VLR - 8/21/84
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NPS Form 10-900
(3-82)

OMB No. 1024-0018
Exp. 10-31-84

United States Department of the Interior
National Park Service

National Register of Historic Places Inventory—Nomination Form

For NPS use only
received
date entered

See instructions in *How to Complete National Register Forms*
Type all entries—complete applicable sections

1. Name

historic Clinch Valley Roller Mills 184-0001-0049 ~~(VHLC File No. 92-17)~~

and or common N/A

2. Location

street & number River Street Drive (Rt. 1202) N/A not for publication

city, town Cedar Bluff N/A vicinity of

state Virginia code 51 county Tazewell code 185

3. Classification

Category	Ownership	Status	Present Use	
___ district	___ public	___ occupied	___ agriculture	___ museum
X building(s)	X private	___ unoccupied	___ commercial	___ park
___ structure	___ both	X work in progress	___ educational	___ private residence
___ site	**Public Acquisition**	**Accessible**	___ entertainment	___ religious
___ object	___ in process	X yes: restricted	___ government	___ scientific
	___ being considered	___ yes: unrestricted	___ industrial	___ transportation
	N/A	___ no	___ military	X other: rehab. in progre

4. Owner of Property

name C & C Welding & Manufacturing c/o Mr. Ray Childress

street & number P.O. Box 853

city, town Richalands N/A vicinity of state Virginia

5. Location of Legal Description

courthouse, registry of deeds, etc. Tazewell County Courthouse

street & number Main Street

city, town Tazewell state Virginia

6. Representation in Existing Surveys

title None Previously Recorded has this property been determined eligible? ___ yes X no

date N/A ___ federal ___ state ___ county ___ local

depository for survey records N/A

city, town N/A state N/A

7. Description

Condition		Check one	Check one
X excellent	___ deteriorated	___ unaltered	X original site
___ good	___ ruins	X altered	___ moved date N/A
___ fair	___ unexposed		

Describe the present and original (if known) physical appearance

SUMMARY DESCRIPTION

The mill complex at the mouth of Indian Creek consists of several elements: the 3 1/2-story, central block first built ca.1856 (and possibly rebuilt in 1884 following a fire) and the late nineteenth and early twentieth additions for the storage of grain, the adjoining saw mill, now enclosed and housing the mill office, the mill dam site with its associated culvert, weirs, flume and turbines, and the 1 1/2-story shop building which stands at a right angle to the mill. Although some of the spouts, elevators and belting have been removed, the mill contains almost all of the original equipment in working order. The little altered exterior of the mill has served as a landmark to the people of Cedar Bluff and is the clearest visual indicator of the town's growth from its development in the mid-nineteenth century.

ARCHITECTURAL ANALYSIS

The mill is located on a prominent site on the south side of Indian Creek where the creek flows into the North Fork of the Clinch River, near the north entrance to the town of Cedar Bluff from Route 460. The mill lies between state Route 1202 and the river. The three-story mill building forms a right angle with an associated one-story shop building at a bend in Route 1202. Across Route 460 stands the five-bay, two-story, double-pile miller's residence built, according to one tradition, in 1865. At the south end of the mill is located the site of the dam, which was removed during the construction of the 460 bypass around Cedar Bluff. The concrete dam was built where a rock ledge extends across the river at that point and forms a small bluff on the far side. The present owner has started reconstruction of a new dam in the same location and has also constructed a low stone wall along the river bank to control flooding of the mill foundations during high water.

The timber-framed mill is made up of five sections: the central 3 1/2-story block, a one-story addition to the south, a small one-story addition adjacent to the southwest corner and two consecutively constructed two-story sections to the north.

The nearly square, gable-roofed central block is the earliest section. Three framed bays in width and four in depth, the exterior is sheathed with horizontal weatherboard and covered with a standing seam metal roof. The frame is largely formed of hewn chestnut and constructed with mortise and tenon joints.

The foundation is of coursed rubble with openings in the south, west, and north walls to admit and discharge water. The western half of the unfloored basement story contains a silted-up stone walled wheel pit, currently occupied by two inoperative turbines in tandem housed in cylindrical cases of boiler plate. The turbines apparently originally discharged through the north wall in a now filled-in tail race below the north addition and were served by a concrete covered iron flume entering through the south wall. The turbines were not housed, as were many in the South, deep in a pit entirely

(See Continuation Sheet #1)

8. Significance

Period	Areas of Significance—Check and justify below				
___ prehistoric	___ archeology-prehistoric	___ community planning	___ landscape architecture	___ religion
___ 1400–1499	___ archeology-historic	___ conservation	___ law	___ science
___ 1500–1599	___ agriculture	___ economics	___ literature	___ sculpture
___ 1600–1699	X architecture	___ education	___ military	___ social/ humanitarian
___ 1700–1799	___ art	___ engineering	___ music	___ theater
X 1800–1899	___ commerce	___ exploration/settlement	___ philosophy	___ transportation
X 1900–	___ communications	X industry	___ politics/government	___ other (specify)
		___ invention		

Specific dates ca. 1856; 1884(?) ca. 1896; 1936 **Builder/Architect** Unknown

Statement of Significance (in one paragraph)

STATEMENT OF SIGNIFICANCE

The Clinch Valley Roller Mills is one of the oldest and most significant industrial structures in Tazewell County. First constructed in the late 1850's (possibly reconstructed on the same lines in 1884 following a fire) and added to several times during the next 60 years, the saw and grist mill originally operated as one of a group of grain, lumber and wool mills clustered along the Clinch River above the mouth of Indian Creek. The town of Cedar Bluff grew up at that location as the commercial center of western Tazewell, before the exploitation of coal in the area, largely in response to the water resources which the mill represents. The central, earliest section of the mill resembles many moderate-sized custom mills of rural Virginia in the nineteenth century. As altered in 1896, it became one of the region's largest and most successful producers of patent, high grade flour, while maintaining its corn meal output and its custom wheat trade. It continued operation, as the chief supplier of flour, meal and feed for the Tazewell area, well into the mid-twentieth century. The building survives intact as a focal point for the community of Cedar Bluff, not only through its historic importance to the area's economy from the mid-nineteenth century, but through its direct connection from the beginning with some of the community's most prominent citizens.

HISTORICAL BACKGROUND

The history of flour milling is that of the attempt to get the maximum amount of white flour from the wheat. The mill at the mouth of Indian Creek probably began operation in the 1850's as a moderate-sized establishment with the standard two runs of stone and a full complement of bolting reels, producing several grades of flour, including a high quality flour and a substantial amount of bran and other tailings. It is assumed that the mill listed in the 1880 federal industrial census had changed little since its construction in the 1850's. It was a grist mill, which meant that it did only custom work for local farmers in return for a "toll" or percentage of each man's flour. It had only a twelve bushel capacity elevator, indicating the limited storage needs of a custom mill and the dramatic change called for by the conversion to commercial milling in 1896, represented by the larger storage capabilities of the first north addition and the even larger capacity of the 1938 second north addition. Commercial or merchant milling differed from grist milling in the late nineteenth century chiefly in the fact that the miller bought grain and sold flour for cash, and depended on an efficient transpor-

(See Continuation Sheet #7)

9. Major Bibliographical References (See Continuation Sheet #16)

Abernathy, R. James. Practical Hints on Mill Building. Moline, Ill.: R. James Abernathy, 1880.
American Historical Society, Inc. History of Virginia, Vol. IV, 1924.
Bennett, Richard and John Elton. A History of Corn Milling, vols. 1-4. London: Simkin, Marshall & Co., Ltd., 1898.

