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HISTORICAL RESEARCH REPORT

WHEELWRIGHT SHOP

BUILDING #35

HOPEWELL VILLAGE NATIONAL HISTORIC SITE

December 1964

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HISTORICAL RESEARCH REPORT

PART I - WHEELWRIGHT SHOP

BUILDING #35

ADMINISTRATIVE DATA

The Wheelwright Shop, Building #35, is shown on the 1887 Stokes photograph of Hopewell Furnace. The Architect and Archeologist both indicate that the Wheelwright Shop rested on a portion of the foundation of the earlier Casting House. The Historian quotes an interview which stated that the wheelpit was located in the north end of the building which would make an overlap unlikely. Exhaustive trenching over the general area of the shop location yielded no foundations other than remnants of a short wall near the southeast corner of the Casting House. Perhaps the building had no permanent foundation.

From the material accumulated thus far on this building we can deduce the following:

1. A building, evidently the Wheelwright Shop, existed in 1887 when the Stokes photograph was made.
2. We do not know the precise location or dimensions of that building.
3. No permanent foundations have been discovered in the general vicinity of where the building appears in the 1887 photograph

other than the short foundation wall extending south from the southeast corner of the Casting House.

4. The base of the Wheelwright Shop rested on slag at a grade level considerably higher (1.3 ft.) than the Casting House indicating its construction or move to that position occurred at a period later in furnace history.

From the various reports submitted up to this point we can see that there are several unanswered questions or research gaps in the history of this building. This would seem strange since two historic photographs of the structure are in existence plus several recorded interviews. The latter may be largely discounted because of the wide disparity in the interviewees' description of the building.

Archeologist Abel conducted a thorough search for evidences of the building outline and exact position. Perhaps further archeological investigation in this area will yield more concrete data. However, it is the recommendation of this office that until more definite information comes to light, we attempt to go no further with a reconstruction project.

Part III of the work description in P.C.P. B-98-4 includes the reconstruction of the Wheelwright Shop. It appears that construction funds will not be available for this work in the near future since all of the funds presently allotted will be expended on the Cast House restoration work.

HISTORIC STRUCTURES REPORT

PART II - WHEELWRIGHT SHOP

BUILDING #35

HISTORICAL DATA

Hopewell Village National Historic Site

APPROVAL SHEET

RECOMMENDED

/s/ Benjamin J. Zerby Date 12/14/64
Superintendent

_____ Date _____
Chief, ECDC

APPROVED

_____ Date _____
Regional Director

PART II (WHEELWRIGHT SHOP)

Historical Data Section

DESCRIPTION-UNKNOWN SIZE

Building 35, surviving until around 1895¹, was a framed and shingled structure covered first by board and batten and later by lath and stucco; its interior was also plastered.² While Hopewell's last manager, Harker Long, recalled it as a 15 by 20 foot structure, another traditional size reported was 25 x 30.³ Archeologist Abel (size could not be determined archeologically) estimated from the two surviving photographs that it may have been 20 by 30 or 24 x 36.⁴ Mr. Abel did uncover two foundations in the lower working area, but neither the structure directly in front of the cast house (17 x 32) nor the stable-crib foundation southeast of the barn (20 x 26) fit the traditional or Abel-suggested measurements.⁵ A mathematical calculation from the Bull-1896 photo may provide an accurate size, since the photo shows the existing blacksmith shop. Likewise, archeology beyond the shed-crib foundation, an area untested by Mr. Abel,⁶ may reveal stucco, foundations and a definite size.

AGE-DATE OF CONSTRUCTION UNKNOWN

Date of construction is also unknown. Since tradition tells that the moulders slept in the attic of the structure,⁷ it

existed before 1845, when moulding ended. Record entries, an 1829 "plastering the moulders' sleeping room" and an 1835 "plastering the warehouse", may refer to, and partially date, building 35.⁸

FUNCTION PRE-1840 WHEELWRIGHTING DOUBTFUL

The pre-1840 function of the building is also unknown. Marker Long, at Hopewell from 1867, was quite emphatic about the necessity for a wheelwright and a wheelwright shop at Hopewell, and Archeologist Abel did uncover a wheelpit as recorded by Mr. Long.⁹ However, that there was ever a pre-1840 "resident" wheelwright at Hopewell is very doubtful; every located wheelwrighting account found to date is entered in the Records as "per account" - as a bill rendered NOT as pay to a resident employee. Likewise, among the regular quarterly Journal accounts NO entries for payment to a pre-1840 resident wheelwright has been found to date. Teamsters, laborers, farm hands, a blacksmith, a hostler and a gardner are regular "resident" entries. Records do pay a RESIDENT wheelwright in Long's time, somewhat verifying his declaration that "it paid to have a wheelwright on hand all the time."¹⁰

EXISTING PHOTOS MAY PROVIDE SIZE

Two photos provide neither age nor definite location clues,¹¹ but DO show that sufficient stucco-plaster survived as late as

c. 1895 so that a lens might have been found in the ground in the area south of (the southeast corner) the cast house.

