

THE American Surveyor

A FOOT IN THE PAST... AN EYE TO THE FUTURE

June 2007

RTK-Net Entrepreneurs

GLO Corner Recovery

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A case study in Big Sky country

\$250 Fine For Removal

Ever wonder where this came from?





Survey markers sometimes show up at antique flea markets among a variety of other items



\$250 FINE OR IMPRISONMENT FOR DISTURBING THIS MARK

Eight words that have long been associated with land surveying, “\$250 Fine or Imprisonment for Disturbing This Mark” were intended as a serious warning to anyone who considered tampering with one of our valued survey monuments. The imprinted wording that appeared on many monuments not only brought attention to their importance, but also foretold of the potential consequences if the warning was not heeded.

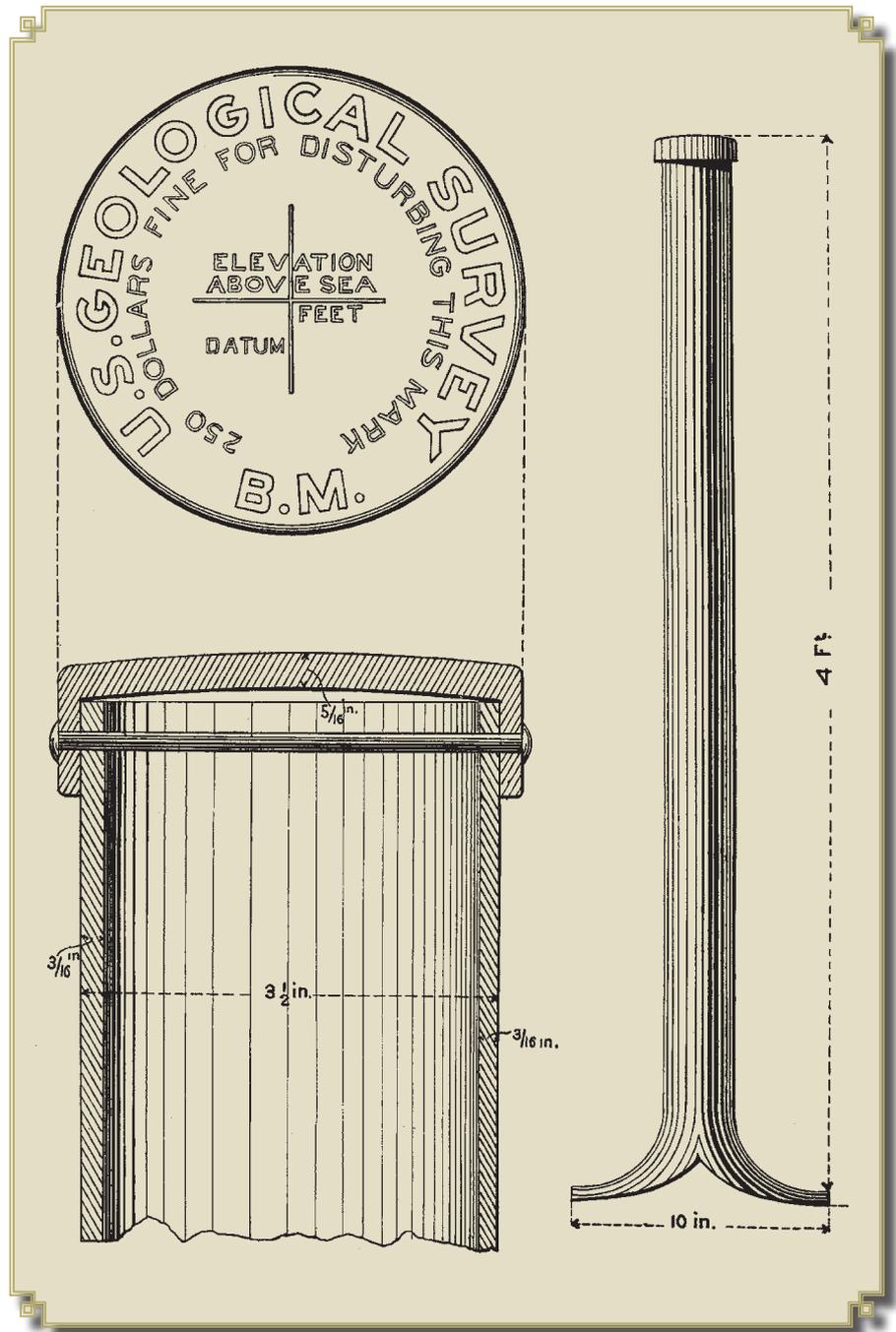
>> By Jerry Penry, LS

The reality is that the statute containing the warning, which has been in place for well over a hundred years, seems to have been, for the most part, a threatening yet harmless paper tiger through lack of enforcement. Thousands of survey markers have been removed, yet finding a single case where anyone has actually been fined under the provisions of that statute, let alone sent to prison, is difficult.

What will the future reveal in regard to the usefulness of the permanent geodetic survey markers that have been painstakingly established by government agencies? With most agencies no longer systematically establishing new monuments, or perpetuating those in danger of removal, the future indeed seems uncertain. Some surveyors are already relegating them as icons of the past within a changing world where new positions meeting their precision needs can be established virtually anywhere while utilizing the Online Positioning User Service (OPUS). Questions arise as to who is actually responsible for safeguarding these markers and what role the markers will play in the future of surveying.

Construction, whether through urban developments or through the expansion of transportation systems, will inevitably continue to take its toll on permanent survey monuments. We may also be facing a relatively new competitor that has risen during the past decade – Internet auction sites. The Internet is now providing a worldwide outlet for the buying and selling of survey markers – a concern not even conceivable in the past.

