



RYDER SCOTT COMPANY
PETROLEUM CONSULTANTS

Houston

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2009 Ryder Scott Reserves Conference
“Evaluation Challenges in a Changing World”

“Vintaging Your Undeveloped Reserve Locations and Projects”

Ryan Wilson-Petroleum Engineer, Ryder Scott Company

DISCLAIMER



The information presented in today's presentations represents informed opinions about U.S. SEC reserves reporting regulations but does not purport to be identical to advice to be obtained from the SEC. As with any set of reserves definitions, the applicability of the guidance should be considered on a case by case basis.

Agenda



- Current Requirements
- The Basics of the 2009 SEC Regulations
- Example of Applying 2009 SEC Regulations
- Recommendations
- RSC Role
- Q&A Session

Certainty as it relates to undeveloped reserves and reliable technology will be discussed later

Current Requirements FAS 69 Volumes



RESERVE QUANTITY INFORMATION FOR THE YEAR ENDED DECEMBER 31, 19XX

| | <u>Total</u> | | <u>United States</u> | | <u>Foreign Geographic Area A</u> | | <u>Foreign Geographic Area B</u> | | <u>Other Foreign Geographic Areas</u> | |
|---|--------------|------------|----------------------|------------|----------------------------------|------------|----------------------------------|------------|---------------------------------------|------------|
| | <u>Oil</u> | <u>Gas</u> | <u>Oil</u> | <u>Gas</u> | <u>Oil</u> | <u>Gas</u> | <u>Oil</u> | <u>Gas</u> | <u>Oil</u> | <u>Gas</u> |
| Proved developed and undeveloped reserves: | | | | | | | | | | |
| Beginning of year: | X | X | X | X | X | X | X | X | X | X |
| Revisions of previous estimates | X | X | X | X | X | X | X | X | X | X |
| Improved recovery | X | X | X | X | X | X | X | X | X | X |
| Purchases of minerals in place | X | X | X | X | X | X | X | X | X | X |
| Extensions and discoveries | X | X | X | X | X | X | X | X | X | X |
| Production | (X) | (X) | (X) | (X) | (X) | (X) | (X) | (X) | (X) | (X) |
| Sales of minerals in place | (X) | (X) | (X) | (X) | (X) | (X) | (X) | (X) | (X) | (X) |
| End of year | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> |
| Proved developed reserves: | | | | | | | | | | |
| Beginning of year | X | X | X | X | X | X | X | X | X | X |
| End of year | X | X | X | X | X | X | X | X | X | X |
| Oil and gas applicable to long-term supply agreements with governments or authorities in which the enterprise acts as producer: | | | | | | | | | | |
| Proved reserves-end of year | X | X | | | X | X | | | | |
| Received during the year | X | X | | | X | X | | | | |
| Enterprise's proportional interest in reserves of investees accounted for by the equity method: | | | | | | | | | | |
| End of year | X | X | X | X | X | X | X | X | X | X |

FAS 69 "Disclosures about Oil and Gas Producing Activities" still applies

"Net quantities of proved reserves and proved developed reserves at the beginning and end of the year and changes in proved reserves in the aggregate, by type, and by geographic area."¹

Current Requirements

FAS 69 Cost and Income



- *“If significant, capitalized costs of unproved properties shall be separately disclosed.”²*
- *“The aggregate change in the standardized measure of discounted future net cash flows shall be disclosed for the year. If individually significant, the following sources of change shall be presented separately:”³*
 - *“Changes in estimated future development costs”³*
 - *“Previously estimated development costs incurred during the period”³*

² Statement of Financial Accounting Standards No. 69 / November 1982 / Pg 9 / Paragraph 19 4

³ Statement of Financial Accounting Standards No. 69 / November 1982 / Pg 12 / Paragraph 33

2009 SEC Regulations - The Basics



Definition: *“Undeveloped oil and gas reserves are reserves of any category that are expected to be recovered from new wells on undrilled acreage, or from existing wells where a relatively major expenditure is required for completion.”⁴*

“Undrilled locations can be classified as having undeveloped reserves only if a development plan has been adopted indicating that they are scheduled to be drilled within five years, unless the specific circumstances, justify a longer time.”⁴

Must disclose proved undeveloped reserves and if registrant elects to disclose incremental probable and possible reserves, registrant must disclose developed and undeveloped reserves separately.

