Metes & Bounds Land Plats Solve Genealogical Problems

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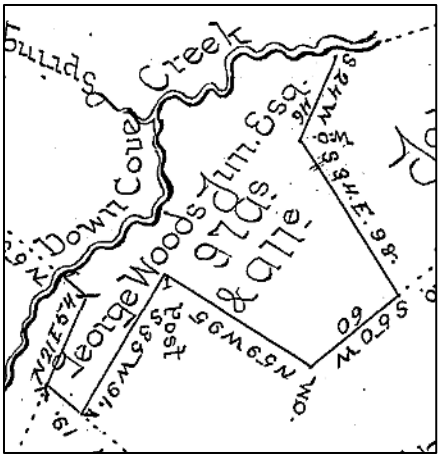


Land Plats & Some Uses

Land plats are drawings of tracts land taken from boundary descriptions in various types of land documents. Surveys are land plats. Genealogists can also draw their own plats from deeds, mortgages, patents, grants, and other land documents.

Plats, both singularly, and grouped as a neighborhood map, are tools for solving genealogical problems.

Metes and Bounds is an indiscriminate (non-rectangular) survey system. It has a long history and high correlation with in "state-land" states – those that retained the authority to distribute unowned land within their boundaries after the American Revolution. That is not to say that: (1) rectangular survey systems are absent from state-land states, or (2) metes and bounds surveys are not to be found in public-land states.

Land plats can:

- Correlate property records over time (especially in situations with unrecorded deeds);
- Provide insight into neighbors (clues to the maiden name of a wife);
- Build a neighborhood;
- Correlate with tax and other records;
- Provide a tool to locate property on a modern map.

Land plats that you find in surveyors' records, published journal articles, and other places need to be assessed for quality just as any other evidence in genealogical research. The written legal boundary descriptions from which plats are drawn (found in deeds, mortgages, grants, patents, etc.) are subject to the same kinds of scrivener's' errors as any other textual record (digits reversed, portions omitted, portions duplicated, etc.). Evidence assessment is as important in land records as any other genealogical research.

Land plats may be especially useful in situations were land has passed through a family for generations without any recording of the corresponding deeds. Given a hypothesis for a possible ancestor, comparing plats of the candidate ancestor's land holdings with the land holdings of later generations may provide evidence for ancestry. While all research problems are different, the tactic of working from both ends is a useful approach.

Connected tract maps that show the first landholders in an area (often the earliest settlers) are of special interest. Such maps are often developed from plats of Patents and Grants from Proprietors or state land offices to the first private owners. Where already available, such maps can be found in state archives and local repositories. These are in some sense a precursor to the land ownership maps popular in the mid-late 1800s. These maps reflect neighborhoods and communities in an era when extended families migrated together.

Common Units for Land Measure

Acre = 43,560 square feet = 1/640 square mile.

Pole, Rod, Perch = 16 ½ feet = 5 ½ yards (linear measure).
1 perch x 1 perch (area measure) is 30 ¼ square yards

Chain = 66 feet (four rods).

Link = 7.92 inches. The distance between joints in a Gunter's Chain, a one chain measure made up of one hundred links.

Basic Terms

Azimuth: A direction in the clockwise direction from the selected meridian (usually North) in degrees from zero to 360.

Bearing: A direction given as number of degrees offset from a north or south meridian. In the timer period for which many genealogists will plat, the usual format is <N/S><offset><E/W> where offset is between zero and 90.

Cadastral Survey: a survey to document land ownership and establish and mark corners.

Call: a boundary segment, usually a straight line segment given by a direction and distance; occasionally calls are meanders (definition below).

Corner: a point, typically where the boundary makes a turn, usually denoted as an object such as a post, tree, heap of stones, etc.

Land Plat: a drawing of a tract of land made from the written metes & bounds description of the tract, and typically showing the calls, corners, owner's name, and acreage. Plats may also show neighbor's names (when available from the metes & bounds description) or physical landforms mentioned in the metes & bounds description.

Meander: a call where the property boundary follows a feature such as a stream, road, fence line, tomahawk right, shoreline, mountain ridge line, etc. No bearing is given for a meander.

