

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Inventory—Nomination FormSee instructions in *How to Complete National Register Forms*
Type all entries—complete applicable sections

For NPS use only

received SEP 9 1983

date entered

1. Name

historic Tantiusques Reservation (preferred)

and/or common Sturbridge Lead Mine

2. Location

street & number Leadmine Road, N/A not for publication

city, town Sturbridge N/A vicinity of

state Massachusetts code 025 county Worcester code 027

3. Classification

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

4. Owner of Property

name The Trustees of Reservations

street & number 224 Adams Street

city, town Milton N/A vicinity of state Massachusetts 02186

5. Location of Legal Description

courthouse, registry of deeds, etc. Worcester County Registry of Deeds

street & number 2 Main Street

city, town Worcester state Massachusetts

6. Representation in Existing Surveys

Inventory of the Historic
title Assets of the Commonwealth # 90-D has this property been determined eligible? ☐ yes ☒ nodate 1981 ☐ federal ☒ state ☐ county ☐ local

depository for survey records Massachusetts Historical Commission

city, town Boston state Massachusetts 02108

7. Description

Tantiusques Reservation, Sturbridge, Massachusetts

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

Describe the present and original (if known) physical appearance

Tantiusques Reservation is a graphite deposit located near the Sturbridge-Holland town line two miles north of the Connecticut border in an area characterized by wooded and hilly upland topography. This nomination includes the aspects of the mining operation visible from the surface and on both sides of an historic access road, comprising about 15 acres on both sides of Leadmine Road. Surrounded by woodland, the site is excellently preserved and undisturbed since the early 20th century (Photos #1, 2, and 3).

The following description is based largely on an archaeological reconnaissance survey conducted in June, July and October, 1981 and a subsequent report. The survey involved an initial intensive walk-over survey, preparation of a measured drawing of the site, and minor probing to determine the extent of tailing piles; safety concerns prohibited exploration of the interior mine shaft.

All primary features of the mining operation are detailed in Figure 1. Two lesser activity areas are located to the southeast. The open major cut extends 750 feet, running approximately northeast-southwest along a ridge (elevation 900') crosscut by Leadmine Road (Photo #2). At the south end the cut averages 20-25 feet wide, while at the north end it is much narrower, averaging 8-10 feet; it varies from ten to thirty feet in depth. The main tunnel entrance is about 200 feet south of Leadmine Road and runs perpendicular to the surface cut as well as the graphite veins (Photo #3). The debris from the extraction process (mine tailings) occurs in a line running parallel to the cut and immediately downslope (east) of it, and in some areas in irregularly shaped mounds extending east from the mine cut. The largest of these mounds is near the tunnel entrance, where the tailings have been made into a wide ramp extending across the access road, and on to the east, over the edge of the ledge outcropping. This would have provided a level trail for hauling tailings out of the tunnel and disposing of them over the ledge. Toward the north end of the open mine shaft is another rampway for transporting tailings out of the mine. This one is cut down into the natural slope to provide an even trail for transporting the tailings downslope to the east, to a long mound east of the access road. A ditch 125 feet long and perpendicular to the mine cut is cut into the natural slope about 80 feet north of the tunnel entrance. The function of this ditch is uncertain. Two other breaks in the east face of the open mine cut exist, one south of Leadmine Road, the other to the north. Both are also associated with piles of tailings. The northernmost of these cuts through the east ledge wall and is buttressed on the south side with a well fitted and intact stone wall. Remnants of similar stone features occur in a few other places farther south, also along the east face of the open mine shaft; however, these are not as well preserved. They may also be buttressing walls. At one point near the center of the open cut there is a set of steps cut into the ledge, apparently to allow foot traffic

(Continued)

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Inventory—Nomination Form**

For NPS use only

received

date entered

Continuation sheet Tantiusques Reservation,
 Sturbridge, Mass. Item number 7

Page 1

to the bottom of the cut. The two depressions noted, one at the south end of the open cut, and one 125 feet farther south, may be indications of collapse into the underground tunnel.

Figure 2 shows two topographic cross sections, running perpendicular to the open mine shaft. These indicate the natural slope, the depth of the cut, and the height of the tailing piles which are immediately east of the cut. The location of the cross sections is marked on Figure 1.

A stone wall which roughly parallels the line of the open mine shaft runs northeast to southwest approximately 185 feet west of the cut. This is part of the west boundary of the property and this nomination. It runs acutely into the sheer stone ledge, slightly south of the mapped area and does not continue beyond.

The access road runs roughly parallel to the mine cut, approximately northeast-southwest, and from 100-200 feet east of the cut. The configuration of the mine tailing and the road indicates that it is historically associated with mining activity. This road continues on south from the mine cut, and thus may have been the original road in this area preceding the road now called Leadmine Road, and not simply a mine access road. A foot trail from this access road connects it to the top of the slope at the south end of the open mine shaft and allows foot travel along the edge of the mine cut.

An historian writing in the mid 1960s noted structural remains of a settlement adjacent to Leadmine Pond (not included in this nomination) which may have been associated with the mine. However, these appear to have been destroyed by recent development. No prehistoric cultural material is known to have been found at the mine itself, although the same historian mentions collections from the surrounding area.

