

# Historical Insights about Lead (Humpback) Mountain

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## **Introduction**

This document was compiled to provide some insights about the history of Lead Mountain. As you will read, Jefferson Davis used Lead Mountain for a relaxing place to recover from illness. John Marin, an artist who spent time in Maine, used Lead Mountain for inspiration to paint. The mountain was also an important location used for triangulation to help survey the coast of Maine, and markers from that activity still grace the summit. Lead Mountain has been used and enjoyed by many in the past and it is interesting to see what went on there before the days of BBWM research.

### **I. Jefferson Davis (1808-1889)**

**Background:** (Information summarized from source 4)

Jefferson Davis was born in Kentucky in 1808 but soon moved to Mississippi for the majority of his life. He was the first President of the Confederate States of America (1861-65) and later served as the Senator of Mississippi among other respectable positions. In 1858, Davis grew very ill and was advised by his doctor to go north to recuperate. He traveled north to Humpback Mountain, now called Lead Mountain to visit Alexander Dallas Bache, a good friend who was working on the coastal survey.

**The following is an excerpt from *Jeff Davis' Last Respite* (3). The selection below describes Davis' illness and why he retreated to Lead Mountain. It gives a description of his wife, Varina Davis, and his friend, Alexander Basche, who he went to go visit.**

During winter of 1858, Jefferson Davis, who had suffered serious health problems (including malaria) in the past, became very sick. Stress and the heavy speaking load all brought on by the country's sectional difficulties were attributed to bringing on this almost fatal illness. In fact, his speaking load in Senate was so intense that he suffered a facial paralysis. By the end of February, Davis was so seriously run down that he caught cold which went into laryngitis then neuralgia of the left side of his face and badly inflamed his left eye. He lay

for weeks in a darkened room unable to speak or see with the pupil of his left eye actually so painfully swollen that his own doctor thought it would burst. (Strode, 301-303)

Varina Davis nursed her husband relentlessly; Davis later attributed her care with saving his vision and probably his life. This was a difficult time; she had two young children of her own. At the same time Varina's very young brother and her husband's namesake, "Jeffy" Davis Howell (born while Davis was fighting in Mexico) was living with the Davis' family and became seriously ill with scarlet fever. She nursed little Jeffy up stairs in the same house where she also desperately tended her husband downstairs. For the family it was a desperate time. It is a tribute to Jefferson Davis that many and various men sat at his sick bed including not only all manner of southerners but also Lord Napier, a British diplomat, and William Seward and Edwin Sumner from the northern opposition. These men not only kept him company but also read aloud to him and wrote for him.

**Ordered by his doctor "to a higher latitude for a month or two,  
after the adjournment of Congress." Theberge**

Later in the spring Davis began to return to the Senate, much emaciated, for at least an hour each day. His physician prescribed a sea voyage or a trip to a northerly cooler climate to improve his appetite and speed his slow recovery. When Congress adjourned, the Davis family thought to visit friends, particularly Franklin Pierce, in Europe but this seemed too much for a man in Davis' weakened condition. Instead the family chose ... Maine? But, why would this consummate Southerner choose to visit the bastion of his opposition, New England, at a time when sectional strife had risen to such a state of distress?

Historians have hypothesized that Davis, in his trip through the North, wished to scout out the true feelings and opinions of the opposition. Perhaps he was even planning to run for the presidency in the next election and needed to scope out support. This seems a bit calculating for a man so recently pulled back from the grave, but as a bonus this information gathering would not be out of the question during a recuperative vacation. In a letter to Franklin Pierce, Davis made it clear that he could not risk a return to his Mississippi home that summer for fear of exposure to malaria (Strode, 305). Perhaps Davis was just following orders from his physicians to seek recuperation in a cooler climate.

One particular friend, Alexander Dallas Bache, may have led the Davis family to finalize the location of their vacation to Maine. Bache, the great grandson of Benjamin Franklin, was engaged in scientific experiments for the US Coastal Survey in downeast Maine that summer. In fact, it was their fast friendship from West Point days that first got Jefferson Davis up out of his sick bed earlier that spring. Davis returned to the Senate above the objections of his wife and doctor to address the Senate on an appropriation for the Survey saying, "I must go if it kills me. It is good for the country and good for the friend of my youth" (Strode, 304).

**"... the medium through which Maine tenders an expression of regard to her sister Mississippi."**

Jefferson Davis to his serenaders (Strode, 307)

The high point of the Davis family's Maine vacation was their visit to Dallas Bache's summer survey camps in Hancock and Washington counties. This was the second time they had made such a summer pilgrimage with Bache; the first time was a few years previous in the White Mountains of New Hampshire. The work of the US Coast Survey was highly exacting and would result in very accurate measurements of the countryside and distances as well as positioning of places on the map. This kind of work was becoming critically important in the modern world of the 19th century economically, militarily and scientifically. Thus scientists and engineers, like Bache, were willing to exert tremendous brain power and effort to inventing mapping solutions while businessmen, leaders and politicians, like Davis, were willing to pay for these solutions.

In August the Davis family set out to join Bache at his survey camp far eastern Maine. They traveled by rail to Bangor and, in what was a two day trip, proceeded east by stagecoach and spent a night at an inn on Shoppe Hill in Aurora. Throughout this portion of their Maine vacation, Varina Davis was charmed by the natural landscape and wonders from Maine's glacial past. She wrote of the trip across a glacial esker, "We drove nine miles over a most wonderful natural road, called by the country people 'horseback,' elevated over sixty feet and sloping steeply down on each side to the valley which it intersected, like a levee built by Titans. Interspersed throughout the rich valley on either side, in the lush green grass, were the most enormous boulders of granite, many of which looked like Egyptians tombs. As there was no stone of the kind underlying the soil, Professor Bache thought they had been left there by some great flood." (Davis, Theberge) The Davis party then journeyed by ox

drawn sled up a substantial supply road built by survey engineers to the summit of Humpback Mountain

