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Device rejuvenates old oil wells, local firm says

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The local makers of a pulsating device proven to push fluids through a reservoir say an oilpatch client could soon be allowed to book more reserves after extending the life of a section of an oilfield.

Wavefront Technology Solutions leases its Powerwave injector devices to oilfield-services firms in Canada and the U.S., including the first of four units to a major international oil company operating in Alaska.

In eastern Alberta one firm has been using the devices in part of its lease for almost two years, Wavefront president Brett Davidson said.

The company's longest-running client had produced an extra 34,000 barrels of oil by June, and the gains have continued.

But perhaps more important, Davidson said, the client has determined that the monthly rate of decline in the reservoir is down to one per cent from 3.4 per cent.

"Given these results, we would expect the client will be able to book more reserves with its IQRE (Independent Qualified Reserves Evaluator) representative," he said.

He said the decline is "very significant" for the client, who can't be named for competitive reasons. "They want to take the next step and the evaluation is going on right now."

Results are due before the end of the year.

"For us, this could be a game-changer. You are adding more field life, which means greater reserves," he said.

Davidson said many oilpatch players are watching as firms try the Wavefront injectors. "The more positive results, the greater comfort to our existing clients and the more units that go out into the field."

He says the company's order book contains more than 90 units.

"We are advertising for more sales staff, and we are expanding our assembly and quality-control facility in Edmonton."

Wavefront's 10-year goal is to have its tools used in at least 10 per cent of the global injector-well market, which includes 200,000 wells in North America alone.

The device sits on the injection tubing and is the first thing in the well. It pulses water through the ground to flush oil from older reserves, and chemicals from groundwater.

The more porous the rock and closer to the surface it is, the slower the pulses. Starting at a tenth of a second, the injector can pulse at a hundredth of a second for deep, tight formations.

With typical oilfield water flooding, water tends to flow to areas of least resistance rather than evenly, and perhaps 35 per cent of the oil can be recovered, compared with up to 90 per cent with Wavefront.

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