

United States Department of the Interior
National Park Service

National Register of Historic Places
Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Central Headframe

other names/site number n/a

2. Location

street & number State Highway 68 not for publication

city or town Ducktown vicinity

state Tennessee code TN county Polk code 139 zip code 37326

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property meets does not meet the National Register criteria. I recommend that this property be considered significant nationally statewide locally. (See continuation sheet for additional comments.)

Herbert L. Harger 7/14/92
Signature of certifying official/Title Date
Deputy State Historic Preservation Officer/ Tennessee Historical Commission
State of Federal agency and bureau

In my opinion, the property meets does not meet the National Register criteria. (See continuation sheet for additional comments.)

Signature of certifying official/Title Date

State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is:

- entered in the National Register.
 See continuation sheet.
- determined eligible for the National Register
 See continuation sheet.
- determined not eligible for the National Register.
- removed from the National Register.
- other, (explain:)

Signature of the Keeper

Date of Action

[Handwritten Signature]

9/2/92

5. Classification

Ownership of Property
(Check as many boxes as apply)

- private
- public-local
- public-State
- public-Federal

Category of Property
(Check only one box)

- building(s)
- district
- site
- structure
- object

Number of Resources within Property
(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
1		buildings
		sites
1		structures
		objects
2	0	Total

Name of related multiple property listing
(Enter "N/A" if property is not part of a multiple property listing.)

Historic Resources of the Tennessee Copper Basin

Number of contributing resources previously listed in the National Register

0

6. Function or Use

Historic Functions
(Enter categories from instructions)

INDUSTRY/PROCESSING/EXTRACTION: extractive
resource

Current Functions
(Enter categories from instructions)

VACANT/NOT IN USE

7. Description

Architectural Classification
(Enter categories from instructions)

OTHER: headframe

Materials
(Enter categories from instructions)

foundation CONCRETE

walls STEEL

roof N/A

other N/A

Narrative Description

(Describe the historic and current condition of the property on one or more continuation sheets.)

Name of Property

County and State

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- A Property is associated with events that have made a significant contribution to the broad patterns of our history.
B Property is associated with the lives of persons significant in our past.
C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
D Property has yielded, or is likely to yield, information important in prehistory or history.

Areas of Significance

(Enter categories from instructions)

Industry

Engineering

Period of Significance

1951-1952

Significant Dates

1952

Significant Person

(Complete if Criterion B is marked above)

n/a

Cultural Affiliation

n/a

Architect/Builder

Tennessee Copper Company

Criteria Considerations

(Mark "x" in all the boxes that apply)

Property is:

- A owned by a religious institution or used for religious purposes.
B removed from its original location.
C a birthplace or grave.
D a cemetery.
E a reconstructed building, object, or structure.
F a commemorative property.
G less than 50 years of age or achieved significance within the past 50 years.

Narrative Statement of Significance

(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

Bibliography

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS): n/a

- preliminary determination of individual listing (36 CFR 67) has been requested
previously listed in the National Register
previously determined eligible by the National Register
designated a National Historic Landmark
recorded by Historic American Buildings Survey #
recorded by Historic American Engineering Record #

Primary location of additional data:

- State Historic Preservation Office
Other State agency
Federal agency
Local government
University
Other

Name of repository:

Southeast Tennessee Development District

Name of Property _____

County and State _____

10. Geographical Data

Acreage of Property approximately 5.2 acres

UTM References

(Place additional UTM references on a continuation sheet.) Ducktown, TN 133 SW

1	1 6	3 7 8 8 6 0	3 8 7 8 3 1 0
	Zone	Easting	Northing
2			

3			
	Zone	Easting	Northing
4			

See continuation sheet

Verbal Boundary Description

(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification

(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title Karen L. Daniels/ Historic Preservation Planner

organization Southeast Tennessee Development District date March 1992

street & number 25 Cherokee Boulevard telephone (615) 266-5781

city or town Chattanooga state Tennessee zip code 37405

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

A **USGS map** (7.5 or 15 minute series) indicating the property's location.

A **Sketch map** for historic districts and properties having large acreage or numerous resources.

Photographs

Representative **black and white photographs** of the property.

