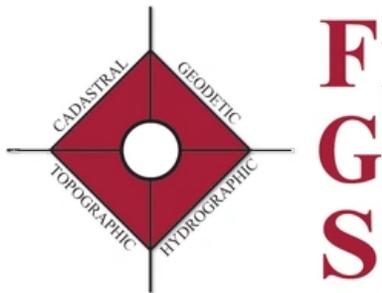
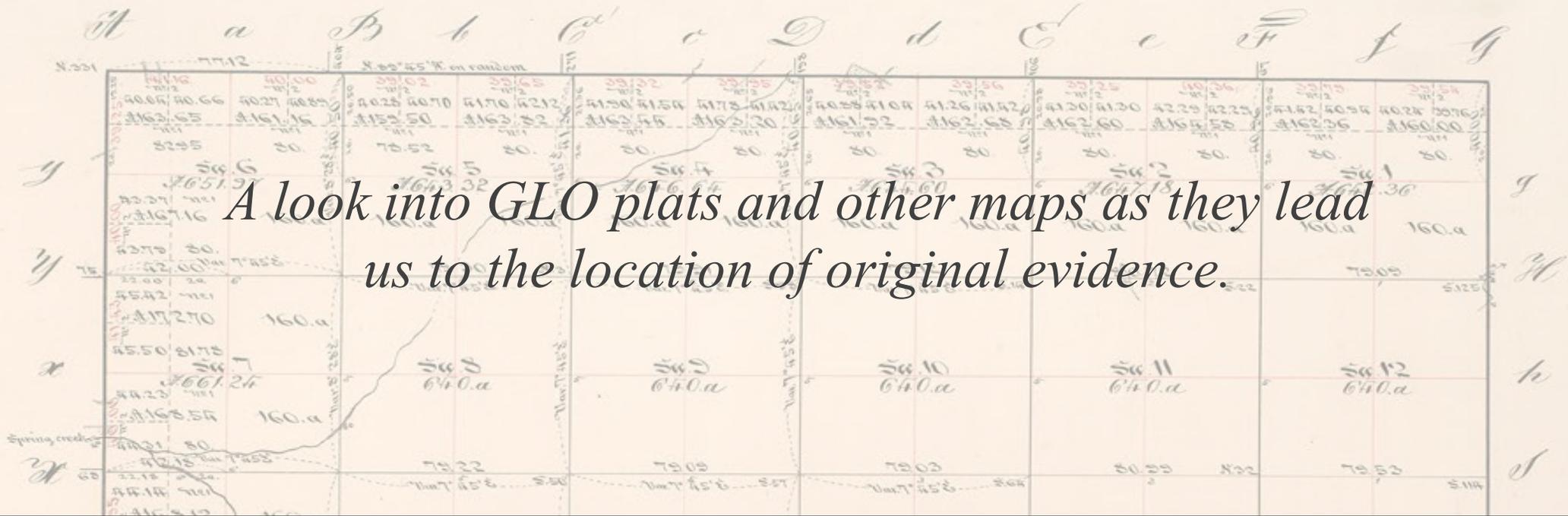


