

UNITED STATES DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

FOR NPS USE ONLY  
RECEIVED  
DATE ENTERED

NATIONAL REGISTER OF HISTORIC PLACES  
INVENTORY -- NOMINATION FORM

SEE INSTRUCTIONS IN HOW TO COMPLETE NATIONAL REGISTER FORMS  
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME

HISTORIC MAUCH CHUNK and SUMMIT HILL SWITCHBACK RAILROAD

AND/OR COMMON  
"Switchback" Railroad; Gravity Railroad

2 LOCATION

STREET & NUMBER Along Pa. L.R. 13033 between Ludlow St. in Summit Hill  
and F.A.P. 209 in Jim Thorpe

CITY, TOWN the Boroughs of Jim Thorpe & Summit Hill VICINITY OF 11th  
NOT FOR PUBLICATION CONGRESSIONAL DISTRICT

STATE Pennsylvania CODE 42 COUNTY Carbon CODE 025

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE
<input type="checkbox"/> DISTRICT	<input type="checkbox"/> PUBLIC	<input type="checkbox"/> OCCUPIED	<input type="checkbox"/> AGRICULTURE <input type="checkbox"/> MUSEUM
<input type="checkbox"/> BUILDING(S)	<input type="checkbox"/> PRIVATE	<input checked="" type="checkbox"/> UNOCCUPIED	<input type="checkbox"/> COMMERCIAL <input checked="" type="checkbox"/> PARK
<input type="checkbox"/> STRUCTURE	<input checked="" type="checkbox"/> BOTH	<input type="checkbox"/> WORK IN PROGRESS	<input type="checkbox"/> EDUCATIONAL <input type="checkbox"/> PRIVATE RESIDENCE
<input checked="" type="checkbox"/> SITE	<b>PUBLIC ACQUISITION</b>	<b>ACCESSIBLE</b>	<input type="checkbox"/> ENTERTAINMENT <input type="checkbox"/> RELIGIOUS
<input type="checkbox"/> OBJECT	<input type="checkbox"/> IN PROCESS	<input type="checkbox"/> YES: RESTRICTED	<input type="checkbox"/> GOVERNMENT <input type="checkbox"/> SCIENTIFIC
	<input checked="" type="checkbox"/> BEING CONSIDERED	<input checked="" type="checkbox"/> YES: UNRESTRICTED	<input type="checkbox"/> INDUSTRIAL <input checked="" type="checkbox"/> TRANSPORTATION
		<input type="checkbox"/> NO	<input type="checkbox"/> MILITARY <input type="checkbox"/> OTHER:

4 OWNER OF PROPERTY

NAME (See Continuation Sheet)

STREET & NUMBER

CITY, TOWN VICINITY OF STATE Pennsylvania

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC. Carbon County Courthouse

STREET & NUMBER Broadway and Market Square

CITY, TOWN Jim Thorpe STATE Pennsylvania

6 REPRESENTATION IN EXISTING SURVEYS

TITLE Pennsylvania Inventory of Historic Places

DATE 1973 FEDERAL  STATE COUNTY LOCAL

DEPOSITORY FOR SURVEY RECORDS Pennsylvania Historical & Museum Commission

CITY, TOWN Box 1026 Harrisburg STATE Pennsylvania

## 7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
<input type="checkbox"/> EXCELLENT	<input type="checkbox"/> DETERIORATED	<input type="checkbox"/> UNALTERED	<input checked="" type="checkbox"/> ORIGINAL SITE
<input type="checkbox"/> GOOD	<input checked="" type="checkbox"/> RUINS	<input checked="" type="checkbox"/> ALTERED	<input type="checkbox"/> MOVED DATE _____
<input type="checkbox"/> FAIR	<input type="checkbox"/> UNEXPOSED		

### DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

Construction began on the "Gravity Railroad" on January 1, 1827 and the line was completed by May of the same year, 3 months and 26 days later. The line was narrow gauge (3 feet, 7 inches across), with rails from England, of rolled iron bars, 3/8 inch thick, 1 1/2 inches wide, mounted on wooden timbers. The railroad ran between the towns of Summit Hill and Mauch Chunk (now known as Jim Thorpe), a distance of 8.5 miles. The grade was 96 feet/mile and loaded cars, each with a capacity of 3000 pounds and connected in trains of 6 to 14 cars, ran the downhill grade by gravity, controlled only by a runner. Mules were originally used to return the empty cars to the Summit Hill mines, with 8 mules hitched to a train of 14 cars.

