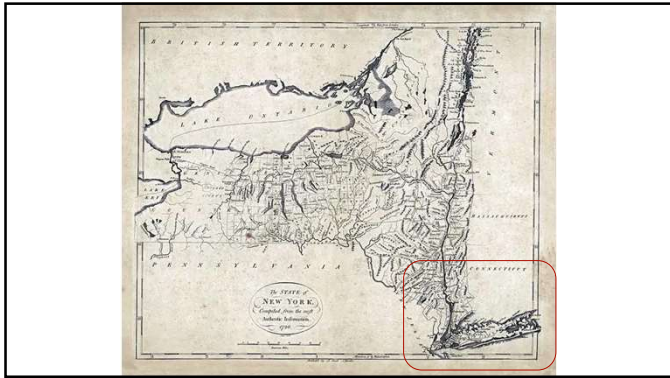
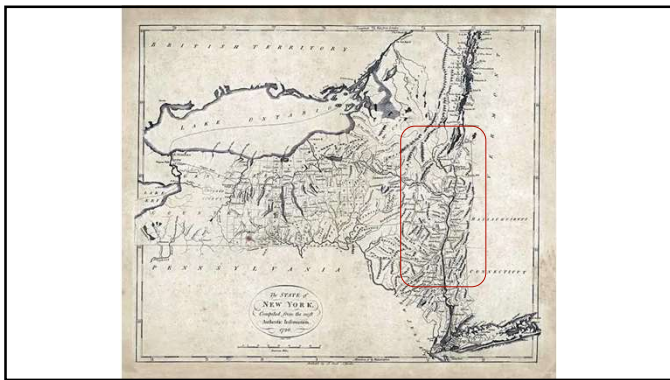