Township 25 North of the base line Range 16 West of the 5th principal Meridian

Analysis and Interpretation of GLO Plats



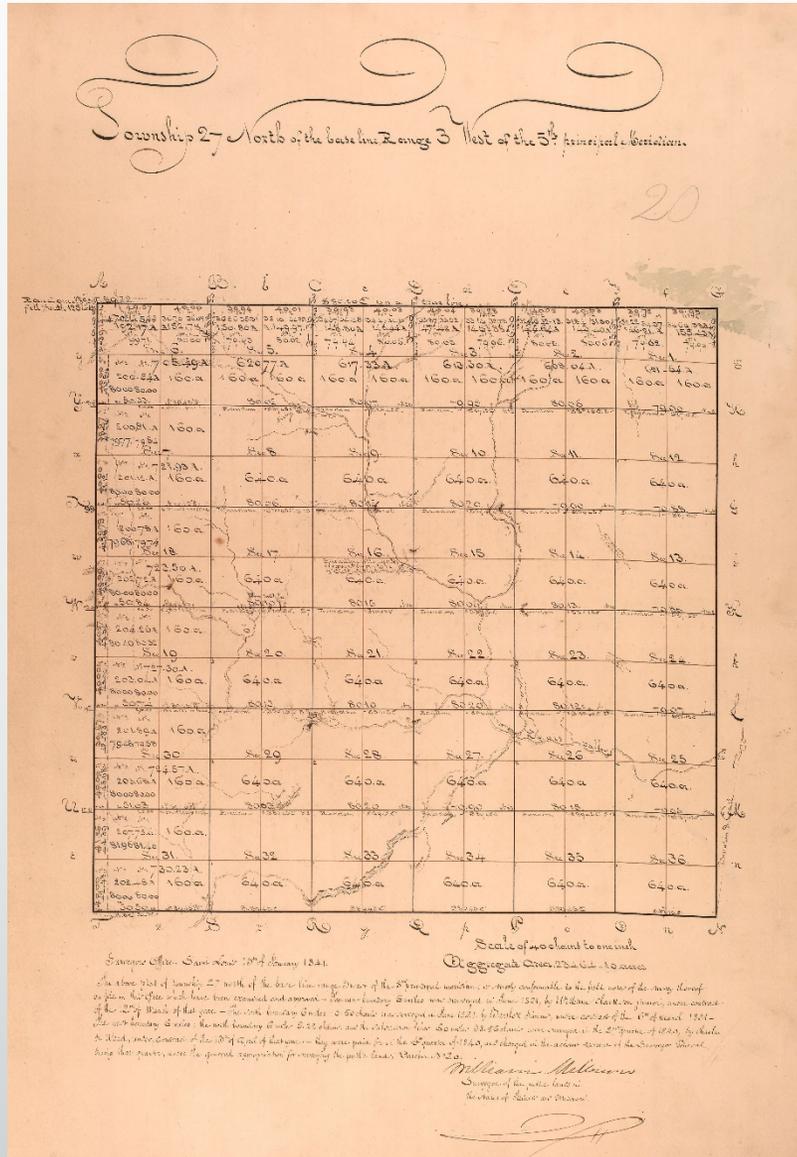
Ralph Riggs - PLS, CFedS – President

Florabama Geospatial Solutions, LLC

DeFuniak Springs, Florida - West Plains, Missouri

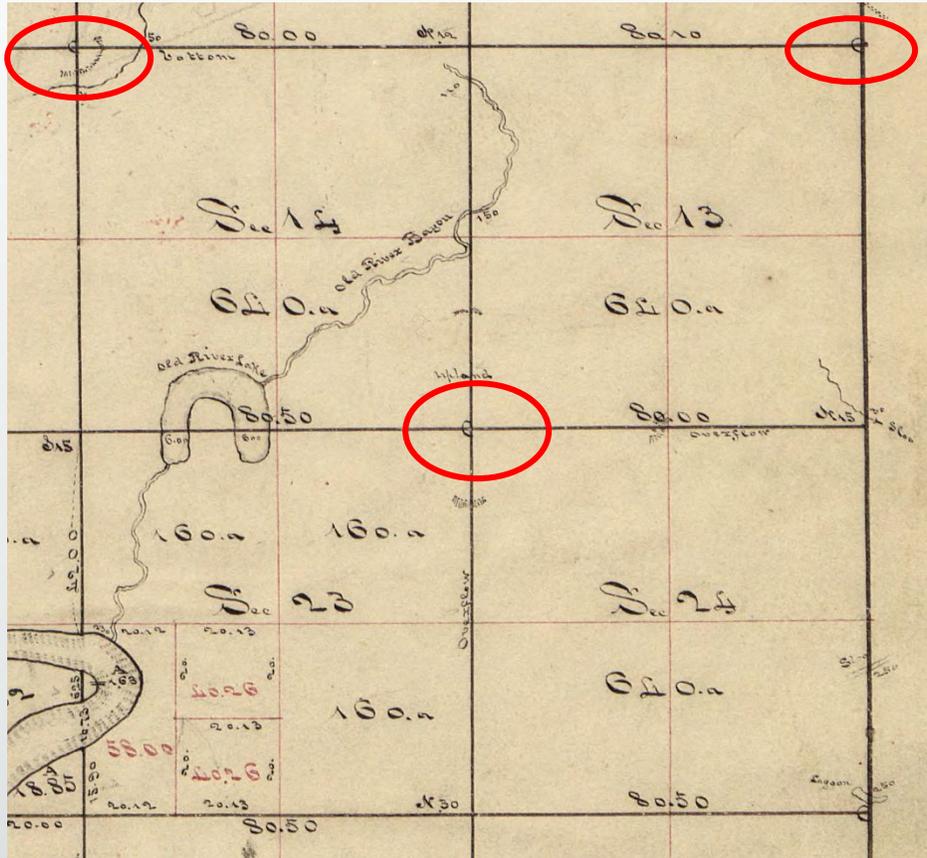
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Analysis and Interpretation of GLO Plats



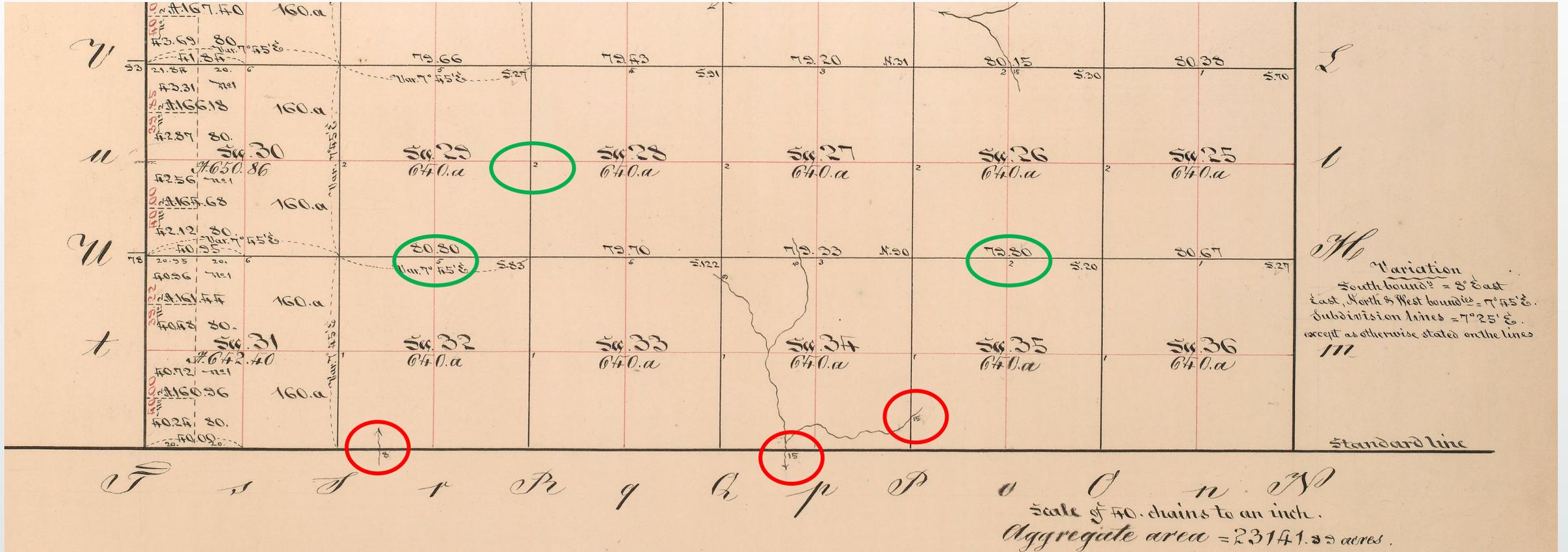
- GLO Plat symbols
- Analyzing physical feature calls
- Analyzing random fallings
- Analyzing topography
- Single proportion vs. Double proportion related to search positions
- Did the GLO surveyor stub and not close?
- Additional resources and comments