Varina Davis, in her memoir, described the camp on Humpback Mountain as follows, "white tents pitched one for each of us, an excellent cook, tenderloin steaks from Bangor, vegetables from the neighboring farms, and to all this comfort was added the newest books, and an exquisite and very large musical box which played 'Ah, cher la morte,' and many other gems of the then new operas of Verdi. Professor Bache, who could not sing a tune, kept up a pleased murmur of musical accompaniment as an expression of his delight." (Davis, Theberge)

*...further down in the text...*

Varina Davis commented on the lack of the insect noise to which Southerners were accustomed saying, "The fall of a leaf could be plainly heard, and it seemed to afford relief to Mr. Davis's exacerbated nerves, after the noise and bustle of Washington, to stay in this secluded place where he could be a lotus eater for a while." As a woman who very nearly lost her husband to a devastating disease only months before, Varina Davis must have been overcome by relief. Now she wrote that they spent their time almost frivolously looking "for numerous signs of the glacial period, reasoned and wondered over them, picked up 'ghost flowers' and found exquisite mosses, sometimes a foot deep, of velvety green. Mr. Davis took our little girl with us on his shoulder, and did all the things so joyful to towns-people on an outing in the country. So health came back to his wasted form...." (Davis, Strode, or Theberge)

Humpback Mountain where the Davises visited Bache is now known as Lead Mountain and sports a fire tower. The road the Davis family climbed in an ox drawn sled is known locally as the Jeff Davis Road, or as the NOAA historian Capt. Albert Theberge dubs it "the Jefferson Davis Highway". It must be the only road named for the Confederate president outside the South. The Horseback is part of the same esker system as the Whaleback and remains just as Varina Davis described. Travelers today can find a similar and easily accessible experience by driving the road across the top of the better known Whaleback and on down to Calais on the renowned "Airline". The baseline up on Epping Plains also remains visible today. In fact, it is the last of the baselines on the east coast to remain visible although it is somewhat overgrown in spots. Some of the granite intermediary markers are still visible as are the marble markers at each end of the road. The west end marker has reportedly been vandalized. "The truly amazing

thing about Bache's measurement" according to the Milbridge Historical Society website, "was that when it was checked in 1991 by a team of professional surveyors using GPS (Global Positioning Survey), it was found to be accurate to within one centimeter--less than one half inch." Amazing what careful scientific observation can accomplish even without modern highly technological geegaws!

**This excerpt is from the book *Jefferson Davis Unconquerable Heart* (1). This passage explains their journey north, describes their camp on Lead Mountain and how they spent their time.**

Another sincere religionist, Dallas Bache, summoned the Davises from the clambakes and excursions of Portland to Mount Humpback and his "party of triangulation." (Davis explained this as "series of triangles" used to fix "a parallel of latitude.") After Pierce's alma mater, Bowdin College, had given Davis and honorary degree, the family took a train to Bangor and then set out for the wilds. One dawn at an inn, Davis went into fits of laughter as he spied from the window a very large man in a "long, figured calico dressing-gown," mounted on a cart, tossing out shelled corn, and making a political speech to the assembled chickens, turkeys, geese, and ducks. This "merry mountebank," seeing Davis, made a deep bow and said to the fowl: "Fellow-citizens, allow me to present one more able and more eloquent than myself. Hear ye him." Illness had not quenched the Davis sense of humor.

Varina tells how they took an elevated "natural road," past "lush green grass" and gigantic granite boulders, to the foot of Mount Humpback. Then an ox team drew the family on a sled up the steep side, with Davis rebuking the driver many times" about goading the oxen. At white tents "on a plateau near the top," they found Bache, that "healthy and hearty lover of life" with: broad, perpetual humor in his countenance," and his wife, Nancy. He provided tenderloin steaks, his favorite Rhine wine, "the newest books," and "an exquisite and very large musical box which played 'Ah, che la morte,' and many other gems of the new operas of Verdi."

Searching out glacial deposits, Jeff and Varina "reasoned and wondered over" them – probably because of the controversy that had sprung up between geology and religion. (Varina once spoke of a time as long "as the Geologists say God's six days were.") The scientist Bache saw no conflict. There were merely new ideas about "the law which ministers the will of Him who made all things and us": "Who would be so indiscreet as to hinge his religions faith upon changeable, progressive science?" By day, Jeff would hike around with Maggie on his shoulder, or he would listen to Bache, who explained his methods as he worked. At night, he would read aloud to them, and they could perhaps see the

“splendid comet that flaunted across the sky that summer.” Jeff was supremely happy in this secluded place where “the fall of a leaf could be plainly heard.” His health and sight improved every day – compensation, as it were, for his long support of Bache in the Senate and in the squabble of control of a New York observatory.

**This letter was taken from *Jefferson Davis Private Letters 1823-1889* (6). It is a letter from Varina Davis to her mother when the Davises were spending time at Lead Mountain. It describes their time spent there from Varina’s view and also mentions their children who accompanied them.**

The Davises had taken the two children with them to Maine. Davis, who had gone “down East” to recuperate from a serious illness in which he almost lost his eyesight, is feted and makes speeches at the State Fair and on several other occasions. He speaks twice in Portland, reviews troops at Belfast Encampment, and accepts an honorary Doctor of Laws degree from Bowdoin College.

Humpback Station, Maine  
Sept 15<sup>th</sup> 1858

My dear Mother,

I received your letter on the eve of starting for Professor Bache’s camp – it being the first since the first week I arrived in Portland, and that was the only one since a letter written after Jeff’s sickness.

Upon the whole I have had as nice a summer as I could expect – the pleasantest part of the summer has been this under canvas. We have quite an encampment here and nice living as ever I saw, the best mutton, and the best chickens, and elegant cooking. We are three miles or twelve hundred feet above the surrounding country in quite a wild district, and we see from the top spur of the mountain over eighty miles. The mountain is only approachable to ladies by a wood sledge drawn by oxen on which we accordingly came up, Mrs Bache & I – the next day the children. We had the equinoxial gale here, but though trees were blown down all around us, we had no accident. The encampment breaks up tomorrow and we will all go down to Portland again. From there we will go through New York to Philadelphia where we will see Uncle Joe Howell, and take up the children, and go home – for their holiday, and winter outfit. I enclose a

letter from Mr Chetwood, Jeffie's teacher, and his report, which I will remit to you regularly.

