

A black and white photograph of a woman wearing a white hard hat and safety glasses, focused on a laptop. She is standing in front of a large, complex industrial structure, likely an oil pumpjack, which is made of dark metal with various pipes and ladders. The background is a clear, light sky.

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# 2018 Canadian Oil & Gas Evaluation (COGE) Handbook Update Significant Changes

By Nora Stewart, Senior Vice President, Reserves Certification

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The Calgary Chapter of the Society of Petroleum Evaluation Engineers (SPEE) and associated industry professionals have updated the 3-volume COGE Handbooks into a single digital reference document for industry.

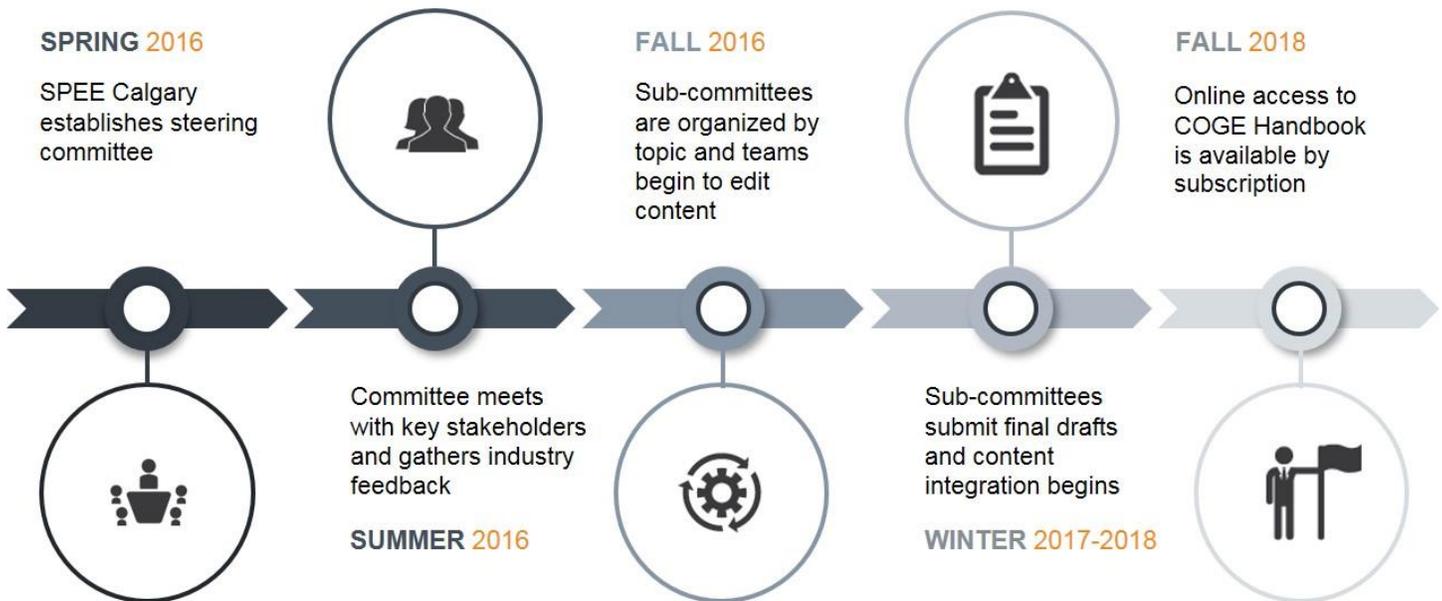
The newly combined digital document clarifies and streamlines existing guidelines and offers additional guidance regarding Canadian resource and reserves evaluations.

### Significant changes include

- Revised guidance on undeveloped reserves
- Revised guidance on operating costs
- Revised guidance on abandonment and reclamation costs
- New guidance on type curve development methodology

### COGE Handbook update timeline

SPEE works in consultation with industry, regulatory bodies and reserves evaluators



## Changes that impact reserve evaluations

### Undeveloped Reserves

#### **New guidance for development plans**

COGE Handbook guidance for undeveloped reserves has changed for large resource plays. Companies can book longer periods of development under proven and probable for plays like the Montney, Duvernay, and Viking. It is now reasonable to have proved undeveloped reserves assigned for 5-years of development drilling and probable undeveloped reserves to extend out for 10-years of drilling. With respect to gas processing facilities under construction, it is reasonable to schedule proved drilling for up to 5-years from the start-up of the facility, with probable reserves up to 10-years beyond the effective date.

Development plans must be disclosed and should be consistent with the company's intent to deploy capital and be reasonably consistent with past behaviour. Divestment packages can optimize development plans without restriction on available capital.

### Operating Costs

#### **Broader guidance for inactive costs and maintenance capital**

There is a material change to COGE Handbook guidance with respect to active and inactive costs. Inactive costs such as mineral leases, shut-ins, suspended and capped well-operating costs etc. should be included in the evaluation to properly represent the asset(s) being evaluated but forecast separately from active asset costs at the property or corporate level, so economic production entities are not unduly burdened.

There may be limited information on maintenance capital in the lease operating statements or it may have been entirely capitalized. Data with respect to maintenance costs, expensed or capitalized, must be obtained from the company and included in an evaluation.

### Abandonment and Reclamation Costs

#### **Increased guidance for sustainable best practices**

Acknowledging the social and environmental responsibility of the oil and gas industry, COGE Handbook supports the premise that abandonment, decommissioning and reclamation (ADR) costs should always be considered in the evaluation process and each report must clearly describe the ADR costs included and excluded from the report.

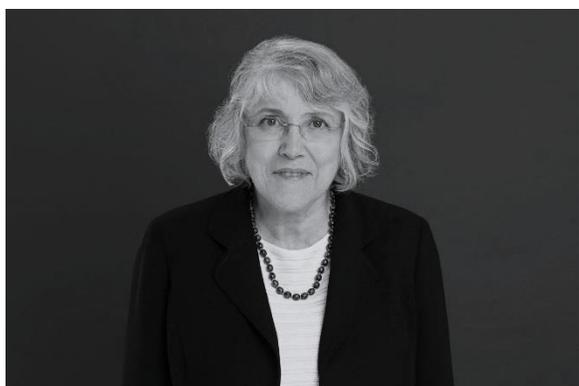
There is a distinction between ADR for existing development and ADR on future development. The former, if included in the evaluation, must include all costs required to restore existing development from the well's bottom hole to custody transfer point, to a standard imposed by applicable government or regulatory authorities and include the ADR costs for both active and inactive development included in the assets evaluated.

## Type Curve Methodology

### Establishing consistent best practices

Guidance on type well development is a new addition to COGE Handbook. The document now addresses the key concepts, methods, and concerns associated with the development of type wells. This includes information on:

- > Normalizing and scaling for key attributes
  - Average horizontal length
  - Performance vintages
  - Stage spacing
  - Average proppant per unit length
- > Developing correlation and cross plots
- > Addressing uncertainty change based on the number of locations



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Nora is Senior Vice President for global Reserves Certification at Sproule. She has extensive experience in the areas of reserve evaluations in support of acquisitions, divestitures and fair market value assessments. With over 35 years of experience in the oil and gas industry, she supports investor confidence with Sproule's third-party independent evaluations, audits, and reviews. Internationally focused, Nora oversees projects where disclosure requirements are defined by international standards, including PRMS, COGE Handbook, SEC, NI 51-101, and CPRs. With expertise in supply-demand analysis, she is responsible for all energy price analysis and forecast development at Sproule.

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