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_X_ RESTRICTED INFORMATION IN THIS DOCUMENT HAS BEEN REDACTED

REDACTION DATE 1/16/2024 (IF APPLICABLE)

NOTES:

FILE (PROPERTY) NAME: Quincy Mining Company Historic District NHL

LOCATION (STATE/TERRITORY: Michigan

LOCATION (COUNTY/PARISH): Houghton County

NRIS#: 89001095

1. NAME AND LOCATION OF PROPERTY

Historic Name: Quincy Mining Company Historic District

Other Name/Site Number:

Street and Number (if applicable)**:**

City/Town: Hancock vicinity **County:** Houghton **State:** MI

2. SIGNIFICANCE DATA

NHL Criteria: 1, 5

NHL Criteria Exceptions: None

NHL Theme(s): V: Developing the American Economy
Extraction and production
Workers and work culture
I: Peopling Places
Community and neighborhood

Period(s) of Significance: 1856–1920

Significant Person(s) (only Criterion 2)**:** N/A

Cultural Affiliation (only Criterion 6)**:** N/A

Designer/Creator/Architect/Builder: Calumet & Hecla (engineers)
J.J. Hoff (engineer, shaft-rockhouse)
McLean Construction Company (builder, shaft-rockhouse)
Sears, Roebuck and Company

Historic Contexts:

X. Westward Expansion of the British Colonies and the United States, 1773-1898
E. The Mining Frontier
XII. Business
A. Extractive or Mining Industries
XVIII. Technology (Engineering and Invention)
F. Extraction and Conversion of Industrial Raw Materials
G. Industrial Production Processes
XXX. American Ways of Life
C. Industrial Towns
Labor History in the United States (2022)

Paperwork Reduction Act Statement. We are collecting this information under the authority of the Historic Sites Act of 1935 (16 U.S.C. 461-467) and 36 CFR part 65. Your response is required to obtain or retain a benefit. We will use the information you provide to evaluate properties nominated as National Historic Landmarks. We may not conduct or sponsor and you are not required to respond to a collection of information unless it displays a currently valid OMB control number. We estimate the time to prepare an initial inquiry letter is 2 hours, including time to maintain records, gather information, and review and submit the letter. We assume that consultants will prepare nominations at an average cost of $32,680 per nomination. You may send comments on the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, National Park Service, 12201 Sunrise Valley Drive, Room 2C114, Mail Stop 242, Reston, VA 20192.

3. WITHHOLDING SENSITIVE INFORMATION

Does this nomination contain sensitive information that should be withheld under Section 304 of the National Historic Preservation Act?

_X_ Yes

___ No

4. GEOGRAPHICAL DATA

1. Acreage of Property: 1063.46

2. Use either Latitude/Longitude Coordinates or the UTM system:

Latitude/Longitude Coordinates:
Datum if other than WGS84:
(enter coordinates to 6 decimal places)

Latitude: **Longitude:**
OR

UTM References: NAD 1983 UTM Zone 16N

	Zone	Easting	Northing
1	16N	381595.47	5223261.36
2	16N	381898.33	5223037.73
3	16N	381656.87	5221133.27
4	16N	389350.28	5222811.34
5	16N	389602.70	5222657.42
6	16N	388325.10	5220979.35
7	16N	381571.10	5220207.92
8	16N	381046.95	5220499.55
9	16N	380667.79	5221007.43
10	16N	379823.33	5221631.10
11	16N	380643.02	5222878.15

3. Verbal Boundary Description:[1]

Begin in the NW ¼ of the NE ¼ of the NE ¼ of the NW ¼ of Sec. 36, Township 55N, Range 34W at the south edge of State Highway M-26 (Royce Road) at the point where Parcels #006-136-001-00 and #006-136-010-00 property lines meet.

Proceed due north across State Highway M-26 to the section line between Sections 36 and 25, then proceed due west along the section line until it intersects the east boundary of Parcel #006-136-012-00. Then proceed due north along this line to the northeast corner of Parcel #006-125-029-00, which point lies in the SE ¼ of the SW ¼ of the SE ¼ of the SW ¼ of Section 25, Township 55N, Range 34W.Then proceed due west along the line which is the north boundary of Parcel #006-125-029-00, to the northwest corner of the parcel. Bear southwesterly along the west boundary of Parcel #006-125-029-00 approximately 40 feet to a point south of 49070 Pewabic Road. Then proceed due west, passing south of 49070 Pewabic Road, to Pewabic Street.

Proceed due west to the north-south line dividing the SW ¼ of the SW ¼ of Section 25 from the SE ¼ of the SW ¼ of Section 25. Then proceed due north along this line to the east-west line dividing the W ½ of the SW ¼ from the E ½ of the SW ½ of Section 25. Continue north approximately 150 feet, then turn due west to the east boundary of Parcel #006-125-302-40. Then proceed north along this east boundary of Parcel #006-125-302-40 to a point approximately 80 feet south of the northwestern corner of the parcel.

Proceed due west, passing along the north boundary of Parcel #011-026-011-00 to the terminus of Round House Road. Proceed along the south side of Round House Road in a southwesterly direction to a point approximately 125 feet from its junction with Kowsit Lats Road/7th Road. Then proceed due south to the terminus of an unnamed dirt road within Parcel #011340-006-00. Proceed along the south side of that road in a southwesterly direction to its junction at US Highway 41 (US-41). Proceed along the south side of US-41 in a southwesterly direction to the south edge of the highway scenic overlook.

Bear northwesterly across US-41 following an imaginary line which runs parallel to but 150 feet south of Ingot Street (formerly Watertank Road). Proceed along this imaginary line approximately 705 feet to the northeast corner of Parcel #051-200-004-00. Then proceed due north to the unmaintained right-of-way of the Mineral Range Railroad Corridor (former Q37). Proceed northeast along the south side of the Mineral Range Railroad Corridor (former Q37) to its junction with French Town Road/Road No.2 (former Karpenen Road,)

From the junction, proceed 29 degrees northeast to Lake Annie Road (Township Road F15). Cross Lake Annie Road continuing along the same line another 150 feet. Then go southwesterly along an imaginary line running parallel to, but 150 feet northeast of, Lake Annie Road (Township Road F15) to the unmaintained right-of-way (former continuation of F23) which extends northeasterly to connect with Township Road F23 immediately east of US-41.

Continue northeasterly along the east side of the above-described right-of-way (former continuation of F23) to US-41, then proceed northeasterly along the east side of US-41 to the junction of US-41 and the east-west segment of Paavola Road/Township Road F23. Bear southwesterly on the south side of Paavola Road/Township Road F23 to the junction with Schaaf Estates Road (formerly described the Mesnard water tower road). At this point, proceed southwesterly along an imaginary line running at approximately 303 degrees to the junction of Sunshine Road/Township Road F20 and the Franklin Tram Road. Proceed southeasterly along the south side of

[1] Where the boundary description remains consistent with the 1989 boundary, property identification has been changed to parcel numbers rather than owner name. Parcel information available at <https://colligogis.com/web/> accessed March 29, 2023.

the Franklin Tram Road and the Franklin Tram Road Extension to a point approximately 50 feet north of the center of the Quincy and Torch Lake Railroad right-of-way.

Proceed easterly along an imaginary line running parallel to, but 50 feet north of, the Quincy and Torch Lake Railroad center line to a point approximately 290 feet southeast of the northwest corner of Parcel #009-23-001-05. Bear southeasterly across the Quincy and Torch Lake Railroad along the northeast boundary of Parcel #009-23-001-00 to State Highway 26.

Proceed across State Highway M-26, then turn southwesterly 90 degrees and continue approximately 307 feet to the northwest corner of Parcel #009-023-001-70. At this point, proceed southeasterly 90 degrees approximately 796 feet to follow the boundary of Parcel #009-023-001-00 to a point near Torch Lake. At this point the boundary of Parcel #009-023-001-00 turns approximately 150 degrees and extends approximately 541 feet to a point, then turns northwesterly and extends approximately 230 feet to a point. At this point, Parcel #009-23-001-00 turns northeasterly and continues to a point where it connects with the south side of the State Highway M-26 right of way boundary.

Proceed southwesterly along the south side of the State Highway M-26 right of way to the northwest corner of Parcel #009-023-013-00. At this point turn southeasterly 90 degrees and follow the northeast boundary of Parcel #009-023-013-00 to the northeast corner of the boundary. Turn 90 degrees and proceed southwesterly along a line approximately 255 feet.

Turn 90 degrees and proceed along a line to follow the northeast boundary of Parcel #009-026-100-00. Follow the boundary line to a point on Torch Lake, then continue to follow the boundary line along the mean high water line of Torch Lake approximately 900 feet before curving southwest. Follow this imaginary line southwesterly approximately 2800 feet to a point on Torch Lake, being in the NW ¼ of the NW ¼ of the NE ¼ of the SE ¼ of Section 27, Township 55N, Range 33W. At this point, turn northeast to follow the northwest boundary of Parcel #009-027-100-00 until it intersects with the west boundary of Parcel #009-026-100-00, then turn due north along the line that divides Section 27 from Section 26 in Township 55N, Range 33W. Continue north, crossing State Highway M-26 to a point that is the northwest corner of Parcel #009-026-001-00.

At this point turn 45 degrees and proceed northeasterly, crossing Forsman Road, to a point that is the northeast corner of Parcel #009-023-003-00. Turn southeast 90 degrees and proceed about 123 feet to the north side of the State Highway 26 right of way. Proceed northeasterly along the north side of the State Highway right of way to a point where the right of way intersects with the boundary of Parcel #009-023-001-05. At this point, turn northwest 90 degrees and follow the southwest boundary of Parcel #009-23-001-05 until it intersects with Parcel #009-023-008-00.

Proceed southwesterly along Parcel #009-023-008-00 approximately 838 feet to a point. Turn 90 degrees and proceed northwesterly to an imaginary line running parallel to, but 50 feet south of, the Quincy and Torch Lake Railroad right-of-way center line.

Proceed southwesterly and westerly along this imaginary line to a point where it intersects with the south side of the Franklin Tram Road Extension. Turn south 90 degrees and continue to a point approximately 250 feet north of the State Highway M-26 right of way north boundary. At this point turn due west along an imaginary line and proceed to the northeast corner of Parcel #006-125-038-00.

Turn 90 degrees and proceed south along the west boundary of Parcel #006-125-030-00, crossing State Highway M-26 (Royce Road). Continue due south to the mean high water line of Portage Lake.

Then proceed westerly along the mean high water line of Portage Lake to an imaginary north-south line that extends the boundaries between Parcels #006-136-001-00 and 006-136-010-00. Then go due north along that property line division to the point of beginning.

4. Boundary Justification: The revised boundary includes all areas that were historically owned by the Quincy Mining Company and/or were integral to the mining operations of the company and that retain integrity to the period of significance (1856 to 1920). Mining operations are defined as all components of the copper mining process including extraction, transportation, milling, smelting, and housing, which were owned or directly controlled by the company. The boundary encompasses the residential area of South Quincy, between East Hancock and Ripley, as it was developed as company housing for workers at the smelting works.

As depicted on Map 4, the current legislative boundary of the Quincy Unit of Keweenaw National Historical Park is not identical to the National Historic Landmark boundary as designated in 1989 (predating establishment of the park) or as revised in this nomination.

Areas Removed from the Original Designation
Since the NHL district boundary was initially established in 1989, several areas formerly included have been impacted to the extent that they no longer contribute to the district. Therefore, the boundaries have been adjusted to exclude these areas. Of the original approximately 779 acres identified in the original NHL designation, 85 are recommended for removal (see Maps 4, 6, 7, and 10). See page 102 for additional detail. They are:

- Mesnard Housing Location, 30 acres. Situated at the north end of the district, north of Paavola Road, the Mesnard Housing Location has been dramatically altered. The addition of non-contributing buildings and circulation routes has obscured the remaining historic features so that they are no longer identifiable as a company housing location. As a result, the boundary has been shifted south to Paavola Road. This also has the effect of excluding the No. 9 Shaft (Mesnard), north of the Mesnard Housing Location.
- Newtown Housing Location, 25 acres. Located east of the Industrial Core, the Newtown Housing Location is east of Franklin Tram Road and north of the Quincy and Torch Lake Railroad corridor. It has also lost its integrity and historic character. The area has lost historic buildings and features and those that remain have been altered to a point that the area is no longer legible as a historic housing location. The boundary has been shifted west to Franklin Tram Road.
- Kowsit Lats Housing Location, 30 acres. The location is within the southwest portion of the district, east of US-41 and south of Kowsit Lats Road. Large non-contributing houses have been added following removal of historic homes in the Kowsit Lats Housing Location. The scale, style, and placement of the new buildings have obscured the historic location so that its historic character is no longer identifiable and the integrity of the location is gone. As a result, the boundary has been adjusted to exclude the new housing while still retaining the Quincy and Torch Lake Railroad roundhouse and water tank north of Kowsit Lats Road and the large poor rock pile east of US-41.

Areas Not Included in the NHL District

Other areas mentioned in Section 5 that have a connection with the Quincy Mining Company were not identified in the original NHL designation (See Map 5).[2] Additional research, field investigations and assessment undertaken for this NHL amendment concluded that these areas should be excluded from the boundary revision for the following reasons:

Areas that were platted and developed by the company as real estate speculation, then sold and privately developed are not included within the boundary. Such areas, originally known as the Quincy Addition, the Lake Shore Addition, and two Hillside Additions, do not contribute to the national significance of the Quincy Mining Company Historic District.

The canal between Portage Lake and Lake Superior (1868-1873) was not a specific product of actions by the Quincy Mining Company, but rather the result of an agreement among many mining companies in the Portage Lake district. While critical to the success of the copper industry on the Keweenaw Peninsula, the canal is not included within the boundary because it is not specifically associated with Quincy Mining Company operations or solely funded by the company.

Because the Coburntown Housing Location (east of the Lower Pewabic Housing Location) was not a Quincy Mining Company-owned or -operated housing location, it is not included. The same justification applies to the Ripley Housing Location, which is situated east of the South Quincy Housing Location/Quincy Smelting Works and north of M-26/Royce Road.

The Copper and Mineral Range Railroads Corridor (now the Hancock and Lake Linden Trail), carried Quincy Mining Company materials between the Quincy Smelting Works and Quincy Stamp Mill. The route paralleled Portage Lake east to the settlement of Dollar Bay, where it turned northeast, paralleled M-26 until it reached the stamp mill site. Because the Copper and Mineral Range Railroads Corridor was not owned and operated by the company, the route in its entirety is excluded from the boundary; however, portions of it do cross into the district, and are identified as non-contributing in Section 6.

The City of Hancock, south and west of the district, was not operated by the company, and is not included.

[2] With regard to the housing locations, some do not have clear boundaries; others were platted and never developed.

5. SIGNIFICANCE STATEMENT AND DISCUSSION

INTRODUCTION: SUMMARY STATEMENT OF SIGNIFICANCE

The Quincy Mining Company Historic District possesses exceptional national significance as the exemplar of the United States copper mining industry in its earliest years, and the transformation of the American economy as a result of that industry. The Quincy Mining Company Historic District is eligible as a National Historic Landmark (NHL) under NHL Criteria 1 and 5, with a national period of significance from 1856 to 1920.

Under NHL Criterion 1, the district is associated with the Keweenaw Peninsula's Quincy Mining Company and the mid-nineteenth-century coming of age of copper mining in the United States. With copper's extensive use as a conductor of electricity, the United States would change from a dispersed, agrarian country to a complex industrial and urban nation.[3] Upper Michigan's Keweenaw Peninsula was the first major copper mining district in the United States, with dozens of operations launched in the 1840s. For nearly four decades, the peninsula and nearby Isle Royale (also known as the Lake Superior copper region) produced more than one-half of the country's copper output; in some years that amount reached 90 percent or more.[4] Hundreds of copper mines would be opened in the Lake Superior copper region between the mid-nineteenth and the early twentieth centuries.[5] Of these the Quincy Mining Company dominated copper production from the first explorations of the 1840s until it was eclipsed by Western mines in the 1880s. The Quincy Mining Company, "Old Reliable," survived the longest and (along with the Calumet & Hecla Mining Company) produced the most copper. Keys to this success were the fabulously prolific copper lode, the adoption of new technology to increase profits, and a management process of corporate paternalism. Quincy's success also depended upon its employees, those who came to dig mines, haul materials, break rock, and smelt ore. While extensive, the company's influence was not absolute, and worker agency in exerting economic and personal control over their lives included creation of localized aid benefit societies, subscription to native language newspapers, development of fraternal organizations, participation in union organization, and support of or participation in workers strikes.

Under Criterion 5 the historic resources of the Quincy Mining Company Historic District collectively comprise an intact mining company landscape that outstandingly represents the evolution of U.S. copper production into a major industry. Of all other copper mining and milling operations on the Keweenaw Peninsula, the collection of Quincy Mining Company resources associated with extraction, transportation, milling, smelting, and housing together best represent the process by which copper mining became a dominant industry in both Michigan and the United States, from the 1850s to the early twentieth century. In no other area during the period was the scope of development as great as on the Keweenaw Peninsula. Copper production on the Keweenaw Peninsula differed from earlier copper mines in the country due to geologic variation, the grade of available copper ore, changes in copper processing technology, changes in management practices, and increases in capital investments. Subsequent copper production in Western states would also differ, for the same reasons. As a result, the copper mining landscape represented by the Quincy Mining Company Historic District is characteristic of a particular and important period of time in United States copper mining history. An integral component of this landscape is its housing locations, which continue to convey the living and working conditions of the people who worked at the copper mine.

[3] Derek Strahn, Chere Jiusto, and Ellen Crain, "Butte-Anaconda Historic District" National Historic Landmark Nomination Form [revised documentation] (Washington, DC: US Department of the Interior, National Park Service, 2006), 85.
[4] F. E. Richter, "The Copper-Mining Industry in the United States, 1845-1925," *The Quarterly Journal of Economics*, 41, no. 2 (Feb. 1927), 237.
[5] More than 300 "ventures" started between the 1840s and the end of the Civil War, alone. Larry D. Lankton, *Cradle to Grave: Life, Work and Death and the Lake Superior Copper Mines* (New York: Oxford University Press, 1992), 9.

In 1989, the Quincy Mining Company Historic District was designated as an NHL under the themes of Business (extractive or mining industries) and Technology (extraction and conversion of industrial raw material). At the time, the nomination focused on the mining buildings on Quincy Hill, the Quincy Smelting Works on Portage Lake, and the associated housing locations in those areas. Since the initial NHL designation, a greater understanding of related themes and the importance of landscape features has emerged. This nomination reconsiders the relevant resources of the Quincy Mining Company Historic District, adds further information, and re-evaluates the boundaries of the district within those additional contexts.

Subsurface archeological resources related to the period of significance have been identified within the NHL district, however, at the time of designation they have not been well defined. Formal archeological evaluation would be required to determine whether they meet the high bar for significance and integrity under Criterion 6. Consequently, in the present nomination individual archeological sites are considered contributing features within contributing sites (Landscape Character Areas) in the district under Criteria 1 and 5 for their contributions to the integrity of location, association, and setting.

Additions to the District

The most significant additions to the district are the Quincy Stamp Mill, and one railroad corridor: the Quincy and Torch Lake Railroad, running between the mine site on Quincy Hill. Including these resources recognizes the importance of Quincy as the only place on the Keweenaw Peninsula where all these components—extraction, transportation, milling, smelting, and housing—are intact and together. The added areas are indicated on the Landscape Character Area maps of LCA-7 (Map 11) and LCA-8 (Map 12).

The nomination now also includes features beyond the remnant buildings of the mining era. Indeed, extensive study of the landscapes of the Quincy Mining Company reveals that much of the district's historic character is demonstrated not just by its buildings, but by the landscape characteristics that define the area, including the spatial organization of the surface plant along the lode, the relationship of the housing locations to above and below ground activities, neighborhood settlement patterns, the relative locations of the smelter and stamp mill, the prominence of the No. 2 Shaft-Rockhouse on the landscape, and other features such as railroad grades, tramroads, poor rock piles, and domestic vegetation. It was within these spaces, as much as within the buildings, that the activities of the mine and the people who lived and worked in and around it took place.

Removals from the District

While there are some additions to the district boundary, this nomination also proposes some reductions. These areas are shown on the Map 4 and Maps 6, 7 and 9. The original nomination was able to state in 1989 that there had been no new developments in the district and virtually no intrusions or non-contributing buildings or structures; however, this has changed in the interim. Some areas that originally had high integrity have since been developed with new housing. Such is the case with the Kowsit Lats Housing Location (see Map 7). In other locations, such as Mesnard and Newtown (see Map 5), some historic resources remain, but various impacts including substantial loss of historic resources, disconnection of the resources from the larger district, or other impacts to integrity have significantly diminished their integrity and the ability of these areas to convey their historic character. In these areas, the boundaries have been redrawn to more accurately reflect the presence of historic resources associated with the Quincy Mining Company's national significance. Additional description is provided in Section 6.

Period of National Significance

The original 1989 nomination established a period of significance beginning with the company's founding in 1846 and ending with its first closure in 1931. This period has been re-evaluated in light of the updated historic context for the property that more fully addresses the nationally significant operations of the Quincy Mining Company and the economic, social, and physical connections reflected in the company's corporate mining landscape. In particular, the updated nomination considers Quincy's exceptional national significance in the context of economic, technical, and social developments related to copper mining and industry in the United States. This nomination proposes that a more suitable period of significance for the Quincy Mining Company Historic District is 1856 to 1920. While the company was founded in 1846, its early explorations were not particularly distinctive or influential in a national context, and few, if any, traces of this period remain on the landscape. A more appropriate opening to the period of significance is 1856, the year that Quincy began working the rich Pewabic Lode, the resource that would propel it to national dominance of the copper industry. Similarly, while the company did continue mining operations until 1931 (and reopened for periods after that date), the original ending date of the period of significance, it is the conclusion of this nomination that the Quincy Mining Company's era of national significance essentially ended with the onset of the permanent decline in native copper mining in Michigan, the close of the company's period of growth and expansion, and the termination of the company's long history of paying dividends in 1920.

PROVIDE RELEVANT PROPERTY-SPECIFIC HISTORY, HISTORICAL CONTEXT, AND THEMES. JUSTIFY CRITERIA, EXCEPTIONS, AND PERIODS OF SIGNIFICANCE LISTED IN SECTION 2.

Significant Themes: Developing the American Economy (extraction and production)

The Quincy Mining Company Historic District possesses exceptional value in illustrating the broad patterns of the nation's copper mining history and the associated industrialization of the United States from the mid-nineteenth century to early twentieth century. The success of the Quincy Mining Company and many of the other mining companies on the Keweenaw Peninsula was connected to the advent of the "Age of Electricity," and the corresponding industrialization of the late nineteenth and early twentieth centuries.

Michigan Copper and the Age of Electricity

It was with the opening of the Keweenaw mines in the mid-nineteenth century that copper became a major industry in the United States. Prior to the 1840s, United States domestic copper output, confined mostly to sources in the East, struggled to exceed 200,000 pounds per year. Copper had been mined in the Atlantic Seaboard as early as 1709 at Simsbury, Connecticut, followed by deposits found in New Jersey, Vermont, Maine, Massachusetts, Connecticut, Pennsylvania, and Maryland. However, these earliest copper mining ventures were modest productions.[6] Primitive methods and transportation challenges made only the richest ores profitable to mine and process, and the incentive to develop copper was further hindered by a relatively small demand, especially before 1840.[7] Until about 1855, the United States imported most of its copper from overseas, principally the mines of Cornwall and Devon in the United Kingdom.[8] However, during the early

[6] Richter, "The Copper-Mining Industry in the United States, 1845-1925," 238; E. D. Gardner, C. H. Johnson, and B.S. Butler, *Copper Mining in North America, Bulletin 405,* US Department of the Interior, Bureau of Mines (Washington, DC: US Government Printing Office, 1938) 12; Otis E. Young, Jr., "Origins of the American Copper Industry," J*ournal of the Early Republic*, 3, no. 2 (Summer 1983), 117-137.
[7] Strahn, et al., "Butte-Anaconda Historic District," 99, citing sources in footnotes 85 and 86.
[8] William B. Gates, *Michigan Copper and Boston Dollars: An Economic History of the Michigan Copper Mining Industry* (Cambridge, MA: Harvard University Press, 1951), 7-9.

nineteenth century, copper came into increasing demand both in the United States and overseas, where it—and the copper alloys of bronze and brass—were used domestically for a variety of applications, from military ordnance and the sheathing for ships hulls to domestic products like cookware and jewelry.

As the nation became increasingly industrialized in the mid-nineteenth century, copper would assume transcendent importance for its ability as the most practical medium for the transmission of electric current. As has been succinctly presented in the Butte-Anaconda Historic District National Historic Landmark nomination, copper ushered in the Age of Electricity and helped shape the modern world:

> It was copper that enabled electricity to transform the national character, creating nationwide systems of telegraph and telephone communication, triggering rapid urbanization, revolutionizing transportation and American manufacturing, and modernizing domestic life throughout the United States. In the form of wiring, machinery components, and transmission lines, copper "provided the sinews for the transformation of America from an agrarian to a complex industrial and urban society" between the Civil War and World War II.[9]

The unprecedented demand for copper grew at precisely the time that copper was being discovered in large quantities in the rich deposits of Michigan's Upper Peninsula, and later in Western states. Copper connected formerly isolated communities scattered across three million square miles: in 1844 Samuel Morse utilized copper as an essential ingredient in the electric telegraph. By the 1860s, the Civil War caused an increase of 25 percent in copper production, largely for cannon-making, and the extensive connection of copper telegraph wires played an important role in the Civil War victory of the industrialized northern states. Alexander Graham Bell's invention of the telephone in 1874 further advanced a nationwide system of communications. Lake Superior copper was also preferred for use in transatlantic and other underwater cables due to its purity. In the 1880s Thomas Edison used copper wire to market electricity. His integrated electrical network would expand so rapidly that from 1890 to 1905, the amount of electrical power available in the United States increased a hundred-fold. In 1902 there were 2,250 power-generating plants in the United States; by 1920 there were nearly 4,000. The growing availability of inexpensive electrical power facilitated the nation's rapid industrialization. Copper was used in the manufacture of electrical machines and supported the growth of mercantile shipbuilding and the rise of the German and American navies. Developments in hydroelectric technology at the turn of the twentieth century enabled the transmission of electricity over hundreds of miles via thick copper wires. Artificial lighting allowed around-the-clock production. Public lighting made urban areas safer and easier to negotiate, while suburban development followed the establishment of electric streetcars radiating out from city centers. During World War I, the mechanization of armies relied on copper to create tools and machinery for the production of motor equipment, radio communications, and ammunition. As a result of these and other advancements, productivity increased more than 300% between 1890 and 1940, allowing the United States to become a global power. On another level, the plethora of new electrical appliances reshaped day-to-day existence, while their sales provided a massive economic stimulus and profoundly influenced attitudes toward the traditional responsibilities of men and women in American society.[10]

Copper Mining on the Keweenaw Peninsula

The particular economic success of the Quincy Mining Company as one of the two most viable, competitive copper mining companies on the Keweenaw Peninsula (along with the Calumet & Hecla Company) was the

[9] Strahn, et al., "Butte-Anaconda Historic District," 102.
[10] Strahn, et al., 85-86; James Calhoun, "War Metal!" *The Military Engineer*, 33, no. 194 (December 1941), 574, http://www.jstor.org/stable/44555658 (accessed July 13, 2020); Richter, "The Copper Mining Industry, 1845-1925," 265.

result of many factors, not the least of which were its ownership of the rich Pewabic Amygdaloid Copper Lode and the practice of corporate paternalism. The company's dominance can also be seen through its adoption over time of new technology and labor practices, increased scales of production and financial support, and consolidation. This trend towards large-scale, integrated corporate copper production would later be repeated on a massive scale in subsequent Western copper mining ventures involving extraction of lower-grade copper ore and resulting in a significantly different copper mining landscape. Yet what initially drew miners and speculators to the Keweenaw Peninsula and the Lake Superior copper region was the wealth of native copper ores unalloyed with other elements. Some existed as tiny flecks held in a surrounding rock matrix. Others were located in rock fissures, or came in massive pieces, or mass copper, literally large masses of pure copper situated relatively close to the surface. The Keweenaw Peninsula in fact held the world's largest deposit of native copper, a rare and "outstanding exception to the rule" that most of the world's copper production comes from ore deposits of copper in chemical association with other elements.[11] Comparatively, copper ore found in almost all other districts is formed as a copper oxide or a copper sulfide.

The copper deposits of the Keweenaw Peninsula were a significant source of copper stretching back as far as 7,000 years ago. Copper from the region has been found at Indigenous archeological sites throughout North America in the form of raw copper, tools such as spear points, fishhooks, and awls, and in decorative materials including beads and bracelets. [redacted]

European and later American explorers in the seventeenth and eighteenth centuries were attracted to the Keweenaw Peninsula by reports of its rich copper deposits and encounters with Native American tribes of the Great Lakes region, who carried copper objects or conveyed knowledge about the source of copper in the area. The Ojibwa, Odawa, and Potawatomi nations lived in the western Great Lakes region when explorers arrived, with Ojibwa communities located on all sides of Lake Superior, or Gichigamiing (the great water, or sea). While these early explorers failed to establish mines, they did bring American attention to the region's resources. As a result, as early as the 1820s, the United States government sought to acquire the lands held by the Ojibwa in the Upper Peninsula with the intent to open the area for mining. Over the next thirty years, much of the Ojibwa land in the Keweenaw area would be ceded in a series of four treaties (1836, 1837, 1842, and 1854); these treaties also included subsurface mining rights.[13] Douglass Houghton, Michigan's state geologist, exhibited caution in reporting on the copper deposits of the Keweenaw in 1841, but their potential was visibly

[11] Lankton, *Cradle to Grave*, 5; Richter, "The Copper Mining Industry in the United States, 1845-1925," 239 (quotation).

[redacted]

[13] Mattie Harper (Bois Forte Band of Ojibwe), "On the Shores of the 'Great Water': The Ojibwe people's migration to Gichigamiing," *Growler Magazine* (May 29, 2018), https://growlermag.com/on-the-shores-of-the-great-water-the-ojibwe-peoples-migration-to-gichigamiing/ (accessed November 5, 2018); David J. Krause, *The Making of a Mining District: Keweenaw Native Copper, 1500-1870* (Detroit, MI: Wayne State University Press, 1992), 135. Names used to refer to the Indigenous peoples of the area vary, including Chippewa, Ojibway, Ojibwa, and Ojibwe. The Ojibwa are part of the larger Anishinaabe cultural group, which includes Odawa and Potawatomi tribes. Ojibwa or Ojibway is the anglicized version of Ojibwe. Chippewa is an alternative anglicization. This document uses 'Ojibwa' to refer to the tribe.

demonstrated by the Ontonagon Boulder, a 3,700-pound mass of pure copper that was displayed in the East in 1843. With publication of Houghton's report in 1841, the "first real mine rush in American history was on."[14]

In short order, hundreds of mining companies (many of them existing only on paper) were formed, and thousands of explorers, speculators, and mine workers flooded into the Keweenaw Peninsula. In the 1860s, the Lake Superior copper region, known today as Michigan's Copper Country,[15] produced on average more than fifteen million pounds of copper per year. In 1869 alone, Michigan accounted for 95 percent of national production in the United States and over 11 percent of worldwide production. During this period, a large proportion of Michigan copper was being exported overseas.[16] Keweenaw copper mines began producing dividends for stockholders in 1849, further accelerating development of the copper resources.[17]

Mid-nineteenth-century mines on the Keweenaw Peninsula extracted mass copper, often in pits that showed evidence of work by Indigenous miners. Two of the earliest companies, the Minesota [sic] Mining Company and the Pittsburgh and Boston Mining Company, enjoyed early success by extracting mass copper at the Minesota Mine and the Cliff Mine, respectively. These large masses were broken into smaller pieces by hand cutting and brought to the surface. Despite the purity of the mass copper deposits, the labor involved in bringing them to the surface was slow and intensive, and this type of mining proved less lucrative than the later conglomerate and amygdaloid mining.[18] By 1870, the Minesota and Cliff Mines were essentially defunct, but their technological and community development efforts paved the way for larger enterprises devoted to conglomerate and amygdaloid mining.[19]

Because of their significance in subsequent Michigan copper mining success, and their distinction from prior or later copper mining ventures in the country, further detail is presented here on the variety and distribution of copper-bearing lodes found in Michigan's Upper Peninsula and on Isle Royale. Both the peninsula and the island were formed from approximately 400 layers of basaltic lava flows interbedded with 20 to 30 layers of sedimentary rock that accumulated to thousands of feet thick. Within the basaltic layers, cavities formed at the tops of the lava flows as the lava cooled. Pure, amygdaloid copper was created when into these cavities (amygdules, or "almonds" in the Greek language) would flow copper-bearing solutions, probably forced upward through porous rock under tremendous pressure from deep underground. During long interruptions without volcanic activity, sedimentary rock formed as erosion took place. Conglomerate copper—"conglomerations" of boulders, sand, pebbles, and sandstone fragments—was formed in these deposits when the rock later received mineralizing, copper-rich solutions. Geologic processes then tilted the layers and bent them into a basin; one rim of the basin ran from what is now the northern tip of the Keweenaw Peninsula southwestward into Wisconsin. The opposite rim appears now in Minnesota, along the Canadian shore, and on Isle Royale. Fissure copper was created during or following the creation of the basin, as longitudinal and cross-fractures created more voids in the rock that would receive copper-bearing solutions. Historian Larry Lankton notes that "it was a distinct geological novelty that the mineralizing solutions, whatever their exact constituency, apparently reacted with ferric compounds in the rock in such a way that metallic copper–and not

[14] Lankton, *Cradle to Grave,* 8; see also Krause, *The Making of a Mining District*, 135. It should be noted that the first "mine rush"—for gold—occurred in Georgia in 1828.
[15] "Copper Country" is a common and more recent regional designation applied to the copper-producing areas of the Keweenaw Peninsula, primarily Keweenaw, Houghton, and Ontonagon counties, and a portion of Northern Baraga County.
[16] Gates, *Michigan Copper and Boston Dollars*, 9-10, 197.
[17] Krause, *The Making of a Mining District*, 217.
[18] Larry Lankton, *Hollowed Ground*: *Copper Mining and Community Building on Lake Superior, 1840s to 1990s* (Detroit, MI: Wayne State University Press, 2010), 23. The spelling of the Minesota company is not the same as the state of Minnesota.
[19] Lankton, *Cradle to Grave*, 9-10. Another mass copper mining operation, the Central Mining Company, was founded in the mid-1850s and remained in operation to 1898.

copper compounds—precipitated out."[20] The amygdaloid and conglomerate copper lodes became the key to Michigan's copper mining success and distinguish it from prior or later copper mining ventures in the country.

Three fairly distinct mining districts were established on the peninsula. From northeast to southwest were the Keweenaw Point district, followed by the Portage Lake district, and the Ontonagon district at the southwest end. Early development focused on the huge mass copper found in some mines in the Ontonagon and Keweenaw Point districts. The Portage Lake district yielded the greatest amount of copper of the three regions up to that time and included the Quincy Mine. The district was divided by its namesake, Portage Lake, a large natural body of water located roughly one-third from the southern end of the peninsula. It was the last area to be developed and included several other productive mines, such as the Calumet & Hecla, Tamarack, Osceola, Mohawk, Pewabic, and Copper Range mines. While mining efforts began in 1846, it was not until the Quincy Mining Company discovered the Pewabic Amygdaloid Lode on its property in 1856 that the wealth of that lode was finally understood.[21]

The Early Years of the Quincy Mining Company

As speculators rushed to claim land that might contain copper deposits, competing claims sometimes occurred, and it was out of one of these disputes that the Quincy Mining Company was born. The Portage Mining Company and the Northwestern Mining Company of Flint both claimed mineral rights to the same property. In November 1846, the stakeholders of the two companies met in Marshall, Michigan, and resolved the competing claims by jointly forming a third company, the Quincy Mining Company. The new company elected its board of trustees from representatives of both parent companies: Eurotas P. Hastings (also named as President), James A. Hicks (Secretary), and Charles H. Avery from the Northwestern Mining Company, and Ira Nash and Milo Soule from the Portage Mining Company.

Securing investment in the Quincy Mining Company was critical to the company's success, as it was for other mining efforts in the region. The risks and substantial costs involved in opening mines in frontier Michigan required the involvement of wealthy investors and corporations. The stock subscriptions of corporations raised needed capital and attracted investors who wanted to limit their financial risk. At the beginning of copper mining in the Keweenaw Peninsula, many investors came from Lower Michigan, the Midwest, and Pittsburgh, but ultimately Boston became the hub of investment.[22]

After formally incorporating in July 1848, the merged Quincy Mining Company purchased what would become the heart of its mining operations, Section 26 of Township 55 North, Range 34 West; this was land originally owned by James Hicks, although the company paid Hastings for the section. (The section contains the core of the NHL historic district, immediately north of the present city of Hancock in northern Houghton County. The northeast corner of Section 26 includes mining offices and manager's residences, the location of the former Dryhouse, and three mineshaft locations set atop the northeast/southwest line of the Pewabic Lode. Two housing locations—Sing-Sing and Frenchtown—are also in this section.)

Hastings remained president of the company through its early years.[23] The company's initial efforts focused on exploring and developing their land, locating the fissure lodes that might yield copper, and clearing the land to

[20] Lankton, *Cradle to Grave*, 5-6.
[21] Richter, "The Copper-Mining Industry in the United States, 1845-1925," 244.
[22] Lankton, *Hollowed Ground*, 15.
[23] Larry Lankton and Charles K. Hyde, *Old Reliable*: *An Illustrated History of the Quincy Mining Company* (Hancock, MI: Quincy Mine Hoist Association, 1982), 5. It appears the venture was named the Quincy Mining Company from its beginnings, but the origin

provide space for industrial operations, housing, and other support needs. Lumberjacks hired by the company clear-cut large swathes in the dense forest and mining crews sank shafts to locate copper-bearing rock.[24] The landscape that began to form during this early development period would set the precedent for Quincy at the height of its operations: a vernacular landscape influenced by environmental factors and functional relationships to mine operations. Transportation routes were dictated by practical considerations such as movement of materials and heavy loads along the least arduous routes. Building design was largely functional and limited by the raw materials of wood and stone available for construction; there was little sense of a designed community aesthetic.[25]

Despite this early activity, Quincy, like many of the mining ventures across the peninsula, struggled to turn a profit. While the mass copper scattered across the surface and the first findings in the fissure lodes seemed promising, the amount of copper found rarely yielded enough to justify further investment in a particular lode or to produce enough money to cover the investment in exploring, clearing, and developing mining infrastructure.[26] Matters looked more hopeful in the early 1850s, when the company discovered the Quincy Lode, a vein of amygdaloid copper, on the top of Quincy Hill, but this too proved a disappointment. In 1855, however, a company geologist discovered a promising amygdaloid deposit on the land of a neighboring mine, the Pewabic. By the following year, Quincy had found evidence of the same rich vein on its own property, a discovery that would change the company's fortunes for the better.[27] Although the company worked both lodes for several years, it was the Pewabic Lode that established Quincy's status as the largest single producer of copper in the world in the 1860s.

The amygdaloid and conglomerate lodes of the Keweenaw Peninsula generally run northeast to southwest along the geologic spine of the peninsula, and the mining infrastructure built by Quincy aligned itself along this axis. Operations in these early years were crude and largely hand-powered, with miners pulling the copper-bearing rock out of the rough shafts in buckets operated by windlasses.[28] Copper was either separated from the surrounding rock (known as poor rock) by hand, or through the calcining process (heating and rapid cooling to crack the pieces apart), which took place in the nearby kiln houses. The copper was then transported to nearby docks, where it was shipped to downstate locations for smelting.[29] In 1858 the company purchased two portable steam engines to power their hoists; this increased the efficiency of operations, but also accelerated the company's use of natural resources including water from nearby Portage Lake and the timber of the peninsula used for fuel.[30]

Throughout the 1850s, the Quincy Mining Company continued to build a full-scale mining operation, albeit one that was not yet yielding profits. They added to their land holdings, expanded their surface and underground operations, and established a community to house the workers needed to operate the mine. The company built a stamp mill on Portage Lake in 1858-1860 to better process the copper rock, and created transportation networks, including roads, railroads, and tramroads, to connect the various parts of the operation. Given the purity of

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of the name is unknown. See Charles K. Hyde, "An Economic and Business History of the Quincy Mining Company," in "Historic American Engineering Report [HAER] No. MI-2," [unpublished] (Washington, DC: US Department of the Interior, National Park Service, 1978) (hereafter cited as HAER No. MI-2), 8.

[24] Lankton and Hyde, *Old Reliable*, 6-8.

[25] Quinn Evans Architects, "Quincy Unit Cultural Landscape Report/Environmental Assessment," National Park Service, 2010, II-15.

[26] Larry D. Lankton, "Technological Change at the Quincy Mine, c. 1846-1931," in HAER No. MI-2, 273-274.

[27] Lankton and Hyde, *Old Reliable*, 8-10; Hyde, "An Economic and Business History of the Quincy Mining Company," 24; Lankton, "Technological Change at the Quincy Mine," 274.

[28] Lankton, "Technological Change at the Quincy Mine," 288. See also Lankton, *Cradle to Grave*, 48.

[29] Hyde, "An Economic and Business History of the Quincy Mining Company," 70.

[30] Lankton, "Technological Change at the Quincy Mining Company," 288.

copper in the region, its reduction process was simpler and less expensive than efforts undertaken previously in other areas of the country. However, as Lankton has pointed out, even at the wealthiest mines (i.e., Quincy), the copper rock was only about 2 percent copper and 98 percent waste rock and could not go directly from mine to smelter. The Portage Lake stamp mill, therefore, separated and concentrated the copper. Every mine of consequence on the Keweenaw Peninsula built its own stamp mill. As described by Lankton:

> Heavy stamping machines first broke and abraded the copper rock, reducing it to the size of a peppercorn or smaller. Mechanically breaking the rock liberated its copper particles. A steady stream of water flushed the copper rock out of the stamps and onto other types of esoteric mill equipment, such as hydraulic separators, jigs, and slime buddles.
>
> This machinery, much of it 'homegrown' to work Lake Superior's peculiar copper deposits, used the difference in the specific gravities of copper and rock to separate the two materials. In the jigs…plungers agitated a watery suspension of copper and rock particles over a sieve. When the agitation stopped, and the water drained out of the box, the materials settled out onto the sieve plate, with the copper on the bottom. Mill hands skimmed off the rock, then collected the copper. At the buddles, a slimy mixture of miniscule particles of rock and copper flowed out very slowly from the center of a large, rotating disc; water carried the lighter rock particles across the disc's surface and then tailed them over its edge.[31]

These developments illustrated a key factor in Quincy's ability to successfully and profitably increase its output in the late nineteenth century: vertical integration. By controlling the three stages of production (extraction, milling, and eventually smelting), as well as other elements such as housing and transportation, Quincy maintained a significant degree of influence over all aspects touching on its business. This success was demonstrated by the phenomenal growth in production; in just four short years, from 1856 to 1860, output increased from 7 tons to 970 tons. Employment at Quincy had increased to 257 men by 1860, working in a half dozen shafts spaced along the copper lode. In terms of refined copper produced during this four-year period, output grew from over 13,400 pounds to over 1,140,300. Only one other mine could match this—the nearby Pewabic Mine. Its production increased from over 129,500 pounds to over 1,917,000 pounds, but could not match Quincy's thereafter. No other mining company on the peninsula that was working amygdaloid lodes came close. The Phoenix Mine increased from 16,000 to over 40,000 pounds. While the Copper Falls Mine and the Isle Royale mines produced modest amounts in 1856 (208,000 pounds and 323,500 respectively), the numbers did not as substantially increase by 1860 (nearly 511,000 and 336,000 pounds, respectively). Fissure copper mines, including the Minesota, National, and Cliff Mines, boasted refined copper produced between 1,000,000 to over 2,600,000 pounds during the same period, but the amounts tumbled thereafter.[32]

Finally, in 1862, the Quincy Mining Company returned the first dividends to its investors. It was the beginning of fifty-plus steady years of profitability, an achievement that would earn the company its nickname, "Old Reliable," for the regular returns it paid to its shareholders.[33]

[31] Lankton, *Cradle to Grave*, 11-13.
[32] Larry Lankton, "Keweenaw National Historical Park: Historic Resource Study," [draft] (National Park Service, 2005), 58; Lankton, *Hollowed Ground*, 52; Butler and Burbank, *The Copper Deposits of Michigan, Professional Paper 144*, Department of the Interior, (Washington, DC: US Government Printing Office, 1929): 67-98. In the following years, Quincy's output continued to climb, reaching over 20 million pounds by 1901. Only the Calumet & Hecla Mine would out-produce Quincy.
[33] Lankton, "Historic Resource Study," 58; Lankton, *Hollowed Ground*, 52.

Quincy Dominates National Copper Production

Over the course of its life, Quincy Mining Company operations reflected a change in copper processing technology into a highly mechanized undertaking. To be successful, extracting and processing the rich lodes required a large scale of production and substantial financial support. While outside investment in the Lake Superior copper region was standard for the area, Quincy's dominance can be seen as the result of adoption of technological innovations, more efficient labor practices, and an associated increased scale of production allowed for continued profit despite decreased copper yield per ton of rock, over time.[34]

With its exploitation of the rich Pewabic Lode, the Quincy Mining Company grew to dominate Michigan copper production. By the beginning of the Civil War in 1861, Michigan produced 89.5 percent of the total United States copper output. Other mines working the peninsula's rich lodes, such as the Pewabic, Franklin, Huron, and Isle Royale mines, contributed to the output, but none could match Quincy, which supplied about 56 percent of that figure (over 1,200 tons of copper, or 6.5 percent of total world production).[35]

During this same period, copper lodes had been discovered and worked elsewhere in the country, but with modest results. Discovery of a copper oxide ore (assaying at 14 to 32 percent copper) in Tennessee and the southern Appalachians during the 1840s and 1850s led to a so-called "copper mania," but the overall production was comparatively much lower than that in Michigan. Likewise, the distribution of copper discovered in New Mexico and Arizona suffered from remote locations and limited access. By the mid-1860s, the state offering the closest competition was California. In that year, California produced 1,800 tons of copper from its deep shaft mines, compared to Michigan's 7,179 tons.[36] Quincy's profitability and the success of other Keweenaw Peninsula copper mines, on the other hand, was keyed both to the quality of Lake Superior copper and to the ability to transport the processed material over water. Whereas the profitability of copper extracted in the mountains of New Mexico, Arizona, or California relied on construction of railroad lines, the 1855 creation of the state locks at Sault Ste. Marie (St. Mary's Falls Canal NHL, 1966) enabled ships to transport Keweenaw copper between Lake Superior and the lower Great Lakes. Financed by capital from the East, the locks facilitated the development of commerce in the Great Lakes region and allowed for the inexpensive and convenient transportation of vast quantities of copper, iron ore and other natural resources to their processing and distribution markets.

With the Civil War came an increased demand for copper to provide the raw material for arms, naval equipment, and necessities such as buttons for uniforms, and Quincy was able to supply much of that need. For the company, it remained a difficult period; while demand (and prices) went up, the consequent increase in its own labor needs, coupled with men leaving to join the army (and competition from other mining companies), created labor shortages that affected profits.[37] Nevertheless, the company continued to expand its operations both on Quincy Hill and at the stamp mill on Portage Lake, as well as explore the limits of the Pewabic Lode. Historian Larry Lankton offers this description of Quincy's facilities during the period:

> By 1862, a shaft house, 35 to 40 feet tall, stood over each of the six shafts and their timber-cribbed collars. Along the row of shaft houses Quincy had erected four sorting houses and three hoist houses, timber-framed buildings that stood on poor-rock foundations. On one side of each hoist-house a tall wrought iron chimney stood atop a masonry base, and on another stretched long rows of cordwood, taken in 1862 and thereafter, from Quincy's own woodlots…. A little

[34] Richter, "The Copper-Mining Industry in the United States, 1845-1925," 242, 248.
[35] Gates, *Michigan Copper and Boston Dollars,* 13; Lankton, *Hollowed Ground*, 52.
[36] Richter, "The Copper-Mining Industry in the United States, 1845-1925," 246-247.
[37] Hyde, "An Economic and Business History of the Quincy Mining Company," 46. See also Lankton and Hyde, *Old Reliable,* 17.

> east of these structures stood four kiln houses. The hoist and shaft-houses were connected by pulley stands that supported the hoisting chains; narrow gauge tramways interconnected all the shaft, sorting, and kiln houses; and a tramway running past all the sorting and kiln houses terminated at the drum house on the southwestern end of the mine which served the stamp-mill incline.
>
> In addition to these major structures and facilities, by 1862 Quincy had its copper house for storing barrel and mass [copper], a stone magazine for black powder, and a general-purpose warehouse. It had one change or Dryhouse, two small blacksmith shops, plus a carpenter shop with a small steam engine for driving bench saws and a lathe. The road leading from the village of Hancock up to Quincy Hill neatly divided the mine location into halves. Excepting the blacksmith and carpenter shops, all the technological mine structures stood on the east side of the road. On the west side stood the company office, a store, a barn and root-house, a forty-bed hospital, and numerous company-built houses.[38]

The top of the shaft was called the collar, and was "cribbed" with timber to support its sides. The hoist house sheltered the hoist engine that raised the rock from the shaft to the shaft house. The sorting house was often attached to the shaft house and housed the initial sorting of the rock, where workers separated poor rock from copper-bearing rock; relatively "clean" mass copper (i.e., without excessive rock adhered) was sent directly to the smelter, while the remainder of the rock was transported to the kiln house, where calcining took place to crack the copper from the poor rock. Kiln houses were later replaced following the introduction of steam-powered rock crushers and steam hammers located in rockhouses and shaft-rockhouses. After this primary handling, some rock contained enough copper to warrant further processing. This took place at a stamp mill, which used heavy machinery to pound down the rock and extract the remaining copper. Mass copper consisted of large pieces of relatively clean copper brought directly up from the shaft, while barrel copper consisted of smaller pieces that had been "liberated" during calcining and subsequently stored and transported in barrels.

