# THE FLORIDA SURVEYOR

September 2023 olume XXXI, Issue 8

## IN THIS ISSUE

Search for an Elusive Army Fort Spotlighting Florida Surveyors Half-Mile Posts Perspectives



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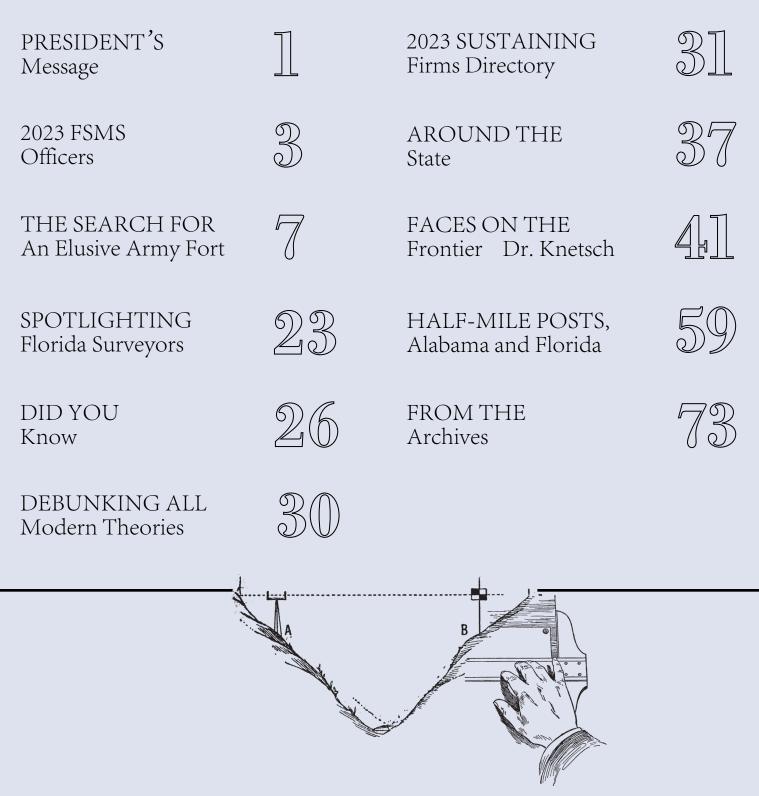
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# **PRESIDENT'S** Message

September 7<sup>th</sup>, 2023



If you've not read "Boundaries and Landmarks A Practical Manual" by A.C. Mulford, 1912. I recommend you do so.

He said "The training of the surveyor consists essentially in practice in turning angles, measuring lines, and getting over obstructions, to which are added rather meager suggestions on the compass and the re-running of old surveys. He is considered preeminently a measure of land. This is very true, and in certain localities and under certain conditions this may compose almost the entire work of the surveyor. But in the vast majority of cases the actual measuring of land forms the smaller portion of his duties.

His hardest work is often, to use a colloquial phrase, to '<u>find the land</u>' to be surveyed." ...

"For after all, when it comes to a question of the stability of property and the peace of the



President Howard Ehmke (561) 360-8883 Howard@GCYinc.com

community, it is far more important to have a some-what faulty measurement of the spot where the line truly exists that it is to have an extremely accurate measurement of the place where the line does not exist at all."

I think this is true today. We may have GPS equipment that is very accurate, but providing the correct location on the property is what we are charged with. We are fact finders, not advocates for the client.

Boundaries and Landmarks A Practical Manual by A.C. Mulford Link.

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| Strategic Planning Committee                    | Rick Pryce         |  |  |  |  |  |
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| Legislative Committee                           | Jack Breed         |  |  |  |  |  |
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| Practice  | Practice Sections  |  |  |  |  |  |
| Geospatial Users Group                          | Earl Soeder        |  |  |  |  |  |

As part of Olde Florida Maps, I'm taking a side trip to a part of my past.

I came across this in my archive of maps and thought it would be of interest as it fits right in with old surveys and old historical Maps. This particular adventure is what got me started in research and collection of Old Maps and the stories they can tell.



#### (Background)

Some of you may know that I spent many years (1985-2006) of my career as a consultant for and preparing surveys for the Seminole Tribe of Florida on all of their Florida Reservations.

While my first love was Surveying, I got into GIS early (1989) as something I saw as a way to document all of the Surveys into a database with history behind it. I helped the Tribe develop their first GIS system starting with using an old survey program called DigiCAD and then moving up to InfoCAD, then eventually ESRI ArcInfo v. 7.0 and mapping all of the Surveys I had done over the two decades into it.

The Tribe eventually got an in-house Surveyor and I stopped, but the Tribe continued to use me in as a consultant and help their in-house Surveyors. They also continued to develop further in GIS and now have active GIS staff. In fact, we have recently updated their GIS with survey accurate drainage on the Hollywood Reservation. That project included us acquiring for aerial Lidar (GPI & Pickett) on portions of Hollywood, Brighton, Big Cypress and Immokalee Reservations for drainage work there.

Over those 20+ years, I surveyed and mapped the reservation boundaries, the Tribes homesites, the initial surveys of the Big Cypress Airport, Billie Swamp Safari, and the Ah-Ta-Thi-Ki Museum. I also surveyed multiple governmental and commercial sites on all of the Hollywood, Big Cypress, Brighton, Immokalee, Fort Pierce reservations, as well as various sites across Florida they were buying up for pennies on the dollar after the collapse of the Savings and Loans. Other sites included the 2500-acre site in Yeehaw Junction they bought specifically for their Green Corn Dance celebration each year, and the Ted Smallwood Historical site on Chokoloskee Island.

That was the era when James Billie was Chairman of the Tribe, and they had their first windfall of income from their initial Bingo operations, before casinos. There were several Tribal members at that time with vision on how to expand their income and help develop the Reservations and assist all tribal members for the future. The rest is history for now, but it was a wild ride for me during that time period and a great experience.

During my time surveying for the Tribe, I did an extensive amount of research into the GLO, BLM, and the (BIA) Bureau of Indian Affairs, regarding surveying the reservation boundaries and the internal Sections. This is something that I will always relish as an integral part of my Survey life experience as it took me back in time during the research period, both in the office and in the field, and it got me into some very pristine areas of the wilderness and swamps on the reservations. Some areas had not seen a human in a very long time, if ever, so a surveyors dream job.

#### (1974 Expedition)

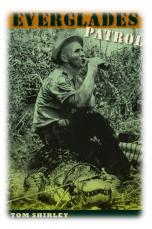
Getting back on track to Olde Surveys and why this story is relative. When reviewing notes from the GLO, I came across many interesting things of the past on the reservations. This one individual discovery took a particular interest for me because of an event in my early years of Surveying.

Not sure of the date, but around (1974-75) I was asked to participate by my then boss and mentor (John Z. Rowe) in an expedition and search for an old Army Fort from the Civil War days in the Everglades.

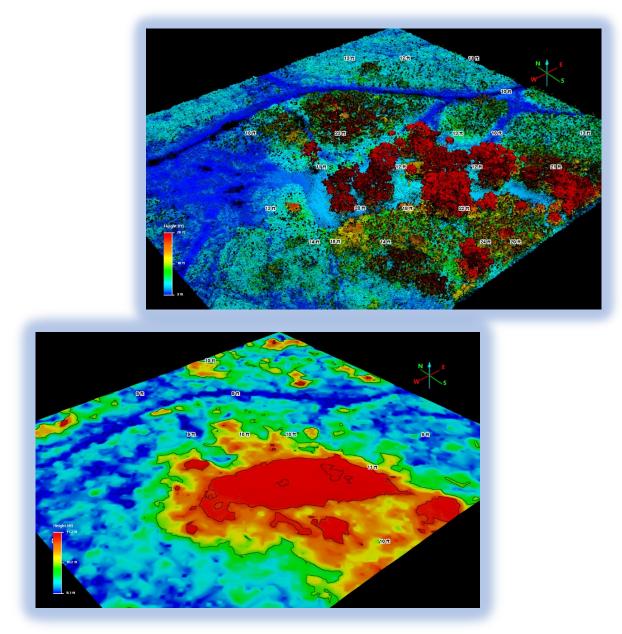
It seems there was a judge, who's relative from the Second & Third Seminole Wars time, found out about this particular Fort named after a distant relative, and he was on a quest to find its location.

Besides the Judge, accompanying him were several Archaeologists, and several prominent local Surveyors at the time that participated and were part of this group. There was (William {Bill} Keith, Tom Schnars, & Eugene {Gene} Stoner) and others such as Ronnie (Alligator Ron) Bergeron, Developer to name a few. We all met about 15 miles out on the north side of Alligator Alley, at that time it was still a two-lane highway. There were at least 6 airboats, and several full tracks waiting to go. For a rookie surveyor like me at the time this was a great adventure, and something that stuck in my mind for a long time. I had no idea what we were in for that day, but I was excited. After a brief meeting with the important people, we all headed North through the famous "Sea of Grass" for about ¾ of an hour to particular island that they had previously picked out as a likely place for the search, and all converged on that site.

I was surprised to see a two-story building out there hidden by the hardwoods and pond apples trees, and it turned out to be a Florida Fish and Wildlife Game Wardens base camp. The Game Warden that met us out there was none other than Tom Shirley. He was infamous in the area as a hardnose law enforcement officer that pulled no punches when patrolling by airboat or full track but as friendly as they come and full of stories of past escapades with poachers and alligators. He later wrote a book about his 30 years on the job, "Everglades Patrol".



Topography of Game Warden Base Camp (2018 Lidar View)(Lat. 26° 11' 03" Lon. 80°42' 40")



The archaeologist got us all in groups in different spots near several large Strangler Fig trees and we started digging and sifting through several layers of soil for the better part of the day. We found, animal bones, turtle shells, deer antlers, and some bear teeth, and a few bits of pottery, but nothing resembling an area occupied as a Fort. What we discovered was a camp site for the early native Americans (Tequesta) in the area, before the Seminoles. We all had a good time, even getting stuck in the sawgrass on the way back on top of a full track and having to radio one of the other full tracks to pull us out, quite the adventure for a rookie.



#### (1992 Discovery)

Fast forward..... 17 years, I was preparing to survey the Big Cypress Rodeo parcel lying along the main road through the reservation and gathering BIA data from the Tribe and Township surveys and notes from State Lands. Back then you had to call State Lands and talk to a very nice lady who would look up the notes and the maps and send them to you by mail. Sorry to say I don't remember her name, but she was incredible, knew everything about the old notes and plats, and just a pleasure to deal with.



Big Cypress Rodeo Parcel (Lat. 26° 18' 25" Lon. 80° 58' 11")

It took a couple of weeks before I got all of the puzzle pieces to start the work. I went through the BIA data first, which included old surveys and BIA roadway plans, and maps. I hadn't worked in this township yet so I reviewed the resurveys (1938-39 & 1975) of the reservation boundaries and notes first to see what section corners were set and make my plan of attack and field reconnaissance to see what was still there if any. Even though I had the original GLO surveys also, I hadn't looked at them yet.

When I had finished my initial recon, finding some 1939 monuments, I sat down to set up my next moves for the traverse because I didn't find the section corners in my section yet. I went back to reviewing BIA and BLM notes, only this time I went back further to the GLO notes. Reviewing the original township surveys from 1875 by M. A. Williams was interesting and since I had some 1940 aerials of the area, I drew out the approximate township lines on and the started doing the Sections. Trying to follow along the calls in the notes by M.A. Williams, looking for any patterns in the vegetation from the aerials checking for Section lines that might have been run previously on the reservation.

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As I was reading through the notes, I came across a passage and couldn't believe my eyes. There in the Notes they were referring the Fort I had looked for on that expedition back in 1974-75. When I went back to the Township map and looked, there it was, plain as day.

I then went back to the aerials and of course there was nothing but pasture now, but I finally had the location from an actual Government Surveyor in writing.

I notified the Tribe of this information as it was a part of their history, the Second Seminole war, hoping they would want to investigate further, but at that time it wasn't a priority to them so once again it was lost in time, but not forgotten.

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I've kept track of Fort Shackleford over the years and in 2009 Archaeologist Annette Snapp who was the Operations manager at the Ah-Tah-Thi-Ki Museum launched a search for it, Florida Frontiers "Searching for Fort Shackleford" | Florida Historical Society (myfloridahistory.org).

#### FLORIDA FRONTIERS Search continues for Seminole War fort

By Ben Brotemarkie FOR FLORIDA TODAY

Many Florida towns were built around Seminole War forts. Some, such as Fort Pierce, Fort Lauderdale and Fort Myers, retain their fort names.

Fort Shackleford was constructed in 1855 during the Third Seminole War. Archaeologists continue to search for its exact location.

Archaeologist Dr. Annette Snapp is operations manager for the Ah-Tah-Thi-Ki Seminole Indian Museum in Clewiston, and is leading the effort to find Fort Shackleford.

Snapp will give a free presentation at 7 p.m. Fridayfor the Florida Historical Society Archaeological Institute at the Brevard Museum of History and Natural Science, 2201 Michigan Ave. in Cocoa.

Seminole Indians moved to Florida in the



Dr. Annette Snapp leads an archaeology field school for Florida Gulf Coast University students in 2009 at the possible site of Fort Shackleford, built in 1855 during the Third Seminole War.

#### ABOUT THE AUTHOR

Dr. Ben Brotemarkle is executive director of the Florida Historical Society and host of the



locally on 90.7 WMFE Thursday evenings at 6:30 p.m. and Sunday afternoons at 4 p.m., and on 89.5 WFIT Sunday mornings at 7 a.m. The show can be heard online at myflo ridahistory.org.

who built it," Snapp said, "so we have at least a general idea of where they're located." Archaeologists have

Archaeologists have collected 260 artifacts from various time periods on the possible site of Fort

I don't think they have found or proved its actual location yet, but they are close. I really think they need a **Surveyor** to mark the search location, and I keep hoping I can eventually finalize my adventure.

You just never know when this job we call Surveying will surprise you. And every map, every survey has a story behind it. It could be as simple as a lot and block survey with a dog chasing you over a fence, or something more substantial like blazing a trail through a swamp or Palmettos and listening for rattlesnakes. Researching old records and walking through history by the words written by some long-ago surveyor/adventurer, following their path.

