Presentation To:
Houston Energy Finance Group

By

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May 19, 2004

DISCLAIMER:

The information presented herein 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

SEC Reserves Reporting Guidelines

- Information Sources for presentation
  - Developed through study of Rule 4-10 of SEC regulation S-X
  - Subsequent Staff Accounting Bulletins (STABs)
  - Staff correspondence with RSC clients and
  - Information gleaned from 4 years of SPEE-sponsored Forums dedicated to a better understanding of SEC reserves definitions

SARBANES - OXLEY

- The Sarbanes-Oxley act of 2002 (SOX) is the most significant securities legislation since the Securities Acts of 1933 and 1934
  - Does not contain the words, oil, gas, hydrocarbons or reserves
  - Terms clearly there by inference
  - Will lead to SEC reserves review of each public oil company at least once every three years
  - Establishes penalties for corporate officers for certain misrepresentations

Currently "Popular" SEC Terms

- "De-booking" relates to
  - Removal of certain volumes from subsequent SEC reports
- Restatement involves
  - Correcting earlier reports to remove known errors
  - May trigger corporate penalties under SOX

SEC Reserves Reviews

- Reserves reviews by SEC may be triggered by
  - Calendar
  - Press releases
  - Negative publicity
  - “Whistle blowers”
  - Other reasons

SEC Reserves Review Process

- “Comment letters” from the SEC:
  - Range of questions posed by accountants, lawyers and engineers designed to test the compliance of the company with SEC regulations
  - First series of answers are typically followed by a smaller list of questions.
  - Iteration of letters may lead to request to restate previous filings, "de-booking" of reserves in subsequent reports or, simply, no more letters

SEC Reserves Reporting Guidelines

- Typical SEC Staff question may be:
  - Please inform us of any circumstance where you have reported proved reserves located structurally below the lowest-known hydrocarbons as established through well logs and these additional reserves have not been confirmed through performance history.

SEC Reserves Reporting Guidelines

- Another question may be:
  - Please inform us of any circumstances where your reported reserves and future income were estimated using prices other than those in effect on the last day of the year.

SEC Reserves Reporting Guidelines

- A common question asks:
  - Have you reported any undeveloped reserves attributable to well locations more than one offset location (“legal location”) away from a commercial well?

SEC Reserves Reporting Guidelines

- A recent letter posed the following:
  - Are performance bonuses linked to reserves increases?

SEC Reserves Reporting Guidelines

- In the same letter:
  - Who has the authority to engage third party engineers and who do they report to?

SEC Reserves Reporting Guidelines

- Interesting Questions – One recent SEC comment letter asked for the following:
  - Identify all independent engineering firms used over last 5 years.
  - What properties were reviewed?
  - How much the firms were paid for work on projects other than year-end type work?
  - If the firms were discharged, reason(s) why?

