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UNITED STATES  
DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

----- NATIONAL PARK

FILE NO.

Record and Description of the  
Reconstruction of Fort Necessity -

(Transcription of the Blackford-Hindman  
survey of 1932.)

(History)

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ARNO B. CAMMERER,  
*Director.*

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UNITED STATES  
DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

Fort Necessity Battlefield Site  
Farmington, Pennsylvania.

September 26, 1935.

The Director  
National Park Service  
Washington,  
D. C.

Attention Mr. Chatelain

My Dear Sir:

I am enclosing a transcription of the Blackford-Hindman survey of 1932, on which the restoration of Fort Necessity was based. I am also enclosing copies of the deeds of the local park property from the Fazenbakers to the state and nation.

The map that accompanies the survey is included in the recent report of Mr. Roy E. Appleman, Regional Historian, returned to you yesterday by this office.

Very truly yours,

(sgd) Thomas L. Loy

Thomas L. Loy  
Ranger Historian

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Record And Description

Of The  
Reconstruction of Fort Necessity

Fort Necessity is situated on the National Pike, U. S. Route 40, about ten miles east of Uniontown, Pa., on a tract of land once owned by Col. George Washington and now known as the Fazenbaker farm. A more definite description of its location places it about 300 yards southwest of the National Pike in the valley of the Great Meadows and at the junction of a branch of Big Meadow Run and Indian Run.

For the purpose of this record it is not necessary to delve into the history of the conflict waged here nearly 200 years ago further than to state that here, on July 3rd, 1754, Col. George Washington in command of 500 Virginia and North Carolina troops was surrounded by a force of French and Indians under command of M. Coulon DeVilliers, which outnumbered him almost five to one. Washington had taken refuge within the hastily built stockade erected a short time previously by his engineer, Capt. Robert Stobo. Much adverse criticism has been made by historical writers in the past of the location and shape of this fort or stockade. The designer evidently took into consideration three things which influenced him greatly: First, the contour of the surrounding terrain; second, the Great Meadows was the only unwooded section in all that territory and musket range was not accurate beyond 40 yards; third, water supply.

Fort Necessity was built on a small, low plateau at the junction of two small streams. On the north and east the ground is level for a space of 70 yards and then rises in a gradual slope of about 5%. On the south it is level for 50 yards and then slopes upward about a 7% grade, while on the west there is a gradual rise of 5% for

100 yards, after which the grade rises sharply at about 15%. A glance at the photostatic copy of Lewis's survey will show that the nearest wood land was 66 yards and the farthest 275 yards from the fort. Mr. Paul Van Dyke, formerly Professor of History at Princeton University, on page 71 of his "George Washington, the Son of His Country" says concerning the battle in which Braddock met his death, "The soldiers in this fight were armed with smooth-bore muskets and the great majority of the Indians probably carried the same weapon. At 40 yards this clumsy muzzle loader would put its balls into a target a foot square, at 100 yards, it would put one half its balls into a space 4 feet square, at 200 yards, when it was held onto the mark, only one half its balls would hit within a target 18 feet square. Even with a rifle it was considered a very extraordinary shot to hit a man in the head at 200 yards." This type of gun was used by the French and Indians just one year after the battle at Fort Necessity and it is logical to suppose they were no better equipped at the earlier fight.

From these facts, we deduce that Capt. Stobo picked his location so that the enemy could not, from any advantageous elevation, be afforded cover within accurate musket range. Also, each side of the irregular square, which the stockade formed, faced the nearest elevation from which an attack might be expected to come.

There is every evidence on the ground immediately to the north and east of the fort that the course of the Branch of Big Meadow Run has been changed and straightened. In fact the writer was informed by Mr. Walter Fazenbaker, a former owner of the land, that this had

been done within his memory. The old channel, which was very crooked is plainly visible along the salient on the northeast side of the fort and this salient was, no doubt, built to insure an unfailing supply of water.

After an all day's battle waged in a steady downpour of rain, Washington signed articles of capitulation which allowed him to retain his arms, his baggage, and to march out on the morning of July 4th, 1754, with the colors flying and drums beating.