Slide 5

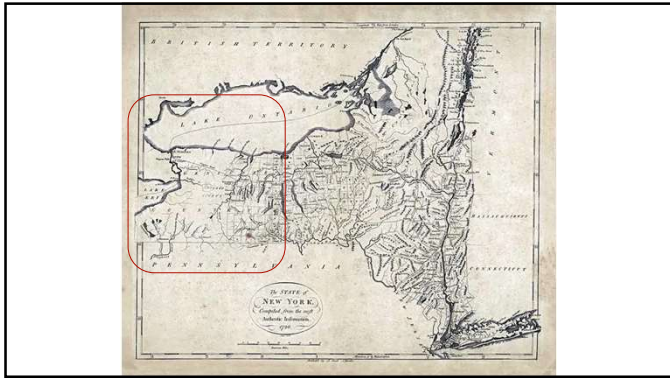
K1 New International Border

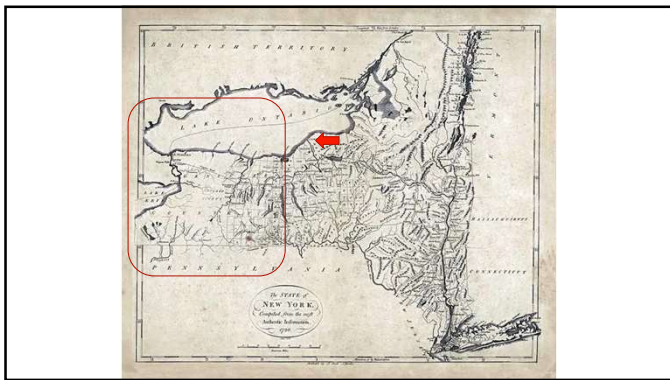
Ken, 10/23/2021









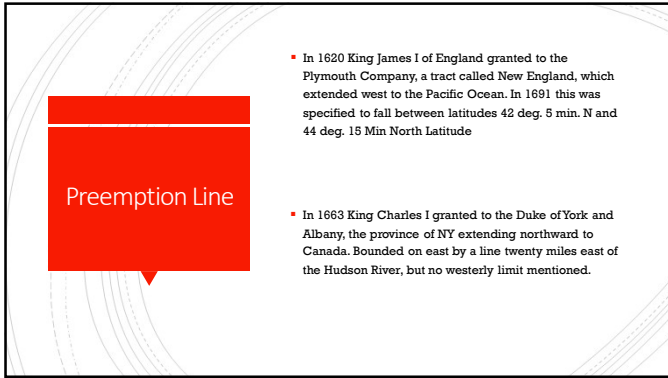






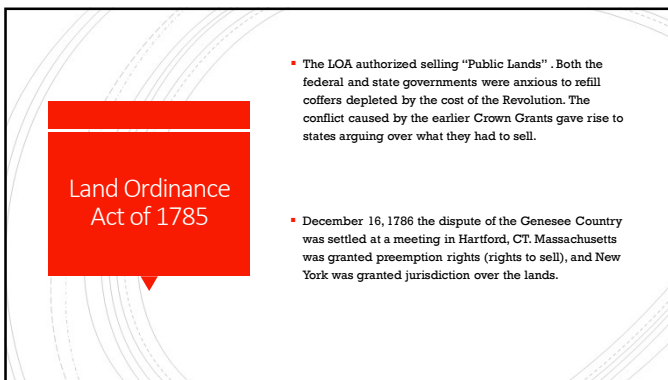






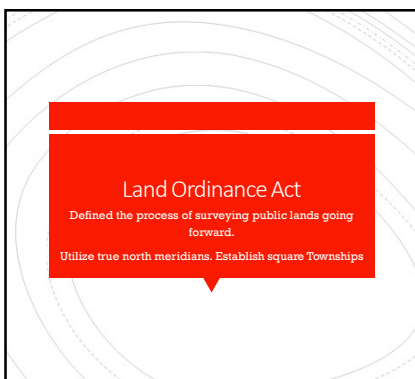
Preemption Line

- In 1620 King James I of England granted to the Plymouth Company, a tract called New England, which extended west to the Pacific Ocean. In 1691 this was specified to fall between latitudes 42 deg. 5 min. N and 44 deg. 15 Min North Latitude
- In 1663 King Charles I granted to the Duke of York and Albany, the province of NY extending northward to Canada. Bounded on east by a line twenty miles east of the Hudson River, but no westerly limit mentioned.



Land Ordinance Act of 1785


- The LOA authorized selling "Public Lands". Both the federal and state governments were anxious to refill coffers depleted by the cost of the Revolution. The conflict caused by the earlier Crown Grants gave rise to states arguing over what they had to sell.
- December 16, 1786 the dispute of the Genesee Country was settled at a meeting in Hartford, CT. Massachusetts was granted preemption rights (rights to sell), and New York was granted jurisdiction over the lands.



Land Ordinance Act

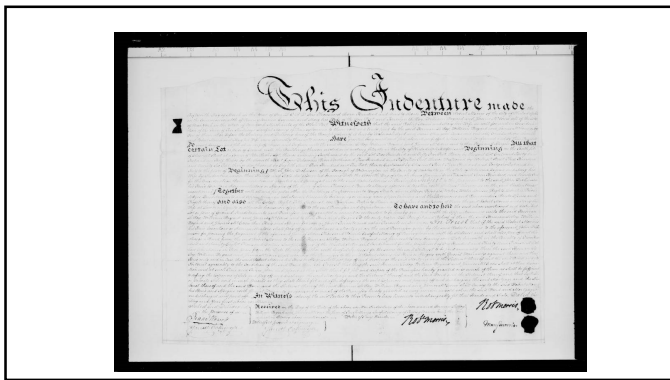
Defined the process of surveying public lands going forward.

Utilize true north meridians. Establish square Townships




Chain of Title

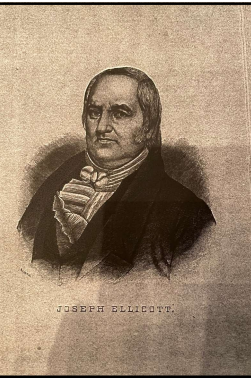
- In 1788 Nathaniel Gorham and Oliver Phelps bought over 6 million acres from Massachusetts. After they were unable to make regular payments in 1790 about two thirds reverted to the Commonwealth.
- In 1791 Robert Morris a prominent land speculator, and former financier of the American Revolution bought four million acres in five deeds.
- Later that year, Morris sold four of the tracts to six Dutch bankers. He kept one for himself.
- The Dutch purchased more land in New York and Pennsylvania.
- In May 1795, they formed "Hollandsche Land Compagnie" to administer the development and sale of these lands. Now known as Holland Land Company.




