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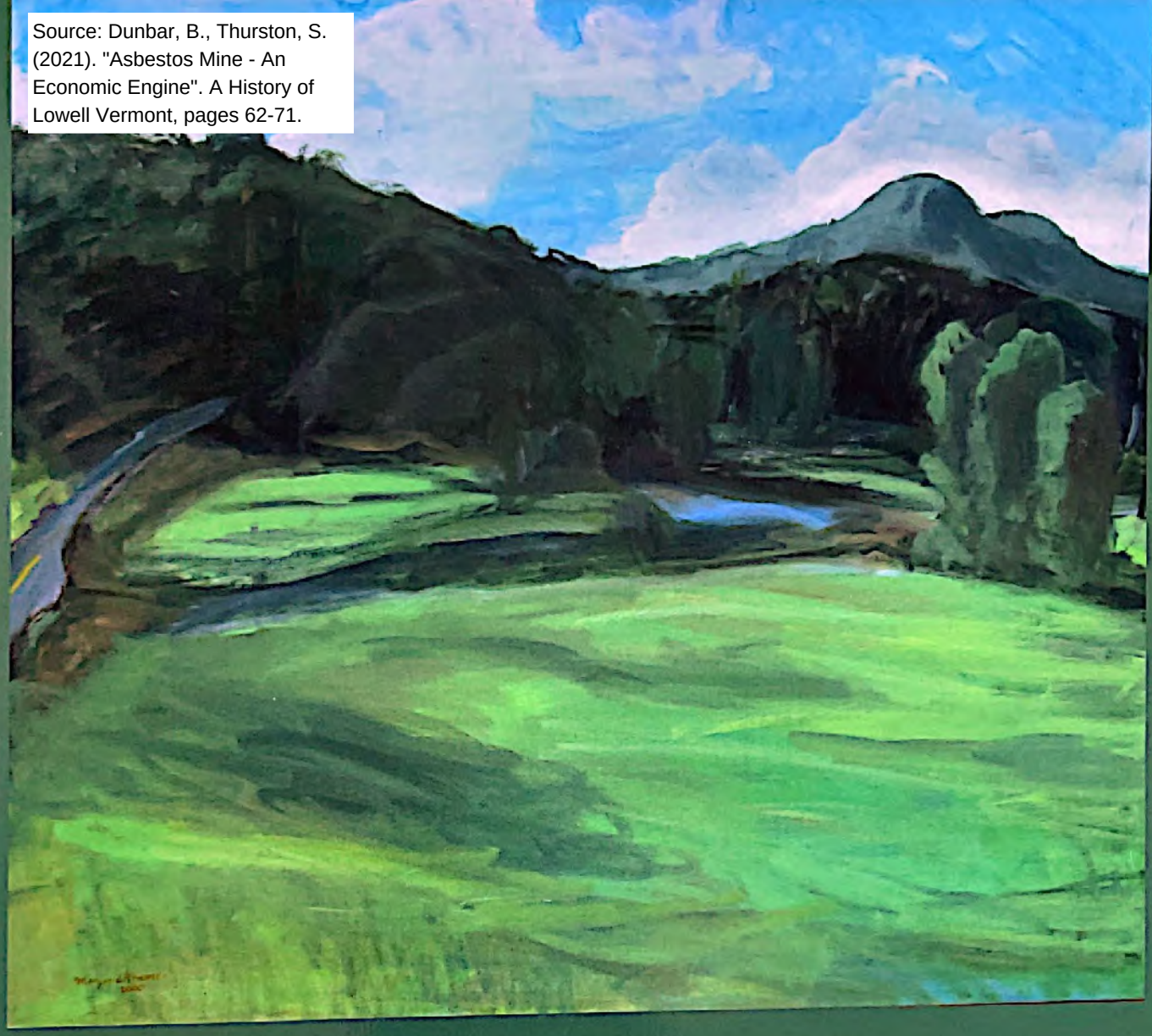
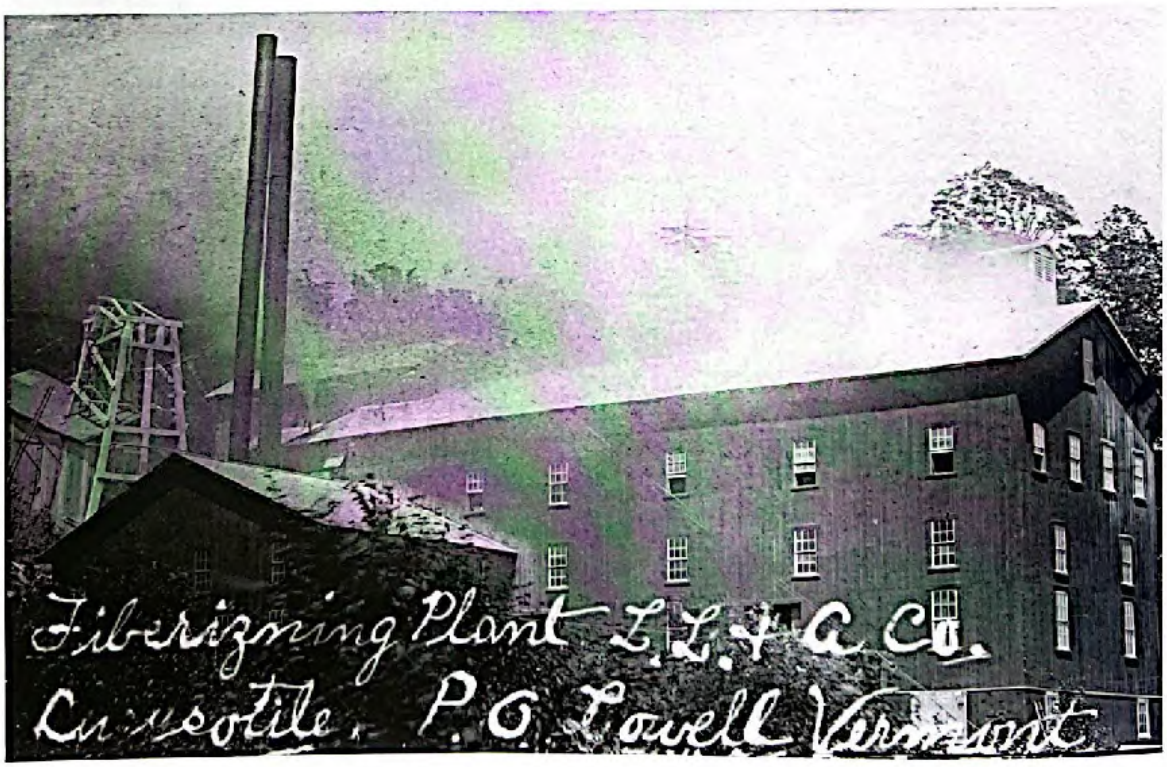