There seems to have been a controversy concerning the size and shape of this fort as Veech in his "Monongahela of Old," page 55, first published in 1858, takes exception to the engravings and description of Fort Necessity given in Sparks' "Washington" vol. 1, page 56 and vol. 2, page 457, as he says they are inaccurate, I quote from Veech, "It may have presented that diamond shape in 1850 but in 1816 the senior author of these sketches made a regular survey of it with compass and chain. The accompanying engraving exhibits its form and proportions. As thereby shown, it was an obtuse angled triangle of 105 degrees having its base or hypotenuse upon the run. The line of the base was, about midway, sected or broken, and about two perches of it thrown across the run, connecting the base by lines of about the same length, nearly perpendicular to the opposite lines of the triangle. One line of the triangle was six, the other seven perches; the base line eleven perches long, including the section thrown across the run. The lines in all embraced about 50 square perches of land or nearly ~~the~~ third of an acre. The embankments then (1816) were nearly

three feet above the level of the Meadow. The outside trenches (in which Capt. Mackay's men were stationed when the fight began, but from which they were flooded out) were filled up. But inside the lines were ditches and excavations, about two feet deep, formed by throwing the earth up against the palisades. A more inexplicable and much more inexcusable error than that in Mr. Sparks' great work is the statement of Col. Burd in the Journal of his expedition to Redstone in 1759. He says that the fort was round with a house in it! That Washington may have had some sort of a log, bark covered cabin erected within his lines is not improbable; but how the good Carlisle Colonel could metamorphose the lines into a circular form is a mystery which we cannot solve." The senior author referred to by Mr. Veech in the opening lines of this quotation was Freeman Lewis and attached to this record is a photostatic copy of the original draft of this survey which Mr. Veech describes.

Mr. Archer Hulbert in vol. 3, page 173, of his "Historic Highways of America," published in 1903, takes rather strenuous exception to Mr. Veech's statement and Mr. Lewis's survey. After quoting the foregoing description of Mr. Veeche, Hulbert critically analyzes as follows: "How could a triangle, the sides of which measure six, seven, and eleven rods contain 50 square rods or one third of an acre? It could not contain one half that amount." Hulbert further states, "The present writer went to Fort Necessity armed with his two-page map of Fort Necessity shown in Frontier Forts of Pennsylvania which he trusted as authoritative. The present owner of the land, Mr. Lewis Fazenbaker, objected to the map and it was only in trying to

prove its correctness that its inconsistencies were discovered. The mounds now standing on the ground are drawn on the appended chart, Diagrams of Fort Necessity, as lines C-A-B-E. By a careful survey of them by Mr. Robert McCracken, C.E., sides C-A and A-B are found to be the identical mounds surveyed by Mr. Lewis, the variation in direction being very slight and easily accounted for by erosion. The direction of Mr. Lewis's sides were  $N25^{\circ}W$  and  $S80^{\circ}W$ ; their direction by Mr. McCracken's survey are  $N22^{\circ}W$  and  $S80^{\circ}-30'W$ . This proves beyond a shadow of doubt that the embankments surveyed in 1816 and 1901 are identical.

"But the third mound runs utterly at variance with Mr. Lewis's figure. By him its direction was  $S59\frac{1}{2}^{\circ}E$ ; its present direction is  $S76^{\circ}E$ . The question then arises, is this mound the one that Mr. Lewis surveyed? Nothing could be better evidence that it is than the egregious error that Mr. Lewis made concerning the area contained within his triangular embankment. He affirms that the area of Fort Necessity was fifty square rods. Now take the line B-E for the third side of the triangle and extend it to F where it would meet the continuation of A-C. That triangle contains almost exactly 50 square rods or one-third of an acre. The natural supposition must be that someone had surveyed the triangle A-F-B and computed its area correctly as about 50 square rods. The mere recording of this area is sufficient evidence that the triangle A-F-B had been surveyed in 1816 and this is sufficient proof that the mound B-E stood just as it stands today and was considered in Mr. Lewis's day as one of the embankments of Fort Necessity." Mr. Hulbert then closes his argument against the Lewis survey by giving the following six reasons for its improbability:

