THE WALKING QUESTION MARK ?

Newsletter of the Grand River Heritage Mines Society

Always Digging For Answers

May, June , July, August 2002

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IN THIS ISSUE

COMING EVENTS: Mark your calendar!

May 4, 2 p.m. - Annual Meeting at Alf and Eileen Peart's near York. In the Ballroom. Guest Speaker is Eileen - History of the Area. **Have you paid your membership dues for 2002? If a bill is enclosed, you have not yet paid. Pay Ilse.**

June 1, 2. Springtime in Paris. We are conducting a historical walking tour of Paris. A fundraiser for GRHMS. Help us if you can. Contact Jean.

August 3,4,5 - Civic Holiday. Golden Horseshoe Steam Show. Details later. If you can help, contact Ilse.

Cobblestone Festival Display. August 9th-10th & 16th-17th, 2002. Jean will research and prepare it. Come and see it! The Theme: *Using Gypsum in Architecture & Decoration in Paris.*

Bits and Pieces, by Jean Farquharson, Ed.

We wish to thank the **Parkhills** for their gracious hospitality in inviting us to their home for our **pot-luck and meeting on February 9th.** The food was delicious, the company was great, and Gwen's slide show of Northern Ontario was top-rate, as usual. We hope Gwen is fully recovered from her recent bout in hospital.

Your Chairman has been busy! Cathy MacArthur and I prepared a display for a meeting of the **Paris Historical Society** in the Brant County Council Chambers on Feb. 24th, and I gave a talk on the history of the **Gypsum Industry in Paris**, with emphasis on the people involved. 27 people attended, in spite of the final Olympic Hockey Game that afternoon. Also we obtained two new members.

I was also guest lecturer at a class at Laurier Brantford on the topic **The Growth of Paris**. As a result I met a student from Burford. As a small boy, when visiting his grandfather on Mile Hill, he would explore to find the old gypsum mines in the area.

The 30th Annual Gem & Mineral Show (Theme- ***The Great Mining Adventure)*** on April 6th and 7th was a great success as usual. We launched our new **brochure** with a new picture on the front, and also displayed the Society's new professionally-made **Banner.** Thank you to all members who manned our display.

At least eight of our members attended the **Grand River Watershed 5th Annual Heritage Day Workshop & Celebration,** with a buffet breakfast and speakers in Cayuga in the a.m.– Bruce Hill spoke about the Grand River Navigation Company, Dr. Gary Warrick on the Native People Settling on the Lower Grand, and Ackland Davey from Six Nations on native History and Legend -- and a box lunch and bus tour of the Lower Grand historical sights in the afternoon. Some of our members were tour guides - Rae and Eileen. The tour made us want to come back and see more!

We were invited by **Springtime in Paris** to lead an **Historical Walking Tour of Paris** on **June 1st & 2nd.** We are allowed to charge for this since we spent $50 to advertise in their brochure - 30,000 will be distributed. Several members (Ilse, Cathy, Diane, Joe, Lou) and Paris people have already volunteered to help us with the display and tour. We would like to hear from YOU!

We have been invited to enter a display at the annual **Cobblestone Festival** August 9-10 & 16-17 I have already begun to research the topic - **Using Gypsum in Architecture & Decoration in Paris.** There will also be an interesting display of models of all the cobblestone houses in Paris.

Annual Meeting on Sunday May 5th, 2 p.m. We are delighted that Eileen Peart has graciously invited us to hold our Annual Meeting in the Grand Ballroom of the historic Cook House. She will speak about the Cook family history and the general history of the area.
At our meeting at Parkhills we had a motion carried to change one of our by-laws - "That family dues be $15 ."[rather than $20]. Moved by Joe Clark, seconded by Paul Boulaine. This is your prior notice of motion We have a Nomination Committee working on your 2002 Executive

Research: Spending a few hours at the Paris Library doing research, Cathy and I found a lot of interesting information, including names of miners and millers and listings for mills in various directories. We are filling in some information about Mr. Wright's plaster beds which we'll report on in a later newsletter. I visited the Canadiana room of North York Public Library for a few hours, and found and copied for the Cobblestone Festival display some pamphlets published by the Alabastine company. Cathy has acquired an 1891 Bureau of Mines Report. **Whiteman's Creek Women's Institute** has had their **Tweedsmuir History** microfilmed, and they have donated copies to Paris Historical Society and Brantford Public Library. We can't wait to see it!

