



# The Buzz

E-Newsletter

March 2011 Issue

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#### Sweet Water Drilling

#### Geothermal Holes in Under Three Hours

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As media coverage on climate change continues to grow, many drilling companies are looking for new ways to leave a "smaller footprint" on the environment.

By creating a smaller impact, clients are happier, the environment suffers less and companies, who take the climate challenge seriously, can feel good about their style of corporate citizenship.

But is it profitable to also be environmentally friendly? Absolutely, says Ray Roussy, president of the Sonic Drill Corporation and patent holder of the revolutionary sonic drill.

"Any time you can drill without any drilling fluids such as mud or water, you're able to pocket the costs of site clean-up and waste disposal," says Roussy. "And you're doing wonders for the environment by not having to haul up and dispose of contaminated drilling fluids."

While most drilling techniques require some type of drilling fluid, the sonic drill can core completely dry (to a depth of 300 ft.) and it can case with a limited amount of fresh water or completely dry, as well, if required. Ultimately, there is less mess, less site disruption and drastically reduced site clean-up costs.

"The sonic drill rig can also extrude a core sample into a sealed bag for examination later in a controlled environment," says Roussy. "This feature prevents employees from coming in contact with the core sample and it minimizes any fumes from escaping from the sample," he adds.

## Sweet Water Drilling



From wishing wells to the famous Jacob's biblical well, humankind has been gathering around water for thousands of years. Amazingly, the oldest known water well, dated from Neolithic times, was discovered in Israel and estimated to be 8,000 years old.

Today, water wells are essential in supplying drinking, irrigation and household water and, as a result, the rules around drilling for them are far more complicated as well. In most cases, water well drilling concerns center on the need to protect an aquifer from contamination and, secondarily, the need to protect it for future reference by recording its location.

If the search is on for a new water source, then most hydrologists are also interested in the flow rate as well, simply because that will determine what the likely output will be.

In the last century, many water wells were drilled with cable tool rigs which worked slowly but accomplished the job. More recently, rotary rigs have become the standard for water well drilling. In addition, the dual rotary rig, an offshoot developed from the petroleum industry, has significantly improved the ability to drill larger wells.

Recently, the City of Chilliwack, in British Columbia, Canada, deployed a sonic drill rig to search for a new aquifer that will ultimately supply the drinking water for a future residential development.

Using a patented Sonic Drill Corporation rig, two holes were drilled to 250 ft. to allow for pump tests and monitoring equipment to be installed. Each hole was marked with GPS and its samples were logged and flow rate recorded. Then the holes were sealed, grouted, labeled and tagged with a "red stick-up" which allows a return to the hole whenever necessary. Finally, a three-foot perimeter was cemented in.

Despite today's complex water regulations, the project was completed quickly and the client was delighted with the drilling results and the performance of the sonic rig.

## Geothermal Holes in Under Three Hours



When it comes to drilling through overburden, nothing buzzes through sand, silt and gravel like a sonic. But, on one recent occasion, the drilling speed surprised even the company who manufacture the sonic drill rig.

Drilling a test hole for a future geothermal project, a Sonic Drill Corporation rig was able to bore past 300 ft. and complete the hole in two hours and three minutes. No other drill exists that could do the job any faster. The drilling project, part of a law library extension for the University of B.C., was contracted to Hemmera Energy, a division of Hemmera Environmental Services Consultants in Vancouver, B.C., Canada.

In this initial first step, the company was asked to conduct a feasibility study to see if it was practical to install a geothermal field in the proposed extension.

"Our role is to do the test holes to see if a larger scale project is feasible," said Christiaan Iacoe, an environmental scientist and consultant at Hemmera Energy. "If you're going to drill 200 holes or more, it's good to know the conditions."

Located on the campus near the high sand bluffs overlooking Burrard Inlet, the plan was to drill a single 350-foot hole. The initial hole was drilled using a conventional mud rotary rig but, when the drill rig got past the 320-foot mark, it was stopped in its tracks. That's when the sonic drill was brought in as a "rescue rig."

In typical fashion, the sonic rig buzzed quickly and easily through the same challenging conditions that jammed the conventional rig while setting a new record for the company that owns the drill.