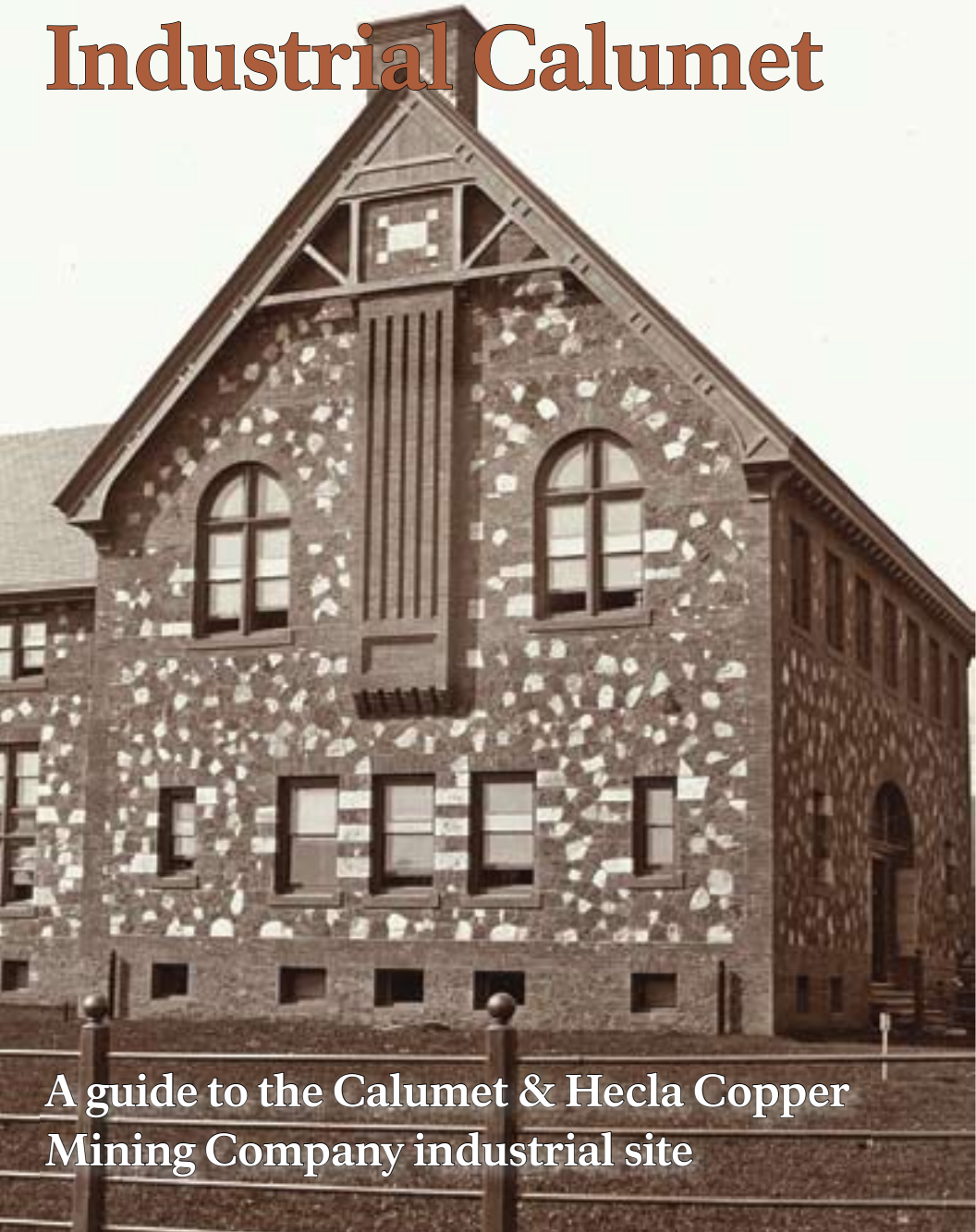




Industrial Calumet



A guide to the Calumet & Hecla Copper
Mining Company industrial site

Copper. Today, it is a common material used in electrical wiring and plumbing. But when the United States entered the Industrial Revolution the demand for copper brought one of the nation's first large mineral rushes to the remote Keweenaw Peninsula.

Seizing upon the vast local stores of this valuable resource, the Calumet & Hecla Mining Company became one of the country's dominant copper producers. C&H built a massive industrial landscape to support their mining operations. Beyond shaping Calumet's environment, C&H also influenced the fabric of the local society through the use of a management practice known as corporate paternalism.

The story of the Calumet & Hecla Mining Company allows us to follow the entire life of an industry. Here, C&H experienced its birth, growth, struggles and eventual death. The remaining buildings and ruins are vivid reminders of this past and the people who were part of it. Let this guide take you on a journey through the area's history and heritage.