Archeologist Abel, after a study of the photos - an architectural study has not been made - suggested that building 35 was constructed of board and batten over framing with later lath and stucco rather than of balloon framing, which dates after 1833 and originated in Chicago.¹² As mentioned in the first paragraph, definite size might be calculated from the 1895-Bull photo.

ARCHEOLOGY ACCOMPLISHED

Mason in 1959 located considerable stucco from building 35 at the southeast corner of the cast house (building 33),¹³ and Archeologist Abel in uncovering the entire site located a STONE wheel-assembly pit, mentioned by Harker Long. However, a lack of stucco-plaster prevented a definite size figure for the structure.¹⁴

WHEELRIGHT SHOP DID NOT TRESPASS ON CAST HOUSE

The archeological discovery of the stone wheel pit plus Long's statement that this pit was in the NORTH end of the shop¹⁵ clearly demonstrates that building 35 did NOT trespass on the south moulding room and MIGHT have been at its last location previous to 1845. Tradition that the moulders slept in the structure¹⁶ also is evidence that the shop existed pre-1845 when moulding ended.

OTHER POSSIBLE LOCATIONS AND NEED FOR ARCHEOLOGY

Tradition (and archeological orientation)¹⁷ also provided two possible earlier locations for a stove-plate cleaning operation¹⁸ and pattern storage potential historic uses of building 35. However, archeology between Walls G (north of cast house) and H provided no clues whatsoever.¹⁹ There was no archeology at the other traditional site, the area beyond the stable-crib. Stucco and foundations denoting location and size might be archeologically found at this untested area. Should the structure have been moved to its photo location, the 1835 "plastering of the warehouse" might date the move.²⁰

NO PRE-1840 RESIDENT WHEELWRIGHT

All references to wheelwrighting (found to date) in the pre-1840 period, including those CITED by Russell Apple in his Documentation for the Historical Base Map 1820-1830,²¹ are bills for wheel construction and repairs at shops AWAY from Hopewell. Practically all discovered to date are Journal entries, "As per account". Conversely, in the regular Journal entries for non-furnace resident employees, NO pay entry for a pre-1840 resident wheelwright has been discovered.

Thomas Roberts, cited by Apple as a resident wheelwright, performed his craft at his shop AWAY from here from 1847-1852²² (as did George Maxton in the period 1868-1875).²³

RESIDENT WHEELWRIGHTING FOR 82 DAYS

While tradition designated Joseph Palsgrove as Hopewell's late wheelwright "without a helper",²⁴ a check of this blacksmith's Journal pages from 1876 to 1883 showed NO credits for wheelwrighting.²⁵ Similarly, another but earlier wheelwright and his helper, Henry Houck and _____ Wortz, "the last wheelwrights at Hopewell",²⁶ were not verified by Records as practicing this craft. Definitely PAID by the day and BOARDING at Hopewell during a three-month period are William Barkley's records as proof of working and residence as wheelwright after 1876. Nine Journal entries specifically credit this craftsman with \$74 for 56½ days of wheelwrighting and \$51.50 for wheelwright work.²⁷ However, by Ledger entries his total earnings from May 1, 1876 to June 4, 1877 total \$123.92.²⁸ At \$1.50 a day, this amount would pay him for 82 days in thirteen months. After the 1880 resumption of the furnace, his earnings totaled \$79.75 for the next two and a half years, 21 days in 1880 and 21½ in 1883. To repeat, Barkley DID wheelwright and board at Hopewell for 56 days in 1876²⁹ (the only year his boarding record was found) and 9½ in 1877. Under these circumstances, Barkley can hardly be considered as a steady employee, or "at hand all the time", as related by Harker Long.³⁰ Without doubt, this 1880-1883 furnace manager, who came to Hopewell as a young man in 1867, was speaking about Mr. Barkley.