8. Significance Tantusques Reservation, Sturbridge, Mass.

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	☐ architecture	☐ education	☐ military	☐ social/
☒ 1700-1799	☐ art	☐ engineering	☐ music	☐ humanitarian
☒ 1800-1899	☐ commerce	☒ exploration/settlement	☐ philosophy	☐ theater
☐ 1900-	☐ communications	☒ industry	☐ politics/government	☐ transportation
		☐ invention		☐ other (specify)

Specific dates 1643 Builder/Architect N/A

Statement of Significance (in one paragraph)

Tantusques Reservation possesses integrity of location, design, setting, materials, workmanship and association. It is historically significant as the earliest documented lead mine or graphite mine in the region and among the earliest in the Commonwealth. Further, it is important as a physical symbol of the early colonists' perception of the mineral riches of the New World and the ease with which they thought this wealth could be exploited; this is most clearly reflected in its association with the powerful Winthrop family in the 17th and 18th centuries. Subsequent, and more realistic, owners included several notable business entrepreneurs. In addition, the mine was most likely used by the Native population prior to English exploration and settlement of the area. Undisturbed since the last mining operation closed in the early 20th century, Tantusques Reservation offers a rare potential to provide information to our understanding of the development of mining technology over at least 300 years. Tantusques Reservation thus meets criteria A, B, and D of the National Register of Historic Places.

The use of Tantusques Reservation during prehistoric and Contact periods is unconfirmed, but seems likely. Graphite appears frequently in association with diagnostic Native American cultural material as early as the Late Archaic period (4,500-3,000 B.P.) in the Northeast and the first documented English knowledge of its existence occurred in 1633 through Native informants.

Colonists' mining activity at Tantusques Reservation predated permanent settlement of the town by nearly 100 years (Sturbridge was known as Tantusques from 1644-1738). First viewed by John Oldham, a trapper, hunter and scout in 1633, the mine was acquired by John Winthrop, Jr., son of the first governor of Massachusetts Bay, in 1643 and remained in the Winthrop family until 1784. Winthrop purchased the hill and its contents; the rights of the Indians to hunt and fish their traditional territory were preserved. Throughout the Winthrop family ownership, the mine seems to have had limited production -- perhaps a total of four tons-- due to a number of factors: over-zealous expectations, remote location, high water table, lack of road access and technological limitations. The first family member to actually visit the mine was John Winthrop's grandson, John Winthrop, on October 11, 1715.

John Winthrop, Jr. apparently anticipated the extraction of lead and iron for cannonballs, not realizing that "black lead" was graphite. Under the 'Company of Undertakers for the Iron Industry,' Thomas King was initially hired as foreman, but was replaced within four months by the mining engineers, Paine and Clarke. Records indicate that the latter

(Continued)

9. Major Bibliographical References

See Continuation Sheet.

10. Geographical Data

Acreage of nominated property 15±

Quadrangle name Wales, Mass. - Conn.

Quadrangle scale 1:25,000

UTM References

A

1	8
---	---

7	3	7	5	6	0
---	---	---	---	---	---

4	6	6	0	2	0	0
---	---	---	---	---	---	---

Zone Easting Northing

B

1	8
---	---

7	3	7	4	8	0
---	---	---	---	---	---

4	6	5	9	7	2	0
---	---	---	---	---	---	---

Zone Easting Northing

C

1	8
---	---

7	3	7	3	0	0
---	---	---	---	---	---

4	6	5	9	7	8	0
---	---	---	---	---	---	---

D

1	8
---	---

7	3	7	4	4	0
---	---	---	---	---	---

4	6	6	0	2	0	0
---	---	---	---	---	---	---

E

--	--

--	--	--	--	--	--

--	--	--	--	--	--	--

F

--	--

--	--	--	--	--	--

--	--	--	--	--	--	--

G

--	--

--	--	--	--	--	--

--	--	--	--	--	--	--

H

--	--

--	--	--	--	--	--

--	--	--	--	--	--	--

Verbal boundary description and justification

This nomination includes the limits of the mine and associated tailings and access road. Please refer to attached map, Truesdale, 1982.

List all states and counties for properties overlapping state or county boundaries

state	code	county	code
N/A			

state	code	county	code
-------	------	--------	------

11. Form Prepared By

name/title Virginia A. Fitch, Preservation Planner, with the
Sturbridge Historical Commission

organization Massachusetts Historical Commission date June 1983

street & number 294 Washington Street

telephone (617) 727-8470

city or town Boston

state Massachusetts 02108

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 Ruth L. Weslow

8/29/83

title State Historic Preservation Officer
Massachusetts Historical Commission

date

For NPS use only

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

Entered in the
National Register

date

10/6/83

for Melores Byers
Keeper of the National Register

Attest:

date

Chief of Registration

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Inventory—Nomination Form

For NPS use only

received

date entered

Tantiusques Reservation,

Continuation sheet Sturbridge, Mass.