During the years 1844-45, a backtrack was built over Mt. Jefferson near Summit Hill and Mt. Pisgah near Mauch Chunk. The Mt. Jefferson plane was 2020 feet long, 470 feet high and 1662 feet above sea level; the Mt. Pisgah plane was 2240 feet long, 740 feet high, and 1400 feet above sea level. The ascent at each end utilized a barney, a four-wheeled, four-axled car powered by a 120 horsepower steam engine, which pushed the empty cars up the grade. The operations of the planes were controlled by two men, a tender in charge of the cars at the foot of each plane and an engineer who handfired ten 2 1/2 foot by 30 foot boilers in the plane house at the top of the plane. In 1858, all burners were changed to burn pea coal.

Eliminating the use of mules, cars now made a continuous circuit as the loaded cars travelled on the original Gravity line, known as the downtrack, while the empties were returned on the backtrack. At Mauch Chunk, the cars were halted, uncoupled, taken into a station house and placed on a turntable atop three inclined planes which lead down to the Lehigh Canal, 215 feet below. One plane was a sliding chute while two others each consisted of two sets of tracks, one for the descending load car which pulled the ascending car on the other track to the top. At the foot of each plane, the coal was released into a hopper. Empty cars were hoisted up the plane, directed out of the station house where they ran by gravity around the brow of the hill to the foot of the Mt. Pisgah plane.

Although the ties, rails, and cars have long since been sold for scrap, much of the right-of-way still remains intact. The 8.5 mile downtrack runs the entire distance with but several minor intrusions: a dirt trail, and several roads. Several significant features still exist on the downtrack among them the overpass-underpass (commonly referred to as the 5-mile-tree) where the backtrack crosses the down-track and several turnarounds or mule sidings. At the Jim Thorpe terminus are also located several sidings where empty cars were pulled aside to allow a train of full cars to descend.

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CONTINUATION SHEET

ITEM NUMBER 7 PAGE 1

Description: (continued)

The right-of-way of the Mt. Pisgah plane still remains intact and several features are also extant at the top of Mr. Pisgah. These include the remnants of the plane house which was originally built in 1843, the concrete water reservoir, and concrete footings for the trestle which bridged the gap at the top of the mountain. The backtrack then runs intact to the 5-mile-tree. The remaining portion including the Mt. Jefferson plane area has been substantially altered and is not included in the nomination.

# 8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW					
<input type="checkbox"/> PREHISTORIC	<input type="checkbox"/> ARCHEOLOGY-PREHISTORIC	<input type="checkbox"/> COMMUNITY PLANNING	<input type="checkbox"/> LANDSCAPE ARCHITECTURE	<input type="checkbox"/> RELIGION		
<input type="checkbox"/> 1400-1499	<input type="checkbox"/> ARCHEOLOGY-HISTORIC	<input type="checkbox"/> CONSERVATION	<input type="checkbox"/> LAW	<input type="checkbox"/> SCIENCE		
<input type="checkbox"/> 1500-1599	<input type="checkbox"/> AGRICULTURE	<input type="checkbox"/> ECONOMICS	<input type="checkbox"/> LITERATURE	<input type="checkbox"/> SCULPTURE		
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> ARCHITECTURE	<input type="checkbox"/> EDUCATION	<input type="checkbox"/> MILITARY	<input type="checkbox"/> SOCIAL/HUMANITARIAN		
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> ART	<input checked="" type="checkbox"/> ENGINEERING	<input type="checkbox"/> MUSIC	<input type="checkbox"/> THEATER		
<input checked="" type="checkbox"/> 1800-1899	<input type="checkbox"/> COMMERCE	<input type="checkbox"/> EXPLORATION/SETTLEMENT	<input type="checkbox"/> PHILOSOPHY	<input checked="" type="checkbox"/> TRANSPORTATION		
<input type="checkbox"/> 1900-	<input type="checkbox"/> COMMUNICATIONS	<input checked="" type="checkbox"/> INDUSTRY	<input type="checkbox"/> POLITICS/GOVERNMENT	<input type="checkbox"/> OTHER (SPECIFY)		
		<input type="checkbox"/> INVENTION				

SPECIFIC DATES 1827, 1844-45 BUILDER/ARCHITECT Josiah White (Lehigh Coal & Navigation Co.)