SEC Topical Issues

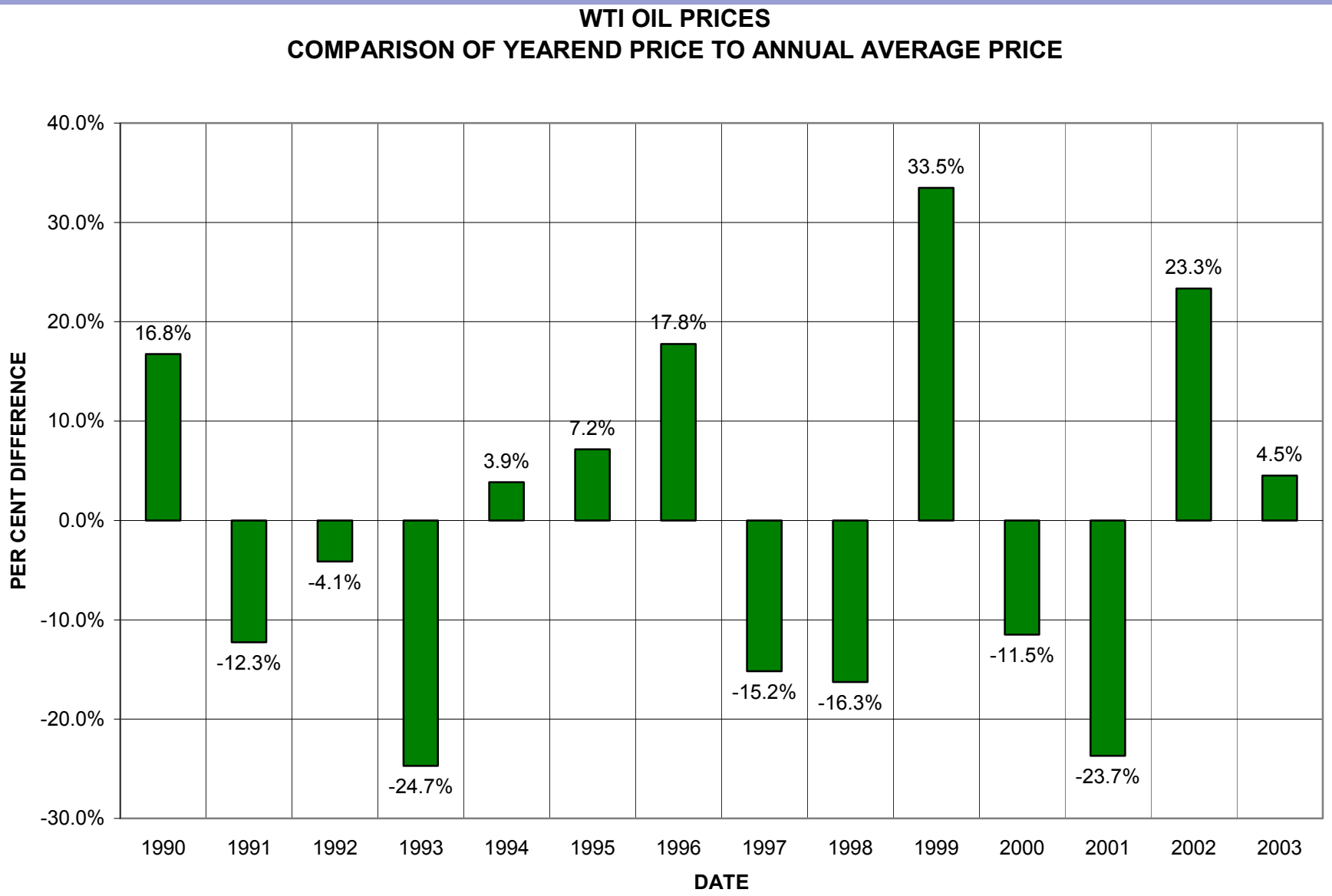
- Registrants must use hydrocarbon prices as of December 31

- Such year-end prices are to be used for all purposes, including cash flows, economic limits and PSC/PSA reserves

Economic Feasibility

- Net positive cash flow (undiscounted) required as basis of proved reserves
- No minimum rate of return required
- As little as $1 "profit" is adequate
- Required 10% annual discount rate may be calculated annually, monthly, daily or continuously.