# A History of Lowell Vermont

## Written and Compiled by Bethany M. Dunbar with Sam Thurston

## Chapter 6

# Asbestos Mine — An Economic Engine




*Fiberizing or rock crushing plant, 1910*

At the time of this writing, the Lowell asbestos mine is abandoned and fenced off as a hazard. In 2012 the town of Lowell voted against having the mine designated a federal Environmental Protection Agency Superfund site, which would have unleashed federal clean-up efforts and could have created its own set of issues for the little mountain hamlet. Instead, the tailing piles were stabilized to avoid potentially harmful runoff.

So, the mine sits for now. But in years past it was a thriving beehive of activity and an economic engine for Lowell. A *Vermont Life* article by Charles Crane said the operations at the asbestos mine in Lowell in 1957 were running around the clock, six days a week, producing 50,000 tons of asbestos fiber a year.

There are those who believe the mine property could become useful and busy in another fashion someday.

Asbestos was discovered in Lowell in 1824, according to a history compiled by Helen Gelo at the time of the country's bicentennial in 1976. Her report, published for the town of Lowell at the time, says that little was done to mine it at first. Geologist Woodrow Thompson, PhD, who works for the state of Maine, reports that serpentine (a rock that sometimes contains fibrous asbestos) and amianthus (a type of asbestos) were known in the area by 1824.