10. Geographical Data

Acreage of nominated property Less than one acre

Quadrangle name Richlands **Quadrangle scale** 1:24,000

UTM References

	Zone	Easting	Northing
A	17	4 3 1 9 2 0	4 1 0 4 7 3 0
B			
C			
D			
E			
F			
G			
H			

Verbal boundary description and justification Beginning on the south side of U.S. 460 at its junction with Route 1202 (River Drive Street), south along the west side of Route 1202 to the northern corner of lot 29, section 3 of Bane Addition to the Town of Cedar Bluff, east along the north side of lot 29, south along the east line of lot 28, west along the south line of lot 28, north

List all states and counties for properties overlapping state or county boundaries (See Continuation Sheet #18)

state	N/A	code	county	N/A	code
state	N/A	code	county	N/A	code

11. Form Prepared By

name/title Charlotte Worsham/Preservation Consultant, Gibson Worsham/Architect

organization N/A **date** June 1984

street & number Yellow Sulphur Springs, Route 2 **telephone** (703) 552-1139

city or town Christiansburg **state** Virginia 24073

12. State Historic Preservation Officer Certification

The evaluated significance of this property within the state is:

___ national X state ___ local

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

State Historic Preservation Officer signature H. Bryan Mitchell

H. Bryan Mitchell, Executive Director
title Virginia Historic Landmarks Commission **date** August 21, 1984

For NPS use only

I hereby certify that this property is included in the National Register

date

Keeper of the National Register

Attest: **date**

Chief of Registration

7. DESCRIPTION -- Architectural Analysis

submerged, but were raised above the water level of the tail race and probably equipped with a now buried draft tube, which enabled the wheel to take full advantage of the head of water without being inconveniently submerged. Two wooden gearing elements were found partially intact under the mill, a 6 1/2 foot spur wheel and a lantern pinion gear.

The first floor of the central block is tranversely divided into two equal areas by a marked change in floor level. The eastern half is entered by double "Dutch" sectional doors in the center of the east wall. The floor, several feet above grade, is supported on joists resting on a system of sills directly on the foundation and two stone intermediate piers. This area is lit by two six-over-six, double-hung sash windows in the bays flanking the door. It contains a flour packer served by bins directly above in the second floor and a grain scale near an underfloor receiving bin served by a hatch in the east wall to the immediate north of the main doors. Two adjacent grain elevators and a modern hammer type feed mill complete the remaining equipment. A high fixed six-light window beside the northeast corner post lights the weight bar of the grain scale. The western half of the first floor is occupied by the husk frame, a five-foot high mortise and tenon timber frame independent of the mill house frame and open to the wheel pit below. The frame, which sits directly on the foundation, has been altered as changes in milling and energy transmission technology necessitated, but remains clearly discernible as a powerful element in the design of the mill. A chronicler of grist mills in southwest Virginia observed that "in most of the older mills the hoppers and 'burrs' were on a platform elevated six or seven steps above the main floor of the mill."[2] While the husk frame often corresponds in height to the second floor in eighteenth- and early nineteenth-century mills of the Tidewater, the raised platform is characteristic of many nineteenth-century mills in the South.[3]

The husk frame is floored over and supports three sets of two flour rollers in their metal stands. It would originally have held the stones and their subsidiary equipment. The eastern front of the frame is sheathed with vertical boards and contains access doors to the area below. The platform is lighted by three six-over-six, double-hung sash windows, one in each bay of the west wall. The northern third of the husk frame has been most altered, and at present provides a seat for a large set of Nordyke and Marmon corn rollers, a corn meal bolter, and two large bins apparently for bran and other tailings, the coarser by-products of the milling of wheat, and an electric motor which is connected by belting to the corn mill.

The frame of the central block, posts, braces, studs, girders, and joists, is exposed. The hewn posts are 9 1/2" by 9 1/2", the sills are 12" by 12", and the studs are 3" wide by 4" deep. At the second floor level, a longitudinal main girder rests on a pair of evenly spaced bolsters each of which is supported by free-standing chamfered posts which rise between the husk frame and the eastern half of the building. Two pairs of secondary

(See Continuation Sheet #2)

7. DESCRIPTION -- Architectural Analysis

girders are tenoned into the main girder above these posts and run to the two posts in both the east and west walls. These support 2" by 10" joists which run north to south.

The husk platform is reached by an added stair cut into it between the two chamfered posts. The second floor is reached by a stair running from the husk frame along the west wall in front of the central window. Evidence in the floor structure above indicates that the stairs originally ran up from the husk frame along the north wall below the existing stairs from the second to the third floors.

The second floor is level and open and lit by two six-over-six, double-hung sash windows in the east wall flanking a double door, two similar windows in the inner bays of the south wall and two windows in the outer bays of the west wall. All of the windows in the central block show evidence of having been replaced, in that a stud to one side of each has been entirely removed and new blocking inserted to accommodate a wider opening. The room contains an in situ milling separator vented to the exterior and a large divided flour bin above the flour packer on the first floor. A modern metal-lined cabinet is located just inside the eastern window in the south wall. A line shaft which supplied power to the machines located on this floor survives attached to two wooden posts near the stair. The framing system of the second floor is identical to that of the first . No evidence suggests that the double door to the exterior was used for any purpose other than obtaining light and ventilation and installing equipment.[4]

The third floor is reached by a stair running from the northwest corner up along the north wall. The steep (7/12) roof rises from knee walls along the west and east. Additional support is provided by a pair of purlins running between posts in the north and south gable walls, which at this level are divided into three unequal bays. Each of the 8" by 8" purlins is supported by two internal posts which rest on the secondary girders supporting the third floor. These four posts are plainly dressed and connected to one another by tie beams supporting the attic floor. The feet of the continuous common rafters rest on 9" high by 8" deep top plates; they are lapped and pegged at the ridge. The top plates and purlins project beyond the gable walls to support the projecting gable eaves.

The third floor is lit by two windows in the central bay of the gable end walls, directly above the end windows on the second floor, and by several small hatches and wooden doors in the west knee wall. This floor contains three disassembled purifiers or redresser chests and their associated reels, a cyclone dust collector, a separator, a scourer or wheat cleaner and the conveyor section of a missing flour sifter. In addition, the tops of the wheat elevators are visible. These serve the separator on the floor below, the auger which carries the grain to the garners or bins in the second north addition, and several wooden spouts which distribute grain to the bins in the first north addition. The main line shaft which powered the many elevators which brought

(See Continuation Sheet #3)

7. DESCRIPTION -- Architectural Analysis

the flour and middlings to the equipment on this floor survives.