Transportation to, from, and around the Keweenaw Peninsula was an important factor in the company's operations. The remoteness of the area and unforgiving climate presented extreme challenges to establishing mining operations. For the early industrial ventures in the Keweenaw, access via Lake Superior was often treacherous, and land-based routes were unimproved trails. Given the Keweenaw's location on the Great Lakes, shipping was the primary method for importing equipment and other necessities and exporting copper. Shipping was always hazardous in this period, particularly on Lake Superior, which is notorious for the severity of its weather, but access to the lower Great Lakes was facilitated in 1855 with the opening of the canal and locks at Sault Ste. Marie at the eastern end of Michigan's Upper Peninsula. After this, the remaining major obstacles were Portage Lake and the small river that connected it to Lake Superior. In 1859 Quincy joined with other mining companies in the area to widen and dredge the river. This enabled large lake ships to dock in Houghton (on the south side of the river) and Hancock (on the north side of the river) and later to access the stamp mill on Torch Lake.[39] Quincy became a stockholder in the Portage Lake and River Improvement Company, established in 1863, which helped keep the lake and river accessible for shipping.[40] These improvements culminated in the construction between 1868 and 1873 of a two-mile-long-canal from the west end of Portage Lake to Lake Superior, resulting in a twenty-two-mile-long waterway cutting across the Keweenaw Peninsula from Keweenaw Bay on the east to Lake Superior on the west, called the Portage Lake and Lake Superior Ship Canal

[38] Lankton, "Technological Change at the Quincy Mine," 296-297.
[39] Hyde, "An Economic and Business History of the Quincy Mining Company," 44.
[40] Lankton and Hyde, *Old Reliable*, 16-17.

(now known as the Keweenaw Waterway). The canal not only enabled greater development of the mineral industry on the Keweenaw, but also of the agricultural, commercial, and railroad interests of the region.[41]

The company also worked to improve overland transportation routes. From 1863 to 1869, the United States government funded the construction of a military road to connect Fort Howard (near Green Bay, Wisconsin) and Fort Wilkins (at Copper Harbor in northern Keweenaw County, Michigan). Quincy, through its agent Samuel Hill, directly influenced the route of the road, which would benefit the company by improving transportation between rural communities and provide access to more mineral deposits. (Modern-day US-41, which cuts through the district, is aligned along the historic route of the military road).[42]

Rail transportation was another element in moving resources and people through the area. Quincy quickly developed a system of narrow-gauge railroads and trams that moved materials between the shafthouses, kiln houses, and stamp mill. The peninsula also had local rail transportation as early as 1873, when the Mineral Range Railroad built a narrow-gauge track between Hancock and Calumet. On the other hand, long distance railroad service would not arrive in Houghton until 1883, when the area was finally connected with Marquette and Chicago. This connection, which would facilitate transport into the winter months, did not come until the Keweenaw was already on its way to being eclipsed by the copper mines of the West in terms of production volume.[43] It did, however, allow the company to gradually shift its main fuel source from timber to coal.

Much of Quincy's success was the result of its drive for better technology to efficiently extract and process copper. While the company did not create new technologies, it frequently experimented with new systems to increase production and efficiency. Even small innovations could have an impact. In 1866 the company was the third area mine (after Cliff Mine and Pewabic) to install a man-engine—a device designed in Germany and introduced to Cornish mines in Great Britain in the 1840s. The device consisted of two side-by-side wood rods with attached foot platforms. The two rods moved in a reciprocating motion in opposite directions, allowing miners to hop from descending step to descending step until they reached the bottom (and reversing the process at the end of the shift to reach the top). The system transported miners up or down faster than they could move on their own and saved their energy for their work rather than the arduous climb. It was an expensive investment but resulted in labor savings for the company in the long term.[44] At the same time, the company did not meddle with existing technology if it continued to serve its purpose or if the company could see no economic or efficiency advantage in changing.

Another innovation the company experimented with in the early 1870s was the use of air-powered drills. The investment here was also large, but the results disappointing: the seven drills introduced in 1872 proved inefficient compared with hand drilling, at least for the time being.[45] The company returned to experimenting with air drills in the late 1870s and early 1880s, with more success. Quincy's adoption of air powered drills and drilling technology actually lagged behind western mines in deploying a new generation of smaller drilling machines. However, coupled with the introduction of dynamite (in place of black powder), this greatly increased the production ability of mining operations.[46]

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[41] Arthur W. Thurner, *Strangers and Sojourners: A History of Michigan's Keweenaw Peninsula* (Detroit, MI: Wayne State University Press, 1994), 81-82.
[42] "Military Road in Keweenaw Can Still Be Found in Places," *Daily Mining Gazette*, 16 January 1960.
[43] Lankton and Hyde, *Old Reliable*, 44.
[44] Lankton and Hyde, *Old Reliable*, 22-23. The man engine was first used in Germany and likely arrived in the Keweenaw by way of Cornwall, England, where the double-rod version had been in use since the 1840s.
[45] Lankton, *Cradle to Grave*, 81-82.
[46] Lankton, *Cradle to Grave*, 86, 96, 104; Lankton, "Technological Change at the Quincy Mine," 323; Lankton and Hyde, *Old Reliable,* 59.

By the 1880s the Quincy Mining Company was a mature, profitable organization. Production increased from 1,248 tons in 1870 to 2,832 tons in 1882.[47] The company continually updated its technology and methods of production, and it continued to expand. In terms of its share of national output, Quincy, and the Keweenaw Peninsula in general, reached the peak of their significance in the 1860s and 1870s. In 1869 Michigan produced more than 95 percent of the country's copper (over 11 percent of world production), and continued to be the nation's leading copper producer until 1887; Quincy led Michigan's production in the 1850s and 1860s. [48] Although Quincy was eclipsed in its status as the largest producer of copper, first by the neighboring Calumet & Hecla Mine in the 1870s, and then by the vast copper mining operations of Montana and Arizona in the 1880s, it remained a significant national player in the copper mining industry through the end of the World War I. Even into the final decades of the nineteenth century, Michigan's share of the world copper industry continued around 12 to 16 percent.[49]

Prosperity and Expansion

Mining operations at Quincy and other copper mines created enormous amounts of waste products. Piles of poor rock (rock containing little or no copper) still dot the landscape of the Keweenaw Peninsula, where it was easier to dump and leave rock near the shaft than attempt to move it elsewhere. Rock that contained sufficient copper to warrant further processing was taken to a stamp mill. Stamp mills used giant cast iron stamps to pound and crush the rock and free the copper from the surrounding rock. The remaining pulverized rock waste product was known as "stamp sands." Quincy had operated its Portage Lake stamp mill since 1860, but by the mid-1880s the facility reached its capacity and was a bottleneck to increasing production. There was no room to expand at its current site, and the federal government had begun to restrict dumping sands that might impede navigation in harbors or shipping channels. The sands from Quincy's Portage Lake facility were beginning to encroach on the Portage Lake navigation channel, and so in 1887 the company found a site on the shore of Torch Lake where they could build a new, larger stamp mill, with land on which to grow, ready access for shipping, and space in the lake to dump the stamp sands. Construction began the following year and the facility was completed in 1890. The mill sprawled over 300 acres and included the stamp mill itself (powered by steam), a pumphouse, boilerhouse, oilhouse, and warehouse. Large docks handled both incoming deliveries of vast amounts of coal to power the mill, and outgoing shipments processed copper.[50]

The construction of the Torch Lake stamp mill, on a site six miles from the mine, included a reassessment of the company's transportation infrastructure. In order to increase overall profitability, the company ultimately determined to build and operate its own rail line, a decision characteristic of the company in its early years and as it grew into maturity. The company had considered contracting with area railroad companies to provide a connection between the two facilities. One option had been to use an existing railroad corridor operated by the Duluth, South Shore and Atlantic Railroad that extended from Hancock east along the north shore of Portage Lake, then turned north to run along the west shore of Torch Lake. This railroad company had formed in 1886 and quickly acquired three important area railroad companies: the Marquette, Houghton & Ontonagon; the Hancock and Calumet; and the Mineral Range. However, Quincy eventually decided to build and operate its own direct connection between the mine and the stamp mill. The six-mile Quincy and Torch Lake Railroad, which was nominally operated by an independent entity but in practice was a subsidiary of the Quincy Mining

[47] *Annual Report of the Commissioner of Mineral Statistics of the State of Michigan for 1882* (Lansing, MI: W. S. George and Co, 1883), 123.
[48] Horace J. Stevens, *The Copper Handbook*, v.8 (Houghton, Mich.: Horace Stevens, 1909), 1466.
[49] Lankton, *Cradle to Grave,* 71.
[50] Hyde, "An Economic and Business History of the Quincy Mining Company," 138-139; Charles F. O'Connell, "Quincy Mining Company: Stamp Mills and Milling Technology, c. 1860-1931," in HAER No. MI-2, 607-609.

Company, was built in tandem with the stamp mill, and opened at the same time as the mill in 1890.[51] The narrow-gauge railroad was a critical link between the mine on Quincy Hill and the stamp mill. It transported both copper-bearing rock from the mine to the mill, and coal from the docks on Torch Lake back to Quincy Hill. Despite building its own railroad, the company also ran its equipment on the lines of the railroads along the corridor between Hancock and Torch Lake in later years.

The increased capacity of the new stamp mill resulted in corresponding developments at the mine site. When the Torch Lake stamp mill came online, the company introduced balanced hoisting, which nearly doubled the output of copper rock at the surface; it also invested in man cars, which enabled workers to reach much deeper in the mine than the previous man engines.[52] The increases in production made possible by these improvements prompted the company to modernize its surface plant as well.

The company's overall increases in output took a major step forward with the acquisition of the Pewabic Mine, immediately to the north of the Quincy Mine. Quincy had been attempting to gain control of the Pewabic Mine since 1884, but acquisition was mired in legal disputes for several years before they were finally settled in 1891. With Pewabic, the company gained greater access to the Pewabic Lode and its surface plant, including a shaft-rockhouse, shops, support buildings, and a worker housing location north of Limerick. The company extended its transportation system to include these new lands, all ultimately connected to the Torch Lake stamp mill by the Quincy and Torch Lake Railroad.[53]

Quincy continued to improve operations in the two decades after 1890. One unusual and successful development in which it invested was the shaft-rockhouse. In the mine's early days, shafts were covered with shafthouses, which were designed mainly to shelter the open shafts from wind, rain, and other elements while rock was transported elsewhere for processing. A rockhouse was a related structure: a massive three-story, timber-framed building, centrally placed, that allowed the company to break rocks mechanically near the shafts.[54] The design increased overall rock processing capabilities by eliminating the need for a kilnhouse, traditionally a bottleneck in the production process, as calcining rock required numerous unskilled laborers and significant stores of wood for fuel. It was also time-consuming as the process delayed the delivery of copper rock to the stamp mills.[55] Quincy installed its first rockhouse in 1873.

While the rockhouse was adapted from similar non-mining prototypes, the hybrid "shaft-rockhouse" was unique to the Keweenaw Peninsula. The growing use of dynamite and pneumatic drills increased the amount of material hoisted to the surface, which soon overwhelmed the rockhouses' capacity. The shaft-rockhouse improved the efficiency of operations by combining the two functions of crushing and sorting. Rock from the shaft was hoisted in skips (wheeled containers that rode up and down on tracks) directly up to the top of the shaft-rockhouse, where it was first processed through crushing equipment and then sorted by size through various chutes into bins and waiting rail cars—technologies and processes previously accommodated separately

[51] O'Connell, "Quincy Mining Company: Stamp Mills and Milling Technology, c. 1860-1931 and Milling Technology," 607-609; see also Chuck Pomazal, *Rock Down, Coal Up: The Story of the Quincy and Torch Lake Railroad* (Hancock, MI: Quincy Mine Hoist Association, 2014).
[52] Lankton, "Technological Change at the Quincy Mine," 341. See also Charles F. O'Connell, "A History of the Quincy and Torch Lake Rail Road Company," in HAER No. MI-2, 663; Lankton and Hyde, *Old Reliable*, 64. See also Lankton, *Cradle to Grave*, 35.
[53] Hyde, "An Economic and Business History of the Quincy Mining Company," 143-145; Lankton, "Technological Change at the Quincy Mine," 361; Lankton and Hyde, *Old Reliable*, 85; O'Connell, "A History of the Quincy and Torch Lake Rail Road Company," 664.
[54] The term "heavy-timbered" is used in the "Quincy Mining Company" HAER No. MI-2 document, page 330. However, timber-framed is more accurate.
[55] Scott Fisher See, "Industrial Landmarks: Shaft-Rockhouses of the Keweenaw Copper Mines," (master's thesis, Michigan Technological University, 2006), 19.

by rockhouses and shafthouses. The process involved grizzlies (a set of equally spaced iron bars that separated material too big for the stamp mill from rock that could be accommodated by the stamps); drop hammers and steam hammers broke rock and cleaned mass and barrel copper; and jaw crushers reduced copper rock for subsequent processing. By 1900 the machinery would be rearranged, and new rock handling processes were incorporated into the structures.[56]

Unlike a single rockhouse that was shared by several shafts, shaft-rockhouses were located over every shaft, increasing efficiency and decreasing the amount of human and mechanical effort needed to process the rock. In addition to increasing efficiency, shaft-rockhouses became landmarks, the dominant structure at a mineshaft, and the visible symbol of the copper mining industry long after production at the Quincy Mine ceased. While Quincy was not the first on the peninsula to build a shaft-rockhouse, it was one of the leaders (along with the Calumet & Hecla Mining Company and the Tamarack Mining Company) in continually implementing innovations on the initial shaft-rockhouse concept. Other area mines followed their lead and built their own shaft-rockhouses.

Although it cannot be said that the Quincy Mining Company or other Keweenaw Peninsula-produced technology or design influenced the mining industry on a national level, the design of the headframes, shafthouses and shaft-rockhouses have been called out for their distinctive and innovative design. Historian Scott See has concluded that the headframes and shafthouses of the Keweenaw Peninsula mines do not appear to have any direct lineage to structures constructed elsewhere: While most of the men who came to the Lake Superior mines had mining experience, it is extremely difficult to directly link the structures they built to another mining district.[57] Perhaps more important, however, is the contribution of the shaft-rockhouse to subsequent mining in the country through the use of steel for the steel headframe. As See points out, shaft-rockhouses were taller and covered more ground area than anything before. These structures were huge compared to their predecessors and required advanced engineering and design to accommodate a number of functions, and to meet physical stresses from operating machinery and wind loads. To ensure longevity and stability, mining companies turned to steel and iron for structural material, designed by bridge manufacturers.

Quincy's shaft-rockhouses reflect this evolution. Quincy's first shaft-rockhouse was over the No. 6 Shaft at the site of the former Pewabic mine. It was completed in 1892 and stood over 100 feet high, dwarfing the shafthouses and rockhouses on the rest of Quincy Hill. In 1895, Quincy converted Shaft No. 2 to a shaft-rockhouse, including double skip tracks and man cars, a necessity now that Quincy's shafts were among the deepest in the world. In 1907, the company rebuilt the No. 2 Shaft-Rockhouse in steel and implemented a number of innovations that made it "the most advanced design of its time."[58] This innovative steel headframe concept, first applied at the Quincy mine, would later be used in only the larger, more capitalized copper districts like Butte, Montana.[59]

Quincy's No. 2 Shaft-Rockhouse is one of only four remaining on the peninsula (the earlier Champion No. 4 Shaft-Rockhouse is extant but in poorer condition) and, at 153 feet tall, is the most visually prominent feature of

[56] See, "Industrial Landmarks: Shaft-Rockhouses of the Keweenaw Copper Mines," 22, 28.
[57] See, "Industrial Landmarks: Shaft-Rockhouses of the Keweenaw Copper Mines," 13.
[58] See, "Industrial Landmarks: Shaft-Rockhouses of the Keweenaw Copper Mines," 74.
[59] Strahn, et al., "Butte-Anaconda Historic District," 47-48. It is logical that a functioning technology would continue to evolve as copper mining proceeded west, and that technology used in Michigan would later appear in Western mines. During the 1870s, for example, the earliest silver and copper mines in Butte, Montana, used the same Michigan copper mining technology of wood headframes created from local material. The replacement of kilnhouses with steam-powered machinery, replacement of older-style crushers with steam-driven stamps, and hand roasters with roasting furnaces followed the lead of Michigan concentrators. Likewise, Keweenaw Peninsula mines adopted the Wilfley table for its stamp mills, a concentrating technology, two years after it had been developed in Colorado. See Lankton, *Cradle to Grave*, 248.

the Quincy landscape.[60] Another necessity due to the deep shafts were larger hoist engines. In 1894 Quincy purchased a 2,500-horsepower hoist from the E. P. Allis Company, the largest that company had ever built, and installed it at the No. 2 Shaft.[61]

The need to dig ever deeper for copper meant that Quincy continued to expand its holdings, acquiring neighboring properties until it owned nearly the entire surface area of the Pewabic Lode.[62] The company also continued to expand its Torch Lake mill site and increase its stamping capacity, as well as extend the railroad and bridge spanning the creek between the buildings.[63] At this time the company also sought to express its success and strength through architecture. The new Mine Office was built in the same location as the earlier, wood-frame office on the main road southwest of the main operations. It was built of Portage Entry red sandstone with a slate roof and was in this way distinguished from the vernacular, functional nature of other mine buildings and worker housing. The conscious style and presence of the office, which was completed in 1895-1896, made a statement about the company's corporate identity.[64]

Meanwhile, the company added another production process to its portfolio. Until the 1890s, Quincy had outsourced smelting to other companies, in part because the company did not produce enough rock to justify the expense of building its own facility when other smelters were readily available. In 1898, after investing in new shafts and a new mill, the company decided to build its own smelter. While stamp mills were ubiquitous features on the Keweenaw landscape, smelters remained relatively few: only the firms operating the largest mines, including Calumet & Hecla, the Copper Range mines, and Quincy produced enough copper to justify the cost of building and operating their own smelters. Smelters were located near the largest stamp mills in order to minimize the distance that mineral concentrates had to be transported. Most companies sent their concentrates to the large copper companies or sent them to one of the region's few independent smelters.[65]

The Quincy Smelting Works was constructed on the site of the Pewabic Mining Company's former stamp mill, on the shore of Portage Lake south of Quincy Hill. The facility included a reverberatory furnace (a furnace in which the fuel is not in direct contact with the ore, used to separate the copper from the rock) and a cupola furnace (a cylindrical furnace used to recover copper from the slag, a byproduct of the separation process), both with 75-foot smokestacks, a dock, warehouse, and various support buildings.[66]

The extensive architectural landscape constructed by the Quincy Mining Company has been acknowledged by several authors. In *Buildings of Michigan*, former Michigan State Historic Preservation Officer Kathryn Eckert described the overall district, provided a brief history of the company's activities in the region, and highlighted several individual buildings and structures including the Quincy Mine Office, the hoist house and headframe of Shaft No. 2, and the Quincy Smelter complex. Eckert stated that the smelter is "the only nearly complete historic copper smelter site in the world with in situ reverberatory furnaces and related equipment, offices,

[60] The other extant shaft-rockhouses on the Keweenaw Peninsula are Painesdale, Osceola 13, and Centennial 6. See, "Industrial Landmarks: Shaft-Rockhouses of the Keweenaw Copper Mines," 27, 59, 74; Lankton, "Technological Change at the Quincy Mine," 365, 371; Lankton and Hyde, *Old Reliable,* 68; Hyde, "Economic and An Economic and Business History of the Quincy Mining Company," 169; and Lankton, *Hollowed Ground*, 115.
[61] Lankton and Hyde, *Old Reliable*, 64.
[62] Lankton and Hyde, *Old Reliable,* 54; Hyde, "An Economic and Business History of the Quincy Mining Company," 169, 171; Lankton, "Technological Change at the Quincy Mine," 360.
[63] O'Connell, "Quincy Mining Company: Stamp Mills and Milling Technology, c. 1860-1931," 613; O'Connell, "A History of the Quincy and Torch Lake Rail Road Company," 667-668.
[64] Sarah McNear, "Quincy Mining Company: Housing and Community Services, c. 1860-1931," in HAER No. MI-2, 553, 557.
[65] Lankton, *Cradle to Grave*, 12-13.
[66] Hyde, "An Economic and Business History of the Quincy Mining Company," 172; Lankton and Hyde, *Old Reliable,* 79; Lankton, "Historic Resource Study," 155.

support buildings, and still occupied houses of smelter workers."[67] Eckert also reflected on the architectural character of the Copper Country, noting that it "achieved a special harmony with the land because its architects and builders used, with sensitivity and understanding, the materials of the area – native Jacobsville sandstone, taken from the site or quarried locally at Portage Entry, and poor mine rock discarded from the mines. The architecture that emerged ranged from the strictly vernacular for the workers to the fashionable high styles for the owners and managers."[68] Eckert also discussed the buildings of the Quincy Mining Company in *The Sandstone Architecture of the Lake Superior Region*. Eckert observed that "throughout the region, there are industrial structures of Jacobsville sandstone, some made of squared blocks of stone, but most composed of rubble stone combined with poor mine rock. Mining buildings of all kinds – rock houses, machine shops, blacksmith shops, power houses, stamping mills, foundries – stand vacant and in ruins today, clusters of red and black rock. They were constructed by the engineers and workmen of the mining companies themselves. The company office buildings, libraries, bathhouses, and schools, however, are often of carefully extracted and finished blocks of sandstone after the designs of trained architects and engineers. The Quincy Mine Company Office, designed by Robert C. Walsh of Morristown, New Jersey, where the mining company's home office was located, and built in 1895-97, matches in skill the designs of the region's vigorous and vital churches, banks, and commercial blocks."[69] In *Mine Towns*, architectural historian Alison K. Hoagland observed that with little new development after the mines closed in the 1960s, "the built environment has survived by default, providing a wealth of material evidence" about the Keweenaw Peninsula mining companies' practice of corporate paternalism; the relationship between workers and managers, as well as the relationship between industrial, civic, and commercial landscapes.[70] Historian Sarah Fayen Scarlett most recently has observed that the region's coexistent paternalist company towns, housing locations and nearby city suburban neighborhoods "offer rich opportunities for interpreting social relationships because they developed largely in the same locations."[71]

As the twentieth century opened, the Quincy Mining Company's place in copper production seemed solid. At more than sixty years old, the company continued to pay dividends consistently. Although innovation and expansion demanded considerable investment, the company maintained its reputation for judiciously directing money towards the improvements that would ensure its continued profitability. One such development was mechanized electric tramming (moving ore). Calumet & Hecla had previously tried and failed to mechanize tramming; moving heavily laden tram cars was labor intensive, sometimes requiring two or three trammers (workers who moved ore) per load. In 1901, Quincy was the first Keweenaw mine to introduce underground electric haulage locomotives. The company coupled this with an automatic side-dumping car, developed in Quincy's own shops and patented, which used a pivoting car body to discharge rock into storage bins without manual labor. With these improvements, tramming became much less labor intensive and therefore increased company profits.[72] While important to understanding the application of new technology to support Quincy's hegemony on the peninsula, these advances were not of themselves influential to the mining industry on a national level.

[67] Kathryn Bishop Eckert, *Buildings of Michigan: Revised Edition* (Charlottesville, VA: University of Virginia Press, 2012), 470, 479-482.
[68] Eckert, *Buildings of Michigan*, 470, 479-482.
[69] Kathryn Bishop Eckert, *The Sandstone Architecture of the Lake Superior Region* (Detroit, MI: Wayne State University Press, 2000), 179.
[70] Alison K. Hoagland, *Mine Towns: Buildings for Workers in Michigan's Copper Country* (Minneapolis: University of Minnesota Press, 2010), ix (quotation), xviii.
[71] Sarah Fayen Scarlett, *Company Suburbs: Architecture, Power and the Transformation of Michigan's Mining Frontier* (Knoxville: The University of Tennessee Press, 2021), 13.
[72] Lankton, *Hollowed Ground*, 121-122.

Although Michigan copper no longer dominated the world in terms of proportion of contribution, the company's raw production numbers continued to increase, from 2,802 tons of copper in 1887 to its 1890s peak of 8,462 tons in 1897 (production fell slightly to 7,058 tons in 1900).[73] Quincy, due to its strategic business practices and innovative technology, retained its place as a leader in the national copper mining industry. At the St. Louis World's Fair in 1904, the company was recognized by an international audience, receiving a gold medal for their copper mining exhibit.[74]

The Beginning of the End

While it was not immediately apparent, the first decades of the twentieth century signaled the end of Quincy's success and profitability. The causes were both external and internal. Externally, the copper mining industry was changing. Competition from Western mines, particularly at Globe and Bisbee, Arizona, and Butte, Montana, became stiffer, and the Michigan copper industry could not compete with their lower operating costs. Such costs were supported by a trend towards corporate ownership of the Western copper mines—a necessity for increasingly large-scale, integrated production. Alaska's Kennecott copper mines would mirror and then surpass Quincy's and the Lake Superior copper region's transformation into large-scale, integrated production. Kennecott was the last high-grade source of copper extracted during the early twentieth century (at 79.8 percent copper) and would ultimately gain market dominance. Elsewhere, at the mines of Montana, Arizona, and Utah, copper extraction turned toward lower-grade (generally assayed at about 2 percent copper), porphyry mines with a decreased copper yield per ton of rock. Such undertakings entailed enormous investments in the millions of dollars, and substantially and physically changed the landscape through an open pit mining process first promoted by Daniel C. Jackling in 1907 in Utah. It was a process that would change the way the world mined copper.[75]

Worker demands for better pay and safer working conditions also distracted Quincy managers in the first decades of the twentieth century, despite—or perhaps because of—the management's early paternalistic bent. The hard physical labor, isolation, and lower pay of a mining job could not compete with factory jobs in Detroit, Chicago, and other Midwest cities, or with mining opportunities at other camps such as in Butte, Montana. Workers began leaving Copper Country after 1910 in search of better working conditions and better pay, and they unionized to demand better pay and working conditions, culminating in the rancorous strike of 1913-1914 (see below for discussion), and while Quincy survived the strike, it did not improve the company's labor issues. Internally, the company ran into problems as it delved deeper into the earth; underground collapses began occurring in the early twentieth century and continued for the next several decades, making working conditions more dangerous than before.[76]

Despite the troubling indications, the company continued to rely on the same strategies that had helped it achieve so much success into the early twentieth century. While Quincy did not make major investments in new technology or construction during this period, it did maintain and update its facilities when needed. In 1908 the company acquired another neighboring competitor, the Franklin Mine.[77] An additional 800 acres of land were acquired in 1910, allowing the company to continue exploring north along the Pewabic Lode. A few years later,

[73] Hyde, "An Economic and Business History of the Quincy Mining Company," 158.
[74] Hyde, "An Economic and Business History of the Quincy Mining Company," 185.
[75] Richter, "The Copper-Mining Industry, 1845-1925," 239; Melody Webb Grauman, "Kennecott: Alaskan Origins of a Copper Empire, 1900-1938," *Western Historical Quarterly*, 9, no. 2 (April 1978); Strahn, et al., "Butte-Anaconda Historic District," 101; Christopher Schmitz, "The Rise of Big Business in the World Copper Industry, 1870-1930," *The Economic History Review, New Series,* 39, no. 3 (Aug. 1986).
[76] Lankton and Hyde, *Old Reliable*, 99, 107.
[77] Hyde, "An Economic and Business History of the Quincy Mining Company," 216-218.

the purchase of 440 acres west of the Torch Lake mill ensured the ability to expand those operations.[78] This expansion resulted in a continued rise in copper output during the first decade of the century, peaking at 11,259 tons in 1910.[79]

The company's final significant construction project on Quincy Hill was the No. 2 Hoist House. With miners now working nearly a mile and a half underground, the task of hauling rock to the surface took large amounts of time and fuel. To handle the load, in 1917 Quincy ordered a cross-compound condensing hoist engine from the Nordberg Manufacturing Company to replace the 1894 E. P. Allis engine. This engine was and remains the world's largest steam-driven mine hoist and went into use in 1920. To house the engine, the company built the No. 2 Hoist House; its reinforced concrete floor was considered to be the largest ever poured for such a purpose. In comparison to older company engines, the Nordberg at No. 2 was faster (hoisting skips at about 36 miles an hour) while burning less fuel.[80] The innovative hoist house and engine demonstrated Quincy's intention to continue mining, but the facility would be the last major addition to the Quincy landscape.

World War I was the last period during which Quincy was both profitable and important in terms of national copper production. As it had during the Civil War, the needs of war production created greater demand for copper. While the beginning of hostilities in Europe in 1914 initially prostrated the copper industry, domestic copper production and consumption grew in the following years, along with exports spurred by the increased demand by manufacturers of war supplies in Allied countries. The country saw its maximum production in 1916 when the price of copper jumped from 18 to 33 cents per pound. In 1917 when the United States finally entered the war, copper was deemed "an essential metal... in the manufacture of munitions" and copper mining "an essential industry."[81]

To meet the demand for copper, Quincy continued to improve its holdings and add to its facilities, in particular the Torch Lake stamp mill. The war was profitable for the company. It made its largest gross profit, $2.8 million, in 1916 and paid out its largest dividends in 1916 ($1.76 million) and 1917 ($1.98 million).[82] Yet Quincy and the Calumet & Hecla Company could not match the production of major porphyric copper mines in the West. In 1916, Quincy produced over 21 million pounds of refined copper, topped by Calumet & Hecla at over 71 million pounds. The same year, the Utah Copper Company produced over 187.5 million pounds of copper, Inspiration Consolidated (in Arizona) generated nearly 121 million, and Nevada Consolidated boasted well over 90 million pounds, followed by Chino Copper (in New Mexico) at over 72 million pounds.[83]

Quincy's long record of prosperity ended with the close of the World War I. Following armistice, millions of pounds of copper recycled from the battlefields of Europe were returned to the market. Increased post-war competition from low-cost producers abroad further affected American copper companies.[84] The price of copper plummeted from 25 to 12 cents a pound, and in 1921, smelter output for the United States fell to 253,000 tons, the lowest figure since 1897.[85] The general economic collapse of 1920-1921 affected the United

[78] Hyde, "An Economic and Business History of the Quincy Mining Company," 217-18; 231.
[79] Hyde, "An Economic and Business History of the Quincy Mining Company," 211.
[80] Lankton and Hyde, *Old Reliable*, 115-120.
[81] Richter, "The Copper-Mining Industry in the United States, 1845-1925," 285; Robert B. Pettengill, "The United States Foreign Trade in Copper: 1790-1932," *The American Economic Review,* 25, no. 3 (September 1935), 432-433, http://www.jstor.com/stable/1802527 (accessed July 14, 2020); Strahn, et al., "Butte-Anaconda Historic District," 99, citing *Montana Socialist,* August 1917 and 13 October 1917 in footnote 67.
[82] Strahn, et al., "Butte-Anaconda Historic District," 100.
[83] Butler and Burbank, *The Copper Deposits of Michigan,* 79, 95; Richter, "The Copper-Mining Industry in the United States, 1845-1925," 279.
[84] Pettengill, "The United States Foreign Trade in Copper," 434.
[85] Strahn, et al., "Butte-Anaconda Historic District," 99, citing Richter, 286, in footnote 69.

States and other countries. For fourteen months, the economy struggled with a surge in the labor force, unemployment, wage stagnation, a decline in commodity prices, and a tighter Federal monetary policy.[86] For a time, there ceased to be a copper market, even as former wartime belligerents increased competition with their enormous stock of copper.[87] With the drop of high wartime copper prices, Quincy's reputation as "Old Reliable" for its regular dividends to stockholders also fell. The company paid a dividend in 1920, but after that, it was nearly 30 years before investors received a payment from the company.

Falling profits and the decline of the Michigan copper industry prompted the company to retrench; expansion would not occur until construction of the reclamation plant during World War II. In 1921, a necessary nationwide reduction in smelter output impacted Quincy and all other copper companies. It was the most drastic curtailment in the history of the industry, with nationwide output falling to 253,000 tons.[88] Although Western mines would increase capacity and production in the 1920s, by 1924-1926 Quincy's production dipped to about 7,000 tons, levels that had not been seen since the company's growth period of the 1890s. Beginning in the early 1920s, the company began to close facilities, including its second mill on Torch Lake. Its housing stock, including boardinghouses and mill worker houses, began to fall vacant as workers lost their jobs at the company.[89] Investments concentrated on improvements that promised an immediate return in reducing operating costs; in the meantime, the company mothballed facilities and machinery in case the market improved. Nevertheless, people continued to leave the Keweenaw by the thousands in the 1920s.[90]

While the company remained optimistic until the end, it could not recover from its slow slide, followed by the shock of the Great Depression in 1929 and the further drop in copper prices. Although Quincy held on for longer than many of its competitors in the Keweenaw, the end was nearing. In 1930 production was only 5,470 tons, and the next year, Quincy—at the time still the deepest operating mine in the United States—closed on September 22, 1931.[91] Perhaps hoping that it could reopen at a later date, the company did not abandon its facilities or responsibilities; it retained a few employees to look after the buildings and allowed former employees without incomes to stay in their homes rent-free and chop firewood. Many who could, left.[92]

For a short time, it seemed that the company's optimism might be warranted. When copper prices recovered in the late 1930s, the company reopened the mine on a limited basis in 1937, a condition that continued when the demand for copper increased again during World War II. The company took advantage of a loan from the Metals Reserve Company (MRC), a subsidiary of the federal government's Reconstruction Finance Corporation (a New Deal program) to build a reclamation plant at Torch Lake. The plant processed the waste sands from the lake to recover whatever copper remained in them. Even though part of the proceeds from the plant were used to repay the MRC loan, its operations returned the company to profitability for a time, even allowing for a small dividend to be paid beginning in 1948.[93] The mine closed permanently in 1945; however, reclamation operations continued until 1967, and the smelter facility continued processing scrap until 1971.

[86] J. R. Vernon, "The 1920-21 Deflation: The Role of Aggregate Supply," *Economic Inquiry, Western Economic Association International*, 29, no.3 (July 1991): 572-580.
[87] Richter, "The Copper-Mining Industry in the United States, 1845-1925," 285-286.
[88] Richter, "The Copper-Mining Industry in the United States, 1845-1925," 286; Strahn, et al., "Butte-Anaconda Historic District," 102.
[89] Lankton and Hyde, *Old Reliable*, 132-135.
[90] Lankton, *Cradle to Grave,* 246.
[91] Hyde, "An Economic and Business History of the Quincy Mining Company," 251, 256, 259. Production was much lower in 1928 and 1929 (610 and 2,230 tons, respectively), but this was due to a fire and air blasts that had closed the mine for more than a year.
[92] Hyde, "An Economic and Business History of the Quincy Mining Company," 262-263; Lankton, *Cradle to Grave*, 254; Lankton and Hyde*, Old Reliable*, 142.
[93] Hyde and Lankton, *Old Reliable*, 144.

The Keweenaw Peninsula was the location of the United States' first copper boom. Along with its primary competitor on the peninsula, Calumet & Hecla, the Quincy Mining Company had a direct impact on the growth of the national economy, dominating United States copper production for decades. The Quincy Mining Company has a distinction over Calumet & Hecla in that it was one of the region's earliest mining companies, and it became the first mining company to work (along with the Pewabic mine, which it would subsequently acquire) an amygdaloid lode successfully during the region's copper mining growth period of 1867-1884. While it and other peninsula companies would lose their status as the nation's leaders in copper production by the mid-1880s, Quincy continued to successfully compete with Michigan and Western copper mines during the region's period of copper mining maturity, 1885-1918.[94] In addition to having access to the rich Pewabic Lode, Quincy's long-term success was due to substantial capital investments by its investors, its ability to reduce production costs, and to adopt and adapt technical changes at critical moments.

Significant Themes: Peopling Places (community and neighborhoods) and Developing the American Economy (workers and work culture)

Housing

At the core of Quincy's economic success, and the success of other copper mines on the Keweenaw Peninsula, were its employees, those who came to dig mines, haul materials, break rock, and smelt ore. Given its remote location and lack of infrastructure, particularly in the early years, attracting and retaining workers required the company to offer housing and other services. While the corporate paternalism that evolved was not unusual for the period, it was an integral component of Quincy's success, and was physically expressed on the landscape in a manner that directly supported Quincy's goals.

Quincy needed an ever-expanding workforce in the nineteenth century to enable its growth and expansion. A small number of people with mining experience were living in the Keweenaw in the 1840s; transportation into, out of, and around the peninsula was difficult for the new settlers, and the climate was harsh. Like other mining operations on the peninsula, most of Quincy's workforce was drawn from successive waves of immigrants, some who had experience working in European mines, and others who were merely looking for work to support themselves and their families. Not surprisingly, a number of early immigrants were from Cornwall, England, another copper mining region. Many of these immigrants brought their knowledge of Cornish mining practices and technology to the Keweenaw, and the company actively recruited them as skilled contract labor. Half the Quincy workforce in the 1860s was Cornish, the employees heavily concentrated in underground labor and mining. Other early immigrants came from Ireland, Germany, and French Canada. Occupations and location of work did not follow clear ethnic lines at this time, although less skilled jobs tended to be held by the Irish and Germans. The former were proportionately more involved in mining and underground labor while a large number of Germans worked at the stamp mill. Mid-level managers tended to be from Germany, England (including Cornwall), Scotland, Ireland, and Canada. By 1885, the Quincy workforce had not significantly changed in terms of overall organization or ethnic composition. One change in Quincy records was the identification of trammer as a specific position, which employed a large number of Irish and Finns.[95]

By the later decades of the nineteenth century, fewer skilled immigrants were available and the company recruited generally unskilled laborers from Finland and Italy who did not have a mining background. These groups, along with Poles, Swedes, Norwegians, and "Austrians" (Eastern European immigrants from the

[94] Gates, *Michigan Copper and Boston Dollars*; Butler and Burbank, *The Copper Deposits of Michigan*, 63.
[95] Hyde, "An Economic and Business History of the Quincy Mining Company," 81-83, 128-131.

Austro-Hungarian Empire, including Croatians and Slovenians), began to appear in sizeable numbers throughout the copper mining district by the mid-1880s. By 1910, Finns were the most numerous ethnic group in the region. These workers tended to be less literate than earlier migrants and usually took the least desirable, most demanding, and most poorly paid jobs at the mines—trammers, underground laborers and general surface laborers. Both Quincy and Calumet & Hecla carefully documented this distinction, as they identified their workers by ethnicity on their employment records.[96] Extensive digital resources regarding additional demographics and ethnicity in the Keweenaw copper mining region are available on the National Park Service's Keweenaw National Historical Park website.[97] The existence of large groups of ethnic immigrants and the job hierarchies that formed along ethnic lines would eventually contribute to the labor unrest of the early twentieth century.[98]

When the Quincy Mining Company was founded in the 1840s, workers could rent privately owned homes or rooms in boarding houses in what would become the city of Hancock, but its small size and distance from the mine made the provision of worker housing at the mine a necessity. As Lankton has observed, the development of housing by Quincy and other early copper mining companies on the peninsula created a "mental template" of what a mine location should include, beyond areas allocated for industrial use:

> A mine location was primarily a place to reside and work in, and only marginally a place of commerce. The industry did not call its settlements *company towns* or *villages*. They were unincorporated *locations*. Companies did not build complete towns, nor did they want to. The typical mine location perhaps had a store or two, but no main street, no downtown…Mining companies understood that first and foremost they were in the mining business. They recognized the need for support services –but they did not want to tend to every human need.[99]

Ultimately, building neighborhoods of company housing became a cost of doing business for all Keweenaw mining companies. To facilitate mining operations, housing was placed near mineshafts. In order to attract married men (believed to be less prone to social agitation), companies built more single-family dwellings than boarding houses. Other services considered necessary for the companies to provide or support included hospitals, doctors, sometimes a general store, a church and school, and agricultural or pasture land. Over time, this paternalistic managerial approach became more inclusive, broadly affecting the lives of employees and their families.[100]

Quincy began building quarters as early as the mid-1850s; these included several houses for the mine administrators, four boardinghouses, and twenty-seven log houses. Over the next several years, sixteen more log houses were completed on Quincy Hill.[101] In the early 1860s, more than 100 wood frame houses were constructed, adding further to the sense that a distinct mining community was forming. The value of the dwellings varied from about $150 for small log houses to more than $1000 for elaborate mine officials'

[96] Keweenaw National Historical Park, *Final General Management Plan and Environmental Impact Statement* (US Department of the Interior, National Park Service, 1998), 142; Hyde, "An Economic and Business History of the Quincy Mine," 131, 200, 202; Lankton, *Cradle to Grave*, 22, 122; MTU Archives and Copper Country Historical Collection, "An Interior Ellis Island, Immigrants and Ethnicity in Michigan's Copper Country," https://ethnicity.lib.mtu.edu/intro.html, accessed January 2, 2024.
[97] National Park Service, "Digital Historical Resources [Keweenaw National Historical Park]," https://www.nps.gov/kewe/learn/digital-historical-resources.htm (accessed April 14, 2023).
[98] Lankton, *Cradle to Grave*, 212-213; Alison K. Hoagland, *Mine Towns: Building for Workers in Michigan's Copper Country* (Minneapolis, MN: University of Minnesota Press, 2010), xviii.
[99] Lankton, *Hollowed Ground*, 41-50. Emphasis is original.
[100] Lankton, *Hollowed Ground,* 43.
[101] Hyde, "An Economic and Business History of the Quincy Mining Company," 42; McNear, "Quincy Mining Company: Housing and Community Services, c. 1860-1931," 518.

residences. Workers of equal occupation or status tended to live in housing of comparable quality. Historian Sarah Scarlett suggests that Quincy more obviously and overtly used domestic architecture as a means of establishing employee hierarchy than did Calumet & Hecla or other copper mining companies on the peninsula.[102] Quincy also established a company-operated farm in the early 1860s to supplement food shipped north from downstate with fresh grains, vegetables, and fruits. Company-owned houses also typically had a large enough yard for residents to maintain their own private gardens or keep livestock.[103]

Quincy's management preferred to hire men with families, believing that such workers would be more reliable and willing to put down roots in the community. Therefore, company-built housing was biased toward single-family dwellings and duplexes rather than boarding houses. For upper management, additional perks included rent-free housing, something not extended to the common laborer. While Lankton has noted that the Lake Superior copper mines' housing costs may have been the lowest of any major metal mining district in the country, the companies never guaranteed housing to all workers who wanted it. As a result, competition for company housing was high—a situation preferred by the mining companies, as housing would then be considered an earned privilege. Such benefits would not extend to those who were the focus of cultural discrimination, and who were employed in the worst underground jobs; for them, housing was wherever they could find it.[104]

As the Quincy Mine established profitability in the 1860s and began to regularize and expand its operations, it began to pay attention to the layout and quality of its housing for workers and their families. Early housing was basic and haphazardly placed, and often located at a distance from the mine site, not unusual given the uncertainty of knowing where the most profitable veins would prove to be. Once it consolidated operations above the Pewabic Lode, the company began laying out housing locations in nearby areas. A number of company housing locations were built on the uphill (west) side of the road aligned along the former military road (the future US-41). There were many reasons for this placement. The mineshafts angled down into the west side of the lode, meaning that heavy uses could not be placed on the surface above the shaft collars and upper mine levels. Hoisting took place from the east to pull loads up the shafts running to the west and to make the most efficient use of gravity in moving the rock toward the calcining/milling operations and waste disposal; locating housing to the west and uphill kept this use away from the primary industrial operations.

As these locations were seen as permanent housing, the company took more care in laying out neighborhoods in an organized manner with streets placed on a rectilinear grid and uniform lot sizes. Houses were built in a few common forms, including the saltbox (a rectangular plan two-story with a one-story addition incorporated under a sloping gable at the rear of the house) and the T-plan (also a rectangular plan two-story, but with the addition set perpendicular to the house with a separate gable roof).[105] Other early neighborhoods west of the county road included Hardscrabble and Limerick, laid out in 1864, and Swedetown, which was considerably farther west. As implied by its name, Swedetown was built for the community of Scandinavian immigrants recruited to work at Quincy during a labor shortage during the Civil War. It was not unusual for worker housing to be informally or formally segregated by ethnic group. Historian Sarah Scarlett observes that Quincy intended such segregation when creating locations as a means of building community among workers and limiting opportunities to organize. Housing segregation also separated ethnic groups who were traditionally antagonistic, such as the Irish (Limerick location) and Cornish (Hardscrabble location).[106] Swedetown, which

[102] Hyde, "An Economic and Business History of the Quincy Mining Company," 43-44; Scarlett, *Company Suburbs*, 191.
[103] Lankton, "Historic Resource Study," 65; Lankton, *Cradle to Grave*, 151-152, 163; McNear, "Quincy Mining Company: Housing and Community Services, c. 1860-1931," 560. The exact location and dates of the farm are unclear, but it was thought to be located north of French Town.
[104] Lankton, *Cradle to Grave*, 152-157, 162.
[105] Hoagland, *Mine Towns*, 7-8.
[106] Scarlett, *Company Suburbs,* 36.

proved to be too far from the mine, offered substandard log cabins, and was abandoned in the 1870s.[107] In addition to more thoughtful placement and layout of the neighborhoods, the quality of the homes generally improved during this period as well, with the log/chinked houses of the 1850s giving way to T-plan wood-framed houses with foundations constructed of poor rock from the mining operations.

Quincy practiced a somewhat varied strategy in providing worker housing. While the company often built its own houses, they could not keep up with demand, and also leased lots on company land to workers to build their own homes. One of the earliest such communities was Shantytown, located on the hill halfway between the mine and the nearby town of Hancock.[108] Sing-Sing, established in 1875, also contained privately built homes on company-leased property. Such arrangements have been described as "the ultimate expression of a strong bond between employee and employers, and of a worker's dependency and loyalty," as the employee's housing investment was dependent upon the mining company's success.[109] However, both ground leases and building leases also reflect the complexities and tensions in worker-management relationships.

In instances where mining companies leased land or buildings to workers, they continued to exert economic and social control over their employees. For example, restrictive leases issued by Calumet & Hecla stipulated that a lessee could not transfer the lease or sublet the house without company approval. Further, new sublessees were required to be company employees; lessees could not sell alcohol; and tenants had to vacate the house within fifteen days of quitting or being dismissed from the company. The company could also terminate a lease within fifteen days' notice for any reason.[110] The Quincy Mining Company based its ground leases on those of Calumet & Hecla, which were even more draconian than their building leases. Ground leases ran for only five years, and were renewable, but such renewal was not guaranteed. The company could continue to mine within 15 feet of the house and could undertake open excavation or other development as it deemed necessary for mining operations. Company approval was required for owner sale of the house or transfer of the ground lease. The owner paid taxes on both the house and the land. If any of the stipulations were not met, the lease was void, and the company could repossess the land and house, although the owner could either pick up the house and move it to another location or sell it to a company-approved buyer. Failure to do either meant that the improvements became the property of Calumet & Hecla. Other mining company ground leases were similarly stringent.[111]

As the Quincy Mining Company grew, it could not accommodate housing demands for the entire district with these two approaches. The company owned a great deal of land in the region, including much of the land on which the city of Hancock now sits. While plats such as the Quincy Addition (now East Hancock), Lake Shore Addition in West Hancock, and two Hillside additions were nominally Quincy properties when they were platted, they were developed as a real estate speculation. After platting the land, the lots were sold and privately developed. While Quincy workers sometimes occupied these houses, either by purchasing them or renting from landlords, they were not worker housing that was owned or leased by the company.[112]

Housing was not the only development undertaken by the company during these decades. In addition to its farm, Quincy built a store in 1863 and a school in 1867. Neither the farm nor the store lasted long as other company-run enterprises, as they were soon taken over by private individuals.

[107] McNear, "Quincy Mining Company: Housing and Community Services, c. 1860-1931," 519; Lankton, *Hollowed Ground*, 58.
[108] McNear, "Quincy Mining Company: Housing and Community Services, c. 1860-1931," 515; Lankton and Hyde, *Old Reliable*, 35.
[109] Lankton, *Cradle to Grave*, 158.
[110] Lankton, *Cradle to Grave*, 159.
[111] Lankton, *Cradle to Grave*, 159; Hoagland, *Mine Towns*, 107-109.
[112] Hoagland, *Mine Towns,* 94-99.

By the 1870s, the expansion of the town of Hancock provided more housing opportunities for mine workers, and the only significant addition to company housing was the Frenchtown Housing Location, which included six double log houses (duplexes).[113] In addition, the opening of the stamp mill in the 1880s led to the establishment of two housing locations in the area: Bunker Hill to the north of the mill, comprising six frame houses for mill management, and Mason, a group of forty-eight single-family dwellings plus a boarding house closer to the mill site. A school was also constructed at Mason for local children.[114]

Quincy's acquisition of mining companies such as Pewabic also added to its company-operated housing stock, including the communities of Newtown and Lower Pewabic on the east side of the lode and the Pewabic Housing Location on the west side. By 1898 the company managed a number of distinctive housing locations for its workers, comprising more than 300 homes.[115] While most of Quincy's workers lived in company-owned or leased housing, or in nearby Hancock, at least one independent community developed near the mine. This was officially the Village of Pewabic but is and was more commonly known as Coburntown, named for the original platter of the land. When Quincy purchased the adjacent Pewabic-owned housing, Coburntown remained independent. This status led to Coburntown being known as a "safe haven" for employees to speak freely outside company property. The independent village could also host saloons that were typically not welcome on company property.[116]

Within the greater copper mining district, the quality of housing and maintenance depended upon the success of the company involved. Profitable companies were more apt to respond to worker housing needs, fixing roofs, windows, and chimneys. But as worker housing was considered a necessary but unprofitable cost of doing business, the companies expended as little as possible on maintenance, and provided improvements only to the housing of upper management. Workers interested in installing modern conveniences such as indoor plumbing, electricity, or steam heat, or even porches or closets had to bear the cost of improvements themselves.[117]

Company housing continued to be an important part of Quincy's operations into the early years of the twentieth century. Homes were added to Mason and Lower Pewabic in 1899 and, after the company began operations at the abandoned Mesnard mine, twelve more homes in the saltbox form were built there.[118] By 1904, over 12,000 people were living in the areas encompassing Quincy and Franklin Townships and the village of Hancock.[119] In 1908 the company added the housing locations of Backstreet and Franklin on Quincy Hill when it acquired the Franklin Mining Company.