*Asbestos mill, 1956*

Asbestos fiber is flexible and known as "the silk of the mineral kingdom." In demand for its flexible, heat- and fire-resistant properties, asbestos was used to insulate boilers, ovens, textiles, roofing, and in toys, nuclear submarines, and World War II ships. It was even used as fake snow on movie sets and appeared in movies, such as *The Wizard of Oz*.

Commercial development of the mineral didn't begin until the second half of the nineteenth century. An article in *Industrial Vermont* published in 1914 stated that several tons of asbestos were mined in Lowell as early as 1870. This article is quoted in *A Walk Through the Garden of Eden: A History of Eden, Vermont*, published by the Eden Historical Society and edited by Alice McKay.

In 1878 a Canadian logger, bringing logs off the mountain, found asbestos-bearing rock. He was familiar with asbestos from Canada.

"Asbestos was rediscovered by Canadian loggers in the employ of Judge M.E. Tucker of Hyde Park," says a paper written by Harvard, University of Vermont, and Idaho researchers in 1999 and revisited in 2009: "Environmental Geology of Belvidere Mountain, Vermont," by M.R. Van Baalen and others.

The mines were on both sides of Belvidere Mountain in Lowell and neighboring Eden. The Eden history says there were some lack of clarity about who exactly owned the mines and when, but there appear to have been at least nine different mining operations in early days.

The history of Eden quotes Blake family members, who say one man named Ben Butler Blake owned and sold the asbestos mine on the Eden side twice in his life, and a third sale was underway when he died in 1919.

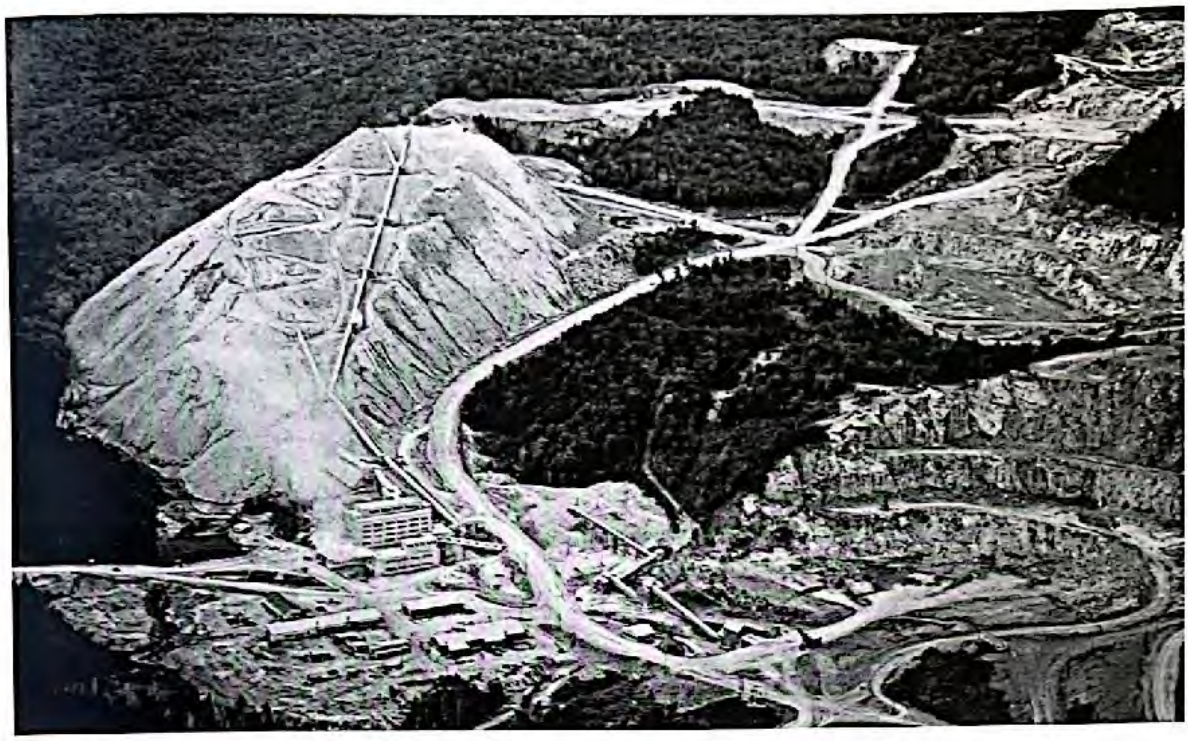
A timeline Thompson created shows mining starting in both Lowell and neighboring Eden by 1902. The Eden mine was developed first and was called The New England Mine. A village was built up around the mine in Lowell. Timber was cut from the site by a man named Gallagher. According to the Eden history, the mine in Lowell was called the Chrysotile Asbestos Corporation of Vermont, the Lowell Lumber and Asbestos Company, and the Gallagher Mine. By 1910 the mine was producing half the asbestos in the United States.

