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Printable Version

reservoir engineering

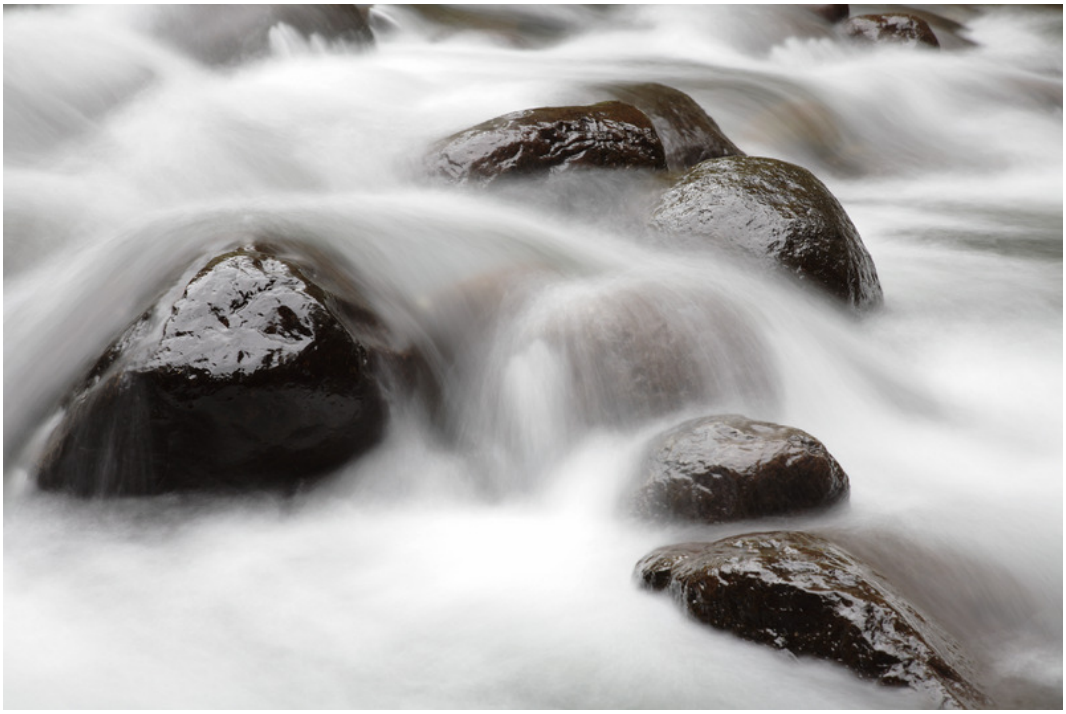
TIPS

This Month:

Cyclic Steam

Single-well cyclic steam stimulation for fun and profit

Kathryn Tingle



"Thermal recovery is one successful method of producing heavy oil."

Throughout Western Canada, the density of conventional oil (non-oil sands) can vary from light to heavy. When conventional oil is very heavy, viscous, and unable to flow on its own or with a pump, it requires stimulation to be produced. Thermal recovery is one successful method of producing such heavy oil.

Thermal recovery is used to heat the heavy oil, thereby reducing its viscosity and allowing it to flow more easily. Single-well cyclic steam stimulation (CSS), commonly known as Huff and Puff, is one method of thermal recovery.

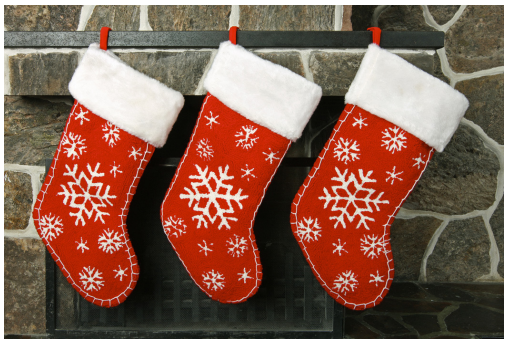
The single well CSS method of thermal recovery involves three stages. The first is an injection phase, where high-pressure steam is injected into the reservoir to heat the oil and reduce its viscosity. The second stage, the soak phase, begins when injection ends. The reservoir, in effect, soaks up the heat from the injected steam for a few days at most. Oil is then produced from the same well in the third and final stage. This production stage continues until the production rate falls to a predetermined economic limit, after which the cycle is repeated.