In the eyes of the public, our permanent survey markers have always been one of the most visible aspects of our profession. They have been the subject of curiosity, conversation, and unfortunately, the victims of vandalism and theft. Human nature seemingly drives many to covet and possess something that emulates an interesting or rare character. Bronze, aluminum, and cast-iron survey markers imprinted with various figures certainly fall into the realm of the unusual category. People have removed or attempted to remove survey markers ranging from small disks to larger monuments weighing several hundred pounds. The removal of survey markers has been a problem since their inception as was noted in the 1889 Annual Report of the Chief of Engineers, United States Army, who specifically detailed the work of the Missouri River Commission surveys. This agency was a forerunner



The United States Geological Survey was the first government agency to imprint the warning onto their brass caps when they first began to use them in 1896.

in the establishment of large cast-iron markers that were designed to have lasting permanency, but the Commission soon discovered that they became visible objects that quickly drew attention.

“The necessity for these new bench-marks [in 1892] is shown by the almost utter disappearance of the old marks, which were established mainly in 1878, 1879, and 1880.”

“Of the four bolts leaded into rocks, all bolts were missing, probably caused by the destructive tendency of mankind.”

The driving factor behind establishing the statute designed to deter theft or the movement of survey monuments has its origins with the Indian Appropriations Act of June 10, 1896 (c. 398, 29 Stat. 321, 339). The United States Geological Survey, as directed by the government, found itself in the rare role of establishing township and section corners in the Indian Territory that would later become the State of Oklahoma. The General Land Office was still prescribing the

use of natural material such as stones or wooden stakes for corner monuments; however, USGS took the lead in establishing monuments of a lasting permanency that would also bear an inscription warning against their removal.

“That hereafter it shall be unlawful for any person to destroy, deface, change, or remove to another place any section corner, quarter-section corner, or meander post, on any Government line of survey, or to cut down any witness tree or any tree blazed to

or any tree blazed to mark the line of a Government survey, or shall willingly deface, change, or remove any monument or bench mark of any Government survey, shall be fined not more than \$250, or imprisoned not more than six months, or both.”

