

Resurvey Issues

by Sara Wilson and Chris Bowler



LAND SURVEYS IN MINNESOTA: ORIGINS, TECHNOLOGICAL CHANGES, AND IMPLICATIONS

While obtaining a new survey of farmland may appear on its face to be a simple process, it can result in confusion or dispute as to the true location of your property's boundaries. This article provides a general overview of the original surveying of Minnesota, problems that may arise upon obtaining a new survey, and what you can do to resolve a boundary line dispute.

History of the PLSS in Minnesota

With the Land Ordinance Act of 1785, the United States adopted a rectangular, coordinate-based survey system, known as the Public Land Survey System ("PLSS") that divided land into grid-shaped townships and sections. In Minnesota, original PLSS plats were created during the first government land survey conducted by the U.S. Surveyor General's Office between 1848 and 1907. The initial surveys were conducted in anticipation of the state subdividing the land for sale to settlers. With such surveys, it was easier to locate and legally describe the parcels being purchased. State land survey plats serve as the official legal land records for Minnesota, with all land titles and descriptions originating with the PLSS survey.

In a PLSS survey, the land is first divided into Public Survey Townships (which are different than political townships) by using two controlling survey lines: a baseline that runs east-west and a principal meridian that runs north-south. All distances and bearings are made from the meridians and baselines. Each such township is assigned a number, measures six miles square, and is comprised of 36 sections. Each section has an area of one square mile, or 640 acres. Sections are numbered from 1 to 36 and are labeled in a switchback pattern. Each section can then be divided into four quarters (NW, NE, SE and SE), with each quarter being 160 acres. Each quarter can then be further subdivided (ex, NW1/4NW1/4). Section corners and section quarter-corners were marked by posts or other monuments.

Surveying Techniques

Original surveys were performed using a Gunter's Chain, a 66-foot long chain, consisting of 80 links equaling one mile. The chains would be pulled taut, and attempts were made to hold the measure level in order to improve accuracy. Alignment was determined using a compass or theodolite. A surveyor's compass was used to measure horizontal angles, while a theodolite could measure both horizontal and vertical angles. In areas where measuring by chains was not possible, distances were calculated using triangulation.



Sara N. Wilson
763-225-6000
swilson@gislason.com



Chris E. Bowler
507-354-3111
cbowler@gislason.com

Recently, a tool known as a total station has improved on the theodolite with the addition of an electronic distance measurement device, or EDM. Total stations have gone from being mechanical or electronic devices to purely electronic systems with on-board computer and software. Global Positioning Systems (“GPS”) have also increased the speed of surveying but are criticized for being less accurate than other tools.

Problems Arising from PLSS Surveys

When locating a true boundary line of any property, advances in technology can only do so much. A surveyor is bound by the original location of a government corner marker. The government corner is where the original surveyor placed it; however, over time many original government corners have been lost. If lost, a surveyor must use best evidence to determine where the original corner marker was set.

Best evidence requires a surveyor to investigate true boundaries by using plats, deeds and other documents placed of record within a county, along with monuments and other physical objects on the land itself which serve as evidence of where a boundary is located (such as a fenceline, tree, or boulder). It is not uncommon for such monuments or objects found on the land to differ from the real estate records or vice versa. Sometimes the records themselves are incomplete, ambiguous, or contradictory.

With original surveys, the science of measurement was not absolute. Certainly there were errors in measurement, but also townships necessarily vary in size and shape because meridians converge as they run north. Adjustments must therefore be made. All surplus or deficiency was allocated to the sections along the north and west boundaries of townships. For this reason, few townships are exactly 36 square miles, and sections rarely measure exactly 640 acres in size.

WHAT HAPPENS IF A NEW SURVEY REVEALS AN ENCROACHMENT?

Because of the realities of the problems resulting from PLSS survey legal descriptions, together with use of new technology, a new survey may well reveal that a boundary line is not in fact where you believed it to be. If a new survey of your land reveals that your neighbor is encroaching on a portion of your land, or vice versa, there are two potential resolutions that will determine who has a superior right to the disputed land.

First, you and your neighbor may be able to come to an agreement regarding the disputed land. That agreement could be formatted such that either the encroaching party agrees to respect the newly-discovered boundary line, or the non-encroaching party agrees to deed the disputed property to the encroaching party. Either format, however, could include a demand for financial compensation, which may not be palatable to the party from whom payment is demanded.



Second, if a suitable agreement cannot be reached, then the dispute will need to be resolved through a lawsuit. Typically, the lawsuit will be commenced by the non-encroaching party, although it is possible (and, under some circumstances, may be desirable) for the encroaching party to preemptively commence the lawsuit. But regardless of who commences the lawsuit, there are two important legal theories that the encroaching party may be able to assert to establish a superior right to the disputed land notwithstanding the results of a new survey: “boundary by practical location” and “adverse possession.”

Under the theory of boundary by practical location (which was more thoroughly discussed in the Fall 2016 issue of DIRT), an encroaching party may assert that regardless of where a boundary line is as stated in a new survey, the landowners (or their predecessors) previously established an enforceable boundary even though it is at a technically inaccurate location. Commonly, an encroaching party will point to a fence to substantiate its claim of boundary by practical location. While that may seem like a commonsense way to determine how the parties established boundary lines, courts may not always agree if, for example, the current landowners have not owned the land for a long period of time, do not know who originally erected the fence, or do not know if the fence was actually used as a definitive boundary in the past. But if an encroaching party is able to establish that a fence (or some other piece of evidence) established an enforceable boundary, the theory of boundary by practical location will permit the encroachment.

The theory of adverse possession, on the other hand, allows one to acquire legal ownership of another’s land

if he or she, together with his or her predecessor(s), has occupied the land in a certain way for 15 years. Specifically, the occupation must be:

- Actual: the occupying party must physically occupy the land in the same manner as a property owner would;
- Open: the occupancy must be done with the landowner’s knowledge or in such a way that the landowner could have such knowledge;
- Continuous: the occupation cannot be interrupted or merely sporadic;
- Exclusive: the public must not share an ability to occupy the property; and
- Hostile: the occupying party must not have the landowner’s permission to occupy the property.

Arguably, the theory of adverse possession is well-suited to disputes over farmland boundaries. For example, crops will typically be planted on farmland in the same location for many years, are visible, and preclude other uses of the land over which they are planted. As a result, claims of adverse possession are common in boundary line disputes relating to farmland.

In sum, new surveys can create new issues regarding ownership, and the ultimate resolution of those issues may not always be straightforward or what one would expect. As a result, great care should be taken when interpreting the legal significance of a new survey and determining what course of action to take with regard to information contained in a new survey.