The fourth floor is located in the peak of the roof and thus has a floor width which corresponds only to the central bay of the gable end walls. It is reached by a stair above the stair from the second to the third floors. The holes in the floor show the locations of the flour elevators, which were carried up into this area, from which the flour was redistributed by spout to the sifters and purifiers. An unattached line shaft survives in this area. The fourth floor is lit by a central window in each gable. A cockle machine, which aided in cleaning the wheat, has been stored in the area.[5]

The south addition is connected to the central block along the eastern half of the south wall. Its east wall is seven feet forward of the east wall of the central block. The gable-roofed structure is sheathed with vertical boards and battens. The shallow standing seam metal roof is pierced by a brick chimney. The hewn oak sills are supported by low foundation walls of coursed rubble. A central sill, resting on stone piers, spans the section laterally from north to south augmented by two evenly spaced pairs of cross sills. The south third of the section's floor is supported by five pairs of massive 8" wide by 10" high hewn oak sleepers spanning from the east and west sills to the central sill. The sleepers are notched in the top and bottom at regular intervals in a pattern symmetrical about the center sill, indicating perhaps their previous use in situ as supports for the ways or runners for the carriages of a pair of saws. A few of these sleepers and sills show evidence of charring, the only evidence of a fire at the site, perhaps one which destroyed the roof and posts of an open sawmill extant prior to the construction of the present walls and roof of this section. The remaining floor area is supported by 2" by 10" circular sawn joists running between the secondary sills. All of the underfloor members are coated with sawdust, indicating use in the not too distant past of this area as a woodworking facility.

The section is framed of 4" by 4" circular sawn pine posts spaced at intervals varying from 2' - 6" to 5' - 0" and braced by similar horizontal members. The roof is supported by common rafters. The space enclosed is unfinished except for the northeast corner adjacent to the central block. This area is walled and ceiled. The interior is finished with narrow vertical tongue and groove boards, and features a wider vertical tongue and groove board dado with a molded rail, and window and door trim with corner blocks. A chimney rises in the center of the room's south wall and features a mantel with attached pilasters and a molded shelf. The mantel surrounds a coal grate. The alcove to the west of the chimney contains a large built-in safe.

The rest of the section contains no equipment; it is lit by a six-over-six, double-hung sash window centered in the south gable end, and two similar windows in the west wall flanking a small cantilevered room, probably a privy. Access to this section is gained through a door with trim and corner blocks similar to those found in the office in the

(See Continuation Sheet #4)

7. DESCRIPTION -- Architectural Analysis

east wall and a door in the south wall of the main block. The office is lit by six-over-six, double-hung sash windows in the east and north walls; one of which is angled in the northeast corner of the room. Doors lead to the adjacent space through the west wall and to the exterior through the north wall.

Next to the south addition is a one-room, one-story addition with a shed roof. The room is at the level of the husk platform and is entered from there through a door in the south wall of the central block. A cut stud is visible in the door sill, indicating that the addition was made after the platform floor was laid in its present form. The room is sheathed on the exterior with horizontal weatherboards and on the interior with horizontal tongue and groove boarding. A six-over-six, double-hung sash window pierces both of the south and west walls. A door in the east wall opens onto a covered area between the two southern additions. The floor of this area has collapsed and any stair or platform allowing access to this door is gone. The corresponding wall of the south addition has been altered in recent decades.

A low space beneath the one-room addition is enclosed and lit by a single fixed window in the west wall. The floor is formed by the top of the concrete flume enclosure. At one time this space held equipment; possibly the generator and batteries of the Delco electric lighting system of ca. 1918. The main horizontal drive shaft (now removed), connected to the larger turbine by a bevel gear, extended into this space.

To the north stands a weatherboard-clad, shed-roofed extension of the main building, a two-story pair of additions which share cornice and window sill heights with the central block despite diverse floor and ceiling heights. The first addition was constructed in the mid-to-late 1890's of framed timber, with braced corner and intermediate posts to accommodate the need for grain storage. It contained large garners for storage of grain on the second floor and possibly an extended husk frame at the rear of the first floor to accommodate additional milling machinery. The addition is supported by a stone foundation along the east and by untrimmed vertical sections of logs as the ground slopes away to the west. On the west and the north a skirt of lattice was added sometime after construction, as shown in contemporary representations.[6] The floor levels are roughly the same as those in the central block. There is some indication that the rear half of the first floor was raised to conform to the height of the adjacent husk platform. A photograph of the mid- to-late 1890's shows steps rising directly behind the door in the east wall. The studs are now enclosed at a level approximately five feet above the floor, and there is a small door below the high west window. The wall between the husk platform and the first north addition has been entirely removed.

The first floor has been much altered by the addition of modern stud and plywood

(See Continuation Sheet #5)

7. DESCRIPTION -- Architectural Analysis

partitions and doors. The east wall of the two-bay addition contains a single sectional door in the south bay and a six-over-six, double-hung sash window in the north. The north end wall originally was pierced by a window at each end and an off-center door, as depicted on contemporary flour bags, photographs, and letterheads.[7] The sectional door remains in use as the door to the second north addition. The photographs and illustrations also show the first north addition both with and without the existing canopy which covers the loading area in front of the main block and first addition indicating its construction between that of the first and second north additions. The first floor is divided north to south by a modern partition which is pierced by double glass panel doors surmounted by a very large transom.

The second floor is lit by two six-over-six, double-hung sash windows in the east and one in the west, not aligned with the single window in the floor below. Two windows originally pierced the north wall. The north wall of the adjacent central block retains its weatherboarding in the interior of the addition. A line of three cased posts in the first floor supports a longitudinal girder which carries the second floor joists. Three similar posts in the second floor support laterally aligned pairs of 2" by 10" purlins which carry the shallow westward sloping, standing seam metal roof on 2" by 6" rafters. The interior is unfinished. The wall posts measure 8" by 8" and the studs 2" by 6". Grain was deposited in the garners of this addition by the use of spouts from the wheat elevator in the third floor of the central block. Additional spouts extant in the floor of the second story allowed the grain to fall back into the wheat scale in the main block and thus to the grain elevator for redistribution as desired.

The second north addition, built in 1938, is three bays in width and contains a large room on the first floor originally divided into garners for storing grain. The roof and walls are aligned with the first addition. The interior is completely sheathed with horizontal boards. The two second floor girders run from east to west and are supported by two rows of three 5" by 7" posts aligned with the east, north and west wall posts, and are reinforced by angled braces at the post heads. The first floor east wall is pierced by three openings, a sectional door in the north bay and a six-over-six, double-hung sash window in each of the remaining two bays. Two similar windows pierce the outer bays of the north wall. There are no openings in the west wall.

The second floor is 3' - 0" below the second floor in the first addition, reached from there by a short flight of steps. Six posts above the posts on the first floor support three sets of doubled 2" by 10" purlins which run north to south and support the 2" by 6" rafters. The second floor is lit by two six-over-six, double-hung sash windows in the east wall flanking a double door which is surmounted by a large fixed transom. The windows on the east are placed above eye level so as to remain even with the windows on that facade of the central block. The north wall fenestration

(See Continuation Sheet #6)

7. DESCRIPTION -- Architectural Analysis

is identical to that of the first floor and is of conventional lower height. The west wall is not pierced by any openings. The interior is entirely sheathed with horizontal boards and is divided into three grain garners by low walls. A pair of grain augers permitted easy supply and retrieval of the grain stored in the second addition. One situated just under the rafters distrubuted the grain to the three garners. Holes in the second floor allowed the grain to drop into the first floor garners. Additional holes permitted the grain to fall into an auger below the first floor which carried it back to the central block to be processed.