1. It has not one-half the area Mr. Lewis gives it.
2. It would not include much more than half the high ground of the plateau which was none too large for a fort.
3. There is no semblance of a mound B-C nor any shred of testimony nor any legend of its existenc.
4. The mound B-E is entirely ignored though there is best of evidence that it stood in Mr. Lewis's day where it stands today and was considered an embankment of Fort Necessity. Mr. Lewis gives exactly the area of a triangle with it as a part of the base line.
5. Loop M-S-N would not come near the course of the brook without extending it far beyond Mr. Lewis's estimate of the length of its sides.
6. Its area is only about 5200 square feet, which would make Fort Necessity unconscionably small in face of the fact that more high ground was available.

Mr. Hulbert also mentions the fact that at the point O on the line C-D of this sketch he made an exploratory excavation and found large flakes of bark the size of a man's hand at a depth of about four and one-half feet below the surface.

On August 4, 1951, the writer of this article made an attempt to verify the surveys of Mr. Lewis and Mr. McCracken, and on attempting to fit the Lewis survey to the existing mounds, found that Lewis had ignored the mound on the lines B-F of the appended plot of survey of August 4<sup>th</sup>, 1951. The lines A-C and A-B agree very closely to the distances given by Mr. Lewis and the angle B-A-C checks the angle

found by Mr. Lewis within  $2\frac{1}{2}$  degrees, which variation might easily be caused by taking different points on the mounds. Having thus proven Mr. Hulbert's statements that the Lewis survey would not fit the existing marks on the ground to our own satisfaction, we decided to accept the survey of his engineer, Mr. McCracken, until such times as excavations on the site would prove him right or wrong, and so proceeded to stake the fort as shown by lines A-B-F-G-C-A.

On November 17, 1931, at 7:40 an excavation for the reconstruction of Fort Necessity was started under direction of the writer. Operations were begun by first digging exploratory trenches at right angles to the existing embankments to determine, if possible, the location of the old stockade with reference to the embankments. No indications being found, work was started in digging a trench along the line C-A three feet wide and averaging in depth two and one-half feet, which depth reached hard pan in the form of hard yellow clay which showed no evidences of having ever been disturbed.

The first day the trench was completed from the point C to a point about twenty feet beyond A on the line A-B. The workmen were instructed to carefully examine and break up all excavated material in the hope that relics might be found of this historic battle. The first day's work netted ~~four~~ lead musket balls, of about one-half ounce size, heavily coated with oxide, these being uncovered at depths ranging from six to eighteen inches below the surface. The next day the trench was completed to the point F and seven more lead musket

balls, all of one-half ounce size except one, which weighed a shade over an ounce were found. At a point on the line B-F about three feet from B, the first indication of the old stockade was unearthed,, it being a section of fairly solid heart wood eighteen inches long, three and one-half inches wide and two inches thick, badly pitted from the action of time. The bottom of this piece was almost in the center of the trench, about three feet underground with the top inclined at an angle of about forty-five degrees towards the inside of the fort as though it had been pulled over in the demolition of the stockade.

From F, as there is no known description from which a definite location could be fixed on the ground, it was decided to follow the line F-G-C. This was carried out, without finding further indications until the intersection of line G-C with D-E was reached. At this point, three large pieces of the stockade were uncovered at a depth of three feet. This depth is just water level of the branch of Big Meadow Run near this point and probably accounts for the fact that the timber here found had been preserved all these years. As the line of the stockade was plainly indicated by the three pieces unearthed, excavation was carefully extended on this line towards E, with the result that six more pieces were found, the last being at E. From here a trench towards F was started which resulted in finding three more pieces at a point five feet beyond E on the line E-F and another large piece which had just been missed while excavating along the line F-G. These pieces of stockade were all in an upright position

and many showing ax marks where they had been pointed to aid in penetrating the ground. They varied in thickness from six inches to, in one case where the log had evidently been split in half, seventeen and one-half inches. The tops were typical of wood that has long been exposed to the action of water and time.