For the thousands of people who had found employment with Quincy or other copper companies on the peninsula by the turn of the twentieth century, discriminatory hiring and housing practices impacted the quality of life for certain foreign-born workers and their families. A survey undertaken in 1909-1910 found that of nearly 500 people living north of Portage Lake, about one-third owned their houses while the others rented. The average family house had 4.6 rooms; however, the ethnic groups that held the most unskilled mining positions (Finns, Croatians, Italians, Hungarians and Slovenians), lived in houses with fewer rooms. The ethnic groups that tended to hold skilled, above ground jobs (Cornish, French Canadians, Irish, Norwegians, Swedes

[113] McNear, "Quincy Mining Company: Housing and Community Services, c. 1860-1931," 522.
[114] McNear, "Quincy Mining Company: Housing and Community Services, c. 1860-1931," 547-548, 607; Lankton and Hyde, *Old Reliable,* 85.
[115] McNear, "Quincy Mining Company: Housing and Community Services, c. 1860-1931," 522-526.
[116] Rachael Herzberg, "East Quincy," National Register of Historic Places Registration Form (draft, 2004).
[117] Lankton, *Cradle to Grave*, 158; Hyde, "An Economic and Business History of the Quincy Mining Company," 190.
[118] McNear, "Quincy Mining Company: Housing and Community Services, c. 1860-1931," 525; Lankton and Hyde, *Old Reliable*, 85; Lankton, "Technological Change at the Quincy Mine," 360.
[119] Michigan's 1904 state census, cited in Lankton and Hyde, *Old Reliable*, 92.

and Poles) lived in houses with more rooms. Lankton points out that larger houses meant more convenience, more privacy, and an associated greater potential to avoid contagious diseases.[120]

The provision of company housing is typically (and accurately) considered a form of corporate paternalism that companies used to attract and control workers and to discourage strikes. However, the workers in the copper industry on the Keweenaw Peninsula "used the same buildings for their own ends."[121] Quincy provided a variety of housing options for workers, from company-owned boardinghouses and homes to leased land, and its release of land to privately owned development offered additional options. Company workers made rational choices among these options based on their personal situations, whether that meant a single worker renting a room in a boardinghouse because it was cheap and convenient, or a family choosing to live in a privately owned house because it gave them a greater degree of freedom and financial security. The worker's ability to sublet a house or a room generated needed income. The boarders, whether family members or fellow countrymen, strengthened social connections and confirmed a cultural or neighborhood support network. These connections and networks were primarily established by adult women residents, and became the basis of the area's women's organizations. For the women, housing also served as a place of work with remunerative value, and a point of production over which she held autonomy. Additional household income could be generated from boarders, gardening, taking in washing or sewing, or undertaking other such business ventures. As described by historian Shannon Kirkwood, these aspects of worker agency would carry into the worker strike of 1913-1914:

> The experiences of domestic labor and neighborly solidarity, along with prolonged exposure to socialism through their husbands' union activity and local, labor-owned newspapers, led the women of the Copper Country to develop a class consciousness based on their domestic existence and an understanding that the home was the center of working-class life. When the strike broke out, women involved themselves not because they were dedicated unionists, but because they wanted to preserve and protect their homes and their community.[122]

As described by architectural historian Alison K. Hoagland, corporate paternalism as practiced through company housing at Quincy and other nearby mining companies was "a two-way street," in which both management and workers developed strategies to best serve their own interests. Scarlett describes workers housing more specifically as playing a major role in residents' negotiations of identity and social power.[123]

Workers and Work Culture

While Quincy's brand of corporate paternalism, particularly its offer of worker-owned housing and other community amenities, seemed relatively benign, labor relations between workers and the company were not always cordial. Laborers at Quincy undertook short-lived strikes in the 1890s and the early twentieth century, including a three-week strike in 1906.[124] However, labor relations in the Copper Country were relatively calm until a major strike erupted in 1913-1914. The causes were complex, but behind it all was the decreasing profitability of mining and mine work. With copper prices and profitability both falling, the Keweenaw's mining companies worked to lower production costs and increase efficiency, and changed the manner in which

[120] Lankton, *Cradle to Grave*, 156.
[121] Hoagland, *Mine Towns*, xviii, 72-74.
[122] Shannon R. Kirkwood, *Mobilizing the Home: The Politics of Female Space, Women's Working Class Consciousness, and the Labor Movement in the U.S. and Britain, 1912-1922*, (PhD diss., Central Michigan University, 2019), 46. See also Shannon Kirkwood, "2016 Graduate Student Essay Prize Winner: In Defense of the Home: Working Class Domesticity and Community Action in the Michigan Copper Country," *Michigan Historical Review* 43, no.1 (Spring 2017).
[123] Hoagland, *Mine Towns*, xvi (quotation), xvi-xxiv; Scarlett, *Company Suburbs*, 37.
[124] Lankton, *Hollowed Ground,* 15.

miners were employed; this often meant fewer workers doing more labor. In turn, workers were concerned that mechanization would cost them jobs.

In the early decades of copper exploration and mining, Quincy and other mining companies followed an employment system adopted from Cornish tradition. This contract system tied earnings to level of effort. As described by historian Larry Lankton, mining teams would bid against each other on fixed-rate, performance-based contracts offered by the companies. They did not work for a mining company boss, and chose areas of the mines in which to work. The system enabled skilled workers (generally Cornishmen already familiar with the tradition) to be "miner entrepreneurs" who exercised some control over their income and labor and secured higher paying contracts. About every sixth underground worker was a contractor. To avoid paying what they considered excessive amounts, however, the companies offered contracts of short duration, and mine captains adjusted contract rates when possible. With an average earnings amount in mind, companies paid these contract workers essentially earned the same as straight wages. The companies also charged certain costs of equipment and materials to the contract miners. Mining companies found the system useful when the production from any one shaft was limited or intermittent, and before the use of heavy machinery became the norm. When labor was scarce, as during the Civil War, the contract system worked to miners' advantage. During that time, some men left the district, but high copper prices due to demand encouraged speculation into new mines. This pulled experienced miners from established mines and productivity fell. Quincy attempted with limited success to import workers from Europe, particularly Norway and Sweden. By the early 1850s the average monthly rate for miners in Copper Country was about $34 per month, and $26 to $28 for unskilled surface laborers. During the peak of Civil War inflation in 1864, monthly rates for miners could be $65 per month, with surface workers earning as much as $55. At Quincy contract miners averaged over $57 per month in 1865. Comparatively, the underground laborers and non-contract miners, who constituted 5 to 10 percent of miners employed, averaged about $34 per month. Highly skilled laborers that were not managers ranged earned from $50 to $60 per month. In most cases, supervisors made about fifty percent more than the highest paid worker they were supervising. With few exceptions, upper-level managers earning above $100 per month also received rent-free housing, free cordwood, horses, and other perquisites.[125]

By the late nineteenth century, mining operations had evolved due to technological advances and efficiencies in engineering, and companies applied a more rigorous system of cost accounting. In the early years of exploratory mining, Quincy and other mining companies used contracts for a number of jobs, not just for mining. With a shift in technology and profitability, the use of contracts diminished, resulting in a division between the former contract miners and the unskilled employees. Those who had been contract miners enjoyed a superior status, while the latter – which included trammers, timbermen and other underground laborers – were considered inferior. With the shift to straight wages, overall, management treated miners with less respect, and in effect all miners became wage-earning laborers. The workforce was also reduced to half its size between 1865 and 1885 although the mix of jobs and skills was roughly the same. With regard to pay, by the second half of the nineteenth century contract miners at Quincy earned ten to twenty percent more than trammers. Regionally, monthly wages paid in 1905 were about 50% higher than in 1885 for all major categories of work. The average monthly wage for contract miners at Quincy, for example, rose from nearly $44 in 1877 to almost $49 in 1882, and to over $52 in 1897. Underground unskilled laborers earned an average of $31 per month in 1885; other underground wage-earning miners roughly $41 per month; trammers received about $38. Drill operators could earn between $27 to $44 per month. By 1905 Quincy no longer identified contract miners as a distinct wage group while the range of specialized jobs had greatly increased. At the bottom of the earning scale for underground labor, drill boys averaged $27 per month while laborers earned about $51 per month. "Landers and

[125] Lankton, *Cradle to Grave*, 66-69; Lankton, *Hollowed Ground,* 59-62; Gates, *Michigan Copper and Boston Dollars*, 98, 108; "Hyde, "An Economic and Business History of the Quincy Mining Company," 46-47, 63, 77-83.

trammers" received $60; timbermen could expect $55; and Rand drill contractors $65. Mid-level employees who enjoyed a greater and more stable income than their underground colleagues did not escape the scrutiny of a company considering multiple avenues to reduce expenses and increase profits. This included a proposal to employ Quincy managers under the rank of "Captain" by the month rather than the traditional year, thus allowing for dismissal without the customary two months' notice.[126]

As noted previously, as mining companies expanded operations, technology and profitability, the size and ethnic composition of the workforce changed significantly in the late nineteenth century. Between 1890 and 1910 the population of Houghton County grew from 38,000 to 88,000. The area's influx of new immigrants were largely from eastern and southern Europe, who arrived with little or no previous mining experience. By the early twentieth century, ethnic Finns, both foreign- and American-born, comprised a large percentage of the Copper Country workforce. At Quincy, Finns may have made up nearly half the workers hired between 1890-1909, the Italians another fifth. By 1910 Calumet & Hecla's largest ethnic group were identified as "Austrian," followed in descending order by Italian, Cornish and Finnish. Because they were a large and relatively cohesive group, the Finns were more likely to speak their native language and retain their native customs, rather than "Americanizing" as some other immigrants had. Many Finns, especially those arriving in the 1890s and the early twentieth century, brought an interest in socialism and unionism, hardly likely to endear them to company management. Finns and other ethnic groups, such as Croatians and southern Italians, often experienced overt discrimination in the Keweenaw mines, and were assigned the most arduous and least remunerative positions. Coupled with labor hierarchies that tended to follow ethnic lines, this discrimination contributed to labor tension in the years leading up to the strike.[127]

The first attempts to unionize on the Keweenaw Peninsula occurred in the 1870s when the International Workingmen's Association organized in the region, and the Knights of Labor (KoL) arrived on the Keweenaw in the 1880s. But despite the nation-wide financial panic of 1873 and a reduction of wages at Quincy, the company's workers did not engage in significant strikes or other labor actions before 1890. Notable strikes in 1872 and 1874 at Calumet & Hecla and Portage Lake awarded miners higher wages and a reduction in the work day, but thereafter union and KoL members were not welcome at the company. Then, between 1890 and 1906, there were at least seven distinct strikes, most associated specifically with Quincy rather than instances of district-wide unrest. Yet during this Progressive Era, unions blossomed. Between 1902 and 1903 alone, the number of unions in Copper Country grew from zero to eleven; most were craft organizations, small collections of laborers focused on a single craft or occupation and who communicated using publications produced by their national unions.[128]

That mine workers called for relatively few substantial strikes on the Keweenaw may have been connected to mining company efforts to secure worker loyalty. But options such as housing and medical assistance did not extend equally to all, and only Calumet & Hecla created a benefit society (1877) and matched contributions paid in by its employees. In 1904 Calumet & Hecla was also the first—and for many years—the only company

[126] Lankton, *Cradle to Grave*, 59, 69-70; Hyde, "An Economic and Business History of the Quincy Mining Company," 123, 129, 164, 190, 196); Athur W. Thurner "Western Federation of Miners in Two Copper Camps: The Impact of the Michigan Copper Miners' Strike on Butte's Local No. 1," *Montana Magazine of Western History* 33, no. 2 (Spring, 1983), 38
[127] Lankton, *Cradle to Grave*, 68, 112, 211-213; Hyde, "An Economic and Business History of the Quincy Mining Company," 200; Gary Kaunonen, *Challenge Accepted, A Finnish Immigrant Response to Industrial America in Michigan's Copper Country*, (East Lansing, MI: Michigan State University Press, 2010), 1-7; Gary Kaunonen and Aaron Goings, *Community in Conflict: A Working-Class History of the 1913-1914 Michigan Copper Strike and the Italian Hall Tragedy* (Michigan State University Press, 2013), 47-51.
[128] Lankton, *Hollowed Ground*,73, 191; Hyde, "An Economic and Business History of the Quincy Mining Company," 123 109, 110, 202; Kaunonen and Goings, *Community in Conflict*, 27-29, 94-97.

to establish a pension plan, albeit with specific service criteria. Other mining companies undertook ad hoc measures.[129]

The increasing number of strikes at the turn of the century speaks both to the failure of the companies' paternalistic management philosophy, and to the strength of workers' community organizations. Historian Larry Lankton has identified the various ways that workers supported themselves, their families and their communities. Independent foreign-language papers published by Swedes, Italians, Croatians, Slovenians and Finns early in the twentieth century provided news free of company influence. The communities of Hancock and Red Jacket offered "pockets of independence and anti-company sentiment" where socialists or union men could share information and increase memberships. Author Gary Kaunonen described Hancock in particular as a "proletarian nexus" for the Finnish socialist-labor movement. Finnish Halls became the location where ideological and political discussions were carried out, on topics from temperance to socialism. Elsewhere, churches offered connection to Old World traditions, and virtually every ethnic group established clubs, and mutual aid and fraternal or benefit societies. Several immigrant groups formed cooperative stores, or cooperative insurance organizations. Annual May Day or Labor Day celebrations encouraged public displays of working-class community and solidarity. The installation of the streetcar system facilitated movement between communities, which allowed mine workers both greater options for seeking higher wages at other area mines, and to engage in union activities across the peninsula. Workers or the unemployed could also leave the area for work elsewhere, such as in Detroit with the burgeoning auto industry, or other mining communities such as Butte, Montana. [130]

Mining companies were also willing to collaborate in opposition to their employees. As early as 1865, mining companies met to discuss a reduction in wages, which over the course of the Civil War had risen in response to labor shortages. While there is no record of the meeting's outcome, wage rates did fall. In 1869 Quincy and nine other Houghton County mines established the Houghton County Mine Agents Union. The mines intended to create a common front against employees and allow mine owners more leverage in reducing wages or resisting demands for increases. Members agreed to inform each other of a pending strike.[131] When mine laborers increasingly agitated for improvements in wages and safety in the early twentieth century, mine leaders again collaborated. About a year after the Western Federation of Miners (WFM) initiated an organizational drive at the mines Calumet & Hecla for the first time shared employment and wage information with other companies, and consulted with them about altering existing wage rates.[132]

One area over which miners and laborers had limited control was the inherent danger in underground work, where life-threatening hazards abounded. In the dark, rough, narrow spaces, potential death or permanent injury could come from nitroglycerine-based explosives, falling rock, or a tumble off a ladder or down open shafts or stopes. Tramcars could crush a person. Fires could immolate or suffocate. Sanitary conditions were crude at best. Temperatures in the deepest mines could reach over 80 degrees, with inadequate ventilation. As a result, as mines on the Keweenaw grew and profits increased, so did the number of deaths. Twelve men died underground in the 1850s; in the 1860s, 54 died. In the 1870s 106 workers were killed, the number nearly doubling to 195 in the 1880s and increasing to 284 fatalities in the 1890s. In the first decade of the twentieth century, 511 men died. Historian Larry Lankton has noted that in terms of fatalities per 1,000 men employed, by the turn of the twentieth century, Michigan mines were somewhat better than the national average; almost five

[129] Lankton, *Cradle to Grave*, 190, 194.
[130] Lankton, *Cradle to Grave*, 188, 214, 216; Lankton, *Hollowed Ground*, 187-188, 239; Kaunonen, *Challenge Accepted,* 17-44, 62; Kaunonen and Goings, *Community in Conflict*, 33-34, 38-40, 56-57, 121-124.
[131] Gates, *Michigan Copper and Boston Dollars*, 100-101; Hyde, "An Economic and Business History of the Quincy Mining Company," 51.
[132] Lankton, *Cradle to Grave*, 205.

men per thousand died in Copper Country's underground mines. However, the statistic for those with less-than-fatal injuries was worse than average, as over half of all reported serious and minor injuries in the U.S. copper industry occurred in the Keweenaw Peninsula mines. The dangers of working in the mines that these statistics reflect would have bearing on the most serious strike on the Keweenaw, in 1913-1914.[133]

While there were numerous reasons for the 1913-1914 strike, the introduction of the one-man hammer drill was the most immediate trigger. Prior to this time, Quincy had employed two-man piston drills. The hammer drill was smaller and could be used in smaller spaces, and was also more powerful, so it could match the output of the larger piston drills. It could also, as implied by its name, be operated by one man instead of two. By introducing the drill, the company could increase productivity and significantly decrease its labor costs. Miners (who operated the drills), on the other hand, believed that working alone on a heavy drill, even at the reduced weight of the new drill, was more dangerous than working as a two-man team. Certainly, the number of deaths had increased dramatically in the Keweenaw after the turn of the twentieth century, commensurate with the maturity of copper mining: an average of nearly 61 deaths per week occurred between 1905 and 1911. It was the threat to their livelihoods, however, that caused the greatest anxiety to the workers. In this, they were joined by the trammers, who both feared competition from demoted miners and also saw their opportunity for advancement to drilling, which paid more, evaporate. This unity between miners and trammers was a new development that contributed to the length and intensity of the 1913-1914 strike.[134]

1913-1914 Strike

Set within the greater national context of labor history, the 1913-1914 strike reflects a larger and analogous reaction to the impacts of industrialization on workers and the workforce, that encompassed coal and hard-rock mining, stone quarrying, oil and gas exploration, and logging. The biggest factor was the steam engine and associated mechanization. In some instances, new technology alleviated physical burdens that exhausted or disabled laborers. In others, technological advances caused bottlenecks that intensified work. Industrialization also tended towards increases in occupational risk. Powerful, unfamiliar tools often harmed workers, while an associated increase in scale of operations meant greater hazards. Few legally mandated safety measures were in place, and company towns exercised a feudalistic control over worker's lives. In other instances, employment insecurities and social inequalities contributed to worker unease.

The creation of workers' unions as a means to organize for self-protection from company owners began in the mid-nineteenth century and gained momentum through the following decades. As described in the *Labor History in the United States* theme study, coal workers first organized in Pennsylvania in 1849 in opposition to low pay and high prices at the company store. The first hardrock union emerged in the silver mines of the Comstock Lode of Nevada in 1863. The copper miners' organization in Butte, Montana, founded in 1878, grew into a formidable stronghold. By the turn of the century, this union had more than 6,000 members, making it the largest local union in the United States. Unions bargained with company owners over economic issues as well as health and safety concerns. Strikes became a common tactic used by unions when companies refused to accommodate workers' demands or to allow national (and regional) unions into their industries. Strikes became an almost ubiquitous feature in two key extractive industries: mining and timber. From the late nineteenth century through the early twentieth century, strikes broke out in almost every region that these industries dominated. Many of the significant strikes in the extractive industries occurred during World War I, when

[133] Lankton, *Cradle to Grave,* 110-112; 125; Kaunonen, *Challenge Accepted,* 116; Kaunonen and Gary, *Community in Conflict*, 81-85.
[134] Lankton, *Cradle to Grave*, 104-107, 111, 221.

workers sought to use the wartime demand for raw materials to push for labor reforms, while mine operators used that same demand to speed up production and thwart unionization.[135]

While the specific issues associated with, or the outcomes of, the 1913-1914 labor strike in Michigan's Copper Country do not rise to the level of national significance, the strike is reflective of the outcome from changes in production and management by the Quincy Mining Company and other Michigan copper mining companies, and it was one important contributor to the downfall of the Western Federation of Miners (WFM). As such, it merits inclusion as part of the Quincy Mining Company story. The WFM, a union created by Western metal mine workers in 1893, was involved in violent strikes at Cripple Creek and Leadville, Colorado, in 1894 and 1896, and again in Coeur d'Alene, Idaho, in 1899. The union gained a reputation for a willingness for violence. But as quickly as it grew, the power of the WFM would be diminished in the next few years, particularly following the outcome of the 1903-1905 Colorado City Smelter Strike and the unsuccessful 1909 Homestake Mining Strike. Supporting the 1913-1914 Keweenaw Peninsula strike would exhaust most of the union's resources.[136]

Prior to the strike, the WFM had only had moderate success in unionizing the miners of Quincy. The union capitalized on the introduction of the one-man drill and signed up thousands of miners and trammers. Historian Gary Kaunonen observes that WFM's success in gaining membership in Copper Country was a strategy to enlist multi-ethnic organizers, to cut across ethnic divisions and crease a sense of solidarity.[137] Like their brethren across the country, WFM local union workers sought increased wages and an eight-hour work day and opposed the one-man drill that was being introduced to area mines. In the summer of 1913, the local leadership of the WFM called out their workers and shut down the mines of the Keweenaw Peninsula, including both Quincy and Calumet & Hecla. Standing in solidarity with mine workers were women who provided support, and leadership during picket duty, meetings, and parades. Some were involved through WFM-established auxiliary locals specifically for women in the Copper Country.[138] The state sent in the National Guard, who set up tent encampments at both Quincy and Calumet, and the mines were soon able to reopen on a limited basis with a combination of scab labor and WFM defectors. The bitter struggle continued into the fall and winter. During the strike, national labor leaders such as Mary Harris "Mother" Jones, a co-founder of the Industrial Workers of the World (IWW), and John L. Lewis, a co-founder of the Congress of Industrial Organizations (CIO) and later president of the United Mine Workers, visited the Keweenaw and encouraged the strikers. In September 1913, prominent US labor attorney Clarence Darrow, who would later become famous for his participation in the Leopold and Loeb and Scopes trials, attempted (but failed) to initiate arbitration with Michigan's governor.[139] Later that fall, a Citizens' Alliance organization was formed, which purported to be a grassroots movement to counter the so-called violence of the strikers, but was really a propaganda machine created and funded by the companies.[140]

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[135] Rachel Donaldson, *Labor History in the United States: A National Historic Landmarks Theme Study* (Washington, DC: National Historic Landmarks Program, National Park Service, 2022), 72-101.
[136] Eric L. Clements, "Pragmatic Revolutionaries?: Tactics, Ideologies and the Western Federation of Miners in the Progressive Era," *Western Historical Quarterly*, 40, no. 4 (Winter 2009).
[137] Kaunonen*, Challenge Accepted*, 115; Kaunonen and Goings, *Community in Conflict*, 63-66, 98-99.
[138] Kaunonen and Gary, *Community in Conflict*, 119-120.
[139] Lankton, *Cradle to Grave*, 225, 230; Kaunonen and Goings, *Community in Conflict*, 109-114, 124-127.
[140] Lankton, *Hollowed Ground*, 201. Anti-union committees aligned with and/or funded by employers were not unique to the Keweenaw; they were founded under similar names in other communities across the United States in the early decades of the twentieth century, including Dayton, Ohio; Minneapolis, Minnesota; Seattle, Washington; and the mining communities of Telluride and Cripple Creek, Colorado. They leveraged the power of local businesses to suppress the formation and activities of unions. See, for example, William Millikin, *A Union Against Unions: The Minneapolis Citizens Alliance and Its Fight Against Organized Labor, 1903-1947* (Minneapolis, MN: Minnesota Historical Society Press, 2001) and Louis G. Silverberg, "Citizens' Committees: Their Role in Industrial Conflict," *The Public Opinion Quarterly*, 5, no. 1 (March 1941), 17-37. See also Kaunonen, *Challenge Accepted*, for a

As the situation drew out into the cold winter of 1913-1914 and both sides grew weary, the WFM's Women's Auxiliary planned a Christmas party for strikers and their children—a respite from the strain and hardship created by the strike. The venue was the Italian Hall in Calumet. On Christmas Eve, 1913, with over 175 adults and 500 children crowded into the second-floor hall, a shout of "fire!" triggered a stampede that killed seventy-three people, nearly sixty of them children. There was no evidence of an actual fire. The stampede killed more people than any single accident on the Keweenaw Peninsula.[141] Various conspiracy theories were floated in the aftermath of the disaster. WFM national president Charles Moyer, who was in the Copper Country at the time, tried to blame the Citizens Alliance for the false cry of fire, and anti-union residents responded by violently deporting Moyer from the peninsula with a bullet in his back.[142] The disaster and aftermath also prompted the US Congress to open an investigation into conditions at the copper mines of the Keweenaw Peninsula.[143]

By Easter Sunday of 1914 the strike was over. The strikers had held on longer than anyone expected, and they wanted to continue the fight, but the WFM was out of money and cut benefits to strikers in April. The workers had no real choice but to end the strike, and while they did receive a few modest concessions, including an eight-hour work day and better grievance processes, it was considered a complete victory for the mining companies. The one-man drill was adopted and while productivity increased, fewer miners were needed to operate the equipment. Upward mobility was reduced for many trammers who had sought to move on to other mining-related jobs where work was comparably easier and paid better.[144] The WFM, which until then had been a powerhouse union in areas like Butte, Montana, and other mining districts, would suffer its worst defeat later that year in Butte, when a man was killed outside the union hall during a riot and the building itself was blown up.[145] The WFM had exhausted most of its resources in supporting the Michigan strike, and this final loss essentially finished the union. It no longer remained a viable organization for its Western members and within a few years reorganized into the less powerful International Union of Mine, Mill, and Smelter Workers.[146]

For a short time, Quincy continued to practice corporate paternalism. In the later 1910s, the company undertook another round of housing additions and improvements, including the construction of a new boardinghouse and the addition of more than fifty houses to existing locations, including Frenchtown, Sing-Sing, Limerick, Mesnard, Lower Pewabic, and at Mason near the stamp mill (houses designed in collaboration with Sears, Roebuck and Company), as well as a new location east of Hardscrabble.[147] The company also added amenities such as a community clubhouse/bathhouse and made improvements to existing houses such as toilets and bathrooms and fences around private gardens.[148] However, this was to be the last time that the company made a significant investment in housing and worker amenities. In part, this was due to the post-World War I decline in copper prices and the company's subsequent struggle to stay afloat in the 1920s, and in part due to the aftereffects of the strike, which had severely damaged the trust between workers and management.

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description of the 1913-1914 strike, the involvement of Finnish socialist-unionists, and the role of the Finnish Tyomies Publishing Company in generating support for striking miners through its newspapers.

[141] Lankton, *Hollowed Ground*, 203; Kaunonen, *Challenge Accepted*, 150-157; Kaunonen,and Gary, *Community in Conflict*, 167-219.

[142] Lankton, *Cradle to Grave*, 236-238, and *Hollowed Ground*, 204-205.

[143] An assessment of fatalities in the Upper Michigan mines concluded that there was actually a substantial decline in the ratio of fatalities to production, accounted for in technology-based productivity gains. Larry D. Lankton and Jack K. Martin, "Technological Advances, Organizational Structure and Underground Fatalities in the Upper Michigan Copper Mines, 1860-1929," *Technology and Culture* 28, no. 1 (January 1987), 65-66.

[144] Lankton, *Cradle to Grave,* 239-241.

[145] Clements, "Pragmatic Revolutionaries," 463.

[146] Lankton, *Cradle to Grave,* 239-241; Kaunonen and Gary, *Community in Conflict*, 240; Thurner "Western Federation of Miners in Two Copper Camps," 30-45.

[147] Hoagland, *Mine Towns*, 152-154.

[148] McNear, "Quincy Mining Company: Housing and Community Services, c. 1860-1931," 513, 528, 530-31, 562.

After the company closed the mine in 1931, some employees stayed in their homes. For those who had no work, the company often allowed them to stay rent-free, to cut firewood from company land, and to use company land for gardening.[149] Many who had the means left the area entirely, looking for new work in cities further south. However, a not-insignificant number of Quincy's former workers remained, through loyalty to the company and hope that it would reopen at some point. The losses took their toll, and by 1935, nearly half of company-owned homes on Quincy Hill were vacant, and the company, unable to pay its property taxes, lost some of its housing properties to tax sales.[150] While the mine did reopen briefly in the 1930s-1940s, its oversight of worker housing and activities was over.

Beyond the changes wrought by mining to the Keweenaw Peninsula landscape, an enduring result of copper mining in the area is the cultural diversity that has persevered over time. Indeed, such impact was already felt by the 1870s, when 57 percent of Houghton County's population foreign-born, making it the third largest foreign-born population as a percent of the total population in the United States. Over twenty immigrant groups were present on the peninsula over time, and the largest populations changed, from Irish to Cornish to Finnish.[151] Evidence of this ethnic diversity, for example, is found in location names, street signs, churches, institutions, and historic building names. While not within the Quincy Mining Company Historic District, perhaps one of the most permanent institutions is Suomi College (later Finlandia University), which was established in 1896 in Houghton by Finnish immigrants who desired to provide a religious education, perpetuate the Finnish language, and preserve their experiences in this new country.[152] Finlandia University closed in 2023.

CONCLUSION

The Quincy Mining Company's Legacy

Quincy's periodic efforts to reopen its mines and rekindle operations were not successful, and over time several mine buildings were demolished, collapsed, or sold for scrap, including all but one of the distinctive shaft-rockhouses. The effects of time, weather, and encroaching vegetation have made their mark on the Quincy landscape. The former housing locations passed into private hands. Many of the homes have disappeared, or remain only as foundations. New occupants have modified the former company homes for their own needs, and more modern homes have appeared in the open spaces between.

However, even before operations completely ceased at the reclamation plant at Torch Lake, the local community recognized the importance of preserving Quincy's legacy. The Quincy Mine Hoist Association, formed in 1958, focused initially on preserving the No. 2 Nordberg steam hoist, but over time the organization widened its interest to include larger portions of the industrial landscape. In 1996 it installed a tram to transport visitors between the No. 2 Hoist House and the side hill adit where they could enter and tour the mine. The Historic American Engineering Record (HAER) carefully researched and recorded the remaining Quincy Mine property in 1978, and in 1984 the Quincy No. 2 mine hoist engine was recognized as a National Historical Mechanical Engineering Landmark by the American Society of Mechanical Engineers. The resources at Quincy Hill and the Quincy Smelting Works were designated a National Historic Landmark in 1989, and the stamp mill

[149] Lankton, *Cradle to Grave,* 254; Lankton and Hyde, *Old Reliable*, 142.
[150] Lankton and Hyde, *Old Reliable*, 142; Hyde, "An Economic and Business History of the Quincy Mining Company," 263.
[151] MTU Archives, https://ethnicity.lib.mtu.edu/intro.html, accessed January 2, 2024.
[152] At the time of its closure in 2023, Finlandia University was the only remaining North American institution of higher learning founded by Finnish Americans. "Finnish American Heritage Center," https://www.finlandia.edu/fahc/, accessed January 2, 2024.

and Mason Housing Location at Torch Lake were listed in the National Register of Historic Places in 2007. This nomination is an update of the 1989 National Historic Landmark designation.

In 1992 Congress established Keweenaw National Historical Park (KEWE) as a unit of the National Park Service to preserve and interpret the landscapes of the peninsula's copper mining heritage, focusing primarily on the former Quincy and Calumet & Hecla properties.[153] In addition, in recognition of the proposed role of partnerships in the new park, Congress also established a permanent, seven-member Keweenaw National Historical Park Advisory Commission to advise and assist the NPS. The resulting park is unique in that it combines limited federal ownership with partnerships that leverage existing preservation efforts and grassroots community involvement to preserve the Copper Country's heritage.

As a result of these efforts, the remains of the former Quincy Mining Company—industrial, management, and residential—are still apparent on the landscape. The great No. 2 Shaft-Rockhouse still dominates the viewshed, and many of the company buildings, including industrial buildings along the lode and the management buildings on the west side of US-41, are still in place. The company's former housing locations remain, for the most part, as identifiable entities, characterized by their settlement patterns, the orientation of streets, domestic details such as fruit trees, ornamental flowers, and remaining houses, outbuildings, and private yards. The Quincy Smelter is largely intact and highly visible on the shores of Portage Lake. The Quincy Stamp Mill ruins on Torch Lake are easily identified. The Quincy and Torch Lake Railroad corridor is maintained as a trail for snowmobiling and hiking. Remnants of the historic mining landscape are still present, from the piles of poor rock to ore cars still on their siding. These features, both visible and subtle, demonstrate the integrity of the remaining resources of the Quincy Mining Company.

The Quincy Mining Company is also the most complete mining landscape left on the peninsula. As is established in the comparative analysis below, the Quincy Mining Company Historic District best exemplifies the extent to which a copper mining company developed and improved its mining property since the initiation of industrial copper mining in the region. The variety and number of such resources facilitated its success as the longest-operating and (with the Calumet & Hecla Company) highest-producing company in Michigan industry throughout its history, and for the copper industry nation-wide, for the period 1856-1920.

COMPARATIVE COPPER MINING SITES

The evolution of the nation's copper industry over time can be roughly traced as an east-to-west progression across the country, correlating to the discovery and exploitation of various copper deposits, levels of accessibility, changing national and international economic conditions, technological progress, and greater investments of capital. As has been noted, copper mining ventures on the East Coast were modest affairs. Geologic variation impacted the scope and extent of the copper industry at any given time, but generally, substantial and economically feasible copper mining began in Michigan in the mid-nineteenth century, followed by California, then Montana and Arizona. By the turn of the twentieth century, Utah, Alaska, and New Mexico were producing sizable amounts of copper. In most instances, copper extraction followed earlier exploration for gold and silver, and these precious metals continued to be extracted along with copper. The type and scale of copper production, economic output, and financial prominence of one area or region over another would change over time, and advances in technology applied in one area would be applied in other regions.

[153] "An Act to establish the Keweenaw National Historical Park, and for other purposes," Public Law 102-543 (October 27, 1992).

Over the period of about 1850 to 1950, copper mining changed from extracting high-grade or even natural mineral ores, as in Michigan, to Western ores that were of increasingly lower grades. Generally, highly productive copper mining in the United States evolved from surface pits to deep shafts, then to open pits. Technological changes in extraction and concentration (processing), transportation, and refinement were supported by increasingly massive sums of capital investment. This made possible the economic viability of mining low-grade sulfides and oxides of copper extracted on an immense industrial scale. Indeed, by 1944, more than one half of the nation's copper came from deposits about which mining operators had been aware as early as the turn of the century but had been considered valueless.[154] The result of this evolution was that over a 100-year period, copper production increased prodigiously even as the quality of copper ore dwindled.

The built environment of mining districts in these regions tells this story of the progression of copper mining in the United States, and its rise to become a major industry by the late nineteenth century. Lake Superior copper was mined, worked, and extensively traded by Indigenous people thousands of years ago, but this comparative analysis will focus on those industrial copper mining sites or districts that were the most substantial producers of copper in the top eight copper-producing states between the mid-nineteenth to mid-twentieth centuries: Michigan, California, Montana, Arizona, Alaska, Utah, New Mexico, and Nevada. During this period copper mining, extraction, and processing contributed to a definitive change in the United States economy from agricultural-based to industrial-based, and from a primarily rural to an urban society.[155] A ninth state, Tennessee, is included in the comparative analysis, despite its relatively small production of copper in comparison to the other states. This inclusion is due to the property's association with a US Supreme Court decision, important both for an advance in mining technology and in early environmental conservation law. Also included is summary information on a colonial-era Connecticut copper mine of the eighteenth century, allowing for a better understanding of the extent of changes in American copper mining over time.

Furthermore, this analysis focuses on those properties that retain a high concentration of resources necessary to document the scope of mining, including extraction, milling, transportation, smelting, and other supportive elements. Also necessary for inclusion in this comparative analysis are the presence of associated residential resources, placing workers in close proximity to industrial locations. Distinctive residential building patterns that emerged alongside mining resources should be clearly evident. The comparative analysis thus identifies a select number of sites among hundreds that are definitively or potentially nationally significant. Not all have been listed in the National Register of Historic Places, although several have been previously designated National Historic Landmarks.

The properties included in this analysis physically reflect the evolution of copper mining in the United States, and the effects of advances in technology, the ongoing quest for efficiency, and increases in capital investments. There are notable distinctions among properties that relate to the type of copper ore mined, technology used in its extraction and production, and the scale of production.

Connecticut

In the early eighteenth century, copper mined in colonial America was shipped to Wales for smelting and used in the manufacture of bronze or brass for use in shipbuilding, precision instruments, and military ordnance.

[154] Timothy J. LeCain, "Moving Mountains: Technology and the Environment in Western Copper Mining," Vol. II, (PhD diss., University of Delaware, 1998), 715.
[155] Richter, "The Copper-Mining Industry in the United States, 1845-1925," 236-291, provides a definitive summary of the copper mining industry, and identifies the highest-producing and most influential copper mining districts and companies in the United States. This is repeated with additional information on specific mines in Gardner, et al., *Copper Mining in North America*.

Historian Otis Young notes that the first productive American copper orebody was the Copper Hill Mine (also known as the Granby Copper Mines and the Simsbury Mine) in Hartford County, Connecticut, about 1707. This was a rich oxide deposit, and in 1709 the Simsbury town association received what is believed to be the first mining company charter in British North America. Its ore production is unknown but probably amounted to about 500 tons.[156] The underground mine was worked until about 1745, with brief attempts made at mining in the 1830s and 1850s. The Colony of Connecticut bought the mine in 1773 and used the tunnels as a prison for British soldiers, Tories, and other political offenders. The significance of the property as an early prison, rather than as a copper mine, is identified in the **Old Newgate Prison and Copper Mine National Historic Landmark**. The landmark was designated in 1970, with a period of significance of 1775-1827—the period of time the property was used as a prison. Five building ruins and the mine are contributing resources. The property is now a state historic site. The Old Newgate Prison and Copper Mine NHL complements the Quincy Mining District NHL as a baseline for comparison of the modest development of copper production in the United States prior to the discovery of the elemental native copper in the Keweenaw Peninsula.

Michigan

During the mid-nineteenth century, Keweenaw Peninsula copper mines produced three-fourths of American copper.[157] Among those copper mining companies producing "Lake copper" or "Michigan copper" from the 1850s to the 1900s, the Quincy Mining Company and the Calumet & Hecla Mining Company proved to be the two most successful and powerful companies in the Lake Superior copper districts.[158] Resources associated with these two companies best represent the full spectrum of copper mining history in Michigan, and the importance of Michigan copper mining to the national story.

While not directly comparable to the copper mining industry represented by the Quincy Mining Company Historic District and the Calumet Historic District, the **Minong Copper Mining District National Historic Landmark** is also included here as a complement and precursor to the nationally significant events associated with the latter NHL districts. The Minong Copper Mining District is located within Isle Royale National Park, over 50 miles off the tip of the Keweenaw Peninsula, at the northern end of Lake Superior. It is Michigan's most recent NHL, designated on January 13, 2021. The NHL boundary covers over 200 acres and encompasses the [redacted] and the [redacted]. The [redacted] includes both [redacted] and [redacted]. [redacted] site includes both a [redacted] and the remains of the historic [redacted]. Archeological and historical evidence suggests [redacted]. Mining continued though the 1880s. The site [redacted] and combines one of the [redacted] with the [redacted] on Isle Royale.

The Minong Copper Mining District National Historic Landmark is nationally significant because it showcases the intimate connection between North America's precontact and historic native copper mining activities. The site shares the same belt of copper-bearing geology that attracted copper mining investment in the Keweenaw Peninsula and Ontonagon County. Beginning in the 1840s, American miners used precontact mining remains found on Isle Royale and Michigan's Keweenaw Peninsula as a key guide to establishing a native copper mining industry that, by 1870, was producing the majority of the world's copper. [redacted]

[156] Young, "Origins of the American Copper Industry," 121. Young cites Charles R. Harte, "Connecticut Iron and Copper," *Annual Report for the Sixtieth Year* (Connecticut Society of Civil Engineers, 1944), for production estimates.
[157] Lankton, *Cradle to Grave,* 9.
[158] A comparison and details of all Michigan copper producers from1845-1925 are found in Butler and Burbank, *The Copper Deposits of Michigan.*

[redacted] is by far the most thoroughly studied and figured prominently in several early archeological investigations. The studies contributed to the development of archeological science with respect to understanding of precontact copper mining. Much of our modern archeological knowledge of precontact native copper mining methods stems from field research undertaken at this site.[redacted]

The **Calumet Historic District National Historic Landmark** was designated in 1989 for its outstanding associations with copper mining in the Keweenaw Peninsula and the greater "Lake region," and the role this company played in the economic transformation of the United States into a world leader in copper production. Whereas the Quincy Mining Company Historic District NHL focuses on the industrial aspects of the region's successful copper mining from the initial discoveries of natural copper through extraction of the copper mineral from amygdaloid or conglomerate lodes and subsequent consolidation and technological advancements, the Calumet Historic District complements the Quincy district. It acknowledges the overarching dominance of the Calumet & Hecla Mining Company and addresses other major elements of Michigan copper mining industry during the period of national economic influence: corporate paternalism, company towns, immigration and ethnic settlement, and labor organization. The Calumet NHL's original period of significance was 1864-1930; its revised period of significance is 1867-1923.[160]

The Calumet Historic District is associated with the Calumet & Hecla Mining Company, which formed in 1871 with the merger of the Calumet Mining Company (organized 1865) and the Hecla Mining Company (organized 1866). Mining adjacent mineral lands on the rich Calumet Conglomerate Lode, the two companies formed with the same stockholders and the same administration. The Calumet mine developed one end of the lode, the Hecla the other.[161] Production of this native copper made Calumet & Hecla the biggest and wealthiest copper mine in the world at the time, and the company emphatically dominated both the Lake region and the entire nation in copper output from 1871 to the early 1880s. As described by economist F. E. Richter, during the 1870s, "… American copper and Lake copper were almost synonymous, and even among the producers at the Lake, Calumet was almost a Gulliver among Lilliputians."[162] Over time, Calumet & Hecla would acquire a number of other area mines, cementing its supremacy in the Michigan copper district. By 1925 the company had produced over three billion pounds of refined copper.[163]

Like the Quincy mine, the Calumet Historic District is in the Portage Lake mining district. Calumet is located roughly 10 miles north of the Quincy NHL and includes portions of the Calumet & Hecla mining site, along with portions of the adjacent community of Red Jacket (which changed its name to Calumet in 1929). As with the Quincy Mining Company Historic District, the core of the mining area follows the narrow belt of the copper lode. No historic shafthouses remain standing in the current Calumet Historic District, although evidence of the copper extraction process and its administration remains in the mine shafts, railroad tracks, a steam boiler house, a gear house, a substation, two warehouses, a man-engine house, a pattern storage building, a pattern shop, a dryhouse, a bath house, company office buildings, and other building ruins. The adjacent Village of

[redacted]

[160] Kathleen Lidfors, Mary Jo Hrenchir, and Laura Feller, "Calumet Historic District" National Historic Landmark Nomination Form (Washington, DC: US Department of the Interior, National Park Service, February 17, 1988), designated March 28, 1989, https://catalog.archives.gov/id/25338748 (accessed March 24, 2023). The Calumet Historic District NHL is currently (2023) being updated in order to more adequately address the national significance of the Calumet & Hecla Mining Company, and the economic, social, and physical resources in this company's corporate mining landscape.
[161] Lankton, *Cradle to Grave,* 18.
[162] Richter, "The Copper-Mining Industry in the United States, 1845-1925," 249-251; Butler and Burbank, *The Copper Deposits of Michigan*, 79.
[163] Butler and Burbank, *The Copper Deposits of Michigan,* 79-82. This amount includes copper processed from reclamation, begun in 1915.

Calumet is within the NHL district and includes the commercial district, a collection of churches, civic structures, a three-story fraternal hall, and a sampling of houses for mine workers, mine administrators, and business owners.

A number of other successful copper mines developed prior to or contemporaneously with the Quincy Mining Company. While important for their contributions to the evolution of mining on the Keweenaw Peninsula, they are not considered outstanding examples of national significance because of the comparatively lesser scope of production, fewer number of remaining resources, or because the properties were later acquired by the Quincy Mining Company or the Calumet & Hecla Mining Company. Some of these acquired resources, in fact, contribute to the national significance of the Quincy NHL and the Calumet NHL districts

Among the first successful mines on the Keweenaw Peninsula were (in roughly chronological order) Cliff Mine, Minesota Mine, Central Mine, Pewabic Mine, and Franklin Mine. Located at the northern end of the peninsula in Keweenaw County in the Keweenaw Point district, the **Cliff Mine** was the largest mine in production at the onset of copper extraction in the Lake region. The Pittsburgh and Boston Copper Harbor Mining Company organized in 1844 and established the Cliff in 1845 to work mass copper in fissure veins. At the time, this and other early companies considered conglomerate and amygdaloid deposits too hard to work and too poor in copper. Due to the rich mass copper, the Cliff Mine was the first mine to turn a profit and produced over one million pounds of copper by 1849, the year the company first paid dividends. These dividends were the first to be received by any investors in Lake Superior copper and confirmed the region's value in investors' eyes. By 1857 the Cliff Mine used six steam engines to support the mining process, among the highest number used at one mining site in the district. Between 1853 and 1868, the amount of refined copper produced annually by the Cliff Mine was consistently over one million pounds, and in some years, over two million pounds. At the height of its productivity in 1860, over 1,000 people lived in the associated company town of Clifton. Yet by 1870, with the diminishment of fissure copper, the mine closed. Subsequent owners continued minor production until 1887; by that time the mine had produced over 38 million pounds of refined copper. The Cliff Mine was later acquired by the Calumet & Hecla Mining Company. In 1899 Cliffton's Catholic church was moved north to the community of Phoenix, where it still stands. Clifton was deserted by 1911, but the buildings stood until the 1930s, when the houses were sold for lumber, and the remainder were burned.[164]

The mine and company town were determined eligible for listing in the National Register of Historic Places in 2006. The site includes four standing smokestacks, two cemeteries, and [redacted]. Stamp sands and rock piles are the most visible remnants. The deposits were altered only enough to remediate copper contamination from mining areas within the Great Lakes watershed. Remediation was completed in 2014.[165]

The Cliff Mine and Clifton are an important component of the national story of the growth of the copper mining industry in the United States; indeed, the mine was producing substantially more copper from its mass fissure than the Quincy Mining Company (working an amygdaloid lode) in the 1850s. Incorporated only a few years before the Quincy Mining Company, the owners of the Cliff Mine focused on mass copper and did not ultimately prove to be as commercially dominant as their contemporary, the Quincy Mining Company. The mine itself would later become a component of the Calumet & Hecla Mining Company. For these reasons, the

[164] Lankton, *Cradle to Grave*, 9, 42, 149-150; Butler and Burbank, *The Copper Deposits of Michigan,* 63, 67, 72, 83; "Cliff Mine," Michigan Archeological Site File, Michigan State Historic Preservation Office, Lansing, MI.
[165] "Cliff Mine," Michigan Archeological Site File; "Environmental Restoration Project Redesign Produces Preservation Success, Keweenaw County, Michigan," *106 Success Story*, Advisory Council on Historic Preservation, http://www.achp.gov/docs/cliff-mine.pdf (accessed July 23, 2018).

Quincy Mining Company Historic District is a better example of the copper industry in the Lake Superior copper district when it dominated national production. [redacted]. The Cliff Mine and associated community represent a different aspect of copper mining on the Keweenaw, and the success of the Pittsburgh and Boston Copper Harbor Mining Company paved the way for larger enterprises devoted to conglomerate and amygdaloid mining through their technical and community development efforts. Future research may be undertaken to determine if that property merits NHL consideration.

The second major copper mining success in the district was the **Minesota Mine,** located at the southern end of the peninsula near Rockland in Ontonagon County, in the Ontonagon district. The Minesota Mining Company incorporated in 1848 to work fissure copper, beginning in 1849. The Minesota Mine began with the "discovery" of a six-ton mass of native copper, located in a pit that included timber cribbing and a variety of wood and stone tools; the copper had been previously worked by native populations. The company sunk a number of shafts, one of which encountered a 527-ton copper mass, the second-largest mass found in the district. The company paid its first dividend to investors in 1854. Prior to 1855, the Minesota produced over three million pounds of refined copper, and another 26.7 million pounds by 1864, yet it would be basically defunct by 1870.[166]

The Minesota mine platted the community of Rosendale in 1858 but also had its own adjacent housing location called Webster. Webster and Rosendale joined in 1864 to form Rockland, which is associated with several mines that spun off from the Minesota. [redacted]

The history of the Minesota Mine aids in understanding the national story of the growth of the copper mining industry in the United States, and it was producing substantially more copper from its mass fissure than the Quincy Mining Company in the 1850s. However, the Minesota Mine was not ultimately as commercially dominant as its contemporary, the Quincy Mine. [redacted] For these reasons, the Quincy Historic District is a better example of the copper industry in the Lake Superior copper district.

Located at the north end of the peninsula in the Keweenaw Point district near Phoenix in Keweenaw County is the **Central Mine.** It was operated by a company of the same name that organized in 1854 and was the first mine in the district to produce and sell enough copper during its first year of operation to more than pay expenses for the year. Over forty tons of pure mass copper was removed in the first 40 feet. The Central Mine continued production into the growth period of copper mining in the district, and by 1887 it was the only fully operational mine in the county. The mine closed in 1898, however; by that time total production (over 51.8 million pounds of copper) and dividends were a fraction of those generated by either the Quincy Mining Company or the Calumet & Hecla Mining Company. Calumet & Hecla purchased the land in 1913, but never reopened the mine.[168]

[166] Lankton, *Cradle to Grave,* 10; Butler and Burbank, *The Copper Deposits of Michigan,* 63, 90.
[redacted]

[168] Butler and Burbank, *The Copper Deposits of Michigan,* 66, 82; L. J. Molloy, "Exploring Central – The Central Mine and The Central Mining Company," *Keweenaw County Historical Society,* http://keweenawhistory.org/central-mine-and-the-village-of-central/ (accessed July 23, 2018); Kathryn Eckert, "Central Mine Historic District," National Register of Historic Places Nomination Form (June 28, 1974); Donna Stiffler, "Central Mine Methodist Church," National Register of Historic Places Nomination Form (October 15, 1970); Wendy Nicholas, "Central Mine Methodist Church," Historic American Buildings Survey [HABS] No. MI-421, (Washington, DC: US Department of the Interior, National Park Service, 1975), Library of Congress Prints and Photographs Online Collection, http://loc.gov/pictures/item/mi0480/ (accessed July 23, 2018).

