**Cheaha Mountain, AL, 2,407 ft. – September 1, 2020, HP #41: This short trail lived up to its reputation of being steep and rocky, and it also involved negotiating several downed trees.**

Cheaha Mountain was the fifth objective on my six highpoint 2350 mile trip which both started and stopped in St. Louis between August 29 and September 6, 2020. Up to this point in the trip I had taken in a few sites in and around St. Louis, then captured Taum Sauk Mountain, as well as Mount Magazine, AR, Driskill Mountain, LA, and Britton Hill, FL. Following Cheaha my plan was to visit Woodall Mountain, MS, and then take in a few site in Memphis, TN. After not being allowed to camp at Marathon Campground in the Bienville National Forest of Mississippi I had gotten ahead of my itinerary. As such I found myself at Cheaha Mountain a day early, namely the afternoon of September 1, 2020.

I arrived around 5pm and arranged for a primitive camp spot in the Civilian Conservation Corps (CCC) campground. After paying for camping, I was allowed through the gate of the Bunker Loop road and I drove to the summit to see the native quartzite stone observation tower named Bunker Tower, which occupies the highest natural spot of Alabama. The tower, like many things in Cheaha State Park was built by the CCC and dedicated in 1936. The tower rises approximately seventy five feet high on walls starting as thick as six feet. I was the only visitor but I only spent a few minutes as I planned to hike to the summit the next day.

After taking a couple photographs, I drove south through what I guessed was a picnic area turning left back onto Bunker Loop where I noticed a pool and restaurant on the right and a hotel on the left. From the country store/camper registration area I turned right and headed south down highway 281 for a couple miles until I came to Cheaha Road which leads to the CCC campground in another mile. I had been provided with a combination for the campground gate and once inside I found I was the only one registered for the night – awesome! This rustic campground is where the CCC resided when they were building many of the features of the park. The road was a bit washed out but I did manage to drive to my spot, only to decide to move to a different spot after worrying about a chance of rain. My original spot was at the bottom of hill and if it rained there was a good chance I’d get stuck trying to get back up the hill. As I moved spots in the dark, I heard a tree fall close by, which was thrilling however I didn’t see it.

The next morning, enjoying the peaceful solitude of the campground and with extra time on my hands I allowed myself a leisurely start to the day. It was after 9:00 am when I left the campground and drove the quarter mile to the adjacent Cheaha Lake also built by the CCC and completed in 1937. At the east end of the parking lot, just past the restrooms, I found the blue blazed Lake Trail that heads up the mountain in a north easterly direction. The blue blazed trail is only about three quarters of a mile long but gains over 800 vertical feet. This short trail lived up to its reputation of being steep and rocky, and it also involved negotiating several downed trees.  At the terminus of the blue blazed trail is a cliff area which offers some amazing views over the Lake, and the surrounding wooded mountains.

At this point I was still about eight tenths of a mile shy of the peak, so I connected with the Mountain Laurel trail (pink blazed), passing the old CCC reservoir with its rock dam and manmade falls, which led me into the upper campground a quarter of a mile below Bunker Tower. The old reservoir was built in 1934 to supply water to the park, however it is no longer used for that purpose. Cutting through the woods from the campground via the red blazed trail I quickly reached the highest point of Alabama. The slightly more than a mile and a half hike had taken me close to an hour and a half.

I had just reached the top of the tower when looking out the open windows I saw another party enter the building. Finding I preferred the view from the top of blue blazed trail, I soon headed back down pausing to taking in those views again on my return hike. On the return I located the stone marker labeled “Custodian” just west of the old reservoir wall. I walked the road from there to the parking area for cabins one and two. The CCC built at least ten cabins on the mountain that I assume are offered for rent today.

When I returned to the lake I discovered swimming was allowed which was a welcome way to refresh after a humid sweaty hike. Having the lake to myself I swam over to the diving platform. After jumping off the platform a couple times I swam back to the shore feeling clean and refreshed. After taking advantage of the restroom to change into clean clothes, I had lunch in the car before hitting the road in search of Woodall Mountain, Mississippi.

**Woodall Mountain, MS, 806 ft. – September 2, 2020, HP #42: It was hot and humid, and I felt anxious not sure if my sleeping location was foolish or not but I managed to sleep very fitfully for a while.**

It is 215 miles from Cheaha Lake to Woodall Mountain, MS, and I arrived at shortly after seven o’clock in the evening. I had used Interstate 20 west to Birmingham, which I was impressed to find nestled within wooded mountains. Interstate 65 and highway 157 (which becomes highway 72) got me to Iuca, MS. On the way, about thirty miles shy of the Alabama Mississippi border I noticed a sign for Muscle Shoals. Of course the line “Now Muscle Shoals has got the Swampers”, from the song Sweet Home Alabama came to mind, and because of that I really hoped I’d pass through the town, but my route bypassed it only getting me within three and a half miles of it. From the outskirts of Iuca it is just four miles to Woodall Mountain and signs from the highway 72 route 25 interchange pointed the way.

A 2007 article in the Mississippi “Daily Journal” claims the state of Mississippi was looking into purchasing or leasing up to two acres on the top of Woodall Mountain, however as far as I can tell it is still privately owned. A gravel road, which I found to be in good condition, arrives at peak from County Road 176. Along the gravel road posted signs announce the Tombigbee Hunt Club which owns the land encompassing the North Ridge trail. On the summit is a circular drive that loops around the Highpointers mailbox and bench, a summit survey marker, and a sizable rock with a plaque listing the elevation. The plaque also gives a short history lesson about the hill mentioning its name changes, and its civil war significance. Outside of the loop are several radio towers.