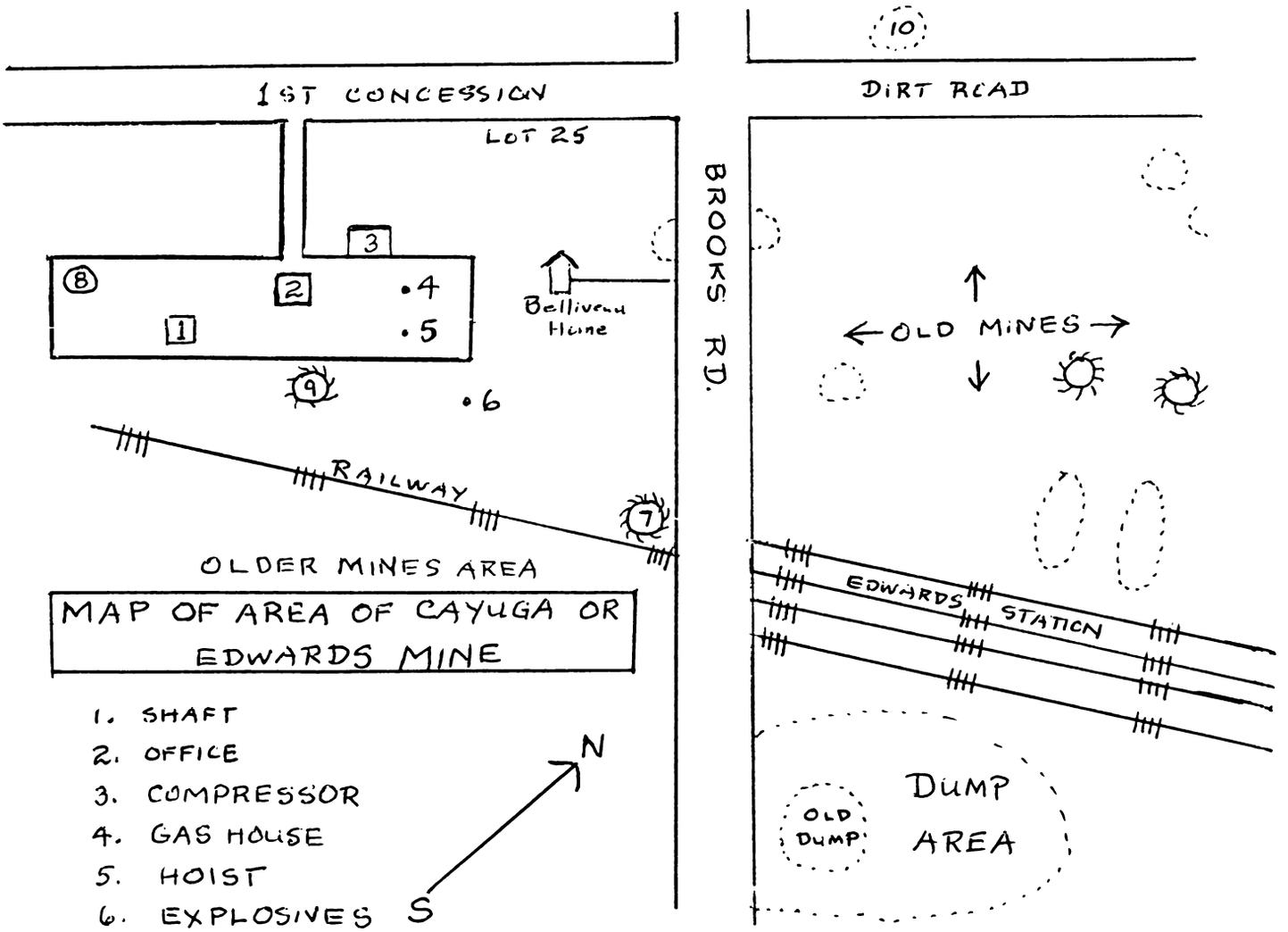
Field Trips: Ilse has been ill with a virus for several weeks, but is finally coming round. Her environmental article on the Edwards Mine has instigated one of this year's field trips. Dates and places for others will be set later as weather and time allow. Phone her to find out the schedule.

