

# It's time to call in a specialist

By Catherine Verrall

On Monday, Jan. 31, Alfred Gretzinger, chief engineer for Brantford, and Phil Bedell, consultant for Golder Associates, made presentations to Brantford City Council. They attempted to allay the widespread concerns of citizens about the planned sewer crossing under the Grand River, in the northwest.

The city's "expert," Mr. Bedell, admits he is not a geologist. His "expert" knowledge of the geological problems around the sewer crossing has a limited basis.

Mr. Bedell said: "The closest mines to this site have been documented substantially upstream, and north of the 403."

In fact: The Cleator mine is recorded in various sources, is one of the largest known old gypsum mines, is within sight of the island, and far south of the 403. The Cleator mine is on the south side of the river but seams can certainly go across/under the river to the opposite side.

Mr. Bedell's company worked for the proponent in the Ontario Municipal Board hearing on the Gurney Gravel Pit. His associates, from whom he said he learns, would have heard the evidence given by the citizens' group and accepted by Chairman Ball. Indeed, in that case, the citizens' group, not the "experts," were commended for their superb research.

Researchers working on the Ministry of Mines' lost mines inventory have found historical records showing that mining was done in the northwest. They have also found a stream disappearing there, which the Ministry of Mines says is significant indication of probable underground cavities. An old report mentions several such disappearing streams in the northwest.

An old report from the Bureau of Mines tells

## The Grand River sewer crossing dispute

about dripstone, a secondary deposit of gypsum and limestone, which was mined, ground and used as fertilizer. Old-time miners took its presence as an indication of gypsum deposits. There are now massive amounts of dripstone in the northwest.

Mr. Bedell said that a title search did not show any mineral rights granted for mining.

In fact: Such rights were recorded only if big companies were mining. In the Grand River area, farmers had "wild mines" on their own land, so there was no need to record them. That is why the Ministry of Mines is searching for lost mines. Finding them can only be done by walking the areas, looking at archives for old wills, interviewing old-timers. There are far more wild mines than recorded mines.

Mr. Bedell wants us to assume that there would be no mine activity near the sewer site because there are no noticeable gypsum deposits above river level.

In fact:

1. The river level is higher now than it used to be and some old mine shafts are under water now.

2. Gypsum veins often travel downward, following contours of the bedrock, up and down, not straight. People who have crawled into gypsum caves and mines have said "it's so hilly in there."

3. Gypsum was identified in the current borings on the south side of the river along the sewer route, near the river. But the report called it "calcium sulphate."

Mr. Bedell said that "exploration of rock in the site area has not shown any workable deposits of gypsum."

He admits they have found gypsum.

Mr. Bedell said "rock has been cored for at least

three metres, with another metre of earth above the rock." That is, they went down about eight metres or more. He did not say the starting point above the water level.

In the work for the Gurney Gravel Pit, Golder initially drilled to the minimum depth. But the citizens' group and the OMB compelled them to later drill far deeper. Then they found massive gypsum veins at 33, 37, 39, 41 and 42 metres below the surface. Water level was 40 metres below. This only indicates the possibility that the consultants' first assessment here may not have been deep nor thorough enough.

Mr. Bedell said: "In areas where solutioning occurs (rock dissolving in running groundwater), a collapsed topography develops. To be a problem with this type of crossing would require very localized, concentrated deposits of highly soluble material. This is not the case in this area."

He admits: Gypsum (or other soft rock such as dolostone, also common in this area) can dissolve and cause collapse. His grounds for saying this won't happen here are either false or need more investigation.

"Underground waters and streams have in places dissolved the lower part of gypsum beds, leaving large underground channels or caves, extending in some cases over 100 feet in length, varying from five to 30 feet in width" — L. H. Cole, Canadian Department of Mines, 1913.

Mr. Bedell said: "There is no evidence of collapsed topography in this area (because) geologists are easily able to define this in aerial photograph analysis."

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In fact: A geologist with the Ministry of Mines has said that you have to walk every inch of an

area to discover gypsum mines or caves. It cannot accurately be done from the air, he insists.

→ Neither Mr. Bedell nor Mr. Gretzinger gave an explanation for the massive cave-in which citizens have photographed, and complained about.

Neither Mr. Bedell nor Mr. Gretzinger mentioned the pumping that has been going on non-stop since early December, right beside the sewer route on the north side. Geologists say that loss of water can weaken the bedrock and cause unknown, unexpected collapse.

A recent newsletter from the Lapidary and Mineral Society reports that the West Rock Gypsum Mine will be closing and so will be permanently flooded. This is presumably to prevent cave-ins. The Golder report on the Gurney Gravel Pit said that there is no danger because the mines are full of water.

So we wonder why the city is pumping masses of water out from the wetlands, into the river. And we wonder what the effects will be.

Mr. Bedell said: "If there were minor movement below that (three-metre good bedrock depth) . . ." So, he admits that movement is a possibility and he only assumes that it would be minor enough to be absorbed by the pipe.

Clearly it is time for an objective specialist, a real geologist knowledgeable about this area, to be called in to assess the situation in Brantford. Only the Ministry of Mines can provide such a specialist.

We understand that the Ministry of Natural Resources or the Ministry of the Environment would have to ask the Ministry of Mines to get involved.

We urge that the necessary steps be taken.

The well-being of the river, and of 100,000 people, is at stake.

Catherine Verrall is a member of Citizens for Clean Water, a new group established in Brantford.