GLO Plat Symbols – random fallings



- Half-circle indicates that when the original surveyor ran east on a random line he hit the corner with no falling
- Distance in links; “N 30” or “S 15” indicates the distance that the original surveyor missed the corner when he ran the random line.
- This plat is from a project in southeast Arkansas. The original survey was real good with a compass or his positional tolerance of “hitting the corner” was pretty big.

GLO Plat Symbols



Indicates index number for witness tree notes – H to U at 1-6



Indicates width of stream or water body

Review Adjoining GLO Plats

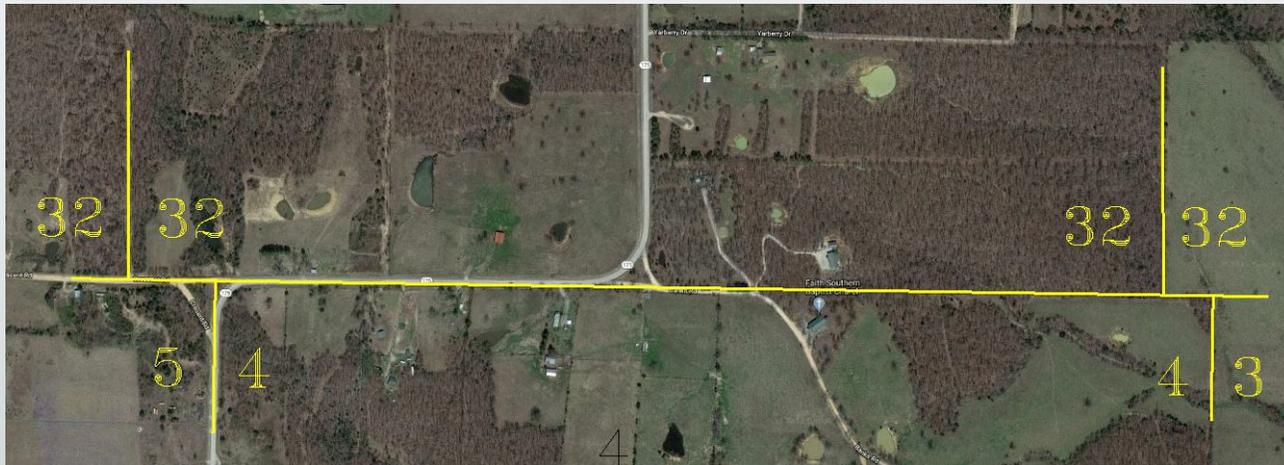
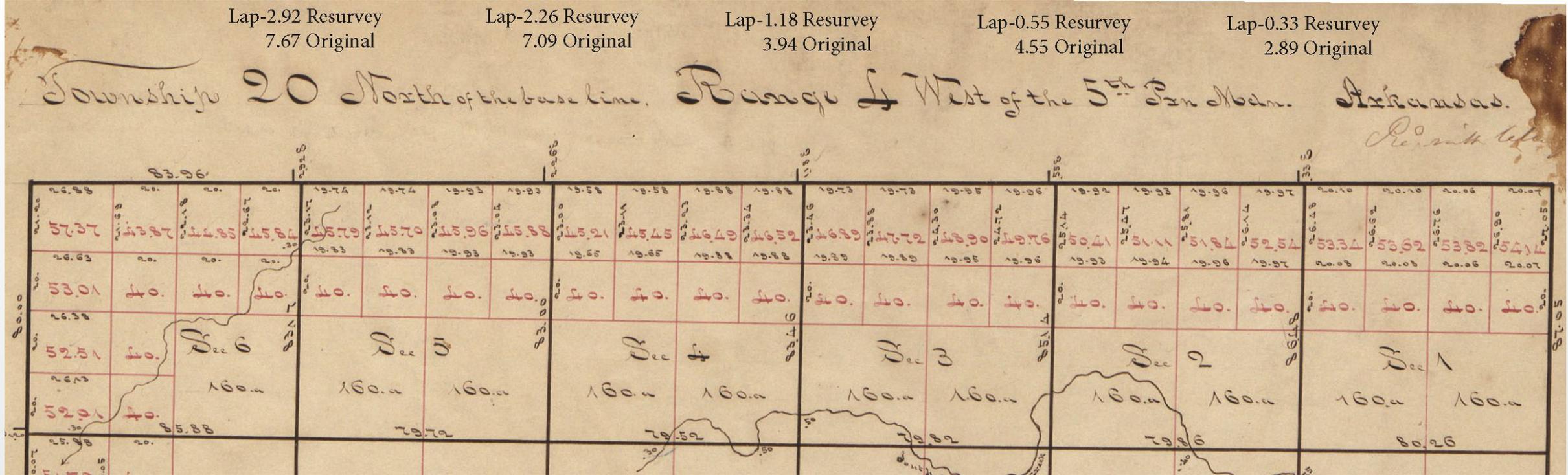
Lap-2.92 Resurvey
7.67 Original