I have been begging Jeff so hard to let me go south with him this fall, and leave the children. He does not say yea or nay. If he goes before Jeffie & Maggie's holidays are over, I must of course give it up, Maggie is quite too womanish to be left alone. In this weary pilgrimage I am never more to do as I please.

Your devoted child  
V. Davis

## **II. John Marin (1870-1953)**

### **Background:**

**This information was taken from *Art Exhibition October 2, 2003- January 17, 1004*, an article from the UMaine news (9). The first paragraph is a brief summary of his life and works. The second paragraph is a quote from the article.**

John Marin was born in Rutherford, New Jersey. He traveled to Holland, Italy, Paris and England for six years to study art before moving back to the New Jersey. He spent many summers in Maine and produced many paintings of the towns and landscapes. He mainly used watercolor and oils.

“Marin recorded the movement of the sea, of course, but he also saw hills, trees, and rocks as dynamic forms. He would travel up country to places like the Tunk Mountains, Centerville, and Beddington in search of new subjects. In paintings like *Lead Mountain, Beddington, Maine*, 1952, he accentuates the rugged landscape with force lines, conveying the essence of the place as he experienced it, an experience that went beyond optical perception.”

**The following two paintings are of Lead Mountain done by John Marin in the 1950's. They were found in two separate books (sources 2 and 5) in the Special Collections part of Fogler Library.**



## Source 2

1441 **MOVEMENT. LEAD MOUNTAINS, NEAR BEDDINGTON, 1950**

Oil on canvas 25 x 30

Private Collection

(Illustrated)



## Source 5

52.28 LEAD MOUNTAIN, BEDDINGTON, MAINE (ns)  
Watercolor on paper. 14 1/2 x 19 Lower right: Marin 52  
Reference: AAA Microfilm, ND33, frame 446  
Estate of the artist



### III. The use of Lead Mountain for Triangulation in the Maine Coastal Survey

This article was in the August 2007 *The Working Waterfront* newspaper (7). Although it is not specific to Lead Mountain, it explains the history of the Geodetic Survey and mentions that Lead Mountain was used. It was written by Catherine Schmitt, a Science Writer at the University of Maine.

**Lead Mountain was part of the Coast Survey.**

*Before surveyors could chart depths, they had to fix heights*

by CATHERINE SCHMITT

On the coast of Washington County, a small hill rises between Pigeon Hill Bay and Dyer Bay. The 317-foot summit is marked by a cairn of stones; beneath the stones is a copper bolt driven into the exposed granite, marking an 1856 visit by the Survey of the Coast, the first scientific agency created by the U.S. government.



**The familiar Coast and Geodetic Survey disks are often set into granite on hilltops.**

*photo: Catherine Schmitt*

The Coast Survey is the predecessor of the National Geodetic Survey, which today is part of the National Ocean Service, an office of the National Oceanic and Atmospheric Administration (NOAA). NOAA also includes Sea Grant, the National Marine Fisheries Service, and the National Weather Service. NOAA is commemorating the 200th anniversary of the Coast Survey throughout 2007.

Two hundred years ago, there were no roads, no highways, no extensive rail network. Shipping occurred via the coast, which also hosted a huge commercial fishing industry and provided the route for foreign trade, correspondence, and travel. Yet despite the importance of marine navigation, few charts were available and shipwrecks were common. Finally in 1807 President Thomas Jefferson created an agency to provide nautical charts for America's growing ports and busy coastline.

After a delay caused by the War of 1812, the first work of the Survey of the Coast began in the Hudson River Palisades region of New York. By 1850, survey parties had reached the southern Maine coast.

Surveyors needed to use a common reference system so that maps and charts would align with one another, and they also had to establish known positions on land before they could position survey vessels at sea to measure the water's depth. The early work of the Coast Survey involved scouring the coast and inland regions of Maine to establish these reference points and continue the survey that began in New York and arched south and north along the East Coast, in what's known as geodetic surveying. Vertical reference points, or benchmarks, for elevation were placed on the coast, relative to sea level. Only after benchmarks and horizontal control points called triangulation stations were established did the Coast Survey begin hydrographic surveys, mapping the shoreline and charting the bottom of rivers and harbors.

Because the survey covered such a large area, the curvature of the earth had to be factored into distances and angle measurements. A wide variety of techniques are used in geodetic surveying, including triangulation and astronomical observations for determining latitude, longitude, and direction.

An ambitious young scientist of the time would have had few permanent landmarks to use in orienting any map — there were islands, mountains, lighthouses, churches. Inland triangulation stations often followed high ridges to assure developing lines of sight of 20 to 40 miles between stations. If the angles between three points were known, and the distance between two of the points was known, then the distances to the other points could be calculated — basic trigonometry applied at a landscape scale. The mountains in Maine were well-positioned for triangulation, and stations were established on high points along the coast as well as the more inland hills of Mount Pleasant, Mount Blue, Mount Harris, Thomas Hill in Bangor, and Bald Mountain in Dedham.

Once stations were selected, permanent monuments were placed at the site — a hole drilled in granite, a copper bolt driven into ledge, a buried brick. Later markers would employ a cast brass disk stamped with the station's name and observation date. A distant observer would make angle measurements between the new station and an established one, pointing a high-precision telescope on a distant target called a heliotrope that uses a mirror to reflect sunlight in a precise luminous point visible from miles away.

A "lightkeeper" would stand on top of Pigeon Hill with the heliotrope, reflecting the sun's rays back to another surveyor in Mount Desert, Beddington or Bucks Harbor. Sometimes mountains were observed from great distances; Peaked

Mountain in Clifton (known locally as Chick Hill) was observed from Mount Blue, over 92 miles away.