Submissions: I have received a lot of clippings from various members. I will mention them when there is space in future newletters. All submissions are welcome. Keep them coming!
In November, there was an Expositor article about a friend and environmentalist with whom we used to confer and share field trips - **Catherine Verrall**. She and her husband sold their house and moved near to their family in Regina. Her friends held a bon voyage party for her before she left. Ilse still gets phone calls from her. She misses her Brantford friends.

ENVIRONMENTAL CONCERNS IN THE EDWARDS/CAYUGA MINES AREA by Ilse Kraemer

An environmental disaster is looming in the vicinity of the Edwards/Cayuga Mine! Our research has not fully revealed the entire history of the mines in this area. Some was written and talked about, but each oldtimer's story was a little different. It is still very confusing. What is the truth? It may be well-buried in the mine and never ever known. But....from what we have learned this environmentally sensitive area is not a safe site for an industrial waste dump!

Our members have, visited, re-visited, researched the site and have recorded all visible changes. Compared to other mines in the area, this is one of the more recent sites, opened up in the 1940's and closed in the 1950's. There is a three-foot seam of exceptionally good quality pure white gypsum. The mine was worked from a vertical shaft, located in the northwest corner of Lot 25.



MAP OF AREA OF CAYUGA OR EDWARDS MINE

1. SHAFT
2. OFFICE
3. COMPRESSOR
4. GAS HOUSE
5. HOIST
6. EXPLOSIVES
7. NEW SHAFT
8. ONE OF MANY COLLAPSES
9. OLD SHAFT
10. SINKHOLE

The gypsum seam is located at the 85 foot depth and is overlain by 30 feet of shale and 52 feet of sand. The area in Lots 22 to 25 is riddled by much older mine tunnels. Most were not used very long because of water problems. The water level is very high and the mines flood. Edwards Station was a good-sized freight yard with many sidings. Gypsum was transported by truck to be loaded on the rail cars and shipped to Toronto for processing.

The first time I came into this area was in the early 1960's while doing an archeological survey. Many of the old buildings were still standing. At this time I was unaware there was an underground mining industry in this area. In 1993, the Mines Society revisited this place. It had changed a lot in the 30 years. Where once were talus heaps, bare of any vegetation, we later had trees, bushes, etc., and most of the buildings had collapsed.

Even in the 1960's, next to the mines was a private dump, very active. Later, when I came back, the dump was closed and workmen were digging out soil and building a berm around it. They installed monitoring wells and fully fenced the area. Danger warning signs were posted all over the place. I have recently heard, to my horror, that this dump of 35 acres is to be re-opened under the old licence, to be used as a private industrial waste dump!!!

Walking around this area after all these years of observing it, I can see the extent of the mining by all the collapses of the old tunnels. It is a very dangerous area. Some of these collapses are round, hour-glass shaped, and filled with white milky water (dissolved gypsum). The Edwards Mine was supported by the room and pillar method ; every few feet a pillar was left as a natural support. When the mine was closed, the pillars were removed since they were pure gypsum. This left the roof without any support, but the mine filled with water which served as a support. But in times of drought, we measured the sinking of the roof by about six or eight inches. There is no complete record of all the mine tunnels. Many gypsum mines in the Grand River Watershed were privately owned "wild" mines. No records exist in government documents. Only by carefully investigating the collapses can we estimate the size and direction of the underground workings.. These mines were not sophisticated at all. The pictures tell us this story.

It is very upsetting to find the owners will re-open the dump in this unstable area. The mine tunnels will act as a pipe for the leachate draining out of the dump. It can drain into a vast area and contaminate the aquifer forever. Modern technology often eventually fails.

Another danger is the karst topography of the Salina formation. Karst is an underground system of caves, natural tunnels, holes, and vugs large and small. Karst is created when the ground water washes the soft, water-soluble gypsum and limestone out. This is an ongoing process. Karst is very unstable and can have cave-ins just like mines. If the cave-in is under a stream, we encounter a disappearing stream with the water gurgling into the hole. Karst too can and will act as a natural pipeline for underground water and leachate from a dump. Here we have two dangerous problems, one man-made and one natural. Very little research has been done in the Grand River Watershed regarding the karst formation.