Copper and the Industrial Age

In the late 1700s, a young United States entered an era that brought many changes. New inventions and technologies began altering our society like computers and communications are doing so today.

For the early part of its history, the U.S. was primarily an agricultural society. People produced their food on farms or gardens. Craftsmen perfected their trades over the years, making items such as tools and glass by hand.



Calumet and Hecla's Pattern Shop shows industrial processes prevalent in the early 1900s.

Starting in the early 1800s, inventors created machines and processes that could efficiently mass-produce goods like textiles or firearms. Assembly line factories drew America's workforce from rural areas to towns and cities. Labor, equipment and raw materials were needed to keep factories running.

Copper was one of these valuable raw materials. Before the industrial age, copper served as sheathing for wooden-hulled ships or as an element in brass hardware. As new technologies

developed, copper became important for a multitude of other uses including electrical wiring, plumbing pipe and automobile parts.

The search for more copper brought people to the Keweenaw Peninsula. The ancient geologic forces that shaped this land had also created the ideal conditions for the formation of the world's largest known deposits of pure, elemental copper. Early native peoples had long quarried these deposits, utilizing copper for tools and trade items.

With the United States' growth in population, capital and innovation, the copper resources of the Keweenaw were ripe for large-scale exploitation. Mining operations were set up to remove the copper from the earth. By the mid 1800s, the Keweenaw Peninsula had become a leading source of copper for America's industrial needs.



Railroads eased transportation and helped to fuel the American Industrial Revolution.

A Mighty Company Is Born

Looking at Calumet, it may be hard to imagine that not long ago this was a gritty, smelly, industrial area teeming with the sounds of men and machines hauling copper deep from the Earth. Hidden here is the story of how one man's discovery gave birth to one of the most powerful and productive copper mining companies in the world.

In 1858, Edwin J. Hulbert, a surveyor with an interest in geology, discovered the rich copper-bearing Calumet conglomerate lode. Hulbert may have discovered the rich ore, but the development of the mine required

Though Hulbert knew geology, he was inexperienced in mining. He attempted to mine the copper rock through large open pits that filled with water and collapsed. Progress was slower than expected, but Hulbert still sent glowing reports back to Boston on the richness of the lode and his success at mining it.

Quincy A. Shaw, the principle stockholder in Hulbert's companies, sent his brother-in-law, Alexander Agassiz, to survey his investment and Hulbert's performance. Agassiz became a believer in the property, but not in Hulbert. In February, 1867, Agassiz wrote, "The



Calumet & Hecla workers take a break to pose for this 1870s photo.

an investment beyond what he alone could manage. He traveled to Boston and convinced wealthy capitalists to form the Hulbert Mining Company. After purchasing the property over the Calumet conglomerate lode, the company established two subsidiaries: the Calumet Mining Company and the Hecla Mining Company.

value of the mines, both Calumet and Hecla, is beyond the wildest dreams of copper men, but with the kind of management many of the mines have had, then even if the pits were full of gold, it would be of no use." Agassiz took over the management of the mines in 1867.

The Calumet and Hecla properties rapidly improved under their leader-

ship. In 1867 the Calumet and Hecla mines accounted for 7% of Michigan's total copper output. By 1870 they increased that amount to 57%. With an annual production of over 14 million pounds, the Calumet and Hecla mines were now supplying nearly half of the United State's copper at a time when demand was growing.

In 1871 Agassiz became president of the consolidated Calumet and Hecla Mining Company and remained so until his death in 1910. C&H prospered under his consistent leadership. It produced the most copper, paid the greatest dividends and employed the biggest workforce of any mine in the region. Though C&H had the same basic structures and technologies as other Lake Superior mines, the company erected larger and more expensive facilities. C&H developed a bold and confident company reputation. Big and powerful were often descriptors of the company. From its humble origins, Calumet and Hecla came to dominate not only its neighboring Michigan mines, but for a short time, overshadowed all other copper mines in the world.

Alexander Agassiz, Copper King

Most who came to the Keweenaw sought their fortunes in copper, but Alexander Agassiz,



a Swiss immigrant, hoped to fund his wealth of knowledge. Intent on following in his father's footsteps, famed naturalist Louis Agassiz, Alexander's primary interest in mining was to pay for his scientific travels. Agassiz confided to a friend in 1867, "I am going to Michigan for some years as a superintendent of the Calumet and Hecla Mines. I want to make money; it is impossible to be a productive naturalist in this country without money. I am going to get some money if I can and then I will be a naturalist. If I succeed, I can then get my own papers and drawings printed and help my father at the Museum."