The shop building, which is sited perpendicularly to the mill building to the southeast, is a 1 1/2-story frame structure. The double door is located in the east center bay in the four-bay principal north facade. The end walls are two bays in depth, and a door to the second level is centered in the west gable. An open shed stands along the south wall. There is no chimney. A photograph of ca. 1886 shows this building in the distance, and another taken ca. 1900, shows that the shop building had a wood shingle roof, was covered with board and batten sheathing, and featured six-over-six, double-hung sash windows.[8]

The complex represents a nineteenth-century grist and saw mill typical of the middle Atlantic states and the South, its design based in traditional millwrighting practice and pattern books of the period including Oliver Evans' The Young Millwright and Miller's Guide of 1795.[9] The mill structure was updated to keep abreast of advances in milling technology and consumer demands, but these changes did not render the mill seat obsolete for approximately one hundred years.

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[1] Telephone interview with Gregory Jeane, Auburn University, Auburn, Alabama, May 5, 1984.

[2] Clarence Baker Kearfott, Highland [Virginia] Mills (New York: Vantage Press, 1970), p. 17.

[3] Op. cit., telephone interview with Jeane.

[4] For discussion of use of doors in upper floors of similar mill, see Gregory Jeane, Archival and Field Survey of McCosh's Mill, West Point Lake, Alabama (Auburn, Alabama: Auburn University, 1979), p. 35.

(See Continuation Sheet #7)

7. DESCRIPTION -- Architectural Analysis

[5]Identification of surviving equipment at Clinch Valley Roller Mills was undertaken with the help of Richard M. Wydner, miller and proprietor of Amherst Milling Company, Amherst, Virginia, who also was helpful in explaining the intricacies of roller milling technology.

[6]Flour bags and stationery in the possession of Ray Childress, Richlands, Virginia, and photographs in the collection of Allen Jefferson Higginbotham, Tazewell, Virginia.

[7]Ibid.

[8]Photograph from the collection of Allen Jefferson Higginbotham, Tazewell, Virginia.

[9]Robert Lewis Hiller, "A Study of Flour Mill Architecture Portrayed in American and English Milling Publications: 1795 - 1861" (Master's Thesis, University of Virginia, 1982) gives a very useful account of the influence of pattern books upon the design of American mills.

8. SIGNIFICANCE -- Historical Background

tation network.

The merchant flour industry had grown from its beginnings in the late eighteenth century, partly through the invention of elevators and conveyors (or "augers") which made the operation of the mill largely automatic. Further improvements resulted in the development of "New Process" or gradual reduction milling, common by the 1870's, a process in which the grain was slowly broken down through several "breaks", or passes between a series of stones, which were separated more widely than in traditional single-stone "low-grinding." This system enabled the miller to more fully separate the clean white flour from the bran, achieving a much higher percentage of fine flour to grain ground. The development of the purifier and the dust collector enabled additional flour to be recaptured from the bran and from the air in the mill.

In the 1880's the American version of the European-invented roller mill superceded the millstone as the method of choice for new flour mills. Ca. 1896, the Clinch Valley Roller Mills converted to the new technology. Although refinements were apparently made in the 1920's, the method of grinding and the equipment was not augmented further after that date. Several similar-sized mills continue to produce large quantities of flour in Virginia today, using much the same sort of equipment, some of it as old as that in the Clinch Valley Roller Mill.

(See Continuation Sheet #8)

8. SIGNIFICANCE -- Historical Background

The Clinch Valley Roller Mill is a remnant of a group of water-powered industries which clustered around the falls of the North Fork of the Clinch River at Cedar Bluff, referred to in the mid-nineteenth century as Mouth of Indian. The land around the mouth of Indian Creek was patented in the first quarter of the nineteenth century by members of the McGuire family, who early recognized the potential of the river at the falls and by the 1840's had used their skills to erect and operate a saw mill and grist mill. Thomas M. Scott, who arrived in 1815 to operate a merchantile business, is reported to have been the first to establish a carding and spinning mill at Mouth of Indian.[1] Eventually the river supported three mills, the uppermost location being the site of a grist and saw mill operated by the McGuire family, the central seat being occupied by the Klondyke Woolen Mills, and the lower dam and seat being the subject of this nomination. This cluster of mills is typical of the plethora of small manufacturing centers which covered much of rural America in the pre-railway era and were located chiefly in regard to the availibility of materials and water power.[2]

The first reference to milling in the area occurs in a deed of 1842 and refers to the upper mill seat as McGuire's Mill Dam.[3] In 1833 William McGuire, Sr. and John McGuire had sold to the Reverend William McGuire, Jr. 100 acres at the mouth of Indian Creek. This would include the Clinch Valley Roller Mill site, which occupies a parcel of land at the juncture of Indian Creek with the Clinch River. In 1853 William T. Morton purchased 3 1/4 acres containing the mill seat from William McGuire in two tracts at the mouth of Indian Creek described as being "where the sawmill stands which was built by. . .Morton and Henry McGuire."[4] Morton, establishing a pattern which would be repeated by a later owner of the mill, had married McGuire's daughter and succeeded to ownership of the mill. The documents suggest that he had arrived in the area as miller and millwright to build and operate a saw mill on McGuire's land. Morton lost no time in improving his new mill seat. The tax records for 1854 show that the site included buildings valued at $300, which increased to $800 in 1857, probably representing the erection in the previous year of a grist mill.[5] A store, planing mill and furniture shop appear to have been connected with the mill.[6]

In the same year as the sale of the privilege at the mouth of Indian Creek to Morton, William McGuire, Jr. sold to Cornelius and Elijah McGuire and Joseph J. Mays a grist mill at the upper mill dam, which in 1857 was valued at $1,000.[7] No changes in ownership or valuation took place at either mill until after the War Between the States. In 1865, Morton built a large residence adjacent to the mill, constructed by Thomas Hawkins, a well-known local builder, and a Mr. Cubine.[8] In 1868, Morton purchased an additional acre to add to the ten he already possessed (seven of which were inherited by his wife from her father),[9] and in 1870 he sold all eleven acres to Thomas Jefferson Higginbotham, who paid $3,600 for "the saw and

(See Continuation Sheet #9)

8. SIGNIFICANCE -- Historical Background

grist mill and dwelling house, etc."[10] It would appear that Higginbotham helped finance his purchase by operating a hotel in the residence called "the Monticello" during the 1870's; the deed of 1868 referred to above mentions the plot where William Morton resided but does not mention any use of the property as a hotel or boarding house. The mill was widely patronized by farmers from the surrounding counties, who often spent the night in a specially constructed house near the mill, now destroyed.[11] By 1880, the year of his marriage to Alice Allen, the mill and an adjacent farm descended to T. J. Higginbotham's son, William Jefferson Higginbotham.

