

## ASC chief petroleum officer cites deficient O&G resources disclosures, says agency to issue guidance

**Phillip Chan**, a chief petroleum officer at the Alberta Securities Commission, said the ASC has received deficient disclosures of oil and gas resources so Canadian regulators have decided to issue more guidance. He made his remarks at the September Ryder Scott Canada reserves conference in Calgary.

Unconventional resources have outpaced and surpassed conventional in Canada. During an eight-year span to the 2011-2012 period, proved and probable reserves disclosed in Canada dropped from 74 percent conventional to 40 percent, Chan showed. The remaining 60 percent comprise unconventional resources—bitumen, coalbed methane and oil and gas shale.

“NI 51-101 and COGEH were written mainly for conventional resources but they also apply to unconventional,” said Chan. National Instrument 51-101 sets public disclosure standards for oil and gas activities in Canada. The three-volume *Canadian Oil and Gas*

*Evaluation Handbook* provides a set of standards and guidelines for reserves and resources evaluations.

Chan said that disclosure of ROTR (resources other than reserves) is voluntary. However, if the issuer discusses anticipated results—for instance in barrels, cubic feet or net present values—then compliance with NI 51-101, Section 5.9 is required. Disclosure items include an issuer’s interest in ROTR, location of the resources, expected product types and risks and uncertainties in recovery.

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—Chan

Chan outlined some deficiencies in reporting ROTR as follows:

- ◆ Issuer has not made it clear whether it is disclosing lease gross, gross or net volumes or company interest or whether the volumes are risked.
- ◆ Discussion of significant positive and negative factors in estimating resources quantity is missing or insufficiently disclosed.
- ◆ Disclosures are in non-standard product types and metrics.
- ◆ Issuer is not always clear on what project is being evaluated or how it is intended to progress.
- ◆ Discussion of risks and uncertainties is missing or inadequate. Section 5.9 provides boilerplate cautionary statements to use.
- ◆ Issuer poorly describes contingencies and steps to remove them.



Chan at the Calgary Conference

- ◆ Contingent or prospective resources are disclosed, but the following year, they are not and no explanation is provided.

Chan said that Canadian regulators plan to provide more guidance for resources disclosures, including a Society of Petroleum Evaluation Engineers update to COGEH, ongoing updates and amendments to NI 51-101 and staff notices from the ASC and Canadian Securities Administrators.

“Proposed amendments to NI 51-101 are progressing through approval stages and there will be a public comment period,” said Chan. His presentation, “Booking Unconventional Reserves and Resources under Canadian Disclosure Rules NI 51-101,” is posted on the Ryder Scott website at [ryderscott.com/Presentations/index.php](http://ryderscott.com/Presentations/index.php).

## Differentials, supply-demand weaken Canada M&A

A large supply of available buying-selling opportunities in the Canadian oil patch is going unnoticed as equity performance in the U.S. market strengthens and commodity prices in Canada remain weak. “Unlike the past 20 years, it’s a buyer’s market in Canada now,” said Cheryl Sandercock, a director at Scotia Waterous in Calgary. She made her remarks at the First Annual Ryder Scott Canada Reserves Conference on Sept. 5.

She said buyers are applying higher risking and discount rates to value acquisition or merger opportunities. Where buyers used to pay for proved plus probable reserves discounted at 10 percent, now PDPs (proved developed producing) may be discounted at 10 percent and proved plus probable at 20 percent,



Sandercock at the Calgary Conference

her slide example showed.

Although differentials between Canada and U.S. oil prices tightened recently, in late 2012 and early 2013, the spread was wide. Then, U.S. light and heavy crude sold at a

premium to oil in Canada because of North American transportation bottlenecks and forecasts for continuing constraints, said Sandercock.

“Buyers of public equity are looking at opportunities in the U.S. while year-to-date figures suggests 2013 will be an historical low for equity issuance in Canada,” she remarked. Sandercock showed that only 40 to 50 percent of potential oil and gas mergers, acquisitions and divestitures on the Canada market have successfully transacted since 2011, creating a large supply.

Complicating this, Sandercock added, is that most Canadian producers are carrying increased leverage (debt) levels, are capital constrained and are unsuccessfully pursuing divestitures to fund large

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More than 100 executives, managers and technical professionals attended the First Annual Ryder Scott Canada Reserves Conference at the Fairmont Palliser hotel in the Alberta Room on Sept. 5. Twelve North American experts discussed petroleum reserves issues at the one-day oil and gas conference in Calgary. The speaker lineup included professionals in geology/engineering, E&P, law, government, academia, banking and consulting. All presentations are posted on the Ryder Scott website at [ryderscott.com/Presentations/index.php](http://ryderscott.com/Presentations/index.php).

## COGEH improvements due for YE 2014, says Elliott



Elliott at conference

**David C. Elliott**, president at Geosgil Consulting Ltd., presented “Resource Classification: The Impact of Unconventional Resources,” at the Ryder Scott Canada reserves conference Sept. 5. He examined worldwide resources and reserves classification systems with emphasis on the Society of Petroleum

Engineers Petroleum Resources Management System and the Canadian Oil and Gas Evaluation Handbook.