Through the hard work and loyalty of C&H employees Agassiz eventually achieved both the financial and intellectual wealth he desired.



From Red Jacket Road, this southerly 1920s view past the pattern shop on the right reveals the dense industrial core of the Calumet & Hecla Mining Company.

Calumet & Hecla Industrial Core



Use caution when crossing streets • Watch for uneven or slippery surfaces • Please remain on sidewalks or paths • Do not enter abandoned buildings. Many are unstable • Leave what you find. Many items that litter the landscape are relics of the copper mining boom • Most buildings are privately owned. Please respect private property.

1 C&H General Office Building

Operations were directed from this building which also housed engineers, draftsmen and accountants. Miners or family members would wait inside the attached shed to collect their wages. It now serves as the headquarters for Keweenaw National Historical Park.

2 Agassiz House

A naturalist by trade, Alexander Agassiz used this as his summer residence while managing C&H operations.

3 C&H Public Library

This combination library & bathhouse was built by C&H in 1898 for the Village of Calumet. The library contained books in many languages. Now known as the Keweenaw History Center, it houses historical artifacts and archives.

4 Bath House

To serve a growing workforce, C&H constructed a larger bath house with an indoor pool for worker's families.

5 Round House

C&H built a massive railroad operation to transport copper ore from the mines and to import other materials. Altered for modern use, garage bays now mark where locomotives once entered.

6 Machine Shop

Here, large equipment including mine skips and tram cars were repaired. This is one of many buildings constructed of leftover mine rock.

7 Hecla Fire Station

C&H provided services such as police and fire protection that communities do today. The building is now home to the Calumet Township Fire Department.

8 Locomotive Shop

Built in 1883, workers repaired company locomotives and rail stock here prior to the construction of the roundhouse in 1888.

9 Railroad Shack

Gandy dancers, men who maintained the railroads, kept their tools here.



C&H workers pose outside the Blacksmith shop once located near the Mine Captains Office.

10 Mine Captain's Office

Mine captains, often Cornish, oversaw the daily operations underground.

11 Sand Storage

Sand was used in the foundry for casting tools and parts. A large supply was kept at this location.

12 Pattern Storage Warehouse

This served as a giant repository for the over 30,000 patterns that C&H used to make various machine parts and tools.

13 Man Engine House

Originally this building housed a steam powered man engine which used a series of platforms that raised and lowered workers in and out of the mine at the start and end of their work shifts. The building was later converted to a small warehouse.

14 Pattern Shop

C&H's location away from distant manufacturing centers required the company to be self-reliant. Here, skilled workers crafted patterns that were used in the foundry to cast needed parts or tools. The pattern shop is now home to Coppertown USA Museum.

15 The Colosseum

Originally constructed to house a hockey rink, it also had removable wooden floors for roller-skating. It is still home to the Calumet Hockey Association.

16 Warehouse Number 2

Rail tracks ran through this warehouse so that large items could be unloaded or loaded directly inside.

17 Russell Snow Plow Number 2

With over 200 inches of annual snow-fall, keeping the rail lines open was an endless, but necessary task.

18 Warehouse Number 1

This building contained various items necessary for mining - from extra helmets and boots, to spare nuts and bolts.

19 Electric Substation

C&H embraced new technologies like electricity in its effort to become more efficient and profitable.

20 Gear House

The original machinery in the gear house helped deliver motive power to the mine and across surface facilities.

21 Powder House

The explosives miners used to blast away rock were stored here to keep them stable and prevent accidents.

22 Dry House

After their underground shifts, miners changed soiled clothes for clean ones before heading home.

23 Drill Shop

Here, skilled workers manufactured and repaired mining drills.

24 Superior Boiler House

Here, coal-fired boilers produced steam power for company buildings.

25 Calumet Schools

C&H constructed the historic school buildings near the general offices which allowed company influence over curriculum and activities.

26 Miscowaubik Club

A mine captain's house was turned into an exclusive social club frequented by community elite.



Reading the Industrial Landscape

What did this area look like 100 years ago? Much has changed, but features of the once mighty C&H linger. Remaining structures show how the Calumet Conglomerate lode dictated where the company set up their operations. Appropriately named, Mine Street follows the richly mineralized ore, which ran southwest to northeast in a thin 4,200-foot linear strip. To understand how the mine functioned, imagine C&H's industrial landscape in four layers.

Look up. Today, only a single smokestack beside the Superior Boiler House is visible in the sky, but at the height of operations the skyline along Mine Street was filled with towering shaft houses and 200 foot high smokestacks.