The Central Mining Company developed the mine location with surface structures for the mining operation, and housing and community buildings for the miners. During the mid-1880s, about 1,200 people lived in the company town in about 130 dwellings. Abandoned since the mine's closing, the Central Mine Historic District was listed in the National Register of Historic Places in 1974 at a state level of significance. At the time of nomination, eighteen miners' dwellings remained, along with the company clerk's house and Central Mine Methodist Church. Of the mining-related resources that once filled the landscape–engine houses, shafthouses, rockhouses, stamp mill, warehouses, powder house, boiler houses, washhouse, change house, ancillary support buildings, administrative offices, and a tramway—many ruins, foundations, and poor rock piles remain. The town of Central today retains thirteen houses, a church, and various mining-related ruins. The church was previously listed in the National Register in 1970 and has been documented through the Historic American Buildings Survey. The Central Mine is now primarily owned by the Keweenaw County Historical Society, which has restored and interprets a number of the community's buildings.[169]

As with the Cliff and Minesota Mines, the Central Mine aids in understanding the national story of the growth of the copper mining industry in the United States. At first, the Central Mine produced more copper than the Quincy Mining Company, although Quincy notably surpassed Central's production by 1860.[170] Therefore, the Central Mine was not as productive or commercially dominant for as long a period as its contemporary, the Quincy Mine. The efforts of the Keweenaw County Historical Society have ensured that the remaining resources associated with the Central Mine will be preserved into the future; however, compared to the Quincy Mining Company Historic District, the extent of associated resources is fewer. For these reasons, the Quincy NHL is a better example of the copper industry in the Lake Superior copper district.

The Pewabic Mining Company organized in 1853 and became a significant copper producer in 1855 with the discovery of the rich Pewabic Amygdaloid Lode. The **Pewabic Mine** was located in Houghton County in the Portage Lake district, and worked the same lode as its neighbor, the Quincy Mining Company. The Pewabic produced nearly 28 million pounds of refined copper by 1884. After it was purchased by the Quincy Mining Company in 1891, its resources became part of the company, and portions of the resources and landscape are included within the Quincy Mining Company Historic District NHL.[171] Because of this, the Pewabic Mine is excluded from further comparative analysis.

The third of the three companies working the same Pewabic Amygdaloid Lode north of the town of Hancock, the Franklin Mining Company organized in 1857 and began working the **Franklin Mine**. The company completed a stamp mill in 1861. Although the Pewabic Lode produced substantial amounts of copper, the failure of the Franklin Mine to obtain adjacent land meant it was boxed in by the Quincy Mining Company. In 1908, the year Quincy bought the mine, it produced over 136.6 million pounds of refined copper. In September 1915, the Franklin made profits for first time in twenty years.[172] Like the Pewabic Mine, because the Franklin Mine's history is intertwined with and part of the history of the Quincy Mining Company Historic District NHL, it is excluded from further comparative analysis.

During the growth and continued national dominance of Lake Superior copper through the turn of the century, mining companies availed themselves of new technology and systems, efficiently mining the amygdaloid and conglomerate lodes to exploit deposits that, due to their depth, previously had little economic value. The use of steam engines to run hoisting, pumping, and ventilation was critical to this success. The companies would

[169] Molloy, "Exploring the Central"; Nicholas, "Central Mine Methodist Church."
[170] Butler and Burbank, *The Copper Deposits of Michigan,* 82, 95.
[171] Butler and Burbank, *The Copper Deposits of Michigan*, 93.
[172] Butler and Burbank, *The Copper Deposits of Michigan,* 85.

acquire great wealth, although none could challenge the overall success of the Quincy Mining Company, or the supremacy of the Calumet & Hecla Mining Company. The closest challenger was Copper Range Consolidated, a Boston-based holding company created in 1901 that owned nearly all of the stock of the Baltic and Trimountain Mines and the Copper Range Railroad in the Portage Lake district. It also owned half the stock of the Champion Mine, and sixty percent of a newly erected smelter on Portage Lake. The mines of Copper Range Consolidated worked the last important lode to be opened on the peninsula, the Baltic Amygdaloid Lode. This consolidation of property ownership reflected a trend in Michigan copper mining—control of the industry concentrated into four investment groups.

The **Champion Mine**, associated with the company town of **Painesdale** in Houghton County (named after William A. Paine, president of the Copper Range company and co-founder of Paine, Webber, and Company), was the most remunerative producer for Copper Range Consolidated. Between 1902 and 1925, the mine produced nearly 438.5 million pounds of refined copper and had slightly surpassed Quincy in dividends to its investors by 1925. Reflective of this volume, a building boom in 1916 brought the total number of houses built in the community to 200. Yet despite the impressive numbers, the mine still ranked third behind the Quincy Mining Company and Calumet & Hecla in terms of total production and dividends. Mining operations ceased in 1967.[173]

The Champion Mine was included within the **Painesdale National Register of Historic Places** nomination in 1993 at a national level of significance for its ability to represent an early twentieth century extractive industry, single-resource company town, and for the high integrity of its contributing resources. Its period of significance is 1899-1930. Within the historic district are 216 contributing buildings and structures that represent the variety of property types associated with copper mining in the peninsula, along with substantial poor rock piles. [redacted] The surviving mining and support buildings are clustered around one shaft (Shaft E): the No. 4 Shaft House, a hoist house, engine house, powder house, two administrative offices, a blacksmith and machine shop, railway equipment, and other ancillary structures. Three housing locations associated with specific mine shafts are within the district and retain rows of identical, standardized-design frame workers' housing and more individualized managers' houses. The Copper Range Railroad bed is occasionally visible within the district. Also included are a library, high school and three churches. A barbershop is the only surviving commercial building. The non-profit Painesdale Mine & Shaft, Inc. volunteer corporation has been working to preserve and restore the Champion No. 4 Shaft-Rockhouse, associated buildings, and site.[174]

The Champion Mine is an important component of the national story of the growth of the copper mining industry in the United States, and it was a heavy producer of copper during the district's mature period, when copper mines in Western states were challenging the hegemony of Michigan copper. Paine's involvement is perhaps the clearest manifestation of the involvement of East Coast financing of industrial operations of the Michigan mines. The district has very high integrity, and a substantial number and variety of resources survive. The buildings retain integrity. As with all housing across the Keweenaw Peninsula, modifications made by owners and occupants of the former mining dwellings to address climate requirements (new and more weather-tight windows placed in original window openings, new siding) have impacted the character of the resources although basic architectural forms and massing remain evident. Modern garages have been built. Despite the

[173] Lankton, *Cradle to Grave,* 21; Butler and Burbank, *The Copper Deposits of Michigan,* 66, 82.

[redacted]

nomination's statement that the Painesdale district was distinctive from either the Quincy Mining Company Historic District NHL or the Calumet NHL, the property is not as outstanding an example of national significance as the Quincy Mine because it lacks association with the earlier era of copper mining and its evolution that are evident at Quincy. The Champion Mine ultimately was not as economically productive as Quincy. In addition, the Quincy district has a slightly higher number of surviving contributing resources. For these reasons, the Quincy Mining Company Historic District is a better example of the copper industry in the Lake Superior copper district.

Tennessee

Contemporary to the initial development of the Lake copper mining districts in Michigan, high-grade copper ore was discovered in the Copper Basin of Appalachia in 1843. This area in the extreme southeastern corner of Tennessee also includes neighboring portions of Georgia and North Carolina. The Burra-Burra Lode in the Ducktown Mining District (also known as the Ducktown Basin or Ducktown) of Tennessee proved to be highly productive, although the total production of copper never came close to that generated in Michigan. From the beginning of mining operations to 1928, the Ducktown district produced about 519.5 million pounds of copper, compared to nearly 8.7 billion in Michigan.[175] The importance of copper mining in Tennessee is not related to the state's contribution to the growth of copper mining as a major industry in the United States, but rather stems from resolving environmental damage created as part of the copper refinement process. The following narrative therefore does not provide a comparative analysis regarding the copper mining industry of Tennessee to the Quincy Historic District, but rather information for possible future consideration of the Ducktown Historic District/Burra Burra Mine Historic District as a nationally significant property associated with the growth of the conservation movement. Further research and analysis are necessary to establish national significance, and if the community's associated resources retain sufficiently high integrity.

Similar to early copper extraction in northern Michigan, the first copper ores discovered in Tennessee were easily accessible, shallow deposits. By 1879 the richest (14 to 32 percent copper) black oxide ore deposits were exhausted, and development turned to underground mining of lesser-grade, high-sulfur ores (chalcocite-pyrrhotite). Processing these copper ores required roasting, or smelting, to reduce the ore's sulfur content. This was done using an ancient "heap roasting" technique in which large piles of copper ore and wood were burned in the open. After smoldering for days, poisonous sulfur dioxide gas was released into the air. The result of this process was a barren wasteland that surrounded the smelters for miles. Following the 1890 completion of a railroad line to the area, and the connections this provided to wider markets, several new copper mining companies were established in the district. Associated smelting increased significantly, and heap roasting continued to be a preferred smelting method. As a result, there was a concomitant rise in sulfur dioxide gas levels in the area.

Lawsuits alleging damage from the fumes—primarily to vegetation—began about 1895, ultimately leading to a precedent-setting Supreme Court decision. Although smoke from heap roasting and other smelters had become an issue in other areas of the country by that time, the Ducktown district's case was the first to reach the US Supreme Court, in *Georgia v. Tennessee Copper Co., 206 U.S. 236*. Early lawsuits against Ducktown smelting companies found in favor of the mining companies, with the courts ruling that the companies' benefit to the county outweighed their damages. But in 1906, the Supreme Court granted the state of Georgia an injunction halting all smelting in the Ducktown district. The decision set a precedent repeatedly cited by farmers, ranchers,

[175] M. L. Quinn, "Industry and Environment in the Appalachian Copper Basin, 1890-1930," *Technology and Culture* 34, no. 3 (July 1993), 577; Gardner, et al., *Copper Mining in North America*, 13.

and other citizens near Western mining communities as part of their own legal challenges to polluting copper smelters.[176]

A second outcome of the Supreme Court decision was a significant advance in smelting technology. This technology represents an early success in rectifying a serious and legally complicated interstate air quality problem. Following the Supreme Court decision, state of Georgia officials agreed that the smelters could continue to operate, provided that the sulfur dioxide was removed from most of the smoke. In 1908 the Tennessee Copper Company developed a recovery system that converted sulfur dioxide gas into sulfuric acid. The process substantially reduced the amount of sulfur dioxide into the air and also established a profitable by-product industry for smelter operators: sulfuric acid has become one of the most important industrial chemicals, used in the manufacture of fertilizers, pigments, dyes, drugs, detergents and explosives, and in refining petroleum.[177] The design was lauded by Stanford University chemist Robert Swain, as one of "… the great industrial achievements of this country."[178]

The 1983 **Burra Burra Mine Historic District National Register of Historic Places** nomination partially represents this history. The district is listed at both the state and local levels of significance, for its architecture and associations with copper mining industry and conservation law. The district includes thirteen structures associated with deep copper mining in the early twentieth century, including a hoist house, powder house, boiler house, mine office, machine shop, a change house, storage building, ore bins, a core house, bit house, and other support buildings. The only important original structure missing is the headframe, dismantled in 1966. When written, the nomination described the immediate surroundings as mostly devoid of vegetation, evidence of the copper mining industry. While vegetation is now returning, the impacts to the landscape are still visible. Missing from the district is an associated smelting area: five miles south, the city of Copperhill includes the partial remains of the Tennessee Copper Company smelter and acid plant.[179]

California

Economist F. E. Richter observed in 1927 that from the end of the 1850s on, copper deposits discovered and exploited in the southwestern part of the country that would become California, Arizona, and New Mexico accounted for a good part of the increase in copper production outside of Michigan.[180] By the mid-1860s, the state offering the closest competition was California. In that year, California produced 1,800 tons of copper from its deep shaft mines, compared to Michigan's 7,179 tons. The boom could be linked to the need for copper for munitions and shell casings for the Civil War. Most copper came from the West Shasta district in northern California, along the Sierran Foothill copper belt. From 1862 to about 1866, the chief area of production was at Copperopolis in Calavaras County. The Napoleon Mine was one of the earliest copper mines, established in 1860, followed soon thereafter by the Union Mine. The **Union Mine** was alone responsible for fully half of the ore exported from the state. The copper content of California's sulfide ores was estimated at between 10 to 60 percent, with very little below 15 to 20 percent. The center of Copperopolis burned in 1867 and was never completely rebuilt. The copper boom in California ended with the close of the Civil War, although mining

[176] Quinn, "Industry and Environment," 519, 579-594; Bode Morin, "Reflection, Refraction, and Rejection: Copper Smelting Heritage and the Execution of Environmental Policy" (PhD diss, Michigan Technological University, 2009), 151-168; Timothy J. LeCain, "Moving Mountains," 519.
[177] LeCain, 516-520.
[178] Quinn, 593, citing Robert E. Swain, "Atmospheric Pollution by Industrial Wastes," *Industrial and Engineering Chemistry* 15 (March 1923): 299.
[179] Shain T. Dennison and Lloyd Ostby, "Burra Burra Mine Historic District" National Register of Historic Places Nomination Form, (Washington, DC: US Department of the Interior, National Park Service, February 15, 1983); Morin, 194.
[180] Richter, "The Copper-Mining Industry in the United States, 1825-1925," 247.

would continue intermittently into the mid-twentieth century. Today very few mining-related resources remain in the area from the period beyond large slag and mine waste piles with the distinctive rust color of copper ore gossan. Depressions in the ground show the location of the many once booming business establishments.[181] For these reasons, the Quincy Mining Company Historic District is a better example of the growth of the copper industry in the United States during the nineteenth and early twentieth centuries.

Montana

With the discovery of placer gold near the Continental Divide in west central Montana 1864, a mining camp was quickly established that became the community of Butte. Copper veins were also discovered that year. An early focus on gold and silver extraction, along with restricted access to the area, dampened copper production, but the construction of a smelter in 1879/1880 and the arrival of a railroad in 1881 increased activity. While copper was produced from numerous districts in the state, the Butte district had the largest output, mining mostly chalcocite and sulphide ores. An early Butte mine was the **Anaconda,** originally a silver mine that proved to be fabulously rich in copper ore. Marcus Daly purchased the Anaconda mine in 1880, then in 1899 formed the Amalgamated Copper Company (a holding company) with out-of-state investors including Standard Oil magnate William Rockefeller. To support its operations, in 1900 Amalgamated built a large-scale smelter, refinery plant, and an associated company town named Anaconda, roughly twenty-five miles away. Overall copper production in the Butte mining district rose from 9 million pounds in 1882 to 222 million pounds in 1896. In 1887, copper production in Montana surpassed that of the Lake Superior copper district, at about 80 million pounds, with the Anaconda mine the chief copper producer.[182]

Four industrial magnates controlled Butte's mining wealth near the turn of the twentieth century, although Amalgamated would gradually acquire ownership or control of most of the principal copper mining companies in town. In 1910 Amalgamated unified its various mines and smelting facilities under the Anaconda Copper Mining Company (ACM). The consolidation resulted in tremendous operating benefits, unification of effort, and avoidance of lawsuits. The ACM enjoyed a virtual monopoly over the mines in and around Butte by the 1920s and became the largest copper-mining company in the world.[183]

The scope of Butte's ore reserves were so large that the community was built atop of the ore bodies. Residential, commercial, social, religious, and mining-related resources are distributed across the landscape. The biggest change came with the creation of the Berkeley Pit in 1955, on the east side of town. The ACM shifted from labor-intensive underground mining to open-pit excavation, removing old mine shafts and Butte's Eastside neighborhoods. However, Butte's other mine yards remained in operation, utilizing the same buildings and equipment.[184]

The expansive **Butte-Anaconda Historic District National Historic Landmark,** which contains the communities of Butte, Walkerville and Anaconda, was designated an NHL in 1961. The revised nomination (2006) identifies the district's close affiliation with the rapid industrialization of the United States, and labor's collective response to this process, during the late nineteenth and early twentieth centuries. The Butte-Anaconda

[181] Richter, "The Copper-Mining Industry in the United States, 1825-1925," 248; "Copperopolis History," http://www.calaverashistory.org/copperopolis (accessed July 26, 2018); "Calaveras Co., California, USA," https://www.mindat.org/loc-16293.html (accessed July 26, 2018).
[182] Gardner, et al., *Copper Mining in North America,* 14, 65-66; Richter, "The Copper-Mining Industry in the United States, 1825-1925," 254-255, 260; Strahn, et al., 3.
[183] Gardner, et al., *Copper Mining in North America,* 14; Richter, "The Copper-Mining Industry in the United States, 1825-1925," 260, 271, Strahn, et al., "Butte-Anaconda Historic District," 95.
[184] Strahn, et al., "Butte-Anaconda Historic District," 75.

Historic District illustrates the dramatic changes that resulted from the US emergence as the world's leading industrial nation. Supported by complex technology, outside capital, and railroads, the mines on Butte Hill represented industrial mining on a colossal scale. Butte-Anaconda experienced a meteoric rise to the pinnacle of world copper production, peaking in 1895 with 51% of the share of the nation's output. Expanding through the end of World War I, and holding the national lead until the mid-1930s, no other American mining region exerted as extraordinary, prolonged, and consequential influence on the historical development of the world copper industry. Butte-Anaconda also profoundly affected the nation's labor movement. As the United States' "Gibraltar of Unionism," Butte-Anaconda embodied the strengths (and periodic weaknesses) of the industrial working class. Workers at the mine spread the gospel of unionism and spearheaded the formation of the Western Federation of Miners and International Workers of the World, along with catalyzing the schism that led to the formation of the Congress of Industrial Organizations. The district includes thousands of industrial, commercial, and residential resources and a railway system. The NHL's period of significance is 1876-1934.[185]

The Butte-Anaconda mining district NHL complements the Quincy NHL by its representation of evolutions in copper mining history and impacts on the US economy. The Butte-Anaconda district retains an exceptionally high number of contributing resources that represent the scope of mining, including extraction, milling, transportation, smelting, and other support elements. Residential and commercial neighborhoods are included, as are social and religious institutions. In this regard, the scope and context of the Butte-Anaconda NHL is more similar to the Calumet NHL than to the Quincy Mining Company NHL. A distinction between the Montana NHL and both Michigan NHLs is that the latter districts address the specific national significance of one copper mining company; the Montana NHL district includes a collection of copper companies, among which is included the colossally powerful ACM. Despite this, a mining historian noted, "At no time during the nineteenth century did the Anaconda occupy in Butte a position quite comparable with that of the Calumet & Hecla at the Lake. In other words, it did not overshadow its neighbors to the extent that Calumet did."[186]

Arizona

Copper ores were discovered in what would become southern and central counties within the state of Arizona as early as the 1850s, with the richest ore bodies identified in the 1870s. Unlike Tennessee, Michigan, Montana, Utah, or Alaska, the state contained several distinct and highly profitable copper mining districts that individually ranked among the top fifteen in total copper production in the United States by the 1920s.[187] These were the Ajo district, the Clifton-Morenci (Morenci-Metcalf) district, the Globe-Miami district, the Jerome district, and the Bisbee (Warren) district. By 1885 Arizona ranked third nationally in copper production, behind Michigan and Montana; by 1905 the state ranked second, behind Montana.[188] Here and at other Western mines, the most highly successful open pit copper mines tended to replace earlier shaft mines, reflecting a change in technology, immense productions of scale, and consolidation under a few and very powerful business interests. In Arizona, this was the Phelps Dodge Corporation.

In Pima County, successful mining of high-grade native copper at the Ajo copper mines in the mid-1850s and 1860s were limited by the expense of transporting copper ore. These mines had been previously worked by Indigenous peoples, and subsequently by the Spanish. After closing for a time in the late nineteenth century, the Ajo mines were reopened with the advent of Daniel C. Jackling's new recovery methods for low-grade porphyry ore (see the Bingham Canyon Open Pit Copper Mine NHL, Utah, below). The Calumet and Arizona Mining Company–established by Michigan investors already engaged in mining in the Bisbee (Warren)

[185] Strahn, et al., "Butte-Anaconda Historic District," 75.
[186] Richter, "The Copper-Mining Industry in the United States, 1825-1925," 267.
[187] Gardner, et al., *Copper Mining in North America,* 7.
[188] Richter, "The Copper-Mining Industry in the United States, 1825-1925," 238.

district—took an option on one of the most productive properties, the **New Cornelia Copper Company Mine**, in 1911. The Calumet and Arizona developed the property as the first large open pit mine in the state. Steam shovels extracted carbonite ore and the lower-grade carbonite and sulfide ores that contained about 1.5 percent copper. To facilitate production, a leaching plant was constructed in 1917. One historian states that this effort was the first commercial application of hydrometallurgy to the reduction of copper ores on any scale in the country.[189] In 1931 Phelps Dodge, the nation's largest copper company, acquired New Cornelia and the mine became the New Cornelia Branch of Phelps Dodge. In the process, evidence of earlier copper mining was removed from the landscape.[190] Comparatively, the New Cornelia mine and nearby town of Ajo have closer associations with the Bingham Canyon Open Pit Copper Mine NHL than the Quincy Mining Company NHL.

These same technological changes and evolution of the mining landscape were repeated at other copper districts in the state. Although copper lodes were discovered in the Clifton-Morenci district (in the future Graham and Greenlee counties) in 1870, remote access restricted the development of high-quality ore copper mines. The Arizona Copper Company bought the principal area mines in 1882 and subsequently built a smelter and a branch rail line connection, solving the problem of expensive transportation costs. The Arizona Copper Company would dominate the district through the turn of the century. In 1885 the Morenci district smelter produced 3.345 million pounds of copper. In 1886, after the rich "bonanza" ores played out, the Arizona Copper Company and other mines invested in new equipment (concentrators and converter plants) to process lower-grade ores. Arizona Copper merged with the owners of neighboring mine claims, the Detroit Copper Company (of the Phelps Dodge Corporation) in 1919. Mining at the rich **Morenci mine** remained underground until the 1930s, when open pit mining of 1.036 percent copper ore commenced. The pit ultimately consumed the associated mining settlement of "Old Morenci," which had been established adjacent to the mine on extremely steep terrain.[191] Today (2023) Morenci remains one of the largest copper producers in North America.[192]

Comparatively, the Morenci mine and nearby company town of "New Morenci" have closer associations with the Bingham Canyon Open Pit Copper Mine NHL than the Quincy Mining Company NHL. With the loss of "Old Morenci" to the pit, resources comparable to the Michigan NHL no longer exist.

In the Globe-Miami district of east-central Arizona, oxide and carbonate copper ore mining began in earnest in the 1880s near what would become Globe, Gila County. One of the few deep shaft mines developed in Arizona that was not subsequently reworked as an open pit is the **Old Dominion Mine**, which by 1888 worked two shafts. A large smelter replaced an earlier facility in 1892. The Phelps Dodge Corporation gained control of the Old Dominion Copper Mining Company in 1902 and brought in additional processing equipment. Before it closed in 1931, the Old Dominion mine had produced more than 600 million pounds of copper. The mine is now included within the Old Dominion Historic Mine Park in Globe. While the massive headframe remains, the site has been modified for use as a city park. Historic buildings were taken apart for reuse in new facilities, slag piles re-graded, and a number of hiking trails added.[193]

[189] Ibid., 284.
[190] Ibid., 247; Gardner, et al., *Copper Mining in North America*, 7, 18.
[191] Gardner, et al., *Copper Mining in North America,* 15-16; Morenci History, "Western Mining History," https://westernmininghistory.com/towns/arizona/morenci/, accessed August 13, 2018.
[192] Richter, "The Copper Mining Industry in the United States, 1825-1925," 252-253; Gardner, et al., *Copper Mining in North America,* 15-16; "Morenci Copper Mine, Arizona," *Mining Technology*, https://www.mining-technology.com/projects/morenci/ (accessed July 27, 2018).
[193] Gardner, et al., *Copper Mining in North America,* 20; Richter, "The Copper-Mining Industry in the United States, 1825-1925," 252-253; "Tour the Old Dominion," *Globe-Miami Times*, https://www.globemiamitimes.com/tour-old-dominion/ (accessed July 27, 2018).

While contemporary with copper mining in Michigan, the Old Dominion mine does not represent the same breadth of development as the Quincy Mine Historic District NHL, and it has few surviving resources. For these reasons, the Quincy NHL is a better nationally significant example of the influence of copper mining on the US economy during the mid- and late nineteenth century.

Less than ten years after a high-grade copper ore body was discovered in Yavapai County in 1876, following the establishment of direct railroad access to the area and the purchase and operation of mine property by the United Verde Copper Company, the **United Verde Mine** became another highly profitable Arizona mine. Mineworkers employed at the underground mine lived in the nearby community of Jerome, named after one of the company's New York City financiers (and grandfather of Winston Churchill). Operations proceeded sporadically as the quality of copper diminished and the costs of mining rose, until William A. Clark, ACM copper magnate from Butte, Montana, acquired control of the mine, erected a copper smelter, and built a narrow-gauge railroad to directly connect Jerome to a major rail line. In 1911 the company established the town of Clarkdale, six miles from the Jerome mines, and established an even larger and more modern smelter. Between 1888 and 1930, the mine yielded nearly two billion pounds of copper. Open pit mining began in 1929; following a hiatus in the early 1930s, the Phelps Dodge Corporation purchased the property and continued open pit mining. The **Jerome (United Verde Mine) National Historic Landmark** recognizes the community as one of the state's two most important copper-producing centers in the late nineteenth and early twentieth centuries, along with Bisbee, Arizona. The 1966 nomination does not define a boundary, a period of significance, or itemize contributing resources. The emphasis is on the town of Jerome. Both Jerome and Clarkdale were described as nearly "ghost towns," with frame buildings, narrow steep streets, and an 1883 blast furnace.[194]

Comparing this Arizona NHL to the Quincy NHL, the Jerome district complements the Quincy NHL by its representation of a different period in the evolution in copper mining history and impacts on the American economy. Like the Butte-Anaconda NHL, the Jerome NHL identifies the national significance of the copper mining district as embodied in the community that supported mining efforts. Prior to its designation, many historic buildings were lost due to collapse, demolition, or fire.

In what would become Cochise County, near Bisbee, in the Bisbee/Warren district, the Copper Queen body of oxide ore was discovered in 1877. By 1884 the Copper Queen Mining Company had produced 35.5 million pounds of copper from ore containing over 20 percent copper, although that same year the Queen exhausted its original ore body. The **Copper Queen mine** came into its own as the district's dominant copper mine after 1885, the year when the Copper Queen combined with the owners of the nearby Atlanta mine: Phelps, Dodge and Company. Phelps Dodge funded construction of a railroad branch line to directly connect Bisbee to the transcontinental railroad, facilitating the district's copper boom. A smelter was constructed a quarter mile to the east. As at other copper mines in the state, as the grade of ore gradually declined over time, Phelps Dodge shifted to using steam shovels and open pit mining to expose sulfide and porphyry ores. Turning from the old Copper Queen underground mine, Phelps Dodge began removing Sacramento Hill, southeast of the Copper Queen, in the 1910s and 1920s. Work on what would become the **Lavender Pit** began in 1951 and continued until 1974; it is now one of the largest open pit copper mines of the world.[195] Underground mining continued in

[194] Gardner, et al., *Copper Mining in North America,* 19; "Jerome (United Verde Mine)," National Historic Landmark Nomination Form (Washington, DC: US Department of the Interior, National Park Service, November 13, 1966).
[195] Richter, "The Copper-Mining Industry in the United States, 1825-1925," 253-254, 273-274; David F. Briggs, "History of the Warren (Bisbee) Mining District," *Arizona Daily Independent* (June 4, 2015), https://arizonadailyindependent.com/2015/06/04/history-of-the-warren-bisbee-mining-district/ (accessed July 27, 2018); David Johnson, *Arizona Mines*, http://www.miningartifacts.org/Arizona-Mines.html (accessed July 27, 2018).

the district, with the average grade of ore at 6 percent copper; mining ended in 1975. The Copper Queen Mine was reopened for tours in 1976.[196]

The second largest mine in the Bisbee area was originally the Irish Mag Mine, acquired at the turn of the century by Michigan investors. By 1911 these investors had consolidated their interests in many mines into the Calumet and Arizona Mining Company, adjacent to the Copper Queen. In 1903 the company opened and focused efforts on the underground **Junction Mine**. A headframe from the mine survives on the southeast rim of the Lavender pit.[197]

Although directly associated with the development of the Copper Queen Mine and other copper mines in the Warren Mining District of Arizona, the state's richest and most famous mine is not included within the **Bisbee Historic District National Register of Historic Places** nomination, which was designated at a national level of significance in 1980. Rather, the nomination addresses the community that developed in the shadow of the Copper Queen Mine, and its close association with the Phelps Dodge Company—one of the great industrial corporations of the twentieth century. The nomination also identifies the national prominence Bisbee acquired during the labor strike of 1917, which resulted in the notorious "Bisbee Deportation," a vigilante effort by mining companies to crush organized labor in the state. The period of significance is broadly identified as 1800-1899 and 1900. [198]

Within the Bisbee Historic District National Register district is the **Phelps Dodge General Office Building,** designated a **National Historic Landmark** in 1983 for its associations with the powerful corporation and its significance in US economic growth and development. As stated in the nomination, from its beginnings in 1843 through the twentieth century, "… few other enterprises spanned so significant a period of economic change or so clearly reflected the late nineteenth- and early twentieth-century economic transformations that placed the United States in the forefront of the modern industrial world."[199] The building now serves as the Bisbee Mining and Historical Museum.

Relative to the Quincy Mining Company NHL historic district, the Phelps Dodge General Office building represents the further evolution of the United States copper industry when Western copper mines surpassed production rates of Michigan, with the associated changes in technology and extraction. The Phelps Dodge Corporation also represents the phenomenal growth of the copper mining business in the twentieth century, facilitated by the development of open pit mining. Further analysis might be undertaken to consider whether or not the Phelps Dodge General Office Building NHL, the Bisbee Historic District, and other mining-related resources, including the greater landscape, merit NHL designation as a historic district.

Utah

Following production surges first exhibited in the Michigan copper mining district, then in Butte, Montana, the third large surge began about 1908, when copper from porphyry ores began to come on the market. Of the many

[196] "History," *Queen Mine Historic Mining Tours*, http://www.queenminetour.com/History, (accessed August 14, 2018); David F. Briggs, "History of the Warren (Bisbee) Mining District," *Arizona Daily Independent* (June 4, 2015), https://arizonadailyindependent.com/2015/06/04/history-of-the-warren-bisbee-mining-district (accessed July 27, 2018).
[197] Richter, "The Copper-Mining Industry in the United States, 1825-1925," 273-274; Gardner, et al., *Copper Mining in North America,* 16-17; Briggs, "History of the Warren (Bisbee) Mining District"; Johnson, *Arizona Mines.*
[198] Marjorie H. Wilson, Janet Stewart, James Garrison, Billy G. Garrett, and Thomas S. Rothweiler, "Bisbee Historic District," National Register of Historic Places Nomination Form (Washington, DC: US Department of the Interior, National Park Service, June 30, 1980).
[199]George R. Adams and James B. Gardner, et al., "Phelps Dodge General Office Building" National Historic Landmark Nomination Form (Washington, DC: US Department of the Interior, National Park Service, May 4, 1983).

improvements in mining methods and metallurgy to influence the production and economics of copper, the most important advance has been attributed to the development of methods for mining low-grade porphyry deposits on a large scale.[200] The location of this development was at the **Highland Boy Mine** in Bingham Canyon, roughly 30 miles from Salt Lake City, Utah. The Highland Boy had started as a gold mine and, with the financial assistance of John D. Rockefeller and other Standard Oil interests, mining of 12 percent copper ore proceeded in 1899. The same year, metallurgist Daniel C. Jackling proposed that much vaster but poorer ores at the Highland (two percent or less copper sulphides distributed throughout porphyritic rock) could be profitably processed by a new method of open-pit mining on an immense industrial scale—a paradigm shift for the copper mining industry. And unlike earlier mining enterprises, the scale of production required enormous investments previously not pursued. Vast amounts of capital from the Guggenheims facilitated Jackling's development, resulting in the removal of an entire mountain by huge steam shovels and vast amounts of ores quickly transported by ore trains through a massive concentrating plant.[201] By 1910, using Jackling's innovations, the Utah Copper Company and other Utah copper mines produced more than half the amount produced by Michigan mines (63,000 tons versus 111,000 tons). By 1917, the Utah Copper Company produced over 195 million pounds of copper; in 1929 production reached 296 million pounds.[202]

The importance of the Highboy Mine is documented in the **Bingham Canyon Open Pit Copper Mine National Historic Landmark,** designated 1966 as the first open-pit copper mine in the world. Bingham Canyon Open Pit Copper Mine remained the most productive of all the low-grade copper mines (porphyry copper deposit) that followed. The immense output of this mine lifted Utah to the rank of fourth-largest copper-producing state by 1919. The mine was more than 2.3 miles wide and one-half mile deep in 1983. It is terraced into approximately 50-foot levels with ramp access between levels. Ore was removed from the mine by railroad cars, which exited through one of three tunnels or from the edge of the pit. Waste dumps formed from the removal of overburden can be seen from Salt Lake City. It is commonly known as the Kennecott Copper Mine. The NHL does not provide a specific period of significance beyond the 1900s.

Compared to the Quincy Mining Company NHL, the Bingham Canyon Open Pit Copper Mine NHL complements the Michigan NHL by its representation of the dramatic evolution of copper mining technology, and the consolidation of copper mining into a handful of giant corporations in the twentieth century. The Utah NHL also reflects the application of Progressive Era attitudes to industrial development. More so than with the Quincy Mining District NHL, the Bingham Canyon Open Pit mine reflects the application of science-based technological research and development as critical to mining success.[203]

Nevada

The second of the great porphyry mines to produce in the United States was the **Nevada Consolidated Copper Company mine** in the Ely (Robinson) mining district. Copper mining began there in 1868, but substantial development awaited construction of a railroad to Ely, and a nearby smelter, in 1906. Open pit work at the Copper Flat mine and underground at the Ruth mine began in 1908; by 1929, production reached 110 million pounds of copper. In the process of mining development, many of the associated mining towns were moved

[200] Gardner, et al., *Copper Mining in North America,* 11.
[201] LeCain, "Moving Mountains," 290, 618-628; Gardner, et al, *Copper Mining in North America,* 23; Richter, "The Copper-Mining Industry in the United States, 1825-1925," 267. Jackling adopted the open pit mining techniques already in use on the Mesabi Iron Range in Minnesota.
[202] See, "Industrial Landmarks: Shaft-Rockhouses of the Keweenaw Copper Mines," 276; Gardner, et al, *Copper Mining in North America,* 24.
[203] LeCain, "Moving Mountains," 429.

several times.[204] As with the Bingham Canyon Open Pit Mine, the Nevada mines represent a later phase of copper mining in the United States as compared to the Quincy Mining Company Historic District NHL.

[204] Gardner, et al., *Copper Mining in North America,* 24; "A Glimpse Into History: 'The Robinson Mining District,'" *White Pine Living*, https://whitepineliving.com/glimpse-history-robinson-mining-district/ (accessed August 13, 2018).

New Mexico

One of the oldest of the large copper mines on the North American continent said to be exploited by colonial interests is the **Chino Mine** at Santa Rita. It was first worked in 1804 under contract for the Spanish government. Early miners worked the deposit for native copper and erected a small smelting plant. Over time, and under various ownership, development included a concentrator, and by 1910 open pit mining commenced by the Chino Copper Company. The company was absorbed by the Ray Consolidated Copper Company in 1924, which in turn was absorbed by the Nevada Consolidated Copper Company in 1926. In 1933 the Kennecott Copper Company acquired all Nevada Consolidated's properties. In 1929 the net production of copper was about 85 million pounds; operations were suspended in 1934. As with the Bingham Canyon Open Pit Mine, the development of the Chino mine into an open pit mine represents a later phase of copper mining in the United States as compared to the Quincy Mining Company Historic District NHL.

Alaska

While copper production in Alaska would not match those of other Western mining districts, significant tonnage of rich sulphide ores made mining profitable in the state. By far the most significant producer of copper was in the Nizina district at Kennecott, Alaska, in the south-central corner of the state. Alaska mining districts were in fact the location of the last large and high-grade ore (chalcocite, at 79.8 percent copper) to be discovered. First developed by the Alaska Copper and Coal Company, in 1905 it reorganized as the Kennecott Mines Company, funded by the Guggenheims and J.P. Morgan. In 1915 the Kennecott Copper Corporation was formed. Substantial investment included construction of a mine and mill works, a railroad, and organization of a steamship line. In 1911 the company's production of copper was over 20 million pounds. As the Kennecott Copper Corporation proceeded to extract lower-grade ores, the company initiated one of the world's first ammonia-leaching plant at the Kennecott site, ensuring continued profitability. [205]

The national significance of the property is identified in the **Kennecott Mines National Historic Landmark,** designated in 1986 as a true vestige of an early twentieth-century copper mining camp, reflecting the mining technology of the era. The mines at Kennecott, Alaska, were among the nation's largest, and contained the last of the great high grade copper ore deposits discovered in the American West. Competition for the ownership and development of the mine affected territorial and national politics and led to the Ballinger-Pinchot affair, a turning point in the early conservation movement's struggles over public versus corporate interests. The innovations of leaching and flotation are represented here; the ammonia leaching process was said to be first successfully used on a commercial scale at Kennecott. By 1916 Kennecott was classed among the nation's largest mines, along with those at Butte, Bisbee, and Bingham Canyon. Profits from the mine provided the capital to fund Kennecott's purchase of the Bingham Canyon mine and the Utah Copper Company, and other mines in New Mexico, Nevada, and Arizona. By the 1930s, while the Alaska deposits were nearly exhausted, the corporation had expanded to become the nation's largest copper company and an international force in the metals market. The NHL is located within Wrangell-St. Elias National Park, 230 air miles east of Anchorage. It contains industrial and residential resources, including a concentration mill, support buildings, a power plant, a wood-frame company town, tramways, and mine camps. The period of significance is 1901-1938. [206]

[205] Fred H. Moffit and Robert E. Fellows, "Copper Deposits of the Prince William Sound District, Alaska," *Geological Survey Bulletin* 963-B (Washington, DC: United States Government Printing Office, 1950); Melody Webb Grauman, "Kennecott: Alaskan Origins of a Copper Empire, 1900-1938," *Western Historical Quarterly,* 9, no. 2 (April 1978), 199-200; Gardner, et al., *Copper Mining in North America*, 25.

[206] Robert Pierce and Robert Spude, "Kennecott Mines" National Historic Landmark Nomination Form (Washington, DC: US Department of the Interior, National Park Service, June 23, 1986).

Compared to the Quincy Mining Company NHL, the Kennecott Mines NHL complements the Michigan NHL by its representation of the evolution of copper mining technology, and the transition of copper mining from wealthy companies into giant corporations in the twentieth century. Both Kennecott and Calumet & Hecla began to treat copper ores by ammonia leaching the same year, five months apart (Kennecott in March 1916, Calumet & Hecla in July). The use of ammonia in leaching had been proposed and tested by a Canadian metallurgist thirty years previously, although Calumet & Hecla metallurgist Harry Benedict first applied to patent the process in the United States.[207] As noted by Historian Melody Webb Grauman, Kennecott also represents a maturity in the management of the copper industry: between 1906 and 1915, management followed a nineteenth-century business philosophy as represented in its Alaska Syndicate. In this, wealthy owners with decision-making responsibility operated as a partnership without accountability to public stockholders. Ultimately, this led to political dabbling and the Ballinger-Pinchot affair. With the creation of the Kennecott Copper Corporation in 1915, management applied tenets of scientific management to business technology, and decision-making shifted to efficient managers.[208]

[207] C. Harry Benedict, *Red Metal: The Calumet and Hecla Story* (Ann Arbor: University of Michigan Press, 1952), 179-180; E. J. Duggan, "Ammonia Leaching at Kennecott," *Transactions of the American Institute of Mining, Metallurgical and Petroleum Engineers* 105 (1933): 547-588.
[208] Grauman, "Kennecott," 197-211.

6. PROPERTY DESCRIPTION AND STATEMENT OF INTEGRITY

Ownership of Property		Category of Property	
Private:	X	Building(s):	
Public-Local:	X	District:	X
Public-State:	X	Site:	
Public-Federal:	X	Structure:	
		Object:	

Number of Resources within Boundary of Property:

Contributing		Noncontributing	
Buildings:	212	Buildings:	84
Sites:	008	Sites:	00
Structures:	017	Structures:	11
Objects:	001	Objects:	00
Total:	238	Total:	95

(See discussion under methodology for explanation of resource counts)

PROVIDE PRESENT AND PAST PHYSICAL DESCRIPTIONS OF PROPERTY
(Please see specific guidance for type of resource[s] being nominated)

METHODOLOGY/APPROACH

The Quincy Mining Company Historic District is a complex collection of resources that represent and embody nationally significant themes in United States history. For the purposes of this nomination, a cultural landscape methodology was applied to document existing conditions and evaluate the district. This approach is based on federal guidance for evaluating historic resources consisting of or containing significant landscape elements, including *National Register Bulletin 30: Guidelines for Evaluating and Documenting Rural Historic Landscapes*, *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*, and *A Guide to Cultural Landscape Reports: Contents, Process, and Techniques,* and other pertinent documents.[209] This approach is used because the tangible and intangible aspects of the landscape individually and collectively create historic character and aid in the understanding of its historic and cultural importance.[210]

[209] Linda Flint McClelland, J. Timothy Keller, Genevieve P. Keller, and Robert Z. Melnick, *National Register Bulletin 30: Guidelines for Evaluating and Documenting Rural Historic Landscapes* (Washington, DC: US Department of the Interior, 1989, revised 1999); Robert R. Page, Cathy A. Gilbert, and Susan A. Dolan, A *Guide to Cultural Landscape Reports: Contents, Process, and Techniques* (Washington, DC: US Department of the Interior, National Park Service, 1998); Charles A. Birnbaum and Christine Capella Peters, *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* (Washington DC: US Department of the Interior, National Park Service, 1996), 3-5.

[210] The same use of landscape character areas has been previously used in the 2015 Lafayette Park National Historic Landmark in Detroit, Michigan.

To better understand the complexity of the Quincy Mining Company Historic District, the property has been divided into "landscape character areas" for the purpose of documentation and evaluation. According to National Park Service guidance, a landscape character area is "an area defined by the physical qualities of a cultural landscape and the type and concentration of cultural resources."[211] While landscapes are not recognized as separate property types under National Historic Landmark guidance, but rather as sites or districts, the use of landscape character areas to organize the description is beneficial for the historic district due to the way in which the Quincy Mining Company used its property. These areas were established based on the physical qualities, historic uses, and relationship of resources present within a given part of the district. For the purposes of this nomination, the historic district is recognized as containing eight discrete cultural landscapes that represent key component resources of the nationally significant 1856-1920 Quincy operations**.** The components include extraction (mine), processing (mill, smelter, and transportation between these), management, and worker housing. Below are brief summaries of each landscape character area; specific detail of the landscape character areas follow below.

Landscape Character Area 1: The **Quincy Mine Industrial Core** area is where surface mining operations associated with extraction occurred. This area includes extensive extant buildings, structures, sites, and landscape features associated with the Quincy extraction operations, including Quincy shafts 1-8 sunk into the Pewabic Lode, the No. 2 Hoist Houses (1882, 1894, and 1918), and the No. 2 Shaft-Rockhouse.

Landscape Character Area 2: The **Quincy Hill Housing and Mine Management** area is on the northwest side of US Highway 41 (US-41), across the road from the Quincy Mine Industrial Core. This consists of, from south to north, the Quincy Mine Office and Superintendent's Office, Frenchtown and Sing-Sing Housing Locations, the Quincy Dryhouse, the Limerick and Pewabic Housing Locations, a portion of the surviving Franklin Housing Location and the former Hardscrabble and Backstreet Housing Locations. Visible above-ground resources in this area primarily date from 1882 to 1917. This area is directly above a large portion of the underground extraction operations and represents the largest extant area of worker housing in the district.

Landscape Character Area 3: The **Lower Pewabic Housing Location** is on the east side of Quincy Hill. It was acquired by the Quincy Mining Company in 1891. The company platted and developed the location between 1899 and 1917. Located east of the No.2 Shaft-Rockhouse, the historic street grid, many houses, outbuildings, foundations of former residences, and residential landscape features remain extant and retain a direct physical and visual connection to the No.2 shaft area.

Landscape Character Area 4: The **Quincy Smelting Works,** located on the north shore of Portage Lake, was constructed upon stamp sands deposited by earlier Pewabic and Franklin Mine operations. The processing site housed Quincy copper smelting operations from 1898 to 1931 and again from 1937 to 1971 in association with the reclamation plant operations, and retains the 1898 Quincy Smelter, "one of the most intact surviving reverberatory furnace smelters in the world," as well as a "complex of more than twenty buildings [that] include cupola and reverberatory furnaces, mineral warehouse, briquetting plant, warehouses, powerhouse, machine shop, laboratory, and assay office."[212]

Landscape Character Area 5: Quincy platted and developed the **South Quincy Housing Location** directly north of the Quincy Smelting Works in 1903 to provide housing for smelter workers, although a few resources may pre-date this development. The area includes residential properties spaced irregularly along

[211] Page, et al., *A Guide to Cultural Landscape Reports*, 127.
[212] Jane C. Busch, "Copper Country Survey: Final Report and Historic Preservation Plan," Keweenaw National Historical Park Advisory Commission, August 2013, 66.

Pewabic Road, Maple Street, and East 2nd Street in a loosely defined neighborhood with rural characteristics juxtaposed with expansive views of Portage Lake and the Quincy Smelting Works site.

Landscape Character Area 6: The 1888-1890 **Quincy and Torch Lake Railroad Corridor** extends to the east from the Quincy Mine along the crest of Quincy Hill and gradually curves to the north, terminating at the Quincy Stamp Mill site. The railroad provided an essential transportation connection between the Quincy extraction and processing operations. The graded corridor is intact for the majority of the route. The extant grading (including massive areas of cut and fill), retaining walls, bridges, culverts, and other drainage features reflect the investment by Quincy in development of this important transportation system.

Landscape Character Area 7: The **Quincy Stamp Mill** site is situated on the southwest shore of Torch Lake in Osceola Township. Quincy used the site from 1888 to 1931 for processing rock from the mine, and again from 1937 to 1967 for reclaiming copper from stamp sands. The landscape contains the ruins of the stamp mill and reclamation plant. Portions of the stamp mill that contribute to the district are those that were historically owned and developed by Quincy during the period from 1888 to 1920. These include stamp mill buildings, transportation corridors and associated landscape features. It also includes Bunker Hill, where Quincy established housing for mine managers in 1888.

Landscape Character Area 8: The **Mason Housing Location** was established by Quincy between 1890 and 1900 to provide a residential community for workers at the stamp mill on the west side of Torch Lake. Twenty-three company houses remain, including a row of twelve homes on the west side of M-26, another row of ten houses on the east side of the highway, and one isolated house northeast of the others.[213]

In the subsequent narrative, the text will provide additional detail for each landscape character area including descriptions of the past and present physical conditions of each character area; identification of contributing and non-contributing resources; definition of the boundaries/extents of each area; and assessment of the general character of the setting and landscape, architectural patterns, and characteristic elements and features. Architectural descriptions are presented in the form of patterns of (where appropriate) settlement, building forms, common materials, and unique features. Typical building styles, materials, and development density are also identified. Groups of similar resources, such as worker housing, are described collectively, with examples and exceptional features noted. With the exception of particularly significant or characteristic examples, which receive additional descriptive detail, individual building/structure descriptions are not provided for every counted resource. Some landscape character areas require a higher level of description because the resources are more individualistic in nature and because there are subtle variations across the area, for example at each shaft site.[214] Following the descriptive narrative are tables enumerating the counted resources, type (building, structure, object, site), their contributing/non-contributing status, and an identification number keyed to the accompanying maps (See Maps 1-8). For reasons of scale and legibility, not all ancillary resources, such as garages and sheds associated with a primary building, can be clearly shown on the map. In instances where the association of ancillary resources to primary resources is unclear, such resources are identified individually on the maps. Please refer to the tables for an accurate resource count. An evaluation of integrity is also included for each character area. The landscape character areas and their relationships to each other are illustrated in Map 4.

[213] The houses within the Mason Housing Location have previously been identified as contributing resources within the "Quincy Mining Company Stamp Mills Historic District" National Register of Historic Places nomination. Larry Mishkar and Alison K. Hoagland, "Quincy Mining Company Stamp Mills Historic District," July 18, 2007.
[214] This format follows the precedence of the "Butte-Anaconda Historic District" National Historic Landmark document.

Note that the term "location" has a specific meaning within the context of copper mining in the Keweenaw Peninsula. Historically, housing locations indicated those areas set aside by mining companies as residential districts for mine workers and their families. Housing locations were typically discrete areas with their own idiosyncratic names, analogous to neighborhoods within cities or villages. They were platted by the companies, who retained ownership of the land (as opposed to land platted and sold) and leased the land and/or the houses on them to mine workers. Mining companies and residents, both of the locations and neighboring areas, used this term rather than "neighborhood" and its use persists in the district. Throughout this report, "location" or "housing location" is used to refer to these settlements.

The original 1989 NHL nomination provided resource counts and an itemized list of contributing and non-contributing resources organized by "area" (e.g., Sing-Sing Housing Location, smelter complex, etc.). Within each area, both extant buildings and "sites" of former buildings were individually counted, apparently based on a 1922 map that was reproduced in 1987.[215] It is unclear the extent to which the foundations or ruins of these former buildings were visible. The nomination utilized a numbering system for the buildings and sites, some of which were based on numbers assigned by the Quincy Mining Company. The numbers do not correspond to current street addresses, and not every building was numbered. Outbuildings were not numbered or counted. Duplexes were assigned two numbers, which had the potential to confuse the resource count. A few, but not all, buildings were identified by name. This makes it difficult to compare the 1989 list of resources to those present today. This revised NHL documentation provides an updated count of all contributing and non-contributing resources within the district boundaries but does not attempt to link them to those described in the original National Historic Landmark nomination.