The website Summitpost states “one could probably pitch a tent or car-camp on the summit itself, however, it is unknown if this is expressly permitted or forbidden.” Since I found no no-camping signs, nor no no-overnight parking signs, I decided to do just that. There was a kid on a motor bike that kept coming around so I decided to postpone setting up my tent and to leave and return after dark. Returning I found a guy on his CB radio, so I drove back down a ways to see if another spot would be good for the tent. Finding no suitable spots to pitch a tent along the road I decided I to return to the summit and just wait him out. Upon my return the radio operator soon left, and I set up my tent within the loop in front of the rock with the plaque on it. It was hot and humid, and I felt anxious not sure if my sleeping location was foolish or not but I managed to sleep very fitfully for a while.

The next morning as soon as the sun was out, I packed up camp and tried to sleep a bit in the car (as the temperature was better) only to have a radio tower employee soon arrive at just after 7 am. At that point I decided to leave the mountain and drive down to where I had seen a view of it at sunset the day before. Reaching that spot I took a few photos then slept in the car for another hour or so.

Feeling a bit more rested I ventured into the town of Iuca to look around. I had seen a photo of a unique looking old Walmart and wanted to check it out. As it turned out it had been remodeled to look just like all other stores owned by the chain. My next point of interest was the Apron Museum which I found to be closed. From there I located the historic Mineral Springs Park, and drove over the covered bridge. I had hoped to obtain mineral water but didn’t notice a place to fill jugs.

From Iuca to Memphis is only 120 miles. ~~My plan was to check out the Chewalla Lake Campground in Holly Springs on the way, but I opted for a motel room instead~~. Since I had a motel room reserved for Friday in Memphis it seemed like a good idea to just head there and hopefully find vacancy at the same motel for Thursday - thus giving me two nights in the same room. Arriving at the motel I was happy to find they could accommodate me for the additional night. Watching TV and generally taking it easy seemed very appealing and I did just that only leaving my room to get some dinner at the Rock n Roll Café across the street from Graceland. Touring Graceland, Sun Studios, Lorraine Motel, and Beale Street were on my agenda for the next day.

**Campbell Hill, OH, 1,550 ft. – October 18, 2020, HP #44: I wandered down the north aspect of the well-manicured grass hill to get a better feel for the place.**

This trip I intended to reach the most highpoints I had ever reached on a single trip, namely seven, with the first those being Campbell Hill, Ohio. The hill is located about sixty miles from the John Glenn Columbus International Airport where I had arrived the day before.

Following a night in a motel close to the airport, I returned to the airport the next morning, October 18, 2020, at 7:30 am to pick up a rental car only to find the retailer didn’t open until 8 am. Being early allowed me to be the first in line, guaranteeing I began my day on schedule.

Campbell Hill had been owned by a Charles Campbell at the turn of the 19th century remaining in his possession until 1937 after which it was eventually deeded to the Federal Government at the dawn of the Cold War. The historical marker on the highpoint explains “In 1951, the federal government established the 664th Aircraft Control and Warning Squadron here as part of the North American Air Defense Command… this Cold War site operated until 1969.” Since 1974 a vocational school has used the grounds, and buildings.

Many information sources calm Campbell Hill reaches an elevation 1550 feet but the historical marker only claims 1549.09 feet.

By 9:30 am I had driven to Campbell Hill located on the outskirts Bellefontaine. A cop was parked at the school gate which must have distracted me as I drove by the entrance gate he was partial blocking. Quickly realizing I’d past the entrance I turned around and as I approached from the east another car approaching from the west, which I felt was a fellow highpointer, turned into the facility ahead of me. The other car parked just east of Building H, and I continued to the end of the road just west of Building H where there were parking spots in front of a both mentioning something about “Restricted Access”. Behind the booth was a silo looking structure. Clockwise from the silo was a pale blue building with three garage doors and an old school large satellite dish next to it. Next came a non-descript circular building followed by some more parking spots and several trees. Through the treed area to the north is a flag pole, the historical sign, a Highpointers bench, an official survey disk, and a granite plaque dedicated to the 664th Aircraft Control and Warning Squadron all occupying the highpoint of Ohio.

The single occupant of the other car reached the highpoint area before I did and I saw him take a selfie. Seconds later when arrived I offer to take his photo, but he politely declined nevertheless agreeing to take my photo. We chatted a bit about our high pointing history, and he was impressed that I had all the tough ones behind me. He informed me that already that morning he had been to the Indiana highpoint, and I replied that I planned to head there next. We didn’t exchange names. He did not linger and very soon I had the place to myself.

I wandered down the north aspect of the well-manicured grass hill to get a better feel for the place and next headed counter clockwise toward the silo. Close to the silo I noticed at its top an American flag was painted above the words “Top of Ohio”. Being fenced in, with barbed wire across the top of the fence lead me to believe the silo was the “restricted area”.

From the silo I returned to the highpoint and this time noticed a bricked in mailbox like container labeled “Highest Point in Ohio” on another side with a drawer labeled “Visitor Registration”. Below the registration drawer was a second drawer labeled “Points of Interest”. Nothing inside the points of interest caught my interest however I did register, and even obtained a certificate certifying I had stood at the highest point in Ohio - I just had to fill in my name and the date. Behind the Visitor Registration was a sign forbidding sledding for the public, which made me wonder if the students were allowed to enjoy sleigh riding here.

I was at Campbell Hill for around thirty minutes before following Sandusky Avenue west to highway 47 and past the Regional Airport. The farm houses along highway 47 seemed much taken in by the upcoming US Presidential election as many proudly displayed many flags supporting their candidate of choice. My quick passing through of Bellefontaine gave me the impression that it was a tiny town, however in reality it has a population of over thirteen thousand.