Item number 8

Page 1

argued over potential profits and experienced difficulties with their employees, one of whom was convicted of stealing lead and an axe. Work seems to have begun in 1658. The lead was extracted from the surface by breaking the rock matrix with fire and water, a slow and tedious process which also required large amounts of wood. That year, Winthrop wrote to his son in London that "There is some black lead digged, but not so much as they expected, it being very difficult to gett out of ye rocks" Letters written just prior to Winthrop's death in 1676 indicated that he no longer entertained hopes of success. Nevertheless, his attempts to work the mine represent one of the earliest such ventures in Massachusetts. The only other documented mining activity during this early period were in Salem where Governor Endicott discovered copper in 1648 and set up a smelting works, and the extraction of bog iron at various locations across the state.

The Tantiusques property was left to Winthrop's two sons, Waitstill and Fitz, and upon the death of Fitz in the early 18th century, was owned solely by Waitstill. His ownership coincided with a period of Indian unrest which deterred any inclinations he may have had to work the mine (which appears to have been abandoned since his father's death). In accordance with the application for a town charter for Sturbridge, however, the area, including 10,240 acres belonging to the Winthrops, was surveyed in 1715 by John Chandler, Jr. accompanied by Waitstill's son, John Winthrop (see Map 1). The map contained notes, apparently in the latter's handwriting, commenting on the presence of gold, silver, lead, tin, copper, garnets and iron, although none were ever found in mineable quantities.

Waitstill Winthrop, a lawyer, died November 17, 1717 intestate, causing a complex quarrel over the property which was long cited as a landmark case in the development of the colonial laws of inheritance. The lead mine was eventually awarded to John Winthrop and was resurveyed in 1728, now reduced to four miles square, again by John Chandler, Jr. (see Map 2). Under John Winthrop the mining operation recommenced in 1737. John Morke, a Swedish engineer, was hired as steward and general overseer, while Samuel Sparrow was contracted to transport the product to England. The access road running parallel to the main cut may date from this period. The problems which had troubled earlier attempts also plagued this phase of production, intensified by Madam Winthrop's distaste for the project. Eventually, Winthrop impounded 800 pounds of graphite, turned against his employees refusing to pay them, and the venture ceased. Winthrop died in 1747; no subsequent members of the family showed any interest in the mine.

Tantiusques was sold out of the Winthrop family in 1784; the exact line of title is somewhat vague, although it appears to have changed hands several times before being purchased by Frederick Tudor in 1828. No records of mining activity during this period are known to exist. Tudor reopened the mine in conjunction with his manufacture of graphite crucibles. Among his employees were members of the Dixon family, later known for

(Continued)

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Inventory—Nomination Form**

For NPS use only

received

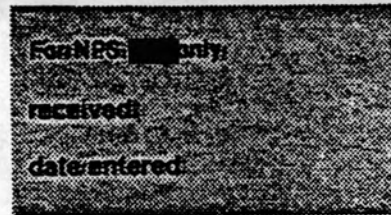
date entered

Continuation sheet Tantiusques Reservation,
Sturbridge, Mass. Item number 8 Page 2

their own businesses in graphite crucible and lead pencil production. Although forced to half production to pump out ground water, Tudor was able to mine five tons of graphite in the fall of 1828 which was carted to Boston and shipped to England via New York. In 1830, about twenty-four tons were mined and Tudor estimated the operation to be worth \$10,000 after the first year.

Operation of the mine ceased by about 1855, but remained in the Tudor family until 1889. In 1900, it was purchased by the Massachusetts Graphite Company. Little is known of their operations which lasted for seven years. Between 1917 and 1935 the property had several owners, the last being Roger Chaffee who, in 1962, gave 55 acres, including the lead mine, to the Trustees of Reservations. It was given in memory of George H. Haynes, his professor at Worcester Polytechnic Institute, who had a great interest in the history of Tantiusques as demonstrated by his account which appears in the 1901 Proceedings of the American Antiquarian Society.