The complexity of the landscape within the Quincy Mining Company Historic District necessitates a focused approach to counting individual resources. Historic buildings and structures range from intact and actively used to ruins and foundations. While many of the latter are massive in scale and visible on the landscape from long distances, others are overgrown with dense vegetation to the point of being indistinguishable during the short growing season. Some archeological surveys have been conducted, but the full extent of below-ground resources is largely unknown. The ground plane itself has been shaped by the deposition of mine waste that has in turn been partially excavated, regraded, or covered with vegetation. The historic district is scattered with the remnants of mining operations, including pieces of equipment and rolling stock, many of which have been moved over the years, but which still contribute to the overall character of the landscape as an industrial mining operation. Therefore, the following parameters have been used to count resources:

- Resource counts are organized by landscape character area, as described above.
- Each landscape character area is counted as a contributing site, reflecting its distinctive nature and characteristics within the overall Quincy Mining Company Historic District.
- [redacted]
- [redacted]

[215] U.P. Engineering and Architectural Associates, Inc., "Map of Quincy Mine Location (reproduced from the map of 1922 by Charles W. Lawton, General Manager, and Ray W. Armstrong, Engineer)," Houghton, Norway and Escanaba, MI, October 1987, in Lidfors, et al., "Quincy Mining Company Historic District." National Historic Landmark Nomination Form.

- [redacted]
- Recognizable and distinctive structures, such as mining headframes and smokestacks, are counted individually.
- Small-scale structures and features such as utility trenches, industrial artifacts, and rolling stock are not counted individually, but will be described collectively as part of the overall description of each landscape character area.
- Railroad remnants, including track and trestle remnants and associated integral design elements such as culverts, are described and counted as one contributing railroad transportation network (structure) spanning the district. Particularly intact components of the network are identified in their associated LCA resource tables and maps as "HAF"s.
- Road systems are described and counted as one system (structure) that spans the district. Roads are important in understanding the distinction among landscape character areas, their development, use, and relationship to topography.
- Mine waste (poor rock) piles are described as integral historic associated features within the LCA of which they are a part, and identified in their associated resource tables as "HAF"s. They are also identified in their respective LCA maps.
- Capped mine shafts were included in the 1989 nomination and are included as component features of the landscape character area (site) in which they are located.

Contributing and non-contributing buildings were mapped using a Geographic Information System (GIS) and exported to a table with addresses and coordinates for reference (attached). Portions of the table identifying contributing and non-contributing resources are abstracted into each landscape character area description.

A final note on methodology: addresses in the district are highly idiosyncratic. Because the Quincy Mining Company assigned building numbers, which in some cases have been overlaid by one or more municipal addresses, an individual property may have three numbers associated with it, or none at all. There is not always one "official" address.

PAST AND PRESENT PHYSICAL DESCRIPTION OF THE PROPERTY

Overview Description

The Quincy Mining Company Historic District is located on the Keweenaw Peninsula in the northwestern portion of Michigan's Upper Peninsula. The Keweenaw Peninsula is a narrow land mass extending approximately 75 miles north and east into Lake Superior. Lake Superior greatly affects the climate of the peninsula, which can receive 300 inches of snow annually. Mild daytime temperatures in the summer average in the 70s, and in the 20s in the winter. In general, the peninsula is heavily vegetated with successional woodland dominated by conifers including balsam fir (*Abies balsamea*), spruce (*Picea* spp.), red pine (*Pinus resinosa*), and Northern white cedar (*Thuja occidentalis*) and deciduous trees including a variety of maple (*Acer* spp.), oak (*Quercus* spp.), birch (*Betula* spp.), aspen (*Populus termuloides*), and alder (*Alnus* spp.). The peninsula is bisected by the Keweenaw Waterway, a partly natural, partly dredged waterway that includes (east to west) the

Portage River, Portage Lake, and Portage Lake Canal. Extending north from Portage Lake are Torch Bay and Torch Lake.

As noted in Section 5, the Keweenaw Peninsula is formed from volcanic strata. The copper-bearing lodes of the peninsula run northwest/southeast along the peninsula, forming a geological "spine" along which the historic resources of industrial copper mining are aligned. It is sparsely populated, with most of the population concentrated in the cities of Houghton/Hancock (divided by the Keweenaw Waterway) and the Village of Calumet (north of Houghton/Hancock, in the middle of the peninsula). Smaller villages are scattered along the peninsula, most in former copper mining locations. South of the Keweenaw Waterway, from south to north, these include Rockland, Painesdale, and South Range. Continuing north of the Waterway and north of Calumet are Mohawk, the former community of Clifton, then Phoenix, Central, and finally Copper Harbor at the northern tip (see Maps 1-3).

Michigan Highway 28 describes an east-west southern boundary to the peninsula, while US Highway 41 (US-41) and Michigan Highway 26 (M-26) provide the primary north-south circulation routes within the peninsula. US-41 follows the shoreline of Keweenaw Bay from L'Anse to the west shore of Portage Lake. It then turns west to follow the south shore of Portage Lake, crosses over the lake from Houghton to Hancock, and continues up the center of the peninsula to the Village of Calumet. From the south, M-26 runs up the center of the peninsula to Houghton, then crosses Portage Lake and turns east to follow the north shore of Portage Lake and the west shore of Torch Lake before turning west at the community of Lake Linden, to continue on to the Village of Calumet. In Calumet, US-41 and M-26 merge to form one road until they diverge again at Phoenix, with M-26 running along the Lake Superior shoreline. US-41 continues along the peninsula spine until it merges again with M-26 in Copper Harbor at the tip of the peninsula.

The Quincy Mining Company Historic District is located at about the midpoint of the Keweenaw Peninsula within Franklin, Quincy, and Osceola Townships of Houghton County, adjacent to the City of Hancock and across the western arm of Portage Lake from the City of Houghton. The topography rises steeply from the shoreline of Portage and Torch Lakes to the top of Quincy Hill, which is situated north of Houghton and Hancock, and where the Quincy Mining Company was centered.

The 1063+ acre district is composed of two large, irregularly shaped areas connected by an east/west historic railroad corridor (see Map 4). The large area on the west side of the district encompasses Landscape Character Areas 1 through 5, and contains the resources associated with mining operations, management, and housing locations at the top of Quincy Hill and at the Quincy Smelting Works along the shoreline of Portage Lake east of Hancock. These LCAs also encompass the original NHL boundary. Three additional LCAs are included in the expanded NHL boundary: LCAs 6 through 8. The LCA 6 consists of the Quincy and Torch Lake Railroad corridor, which extends east to the second large irregularly shaped area, containing the Quincy Stamp Mill area (LCA 7) and associated housing location (LCA 8). The descriptions which follow serve to establish the relationship of the LCAs to each other and to the NHL district in its entirety.

At the top of Quincy Hill, the spatial organization of resources within LCAs 1 and 2 are defined by their relationship to the southwest/northeast orientation of the copper lode below ground. The US-41 parallels the direction of the lode in this area and provides visual and physical separation between the largely industrial resources on the east side of the road in LCA 1 and the largely management and housing resources on the west side in LCA 2 (see Maps 6 and 7). The Quincy Mine Industrial Core LCA 1 extends along the east side of US-41 from Kowsit Lats Road on the south to Paavola Road on the north. From south to north the resources are aligned parallel to US-41 and include both mining shafts (now capped) and the industrial buildings and structures on the surface that supported the Quincy Mining Company's extraction and initial processing of the

copper ore: Shafts No. 7, 4, 2, a blacksmith/machine shop area, then Shafts No. 6, 1, 3, 5, and 8. Within the LCA 1 is the south-facing slope of Quincy Hill, including a portion of what is now the Mount Ripley Ski area. Tramlines along the slope at this southern end of the LCA connected the industrial facilities at the top of the hill with the smelting works at the bottom.

The Quincy Hill Housing and Mine Management LCA 2 encompasses an area on the west side of US-41 between Ingot Street on the south and Lake Annie Road on the north. Within this LCA are several east-west roads that generally run perpendicular to US-41. From south to north, these are Ingot Street, French Town Road,[216] No. 2 Road, Campus Drive, and 1st, 2nd, 3rd, 4th, and 5th Streets. The 17 Road (also known as Sing-Sing Road) loops north from No. 2 Road and then curves northwest to become Raasio Road. Cross streets north of 1st Avenue include Limerick Street, Street Car Road, and Mine Rock Road. At the south end of this LCA, and between Ingot Street and French Town Road is the historic mine management area. The mine management area includes the Quincy Mine Office and the houses of the superintendent and mine captains. Between French Town and No. 2 Roads is the Quincy Dryhouse area. Surrounding the Dryhouse area to the west are the historic housing locations of Frenchtown and Sing-Sing. North of Campus Drive to Lake Annie Road is the historic housing location of Limerick. Hardscrabble and Backstreet Locations, which in 1989 contained only a few surviving buildings, are west and northwest of Limerick, at the western side of LCA 2.

East of the Industrial Core on Quincy Hill were several more housing locations. The Lower Pewabic Housing Location, LCA 3, survives within the district. The housing resources within LCA 3 do not demonstrate the same relationship to the subsurface lode as evident along US-41 and are at a further distance from the industrial resources in LCA 1 (see Map 8). Somewhat visually removed now from the Quincy industrial development due to vegetation, Pewabic is arranged along two parallel east/west roads, West Lower Pewabic Street and South Street. Included within the original NHL boundary, south and west of the Lower Pewabic Housing Location, was the Newtown Housing Location. Newtown has been excluded from the revised district boundary due to a substantial loss of integrity (see Maps 5 and 8), and Coburntown is excluded because it is not historically associated with the Quincy Mining Company.

Down from Quincy Hill, along the shoreline of Portage Lake is LCA 4, which contains the Quincy Smelting Works (see Map 9). The LCA 4 occupies level ground jutting into Portage Lake between Hancock and the unincorporated area of Ripley, and contains industrial facilities, tram lines and slag piles associated with copper smelting.

The South Quincy Housing Location for smelter workers, LCA 5, is separated from LCA 4 by M-26 and is arranged on the steep lower slope of Quincy Hill (see Map 10). The curving Maple Street and Pewabic Road generally climb north/south to provide access to workers' housing, while the east/west 2nd Street provides access to houses that directly overlook the smelter complex.

As noted in Section 4, there are several areas on the edges of the Quincy Hill/Quincy Smelting Works portion of the district that were historically associated with the Quincy Mining Company, but which have been excluded from the district due to not meeting the established criteria for the district or subsequent and substantial loss of integrity: the City of Hancock, and the Hardscrabble, Kowsit Lats, Mesnard, Coburntown, Newtown, and Ripley Housing Locations (See Map 5)

The second large area of the historic district encompasses the resources associated with the Quincy Stamp Mill and contains LCAs 7 and 8. This area is located east of Quincy Hill along the west shore of Torch Lake, approximately halfway between the villages of Dollar Bay and Hubbell. Resources in this area are located on

[216] While the housing location is one word (Frenchtown), the road name uses two words (French Town).

either side of M-26 and include the historic No. 1 and No. 2 Stamp Mills, the Reclamation Plant (built outside the period of significance), the housing locations of Mason (workers), and large deposits of stamp sands.

Connecting the two large areas is a narrow corridor associated with the historic Quincy and Torch Lake Railroad Corridor, LCA 6. This LCA begins at the top of Quincy Hill just south of the Lower Pewabic Housing Location, runs east, then curves gradually north to the Quincy Stamp Mill on Torch Lake.

The rail corridor is one of two contributing resource types that is found throughout the historic district, and span character area boundaries. The other is the road system. While both the rail corridor and the road system extend outside the boundaries of the district, for the purposes of this nomination they are each considered as contributing structures within the boundaries of the district. The Copper Range and Mineral Range Railroads corridor is another regional railroad that runs through LCA 4, LCA 7, and LCA 8. It is not directly associated with the Quincy Mining Company and is considered one non-contributing structure (see Maps 4, 9, 11, and 12).

The overall character of the NHL district varies depending on location. A few generalizations can be made, while specifics are provided in the individual landscape character area descriptions. During the period of significance, from 1856 to 1920, the majority of the district was composed of two distinct land uses, industrial/mining operations and company housing. Today, the district contains resources associated with residential, commercial, industrial, institutional and recreational/tourism uses. Although no mining activities continue today, many of these places have been transitioned for use as interpretive sites, which provide a tangible link to their historic use through education. Because of the intensive industrial use of the landscape, most of the native vegetation, which had included abundant growths of sugar maple (*Acer saccharum*), birch (*Betula* spp.), fir (*Abies* spp.), oak (*Quercus* spp.), and white pine (*Pinus strobus*), as well as some swamp or marshland, was “cut over” to both clear the land for use and to provide wood for construction and fuel. With the decline of the copper industry and gradual scaling back of company operations, natural succession has reclaimed large areas of formerly cleared land. Woodland covers large portions of the district, including areas of conifers such as balsam fir (*Abies balsamea*), spruce (*Picea* spp.), Northern white cedar (*Thuja occidentalis*), and red pine (*Pinus resinosa*). Mixed shrubs and trees include a broad range of woody plants in various phases of succession and transition such as mixed maple (*Acer* spp.), oak (*Quercus* spp.), birch (*Betula* spp.), aspen (*Populus tremuloides*), alder (*Alnus* spp.), apple (*Malus* spp.), and lilac (*Syringa* spp.) species. Meadow areas contain mixed grass and forb species as well as scrub plants (woody plants that are seedlings or saplings). Abandoned industrial and company housing sites are overgrown with volunteer herbaceous and woody plants. Some of the domestic plants that were introduced to the area by residents have survived and spread, including rhubarb (*Rheum* spp.), lilacs (*Syringa* spp.), lilies (*Lilium*), apple (*Malus* spp.), and Lombardy poplar (*Populus nigra*) trees. These plants provide hints of former activities and help to identify historic company housing sites.

RESOURCE DESCRIPTIONS

Archeological Resources (features within various LCAs)

Archeological resources related to historic copper mining in Michigan’s Keweenaw Peninsula have been identified within the NHL district, however, insufficient archeological survey has been conducted to sufficiently define the significance or integrity of these subsurface components. Because all of the archeological sites are located within the boundaries of an LCA that is counted as a contributing site, the archeological sites are not counted separately from the larger site of which they are a part. Further archeological evaluation of the integrity and associations of the subsurface components would be required to determine if the individual archeological sites contribute to the NHL district.

Documentation of copper mining in the area began in 1863 when Charles Whittlesey published his observations regarding early copper mining in the area; investigations continue to the present. The Keweenaw Peninsula hosts the oldest known copper-working sites in North America, dating to the early Holocene (about 10,000 years ago). Although historic activity has resulted in extensive ground disturbance, precontact archeological remains likely exist. At present, precontact resources have yet to be investigated in depth. Although they may offer additional information about early activity in the Upper Great Lakes, precontact archeological resources would not contribute to the national significance of the district since they would provide information about events and trends that happened outside of the period of significance.

There are seven archeological sites within the Quincy Mining Company Historic District NHL that are assigned state site numbers: 20HO127–20HO131, inclusive, 20HO276, and 20HO344. All seven are associated with the Quincy Mining Company operations. Site 20HO276 requires additional information to determine National Register eligibility, and Site 20HO344 has been recommended as eligible for National Register listing. [redacted] Future research will likely create multiple smaller archeological sites from these larger sites. Although their contributing status is not evaluated in this nomination update, they are acknowledged as warranting further investigation and evaluation.

Site number **20HO127** designates the associated known and/or presumed subsurface archeological resources primarily associated with the Quincy Mining Company. [redacted]

Site number **20HO128** designates the associated known and/or presumed subsurface archeological resources associated with the Quincy Mining Company mining operations. [redacted]

Site number **20HO129** designates the known and/or presumed subsurface archeological resources associated with the Quincy Mining Company. [redacted]

Site number **20HO130** designates the associated known and/or presumed subsurface archeological associated with the Quincy Mining Company mining operations. [redacted] This site includes industrial mining ruins and mining shafts first developed by the Pewabic Mining Company. [redacted]

Site number **20HO131** designates the associated known and/or presumed subsurface archeological resources associated with the Quincy Mining Company mining operations. [redacted]

Site number **20HO276** designates the associated known and/or presumed subsurface archeological associated with the Quincy Mining Company mining operations. [redacted]

Site **20HO344** designates the associated known and/or presumed subsurface archeological resources associated with the Quincy Mining Company. The LCA 2 overlays this site. [redacted] Vegetation ranges between fairly open grassy areas with scattered apple trees to dense thickets of apple trees and scrubby bushes. [redacted] The site has been recommended as eligible for listing on the National Register of Historic Places under Criteria A, C, and D, pertaining to the lives of mine employees and their families occupying company-provided housing in the Keweenaw Copper Country.[217]

The following chronology gives the highlights of past archeological work on property formerly owned by the Quincy Mining Company, by year of their undertaking. Most of these activities were undertaken by the NPS, or by the Michigan Technological University (MTU) via contracts or agreements with Keweenaw National Historical Park (KEWE). Many of the reports were prepared in response to modern utility and land development projects, performed in compliance with the National Historic Preservation Act of 1966. [redacted]

1989: A Phase I archaeological and architectural survey for an area surrounding the [redacted], was undertaken due to proposed alterations and improvements to the route. The survey area covered [redacted]

2000: In response to a proposed construction of a water main east of the No. 2 Hoist House, MTU assessed potential impacts to cultural resources within the KEWE Quincy Unit. The report recommended using an alternate route.[redacted]

[redacted]

2001: In response to the proposed creation of an [redacted] MTU assessed potential impacts to cultural resources within the KEWE Quincy Unit. The report identified [redacted] did not go forward.

2003: In response to a proposed sewer line improvement project for Franklin Township, MTU assessed potential impacts to cultural resources within the KEWE Quincy Unit. The proposed line intersected through many culturally sensitive areas within the NPS unit, and sub-surface testing was utilized to determine potential for impact. [redacted] Shovel testing resulted in the determination of no adverse effect.

2005: MTU conducted a comprehensive inventory of the surface features on the [redacted] The report provides a land use history and survey of resources as part of planned rehabilitation efforts for the expansion of the [redacted]

2010: A [redacted] presented best practices in the rehabilitation and interpretation of the Quincy Mining Company's Quincy & Torch Lake Railroad Engine House. Excavations of the building provided clues to its several decades of use [redacted]. The crew also documented and mapped resources in the vicinity of the engine house, including the water tower.

2014: NPS staff confirmed the presence of archeological deposits [redacted]

2014: A project assessment by NPS staff determined the construction of two interpretive trails that overlook the Quincy Dryhouse ruins would not have an adverse effect on the resources.[226]

2017: Archeological testing for the installation of a facility sign at the Quincy Smelting Works adjacent to but outside the M-26 Highway right-of-way confirmed the presence of stamp sands underneath a layer of topsoil.[227]

[redacted]

2017: In conjunction with planned landscape work for the Quincy Mine Office grounds, archeological survey and evaluation found remnants of the company's first office building, sited just southwest of the present office building.[228]

2018: The associated report from MTU summarizes mitigation activities including artifact collection and documentation.

2019: Through a cooperative agreement between MTU and the NPS, MTU inventoried roughly 135 acres of fee simple tracts owned by the Quincy Development Corporation, representing property tracts associated with activities connected to the Quincy, Franklin, and Mesnard Mining companies in the late nineteenth and early twentieth centuries.[230]

2020: Based on the results of the previous survey, MTU conducted further archeological field work on two tracts owned by the NPS within the KEWE Quincy Unit. Shovel test pits along Testing a possible yielded little new information about early mining resources of the Quincy Lode or earlier Indigenous mining activities. No further work in this area was recommended. Testing features behind the produced few artifacts. A located on the were determined to have high integrity and warranted additional archeological research. Investigations into the location of the , utilized during the Copper Country miners' strike of 1913-1914,

2022: In response to the proposed City of Hancock Business and Technology Park project located in Houghton County, the Public Service Archaeology & Architecture Program of the University of Illinois at Urbana-Champaign conducted a Phase I survey of 42.5 acres. Field reconnaissance survey work consisted of shovel testing and pedestrian reconnaissance. The report recommended site number 20HO344 as eligible for listing in the National Register of Historic Places.

2022: Through a cooperative agreement with the NPS, MTU conducted a precontact mining survey on the [redacted] identified a number of [redacted]. The origins and function of these features is uncertain . The extreme upper portion of the survey area fell within the [redacted]. Field investigations in an area [redacted] did not locate any precontact mining remains in the [redacted].

Poor Rock Piles (features within various LCA sites)

While not identified as contributing resources, poor rock piles are identified here as historic associated features of the district that merit further description. The mining process created vast quantities of waste rock, known locally as poor rock. As the copper was separated from the surrounding rock, the poor rock was deposited in large piles in unused areas around the shafts. Some was repurposed, in many cases for building (poor rock foundations are common throughout the Keweenaw Peninsula) or other uses. However, most was left in place. Today, poor rock remains a historic associated feature of the Quincy Mining Company Historic District landscape and helps to illustrate the scale of mining operations within the district. The condition of poor rock piles within the district varies. In some areas, piles have been diminished as the rock is removed for reuse in road construction. In others, vegetation has grown over the piles, making their extents difficult to determine. In many cases, though, poor rock piles are still clearly identifiable on the landscape. A characteristic poor rock pile is located at the No. 6 Shaft (northeast of the No. 2 Shaft-Rockhouse). It is approximately 300 feet in diameter and 30 feet high, and consists of small to medium, irregularly shaped, reddish-grey basaltic rock. The pile is domed and tails off on all sides. On the top of the pile is a wood structure and several wood poles. Highly visible poor rock piles are indicated on landscape character area maps for illustrative purposes, but these are not intended to represent the full extent of poor rock within the district.

Resources that Span Multiple LCAs

There are a number of contributing resources that span the district and multiple LCAs. The resources are counted here rather than as part of the specific LCAs.

1. Quincy and Torch Lake Railroad/Tram Lines (one contributing structure)

At the height of the Quincy Mining Company's operations in the late nineteenth and early twentieth century, a complex network of rail and tram routes crisscrossed the Quincy Mine, linking the various functions of the mine operations. Today, evidence of this network exists in extant rails and crossties, railroad grades, remnants of trestles, and some rolling stock. The intracompany Quincy and Torch Lake Railroad and various tram roads carried counter-weighted tram cars filled with copper rock from the mine on Quincy Hill down to the original location of the stamp mill at Portage Lake. While the corridor of the Quincy and Torch Lake Railroad between the Industrial Core and Quincy Stamp Mill landscape character areas is described as a separate character area, below, portions of the line are still highly visible within the Industrial Core landscape, including rails and ties and rolling stock. The Pewabic and Franklin mining companies also had tram roads that descended from their mines on Quincy Hill to mining operations bordering Portage Lake. (Both were acquired by the Quincy Mining Company and are part of the district.) Because the tram roads were made obsolete by the merger of the Pewabic

[redacted]

and Franklin mining companies or by the construction of the new stamp mill at Torch Lake, only traces of these routes now remain on Quincy Hill and the lower slope as it descends toward Portage Lake. Franklin Tram Road, an angled road between Coburntown and Lower Pewabic Housing Locations, runs along a portion of the tram road. Other tram lines are located throughout the Industrial Core, some between buildings and structures within a particular shaft complex and some between the shaft complexes and are frequently visible on the landscape. The most distinctive component of this railroad network system, the Quincy and Torch Lake Railroad Corridor, is identified as LCA 6, but is enumerated here as part of the greater system.

2. Copper Range and Mineral Range Railroads Corridor (one non-contributing structure)

A State of Michigan recreational trail runs from Hancock to Calumet along the north shore of Portage Lake and the west shore of Torch Lake before turning west toward Calumet. This route follows a formerly regional railroad, used variously by the Mineral Range Railroad, the Hancock and Calumet Railroad, the Duluth, South Shore and Atlantic Railroad, and the Copper Range Railroad. Two track lines followed this corridor. The corridor runs through portions of the Quincy Smelting Works, Quincy Stamp Mill, and Mason Housing Location Landscape Character Areas and also connects with the Quincy and Torch Lake Railroad Landscape Character Area. The corridor is managed by the State of Michigan and currently used as a recreational trail. Most of the rails and ties have been removed, although the grade and supporting structures remain in place, with concrete retaining walls and bridge abutments. As noted in Section 4, because the railroad corridor was not owned and operated by the Quincy Mining Company, it is not considered contributing. The State of Michigan is currently evaluating proposed repairs to the trail between Dollar Bay and Lake Linden. The resource crosses through more than one LCA, and so is identified here rather than on the individual LCA resource lists.

3. Road Systems (one contributing structure)

As with rail and tram lines, the Quincy Mining Company constructed a complex set of road systems that both responded to the topography and functions of areas and also formed the patterns around which the community developed. In most cases, the company built the roads within mining and housing areas, but it also influenced the routes of major regional roads such as US-41, which cuts through the district, and M-26, which runs adjacent to or through the South Quincy Housing Location, Quincy Smelting Works, Quincy Stamp Mill, and Mason Housing Location character areas. The road systems vary throughout the district. At the relatively level area on the top of Quincy Hill, housing locations such as Limerick, Pewabic, and Franklin have a grid-like pattern extending from US-41, while Lower Pewabic, Frenchtown, and Sing-Sing are more irregular. Roads within the primarily industrial zones of the Industrial Core, Smelting Works, and Stamp Mill reflect efficient patterns of movement for materials and workers. The loop road of the South Quincy Housing Location responds directly to the steep topography of the area. Street Car Road within the Housing and Mine Management Area preserves portions of the historic route of a street car line between Hancock and Calumet.

Landscape Character Areas and Associated Contributing/Noncontributing Resources

4. Landscape Character Area 1: Quincy Mine Industrial Core (See Maps 4, 5, and 6)

Contributing: 22 Buildings, 7 Structures, 1 Site, 1 Object
Non-Contributing: 8 Buildings, 9 Structures

Description

The **Quincy Mine Industrial Core** is characterized by its dense concentration of historic industrial resources and landscape features in the heart of the Quincy Mining Company Historic District. There are thirty-one

contributing and seventeen non-contributing resources in this area. The Quincy Mine Industrial Core LCA includes the most intact historic mining resources within the region, including the No. 2 Shaft-Rockhouse and the No. 2 Hoist House, as well as other industrial buildings, extensive building ruins and foundations, utility trenches, poor rock piles, mine-related structures and equipment. These are all associated with the period of national significance from 1856 to 1920. Historically, most of the area was owned by the Quincy Mining Company for the entire period of significance. Portions of the northern area and eastern areas were acquired by Quincy from the Pewabic Mining Company (1891) and the Franklin Mining Company (1908). The surface plant in this area reflects the biggest building boom undertaken by the Quincy Mining Company (1892-1900), to support increased demand for mining support. During this time, the company sunk several new shafts and greatly expanded its underground workings.[234] The majority of the area is currently owned by the Quincy Mine Hoist Association and managed as an interpretive site with support from KEWE.

The Quincy Mine Industrial Core is located largely on the crest of Quincy Hill, with a portion extending downslope to the south. The character area is irregularly shaped with US-41 as its western boundary. A wide rectangular corridor extends from just south of Kowsit Lats Road to Paavola Road on the north. A portion of the east boundary of this LCA excludes the Lower Pewabic Housing Location LCA 3 (generally encompassed between West Lower Pewabic Road and Back Street), then the Industrial Core character area descends south down Quincy Hill toward Portage Lake until it meets the South Quincy Housing Location LCA 5.

Transportation routes are generally limited within LCA 1. At the western edge, US-41 provides access from both north and south. Its grade is slightly raised from the topography of the Industrial Core. Sunshine Road and Lower Pewabic Road bisect the area and connect with Franklin Tram Road on the eastern edge, which angles northwest/southeast along the line of a former company tram line. Major roads like US-41 and Sunshine Road are asphalt-paved, while secondary roads are covered with gravel. Historically, the roads in this LCA, and elsewhere in the district, were unpaved. There are no sidewalks. Some informal dirt routes are also present within the area, leading between and around buildings and shaft locations. Remnants of the Quincy and Torch Lake Railroad and tram routes are also present and visible throughout the area, some with rails or crossties still intact.

The spatial arrangement of resources and features upon the Industrial Core's landscape reflects its historic patterns of development and use. The alignment of the Pewabic Lode under the Pewabic, Franklin, and Quincy mining companies determined the broad-scale above-ground spatial organization (see Figure 01 for an illustration of the relationship between the surface buildings, structures, an object, and sites, and the underground operations). Within the boundaries of the district, the Pewabic Lode angles along a southwest/northeast line. Shafts were located along the diagonal line of the lode; from south to north they are: No 7, No. 4, No. 2, No. 6, No. 1, No. 3, No. 5, and No. 8. [redacted]. See Maps 4, 5, and 6.) The idiosyncratic ordering of shaft numbers reflects differences in mine ownership over time. The three southernmost shafts (Nos. 7, 4, and 2) are located over the original Quincy Mining Company claim. Shaft No. 6 was originally owned by the Pewabic Mining Company but acquired by Quincy in 1891. Shafts No. 1, 3, and 5 were established by the Franklin Mining Company and acquired by Quincy in 1908. The two northernmost shafts, Nos. 8 and 9, were purchased from the Mesnard and Pontiac mining companies in 1896. Clustered around each shaft were shaft-rockhouses, hoist houses, a multitude of railroad tracks and trestles, cooling ponds, and expansive poor rock piles. In order to take advantage of gravity in moving rock down the hill, these massive industrial buildings were situated east of the spine of the Pewabic Lode. Historically, vegetation was virtually non-existent.

[234] Jon R. Carter, Dianne M. Pohlsander, Richard K. Anderson, Jr., "Machine Shop 1900," in "Historic American Engineering Report [HAER] No. MI-2," [unpublished] (Washington, DC: US Department of the Interior, National Park Service, 1978) https://www.loc.gov/item/mi0086/ (accessed June 24, 2019).

It is along this corridor that the majority of extant historic resources associated with extraction and initial processing of the copper ore are located. While some of the buildings and structures have deteriorated to the point of being ruins, and some cooling ponds and poor rock piles are gone, the area retains much of its character as an industrial mining landscape. It has a highly irregular topography due to the continued presence of poor rock piles of varying heights, and the rock remnants of numerous building foundations, trenches, railroad and tram grades, etc. Heavy compaction and the presence of deposits of poor rock have limited the successional growth of vegetation along the corridor, enhancing the visibility of industrial resources and their interrelationship. Shafts are represented on the landscape as metal grids capping the openings, and many are marked by interpretive signage.

The Quincy Mining Company built the majority of its industrial buildings from poor rock, which was free and immediately available from the waste rock piles surrounding the site. Poor rock is a basaltic rock that ranges in color from light grey to black and often has a reddish cast to it from the presence of copper. Poor rock was very commonly used for foundations and footings throughout the Industrial Core and in fact the entire district. It is also often used in random uncoursed rubble for walls, particularly the industrial buildings. Another common material used throughout the region and the NHL district is Jacobsville sandstone, a formation of red sandstone that naturally occurs in the Upper Peninsula of Michigan. Sometimes known as Portage Entry red sandstone after the location of some of the major quarries, Jacobsville sandstone was highly valued for its red color and ease of carving. It was also often used as trim, such as quoining at corners and around doors and windows, where it sharply contrasted with the dark poor rock. This is very characteristic of architecture in Michigan's Copper Country. High-profile administrative buildings used the purer red sandstone in dressed blocks, but the industrial buildings at Quincy typically used the less valuable variegated (shades of red and white) sandstone in random coursed rubble. Where it was used for walls or foundations, the sandstone was usually pointed with a beaded profile, a characteristic expression of regional architecture. Poor rock buildings often had brick-arched window and door openings, with the red brick again providing a contrast with the dark rock. Buff brick was occasionally used, and a number of buildings are partially or entirely sided with corrugated metal; corrugated metal was also frequently used as a roof covering. Wood was used less frequently. Industrial buildings typically had wood doors and windows, and a few smaller outbuildings were also sided with vertical or horizontal wood siding. The few residential houses and outbuildings in the Industrial Core are generally sided with wood clapboard. Concrete was also used sparingly in the district, and for some foundations and boiler stacks. In form, and unless otherwise described, buildings are generally rectangular, with an occasional wing, and from one to three stories in height. Almost all are front-gabled, with a few side-gabled and hipped roofs. The boiler houses have circular concrete stacks set in square sandstone-trimmed poor rock bases. The densest concentration of resources is from approximately Kowsit Lats Road to Sunshine Road. At the south end is the No. 7 area, which contains the 1889 Quincy and Torch Lake Railroad Engine House, a water tank, rail lines, and rolling stock associated with the Quincy and Torch Lake Railroad. The Engine House is an L-shaped, one-story poor rock building that has a curved wall at the east end and four tall openings to accommodate rolling stock. The roof slopes downward to the west. The building has the industrial area's typical brick window and door arches. A row of nine windows lines the south side. The walls are built in random rubble. The nearby water tank is sheltered by a corrugated metal roof.

North of the No. 7 area is the No. 4 area, which includes the sites of two boiler houses and a hoist house. While the southernmost of the three ruins is identified as the "No. 7 Boiler House," it is closer in proximity to the No. 4 area. Having survived as ruins for decades, only portions of the exterior walls remain for these three sites, which were formerly very large, multi-story buildings. They are the 1898 No. 7 Boiler House, the 1885 No. 4 Hoist House, and the 1882 No. 4 Boiler House. The surviving poor rock walls reflect the characteristic

construction design of the industrial core area. The No. 7 Boiler House also has distinctive variegated sandstone corner quoins. The lower poor rock base of the No. 7 Boiler House stack remains.

The No. 2 area is the most densely packed of the remaining shaft complexes. It has two clusters of buildings and structures: one around the 1894-1895 No. 2 Shaft-Rockhouse at the west end, adjacent to US-41; and one around the 1918-1920 Hoist House to the east. The No. 2 area—and indeed the district as a whole—is dominated by the No. 2 Shaft-Rockhouse. This building rises to 147 feet tall at its highest point, and slopes down to the west to one story. It is steel-framed, enclosed with corrugated metal roofing and siding and has one-story shed-roofed wings on the north and south elevations. At the east end, its circular concrete and metal stamp rock bin is exposed at the lower three levels and enclosed in projecting shed-roofed bays two levels above that. Eight-over-eight double-hung wood windows are set in irregular locations on the north, south, and east elevations. At the west end are double doors with ramps. Door openings are also located in the shed additions. A wide opening at the base of the building has rail tracks running through; originally, this was where poor rock was dumped directly into rail cars for removal. A rectangular poor-rock foundation is set on the south side. East of the shaft-rockhouse is the one-story No. 2 Hoist House, built in 1882 of poor rock but which is now entirely sided with corrugated metal. Above the hoist house is a metal superstructure equipped with pulleys; it reaches nearly the height of the shaft-rockhouse.

Visually balancing the shaft-rockhouse in the No. 2 area is the 1918-1920 Hoist House. It was designed by Quincy Mining Company engineer J. H. Hoff and built by the McLean Construction Company of Chicago. The building was designed to house a condensing hoist built by the Nordberg Manufacturing Company. It was at the time the largest steam hoist in the world and was designated a National Historic Mechanical Engineering Landmark by the American Society of Mechanical Engineers in 1984. The 1918-1920 Hoist House is approximately five stories high. It is a gabled, rectangular building with a shed-roofed wing on the north side. It has a raised concrete foundation and is concrete framed with the frame expressed on the exterior. Red brick fills the spaces between concrete framing. The windows are multi-light metal units with concrete trim. At the fourth level are arched windows with concrete keystones and fanlight transoms; these windows mark the interior location of the Nordberg hoist engine. Immediately south of the 1918-1920 Hoist House is an older, two-story 1894-1895 Hoist House built of variegated sandstone laid in courses, with a gabled roof. Immediately south of the older hoist house are the two-story ruins of the 1912 No. 5 Boiler Plant. The end walls and interior iron framing of the buff brick boiler plant continue to exhibit the original design's monitor roof and seven-bay layout. Its cement stack remains. North of the No.2 Shaft-Rockhouse are the one-story 1893 Supply Office and 1893 Oil House. Both are built of dressed, variegated sandstone, laid in courses. The only residential frame building in this No. 2 area is the two-story Martin House, a turn-of-the-century saltbox design house with two small outbuildings; it is located northeast of the large mining buildings.

In between and around are numerous constructed landscape features and industrial artifacts that enhance the industrial character of the area. These include metal pipes, track remnants, trams, and railcars in varying condition, metal equipment, and skips. Small concrete foundations that supported equipment storage or other work areas are also scattered through the landscape. Between the No. 2 Shaft-Rockhouse and the 1918-1920 Hoist House are three metal pulleys of graduated size set on rectangular concrete foundations and still connected by a pulley wire. Although these are fixed in place as an interpretive exhibit, they are located in the immediate area in which they were used historically as part of the pulley stand system that supported cables running from the hoist house to the shaft-rock house. They are counted as one contributing object. East of the 1918-1920 Hoist House is a section of curved track with multiple railroad cars. Extending north from the northwest corner of the 1918-1920 Hoist House are two concrete-lined trenches, former cooling ponds associated with the 1918-1920 Hoist House.

The No. 2 area is operated by the Quincy Mine Hoist Association as an educational and interpretive site. Minimal alterations have been made to support this function. Historic mine buildings such as the supply office and oil house have been repurposed as (respectively) a gift shop and restroom building, Additions to the landscape include a loading platform for the ca. 1990s Quincy Cog Railway Tram (compatible but non-contributing), and a new, non-contributing shed. The Quincy Cog Tramway does not follow any of the historic former tram routes and is rather a route for tours to travel between the No. 2 Hoist House complex and the No. 2 Adit located to the south. Because this area is used as an interpretive site, there is limited directional and interpretive signage, generally small wood signs.

Between the No. 2 and No. 6 areas to either side of Lower Pewabic Road is a cluster of buildings that include the Mine Captain's Office, Machine Shop, and Blacksmith Shop, as well as the modern (non-contributing) Franklin Township Hall and Fire Station. The simple, frame Mine Captain's Office is distinguished by a diamond window opening (glass missing) in its gable; behind the office is a pyramidal hipped-roofed building (historic use unknown). Construction dates are unknown. The long, two-and-one-half story Machine Shop to the north has a Jacobsville sandstone foundation, buff colored brick walls, and a monitor roof. It was built in 1899-1900. The Machine Shop is distinguished by two-story pilasters that create nine bays, most containing three windows (the nine-over-nine windows have been boarded over). Nearby are the ruins of the 1900 Blacksmith Shop, a T-plan building of Jacobsville sandstone, the walls constructed of rubble in courses. Unlike many of the other ruins, the gabled end walls are intact. Both sides of the steep roof, now gone, had originally been pierced by a series of six tall metal chimney stacks. The roof was still present, but in seriously deteriorated condition, in the 1970s. This area also contains piles of building materials (stone, brick, and metal) related to the Machine and Blacksmith Shops, as well as the partial foundations of several buildings, some obscured by heavy vegetation.

The No. 6 area is dominated by a large poor rock pile, approximately 30 feet high and 300 feet in diameter, with a small wood pole structure (possibly part of a pulley system) on the top. Other smaller poor rock piles are scattered around the area. Northeast of the Blacksmith Shop are two circular concrete Boiler Stacks. These are the remnants of the No. 2 Boiler House (south), construction date unknown, and the 1891-1892 No. 6 Boiler House (north). Within this area, and increasingly obscured by vegetation, are a number of building foundations and the site of the North Quincy Dryhouse. The Dryhouse, now a ruin, was an extremely long, gabled building constructed of rubble course poor rock, with arched window openings of sandstone. Built before the turn of the century as a boiler house for the Pewabic Mining Company, in 1907 Quincy Mining Company converted it to a Dryhouse. The surviving gable end wall indicates the building once stood three stories, although the walls are now in varying stages of collapse.

North of the No. 6 area, between Sunshine Road and the intersection of US-41 and Mesnard Location Road, the landscape is largely composed of large poor rock piles surrounded by woody vegetation consisting of young successional plants including birch (*Betula* spp.), maple (*Acer* spp.), alder (*Alnus* spp.), redosier dogwood (*Cornus sericea*), and honeysuckle (*Lonicera)*. There are few substantial buildings or structures associated with shaft numbers 1, 3, 5, or 8. The poor rock foundation of the ca. 1917 Franklin School is visible north of Shaft No. 5, and on the west side of US-41. North of this is a modern (non-contributing) auto-repair shop complex and several non-contributing/modern wood billboards.[235] At the far northern end of the Industrial Core, to either side of Mesnard Location Road south of Paavola Road, is the No. 8 area, consisting of a triangular metal Headframe, a Hoist House, and a concrete Dryhouse as well as stone and concrete foundations and industrial artifacts. Enveloped by vegetation and located between the No. 5 area and the No. 8 area is a surviving gabled frame residence, with a garage and two small outbuildings.

[235] Where two billboards stand immediately adjacent to each other, they are counted as one resource.

On the south slope of Quincy Hill are the Quincy and Torch Lake tram lines associated with the transportation of the ore to the Quincy Smelting Works on Portage Lake. This portion of the character area is more heavily vegetated with volunteer herbaceous and woody plants and second-growth woodland. [redacted] The No. 2 Adit daylights on the south slope. [redacted]

Currently, the Quincy Mine Hoist Association runs tours that take visitors on the Quincy Cog Tramway (not historic) near the No. 2 Hoist House down to the No. 2 Adit. The Adit also is used by Michigan Technological University to educate students about subjects related to the technical field of mining, on which the university was founded. On the downslope side is the Mont Ripley Ski Area, also operated by Michigan Technological University. The ski area is on former cutover land that was bisected by tram roads. Although the ski area use is not historic, the topography and physical connection between Portage Lake and Quincy Hill is an important part of understanding the overall landscape of the district. In addition, the lack of vegetation in this area due to clearing for use for skiing, is closer to what was present historically than in areas that are now heavily wooded (including second growth woodlands of balsam fir, cedar, pine, maple, birch, alder, and aspen), making the ski area in some ways more evocative of the mining landscape than reforested areas. The four non-contributing resources within this part of the landscape character area are associated with the ski hill.

Inventory of Resources, Landscape Character Area 1: Quincy Mine Industrial Core

NOTE: "HAF" is Historic Associated Feature, part of the LCA site

(ID numbers are keyed to the attached Map 6)

ID #	NAME (HISTORIC NAME)	ADDRESS	TYPE	STATUS
NA	Quincy Mine Industrial Core Landscape	NA	Site	Contributing
001	Quincy and Torch Lake RR Engine House	Roundhouse Rd.	Building	Contributing
002	Quincy and Torch Lake RR Water Tank	Roundhouse Rd.	Structure	Contributing
003	No. 7 Boiler House Ruin	US 41	HAF	n/a
004	No. 4 Hoist House Ruin	US 41	HAF	n/a
005	No. 4 Boiler House Ruin	US 41	HAF	n/a
006	No. 2 Shaft-Rockhouse	US 41	Building	Contributing
007	Pulley Stand over 1882 Hoist House	US 41	Structure	Contributing
008	1882 No. 2 Hoist House	US 41	Building	Contributing
009	1893 Supply Office (Gift Shop)	49750 US 41	Building	Contributing
010	Oil House (Public Restrooms)	49750 US 41	Building	Contributing
011	Three Pulleys	US 41	Object	Contributing
012	1918-20 No. 2 Hoist House	US 41	Building	Contributing
013	1894-95 No. 2 Hoist House	US 41	Building	Contributing
014	No. 5 Boiler Plant Ruin	US 41	HAF	n/a
015	Quincy Cog Railway Tram Loading Platform	US 41	Structure	Non-contributing

015	Quincy Cog Railway Tram Loading Platform, associated Shed	US 41	Building	Non-contributing
016	Cooling Ponds	US 41	Structure	Contributing
017	Building Ruin, possible sauna	US 41	HAF	n/a
018	Martin House	US 41	Building	Contributing
018	Martin House, associated Outbuilding	US 41	Building	Contributing
018	Martin House, associated Outbuilding	US 41	Building	Contributing
019	Residence	Lower Pewabic Rd.	Building	Contributing
019	Residence, associated Outbuilding	Lower Pewabic Rd.	Building	Contributing
020	Captain's Office	US 41	Building	Contributing
021	Unidentified Outbuilding	US 41	Building	Contributing
022	Hancock Township Fire Department	US 41	Building	Non-contributing
023	Quincy Machine Shop	US 41	Building	Contributing
024	Quincy Blacksmith Shop Ruin	US 41	HAF	n/a
025	No. 2 Boiler House Stack	US 41	Structure	Contributing
026	No. 6 Boiler House Stack	US 41	Structure	Contributing
027	North Quincy Dryhouse Ruin	US 41	HAF	n/a
028	Wood Structure at No. 6	US 41	Structure	Contributing
029	Billboard	US 41	Structure	Non-contributing
029	Billboard	US 41	Structure	Non-contributing
030	Billboard	US 41	Structure	Non-contributing
031	Quincy Hill Auto Sales and Service	50124N US 41	Building	Non-contributing
032	Billboard	US 41	Structure	Non-contributing
032	Billboard	US 41	Structure	Non-contributing
033	Billboard	US 41	Structure	Non-contributing
033	Billboard	US 41	Structure	Non-contributing
034	Historic Residence	50534 N Mesnard Location Rd.	Building	Contributing
034	Historic Residence, associated Outbuilding	50534 N Mesnard Location Rd.	Building	Contributing
034	Historic Residence, associated Outbuilding	50534 N Mesnard Location Rd.	Building	Contributing
034	Historic Residence, associated Outbuilding	50534 N Mesnard Location Rd.	Building	Contributing
035	Dryhouse/Storage Building	50714 Mesnard Location Rd.	Building	Contributing
036	No. 8 Hoist House	50714 Mesnard Location Rd.	Building	Contributing
037	No. 8 Headframe	50714 Mesnard Location Rd.	Structure	Contributing
038	Residence	50363 US 41	Building	Non-contributing
038	Residence, associated Garage	50363 US 41	Building	Non-contributing
039	Residence	49570 Franklin Tram Rd.	Building	Contributing

040	Mount Ripley Ski Lift	49051 Ski Hill Lane	Structure	Non-contributing
181	Mount Ripley Ski Hill Building	49051 Ski Hill Lane	Building	Non-contributing
181	Mount Ripley Ski Hill Building, associated shed	49051 Ski Hill Lane	Building	Non-contributing
182	Mount Ripley Ski Hill Building	49051 Ski Hill Lane	Building	Non-contributing

Integrity Assessment

The **Quincy Mine Industrial Core** has not substantially changed since the initial 1989 NHL nomination. It contributes to the historic character of the district to a very high degree. Contributing resources include the landscape (one contributing site), twenty-two buildings, seven structures, and one object. The character area retains high integrity of location, design, materials, workmanship, feeling, and association due to the extensive extant resources that continue to represent the flow and extent of historic mining activities in the district. The industrial core is integral to the character of the overall district as the location of the central activity of extracting copper ore and initial processing before transporting it to the smelter and the stamp mill for further processing. It is the heart of the Quincy Mining Company's original operations from the beginning of the period of significance in 1856 to the final improvements of the late 1910s before the company began to decline. The location and setting of the mine on the top of Quincy Hill is a particularly important aspect of the district's high integrity. The dramatic 600-foot descent from the crest of Quincy Hill to Portage Lake afforded mine managers a commanding view of mining operations. Views from and to Quincy Hill remain important in providing a broad visual overview of the spatial relationships between the lake, the hill, the mining operations, and the mine housing locations, with the view north from the city of Houghton toward Quincy Hill and the panoramic views from Quincy Hill south and east toward Portage Lake and the city of Houghton as particularly significant. During the period of significance, a series of shaft-rockhouses visually dominated mining operations on Quincy Hill, and the surviving No. 2 Shaft-Rockhouse remains the foremost visual legacy of the historic mining era, providing an identifiable visual landmark from over five miles away.

As with the original 1989 nomination, since the closure of the Quincy Mining Company operations, a number of historic resources have been lost or deteriorated, and successional growth has obscured some previously open areas. Deterioration has affected some resources, and in, and some instances, some buildings have had new windows installed, or siding added; others have been modified since the NHL designation to such an extent that they have changed from contributing to non-contributing. However, changes made since the district's initial 1989 NHL designation are not so large as to impact integrity to any substantial degree. Indeed, the National Park Service has provided technical assistance to property owners in stabilizing or rehabilitating their property. This is particularly evident with the resources surrounding the No. 2 and No. 4 Mine Shafts. Numerous historic resources remain, reflecting all aspects of the extraction process. These include headframes, the physical plant at the No. 2 Shaft—including the exceptional and rare No. 2 Shaft-Rockhouse and 1918-1920 Hoist House with its Nordberg steam hoist—[redacted]. Together they clearly continue to convey feeling and association of the Quincy Mine Industrial Core's historic character to a high degree.

The distinctive industrial-type resources in the Quincy Mine Industrial Core area, whether standing or in ruin, retain their original designs, materials, and workmanship. Mostly designed in-house by company engineers, the materials and their application distinguish between building uses. Buildings of poor rock built in random rubble construction signify heaviest industrial uses. Brick buildings or those of dressed sandstone laid in courses are associated with more skilled tasks, storage, or office space. In addition, the massive stone buildings reflect the wealth of the Quincy Mining Company and its confidence in long-term economic success. The three pulleys,

although no longer integrated into the truss system that once held them, are not completely divorced from this place of mining activity and are therefore considered contributing to this mining landscape.

The spatial organization, aligning to the underground Pewabic Lode, historic views from and to Quincy Hill, and massive poor rock piles, all remain in place and convey the historic character of the landscape. The few non-contributing features (new building construction and billboards, some secondary outbuildings) are small in scale and are generally concentrated along US-41. They do not unduly distract from the historic setting, feeling and association of the area as an industrial landscape with its massive buildings and building ruins and its connection to the Quincy Mining Company. The ca. 1990s Cog Railroad Tramway—while modern—is in keeping with the industrial nature of the landscape and the historic tramways.