Or ...... It could be your own adventure that leads to a lifelong expedition of discovery that keeps you continuously searching for that elusive "Fort" or "Section Corner" from the past ..... and draws you into something that keeps your interest and mind wandering.

Great Profession ...... Love what you do and you'll never work a day in your life.

Rick Pryce, RLS/PSM

More history on Florida Forts: Florida's Forts | American Battlefield Trust (battlefields.org)

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1873 Colton New Township Map (Fort Shackleford)

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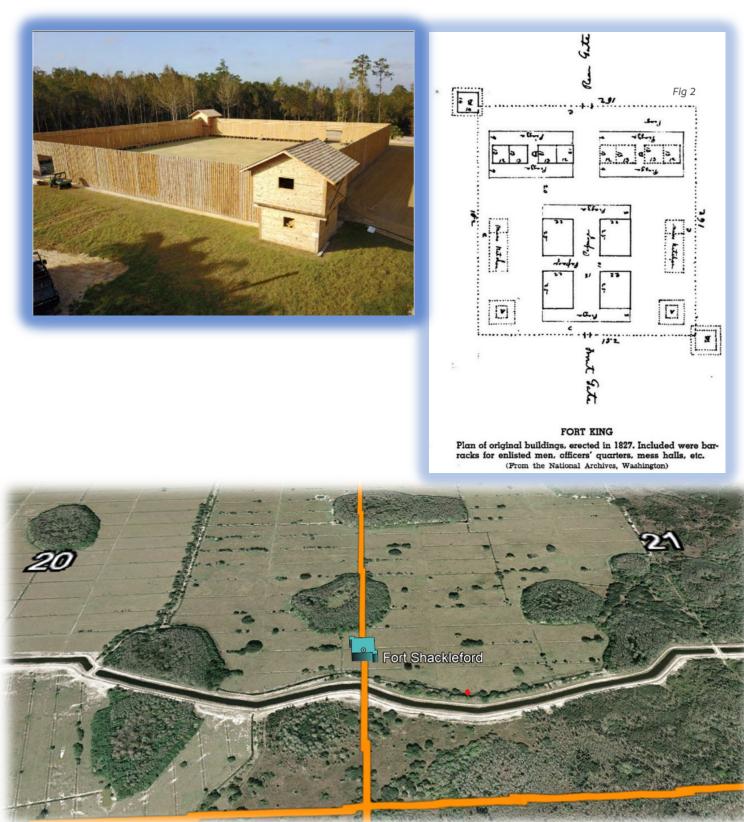


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Example Fort layout "Fort King" 1823 in Ocala from National Archives





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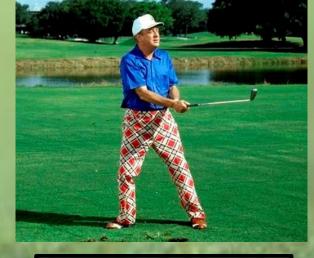
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Spotlighting Florida





John N. "Jack" Breed PLS# 4089

John N. "Jack" Breed Florida Professional Land Surveyor #4089 August 28, 2023

was born November 17, 1959, in Avon Park, Florida, into a long-time Sebring family. As the grandfather of two sixth-generation Floridians, I am passionate about my home state, and its wonderful institutions, like the Florida Surveying and Mapping Society, and the University of Florida! I'm a proud Blue Streak from Sebring High School Class of '78 and a proud Gator with a Bachelors Degree in Land Surveying, UF Class of '82. I passed my professional licensure test in 1984, and my career tree has only one branch, CivilSurv Design Group, Inc., my employer (semi retired). CivilSurv, is the successor of firms that originated in 1980, when the great Bill Keith (Keith and Schnars, P.A.) opened a Lakeland

Florida office "Imperial Engineering Services". For the past 14 years, I have also served as a part-time instructor in the Geomatics Program at UF.

My Christian Faith defines me, my life, family, business, and friends. I am the great-grandson of a Presbyterian Missionary to the "Indian Territories" (now the Dakotas), who moved to Sebring in the early 19th century. I am a fourthgeneration Presbyterian Elder, Adult Bible Fellowship instructor, Sunday School Teacher, and co-founder of a Classical Christian School. Our Sebring Office shares space with my brother's Law Firm and he has lovingly restored and maintained our family home in downtown Sebring that Robert Telford (great grandfather) began construction in 1920 and occupied in 1921 with his daughter Charlotte Post (grandmother) who had just graduated from Stetson University (in the Breed family, the ladies all went to Stetson and the men all went to UF).



In a new season in life, I am enjoying part-time consulting, part-time teaching, and full-time grandkids/fishing/hunting/ GatorSports/travel with my wonderful bride, Sandy. I was blessed to have shared 32 years with my deceased wife, and have been doubly blessed to now be with the amazing Sandy! My family legacy lives on in my sons Jacob Wayne Breed (CivilSurv!) and Luke Townshend Breed (US Naval Submariner), and my magnificent 10-year old grandson, Case Wayne Breed (future MLB star), and my lovely granddaughter Maggie Breed (2 years old). I was weaned on Gator Sports and have been a season ticket holder to *The Swamp* since 1983. I'm the leader of a rowdy group of Tail-Gators, on campus for every home football game. I love to travel with the Gators and

have been in almost every SEC stadium! Needless to say, I bleed Florida Orange and Blue, and tail gating for years developed into being the "Chief Rib Officer" of *The Grove In The Swamp BBQ Team*. I am blessed with a huge circle of friends, and my service and activities within FSMS have given me relationships with great Surveyors all over Florida.

So, that completes my biography. When Justin Ortiz called me from FSMS, I had the shock of realizing they were asking for interviews with "OLD SURVEYORS" to share their past, and I guess I'm now one of the old farts. Justin posed a series of questions, and I'll do my best to answer them:

In high school, I enjoyed courses in Mechanical Drawing and thought it would lead into Engineering. In the summer of 1978, Roger Miller PE/PLS hired

Jack Breed and John Clyatt at the University of Florida.

me to draft sewer plan/profiles for land development (pencil on vellum). Often, the field surveyors needed an extra hand, so they sent the "drafting kid" out to help on the crews. That was the spark for me, and I entered UF that fall with the goal of a Survey degree. My in-school internships were with Dale Thomas, PLS of Sebring, and while in Gainesville, I worked for Robert Wigglesworth, PLS and had my first "career" job with him in 1982. In 1984 the legendary Bill Keith (yep, Dodie's





Daddy) came calling, and I've never had another job.

I truly love this profession and think that Surveyors are the highest evolution of the species! If I had to do it all over again, I'd pick Surveying and Mapping. I love the history of title and ownership, retracement work, and boundary surveys. Most of my career's 'big jobs' have been infrastructure and I absolutely love working with a design team and being more than just the data source, but being an integral part of the actual facility being designed.

Final thought... wow.... howzabout

the technology we've got today? It's amazing how much data we can capture, especially when I think about transit and tape jobs we did in the summers of the late 70's. One warning to all of you young PSM's: don't let this amazing technology turn you into POINT Surveyors and remember that the art of boundary work requires you to be LINE Surveyors. Beat the bounds. Walk the lines. Gather ALL the evidence.

Gators. BayBee!

Soli Deo Gloria



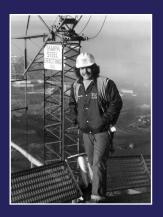
DID YOU KNOW?

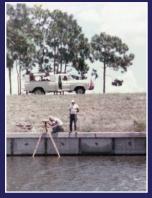
More than 1,500 people died when the Titanic struck an iceberg during its voyage from Southhampton to New York. The first full-sized digital scan of the Titanic, which lies 3,800m (12,500ft) down in the

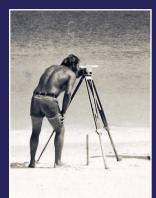
Atlantic, has been created using deep-sea mapping. It provides a unique 3D view of the entire ship, enabling it to be seen as if the water has been drained away.

The scan was carried out in summer 2022 by Magellan Ltd, a deep-sea mapping company, and Atlantic Productions, who are making a documentary about the project.

Source













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FSMS is a professional membership society representing the Surveying & Mapping Profession, including: Photogrammetry, Imagery, Remote Sensing, Base Mapping, GIS/LIS, Cartography, Geodesy, Geomatics, GPS, Geographic Information and Geospatial Data.

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11

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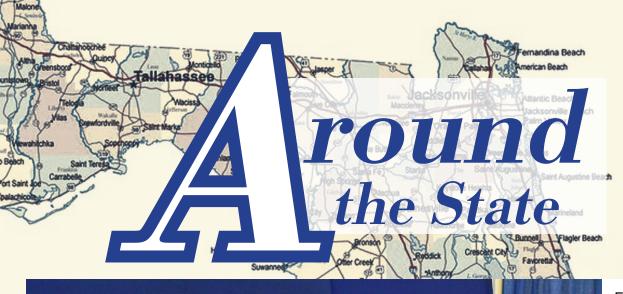
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From Left to Right: Executive Director Rebecca Porter standing alongside Education Director Sam Hobbs with Past President Lou Campanile, Jr. at the 2023 FIG Conference.

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# Bon A. Dewitt

University of Florida Associate Director for Geomatics

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Associate Director for Geomatics at the University of Florida & Treasurer for FSMS, Dr. Bon A. Dewitt presenting at the 2023 FIG Conference.

Key Largo



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STALIT'

Thank You to Mr. Tom Whidden of Whidden Surveying and Mapping for these incredible photos from the field.

For those new to Florida, According to FWC, "Burmese pythons are not native to Florida and are considered an invasive species due to their impacts to native wildlife. Like all nonnative reptile species, Burmese pythons are not protected in Florida except by anti-cruelty law and can be humanely killed on private property with landowner permission."

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## FACES ON THE FRONTIER

## FLORIDA SURVEYORS AND DEVELOPERS IN THE 19TH CENTURY

## by Dr. Joe Knetsch

## INTRODUCTION

Few textbooks tell the story of the men who brought order to the frontiers of America. By order we mean to measure the land into sections, townships, ranges, blocks and lots. Before anyone can obtain clear title to the land, it must first be surveyed and given distinction so one person can tell his/her property from another's. The men who performed this task were often the very first non-native Americans to see the land in its natural state. The descriptions they have left us, in the form of field notes and plat maps, are the closest we can get to a true picture of the physical frontier. Yet, their story is almost forgotten in the textbooks, official histories and biographies of those who have benefited most from their work, all of us.

It is not difficult to imagine some of the territory of Florida in its primitive state, one has only to look at the wild beauty of the Everglades National Park. But most of Florida was not everglades, but a widely varied land of rolling pine covered hills, with "blackjack" oaks and other hardwood trees sprinkled among them. Some of the land was covered with prairielike grasses that frequently burned in the lightening charged air of middle and southern Florida. Still other portions of the territory were covered with cypress swamp and thick "baygalls", as the wet, entangled titi and wax myrtle scrub of the low lying areas were often called by the early settlers. All of these types of environments are described in the field notes of the U. S. Deputy Surveyors and all of them were surveyed by these very same men.

To survey the land means to mark it out in an organized pattern, such as sections, townships and ranges. Florida, like all public lands states, is divided up into such a pattern. First, a "prime meridian" (north to south) line is marked out. In Florida this line runs from the Gulf of Mexico, near St. Marks to the Georgia border and runs through the capitol of Tallahassee following the line of Meridian Street. A second line is run, called the basis parallel line, and it goes from Tallahassee east to near the southern end of Little Talbot Island, in Duval County, and westerly from Tallahassee to the Perdido River, the boundary between Florida and Alabama. Because of the great amount of water in Choctawhatchee Bay and St. Andrews Bay, there is a "jog" in the line running west. The basis parallel and the prime meridian lines intersect in Tallahassee (the spot is marked by a monument).

From this intersection point, all surveys of Florida begin. Lines running parallel to the basis parallel line are referred to as "township lines" and those paralleling the prime meridian line are called "range lines". The unit called a township is a square of 6 miles and this square is divided into 36 sections. This system was developed, in its early stages, by Thomas Jefferson and refined by the Land Ordinance of 1785. It is officially called the "rectangular system" of surveying.

Aside from the need to have an organized system of land measurement, the surveys served another very important function. They told potential settlers exactly what the land was like in a given township. Just how important is this information? Say a settler from New England, used to growing com, potatoes and pumpkins wants to come to Florida, where all three crops can grow, but only in specific areas. The New Englander would not want to move his family and belongings to an area of high, sandy hills where these crops will probably fail and leave the family without food. Therefore, by consulting the field notes at the local land office, these potential settlers will find the area of Florida where the crops they wish to grow will prosper.

To plot out this land and give the information to the potential settler was the major job of the surveyors. This meant, as noted before, that these men were often the first non-Native Americans to see the lands of Florida in their wild state. Spanish and English explorers did c9ver much of the state, however, they did not leave enough accurate information behind to be useful and the settlements they founded, like St. Augustine and Pensacola, were small and often isolated from the mainstream of colonial activity. This left the task of accurate description to the United States Deputy Surveyors, under the leadership of the Surveyor General for Florida. The job was not easy and full of danger.

## Faces on the Frontier

When Florida was acquired from Spain, in 1821, it was not well mapped and virtually unknown in the interior. The first Surveyor General, a former ward of Andrew Jackson, Robert Butler, somewhat miscalculated the time needed to survey the first lands to be opened for settlement. He and his deputies were delayed by heavy rains, mixed and confusing instructions from the General Land Office in Washington D. C. and the difficult nature of the lands in northern Florida. Additionally, the surveying season, because of the Jack of medical knowledge, was limited to four to six months of the year, or only during the d1y months. It was believed that dangerous and fatal "miasma" rose from the lands during the rainy season and no one would work during this period. This was also believed by the United States Anny, which campaigned against the Seminoles, Miccosukees, Creeks and others during the "healthy" season, or dry time. Thus, when Colonel Butler, as he was known to most, said he would have his men finish 130 townships in one year, he was off by a large margin. Not until the surveying season of 1824-26 did the speed of surveying pick up and larger quantities of lands sold to the public.