“No one today would suspect the enormous effort of surveying, mapping, and charting that went on in Victorian Era Maine,” says survey historian Harold Nelson with the Maine Department of Transportation’s Property Office.

Much of this work was carried on under the direction of Prof. Alexander Dallas Bache, who was appointed superintendent of the Coast Survey in December 1843. Born in Philadelphia in 1806, Bache was the great-grandson of Benjamin Franklin and a graduate of West Point. He served three years in the Army Corps of Engineers and then taught natural history and chemistry at the University of Pennsylvania. During his term with the Coast Survey, Bache helped form the National Academy of Sciences and serve as its first president.

Other notable Coast Survey employees from this period included Alexander Wadsworth Longfellow, brother of Maine’s poet Henry, who ran a topographic party in the 1800s and even used the chimney of the family home in Portland as a triangulation site, according to Nelson.

Under Bache, the Coast Survey progressed eastward, monumenting Ragged Mountain, Isle au Haut, Mount Desert, and Pigeon Hill. Crews then ventured inland through the sandy barrens and granite promontories of Downeast Maine, laying a baseline in Epping Plains and marking the summits of Tunk (“one of the most inaccessible stations on the coast of Maine”), **Humpback (Lead) Mountain**, and Cooper Hill.

At Calais, a temporary astronomical observatory was built for determining longitude: using telegraph wires, observers recorded the time span between when a star passed over Calais and when the same star passed over Bangor, the next astronomical station to the west. Since the earth rotates 360 degrees each day (24 hours or 1,440 minutes), the time difference between the two observatories reveals how many degrees separate them...and so time becomes space.

“Bache knew that at some time there would be a telegraph connection across the Atlantic, so he pushed the longitude network eastward, Harvard to Bangor in 1851, Bangor to Calais in 1857,” says Nelson. With the successful laying of the Transatlantic Telegraph Cable in July 1866, the Coast Survey sent men to Calais, Newfoundland, Ireland and Greenwich, England, to make the longitude

connection complete between Greenwich and North America. On Dec. 16, 1866, observations of stars passing above Calais completed the connection work. It is to geodetic surveying and mapping what the “golden spike” was to the railroad, says Nelson.

Today, the remains of the observatory can be viewed in downtown Calais, across from the Dunkin’ Donuts, on a small, park-like hill. Atop this hill is a tall granite post that local kids call The Chimney. In July 2005, NOAA set a commemorative survey disk at the observatory site, marking the first site in NOAA’s Heritage Trail.

Throughout the 1900s, survey crews would revisit old stations, and their notes read like an epitaph of the Maine landscape, as fields became forests and pastures disappeared beneath pavement.

The station at Mount Agamenticus was established in 1847. Over the next half-century, the station became surrounded by trees, and a new, visible mark had to be placed by 1908. In 1943, a military reservation “of considerable size” occupied the summit, by 1965 the mountain had become a ski resort, the military radar tower replaced with a parking lot. Holman Point, near Fletcher’s Neck in Biddeford, was established in a rocky pasture field in 1868 but a golf course erased it in the following century. Butland Island was marked in 1867 with an upside-down glass bottle sunk in the ground and a pile of stones; by 1928 the land was “covered densely by modern buildings.” Such was the fate of many southern Maine survey stations. At Seal Head Point, the station mark was placed in 1851 near “a lone elm tree, which is visible from a great distance;” 100 years later both the elm tree and the mark were gone. Another mark became the site of Bucks Harbor Air Force Station and was covered by a radar dome. Stations in church steeples and hotel cupolas were lost when buildings burned or were torn down. Other marks simply were never found again.

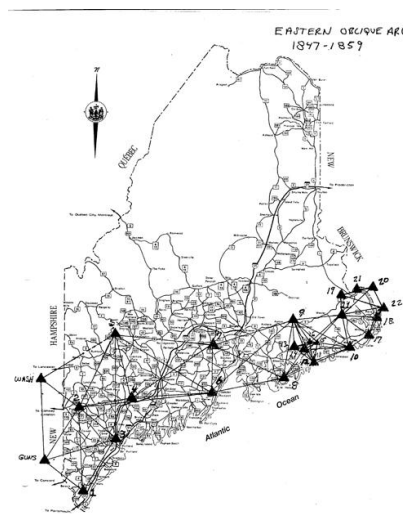
Many the 1850s survey marks that survived became part of the National Spatial Reference System, a national geodetic control network managed by NOAA that provides today’s surveyors and navigators with a consistent coordinate system for position (latitude and longitude), elevation, distance and direction between points. Modern technologies of Global Positioning Systems allow one point to be used for both position and elevation, says Curt Crow of the National Geodetic Survey, but GPS and satellites would be useless without the comprehensive foundation of maps and charts established by the Coast Survey in the 19th

century. Today's nautical charts retain many of the same characteristics and coverage as the Coast Survey's earlier editions.

The Coast Survey is responsible for our red-right-returning buoy system, as well as many other notable feats, including the discovery of Stellwagen Bank and Nantucket Shoals and the first major study of the Gulf Stream.

For anyone who uses nautical charts or a handheld GPS unit, the work of the Coast Survey is worth more than just a passing acknowledgement. They were the true chroniclers of the coast of Maine, back when man followed the stars to determine the hour, and climbed mountains to understand his place in this world.

*Catherine Schmitt is a science writer with the Maine Sea Grant College Program at the University of Maine.*



Picture from Source 8

Appendix: National Geodetic Survey (Lead Mountain Survey Points". 2007. National Geodetic Survey.)

Since the early 1900's, Lead Mountain has been used for triangulation in what is now called the National Geodetic Survey. Inserted below is the survey history for Lead Mountain.