**Hoosier Hill, IN, 1,257 ft. – October 18, 2020, HP #45: There aren’t any sweeping views to be taken in.**

It’s about eighty miles from Campbell Hill, Ohio to the highest natural point of Indiana, and under two miles from the boundary between the two states. Hoosier Hill is located in the north east corner of rural Wayne County on flat farm land. The only variation in the landscape being random small patches of trees sprinkled in, here and there, making one wonder if the entire area was once wooded. In one such patch of trees, on a “hill” with no visible prominence to speak of, is a small boulder labeled “Indiana’s High Point, Elev. 1257 ft.” The boulder was placed there after the previous wooden sign was stolen, with the logic being a boulder would be tougher to remove or destroy. The highpoint is privately owned, but the owners allow and even encourage visitors. This landmark, is named after the states nickname, The Hoosier State.

I arrived just before one o’clock the afternoon of October 18, 2020, and was surprised to find another car at the parking area but pleased when the young couple belonging to the car decided to leave about the same time I exited my vehicle.

It’s only a dozen steeps from the car park to the engraved boulder. There aren’t any sweeping views to be taken in, and in fact there really isn’t much to see just the inscribed boulder, a Highpointers bench, a picnic table, and a mailbox. No survey monuments were visible.

One interesting fact, to Highpointers, is that Arthur Harmon Marshall the first person to reach the highest point in each US state completed the task on Hoosier Hill in July 1936.

I spent under 15 minutes at Hoosier Hill which mostly involved positioning my tripod to take a few photos of myself. At one point, with the timer set on my camera, I ran over and jumped up on the boulder, only to discover it was polished and slippery - no doubt from many others standing on it to be photographed - and my feet slipped. Fortunately I landed on one foot and one knee with no harm done. Had I injured myself it may have been the first for Hoosier Hill, as there is nothing dangerous nor challenging about this sight. On the next try, I did manage to photograph myself atop the small boulder.

Before leaving I signed the log book found inside the mailbox. After looking over my trip plan I headed to I-70 E which would take me past Columbus Ohio, where I had spent the previous night, and through Wheeling West Virginia before dropping down to the south east on highway 40 and over to Mount Davis road leading to the rooftop of Pennsylvania - my next destination over 350 miles away.

**Mount Davis, PA, 3,213 ft. – October 18, 2020, HP #45: The upper circumference of the sun appeared on the eastern horizon between a ridge line and below a band of clouds.**

I made it to the Mt. Davis Wild and Natural Area of Forbes State Park around eight o’clock in the evening October 18, 2020, and the sun had already set. Earlier that same day I had visited Campbell Hill in Ohio, as well as Hoosier Hill in Indiana. All these highpoints were part of a seven highpoint trip (with four more to follow Mount Davis). My schedule only required me to make it to the area, as my plan was to summit Mt. Davis the next morning.

I was slightly concerned that a sign said the park was closed after sunset, but since I was there, and no one was around I went ahead and wandered around a bit. Eventually I stumbled upon the Mt. Davis sign explaining that it was “a geologic feature” made of erosion-resistant sandstone millions of years old. In the dark, I couldn’t even see the 50 foot tower a few yards from the sign, but soon enough I stumbled upon that also. I couldn’t resist climbing the tower however no remarkable night views were offered from its top due to the darkness. Next I encountered the interpretive media plaques on the rocks a stone’s throw east of the tower. With all those things discovered I felt I had successfully reached my third highpoint of the day; definitely a record for me. Nevertheless I still wanted to return when the sun was up and have a better look around. So after fifteen or so minutes on the summit I drove away and found a covert place to park for the night where I could sleep in the car.

It was a chilly night, but I stayed warm. The next morning I was up before the sun returning to the observation tower with my breakfast to watch the sunrise. Close to 7:30 am the upper circumference of the sun appeared on the eastern horizon between a ridge line and below a band of clouds. I watched and waited for several move minutes hoping it would turn into something grand but alas I had to settle for mediocre.

Mount Davis is the 3,123 foot summit of Negro Mountain which it’s self is a gentle ridge spanning thirty miles with more of the ridge extending south west from the summit into Maryland than extends north east additionally into Pennsylvania. The name Davis references to John Nelson Davis, an early settler of the area, who is credited with surveying it. The origin of the name of the mountain isn’t clear as several stories compete. A common thread seems to be that a man of dark skin was wounded or kill on the mountain perhaps during a skirmish with Native Americans in an effort to protect his Caucasian comrades. One can still find the name Negro Mountain on US topographical maps, but more than once due to political correctness renaming of the mountain has been proposed. Additionally road signs with that name have been taken down over concerns of racial sensitivity.

With the sun fully up, I took in the 360 degree views and photographed the bronze cast map housed on the top of the tower, before descending the towers polished stainless steel stairs. Back on the ground I wandered around the highpoint finding two survey markers - one with an arrow and one without. The benchmark (without an arrow) is on the pinnacle of a rock just a few steps east of the tower, with the other marker further east and a bit south on a rock in the trees. After photographing the survey markers, as well as the plaques I’d stumbled on the night before, I was ready to move on. Wandering west along the south side of the old loop road, which was not open for driving, I took a short detour into the woods, but finding only trees I soon returned to my rental car.

Before leaving the summit area I drove over to and took in the view at the High Point Lake Overlook, then I headed west on Mt. Davis Road to US 219 north en route to the Flight 93 National Memorial just 35 miles away. As I descended Negro Mountain I passed two Amish single horse carriages going up the hill and I concluded this area of Somerset County must be Amish country.