The main change appears to be the length of imprisonment that was changed from 100 days to six months. This statute wording began appearing in publications such as the 1909 version of *Restoration of Lost or Obliterated Corners and Subdivision*

of Sections produced by the General Land Office. Inflation had not greatly increased from the original 1896 statute date, and according to the Consumer Price Index the penalty would have only increased to around \$270.

The 1930s introduced various Public Works programs which brought large-scale surveying never before seen in the United States. Brass and aluminum disks of many government agencies were produced into the tens of thousands with many still being embossed with the \$250 fine statement. Those new markers manufactured for USGS, however, now were void of any warning, but merely stated “For Information Write to the Director Washington, D.C.” Later the wording “Unlawful to Disturb” became standard for USGS. Inflation, though continuing to grow, remained slow and the penalty amount should have been closer to \$420 by 1935.

CONSTRUCTION, WHETHER THROUGH URBAN DEVELOPMENTS OR THROUGH THE EXPANSION OF TRANSPORTATION SYSTEMS, WILL INEVITABLY CONTINUE TO TAKE ITS TOLL ON PERMANENT SURVEY MONUMENTS.

mark the line of a Government survey, or to deface, change, or remove any monument or bench mark of any Government survey; that any person who shall offend against any of the provisions of this paragraph shall be deemed guilty of a misdemeanor and, upon conviction thereof in any court, shall be fined not exceeding two hundred and fifty dollars, or be imprisoned not more than one hundred days.”

The \$250 fine imposed in 1896 was certainly enough to warrant the attention of anyone contemplating the removal of a survey marker. The fine or imprisonment wording immediately began appearing on newly designed USGS brass caps and soon other government agencies likewise followed. A bounty of \$25 was also offered to informers as a reward upon conviction of anyone found guilty of monument theft.

New monuments continued to be produced with the same monetary amount without respect to inflation even into the late 20th century. The clause was amended by the act approved March 4, 1909 (35 Stat. 1099, Sec. 57) revising and amending the penal laws of the United States to read as follows:

“Whoever shall willfully destroy, deface, change, or remove to another place any section corner, quarter-section corner, or meander post, on any Government line of survey, or shall willingly cut down any witness tree

Disks that have been sent to the Denver office of USGS by private surveyors ensure that the marks can be classified as “destroyed”.





The statute wording was again slightly modified on June 25, 1948 (Ch. 645, 62 Stat. 789; 18 U.S.C. 1858) to read a bit more fluently with no major changes:

“Whoever willfully destroys, defaces, changes, or removes to another place any section corner, quarter-section corner, or meander post, on any Government line of survey, or willfully cuts down any witness tree or any tree blazed to mark the line of a Government survey, or willfully defaces, changes, or removes any monument or bench mark of any Government survey, shall be fined not more than \$250 or imprisoned not more than six months, or both.”



Although staged for the camera, this USC&GS brass disk might have once been the failed attempt by someone to acquire it.

The monetary amount remained at \$250, but inflation should have now brought it closer to \$750. The final revision occurred in 1994 which read the same as the 1948 statute but replaced the words *“fined not more than \$250”* with *“fined under this title”*. Today’s monetary amount, when compared to the original penalty amount of \$250 in 1896, would be more than \$6,000.

Having the dollar amount imprinted directly onto the marker was a good idea in theory, but those responsible perhaps never considered a changing financial world. Some areas in Canada were a bit more stringent, having certain markers

placed in British Columbia bearing the words “Penalty For Removal – 7 Years”. According to the Alberta Land Surveyors’ Association, tampering with boundary markers in Alberta can currently result in fines up to \$10,000.