Recently the Conestoga Rovers, a hydrogeological consulting company from Waterloo area, contacted me. They work for the owner of the dump. They wanted to visit me to look at all our research material, but as yet they have not come. As soon as the weather permits, I will re-visit the site and arrange an outing for the research group. I talked with the head planner in Cayuga, who said the municipality does not want the dump in this area. It is environmentally very sensitive – the rare Cayuga slough forest, a wetland with Carolinian trees, bushes, plants, tall grass prairies and a lot of animals, including a very large population of sable wild mink.

COBALT 1903 -2003: HOBNAIL BOOTS AND A FLANNEL SHIRT

By Mike O'Byrne

The Northern Ontario Town of Cobalt will be celebrating its bicentennial next year. Cobalt has an incredible heritage and is a must-see for anyone interested in mining. Allow me to briefly take you back into the past and provide a glimpse of the extraordinary events that occurred.

As a result of pressure to open up the potentially rich agricultural lands north of New Liskeard, Ontario, the Ontario Government chartered the Temiskaming and Northern Ontario Railway to build a developmental railroad north out of North Bay, Ontario. The sod-turning ceremony was held in May 1902. Those of us who have traveled Highway 11 north through the Muskoka country to North Bay and beyond, quickly become aware of the dominating presence of the Canadian Shield and gain an insight into the construction difficulties faced by railroad contractors.

On August 7th, 1903, on the west side of Long Lake at mileage 104 north of North Bay, two tie cutting contractors, James McKinley and Ernest Darragh noticed some unusual mineralization. Both McKinley and Darragh were experienced miners and recognized that the soft white metallic mineral they found was significant. Claims were staked and samples sent for assaying. The result -- 4,000 ounces of silver per ton.

The following month, Fred LaRose, a blacksmith but also an experienced prospector who was working for the railroad contractor noticed an unusual pink-coloured patch on a metallic outcrop, and believing it to be significant, staked a claim for himself and his boss Duncan McMartin. LaRose believed that he had found copper, but a geologist in the area indicated that the mineral was niccolite, a potentially valuable ore of nickel. Nickel had recently been discovered at Sudbury to the west, and believing that there might be a connection between the two finds, summoned Provincial Geologist Willet Miller to the site. Dr. Miller quickly recognized the potential of the site and confirmed the presence of silver, cobalt, nickel, bismuth and arsenic. He was aware also that there was another town in Ontario called Long Lake and petitioned the government to name the location Cobalt. Cobalt eventually was incorporated as a town in 1906.

Prior to the discovery in 1903, the area had been traversed by fur traders, timber cruisers, native people and a few settlers. For years, fur traders traveling north to Hudson's Bay via the lake Temiskaming canoe route were aware of a lead deposit on the east shore of lake Temiskaming. This site which came to be known as the Wright Mine had been located on a map published in 1744. It is ironic that the vast silver deposits of the Cobalt area were only a few miles west of the Wright Mine. Historically, previously discovered gold and silver deposits in Ontario had been limited in extent and it was firmly believed that future discoveries of any significance would only be located in western Canada, paralleling the development pattern experienced in the United States.

When the significance of the silver discovery at Cobalt became public and it took a few years to do so, there was a major influx of prospectors, miners, promoters, bunco artists, drummers and camp followers. Cobalt was now only an overnight journey by rail from Toronto and only a slightly longer journey from New York city, the fountain of mine development capital. Interested speculators could reach the town via rail coach, Pullman car or often in their private railway cars. The site became a magnet for nabobs and charlatans and everything in between.

The resulting silver boom created a number of millionaires and mining dynasties and

witnessed the chartering of hundreds of mining companies and fleecing of a large number of the public who speculated in what were in hindsight, spurious mining promotions. In excess of 500 companies were floated to mine silver or the public.

The number of producing mines probably totaled less than 100 but this figure is difficult to pin down. Some of the mines produced phenomenal amounts of silver. Mines seemingly ran out of ore and were abandoned only to be re-opened by different operators. The Bailey Mine as an example produced 286,000 ounces of silver up to 1926 and shut down, only to re-open as the Glen Lake Mines which was producing a million ounces of silver per year in 1962.