"In 1910, the community of Chrysotile was built," reports Thompson. Chrysotile is one of six types of asbestos, according to an EPA manual for training people to inspect buildings for it. The mine in Lowell closed around 1918 or 1920, according to Thompson's timeline, only to reopen a few years later.

By 1930, the mine in Eden was producing two tons of asbestos per hour, according to Thompson's notes. In 1936 the Ruberoid Corporation acquired the mine, the Harvard article says. The corporation built a tramway to carry the ore, mined in Lowell, 5,000 feet over to Eden to be processed. By 1942 three shifts a day were working in the mines.

By 1946 Vermont Asbestos Mines had shifted their operation to the Gallagher Quarry in Lowell. "In 1944, 150 men worked there in three eight-hour shifts, six days a week, to help meet wartime asbestos needs," wrote Thompson.

Between 1948 and 1949 the mine buildings were built on the Lowell side, and in 1950 all operations moved to that side of Belvidere Mountain. In 1967 General Analine Film (GAF)



*Aerial photo of the asbestos mine, 1960*

Corporation bought the mine.

From the 1950s to the 1970s the Lowell asbestos mine was the largest in the U.S. During the 1950s when it was in operation 24 hours a day, 135 tons of blasted rock an hour left the drying area on its way to have the fiber extracted. The blasted rock would produce about 6 to 7 percent fiber.

The word asbestos comes from a Greek adjective meaning inextinguishable. Its valuable properties and potential dangers were known, to some extent, since the days of Pliny the Elder (born in the year 23 A.D.) who mentioned in passing a sickness of the lungs in slaves who wove asbestos into fiber, according to a book devoted to the legal history of asbestos, Outrageous Misconduct: The Asbestos Industry on Trial by Paul Brodeur.

But workers in Eden and Lowell discounted health risks, and many still believe the asbestos from the Lowell mine is not as dangerous as other asbestos. There is science to back up this theory.

The International Chrysotile Association (ICA), based in Canada, asserts on its website chrysotile.com,that chrysotile asbestos is safer than other types of asbestos.

> *"Asbestos" is not a mineral in itself. It is a collective term given to a group of minerals whose crystals occur in fibrous forms. The term "asbestos" was adopted for commercial identification.*
>
> *The six minerals commonly referred to as asbestos come from two distinct groups*

*of minerals. One group is known as serpentines (chrysotile, white asbestos); while the other group is the amphiboles (amosite, brown asbestos; crocidolite, blue asbestos; anthophyllite; tremolite; and actinolite). While both are all silicate minerals, the two groups are chemically and mineralogically distinct.*

The ICA says that chrysotile asbestos fibers are the shape of wrapped sheets which are more likely to break down biologically in a person's lungs or stomach, while the other types can contain long fibers that are less likely to break down. The Association says studies have shown lung overloads of both types of fibers to be toxic, but many of the existing studies were less than ideal in terms of comparing the toxic impacts of chrysotile asbestos on its own.

The article on the geology of Belvidere Mountain by Harvard and UVM researchers agrees: "It has become accepted that exposure to chrysotile asbestos is far less harmful than amphibole asbestos. In fact, asbestos-related diseases among chrysotile workers are often ascribed to the possibility of amphibole asbestos occurring in the chrysotile ore."