Directly on the surface, a web of rail lines spread out in all directions. Trains served key support functions: delivering timbers to support the “hanging wall,” or ceiling, from falling on miners, and hauling away copper rock destined for the milling facility in Lake Linden.

A few feet below the ground's surface, a complex network of trenches contained steam and water pipes. These pipes delivered the life-blood that powered C&H's mighty machines.

Finally, plunging almost two miles underground at their deepest, C&H's mine shafts and horizontal drifts ran the entire length of the copper deposit. An intricate network of rail lines for

tram cars, hoses for compressed air and wires for electricity stretched through the mines .

Within these four layers the wealth, work, life and death of thousands of people and one giant copper company was decided.

Missing from these layers today, however, are the sounds, smells and sensations of copper mining. Imagine the deafening roar of machines pulsing twenty-four hours a day, the ground vibrating as large charges were set off below or the smell of blasting powder hanging in stale underground air. These elements are absent now, but were as much a part of the scene as the buildings and machines that crowded this once bustling landscape.

Workers pose in front of the Hecla Rock Shafthouse.



Worker Hierarchy

Like other large businesses, C&H had many positions to keep the vital functions of the mine running. A strict hierarchy of employment existed at C&H which favored some and exploited others. This division of labor often followed ethnic lines and separated skilled and unskilled workers, both above and below ground. Skilled workers received better wages, higher social status and preferred company housing.

Miners were C&H's primary skilled labor force. At C&H, a miner was a person who drilled, charged, and blasted mass or copper rock underground. At the top of the ladder were white-shirted mining captains. Miners often came from Cornwall, England, or from mining regions in Germany and Scandinavia. At the lower end of the labor ladder were trammers, who often referred to themselves as beasts of burden. Trammers "mucked" or loaded rock by shovel or hand into tramcars, and pushed them to waiting skips that hauled the rock to the surface. Trammers were often from Finland, northern Italy and southeastern Europe. Advancement was limited.

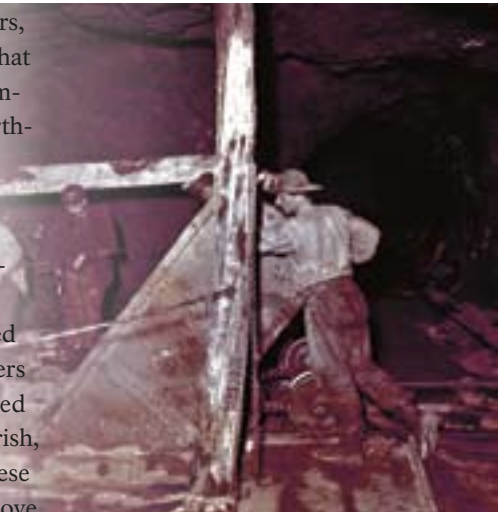
Surface operations also had a pecking order. Skilled blacksmiths, patternmakers, and machinists received higher wages and status than laborers in industrial shops. Men who worked skilled positions were commonly Irish, French-Canadian or American. These last two ethnic groups preferred above

ground work and rarely went underground. Train crews or railroad track maintenance were also categorized. A conductor was a skilled worker, while the gandy dancer, the man that fixed the track, was considered unskilled.

As a rule, women did not work underground. If employed by C&H, they were more likely to be bathhouse assistants for women's facilities, clerical workers or library attendants.

At the very bottom of the C&H labor pecking order were children. Teen-age boys worked both above and below ground. Many boys started at C&H after their fathers were killed or maimed while on the job. The practice of employing children generally ended with early 1900s Progressive Era reforms.

Trammers load rock into a skip for transport to the surface.



A Style of Management

Parents often hope for respectful children in return for their care and support, and C&H had similar expectations of its workers. While parents care for a child out of love, C&H's relationship with its workers was based on practical choices. The operation of a large copper mine in the remote Keweenaw wilderness required a massive, stable workforce to be profitable. C&H used a management style known today as corporate paternalism.

C&H wanted to avoid the problems associated with many boom towns inhabited by single men - rife with lawlessness and populated by saloons and bordellos. Company managers reasoned that men with families would be loyal, productive and live quieter lives. To attract families, C&H provided homes or land for workers to construct their own houses. Few boarding houses for single men were built.

C&H took a nurturing role towards worker's wives and children to retain their workforce. The company provided a library, schools, English classes,

bathhouses a swimming pool, medical services and land for churches and fraternal organizations. In many ways, the company tended to workers' heads, hearts and souls.

