Kennecott Mines National Historic Landmark

Self Guided Walking Tour

Welcome to Kennecott

The Kennecott mill camp and mines are an extraordinary relic from America's past. These impressive standing structures and artifacts tell stories of Alaskan exploration, westward expansion, technological modernization, World War I, expansion of multinational corporations, and the death of monopolies. More intimately, Kennecott provides insight into the lives of the people who took on the challenge of living and working here.

Why Here?

The wild, remote, and isolated Kennecott Valley on the surface seems like an odd place for industry, but the rugged Alaskan landscape actually holds the key to the discovery and development of one of the world's richest ore bodies.

Generations of Ahtna people collected native copper found in the Wrangell Mountains, working it into art, utensils and arrowheads. Prospectors flooding into the area in the wake of the '98 Gold Rush knew there was copper as well as gold in these mountains, so it was no surprise when the Bonanza Mine was discovered in 1900. Prospectors Clarence Warner and "Tarantula" Jack Smith looked up Bonanza Ridge and saw what appeared to be green pastures, a mountainside stained with the emerald hues of copper ore.

Developing the rich ore body would require tremendous effort, ingenuity, and money. During the early 1900's, one could not find bigger financial backers than the Havemeyer, Guggenheim, and J.P. Morgan families.

With a young east coast mining engineer named Stephen Birch managing, the three families formed the Alaska Syndicate, which quickly gained a monopoly over the area’s mining operation. When copper from Kennecott reached the world’s markets and the Syndicate became profitable, the group reorganized as the Kennecott Copper Corporation, which still operates other mines around the world today.

The Corporation supplied the world with copper for electrification, utilities, industrial development, and munitions for the World War I effort. Kennecott Copper Corporation managed all aspects of their operation with creativity, skill, and at times a heavy hand.

Kennecott’s Story

Kennecott, established in 1900, expanded in stages until the mid-20's. As mining increased, camp needs grew.

Waste rock from the ore, called tailings, helped level the land for building of the valley’s steep hillsides. By 1938, there were more than 100 buildings in camp. But with a limited supply of ore and dropping prices, Kennecott closed that year after producing 200-300 million dollars worth of copper and silver. After closing, the camp endured many different eras: private mining, resort development, tourism, and homesteading. Now the area’s rich history is celebrated as Kennecott Mines National Historic Landmark and has been part of the National Park Service system since 1998.

Things to do in Kennecott

We encourage you to explore with a sense of discovery! This self-guided walking tour provides information about the buildings as you walk through the site. Other activities in the area include: * Hike to the historic mines or the Root Glacier. * Walk the historic wagon road to McCarthy. * Explore the Kennecott Cemetery on the way to the toe of the Kennicott Glacier *

In response to guidance from the Centers for Disease Control (CDC) and the State of Alaska and in support of federal, state, and local efforts to slow the spread of the novel coronavirus (COVID-19), Wrangell-St. Elias National Park and Preserve is adapting park operations to limited and strategic locations where visitors typically congregate or frequent in close spaces.
Exploring Kennecott

**Safety**

No matter how you choose to visit the site, explore safely. Kennecott is an old industrial site and has large rock hazards. Respect closures. You are also in a wild place, so be aware of your surroundings and stay alert for quickly changing weather and the presence of wildlife, such as bears. Be aware that portions of the Kennecott Mines National Historic Landmark are private property. Please respect private property by confining your exploration to public lands. Do not disturb or remove artifacts from the site. Take nothing from Kenneccott but inspiration for your soul, questions for your mind, and photographs for your memories.

### Kennecott & Root Glaciers

The 27-mile long Kennicott Glacier begins on the flanks of Mt. Blackburn (16,390 ft.), Rine, Atna, and Parka peaks. Wondering why you don’t see the glacier? The glacier’s ice is covered by rocks and dirt, called a moraine. The surface moraine comes from erosion of surrounding valleys and a cliff from the scattering of mine tailings onto the glacier. To hike to the Root Glacier, access is available via the Root Glacier Trail. Stop by the Visitor Center to get a more detailed trail map.

### Dairy Barn

Except for ore and water, Kennecott’s workers had to bring in everything from the outside in order to survive. To relieve the cost of shipping in all food for the camp, a simple barn held a few cows which supplied fresh milk. Local families raised chickens for eggs, and community and private gardens were planted around the mill site.