The article includes a lengthy appendix, and the full text of an interview with mine worker Elverne Jones, who was 90 years old at the time of the interview. He had worked at the mine for 60 years in various roles. He said few people got asbestosis working there, although there were a couple of accidental deaths over the years.


*The large Marion shovel could move 50 tons of material at once.*

Mr. Jones said garnet and other minerals were always evident, and some of the workers collected them. "There's a tremendous amount of garnet in different colored stones," he said. "I've been day after day, after a blast. You know, go out and literally be covered with maybe green this time, maybe red stone like a diamond."

The Eden history also points out the value of gems found at the asbestos mines. "Thirty-two different minerals are known to be present at the mines and the old mine is a source of grossular garnet, which was nominated to be the Vermont State Gem in 1991," says the Eden history. "The clear crystals of grossular garnet, which can be cut into beautiful, faceted gems, comes in pale green as well as shades ranging from nearly white through yellow to pinkish yellow, pinkish orange, and cinnamon. A grossular garnet specimen mined in Eden in 1950 was included in Peter Bancroft's The World's Finest Minerals and Crystals, published by the Viking Press in 1973."

In the *Vermont Life* article, Charles Crane described a tour he was given of the mines.

> *We were greeted by Michael J. Messel, general factory manager, who lives in Hyde Park. The life of a mining engineer has always appealed to me as a romantic one, and Messel has certainly been around poking his nose into many strange spots on this planet — copper mining in Canada's northwest, various things in the Far East, asbestos in Quebec Province, Canada, and years all over South America.*
>
> *At the Vermont mines he has participated in the layout and construction of what probably is one of the most modern and efficient asbestos plants in existence. He has gathered around him a handful of other asbestos-minded men (some natives of the region, who have grown up in the business) and as a group they are considered such authorities on the appraisal of asbestos deposits that their services are sought by companies in Canada and elsewhere.*

The article described the process at the time in some detail. Once a month, miners used dynamite to blast out a massive amount of stone, some 100,000 tons at a time. After the blast, men with jackhammers broke up the asbestos into large chunks. Then a Marion "power shovel" lifted the heaps of rock and dropped them into trucks. The power shovel could lift seven cubic yards of rock weighing about ten tons at once. Trucks carried the stone to two phases of crushers. The first crusher reduced it to six-inch pieces, and the second crusher reduced it to pea-size. "After a drying process, the product is run through the six-story mill, a maze of air ducts and sifting screens, where the asbestos fibre — the silk of the mineral kingdom — is removed from the ore by aspiration, that is by air suction." The residue was piled into huge tailings piles still visible at the mine site today.

"Best place anybody could work," remembered Reg Pion, interviewed at his home in Lowell in 2016. He worked at the mine when there were 240 union members and 70 in management. He went to work there on December 17, 1979. Co-workers came from Montgomery, Eden, Hardwick, and Morrisville as well as the neighboring towns.

"The place made millions. When I started there, a lot of the equipment was new," Mr. Pion said. He recalled the conveyor feeding the mill could take 195 tons of rock per hour. "That's where they took the fiber out of the rock," he said. He noted the dryers used 11 gallons of oil a minute.

Mr. Pion, who served the town as road commissioner for many years, does not believe chrysotile asbestos is harmful to anyone's health. "I've ate more of it than anybody's ever going to see in your life," he said, and he has no cancer or asbestosis. He said he knew one man, who was in his 80s and had worked in the mine since he was 15 years old.

*Asbestos mine entrance, 1988*

In the 1960s, people in Lowell did not know of the hazards of asbestos and were not worried about the dust. "They just blew the dust out the windows," Mr. Pion said. "It's all over these roads," he added. "We used to sand the roads with it. It makes the best sand you ever laid your eyes on."

Mr. Pion said there was a culture at the mine that was almost like being part of a family. When he bought a house in Lowell with no cellar, his friends from the mine came and helped him build a foundation, working beside him in the pouring rain all day long for no pay. "It was probably the best family a man could ever have," he said.

