

## UPCOMING EVENTS

Be sure to mark these dates on your calendars and join us for an interesting and informative time! Watch for an e-mail with details on the event or check the CHOA website [www.choa.ab.ca](http://www.choa.ab.ca).

### JANUARY

29 Beer & Chat — Drilling & Completions

### FEBRUARY

10 Technical Luncheon — Reservoir & Production

### MARCH

10 Technical Luncheon — Environment

27 Tarspiel

### APRIL

6 Slugging It Out 2009

15 Technical Luncheon - Business & Regulatory

30 Beer & Chat — Facilities & Upgrading

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## INTERVIEW WITH PENNY CHRISTENSEN



For the last six years, Penny has been working with Schlumberger Canada as Oilfield Services Account Manager for Shell Canada and Suncor Energy. She is also one of the new Board members of the CHOA, serving as Special Events Director.

*What is your educational and career background?*

I've worked in the Calgary oil patch for about 20 years, primarily in sales and marketing roles. Throughout my career, I've had the pleasure of working with companies that provide the variety of services most E&P companies require, including: core/fluid analysis, environmental services, directional drilling, wireline logging, well services and information technology.

I originally wanted to become a Doctor, so I enrolled at the University of Calgary in the Biology faculty. However, I decided to pursue a career in the oil industry instead and began working at Core Lab cutting core samples. To help me understand my new chosen industry, I enrolled at the Southern Alberta Institute of Technology and completed the Reservoir Engineering Technology Diploma in the evenings.

The last 20 years have been a wonderful ride! I've volunteered on several industry committees including the Canadian Well Logging Society, Canadian Society of Petroleum Geologists, Society of Petroleum Engineers, and now the CHOA is adding to the experience.

*Other than your CHOA Board activities, how are you involved in the heavy oil industry today?*

As a Schlumberger Account Manager, I work with Suncor and Shell. Both are long term, major companies involved in heavy oil production, both with mining and in situ operations. As an organization, Schlumberger is committed to providing key technology required by our heavy oil clients. In fact, Schlumberger just opened a Calgary based Regional Technology Center (RTC) focused completely on heavy oil. The RTC is a collaborative environment where clients will work closely with Schlumberger geoscientists and petroleum engineers to solve key heavy oil recovery challenges. The Calgary Heavy Oil RTC is already working with several clients on projects, including:

- New recovery methods for CHOPS fields
- Creation of high-temperature PVT analysis cells for heavy oils
- Enhanced reservoir characterization and monitoring for SAGD operations; and
- Enhanced well placement and completions strategies for SAGD.

The RTC works closely with Schlumberger Canada operations, as they are sharing facility space with our software group and the Calgary Technology Centre. This unique combination of operations, R&D plus the Heavy Oil RTC will give our clients access to the full potential of Schlumberger.

*What do you see as one of the main challenges facing the heavy oil industry today?*

Other than the current economic situation or even because of it, companies need to improve recovery while controlling project costs. Implementation of the proper technology is crucial, including reservoir characterization, modeling, simulation, intelligent completions, and continuous monitoring. Understanding the reservoir and simulating production techniques before deployment are fundamental to successful projects. Honestly, it's much more expensive to drill and test than it is to simulate.

*What are your hobbies or personal interests?*

Is the enjoyment of red wine considered a hobby? I love running and usually hit the paths every morning before work. I am a big fan of all sports and you can find me at most of my daughter's basketball and baseball games throughout the year.

## HEAVY OIL 101 – EDMONTON

On September 22, 2008, the CHOA—in partnership with dmg world media and JuneWarren/Nickle's Energy Group—hosted Heavy Oil 101 in Edmonton. As usual, the course included a synopsis of global heavy oil resource development and a perspective of current trends, a review of heavy oil geology, an overview of basic reservoir engineering and extraction methods, a look at the different downhole and surface challenges associated with heavy oil, an overview of market fundamentals, upgrading and refining processes, as well as regulatory and environmental issues.

The CHOA would like to thank all of the facilitators and attendees.

## TECHNICAL LUNCHEONS

### *Thermal Completions Technology Update*

On October 15, 2008, Nexen Staff Production Engineer Gina Wozney offered a Technical Luncheon presentation updating thermal completions technologies. Each SAGD project has specific requirements and challenges, demanding different approaches by individual operators towards completion technologies. Gina focused on:

Steam distribution systems and improved production well configuration

- Thermal liner hangers/seals
- Downhole safety valves and barrier systems
- Well kill/steam shut-in systems
- Slotted liner, wire-wrap screen, and alternate sand control technologies.

For each technology, Gina discussed new advancements relative to industry standard field practices, and reviewed known benefits, challenges, and available field experience. The CHOA would like to thank Gina for sharing her technical expertise.