**Ebright Azimuth, DE, 448 ft. – October 19, 2020, HP #46: I’d say I wore both my belt and my suspenders in Delaware.**

**See** [**http://www.peakbagging.com/Benchmark.htm?fbclid=IwAR1o\_8K9QTOKAhe2OrYeYdr2VQkmiMt85ns3wMz3XBTqGs-j\_lZrhjnSZes**](http://www.peakbagging.com/Benchmark.htm?fbclid=IwAR1o_8K9QTOKAhe2OrYeYdr2VQkmiMt85ns3wMz3XBTqGs-j_lZrhjnSZes)

A block from the Pennsylvania-Delaware border in Wilmington, and about thirty miles from Philadelphia, is place known as Ebright Azimuth marked by a blue sign located along a busy residential road. Ebright Azimuth is known as the highest land point in Delaware. Of all the fifty US State highpoints, this second to the lowest one, definitely can claim a first with having the most unusual name.

Where does such a mystical or celestial sounding name come from? Well, the first half of the name makes sense as when the land was initially surveyed (likely in 1933) it belonged to Grant and James Ebright, who I presume where brothers. But why “azimuth” follows as part of the sanctioned name, instead of something like hill, point, or mound doesn’t seem to be officially documented, and perhaps is not even known.

However, as I have pondered the name, I believe I have arrived at a very plausible theory, which might very well explain how the name came to be. Allow me to explain.

If you are familiar with a compass, you know it contains 360 degrees listed in a clockwise direction, and each of the numbers between 0 and 360 represent a direction. To express the direction of west, for example, we know that to be 270 degrees. Technically those direction numbers are called azimuths.

In land surveying there is something called an azimuth mark. To understand what an azimuth mark is, I’ll first need to introduce a few more terms from the world of surveying.

Have you ever come across a metal disk about three and a half inches in diameter set into a rock on the top of a mountain? Those metal disks are survey marks. A primary survey mark is a point on the earth for which an accurately measured location, either horizontally or vertically has been determined. Additionally other survey marks are disks which point to primary mark, and these are known as reference marks. Both types of marks use the same sized disks, made of either bronze or aluminum, and stamped with text, numbers, and a symbol.

Vertical control marks are those for which a measured accurate elevation above sea level has been determined, and they are stamped at the center with a crossed slash symbol. Disks stamped with an equilateral triangle symbol in the center are horizontal control marks and they pinpoint a spot for which the latitude and longitude has been accurately calculated. Reference marks are stamped in the center with a crossed arrow symbol. Reference marks are always set with their arrow symbol accurately pointing toward the primary mark.

Alright, armed with that background it is now time to explain what an azimuth mark is. Very simply an azimuth mark is a long reference mark. Unlike a normal reference mark which is typically located within thirty meters (one tape length) of the primary mark, azimuth marks are set typically between one quarter of a mile and two miles from the primary mark.

Reference marks, including azimuth marks, serve two purposes both of equal importance. First they provide a point from which a surveyor can locate a primary mark. Once the primary mark is found and the surveyor sets up his gear in order to make accurate measurements he needs a known point of reference, and that then is the second function of both types of reference marks – they allow the surveyor to know the exact direction in which he is looking.

Great, we now know what an azimuth is and what an azimuth mark is, so let’s get to my very plausible theory explaining how the name Ebright Azimuth may have come to be. I have concluded that the name “Ebright Azimuth” simply comes from the azimuth mark disk which can be in a cutout along the side walk of Ebright Road, a dozen or so steps south of the blue sign. I attest that in the beginning the highpoint was simply called Ebright, but because the disk was stamped Ebright Azimuth people read that and assumed it was the name of the high point, and that name has stuck.

**Why if the name is really Ebright, does the disk say Ebright Azimuth**? Well we will get to that, but first I need to start telling you about my visit to the highpoint of Delaware.

I arrived at Ebright Azimuth from the Pennsylvania side traveling to the south, and I didn’t detect any increase in altitude, as it was a rather flat drive through a suburban neighborhood. I don’t even recall seeing a sign announcing Delaware. I just knew that from the point I left PA-491 getting on Ebright Road my destination of the tee formed by Ramblewood Drive and Ebright Road would be six tenths of a mile in a mostly southern direction – or more precisely in terms of an azimuth six tenths of a mile at 196.0 degrees. At the tee was a three-way stop, with the blue “Ebright Azimuth” sign to my right, and Ramblewood drive a left turn. I made the left, and parked in front of the second house on the south side of the street, the local time was 2:30 pm.

I wandered over to the blue sign on the west side of Ebright Road, and took a photograph of the sign, which declares “**The highest bench mark monument in Delaware is located on Ebright Road. This horizontal control mark denotes an elevation of 447.85 feet above sea level. The Delaware Geological Survey through its relationship with the National Geodetic Survey has determined that this bench mark monument is in the vicinity of the highest natural elevation in the state**.”

Wow, what a confusing jumble of words that is! What bench mark, monument, horizontal control, or mark is the sign even talking about? Or is it the blue sign itself a horizontal bench mark control monument – if there is even such a thing, that I just made up to show how so many terms, which may or may not be interchangeable were used. In the vicinity – well how dare you, we all come here for the highest point, not the vicinity of the highest point. What in the world is going on?

Oh well, I didn’t let that silly sign bother me I just strolled down Ebright Road to the south, a dozen or so steps and found the azimuth mark disk I mentioned earlier. First thing to note about the disk is that it is factory stamped with the words “reference mark”. Hmmm, reference mark, so really it’s not a bench mark nor a horizontal control, but when placed it would have pointed to a horizontal control station. Second thing to note is, **as we are wondering about**, field stamped on the disk are the words “Ebright Azimuth”, separated by the factory stamped arrow. Third thing to note is the disk is lower than the sidewalk demonstrating that this area is no longer natural – remember survey disks are set in visible locations, and in the ground lower than the sidewalk isn’t visible.