But whatever the people of Lowell thought about the safety of chrysotile asbestos, the U.S. market was beginning to dry up even before Pion went to work in the mine in Lowell.

In the early years with the tramway, the mine employed between 250 to 275 workers. As

the years passed and more of the work was done by machinery, there were fewer jobs but still a substantial number. An invention called a travel drill replaced 20 men operating jackhammers.

Lloyd Dolan worked as the driver of a Marion #5 power shovel at the mines for 17 years. The bucket was large enough to lift a big truck. At that time it was the largest power shovel in New England and could move 50 tons of material at once.

The mine's employees and the Town of Lowell benefitted financially. The pay and benefits were excellent. In the 1950s the pay was higher than any other local places of employment. In 1972, 53 percent of the town's property taxes were paid by the mine.

In 1974, seeing the writing on the wall for the future of the asbestos market, GAF decided to sell the mine. A group of workers, the Vermont Asbestos Group, bought it a year later with lots of local and state help. John Lupien, who was a maintenance supervisor, had the idea for workers to buy it. By 1975 the Vermont Asbestos Group had purchased the mine business and 2,300 acres, for $400,000, according to an article in the *Burlington Free Press* by Sam Hemingway. The deal went through with help from an Association to Boost Lamoille Enterprises (ABLE), the Vermont Industrial Development Authority, the Howard Bank, the Small Business Administration, Sterling Trust, the State Street Bank of Boston, the Passumpsic Savings Bank of St. Johnsbury, the Chittenden Trust Company, the Union Bank of Morrisville, and the Franklin-Lamoille Bank.

Directors for the new business included a steam shovel operator, a mechanic, a yard man, a warehouseman, two ore testers, a shift mechanic, general manager, a purchasing agent, a quarry foreman and Mr. Lupien, according to an article in *Vermont Life* published in 1976.

The article says the deal was put together based on the concept that the asbestos in Lowell was not as hazardous as other types. "In 42 years, this plant has had 1,800 employees, but we've had only 17 workers come down with lung disease," said Mr. Lupien in the article. "We care about our people and want to make it safe here, but we also know that the atmosphere in Vermont makes it safer for this kind of operation than other places in the world."

"One of the first jobs after the workers bought the mine was to install dust control systems in the mill and dryers which were a blessing," said Mr. Dolan in an interview.

The workers raised $100,000 through the sale of stock locally and borrowed $200,000 from the State of Vermont. Profits started strong and the workers paid the state back in one year. According to Gelo's research, one year after the workers bought the mine, all debts were paid back and "all stockholders (most of whom are employees) have received a 100 percent dividend on their investments. The company is making a substantial profit."

Despite the fact that so many people in Vermont were convinced of the relative safety of chrysotile asbestos, the rest of the United States did not feel the same way. The public and the market did not distinguish between types of asbestos and demand for asbestos dropped off. Lawsuits claiming asbestos caused health problems piled up.

In a 2016 interview, Howard Manosh recalled that he was approached by some of the workers to help after the employees had bought the mine. A problem that arose, he said, was that too

many people wanted to be the boss.

"They came to me and said, 'Why don't you come up and manage it for us?'" In April of 1978 Mr. Manosh bought into the group. Eventually he held a controlling interest, but in 2016 he only owned 5 percent.

The mine was a going concern for some years while he was involved and continued to provide jobs. "I was paying 52 percent of the town tax of Lowell," he said. "The asbestos didn't do too much harm."

Mr. Manosh loved working there. He traveled to Germany, England, France, and in the Gulf Coast cities such as New Orleans and Galveston to meet with people interested in buying Lowell asbestos. But the sales did not last.

"I think everybody didn't believe in it," Mr. Manosh said. "I wish there was some way I could have changed the market conditions," he said. But things got slower and slower and before long, the only market was in Asia and the Far East.

Mr. Manosh said the mine ran at a loss for three years before it closed in 1993.

Ten years before the mine closed, Mr. Manosh made decisions about wages and benefits that were so unpopular they led to a strike in 1983. In dispute was the management asking workers to contribute 25 percent to a group medical plan and sacrifice two vacation days, according to the *News and Citizen*, proposals the union said would cost workers between 85 cents to a dollar an hour.