Lap-2.26 Resurvey
7.09 Original

Lap-1.18 Resurvey
3.94 Original

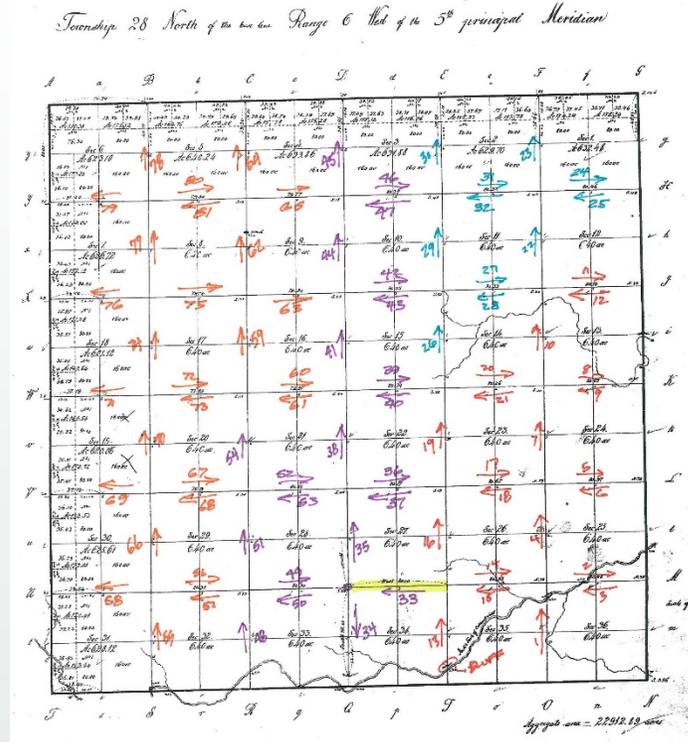
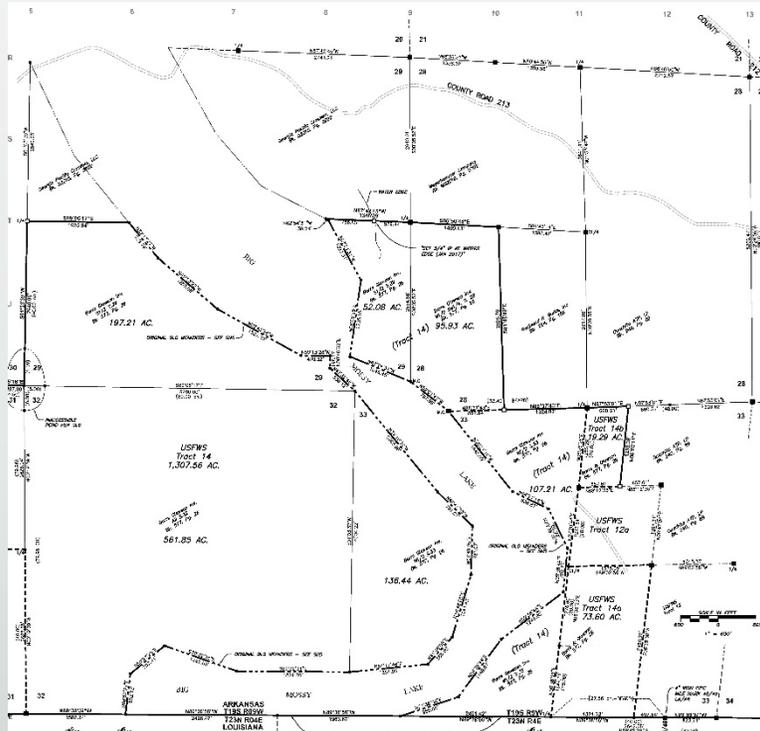
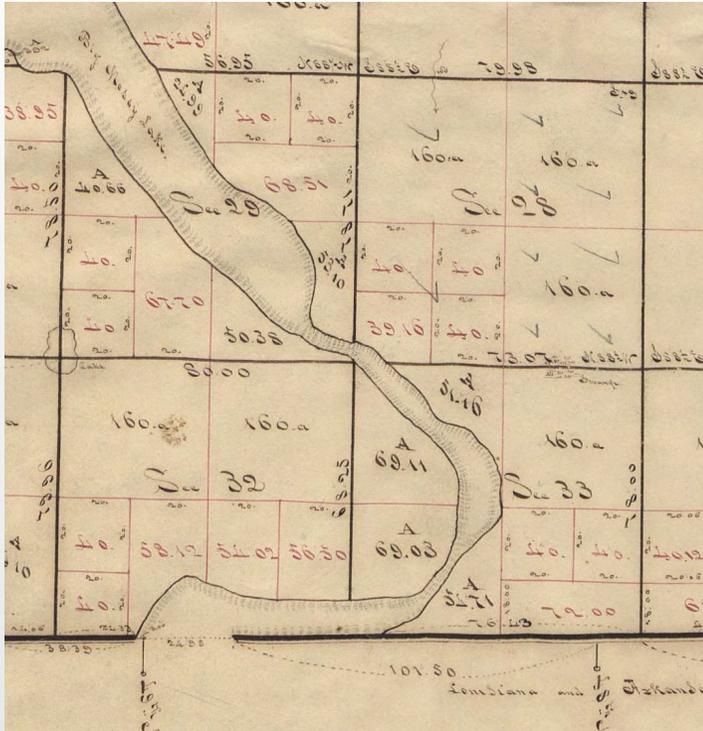
Lap-0.55 Resurvey
4.55 Original

Lap-0.33 Resurvey
2.89 Original



- 1821-Original Survey T20N R4W
- 1853-Re-surveyed south boundary of T21N R4W, set temporary standard corners and re-surveyed T20N R4W
- Calculated lap distances based on 1853 re-survey
- Township line and T21N R4W never resurveyed