### Old School and New School

Imagine attending class next to a towering glacier and an extremely loud copper mill. It was certainly a unique learning environment. Education in Kennecott was different in another way as well; students included both youngsters and adults. In the evenings the corporation provided English and citizenship courses. By 1920, the night school had 126 adult students from 23 countries, while the largest children’s school class had only 20.

### National Creek

To operate a mill and camp without a reliable supply of water is impossible. Dams upstream on National Creek and Bonanza Creek were able to supply most of the camp’s water for ore processing, fire suppression, and drinking water. In the winter when creek levels were low, it was said Kennecott could “wear out water” by running water and over again. At other times high water and flood damaged buildings. As recently as October 2006, floodwaters wiped out the powerhouse and railroad. To develop an industrial scale ammonia leaching process were mixed with power and the sacking area were all framed in 1923. Finely ground chain of command. Imagine attending class next to a mill was gravity concentration. Ore and ore was gravity concentration. Ore and required the copper ore be the most economical process for rich ore was gravity concentration. Ore and ore was gravity concentration. Ore and had 126 adult students from 23 countries, while the largest children’s school class had only 20.

### Power Plant

Kennecott required power to support both the mill town and the mine. McFarland’s Mill built the camp and required the copper ore to be used to develop an industrial scale ammonia leaching process. Large tanks were filled with gravel-sized pieces of low grade copper and an ammonia solution. The ammonia dissolved the copper in the ore. The copper-rich solution was then transferred to other tanks known as evaporators. These tanks were heated until the ammonia evaporated. The ammonia was recycled, leaving behind a very concentrated residue, which was then bagged and shipped to the smelter. Overall 25-30% of Kennecott’s ore was processed through ammonia leaching, increasing the profitability of the site.

### General Store and U.S. Post Office

This building connected the remote residents of Kenneccott to the outside world. Families could purchase just about anything that could be found in the “lower 48.” If the store didn’t have it, an order could be placed through copous catalogues. However, they would have to be prepared to wait a month or more for a special order to arrive.

### Sawmill Ruin

Next to the General Store. This was one of the first buildings to be constructed on the mill site. Through 1910, the sawmill was busy processing local wood as a 40-man work crew built the camp and mine infrastructure. The gravity concentrator mill, rocker tables, jigs, and the sacking area were all framed before the site was connected to the outside world by the Copper River & Northwestern Railway in 1911.

### Refrigeration Plant

Why would a community with a glacier in their backyard need a refrigerator? They didn’t. However the innovative corporation always experimented and took advantage of the latest technology and materials they had available, in this case the cooling ability of compressed ammonia. As you enter the building, check out the compressor, the access to the railway that helped to move food supplies in and out of the building, and the still- hanging meat hooks.

### Concentration Mill

Shipping ore to Tacoma was expensive and required the copper ore to be concentrated for maximal profitability. The most economical process for rich ore was gravity concentration. Ore and waste rock were delivered to the Mill from the five remote mine sites via train at a rate of up to 1,200 tons of ore per day. Once in the Mill, ore went through a series of crushers and sorters using gravity and water to move the ore to the next process in the flow. Once waste was removed, ore was loaded into burlap bags and stacked on open rail cars and shipped to the coast. Construction of the Mill evolved over 20 years as new mining processes were developed. Over time, deteriorating ore quality demanded different processing techniques, continual equipment modifications, and additions to the mill structure, resulting in the unusual roof line and jumbled appearance of the iconic red building.

### Leaching and Flotation Plant

Gravity concentration is only efficient for high grade ore. To process lower grade ore, new techniques were needed. E. Tappen Stannard was hired to develop an industrial scale aluminum leaching process. Large tanks were filled with gravel-sized pieces of low grade copper and an ammonia solution. The ammonia dissolved the copper in the ore. The copper-rich solution was then transferred to other tanks known as evaporators. These tanks were heated until the ammonia evaporated. The ammonia was recycled, leaving behind a very concentrated residue, which was then bagged and shipped to the smelter. Overall 25-30% of Kennecott’s ore was processed through ammonia leaching, increasing the profitability of the site.