These late Record discoveries DO NOT disprove that Hopewell might have had a resident wheelwright in the 1856-1868 period, a time for which NO pertinent Hopewell records have survived.

PRE-1845 USE OF BUILDING 35

That building 35 had moulding-related use in the stove-making period is possible. Among the suggested uses (other than the traditional attic sleeping room) is as the traditional "across the road" auxiliary moulding area and stove-plate cleaning³¹ and packing into crates for shipment. While the occupations can be documented, no entry found to date ties these tasks to building 35.

CONCLUSIONS

Wheelwrighting by a craftsman in residence DID occur at Hopewell, but NOT in the pre-1840 period; a RESIDENT wheelwright DID operate at Hopewell 1876-1883. More important, the structure did NOT TRESPASS on the cast house, showing that it could have existed in the historic period at its last site. Definite size is still unknown, but either archeology or calculation from the Bull-1895 photo may produce definite details. Most likely, this auxiliary building not only provided sleeping space for the moulders but also provided space for plate cleaning, packing and pattern storage.

FOOTNOTES

1. Hopewell Photo, Bull - 101-03 and H2215 Interview Harker Long, p. 31. Hereafter cited as Long.
2. Hopewell Photos, Bull - 101-03 and Stokes - 1887 125-01. Hereafter cited as Photos. Long, p. 31.
3. Long, p. 31 and H2215 Interview Mr. and Mrs. Charles Sheridan Care, p. 4. Hereafter cited as Care.
4. Leland J. Abel, Archeological Excavations at Hopewell Furnace, p. 104 based on board and batten, and 106 based on lath length, both from Hopewell Photos, Stokes-1887, 125 - 01 and Bull 1895, 101-03. Hereafter cited as Abel.
5. Abel, Fig. 5, following 78 and Earl J. Heydinger, Orientation Report for Archeology in Lower Working Level, p. 5, 6. See Appendix.
6. Drawing NHS-HV 3040, Sheet 2 of 8 and Measurements by William Bitler and E. Heydinger Sept. 1964.
7. Care, p. 4.
8. Hopewell Records, SM 14, p. 45a, Jan. 16, 1829 and SM 21, Mar. 22, 1836.
9. Long, p. 31 and Abel, p. 110.
10. Long, p. 31.
11. Photos.
12. Abel, p. 104, 106. A factor in this decision may have been the records of extensive scantling purchased between 1800 and 1833.
13. Ronald J. Mason, Archeological Exploration of the Site of the Casting House, Hopewell Furnace HVNHS 1958, p. 11, "a heavy layer of plaster fragments."
14. Abel, p. 111.

15. Long, p. 31. Mr. Abel ignored this statement and DREW the wheelpit in the SOUTH end of the structure in his Plan of Hopewell Furnace and Casting House about 1840 /No number/ in Abel. Also see Abel, p. 110, 113.
16. Care, p. 4.
17. See Appendix 1 for extract.
18. H2215 Interview Thomas Hoffman, p. 3, H2215 Interview Mr. and Mrs. M.L. Care, p. 2, Care, p. 1, and H2215 Interview Charles Sheridan (Sherd) Painter, p. 3.
19. Abel, p. 45, 46.
20. Hopewell Record, SM 21, Mar. 22, 1836.
21. Russell Apple, Documentation for the Base Map, 1820-1830, p. 11-107, 108.
22. Hopewell Record, SM 32, p. 45b, May 1, 1848, 65b, Apr. 20, 1849, 86a, Apr. 3, 1850, 103b, Mar. 29, 1851 and 126a, Mar. 31, 1852.
23. Hopewell Record, SM 34, p. 191a, Apr. 1, 1869, p. 197b, 1869, 214a, Apr. 1872 and p. 238b, Dec. 1875.
24. H2215 Interview Mr. and Mrs. S. March and H2215 Interview Thomas Hoffman, p. 3.
25. Hopewell Record, 62M, p. 21, 33, 37, 40, 49, 53, 62, 63, 133, 137, 142, 145, 146, 153, 157, 162, 167, 169, 181, 182, 187, 189, 191, 194-198, 203,. From July 31, 1876 to July 20, 1883.
26. H2215 Interview Reginald Smith, p. 2.
27. Hopewell Record, SM 76M, p. 11, May 10, 1876, p. 14, June 10, 1876, p. 17, July 8, 1876, p. 23, Aug. 31, 1876, p. 107, Dec 1, 1880 for 2 items, p. 111, Dec. 10, 1880, p. 160, June 30, 1882 and p. 195, Mar. 15, 1883.
28. Hopewell Record, SM 62M, see Appendix.
29. Hopewell Record, SM 34, p. 242, June 1876.
30. Long, p. 3.
31. See Footnote 18.