W. J. Higginbotham's grandson, Allen Jefferson Higginbotham, recalled in an interview that an adjacent furniture shop was operated as well as a planing mill and shop which produced much of the finished lumber for stairs, doors and windows supplied to local builders. He said W. J. Higginbotham was a master mechanic and made his living during his adult life from the mill and adjacent farm. He preferred taking partners to handle the bookkeeping and help keep the mill going. His chief employees during the period from the 1890's through the '20s included a Mr. Grinstead and his son-in-law, Theo Luttrell.

The 1880 industrial census schedules show that the mill did only custom work, and that two sets of millstones were powered by a sixty horse-power turbine wheel of five feet in diameter, operating at 125 revolutions per minute from an eight-and-one-half foot fall. The grist mill, with a capital of $8,000, operated twelve months out of the year at a 150 bushel/day capacity, producing 720 barrels (or 141,120 pounds) of wheat flour in the previous year, 259,200 pounds of corn meal and 63,600 pounds of feed, worth a total of $7,000. The saw mill operated eight months out of the year with its two circular and one muley saws. It was powered by a three-and-one-half foot turbine and a six foot flutter wheel, producing twelve horse-power at 120 revolutions per minute. The saw mill, with a capital of $600, produced 249,000 feet of lumber valued at $2,800. The grist mill required an average of one man to operate the largely automatic equipment at a salary of $1 per day, while the saw mill had two operatives who were paid $1.50 for skilled and $.50 for ordinary labor. W. J. Higginbotham converted the Monticello Hotel into his residence, but found it convenient, like many of his neighbors, to take in several boarders connected with the building of the railroad during the 1880's and '90s.[12]

According to secondary sources, the mill burned in the early 1880's[13] and was completely rebuilt with modernized equipment; perhaps for the first time catering to the merchant flour market with "New Process" gradual reduction "high grinding" in addition to the traditional custom work which was continued well into the mid-twentieth century. The stone foundation of the former mill was clearly not altered, and it seems

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8. SIGNIFICANCE -- Historical Background

quite possible that the main mill building did not burn at all. The smaller of the existing turbines is probably the same mentioned in the 1880 census.

Most communities in the nation continued to rely on grist mills for their flour or meal until well into the late nineteenth century, but after the War Between the States their position was continuously undercut by the extension of the market economy. The railroads were very influential in developing regional markets.[14]

In 1880 Cedar Bluff was a small, relatively isolated community which apparently grew in response to the water resources available on that section of the Clinch River. With the coming of the railroad in 1889, wheat from areas outside the western Tazewell environs became available, as did markets far beyond its previous range. The conversion of the mill to a commercial flour mill was predicated not only on the easy and unlimited supply of water but on the arrival of the railway. Low rates for shipping on the Norfolk & Western made shipping flour to the urban East very lucrative and grain from western regions easily available.[15]

The size of the husk frame seems to indicate that the mill continued to employ two runs of stones until the mid 1890's. Two pairs of French buhr stones were located on the site when the present owner acquired it. In 1896 the mill responded to the American milling revolution of the late nineteenth century with the replacement of the burr stones with three pairs of steel rollers and a flour packer, for which the bill of lading survives. Some of the rest of the equipment probably dates from the previous milling system and was reused. At this time the second, seven foot diameter turbine may have been added.

The turbine was developed in both Europe and the United States during the first half of the nineteenth century. At first it was chiefly found in progressive industrial centers where its greatly increased efficiency and ease of maintenance was important. Stock turbines were available across the country by 1870, finding favor particularly with small saw mills and grist mills.[16] By 1880 it was described as "the only water wheel in general use."[17] The water was introduced into the curved vanes of the turbine from their periphery, directed inward and expelled axially through the bottom of the case. The amount of water was controlled by the use of a cylindrical "gate" which fitted around the turbine and could be controlled from the mill above to widen or narrow slots surrounding the turbine.[18]

While many such turbines in the lower South are known to have been submerged uncased in a concrete wheel pit,[19] the technique of raising the wheel above the tailrace and enclosing it made the wheel much more accessible both to the machinery it was to power and to the person wishing to make repairs. The power of the full "head" or fall was maintained by expelling the water through a draft tube below the turbine which, through suction produced by gravity, preserved the energy of the water. The power of the rapidly rotating turbines was generally transmitted by the use of belts directly to

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8. SIGNIFICANCE -- Historical Background

the machinery above, since the cumbersome and expensive wooden gearing served chiefly to "gear up" the slower speeds of the vertical water wheel. At the Clinch Valley Mill the turbine would probably have replaced a vertical water wheel and would have been hooked up to the then existing gearing only with difficulty. The larger (seven-foot) turbine still carries a large wooden bevel gear at the top of its shaft, which apparently transmitted its power through another wheel on the end of a horizontal main line shaft which powered the main belt. It is not clear when or how the relatively small (six feet and four inches) wooden cog wheel found nearby was used. The power transmission system has been so altered that it is difficult to analyze any previous forms from the existing evidence.

By the mid-1890's W. J. Higginbotham was in partnership with T. A. Gillespie. The saw mill was still in operation.[20] The mill was renamed Clinch Valley Roller Mills at the time of the change in milling technology, a convenient device, since Higginbotham had a new partner almost every five years until 1910. In 1899 the firm was known as Higginbotham and Kirby. In 1900 the firm was operated by Higginbotham and George B. Hurt; Hurt died in 1902 and McGuire took his place until the arrival of Harry Wythe Bane in 1909. Bane married Higginbotham's daughter, Louise, and had purchased an interest in the mill by 1910.[21] According to A. J. Higginbotham, the adjacent building was used at this time as a "shop."[22]

The merchant flour trade picked up following the introduction of roller milling, and by 1899 the firm was "busy running day and night in an attempt to catch up with orders for fine flour." The firm made several grades of flour, naming its finest flour "the Invincible" and utilized rail for transport of flour and grain.[23] During the mid-to-late 1890's the first north addition was constructed to answer the greatly increased need for grain storage called for by commercial milling. By ca. 1900 the porch over the loading area was constructed.[24]

In 1910 the wooden dam was replaced with a concrete dam.[25] Apparently the saw mill ceased operation at some point after 1902. The saw mill area was enclosed and part of it finished for use as an office. An illustrated letterhead for Higginbotham and Hurt (ca. 1899 - 1902) shows the second addition complete but no porch and the saw mill still in operation.