## STATEMENT OF SIGNIFICANCE

The Lehigh Coal and Navigation Company was formed in 1818 by Josiah White and Erskine Hazard in the heart of the anthracite coal fields of northeastern Pennsylvania. The Summit Hill mines were discovered as early as 1791 and the Company's problem was to transport the coal to Mauch Chunk (presently Jim Thorpe) about nine miles away on the Lehigh River (and later the Canal, 1829) where it could be loaded on boats to Easton and Philadelphia. The coal was originally hauled by mules, but in 1827, the Company's business had increased sufficiently and a more efficient means of transportation was needed.

Ground was broken for the "Gravity Railroad" on January 1, 1827 and, under the direction of Josiah White, the railroad from Summit Hill to Mauch Chunk was completed by May of the same year. The cars of the railroad ran the downhill grade of 96 feet/mile by gravity and were hauled back by mule.

By 1844, the demand for coal became so great that a single track proved inadequate, and a backtrack was built during the years 1844-45. The cars could now make a continuous circuit between Mr. Jefferson near Summit Hill and Mt. Pisgah near Mauch Chunk. The Mt. Pisgah and Mr. Jefferson planes were used to reach sufficient grade for the cars to make the circuit.

By 1872, the Hauto Tunnel was completed through North Mountain and provided a more efficient means for transportation of coal. By 1874, the Central Railroad of New Jersey purchased the railroad and leased it to local residents who operated it for the many tourists who visited the area. By 1929, the Central Railroad of New Jersey sold the railway to local citizens and by 1937 the line was abandoned, primarily because the Central Railroad of New Jersey no longer ran excursions.

The original Gravity Railroad was the first in the country which was constructed for the movement of coal. Considered one of the first lines of major significance in Pennsylvania, the development of the railroad and its impact on the coal industry was of major importance to the economic growth of the region. The line continued to play an important role well into the 20th century as Mauch Chunk became a tourist mecca for residents of the urban areas of the East Coast.

Although the ties, rails, and cars have long since been sold, much of the right-of-way still remains as a reminder of the earlier years of the railway.

## 9 MAJOR BIBLIOGRAPHICAL REFERENCES

- Morton, Eleanor - Josiah White, Prince of Pioneers, Stephen Daye, New York, 1946.
- White, Josiah - "Josiah White's History Given by Himself", G. H. Buchaman, Philadelphia, 1909.
- Hoffman, John N. - Anthracite in the Lehigh Region of Pennsylvania 1820-1845 Smithsonian Institution Press, Washington, D.C., 1968 (Contributions from the Museum of History and Technology: Paper 72).

## 10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY 47 acres

UTM REFERENCES SEE CONTINUATION SHEET FOR UTM'S

A	_____	_____	_____	B	_____	_____	_____
	ZONE	EASTING	NORTHING		ZONE	EASTING	NORTHING
C	_____	_____	_____	D	_____	_____	_____

VERBAL BOUNDARY DESCRIPTION

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	CODE	COUNTY	CODE
STATE	CODE	COUNTY	CODE

## 11 FORM PREPARED BY

NAME / TITLE David M. Berman/Curator

Bruce Conrad/Community Development Director Carbon Co. Planning Comm.

ORGANIZATION Pennsylvania Historical & Museum Comm.

Carbon County Courthouse Annex

DATE

March, 1976

STREET & NUMBER Box 1026, Wm. Penn Memorial Museum

TELEPHONE

717-787-4363

CITY OR TOWN Harrisburg

STATE

Jim Thorpe

Pennsylvania

## 12 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL

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

Executive Director

TITLE

Pennsylvania Historical & Museum Commission

DATE

4/9/76

FOR NPS USE ONLY

I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

DATE

DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION

ATTEST:

DATE

KEEPER OF THE NATIONAL REGISTER

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UTM'S References:

Lehighon Quadrangle, Pa.:

(1)	A	18	437	590	4524	240	(2)	A	18	437	930	4524	000
	B	18	437	580	4524	150		B	18	437	760	4524	000
	C	18	436	800	4524	260		C	18	437	580	4524	150
	D	18	436	800	4524	370		D	18	437	590	4524	240
(3)	A	18	437	930	4524	000	(4)	A	18	437	640	4523	840
	B	18	437	650	4523	760		B	18	437	650	4523	760
	C	18	437	640	4523	840		C	18	437	380	4523	910
	D	18	437	770	4524	000		D	18	437	390	4523	970
(5)	A	18	437	390	4523	970							
	B	18	437	380	4523	910							
	C	18	436	800	4523	670							
	D	18	436	800	4523	770							

Nesquehoning Quadrangle, Pa.:

(1)	A	18	427	270	4519	250	(2)	A	18	427	830	4519	550
	B	18	427	310	4519	350		B	18	427	940	4519	510
	C	18	427	050	4519	350		C	18	427	310	4519	150
	D	18	427	050	4519	520		D	18	427	270	4519	250
(3)	A	18	427	840	4519	860	(4)	A	18	428	260	4519	860
	B	18	427	920	4519	770		B	18	428	320	4519	810
	C	18	427	940	4519	510		C	18	427	920	4519	770
	D	18	427	830	4519	550		D	18	427	840	4519	860
(5)	A	18	429	150	4520	530	(6)	A	18	430	910	4521	210
	B	18	429	220	4520	430		B	18	430	960	4521	020
	C	18	428	320	4519	810		C	18	429	220	4520	430
	D	18	428	260	4519	860		D	18	429	150	4520	530
(7)	A	18	431	690	4521	500	(8)	A	18	432	570	4522	090
	B	18	431	750	4521	440		B	18	432	880	4522	150
	C	18	430	940	4521	110		C	18	431	750	4521	440
	D	18	430	910	4521	210		D	18	431	690	4521	500
(9)	A	18	434	810	4523	290	(10)	A	18	435	430	4523	710
	B	18	434	880	4523	210		B	18	435	500	4523	650
	C	18	432	880	4522	150		C	18	434	880	4523	210
	D	18	432	570	4522	090		D	18	434	810	4523	290

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CONTINUATION SHEET

ITEM NUMBER 10 PAGE 2

UTM References: (continued)

Nesquehoning Quadrangle, Pa.:

(11)	A	18	436 070	4523 950	(12)	A	18	436 800	4524 340
	B	18	436 110	4523 840		B	18	436 800	4524 210
	C	18	435 500	4523 650		C	18	436 110	4523 840
	D	18	435 430	4523 710		D	18	436 070	4523 950
(13)	A	18	431 770	4521 280	(14)	A	18	432 040	4521 580
	B	18	431 820	4521 320		B	18	432 140	4521 520
	C	18	430 960	4521 020		C	18	431 820	4521 320
	D	18	430 940	4521 110		D	18	431 770	4521 380
(15)	A	18	434 930	4522 500	(16)	A	18	435 270	4522 890
	B	18	435 010	4522 410		B	18	435 340	4522 790
	C	18	432 140	4521 520		C	18	435 010	4522 410
	D	18	432 040	4521 580		D	18	434 930	4522 500
(17)	A	18	435 980	4523 040	(18)	A	18	436 480	4523 550
	B	18	436 020	4522 920		B	18	436 570	4523 500
	C	18	435 340	4522 790		C	18	436 020	4522 920
	D	18	435 270	4522 890		D	18	435 980	4523 040
(19)	A	18	436 790	4523 720					
	B	18	436 790	4523 600					
	C	18	436 570	4523 500					
	D	18	436 480	4523 550					

AREA:

The area encompasses the right-of-way of the nominated portion of the railroad, a strip of land approximately 30 feet wide and approximately 13 miles long. It also includes several turn-offs, sidings, the overpass-underpass, and the area around the Mt. Pisgah plane house. The right-of-way in these areas extends to approximately 100 feet in width.

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ITEM NUMBER 4 PAGE 1

OWNERSHIP:

Carbon County Commissioners  
Carbon County Courthouse  
Jim Thorpe, Pennsylvania 18229

ATTN: Hon. Albert <sup>P.</sup> Koch, Chairman

U.