Although both frameworks provide general guidance on unconventional resources, he said that the main focus is on conventional reserves. “The Alberta Securities Commission has conducted hundreds of reviews on contingent resources disclosures, which are increasing, and has found a lack of consistency,” said Elliott, who retired from the ASC last year.

The inconsistencies prompted him, as a chief petroleum advisor at the agency in 2011, to request that the Society of Petroleum Evaluation Engineers in Calgary improve COGEH guidelines on contingent resources. As a result, the chapter formed the SPEE Calgary resource guidelines subcommittee

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that issued a working draft of resources guidelines for ROTR (Resources Other Than Reserves) May 31 and an interim draft Aug. 14. The SPEE committee aims to issue the final guidelines for use in year-end 2014 reporting.

The draft addresses all types of ROTR, discovered and undiscovered petroleum initially in place, prospective and contingent resources and topics, such as project descriptions and aggregation.

In looking at contingent resources, Elliott pointed out that the SPE-PRMS and COGEH address economic and technical contingencies but non-technical contingencies—political, regulatory and social—are growing in importance. “Nowadays, social factors have become a major issue and are important in determining resource classifications, but we don’t have much guidance on them,” Elliott said.

His and all presentations are posted on the Ryder Scott website at [ryderscott.com/Presentations](http://ryderscott.com/Presentations).



With fellow presenters, Phillip Chan, chief petroleum officer and manager at the ASC, (second from right) makes his comments at a question-and-answer session at the Ryder Scott Canada Reserves Conference. From left are Vitaliy Charkosvskyy, reserves evaluator at Ryder Scott; John Lee, professor at the University of Houston; David Elliott, former chief petroleum advisor at the ASC; Miles Palke, senior vice president at Ryder Scott; Chan; and Larry Connor, managing senior vice president at Ryder Scott.

## Integrated seismic analysis plays bigger role six years into modernized reserves guidelines and rules

Geoscience input for the reporting of reserves has increased since the 2007 SPE-PRMS emphasis on using all geoscience and engineering data and the subsequent revision of U.S. SEC reserves disclosure rules in 2008, said **Doug Uffen**, managing partner at Geo-Reservoir Solutions Ltd. He made his presentation, "Geology and Geophysics in Reserves Estimates," at the Ryder Scott Canada reserves conference Sept 5.

Uffen said that further use of geophysics in estimating reserves has increased with the publication of Chapter 3, "Seismic Applications," in the SPE-PRMS application guidelines in late 2011. Uffen said that historically, the contribution of geophysics to reserves estimates has had limited impact, often just defining the areal extent of the reserves for volumetric analysis. However, over the past two decades, seismic data has been used in integrated studies to predict reservoir properties through reservoir characterization.

Uffen said that properties being investigated more thoroughly in integrated studies are porosity,

vertical and horizontal permeability, mineralogy, diagenesis and faulting. "Seismic data has poorer vertical resolution than well logs but with both combined, spatial and vertical resolutions can be enhanced," he remarked.

Uffen showed various examples of maps where integrated seismic analysis played a role in reservoir characterization. "When the relationship between porosity and permeability is linear, permeability maps can be made from seismic data," he said.

Uffen also cited various inferences derived from geophysics used with rock physics and geology in what he termed a "quantitative interpretation." That integrated approach results in the creation of better geo-models of the reservoir, he said.

Innovations in seismic technology can help better define reserves, particularly probable and possible reserves, as well as resource potential, Uffen remarked.

His and all presentations from the conference are posted on the Ryder Scott website at [ryderscott.com/Presentations](http://ryderscott.com/Presentations).

## Research on fracturing optimization detailed by Chen

**Zhangxing (John) Chen**, professor at the University of Calgary, presented hydraulic fracturing optimization research on shale gas at the Ryder Scott Canada reserves conference Sept. 5. The research objective was to study increases in the effective reservoir contact area from hydraulic fractures and complex natural fracture networks, he said.

Chen outlined the stimulation optimization design process with an emphasis on the following areas:

- ◆ Wellbore placement and landing point
- ◆ Horizontal wellbore lateral length
- ◆ Completion hardware and isolation techniques
- ◆ Fracture spacing and number of hydraulic fractures per lateral
- ◆ Fracturing fluids and additives, proppant selection and pumping schedule
- ◆ Stimulated reservoir volume (SRV)
- ◆ Fracture monitoring and evaluation

Chen compared typical fracturing treatments of five major U.S. shale plays as measured by several parameters such as average number of frac stages per day, amount of proppant per stage and per well, foot per stage, etc. He offered the following general conclusions:

- ◆ No shales are alike.
- ◆ Optimized stimulation design must start from well planning.
- ◆ Slickwater/gel high-rate fracturing job proved to be

most effective in shale gas plays.

- ◆ SRV, fracture network spacing and conductivity are identified key factors linked to well performance.

His and all presentations from the conference are posted on the Ryder Scott website at [ryderscott.com/Presentations](http://ryderscott.com/Presentations).



Chen at the Calgary  
Conference