Around 1918, according to A. J. Higginbotham, a Delco generator and battery system, the area's first, was installed to generate and store power to light the mill and house, powered by the turbines.[26] The machinery continued to be powered by water until the mid-twentieth century. In 1923 the mill layout was apparently modernized and redesigned by the Salem Foundry and Machine Works which provided a flow chart of the milling process.[27] In 1924 it was reported that the Clinch Valley Roller Mill had a capacity of 40 barrels or 7,840 pounds of flour a day.[28] McGuire's mill at the

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8. SIGNIFICANCE -- Historical Background

upper privilege had ceased operation soon after World War I.[29]

In 1925 W. J. Higginbotham died, and Harry Bane became sole proprietor until his death. Bane built the second north addition in 1938, more than doubling the grain storage capacity of the mill.[30] In 1948 the mill was listed in The Northwestern Miller as having a capacity of 100 sacks or 1,000 pounds of flour per day. While this was considerably less than in 1924, the only mill in the region with a larger capacity was in Marion, Virginia with a capacity of 120 sacks or 1,200 pounds of flour per day.[31]

Virginia was unusual in the late nineteenth century among the leading grain producing and milling states. The 1870, 1880 and 1890 industrial censuses show that while Virginia retained a place as third in total number of mills in the nation, her position gradually fell from ninth to twelfth and finally fourteenth in total production of flour and meal. The western states gradually surpassed the major eastern producers of Pennsylvania and New York without ever overtaking them or Virginia in number of mills. In fact, in 1870 California with 115 mills surpassed Virginia with 1,556 mills in total bolted flour production, demonstrating the high proportion of grist mills among Virginia's mills. While the other eastern states high in number of mills (all in the North) maintained their primacy in production, Virginia did not. The inequality is best demonstrated by a calculation of the number of runs of stone listed per mill. Virginia had only slightly more than two runs of stone listed per mill, above North Carolina's one, but behind New York and Illinois. These, the first and second most productive states, had three runs per mill, while Minnesota, the fourth most productive state, was the only state to have four runs per mill, indicating the concentration of gradual reduction milling which would enable it to become the first in the nation by 1890 and the world's largest producer by the end of the century.

Within the state, flour and grist milling ranked highest in number of industrial establishments throughout the nineteenth century. In 1870, when the census separated out the commercial flour product, it was, however, slightly lower than that of the tobacco industry. Tazewell ranked in the lower third in number of manufactories, and in the lower third of eleven Virginia Highland counties. Tazewell was sixth among the seven reporting Highland counties in number of mills and fifth in production in 1880.

In 1850 Tazewell had nine millers on record, but there was no market for their product, and they operated entirely as grist mills.[32] By 1870, only four mills were recorded. The recorder probably ignored some hard to reach or small mills although the War Between the States apparently depleted the stock of competent millers.[33] The sale of William T. Morton's mill to T. J. Higginbotham in that year may suggest a failed or unproductive mill and explain its absence from the record. Three of the recorded mills had combined a certain amount of merchant milling with their custom work. None of the four was in Cedar Bluff.

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8. SIGNIFICANCE -- Historical Background

In 1880 there were seventeen mills recorded in Tazewell County. All of the mills had two runs of stones, except one, which had one run. The average size daily capacity was 75 bushels of wheat, and the average capital investment $2,800, with an equal range of figures to either side, from thirty bushels to 150, and from $1,000 to $6,000. The average total value of products for the previous year was $4,700 with a balanced range from $1,200 to $10,125. The mills were all powered by overshot wheels, with the exception of four breast wheels, one pitchback type, and three turbines. Three of the mills were consistently high in daily capacity, capital invested, and value of production, while the remainder varied widely. The highest in capacity (150 bushels) was the Higginbotham mill, although it took second place in capital ($5,000) and value of production ($7,000) to a mill owned by the Williams family of Bluestone. In 1880 the McGuire mill at Cedar Bluff had half the capacity, half the capital investment, and five-sevenths the product. Both the Higginbotham and McGuire mills were powered by turbines. The third turbine powered mill, interestingly, was the mill with the lowest capital investment but one which produced a total product close to the median in value.

Thus the Clinch Valley Roller Mills, by a careful updating as milling technology advanced, initially improved its position among the hundreds of nineteenth-century mills in southwest Virginia and maintained a position as a leading producer of flour to the middle of the twentieth century. Most of the other grist mills continued as such, surviving with a few exceptions only into the first quarter of the century as relics of a pre-market economy. The preservation of the mill is assured by the present owner's plans for adaptive reuse of the structure as a demonstration mill and restaurant.

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[1]"Thomas Scott Gave Cedar Bluff Name," Richlands News-Press and Clinch Valley News, July 2, 1975, p. 10D.

[2]Louis C. Hunter, A History of Industrial Power in the United States, 1780 - 1930, Vol. I: Waterpower in the Century of the Steam Engine (Charlottesville: University Press of Virginia, 1979), p. 292.

[3]Tazewell County Deed Book 7, p. 396.

[4]Ibid., Book 11, p. 131.

(See Continuation Sheet #14)

8. SIGNIFICANCE -- Historical Background

[5]Tazewell Land Book 1851 - 1863.

[6]Interview with Allen Jefferson Higginbotham, Tazewell, Virginia, May 8, 1984; also "The Historic Town of Cedar Bluff . . .," Richlands News-Press and Clinch Valley News, July 2, 1975, p. 8D.

[7]Op. cit., Tazewell Land Book 1851 - 1863.

[8]Op. cit., "Thomas Scott Gave Cedar Bluff Name."

[9]Tazewell County Deed Book 14, p. 209.

[10]Ibid., p. 269.

[11]Louise Leslie, Tazewell County (Radford, Virginia: Commonwealth Press, Inc., 1982), p. 159; also interview with Allen Jefferson Higginbotham, Tazewell, Virginia, May 8, 1984.

[12]Op. cit., "The Historic Town of Cedar Bluff . . ."; also op. cit., interview with Allen Jefferson Higginbotham.

[13]Op. cit., "The Historic Town of Cedar Bluff . . ."

[14]Louis C. Hunter, A History of Industrial Power in the United States, 1780 - 1930, Vol I: Waterpower in the Century of the Steam Engine (Charlottesville: University Press of Virginia, 1979), p. 484.

[15]Correspondence with G. Terry Sharrer, Division of Extractive Industries, National Museum of American History, Smithsonian Institution, May 9, 1984.

[16]Arthur T. Safford and Edward P. Hamilton, "The American Mixed-Flow Turbine and Its Setting," American Society of Civil Engineers, Transactions 85, (1922): 1261.

[17]R. H. Thruston, "The Mechanical Engineer, His Work and His Policy," TASME 4 (1882 - 1883): 81 - 83, in Hunter, p. 311.

(See Continuation Sheet #15)

8. SIGNIFICANCE-- Historical Background

[18]John Wolf Thurso, "Modern Turbine Practice and the Development of Water Power," Engineering News XLVII, no. 23 (December 4, 1902): 464.

[19]Telephone interview with Gregory Jeane, Auburn University, Auburn, Alabama, May 5, 1984.

[20]Account book, Higginbotham and Gillespie, 1881 - 1896, in possession of Ray Childress, Richlands, Virginia.

[21]American Historical Society, Inc., History of Virginia, Vol. 4 (n.p., 1924), p. 476.

[22]Op. cit., interview with Allen Jefferson Higginbotham.

[23]Op. cit., Leslie, pp. 158; 504.

[24]Illustrations on flour bags and stationery, also account book, Higginbotham and Hurt, January 1900 - September 1902, in possession of Ray Childress, Richlands, Virginia.

[25]Cash book, Higginbotham and Bane, February 1910 - March 1912, in possession of Ray Childress, Richlands, Virginia.

[26]Op. cit., interview with Allen Jefferson Higginbotham.

[27]Flow chart for Higginbotham and Bane, Salem Foundry and Machine Works, 1923, in possession of Ray Childress, Richlands, Virginia.

[28]Op. cit., American Historical Society, Inc., p. 476.

[29]Op. cit., "Thomas Scott Gave Cedar Bluff Name."

[30]Blueprints for second north addition, drawn by R. Ramage, July 14, 1938, in possession of Ray Childress, Richlands, Virginia.