National Register of Historic Places Inventory—Nomination Form



Continuation sheet

Tantiusques Reservation
Sturbridge

Item number

9

Page

1

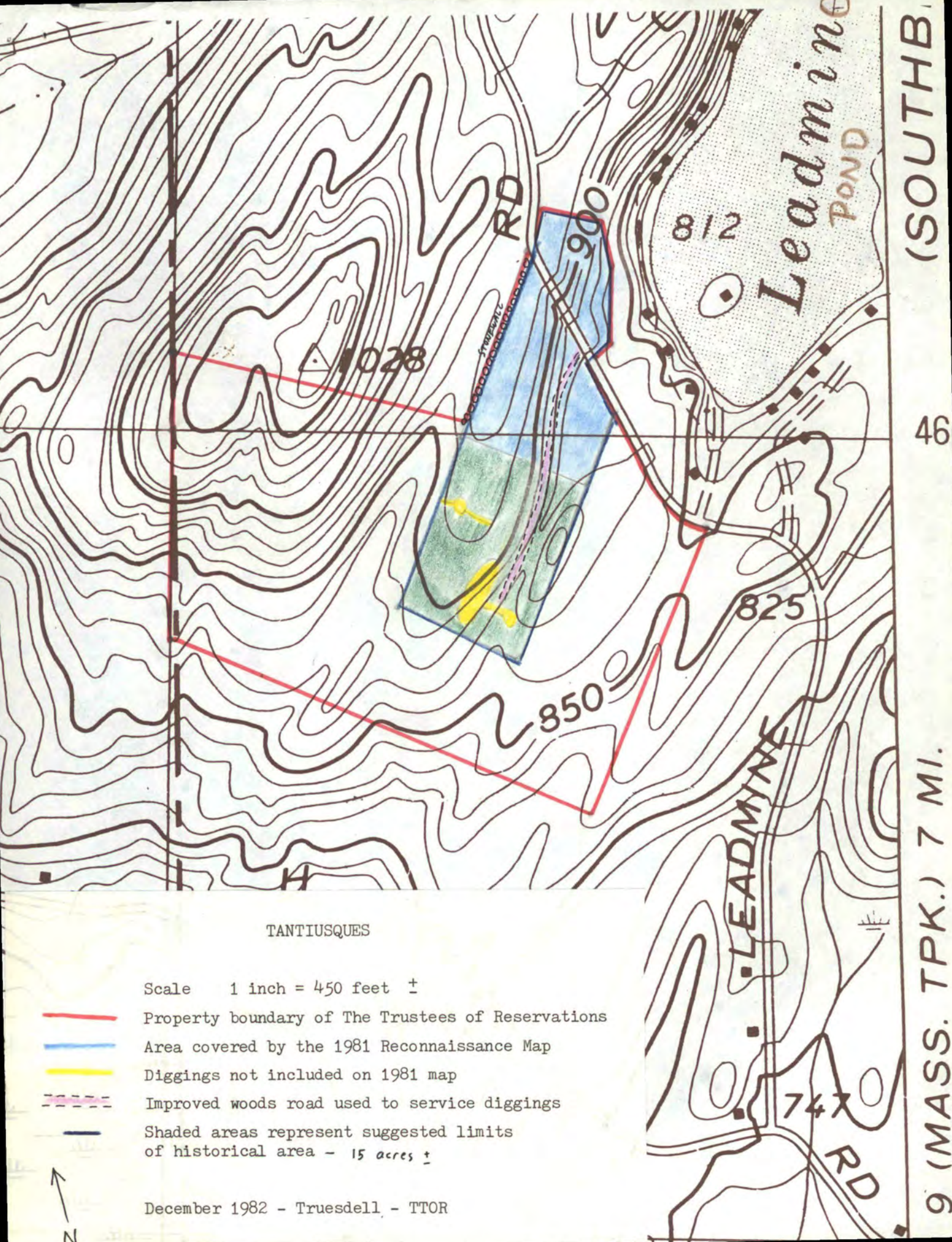
Haynes, Prof. George H., The Tale of Tantiusques, An Early Mining Venture in Massachusetts, Press of Charles Hamilton, Worcester, MA, 1902.

Amidown, Holmes, Historical Collections, V. II, p.11-19. New York, 1874.

Anons, Linda et al, "Sturbridge Lead Mine: Archaeological Reconnaissance Survey Report." Manuscript, 1981.

Davis, George, A Historical Sketch of Sturbridge and Southbridge, p. 138-139. Power Press O.S. Cooke and Co., West Brookfield, Ma, 1856.

Howarth, Andrew, 'Tantiusques Reservation', Historic Leadmine Site May Be Dangerous, p. 2, The Evening News (Southbridge, MA) August 30, 1973.



TANTIUSQUES

Scale 1 inch = 450 feet ±

- Property boundary of The Trustees of Reservations
- Area covered by the 1981 Reconnaissance Map
- Diggings not included on 1981 map
- Improved woods road used to service diggings
- Shaded areas represent suggested limits of historical area - 15 acres ±

December 1982 - Truesdell, - TTOR

(SOUTH B.)

46

9 (MASS. TPK.) 7 MI.

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

Tantiusques Reservation
Worcester County
MASSACHUSETTS

Working No. SEP 9 1983
Fed. Reg. Date: 2.5.85
Date Due: 10/6/83 - 10/24/83
Action: ☒ ACCEPT 10/6/83
☐ RETURN
☐ REJECT
Federal Agency: _____

Entered in the
National Register

- ☐ resubmission
☐ nomination by person or local government
☐ owner objection
☐ appeal

Substantive Review: ☐ sample ☐ request ☐ appeal ☐ NR decision

Reviewer's comments:

Recom./Criteria _____
Reviewer _____
Discipline _____
Date _____
_____ see continuation sheet

Nomination returned for: _____ technical corrections cited below
_____ substantive reasons discussed below

1. Name

2. Location

3. Classification

Category	Ownership	Status	Present Use
	Public Acquisition	Accessible	

4. Owner of Property

5. Location of Legal Description

6. Representation in Existing Surveys

Has this property been determined eligible? ☐ yes ☐ no

7. Description

Condition	Check one	Check one
☐ excellent	☐ deteriorated	☐ original site
☐ good	☐ ruins	☐ moved date _____
☐ fair	☐ unexposed	

Describe the present and original (if known) physical appearance

- ☐ summary paragraph
☐ completeness
☐ clarity
☐ alterations/integrity
☐ dates
☐ boundary selection