Another way C&H affected the community was by its decision to not operate company stores. This fostered the development of a commercial district outside the mine's industrial operations. Without C&H control, a wide variety of businesses appeared including some of the unsavory elements C&H hoped to avoid. The growing commercial district affected the diversity of the community by attracting people to the area for its economic opportunities but not employed by the mines .

For a time, Calumet and Hecla enjoyed a fairly stable relationship with its employees. As the 1900s dawned, an increasingly diverse workforce and tension over various issues led to struggles between labor and management. Just as many parents have experienced, C&H's relationship with its growing dependents entered a turbulent period.



Workers and their sons enjoy the swimming pool inside the C&H Bathhouse in this 1913 photo.

A Changing Relationship

Alexander Agassiz determined the relationship between management and labor at C&H. His managerial decisions were influenced by a strong anti-union stance and C&H closely monitored its employees for any union activity.

In its early years, C&H workers generally knew their boss and even their boss' boss. The distance between them, however, grew along with the company. Workers lost their familiarity and identity. Further divisions formed as new immigrants brought diverse languages and cultures to the workplace. This often frustrated and confused English-speaking managers and miners.

Trammers were the first to express frustration with working conditions. Suspicious fires in 1888 signaled the beginning of small "wildcat" strikes and labor unrest. The arrival of the Western Federation of Miners (WFM) union to the area in 1908 increased the tension.

In the summer of 1913, the company announced plans to introduce the one-man drill, a tool that would eliminate many jobs. Miners, trammers and surface workers united for the first time and walked off the job, silencing C&H's million-dollar machinery.

C&H considered the strike a showdown with a group of ungrateful workers and outside agitators, and refused to be dictated to by the union. The often violent strike continued into the winter of 1914, but ultimately, C&H won the fight against the unions.

C&H's success ensured the region would remain non-union for the next thirty years. Finally, in 1943 the United Mine, Mill and Smelter Worker's Union arrived. The strained relationship between labor and management remained until a final strike in 1968 set the stage for C&H's closure.

C&H's police force patrols Mine Street near the Superior Boiler House during the 1913 strike.



Copper's Decline



Materials and scrap parts lie around the idle C&H Foundry.

C&H reached the peak of its power in the 1870s, but by the early 1880s the company struggled to maintain its grip on the copper market. Mines in the western United States were surpassing C&H production. Though demand for copper was high for electrical wiring in the twentieth century, C&H wrestled for its share of the booming markets.

The loss of income during the 1913-14 strike had residual effects on C&H even though the company saw its victory as a confirmation of its corporate policies. After the strike, C&H began a policy of aggressively purchasing other area mines, including the Tamarack Mining and Osceola Mining Companies, to preserve its market share at the expense of lesser mining companies. C&H changed its name to Calumet and Hecla Consolidated Copper Company to reflect its new policy of expansion.

Other economic problems plagued C&H. The price of copper rose and fell haphazardly. The mines were becoming some of the deepest in the world but

copper content in the rock declined as they pushed farther into the Earth. C&H continued its search for other winning copper deposits with some successes in the 1910s and 1920s. However, the Great Depression brought America to its knees and made C&H face its own mortality.

C&H never fully recovered from the economic collapse caused by the Great Depression. It sought government help to limp through World War II. In the post-war era, C&H attempted to diversify with ventures such as the Wolverine Copper Tube Company in Detroit, but the company failed to regain its former industrial wealth and significance. In April 1968, C&H was purchased by Universal Oil Products, a massive corporation. Rather than deal with labor problems, these distant new owners decided to close down operations on the Keweenaw Peninsula. What was once the most powerful and successful copper mining company in the world, was no more. With the demise of C&H, a way of life disappeared forever.

Preserving the Past

The story does not end with the closure of C&H. In the years that followed, the area suffered severe economic and social hardships. Buildings were torn down and sold for scrap. Others were left to suffer the eventual decline brought by weather and time.

Some members of the community understood the area's history and the significance of the copper mining story to the country's growth and development. They began working toward preserving the area's history and heritage.

National Historic Landmark Districts were established in the Village

of Calumet and at the former Quincy Mine, but many felt the area needed and deserved greater preservation. Their efforts led to the establishment of Keweenaw National Historical Park in 1992.

Unlike other national park sites, this park is part of living communities and landscapes. Federal ownership is limited. Instead, the park works with a variety of partners to preserve and interpret the area's historic resources and stories - like those found here at the former Calumet and Hecla Copper Mining Company.

For more information

Visit Keweenaw National Historical Park's website at www.nps.gov/kewe

Books

These publications are available from the Isle Royale Natural History Association: *Calumet Copper and People, History of a Michigan Mining Community, 1864-1970*, by Arthur W. Turner
Cradle to Grave by Larry Lankton

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