Metes & Bounds Terminology

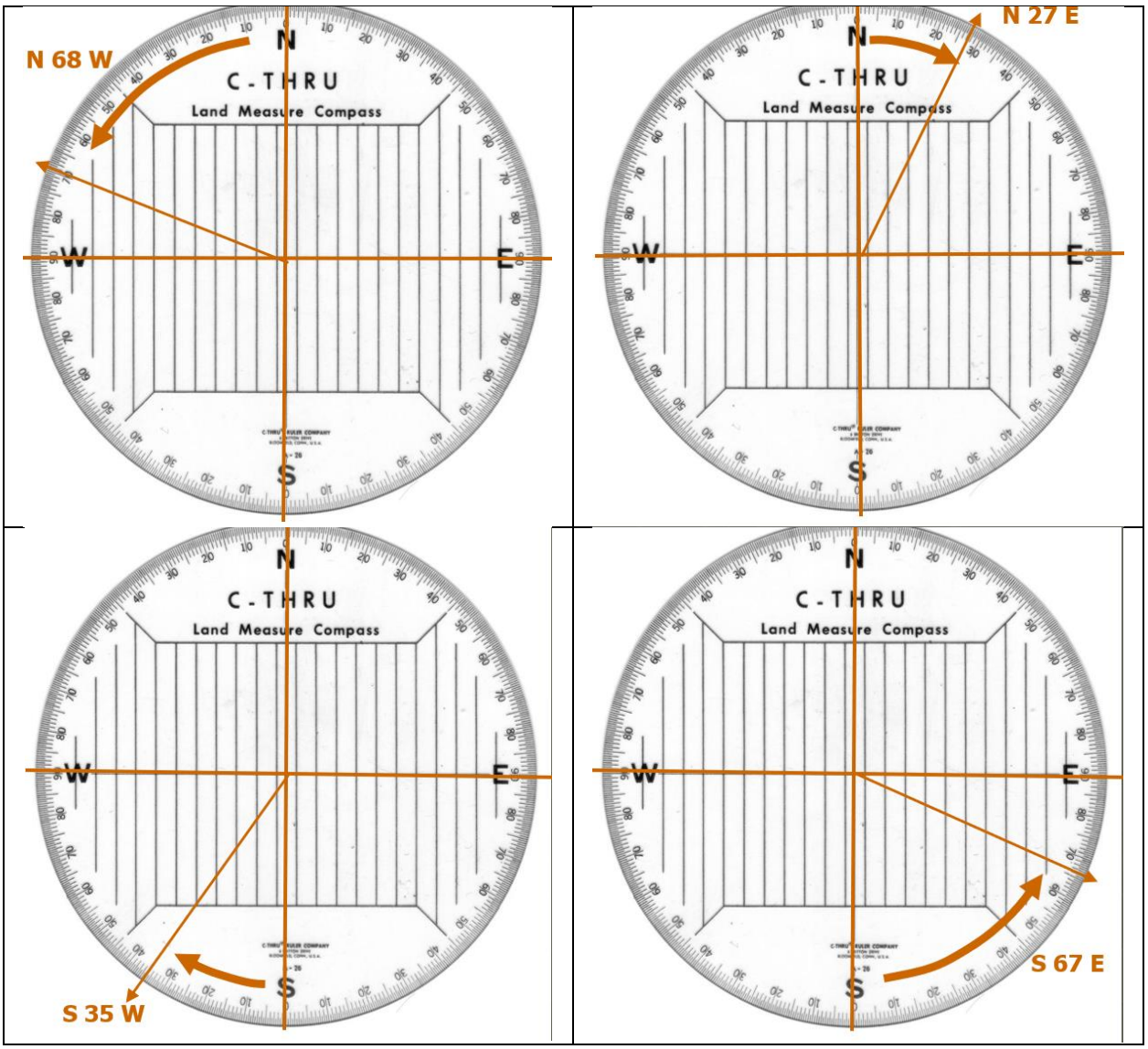
A written metes & bounds description for a land tract is made up of a series of calls (direction/distance) and corners (points) that describe the perimeter of the tract.

Calls consist of a direction (angle) and a distance. The distance may be expressed in distances such as chains, rods, poles, perches, or feet. Direction may be expressed as:

- a point on a compass card (left illustration below);
- bearings often seen as <N/S> <degrees> <E/W>, where degrees is less than 90;
- azimuth degrees (0 to 360).

Corners are point features such as a tree, pile of stones, or stake in the ground.