8. Significance

Period Areas of Significance—Check and justify below

Specific dates

Builder/Architect

Statement of Significance (*in one paragraph*)

- ☐ summary paragraph
- ☐ completeness
- ☐ clarity
- ☐ applicable criteria
- ☐ justification of areas checked
- ☐ relating significance to the resource
- ☐ context
- ☐ relationship of integrity to significance
- ☐ justification of exception
- ☐ other

9. Major Bibliographical References

10. Geographical Data

Acreage of nominated property _____

Quadrangle name _____

UTM References _____

Verbal boundary description and justification _____

11. Form Prepared By

12. State Historic Preservation Officer Certification

The evaluated significance of this property within the state is:

_____ national _____ state _____ local

State Historic Preservation Officer signature

title

date

13. Other

- ☐ Maps
- ☐ Photographs
- ☐ Other

Questions concerning this nomination may be directed to _____

Signed _____ Date _____ Phone: _____

Comments for any item may be continued on an attached sheet



TANTIUSQUES RESERVATION
LEADMINE RD., STURBRIDGE, MASS.

WOLFGANG LOWY, DECEMBER 1978
STURBRIDGE HISTORICAL COMMISSION
TOWN HALL
STURBRIDGE, MASS. 01566

#1 OF 3

ENTRANCE TO TANTIUSQUES RESERVATION
FACING NW



TANTIUSQUES RESERVATION WORCESTER
LEADMINE RD., STURBRIDGE, MASS. County, MA

WOLFGANG LOWY, DECEMBER 1978
STURBRIDGE HISTORICAL COMMISSION
TOWN HALL
STURBRIDGE, MASS. 01566

#2 OF 3

TUNNEL ENTRANCE
FACING NW



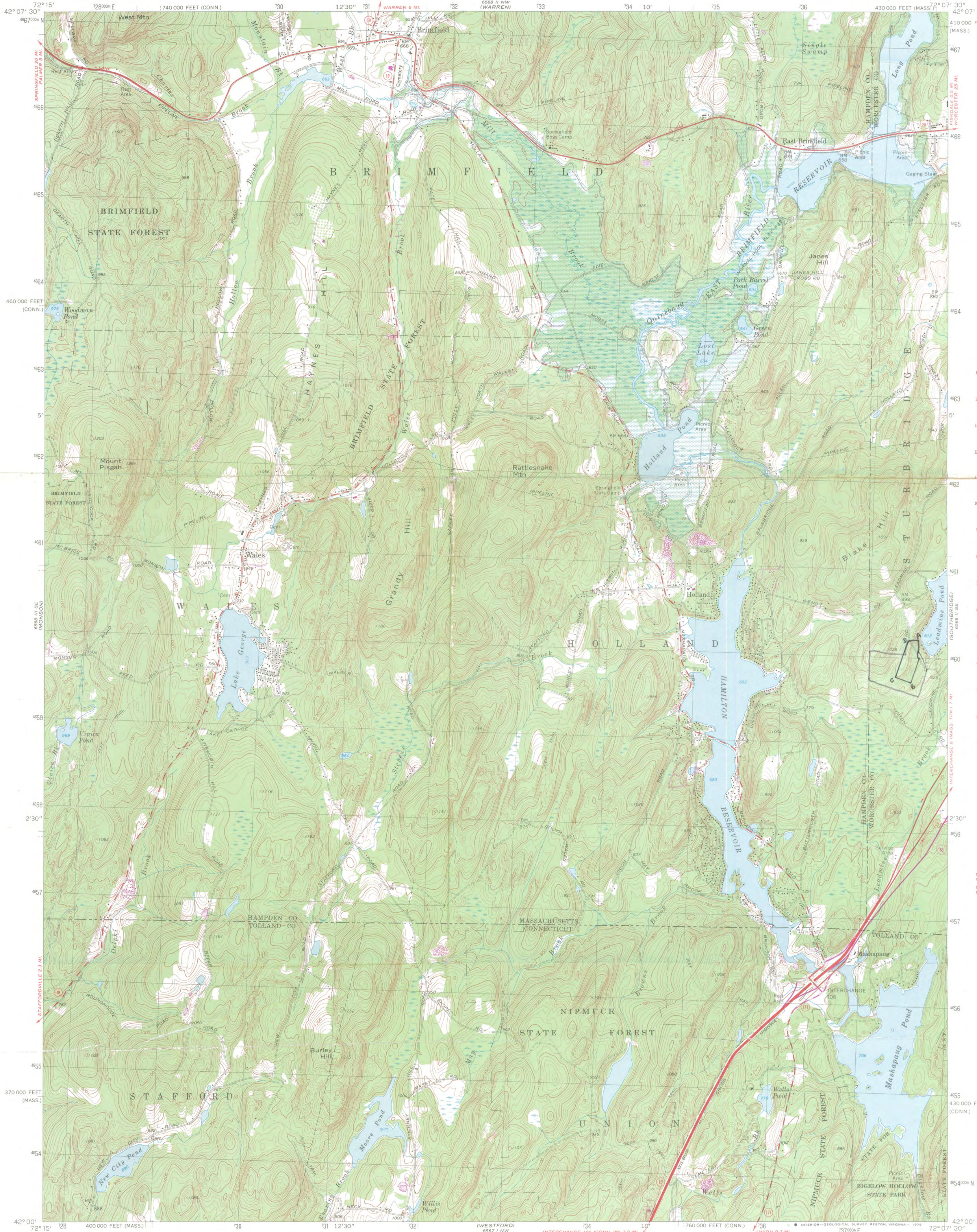
TANTIUSQUES RESERVATION
LEADMINE RD., STURBRIDGE, MASS.