P125-01



P101-03

61	Mr. Richard	For hauling 25 tons	
"	"	from valley @ 80 ^{cts}	20.59
62	Polaygrove	for hauling 2-13 tons	
"	"	" " " 65 tons from 15/75	50.67
63	Mr. Jacobs	" " " 7-19 tons	
"	"	April & May @ 80 ^{cts} 6.36	

JUNE 1877

35	Nathan	Use of Horses at Swamp	4.20
65	Mr. Barkley	Wood work of 1 two horses	
"	"	Wagon	\$30.00
"	"	2 1/2 days work in Feb	2.50
"	"	" " " " March 1.00	
"	"	" " " " May 6.05	39.55
for the Survey		16.32	
		11.25	
		2.88	
		102.18	29.11

had existed 23 years before his arrival in 1867 and 5 years before Dr. Clingan became manager in 1849. Long's statement, the wheelwright shop "was absolutely necessary for operation",¹³ has to be considered in his post-1867 period. However, neither in early or late periods are wheelwrights steadily employed. On the contrary, there are definite records of regular wagon-making and repair by non-Hopewell craftsmen.¹⁴

Possible Archeological Finds

That this building was plaster-stucco is shown by the attached photos and by the heavy deposit of plaster-stucco found in the 1999 Cast House wall archeology.¹⁵ Complete archeology should determine its dimensions. This work may also show that the final location of the structure may have almost trespassed on the area of the south moulding room. Should this condition develop, the possibility then exists that the two structures were so near that a doorway from one into the other may have existed for the efficient moving of castings from the moulding room into the cleaning shed. It may also show, if the trespass on the moulding room is too great, that the structure (building 95) was moved to its final "wheelwright shop" site after the 1844 end of moulding and, or perhaps, as the barn across the road expanded south and southeastward. Further, should archeology disclose that the size of the cleaning shed traditionally

1999 DUG

ORIENTATION REPORT FOR ARCHEOLOGY in LOWER WORKING LEVEL
Hopewell Village 1962

located southwest of the barn is comparatively near that of building 35, the possibility exists that the cleaning shed of an earlier period may have been moved to the more handy final site. Near size for both structures also suggests that the "plastering of the warehouse" of 1836 might have been for the cleaning shed after it had been moved, with this plaster-stucco finish replacing an earlier plaster or wooden siding.

The presence of burnt moulding sand may verify cleaning operations at both sites. Discovery of a pit within northwestern part of building 35 in which Harter Long said wheels were placed for spoke installation, would verify that statement.¹⁶

Other Possible Cleaning Shed Sites

The area southwest of the barn, last used as a parking lot for the Village office before the Visitor Center opened, has contained an unknown number of buildings, which may have existed from 1770 to 1836. Most important of all is a possible cleaning shed of the pre-1844 (stovemaking) period. All sources about this location are Gore family descendants, but they disagree about the use of the structures. One, born in 1866, recalled hearing his grandfather tell about a cleaning shed here (and between Wall E and the North Moulding Room). No trace of it existed within his memory.¹⁷ Another

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ARCHAEOLOGY
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Dr Wm Barkley Contra Cr

1876

July 8	To Cash	17	30.00
July 10	By Furnace	16	31.32
August 31	To Cash	22	26.10
March 1	To Cash	45	10.00
May 10	To Cash	50	20.00
July 4	To Cash	52	6.50
			<hr/>
			123.92

1876

May 1	By Furnace	11	24.00
June 10	By Ditto	14	29.62
July 8	By Ditto	17	29.25
August 31	By Ditto	23	1.50
June 4	By Ditto	53	29.55
			<hr/>
			123.92

1880

Sept 1	To Cash	101	5.00
Nov 1	To Cash	104	28.75
	To Balance		12.25
			<hr/>
			\$46.00

1880

Decr 1	By Furnace	107	42.75
" 10	By W. A. Long	111	3.25
			<hr/>
			\$46.00

1882

Feb 1	To Cash	158	12.25
June 30	To Cash	166	8.00
Aug 18	To Cash	168	8.50
			<hr/>
			28.75

1882

By Balancer			12.25
By W. A. Long	169		16.50
			<hr/>
			28.75

1883

May 15	To Cash		5.00
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1883

By W. A. Long	195		5.00
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