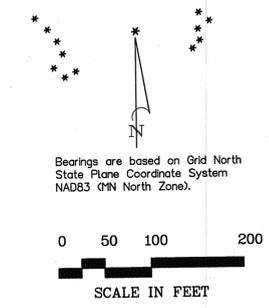
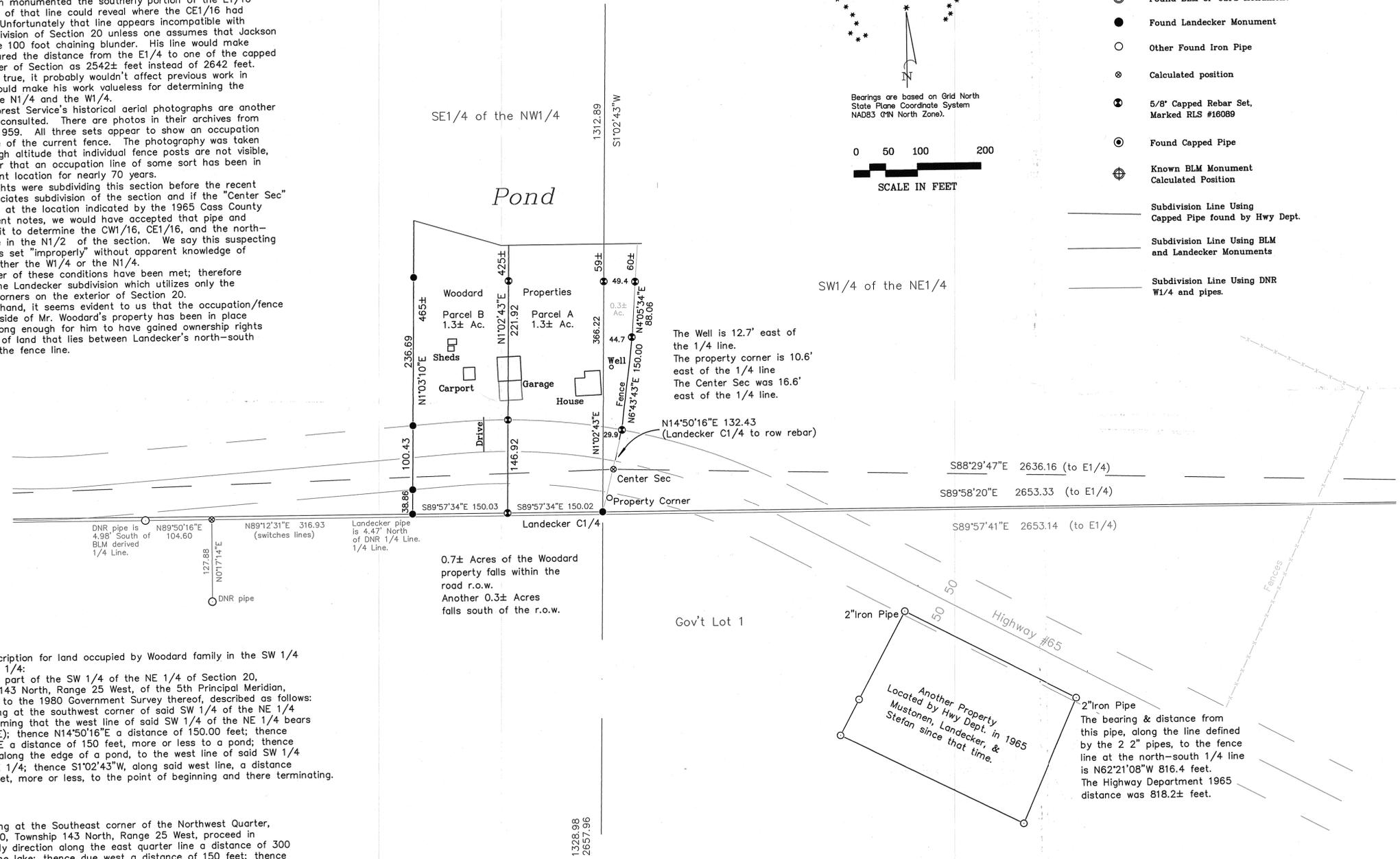
However neither of these conditions have been met; therefore we concur with the Landecker subdivision which utilizes only the BLM sanctioned corners on the exterior of Section 20.

On the other hand, it seems evident to us that the occupation/fence line on the east side of Mr. Woodard's property has been in place and relied upon long enough for him to have gained ownership rights over the triangle of land that lies between Landecker's north-south quarter line and the fence line.

Legal Description for land occupied by Woodard family in the SW 1/4 of the NE 1/4:
 All that part of the SW 1/4 of the NE 1/4 of Section 20, Township 143 North, Range 25 West, of the 5th Principal Meridian, according to the 1980 Government Survey thereof, described as follows:
 Beginning at the southwest corner of said SW 1/4 of the NE 1/4 (and assuming that the west line of said SW 1/4 of the NE 1/4 bears N10°24'3"E); thence N14°50'16"E a distance of 150.00 feet; thence N4°05'34"E a distance of 150 feet, more or less to a pond; thence westerly, along the edge of a pond, to the west line of said SW 1/4 of the NE 1/4; thence S1°02'43"W, along said west line, a distance of 425 feet, more or less, to the point of beginning and there terminating.

Parcel A:
 Beginning at the Southeast corner of the Northwest Quarter, Section 20, Township 143 North, Range 25 West, proceed in a northerly direction along the east quarter line a distance of 300 feet to the lake; thence due west a distance of 150 feet; thence due south a distance of 300 feet to the south quarter boundary of the Northwest Quarter, Section 20; thence along said south quarter boundary in an easterly direction to the point of beginning.

Adjoining Parcel:
 S 1/2 of the SE 1/4 of the NW 1/4, Sec 20-143-25, less the following described tract: Beginning at the SE corner of the S 1/2 of the NW 1/4, Section 20-143-25 proceed in a northerly direction along the East boundary a distance of 300 feet north to the lake; thence along the shore of the lake a distance of 300 feet; thence south a distance of 300 feet to the south quarter boundary of said S 1/2 of the SE 1/4 of the NW 1/4 Sec 20-143-25; thence along said South quarter boundary in an easterly direction to the point of beginning.



- LEGEND**
- Found BLM or USFS Monument
 - Found Landecker Monument
 - Other Found Iron Pipe
 - ⊙ Calculated position
 - ⊗ 5/8" Capped Rebar Set, Marked RLS #16089
 - ⊙ Found Capped Pipe
 - ⊕ Known BLM Monument Calculated Position
 - Subdivision Line Using Capped Pipe found by Hwy Dept.
 - Subdivision Line Using BLM and Landecker Monuments
 - Subdivision Line Using DNR W1/4 and pipes.