5. Landscape Character Area 2: Quincy Hill Housing and Mine Management Area (See Maps 4, 5, 7)

Contributing: 99 Buildings, 1 Structure, 1 Site
Non-Contributing: 62 Buildings, 1 Structure

Description

The **Quincy Hill Housing and Mine Management** LCA is located on the northwest side of US Highway 41 (US-41), across the road from the Quincy surface operations associated with extraction (LCA 1: Quincy Mine Industrial Core). It is bounded by US-41 on the east, Ingot Street on the south, and Lake Annie Road on the north. There are 101 contributing and sixty-three non-contributing resources in the Quincy Hill Housing and Mine Management area. Historically, the mine management and housing areas were concentrated on this west side of the Pewabic Lode (see Figure 01 for an illustration of the relationship between the surface features and the underground operations). The LCA is situated above a large portion of the underground extraction operations, including shafts that continue from openings on the surface (located within the Industrial Core landscape character area) into the mineral lode at an angle extending to the northwest. Also underground are drifts and stopes that run perpendicular to the shafts to follow the mineral deposit. The buildings and structures in this area were constructed uphill from the shafts, and relatively lightweight compared to the massive industrial buildings and facilities to the east. This arrangement of functional land use reflects the leverage of gravity to enhance efficiency when moving large amounts of extracted material across the landscape. The majority of the area was owned by Quincy for the entire period of national significance. The northern portion of the area, between Lake Annie Road and 3rd Street, was purchased by Quincy from the Pewabic Mining Company and the Franklin Mining Company in 1891 and 1908, respectively.

As with the Industrial Core, the main access to this LCA is via US-41, which angles southwest/northeast in alignment with the Pewabic Lode. Extending to the northwest are perpendicular roads including, from south to north, Ingot Street, French Town Road, No. 2 Road, Campus Drive, 1st through 5th Streets, and Lake Annie Road. Cross streets parallel to US-41 are Raasio Road, Limerick Street, Street Car Road, and Mine Rock Road. Most of the roads are paved with asphalt with no shoulders or curbs. Street Car Road partially aligns along the former streetcar line from Hancock to Calumet, with other portions of the line existing as a railroad grade. The southern end of the character area, including the mine management area and two housing locations (Frenchtown and Sing-Sing), is characterized by non-linear/curving roads while the northern area of Limerick is more grid-like (see Map 5). There are no sidewalks in the area, with the exception of some small sections at the primary mining residential and office buildings. The west side of this landscape character area, which is the west boundary of the NHL district, separates the highest concentration of historic resources associated with the Quincy Mining Company from more recent development. West of the district boundary line and accessed from Campus Drive are two large and modern institutional developments: UP Health System-Portage (hospital) and

Hancock High School. Both are predominantly screened from the district by intervening topography and vegetation, although there is considerable traffic through the character area due to use of Campus Drive to access these facilities.

The Quincy Hill Housing and Mine Management LCA includes seven former worker housing locations. From south to north these are Frenchtown, Sing-Sing, Limerick, Hardscrabble, Pewabic, Franklin, and Backstreet (see Map 5), and buildings devoted to company management. At the southern end of this area are the mine management resources: the Mine Office (local headquarters), the Assay Office (now a residence), two Managers' Residences (superintendent and mine captain), and a site with stabilized remnants of a dryhouse. While this area is primarily associated with housing and management rather than extraction or processing, the Dryhouse site is included in this group both because of its geographical location west of US-41 and because functionally and physically it provided a transition between the industrial core and the management and housing areas. The Dryhouse was a building where miners changed their work clothes and cleaned up following a shift in the mine and before returning to their homes. The physical association of the Dryhouse with the housing locations on the west side of US-41 supports this categorization.

The mine management buildings are generally aligned along US-41 and would have been among the first company buildings encountered when traveling north from Hancock along US-41. As such, and reflective of the company's ability to physically represent its economic dominance on the peninsula, these buildings are some of the most distinctive in the landscape character area. The most visually striking is the Quincy Mine Office. Quincy completed construction of the Mine Office at its present location on Quincy Hill in 1897. The "new" office was more substantial and in a higher architectural style than the former wood frame office. It was strategically located between Hancock and the top of Quincy Hill, and commanded views both up the hill to the mine works and down towards Hancock, Portage Lake, and the smelter site. The Mine Office is a two-story rectangular building displaying elements of both Richardsonian Romanesque and Classical Revival styles. It is constructed of rusticated Portage Entry (Jacobsville) red sandstone blocks with heavy arched windows at the first floor. A centered projecting front bay features a portico with square columns and a balustraded balcony supported on stone cheek walls. The windows are paired, double-hung, one-over-one units that are flanked by engaged columns on the second floor. Rising from the hipped, slate-covered roof are two sandstone chimneys, and the roof peak is topped with iron cresting. A gabled dormer with gable returns and an arched window projects from the center of the roof.

South of the mine office is the Superintendent's Residence. The grand Italianate-style building was completed in 1882. Also designed to impress, the home was built in a prominent position west of the county road at the south end of the mine. It is two-and-one-half stories tall and is a cross-gabled T-plan. Covered in wood clapboard, it features a three-quarter-length one-story front porch, several bay windows, segmental arched window hoods over paired four-over-four windows, and paired brackets at the cornice. Centered on the front elevation is a three-story square tower with paired, round-arched windows and a hipped roof with bracketed cornice. Although US-41 has been widened and realigned, a trace of the historic route remains and serves as a parking area in front of the Quincy Mine Office. The buildings are located on leveled sites that are heavily vegetated to the west but have typical domestic landscapes around the buildings and adjacent to the road (paved or gravel driveways, maintained lawns, and ornamental plantings).

Despite its ostentatiousness, the choice of Italianate style reflects the company's conservatism, in that the Italianate style was ending its period of popularity by the 1880s. Even more conservative was the choice of Gothic Revival style for other company management residences. North of the Quincy Mine Office, fronting US-41, and located on either side of French Town Road, are the 1899 Mine Captain's Residence and the 1897 Assay Office. Both featured a centrally placed, steeply pitched, front-wall gable and narrow double-hung

windows. The two-and-one-half-story Mine Captain's Residence and the one-story Assay Office were built long after the Gothic Revival style had waned in popularity. Although the Assay Office has had new windows installed, and some decorative elements removed, the Gothic Revival style massing is still quite evident.

Other mine management buildings that were formerly in this area, but are now gone, were a physician's residence, a dispensary, and the clerk's residence. [redacted]

The stabilized remnant of the Quincy Dryhouse is located along US-41 northeast of the mine management area. Portions of the Dryhouse walls, built of random rubble poor rock, range in height from 30 feet above grade at the peak of the south wall to two feet above grade at the north wall. Included within this Dryhouse area, and considered part of the Quincy Hill Housing and Mine Management site, [redacted] The area around the Dryhouse is bisected by No.2 Road, which leads from US-41 to French Town Road. It is crossed by several dirt paths and roads that can be linked to circulation routes shown on historic company plans. The Dryhouse area is characterized by uneven, rocky ground that is sparsely vegetated except west and south of the Dryhouse. It includes a mix of herbaceous (grasses (undetermined species), yarrow (*Achillea millefolium*), leadplant (*Amorpha canescens),* goldenrod (*Solidago* spp.), aster (*Aster* spp.), rose (*rosa* spp.), raspberry (*Rubus* spp.) and sweet pea (*Lathyrus odoratus*)), and woody (successional and mature lilac (*Syringa* spp.), maple (*Acer* spp.), ash (*Fraxinus* spp.), and poplar (*Populus* spp.)) plants. Due to the elevated topography and its location across from the No. 4 Shaft, the Dryhouse area provides good views of the No. 2 Shaft-Rockhouse and Hoist House, the ruins of several poor rock buildings associated with the No. 4 and No. 7 Shafts, and beyond to Portage Lake.

Apart from the company management buildings, the majority of the contributing buildings in the Quincy Hill Housing and Mine Management area are residential. They generally range from one-and-one-half to two-and-one-half-story houses in a variety of forms, from front- and side-gabled to saltbox, T-plan, L-plan, and foursquare. A common house type is a rectangular, two-and-one-half-story front-gabled house, with a front-gabled enclosed porch over the entry, gabled dormer on one roof side, double-hung one-over-one windows, clapboard siding, and a brick chimney rising from the center. This form was based on Sears and Roebuck-furnished plans used by the mining company for a number of houses built about 1917.[237] Poor rock foundations are almost universal. Siding is generally wood clapboard, but some have been re-sided with imitation brick asphalt or vinyl siding. Windows are typically double-hung, one-over-one units with a few in different configurations, such as two-over-two, three-over-one, or picture windows. Roofs are generally covered with asphalt shingles or, in a few cases, standing seam metal. While most are gabled roofs, there are a few hipped and gambrel roofs, particularly in the northern part of Limerick.

Many of the houses have outbuildings. While attached garages were not built during the period of significance, there are a number of detached garages from the period. These are typically one-story, gable-front buildings with vertical or horizontal wood siding set close to the street. A few have hipped roofs. There are also a few wood sheds scattered throughout the character area. Some residences have added newer garages, typically with concrete foundations and concrete block or vinyl siding.

Examples of the Sears and Roebuck house design are found in the Frenchtown Housing Location. Frenchtown is situated immediately northwest of the company management buildings and nestled within thick woods on

[redacted]

[237] See HAER No. MI-2, photos 239, 240, 247, Library of Congress.

either side of French Town Road, northwest of its intersection with US-41. Between 1875 and 1876, Quincy constructed six double-house dwellings in Frenchtown, although none survive today. As part of a company-wide expansion of housing undertaken by adding homes into existing housing locations, Quincy added three houses here in 1917. They may be the three houses at 49560, 49582, and 63-69 French Town Road. The houses are on the north side of the road and share similar lot size, orientation, and front yard setback. Across the street are small outbuildings used as garages and storage sheds.

Northwest of the Quincy Dryhouse ruin is the Sing-Sing Housing Location. Historically, the location consisted of private homes constructed on leased Quincy land. Fifteen homes were present by 1898. As part of the company-wide housing expansion program Quincy is known to have added one house at Sing-Sing in 1917. Based on the design, this might be 19742 Sing-Sing Road, although a number of houses in the area appear to be based on the Sears and Roebuck design, such as at 19643 and 19651 French Town Road. Because of the presence of private homes, this location is characterized by a variety of residential designs, from a side-gabled/enclosed front porch at 19701 Sing-Sing Road, to T-plans (as at 19719 Sing-Sing Road). Sing-Sing is bisected by No. 2 Road as it runs west from US-41. Sing-Sing Road is a loop road that extends from No. 2 Road north then turns west and curves back to No. 2 Road, where it crosses to become Raasio Road. The buildings are clustered around the intersection of No. 2 and Sing-Sing Roads and along Sing-Sing and Raasio Roads to either side of French Town Road, with a few houses on the backside of Sing-Sing Road and along French Town Road. Lot sizes and setbacks vary throughout the location, although the historic houses are generally close to the road. Larger lots tend to be located on corners. Like Frenchtown, Sing-Sing is heavily wooded except around housing clusters. Vegetation in this area is mixed successional woodland species of maples, poplars and a few spruce and pines. Apple trees and a few groups of day lilies are located in the domestic yards.

In the middle of the character area is the Limerick Housing Location. This is a residential neighborhood bordered by Campus Road on the south, 2nd Street on the north, US-41 on the east, and Mine Rock Road on the west. It includes historic residential buildings and landscape features including houses, a church, roads, and remnants of the former Houghton County Traction Company street car route. The southern part of this area includes some of the oldest extant houses built by Quincy to house workers. Three rows of one-and-one-half-story T-plan houses were closely aligned facing Limerick/1st Avenue and US-41. While most are now gone, examples survive at 49893 and 49865 US 41. The ubiquitous Sears and Roebuck design residence are present in this location, at 49902 and 49916 Limerick Road, 19961 and 19944 2nd Street. Another example has been greatly modified, at 19943 2nd Street. About 1917, Quincy Mining Company also built double residences on its property, based on Sears and Roebuck-furnished plans.[238] One such example is at 49919 Mine Rock Road. While the original porch has been modified and enclosed, its two-story form, window pattern, and central entry are very much in evidence. Yet another residential form, the saltbox, survives at 200 Limerick Road. The Limerick Housing Location also includes a former Catholic church and rectory (19980 and 19961 2nd Street). The church is a one-story, front-gabled rectangular building constructed of stone that has been painted. It has two-over-two windows along the east and west walls. At the north end is a sandstone and brick tower, capped by a wood-framed open belfry and cross. The rectory is a two-story, foursquare building constructed of brick with rusticated sandstone lintels over the first-floor windows. At the front elevation is a three-sided bay window with adjacent enclosed front porch. The building has a hipped roof and hipped dormers with fish scale shingles. Nearby, the 1916 metal water tower serves as a dominant visual landmark for the location.

While the greater area north of Sing-Sing is now generally known as the Limerick Housing Location, within that are two housing locations originally developed by other mining companies and situated at the northern end of this landscape character area. Immediately northeast of the historic Limerick Housing Location is the Pewabic Housing Location (distinct from the Lower Pewabic Housing Location on the east side of US-41),

[238] See HAER No. MI-2, photos 243, 244, 245, Library of Congress.

initially developed by the Pewabic Mining Company and included in Quincy's purchase of that company in 1891. Pewabic is arranged around a more-or-less regular street grid consisting of US-41 and the parallel roads of Street Car Road and Mine Rock Road, and cross streets of 2nd through 4th Streets. Northeast of Pewabic is the Franklin Housing Location (first established by the Franklin Mining Company, purchased by Quincy in 1908). It is generally bounded on the south by 4th Street and by Lake Annie Road on the north. House types and lot sizes also vary here, with the houses generally set close to the road. An earlier residence, likely built during the Pewabic Mining Company period, is at 49937 US-41. It is a one-and-one-half-story frame house with clapboard siding, and two entrances on the eaves side that face US-41. Variety is particularly apparent along 5th Street and Street Car Road, perhaps because these were on land originally developed by another mining company. Some houses are the popular Sears and Roebuck single dwelling constructions. In this area are several foursquare houses and two houses on Street Car Road that have two-story, three-sided bays on their gable fronts (50229 and 50241 Street Car Road). At 20044 5th Street is a two-story, T-plan house that incorporates elements of the Greek Revival style in its gable returns and gable-end lunette window. It sits on a rock porch base and has wide rock steps on each side. There are two houses with gambrel roofs (50096 Limerick Road and 50267 Street Car Road). The house at 20498 Street Car Road is constructed of brick.

West of the Limerick Housing Location once stood the Hardscrabble Housing Location. Hardscrabble was located north of 1st Street and west of Mine Rock Road. At the time of the 1989 NHL nomination, only one house remained in the area; it is now gone, and [redacted]

Further north, the Backstreet Housing Location likewise contained few surviving buildings at the time of the 1989 NHL nomination [redacted]

The vegetative character is more open and domestic in Limerick as opposed to the heavily wooded French Town and Sing-Sing. Lombardy poplars form distinct lines along portions of streets in the location. Also present are apple trees, mature lilac, young lilac, fir, sumac, and maple. Herbaceous species identified on site include leadplant, yarrow, snowberry, goldenrod, aster, sweet pea, and Virginia creeper.

The non-contributing resources are mostly newer houses, with a majority of non-contributing resources being one-story residential garages; there are also a few commercial buildings. The new residential construction is generally in scale with the historic houses, ranging from one to two stories, generally with irregular footprints, hipped roofs, and vinyl siding; some have attached garages. The commercial buildings are one story, rectangular buildings along or near US-41 and include Peterson's Fish Market, the metal-sided Copper Country Cubes Warehouse, an auto shop, and a prosthetics and orthotics business. Another, small non-contributing resource is the UP Health System Portage sign at the intersection of US-41 and Campus Drive.

Inventory of Resources, Landscape Character Area 2: Quincy Hill Housing and Mine Management Area

NOTE: "HAF" is Historic Associated Feature, part of the LCA site

(ID numbers are keyed to the attached Map 7)

[redacted]

ID #	NAME (HISTORIC NAME)	ADDRESS	TYPE	STATUS
NA	Quincy Hill Housing and Mine Management Landscape	NA	Site	Contributing
041	Residence	19575 Ingot St.	Building	Contributing
041	Residence, associated Garage	19575 Ingot St.	Building	Non-contributing
042	Residence	19548 Ingot St.	Building	Contributing
043	Residence	49345N US 41	Building	Non-contributing
043	Residence, associated Outbuilding	49345N US 41	Building	Non-contributing
043	Residence, associated Outbuilding	49345N US 41	Building	Non-contributing
044	Superintendent's Residence	49401 US 41	Building	Contributing
044	Superintendent's Residence, associated Outbuilding	49401 US 41	Building	Contributing
045	Quincy Mine Office	49445 US 41	Building	Contributing
046	Residence (Captain's Residence)	49483 US 41	Building	Contributing
047	Residence	49521 US 41	Building	Contributing
047	Residence, associated Outbuilding (Assay Office)	49521 US 41	Building	Contributing
048	Garage	49560 French Town Rd.	Building	Contributing
049	Residence	49560 French Town Rd.	Building	Contributing
049	Residence, associated Garage	49560 French Town Rd.	Building	Non-contributing
050	Residence	49582 French Town Rd.	Building	Contributing
051	Residence	63-69 French Town Rd.	Building	Contributing
051	Residence, associated Garage	63-69 French Town Rd.	Building	Non-contributing
051	Residence, associated Outbuilding	63-69 French Town Rd.	Building	Contributing
052	Garage	French Town Rd.	Building	Non-contributing
053	Garage	63-69 French Town Rd.	Building	Contributing
054	Garage	63-69 French Town Rd.	Building	Contributing
055	Outbuilding	French Town Rd.	Building	Contributing
056	Residence	49693 French Town Rd.	Building	Non-contributing
056	Residence, associated Outbuilding	49693 French Town Rd.	Building	Non-contributing
057	Residence	19949 Raasio Rd.	Building	Non-contributing
058	Residence	19564 Raasio Rd.	Building	Non-contributing
058	Residence, associated Outbuilding	19564 Raasio Rd.	Building	Contributing
058	Residence, associated Outbuilding	19564 Raasio Rd.	Building	Contributing
059	Residence	19563 Raasio Rd.	Building	Non-contributing
059	Residence, associated Garage	19563 Raasio Rd.	Building	Non-contributing

060	Residence	19604 Raasio Rd.	Building	Non-contributing
061	Residence	49819 French Town Rd.	Building	Contributing
062	Residence	49811 French Town Rd.	Building	Non-contributing
062	Residence, associated Garage	49811 French Town Rd.	Building	Non-contributing
063	Garage	49820 French Town Rd.	Building	Contributing
064	Residence	49820 French Town Rd.	Building	Contributing
065	Residence	19643 French Town Rd.	Building	Contributing
065	Residence, associated Garage	19643 French Town Rd.	Building	Contributing
066	Residence	19651 French Town Rd.	Building	Contributing
067	Baakko Residence	19719 Sing-Sing Rd.	Building	Contributing
067	Baakko Residence, associated Garage	19719 Sing-Sing Rd.	Building	Contributing
068	Residence	19742 Sing-Sing Rd.	Building	Contributing
069	Residence	19759 Sing-Sing Rd.	Building	Contributing
069	Residence, associated Outbuilding	19759 Sing-Sing Rd.	Building	Contributing
070	Residence	19701 Sing-Sing Rd.	Building	Contributing
070	Residence, associated Outbuilding	19701 Sing-Sing Rd.	Building	Contributing
070	Residence, associated Outbuilding	19701 Sing-Sing Rd.	Building	Non-contributing
071	Residence	19760 Sing-Sing Rd.	Building	Non-contributing
072	Residence	19796 Sing-Sing Rd.	Building	Non-contributing
072	Residence, associated Garage	19796 Sing-Sing Rd.	Building	Non-contributing
072	Residence, associated Outbuilding	19796 Sing-Sing Rd.	Building	Non-contributing
073	Residence	19799 No. 2 Rd.	Building	Contributing
073	Residence, associated Garage	19799 No. 2 Rd.	Building	Non-contributing
074	Residence	19809 No. 2 Rd.	Building	Contributing
074	Residence, associated Garage	19809 No. 2 Rd.	Building	Non-contributing
075	Residence	19821 No. 2 Rd.	Building	Contributing
075	Residence, associated Garage	19821 No. 2 Rd.	Building	Contributing
076	Quincy Dryhouse Ruin	US 41	HAF	n/a
077	UP Health System Portage Sign	US 41	Structure	Non-contributing
078	Residence	19820 Limerick Rd.	Building	Contributing
078	Residence, associated Garage	19820 Limerick Rd.	Building	Non-contributing
079	Residence	49841 Limerick Rd.	Building	Contributing
079	Residence, associated Outbuilding	49841 Limerick Rd.	Building	Contributing
080	Residence	49842 Limerick Rd.	Building	Contributing
080	Residence, associated Outbuilding	49842 Limerick Rd.	Building	Contributing

081	Peterson Fish Market	49750 US 41	Building	Non-contributing
082	Peterson Fish Market	49813 US 41	Building	Non-contributing
083	[redacted]	[redacted]	[redacted]	n/a
084	Copper Country Cubes	20038 1st Ave.	Building	Non-contributing
085	Residence	49839 US 41	Building	Contributing
086	Residence	49865 US 41	Building	Contributing
087	Residence	49902 Limerick Rd.	Building	Contributing
088	Residence	49916 Limerick Rd.	Building	Contributing
088	Residence, associated Outbuilding	49916 Limerick Rd.	Building	Non-contributing
089	Water Tower	Limerick Rd.	Structure	Contributing
090	Residence	20035 Limerick Rd.	Building	Contributing
091	Garage/Industrial Building	49865 US 41	Building	Non-contributing
091	Garage/Industrial Building, associated Outbuilding	49865 US 41	Building	Non-contributing
091	Garage/Industrial Building, associated Outbuilding	49865 US 41	Building	Contributing
092	Residence	49937 US 41	Building	Contributing
092	Residence, associated Outbuilding	49937 US 41	Building	Contributing
093	Superior Prosthetics and Orthotics, Inc.	20075 3rd St.	Building	Non-contributing
094	Residence	20011 3rd St.	Building	Non-contributing
094	Residence, associated Garage	20011 3rd St.	Building	Non-contributing
094	Residence, associated Outbuilding	20011 3rd St.	Building	Contributing
095	Catholic Church (Residence)	19961 2nd St.	Building	Contributing
096	Catholic Church Rectory (Residence)	19980 2nd St.	Building	Contributing
097	Residence	19961 2nd St.	Building	Contributing
097	Residence, associated Garage	19961 2nd St.	Building	Contributing
098	Residence	19943 2nd St.	Building	Non-contributing
098	Residence, associated Outbuilding	19943 2nd St.	Building	Non-contributing
099	Duplex Residence	49919 Mine Rock Rd.	Building	Contributing
099	Duplex Residence, associated Garage	49919 Mine Rock Rd.	Building	Non-contributing
099	Duplex Residence, associated Outbuilding	49919 Mine Rock Rd.	Building	Non-contributing
100	Residence	19944 2nd St.	Building	Contributing
100	Residence, associated Garage	19944 2nd St.	Building	Contributing
100	Residence, associated Garage	19944 2nd St.	Building	Non-contributing
100	Residence, associated Outbuilding	19944 2nd St.	Building	Contributing
101	Residence	49969 Mine Rock Rd.	Building	Non-contributing
101	Residence, associated Outbuilding	49969 Mine Rock Rd.	Building	Non-contributing
102	Residence	19957 3rd St.	Building	Contributing

103	Residence	50098 Mine Rock Rd.	Building	Contributing
103	Residence, associated Garage	50098 Mine Rock Rd.	Building	Contributing
103	Residence, associated Outbuilding	50098 Mine Rock Rd.	Building	Non-contributing
104	Residence	50030 Mine Rock Rd.	Building	Contributing
104	Residence, associated Garage	50030 Mine Rock Rd.	Building	Contributing
105	Residence	50055 Mine Rock Rd.	Building	Non-contributing
105	Residence, associated Garage	50055 Mine Rock Rd.	Building	Non-contributing
105	Residence, associated Outbuilding	50055 Mine Rock Rd.	Building	Contributing
106	Residence	19996 3rd St.	Building	Contributing
107	Residence	49850 US 41	Building	Non-contributing
108	Auto Shoppe	49997 US 41	Building	Non-contributing
108	Auto Shoppe, associated Outbuilding	49997 US 41	Building	Non-contributing
109	Residence	20019 4th St.	Building	Contributing
109	Residence, associated Garage	20019 4th St.	Building	Contributing
109	Residence, associated Outbuilding	20019 4th St.	Building	Contributing
109	Residence, associated Outbuilding	20019 4th St.	Building	Contributing
109	Residence, associated Outbuilding	20019 4th St.	Building	Contributing
110	Residence	20020 4th St.	Building	Contributing
110	Residence, associated Outbuilding	20020 4th St.	Building	Contributing
111	Residence	20089 5th St.	Building	Non-contributing
112	Residence	20057 5th St.	Building	Contributing
112	Residence, associated Outbuilding	20057 5th St.	Building	Contributing
113	Residence	50096 Limerick Rd.	Building	Contributing
114	Residence	20057 5th St.	Building	Contributing
114	Residence, associated Garage	20057 5th St.	Building	Contributing
115	Residence	20058 5th St.	Building	Contributing
115	Residence, associated Garage	20058 5th St.	Building	Contributing
115	Residence, associated Prefabricated Home	20058 5th St.	Building	Non-contributing
116	Residence	20044 5th St.	Building	Contributing
116	Residence, associated Outbuilding	20044 5th St.	Building	Contributing
117	Residence	20034 5th St.	Building	Contributing
118	Residence	20029 5th St.	Building	Contributing
118	Residence, associated Outbuilding	20029 5th St.	Building	Contributing
118	Residence, associated Outbuilding	20029 5th St.	Building	Non-contributing
118	Residence, associated Outbuilding	20029 5th St.	Building	Non-contributing
119	Residence	20017 5th St.	Building	Contributing
119	Residence, associated Outbuilding	20017 5th St.	Building	Contributing

120	Residence	50117 Mine Rock Rd.	Building	Non-contributing
121	Residence	19969 5th St.	Building	Contributing
121	Residence, associated Garage	19969 5th St.	Building	Non-contributing
121	Residence, associated Outbuilding	19969 5th St.	Building	Contributing
122	Residence associated Outbuilding	50151 Mine Rock Rd.	Building	Non-contributing
122	Residence, associated Outbuilding	50151 Mine Rock Rd.	Building	Non-contributing
123	Prefabricated Home	50159 Mine Rock Rd.	Building	Non-contributing
124	Residence	50160 5th St.	Building	Contributing
125	Residence	50170 Street Car Rd.	Building	Contributing
125	Residence, associated Garage	50170 Street Car Rd.	Building	Non-contributing
125	Residence, associated Outbuilding	50170 Street Car Rd.	Building	Contributing
126	Residence	50219 Street Car Rd.	Building	Contributing
126	Residence, associated Garage	50219 Street Car Rd.	Building	Non-contributing
127	Residence	50229 Street Car Rd.	Building	Contributing
127	Residence, associated Outbuilding	50229 Street Car Rd.	Building	Non-contributing
128	Residence	50241 Street Car Rd.	Building	Contributing
128	Residence, associated Garage	50241 Street Car Rd.	Building	Contributing
128	Residence, associated Outbuilding	50241 Street Car Rd.	Building	Contributing
129	Residence	20498 Street Car Rd.	Building	Contributing
129	Residence, associated Garage	20498 Street Car Rd.	Building	Non-contributing
129	Residence, associated Outbuilding	20498 Street Car Rd.	Building	Non-contributing
130	Residence	50267 Street Car Rd.	Building	Contributing
226	Residence	50233 Mine Rock Rd.	Building	Contributing
226	Residence, associated Prefabricated Home	50233 Mine Rock Rd.	Building	Non-contributing
226	Residence, associated Outbuilding	50233 Mine Rock Rd.	Building	Contributing
227	Residence (duplex)	50303 and 50305 Rock Rd.	Building	Non-contributing
228	Residence	50350 Lake Annie Rd.	Building	Non-contributing
229	Residence	50364 Lake Annie Rd.	Building	Non-contributing

Integrity Assessment

The **Quincy Hill Housing and Mine Management Area** has not substantially changed since the initial 1989 NHL nomination. It continues to contribute to the historic character of the district to a high degree. Contributing resources include the landscape (one contributing site), ninety-nine buildings, and one structure. The character area retains integrity in the aspects of location, setting, design, materials, workmanship, and association due to the extant buildings, outbuildings, plants, views, spatial organization, and streets that continue to represent historic character. The Quincy Hill Housing and Mine Management Area is integral to the character of the overall district as the location of the offices and residences built for the mining company's local administrative

officers; it also retains the largest collection of worker housing in the NHL district. Its domestic character balances the industrial resources across the road.

Integrity of design, materials, and workmanship remains to a large degree, particularly with the mine management resources. The National Park Service has provided technical assistance in the restoration of some of these buildings, particularly the Quincy Mine Office. In some instances, residences have had new windows or siding installed, or garages built onto or adjacent to them. This has not impacted integrity to a substantial degree, and building design, particularly the distinctive massing of the various residential types, remains clearly evident. The area retains a high level of location, setting, feeling, and association, particularly through the continued visual connection with the Industrial Core, situated immediately across the road. The restored Quincy Mine Office and its associated landscape is exceptional and unique within the area and conveys the power and prestige of the company at the height of its operations at the turn of the twentieth century.

Impacts to integrity include a few areas of non-historic/incompatible construction, particularly along US-41 at Campus Drive where several commercial buildings have been added and along Raasio Road in Sing-Sing where contemporary houses have infilled vacant lots. Some housing areas have been obscured due to successional vegetation. This situation was present in 1989 with the creation of the original NHL nomination, as a number of residences had been demolished following the closure of the Quincy Mining Company. Some residences have been modified since the NHL designation and have changed from contributing to non-contributing. Despite this, the overall architectural and landscape character of the historic housing and management area predominates. Historic streets, homes and outbuildings, and domestic vegetation all contribute to the sense of place, as do building foundations and remnant road traces. The majority of non-contributing residential garages are mid-twentieth century, although they were not included in the resource count for the original NHL designation. While they are adjacent to the residences, they are one-story, and do not substantially detract from the pattern of historic housing in this LCA. The Dryhouse, which exists as a ruin, has been stabilized and serves as an interpretive site explaining its relationship to the Quincy mining operations.

6. Landscape Character Area 3: Lower Pewabic Housing Location (See Maps 4, 5, and 8)
Contributing: 22 Buildings, 1 Site
Non-Contributing: 6 Buildings

Description

A portion of the **Lower Pewabic Housing Location** was initially developed by the Pewabic Mining Company. When Quincy acquired the Pewabic Mine property in 1891, the company took over management of existing worker housing and platted an expansion of the location. That extension is the area known today as the Lower Pewabic Housing Location. Quincy built thirty-six homes at the site in 1899 and added another twenty-four homes in 1917.[241] Within the LCA today are twenty-three contributing and six non-contributing resources.

The Lower Pewabic Housing Location LCA is located east of the Quincy Mine Industrial Core. It is bounded roughly by West Lower Pewabic Street on the north, Back Street on the south, Franklin Tram Road on the east, and Lower Pewabic Road on the west, with some resources present north of West Lower Pewabic Street and south of Back Street. It is situated on relatively level ground that is elevated above the landscape to the south and west, providing for views over those areas. Historically, the housing location was visually dominated by the No. 2 Shaft-Rockhouse to the west, a relationship that remains tangible in the present and is enhanced by the alignment of the location's streets. The landscape is spatially defined by three parallel streets that are oriented

[241] Quinn Evans Architects, "Quincy Unit Cultural Landscape Report," II-51 through II-59.

east-west (from north to south: West Lower Pewabic Street, South Street, and Back Street) and connected on each end by shorter north/south streets (Lower Pewabic Street South on the east and Lower Pewabic Road on the west). Bisecting the location north/south is 1st Street. The small, evenly spaced lots create a dense residential neighborhood pattern.

The streets of Lower Pewabic are level and chiefly covered with gravel, with the exception of the east half of West Lower Pewabic Street, which is paved with asphalt. Driveways of dirt, gravel, or asphalt extend into some, but not all lots. The placement of driveways/parking areas varies from one lot to the next. Pedestrian circulation occurs on the roads, driveways, parking areas, and lawns. There are very few paths dedicated to pedestrians and no sidewalks.

Thirteen of the primary extant residences in the Lower Pewabic Housing Location line West Lower Pewabic Street, with most on the south side and two on the north. The remaining four houses are on South Street east of 1st Street. The properties are on parcels that are generally evenly spaced with few gaps between them and have relatively uniform setbacks. The contributing houses are all very similar, having been based on the same Sears and Roebuck plans from 1917. They are rectangular two-and-one-half-story, front-gabled houses. They have stone foundations, a few of which have been painted. Historically, they had wood clapboard siding. Most retain the wood siding, while a few have been covered with horizontal aluminum or vinyl siding (e.g., 20201 West Lower Pewabic Street) or asphalt roll siding (e.g., 20350 West Lower Pewabic Street), and in one case, vertical wood siding on the lower level (20232 South Street). Roofs are generally asphalt-shingled and most have gabled dormers on the sides and brick chimneys. Windows are typically double-hung, one-over-one units with some paired or tripled replacement windows. Single-leaf entry doors are located on the front, rear, and side walls. Most have a one-story, front-gabled porch covering the main entry on the front elevation; a few of these have been enclosed.

Several of the properties include garages and outbuildings. Typically, the earliest garages in the location were rectangular, one-car buildings with gabled or hipped roofs built of wood covered in clapboard or asphalt roll siding, and usually set immediately adjacent to the street. Examples include the garages at 20309 and 20337 West Lower Pewabic Street. One property, 20211 West Lower Pewabic Street, has a similar garage, but it is set back behind the house. In a few cases, newer garages have been attached to the houses (e.g., 20271 West Lower Pewabic Street). There are also a number of smaller outbuildings, typically sheds of varying dates. These are usually set along the rear property lines, for example at 20211 West Lower Pewabic Street and 20232 South Street.

Lining the remainder of South Street and Back Street (parallel to and south of South Street) are forty foundations that mark the evenly spaced pattern of company housing that once existed. Historic images document a pattern of identical small, T-plan residences one-and-one-half stories tall with centrally placed entrances on the eave side. They were similar or identical to company housing in the Limerick Housing Location.[242] These are typically stone foundations with, in some cases, remnants of historic wood framing and siding. [redacted]

Vegetation is generally of two types. The areas around the extant buildings include lawn, canopy and ornamental trees, fruit trees, ornamental shrubs, and a few vegetable and flower gardens. The areas around the remnant building foundations have more successional vegetation in a variety of herbaceous species, but also includes historic domestic plants such as lilies, lilac, apple trees, Lombardy poplar, and small red pines.

[242]Compare HAER No. MI-2, photograph 239 to 237, Library of Congress.

The three non-contributing houses include a one-story rectangular side-gabled house with attached garage at 20181 West Lower Pewabic Street, a manufactured home with detached garage at 20384 South Street, and a residence at 20419 South Street. All are modern and built outside of the period of significance.

Inventory of Resources, Landscape Character Area 3: Lower Pewabic Housing Location

(ID numbers are keyed to the attached Map 8)

ID #	NAME (HISTORIC NAME)	ADDRESS	TYPE	STATUS
NA	Lower Pewabic Housing Location Landscape	N/A	Site	Contributing
131	Residence	20181 W Lower Pewabic St.	Building	Non-contributing
132	Residence	20201 W Lower Pewabic St.	Building	Contributing
132	Residence, associated Garage	20201 W Lower Pewabic St.	Building	Non-contributing
133	Residence	20211 W Lower Pewabic St.	Building	Contributing
133	Residence, associated Garage	20211 W Lower Pewabic St.	Building	Contributing
133	Residence, associated Outbuilding	20211 W Lower Pewabic St.	Building	Contributing
134	Residence	20227 W Lower Pewabic St.	Building	Contributing
135	Residence	20245 W Lower Pewabic St.	Building	Contributing
136	Residence	20271 W Lower Pewabic St.	Building	Contributing
137	Residence	20287 W Lower Pewabic St.	Building	Contributing
137	Residence, associated Garage	20287 W Lower Pewabic St.	Building	Contributing
138	Residence	20309 W Lower Pewabic St.	Building	Contributing
138	Residence, associated Garage	20309 W Lower Pewabic St.	Building	Contributing
139	Residence	20321 W Lower Pewabic St.	Building	Contributing
139	Residence, associated Garage	20321 W Lower Pewabic St.	Building	Contributing
140	Residence	20337 W Lower Pewabic St.	Building	Contributing
140	Residence, associated Garage	20337 W Lower Pewabic St.	Building	Contributing
141	Residence	20349 W Lower Pewabic St.	Building	Contributing
141	Residence, associated Garage	20349 W Lower Pewabic St.	Building	Non-contributing
142	Residence	20350 W Lower Pewabic St.	Building	Contributing
143	Residence	20320 W Lower Pewabic St.	Building	Contributing
144	Residence	20232 South St.	Building	Contributing
144	Residence, associated Outbuilding	20232 South St.	Building	Contributing
144	Residence, associated Outbuilding	20232 South St.	Building	Contributing
145	Residence	20340 South St.	Building	Contributing
146	Residence	20384 South St.	Building	Non-contributing
146	Residence, associated Garage	20384 South St.	Building	Non-contributing

147	Residence	20419 South St.	Building	Non-contributing

Integrity Assessment

The **Lower Pewabic Housing Location** has not substantially changed since the initial 1989 NHL nomination and continues to contribute to the historic character of the district. Contributing resources include the landscape (one contributing site) and twenty-two buildings. The character area retains integrity in the aspects of location, design, association, and materials. The Lower Pewabic Housing Location is integral to the character of the overall district as a Quincy Mining Company owned and operated the housing location during the period of significance. The small, evenly spaced lots platted by the Quincy Mining Company created a dense residential neighborhood that is still evident in the patterns displayed by streets, buildings, foundations, and residential vegetation. Historically, this housing location had a strong functional and visual connection to the adjacent mining landscape, particularly the No. 2 Shaft and its associated resources. Due to the orientation of the streets and the visual presence of the No. 2 Shaft-Rockhouse, this connection is still highly evident. The contributing buildings retain their historic setting, form, workmanship, and materials with few alterations, most of which are compatible with their historic character.

Many historic outbuildings survive in this LCA, with relatively few new garages built. The construction of recent outbuildings and addition of garages and entries to some of the buildings have created a variety of adaptations, but the scale and character of the historic residences remains apparent. Some of the garages may have been present when the property was first designated an NHL, but they were not identified at the time. The continued use of historic houses for residences reflects the historic land use and strengthens the connection between this area and its significant historic role as a part of the Quincy Mining Company operations. The three non-contributing properties are consistent with the scale of the housing location and do not unduly distract from its historic character.

The location encompasses fewer worker houses than it had historically, although the loss of forty residential buildings occurred before establishment of the original NHL nomination in 1989.[243] The subsequent encroachment of vegetation in portions of the housing location has somewhat reduced this character area's integrity of setting and feeling. [redacted] The extant houses, streets, and stone foundations combined convey the historic character of the housing location.

7. Landscape Character Area 4: Quincy Smelting Works (See Maps 4 and 9)

Contributing: 23 Buildings, 4 Structures, 1 Site
Non-Contributing: 0

Description

The **Quincy Smelting Works,** located on the north shore of Portage Lake, was constructed by Quincy on stamp sands deposited by the earlier Pewabic and Franklin Mine operations. The processing site housed Quincy copper smelting operations from 1898 until the mine closed in 1931, and again from 1937 to 1971 to service the reclamation plant operations. The character area has twenty-eight contributing resources constructed between 1860 and 1920.

[243] See also HAER No. MI-2 photo 54, Library of Congress.

The smelter site sits on a spit of land that extends into Portage Lake south of M-26 east of Hancock. It runs east approximately from Maple Street to Ski Hill Road. The site was created entirely by fill placed in Portage Lake, the result of two previous companies dumping waste stamp sand into Portage Lake. Since the site is not part of the original shoreline, the composition is hard packed stamp sand accrued between 1860 and 1898. The ground plane is composed of a mixture of stamp sand, finely crushed slag, coal, coal ashes, limestone, iron ore, mould sand, and structural debris like brick, mortar and wood. This mixture provides a gritty industrial texture that further conveys the character of the site's former use; it also limits the growth of vegetation except where soil has accumulated or become intermixed with the coarser rock and mineral elements. Other portions of the site were addressed by an EPA remediation project that sealed the site to eliminate leaching of toxins into Portage Lake. The resulting surface in the remediated area is level turf, which conveys a park-like character that is quite different from the historic surface. Because of the way the site was constructed with deposits of industrial waste, [redacted] Archeologists have documented the timber cribbing used to contain the stamp sands as it was being built.

The Quincy Smelting Works LCA is divided in two building clusters by the Hancock-Lake Linden Trail (former Mineral Range and Copper Range Railroads). The north cluster consists of three buildings built on either side of the access road (Maple Street) to the smelting site. The 1898 Smelter Office is a two-story, T-plan building with a poor rock foundation, horizontal siding, and an asphalt-shingled roof with cross-gabled dormers. The enclosed entrance porch is on the east side of the building. To the south is a garage (ca. 1900) and an 1898 barn. They are both rectangular frame buildings with gabled roofs clad in corrugated metal. The garage has clapboard siding while the barn is board-and-batten.

South of the former railroad grade is the much larger complex of industrial buildings and structures associated with the smelting operation. Building forms and materials vary across the site. Most are two to three stories tall and with a few exceptions have gabled roofs. Shed-roofed wings are present on some buildings. Foundations are either poor rock or concrete. While the basic building forms are generally rectangular, this is somewhat obscured in the case of the two connected clusters of buildings. Wall materials are most frequently corrugated metal and Jacobsville sandstone, but also present are grey brick, wood in either clapboard, board and batten, or both, and concrete. Buildings constructed of Jacobsville sandstone are typically laid in random coursed ashlar, with some blocks more rusticated than others. Generally, the main wall planes are of the variegated variety, while all-red blocks are used in quoining and segmental arched window and door lintels. The buildings all have corrugated metal roofing; in some cases, this is protecting the original wood shingles. Because the buildings have been stabilized and mothballed, they have ventilated shutters in the window openings and most doors have also been boarded over to prevent unauthorized entry.

The resources south of the railroad grade are organized around a central open space that extends southwest to the shoreline of Portage Lake. The southwest corner of this space, adjacent to the water, originally held the coal dock and trestle, which are no longer extant. The buildings and structures on the site are grouped into several functional clusters, dominated by the 1989 sandstone Cupola Furnace Building and the 1898 and 1904 No. 5 Reverberatory Furnace Buildings. The massive, multi-level Cupola Furnace Building stands south of the railroad grade, and is distinguished by its monitor roofs, and centrally placed, square elevator tower on the south side that rises three stories to a gabled roof. Attached to the Cupola Furnace Building on its east and west sides are supporting buildings. On the west side is the 1905 one-story, sandstone Boiler House (clad in corrugated metal); immediately south of that, the two-story Baden Hansen Boiler Building, built in 1919 of reinforced concrete. Adjacent to the 1919 building is a 125-foot tall, reinforced concrete boiler stack. On the east side of the Cupola Furnace Building, ranged from west to east, are the one-story, sandstone 1906 Pump House addition; then a narrow (12-foot deep), two-story, crushing plant built of heavy timber and sided in metal. The

Crushing Plant was built ca. 1919 as an addition to the concrete block 1906 Briquetting Plant to its west. Finally, there are limestone bins built in 1907.

The other large complex of buildings is arranged about the two Reverberatory Furnace Buildings. The older of the two (1898) is south and west of the limestone bins. The sandstone building was originally designed to stand about 36 feet tall to the top of its monitor roof. It also included four red brick stacks that rose over 70 feet in height. Prior to the original 1989 NHL nomination, the front (south) half of the building had been lowered to about 26 feet tall, and the roof changed to a flattened gambrel. The stacks were removed. Three equally spaced and oversized double-door entrances remain on the south side, along with two of the large second-floor window openings. A one-story gabled scale house was added to the central entrance, south side, ca. 1907 and built of concrete block. Perpendicular to the 1898 Reverberatory Furnace Building is another large, two-story building built for the No. 5 Reverberatory Furnace in 1904. The newer Reverberatory Furnace Building also has a monitor roof and is sided in corrugated metal. The metal furnace stack on its west side has been truncated. Extending in front of the Pump House addition and the Briquetting Plant is a metal and wood trestle. [redacted] At the end of this connected complex is the 1920 Casting Plant, a two-and-one-half story building with a monitor roof, metal siding, and walls dominated by multi-light windows. Connecting to the No. 5 Reverberatory Furnace Building from the north is the two-story sandstone Mineral House, also built in 1904.

Around these clusters are other supporting buildings such as the Dockside Warehouse, Assay Office, Scale House, Machine Shop and Carpenter Shop/Cooper Stock Building, and Oil Shed. The two-story frame Warehouse is distinguished by its low-pitched gable and exterior enclosed staircase. It has board and batten siding on the first floor, and clapboard on the second. It was built in 1898, with a dryhouse addition constructed in 1916. Covered runways that connected the Warehouse to the Casting Plant and the 1898 Reverberatory Furnace are gone, although the sidewalks remain. West of the Warehouse is the 1898 Assay Office, which received an addition off the northeast end of the building in 1908. The one-and-one-half story office has clapboard siding, with a cross gable at the south end and an external square brick chimney on the west side. West of the Assay Office is the ruin of the sandstone Charcoal House (1898). The Charcoal House was one story tall, with a gable on the south side, and heavy timber truss system also on the south side. The exterior stone walls survive, although the frame gable is gone. The nearby, one-story Scale House was built in 1898, as was the Carpenter Shop/Cooper Stock Building. The Scale House is clad in corrugated metal siding and has large wood garage doors at either end. The one-and-one-half story Carpenter Shop/Cooper Stock Building, located at the west side of this landscape character area, is clad in board and batten. Its original wood shingles are underneath the corrugated metal roof covering. It stands south of and adjacent to the 1907 Machine Shop, which is made of concrete block. Within the gable end of the building's saltbox roofline is a round window, an unusual feature for the smelting complex. While notably smaller than most of the resources in the area, the sandstone Oil House is distinctive for its barrel roof.

Operation of the smelting plant relied on a transportation network of two-foot-gauge rail lines (tramways and spurs) that connected the complex's buildings. As noted at the beginning of Section 6, this transportation network is part of the Quincy and Torch Lake Railroad and Tramway system—one contributing site—that spans many LCAs within the NHL district. The tramways and spurs are not enumerated in the table below, but are described further here. Today two spurs on the south side of the Mineral Range and Copper Range Railroads grade remain. (The Mineral Range and Copper Range Railroad also spans more than one LCA and is counted as one non-contributing structure that is not listed separately in this LCA.) One Quincy and Torch Lake Railroad and Tramway system tram line continues to feature a locomotive resting on rails and ties, while the other provides a ramped berm (with remnants of the former wood trestle structure) to the upper level of the mineral house. Other evidence of this smaller-gauge network of rails is found as four steel trestles built to facilitate

movement of slag and coal. One is north of the Cupola Furnace Building where it bridges the Mineral Range Railroad grade to access the north slag pile. A second is south of the Briquetting Building where it connects the Cupola Furnace Building with the Reverberatory Furnace Building and facilitated the movement of materials between them. A third is located north and east of the Casting Shed where it functioned as an elevated charging system for the furnaces. Finally, a fourth trestle exists east of the Dockside Warehouse loading dock where it was once integrated with the disposal of slag from the Reverberatory Furnace.

The landscape is dominated by several slag piles (slag is finely graded rock left over from the copper smelting process). Important historic associated features that contribute to the significant LCA 4 site, they are denoted by "HAF" in the table below. North of the Cupola Furnace Building and east of the Smelting Works Office Building is a massive slag dump with steep sides and a relatively flat top. This pile was formed when slag from the cupola furnace was trammed here while still in a molten state. It was begun in 1905 when construction of the elevated steel trestle connecting it to the Cupola Furnace Building was complete. A smaller, linear slag pile east of the Mineral House and Casting Plant supported train tracks and tram trestles entering those buildings from the east. This was also begun around 1905 after the Mineral House was completed. Finally, there is a low slag pile east of the Dockside Warehouse, at the end of an elevated tram trestle, near the shore of Portage Lake. This slag pile curves and slopes upward as it once functioned to support a tram line between the Casting Shed and the elevated tram trestle. Included within the pile is other industrial debris like fire brick, structural brick, coal ash, [redacted] Its construction date is unknown, but it was present by 1920. At the far eastern edge of the smelter site is another large slag pile. It has been altered over the years and is outside the boundary of the district.

As with the Industrial Core, the presence of [redacted] enhances the historic character of the smelter site. [redacted] Vegetation in this location consists of grasses (undetermined species), and volunteer successional plants including paper birch (*Betula papyrifera*), balsam fir, Northern white cedar, and red pine.

Inventory of Resources, Landscape Character Area 4: Quincy Smelting Works

NOTE: "HAF" is Historic Associated Feature, part of the LCA site.