PE1692

PE1692 DESIGNATION - HUMPBACK RESET  
 PE1692 PID - PE1692  
 PE1692 STATE/COUNTY- ME/HANCOCK  
 PE1692 USGS QUAD - LEAD MOUNTAIN (1987)  
 PE1692  
 PE1692 \*CURRENT SURVEY CONTROL  
 PE1692

---

PE1692\* NAD 83,(1996)- 44 51 50.24323(N) 068 06 35.68469(W)  
 ADJUSTED  
 PE1692\* NAVD 88 - 450.8 (meters) 1479. (feet)  
 VERTCON  
 PE1692

PE1692 LAPLACE CORR- 2.06 (seconds)  
 DEFLEC99  
 PE1692 GEOID HEIGHT- -24.13 (meters)  
 GEOID03  
 PE1692  
 PE1692 HORZ ORDER - FIRST  
 PE1692

PE1692.The horizontal coordinates were established by classical geodetic methods  
 PE1692.and adjusted by the National Geodetic Survey in March 1998.. 'PE1692  
 PE1692.The NAVD 88 height was computed by applying the VERTCON shift value to  
 PE1692.the NGVD 29 height (displayed under SUPERSEDED SURVEY CONTROL. PE1692  
 PE1692.The Laplace correction was computed from DEFLEC99 derived deflections.  
 PE1692  
 PE1692.The geoid height was determined by GEOID03.  
 PE1692

PE1692;	North	East	Units	Scale	Factor	Converg.
PE1692;SPC ME E	- 133,100.481	330,826.788	MT	0.99991168		
+0 16 30.6						
PE1692;UTM 19	- 4,968,223.184	570,318.347	MT	0.9996-6080		
+0 37 40.5						
PE1692						
PE1692!	- Elev Factor x Scale Factor	=	Combined			
Factor						
PE1692!SPC ME E	- 0.99993311 x	0.99991168	=	0.99984479		
PE1692!UTM 19	- 0.99993311 x	0.99966080	=	0.99959393	PE1692	
PE1692:	Primary Azimuth Mark			Grid Az		
PE1692:SPC ME E	- HUMPBACK AZ MK			114 03 41.0		
PE1692:UTM 19	- HUMPBACK AZ MK			113 42 31.1		
PE1692						



PE16921 PID Reference Object Distance  
 Az I  
 PE16921  
 dddmmss.s  
 PE16921 CE8027 HUMPBACK AZ MK  
 1142011.6 1  
 PE16921 CE8029 HUMPBACK RM 2 5.315 METERS  
 23954 1  
 PE16921 PE2242 MT HARRIS RESET APPROX.85.1 KM 2551901.5  
 1  
 PE16921 PE1693 HUMPBACK 58.711 METERS  
 34129 1

PE16921 ----- I

PE1692  
 PE1692 SUPERSEDED SURVEY CONTROL  
 PE1692

PE1692 NAD 83(1992)- 44 51 50.24221(N) 06 35.68219(w)  
 AD( ) I  
 PE1692 NAD 83(1986)- 44 51 50.24196(N) 068 06 35.68501(W)  
 AD( ) I  
 PE1692 NAD 27 - 44 51 49.97100(N) 068 06 37.64400(W)  
 AD( ) I  
 PE1692 NGVD 29 (07/19/86) 451.0 (m) 1480. (f) VERT

ANG  
 PE1692  
 PE1692.Superseded values are not recommended for survey control.  
 PE1692.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
 PE1692.See file dsdata.txt to determine how the superseded data were  
 derived.

PE1692  
 PE1692 U.S. NATIONAL GRID SPATIAL ADDRESS: 19TEK7031868223(NAD  
 83) PE1692 MARKER: B = BOLT  
 PE1692 SETTING: 66 SET IN ROCK OUTCROP

PE1692  

PE1692	HISTORY	Date	Condition	Report By
PE1692	HISTORY	1858	MONUMENTED	SURCOA
PE1692	HISTORY	1913	SEE DESCRIPTION	CGS
PE1692	HISTORY	1929	GOOD	MEGS
PE1692	HISTORY	1931	GOOD	MEGS
PE1692	HISTORY	1932	SEE DESCRIPTION	MEGS
PE1692	HISTORY	1934	SEE DESCRIPTION	CGS
PE1692	HISTORY	1958	GOOD	CGS

PE1692  
 PE1692 STATION DESCRIPTION  
 PE1692  
 PE1692'DESCRIBED BY COAST AND GEODETIC SURVEY 1913  
 PE1692'ON HUMPBACK MOUNTAIN, THE SUMMIT OF WHICH IS NEAR  
 THE SE CORNER PE1692'OF BREWSTER TOWNSHIP AND ABOUT 20 MILES  
 N OF CHERRYFIELD. THE PE1692'OLD BANGORCALAIS STAGE ROAD IS  
 A13OUT 3 MILES S AND BRANCHING PE1692'OFF FROM IT ABOUT 200  
 METERS W OF THE BRIDGE ACROSS THE PE1692'NARRAGAUGUS RIVER  
 IS THE ROAD MADE BY THE COAST SURVEY IN 1858

AND

PE1692'LEADING NEARLY TO THE SUMMIT. A TELEPHONE LINE ALONG THE PE1692'LATTER ROAD ENABLES ONE TO KEEP ON THE PROPER HIGHWAY TO THE PE1692'PLACE WHERE BACHES CAMP WAS LOCATED AND WHERE TWO LOG PE1692'CABINS NOW STAND. JUST BEYOND THESE CABINS A TRAIL LEADS UP TO

PE1692'THE STEEP PART OF THE-SUMMIT. A LOOKOUT TOWER FOR THE USE PE1692'OF FIRE WARDENS STANDS ON THE HIGHEST POINT, AND ABOUT 50 PE1692'METERS SE OF IT, ON A LARGE BARE LEDGE, THE STATION IS LOCATED. PE1692'

PE1692'IT WAS ORIGINALLY MARKED BY A COPPER BOLT SET IN THE ROCK, BUT PE1692'ONLY THE DRILL HOLE WAS FOUND IN 1913. MR. FRENCH FOUND THREE PE1692'OTHER DRILL HOLES NOT MENTIONED IN THE ORIGINAL DESCRIPTION,