WOLFGANG LOWY, DECEMBER 1978
STURBRIDGE HISTORICAL COMMISSION
TOWN HALL
STURBRIDGE, MASS. 01566

3 OF 3
MINE CUT IN LEDGE
FACING NW

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WALES QUADRANGLE
MASSACHUSETTS—CONNECTICUT
7.5 MINUTE SERIES (TOPOGRAPHIC)



CONVERSION
SCALES



Sturbridge, MA

Sturbridge Leadmine

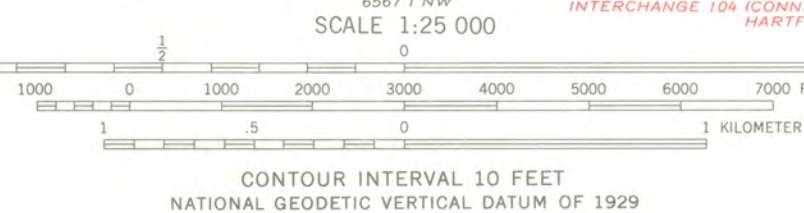
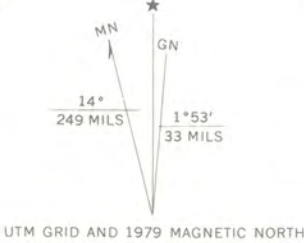
A 18 737560 4660200
B 18 737480 4659720
C 18 737300 4659780
D 18 737440 4660200

Feet	Meters
1	3048
2	6096
3	9144
4	12192
5	15240
6	18288
7	21336
8	24384
9	27432
10	30480

To convert feet to meters
multiply by 3048

To convert meters to feet
multiply by 3.2808

Mapped, edited, and published by the Geological Survey
Revised in cooperation with Massachusetts Department of Public Works
Control by USGS, USC&GS, and Massachusetts Geodetic Survey
Topography by plane-table surveys 1942-1943. Revised from aerial
photographs taken 1966. Field checked 1967
Polyconic projection. 1927 North American datum
10,000-foot grids based on Massachusetts coordinate system,
mainland zone, and Connecticut coordinate system
1000-meter Universal Transverse Mercator grid,
zone 18
Areas covered by dashed light-blue pattern are subject to controlled
inundation
There may be private inholdings within the boundaries of
the National or State reservations shown on this map



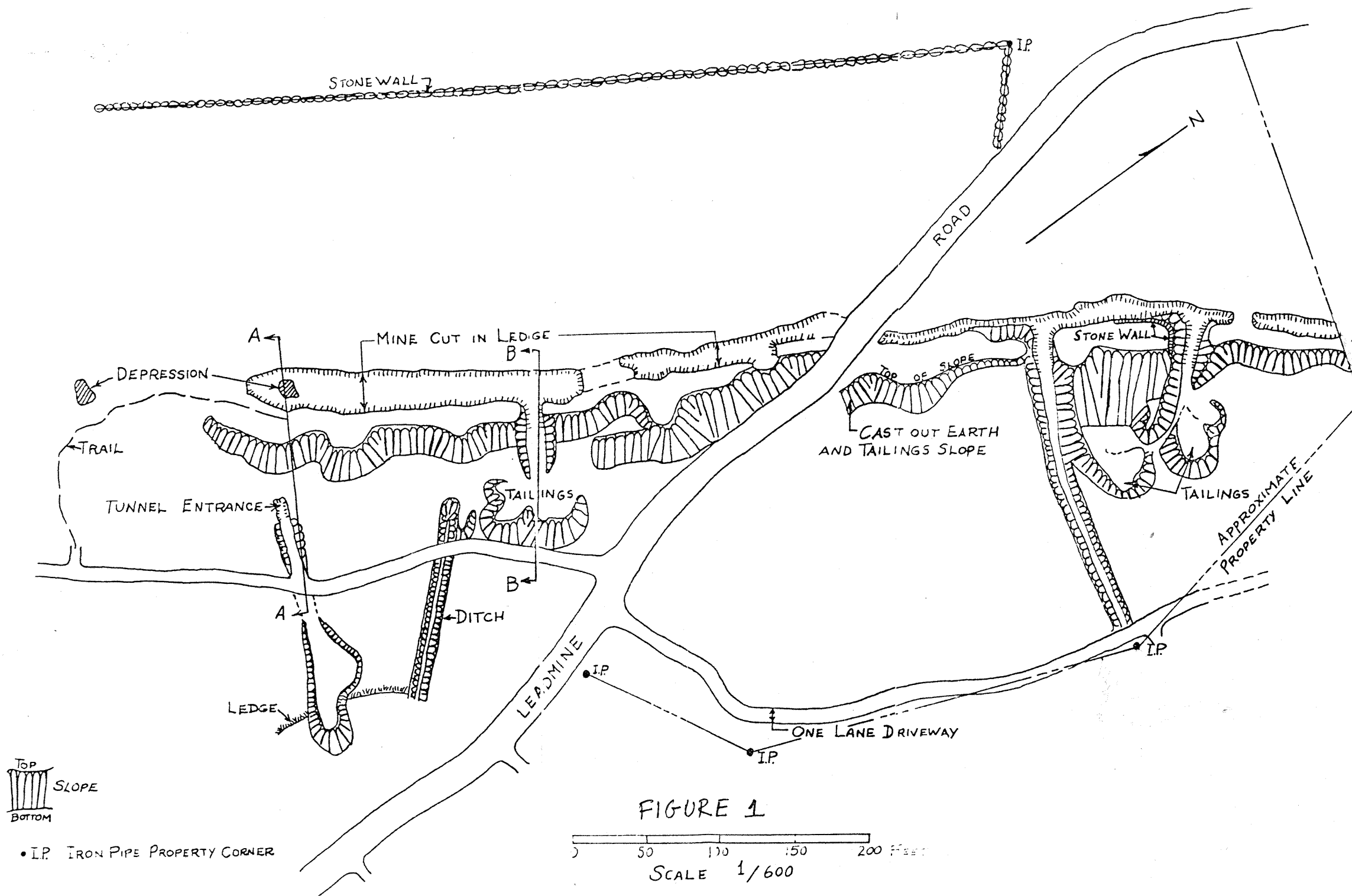
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