Treaty of Big Tree

September 16, 1797
3000 Senecas present
Geneva, NY






Joseph Ellicott
Chosen as lead surveyor for the survey
Also engaged his brothers as assistants and advisors



- Joseph Ellicott, Andrew Ellicott and Benjamin Ellicott were experienced land surveyors and highly competent.
- Andrew, the eldest led the way and trained his brothers well and thoroughly.
- Prior to the HLS they worked on laying out the national capital, Washington, DC; a portion of the Mason-Dixon Line and the lines between New Jersey, Pennsylvania and New York



- Immediately after the Treaty of Big Tree settled the issue of Native land rights, Ellicott began the survey.
- The first order of business was to define the area to be subdivided into saleable lots. The shore of Lake Ontario and the eastern bank of the Niagara Strait required a mathematical description.
- Furthermore, the actual west limit of the HLS was not the top of Bank of the Niagara, rather it was a line one mile east of that.

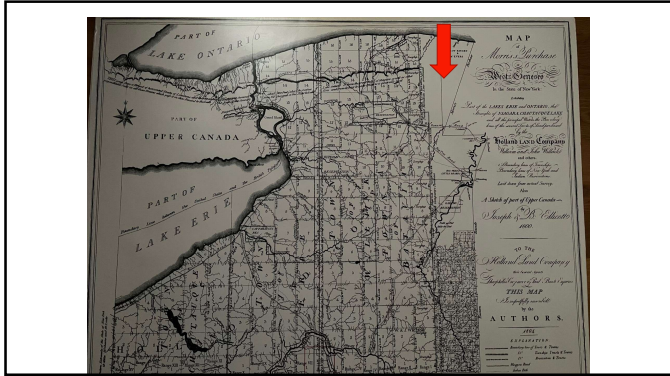
Completion of task one

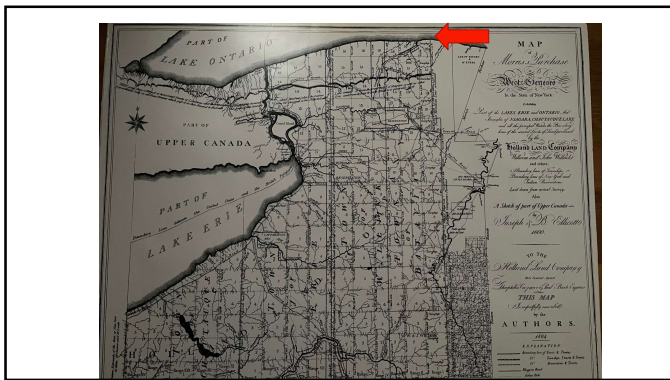
- The first task the surveyors accomplished was to determine the outer limits of the Holland Land Company Purchase.
- Traversing and mapping the coast of lake Ontario and the east bank of the Niagara River was completed on November 8th



Ellicott's work begins
Excerpts from his
Field Notes dated October 3, 1797

- Traverse of a part of country called West Geneseo, commencing at the N. West corner of Messrs. Gorham and Phelps purchase, a chestnut post, standing on the beach of Lake Ontario, which is open marsh of about 40 or 50 yds wide, the post marked GP on the east and $\frac{3}{4}$ miles on the south.









A look into the daily notes
Continuing from the description of the POB

- Bank 4 or 5 feet high and termination of the marsh
- A small marsh back of the beach and the mouth of a small creek at 3.50 - The marsh ends with the course and the bank begins 4 or 5 feet high.
- Open marsh
- To the mouth of a creek large enough to turn an overshot mill enters the lake at 2.50. Land on the creek for half a mile is marshy and no timber. Encamped at this place - about 9 at night there came on a violent thunderstorm from the S.E, with hard wind and rain, blew down our tents, the wind about 12 shifted to the north an blew a gale. Storms of rain continued all night, ...