[31]The Northwestern Miller (The Miller Publishing Company, 1948).

(See Continuation Sheet #16)

[32]George W. L. Bickley, History of the Settlement and Indian Wars of Tazewell County, Virginia, 1852, in John Newton Harman, Annals of Tazewell County, Virginia, 2 vols. (Richmond: Hill Printing Co., 1922), 1: 378; 403.

[33]John Newton Harman, Annals of Tazewell County, Virginia, 2 vols. (Richmond: Hill Printing Co., 1922), 2: 64.

9. MAJOR BIBLIOGRAPHICAL REFERENCES

Childress, Ray, Richlands, Virginia. Miscellaneous flour bags, stationery, blueprints, flow chart and account books from Clinch Valley Roller Mills.

Craik, David. The Practical American Millwright and Miller. Philadelphia: Henry Carey Baird, 1874.

Douglas, Henry H. "Beverly Mill." Northern Virginia Heritage, Vol. 3, No. 3 (1983): 11 - 14.

Edgar, William C. The Story of a Grain of Wheat. New York & London: D. Appleton & Co., 1912.

Evans, Oliver. The Young Millwright and Miller's Guide. 13th ed. Philadelphia: Lea & Blanchard, 1850.

Gray, William D. Plans, Diagrams and Estimates for Model Roller Mills from 25 to 500 Barrels Daily Capacity. Milwaukee: Edw. P. Allis & Co., Reliance Works, 1884.

Harman, John Newton. Annals of Tazewell County, Virginia. 2 vols. Richmond: Hill Printing Co., 1922.

Higginbotham, Allen Jefferson. Tazewell, Virginia. Interview, May 8, 1984.

Higginbotham, Allen Jefferson. Tazewell, Virginia. Photographs of Clinch Valley Roller Mill in 1886 and from the 1890's - 1900.

Hiller, Robert L. "A Study of Flour Mill Architecture Portrayed in American and English Milling Publications: 1795 - 1861." Master's Thesis, University of Virginia, 1982.

Hindle, Brooke, ed. America's Wooden Age: Aspects of its Early Technology. Tarrytown, New York: Sleepy Hollow Restorations, 1975. See: Howell, Charles. "Colonial Watermills in the Wooden Age"; Hunter, Louis C. "Water Power in the Century of the Steam Engine."

"The Historic Town of Cedar Bluff . . ." Richlands News-Press and Clinch Valley News, July 2, 1975, p. 8D.

Howell, Charles and Allan Keller. The Mill at Philipsburg Manor Upper Mills and a Brief History of Milling. Tarrytown, New York: Sleepy Hollow Restorations, 1977.

Hughes, William Carter. The American Miller and Millwright's Assistant. Philadelphia: Henry Carey Baird, 1853.

(See Continuation Sheet #17)

9. MAJOR BIBLIOGRAPHICAL REFERENCES

Hunter, Louis C. A History of Industrial Power in the United States, 1780 -1930, Vol. I: Waterpower in the Century of the Steam Engine. Charlottesville: University Press of Virginia, 1979.

Jeane, Gregory. Archival and Field Survey of McCosh's Mill, West Point Lake, Alabama. Auburn, Alabama: Auburn University, 1979.

Jeane, Gregory. Auburn University, Auburn, Alabama. Telephone interview, May 5, 1984.

Kearfott, Clarence Baker. Highland [Virginia] Mills. New York: Vantage Press, 1970.

Kuhlman, Charles Byron. The Development of the Flour Milling Industry in the United States. Boston: Houghton Miflin, 1929.

Layton, Edwin T. "Millwrights and Engineers, Science, Social Roles, and the Evolution of the Turbine in America." In Wolfgang Crohn et. al., eds. The Dynamics of Science and Technology, Vol. 2 Dordrecht, Holland and Boston, 1978.

Leslie, Louise. Tazewell County. Radford, Virginia: Commonwealth Press, Inc., 1982.

McGrain, John W. Grist Mills in Baltimore County Maryland. Towson: Baltimore County Public Library, 1980.

Old Mills of Far Southwest Virginia. Wise, Virginia: Historical Society of Southwest Virginia, 1973.

Northwestern Miller. The Milling Publishing Co., 1948.

Pendleton, William C. History of Tazewell County and Southwest Virginia. Richmond: Hill Printing Co., 1922.

Reynolds, John. Windmills and Watermills. New York: Praeger Publishers, 1970.

Reynolds, Terry S. Stronger Than a Hundred Men, A History of the Vertical Water Wheel. Baltimore and London: The Johns Hopkins University Press, 1983.

Rice, A. S. "Notes on the History of Turbine Development in America." Engineering News 48 (1902): 208 -10.

Safford, Arthur T., and Edward P. Hamilton. "The American Mixed-Flow Turbine and Its Setting." American Society of Civil Engineers, Transactions 85, (1922): 1237 - 1356.

Sharrer, G. Terry. Division of Extractive Industries, National Museum of American History, Smithsonian Institution, Washington, D. C. Correspondence May 9, 1984.

Steen, Herman. Flour Milling in America. Westport, Connecticutt: Greenwood Press, Publishers, 1973.

Storck, John and Walter Dorwin Teague. Flour for Man's Bread, A History of Milling. Minneapolis: University of Minnesota Press, 1952.

Tazewell County Deed Books 7, 11, 14.

Tazewell County Land Book, 1851 - 1863.

(See Continuation Sheet #18)

9. MAJOR BIBLIOGRAPHICAL REFERENCES

"Thomas Scott Gave Cedar Bluff Name," Richlands News-Press and Clinch Valley News, July 2, 1975, p. 10D.

Thurso, John Wolf. "Modern Turbine Practice and the Development of Water Power." Engineering News XLVII, No. 23 (December 4, 1902): 462 - 464.

U.S. Department of Commerce. Bureau of the Census. Ninth Census of the United States, 1870: Manufacturing Schedules, State of Virginia. Washington: GPO, 1872.

U.S. Department of Commerce. Bureau of the Census. Tenth Census of the United States, 1880: Manufacturing Schedules, State of Virginia. Washington: GPO, 1882.