EACH

PE1692'ABOUT 6 FEET FROM THE STATION LOCATED TO THE E, W AND S, PE1692'RESPECITELY. THE MOUNTAIN IS DENSELY WOODED AND CONSIDERABLE PE1692'CUTTING WOULD BE REQUIRED TO OPEN LINES TO OTHER STATIONS. PE1692'

PE1692 STATION RECOVERY (1929)

PE1692

PE1692'RECOVERY NOTE BY MAINE GEODETIC SURVEY 1929

PE1692'THE DRILL HOLE WHICH MARKS THE STATION IS LARGE AND WAS QUICKLY PE1692'FOUND. ONLY TWO OF THE THREE OTHER HOLES MENTIONED AS HAVING

BEEN

PE1692'FOUND IN 1913 WERE LOCATED IN A RATHER HASTY SEARCH. ONE OF THESE

PE1692'WAS SE AND THE OTHER SW OF THE STATION HOLE, ONE BEING A FEW PE1692'INCHES MORE AND THE OTHER A FEW INCHES LESS THAN 6 FEET PE1692'DISTANT. THE THIRD HOLE MAY HAVE BEEN COVERED WITH MOSS.

UNDER

PE1692'THE FIRE TOWER THERE WAS A STANDARD GEOLOGICAL SURVEY PE1692'TRIANGULATION DISK, WHICH WAS PLACED THERE IN THE SUMMER OF

1928,

PE1692'WHEN THE TOWER WAS OCCUPIED BY A GEOLOGICAL SURVEY PARTY PE1692'ACCORDING TO THE FIRE WATCHMAN. THERE IS AN UNOBSTRUCTED VIEW PE1692'FROM THE TOWER. THE DESCRIPTION STATES THAT THE MOUNTAIN IS IN PE1692'BREWSTER TOWNSHIP, BUT THIS IS NOW KNOWN ONLY AS NO. 28 AND I PE1692'COULD FIND NOBODY WHO HAD EVER HEARD THE NAME BREWSTER APPLIED PE1692'TO IT. THE DESCRIPTION ALSO MENTIONS THE NARRAGAUGUS RIVER, PE1692'WHICH SHOULD BE WRITTEN NARRAGUAGUS. THE ROAD UP THE PE1692'MOUNTAIN IS CALLED LOCALLY THE JEFF DAVIS ROAD. THE MOUNTAIN PE1692'ITSELF IS ALSO CALLED LEAD MOUNTAIN AS WELL AS HUMPBACK.

PE1692'

PE1692'COPIED FROM LETTER OF NOV. 7, 1929. SINCE WRITING TO YOU ON PE1692'SEPT. 26, I HAVE FOUND THAT THERE IS AN ACTUAL BASIS IN FACT

FOR THE

PE1692'NAME JEFF DAVIS ROAD. I FOUND A BIOGRAPHY OF JEFFERSON DAVIS, PE1692'BY HIS WIFE, IN WHICH A CHAPTER IS DEVOTED TO A VISIT HE AND

HIS

PE1692'FAMILY MADE TO MAINE IN 1858 OR 1859, WHEN HE WAS ILL AND WAS PE1692'ADVISED TO Go N FOR HIS HEALTH. THEY VISITED HUMPBACK AT THE PE1692'INVITATION OF PROF.-BACHE, WHO WAS A BOYHOOD FRIEND OF DAVIS PE1692'AND THERE IS AN ACCOUNT OF THEIR EXPERIENCES ON THE MOUNTAIN, PE1692'AT THE TIME WHEN THE STATION WAS OCCUPIED BY THE TRIANGULATION PE1692'PARTY.  
PE1692

PE1692  
PE1692

STATION RECOVERY (1931)

PE1692'RECOVERY NOTE BY MAINE GEODETIC SURVEY 1931  
PE1692'STATION IS ON WHAT IS NOW USUALLY CALLED LEAD MOUNTAIN,  
ALTHOUGH

PE1692'THE OLDER NAME HUMPBACK IS STILL IN USE. THE STATION IS IN

PE1692'TOWNSHIP 28, THE NAME-BREWSTER MENTIONED IN THE PRINTED DESCRIPTION  
PE1692'BEING APPARENTLY AN OLD NAME WHICH HAS NOT SURVIVED, AS I DID PE1692'NOT FIND ANYONE IN THE VICINITY WHO HAD EVER HEARD OF IT.  
PE1692'  
PE1692'THE STATION MARK IS A DRILL HOLE ABOUT 1-1/4 INCHES IN DIAMETER PE1692'IN GOOD CONDITION. I FOUND A SMALLER DRILL HOLE 6.43 FEET SE  
OF  
PE1692'THE STATION AND ANOTHER 5.16 FEET SSW OF THE STATION, THESE PE1692'PROBABLY BEING TWO OF THE THREE MENTIONED IN THE PRINTED PE1692'DESCRIPTION. AT THE TIME OF MY VISIT I DID NOT KNOW OF 7 RANGE PE1692'HOLES WHICH ARE SHOWN ON A SKETCH ACCOMPANYING THE ORIGINAL PE1692'DESCRIPTION, BUT WHICH ARE NOT MENTIONED. I DID NOT LOOK PE1692'FOR THEM.  
PE1692'  
PE1692'UNDER THE CENTER OF THE STEEL FIRE TOWER IS A U.S. GEOLOGICAL PE1692'SURVEY TRIANGULATION DISK, WHICH, ACCORDING TO INFORMATION WHICH  
PE1692'I OBTAINED AT THEIR WASHINGTON OFFICE, WAS ESTABLISHED BY PE1692'B.H. YOAKUM IN 1928. THE POSITION IS GIVEN AS LATITUDE 44 DEG PE1692'51 MIN 52.577 SEC LONGITUDE 68 DEG 06 MIN 38.627 SEC. THE PE1692'C. AND G.S. STATION DISTANT 200.25 FEET, IN AZIMUTH 342 DEG PE1692'21 MIN 46 SEC.  
PE1692'  
PE1692'THE STATION MAY BE REACHED BY THE TRAIL TO THE FIRE TOWER AS PE1692'STATED IN THE ORIGINAL DESCRIPTION. THIS TRAIL IS KNOWN  
LOCALLY  
PE1692'AS THE JEFF DAVIS ROAD.  
PE1692'  
PE1692'THE VIEW FROM THE GROUND AT BOTH STATIONS IS LARGELY OBSTRUCTED PE1692'BY TREES, BUT IT IS CLEAR IN ALL DIRECTIONS FROM THE  
OBSERVATION  
PE1692'ROOM OF THE TOWER.  
PE1692'  
PE1692' STATION RECOVERY (1932)  
PE1692'  
PE1692'RECOVERY NOTE BY MAINE GEODETIC SURVEY 1932  
PE1692'THIS RECOVERY NOTE IS SUPPLEMENTARY TO THE ONE WHICH I WROTE IN PE1692'1931. THE STATION AND THE TRAIL LEADING TO IT ARE SHOWN ON THE PE1692'RECENTLY ISSUED U.S.G.S. MAP OF THE LEAD MOUNTAIN QUADRANGLE.

