

Thousands could be affected

# Water at old N.S. mines checked after arsenic poisoning confirmed

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HALIFAX — There has always been gold in the rocky hills of Nova Scotia, but it was only this week that provincial health officials issued a scary warning to the public: where there's gold, there's usually a deadly poison in the drinking water—arsenic.

Halifax doctors have diagnosed a rare case of arsenic poisoning as a result of drawing well water from the site of a former gold mine, "and the question now is how many other people have died or are dying from it," Dr. Ormille Hayne, 35, a young hematologist who diagnosed the disease, said. Estimates of the number of people possibly af-

ected run to the thousands.

"Most of the gold mines in Nova Scotia closed 80 years ago. Why has it taken until now to discover this problem?" the doctor asked.

Yesterday, the medical alert was sounded in 61 one-time gold-mining communities across Nova Scotia by the deputy health minister, Dr. John Stanton, who has set up an emergency task force to test suspected well water in each of the communities.

So far, tests begun Feb. 19 have shown six wells with arsenic levels more than 100 times the level (.05 parts per million) considered safe for drinking and cooking in Canada. Dr. Stanton estimates that 20 per cent of the wells in

the former gold-mining community of Waverley will show levels higher than those acceptable. Tests are to be completed next week.

Waverley, the site in the nineteenth century of at least three major gold mines, is just 15 miles from downtown Halifax and midway between the city and Halifax International Airport.

It was only last week that Dr. Hayne diagnosed arsenic poisoning from well water as the illness that was slowly killing 36-year-old John Hartlen and members of his family from Waverley.

Mr. Hartlen, the father of two young children who lives with his wife and mother in an old mining house, has been

ailing and unable to work for two years because of a disease which doctors couldn't quite figure out.

Then, one morning last week, the hematologist said, he sat thinking about "the bizarre symptoms" that were troubling Mr. Hartlen and suddenly he hit upon the possibility of arsenic. Samples of

hair and fingernails were taken and tests showed very high levels of arsenic poisoning.

Mr. Hartlen's two children, a boy 7 and a girl 4, have also been admitted to Victoria General Hospital in Halifax and his mother, Vicki, was to be admitted last night.

Quick tests last week of the drinking water well at the Hartlen home confirmed what doctors suspected: the arsenic level was so high, more than 100 times the acceptable level, the family has been warned not to use it even for washing the floor or clothes.

Several other families have been sent letters by the Health Ministry warning them not to drink from their wells,

but most have been told they can use it for washing but not for internal use.

In the Legislature yesterday, Health Minister Allan Sullivan said it was only with the diagnosis of the Waverley (Hartlen) case and the subsequent examination of the family's well water that Nova Scotia officials first realized

that old gold mine sites constituted a health hazard.

"Strangely enough, these people have been exposed to arsenic in their water supply for some period of time and I gather built up a resistance to it," Mr. Sullivan said.

Our advice, of course, is basically to continue using your water for everything other than cooking or internal consumption.

tion until such time; in about two weeks, as we will have the survey done.

The Hartlen well was found to contain 5.4 milligrams of arsenic per litre of water, or more than 100 times the acceptable Canadian level for consumption, Mr. Sullivan confirmed.

Since that time, wells in the area have been checked by a task force of Department of Health, Department of Environment, Department of Mines and pathology laboratory personnel, and approximately 80 per cent of the wells were found to be safe and have an arsenic concentration below the maximum

# Arsenic poisoning confirmed in N.S.

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acceptable levels. There have been six cases in which wells have been above that level, "but the tests are far from completed."

Mr. Sullivan said people whose wells had high levels, have been notified of the problem.

Besides the natural occurrence of arsenic in gold-mining areas and the use of arsenic in extraction, arsenic is also commonly found in mine tailings left near the site of old mines.

Irene Moore, the Hartlens' next-door neighbor, lives in a house that is 55 years old and just a stone's throw from a former mineshaft. But her well was cleared for drinking by the tests.

"But it almost frightened me to death when I first heard about it. I wondered if somebody had gone rampant and was putting arsenic in the wells," Mrs. Moore said. "We have a kind of a house built over ours (well) and I told my husband he had better padlock it."

Mrs. Moore said Mr. Hartlen has lost weight consistently over the years and has lived in his house since the early 1940s. At one point, more than a year ago, doctors had told him he suffered from fluid around the heart, she said. Dr. Hayne said Mr. Hartlen's symptoms were anemia, low blood pressure and numbness in his feet and "they didn't seem to fit anything."

Mrs. Moore said Waverley residents whose wells have been condemned have been borrowing water from the wells of neighbors. Besides remnants of the old mining community, several housing subdivisions have been established in the Waverley area in recent years and are primarily inhabited by railway and airport workers. About 2,000 people live in Waverley.

Other symptoms include a metallic taste in the mouth, dryness or constriction of the throat, cramps in the stomach, diarrhea, dehydration and loss of blood pressure.

Dr. Stanton cautioned residents who get their drinking water from wells not to panic, and said a person would have to consume water over a long period of time with very high concentration levels before he would exhibit signs of poisoning.

Arsenic poisoning is treatable unless it is in a very advanced stage.

Dr. Hayne said that in Mr. Hartlen's case, the patient was already showing signs of recovery simply as a result of halting his consumption of contaminated well water.

It is not unusual to find arsenic in gold-mining communities. Arsenic concentrations can come from three sources: arsenopyrites, a geological formation usually found in association with gold veins; arsenic used in the extraction of gold; and the dumping of waste from the gold mines in surrounding areas for fill or roadbuilding.

break of arsenic poisoning resulted from the spraying of insecticides near wells.

In the 1860s to the 1890s, Nova Scotia was one of the richest gold mining areas in the world. It was only with the discovery of gold in British Columbia, Northern Ontario, and the Yukon that many miners moved westward to improve their prospects.

The gold-mining region of the province extends from Yarmouth at the extreme west end of the province across the southern half through to Guysborough County at the east end. There

is only one gold-mining district on Cape Breton Island.

There are many old shafts from gold-mining operations still in evidence, especially in communities like Waverley. But John C. Smith, deputy minister of mines, said there has been no major mining of gold in Nova Scotia for at least 20 years because it has not been financially attractive.

Health officials said that Halifax water, which comes from a lake system not far from Waverley, probably is not endangered by high arsenic levels because metals tend

to settle out on to the lake bottom and are greatly diluted by the volume of water.

In Ontario, provincial officials know of three areas where arsenic is or has been a concern.

A spokesman for the Ministry of the Environment said in all cases arsenic levels in water were well within drinking-water quality standards.

Arsenic was found in the drinking water at Red Lake, and a nearby mine had to cut back on parts of its operation last year.

Privately, doctors wonder if undetected arsenic poisoning might have killed at least one man from the Waverley who died of a mysterious disease in hospital several months ago.

Dr. Hayne said it was very difficult to trace the history of symptoms and disease once arsenic was detected because most cases in medical journals are of acute poisoning administered with criminal intent. Several doctors who reviewed all available literature on the subject found no cases of arsenic poisoning related to gold mines, although there was a case in the Midwestern United States where an out-

General faked Vie