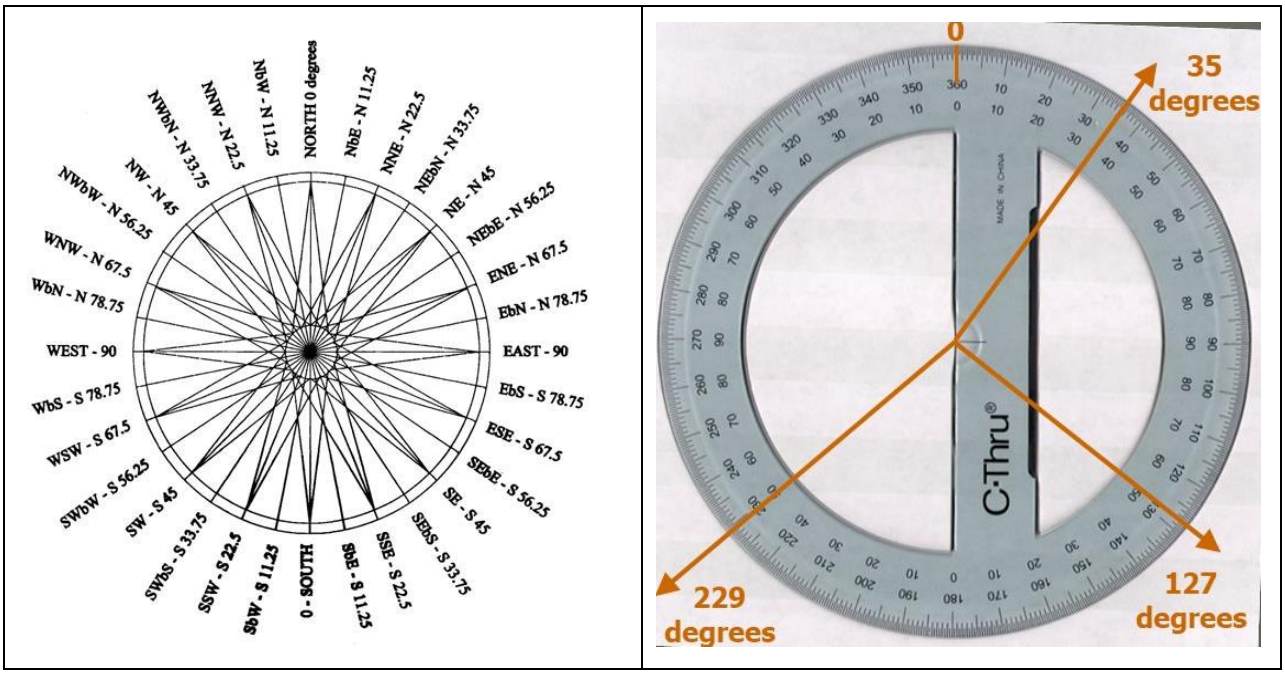
The illustrations below illustrate compass bearings in each of the four compass quadrants. Imagine a surveyor standing at the center of the compass and then walking the arrow in the direction shown. The bearing appears for each arrow.



Two metes and bounds descriptions for the same property do not have be identical because:

- the surveyors may begin at different corners;
- the surveyors may traverse the property in opposite directions;
- one survey may have intermediate points in a meander that the other does not.

While seen less frequently in land records of genealogical interest, other systems may be used for bearings. The Compass Rose (left below) gives general direction and derives from early maritime methods. The more modern 360 degree system (right below) is seen in more modern records.



References for Hand Drawing Plats

"Metes and Bounds Land Plats Can Solve Problems," *NGS Magazine*, Vol. 49, No. 1 (January-March 2023). Includes addition information on scale, direction nomenclature and platting.

Tools for Hand Drawing Plats

You need the following materials to hand-draw plats:

