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THE WALKING QUESTION MARK

Newsletter of the Grand River Heritage Mines Society

Always Digging For Answers

January, February, March, April 2002

Vol.10, Issue #1

BITS AND PIECES

By Jean Farquharson, Ed.

We are into the Winter Blah's, but we have many activities to look forward to for the next few months. And we have lots of news for 2002!

Ilse Kraemer has won another award! The Ontario Heritage Foundation has awarded to four people in Brant County through the Heritage Community Recognition Program an **award for significant contribution to local heritage preservation.** The award is given for leadership of natural heritage conservation and restoration projects, long-standing voluntary service to local heritage organizations, productions of local history publications and preservation of heritage buildings. She will receive her award on Feb. 5th at Brant County Council chambers in Paris. Congratulations Ilse!

We thank Ilse for hosting the Christmas Potluck Supper. There was a good turnout, and everyone had a great time. Cathy showed us her excellent photographs and talked about our trip down the Hagersville Mine. Jean and Cathy have written an article about the wonderful trip by nine of our members through the CGC (Canadian Gypsum Company) Mine and Mill at Hagersville - described by some of us as the thrill of a lifetime!

Mary Nelles has contributed a photocopy of a certificate for 60 shares, costing $5 per share, to the Seneca Gypsum Company Limited, dated September 29th, 1925. If anyone knows anything about the company, please let us know.

Cathy McArthur has purchased an old treasure for us to use in our displays. She found at an auction a large buff-coloured can about 12 inches in diameter and 15 inches high. It held a product called **Art-Cement Paint**, a patented powder produced by **Gypsum, Lime and Alabastine Canada Ltd.**, Paris, Canada, and used for interior decoration. We do not know the age of the can. Instructions are stamped on the side. After being mixed with water, it was to be brushed or sprayed on surfaces such as cement-stucco, concrete, terra-cotta, brick or interior walls of sand-finish plaster.

Members are reminded that their 2002 fees are due right away. Please submit them to Ilse ASAP. Individual - $10

Family - $15

COMING EVENTS

GENERAL MEETING AND PROGRAM: Howard and Gwen Parkhill have invited us to use their home for a **general membership meeting and Pot Luck Lunch on Saturday, February 9th at 10 a.m.** Snow date is February 16th. We will cover some business and then Gwen will show us her excellent slide show entitled ***Lake Superior Shores***. It includes Silver Islet and Cobalt as well as general terrain, geological features, waterfalls, flowers, Ouimet Canyon, and Kakabeka Falls. Then we can enjoy lunch including Gwen's delicious apple pie. Please bring sandwiches, dessert or nibblies to share with others. Tea and coffee will be provided.

Monday, **February 18th** is **Heritage Day.** Celebrate by attending the **Grand River Watershed 5th Annual Heritage Day Workshop and Celebration to be held at the Cayuga Kinsmen Hall, Cayuga**. Speakers in the a.m. are local historian Bruce Hill, archaeologist Gary Warrick, and Norm Jacobs from Six Nations. Box lunches will be provided with field tours in the afternoon. Registrations must be in by February the 8th. For details, call Jean F. at 519-442-2156. To register, call Wendy Whitfield, Manager of Heritage and Culture, Haldimand County, 905-318-5932, ext.240.

This year, the Paris Historical Society will hold several Meetings with Program followed by an Open House in the Brant County Council Chambers on Sundays throughout the year.
The Society's display cases are located in the Council Chambers, and the open house allows the public to see their revolving displays. **The GRH Mines Society has been invited on February 24th to provide the program. We are also asking the public to provide any information and documentation about the mines, mills and gypsum companies and the people involved, and to ask us questions.** The Open House follows our program. If any members are available that day, we ask that you attend to support our Society. It will be advertised in the Paris Star and Brantford Expositor. Members of the public are welcome. Bring a friend.

The building will open at 1 p.m. for setting up our display, and will be open until 5 p.m.

The **Brant Lapidary Show** will be held on **April 6th and 7th** at the Paris Fairgrounds. We are looking for volunteers to man our booth. This year's theme is ***The Great Mining Adventure***.

In **May** we will hold our **Annual Meeting** which will be open to the public with a guest speaker. We will announce details in the next newsletter.

On **June 1st & 2nd,** we are committed to a **fundraiser** which should be fun. We have been invited to give a **Historical Walking Tour of Paris** at the annual **Springtime in Paris**. More definite plans will be forthcoming. Our event will be well advertised and we will need some help to carry it off. If you will help, please contact Jean.