SEC considered but elected not to require a company to prepare a table disclosing in their filing:

- *“Proved undeveloped reserves converted to proved developed reserves during the year”⁵*
- *Net Investment required to convert proved undeveloped reserves to proved developed reserves during the year.”⁵*

⁴ Federal Register/ Vol 74, No.9 / January 14, 2009 / Rules and Regulations / Pg 2192, Part 210.4-10 (31) 5

⁵ Federal Register/ Vol 74, No.9 / January 14, 2009 / Rules and Regulations / Pg 2176, Section IV, 4

2009 SEC Regulations - The Basics



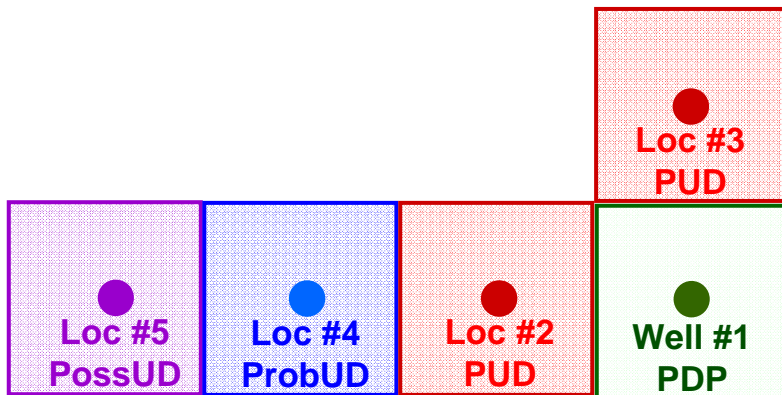
As an alternative to the proposed table the SEC elected to “*require a company to disclose the following in narrative form*”⁶:

- “*Disclose the total quantity of proved undeveloped reserves at year end*”⁷
- “*Disclose material changes in proved undeveloped reserves that occurred during the year, including proved undeveloped reserves converted into proved developed reserves*”⁷
- “*Discuss investments and progress made during the year to convert proved undeveloped reserves to proved developed reserves, including, but not limited to, capital expenditures*”⁷
- “*Explain the reasons why material amounts of proved undeveloped reserves in individual fields or countries remain undeveloped for five years or more after disclosure as proved undeveloped reserves*”⁷

⁶ Federal Register/ Vol 74, No.9 / January 14, 2009 / Rules and Regulations / Pg 2177, Section IV, 4 6

⁷ Federal Register/ Vol 74, No.9 / January 14, 2009 / Rules and Regulations / Pg 2195, Part 229.1203

Booking Methodology Year 'X0



“Explain the reasons why material amounts of proved undeveloped reserves in individual fields or countries remain undeveloped for five years or more after disclosure as proved undeveloped reserves”⁷

Development Plan Timing & Reserve Category YE 'X0

Well #1 PDP

Loc #2 PUD – Planned to be drilled in 'X2

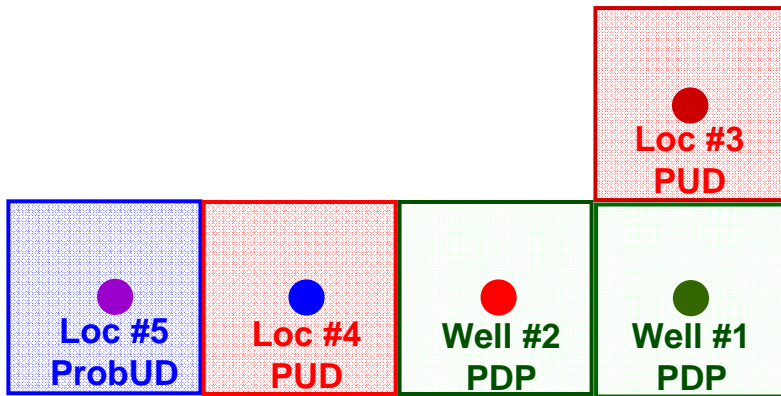
Loc #3 PUD – Planned to be drilled in 'X4