The silver deposits were erratic and puzzling. Individual veins pinched and swelled from hairline thickness up to 48 inches in width and were up to several hundred feet in both horizontal and vertical extent. The composition of the ore varies considerably and was extremely complex. In addition to native silver, the ores included at least 30 other simple and complex compounds of nickel, copper, bismuth, cobalt, antimony, lead, and zinc.

Due to the erratic location of the veins, the most expedient method of surface exploration was to trench the claim on a systematic basis. The Nipissing Mining Company, one of the largest property holders, utilized large hydraulic monitors to wash the overburden of what became known as Nipissing Hill, today the somewhat bald hill east of the town.

The deposits initially worked were so rich and massive that the only equipment required was sledgehammers, drill steel, picks, shovels wheelbarrows, dynamite and strong backs. Native silver was collected, sorted, bagged and shipped out in rail car lots to refineries primarily in the United States. It was not unusual for a single carload to yield a return of $75,000. In a number of instances, one or two carloads of high grade ore were sufficient to recover the producer's initial investment.

As a developing but essentially a wilderness area there were no electrical services available. As mining became more sophisticated and entered the underground phase and the erection of reduction plants, it became necessary to install steam plants to provide power and compressed air.

The development of hydro and compressed air at Ragged Chutes resulted in a substantial reduction in mining costs. The natural compressed air plant at Ragged Chutes was unique to North America. Compressed air of 125 pounds per square inch was conveyed to the mines via a 21 mile network of 20, 12, 6 and 3 inch cast iron pipes. The Fact that the air was deficient in oxygen was only a problem if the miner has to light his candle lamp, pipe, or cigarette.

Mine sites varied widely in size, with the Nipissing Mining Co. having one of the largest holdings. The Right of Way Mining site was unique in that it was less than 100 feet wide but 4 miles in length and stretched under the Temiskaming and Northern Ontario Railway right of way. Silver production peaked in 1911 when 3 million ounces of silver was produced, by which time the town's population had reached 12,000. In its first sixty years, the Cobalt camp shipped nearly1,185,000 tons of silver high grade and concentrates, over 420,500,000 ounces of silver. If all of the silver extracted from Cobalt during its first sixty years of production were placed in boxcars, a train of over 100 miles in length would be required.

Cobalt seemingly didn't develop according to any plan, it just sort of evolved. Mining operations were carried on within the town and underneath the town. People tended to take possession legally or otherwise of any parcel of level land which was a scarce commodity in the town. Often they were squatting on mining properties and somewhat intimidating measures were taken to evict squatters.

"The Jamieson Meat Co. has not moved, although they have been served notice that we need their lot for mining purposes. We will therefore dump the rock from the shaft at Prospect and Silver Avenue alongside their building so that as the pile increases the walls will be crushed." (Letter dated July 30, 1914, written by the secretary of the Coniagas Mining Co. to Col. Leonard, President, Coniagas Mining Co. - Coniagas Letterbook- Courtesy of the Cobalt Mining Museum).

It is uncertain how the streets of Cobalt were laid out, but none of them is either straight or level and the main street is a series of right angle turns and hills. None of the street intersections appears to meet at right angles. Construction standards and building code compliance were non-existent. Buildings were erected whenever and wherever. Little regard was paid to providing adequate water and and sanitation services. This lack of planning would have been of little importance had the silver boom fizzled like all the previous mining booms. The boom didn't fizzle and the town suffered severely from a succession of fires, epidemics, explosions and cave ins.

It is impossible to convey the excitement of the booming community, the clamor and the bustle of the town. There was the constant pounding of the many batteries of gravity stamp mills used to pulverize the ore in the numerous reduction plants, the constant clatter of the overhead tramway systems continually moving large buckets of ore, and the regular blasting. All above the racket was superimposed on the normal noise of a vibrant community, the steam whistles announcing shift changes, the whistles of trains arriving and leaving the town, the noise of teams and teamsters delivering freight to various sites and the noise of hammers and saws used in the erection of commercial and residential buildings.