PE1692'HISTORICAL ACCOUNT OF THE STATION IS GIVEN IN AN ARTICLE OF PE1692'MINE IN THE JUNE, 1932 ISSUE OF THE BULLETIN OF THE ASSOCIATION PE1692'OF FIELD ENGINEERS, U.S.C. AND G.S.

PE1692'

PE1692'THE MOUNTAIN IS JUST N OF THE OLD BANGOR-CALAIS STAGE ROAD, OR PE1692'AIR LINE ROAD, A LITTLE MORE THAN 40 MILES FROM BANGOR AND

NEARLY

PE1692'60 MILES FROM CALAIS. THIS ROAD IS NARROW AND CROOKED IN

PLACES

PE1692'BUT IS GRADUALLY BEING REBUILT. AT PRESENT (1932) THE STATION PE1692'CAN PROBABLY BE MOST EASILY REACHED FROM CHERRYFIELD, ABOUT 20 PE1692'MILES TO THE S, OVER A FAIRLY GOOD GRAVEL ROAD.

PE1692'

PE1692'WHEN I VISITED THE MOUNTAIN IN THE SUMMER OF 1932 I FOUND SEVERAL

PE1692'OF THE RANGE HOLES WHICH ARE SHOWN IN THE ORIGINAL DESCRIPTION,

PE1692'BUT THESE DID NOT CHECK WITH THE POSITION OF THE LARGE HOLE WHICH

PE1692'HAS BEEN CONSIDERED TO BE THE STATION. HOWEVER, A SMALL HOLE PE1692'ABOUT 8.6 FEET N FORMED A FAIRLY GOOD CENTER FOR THE PE1692'RANGE HOLES AND MAY WELL BE THE STATION, UNLESS ANOTHER POINT PE1692'WAS USED AFTER THE RANGE HOLES WERE MADE. IN ANY CASE I THINK PE1692'THAT THE EXACT LOCATION OF THE STATION MUST REMAIN UNCERTAIN PE1692'UNLESS A REDETERMINATION OF ITS POSITION CAN BE MADE.  
PE1692

PE1692  
PE1692

STATION RECOVERY (1934)

PE1692'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1934 (KGC)  
PE1692'STATION IS ON HUMPBACK MOUNTAINR BETTER KNOWN NOW AS LEAD PE1692'MOUNTAIN. THE SUMMIT OF THE.MOUNTAIN IS NEAR THE SE CORNER OF PE1692'TOWNSHIP NO.28 AND ABOUT 20 MILES N OF CHERRYFIELD. THE ROAD PE1692'TO THE SUMMIT LEAVES HIGHWAY 9 (BANGOR-CALAIS ROAD) AT,A POINT PE1692'200 METERS W OF THE BRIDGE OVER THE NARRAGUAGUS RIVER AT A PE1692'C.C.C. CAMP. THIS POINT IS ALSO ABOUT 1/4 MILE E OF JUNCTION  
OF

PE1692'HIGHWAYS 9 AND 193 (ROAD FROM CHERRYFIELD). THE ROAD LEADS TO PE1692'THE FIRE WARDENS CAMP IN THE SADDLE AND A GOOD PATH LEADS FROM PE1692'THE CAMP TO THE SUMMIT AND FIRE TOWER. THE TOTAL DISTANCE FROM PE1692'ROUTE 9 TO THE SUMMIT IS ABOUT 2-1/2 MILES AND IT IS PE1692'NECESSARY T 0 WALK THIS DISTANCE TO REACH THE STATION.  
PE1692'

PE1692'THE STATION IS NOW MARKED BY A STANDARD DISK-IN THE LEDGE WHICH PE1692'IS 341 DEG 28 MIN (APPROXIMATELY) IN TRUE AZIMUTH AND 192.4  
FEET

PE1692'IN DISTANCE FROM THE CENTER OF THE FIRE TOWER ON THE SUMMIT. A PE1692'U.S.G.S. TRIANGULATION STATION HUMPBACK NEW IS IN THE LEDGE  
UNDER

PE1692'CENTER OF THE FIRE TOWER. IT IS MARKED BY THEIR STANDARD DISK. PE1692'THE I 1/2-INCH DRILL HOLE RECOVERED BY MR. FRENCH IN 1913 Is  
NOT

PE1692'THE TRUE STATION. THE TRUE STATION WAS MARKED BY A 1/2-INCH PE1692'DRILL HOLE WHICH WAS FOUND AND IDENTIFIED BY H.S. SHAW. THE PE1692'FOLLOWING TABLE SHOWS THE EVIDENCE BY WHICH THE TRUE STATION PE1692'WAS IDENTIFIED. MR. SHAWS OBSERVATIONS WERE