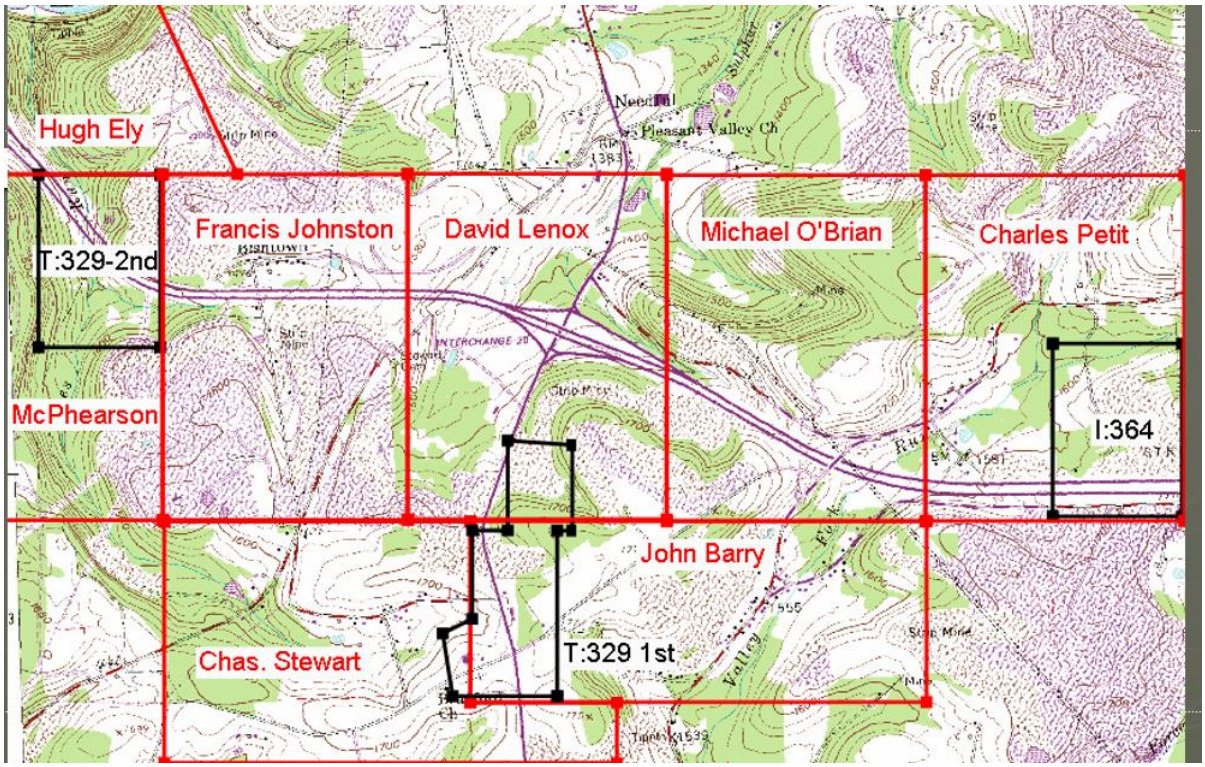
- Graph paper.
- Metric division ruler. This can be a ruler with inches are divided into tenths, a metric ruler (centimeter scale), or an engineer's scale.
- Land Plat Compass. This is a plastic template that is set up with the <N/S> ## <E/W> nomenclature for direction that is commonly used in the time periods of most interest to genealogists. One source is Forestry Suppliers: https://www.forestry-suppliers.com/p/47922/59201/forestry-suppliers-land-measure-compass

Platting Software

Two software applications that genealogists frequently use are:

DeedMapper: https://directlinesoftware.com/
This application is available in native PC (Windows) version only. Experienced MAC users can run it in a Windows emulation environment.

Sandy Knoll Software Metes and Bounds: https://www.tabberer.com/sandyknoll/index.html
This application comes in both MAC and PC (Windows) versions.



Example of Plats over USGS basemap in DeedMapper.
Red plats are first private land owners; black plats are county deeds.

THE COMMONWEALTH OF PENNSYLVANIA,

To all to whom these Presents shall Come, Greeting:

P. B. Jno. W. Leary

Know You, That in consideration of the money paid by Sarah O'Neal at the granting of the Warrant hereinafter mentioned, and of the sum of seventeen dollars and thirty cents, in full of arrearages and fees, now paid by David Mortimore into the Treasury Office of this Commonwealth, there is granted by the said Commonwealth, unto the said David Mortimore, a certain tract of land, situate in Monroe township, Bedford County: Beginning at a post; thence by land of Abraham Weimer, south forty-eight and one-half degrees west, forty-three perches to stones; thence by other land, south forty-two degrees east, twenty-nine perches to a post; thence south nineteen and one-half degrees west, seventy-nine perches to a post; thence south fifty and three-fourths degrees east, twenty-six perches to a post; thence by Sarah O'Neal's other land, north thirty-nine degrees east, ninety-nine perches to stones; thence north thirty-four degrees east, twenty perches to a post; and thence north forty-nine degrees west, seventy-two perches to the beginning: Containing thirty-seven and one-half acres and allowance.

Which said tract was surveyed in pursuance of a Warrant dated the thirteenth day of October A. D. 1836, granted to the said Sarah O'Neal, whose right in and to the said tract, became vested in the said David Mortimore.