### *Geology And Bitumen Recovery Studies of The Grosmont Formation, Saleski, Alberta*

A joint presentation was given by Kent Barrett and Mauro Cimolai from Laricina Energy Ltd. on November 10, 2008, entitled "Geology and Bitumen Recovery Studies of the Grosmont Formation, Saleski, Alberta."

Kent focused on recent geological studies, largely involving core work, and Mauro presented results of an experimental, lab-pilot distillation experiment on recoveries from one of the cores.

Kent showed regional maps and wireline log sections outlining zones of mega-porosity and mega-permeability. He related these zones to fractures, regional facies patterns within the Grosmont Formation, also spatially related to the sub-Cretaceous unconformity that overlies the Grosmont deposit.

Mauro presented some very interesting results, including MRI and CAT scans of cores before and after distillation processes, using steam and a catalyst. The results showed clearly that heterogeneity may be a blessing and not a curse in future development of these unconventional carbonate-bitumen reservoirs. The CHOA would like to thank both gentlemen for providing updates to industry regarding this very interesting carbonate bitumen deposit.

Featured keynote speakers included Don Thompson, president of the Oil Sands Developers Group, and Kent Campbell, Acting Deputy Minister of Energy & Resources with the Government of Saskatchewan. The ninth annual Athabasca Oil Sands Conference will be held September 22-23, spotlighting operating and producing companies as well as service and supply firms discussing project updates, enhanced methods and technology innovation, as well as insight into strategic issues affecting the industry. For more information visit [www.petroleumshow.com](http://www.petroleumshow.com).

### *Low Intensity Gasification Applied to the Heavy Oil Industry*

On December 4, 2008, Guido Bachmann from Afina Energy presented his talk entitled "Low Intensity Gasification Applied to the Heavy Oil Industry" to an enthusiastic group at the EnCana Amphitheatre.

Guido described how Afina's "Enerkem" low intensity gasification technology can be applied to a SAGD production complex, converting residual material into syngas fuel for steam production. This is a lower intensity process than conventional gasification, with claimed environmental benefits via reduced greenhouse gas production through CO<sub>2</sub> capture.

The technology is of Canadian origin, with pilot plants and testing facilities in Sherbrooke, Quebec. It has been applied in other industries, and has potential application in the heavy oil sector as a means of converting upgrading by-product streams (asphaltenes and petroleum coke) into fuel than can replace natural gas.

The CHOA would like to thank Guido for and an interesting talk and providing some perspective into emerging technologies that can potentially benefit the environmental performance of the heavy oil industry.

### *Alberta Accessing Asian Crude Oil Markets—Enbridge Northern Gateway Pipelines*

On January 12, 2009, Paul Fisher, Enbridge's director of upstream business development, presented his talk entitled, "Alberta Accessing Asian Crude Oil Markets—Enbridge Northern Gateway Pipelines."

Paul noted that market diversification is a key business objective for all companies. Being able to access new markets, large markets, and most importantly, growing markets, ensures that a company will receive full value for their goods and services, which is especially true for Canadian producers of heavy crude oil.

Paul outlined Enbridge's Northern Gateway Pipelines project, a proposed new twin pipeline system running from near Edmonton to Kitimat, British Columbia. A new marine terminal there would export petroleum and import condensate. The goal is for start-up in 2015.

In his presentation, Paul described how the project will enable Canadian producers to diversify from traditional markets, specifically addressing new opportunities in Asia. He also talked about the challenges facing the project, and the strategies in place to overcome them. Finally, he described how Canadian producers can participate.

The CHOA would like to thank Paul for sharing this valuable information.

## BEER & CHATS

### *Bitumen Valuation Methodology*

The Beer & Chat on September 25, 2008 featured an update on the Alberta Department of Energy (ADOE)'s Bitumen Valuation Methodology (BVM), presented by Gail Flaherty. Gail works in EnCana's Integrated Oil Division and is also on the Board of the CHOA. Her experience with BVM started in 2001, when she was contracted by the ADOE to perform a due diligence review of the BVM methodology. She is Chair of the Canadian Association of Petroleum Producers' BVM subcommittee.

Gail's talk covered some of the BVM historical background, and features of an acceptable BVM to value bitumen for royalty purposes where applicable arms-length sales do not exist. Basically, BVM is used to value bitumen that is not sold in the open market.

While the ADOE works towards a final gross product worth methodology by January 1, 2010 to calculate quality differentials for BVM at each project, the interim approach effective January 1, 2009 will be based on density. The starting point for BVM will be the price of Western Canadian Select (WCS) heavy crude at Hardisty, Alberta. The BVM will be also be subject to a floor price to ensure Albertans received a reasonable return with low oil prices which with recent oil prices is proving to be a necessary feature.