So here is my theory as to why the disk says Ebright Azimuth and not just Ebright if that is the real name of the high point, as my main theory claims. Well that is simply given that the Ebright Road disk is not factory labeled as an Azimuth Mark, but rather factory labeled with Reference Mark, I’m going to assume the surveyor decided to include, and stamp, the word Azimuth, at the time he stamped Ebright, effectively denoting it an Azimuth Mark. Maybe in 1933 they hadn’t come out with the factory stamped Azimuth Mark disks yet, or perhaps he had run out of them and just made do with what he had. **When I get to the point where I explain where the O.G (original gangster) horizontal control station is this will all mark sense**. Bear with me for a moment, por favor.

Let’s consider something else first. What the heck is meant by the confusing wording on the blue sign claiming a bench mark, or horizontal control resides on Ebright Road? Could there another disk on Ebright Road that is an actual horizontal control mark stamped with (or at) an elevation of 447.85 feet? Unfortunately, I don’t think so because the arrow on the disk we have been talking about points perpendicular to Ebright Road in a more or less westerly direction, and for a horizontal control to exist on Ebright Road the arrow would need to point up or down the road.

Okay then it seems the sign really should read “THE horizontal control mark denotes” *(as in the horizontal control mark pointed to by the reference mark on Ebright road)* instead of “THIS horizontal control mark denotes”. Am I right, or am I right?

Alright back to my experience at Ebright Azimuth (as we like to call it). Well, first more background. Before my trip I had studied both World and US topographical maps of the area, and found the World topo marked a spot at 450 vertical feet in the mobile home park located about 650 feet west of the Ebright Road azimuth disk. Whereas the US topo contains a contour line of 450 feet extending across both Sulky and Alpha roads in the mobile home park. According to the World topo the 450 foot elevation spot is located on the south side of the second trailer on the east side of Sulky Road. I’d also read a theory claiming there is an elevation benchmark buried under one of the trailer homes.

Having located the blue sign, and the azimuth mark, next out of curiosity, wandered down Turf Road into the trailer park. From Turf Road I turned down Sulky Road, and from the street I took a photograph of the second trailer, wondering if a benchmark had been (or still was) located under it or not. For good measure I next made my way to the end of Alpha Road, figuring in the process I had crossed the 450 foot contour as shown on US top maps. With that out of the way my next hope was to locate a person by the name of Doreen Kupchick.

Ebright Azimuth and Doreen go hand in hand, she was instrumental in preserving the survey disk on Ebright Road when it was cemented over, plus she keeps a highpoint log book at her home. Returning to the vicinity of my rental car I made an educated guess and knock on the door of what I hoped belonged to her. Fortune was with me, as not only did I get the right door, but she was home. Donning my COVID mask explain what I was doing, and I asked to sign her highpoint log book. She asked if I had visited the sign and survey monument on Ebright Road, and when I said I had she said she would get the book ready but suggested that in the mean time I should head over to a second survey monument disk on Winterset road.

**Okay, we are getting closer to explain where horizontal control station is. Exciting isn’t it?**

Winterset road seems to be the Pennsylvania-Delaware border. I located the survey marker there on a concrete base sticking about a foot or more above the ground. ~~Nevertheless it is clearly lower than the landscaped yard on the edge of which it resides, as the yard slopes up from it, again showing that this environment is no longer natural.~~ It also is a reference mark, as it is factory stamped with an arrow. I didn’t look close but I think the arrow on it pointed west and not toward Sulky Rd in the trailer park.

~~Satisfied that I had already gotten as closed to the highest natural point as I could expect in a manmade environment like this, out of curiosity, nevertheless, I decided to wander down Turf Road into the trailer park. From Turf Road I turned down Sulky Road, and from the street I took a photograph of the second trailer, wondering if a benchmark had been (or still was) located under it or not. For good measure I then made my way to the end of Alpha Road, figuring in the process I had crossed the 450 foot contour as shown on US top maps~~.

~~Likewise, what is meant by “denotes an elevation” – does that mean it is stamped with an elevation, as horizontal controls can be but rarely are? The disk I found was not stamped with an elevation. Could possibly “denotes” mean it is at an elevation of 447.85 feet but without being labeled as such? Or could the blue sign mean there is an actual horizontal control mark on Ebright Road stamped with (or at) an elevation of 447.85 feet?~~

~~Given that the Ebright Road disk is not factory labeled as an Azimuth Mark, but rather factory labeled with Reference Mark, I’m going to assume the surveyor decided to include, and stamp, the word Azimuth, at the time he stamped Ebright, effectively making it an Azimuth Mark. Leigh mentions “Reference Marks were usually set within 30 meters (one tape length) of the station” and Azimuth Marks where “set about a quarter mile distant from the Triangulation Station”. In this case the Ebright Road azimuth disk is located about 300 meters (close to a quarter mile) from a likely Triangulation Station nowadays under pavement which will be explained further below. Being so much farther than 30 meters, might explain why the surveyor felt the need to add the word “Azimuth” to the reference mark disk. Being factory labeled as a reference mark clearly means the Ebright Road azimuth is pointing (or at least at one time pointed) to the “Ebright” horizontal control.~~

~~The disk has an arrow on it, pointing to the west – which means it is not a horizontal control but is pointing to one.~~

~~After all primary horizontal control stations were normally named after the property owner, or for a feature of the land~~.