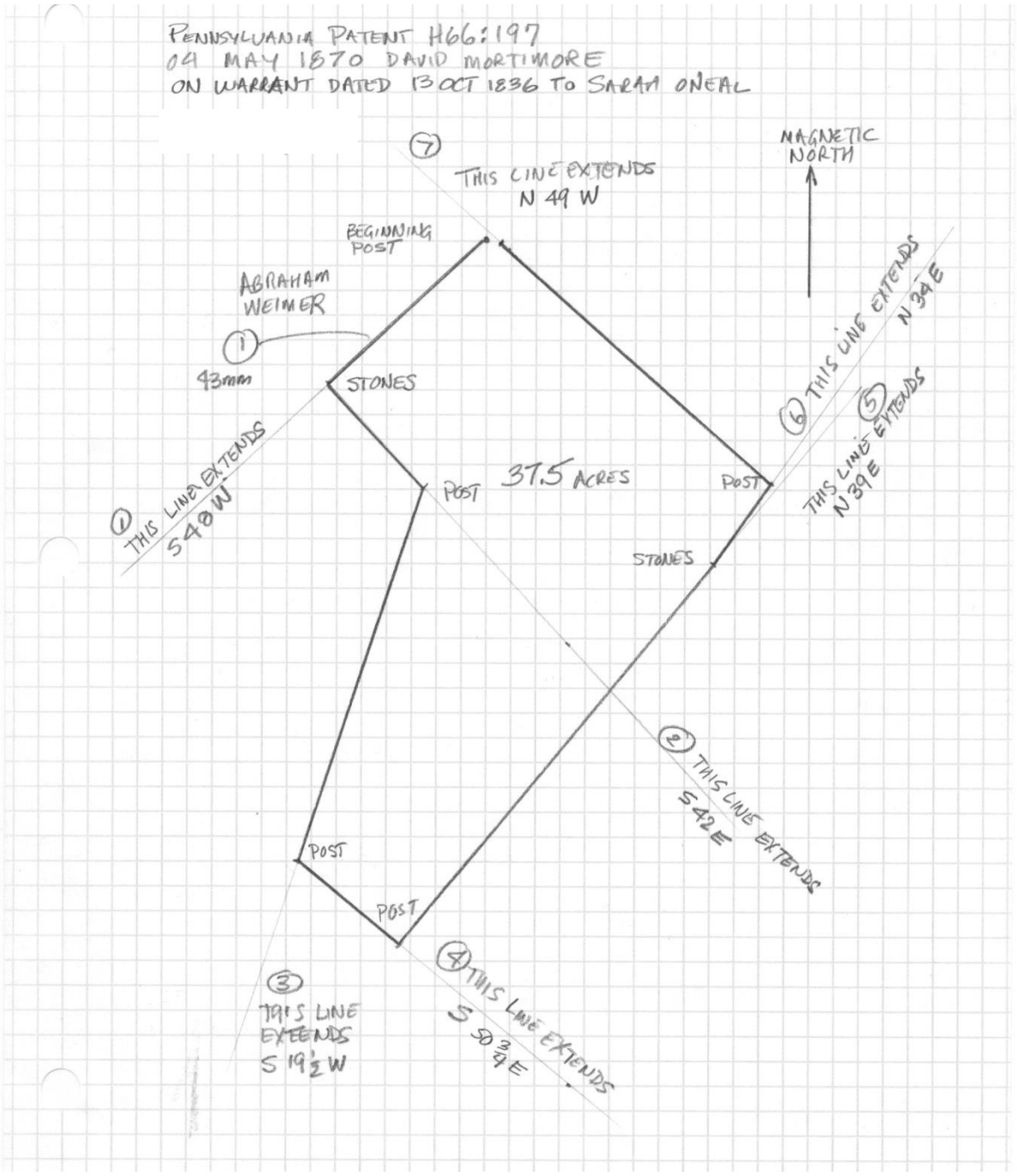
Repository & Record: *Pennsylvania Patent Book H66, page 197*
Pennsylvania Archives

Grantor: *Commonwealth PA* Grantee: *David Mortimore*

Execution Date: *n/a* Recording Date: *04 May 1870*

Mentions other Patent, Warrant, Survey, or Deed:
Warrant 13 October 1836 to Sarah O'Neal

	Direction & Distance	Distance	Corner	Comment
	Beginning at		*a post*	
1	*S 48.5 W*	*43p*	*stones*	*by land Abraham Weimer*
2	*S 42 E*	*29p*	*post*	*by other land*
3	*S 19.5 W*	*79p*	*post*	
4	*S 50.75 E*	*26p*	*post*	
5	*N 39 E*	*99p*	*stones*	*by Sarah O'Neal's other land*
6	*N 34 E*	*20p*	*post*	
7	*N 49 W*	*72p*	*begin*	



Hand-drawn plat with construction lines shown. Construction lines were drawn in order: ①, ②, ③, ④, ⑤, ⑥, ⑦.