Loc #4 ProbUD – Planned to be drilled in 'X6

Loc #5 PossUD – Planned to be drilled in 'X7

⁷ Federal Register/ Vol 74, No.9 / January 14, 2009 / Rules and Regulations / Pg 2195, Part 229.1203

Booking Methodology Year 'X2



“Explain the reasons why material amounts of proved undeveloped reserves in individual fields or countries remain undeveloped for five years or more after disclosure as proved undeveloped reserves.”⁷

Assume **Loc #2 PUD** was drilled mid-year 'X2.
Reserve Category Changes with Time

| <u>YE 'X0</u> | | <u>YE 'X2</u> |
|---------------|---|---------------|
| Well #1 PDP | → | Well # 1 PDP |
| Loc #2 PUD | → | Well #2 PDP |
| Loc #3 PUD | → | Loc #3 PUD |
| Loc #4 ProbUD | → | Loc #4 PUD |
| Loc #5 PossUD | → | Loc #5 ProbUD |

Questions

Does the Jan 14, 2009 version of the Modernization of Oil and Gas Reporting require additional disclosure relative to vintaging for **Loc #3 PUD**?

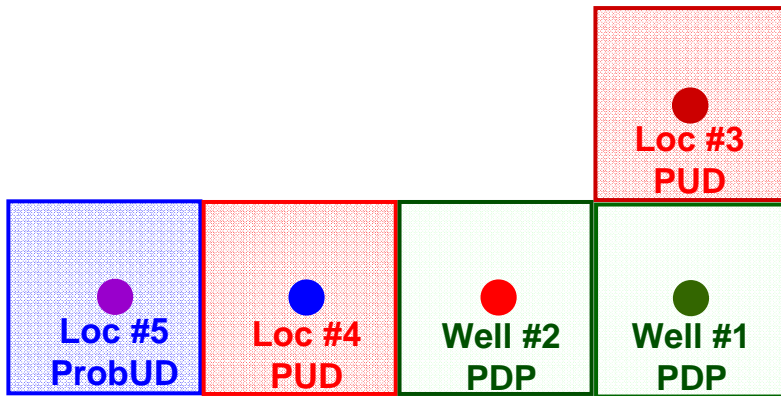
If material, RSC's current opinion is yes.

Development Plan Timing-Drilling Schedule

| <u>Well</u> | <u>YE 'X0 Plan</u> | <u>YE'X2 Plan</u> |
|-------------|--------------------|-------------------|
| Loc #3 | 'X4 PUD | 'X6 PUD |
| Loc #4 | 'X6 ProbUd | 'X6 PUD |
| Loc #5 | 'X7 PossUD | 'X7 ProbUD |

⁷ Federal Register/ Vol 74, No.9 / January 14, 2009 / Rules and Regulations / Pg 2195, Part 229.1203

Booking Methodology Year 'X2



“Explain the reasons why material amounts of proved undeveloped reserves in individual fields or countries remain undeveloped for five years or more after disclosure as proved undeveloped reserves.”⁷

Assume **Loc #2 PUD** was drilled mid-year 'X2.
Reserve Category Changes with Time

| <u>YE 'X0</u> | | <u>YE 'X2</u> |
|---------------|---|---------------|
| Well #1 PDP | → | Well # 1 PDP |
| Loc #2 PUD | → | Well #2 PDP |
| Loc #3 PUD | → | Loc #3 PUD |
| Loc #4 ProbUD | → | Loc #4 PUD |
| Loc #5 PossUD | → | Loc #5 ProbUD |

Questions

Does the Jan 14, 2009 version of the Modernization of Oil and Gas Reporting require additional disclosure relative to vintaging for **Loc #4 PUD**? What about **Loc #2 PDP**?

If material, RSC's current opinion is yes.