We expect to participate as usual in the **Golden Horseshoe Steam Show** in Caledonia on the Civic Holiday weekend, **August 3rd, 4th and 5th** More definite plans later.

With some hikes planned in the spring, we should have a very busy year.

DOWN THE MINE : OUR TRIP TO CGC, HAGERSVILLE

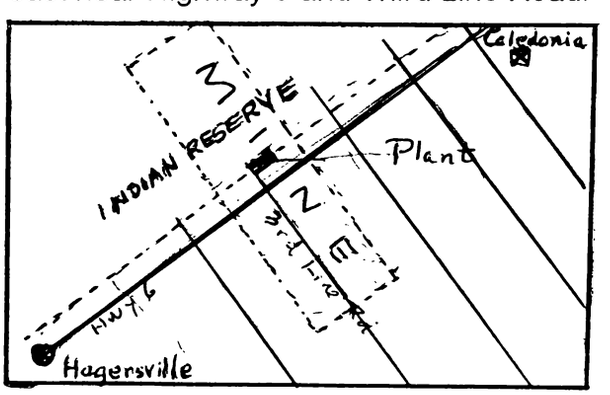
by Jean Farquharson & Cathy McArthur

On that fateful day in New York City, September 11, 2001, a day which the world will never forget, six members of the Grand River Heritage Mines Society were oblivious of what was occurring. We were down the CGC (Canadian Gypsum Company) mine at Hagersville. When we found out what had happened in New York and Washington, we were 100 feet underground, in the lunchroom. We weren't sure we wanted to come back up from our safe bunker! We were told by staff that the US Gypsum headquarters in Chicago had just been shut down for the day because of fear that their tall office tower might be struck as well.

Arranged by Harold Cruikshank and his daughter, Peggy Beckerson, Office Supervisor, the trip down the Hagersville Mine was one we had dreamed of for several years. At 8:30 a.m., on Sept. 11th, Al and Jean Farquharson awaited all the other members who were coming - Ilse Kraemer, Mike O'Byrne, Joe Clark, and Lou Knechtel. The trip was repeated on a cold, rainy, blustery day, October 25th, by Cathy McArthur, her brother Wayne McKay, new member Rae Tomlinson and Harry Frishette. This article combines the notes taken by Jean and Cathy on the two tours.

We signed in at the gate and were led into the plant office where we met our tour guide, Jim Gowland. He described himself as a mine technician, a graduate of the mining school at Haileybury with 26 years on the job with CGC. He led us into the plant office where we signed release sheets before we were allowed to go into the mine. We looked at the mine maps on the wall, which are updated every six months as the size of the underground excavation grows. It was pointed out that the ***room and pillar*** method of mining was used, the ***pillars*** being left to support the mine. A *room* is usually 22 feet wide, a ***pillar*** is 14 feet by 24 feet. In a 1000 foot section, there are normally 26 rooms. The maps also include the various sections of the drywall plant above ground which processes the gypsum from start to finish.

The mine area extends about 4 square miles underground, four miles by one mile. There are five shafts including the air shafts. The mine has been open since 1931, and the original plant was built soon after. The depth of bedrock varies from 80 to 150 feet, with rolls, pinches and dips. The layer of rock dips 5 feet per mile. The gypsum seam is about 42 inches deep. The ore body is horizontal and flat, and subcrops to the north. It may be the same ore body as at Lythmore. The part of the mine extending into the reserve is now closed because of various problems, and we were told we would be going south and east near Highway 6 and Third Line Road.



We were required to don appropriate dress: safety glasses, mine helmets, leather utility belts with batteries attached to provide power for our clip-on headlamps, steel-toed rubber boots, warm clothes we didn't mind getting dirty, leather gloves, and last but not least, carbon monoxide filter/converters which convert carbon monoxide to carbon dioxide through a chemical process producing heat (we were warned not to burn ourselves if we had to use them). The filter lasts an hour when a fire breaks out underground to give us a chance to escape to daylight.

We passed through the drying room, a very high-ceilinged room where we saw dirty coveralls hanging to dry after the miners had come from underground. The mine is always wet and always 55 degrees Fahrenheit, summer or winter. There are benches for changing, lockers for the workers' belongings and showers for them to clean up when they came off duty.