(ID numbers are keyed to the attached maps)

ID #	NAME (HISTORIC NAME)	ADDRESS	TYPE	STATUS
NA	Quincy Smelting Works Landscape	NA	Site	Contributing
148	Office Building	210 Maple St.	Building	Contributing
149	Garage	210 Maple St.	Building	Contributing
150	Barn	210 Maple St.	Building	Contributing
151	Steel Trestle and North Slag Pile	210 Maple St.	(Structure, HAF)	n/a, see pp. 58-59
152	Tool Shed	210 Maple St.	Building	Contributing
153	Oil House	210 Maple St.	Building	Contributing
154	Machine Shop	210 Maple St.	Building	Contributing
155	Cooper Stock (Parts and Supplies Storage Barn)	210 Maple St.	Building	Contributing

156	Boiler Stack	210 Maple St.	Structure	Contributing
157	Baden Hausen Boiler Building	210 Maple St.	Building	Contributing
158	Boiler House	210 Maple St.	Building	Contributing
159	Cupola Furnace Building	210 Maple St.	Building	Contributing
160	Woodshed	210 Maple St.	Building	Contributing
161	Wood and Metal Trestle	210 Maple St.	(Structure)	n/a, see pp. 58-59
162	Pump House Addition	210 Maple St.	Building	Contributing
163	Crushing Plant	210 Maple St.	Building	Contributing
164	Steel Trestle	210 Maple St.	(Structure)	n/a, see pp. 58-59
165	Briquetting Plant	210 Maple St.	Building	Contributing
166	Limestone Bins	210 Maple St.	Structure	Contributing
167	Woodshed	210 Maple St.	Building	Contributing
168	Wood structure	210 Maple St.	Structure	Contributing
169	Mineral House	210 Maple St.	Building	Contributing
170	Steel Trestle and East Slag Pile	210 Maple St.	(Structure, HAF)	n/a, see pp. 58-59
171	Casting Plant	210 Maple St.	Building	Contributing
172	No. 5 Reverberatory Furnace Building	210 Maple St.	Building	Contributing
173	1898 Reverberatory Furnace Building	210 Maple St.	Building	Contributing
174	Scale House	210 Maple St.	Building	Contributing
175	Charcoal House Ruins	210 Maple St.	HAF	n/a
176	Assay Office	210 Maple St.	Building	Contributing
177	Scale House	210 Maple St.	Building	Contributing
178	Dockside Warehouse	210 Maple St.	Building	Contributing
179	Icehouse	210 Maple St.	Structure	Contributing
180	Steel Trestle and South Slag Pile	210 Maple St.	(Structure, HAF)	n/a, see pp. 58-59

Integrity Assessment

The condition of resources at the **Quincy Smelting Works** was noted in 1989 as fair to poor, with additional deterioration expected should stabilization not occur. Since that time, the buildings have been stabilized and protected through the addition of corrugated metal roofs and window and door panels, the removal of overhead hazards, and the remediation of environmental hazards such as asbestos and contaminated stamp sands. Because of this, deterioration has been considerably slowed and the Quincy Smelting Works has remained generally unchanged since the initial NHL nomination. The Quincy Smelting Works continues to outstandingly contribute to the historic character of the district. Contributing resources include the landscape (one contributing site), twenty-three buildings, and four structures. The character area retains all seven aspects of integrity to a high degree. The Quincy Smelting Works is integral to the character of the overall district as the location of a key aspect of the processing of copper-bearing rock through smelting to preparing the ore for shipping. The complex retains more than thirty historic resources representing the Quincy smelting operation. The majority of the historic buildings are intact, in stable condition, and with few elements that date beyond the period of significance. There has been very little substantial change to the physical appearance or historic design of the

buildings, and the retention of these stone, concrete, wood, heavy timber, and brick resources continues to clearly display the original design, materials, and workmanship of the company workers who designed and built the complex. As with the Quincy Mine Industrial Core area, the massive buildings reflect the wealth of the Quincy Mining Company and its confidence in long-term economic success.

With the exception of the coal dock/trestle areas, most of the major historic buildings are present, both massive processing buildings, and smaller support resources, giving a relatively complete impression of the historic industrial character of the property. The presence of smelting-related structures and landscape features such as trestles, slag piles, equipment, and other features contribute to the record of historic operations of the property. Despite some loss of features (such as smokestacks) and a few small frame buildings, along with changes to a portion of the landscape due to remediation, the property continues to convey a strong sense of place and possess integrity of feeling and association. The setting of the character area is somewhat impacted by contemporary industrial land uses outside the boundary, including a contracting salvage yard to the east and the Houghton County Road Commission Service Facility to the west, but the development is not sufficient to greatly impact the overall integrity of the area.

8. Landscape Character Area 5: South Quincy Housing Location (See Maps 4, 5, and 10)

Contributing: 21 Buildings, 1 Site
Non-Contributing: 5 Buildings

Description

Quincy platted the **South Quincy Housing Location** directly north of the Quincy Smelting Works in 1903 to provide housing for Quincy Smelter workers. The area has twenty-two contributing resources and five non-contributing resources.

The South Quincy LCA is located on the north side of M-26, across from the Quincy Smelting Works, and Portage Lake. The landscape consists of three roads: Pewabic Road, a north-south loop road; Maple Street, which extends from the east side of the Pewabic Road loop and curves south to end at M-26; and East 2nd Street, which runs east from Maple Street before curving south (where it becomes Slattery Road) toward M-26, although the road is blocked off before it reaches M-26 (which is also called Royce Road). Unlike housing locations at the top of Quincy Hill, the South Quincy Housing Location is situated on a relatively steep slope rising toward the north from the relatively level land along M-26. Pewabic Road is the lower section of a road that once climbed the steep slope to connect with the Pewabic Mine at the top of the hill. There is no longer evidence of that connection. The streets and residential lots are irregularly shaped in response to the steep topography. The streets are generally surfaced with asphalt but have decomposed in some areas, particularly the upper Pewabic Road loop. They have no curbs or sidewalks except where they meet M-26.

Within the LCA, residences are widely scattered. In their location and design, they represent the hierarchy of workers at the smelter site. Workers' houses on Pewabic Road and Maple Street are generally placed on level sites cut into the hillside. They have varied setbacks and orientations toward the roads; combined with the steep grades and limited sight distances, this makes the overall spatial organization of the housing location somewhat obscured. The Pewabic Road area is dominated by the surrounding woodland vegetation, containing ash and maples with ferns and thimbleberries apparent along the roadside. Wood piles and ornamental plantings, including foundation plantings are also present. Homeowners have added spruce, balsam, and cedar trees in their yards. The 2nd Street yards include lawns, gardens, scruffy undergrowth and scattered canopy trees. Most houses have driveways of varying lengths, generally covered with gravel although a few are asphalt.

The housing for workers consists mostly of saltbox or T-plan houses that are one- or one-and-one-half stories tall. Most have irregular footprints, with a few rectangular and square shapes scattered throughout. The saltbox houses (as at 49251 Pewabic Road) are typically one-and-one-half stories with a gabled roof sloping down to shelter the one-story section. T-plan houses (as at 49159 Pewabic Road) are also generally one-and-one-half stories with a cross-gabled roof. Poor rock and brick foundations predominate, with a few concrete block foundations under later porch additions. Siding varies throughout the location. Wood shingle siding is common, but clapboard is also present. Asphalt roll siding and vinyl or aluminum siding are also present on some houses. The house at 49013 Pewabic Road has unique diagonal siding in the gable. Roofs are generally covered with asphalt shingles, but a few have been replaced with standing seam metal. A few houses have gabled or hipped dormers. Brick chimneys are also nearly universal; some rise from the center of the roof while others are set on side walls. Windows vary widely. Many original wood double-hung windows remain, including three-over-one, six-over-six, one-over-one, and two-over-two. Some windows are vinyl replacements, typically in a one-over-one arrangement. A few sliding windows and larger tripartite windows are also present. Porches are common, ranging from small open porches covering the main entry, to partial and full-width porches, although all are one-story in height. The house at 49070 Pewabic Road is notable for its enclosed full-length porch under the saltbox roof, which also features historic three-over-one, wood, double-hung windows wrapping around all three sides, and a paneled door with a divided-light, three-quarter glass panel.

The houses along 2nd Street are somewhat larger and more elaborate in character. They may have housed middle managers from the smelter. The houses are aligned along a level terrace, which has a grade that slopes away to the south. The setting exposes more of the buildings on that side and fosters the perception, when viewed from the north, that the houses are practically sitting on top of the smelter site. The houses along 2nd Street are uniformly spaced and have a somewhat consistent setback from the street. However, the presence of outbuildings, driveways, decks, gardens, and vegetation break up the spatial character, making them seem more scattered than they are. The residences command expansive views of the smelter, Portage Lake, and the city of Houghton beyond. These houses are typically two- or two-and-one-half stories high and have more overtly stylistic elements such as bay windows and gable returns. They often have complex hipped or multiple-gabled roofs and hipped or gabled dormers. Three houses, 20437 and 20459 2nd Street and 49027 Slattery Road, share similar massing that includes a pyramidal roof, a gabled dormer on the west side, and full-width front porches, although the middle house in the series is differentiated by a gambrel front gable. The most elaborate house in South Quincy is 20497 2nd Street. This foursquare house is two full stories with pyramidal roof finished with hipped dormers. It has a poor rock foundation and wood clapboard siding with a flat trim board delineating the transition from first to second story and a slight kick of the siding at the base of the second story. References to the Classical Revival style are found in the three-quarter-width front porch with railings and Doric columns. A porch is recessed into the southwest corner of the second story, and there are bay windows on the south, west, and east sides. The house also features leaded windows on the upper sash of the bay window and in the attic dormers, and a large exterior brick chimney on the east side. Two houses that front on Royce Road may pre-date Quincy's purchase of the area from the Pewabic Mining Company (49099 Maple Street and 20402 Royce Road). These two residences reflect the irregular massing and decorative detailing of the Queen Anne style, with front two-story bays rising to a gabled peak. Fish scale shingles and a Palladian window survive in the gables of 49099 Maple Street.

The South Quincy Housing Location LCA also retains a number of outbuildings in various conditions, including sheds and garages. Typically, the earliest garages in the location were rectangular, one-car buildings with gabled or hipped roofs built of wood covered in clapboard or asphalt roll siding, and usually set immediately adjacent to the street, such as the garage at 20459 2nd Street. Some retain their original wood shingled or clapboard siding and shingled roofs, and other features such as original garage or person doors. A

few homes along Pewabic Road feature new additions and garages (the non-contributing buildings in this LCA), although these are generally in character with the scale, massing, and materials of the location. Flat areas near the road appear to be former house sites.

Inventory of Resources, Landscape Character Area 5: South Quincy Housing Area

(ID numbers are keyed to the attached maps)[244]

ID #	NAME (HISTORIC NAME)	ADDRESS	TYPE	STATUS
NA	South Quincy Housing Location Landscape	NA	Site	Contributing
184	Residence	49070 Pewabic Rd.	Building	Contributing
184	Residence, associated Garage	49070 Pewabic Rd.	Building	Contributing
185	Residence	49129 Pewabic Rd.	Building	Contributing
185	Residence, associated Garage	49129 Pewabic Rd.	Building	Non-contributing
186	Residence	49159 Pewabic Rd.	Building	Contributing
187	Residence	49160 Pewabic Rd.	Building	Contributing
187	Residence, associated Garage	49160 Pewabic Rd.	Building	Non-contributing
188	Residence	49251 Pewabic Rd.	Building	Contributing
188	Residence, associated Garage	49251 Pewabic Rd.	Building	Non-contributing
188	Residence, associated Outbuilding	49251 Pewabic Rd.	Building	Non-contributing
189	Residence	49266 Pewabic Rd.	Building	Contributing
190	Residence	49323 Pewabic Rd.	Building	Contributing
190	Residence, associated Outbuilding	49323 Pewabic Rd.	Building	Non-contributing
191	Residence	49013 Maple St.	Building	Contributing
191	Residence, associated Outbuilding	49013 Maple St.	Building	Contributing
192	Residence	49099 Maple St.	Building	Contributing
193	Residence	20382 Maple St.	Building	Contributing
194	Residence	49099 Maple St.	Building	Contributing
195	Residence	20402 Royce Rd.	Building	Contributing
196	Residence	20419 2nd St.	Building	Contributing
197	Residence	20437 2nd St.	Building	Contributing
198	Residence	20459 2nd St.	Building	Contributing
198	Residence, associated Garage	20459 2nd St.	Building	Contributing
199	Residence	49027 Slattery Rd.	Building	Contributing
200	Residence	49028 Slattery Rd.	Building	Contributing
201	Residence	20497 2nd St.	Building	Contributing

[244] The building ID# begins sequentially at 184; Numbers 181-182 are assigned to non-contributing resources in LCA 1; the number 183 is not used.

Integrity Assessment

The **South Quincy Housing Location** LCA has not substantially changed since the initial 1989 NHL nomination and continues to contribute to the historic character of the district. Contributing resources include the landscape (one contributing site) and twenty-one buildings. The character area retains integrity in the aspects of location, design, materials, workmanship, and association. The South Quincy Housing Location is integral to the character of the overall district as the location of worker and managerial housing built specifically for the nearby Quincy Smelting Works. The retention of the historic street and building cluster patterns and the massing, scale, and materials of the buildings all contribute to the perception of a cohesive historic mining company housing location. Historically, the housing location had a significant functional and visual connection to the smelter, which is still highly evident and contributes to strong sense of association. While the houses have seen some modifications, such as replacement windows and garage additions, they are common for buildings of this era, relatively minor in scale, and do not distract from the overall historic character of the location as early twentieth-century worker and middle-management housing.

The most apparent impacts to integrity are in the aspects of setting and feeling. Historically, the nearby smelter operations would have been quite noisy and industrial materials were prevalent in the view and the air. Today, the setting is more peaceful, a perception that is enhanced by the growth of denser vegetation since the period of significance. While some of the historic residences have been lost, the winding roads and mature trees serve to diminish the visual impact of losses.

9. Landscape Character Area 6: Quincy and Torch Lake Railroad Corridor (See Map 4)

Contributing: 1 Site
Non-Contributing: 0

Description

The **Quincy and Torch Lake Railroad Corridor** LCA connects the Quincy Mine site at the top of Quincy Hill to the Quincy Stamp Mill site on the shores of Torch Lake. The railroad was constructed by a Quincy-owned subsidiary to provide a critical link between the mine extraction and processing operations. Quincy initiated construction of the track in 1888 and completed it in 1890. The track consisted of six miles of narrow-gauge (3-foot wide) rail and 50-foot diameter iron turntables at each end, as well as water tanks and a stone engine house on Quincy Hill. (Extant resources at each end are described in the Quincy Mine Industrial Core LCA 1, the Quincy Smelting Works LCA 4 and the Quincy Stamp Mill LCA 7).[245] Historically, the Quincy and Torch Lake Railroad (Q&TL) ran from the engine house near the No. 7 Shaft (extant) to the No. 1 and No. 2 Mills at the Quincy Stamp Mill. In the Industrial Core, it was one of many railroad and tram lines crisscrossing the landscape. Segments of the tram line are present in the Quincy Smelting Works LCA. As it left the top of Quincy Hill heading east, the railroad was carried on a graded corridor created by modifications to the hillside that included massive areas of cut and fill to level the grade. Additional constructed elements included retaining walls, bridges, and culverts to support the track and to drain water away from it. These all are considered elements of the structure, which was identified on pages 58–59 as one contributing resource.

The LCA 6 is approximately six miles long from the east boundary of the Quincy Mine Industrial Core LCA 1 to the west boundary of the Quincy Stamp Mill LCA 7. Its highest point is at the crest of Quincy Hill on the

[245] O'Connell, "Quincy Mining Company: Stamp Mills and Milling Technology, c. 1860-1931," 650, 654, 659, 660.

west end. From there the corridor slopes gradually to the east before gently curving north as it approaches the Quincy Stamp Mill. Along the entire route, the corridor maintains a grade change of less than two percent, constructed to establish a consistent grade as the topography becomes steeper near Torch Lake. The shallow grade facilitated transportation of heavy loads of copper-bearing rock. Along the railroad alignment, portions of the grade are built up on fill, sometimes reinforced with rock, while in other areas they cut through the hillside, with the sides supported by stone or poured concrete retaining walls. In general, cuts and retaining walls are more evident closer to Torch Lake due to the topography. While the metal rails have been for the most part removed, the wood cross ties are still evident along portions of the track. The corridor is currently used informally as a non-designated transportation corridor for pedestrians, bikes, all-terrain vehicles, and snowmobiles. Modern roads cross the corridor in three locations, providing access points for the current recreational use. In these locations, the grade has been slightly altered to provide a level surface for the crossing road. Dense woodland vegetation encloses most of the corridor. Openings in the forest in some locations present broad views of Portage Lake, Houghton, and Torch Lake in the distance. There are a few residences and a small logging operation adjacent to the corridor (outside the boundary), but these are largely screened by vegetation. A bridge over Quincy Creek (within the Quincy Stamp Mill LCA 7) has been removed; a fence made from old rails marks the location of the bridge. Also within the Quincy Stamp Mill area are a poor rock abutment and concrete piers—the remnants of a steel trestle that crossed over M-26. On the east side of the highway is an earth embankment.

Inventory of Resources, Landscape Character Area 6: Quincy and Torch Lake Railroad Corridor

NOTE: “HAF” is Historic Associated Feature, part of the LCA site

(ID numbers are keyed to the attached maps)

ID #	NAME (HISTORIC NAME)	ADDRESS	TYPE	STATUS
NA	Quincy and Torch Lake Railroad Corridor Landscape	NA	Site	Contributing

Integrity Assessment

The **Quincy and Torch Lake Railroad Corridor** significantly contributes to the historic character of the district. The corridor landscape is one contributing site (the railroad itself is counted elsewhere as one contributing structure that, along with other railroad and tram lines, spans the district as a system). The character area retains integrity in the aspects of location, design, setting, materials, and workmanship. The Quincy and Torch Lake Railroad Corridor is integral to the character of the overall district as the location of an important transportation route between the mining resources on Quincy Hill and the stamp mill on Torch Lake. The railroad corridor remains in its original location and physically links the mine and mill sites as it historically did. The design of the route is evident in the extant horizontal and vertical alignment on the landscape, clearly reflecting the alterations the Quincy Mining Company made to accommodate the trains at an appropriate gradient. Aside from a few modern road cuts, the historic grade of the railroad is maintained throughout the length of the corridor. During the period of significance, views from the corridor were more open as the surrounding landscape was mostly cut over through its use for industrial purposes. Although this setting has been somewhat altered through successional growth, the vegetation also helps to visually frame and define the railroad grade as a deliberately developed transportation route through what remains a rural area, as well as screening views of non-historic development outside the district. Materials and workmanship are

represented by the retaining walls, culverts, and bridges along the route that provide tangible reminders of the historic use of the corridor. The aspects of feeling and association have been altered due to the loss of use of the corridor for mine-related purposes and the lack of trains and tracks.

10. Landscape Character Area 7: Quincy Stamp Mill (See Maps 4 and 11)

Contributing: 2 Structures, 1 Site
Non-Contributing: 0

Description

The **Quincy Stamp Mill** LCA is situated on the southwest shore of Torch Lake in Osceola Township east of Quincy Hill. The Quincy Mining Company used the site from 1888 to 1931 for processing rock brought from the mine shafts on the hill. From 1937 to 1967, the company operated a reclamation plant extracting remnant copper from the stamp sands deposited on the shore. The docks at the stamp mill shipped out the processed rock to various locations on the Great Lakes, while coal was imported to fuel the mine operations. The Quincy Mining Company Stamp Mill was designated as a National Register of Historic Places Historic District in 2007 (NRIS 20070718) at a national level of significance. Because the National Register district has a different period of significance (1888-1967) from the NHL period of significance (1856-1920), the boundaries are different for this LCA compared to the National Register listing. This reflects in part changes in the extent of the stamp sand deposits during different periods.[246] There are three contributing resources in LCA 7.

Critical to this LCA are the ruins of Quincy Stamp Mill No. 1 and Quincy Stamp Mill No. 2. The portions of the landscape that contribute to the NHL district are those that were historically owned and developed by Quincy during the period from 1888 to 1920. These include the structures and landscape resources associated with both stamp mills and transportation networks.

Company housing in the area includes the Mason Housing Location (described as Landscape Character Area 8), and Bunker Hill, where Quincy established housing for mine managers in 1888. Bunker Hill is located at the north end of the Quincy Stamp Mill character area, on the west side of M-26 between Hubbell and Dollar Bay. Historically, Bunker Hill was part of the Quincy operations, but is not included in the district due to property owner objection. The majority of manager housing on Bunker Hill was lost, with only two of six remaining, which lessens the integrity of the area and the understanding of the relationship of the manager housing to working housing and the industrial area. A reclamation plant and dredge were added to the site after the end of the period of national significance. Although they do not contribute to the NHL national significance of the property, they are listed as contributing resources to the Quincy Mining Company Stamp Mills National Register of Historic Places Historic District.

The Quincy Stamp Mill ruins are located on either side of M-26 (see Map 11), and north of the Mason Housing Location. The spatial organization of the Quincy Stamp Mill directly responds to the natural topography of the

[246] Larry Mishkar and Alison K. Hoagland, "Quincy Mining Company Stamp Mills Historic District," National Register of Historic Places Registration Form (Washington, DC: US Department of the Interior, National Park Service, July 18, 2007), Section 7, 1-2. This LCA boundary is also smaller than the National Register nomination due to owner objection to inclusion of certain parcels within an expanded NHL district. These parcels include two Quincy-built, two-story L-plan frame houses with cross-gabled roofs and poor rock foundations. They are two surviving of six built in 1888 to serve as housing for stamp mill managers. They are located on Bunker Hill, north of the Quincy Stamp Mill Landscape Character area and on the west side of M-26. The houses were set on a steep rise that commanded views of Torch Lake and the Stamp Mill operations to the south and west. [redacted]

area. Materials brought from Quincy Hill to be processed gradually descended by rail along the crest of the hill toward the processing plant. The mills were constructed of multiple levels that step down the steep grade adjacent to the southwest end of Torch Lake to take advantage of gravity to increase efficiency. Boilers, storage, housing, and transportation corridors were aligned in a linear pattern that utilized the more level grade along the original shore of the lake.

Large areas of waste stamp sands (important historic associated features) extend out from these areas to the east and south, into portions of the lake that could accommodate the large quantities of materials. The materials were placed in locations where they would not impede water traffic. This LCA contains a representative of the stamp sands, with the boundary in the stamp sands area defining the extent of the sands during the period of national significance. Beyond the boundary is additional waste material that was deposited after the period of national significance.

Vegetation in this area includes large stands of young successional woodland dominated by alder, birch, and maple trees.

The Stamp Mill No. 1 ruin is the southernmost mill. On the northwest side, it includes remnants of the six-level stamp mill, most prominently a brick-and-concrete section that was added to the original wood-frame mill in 1920. The wood-frame portion of the stamp mill was destroyed in a fire in the 1950s or 1960s, but the concrete floor and some foundation walls constructed of Jacobsville sandstone and poor rock remain. The rear wall of the mill served to support an adjacent railroad track. The 1920 building is concrete-framed and has a rectangular footprint. It is two levels high, with the upper level stepped back from the first. The concrete frame is evident on the exterior. Between the framing members are large expanses of multi-light steel windows with brick veneer above and below the windows. Northwest of the stamp mill is the Steam Turbine Building ruin, a square, three-story building of similar construction to the 1920 stamp mill, now a steel, brick, and concrete skeleton. It has shallow arched lintels above the third-level windows. Also extant around the No. 1 Mill area are piping and overhead shafts, a large wooden tub, and remnants of additions constructed of poor rock.

Northeast of Stamp Mill No. 1 was located Stamp Mill No. 2, of which some surface features remain (considered part of the LCA site). On the northwest side of M-26, a concrete slab identifies the footprint of the Stamp Mill. A stone retaining wall that supported the railroad track remains, along with portions of a 1920 lower-level addition: concrete stairwells, bases of machinery, and parts of the roof support system.

On the southeast side of M-26 are additional remnants of the stamp mill process. East of the location of Stamp Mill No. 2 are surface features (foundations—part of the contributing site) associated with the No. 2 Pump House, boiler house, dock, and coal hoist. A stone-lined tunnel and entrance at Torch Lake connect from the south wall of the pump house. East of Stamp Mill No. 1 are surface features associated with the No. 1 Pump and boiler house, coal hoist, coal shed, and dock. This area includes two standing structures: the concrete smokestack of the Boiler House and the Coal Hoist Silo (the coal hoist was used to move coal into the boiler house). The concrete smokestack was associated with the company's first combination boiler and pump house. Elements of the original poor rock Boiler House stack base is next to the concrete stack. Behind the coal hoist are remnants of the concrete unloading pit. It was used to transfer coal from rail cars to the silo storage bin via an underground conveyor system. Remnants of a scale house are also present in the Quincy Stamp Mill area. The site of the coal dock is marked by three rows of pilings and stringers at the shore of Torch Lake, adjacent to a large, level grassed area.

Historically, railroads and barges provided important links between the stamp mill and Quincy Hill as well as the sources for coal and access to markets. Remnants of two railroad corridors are present within this area. The

Copper Range and Mineral Range Railroads corridor (a non-contributing structure that spans multiple character areas, as noted at the beginning of Section 6, pages 58–59) provided a connection between the mill site and the Copper Country region. The tramways and spurs are not enumerated in the table below but are described further here. The section between the No. 1 and No. 2 Mill sites retains intact ties.

The Quincy & Torch Lake Railroad provided the connection between the stamp mill and the mines on Quincy Hill. Portions of railroad trestles connecting the Mill No. 1 to the railway include concrete piers and one complete steel trestle bent. Timber trestle bents protrude from a poor rock embankment marking the location of the empty car storage track right-of-way adjacent to the building. Ties from the Q&TL are also present behind the Coal Silo for the Stamp Mill No. 1 Boiler House.

This character area is overlooked by dense northern hardwood forest in most areas. Areas not forested include the stamp sands, which are partially covered with grasses, and other areas that hosted industrial activities that have retarded forest growth.

Inventory of Resources, Landscape Character Area 7: Quincy Stamp Mill

(ID numbers are keyed to the attached maps)

ID #	NAME (HISTORIC NAME)	ADDRESS	TYPE	STATUS
NA	Quincy Stamp Mill Landscape	NA	Site	Contributing
202	Steam Turbine Building Ruin	50493 M-26	HAF	n/a
203	Quincy Stamp Mill No. 1 1920 addition Ruin	50461 M-26	HAF	n/a
204	Boiler House Smokestack, Stamp Mill No. 1	M-26	Structure	Contributing
205	Coal Hoist Silo	50478 M-26	Structure	Contributing

Integrity Assessment

The **Quincy Stamp Mill** importantly contributes to the historic character of the district. Contributing resources include the landscape (one contributing site) and two structures. The character area retains strong integrity of location and association, and good integrity of design and materials. The Quincy Stamp Mill is integral to the character of the overall district as the location of a key aspect of the processing of copper-bearing rock through stamping to prepare the ore for shipping. Although most of the buildings exist only as ruins, and vegetation has begun to encroach on the site, the building remnants, large-scale structures, railroad corridors and features, dock, and stamp sand deposits combine to provide a strong connection that reflects the overall character of the area as a historic industrial site. The remnants of the mills and railroads continue to reflect the utilitarian organization of activities on the landscape. Stamp sands, a significant by-product of the milling process, remain present in the LCA and beyond, over large areas of the landscape; they reflect the extensive alteration of the shoreline through the historic milling activities. For this reason, integrity of setting is particularly high. The direct link provided by the extant railroad corridors connecting the stamp mill to Quincy Hill and Hancock reinforce the significance of the Quincy Mining Company district as a place where historic resources representing all aspects of the mining operation remain present.

11. Landscape Character Area 8: Mason Housing Location (See Maps 4 and 12)

Contributing: 24 Buildings, 1 Site
Non-Contributing: 3 Buildings

Description

The **Mason Housing Location LCA** was established between 1890 and 1900 following the construction of the Quincy Stamp Mill on Torch Lake. It has twenty-five contributing resources. The location provided quarters for workers at the stamp mill site. The Mason Housing Location is located east of Quincy Hill on the west shore of Torch Lake in Osceola Township and south of the Quincy Stamp Mill LCA 7. The housing location consists of Quincy-built company houses arranged on either side of M-26, which runs roughly southwest-northeast. M-26 is an asphalt-paved, two-lane highway with paved shoulders and gutters (no curb) in the Mason area. The east-west Forsman Road tees into the location approximately a third of the way from its north end. There are no sidewalks. A Michigan Department of Natural Resources-designated snowmobile and ATV route between Dollar Bay and Calumet runs behind the houses on the northwest side of the road, providing a vehicular and pedestrian link between the houses that is separate from the highway. A maintained, unpaved, off-road vehicle track parallels M-26 southeast of the houses on the south side of the highway. This is the Hancock-Lake Linden trail that follows the former route of the Duluth, South Shore, and Atlantic Railroad.

Because the location is situated on the side of a hill, the finish floor elevations of the homes on the northwest side of M-26 are set about ten feet above the road, and those of the houses on the south side of the road are slightly below the road grade. Most of the yards are sloped, and outbuildings are set at a variety of elevations. The stepping down of the buildings as they near the lake and the stamp mill site provides for views that reinforce the historic connections between the housing location and the stamp mill.

The extant neighborhood reflects the layout and use of the historic location. The Quincy Mining Company platted small, evenly spaced lots to create a dense cluster of houses along the road. This arrangement continues to be clearly evident today in the relationship of the houses to each other and the street. The houses maintain relatively even setbacks, with the houses on the southeast side of M-26 set closer to the road than those on the northwest side. Driveways are typically asphalt or gravel and generally lead between the houses to detached garages or open parking areas. The front facades of the houses are oriented toward the road which is set farther back from M-26 and faces Torch Lake. Vegetation within the residential lots includes lawn, canopy, evergreen, and ornamental trees, ornamental shrubs and a few flower beds. The most common trees are maple (*Acer* spp.), oak (*Quercus* spp.), and pine (*Pinus* spp.). The slope to the northwest is mature deciduous forest. A dense stand of young second-growth forest provides a buffer between the homes on the southeast side of the highway and the remediated stamp sands.

Within the character area are twenty contributing buildings, a mixture of fifteen T-plan and five saltbox residences. The T-plan buildings were generally built between 1890 and 1900. They have one-and-one-half story front-gabled sections facing the road, with a one-story side-gabled section to one side (parallel to the highway). The entrances are generally located in the middle of the one-story section. Particularly good examples are at 49926 and 49938 M-26; a number of other T-plan houses have enclosed the front entry with a small porch (as at 49948, 49960, 49978, and 49990 M-26). The saltbox houses were built in 1917 and are one-and-one-half stories high with a centrally placed, side-gable entrance. The lower portion of the saltbox is toward the rear of the house (away from the road). Particularly good examples are at 49926 and 49987 M-26. All the houses have poor rock foundations, which are exposed on the downhill sides. Most have wood clapboard siding, which in a few cases has been covered with horizontal vinyl or aluminum siding. Roofs are generally asphalt-shingled with one or two instances of metal roofing. Brick chimneys rise from the centers of the roofs. Double-

hung windows predominate, in both original wood and vinyl replacement, in a variety of configurations from one-over-one to six-over-one to six-over-six. A few sliding or casement windows are present. Doors are typically single-leaf replacement units. Porches are not common. Where present, they are generally enclosed entries on the street-facing side of the T-plans, or wood platforms with steps and railings to provide access to the raised entry levels on houses on the northwest side of the highway.

The properties have few outbuildings. Some historic wood-framed garages and sheds are present, for example the garage at 49937 M-26 is a rectangular, gable-front, clapboard-sided building set close to the road, which is typical of the earliest garages built in the housing location. A few newer garages and outbuildings have been added.

Inventory of Resources, Landscape Character Area 8: Mason Housing Location

(ID numbers are keyed to the attached maps)

ID #	NAME (HISTORIC NAME)	ADDRESS	TYPE	STATUS
NA	Mason Housing Location Landscape	NA	Site	Contributing
206	Residence	49926 M-26	Building	Contributing
207	Residence	49926 M-26	Building	Contributing
208	Residence	49921 M-26	Building	Contributing
209	Residence	49937 M-26	Building	Contributing
209	Residence, associated Garage	49937 M-26	Building	Contributing
210	Residence	49938 M-26	Building	Contributing
211	Residence	49948 M-26	Building	Contributing
211	Residence, associated Outbuilding	49948 M-26	Building	Non-contributing
212	Residence	49953 M-26	Building	Contributing
213	Residence	49965 M-26	Building	Contributing
214	Residence	49960 M-26	Building	Contributing
215	Residence	49973 M-26	Building	Contributing
215	Residence, associated Garage	49973 M-26	Building	Contributing
216	Residence	49987 M-26	Building	Contributing
216	Residence, associated Outbuilding	49987 M-26	Building	Contributing
217	Residence	49978 M-26	Building	Contributing
217	Residence, associated Outbuilding	49978 M-26	Building	Contributing
218	Residence	49990 M-26	Building	Contributing
219	Residence	50002 M-26	Building	Contributing
220	Residence	50016 M-26	Building	Contributing
221	Residence	50015 M-26	Building	Contributing
221	Residence, associated Outbuilding	50015 M-26	Building	Non-contributing
222	Residence	50027 M-26	Building	Contributing

223	Residence	50043 M-26	Building	Contributing
224	Residence	50059 M-26	Building	Contributing
224	Residence, associated Garage	50059 M-26	Building	Non-contributing
225	Residence	50063 M-26	Building	Contributing

Integrity Assessment

The **Mason Housing Location** significantly contributes to the historic character of the district. Contributing resources include the landscape (one contributing site) and twenty-four buildings. It retains all seven aspects of integrity to a high degree. The Mason Housing Location is integral to the character of the overall district as the location of worker housing built specifically for the nearby Quincy Stamp Mill. The extant company houses read clearly as a uniform neighborhood, particularly as there are few gaps between them. The visual relationship to the extant stamp mill remains apparent and reinforces the historic association of the location as company worker housing for the stamp mill. The continued use of the houses as residences reflects their historic use and strengthens the connection between the area and its significant historic role as part of the Quincy operation. While the houses have evolved over the years, with common replacements such as windows and siding, their design, workmanship, materials remain. In particular, their massing, form, most materials, and details continue to strongly convey their historic character.

There are a few impacts to integrity. The housing location is smaller today than it was historically, and lots on the periphery of the location that once contained residences, outbuildings, and landscape features have been encroached upon by vegetation. The widening of M-26 has somewhat impacted the aspects of setting and feeling. However, the fairly regular pattern of buildings and the high degree of integrity of the remaining buildings contributes to the persistence of the location's historic residential character.

AREAS REMOVED FROM THE REVISED NHL BOUNDARY (See Maps 4, 5, 6, and 7)

There are three areas originally included within the 1989 NHL boundary of the Quincy Mining Company NHL that have lost sufficient integrity to justify their removal from the revised NHL boundary:

Thirty acres of the former Mesnard Housing Location north of Paavola Road are removed from the boundary because of substantial changes since 1989. Circa 1920 there were at least 47 houses in this location, and a water tower. The 1989 nomination identified seven surviving houses, and as late as circa 2000 aerial images document a continuing visual connection between the surviving buildings, with little intervening vegetation or new development.[247] Since that time several buildings have been added to the location, including a large structure and parking area adjacent to US-41. Mature vegetation has obscured the visual connection among the remaining historic houses such that the location is no longer identifiable as cohesive company housing, greatly reducing the integrity of this area. The NHL boundary is therefore shifted south to Paavola Road. This also has the effect of [redacted]

Twenty-five acres of the former Newtown Housing Location east of Franklin Tram Road and north of the Quincy and Torch Lake Railroad Corridor, have also lost substantial integrity and historic character. In 1989, the original Quincy Mining Company NHL nomination stated the Newtown Housing Location had eight

[247] Google Earth Pro.

contributing buildings and three non-contributing buildings. As the nomination did not include a coded map of the area, evaluating the integrity of the area relied on a comparison of aerials taken before and after 1989, and an analysis of existing resources. This location had about twenty-six buildings circa 1920.[248] Since 1989, aerial photographs document the loss of two houses, and construction of a new, large building. The historic buildings that remain have been altered to a point that the area is no longer legible as a historic housing location. [249] The boundary is therefore shifted west to Franklin Tram Road.

Thirty acres of the former Kowsit Lats Housing Location at the southwest portion of the district, east of US-41 and south of Kowsit Lats Road, have substantially diminished integrity since 1989. The 1989 NHL nomination did not identify the location by name, but rather included it as part of the Quincy Mine Location. Ten houses were identified in this location; of these, seven are now gone, one has been substantially remodeled, and four new houses have been constructed. In addition to the loss of historic housing, the scale, style, and placement of the new buildings have obscured the historic location such that it has lost substantial integrity and is no longer identifiable as an historic community. The boundary is therefore adjusted to exclude the new housing while still retaining the Quincy and Torch Lake Railroad Roundhouse and Water Tank north of Kowsit Lats Road and the large poor rock pile east of US-41.

OVERALL INTEGRITY OF THE DISTRICT

The Quincy Mining Company Historic District is important for its ability to represent the process by which copper mining became a dominant industry in both Michigan and the United States during the latter half of the nineteenth century and the first two decades of the twentieth. Its historic integrity is derived from the extent of its collective resources representing all phases of the process, including extraction of copper-bearing rock, transportation within and between mine sites, secondary processing through milling and smelting, the provision of housing for workers, and key mine management buildings. Integrity is derived not only from the number of extant historic buildings, structures, and objects and the degree to which they have remained unchanged, but also from the integrity of the landscape within each character area and the district as a whole. In other words, the significance and integrity of the district lies not in the integrity of each individual piece, but in its collective ability to convey the national importance of the Quincy Mining Company in transforming the American economy in the nineteenth century.

Since the decline of the copper industry in Michigan and the final closure of Quincy Mining Company operations in 1967, the landscape and resources of the former company have continued to evolve. Over time, there have been individual changes and cumulative impacts to the historic character of the district; it has not been frozen in time. During the historic period, and particularly in the Industrial Core area, buildings and structures were built, demolished, or modified to meet new operational requirements. After the historic period, a number of buildings deteriorated to a state of ruin even before the district was originally designated in 1989. Vegetation has crept into formerly cutover areas. Contemporary commercial and industrial land uses have become interspersed throughout the district, particularly along US-41. As people have continued to live in the former company housing locations, houses have evolved, with the addition of garages, new windows, and in some cases replacement siding. The physical changes, some of which took place during the period of significance, are illustrative of the story of copper mining as it evolved in Michigan. While some historic houses have been lost, in most cases the infill of newer houses is limited and complementary to the existing housing stock; where this is not the case (e.g., Kowsit Lats), the boundary has been adjusted to exclude them. Within the Industrial Core and the Quincy Stamp Mill site, industrial buildings, which have not been used in half a century,

[248] "Quincy Mine Location Housing and Community Structures c. 1920," Historic American Engineering Record (HAER) No. MI-2, Quincy Mining Company, Sheet 7, https://www.loc.gov/pictures/item/mi0086.sheet.00007a/resource/ (accessed 9 February 2023).
[249] 1978 Aerial of the Houghton, MI area; Google Earth Pro.

are in varying conditions, from foundations to intact buildings. The use of the No. 2 Shaft area and the Quincy Smelter as interpretive sites has maintained them with a higher degree of integrity than in some other areas. However, the full scale of the mining process is expressed through the survival of multiple shaft locations and resource clusters along the extent of the Pewabic Lode through the district, and the progression of ore from its collection on the surface to its distribution and processing at the stamp mill and smelter sites before shipping out on Lake Superior is key to understanding the significance of the Quincy Mining Company.

[redacted]

7. BIBLIOGRAPHICAL REFERENCES AND OTHER DOCUMENTATION

The American Society of Mechanical Engineers. "Quincy No. 2 Mine Hoist (1920), Hancock, Michigan." National Historic Mechanical Engineering Landmark Nomination Form. New York: American Society of Mechanical Engineers, August 24, 1984.

Annual Report of the Commissioner of Mineral Statistics of the State of Michigan for 1882. Lansing, MI: W. S. George and Co, 1883.

Birnbaum, Charles A. and Christine Capella Peters. *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes.* Washington DC: US Department of the Interior, National Park Service, 1996.

[redacted]

Butler, B. S., and W. S. Burbank. *The Copper Deposits of Michigan*. Washington, DC: US Geological Survey, 1929.

Calhoun, James. "War Metal!" *The Military Engineer*, 33, no. 194 (December 1941), 574. http://www.jstor.org/stable/44555658. Accessed July 13, 2020.

[redacted]

Eckert, Kathryn Bishop. *Buildings of Michigan.* Revised edition. Buildings of the United States. Charlottesville, VA: University of Virginia Press, 2012.

———. *The Sandstone Architecture of the Lake Superior Region*. Detroit, MI: Wayne State University Press, 2000.

Forero, George A., Jr. "The Copper Range Railroad and the Copper Country." *Mid-Continent Railway Gazette*, Vol 37, no. 4 (December 2004), 2-42.

Gates, William B. *Michigan Copper and Boston Dollars: An Economic History of the Michigan Copper Mining Industry.* Cambridge, MA: Harvard University Press, 1951.

[redacted]

Hoagland, Alison K. "Industrial Housing and Vinyl Siding: Historic Significance Flexibly Applied." In *Preservation of What, For Whom: A Critical Look at Historical Significance*, edited by Michael A. Tomlan, 117–24. Ithaca, NY: The National Council for Preservation Education, 1998.

———. *Mine Towns: Building for Workers in Michigan's Copper Country.* Minneapolis, MN: University of Minnesota Press, 2010.

[redacted]

Houghton, Jr., Jacob. *Reports of William A. Burt and Bela Hubbard, esqs., on the Geography, Topography, and Geology of the U.S. Surveys of the Mineral Region of the South Shore of Lake Superior, for 1845; accompanied by a List of Working and Organized Mining Companies; a List of Mineral Location; and a Correct Map of the Mineral Region, also a Chart of Lake Superior, reduced from the British Admiralty Survey.* Detroit, MI: C. Wilcox, 1846.

Hyde, Charles K. "An Economic and Business History of the Quincy Mining Company." In HAER No. MI-2, an unpublished report for the National Park Service Historic American Engineering Record. Washington, DC, 1978.

Kaunonen, Gary. *Challenge Accepted, A Finnish Immigrant Response to Industrial America in Michigan's Copper Country.* East Lansing, MI: Michigan State University Press, 2010.

Kaunonen, Gary, and Aaron Goings. *Community in Conflict: A Working-Class History of the 1913-1914 Michigan Copper Strike and the Italian Hall Tragedy.* Michigan State University Press, 2013.

Kirkwood, Shannon R. *Mobilizing the Home: The Politics of Female Space, Women's Working Class Consciousness, and the Labor Movement in the U.S. and Britain, 1912-1922*. PhD diss., Central Michigan University, 2019.

———. "2016 Graduate Student Essay Prize Winner: In Defense of the Home: Working Class Domesticity and Community Action in the Michigan Copper Country." *Michigan Historical Review* 43, no.1 (Spring 2017).

Krause, David J. *The Making of a Mining District: Keweenaw Native Copper 1500-1870.* Detroit, MI: Wayne State University Press, 1992.

"Land Use Plan (County Development Plan), Houghton County, Michigan." Draft Report dated January 4, 2006.

Lankton, Larry D. *Cradle to Grave: Life, Work and Death and the Lake Superior Copper Mines.* New York: Oxford University Press, 1992.

———. *Hollowed Ground*: *Copper Mining and Community Building on Lake Superior, 1840s to 1990s.* Detroit, MI: Wayne State University Press, 2010.

[redacted]

Lankton, Larry D., and Charles K. Hyde. *Old Reliable*: *An Illustrated History of the Quincy Mining Company.* Hancock, MI: Quincy Mine Hoist Association, 1982.

Lankton, Larry D. and Jack K. Martin. "Technological Advances, Organizational Structure and Underground Fatalities in the Upper Michigan Copper Mines, 1860-1929." *Technology and Culture* 28, no. 1 (January 1987), 42-66.

LeCain, Timothy J. "Moving Mountains: Technology and the Environment in Western Copper Mining." PhD diss., University of Delaware, 1998.

Malone, Michael P. *The Battle for Butte: Mining and Politics on the Northern Frontier, 1864-1906.* Seattle, WA: University of Washington Press, 1981.

Martin, Susan. *Wonderful Power: The Story of Ancient Copper Working in the Lake Superior Basin.* Detroit, MI: Wayne State University Press, 1999.

McClelland, Linda Flint, J. Timothy Keller, Genevieve P. Keller, and Robert Z. Melnick. *National Register Bulletin 30: Guidelines for Evaluating and Documenting Rural Historic Landscapes*. Washington, DC: US Department of the Interior, 1989, revised 1999.

"Military Road in Keweenaw Can Still Be Found in Places." *Daily Mining Gazette*, 16 January 1960.

Michigan Technological University, Archives and Copper Country Historical Collection. "An Interior Ellis Island, Immigrants and Ethnicity in Michigan's Copper Country." https://ethnicity.lib.mtu.edu/intro.html. Accessed January 2, 2024.

Morton, Ron, and Carl Gawboy. *Talking Rocks: Geology and 10,000 Years of Native American Tradition in the Lake Superior Region.* Minneapolis: University of Minnesota Press, 2000.

[redacted]

O'Connell, Charles F. "A History of the Quincy and Torch Lake Rail Road Company." In HAER No. MI-2, an unpublished report for the National Park Service Historic American Engineering Record. Washington, DC, 1978.

[redacted]

Page, Robert R., Cathy A. Gilbert, and Susan A. Dolan. A *Guide to Cultural Landscape Reports: Contents, Process, and Techniques.* Washington, DC: US Department of the Interior, National Park Service, 1998.

[redacted]

Pettengill, Robert B. "The United States Foreign Trade in Copper: 1790-1932." *The American Economic Review,* 25 no. 3 (September 1935), 432-433. http://www.jstor.com/stable/1802527. Accessed July 14, 2020.

Pomazal, Chuck. *Rock Down, Coal Up: The Story of the Quincy and Torch Lake Railroad*. Hancock, MI: Quincy Mine Hoist Association, 2014.

[redacted]

Richter, F. E. "The Copper-Mining Industry in the United States, 1845-1925." *The Quarterly Journal of Economics* 4, no. 2 (Feb. 1927).

Scarlett, Sarah Fayen. *Company Suburbs: Architecture, Power and the Transformation of Michigan's Mining Frontier.* Knoxville: The University of Tennessee Press, 2021.

[redacted]

Strahn, Derek, Chere Jiusto, and Ellen Crain. "Butte-Anaconda Historic District." National Historic Landmark Registration Nomination Form (updated documentation). Washington, DC: US Department of the Interior, National Park Service, January 2006.

Stevens, Horace J. *The Copper Handbook*, v. 8. Houghton, MI: Horace Stevens, 1909.

Thurner, Arthur W. *Strangers and Sojourners: A History of Michigan's Keweenaw Peninsula.* Detroit, MI: Wayne State University Press, 1994.

———. "Western Federation of Miners in Two Copper Camps: The Impact of the Michigan Copper Miners' Strike on Butte's Local No. 1." *Montana Magazine of Western History* 33, no. 2 (Spring, 1983).

[redacted]

Whittlesey, Charles. "Ancient Mining on the Shores of Lake Superior." Smithsonian Contributions to Knowledge 155. Washington City: Smithsonian Institution, 1863.

[redacted]

Previous documentation on file (NPS):

_X_ Previously listed in the National Register (fill in 1 through 6 below)
___ Not previously listed in the National Register (fill in **only** 4, 5, and 6 below)

1. NR #: 89001095
2. Date of listing: 02/10/1989
3. Level of significance: National
4. Applicable National Register Criteria: A__ B__ C__ D__ [Not listed]
5. Criteria Considerations (Exceptions): A__ B__ C__ D__ E__ F__ G__
6. Areas of Significance: Engineering, Industry

Two other properties are listed within the expanded district:

Quincy Mine No. 2 Shaft Hoist House (70000271) listed 1970
Quincy Mining Company Stamp Mills Historic District (07000750) listed 2007,

___ Previously Determined Eligible for the National Register: Date of determination:
_X_ Designated a National Historic Landmark: Date of designation: 02/10/1989
___ Recorded by Historic American Buildings Survey: HABS No.
_X_ Recorded by Historic American Engineering Record: HAER No. MI-2
__ Recorded by Historic American Landscapes Survey: HALS No.

Location of additional data:

State Historic Preservation Office:
Other State Agency:
Federal Agency: Keweenaw National Historical Park, Calumet (National Park Service)
Local Government:
University: Michigan Technological University
Other (Specify Repository):

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Date: July 2020; revised January 4, 2024

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Map Log

Map 1: Quincy Mining Company Historic District NHL within the Keweenaw Peninsula. U.S. topographical map, Keweenaw vicinity, National Geographical Society, 2013. Inset from Freeworldmaps.net.

Map 2: Western boundary and UTM points of the Quincy Mining Company Historic District NHL shown in red on U.S.G.S. Topographic Map, Hancock Quadrangle 7.5 Minute Map.

Map 3: Eastern boundary of the Quincy Mining Company Historic District NHL boundary and UTM points shown in red on U.S.G.S. Topographic Map, Laurium Quadrangle 7.5 Minute Map.

Map 4: Map S-1 Quincy Mining Company Historic District, with the revised NHL boundary, the 1989 NHL boundary, all Landscape Character Areas, and references to relationships of the individual Landscape Character Area maps to the overall district map.

Map 5: Map H-1 Housing Locations, with the revised Quincy Mining Company Historic District NHL boundary, the 1989 boundary, and historic housing locations identified in the nomination text.

Map 6: Map of Landscape Character Area 1 with the revised NHL boundary, the 1989 boundary, historic housing locations, and contributing/non-contributing resources.

Map 7: Map of Landscape Character Area 2, with the revised NHL boundary, the 1989 boundary, historic housing locations, and contributing/non-contributing resources.

Map 8: Map of Landscape Character Area 3 with the revised NHL boundary, the 1989 boundary, and contributing/non-contributing resources.