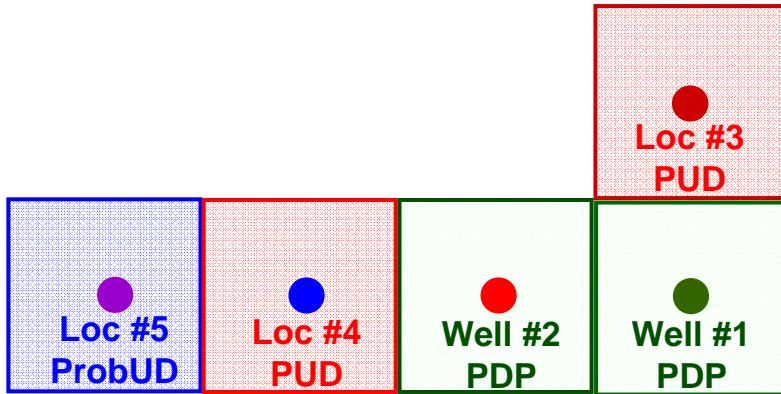
“Disclose material changes in proved undeveloped reserves that occurred during the year, including proved undeveloped reserves converted into proved developed reserves”⁷

Development Plan Timing-Drilling Schedule

| <u>Well</u> | <u>YE 'X0 Plan</u> | <u>YE'X2 Plan</u> |
|-------------|--------------------|-------------------|
| Loc #3 | 'X4 PUD | 'X6 PUD |
| Loc #4 | 'X6 ProbUd | 'X6 PUD |
| Loc #5 | 'X7 PossUD | 'X7 ProbUD |

⁷

Booking Methodology Year 'X2



“Explain the reasons why material amounts of proved undeveloped reserves in individual fields or countries remain undeveloped for five years or more after disclosure as proved undeveloped reserves.”⁷

Assume **Loc #2 PUD** was drilled mid-year 'X2.
Reserve Category Changes with Time

| <u>YE 'X0</u> | → | <u>YE 'X2</u> |
|---------------|---|---------------|
| Well #1 PDP | → | Well # 1 PDP |
| Loc #2 PUD | → | Well #2 PDP |
| Loc #3 PUD | → | Loc #3 PUD |
| Loc #4 ProbUD | → | Loc #4 PUD |
| Loc #5 PossUD | → | Loc #5 ProbUD |

Questions

Does the Jan 14, 2009 version of the Modernization of Oil and Gas Reporting require additional disclosure relative to vintaging for **Loc#5 ProbUD**? What if **Loc #5 PossUD** was disclosed?

RSC's current opinion is yes, if it is reasonably likely to have a material effect on the company and if probable and possible are disclosed.

“Changes in proved reserves and, if disclosed, probable and possible reserves, and the sources to which such changes are attributable”

“company's recent ability to convert proved undeveloped reserves to proved developed reserves, and, if disclosed, probable reserves to proved reserves and possible reserves to probable or proved reserves.”⁸

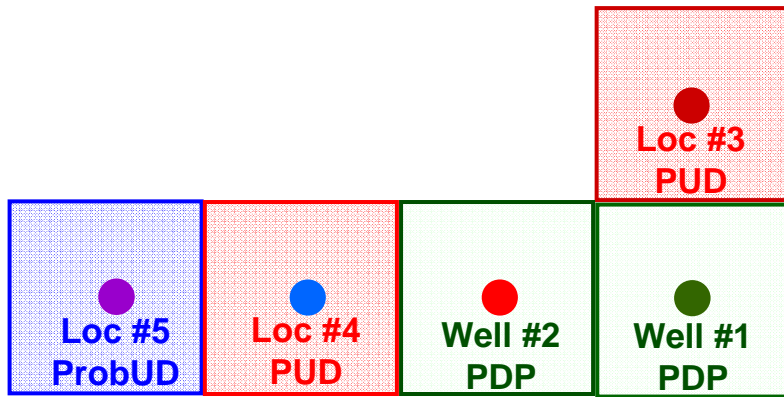
Development Plan Timing-Drilling Schedule

| <u>Well</u> | <u>YE 'X0 Plan</u> | <u>YE'X2 Plan</u> |
|-------------|--------------------|-------------------|
| Loc #3 | 'X4 PUD | 'X6 PUD |
| Loc #4 | 'X6 ProbUd | 'X6 PUD |
| Loc #5 | 'X7 PossUD | 'X7 ProbUD |