Borough Hall  
West Broadway  
Jim Thorpe, Pennsylvania 18229

ATTN: Mary Louise Redline

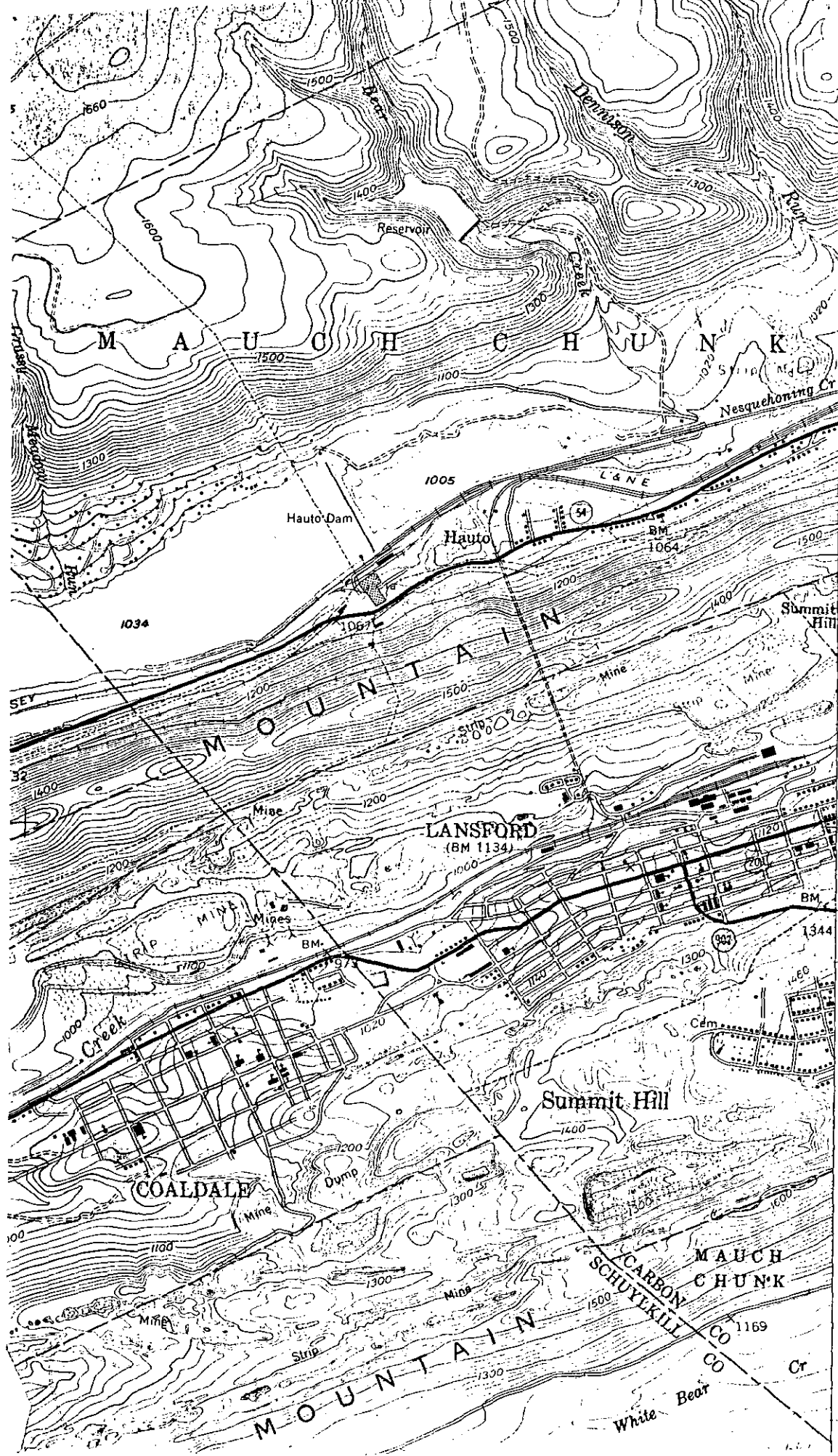
Northeast Land Company  
Route 115  
Blakeslee, Pennsylvania 18610

ATTN: Curtis Kemmerer, President

Summit Hill Boro Council  
Boro Building  
Ludlow Street  
Summit Hill, Pennsylvania 18252

ATTN: Kathleen Lanzos, President





524

523

560 000. FEET  
(SOUTH)

NESQUEHONING 3.8 MI

STROUDSHURG 4.3 MI

50

NEW MAHONING 4.9 MI  
LEIGHTON 11 MI

4519

INESQUEHONING  
5869 IV SE







NESQUEHONING  
(BM 820)