With some bronze and aluminum survey markers now more than a century old, their antique value has become a greater attraction for unscrupulous individuals wanting to exchange them for cash. Many have been bought and sold on Internet auction sites such as eBay, even though this company attempts to stop these auctions to discourage theft of other markers. Not only are the actual markers being sold, but also witness, boundary, and bearing tree signs are appearing for sale with increased frequency. Others show up at flea markets, in antique stores and at garage sales. These markers, which were once only revealed in chance encounters with the general public, are now a focus of several hobbyist groups including GPS geocaching. The *geocaching.com* website devotes a section to searching and finding geodetic markers with a direct link to the NGS database. The number of survey markers recovered by geocachers is near the one hundred thousand mark. The Internet encyclopedia *Wikipedia* describes “Benchmarking” as a sport in which participants individually go out and find bench marks. Of course the majority of people using hand-held GPS receivers for this sport are very caring individuals who are doing a great service to surveyors by helping us to update the recovery datasheets. It has nevertheless revealed the exact locations of the markers to many people who have nothing to do with surveying and who often do not have a true understanding of their continued importance in our profession.

So where do the markers come from that are now showing up for sale? Many land surveyors have legitimately obtained markers during the course of their work when they found a monument knocked over due to construction. Usually they reside on office shelves as a historic reminder of our profession.



Others being offered for sale are possibly the direct result of theft by the public. Unfortunately possession of a survey marker by a non-surveyor is apparently not a criminal offense, so unless the act of destruction is actually witnessed, there is probably little chance for prosecution. When personnel were contacted at both USGS and NGS, neither had any record of a person ever being prosecuted for monument destruction by their respective agencies. Criminal cases of this type are often hard to prosecute when the plaintiff, the owner/establisher of the marker, is not readily available to assist when a surveyor brings the matter to their attention. In the past, a marker could only be classified as “destroyed” by government agencies if the actual

Many monuments are not protected by warning signs making them vulnerable to destruction. The BLM was still setting new monuments with the original penalty wording into the late 1950s.

disk was sent to them for complete verification.

To discourage others from removing survey markers, a few surveyors have continuously contacted sellers on Internet auction sites and asked that the survey markers be removed. They are considered a banned item on the eBay site, but due to the volume of items being sold every day, this company has often been slow to react to requests that the markers be removed. Therefore, many continue to be bought and sold – often at high prices with some in the hundreds of dollars. Some of the early GLO and BLM brass caps used for section corner monuments have also been offered for sale. The obscure issue is whether unused markers that have made their way into private hands should be allowed for sale. By tracking the frequency of markers appearing for sale, it is estimated that over a thousand survey markers have been placed for sale on eBay since its beginning in 1995. One antique dealer, when politely asked to discontinue an auction selling an older brass disk, responded with his own interpretation of how he viewed survey markers.

When markers of any sort are obsolete, meaning not used anymore, they can be

HAVING THE DOLLAR AMOUNT IMPRINTED DIRECTLY ONTO THE MARKER WAS A GOOD IDEA IN THEORY, BUT THOSE RESPONSIBLE PERHAPS NEVER CONSIDERED A CHANGING FINANCIAL WORLD.