⁷ Federal Register/ Vol 74, No.9 / January 14, 2009 / Rules and Regulations / Pg 2195, Part 229.1203 ¹⁰

⁸ Federal Register/ Vol 74, No.9 / January 14, 2009 / Rules and Regulations / Pg 2179, Section V

Booking Methodology Year 'X5



“Explain the reasons why material amounts of proved undeveloped reserves in individual fields or countries remain undeveloped for five years or more after disclosure as proved undeveloped reserves.”⁷

Reserve Category Changes with Time

| <u>YE 'X0</u> | <u>YE 'X2</u> | <u>YE 'X5</u> |
|---------------|-----------------|-----------------|
| Well #1 PDP | → Well # 1 PDP | → Well # 1 PDP |
| Loc #2 PUD | → Well #2 PDP | → Well #2 PDP |
| Loc #3 PUD | → Loc #3 PUD | → Loc #3 PUD |
| Loc #4 ProbUD | → Loc #4 PUD | → Loc #4 PUD |
| Loc #5 PossUD | → Loc #5 ProbUD | → Loc #5 ProbUD |

Question

Does the Jan 14, 2009 version of Modernization of Oil and Gas Reporting require additional disclosure for PUD #3?

If material, RSC's current opinion is yes. Over 5 years after initial disclosure.

Development Plan Timing-Drilling Schedule

| <u>Well</u> | <u>YE 'X0 Plan</u> | <u>YE 'X2 Plan</u> | <u>YE 'X5 Plan</u> |
|-------------|--------------------|--------------------|--------------------|
| Loc #3 | 'X4 PUD | 'X6 PUD | 'X7 PUD |
| Loc #4 | 'X6 ProbUD | 'X6 PUD | 'X6 PUD |
| Loc #5 | 'X7 PossUD | 'X7 ProbUD | 'X8 ProbUD |

⁷

Recommended Tracking



Below are a few of the items that RSC recommends the client track at the location/project level:

- When location was initially put on the books as undeveloped
- Capital cost estimate used for prior year and current year
- Actual capital cost spent when converted to developed
- Reserves estimate pre-drill versus post-drill with supporting documentation by well over time
- Reserve category and volume changes year on year
- Number of wells drilled per field versus prior year plan; registrant wants to establish a *“verifiable, established track record”*⁶

⁶ Federal Register/ Vol 74, No.9 / January 14, 2009 / Rules and Regulations / Pg 2177, Section IV, 4

Example of Prior SEC Comment Letter

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U.S. Securities and Exchange Commission

Letter Dated: November, 2006

Topic: Examination of Pre/Post PUD Reserves

Question: “Supplementally, submit to us:

- a) “Hindsight analysis of the amalgamated reserve estimates for all your PUD locations booked at year-end 2004 that were drilled in 2005. Include brief narratives reconciling the five largest PUD reserve estimates in this group to their current estimates. Provide all supporting maps, geological, and engineering data used to justify the pre-drilling and post drilling results.
- b) Address your corporate methodology for eliminating any significant sources of error, e.g. PUD reserve estimates by analogy with recovery estimates that have a high degree of uncertainty such as recently completed wells. You may contact us for assistance in this or any other matter.”

Example of Prior SEC Comment Letter

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U.S. Securities and Exchange Commission

Letter Dated: November, 2005

Topic: Appropriate Capital Expenditures

Question: Prepare a list of the PUD locations booked as of 12/31/2003 that were actually drilled during 2004. Include the pre-drill and actual drilling cost for each well. Explain any variances over 1%.

Depends...

- When RSC completes a reserves audit for registrant, RSC's role will depend on the scope of audit.
- When registrant accepts RSC's reserve estimates RSC may provide reconciliation for:
 - Capital investment estimates year versus year case by case
 - Reserve changes on field level by status category case by case
 - Year of initial booking
- Planning upfront for YE2009 filing is critical.
Recommend discussion to begin as mutually agreed.

QUESTIONS?

Contact Info

Ryan_wilson@ryderscott.com