Revisions shown in purple compiled in cooperation with the State of
Massachusetts agencies from aerial photographs taken 1975 and other
source data. This information not field checked. Map edited 1979

ROAD CLASSIFICATION
Primary highway, all weather, hard surface
Secondary highway, all weather, hard surface
Light duty road, all weather, improved surface
Unimproved road, fair or dry weather
Interstate Route
U.S. Route
State Route

WALES, MASS.—CONN.
N4200—W7207.5/7.5

1967
PHOTOREVISED 1979
AMS 6568 II SW—SERIES V814



STURBRIDGE LEAD MINE
RECONNAISSANCE SURVEY MAP
OCTOBER 1981

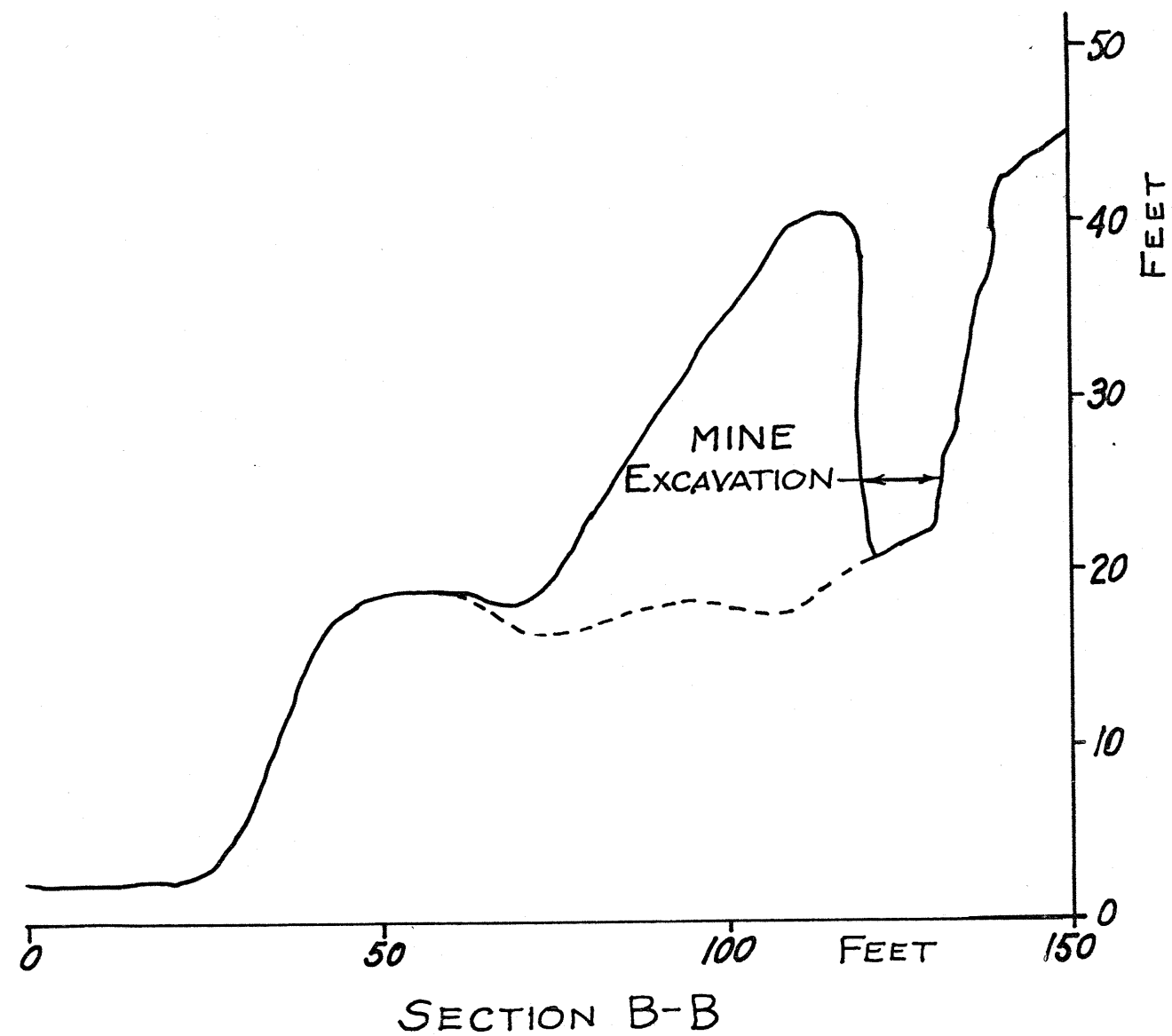
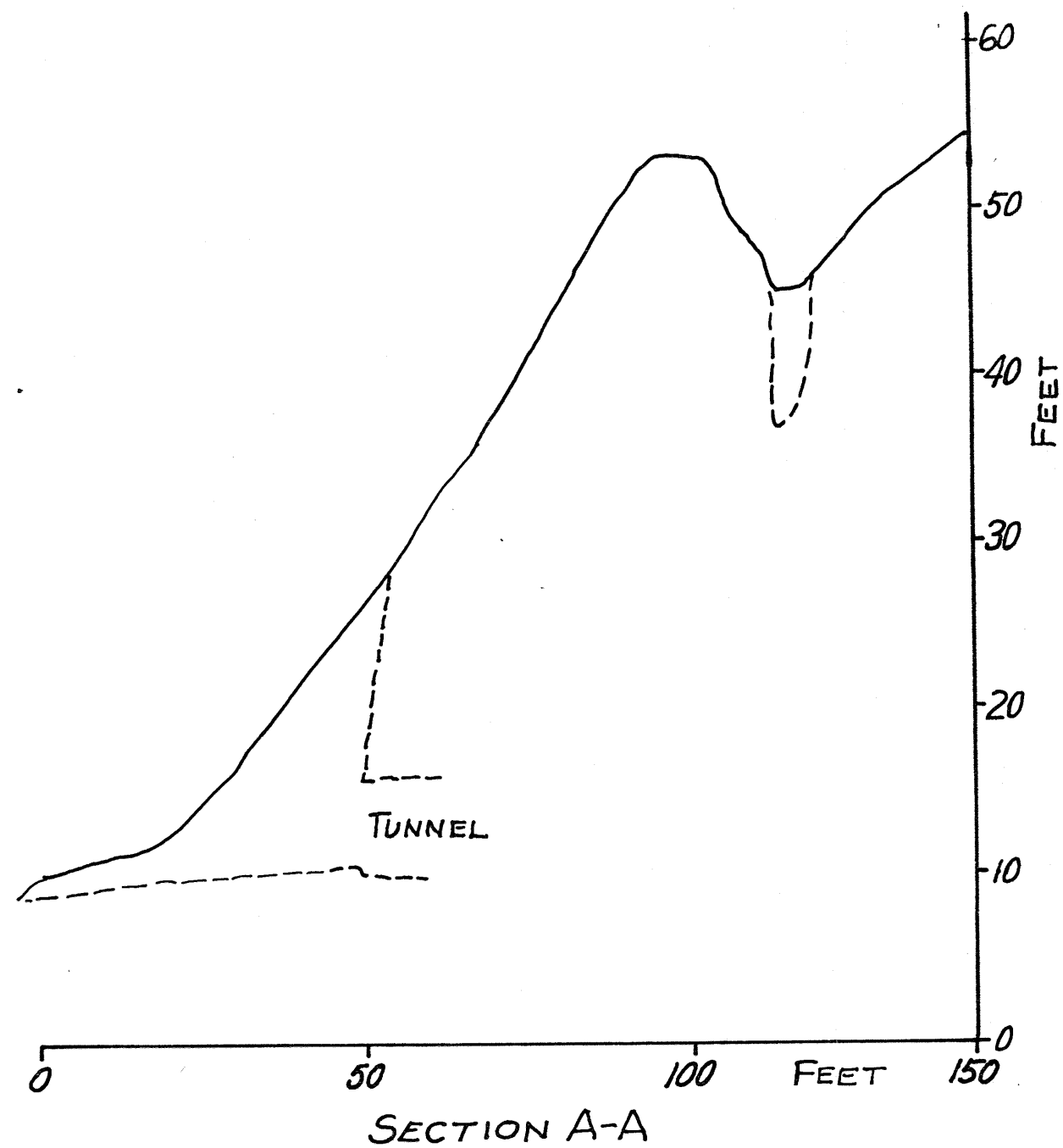


FIGURE 2