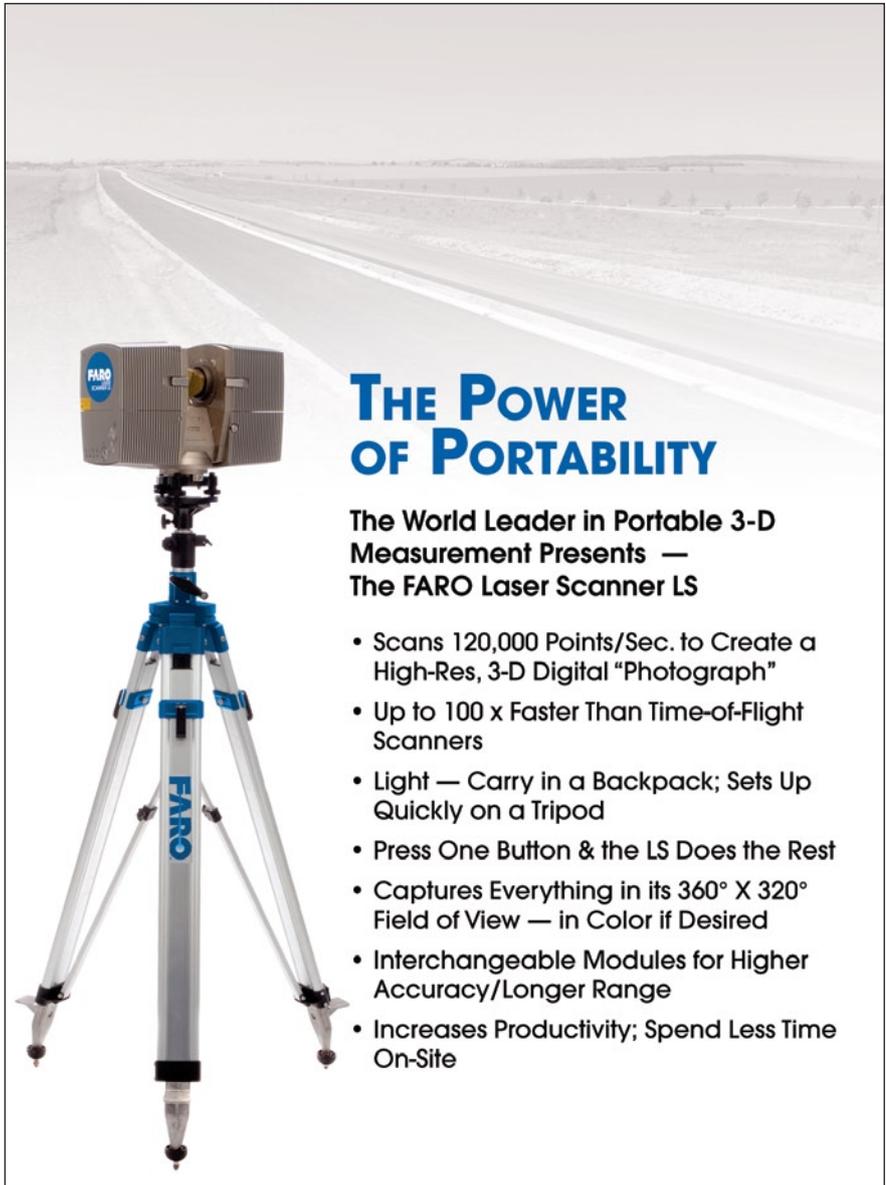
owned and sold! This is obviously obsolete. Over 50 years old, when it only needs to be 10 or more years. So go educate yourself!

Despite the efforts of individual surveyors, government agencies are often in the best position to deal with monument destruction. A case involving a Nebraska Department of Roads (NDOR) project concerned having a contractor specifically protect a High Accuracy Reference Network (HARN) point that was previously established by NGS. This contractor ignored the request and deliberately tore out the monument, thinking it would be easier to just set it back after the construction project was completed rather than having to work around it. NDOR, while working with their attorneys and the local NGS representative, withheld paying the contractor \$10,000 of his contract when the project was completed.

Every surveyor can assist in the future protection of markers in several ways. First, determine if an existing marker is potentially in danger of accidental destruction by someone who has no idea that it is even present. Most of the older markers did not originally have warning signs placed near them. If an appropriate warning sign cannot be obtained, a simple painted steel post driven near the marker might be enough to alert someone of its existence. Many markers such as those established by USGS and other government agencies are not in the NGS database, so it is essential that these also be found and protected. When you do locate a marker that is in the NGS database, take time to update the recovery sheet. This will help keep track of its location when physical surroundings change, and may also help determine if a marker has been recently removed if it is later offered for sale. Some surveyors have even suggested the idea of having geodetic markers involved in the "One Call" system, similar to locating buried utilities so contractors can be alerted to their existence.

The responsibility for safeguarding survey markers, whether accepted or not, has to rest with everyone using them. Survey markers are a lasting impression of our profession. Let's all do our part to ensure that they remain intact for future surveyors, regardless of the changing ways in which they may be used. *A*

Jerry Penry is a Nebraska licensed land surveyor. He is a frequent contributor to *The American Surveyor*, and has written numerous articles for other newsletters and magazines.



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