YEAR-END PRICING



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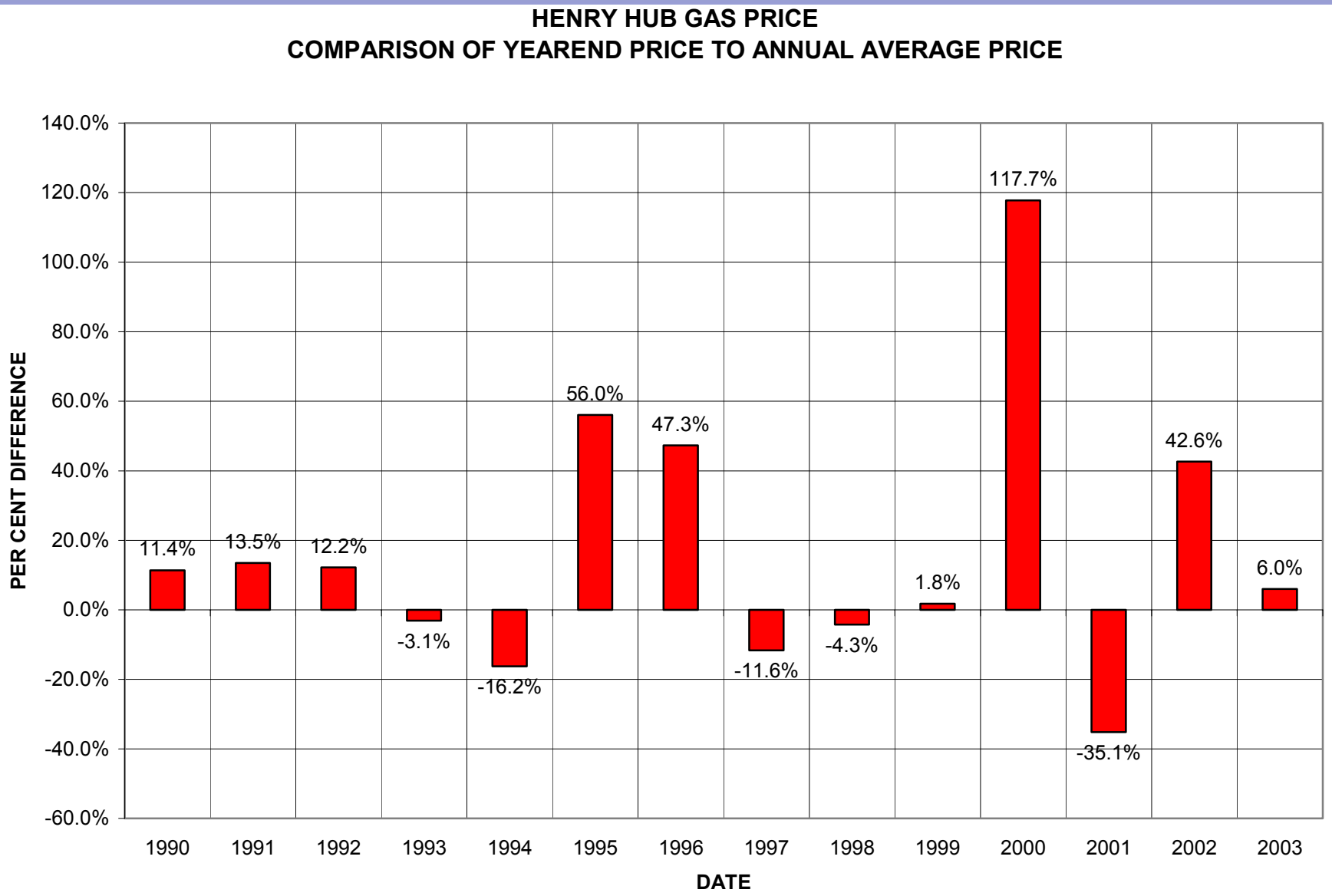


YEAR-END PRICING

- Prices received through hedge transactions are to be ignored unless the hedge is property specific (rare).

- Company should report significant differences, positive or negative, resulting from hedging activities in the Disclosures Section of the 10-K filing.

HYDROCARBON SALES ONLY

- Report only revenues received from the sale of hydrocarbons (oil, gas, condensate, NGLs) owned by the company.
- Excludes revenues from sulphur, CO2, helium, platform rentals and third-party processing.
- Non-hydrocarbon revenues cannot be used to offset OPEX.
  - such revenues may be reported as a disclosure.

RESERVOIR EXTENT

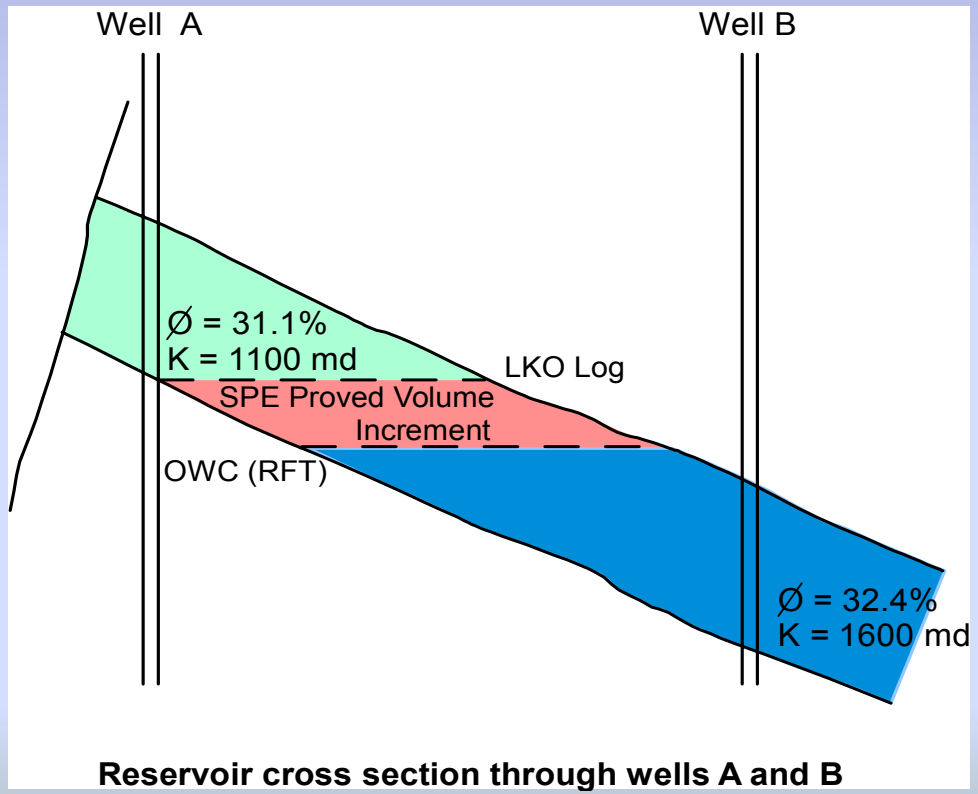
- Lowest known hydrocarbons
  - In the absence of a hydrocarbon/water contact observed in a wellbore, the lowest known subsea depth recorded in a well shall become the LKH.
  - SEC will not allow reliance on seismic or pressure gradient data.
  - 2003 reversal of position adopted earlier for “compelling cases” incorporating MDT data and seismic.