At a point four feet from E on the line E-F on the inside of the trench and two feet below the surface, six iron balls each one and one-half inches in diameter and weighing about one-half pound were dug up within the space of one cubic foot. These were, in all probability, ammunition for Washington's swivel guns. Seven lead musket balls, all of about one-half ounce size were also found on the line. At the point D, seven small pieces, indicating an angle in the line of the stockade, were found and all along the line D-C, which coincides very closely with Hulbert's line D-C, bark, pieces of rotten wood, which was in such a condition that it could not be preserved, were uncovered. These findings substantiated Mr. Hulbert's statement of finding bark on this line. Also, at various points along this line, pieces of charred wood and lumps of charcoal were excavated from a depth of about three feet, thus giving evidence to support the statement that the stockade had been burned. Ten feet beyond D on the line D-C, a large iron cannon ball, three inches in diameter and weighing three and one-half pounds, was found on the outside edge of the trench about twenty inches below the surface. Numerous lead balls of various size came to light on lines E-D and D-C, some of them weighing as much as one and one-half ounces.

While excavating for drain tile inside the lines of the fort, approximately two hundred lead shots, ranging in size from number eight to Buck shot, which look as though they had been hurriedly made by pouring molten lead in a thin stream into cold water, were found, also numerous lead musket balls of one ounce size and the flint for a flint lock musket.

Three feet underground and midway between E and D a small piece of straight grained wood, seven inches long and of one-half inch diameter was uncovered. This could easily be a portion of either a wooden ram for the muzzle loading muskets or an Indian arrow shaft.

Summing up the evidence found by investigating this site, we have: The embankments found on the lines C-A and A-B which were in evidence in 1816 as proved by the Lewis survey. The embankment on the line B-F which may have been, and probably was, visible at the time of Mr. Lewis's survey. This embankment is plainly joined to the one on the line A-B on the inside of the fort at the point B and in no possible way could it be construed as being thrown up in excavating a farm drain as some authorities have advocated. Besides, it is proven at B and at F by the finding of parts of the stockade. The lines F-E, E-D, and D-C are indisputable, as sufficient remains of the stockade were excavated to prove their location beyond a shadow of doubt.

In reconstructing the fort, considerable effort has been put forth to insure a lasting structure. When the hard pan referred to above was reached in excavating the foundation trenches, considerable water was encountered. In order to provide a dry foundation, a ditch

six inches wide and six inches deep was excavated in the bottom of the foundation trench. In this was placed four-inch field tile, carefully aligned and graded to carry to the low side of the foundation nearest the creek where an outlet was provided. Over this tile and the bottom of the foundation an eight-inch layer of broken native stone was placed. On top of the broken stone four inches of concrete of a 1:3:5 mix was placed to give a uniform surface for the bottom of the stockade. The stockade is composed of the finest locust timber available, twelve feet long, with no piece under eight inches at the small end. Each piece is pointed at the top and slabbed on two sides to insure a tight fit against the adjoining piece. The bark is removed from the bottom up a distance of three feet, from here to the top of the bark is left in place with the idea of showing a natural surface on the outside and inside when the fort is finished. Every third and fourth post is notched down a distance of eighteen inches from the top and to the depth of two inches, thus forming port holes when members are in place. All cut and peeled surfaces are given two brush coats of creosote oil. Where the bark remains, it is given a treatment of blue vitriol to kill all insect life, thus preserving the bark as long as possible. The stockade is placed in position in the trench and the trench filled to the ground level with a 1:3:5 mix of concrete. After the concrete has set all shrinkage around the members is poured with a hot water-proofing compound. Back filling on the outside is carried up eighteen inches on the stockade and sloped

to meet the natural surface. Material for this back fill comes from the excavation of trenches outside the fort, corresponding to the trenches in which Washington placed part of his men during the early part of the engagement until water made them untenable. The material excavated from the foundation trenches, having been piled on the inside of the fort, is used in forming a three-foot fire step, and the whole inside graded and prepared for grass seed in the early spring.

On the western side there are three bastioned gateways, formed by setting a stockade a short distance in front of each opening in such a manner as to protect the fort from direct or cross fire, thus carrying out the idea of making the reconstruction as historically correct as possible.

H. R. Blackford - R. E. - 1951

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