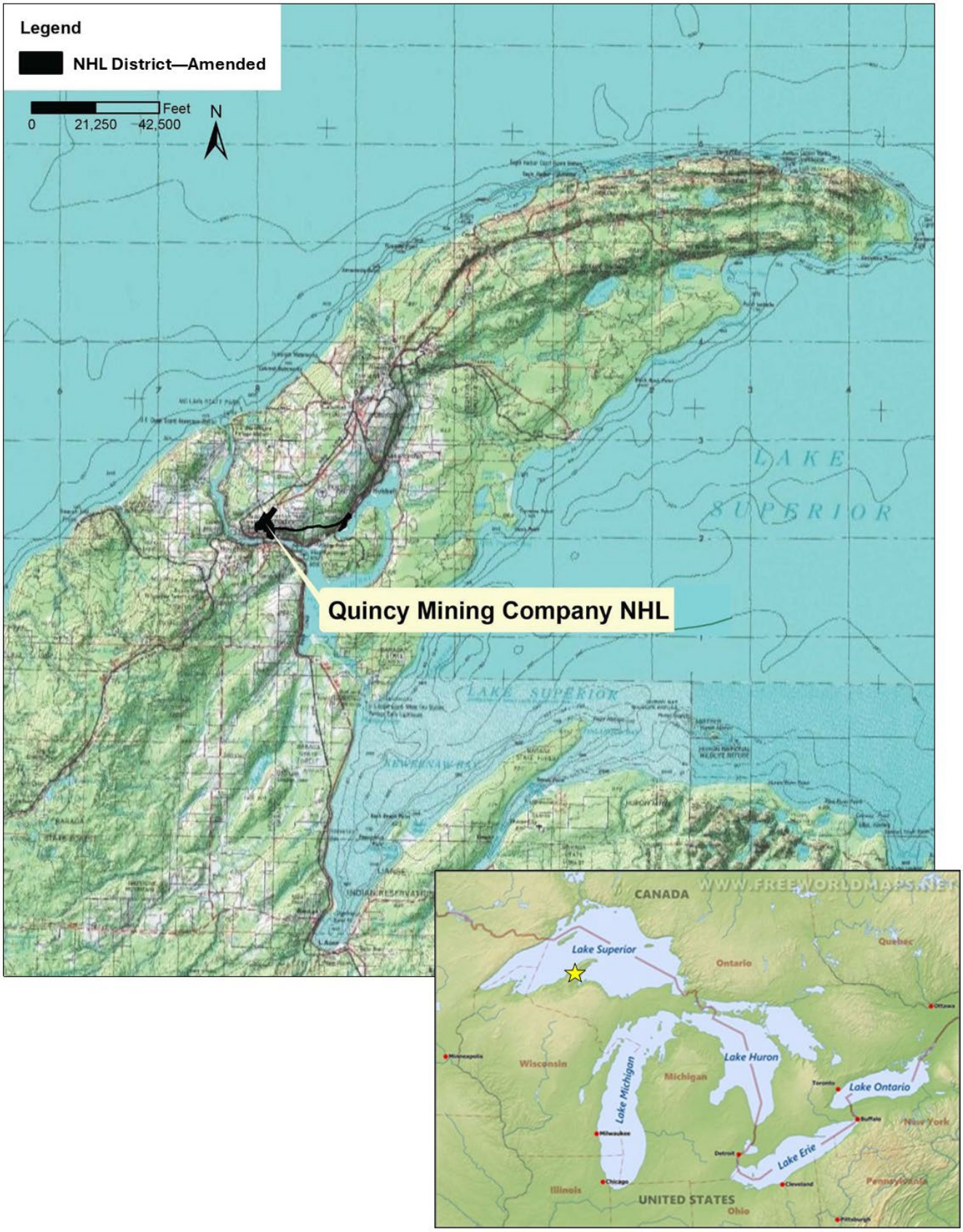
Map 9: Map of Landscape Character Area 4 with the revised NHL boundary, the 1989 boundary, and contributing/non-contributing resources.

Map 10: Map of Landscape Character Area 5 with the revised NHL boundary, the 1989 boundary, and contributing/non-contributing resources.

Map 11: Map of Landscape Character Area 7 with the revised NHL boundary, the 1989 boundary, and contributing/non-contributing resources.

Map 12: Map of Landscape Character Area 8 with the revised NHL boundary, the 1989 boundary, and contributing/non-contributing resources.

Map 13: Surface Features and Underground Operations.



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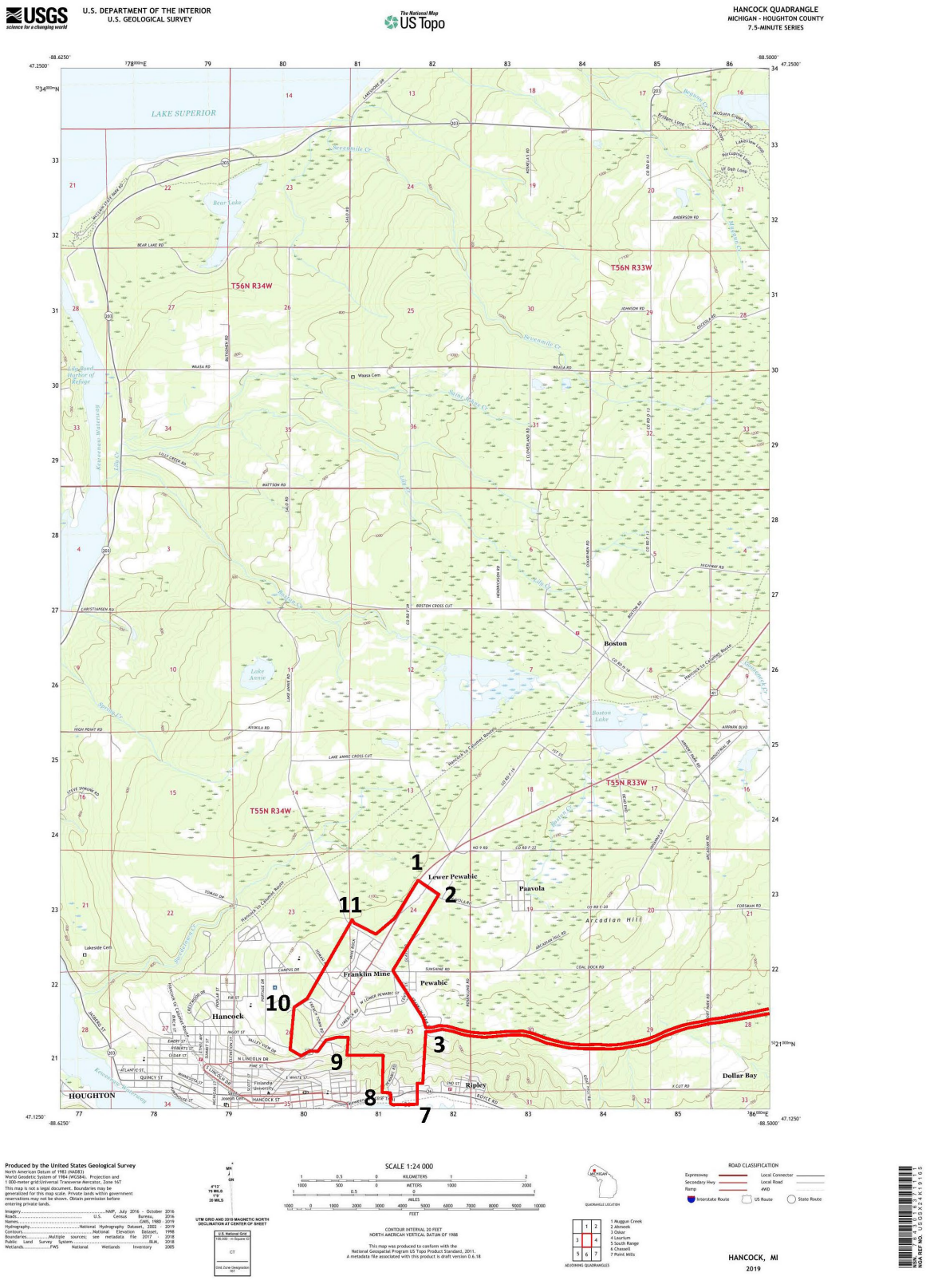
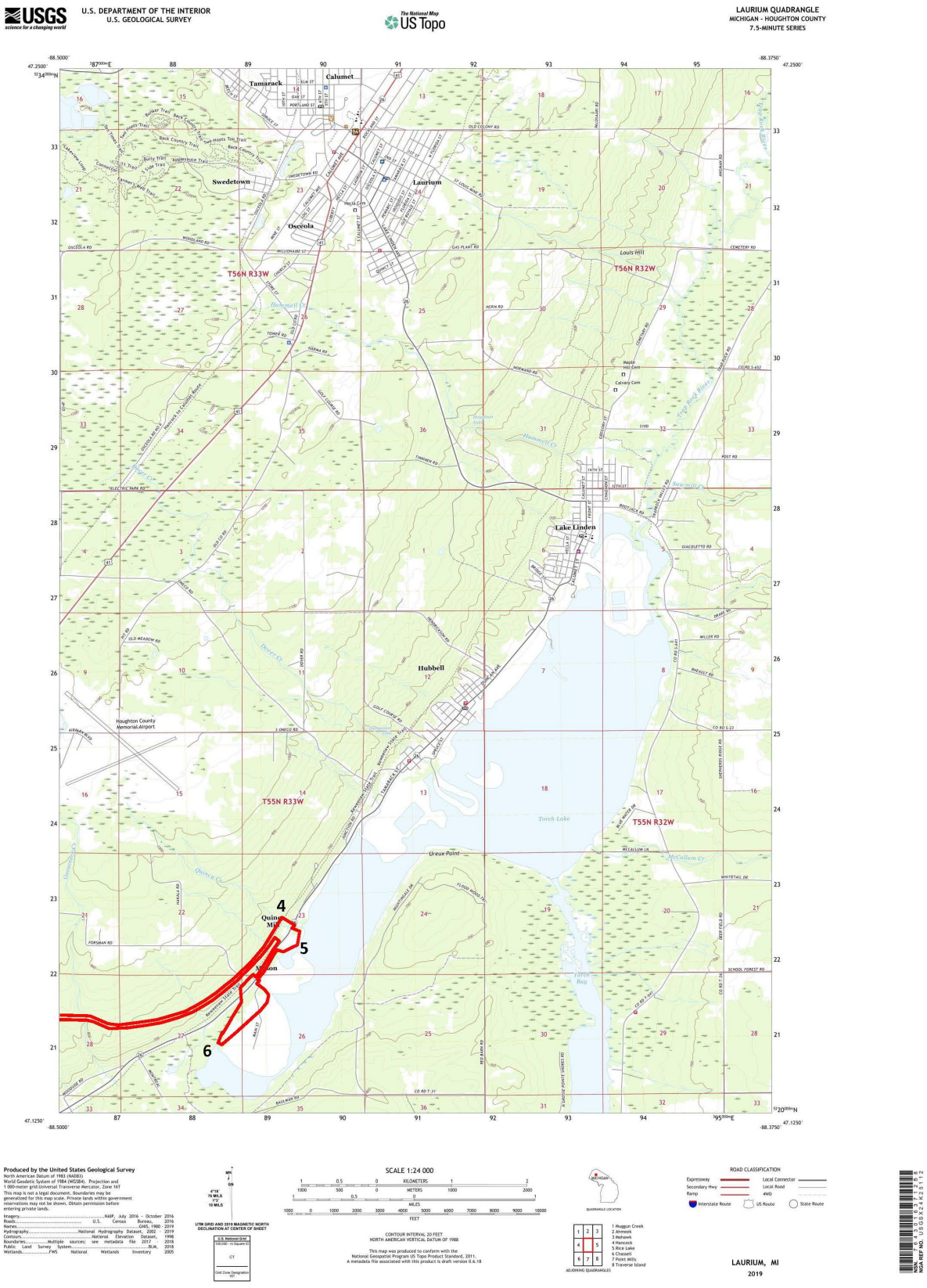
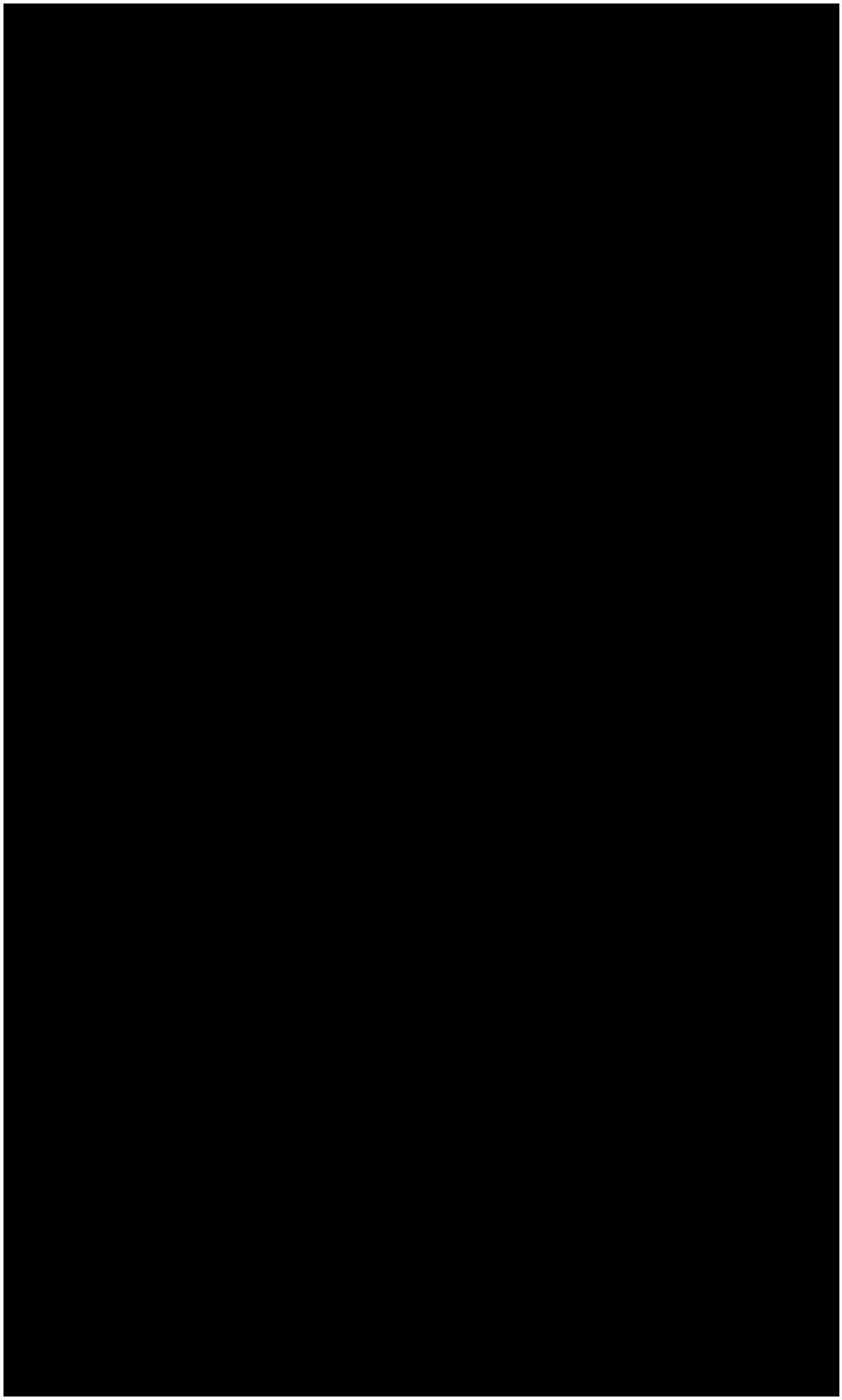


Map 2: Western boundary and UTM points of the Quincy Mining Company Historic District NHL shown in red on U.S.G.S. Topographic Map, Hancock Quadrangle 7.5 Minute Map



Map 3: Eastern boundary of the Quincy Mining Company Historic District NHL boundary and UTM points shown in red on U.S.G.S. Topographic Map, Laurium Quadrangle 7.5 Minute Map



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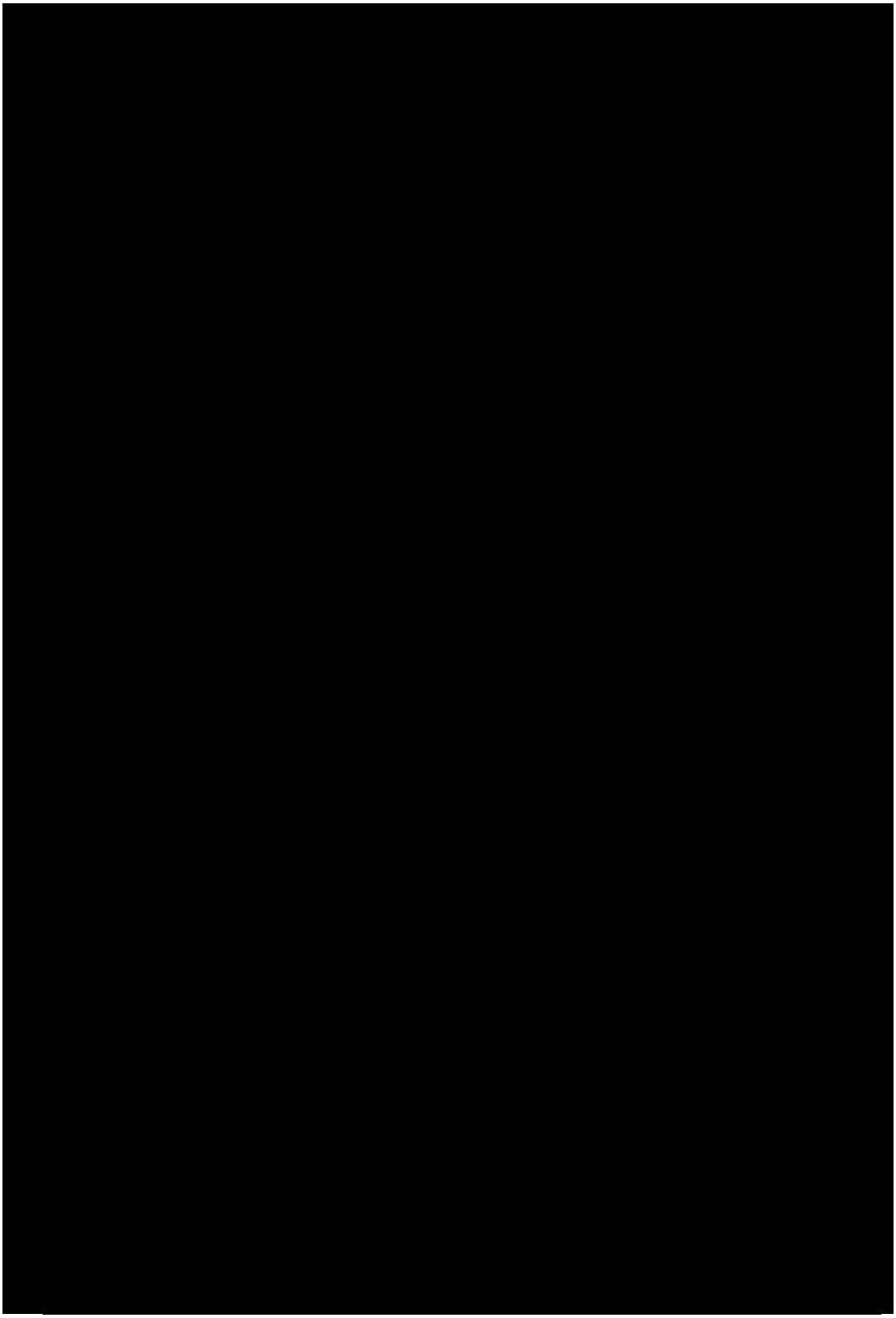

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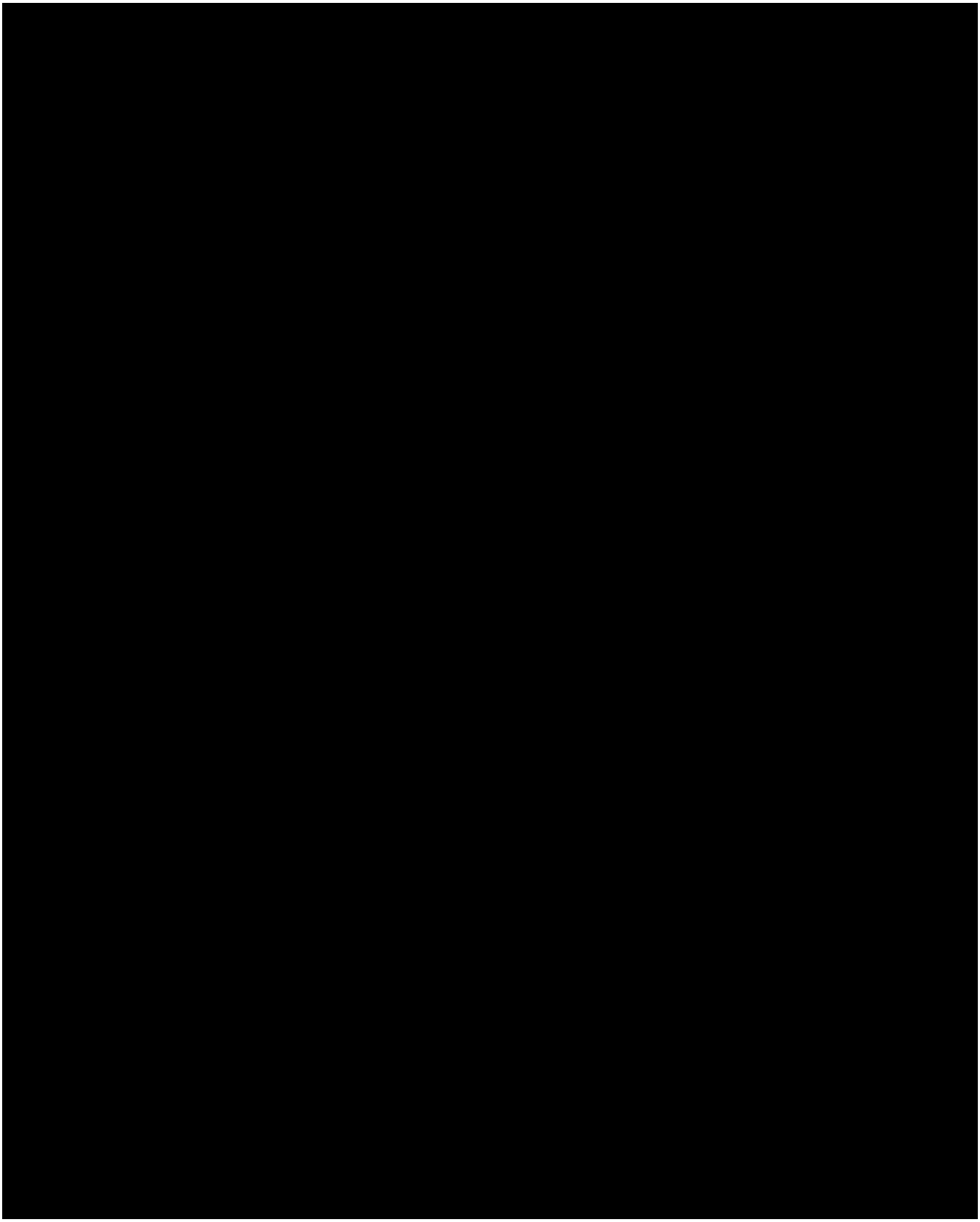
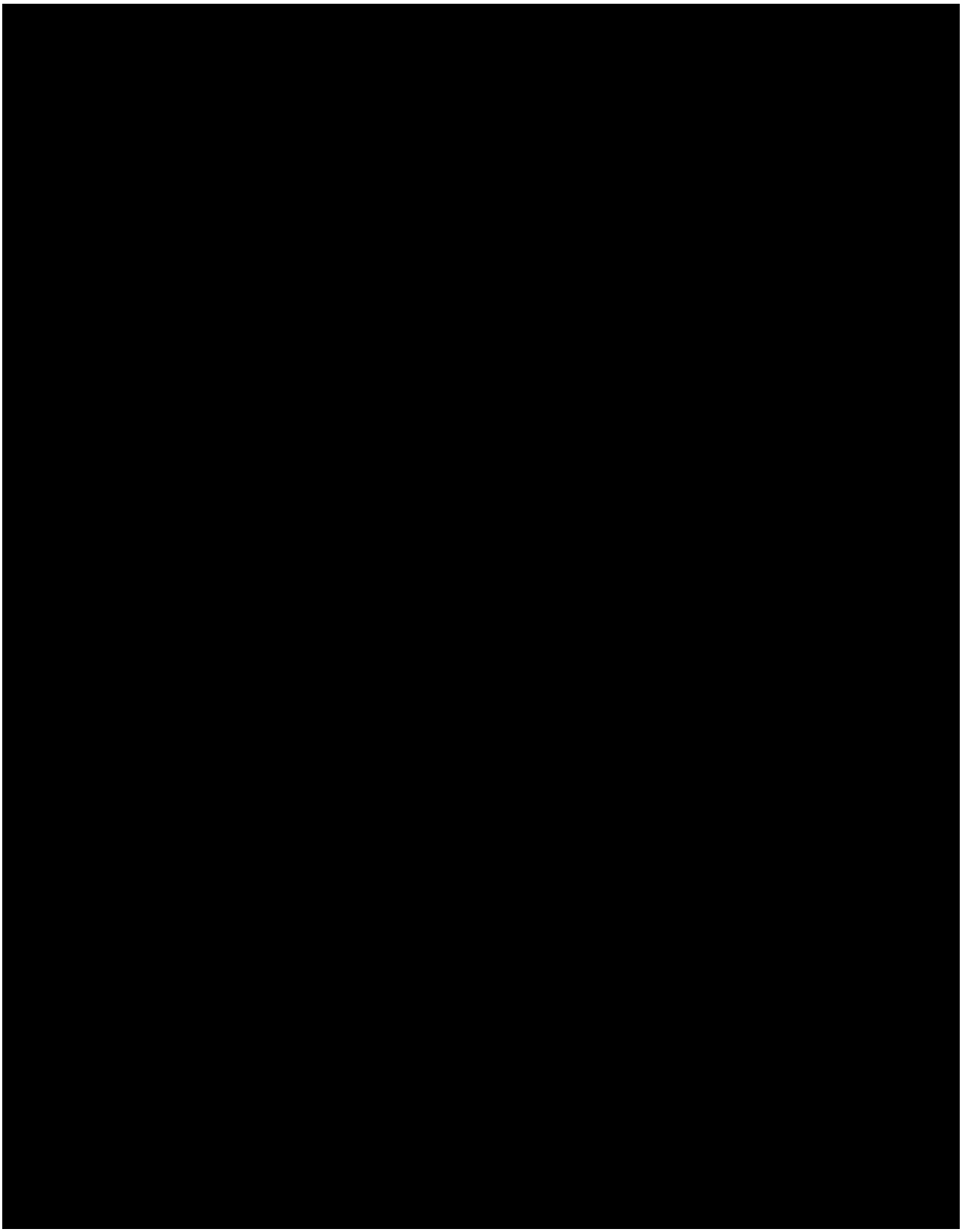
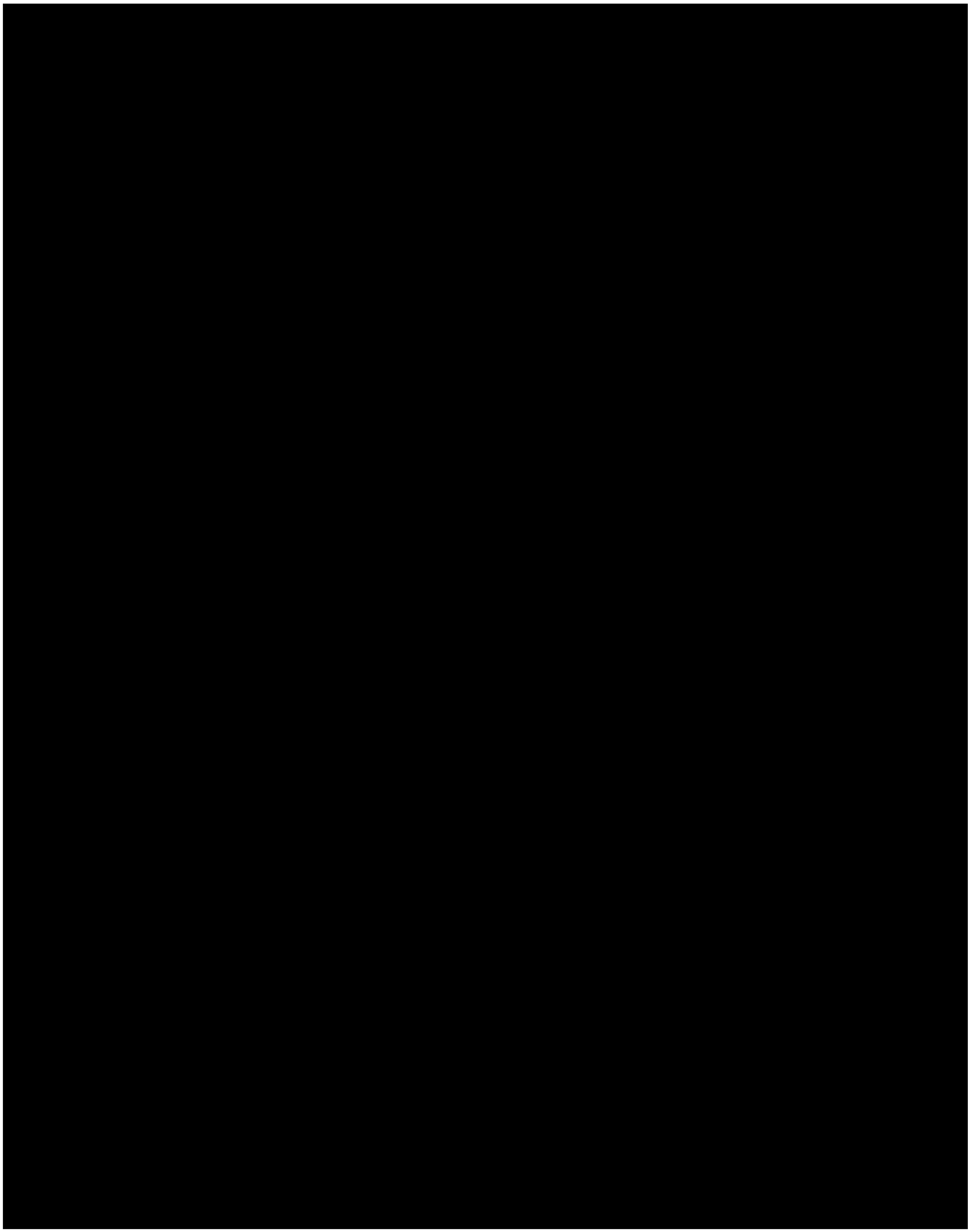


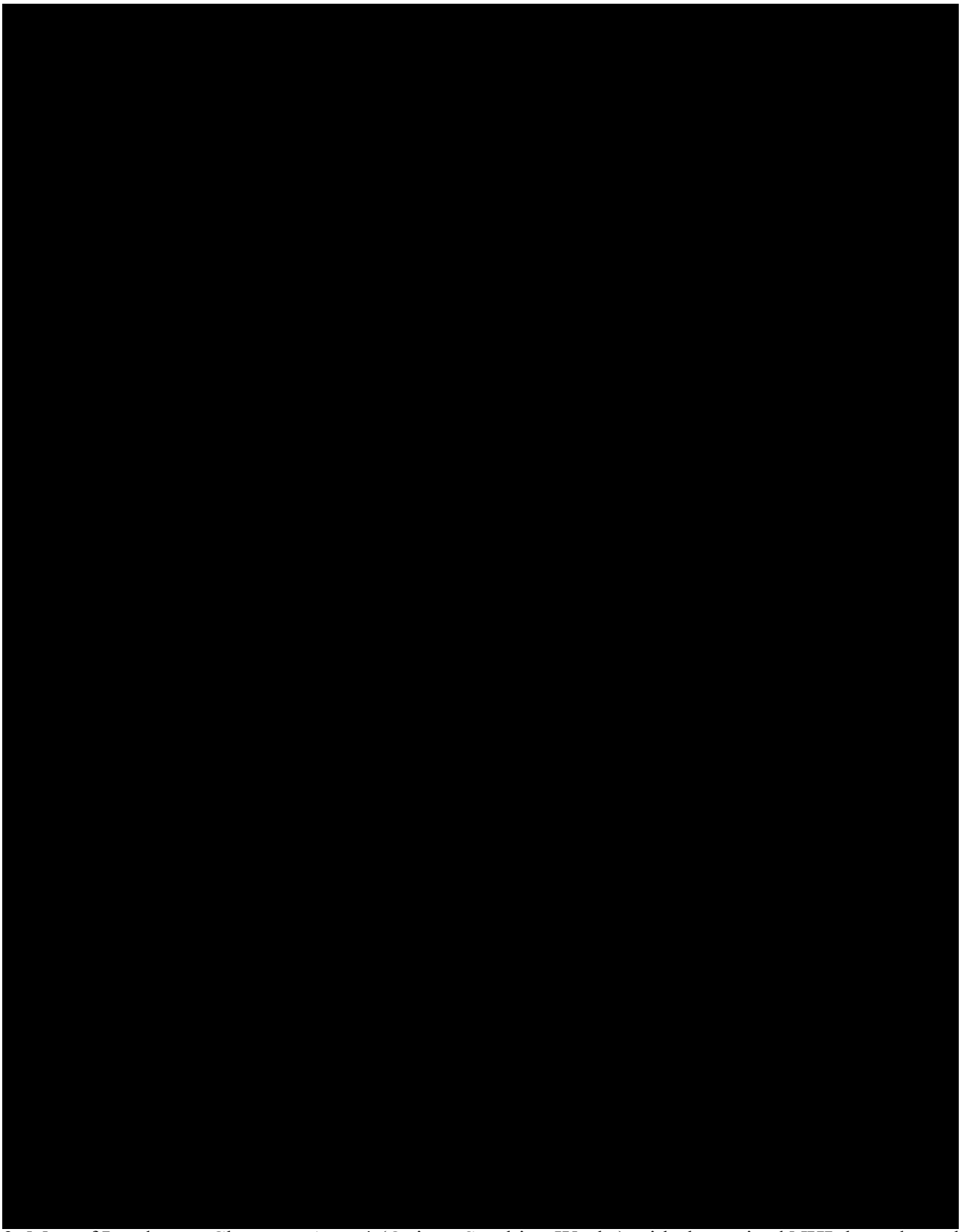
Map 6: Map of Landscape Character Area 1 (Quincy Mine Industrial Core) with the revised NHL boundary, the 1989 boundary, historic housing locations, and contributing/non-contributing resources.



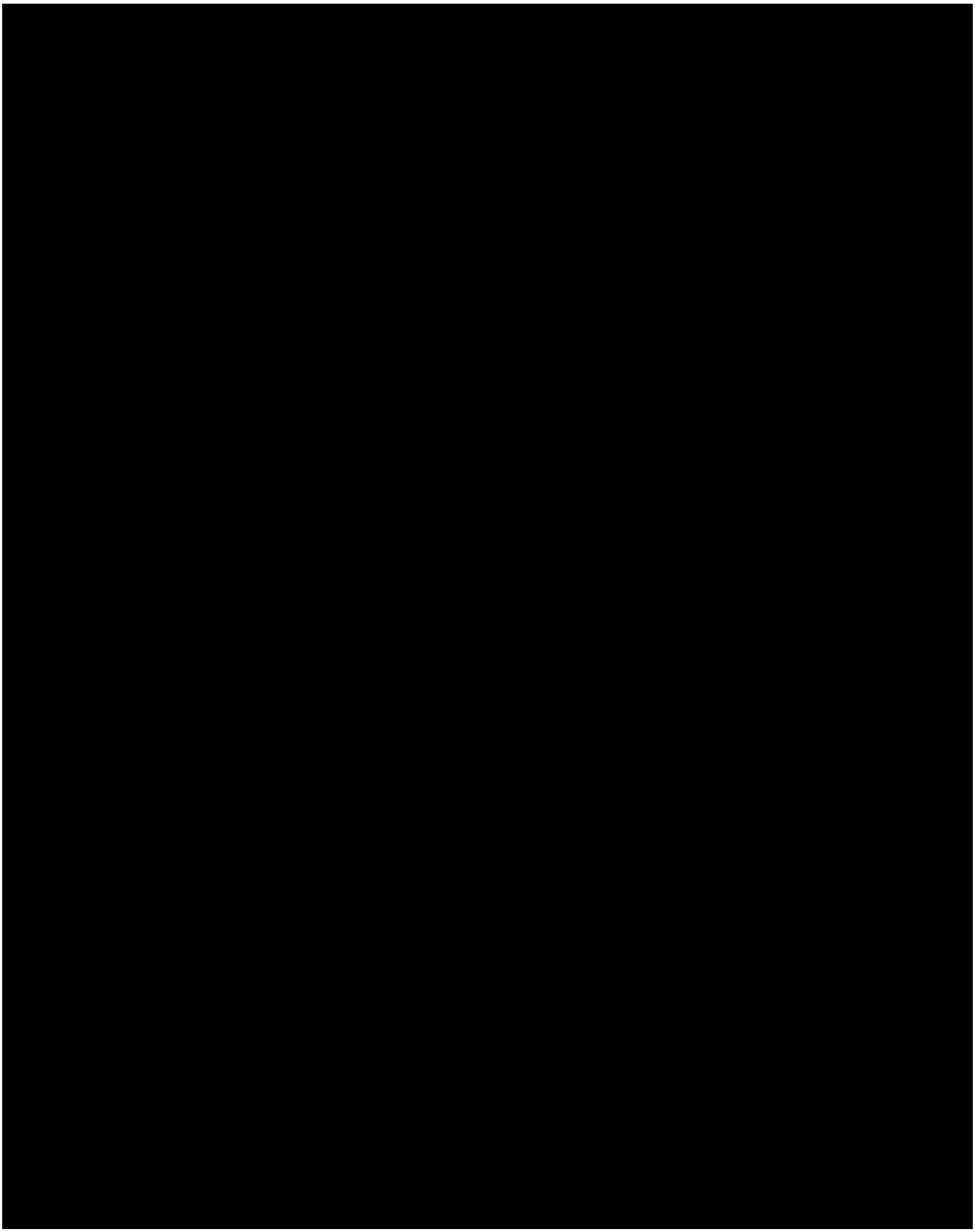
Map 7: Map of Landscape Character Area 2 (Quincy Hill and Mine Management), with the revised NHL boundary, the 1989 boundary, historic housing locations, and contributing/non-contributing resources.



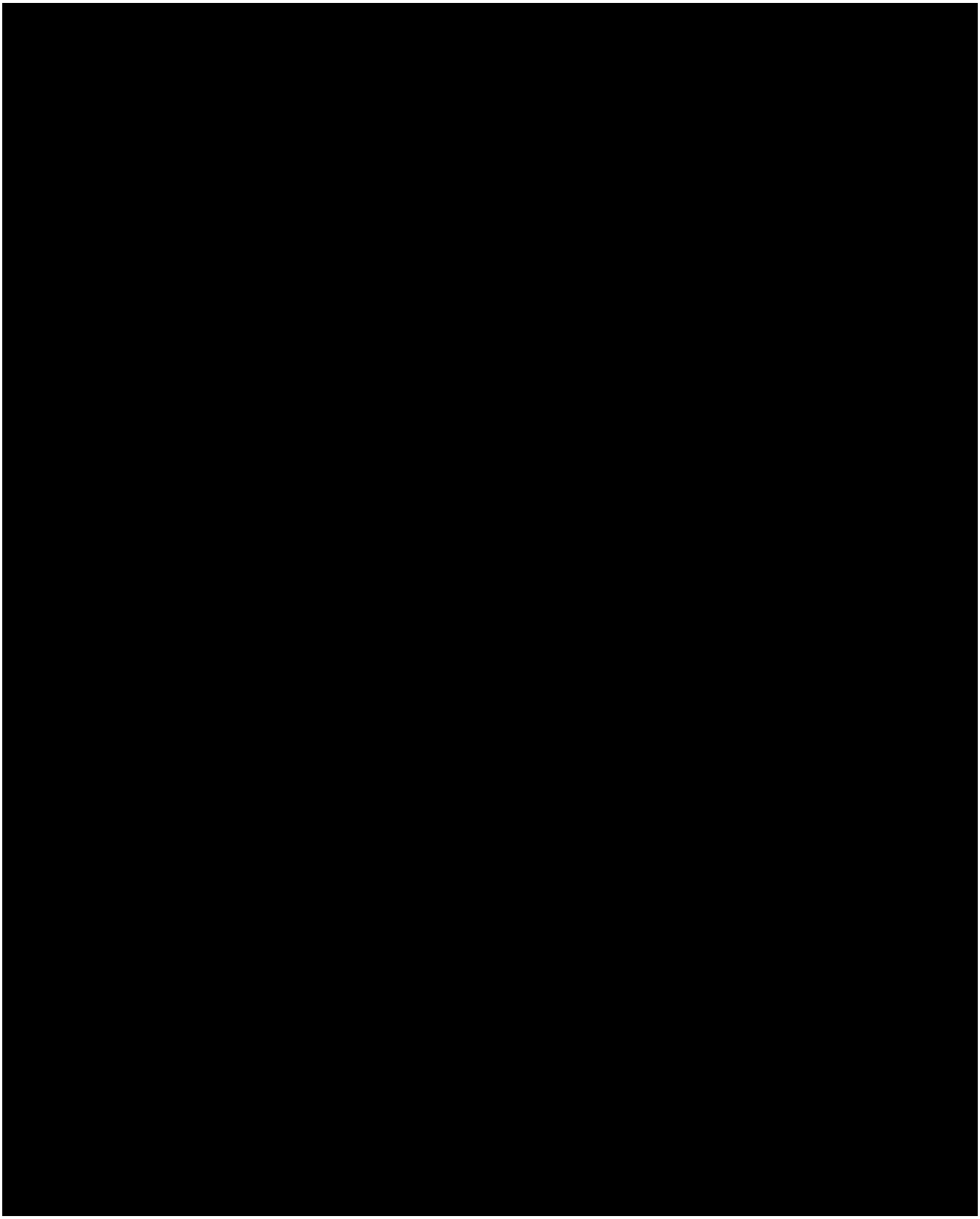
Map 8: Map of Landscape Character Area 3 (Lower Pewabic Housing Location) with the revised NHL boundary, the 1989 boundary, and contributing/non-contributing resources.



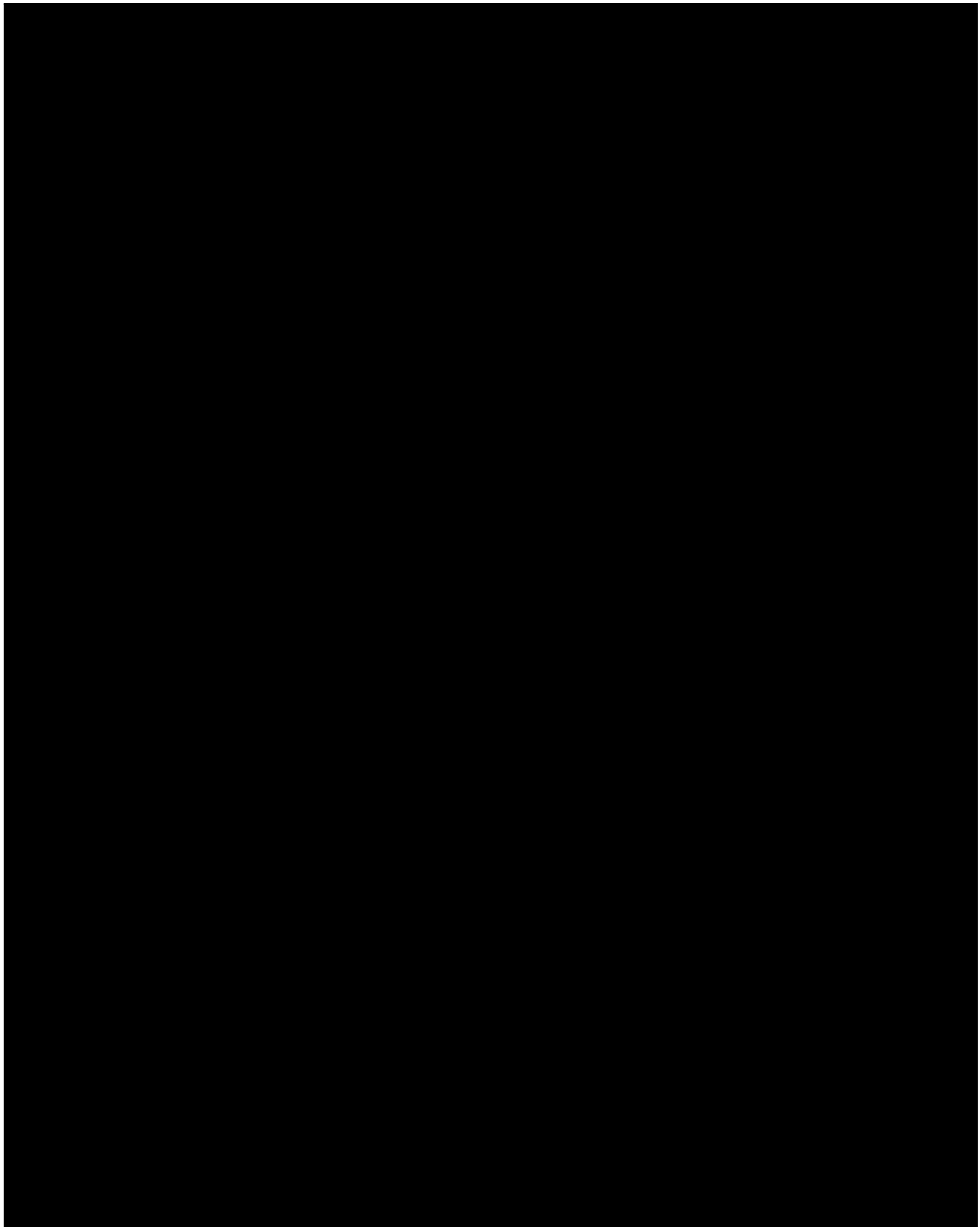
Map 9: Map of Landscape Character Area 4 (Quincy Smelting Works) with the revised NHL boundary, the 1989 boundary, and contributing/non-contributing resources.



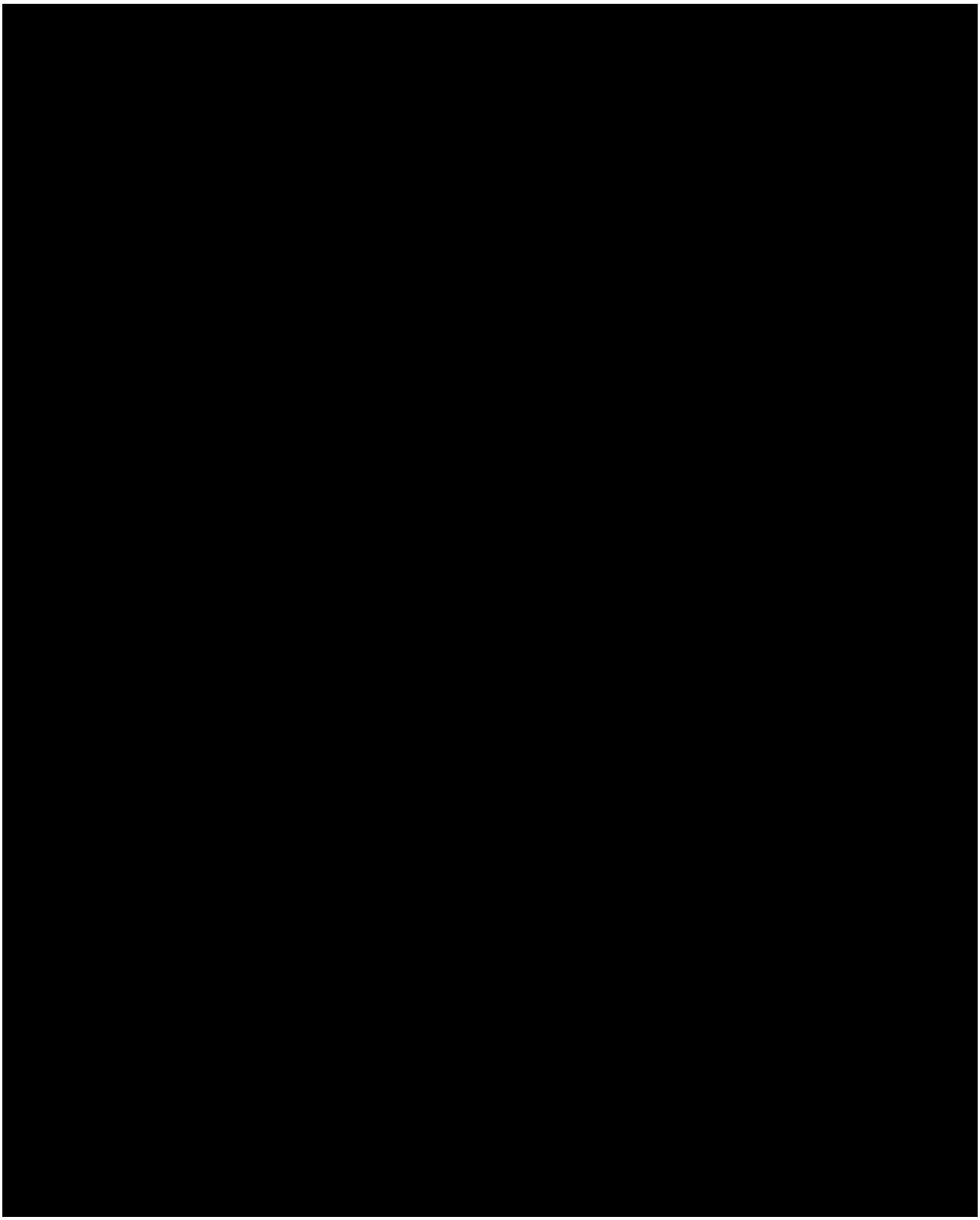
Map 10: Map of Landscape Character Area 5 (South Quincy Housing Location) with the revised NHL boundary, the 1989 boundary, and contributing/non-contributing resources.



Map 11: Map of Landscape Character Area 7 (Quincy Stamp Mill) with the revised NHL boundary, the 1989 boundary, and contributing/non-contributing resources.



Map 12: Map of Landscape Character Area 8 (Mason Housing Location) with the revised NHL boundary, the 1989 boundary, and contributing/non-contributing resources.



Map 13: Surface Features and Underground Operations.