Modernization of the SEC Oil and Gas Reserves Reporting Requirements

TAMU PETE Graduate Seminar
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Disclaimer

Opinions expressed in this presentation are mine alone; they represent neither the opinions of the Securities and Exchange Commission nor of its staff members.
SEC Modernizes Reporting Requirements for Oil and Gas Reserves

- Requirements adopted December 29, 2008
- New rules follow public comments
  - Concept Release December 2007
  - Proposing Release June 2008
- Complete text online
  

Changes in Technology, Markets, Resources Motivate Updates

- Current reporting requirements in place since 1978-1982
- Substantial technology advances in 25 years
- Growth and improvements in spot markets, product transportation to market
- Economical production of new resources, such as bitumen

http://ostseis.anl.gov/
Ideas Came from Many Sources

- Filers suggested changes to staff
- Staff identified need for enhanced disclosure in investors’ interest

SEC Incorporated Ideas from Suggestions

- December 2007 concept release solicited suggestions for modernization
  - Reinforced and advanced previous ideas
  - Added new possibilities
- Proposing release issued in June 2008
  - Clearer, more appropriate definitions and disclosure requirements
- Final rules adopted December 2008
**Major Change: 12-Month Averaging**

- Replace single-day (year-end) price with 12-month average
- Reduces effects of short-term volatility
  - Reduces effect of seasonality in prices
  - Uses first-day-of-month prices to determine average

**Major Change: ‘Certainty’ Criterion**

- ‘Certainty’ for proved undeveloped reserves modified to ‘reasonable certainty’
- Affects undrilled acreage beyond immediate vicinity of existing wells
- New flexibility increases uncertainty

Greater uncertainty = greater risk to investor
**Definitions Modified: Reserves**

- Reserves
  - Estimated remaining quantities of oil and gas expected to be recovered from known accumulations
  - Categorized according to degree of uncertainty

(from http://pubs.usgs.gov/)

**Definitions Modified, Added: Reserves Categories**

- Proved reserves
- ‘Reasonable certainty’ clarified
  - Much more likely than not; 90% probability
- Probable reserves
  - As likely as not; 50% probability
- Possible reserves
  - Possible, but not likely; 10% probability
Definitions Added: Resources

- Resources: Quantities of oil and gas estimated to exist in natural accumulations
  - Portion recoverable (reserves), another portion unrecoverable
  - Some discovered to date, some undiscovered

Major Change: Nontraditional Resources

- Nontraditional resources to be included in oil and gas reserves
  - Oil (tar) sands
  - Oil shales from mining operations
  - Synthetic oil, gas from mined coal

(from www.eia.doe.gov/)
**New Disclosures: Nontraditional Resources**

- Bitumen (‘tar’ in tar sands) in natural state
- Oil and gas in natural state from shale formations
- Synthetic oil and gas from bitumen, shales, coal, other non-renewable natural resources
- Gas from coalbeds (formalizing guidance)
- Possible others, including gas hydrates

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**Major Change: Use of new Technologies**

- Permit use of new technologies to estimate proved reserves
  - No longer prescribe specific technologies
  - Allows emerging technologies proven in practice to lead to correct conclusions

http://www.istore.com/10101.html
New Disclosure: New Technologies

- Old rules specified technologies (e.g., flow tests to surface) to establish reserves
- New rules allow technologies ‘demonstrated to be reliable’
  - Includes proprietary technologies
- Concise summary disclosures required where technologies provide basis for additional reported reserves

Comparison of Disclosures: Geographic Area

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<thead>
<tr>
<th>Previous</th>
<th>Current</th>
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<tbody>
<tr>
<td>Countries</td>
<td>Continent</td>
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<tr>
<td>Groups of countries</td>
<td>Groups of countries within continent</td>
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<tr>
<td></td>
<td>Country with &gt;15% BOE proved reserves</td>
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### Comparison of Disclosures: Product Types

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<tbody>
<tr>
<td>Oil</td>
<td>Oil and natural gas</td>
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<td>Gas</td>
<td>Nontraditional resources</td>
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<td></td>
<td>○ bitumen</td>
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<td>○ oil and gas shales</td>
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<td>○ coal</td>
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<td>○ gas hydrates</td>
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<td>Nonrenewable natural resources intended to be upgraded to synthetic oil and gas</td>
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### Comparison of Disclosures: Proved Reserves

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<tr>
<td>Oil and gas</td>
<td>By product type</td>
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<tr>
<td>In aggregate and by geographical area</td>
<td>○ oil and natural gas</td>
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<tr>
<td>Total proved and proved developed</td>
<td>○ synthetic oil and gas</td>
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<td>○ saleable nontraditional nonrenewable resource intended to be upgraded to synthetic oil or natural gas</td>
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<td>By geographic area</td>
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<td>Developed and undeveloped</td>
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### Comparison of Disclosures: Probable Reserves

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<td>By product type</td>
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<td>By geographic area</td>
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### Comparison of Disclosures: Possible Reserves

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Comparison of Disclosures: Non-Reserve Resources

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Summary: Major Changes in Rules

- Definition of current price changed
- Nontraditional resource extraction considered oil and gas activity
- Modern technology allowed to establish certainty levels
- ‘Certainty’ criterion replaced by ‘reasonable certainty’ for PUDs
- Optional disclosure of probable, possible reserves allowed
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