~~Survey marks have text stamp in a clockwise direction around the outer edge of the disk. As such on both types of reference marks, using this text as guide, one can determine if the arrow is pointing to the left, right or up. Azimuth marks have their arrow pointing either up or to the left, whereas on normal reference marks the arrow points to the right.~~

~~Outside of the mountains the survey mark disks are often placed into a cement mound a foot or more above the ground, making them visible, and tough to steal, as surveyors need to be able to see them.~~

Survey marks are also known by various other names, such as monuments, bench marks, and stations. These names might also be proceed with terms like horizontal control, control, or triangulation – as in “triangulation station”. There are technical reasons for these names, but surveying is a complex discipline and terms end up being used interchangeably even if not strictly correct. For example, a bench mark is a point of precisely measured elevation, but some might call a reference mark a bench mark, since they are both marked with metal disks. Monuments concerned only with horizontal positioning are called horizontal control stations, or simple control stations. A Triangulation Station is a specific type of a control station having had its position determined by measuring distances and angles from other stations.

With that background laid, let us get to my very plausible theory explaining how the name Ebright Azimuth may have come to be. Bearing in mind the azimuth and azimuth marks definitions explained above, I have concluded that very likely the name “Ebright Azimuth” simply comes from the azimuth survey disk which can be found on Ebright Road, and conceivably in the beginning the highpoint was just called Ebright. After all, Leigh tells us that “triangulation Stations were normally named for an area feature or the property owner.”

Generally speaking a “Survey Mark” refers to any disk placed in the ground or attached to a permanent structure with measured latitude, longitude or height information. In other words, they are a location on the earth which has been accurately determined by geodetic survey. These marks are also referred to as Survey Monuments, and typically, at least in the USA, they are bronze or aluminum disks, about three or four inches in diameter, cemented into a rock or placed on a cement mound.

Survey marks fall into two broad categories, namely horizontal control and vertical control. As you might expect a horizontal control mark identifies a fixed latitude and longitude point, and these locations are called horizontal control stations, control stations, or stations. A vertical control mark is a measure of elevation, above sea level, of a fixed point. When a survey mark has a known elevation it can be called a bench mark. Although not technically correct bench mark is used interchangeably with survey mark. The purpose of survey marks are for making measurements from a defined point to establish boundaries and to base maps off of.

There is a specific type of survey mark which is known as an azimuth mark. BOTTLES, POTS, & PANS? – MARKING THE SURVEYS OF THE U.S. COAST & GEODETIC SURVEY AND NOAA by CDR George E. Leigh states, “Before the advent of GPS surveys, an Azimuth Mark was set near each Horizontal Control (HC) Station. Its purpose was to provide an initial azimuth for local surveyors beginning surveys at a HC Station.” ~~Leigh also informs us “most of these marks [Horizontal Control Stations] have at least an approximate elevation and some have more accurate elevations.”~~

A person who writes under the handle of “survey tech” on the website forums.geocaching.com explained Azimuth Marks very well when he wrote, “When a surveyor sets up his instrument on the station marker, he needs first to observe a point in a known direction, in order to have a frame of reference for the angles he will subsequently turn from the station. The azimuth mark serves this purpose, so when he points his instrument to it, he then knows the exact direction in which he is looking. The true direction from the station to the azimuth mark is given in the published data.” From https://forums.geocaching.com/GC/index.php?/topic/25074-azimuth-mark/

An azimuth mark, is a specific type of reference mark, and can also be called a long reference mark. Leigh explains that “Reference Marks were set to assist in locating the Triangulation Station”. A Triangulation Station is a specific type of a horizontal control station with its position having been determined by measuring distances and angles from other stations. The metal disks for Reference Marks, including Azimuth Marks, are factory stamped with an arrow in the center of the disk, and when they are placed the arrow is positioned to point precisely toward the primary station. Whereas the disks for horizontal control marks, including triangulation stations, are factory stamped with an equilateral triangle in the center.

~~“A horizontal control~~ **~~point~~** ~~is defined as any survey point whose position has been previously determined and is in the NGS Data Base, whose position is to be determined in an adjustment of the submitted HZTL OBS data, or whose(adjusted) position is available from another source.” See https://www.ngs.noaa.gov/FGCS/BlueBook/pdf/Chapter1.pdf~~

~~survey station means a survey mark over which survey observations are made in connection with land boundary surveys submitted to the Land Survey Authority under the Land Survey Ordinance or land boundary surveys carried out by the Survey and Mapping Office of Lands Department. It can be a trigonometric station, a traverse station, or a control station established by using GPS. See https://www.lawinsider.com/dictionary/survey-station~~

I get the impression surveying terminology and symbols have evolved over time as I haven’t found a lot well defined information, nor hard and fast consistency across my various limited readings. Keep in mind I have a very limited knowledge of the subject, and in fairness, my perceived lack of consistency may also just be my own lack of familiarity with the subject. Nevertheless, based on what I understand, and bearing the azimuth and azimuth marks definitions from above in mind, I have concluded that very likely the name “Ebright Azimuth” simply comes from the azimuth survey disk which can be found on Ebright Road, and conceivably in the beginning the highpoint was just called Ebright. After all, Leigh tells us that “triangulation Stations were normally named for an area feature or the property owner.” Furthermore the NGS Data Sheet for the Delaware highpoint, found at <https://www.ngs.noaa.gov/cgi-bin/ds_mark.prl?PidBox=JU3626> lists the designation as EBRIGHT, without the “Azimuth”. According to The DSDATA Format document found at <https://www.ngs.noaa.gov/DATASHEET/dsdata.pdf> “The designation is often called the ‘name’ of the mark.”

An example from the High Uinta Mountains of Utah backs up my belief where on the unofficially named “South Emmons” peak I found a survey disk factory labeled “Azimuth Mark” with an arrow pointing northeast and the word “Emmons” stamped parallel to the arrow. Mount Emmons, an officially named peak, is located seven tenths of a mile north east of “South Emmons”. Clearly the azimuth mark is associated with the primary horizontal control station on the official Mount Emmons where an elevation would have been measured.