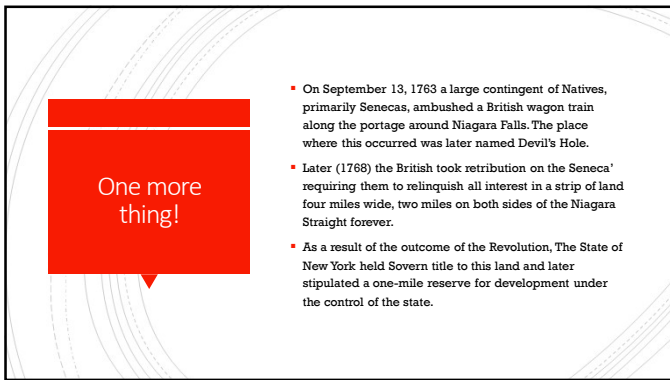
The note continues

- .. The sea ran so high, that all hands were obliged to turn out to the boat and of course suffered both cold and wet. (Oct 4th) Lay by all this day, the wind too high to settle the needle. (Oct 5) Commenced the traverse at No. 29 to a bank timbered with Beech and Maple.



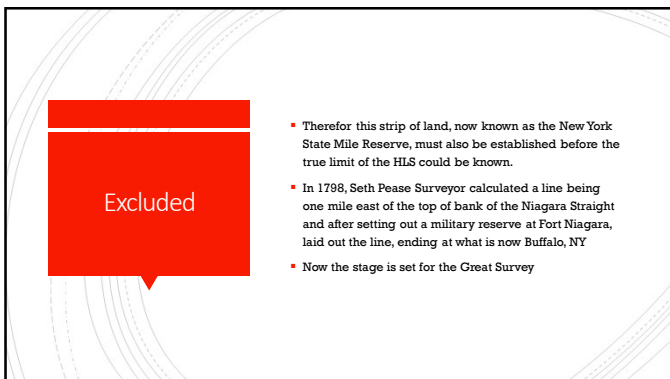
Shortly thereafter we learn more

- On the evening of October 5th, this entry appears:
- "Encamped for the night, and observed the variation which we found to be 3 degrees 10 minutes west and the observation taken half an hour after the polar star passed the meridian going west."



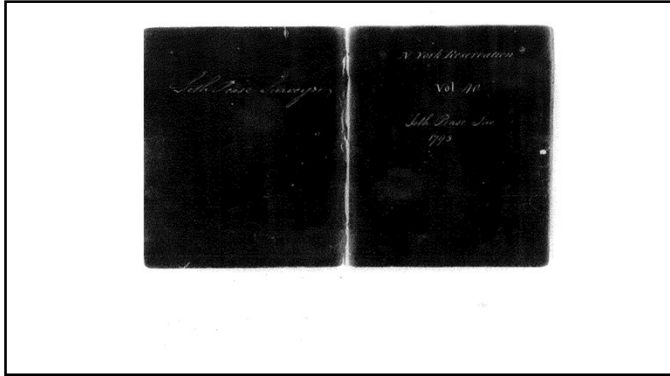
One more thing!

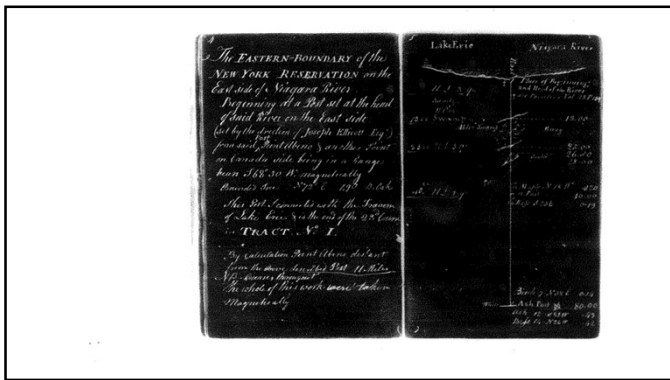
- On September 13, 1763 a large contingent of Natives, primarily Senecas, ambushed a British wagon train along the portage around Niagara Falls. The place where this occurred was later named Devil's Hole.
- Later (1768) the British took retribution on the Seneca' requiring them to relinquish all interest in a strip of land four miles wide, two miles on both sides of the Niagara Straight forever.
- As a result of the outcome of the Revolution, The State of New York held Sovern title to this land and later stipulated a one-mile reserve for development under the control of the state.