Surveying in the early years of Florida was very difficult. The surveyors and their crews had to face numerous hardships. Many men died from disease during the first few years, most notably the crews who surveyed in the area of Pensacola and the Escambia River basin, who contracted the dreaded "yellow fever" in the 1820s and early 1830s. One surveyor, Benjamin Clements, an old friend of and soldier under Andrew Jackson, lost his son, Hosea, and one other crew member to the fever and four others had to be hospitalized for an extended period. Malaria, dysentery and various forms of intestinal diseases afflicted the early crews of the surveyors. The terrain, too, was often rugged and a severe test of the stamina of these pioneer surveyors. Swamps, bogs and Florida's numerous water bodies provided difficult challenges to these frontiersmen. Few were prepared for tackling the twisted and knotted cypress swamps, particularly the great "Green Swamp" of central Florida, headwaters of four major river systems. The tidal marshes, also, gave surveyors a great deal of difficulty. Trampling through the swamps in Florida's cool winter months was not a pleasurable task.

The great variety of pests, known to all as insects, also plagued the surveyors, many of whom had never seen mosquitoes so large or sand fleas so hungry as those in Florida. Snakebites were common for the surveyors and, although seldom fatal to most victims, they did make many very ill for three to five days. As with any profession requiring physical labor, accidents happened that laid up surveyors or members of their crews for many days. Simple exhaustion often delayed surveys, because the surveyors had to work in all types of weather to cut (mark) lines, take measurements and literally make roads (paths) to get to their work. Poor planning often delayed the work for weeks at a time. One should never forget that the surveyor in the field had to provide the food and tools for the crew, plan the work so as to keep everyone productive as long as possible, buy the horses or mules and the wagons to haul the materials and food, pay for the instruments used to measure the land and, finally, pay everyone of the workers on his crew. This meant that the surveyors had to have money or people willing to pay expenses (bondsmen) and be willing to wait, sometimes as much as two years.

No Deputy Surveyor was ever killed in the line of duty by Florida's Indian population. This does not mean that confrontation did not occur. John Jackson, a deputy surveyor from Tampa, had some memorable encounters with Indians, including one where his campman/cook, an African-American, was told twice to leave the territory under pain of death and the poor man was, in Jackson's words, "nearly frightened out of his wits." On another occasion, the Indians "fired the prairie" behind the surveyors forcing them to leave the vicinity. Upon waking up one early morning in 1855, surveyor W. S. Harris found his horses missing. He spent four days trying to find them and when he did eventually locate his horses, they were hobbled, Indian style, in the Kissimmee prairie. Yet, even when the surveyors were being used by the government to edge the Indians out of Florida by surveying the "neutral ground" of 1842, the Seminoles and Miccosukees did not attack the crews, even though they had every opportunity to do so. The surveyors were not well armed, the U.S. Army was and for the Indian peoples, that was the major difference.

Of all the problems faced by the surveyors on the Florida frontier, loneliness was one of the worst. Thoughts of loved ones, family and friends often filled the letters of the surveyors. It could be weeks or months before a surveyor in the field would or could receive or send a letter to his family and friends back home. Since many of the surveyors were leaders of their respective communities, being out of touch with what was going on added

## Faces on the Frontier

to the pangs of loneliness. In the late 1840s, surveyor Henry Wells, noted for his dry humor, wrote to the register of state lands, John Beard, a political and social friend: "I wish you would file away the list among my papers in the land office provided you are still the incumbent, if not, please hand or send it to that functionary ... I have not heard from the white settlements for a long time. Anything from any body would be truly acceptable." The isolation a surveyor felt in the wilds of the territory of Florida was strong and is expressed often in their correspondence with other officials.

As leaders of their local communities, the Florida surveyors stand out as a group. The examples of their leadership abound. Dr. John Westcott, for example, served in two constitutional conventions, was the president of a railroad, became noted as the "Father of the Intracoastal Canal" and served in the State's first legislative session, where he helped to shape today's educational system. Captain Samuel E. Hope was the founder of the community of Anclote, which later became part of today's Tarpon Springs. He also served in three legislatures and two constitutional conventions. Captain Hope served in the Third Seminole War and was elected captain of his unit during the Civil War. Major Romeo Lewis had the distinction of serving as sheriff of both Leon and Jackson Counties during his lifetime. Surveyor General Benjamin Putnam was one of the most respected military men and judges during Florida's years as a territory and early in its statehood. Putnam County is named for this distinguished gentleman. Finally, Governor Albert W. Gilchrist, of Punta Gorda, began his professional life as a surveyor for the railroad and for the United States. It should also be noted that these men followed in a long tradition of surveyors as leaders of their communities, states and the nation. George Washington, Thomas Jefferson and Abraham Lincoln were all surveyors at some point in their lives.

Frontier surveyors were generally well-educated individuals. Their training, as a group, stands out in the very accuracy of their work. True, there were some who did not fulfill their functions properly, however, the majority of these pioneer surveyors showed that a good foundation in mathematical education paid dividends to the society that followed their lines. To this day, the survey lines of a Henry Washington, an A. M. Randolph or a Benjamin Whitner Jr., are so good, given the crudeness of their instruments, that modern surveyors can often follow them to the exact point of departure and ending with little difficulty. Each of these men, and their numerous colleagues, had good educations and a firm understanding of the principles of surveying.

Henry Washington was the nephew of General William Washington of Virginia and later South Carolina, and related, though vaguely, to that other surveying Washington, George. His immediate background is unknown, however, he was reared in the traditions of the genteel South and this often included some military training, which, in the early years of this nation, meant a good grounding in mathematics. He gained valuable experience in his early career in the agricultural fields of what is today's Mississippi and Alabama, where he worked out of the Washington, Mississippi, office of Surveyor General John Coffee. His work was highly thought of by his colleagues and nine of these gentlemen signed a joint letter of endorsement when he applied for his first surveying position in Florida. One letter of endorsement, from Levin Wailes, an early leader in Mississippi, named the character of Washington, "Without disparaging other Surveyors it is but an Act of justice due to Mr. Washington to state that his returns have been among those which have merited the highest approbation for their accuracy & perspecuity. Indeed he never seemed satisfied with himself but when he has made practice approach theory the nearest of which it is susceptible."

Henry Washington strived for perfection in a profession where it was, and still is, difficult. He worked in the wilderness areas of Mississippi, Alabama, Florida, Louisiana and California with imperfect instruments and tremendous hazards. He braved the heat of the Florida and Louisiana swamps and the cold of the California mountains to plot lines that became the basis for the property of millions of people. And in Florida, he succeeded in an arena fraught with the difficulties of political actions, especially in the survey of the "Great Arredondo Grant." Nearly every surveyor who has ever followed the landlines he established, however, recognizes his achievements. As the historian of the Bureau of Land Management put it in Surveys and Surveyors of the Public Domain: 1785-1975, "Everywhere that surveyors have retraced his lines, whether in Florida swamp or California desert, their conclusions have been unanimous: Henry Washington was one of the best [surveyors]."

Two of Washington's colleagues in the field were medical doctors, Arthur

## Faces on the Frontier

Morey Randolph and John Westcott. A. M. Randolph came to Florida at a young age and was sent off to school at the University of Pennsylvania for training in the medical profession, which, in those days, involved experimenting with measurements of the human anatomy to help diagnose diseases of the body. Arthur, according to family lore, had studied some engineering prior to his attending the famed medical school. Upon his return to Florida, he went into partnership with his brother, the well-known physician James Randolph. Tallahassee, which was not big enough to support two physicians, failed to offer Arthur the opportunities he needed to support himself and his bride, the daughter of Governor William Pope Duval. He, therefore, took up surveying and began a career that included surveying millions of acres of the State of Florida. Indeed, probably no other man surveyed as much land or for so many reasons than A. M. Randolph. His success as a surveyor soon allowed him to set up his own plantation on the outskirts of Tallahassee on the old mission site of San Luis where he built a steam-driven cotton gin and a hydraulic ram to pump water for the plantation's fields and gardens. Like Henry Washington, Randolph also surveyed many of the remaining Spanish land grants in Florida, a difficult task because many were never surveyed by the Spanish. In these special surveys, A. M. Randolph had to convert many of the Spanish measurements into their contemporary American equivalents, a task which presented many difficulties because of the many variations in the Spanish measurements. His surveys of these grants, with one notable exception, remain the standard in many areas is testimony to his attention to mathematical detail in the conversions and the actual measurements.

But Arthur Randolph was not only a surveyor of grants and township lines. His surveying experience carried him into the realm of numerous specialized surveys and unique requests upon his talents and judgment. In particular, A. M. Randolph, with Henry Wells, another good Florida surveyor, was chosen by the governor to become the first selector of lands under the Swamp and Overflowed Land Act of 1850, the most important land act passed concerning Florida and the largest single grant of land to any state in our nation's history. This act brought over 20,000,000 acres of land under state control. The first selections were crucial in determining the future growth of the state. He also was one of the team of surveyors chosen to select the first "Internal Improvement" lands, by which the state of Florida received 500,000 acres of land, the sale of which was to promote railroads and canals. Randolph's career involved him in the Seminary lands selection and surveying lands permitted under the Armed Occupation Act of 1842. Because of his established reputation for accuracy and tenacity, A. M. Randolph was constantly trusted with the difficult jobs, which sometimes put him at the wrong end of a gun barrel, such as when the citizens of Alligator (today's Lake City) refused to let him survey the "Little Arrendondo Grant" for fear of losing their homesteads. In this famous case, discretion was the better part of valor and Randolph did not survey the grant, thus saving the lives of his crew and, maybe, many more individuals as well. In each of these special survey cases, Randolph's judgment was heavily relied upon to bring each to its proper close. It is always to be remembered in studying early surveying, that much was left to the discretion of the early surveyors. If their judgment was in any way faulty or erratic, their work could not and cannot be relied upon. The career of Arthur M. Randolph demonstrates that his judgment was sound in almost every instance, a true measure of his character and reliability.

The other physician in the ranks of Florida's early surveyors was Dr. John Westcott, the younger brother of Senator James D. Westcott. Like his colleague, Arthur Randolph, Westcott's hometown, Madison, was too small for two doctors. Dr. Westcott, after service in the Second Seminole War, began to cast around for another career and decided to use his natural inclination for mathematics in the profession of surveying. Westcott is known among today's surveyors for his meticulous work in the field. His sense of duty to the profession also made him one of the very few surveyors in Florida history to follow all directions given in the Manual of Instructions as closely as the terrain permitted. If the directions called for him to meander a twenty-five acre lake in the middle of a section and tie his meander posts into the nearest quarterquarter post, he did so to the best of his ability. When he became Surveyor General of Florida in late 1853, he demanded the same of those surveyors who worked under him. To make sure that his and the General Land Office instructions were being carried out in the field, he frequently went on personal field inspections of the work in progress and, when this was not possible, he hired competent surveyors to check the work of their colleagues, thus insuring the greatest possible accuracy in any work approved during his tenure.

John Westcott was more than a Deputy Surveyor or, even, a Surveyor General. He was an inventor and innovator of the highest order. In all cases,

## Faces on the Frontier

his mathematical instincts and education played an important role. In Madison, he built one of the first steam sawmills to operate in that region. In the early 1870s he worked on an invention that was displayed for the world to see in the Centennial Exposition, a "saddle-bag railroad" line. The main feature of this invention was a single track with a shoe-like device propelled along in front of an engine driven by wheel-traction with the shoe inside of the track instead of straddling it like a railway car's wheels. This, as some will recognize, is a prototype of today's monorail. (He even established a company to test this out in Florida, but he attempted to build it on the ground between Orange Lake and the Ocklawaha River where the loose sand created too much friction for it to work.) However, even though his inventions failed to bring him fame or fortune, he did begin two ventures that paid huge dividends for the citizens of Florida. The first was the organization of the St. Johns Railroad, from Tocoi to St. Augustine, the first successful attempt to link the St. Johns River to the Ancient City. This line later, after the War Between the States, became part of the Flagler system of railroad lines. The second venture was the organization of the Florida Coast Line Canal and Transportation Company, the forerunner to the Intracoastal Canal. In each case, the initial lines of the routes was surveyed and plotted by Westcott himself. He was nearly eighty years of age when he ran the last of the route for the coastline canal.

Westcott's remarkable career also included a stint in the first Florida legislature, where he pushed his now famous plan for education in Florida. In this plan he stated a basic truism for all to remember, "Education is to the Republican body politic, what vital air is to the natural body; necessary to its very existence, without which it would sicken, droop, and die." He advocated a system of public libraries too which would be open to all in society and contain books, "chiefly works on morals, natural philosophy (mathematics), Natural history, Geography, Agriculture, Astronomy, History, and Biology, Chemistry & Physiology, and Political Economy." His emphasis, as can be seen from this list of general works, was placed upon those sciences that are rooted in the study of mathematics. Westcott, like all surveyors, realized the very essential nature of mathematics to the fullness of human life and labor.

Not every surveyor, however, was to be taken so seriously as Washington, Randolph or Westcott. Not that these gentlemen did not display appropriate humor in the proper circumstances, but there was one fellow surveyor among them who, for sheer volume, audacity and bombast stands out in the records of Florida surveying. His name was John Irwin. In the letters of "Bombastic John," my nickname for this readily readable gentleman, are found some of the most unique phraseology found in the history of surveying. "In his own words" is the best way to appreciate the linguistic ramblings of this peripatetic purveyor of verbosity:

Sir: It is with mingled emotions of pleasure and pain that I respond to your brief but very welcome letter of the 12<sup>th</sup> ult. for I am mortified and depressed at my egregious oversight in not signing the hasty letter I wrote you on the 16<sup>th</sup> of last October. At the time of writing it, the man who was to take it to Marianna was impatiently waiting for it, while at the same time the men were importuning me, and clamouring for money, shoes and clothes, of which they stood extremely in want: for they were not only in a state of nudity, as their garments of many colours, and many patches, were almost all frittered away among the tie-tie scrubs, cypress swamps, bushes, and briars, of the Choctawhatchee Peninsula: but they also could display more scars and scratches than any of the war worn soldiers of the renown Napoleon. This no doubt contributed to confuse me, and commit the unconscious error; besides, after I had rehearsed the letter I concluded not to send it on account of its many faults. And yes, I had no other paper to copy it, nor any other opportunity of sending it to the Post Office and for the necessaries we stood in need of at the same time. But perhaps the best palliation I can offer is to plead guilty to the <u>Irish</u> blunder and to ask forgiveness of an indulgent friend; and to promise with Divine assistance to be guiltless of the like in the future.