Additional items

(Check with the SHPO or FPO for any additional items)

Property Owner

(Complete this item at the request of SHPO or FPO.)

name Ducktown Basin Museum c/o Kenneth Charles Rush

street & number Burra Hill P. O. Box 458 telephone (615) 496-5778

city or town Ducktown state Tennessee zip code 37326

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Projects (1024-0018), Washington, DC 20503.

National Register of Historic Places Continuation Sheet

Section number 7 Page 1 Central Headframe
Polk County, Tennessee

Historic Appearance

The Central Headframe between Ducktown and Copperhill, Polk County, Tennessee is a 148 foot high structure with an associated corrugated metal hoist house. The structure was designed by the Tennessee Copper Company in 1948. Construction of Central began in 1951 and it was completed in 1952.

The 14 story structure is an open steel framework on a concrete foundation and with a concrete shaft. The structure and shaft, which is 1600 feet deep, are completely fireproof. Four steel legs run straight from the foundation to the top of the headframe with angled "front" legs providing support on the south side. The headframe is capped with a platform and an open gable framework.

The headframe has a southern orientation with an oval concrete ore bin located under the front legs, which angle away from the upright legs. Large iron chains lined the ore bin on the short ends of the oval to protect the concrete from the weight of the ore; the chains were removed in 1991. A steel walkway runs from the body of the headframe over the ore bin. The waste chute is in the front of the ore bin, and piles of waste rock dot the landscape around the headframe.

A rail line ran east from the loading area under the ore bin to the main TCC line, and the ore was taken to Copperhill for smelting. The tracks have been removed from the bed.

Steps climb the east side of the headframe to a platform at the 140 foot level. Located at this level is the 13 foot diameter sheave over which ran 1 5/8" metal cables which did the hoisting. The cables ran from the hoist platform over the sheave and into the hoist house where they connected to 12 foot diameter hoist drums.

The hoist house is a 1 story, corrugated metal building, built in 1951, with a concrete foundation and corrugated metal gable roof. There are rectangular openings on the south side through which hoist cables ran, and windows and doors were located on the west side. The interior of the hoist house is inaccessible but the hoist drums and other equipment can be seen inside. On the west side of the building is a light panel which showed from which mine ore was being hoisted.

National Register of Historic Places Continuation Sheet

Section number 8 Page 2 Central Headframe
Polk County, Tennessee

Significance

The Central Headframe between Ducktown and Copperhill, Polk County, Tennessee is eligible for the National Register under criteria A and C for its significance in industry and engineering. Despite the fact that the headframe is not yet 50 years old it has exceptional significance in the Basin as the only fireproof shaft, the only headframe designed by Tennessee Copper Company (TCC), and as the last remaining headframe.

Central was the only headframe designed by the TCC in the Copper Basin. The others were designed by outside engineering firms. The design for Central was begun in 1948 and construction was completed in 1952.

Because the headframe was designed by the TCC the engineers tried to eliminate the problems present in other headframes throughout the Basin, such as swaying and vibration. TCC employees who worked on Central praised the headframe as the most sound headframe in the Basin during hoisting operations.

Central was unique to the Basin in that it was fireproof throughout. The headframe and shaft were constructed of steel and concrete, they used no wood. Since most of the mine shafts were much older than Central they used wood in their construction, and the one mine shaft sunk after Central also utilized wood in its construction.

Central was also unique because it was not a mine, it provided hauling facilities for three mines, the Mary, Boyd and Cherokee. Ore was taken from these mines to the Central shaft which was capable of hauling 450 tons of ore an hour from the 14th (1400 foot) level, and could store 3500 tons of ore in its concrete ore bin.

After World War II TCC began to consolidate their costs of production, because the price of ore had declined, and the cost of extraction had increased. The mines in the northern part of the Basin, having been exploited longer, were running out of ore and TCC planned to open more mines in the southern part of the Basin. Central was located to be in the center of the mining operations once the northern mines were closed.

National Register of Historic Places Continuation Sheet

Section number 8 Page 3 Central Headframe
Polk County, Tennessee

Deeper shafts were opened in the mines in the southern part of the Basin, they reached below the 1000 foot level and new veins of copper ore. Throughout the early 1950s the mines were expanding and growing deeper, a new shaft was opened into the Calloway mine.