MOUNTAIN M A U C H C H

SUGAR HILL M O U N T A I N

SUGAR HILL MARCH

Bloomingdale

A U C H U N K

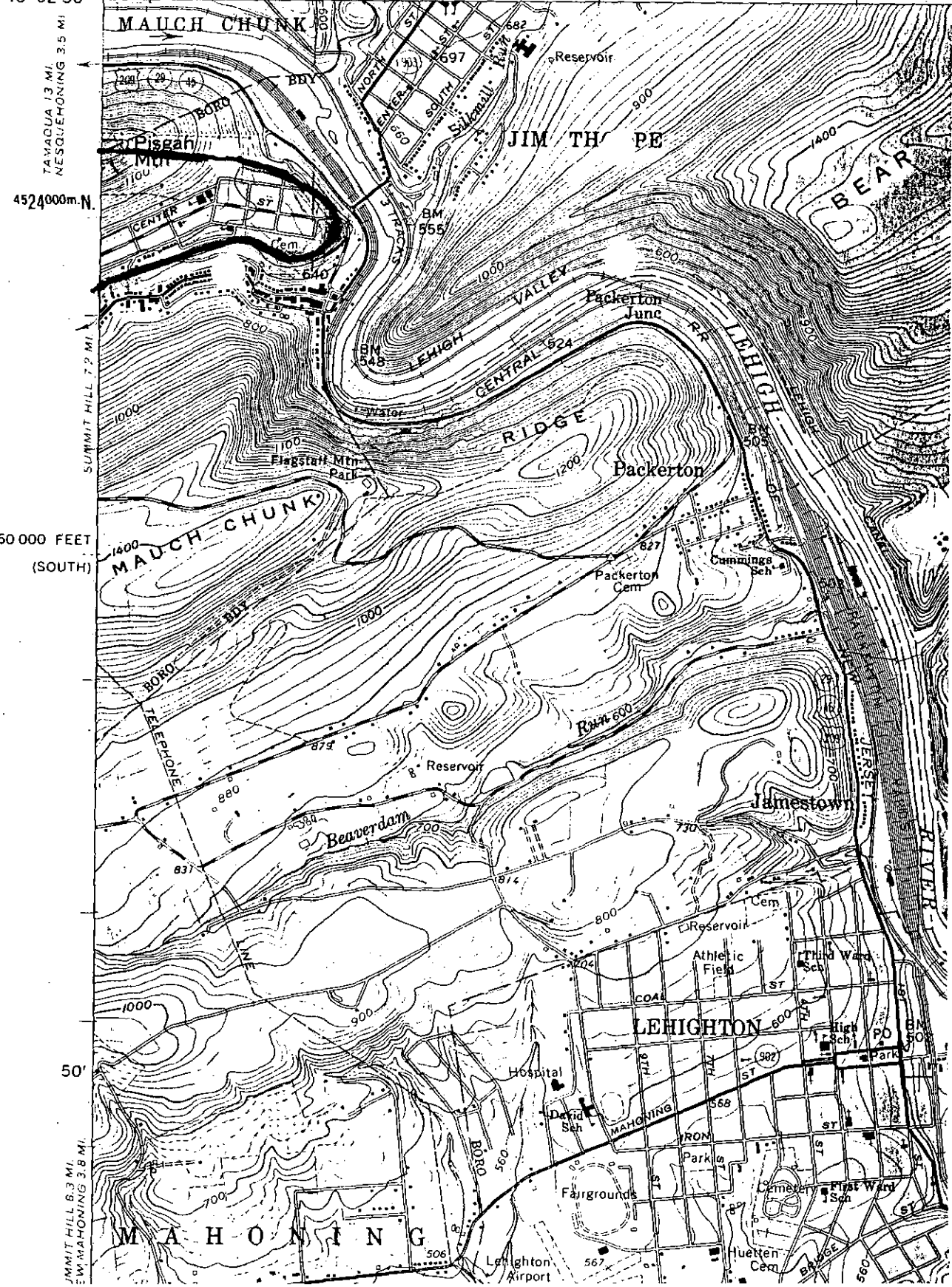


# LEHIGHTON QUAD.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

(WEATHERLY)

75°45' 437000m. E. CHRISTMASS 4.7 MI 2 560 000 FEET (SOUTH) 42'30"



TAYACUA 13 MI  
NESQUEHONING 3.5 MI

4524000m. N.

SUMMIT HILL 7.2 MI

560 000 FEET  
(SOUTH)

50'

JMMIT HILL 6.3 MI  
E.W. MAHONING 3.8 MI

MAUCH CHUNK  
BOBO  
Pisgah Mtn  
CENTER ST  
NOR. CENTER ST  
SOUTH ST  
SILKEMILL ST  
Reservoir  
JIM TH PE  
Packerton Junc  
VALLEY  
LEHIGH  
CENTRAL 524  
RIDGE  
Packerton  
Packerton Cem  
Cummings Sch  
JAMES TOWN  
BEAVERDAM  
Reservoir  
Athletic Field  
Third Ward Sch  
High Sch  
PO  
Park  
LEHIGHTON  
Hospital  
David Sch  
Fairgrounds  
Lehigh Airport  
MAHONING  
RON  
Park  
Cemetery  
First Ward Sch  
Huetten Cem  
Boro