As I always sympathized in your trials, and rejoiced in your triumphs ever since I had the honour and happiness of your first acquaintance it would seem almost supererogatory to say that I experienced similar sensations at the perusal of the statement of your health in your last letter. For the sensitive mind of the grateful recipient like every other thing very elastic when relieved of its burden rebounds with increased vigour even beyond its wonted equanimity at the prosperity and welfare of a good friend and benefactor.

And this letter goes on for an additional three pages in similar fashion. On

## Faces on the Frontier

the last page, however, indicates, albeit rather fawningly, that even in the wilds of the Choctawhatchee swamps he could not forget that his basic task was a mathematical one:

I flatter myself that you will be pleased with the methods I pursue in ascertaining the width of the creeks, rivers, &c., Allow me to give you 1 or 2 specimens briefly; in running West I come to the bank of the river, I retrograde 43 lks through choice, and sight to an object due West; then I again take S. 30 W. as another sight, and go on this course until such time as the object on the opposite bank bears N. 30 W. which is the distance of 5.97 chs. hence I have per 32nd 1st b. Euclid, 3 angles and 1 side of an equilateral triangle viz. 60 & 5.97 chs. therefore 5.97 - .43 = 5.54 chs. the exact width of the river in this place.

His second example, not to be given here, involved the angles and one side of an isosceles triangle. In the deep woods of west Florida, a surveyor spends his evening by the campfire writing the surveyor general of the harsh conditions of work and still includes his basic math lesson for the day, as if the surveyor general needed one so late in the day.

Bombastic John Irwin is fun to read and entertaining to describe. However, the lesson here is that, even though it sounds silly to the modern ear to hear of a surveyor describing basic mathematics to the surveyor general, the need to reassure himself of these basic principles of mathematics was important to John Irwin. He felt the need to let his superior know that he knew exactly what he was doing in running his lines and thus give his superior confidence in his work product. What better way to express this need and prove the point than to run through the lesson, citing Euclid's theorem, book and verse?

In all of the above examples of early Florida surveyors, the theme has been their reliance on mathematics, education and self-motivation. Each man was meticulous in his work and accurate for his day and time. The hardships, indicated here only by Irwin's letter, danger, and harshness of the climate are only to be added to give us an idea of the immense struggle each undertook to give us the basic lines with which to establish our property and perfect our inheritance.



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In establishing the boundaries of private and public property throughout the state, the surveyors of Florida's frontier performed an invaluable and necessary function. All land titles in the state depend upon the surveys of these early pioneers, which means that all titles to land in Florida can be traced back to the original work performed by these remarkable, yet often forgotten, men. To bring what Europeans called civilization to the frontier required that the land be parceled out to individual owners who would make the land productive of crops needed by everyone to live. The rectangular surveying system, founded upon Jefferson's work and developed by the United States government, made sure that the land was correctly surveyed and marked out for the benefit of individual owners.

Without the surveys, performed under hazardous conditions and in the unmarked swamps of early Florida, our world would be much different and more confusing place in which to live.

Joe Knetsch, PhD

Next Week ...

## CHAPTER 1

## A BRIEF LIFE OF ROBERT BUTLER: SURVEYOR GENERAL OF FLORIDA

Joe Knetsch has published over 170 articles and given over 130 papers on the history of Florida. He is the author of *Florida's Seminole Wars: 1817-1858* and he has edited two additional books. *Faces on the Frontier: Florida Surveyors and Developers in 19th Century Florida* is a history of the evolution of surveying public lands in Florida and traces the problems associated with any new frontier through the personalities of the majort historical figures of the period. As the historian for the Division of State Lands, Florida Department of Environmental Protection, he is often called to give expert witness testimony involving land titles and navigable waterways issues.

## COLLIER-LEE CHAPTER FLORIDA SURVEYING & MAPPING SOCIETY

# 3RD ANNUAL

SATURDAY - NOVEMBER 11, 2023

## Bermont Shooting Club

40571 Bermont Rd Punta Gorda, FL 33982

## 50 Bird Tournament

8:00 AM Registration 9:00 AM Start

Must arrive by 8:30 AM for a mandatory safety lesson

Lunch and awards ceremony after the tournament

## Challenges /Raffles / Prizes

- Prizes for **1ST**, **2ND**, and **3RD** place teams
- Prizes for 1ST, 2ND, and 3RD place individual

.....

- Green Bird Challenge for shotgun entry
- 50/50 Raffle

## ABOUT US

The Florida Surveying & Mapping Society has served the State of Florida for over 60 years dedicating its efforts to making a difference within the community each local chapter resides in.

## OUR MISSION

Our mission is to expand our community outreach to help provide school supplies for children in need and continue providing Christmas gifts and holiday dinners to families within Lee and Collier County.

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## PRICING

#### ONE PLAYER

#### S130

#### FOURSOME

\$520

Pricing includes golf cart for а foursome, ammo, entry fees, breakfast, and lunch.

Shotgun rental is available for \$20 (limited supply) It is recommended 1 shotgun is shared by 2 people

There are only 28 golf carts available, act quickly!!



PLEASE BRING CASH FOR ALL SPECTIALTY STATIONS

> 50/50 RAFFLE 1 TICKET FOR \$2 OR **3 TICKETS FOR \$5**

## **GREEN BIRD CHALLENGE**

1 TICKET FOR \$20

#### RULES FOR THE GREEN BIRD:

Players will get **1** shot at the Green Bird. If you hit it we will double your tickets into the raffle. If you miss it, the amount of tickets you purchased will go into the raffle.

## SPONSORSHIPS

.....

#### FOOD SPONSOR

1 - Full Price Slot, or 2 - \$1,000 Slots & 1 - \$500 Slot

Includes table display signs on each table and on the food table.

#### GREEN BIRD SPONSOR \$1,200

**\*PRICE IS SUBJECT TO CHANGE\*** 1 - Slot Available

Tickets to display the company logo and table display to be displayed with rifle.

#### CART SPONSOR 1 - Slot Available

**\$800** 

\$2,500

Includes 1 - 8.5"x20" color low tac sign to be displayed on the front of (28) golf carts.

#### DRINK SPONSOR **\$750**

1 - Slot Available

Includes koozie with company logo per participant, and drink tickets to display the company logo.

#### STATION SPONSOR \$250 14 - Slots Available

Includes 1 - 18"x24" color sign at a station.

## **VOLUNTEERS ARE NEEDED!**

PLEASE LET US KNOW IF YOU OR ANYONE YOU KNOW WOULD LIKE TO VOLUNTEER FOR THIS EVENT.

FOOD AND DRINKS WILL BE PROVIDED TO ALL VOLUNTEERS

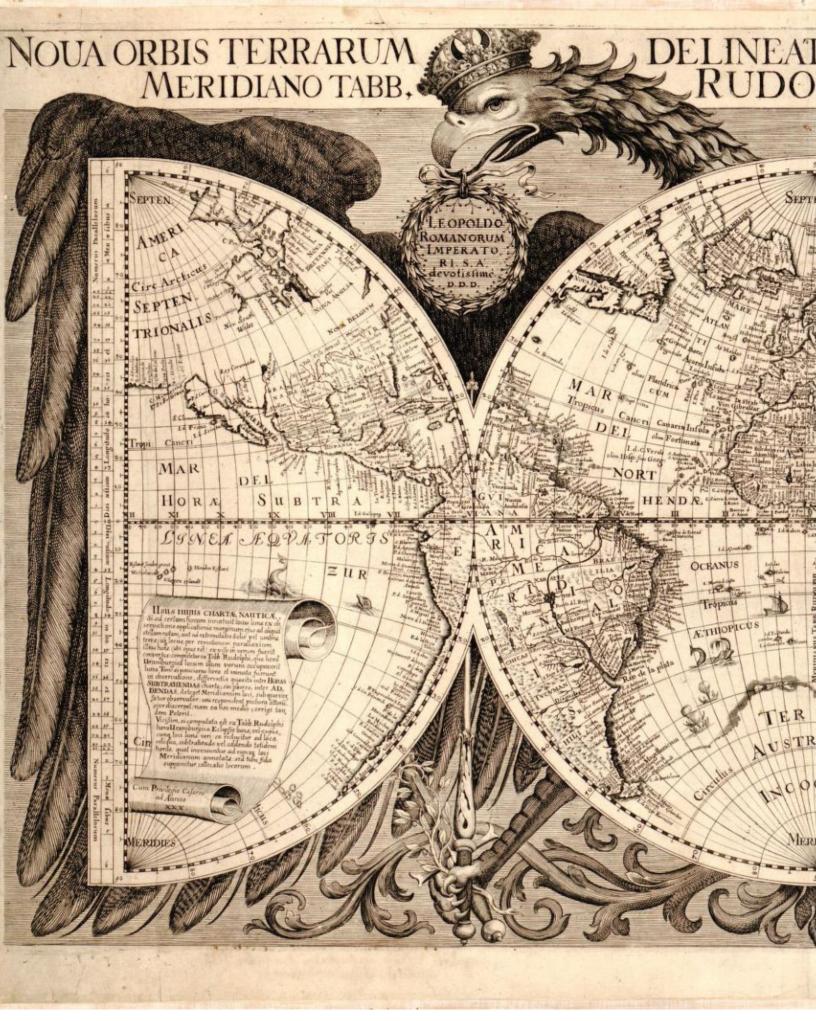
REGISTRATION FORM

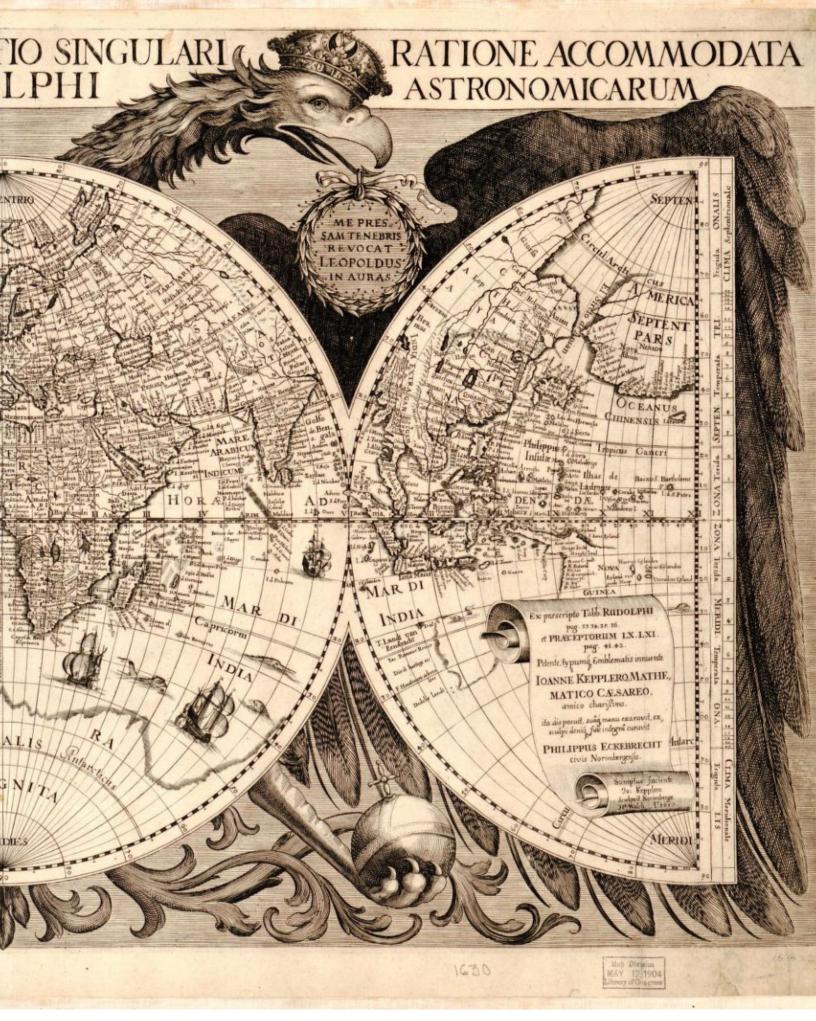
- 1

| <b>TEAMS</b><br>The deadline for participant registration is October 30th    |                             |  | PAYMENTS ARE ACCEPTED<br>VIA CHECK OR CREDIT                           |  |  |
|--|-----------------------------|--|--|--|--|
| ONE PLAYER   | \$130                       |  | CARD THROUGH SQUARE  |  |  |
| FOURSOME   | \$520                       |  |  |  |  |
| <b>SPONSORSHIPS</b><br>The deadline for sponsor registration is October 13th |                             |  | <b>Please make checks</b><br><b>payable to:</b><br>Florida Surveying & |  |  |
| <b>FOOD SPONSOR</b><br>2 - \$1,000 Slots<br>1 - \$500 Slot                   | \$2,500<br>\$1,000<br>\$500 |  | Mapping Society<br>Collier-Lee Chapter<br>FSMS                         |  |  |
| GREEN BIRD SPONSOR   | \$1,200                     |  |  |  |  |
| CART SPONSOR   | \$800                       |  | Please mail checks to:   |  |  |
| DRINK SPONSOR  | \$750                       |  | Jennifer Sheppard  |  |  |
| STATION SPONSOR<br>14 Slots  | \$250                       |  | 10511 Six Mile Cypress<br>Parkway<br>Fort Myers, Florida               |  |  |
| TOTAL AMOUNT   | ENCLOSED                    |  | 33966  |  |  |

PARTICIPANT INFO

|   | NAME | MALE | FEMALE | UNDER<br>16 |  |  |
|---|------|------|--------|-------------|--|--|
| SHOOTER #1  |      |      |        |             |  |  |
| SHOOTER #2  |      |      |        |             |  |  |
| SHOOTER #3  |      |      |        |             |  |  |
| SHOOTER #4  |      |      |        |             |  |  |
| INCLUDED WAIVER MUST BE COMPLETED AND EMAILED TO JSHEPPARD@BANKSENG.COM WITH YOUR REGISTRATION FORM |      |      |        |             |  |  |





# Half-Mile Posts, Alabama and Florida

A Federal Perspective

As happens from time to time, an obscure aspect of the Public Land Survey System (PLSS) is brought to the forefront of scrutiny; debates ensue based upon various levels of understanding of the history and facts of the matter. The background and chronology that follow is intended to put the subject of Half-Mile Posts into its proper context. It can be a start for anyone wishing a more comprehensive understanding of the subject.