In the 1960s production began leveling off from its post World War II growth, due to rising production costs, and deteriorating grades of copper. The company began phasing out active mines, and began importing the copper which it smelted from sources in South America. By the mid 1970s only two mines were actively working, the Boyd and Cherokee Mines, both were serviced by the Central Headframe. In the early 1980s these two mines were closed and all the copper ore used by TCC to make sulfuric acid was imported. Rising labor and production costs had closed the Basin mines.

The construction and location of Central was visionary because TCC believed it would be opening more mines south of US 64, and Central could serve those mines. Because of Central, railroads and expensive hoisting equipment would not be needed at each new mine. Smaller headframes would be needed to haul men into the mines, but heavy equipment and ore would be hauled by Central.

The mining industry in the Basin at that time was producing ore to be processed into sulfuric acid, and other by-products which were worth more than the copper ore. TCC was reclaiming zinc and iron out of the ore as well as copper.

Other shafts could be repaired without having to close that mine down because of Central. Since there was a way to get the ore out of the mines, shafts could be closed for repairs and ore extraction could continue. This feature saved TCC money that would have been lost due to idle mines.

Central is the last remaining headframe in the Basin. As the mines were closed TCC dismantled the headframes and sold the steel for scrap metal. Only two headframes remained when TCC declared bankruptcy in 1987, Central and the Polk County mine headframe. Polk County was auctioned as scrap metal and was destroyed in 1988. Central was also auctioned as scrap metal, but the purchaser donated the property to the Ducktown Basin Museum instead of destroying the headframe.

Even though the Central Headframe and hoist house are not yet 50

National Register of Historic Places Continuation Sheet

Section number 8 Page 4 Central Headframe
Polk County, Tennessee

years old they are exceptionally significant to the development of the copper mining industry in the Basin. They represent TCC's forward thinking and excellence in design. They hold a unique place in the history of the Basin because they were designed to meet future needs, instead of the needs of the day.

The Central Headframe meets the registration requirements set forth for Industrial Resources in the Historic Resources of the Tennessee Copper Basin Multiple Property Documentation Form for significance in industry and engineering.

National Register of Historic Places Continuation Sheet

Section number 9 Page 5 Central Headframe
Polk County, Tennessee

Bibliography

- "Central Shaft Hoist Drums." TCC Topics. December 1950. p. 3.
- "Contractor's Equipment Grading Roadbed for T. C. Railroad Extension to Central Shaft." TCC Topics. March 1951. p. 2.
- "Headframes at TCC Mine Shafts." TCC Topics June 1953. p. 4.
- Rush, Ken. Curator, Ducktown Basin Museum. Interview. 26 November 1991.
- "Speedy Repair for Big Sheave." TCC Topics. July 1958. p. 1.
- "Symbol of Modern Design--and Mining Safety." TCC Topics. July 1952. p. 1.
- see Historic Resources of the Tennessee Copper Basin Multiple Property Documentation Form.