On our walk to the elevator, we saw piles of gypsum where the unloader brought it up from underground, and piles of discard rock they provide to the Reserve, and a recycling pile where faulty wallboard and scrap is piled. A huge ventilator shaft was nearby.

Previously hoists were used to transfer both workers and gypsum. A bell system was used to indicate when the hoist would start. Now a modern Alimak elevator is used for people. We descended in our cage about 100 feet. When we emerged, we walked on a rough roadway past the lunchroom that could be disassembled and moved to where the latest operations were going on to save valuable time for the workers.

We walked toward a narrow gauge rail line and were instructed to sit in an open low shuttle car. Each car could accommodate eight in a pinch. There were six of us plus our guide. Large batteries took up a large area in the middle of the car, the spares available when the "juice" ran out. When we started to move we were warned to be ready to duck when we came to low ceilings or wires, etc. hanging down. We passed through the area that had been opened in 1931 and was mined out. We saw names written on the wall surfaces; e.g., "Winger, 1946".

While we were moving down the track, our guide suddenly grabbed a rubber strap that was hanging down convenient to his reach, and a door automatically opened. We passed through into another area of the mine and he pulled another strap that closed the door behind us. We were now in a newer section of the mine. Jim told us that we were now passing under Third Line Road. The area under the roads was not excavated for safety reasons, but as we proceeded, we could see the rooms and pillars as previously described. We observed the conveyor system. Two belts go straight north through the mine to near the plant. Then an incline brings the gypsum up to the stacker.

We passed under a chicken barn and Highway 6. With the cool dampness, we noticed the *rustcicles* that form on the metal bolts which hold the ceiling up. Every once in a while as we rode along, we came to a junction where the rails had to be switched. One of us had to get out and pull the switch, and then throw it back

in place after we had passed over that part of the track. We passed through more automatic doors and proceeded to the new underground maintenance facility, where we got out and explored . It was lit up like Christmas and had a much higher ceiling than the rest of the mine. Block walls in the maintenance room help to retain the heat. This very large room was filled with machines that needed repairs. We learned that the company purchases low seam coal equipment (mostly Joy brand) in order to manipulate under the low roofs in the mine. Thus loaders need gathering arms to operate, and much of the equipment is articulated. Each machine is battery operated. The batteries are mostly all 128 volt with 64 cells (1 cell + 2 volts). A few are 96 volts. The storage area for such large batteries and their backups takes up a large part of each machine. We saw a unitrack scoop, articulated. with an ejection blade. There was a drill 1 3/4" by 12 feet. A hauler was articulated at the centre so that it could move both up, down and sideways. A bolter machine is used to drill and position roof bolts. There is a safety post and stabilizer on it. Dust collectors are used to remove dust from the air for workers' safety.

We moved to an area where there was a haze in the air. a remnant of the previous night's blast a mile away. It was drawn to an air shaft. where we could feel a cool breeze. Beneath the shaft was a circular pool of water, bubbling like a magic fountain. This was caused by air pressure and the movement of air up the shaft. Air is mechanically pumped through the mine. It rises up the vent as steam in the cold weather. We stepped into the shallow pool to look at the daylight at the top of the shaft.

We proceeded in our shuttle car to the production section. The staff work in 9-hour shifts. The south and west section were loading that day. Two sections can be loaded at a time. Because this East section, where we were, is partially flooded, only 15 rooms are opened up. We learned that 94 people work underground. There are 6 to 8 section workers, mechanics, greasers, hole drillers, etc. Equipment is moved every 4 months, including the lunchroom. At present, they were 200 feet from the Third Line Road and close to the power line. The section workers were drilling, bolting and later blasting. They drill the face at one time and bring the face down, then muck out the gypsum, leaving the black rock. The black rock is dolomitic shale and limestone. It is stoved behind after the gypsum is removed. The gypsum may be white. pink, blue, green or black depending on the mineral content They slash/cut across the whole room, then reinforce the roof. The blasting is done when no one is around, and then the gypsum would be loaded later.

We had to stoop to walk to where they were working. We watched an operator installing roof bolts. First he drills an 18 inch hole. The cuttings are vacuumed out. Carbide bits are used. A 36 inch drill is used next to the full depth. The bolts are set 4 feet apart over the entire ceiling of the mine. There are two types of bolts - metal and metal with resin. A plastic tube of resin is inserted in the drilled hole. It is spun for six seconds. and held for 10.