Proven Reserves recently submitted and had approved an application on behalf of one of our clients for a CSS test in Saskatchewan. Requirements for a CSS application include a detailed well history, reservoir properties, remaining reserves estimation, and injection and recovery estimates.

The cyclic steam application also requires that the applicant obtain consent letters from offsetting interest holders rather than the notification process commonly used in Alberta. Proven was able to assist our client by facilitating the procurement of the consents required for the CSS application.

Stocking Stuffer

What are you giving for Christmas this year?



The lights, the trees, the candy, the music. Make no mistake, Christmas has come to Canada again this year despite the recent global economic slump.

With the big day only a stone's throw away, the big looming question remains: are you finished your Christmas shopping?

Take a moment to check out what you (Canada) spent your Christmas budget on in 2006:

$18.2 million - giftware, novelties, and souveniers

$133.8 million - jewelry and watches.

$157.4 million - stationary, office supplies, cards, gift wrap, and party supplies

$196.1 million - cosmetics and fragrances

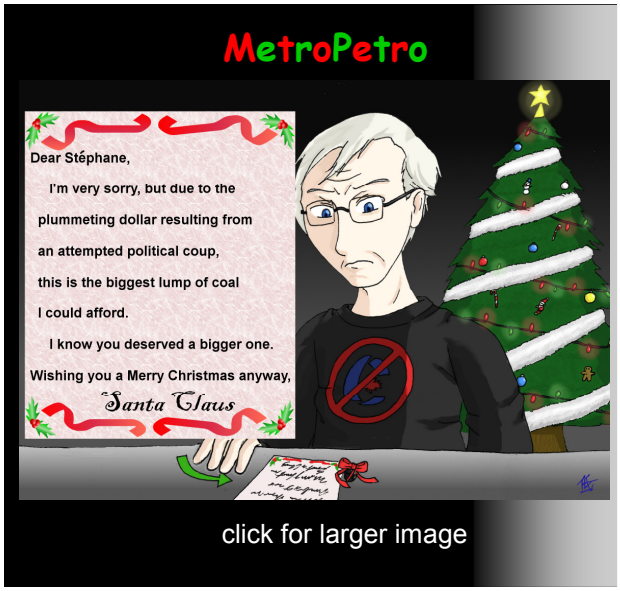
$196.5 million - small electronic appliances

$247.7 million - CDs, DVDs, video and audio tapes

$374.1 million - candy, confectionary, and snack foods

$430.8 million - toys, games (including electronic games), and hobby supplies

$3.3 billion - food



Company News

New Addition to Proven's Engineering Team

Proven Reserves would like to welcome Norman Mohr as a new EIT and a member of our engineering team!

Norman was born and raised in the Edmonton area, and graduated with a degree in Mechanical Engineering from the University of Alberta.

He has worked as an Open Hole Field Supervisor for the last two years, working on logging wells.

In his spare time, Norman enjoys watching sports (especially the Oilers' games), working out, and traveling when he has the opportunity.

Norman says that he would like to continue to grow in knowledge of the oil and gas industry, and provide quality work to our clients here at Proven. He also has a personal goal of being "the next Ralph Klein" (whatever that means).

Welcome, Norman!

Upcoming Events

Christmas
December 25, 2008
Calgary, Alberta

Technical Luncheon
SCAL using NMR: Current Techniques and Beyong
January 14, 2009
Calgary, Alberta
www.cwls.org

APEGGA Branch Luncheon
Canada's Oil Sands
January 15, 2009
Calgary, Alberta
www.apegga.org