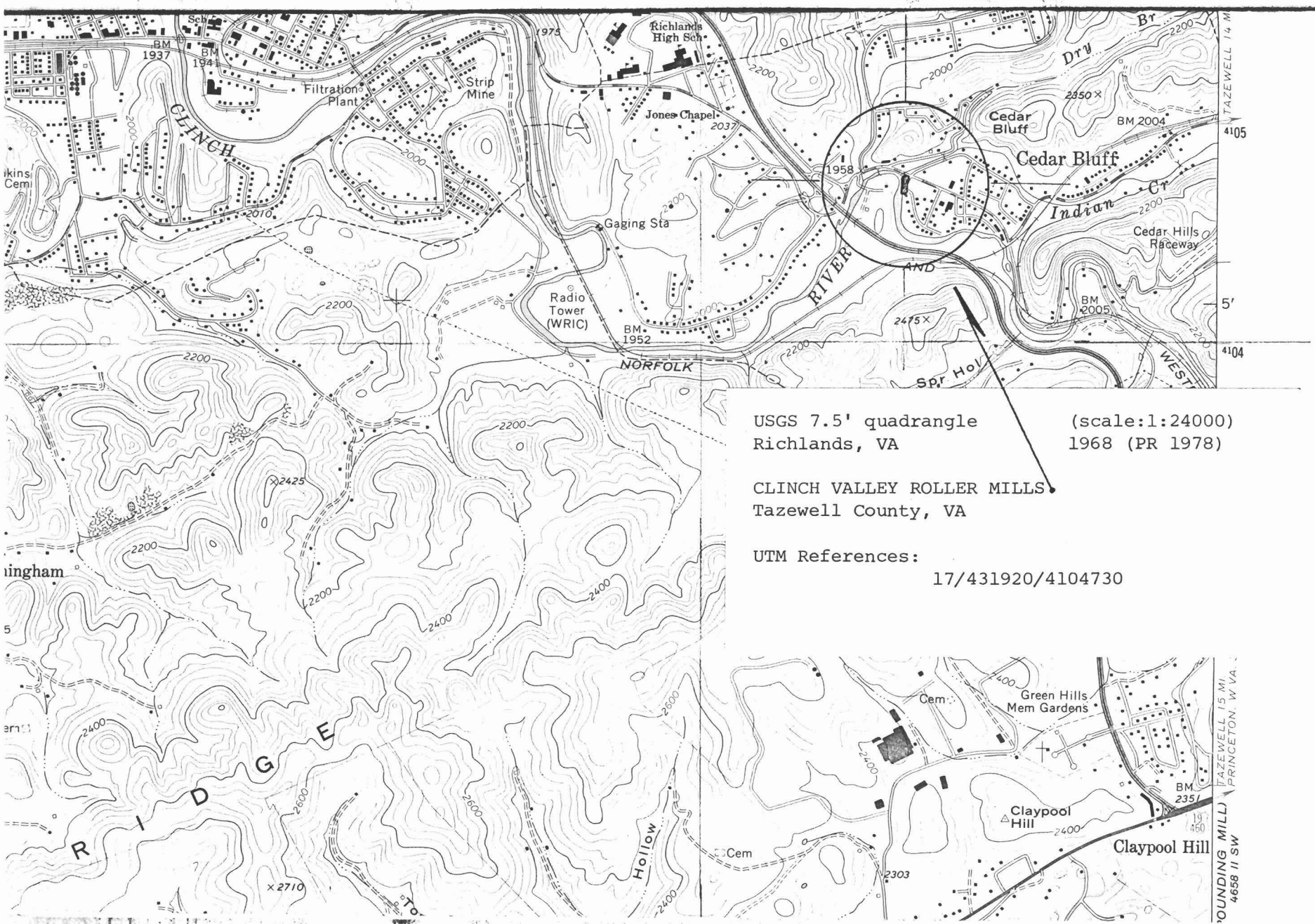
Wydner, Richard M. Amherst Milling Co., Amherst, Virginia. Correspondence and interviews, Spring 1984.

Zimiles, Martha and Murray. Early American Mills. New York: Clarkson N. Potter, Inc., Publisher, 1973.

10. GEOGRAPHICAL DATA -- Verbal Boundary Description and Justification

along the west line of lot 28, west to the east bank of the Clinch River, north along the east bank of said river to the mouth of Indian Creek, east along the south bank of said creek to the southwest edge of Route 460 bridge over Indian Creek, southeast to the point of origin along the southwest side of U.S. 460. (Based on Plat of Survey, 9/3/41, plat card #1290, Tazewell County Deed Book 148, p. 241.)

Boundary Justification: The nominated property includes the mill building, the adjacent shop, and associated features. The boundaries approximate those of the original mill seat.

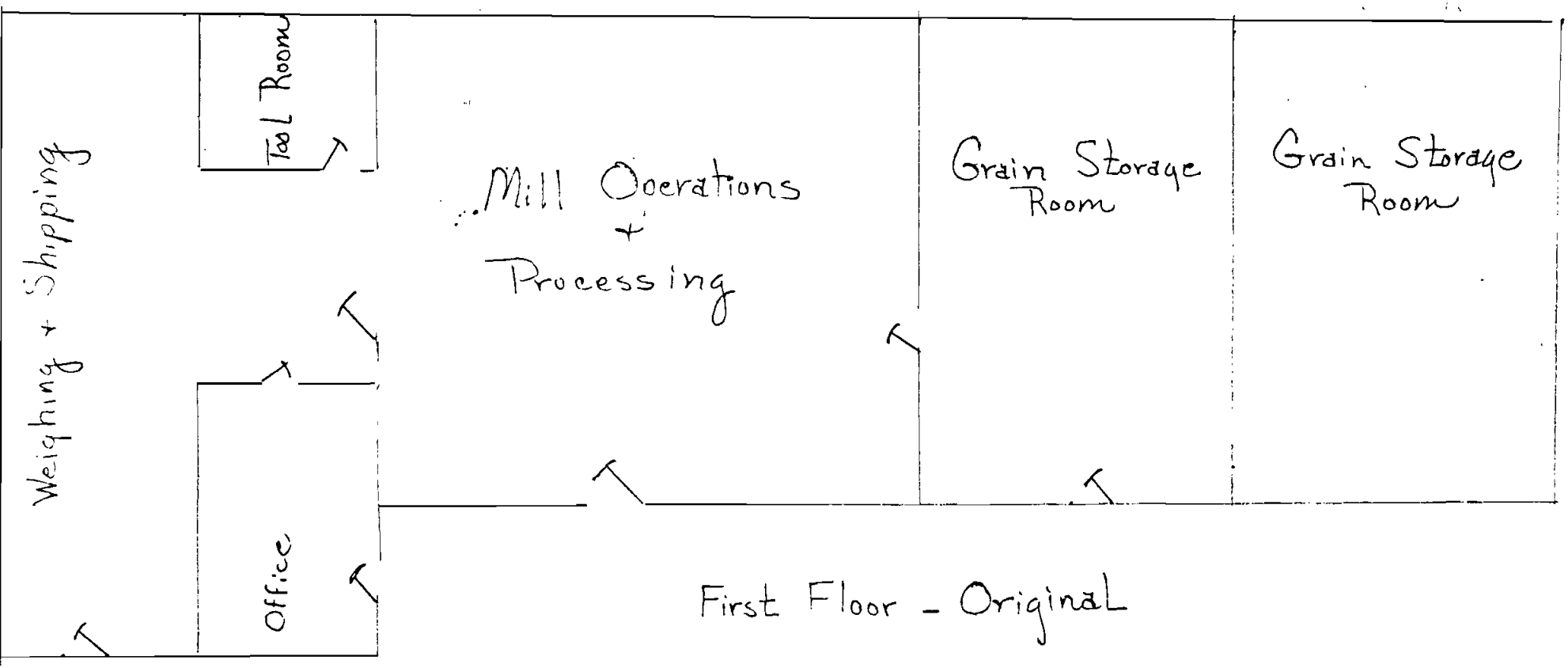


USGS 7.5' quadrangle (scale:1:24000)
Richlands, VA 1968 (PR 1978)

CLINCH VALLEY ROLLER MILLS
Tazewell County, VA

UTM References:

17/431920/4104730



First Floor - Original