Then it is solid enough to hold up 13,000 pounds. The roof bolts are installed to hold up the 70 to 80 feet of overburden above the tunnels. This varies somewhat in the Silurian layer of sedimentary rock.

Large drills are used to pack the explosives. Pattern timing and sequence are important in using explosives successfully. They use non-electric detonators on the explosives for blasting out the rock The compressor machine drives the dynamite after drilling. An air filter is set close by to clear the air for workers. Obviously we were not allowed to be underground when they blasted.

After blasting, the loose rock is scooped up. The gypsum is loaded onto conveyors which move the gypsum 2½ miles through the mine. Before the conveyor belt was installed in 1978, a 10 ton battery-powered locomotive drew 36 ore cars loaded with gypsum, each car holding 2 tons. The rails are still used in the mine to move the workers and equipment. Before electricity was used, donkeys pulled the gypsum cars. Donkeys that were retired from the pit were said to stop work on the farm whenever they heard a whistle. The shift was over. Shovels were worn out in three days by workers loading the cars. Work was rough in those days!

When the gypsum is sorted from other rock, the sink/float method works using density as the separator. The specific gravity of anhydrite is greater than that of gypsum. A primary crusher underground crushes to minus 6 size rock.

Before we left the production section, we looked at a huge electrical rectifier, 480 volts. 4160 A.C. come in Shuttle cars run on 220 D.C., so AC is converted to DC. There is an automatic shut-off if any problem occurs.

Back on the surface, we walked around and saw the ponds where the effluent water is pumped from the mine. One of the ponds is a beautiful clear green colour, stocked with rainbow, brown and speckled trout. We saw a few giant beauties swimming around. The mine and plant are proud of their safety record. Those employees who have a good record are allowed to have their names put into a draw. Whoever wins the draw each year is allowed to fish in the pond.

Jim pointed out the place where the gypsum is brought to the surface from the mine below. Then we went inside the dry wall plant to begin our tour. The raw gypsum rock is taken to the mill, where impurities are separated out, and the *land plaster* is ground fine and calcined by heating to 275 degrees Fahrenheit in two huge kettles. The part of the plant we went through was built in 1979. The older parts of the plant, built in 1932 and 1968, were behind it.

On the board line, the *stucco* is taken and mixed into a slurry with water, soap, starch, and sugar. There are reagents to make it bubble up lighter. This slurry or stucco is spun at high speed and sandwiched between two layers of paper which appear to go on for miles down the long conveyor belt Different types of paper are used for the top and the bottom

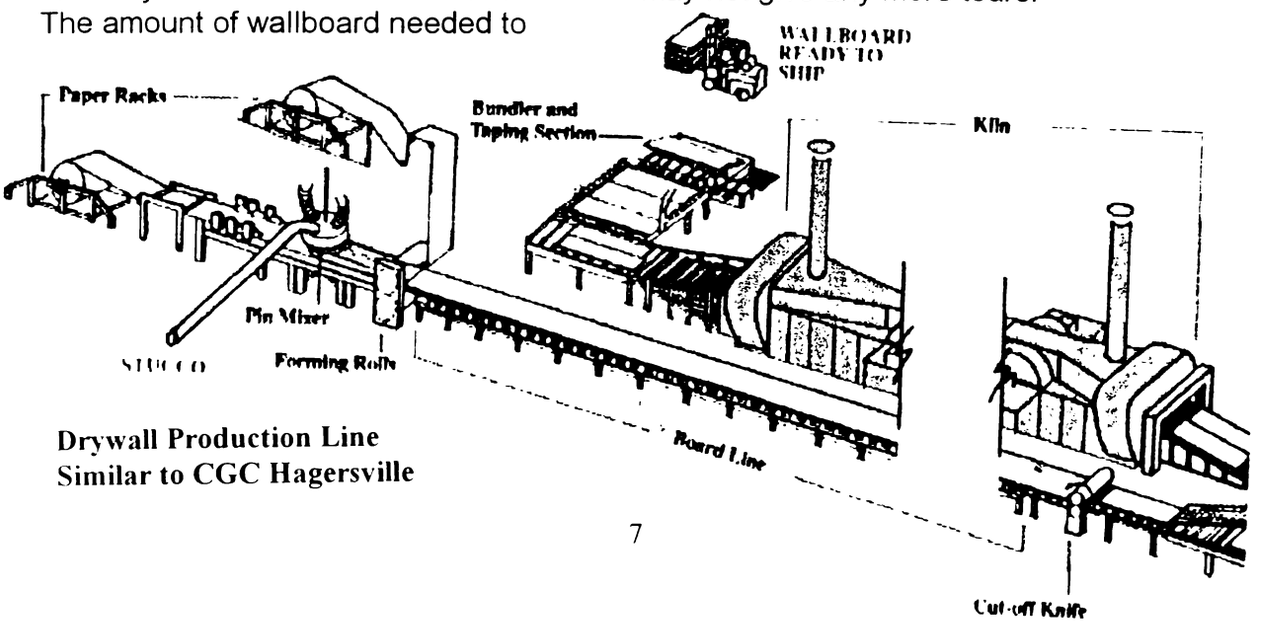
of the sandwich. The plant processes 60 rolls of paper per day. Each roll contains a mile of paper. As the material moves down the line, it is set in the proper thickness and width. Computers set the machines to make what the customer has ordered. There is a different formulation for edges and centres to meet specifications for hardness, depending upon the customer. In western Canada, customers demand soft edges, different from elsewhere. Different sizes of board may be ordered, either 48 inch or 54 inch width, and various lengths. Some customers prefer 54 inch wide plasterboard because for a 9 foot ceiling only one joint is required, instead of two. The plaster board continues along the assembly line, passing through drying kilns, and later it is flipped over and cut.