The CHOA would like to thank Gail for sharing her technical expertise.

### *Alberta Saline Aquifer Project (ASAP) to Collect CO<sub>2</sub> for Sequestration And Enhanced Oil Recovery*

At the October 30, 2008 Beer & Chat, Enbridge's Richard Luning outlined two important initiatives the company is working on. First is the Alberta Saline Aquifer Project (ASAP), a multi-party project with 34 industry participants and the Alberta government through the Alberta Energy Research Institute, operated by Enbridge. ASAP is studying and costing an integrated system to collect, pipeline and deliver CO<sub>2</sub> to selected locations for sequestration and enhanced oil recovery. The next phase of the project will be to pilot CO<sub>2</sub> sequestration in saline aquifers, aiming at expansion to commercial operations.

Luning also introduced the Enbridge concept of using CO<sub>2</sub> in a slurry pipeline mode to transport isolated products such as sulphur and petroleum coke to markets.

The CHOA would like to thank Richard for sharing this important work.

## EDMONTON CHAPTER UPDATE

The Edmonton chapter held its first event on November 13 at the Radisson Hotel Edmonton South. Our guest speaker was Dr. Robert Skinner, who is currently Senior Vice President of Commercial and Business Development, StatoilHydro Canada.

Dr. Skinner has previously held positions as Director of the Oxford Institute of Energy Studies, Vice President of Oil Sands Business Development at Total E&P Canada, Director of Policy Office, International Energy Agency, and Assistant Deputy Minister of Energy in the federal government.

Even with all this experience, however, his presentation to our audience came from a personal perspective. He shared his view of the oil industry and markets, comparing the current tumultuous times with previous upheavals.

An audience of more than 160 people enjoyed the informative and entertaining presentation. It provided an excellent networking opportunity for a crowd that included many who were new to the CHOA. Those in attendance who signed up for a membership were offered a complimentary copy of our Oil Sands Handbook.

Alberta's Industrial Heartland Association co-sponsored the event, and we look forward to continued cooperation with them. Their participation was instrumental in helping us reach out to the Edmonton audience, which doesn't currently participate in CHOA activities. This inaugural Edmonton event helped to spread much greater awareness of the CHOA in the region. Two more events are being organized for this season featuring marquis speakers.

We are also taking the opportunity to draw volunteer resources into the organizing group in Edmonton to develop a mainstream series of activities that parallels our success in the Calgary region, while at the same time serving the unique interests and configuration of the local industry. Keep an eye on the CHOA website, which will have announcements of the events posted when plans have been finalized.

Our Edmonton member liaison is Jo Mark with Jacobs Canada. She can be reached at [jo.mark@jacobs.com](mailto:jo.mark@jacobs.com).

## ITOHOS 2008 – HEAVY OIL: INTEGRATING THE PIECES

The 2008 International Thermal Operations and Heavy Oil Symposium (ITOHOS) was held in Calgary October 20-23, 2008, with the theme "Heavy Oil: Integrating the Pieces." The technical program and business conference addressed the economic, technical, and environmental issues challenging the heavy oil and bitumen industries today. Visitors to the trade show were greeted with many new and exciting technologies designed to help them manage their business more effectively.

Keynote speakers included CIBC Senior Economist Benjamin Tal, 2010 Society of Petroleum Engineers President Dr. Behrooz Fattahi, StatoilHydro ASA Vice President of Environment and Climate Trude Sundset, and Crux Financial Managing Director Douglas Allen. The CHOA would like to thank the organizers of this successful event, and all who attended.

## ATHABASCA OIL SANDS CONFERENCE 2008

On September 23, 2008, the CHOA celebrated its eighth year co-presenting the Athabasca Oil Sands Conference as part of dmg Media's annual Oil Sands Trade Show and Conference, now held in Edmonton. The Conference focused on the high-demand topics facing the industry, as well as a selection of regional project updates.

Featured keynote speakers included Don Thompson, president of the Oil Sands Developers Group, and Kent Campbell, Acting Deputy Minister of Energy & Resources with the Government of Saskatchewan. The ninth annual Athabasca Oil Sands Conference will be held September 22-23, spotlighting operating and producing companies as well as service and supply firms discussing project updates, enhanced methods and technology innovation, as well as insight into strategic issues affecting the industry. For more information visit [www.petroleumshow.com](http://www.petroleumshow.com).

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**THE CHOA MAKES A SUITE MOVE**

Effective July 2008, the CHOA has a new office and fax number.  
We are now located at 500, 5th Avenue S.W., Suite 400,  
with the new fax number (403) 453-0179.



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