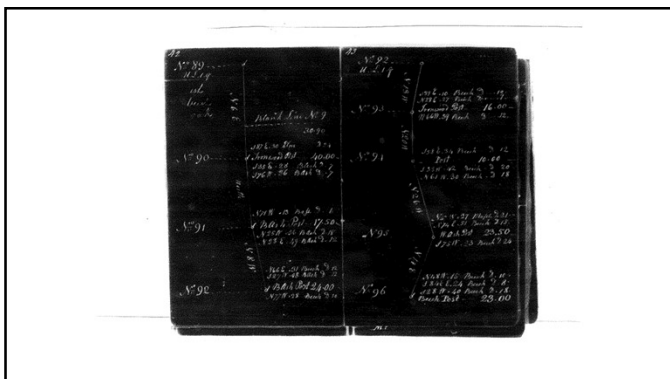


Excluded

- Therefor this strip of land, now known as the New York State Mile Reserve, must also be established before the true limit of the HLS could be known.
- In 1798, Seth Pease Surveyor calculated a line being one mile east of the top of bank of the Niagara Straight and after setting out a military reserve at Fort Niagara, laid out the line, ending at what is now Buffalo, NY
- Now the stage is set for the Great Survey

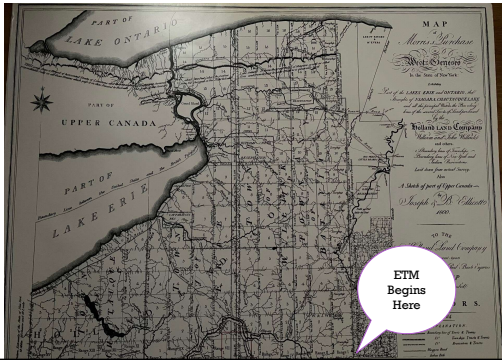




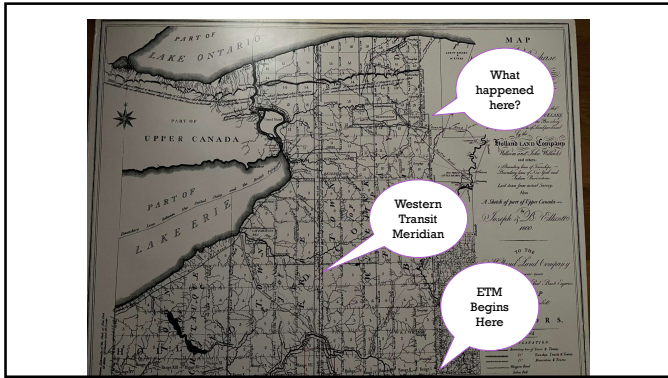


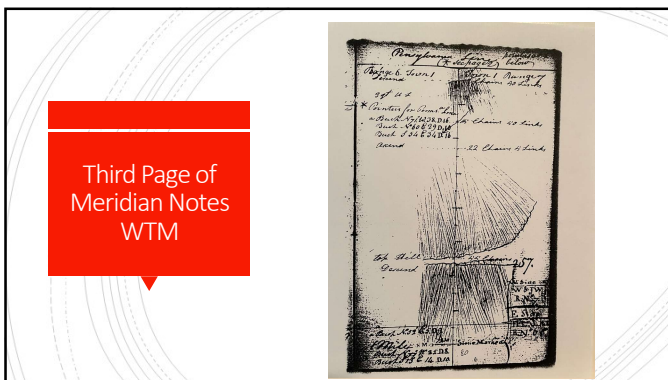
Logistics continued

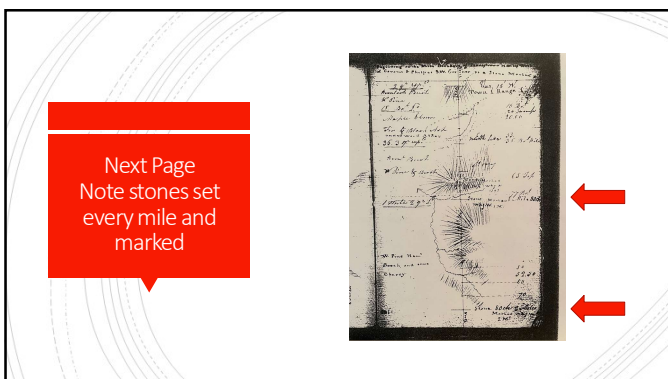
- The survey required 150 men, included two transit engineers; at least ten deputy surveyors, axmen, boatmen, store managers, cooks, messengers and others.
- Ellicott himself was paid \$8 per day. He had total charge and responsibility for the survey.
- The Eastern Transit Meridian was started on June 14, 1798. Benjamin led that effort and took an oath before the magistrate to "...perform his duty truly and faithfully"

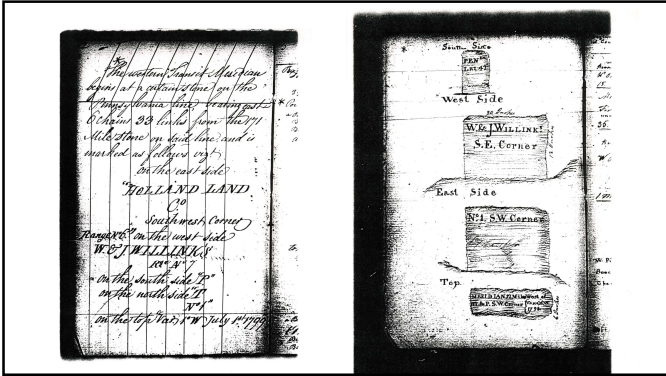










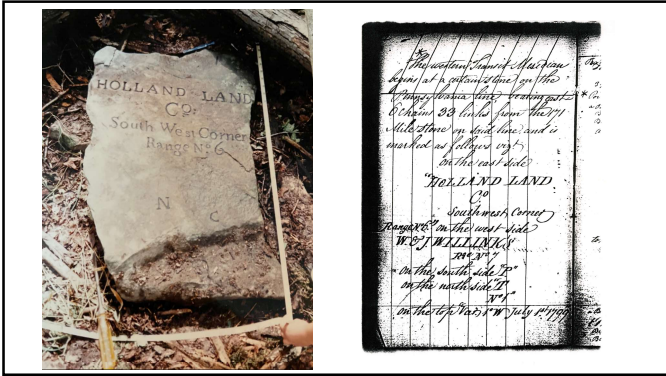


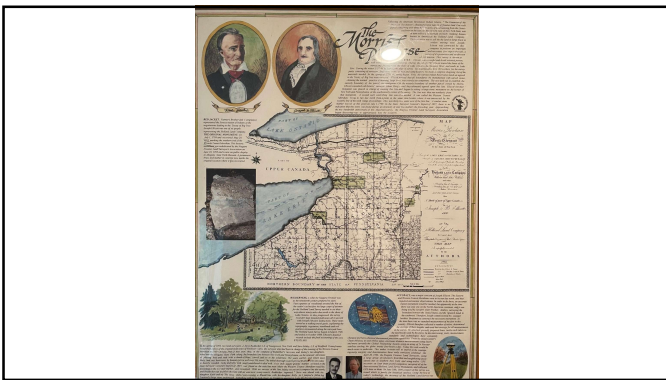
Tracing our
Forefather
Surveyors

- The WTM Starting stone was set July 1, 1799
- As 1999 approached, several members of NYSAPLS Niagara Frontier Regional took notice and in "After meeting" conferences (LOL) a few decided to celebrate the bicentennial.
- How to do that. We started an inventory from all members of original monuments that had been recovered and used through the years. Several were known. We updated the data bases with fresh recoveries.

Retracing

- The original stone at the south end of the WTM (Pennsylvania - New York State Line) was unknown.
- A NYS Engineers boundary commission report dated 1897, indicated the original stone was not recovered at that time.
- May 29, 1993 - The stone was found!
- Steve Boddecker and Steve Maley, both PLS - with their children went looking and after a difficult start, lo and behold there it was





Other stones along the TM were also found

- On the Eastern Transit Meridian original stones were found at the state border, One Mile, 22 Miles, 24 Miles, 29 Miles, 30 Miles.
- On the Western Transit Meridian the beginning stone was found disturbed; and stones were recovered at Miles 6, 45 and 48.
- On April 20, 1996, a large group of western NY land surveyors spent the day observing GPS observations on all recovered monumentation.