The finished board reaches the other end of the plant where it is bundled and stacked, ready to ship out by train or truck. Ninety truckloads of wallboard are shipped out each day. The plant operates seven days a week, 24 hours per day, with nearly 100 staff members, and only shuts down for maintenance. The amount of wallboard needed to build a good size three bedroom house can be manufactured in about 5 minutes.

There is a Quality Control Lab which keeps testing the products at various stages of production to see that they conform to set standards set by industry such as Canadian Standards Association.
The Hagersville mine and plant has a sister mine and plant near Batavia, New York State, at Oakland.
Various other products are made - Sheetrock fire resistant panels, Joint Compound and Textures.

We will never forget the courteous and friendly manner which we were treated by our guide, Jim Gowland, and by Peggy Beckerson and the other staff members. When we gathered around the office, they presented us with copies of a booklet which celebrated their 90th Anniversary in June 1997, and a book about their parent company, *United States Gypsum: A Company History, 1902 -1994.*

We should consider ourselves fortunate; because of September 11th, the company may not give any more tours.



Drywall Production Line
Similar to CGC Hagersville

FALL FIELD TRIPS

Ilse reported on two fall field trips.

The first, on September 22nd, was a trip led by the Mines Society with members from Brant Field Naturalists, the Brant Environmental group, and the Northwest Gateway Community Group. Our goal was to study the trees, vegetation, and geology, including the mines. The area we investigated was around Powerline Road and Oak Park Road which is being used for heavy industry and gravel extraction. The County plans to bring in more heavy industry to this area.

There is an Environmentally Sensitive Area (ESA) close to the river, including an unstable river bank, karst-like topography, Carolinian trees and plants and prairies. This is a continuation of the Brantford Northwest which is a study area for an ANSI (Area of Natural and Scientific Interest) by the Ministry of Natural Resources.

The group found also ruins from the Hymer Homestead, pioneer farms, and a sinkhole above the area where pink gypsum is located. Much slumping has occurred along the river bank, and many changes from earlier trips. The trip was recorded and photographed by Lou Knechtel, Harry Frishette and Pat Clemons.

The second field trip, on November 10th, taken by the Mines Society and Brant Environmental group by special request, was intensively photographed. Members wanted to see the disappearing and reappearing streams and the fens, and they trekked for 4-5 hours all the way up to Highway 403, an exhausting day! They saw many disappearing streams and a coldwater stream that remains at 8 degrees summer and winter. It steams in the winter and doesn't freeze.
They found close to 403 and beside a big disappearing stream old foundations made of sandstone - no cement used. They were probably extremely old, perhaps Burrowes' first homestead before he moved across the river to Five Oaks. There was also an Indian village in the area that was inhabited in the late 1700's and early 1800's. They also saw a huge tree that had fallen over with the stump about 5 feet above ground, and full of beehives. The flow of water has changed quite a bit. It will be monitored again by a consultant.

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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, 2001.
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