## **History and Administration of the PLSS**

## What is the Public Domain?

After the American Revolution, seven of the original thirteen colonies claimed the unsettled "wild" lands between the Allegheny Mountains and the Mississippi River. These seven colonies ceded their claims to this area to the newly confederated United States under the terms of the October 10, 1780, resolution of the Continental Congress.

The resolution stated that the ceded lands were to be utilized for the common benefit of all the people of the Confederated Colonies. They were to be disposed of or settled under such rules and regulations as agreed upon by the United States in Congress assembled.

The colonial sessions included the Territory south of the State of Tennessee, now Alabama and Mississippi, and the Territory northwest of the Ohio River, now the states of Ohio, Indiana, Illinois, Michigan, Wisconsin and the eastern portion of Minnesota. The lands ceded by the colonial states were from that time on referred to as: "The United States Public Domain."

About 1.5 billion acres of land were added to the U.S. Public Domain when territories west of the Mississippi River, Florida, and Alaska were acquired by the United States.

## The legal foundation for the PLSS

In 1780 the Congress of the Confederated States passed a resolution reserving to itself the right to dispose of the Public Lands and to make the rules for the means of its disposal. Terms of the 1780 resolution are incorporated in Article IV, Section 3 of the United States Constitution which says:

"The Congress alone shall have the power to dispose of and make all needful rules and regulations respecting the territory or other property belonging to the United States; and nothing in this Constitution shall be so construed as to prejudice any claims of the United States, or of any particular State."

The specific act of Congress most germane to the half-mile post situation and the proper treatment of them is the Act of February 11, 1805.

The Florida Surveyor

## Administration

The administration of the Public Lands, including surveying, was placed under the Secretary of the Treasury an appointee of the President. The Act of May 18, 1796 called for the appointment of the first Surveyor General, also a presidential appointee. The business of the Public Land administration became an overwhelming task for the Secretary, and in 1812 the General Land Office (GLO) was created within the Department of the Treasury. A Commissioner, also appointed by the President, headed the GLO.

The Treasury Secretary, the GLO Commissioner and the Surveyors General had to work closely together in dealing with the Public Land Surveys. These men were on equal footing, all having been appointed by the President. The Secretary and the GLO Commissioner had limited power over the Surveyors General. As new Surveyors General were appointed, control was exercised through the monies appropriated by Congress for the Public Land Surveys. These men, much like surveyors today, all had opinions on how to carry out the various Acts of Congress relating to the Public Land Surveys. If the Secretary or Commissioner didn't agree with a particular Surveyor General, they simply adjusted the amount of funds he received. This form of control had limited impact because the Surveyors General had equal access to the President.

## Surveyors General

The first Surveyor General was Rufus Putnam, appointed November 5, 1796. He was responsible for the surveys in the Northwest Territory (the lands northwest of the Ohio River).

The second Surveyor General was Isaac Briggs, appointed April 1, 1803. He was responsible for the surveys south of the State of Tennessee (now Alabama, Mississippi and Louisiana after its purchase in 1803).

Seth Pease was appointed in 1807, replacing Briggs as Surveyor General for the lands south of the State of Tennessee.

Thomas Freeman succeeded Pease as Surveyor General for the lands south of the State of Tennessee with his appointment on September 10, 1810.

Edward Tiffin was the first Commissioner of the GLO from May 7, 1812 to October 11, 1814. He was also the fourth Surveyor General for the Northwest Territory, appointed in November of 1814.

Alabama was split out of the jurisdiction of the lands south of the State of Tennessee with the appointment of John Coffee as Surveyor General of Alabama in March 17, 1817.

Each of these Surveyors General was authorized to frame regulations and instructions for the direction of the deputy surveyors within their surveying districts. History shows that some did and some didn't provide guidance, as evidenced by the written instructions that have survived. As stated above, they all had opinions as to carrying the Federal laws into effect, which explains the different methods of survey in the various jurisdictions.

Similarities can be explained by the fact that some of the Deputy Surveyors who later became Surveyors General had previously worked under or with other Surveyors General. For example, Coffee worked for Freeman who had worked for Pease. As documented by the field notes, contracting Deputy Surveyors migrated with the work. Deputy Surveyors who had worked in Mississippi and Alabama wound up with contracts in Florida. One can easily surmise that an experienced Deputy Surveyor from Alabama with a contract from Robert Butler, (the first Surveyor General of Florida appointed July 9, 1824) who never issued any general instructions of his own that we know of, executed his surveys in the same fashion as he had in Alabama. Even if Butler objected to the returns when he received them, he was hardly in a position to force the Deputy Surveyor to correct them as he had issued no general or specific instructions to the contrary and the Deputy's former work, done in the same fashion, had been accepted.

An understanding of this early history and administration serves to explain how the practice of setting half-mile posts could exist in one area of the country and not another, and how this practice may have migrated to Florida.

## The Origins of Half-Mile Posts

#### Where and when did this practice actually start?

We know from the field notes that few half-mile posts exist in Mississippi; many exist in Alabama, and some in Florida. To my knowledge, they are not found in any other township subdivision notes in any other part of the country. They do, however, exist in long straight-line segments of old Indian boundary surveys.

A glimpse into the possible true origins of the half-mile post is provided from research done by Mr. Lane Bouman, BLM Eastern States Deputy State Director for Cadastral Survey, retired. For many years Mr. Bouman studied various correspondence records between Surveyors General and the Secretary of the Treasury and the Commissioner of the GLO.

The following quotes were found by Mr. Bouman in correspondence between Seth Pease, Surveyor General for the lands south of the State of Tennessee and the Secretary of the Treasury.

Letter dated July 14, 1807 to the Secretary of the Treasury from Seth Pease: "Mr. Thomas Freeman is on his way from this place (Washington, Mississippi Territory) to the Tennessee river, in order to run the boundary lines of the Chickasaw session..." Letter dated August 19, 1808 to the Secretary of the Treasury from Seth Pease: "Mr. Thomas Freeman has returned the notes of four Townships and informs me that he expects to complete the survey in the bend of Tennessee this season."

Letter dated May 31, 1809 to the Secretary of the Treasury from Seth Pease: *"I have the honor to transmit … the Townships of the Public Lands in Madison County M. T. from the field notes of Thomas Freeman and …"* 

Letter dated August 2, 1809 to the Secretary of the Treasury from Seth Pease: "I mentioned in my instructions to Mr. Thomas Freeman that the law required a post be set at each half mile for the corners of sections, or rather that it be placed just half way on each line between the corners of sections as run..."

Letter dated October 25, 1809 to the Secretary of the Treasury from Seth Pease: "Mr. Thomas Freeman informs me that he has set half mile posts on all his lines in his survey of Madison County, but that they will not always be found exactly half way between the section corners. I can furnish the Deputy Surveyor for that District with instructions for placing any one correctly which may not be so, without giving him any extraordinary trouble."

Mr. Freeman, being an experienced Indian boundary surveyor, obviously carried the terminology and practice of setting half-mile posts into the subdivision of townships.

Looking at Mr. Pease's side of the correspondence, it is easy to conclude that the Secretary must have had some concerns with the half-mile posts set by Mr. Freeman. No other correspondence on the matter has been discovered and Mr. Pease's remedy was never done. So the practice of setting half-mile posts, although questioned in 1809, was never corrected; and in fact, as evidenced by the field notes, was continued throughout Alabama and carried into Florida.

It has been suggested that Mr. Tiffin's instructions of 1815 could be viewed as being written to "kill off" half-mile post procedures. As seen above, the issue had arisen as early as 1809, some 3 years prior to his first involvement with the Public Land Surveys as Commissioner of the GLO. One could postulate that because of Tiffin's stint as GLO Commissioner, he was undoubtedly aware of these half-mile posts and given the obvious learned nature of the man, he could foresee the vexing problems that could result because of them.

Because of his experience as GLO Commissioner, Mr. Tiffin was surely aware of the lack of uniformity in the surveys being executed; and when he was appointed to the office of Surveyor General for the Northwest Territory, he developed his own detailed instructions as an effort to ensure uniformity in the future. He was also aware, however, that his instructions had no force and effect beyond his jurisdiction, the Northwest Territory.

## The Controversy with Half-Mile Posts

# What half-mile posts are and how they came to be is succinctly described in the first two paragraphs of Section 5-39 of the 1973 Manual and is quoted here.

#### "5-39. "Half-Mile Posts," Alabama and Florida

In the early practice in parts of Alabama and Florida, so-called "half-mile posts" were established at distances of 40 chains from the starting section corner. The term was applied where the line might be more or less than an exact 80 chains in record length, and where by later methods the latitudinal lines have been run as "random and true." The practice contemplated that in some cases these subdivisional lines be run in cardinal directions to an intersection, where the next section corner would be placed, and either or both lines might be more or less than 80 chains in length. In some cases the section corners were placed across the township at intervals of 80 chains on one of the cardinal lines, and the other lines were run on random only. On the first plan the "half-mile post" would not be at midpoint unless the line turned out to be 80 chains in length. On the second plan the "half-mile post" on the lines first run would be in true position for the quarter-section corner, but on the lines last run they would usually not be on true line, nor at midpoint.

In both cases field notes were written showing a true line direction and midpoint distance for a quarter-section corner. This was done to meet the objection that the "half-mile post" did not satisfy the requirements of law, but the true line was not actually run on the ground, nor was a monument constructed at midpoint. In these cases only the true line field notes need be regarded if the evidence of the "half-mile post" has disappeared; but where the latter can be identified the point must be given proper weight for control. Each set of field notes requires its individual consideration, as the practices were not uniform even in the same surveying district."

The intersection method of establishing the next section corner, which resulted in one or both lines being more or less 80 chains long, comes directly from instructions to Deputy Surveyors issued by John Coffee, Surveyor General of Alabama, dated May 4, 1817. Note that Coffee had been a contracting Deputy Surveyor for Freeman whose work had been questioned by Secretary Albert Gallatin in 1809.

The crucial problem with these half-mile posts is the fact that in most cases, they failed to satisfy the law.

#### Pertinent requirements of the Act of February 11, 1805

"1<sup>st</sup>. All the corners marked in the surveys, returned by the Surveyor General shall be established as the proper corners of sections, or subdivision of sections, which they were intended to designate; and the corners of half and quarter sections, not marked on the said surveys, shall be placed as nearly as possible equidistant from those two corners which stand on the same line." This is where the problem with the half-mile post begins. Some will point to this requirement in the statute and say that it doesn't matter where the half-mile post is. If it can be recovered, it is controlling, after all it's an original corner.

"2<sup>nd</sup>. The boundary lines, actually run and marked in the surveys returned by the Surveyor General, shall be established as the proper boundary lines of the sections, or subdivisions, for which they were intended, and the length of such lines, as returned, shall be held and considered as the true length thereof. And the boundary lines, which shall not have been actually run, and marked aforesaid, shall be ascertained, by running straight lines from the established corners to the opposite corresponding corners; but in those portions of the fractional townships, where no such opposite corresponding corners have been or can be fixed, the said boundary lines shall be ascertained, by running from the established corners due north and south or east and west lines, as the case may be, to the water-course, Indian boundary line, or other external boundary of such fractional township."

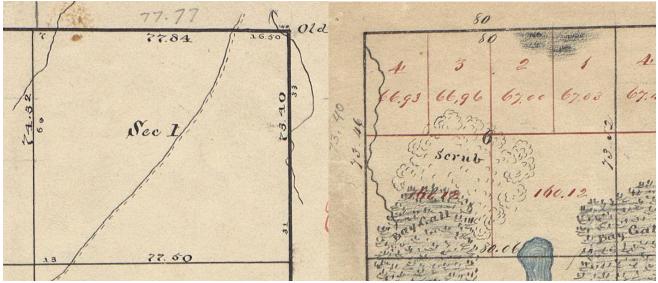
The boundary lines actually run and marked being established as the proper boundary becomes a key consideration in the technical treatment of a recovered half-mile post.

"3<sup>rd</sup>. Each section, or subdivision of section, the contents whereof shall have been, or by virtue of the first section of this act, shall be returned by the Surveyor General, shall be held and considered as containing the exact quantity, expressed in such return or returns; and the half sections and quarter sections, the contents whereof shall not have been thus returned, shall be held and considered as containing the one half, or the one fourth part respectively, of the returned contents of the section of which they make part."

The latter part of the 3<sup>rd</sup> subsection of Sec. 2 of the Act means that if the Surveyor General did not indicate by protracted subdivisions or lottings of the sections on the plat, the only division of the section allowed by the statute would be by aliquot part of the whole. This portion of the statute is the reason for Section 7-10 of the current Manual.

Most of the surveys in Alabama and some in Florida do not contain any protracted section subdivisions or any of the customary lottings. This is true even on sections closing into the township exterior. Many of these closing miles were considerably short or long of 80 chains going into the boundary, yet the half-mile posts were set at 40 chains from the starting section corner. In these instances, the lands were patented by one-fourth or one-half of the returned acreage for the entire section. This clearly indicates that the half-mile post, although set in the original survey, was not held as a controlling corner for the subdivision of the section.

#### Let's look at some actual records to better see the situation.



Section 1, T. 15 S., R. 23 E., Tall. Mer., FL.

Section 6, T. 15 S., R. 24 E., Tall. Mer., FL.

Protracted subdivision and lot lines with acreages were returned on the plat by the Surveyor General for Section 6. In contrast, Section 1 in the abutting township has no protracted subdivision lines; and only the acreage of the entire section (573.68 acres) was returned.