Definition:

“… in the absence of information on fluid contacts, the lowest known structural occurrence of hydrocarbons …”

Significant Differences in SEC and SPE/WPC Reserves Definitions

- Determination of Lowest-Known Hydrocarbons



Reservoir cross section through wells A and B

Significant Differences in SEC and SPE/WPC Reserves Definitions

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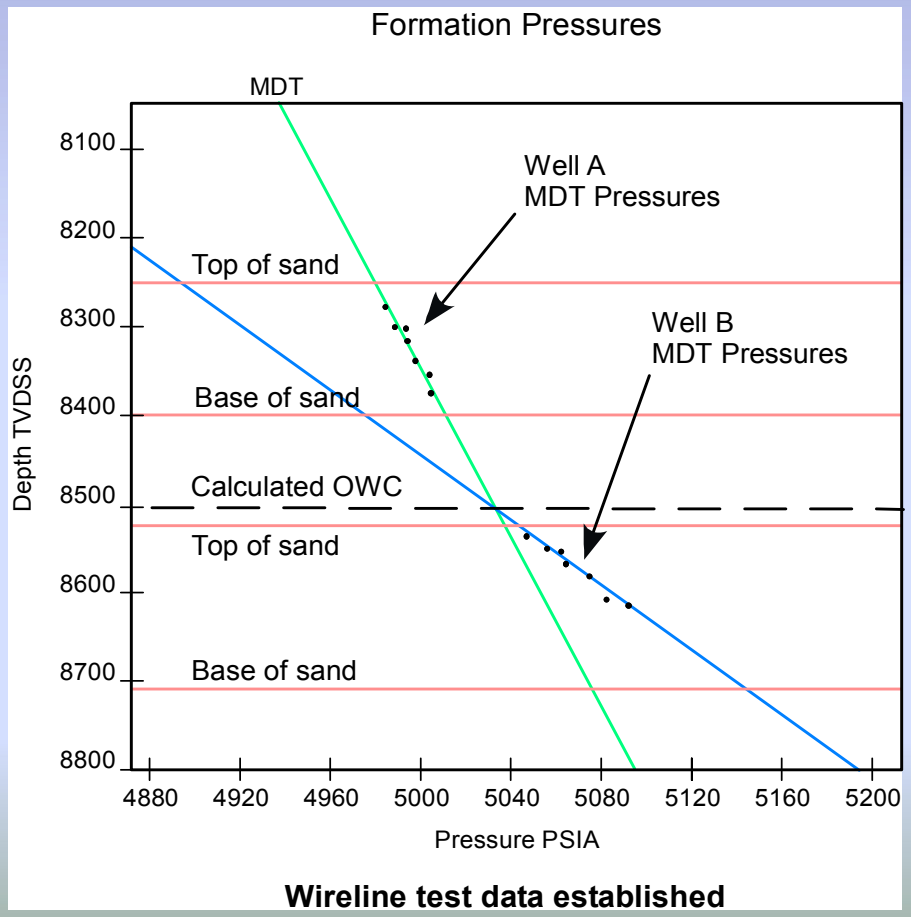

