

# Monograph 4, Monograph 3 ... and the SEC

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8 April 2016

## Some Questions ...

- What special reserves reporting regulations does the SEC have for unconventional resources, and resource plays in particular?
- Which regulations that apply to all resources are particularly important for un conventionals?
- What recent technologies has the industry proposed or adapted especially for un conventionals?
  - What is the SEC's position on these recent technologies?
  - How can we evaluate a technology for which the SEC has issued no formal guidance?

# Special Regulations for Unconventionals?

- In resource plays,

None

# Regulations Meant for All Resources Especially Important for Unconventionals

- Only directly offsetting locations to Proved Developed Producers (PDP's) qualify as Proved Undeveloped Producers (PUD's)  
*except when ...*
- Resources booked as PUD's must be converted to PDP's within five years of initial booking *except when ...*
- 'Reliable Technology' can provide for exceptions to seemingly rigid rules *when ...*

# What Traditional Technologies Are Generally Acceptable to SEC Staff for Unconventionals?

- Decline curve analysis with Arps hyperbolic model, minimal terminal decline rate
- Analogy
  - Type wells (with reservations)
- Volumetrics (with reservations)
- Reservoir simulation (with reservations)

# What Recent Technologies Are of Interest?

- SPEE Monograph 3
  - Methodology for extending PUD locations beyond immediate offsets
- SPEE Monograph 4
  - Alternative 'simple' decline models
  - Rate-transient analysis
  - Modified and enhanced reservoir characterization and simulation techniques

# What Will It Take for SEC to Accept Recent Technologies, Such as Monographs 3 and 4?

- Forecasts must meet criteria for proved reserves
  - Booked volumes ‘reasonably certain’
  - Volumes ‘much more likely than not’
  - As historical data added, EUR for fixed groups of wells remains constant or increases
- Technology used for forecasts must meet criteria for ‘reliable technology’

# What is 'Reliable Technology'?

From SEC Regulation S-X, 4-10(a) (25):

'Grouping of one or more technologies (including computational methods) that **has been field tested** and demonstrated to provide reasonably certain results **with consistency** and repeatability in formation being evaluated or analogous formation'



# What Guidance Has SEC Provided for Reliable Technology?

From SEC “Compliance and Disclosure Interpretations (CD&I),” October 26, 2009:

- **Question:** Does the staff intend to publish a list of reliable technologies that the SEC will accept for the determination of proved reserves?
- **Answer: No.** An issuer has the burden of establishing and documenting the technology (or set of technologies) that provides reliable results, consistent with the criteria set forth in Rule 4-10(a)(25) of Regulation S-X. This information should be made available to the Commission's staff upon request in support of any reserves estimates that the staff may be reviewing.

## How Are Technologies in SPEE Monographs Affected by Reliable Technology Requirements?

- Monograph 3: Some filers have, in interchanges with SEC staff, been able to demonstrate that they have field evidence that their application of technology meets criteria – **but no 'blanket' approval**
- Monograph 4: Similar outcomes with, e.g., analytical and numerical models – again, **no blanket approval**

# What Is the 5-Year Rule?

- Rule [4-10(a) (31)]: Undrilled locations classified as having undeveloped reserves only if development plan has been adopted indicating they are to be **scheduled to be drilled within five years** unless specific circumstances justify longer time

# And Guidance on 5-Year Rule?

Short summary and interpretation of SEC “Compliance and Disclosure Interpretations (CD&I),” October 26, 2009

- Exceptions generally limited to
  - Development projects which cannot reasonably be completed in five years
  - Projects which, if terminated prematurely, would result in significant loss of capital
  - Projects extending beyond five years for reasons beyond operator’s control

# What Do Comment Letters Say?

- Development project must be completed within five years to qualify as PUD's
- Large drilling programs in resource plays *are not* single development projects
- Each well, or small groups of wells (perhaps pads) with associated facilities, are individual development projects, and each must be converted to PDP within five years to qualify as a PUD

# Summary

- No special reporting requirements for unconventional reserves in resource plays
- Among requirements for all reserves, most important for unconventional are
  - Reliable technology (opportunity to validate novel approaches)
    - SPEE Monographs 3, 4 relevant examples
  - 5-year rule (no exceptions for drilling programs)

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End



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