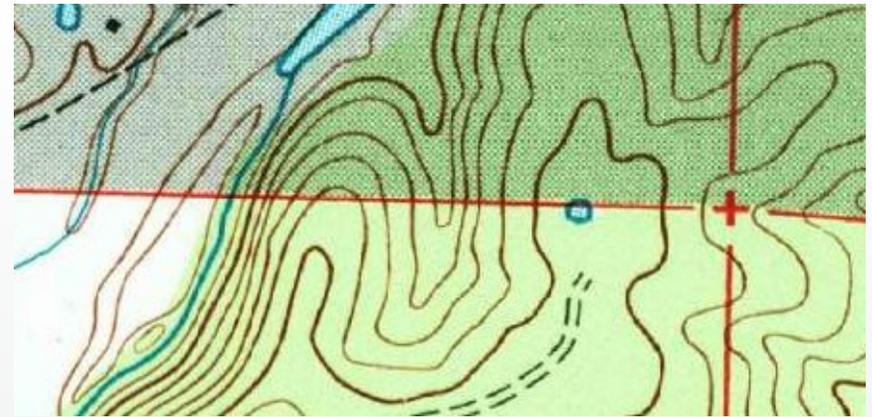
GLO Plat – Method of Subdivision



- How was township subdivided?
- Did method deviate from standard?
- Did meandering waterbodies affect order of subdivision?

Physical Feature Calls

Chains
40.00 Set temporary quarter section
corner post in the middle of a
sand prairie
58.00 on a high hill
72.00 middle of a small pond on a
high hill
80.12 1/2 fell 20 links south of corner to
sections 23, 24, 25 & 26

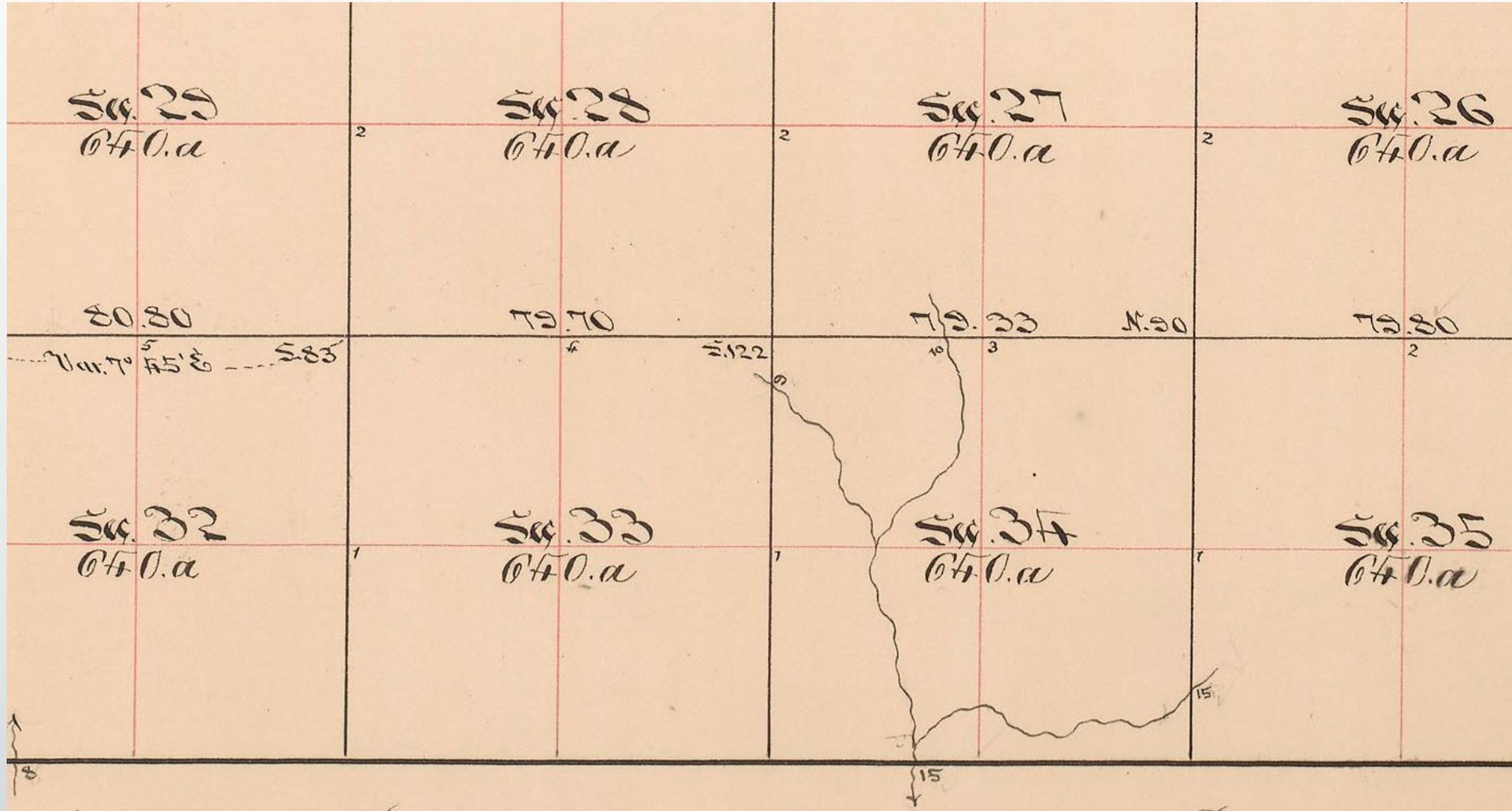


Description of corner evidence found:

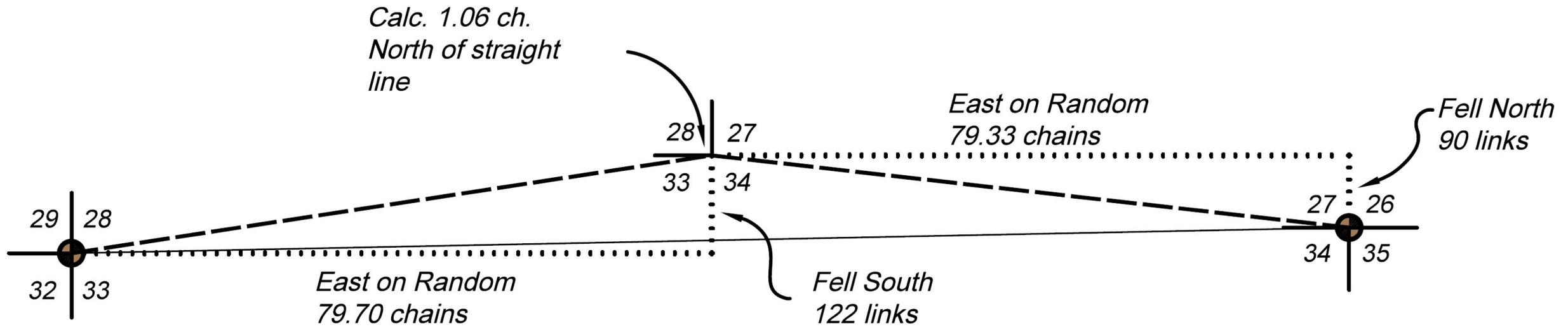
From original survey: Monument found - None
(Remarks: Found pile of stones with pine knot in center)
Found Government pine stump hole S43°E 150 lks.
Found Government remnants of pine stump S15°W 86 lks.
Found Government pine stump hole S78°E 82 lks.
Found small pond West of corner 8 chains and 12 lks.