“In the vicinity of the highest natural elevation” is about as good as can be expected for a residential neighborhood that has been excavated, landscaped, paved, and otherwise disturbed from its natural condition leaving a lot of questions as to what might be (or might have been) the exact highest point.

~~Strolling down Ebright Road to the south, a dozen or so steps from the blue sign, I found a survey disk in a cut out along the sidewalk which is clearly factory stamped with the words “reference mark”. The disk has an arrow on it, pointing to the west – which means it is not a horizontal control but is pointing to one. Non-factory stamped on the disk are the words “Ebright Azimuth” separated by the factory stamped arrow. The disk is lower than the sidewalk demonstrating that this area is no longer natural. An azimuth mark is meant to be visible from the primary station, as such it would have been so in 1933 when it was originally placed.~~

After my trip, I looked more into the confusion around what might be the highest natural point in Delaware and I came across the NGS Data Sheet for the Delaware highpoint. Which gives the position as “39 50 13.86151(N) 075 31 19.55007(W)” (or in decimal “39.83718, -75.52208”). Interestingly this could very well be in line with the way the arrow on the Winterset Road Reference Mark is pointing if the azimuth is 250 degrees, something I didn’t think to check during my visit. Also the NGS Data Sheet position is located about 40 meters (give or take 10 meters) from the Winterset Road Reference Mark. Conceivable if the Ebright Azimuth is actually pointing at 302 degrees, as opposed to the 270 degrees I had assumed (which points at it the second trailer on Sulky Road), it too would be pointing at the NGS Data Sheet position. Again, I didn’t measure the azimuth of the Ebright Road reference mark.

Additionally along the 302 degree line are ten or more mobile homes, and the NGS Data Sheet states under a 1979 entry “THE AZIMUTH MARK IS NO LONGER VISIBLE FROM THE GROUND, THERE ARE SEVERAL MOBILE HOMES ON THE LINE.” Furthermore, the NGS Data Sheet position is between the US Topographical map 440 and 450 foot contour lines – meaning it could very well be at 447.85 feet. However the NGS Data Sheet does not list an elevation.

The 1960 directions to the NGS Data Sheet position also appear to work, as they state “GO EAST ON NAAMANS ROAD FOR 1.0 MILE TO EBRIGHT ROAD LEFT. TURN LEFT ON EBRIGHT ROAD AND GO 0.6 MILE TO SIDE ROAD LEFT LEADING TO TRAILER COURT AND AZIMUTH MARK ON THE LEFT. CONTINUE 0.05 MILE TO PRIVATE DRIVEWAY LEFT LEADING TO MR. MERCHANTS HOME. TURN LEFT AND GO 0.1 MILE TO THE SOUTH SIDE OF MR. MERCHANTS HOME AND STATION.” Note also that the Ebright Road Mark in the directions is called the “AZIMUTH MARK”.

One more note from the NGS Data Sheet is worth mentioning, it comes from the 2015 section of the document, and it states “MEASUREMENTS FOR THE STATION MARK FELL UNDER THE PAVEMENT OF A PAVED PARKING AREA. REFERENCE MARKS 1 AND 3 AND THE AZIMUTH MARK WERE RECOVERED IN GOOD CONDITION. REFERENCE MARK 1 IS SET IN THE TOP OF A CONCRETE POST WHICH PROJECTS ABOUT 20 INCHES (51 CM) ABOVE THE SURFACE OF THE GROUND.” This proves to me the two survey disks I found where the Azimuth Mark on Ebright Road, and Reference Mark 1 on Winterset Road.

The question remains why do topographical maps include elevations of 450 feet, if the highest point is 447.85 feet? Also for how long have those maps shown elevations of 450 feet? These maps like are drawn correctly nevertheless the highest NATURAL point could still be lower than 450 feet if the land was built up to 450 feet during landscaping or road construction. Prehaps there is no longer a highest natural point. Why does legend claim a bench mark is located under a trailer, instead of under the pavement of a parking lot? Why don’t other sources on Ebright Azimuth mention the NGS Data Sheet location? What is the elevation of the NGS Data Sheet location? Was the NGS Data Sheet location ever intends as, or does it ever claim to be the highest point in Delaware?

All that said, I still concluded that “in the vicinity of the highest natural elevation” is about as good as can be expected for a suburban neighborhood area clearly no longer in its natural state. That is probably why the High Point club recognizes the blue sign by the road as the highest point of the state – there doesn’t seem to be any other point which is clearly more likely, even if the blue sigh has been moved from originally being on the east side of Ebright Road, to today being on the west side. “…has determined that this bench mark monument is in the vicinity of the highest natural elevation in the state” probably because not natural point any longer exists in this urbanized area.

Following the jaunt to the PA/DE border I returned, as instructed, to sign the log. After I signed the book, Doreen gave me some literature about Ebright Azimuth. One of the articles explained how a Paul Zunwalt surveyed the area and found a spot on the north of Turf Road at the first trailer measuring 450.85 feet above sea level. However, he felt it was manmade and not natural. Paul also lists what he calls the “Ebright Azimuth benchmark” at 447.85 feet – all assume that is the Ebright Road Azimuth we have talked so much about. Another article by Don Kjelleren explained, and debunked eight of nine claimed Delaware highpoints around Ebright Road and concluded a 447.85 foot spot (apparently ~~192' west of the sign by Ebright Road see striked out paragraph below~~ presumable at or near the Ebright Road Reference Mark) is the highest natural spot. Neither Paul nor Don mentioned the spot under the pavement listed on the NGS Data Sheet near Winterset Road, as perhaps its elevation is much lower.