National Register of Historic Places Continuation Sheet

Section number 10 Page 6 Central Headframe
Polk County, Tennessee

Boundary Description and Justification

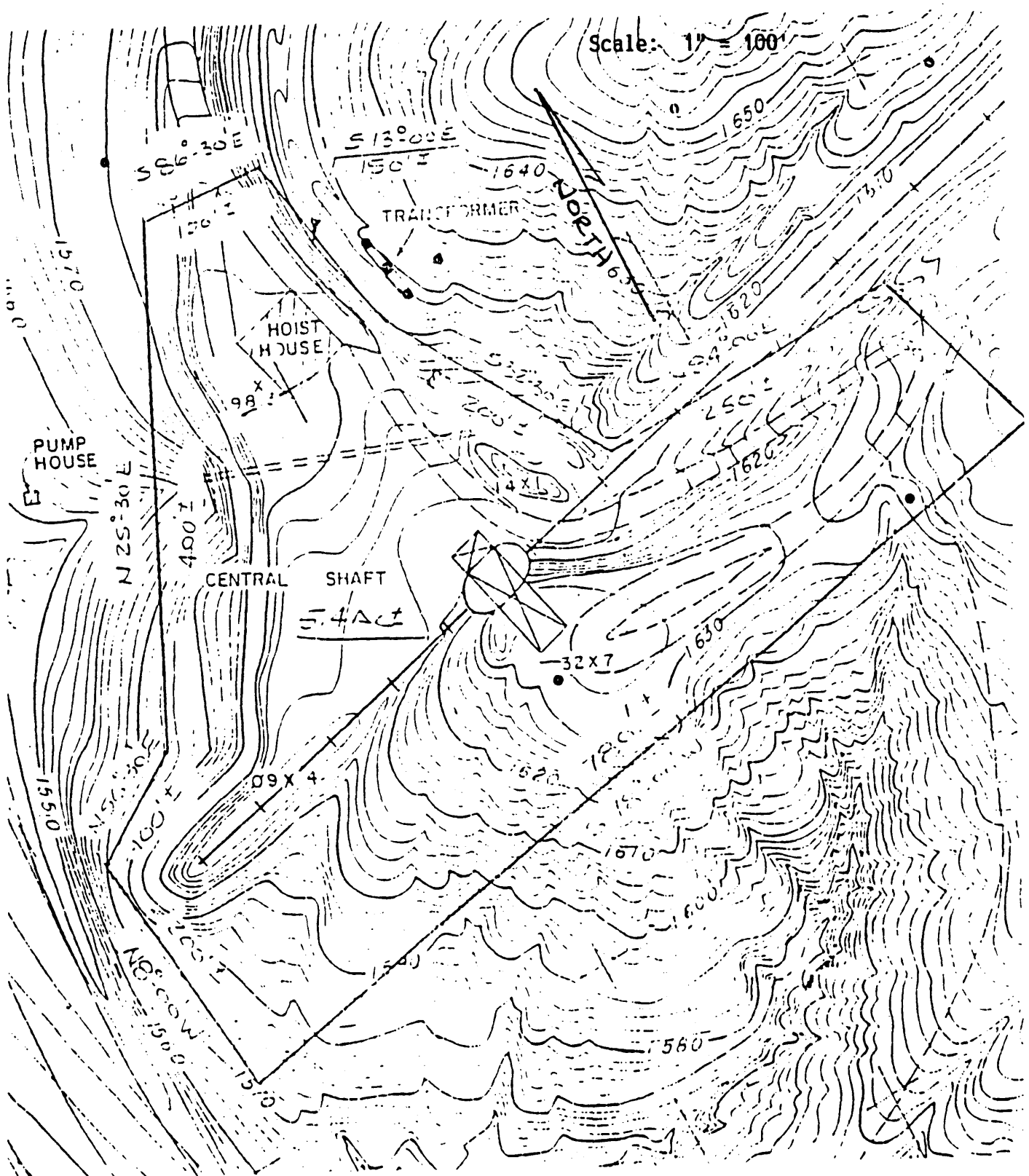
The legal description of the Central Headframe property is as follows: A certain tract of land situated in Section 9, Fractional Township 4 South, Range 5 East of the Ocoee Basis Line, in the 3rd Civil District of Polk County, Tennessee, located in the City of Ducktown, and being more particularly described as follows:

Beginning at a point on the Southwest corner of said property; thence North $8^{\circ} 00'$ West a distance of 200 feet \pm ; thence North $56^{\circ} 30'$ East a distance of 100 feet \pm ; thence North $25^{\circ} 30'$ a distance of 400 feet \pm ; thence South $13^{\circ} 00'$ East a distance of 150 feet \pm ; thence South $32^{\circ} 30'$ East a distance of 200 feet \pm ; thence North $84^{\circ} 00'$ East a distance of 250 feet \pm ; thence South $17^{\circ} 00'$ East a distance of 150 feet \pm ; thence South $78^{\circ} 00'$ West a distance of 780 feet \pm to the point of beginning, said tract of land containing 5.4 acres \pm .

The area nominated is the land associated with the headframe and hoist house which is owned by the Ducktown Basin Museum.

National Register of Historic Places Continuation Sheet

Section number 10 Page 7 Central Headframe
Polk County, Tennessee



National Register of Historic Places Continuation Sheet

Section number Photo Page 8 Central Headframe
Polk County, Tennessee

Central Headframe
Copperhill vicinity, Polk County, Tennessee
Photo by: Karen L. Daniels
Date: August 1991
Neg: Tennessee Historical Commission
Nashville, Tennessee

1 of 7
North (rear) side of headframe

2 of 7
West side of headframe

3 of 7
East side of headframe

4 of 7
South (front) side of headframe from west

5 of 7
South (front) side of headframe from east

6 of 7
Hoist house from 700 foot level of headframe

7 of 7
Interior of hoist house--hoist drums