The United States of America, TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETING: Homestead Certificate No. 700 Whereas there has been deposited in the GENERAL LAND OFFICE of the Application 1.3.9 United States a CERTIFICATE of the Register of the Land Office at Samesvilles, Florida , whereby it appears that, pursuant to the Act of Congress approved 20th May, 1862, "To secure Nomesteads to actual settlers on the public domain," and the acts supplemental thereto, the claim of Aberts W. Wingales has been established and duly consummated in conformity to law for the morthmest section one in township fifteen south of ranne twenty - three Sallahassee Mundian in Florida, containing, one hundred and forly-three acres cand forly-two hundredthe . ..

Portion of the Patent for the NW<sup>1</sup>/<sub>4</sub> of Section 1, T. 15 S., R. 23 E., Tall. Mer., FL.

The patent for the NW<sup>1</sup>/<sub>4</sub> of Section 1 is for precisely one fourth the total acreage of Section 1 returned by the Surveyor General (143.42 acres). Patents for Section 6 were with specific reference to the lotting and areas as returned on the plat by the Surveyor General. These patents are in complete accord with the statute.

The Florida Surveyor

The official field notes of these surveys show that half-mile posts were set at 40 chains from the south on the west boundary of Section 1, the east boundary of Section 6 and on the range line common to both sections.

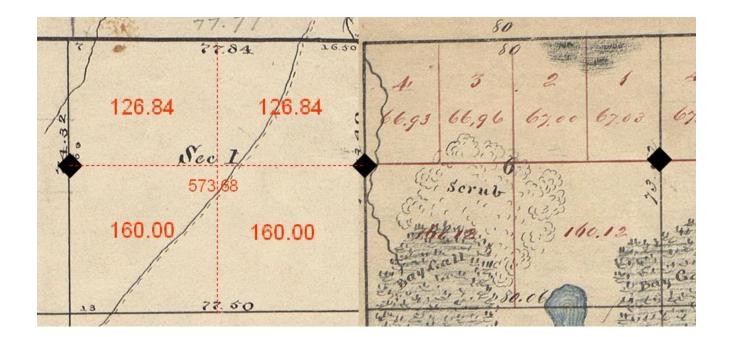
Everything is fine up to the point the sections are to be subdivided on the ground. There is generally no problem with Section 6 because the Surveyor General by his protraction and lotting made the original half-mile posts controlling for the subdivision. His protraction and lotting, in accordance with the statute, controlled the descriptions in the patents issued. Section 1, however, becomes a dilemma for some because according to the same statute, original monuments control.

The concept that original corners control has been ingrained in surveyors early on and throughout their careers. So much so, that recognizing there are exceptions becomes difficult. Our example here is even further compounded with the common knowledge among surveyors that the overage or shortage that exists in these surveys is by Federal law and Manual requirement to be placed against the north and west boundaries of the townships. In so doing, as many regular aliquot parts of the closing sections as possible are created. The Surveyor General's protraction of Section 6 with nominal 160 acre aliquot quarter sections in the south half and the four lots in the north half demonstrates this requirement.

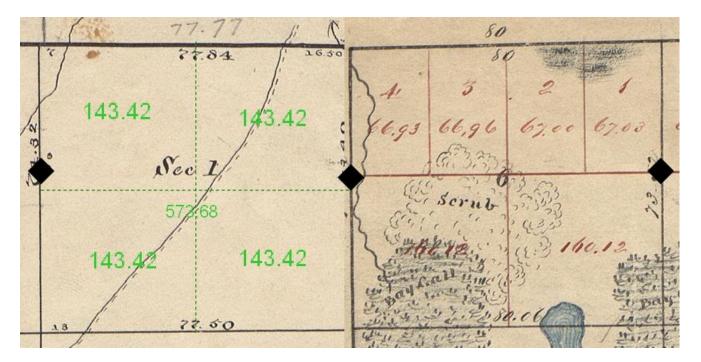
Another element of confusion is where the Manual discusses subdivision of sections by protraction and by survey in chapter three. This chapter deals with original and completion surveys of vacant Public Land. The guidance for subdivision by protraction is for cartographers creating the plats that will be the basis for patenting. It has no merit for subdividing sections once any or all of the land in a section has been patented.

As a consequence today, most surveyors' initial approach to Section 1 is to hold the original half-mile posts to control the subdivision of Section 1 as well. The result being that the patentee for the NW<sup>1</sup>/<sub>4</sub> of Section 1, having legally acquired it in good faith under the law, is by a survey process denied 16.58 acres of the 143.42 acres patented. Conversely, patentees in the south half of the section have their acreage enriched by 16.58 acres. It could easily be argued that this subdivision of Section 1, amounts to a taking without compensation and as such is unconstitutional.

The graphic below demonstrates the incongruity of the result.



With a little deeper consideration of the entire Act of February 11, 1805, in the context that it included elements applicable to the disposal of the Public Lands as well, one should recognize that there are instances when the patent records dictate the proper subdivision of sections.



The above shows the subdivision of Section 1, using the midpoint or equidistant principle from the Act of February 11, 1805, protecting the patents that contained <sup>1</sup>/<sub>4</sub> of the total returned acreage as also specified by the same statute.

Hopefully, this serves to demonstrate that an original half-mile post, albeit an original corner set in the course of the original survey, represents an exception to the rule that original corners control.

The Florida Surveyor

Half-mile posts were not, in effect, the equivalent of original quarter section corners. They can only be used to control the subdivision of sections if by clear implication they were used to protract the subdivision of the section; or if by record they are, in fact, equidistant or midpoint between the section corners of the same line.

The Act of February 11, 1805 stipulates that a quarter section corner was to be established, as near as may be, equidistant between the corners of the sections on the same line. Understanding Coffee's instructions and the common practice of setting these half-mile posts going back to Freeman's 1809 work, it is easy to see why they were generally not considered as marking the quarter section corner; they simply in most cases, did not meet the legally established requirement.

#### **RULES AND REGULATIONS**

To be observed by Deputy Surveyors in the Northern District of the Mississippi Territory, in surveying the lands of the United States, which must not be departed from.

All lines of townships and sections must be surveyed by north and south lines run by the true meridian and others crossing them at right angles :-- In surveying townships, the survey must begin at the northeast corner, and run south six miles, then west six miles. Then return to the beginning, and run west six miles, and then south six miles to intersect the other line at the extreme corner. In closing the survey of a township, if the lines intersect within 12 poles of the proper point, the survey maybe considered correct, except the last mile, which must be resurveyed making the proper variation and noting it to intersect at the proper point. The lines to be marked plainly by a blaze with a chop above and below on all fore and aft trees and near sidelines. Townships to be designated by numbers progressively from north to south, beginning each range with No. 1. The ranges to be distinguished by progressive numbers to the west of the basis meridian. On the township lines at the distance of a mile, between the corners, shall be marked corners for sections different from those of townships. All lines of townships will be continued over all rivers without varying in the course or distance. In the corner of each township a tree must be marked with the number of such township and over it the number of the range, and under it the number of the section, taking the bearing and distance of each tree from the true corner and carefully noting the same with the kind of tree so marked, in the field book.

In the surveying of sections the same rule will be observed as in surveying townships by running two lines, and then returning to the beginning and running the other two, so as to intersect at the extreme corner from the beginning, if the lines intersect within two poles, it may be considered correct, and make the corner of the intersection, noting the excess of deficiency; but if it should be more than two poles, the line so varying must be incorrect, and run over again; in closing the last section with the line of the township, it must be run to the proper station already fixed on that line, in doing which a small variation may become necessary, always noting the same correctly. Section lines will be marked by two chops on fore and aft trees and near sidelines. In each corner of all sections a tree must be marked with the number of the section, and over it the number of the township. And the name of the trees so marked, will be carefully noted in the field book and the distance and bearing of then from the true corner.

Fractional sections binding on navigable rivers or Indian boundaries, will be surveyed by carefully meandering the bank of the river, or running the Indian boundaries, which made such fractions. At all section corners a stake must be set up, with a number of notches at each of the four corners directed to the cardinal points corresponding with the number of miles that it stands from the outlines of the township, the side of the stake will be numbered corresponding with the number of the section it faces. Quarter-section corners, or half mile stakes, must be set up in the center of all section lines, at equal distance from the corners as near as may be. All sections in each township shall be numbered respectively, beginning with No. 1 in the northeast section, and proceeding west and east alternately, through the township, with progressive numbers until the thirty sixth shall be completed.

The southern boundary of the State of Tennessee, and the meridian of Madison County will be the base and meridian of all surveys made in this district. The lines of the townships and sections of Madison County will be extended to the south and west, so as to perfect all fractions occasioned by the diagonal line theretofore existing between the county and the Chickasaw Indians.

All lines must be run horizontally, by leveling the chain and plumbing the pins where the ground is uneven, and measured with the two pole chains subdivided into fifty equal links. Each Deputy Surveyor will adjust his compass and chain, to the standard kept in the surveyor's office for that purpose. Every surveyor shall carefully note in his field book the true situation of all mines, salt-licks, saltsprings, and all mill seats, which shall come to his knowledge; all water courses over which the line he runs shall pass, with the bearings of the same; and also the timber and undergrowth, whether mountainous, hilly, or level; and the quality of the soil, whether first, second or third rate. These field books shall be returned to the principal surveyor of the district, with such other information relating to the situation and quality of the lands, as the Deputy may be possessed of. All Deputy Surveyors will make return of their surveys, agreeable to foregoing instructions, at such time as the principle surveyor of the district may require.

The Surveyors will administer an oath to their Chainmen Markers, faithfully to perform their duties as such, an not to depart their service until the expiration of the term for which they have engaged. 4th May 1817

## **The Manual Treatment of Half-Mile Posts**

Starting in 1809 with Treasury Secretary Gallatin's objections to the half-mile posts set by Freeman, the GLO beginning in 1812 and later the Bureau of Land Management (BLM) since 1946 has taken a consistent position in regard to the half-mile posts. It should be acknowledged, considering the early nature and limited scope of half-mile posts, that there simply hasn't been much written officially on the subject.

The following is quoted from the Restoration of Lost or Obliterated Corners, a Circular of the Department of the Interior, General Land Office, Washington, D. C., Revision of June 1, 1909. It is believed to be the first official Manual or Circular mention of half-mile posts:

"61. Note.- In some of the southern public-land States it was the custom in the early surveys to establish half-mile posts at a distance of 40 chains from the point from which the section line was initiated, at the same time inserting in the field notes at the midway point "1/4 sec. cor." without indication in the field notes that any other corner than the half-mile corner was set. And it is presumed that the ¼ sec. cor. was merely "called for" at that place. This practice has long been discontinued owing to the confusion thereby occasioned.

These half-mile posts have no bearing upon the subdivision of the section except where they happen to occupy the midway point on true lines between section corners. In such cases, when a subdivision is required of a section surveyed on this plan, and no original quarter corners are found, the latter should be reestablished at a point on a true line midway between the original section corners."

The GLO and BLM have not varied from this viewpoint for nearly one hundred years as it is based on Statutory Laws. Any rule or regulation published in a technical bulletin by an administrative agency is null and void when it is in conflict with the law.

Not until 1947 were procedures for dealing with recovered half-mile posts incorporated into the Manual of Surveying Instructions. These procedures are binding upon the Cadastral Survey employees of the Bureau of Land Management in the course of conducting dependent resurveys on Federal lands. Any surveyor surveying private lands that abut Federal lands should also adhere to them.

The fourth rule relating to half-mile posts in Section 5-39 of the 1973 Manual of Surveying Instructions could be argued to be in violation of the Act of February 11, 1805.

The Act of February 11, 1805 stipulates that the section line as run and marked will be the true boundary. This fourth rule forces the angle point in the section line, if one exists, to be at the quarter section corner placed at the record correction from the original half-mile post.

Although admittedly a minor detail, this places the quarter section corner off the original line. If there was an angle point in the original line, it would have been at the half-mile post.

The author of the 1973 Manual Mr. Thomas Tillman was asked about this minor deficiency. Mr. Tillman was well aware of the objection to the procedure and explained that it was preferable because you would have to re-monument the half-mile post and the quarter section corner to preserve the original section alignment. Having two monuments so close together was judged to be too confusing; a procedure that placed the angle point at the quarter section corner, even if it was ever so slightly off the true line, was preferable.

The fourth rule under Manual Section 5-39 also requires the record correction for distance to be applied. This stems from the premise, if the original surveyor would have set the corner that is where he would have placed it. This theory has some merit; however, one can easily see where this notion could be totally in error.

Take for example, the placement of a sixteenth section corner, not set in the original survey, on a line closing into a former boundary i.e. a township line. See Section 5-41 of the Manual. This section of the Manual requires the use of the position of the offline closing corner, as opposed to the true intersection, to establish sixteenth corners not monumented in the original survey. It is likely that you could come up with a situation where the closing corner is so far off the senior controlling boundary that using this procedure would place the position for the sixteenth section corner over the said boundary as well. This would, in effect, eliminate or, if not over the senior boundary, severely diminish a lot that exists on the original plat.

No one today has the authority to dictate procedures, be it the treatment of half-mile posts or the establishment of minor corners not set in the original survey, if said procedures can be shown to impair a right properly granted under the authority of the Constitution. The diminished right could be argued as a taking without just compensation and that is clearly unconstitutional. I'm more inclined to following the Act of 1805 as strictly as possible.

#### **Case Law Concerning Half-Mile Posts**

The status of an original half-mile post, not set equidistant in accordance with Federal Statute was considered by the Supreme Court of Alabama in Walters v. Commons, 2 Port. 38; 1835 Ala.

#### Quoted Sections of Walters v. Commons

"Walters was owner of the south east quarter of section eight, in township eighteen, of range ten, and Commons claimed the east half of the south west quarter of the same section. The whole section was found to contain six hundred and fifty two 37-100 acres, and the question raised in this case, was, in substance, whether the surveyors had the right of removing the half mile posts, and of thus giving the plaintiff his portion of the excess in the section. The Court below, charged, among other things, that the surveyors had no right to remove the half mile stakes, if without doing so, they could give the quantity called for in the patent, though the section contained more than six hundred and forty acres. There was a judgment for defendant below, and the plaintiff having excepted to the opinion of the Court, took his writ of error." ...