~~From FB 50 State Highpoints group 10/31/2020 John Mitchler wrote “DELAWARE - The HP club recognizes the sign by the road. Paul Zumwalt's survey found 448.25' under the sign, 447.85' BM across Ebright Rd at entrance to trailer park, and 450.85' east-most trailer. John Garner's laser survey determined the highest ground is between the road and trailers. Don Holmes found a 1935 topo map showing a 450' BM at the state line marker 17. And Don Kjelleren compared 9 candidate areas and guarantees the HP is on Turf Road, 192' west of the sign by Ebright Road (which matches the surveys of Garner & Zumwalt). LiDAR analysis shows highest ground in the trailer park, however, vintage photos clearly show the trailer park land is mad-made so there's no reason to go further west on Turf Rd beyond South Ellis Rd.”~~

Before discovering the NGS Data sheet I personally felt it very reasonable that a primary horizontal control mark at 450 feet is likely under the trailer house on Sulky Road as legend claims. However after reading the datasheet, I now find that to be highly unlikely. Also unlikely, but possible, is that a vertical control mark at one time was located near Sulky Road, giving us the 450 foot elevations mentioned.

Having reached the recognized highpoint of the Blue Sign on Ebright Road, as well finding the two visible reference marks (Ebright Road, and Winterset Road), and having walked on the 450 foot contour found on topo maps I’d say I wore both my belt and my suspenders in Delaware.

Leaving the area around 3:30 pm I headed south on Ebright Rd to Naamans Road and did notice a drop in elevation on that side of the highpoint. After a short break at local shopping center, where in the parking lot I looked over my seven highpoint trip notes, I decided to head to High Point State Park NJ that same day, and hoped to find camping spot there.

**High Point, NJ, 1803 ft. – October 20, 2020, HP #47: I’d say I worn both my belt and my suspenders in Delaware.**

By the time I got on I-95 in Wilmington DE, which would soon take me to I-476, it was close to 5pm, and the commuter traffic was heavy. Reaching Easton PA, around 6:30 pm, I stopped for a rest and a burger. From Easton I got on 33-North to 209-North and after 45 miles I entered the Delaware Water Gap National Recreation Area where 209 parallels the Delaware River which forms the border of PA and NJ. On this twenty or more mile stretch of 209, through the Delaware Water Gap, before reaching highway 206 at the Milford Bridge Toll Plaza, I kept my eyes open, even though it was dark outside, for a place to stealth car camp, but nothing stood out to me. I used highway 206 east to cross the river and enter New Jersey then I took Clove Road north to Highway 23 and into High Point State Park, where I happened upon Sawmill Road and the campground at Sawmill Pond. Must have been around 9pm or 9:30 pm when I decided on camp spot 49. It had been a full day which started with watching the sunrise at Mount Davis, PA, followed by a tour of the the Flight 93 National Memorial, plus a 200 plus mile drive to the highest point in Delaware - before making this four hour drive. Since it wasn’t hot nor humid, I opted to simply fold down the back seat of my rental SUV and sleep in the back of the car.

I woke up at sunrise the morning of October 20, 2020 and headed directly to the highpoint. This time of year (or maybe because of COVID) the entrance fee both at Scenic Drive was unmanned and a sign said entrance was free. I stopped at the parking area at Lake Marcia and had my breakfast before heading up to the highpoint. Must have been almost nine o’clock in the morning when I finally reached the fogged in highpoint of New Jersey. Not one other car in the parking lot, and not a soul around.

I thought New Jersey was going to be an unattractive high point, but it turned out to be very nice with a wonderful, remote and outdoorsy vibe to it. Thanks to the thick fog I didn’t get to see much from the top of the Kittatinny Mountains but I still really liked being there. Apparently on clear days two additional states can be seen from the top, namely New York, and Pennsylvania.

The 220 foot monument on the summit, built in 1930 to commemorate war dead, was not open to the public due to the pandemic so I wandered around it and found two survey disks, one 100 yards from the front door, and another 20 yards behind the monument. After a half hour or so I returned to the parking lot then drove over to where the old mansion on the hill used to be across from Lake Marcia. After looking around there, next I drove the scenic drive loop stopping to hike up to the Appalachian Trail Observation Platform where again the weather blocked the views. The Appalachian Trail does not cross the New Jersey highpoint forcing AT hikers to take a five mile or so detour to the summit monument.

Ten miles from the highpoint in Port Jervis under a bridge on I-84, at the confluence of the Neversink and the Delaware Rivers is where New Jersey, New York, and Pennsylvania meet. I guess technically the tri-state corner is in the Delaware river, but there is a monument under the bridge which was a bit tricky to find as there is another cemetery a couple blocks away called St. Mary’s which I first noticed. At St. Mary’s a fellow there told me I had the wrong one and needed to go across the street and down a block or two to Laurel Grove, and then drive to the I-84 Bridge. When I arrived there was a couple there, each with their own car, obviously trying to have some stealthy romance and they were obviously put off by my arrival. I told them I’d just be a few minutes, but they soon left. At the confluence of the two rivers I found two monuments, the first was one for the border of New York and New Jersey, and the second (closer to the water) was the tristate marker.

From the cemetery I detoured north west a few miles on highway 97 to a section of that highway called the Hawks Nest. Route 97 parallels the serpentine path of the Delaware River at one point it rises on to the shoulder of the hill west of the river providing pleasant view down to the river. This five or so mile stretch of highway offers a twisting, rolling ride, and has been featured in ads for Porsche, BMW, Saab, Cadillac, and Honda.

Following that quick detour I jumped on I-84 and headed east to US-44 and the town of Salisbury CT about 100 miles away.

“This 'hobby' certainly is a long term pursuit. For many it comes and goes to accommodate life's ups and downs. As Loren Mooney said, at a certain point we stop counting how many we've done and we start counting how many we have left to do.”