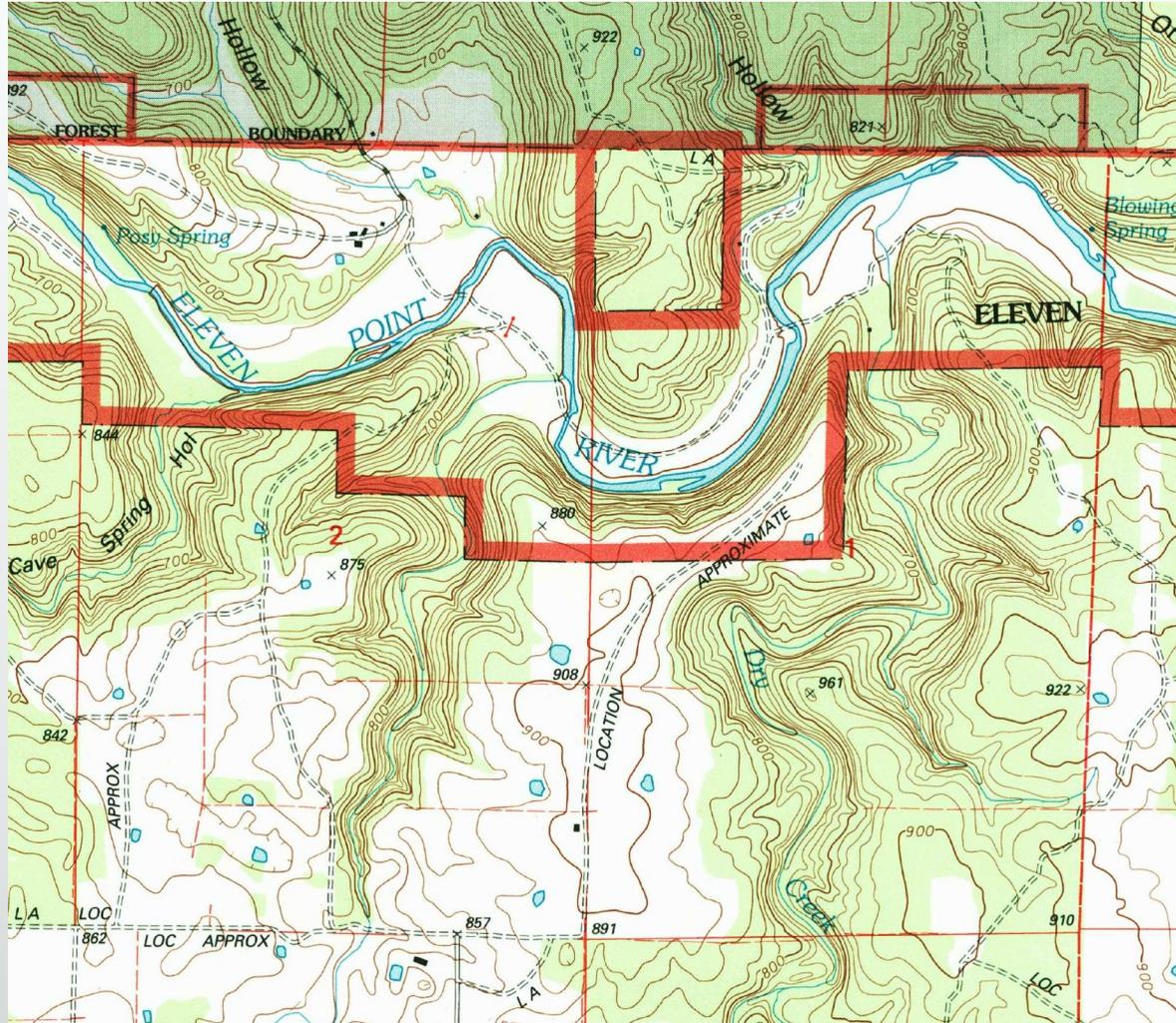
Analyzing Random Fallings



Analyzing Random Fallings



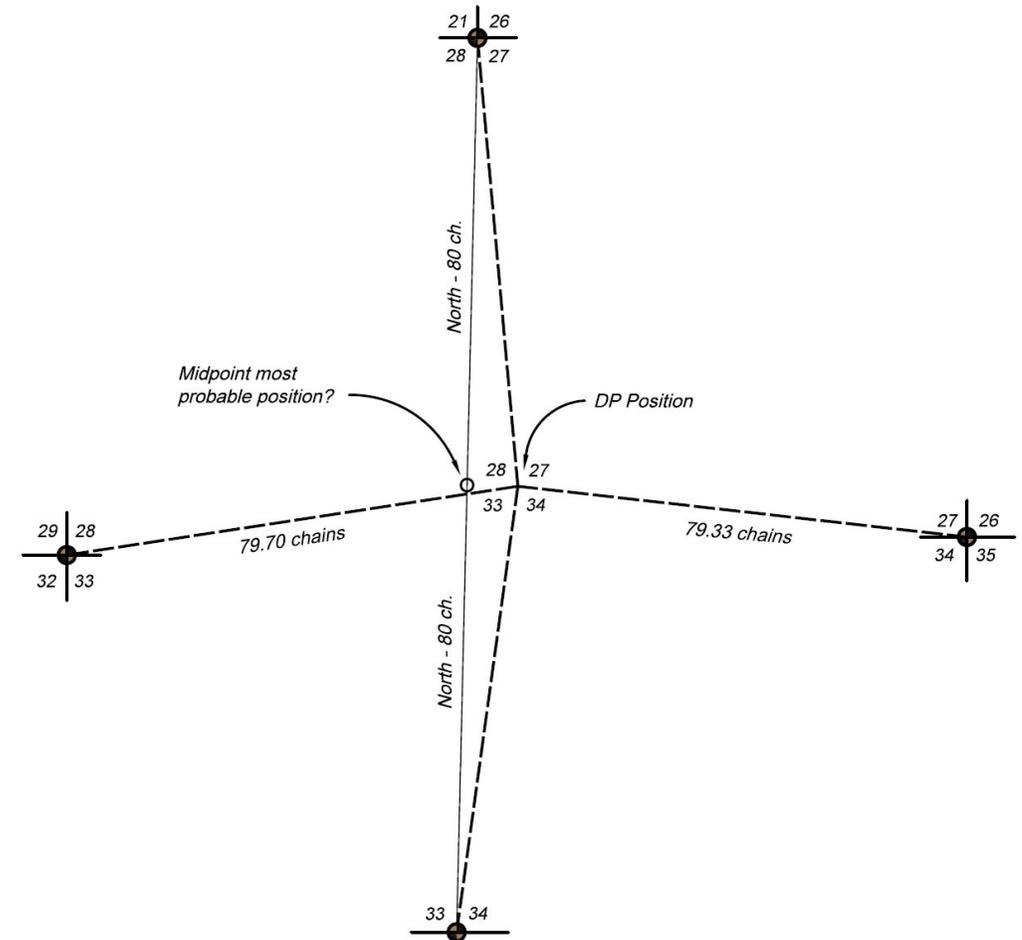
Analyzing Topography



- Line between Sections 1 & 2 ran North
- Note terrain for the first ½ mile vs. terrain for the remainder of the line
- Possibility of chain not held level for the north part of the line would result in a longer distance being reported
- We would assume the search position for the quarter corner would be north of the proportioned position
- This is not a hard and fast rule but in several instances it has proved useful.

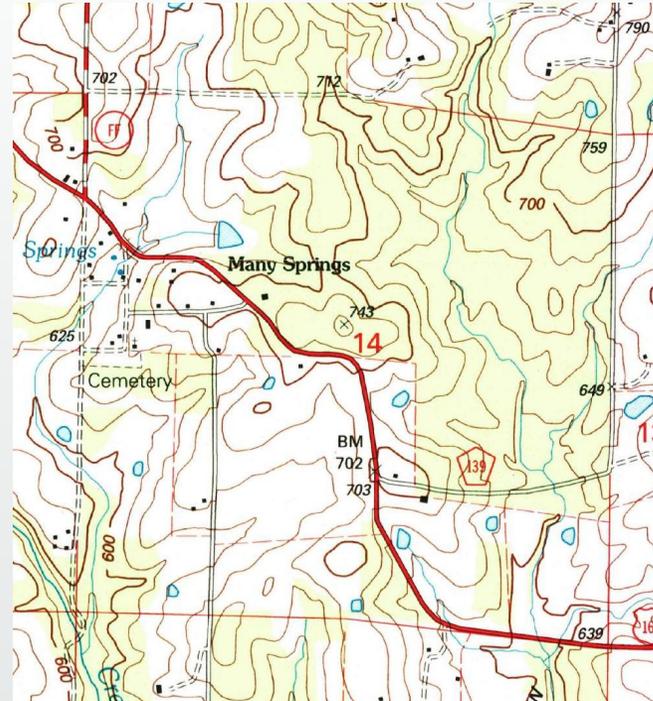
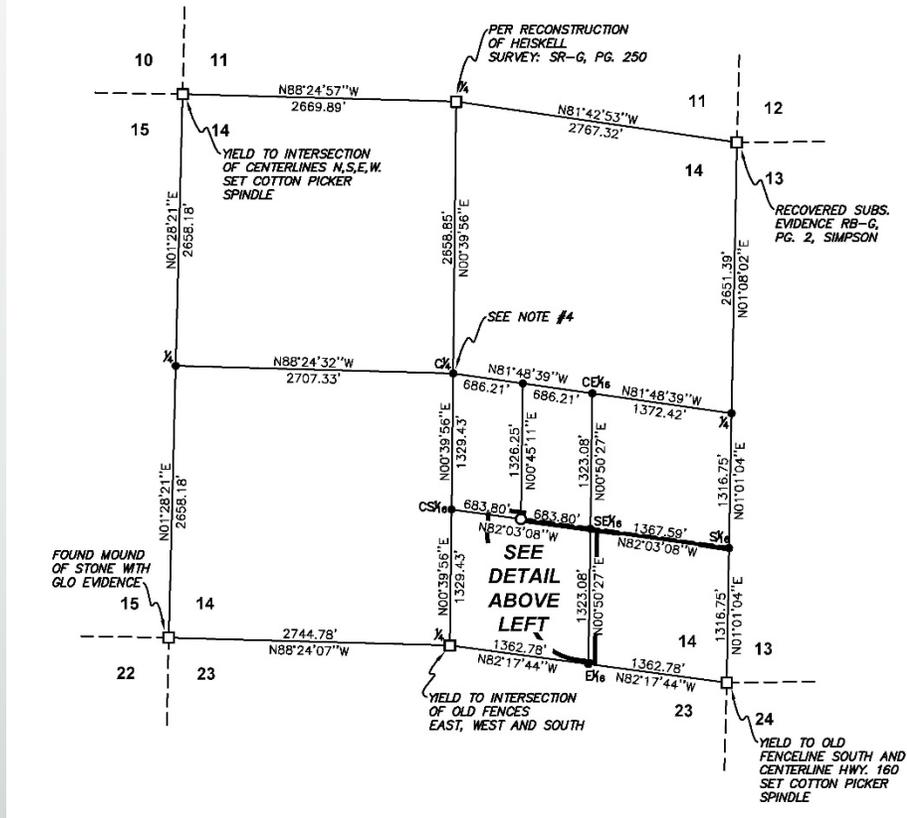
Single Proportion vs. Double Proportion