PE1692'CONFIRMED BY A MEMBER OF OF THIS PARTY. STANDARD REFERENCE PE1692'MARKS WERE PLACED IN THRE DRILL HOLES ON LINES TO STATIONS PE1692'SAUNDERS AND PIGEON. THE RECORD DISTANCES AND INFROMATION PE1692'IN REGUARD TO DRILL HOLES ON LINES TO OTHER STATION WERE PE1692'OBTAINED FROM A PHOTOSTATIC COPY OF THE ORIGINAL PE1692'DESCRIPTION. THERE CAN BE LITTLE DOUBT THAT MR. SHAW HAS PE1692'RECOVERED THE TRUE STATION. IT WAS NOT OCCUPIED IN THE PE1692'1934 SCHEME.  
PE1692'

PE1692'DISTANCE R.M.NO.1 TO R.M.NO.2 - 20.20 FEET.  
PE1692

PE1692  
PE1692

STATION RECOVERY (1958)

PE1692'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1958 (JCE)  
PE1692'STATION, AND ALL MARKS WERE RECOVERED AND FOUND TO BE IN GOOD PE1692'CONDITION. THE DISTANCE TO R.M. NO. 1 AND R.M. NO. 2 WAS  
MEASURED

PE1692' AND CHECKED. DUE TO INTERFERENCE OF POLE STAND,  
DIRECTION TO

PE1692' R.M. NO. 1 WAS NOT MEASURED.

PE1692'

PE1692' A COMPLETE NEW DESCRIPTION FOLLOWS--

PE1692'

PE1692' STATION IS LOCATED ABOUT 35 MILES EAST OF BANGOR, 20  
MILES  
NORTH

PE1692' OF CHERRYFIELD AND ON THE SUMMIT OF LEAD MOUNTAIN.  
STATION IS PE1692' 192.62 FEET SOUTH OF THE LOOKOUT TOWER AND  
IS ON THE SOUTHERLY PE1692' PART OF THE TOP OF THE MOUNTAIN  
ON GROUND ABOUT 6 FEET LOWER

ATHAN

PE1692' THE HIGHEST POINT. THE MARK IS A STANDARD  
TRIANGULATION- STATION

PE1692' DISK CEMENTED FLUSH IN A DRILL HOLE IN A BOULDER AND  
THE DISK PE1692' IS STAMPED HUMPBACK 1858 1934.

PE1692'

PE1692' REFERENCE MARK NO. 1 IS ABOUT 215 FEET SOUTH OF  
LOOKOUT PE1692' TOWER. THE MARK IS A STANDARD REFERENCE DISK  
CEMENTED FLUSH IN

PE1692'DRILL HOLE IN BOULDER. THE DISK IS STAMPED HUMPBACK NO. 1 1934 PE1692'

PE1692'REFERENCE MARK NO. 2 IS ABOUT 212 FEET SOUTH OF LOOKOUT PE1692'TOWER. THE MARK IS A STANDARD REFERENCE DISK CEMENTED IN A PE1692'DRILL HOLE IN A BOULDER. THE DISK IS STAMPED HUMPBACK NO 2 1934.

PE1692'

PE1692'U.S.G.S. STATION MARK IS SET UNDER THE LOOKOUT TOWER. MARK PE1692'PROJECTS ABOUT 5 INCHES AND DISK IS CEMENTED IN A DRILL HOLE IN PE1692'A BOULDER. DISK IS STAMPED ELEVATION ABOVE SEA L 1475.

PE1692'

PE1692'THE DISTANCE AND DIRECTION TO DRILL HOLES MENTIONED IN PREVIOUS PE1692'DESCRPTIONS WERE NOT VERIFIED DUE TO INTERFERENCE OF POLE STAND.

PE1692'

PE1692'TO REACH FROM AURORA, GO EAST ON STATE HIGHWAY 9 FOR 14.6 MILES PE1692'TO THE JUNCTION OF STATE HIGHWAYS 9 AND 193. CONTINUE ON STATE PE1692'HIGHWAY 9 FOR 1.2 MILES TO SIDE ROAD LEFT AT SIGN ON LEFT FOREST

PE1692'FIRE DANGER TODAY. TURN LEFT ON GRAVEL ROAD AND GO 0.1 MILES PE1692'TO SIDE ROAD LEFT AT MAINE FOREST FIRE STATION ON THE RIGHT. PE1692'TURN LEFT AND GO 0.05 MILE TO FORK JUST BEFORE REACHING A CABIN PE1692'AND A SIGN IN THE FORK TRAIL TO LOOKOUT TOWER. TAKE RIGHT FORK PE1692'AND GO 0.15 MILE TO WHERE THE FIRE WATCHMAN LEAVES HIS CAR. PE1692'(THIS IS,ETT FOR 2-WHEEL DRIVE. FROM HERE TO THE STATION IT IS PE1692'ABOUT 3 MILES AND THERE IS A TRAIL ALL THE WAY. IT IS POSSIBLE PE1692'TO DRIVE A 4-WHEEL DRIVE ABOUT 2-3/4 MILES TO THE CABIN WITH THE PE1692'AID OF A WINCH). FROM HERE CONTINUE ON WOODS ROAD FOLLOWING THE PE1692'TELEPHONE LINE UP HILL FOR ABOUT 2 MILES TO FORK. (EITHER PE1692'ROUTE WILL TAKE YOU TO CABIN BUT LEFT TRAIL IS THE BEST). PE1692'LEFT FORK FOR ABOUT 275 YARDS UP WOODS ROAD TO SIGN ON LEFT PE1692'SPRING, WHERE DRINKING WATER IS AVAILABLE. CONTINUE UP HILL PE1692'FOLLOWING THE TELEPHONE LINE TO CABIN WHERE FIRE WATCHMAN PE1692'LIVES. CONTINUE FOLLOWING TELEPHONE LINE UP HILL TO TOP AND PE1692'STATION DESCRIBED.

PE1692'

PE1692'OBSERVATIONS TAKEN FROM A 17 FOOT POLE STAND.

I National Geodetic Survey, Retrieval Date = APRIL 19, 2007 PE1695



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