According to an article in the *News and Citizen* on October 13, 1983, 89 of 130 mill and mine workers voted to strike. The newspaper describes a man's arrest for throwing nails under a truck driven by an independent trucker who was driving across the picket line to keep operations going during the strike. The article said 25 managers were keeping the mine open. Mr. Manosh said in the article the strike was not really hurting the company because it was close to having to shut down anyway.

By 1982, a year before the workers' strike at the Lowell mine, the Manville Corporation, an industry leader, had filed a Chapter 11 bankruptcy petition because it was facing 16,500 lawsuits related to health effects of asbestos with 500 new lawsuits a month, according to *Outrageous Misconduct: the Asbestos Industry On Trial.* The Manville Corporation, formerly Johns-Manville, was the world's largest asbestos company, with 25,000 employees and more than 50 factories and mines in the U.S. and Canada. It was the largest American industrial company ever to file bankruptcy and one of the healthiest with assets of more than $2-billion. The book provides an insurance industry estimate that asbestos-disease related lawsuits would cost the insurance industry $1.35-billion a year. Manville was accused of covering up the dangers of working with asbestos for 50 years.

The fact that the Lowell mine was producing chrysotile asbestos instead of the more dangerous types did not save the mine's market.

"There's no reason that mine shouldn't be operated today," said Mr. Manosh in 2016. He remembered the heyday of the place when the mine was so busy it was often all lit up at night

and looked like a small city.

"My dad worked up there. He used to plow the road," he said. Mr. Manosh remembered going up there when he was just a little guy with his dad.

In 2007, the federal Environmental Protection Agency came in to stabilize the site, after people downstream began finding runoff from the mountains of mine tailings in beaver ponds and other waterways. At that time, according to an article in *The Chronicle* on November 7, 2007, it was estimated that fully cleaning up the tailings would cost in the realm of $500-million. The Lowell tailing pile was estimated to be between 30 and 60 million tons, covering 80 acres, while the Eden site had a waste pile of 12 million tons.

In 2012 the town voted not to declare the site a Superfund site, which would have brought massive federal resources for the clean-up. The State of Vermont would have had to come up with matching funds. The town's no vote may have indicated a lack of confidence that the job would have been done right. For some the clean-up might have seemed unnecessary. Many in town thought declaring the mine a toxic superfund site would make the town look bad.

"In 2008 the Vermont Department of Health published a cross-sectional study of asbestos-related morbidity and mortality in Vermonters residing near Belvidere Mountain based on data from individual health certificates and hospital discharges from 1996 to 2005," says the Harvard article. The study suggested Lowell's asbestos could be connected to health problems. The Health Department study was based on three asbestosis deaths, two of which turned out to be people who had "high previous occupational exposures to asbestos elsewhere." The later revelations invalidated the study's findings. The Health Department later apologized, but the mistake infuriated residents of Eden and Lowell, who said the study affected their property values among other things.

Bill Duncan runs a natural food and health store in Morrisville and believes strongly the mine could thrive again by focusing on other minerals and gems often found in the same soils as asbestos. A self-described rockhound, Mr. Duncan has found beautiful specimens of green and white stone at the mine that he calls Vermont jade.

When Mr. Duncan was young, his father was a metals broker, and they would often go rock hunting. This led to a lifelong hobby and interest in gems and geology.

The presence of asbestos in Lowell means there are other valuable rocks as well, Mr. Duncan said, and he feels strongly that has not been fully explored. "I really resent EPA," he said. He recalled attending meetings for Lowell citizens at the time they had to decide if they wanted to make the mines a Superfund site. "They didn't send a single geologist to the Lowell meetings."

Mr. Duncan believes the site could still be worth tens or hundreds of millions of dollars based on rocks that are commonly associated with asbestos. The mine could be made into a history and art museum, rock shop, and general tourist attraction, he believes.

For now, the mine lies fenced off and dormant, a vast reminder of Lowell's thriving working landscape of the past. It also holds a hint, for some, of resources not yet even fully discovered.