"The titles to lands in this state, are derived from grants by the United States, and are made under surveys regulated by laws of the United States."…

"... It is only when there is an error in not placing the half mile post or corner at the center of the line of the section, that the inequality occurs. By law, these corners are not declared to be "established as the proper corners," as is done in the case of sections; to disturb which would distract a whole township: but they are to be as "nearly equidistant as possible from the corners of the section;" and if there is an error found in that particular, by which one person owning one half or quarter of a section, has got possession of more than the half or quarter, it is the opinion of the Court that this error can be corrected."

So the Alabama high court is saying the record establishment of the half-mile post is immaterial, if, by actual survey the half-mile post does not sit equidistant between the section corners of the line. This may well be the reason very few original half-mile posts have been perpetuated in Alabama. The majority of the sections have quarter section corners that have been established at midpoints on the section lines.

The 1835 Walters v. Commons decision of the Alabama Supreme Court has never been overturned. It is in accord with the stated long standing policy of the United States that a half-mile post that does not meet the statutory requirement for a quarter section corner does not constitute one.

#### **Conclusions Concerning Half-Mile Posts**

The majority of the remaining Public Lands in Alabama and Florida have already been dependently resurveyed and remonumented with regulation metal monuments. These surveys were executed in accordance with Federal policy and guidance for half-mile posts that has remained unchanged for nearly 100 years. Consequently, an attempt to expound upon the topic of half-mile posts adding criteria which is legally questionable serves no useful purpose in a Manual for the survey of Public Lands.

On the other hand, the proper treatment of half-mile posts is very relevant in private boundary surveys in Alabama and, to some extent, in Florida. Common law doctrines of unwritten transfer of rights may well be applicable. Statutory time frames and case law requirements that have evolved for adverse possession, acquiescence, agreement, and repose would need to be scrutinized in light of the facts developed on the ground. However, once land has been patented, the United States is without jurisdiction; therefore, BLM's Manual treatment of half-mile posts is not compulsory when private boundaries are at issue. I believe that surveyors will debate these types of situations forever. The reasons are numerous. Some surveyors just want to point to some authority such as the Manual for a cookbook answer to the situation at hand. They fail to realize that the Manual is, for the most part, merely a guide. It is not law even if it has been adopted by State Statute. See 116 Idaho 429; 776 P.2d 438; 1989

Other surveyors have deep-rooted "feelings" about the justices or injustices of a given survey situation and justify their actions upon these feelings. I was taught early in my career that "feelings" are good for writing songs but surveying is based upon evidence and the law.

Many differences attributable to one surveyor's opinion over another are small; these small differences are rarely litigated because the courts do not deal with trifles. Lacking the courts consideration, the debates go on. There is always hope because unlike surveyors who are constantly trying to define how close is close, the courts have never defined what a trifle is.

The Federal surveyor's solution to a particular survey decision is often times overly tempered by the apparent effect on the abutting private landowner. The justification given the most is that the method chosen protects the private landowner's bona fide rights. What is neglected is the public's bona fide right, which we, as Federal surveyors are charged to protect. Another perceived factor in this analysis is that Federal surveys are protested or contested by the abutting private landowners. I do not know of one survey that was ever contested on behalf of the public. Conversely, private surveyor's decisions can get challenged from both sides of the line. The decision made must take into account the vested legal rights on either side. The public's rights in the Public Domain are no less important than an abutting private right. Therefore, anyone surveying the boundaries of Federal land should likewise consider the valid rights on either side of the line.

- end -

This document was compiled for background and context relating to Half-Mile Posts. It was written to support BLM Eastern States' comments concerning related sections of the next edition Manual.

Corwyn J. Rodine Cadastral Surveyor BLM Eastern States

September 2023





PARTA I

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STRUCTURAL TABLES AND DESIGN MATERIALS OF STRUCTURAL ENGINEERING WATER TURBINES





The Florida Surveyor

## A HALF CORNER IS BETTER THAN NONE or WHAT A SURVEYOR WILL DO FOR A QUARTER



James A. Thigpenn, III (FSMS Past President 1964-1965)

#### **BIOGRAPHICAL SKETCH**

The author is a specialist in retracements of the early General Land Office surveys in Florida. He is a Registered Land Surveyor in Florida, Georgia and Alabama. He is a Past President and Fellow Member of the Florida Society of Professional Land Surveyors and a Past President of the American Congress on Surveying and Mapping.

#### ABSTRACT

A brief discussion of a variation in the subdivision of townships during the original public land surveys in parts of Florida and Alabama, and the rules to be followed by Land Surveyors today when encountering same during retracements requiring the subdivision of the sections into halves or quarters.

#### TEXT

On July 17, 1821, Andrew Jackson completed the formalities through which the territories of East and West Florida were turned over: to the United States by the Spanish authorities. Four days later, acting in his capacity as

Military Governor, he issued an ordinance dividing the newly acquired land into two counties with seats of government established in Pensacola and St. Augustine. The next year, following the establishment of a civil government in Florida with authority vested in a territorial governor and a legislative council made up of 13 citizens, the territory was divided into four counties, and a year later into five. By 1824, when the public land surveys were begun in Florida, the territory had been divided into eleven counties, evidencing its rapid development under the pressure of an avalanche of new settlers, all seeking a fresh start on land soon to be available for homesteads.

No doubt, there was a great deal of pressure also on the General land Office to expedite the surveys of those parts of the public domain in Florida found suitable for farming so that the land could be patented into private ownership. By law, public lands of the United States could not be disposed of until surveyed, marked and approved by the Surveyor General. It was not too surprising, therefore, to find that some short cuts were introduced into the routines employed during these early surveys.

The most significant variation officially introduced was the establishment of so called "half-mile posts" at the distance of 40 chains from beginning section corners on each line run. In actual practice, two distinctly different plans evolved, one being the running of all interior section lines in cardinal directions, or on bearings in harmony with the township boundaries, to intersections where the section corner post would be placed. If the distance from each beginning section corner to the intersection happened to be 80 chains, the "half-mile post" became a legitimate quarter corner as prescribed by law. If the distance varied, the total distance for that particular line was halved and the field notes would, in some manner, indicate that the quarter corner, or post, was located at that point midway between the section corners.

In the second plan, the interior section lines would first be run in one of the cardinal directions across the entire township with section corners set at each 80 chain interval and "half-mile posts" set at 40 chain intervals between the section corners. The lines run later at approximate right angles to the first run lines were run only as random lines, although "half-mile posts" were set, and bearing trees recorded, at 40 chains on that trial line. If the last run lines did not cross the first run lines at the established section corners, the "half-mile post" was not on the true section line bearing shown in the field notes. If the closing distance was not 80 chains, half the distance was noted in the field notes as the distance to the quarter corner on the true line, but the line was not run and no quarter section post was set.

The most significant difference in the two plans was the probability that the "half-mile post" in the second plan would not actually be on the section line, and could not be used as a reference monument to the true quarter corner. Too, there could be no marked closing section line to aid the eventual purchasers in the location of their boundary. To the contrary, the bogus monument could cause an erroneous occupation to the wrong line. In making retracements, however, the second method did simplify the establishment of a quarter corner by a surveyor having access to the field notes, and having successfully identified the appropriate section corners, as he had only to halve the true distance, without regard for the half-mile post, and set his corner at the intended point. However, if the field notes indicated that the closing line actually hit the section corner at 80 chains, then that "half-mile post" would be the true quarter corner.

When the first described plan was followed, all of the "half-mile posts" were presumably set on the true section lines, but such posts, whether set on the north - south lines, or the east - west lines, could be quarter corners only where the distance from the beginning corners to the intersection point was exactly 80 chains, or so entered in the notes. In all other cases, the "half-mile posts" became reference monuments from which the quarter section corners could be located.

Chapter 5, Paragraph 39, in the 1973 Manual of Surveying Instructions, cites the rules regulating the establishment, or re-establishment of quarter corners created during original government surveys made in accordance

with the two methods previously referred to:

(1) In case the "half-mile post" and quarter-section corner are recorded as being at a common point, the identified "half-mile post" will be restored as the quarter-section corner.

(2) If there is evidence of the position of the section corners in both directions, and if the record leaves doubt as to the establishment of the "half-mile post" on the true line, the quarter-section corner will be monumented at midpoint on the true line, disregarding the record of the "half-mile post."

(3) In the absence of evidence at one or both section corners and where the record leaves doubt regarding the running and marking of the true line, the "half-mile post" will be employed on a north and south line for the control of the latitude of the quarter-section corner, or on an east and west line for control of its position in departure, using the record correction for distance. The alignment of the section boundary and the position of the quarter-section corner on the true line will be adjusted to the location of the two section corners after the double proportionate measurements have been completed."

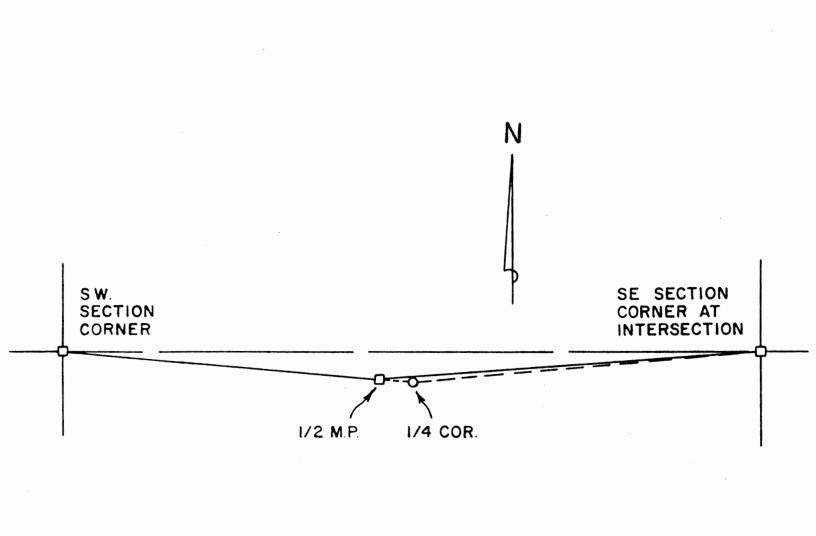
(4) Where the field notes show proper location for alignment and record correction for distance, the "half-mile post" will be employed for the full control of the position of the quarter-section corner, and for the restoration of the lost section corners. The position of the quarter-section corner in latitude on a north and south line, or in departure on an east and west line, will be ascertained by making use of the record correction for distance from the "half-mile post." The alignment from the position of the "half-mile post" to the point for the quarter-section corner will be determined by the position of the section corner to the south, if the record correction for distance is to be made to the north; the section corner to the north will be used if the record correction for distance is to be measured to the south; and similarly on east and west lines.

(5) The evidence of the "half-mile post" will not be destroyed.

Upon first encountering a situation during a retracement requiring the application of the referred to rules, there is a great temptation to throw out the evidence of the "half-mile post" recovered during the random traverse made along or in the vicinity of the original section line. This occasionally is made possible by the fact that only two bearing trees or other accessories were given at the "half" corners, and it is often possible to find several pairs of the objects or remains of the objects matching the field note calls in the obvious vicinity of the point where the original post was placed. If two points can be identified with equal authenticity, then neither point can be identified as the true corner. This convenient solution, however, is not always possible and in any case, is not the object of the retracement. The concealment of evidence would be an actionable misrepresentation, as well as a breech of our code of ethics.

In every instance, the rules formulated by the Bureau of Land Management and its predecessor, The General Land Office, were issued to preserve the scheme of the public land surveys, to validate the performance of the deputy surveyors, and to satisfy the dictates of the federal laws governing the identification and disposal of the public lands of the United States. In most instances they have been successful, and the occasional failure detected in the results of their performance is infinitesimal in view of the magnitude of their undertaking. Nevertheless, rule (4) as cited here seemingly has the uniqueness of being a deliberate attempt to frustrate the object of the intersection plan rather than strengthen it, and I cannot help but believe that had this method of closing sections been widely used in other areas, instead of isolated in a few districts of Florida and Alabama, there would have been so many attacks on the rule that it would **not** have remained on the books for long.

To illustrate my objections, the consequence of the Bureau's standing rule is shown in Figure 1. This drawing portrays the two segments of a closing section line run in an easterly direction as a true line to an intersection with a line run earlier in a southerly direction from the northest corner of the section to be established. For the purpose of clarifying the results, an exaggerated turn has been made in the course between the "half-mile post"



#### FIGURE I

The Florida Surveyor

and the section corner set at the intersection. In this example, as the total distance from section corner to section corner is greater than 80 chains, the correction distance must be measured in an easterly direction with the section corner to the west used for alignment. It is at once apparent that the original intent to establish a straight section line between the two corners has been completely ignored and the quarter-section corner established at a point even farther from a straight line than the "half-mile post" was to begin with. The only improvement realized through this method depends on the possibility that the quarter-section corner may be equidistant from the two section corners. If you believe that is much of a possibility, then you will probably want to vote slot machines back in too.

Of course, any movement of the quarter-section corner would disturb the line actually run, but why select a procedure that puts a larger turn in the boundary and a monument that is even farther out of place than the one set by the deputy surveyor? By way of explanation, the Manual provides this enlightening statement:

"The applicable rules for the restoration of the true line midpoint position for the quarter-section corners in the above practices are derived from the Act of February 11, 1805 (R.S. 2396), which requires that "the corners of half and quarter sections, not marked on the surveys, shall be placed as nearly as possible equidistant from two corners which stand on the same line."

It is not conceivable that the law could be so broadly interpreted so as to permit the quarter-section corner to be set just anywhere as long as it satisfies the equidistant provision. There was also a mention of "the same line." Where is the same line? Is it a line that would fix the points all in a row —a straight line— with the midpoint equidistant from the other two? Not necessarily. We have all sorts of lines; crooked lines, zig-zag lines, curved lines, and yes, even straight lines. We also have section lines, and in this case we can assume that this is the line referred to — the section line — but, if this is true, where was the section line when the rule was applied? Was it not right where the deputy surveyor put it when he ran the closing true line to its intersection with the

first run line for the purpose of establishing a section corner? As a matter of fact, there was no other line, except the theoretical straight line, on which the quarter-section corner can only be placed when the closing line was run as a random line to a post already set at the next section corner. Then where is the logic behind the published rule?