For entertainment one could attend the Opera House, watch vaudeville performances, journey by streetcar to Haileybury or New Liskeard to imbibe at a licensed establishment. Cobalt was a dry town, but evidently there were a number of blind pigs to satisfy one's thirst for something alcoholic. One could also watch the Cobalt Silver Nuggets challenge the Renfrew millionaires for the Stanley Cup. Despite its frontier boom town atmosphere the town was essentially law abiding and a great town to live in.

In sharp contrast to the social life of the town was the grim reality of mine working. By the end of 1912 over 100 miners had been killed in the mines. The Ontario Bureau of Mines bureaucratically reported that an average of only one man was killed to produce to the value of approximately $170,000, probably the first attempt to put a monetary value on one's life.

In spite of everything, the town survived. The last silver producer, Agnico Eagle Mines, shut down in 1987. Natives of the town, either residents or miners who learned the trade in Cobalt but are working elsewhere, love their town and are extremely proud of their Cobalt connection. A lasting legacy of the town is its wonderful mining museum. The dedicated staff at the museum have been instrumental in preserving and sharing the town's rich heritage. The museum houses what is considered the world's best collection of native silver specimens as well as artifacts, papers, and items of mining equipment. The staff have developed a comprehensive Heritage Silver Trail, a driving tour of some of the noteworthy sites and an underground tour.

The Heritage Silver Trail is an excellent way of gaining an understanding of the scope of former mining operations and the dynamics of the town. Cobalt was the cradle of the Canadian hard rock mining. Capital, expertise and interest stimulated by the Cobalt bonanza resulted in the development of subsequent mining booms in Timmins, Kirkland Lake, Red Lake and Rouyn, etc.

SAFETY INSPECTIONS OF THE GRAND RIVER GYPSUM MINES IN 1891 by Cathy MacArthur

During 1891, inspections of the gypsum mines along the Grand River from Paris to Cayuga revealed unsafe mining conditions in violation of the mining regulatioins set out by the Mines Act. An inspector was sent to these mines to investigate and report back to the Bureau of Mines. Many of the mines operated close to the water level of the Grand; therefore flooding was a major problem..

The Teasdale Mine in Cayuga Township suffered flooding due to the construction of a dam downstream at Dunnville. This periodic flooding further weakened the integrity of the mines along the river.

The Adamant Manufacturing Company mine (former Excelsior Mine) on the River Road in North Cayuga dealt with high water pouring in-between the cap rock and gypsum bed by hooking up two wind-powered pumps to rid the mine of water. The Adamant's flooding problem was due to the bottom works of the mine being the same level even though it was 400 yards away. John A. Nelles, manager of this mine, received instructions to add more support timbers to the interior of the mine to improve safety for the miners.

The Caledonia mine, owned by N. Garland of Toronto, closed a drift leading to the mine workings when careless mining practices resulted in 30 to 40 yards of the drift collapsing, filling the drift with soft clay too costly to remove. The Garland Mine, located beside the Caledonia mine, was directed to replace the rotting timbers in the mine with new ones. William Smith, the mine foreman was told to add a ventilation shaft and escape route. He also had to create a man-hole (siding) along the narrow tramway where the horse-drawn ore cars exited the mine.

Sections of the Martindale Mine were declared unsafe as well. Manager George Millward was instructed to fence off a dangerous area of the mine threatened by a hanging rock roof ready to collapse at any time. Millward was also told to add stone pillars to support the roof where mining was currently underway. This mine also required a ventilation shaft to be built which would double as an escape route for the men.

The Alabastine Company of Paris had just purchased the Paris Plaster Mines 1 1/4 miles south of Paris when they received inspection. The mine was dangerous. The original drift was unstable and foul air made it impossible for the miners to work here at times. The inspector ordered new supports to be added at the work site and that a new drift be opened 75 yards to the west of the current opening,. This new drift would connect with the existing work area, and was to be shored up with proper supports and made large enough to work safely and easily. The old drift was to be left in place to aid in ventilation, but fenced off to prevent entry. *Annual Report of the Bureau of Mines, 1891.*

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This newsletter is edited by Jean Farquharson. We are not responsible for errors. We are looking for more information about the mining industry in Southern Ontario. Submissions are welcome. Deadline for the next newsletter is September 1, 2002.
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