Comparisons
Along Eastern Transit Meridian
Measured from the origin stone

- To 1 Mile Stone
 - 1 mile - 4.06 feet
 - Az 359-57-55. indicates stone is 3.2 feet west of meridian
- To 22 Mile Stone
 - 22 miles - 86.38 feet
 - Az 0-00-00, DEAD ON!!!!
- To 24 Mile Stone
 - 24 miles - 61.50 feet
 - Az 359-59-57. indicates stone is 1.8 feet west of meridian
- To 29 Mile Stone
 - 29 miles + 53.6 feet
 - Az 359-59-36. indicates stone is 17.8 feet west of meridian
- To 30 Mile Stone
 - 30 miles + 63.17 feet
 - Az 359-59-36. indicates stone is 18.4 feet west of meridian

Analysis of Distance Measurements

- When we look at the excess footage in the lengths between mile stones on the WTM it appears a foot of mis-measurement was accumulated every 480 feet of planned distance.
- On the ETM this ratio increased to 1 in every 2,500 feet
- Quite a Difference!

Comparison Details


- There appears a significant difference in the precisions on the Western vs the Eastern Transit Meridians.
- The Eastern Transit Meridian was performed under the direct supervision of Joseph Ellicott's Brother Benjamin, with assistance from Augustus Porter, a very experienced surveyor.
- Benjamin took an oath of office to "perform that duty truly and faithfully."
- His notes state "...formed by astronomical observations, that began... on the 11th day of July with all possible care and exactitude, planting monuments of stone at the end of every 80 chains,"
- This line was the eastern boundary of the HLS and was seriously approached.

Comparison
Details

- The western Transit Meridian was surveyed under the direction of Ebenezer Carey, a surveyor from Connecticut on July 1, 1799.
- "Well here we go again" at the outset. Carey was to carry the survey to the 65 mile stone, then hand the balance over to another.
- Some of his crew had been through the ETM survey, the remembered the swamps, the mosquitos, and the long days of cutting their way through uninhabited woods under threat of attack from hostile Indians. They recalled backbreaking work, interrupted by scant sleep, poor food and sometimes water unfit to drink.
- The WTM was "interior" to the HLS, not an existing boundary, perhaps less care was taken.

Summary

- The Grand Survey began July 11, 1798 with the setting of the ETM Southerly stone on the PA line




Summary

- The Survey was completed in October 1800
- Total Cost was \$70,921.69 ¼
- 178 six-mile-square townships fully laid out
- Details of the surface of the land, soils, lumber, creeks, rivers, mill seats, etc fully established throughout the area

Summary

- In 1801 Joseph Ellicott was appointed as Resident Agent for the Holland Land Company and opened a sales office in Batavia New York



HOLLAND LAND OFFICE BATAVIA, NEW YORK

Summary

- In 1821 Joseph Resigned from his position. In his closing years he experienced mental health issues and was confined to an asylum.

Some Random Images

To close with



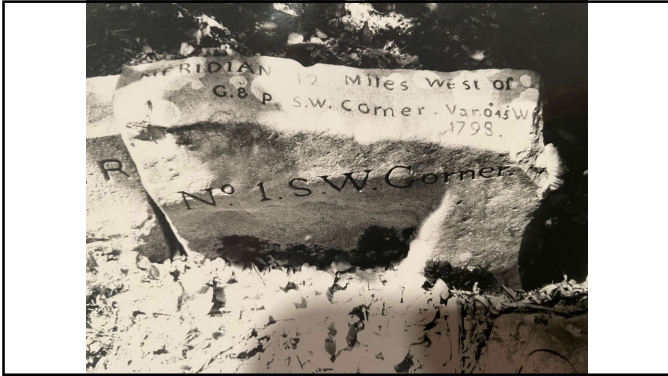














Questions and
Comments

Thank You for your interest.