It has been written that the law is not based on logic; it is based on experience, and brother, we have had the experiences with "half-mile posts" some good and some bad. Today, I would like to tell you about one of our good experiences, with the hope that you never find some of our bad ones.

In the summer of 1831, Henry Washington, a most capable and reliable deputy surveyor, with the assistance of another deputy surveyor, George Willis, was engaged in the survey and subdivision of Township-2-South, Range-24-East, in Duval County. Leaving his camp by the old Spanish Trail, near the small settlement called Thigpen, at sunup one hot August day, he returned to the section corner post set late the day before at the southwest corner of Section 8. Running East, he entered a cypress swamp at about 32 chains and just reached its easterly margin as the talley reached 40 chains; At this point, he had a cypress post set and recorded the bearings and distances to two pines located near enough to his cleared line to be located without having to clear the dense underbrush growing along the edge of the swamp.

Continuing East from the "half-mile post" through a fairly open pine flat, his chainmen reached a point 25 links south of a temporary post set earlier at a distance of 80 chains from the northeast corner of Section 8 on a line run S 0°- 30 ' W. The total distance measured along the south line to that intersection point was 80 chains and 27 links. Washington noted that the quarter-section post was located at 40 chains and 13½ links on the south line and the quarter-section post was located at 40 chains and 12½ links on the east line of Section 8.

In the Fall of 1977, one hundred and forty-six years later, our survey crew, under the direct supervision of our chief of parties, J. R. O'Quinn, made a

retracement of these lines as a part of a survey that took in four sections in this vicinity. Running in an easterly direction from the proven southwest corner of Section 8, he found a point which fit a visible lightered pine stump lying S 82°W, 75 links, and a second lightered pine stump found below the surface lying N 89°W, 95 links, as recorded in the original field notes to reference the "half-mile post." He found no trace of a post at that point, and as the bearing trees were so close together, he was not too certain that he could fix the exact place where the original post was set. Therefore, he merely set a large nail, tied it in, and proceeded to the east.

In the vicinity of the southeast corner of the section we nearly blew the entire survey. At a point a bit south of the line indicated by the possibly proven "half-mile post," we found an old wood corner post, and nearly forty feet north of it we found a concrete monument. The concrete monument seemed to be in better alignment, but when we searched for supporting evidence of the accessories given in the field notes we came up empty handed. We then checked the old post, and found large pieces of lightered pine stumps at each call. We were not too happy with our findings, as this seemed to completely destroy the evidence of the "half-mile post," but we thought the matter settled and continued our random line east along the south line of Section 9.

It was a good move when we decided to run East before returning to make a search for a more likely point for the "half-mile post." The next "halfmile post," established on the south line of the adjoining Section 9, had been set in a cypress pond, and, as Robert O'Quinn put it, "The old blind hog finally found an acorn." We found an original scribing beneath the layers of overgrowth on a living cypress tree. Using this reference mark, and the remains of the second cypress given in the field notes, we dug up the entire point of a lightwood post. The only disappointment was the fact that the notes called for a cypress post. Even the later examination of the post by some of our other men failed to change it from a lightwood post. Nevertheless, it was a proven point, and we replaced it with a concrete monument and proceeded to make ties to three additional references in

compliance with the restoration of corners program. On two of the three trees selected to mark with an "X" we found blazes facing the corner, and as these marks were at least thirty years old, we came to the conclusion that someone had recovered this corner at about that time, and had, perhaps, replaced the original cypress post with a lightwood corner post.

With this new evidence, we soon located the correct position of the southeast corner of Section 8, but not before we made a very embarrassing discovery at the site of the old post that we had thought proven earlier. We had made what could only have been termed a fundamental error. We had found a fairly large piece of lightered pine at each point located from the post, but as we thought that the post was the true point, we had not dug deep enough <u>to fix the tap root</u>. We had only confirmed that there was a pine stump at each position called for in the notes, and there was. Unfortunately, though, stumps pushed in from somewhere else, and laying on their sides, or upside down, really do not count for brownie points. The sad fact is, the old post had been set in an old pile of pushed stumps, and we fell for it. Actually, we found that you would be on top of an old lightered pine stump no matter where you dug within a hundred feet of the post.

I am glad that I do not have to tell you that we found some more buried lightwood at the true corner. As a matter of fact we found four visible stumps – all much larger than any other stumps in that vicinity, indicating, we believe, that the bearing trees had been spared a lot longer than the other mature trees in their vicinity. It should also be realized that this was only a part of the evidence confirming the point where we reestablished the section corner. We also proved the northeast corner of Section 8, and found the entire buried portion of the original corner post at the point backed in from the four witnesses. After that we proved the "half-mile post" on the line run S 0°- 30' W for the east line of Section 8.

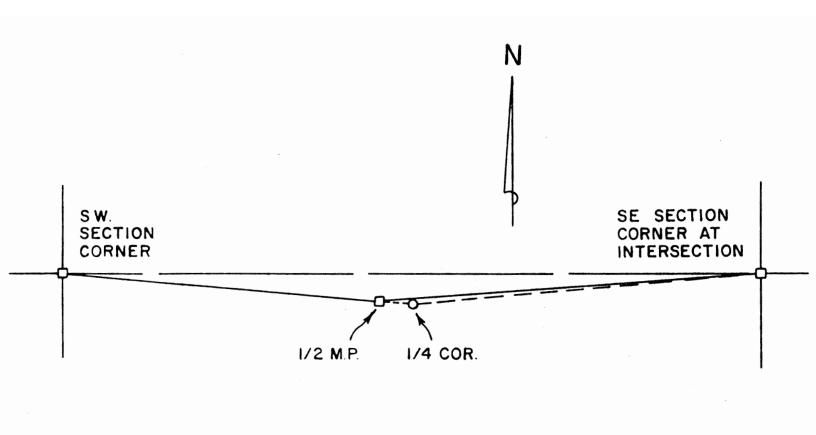
The most interesting facts revealed by our retracement of Henry Washington's original survey was not the recovery of so many old corners. We have found too many of them to be excited by a few more. It was the quality of that survey

that should be emphasized; especially the consistency of the chainmen, James B. Walls and Joseph Warren. For example: The distance from the southwest corner of Section 8 to the proven "half mile post" on the south line was 40.1839 chains when measured with EDM equipment. The distance from the northeast corner of Section 8 to the "half-mile post" established on the east line was 40. 1814 chains. The distance from the southeast corner of this section to the "half-mile post" on the south line of Section 9 was 40.2456 chains. As this particular corner was said to also be the quarter-section corner on a line recorded as being 80 chains in length, it is also interesting to note that it was 40.2089 chains on to the proven southeast corner of Section 9, or only 0.0179 chains from the precise midpoint.

Returning our attention to the reestablishment of the quarter-section corner on the south line of Section 8, which was done by applying the correction distance given in the field notes, 13½ links, and the southwest corner for alignment, we set a concrete monument at a point that was only about four links short of the exact midpoint. The deflection at this point was only 0°-01'-20" to the right, and inasmuch as I have already made my protest about this method, the difference in the closing line run and the line from the quarter-section corner was three whole tenths of a second. Now how can we live with that?

Our restoration of the quarter-section corner on the East line of Section 8 was just as satisfying, in that the concrete monument placed in the same manner as the one on the south line is only about one link from a true midpoint. In both instances, it is obvious that my concern over the placement of the quarter-section corner on a prolongation instead of directly on the line ahead was entirely unnecessary. By the same token, however, with so little effect contemplated, it is even more difficult to understand why such a unique rule was adopted, when it would have sufficed to say that the quarter-section corner in the same direction, which would have at least been technically on the lone actually run.

I wish that I could assure you that all of your experiences with "half-mile posts" will be as satisfying as the examples used in this paper, but there is no likelihood of that. We have also found the predicaments caused by comparatively large discrepancies in the field note calls and the positions occupied by the controlling corners. In some such cases, the end result is anything but a satisfactory conclusion, but be that as it may, we must always bear in mind that we are merely investigators identifying the circumstances which happen to exist — not competitors in a game to see who can improve the original surveys the most.



#### FIGURE I

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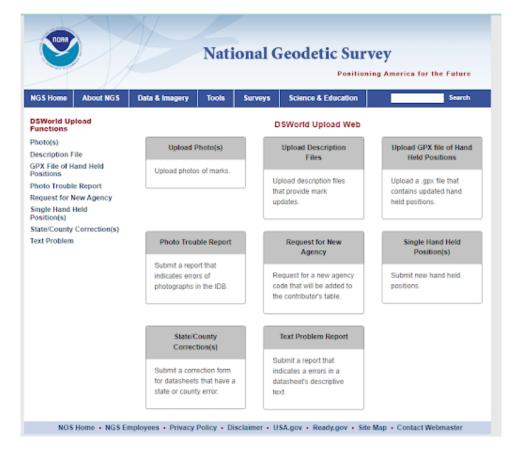
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# **DSWorld Online Tool Available**

DSWorld software is a free application originally distributed by NGS in 2012 to display datasheet information in a "world view." The tool adds new functionality in that it allows users to report errors they have discovered in the database. The software was designed to provide geospatial professionals and the public with up-to-date geodetic control information at the click of a button. Since its inception, it has been enhanced to become a major interface with NGS and the NGS Integrated Database (IDB).

The new DSWorld Upload Web Form, currently on Beta, offers many of the same features of the application as an online form. It allows users to upload new photos, descriptive text, and updated hand-held GPS coordinates for survey marks with poor positions, as well as report errors and corrections found in the database with photos, estimated coordinates, or text. The website will also allow users to request a new agency code if they do not currently have one.





# Introducing the NSRS Modernization Alpha Site

To provide early access to upcoming, yet incomplete, products of the modernized NSRS, NGS has created the <u>Alpha NSRS Modernization website</u>. That site provides examples of the content, format, and structure of select data and products that NGS plans to release as a part of the Modernized NSRS. Products found on this page are for testing purposes only and do not contain any authoritative NGS data or tools. They are under active development and are subject to change without notice. But early access to alpha products should enable a smoother rollout of the Modernized NSRS. As products are released to this site, NGS will refer to them as being "released to Alpha."

#### SPCS2022 Released to Alpha

An alpha version of the State Plane Coordinate System of 2022 (SPCS2022) and its implementation in the NGS Coordinate Conversion and Transformation Tool (NCAT) has been released to the Alpha site. This includes:

- <u>Alpha SPCS2022 website</u>
- <u>Alpha NCAT</u> with SPCS2022 conversions enabled
- <u>Online interactive maps</u> of SPCS2022 zones
- Tables of <u>zone definitions</u> and <u>example</u> <u>coordinates</u>
- <u>Maps</u> of linear distortion with performance statistics
- Updated SPCS2022 <u>Policy</u> and <u>Procedures</u>

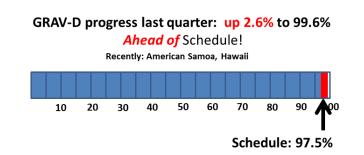
Alpha SPCS2022 content will be updated and augmented as it evolves toward completion.

#### **Progress in Ongoing Projects**

There are currently **32 ongoing projects** related to NSRS modernization around NGS. Here are some highlights.

#### **GRAV-D** (Project Manager: Jeffery Johnson)

In June of 2023, NGS's Gravity for the Redefinition of the American Vertical Datum (GRAV-D) project completed the airborne data collection effort in the American Samoan and Hawaiian regions. NGS teamed up with NASA Langley Research Center's Research Services Directorate to use their Gulfstream IV jet (Tail # N522NA) for this project. These remote Pacific islands were the largest hurdles for the GRAV-D project to finish before December 2023 so that the geoid team can have a complete airborne gravity data set as they build the North American-Pacific Geopotential Model of 2022 next year.



# STR /



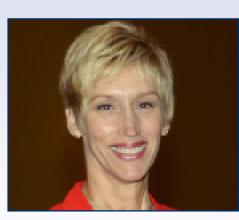
Executive Director Rebecca Porter <u>director@fsms.org</u>



Education Director Samantha Hobbs education@fsms.org



Communications Coordinator Justin Ortiz <u>communications@fsms.org</u>



Regional Coordinator Cathy Campanile <u>seminolecc84@gmail.com</u>

# Past Presidents

#### 1956

H.O. Peters Harry C. Schwebke John P. Goggin R.H. Jones

#### 1960

Hugh A. Binyon Russell H. DeGrove Perry C. McGriff Carl E. Johnson James A. Thigpenn, III Harold A. Schuler, Jr. Shields E. Clark Maurice E. Berry II William C. Hart Frank R. Schilling, Jr.

#### 1970

William V. Keith James M. King Broward P. Davis E.R. (Ed) Brownell E.W. (Gene) Stoner Lewis H. Kent Robert S. Harris Paul T. O'Hargan William G. Wallace, Jr. Robert W. Wigglesworth

#### 1980

Ben P. Blackburn William B. Thompson, II John R. Gargis Robert A. Bannerman H. Bruce Durden Buell H. Harper Jan L. Skipper Steven M. Woods Stephen G. Vrabel W. Lamar Evers

#### 1990

Joseph S. Boggs Robert L. Graham Nicholas D. Miller Loren E. Mercer Kent Green Robert D. Cross Thomas L. Conner Gordon R. Niles, Jr. Dennis E. Blankenship W. Lanier Mathews, II Jack Breed

#### 2000

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#### 2010

Dan Ferrans Jeremiah Slaymaker Ken Glass Russell Hyatt Bill Rowe Dale Bradshaw Lou Campanile, Jr. Bob Strayer, Jr. Dianne Collins

#### 2020

Don Elder Hal Peters Lou Campanile, Jr.

# F.S.M.S. 2023 CHARITY Sporting Clay Shoot

### WHEN: November 3rd 2023 Check in 9a - 10a Clay shoot 10a - 1p Awards & lunch 1p - 2p

**WHERE: Talon Range** 550 Commerce Blvd, Midway FL 32343

# **REGISTRATION DEADLINE: October 27, 2023**

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Chad Thurner – (850) 200-2441 chad.thurner@sam.biz Melissa Seitzinger – (850) 566-5518 mseitzinger@bowman.com 2844 Pablo Ave, Tallahassee FL 32308



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