- In almost all cases the north south lines in a township were ran North, and sometimes South
- The intention was to parallel the east township boundary
- You can be sure of one thing when you double-proportion...it's not where the GLO surveyor set the corner
- Double proportion is about equity, not accuracy. "Protect the plat"
- But, sometimes a single proportioned position on a north south section line results in a more logical search position for a section corner.



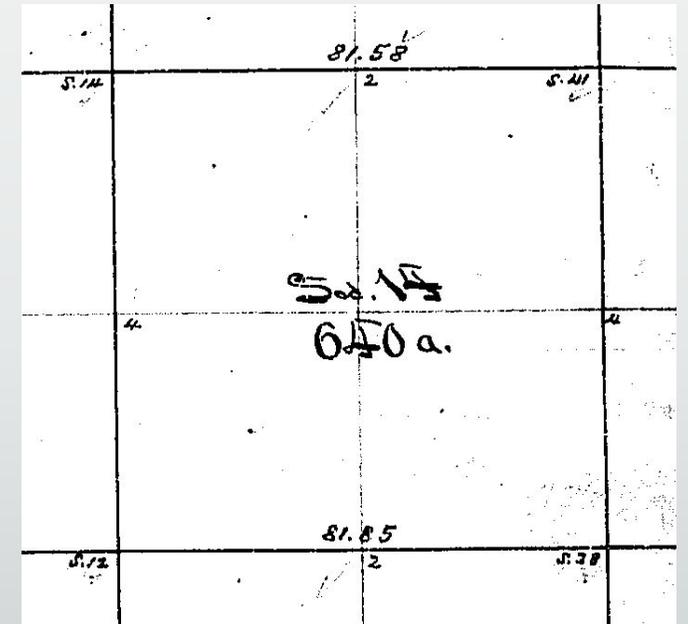
Did the GLO Surveyor stub and not close?

Pt. $W\frac{1}{2}$ $NW\frac{1}{4}$ $SE\frac{1}{4}$ and Pt. $S\frac{1}{2}$ $SE\frac{1}{4}$ &
 Pt. $E\frac{1}{2}$ $NW\frac{1}{4}$ $SE\frac{1}{4}$ &
 Pt. $E\frac{1}{2}$ $SW\frac{1}{4}$ $SE\frac{1}{4}$ and Pt. $SE\frac{1}{4}$ $SE\frac{1}{4}$
 Sec. 14, T23N R03W, 5th P.M.
 Oregon County, Missouri



Thought for Future Discussions:

- Where is the center of the section?
- Intersection per Chapter 60?



Additional Thoughts

- Looking for a quarter corner on an east-west line. Did he mistakenly monument the temporary corner that was set at 40 chains?
- Somehow establish a chain factor for the township. Do you have prior surveys that will indicate whether he measured short or long?
- If there are stream or river calls, import a georeferenced USGS topo map to your CAD drawing. See how your search position relates to the stream call distance.
- Stream calls in flat areas are sometimes unreliable. Rivers and streams move around. The best call is to the bluff side of a stream.
- Use Google Earth. Snap a placemark to a fence corner, road intersection or tree line. Take the latitude/longitude readout and enter that into your COGO program. You can get a feel for distances and even use them for single and double proportion to calculate search positions. Or, import a georeferenced aerial photo.
- That old tree at the fence corner could be a witness tree. Landowner: *“yes, that old tree at the fence corner is the corner tree. My grandad said there used to be marks in it”*
- You may have to go back and look for the corner more than once. As you find other evidence in different directions it may significantly change your search area. *Or, you may uncover some new records that you didn't have before.*
- Don't assume the witness trees listed in the GLO notes are the only ones. Look at the lines coming into the corner and the lines going out. There may be a line tree a short distance away. *Additional discussion for a later time: How do you use an existing line tree? Do you proportion from it?*



Happy Hunting!



Ralph Riggs - PLS, CFedS – President

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