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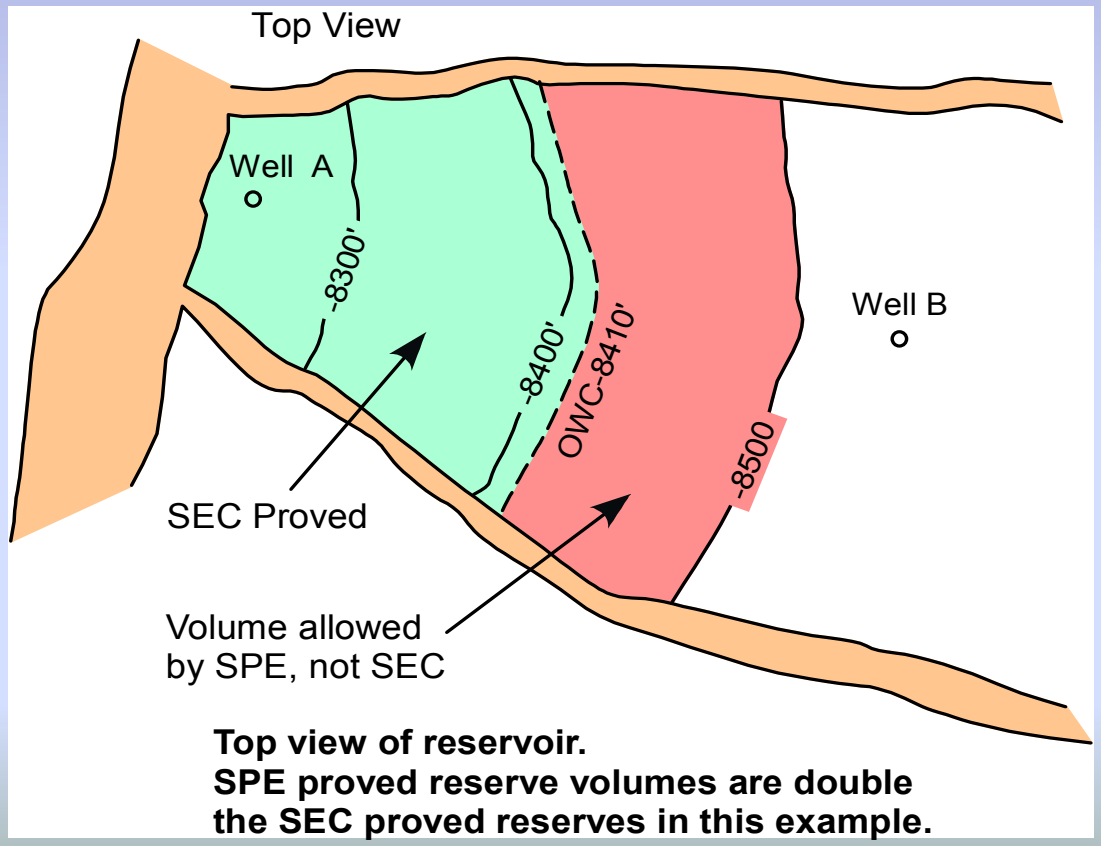

Top view of reservoir.
SPE proved reserve volumes are double the SEC proved reserves in this example.

UNDEVELOPED RESERVE

Proved Undeveloped Locations (PUDs)

- Limited to one “legal” location away from a commercial well without a “certainty of continuity of production” beyond.
- “There is no mitigating modifier for the word ***certainty"*** as explained in a 2001 website release by the SEC.
- May use pressure communication as evidence of certainty.
- Confirmed presence of coal not ample evidence for CBM PUDs.
- No reliance upon 3-D seismic to support continuity.

DATA CUT-OFF

- Data obtained after December 31 may NOT be given consideration.

- If material, the effect of such post-year-end information should be reported in the disclosure section of the 10-K report.

DISCLOSURES

- Company may use disclosure section to report alternate cash flows using “reasonable” pricing assumptions above and below those in place on December 31.
- The assumption of a higher price cannot result in increased production forecasts or reserves.
- The assumption of a lower price should result in reduced production projections and reserves.

FUEL GAS

- Fuel Gas May Be Reported As Reserves
  - OPEX will need to reflect equal amount of gas “purchased” for fuel at the same price gas is sold as an economic offset.
  - No requirement that an alternate fuel supply be physically available.
  - Flared Gas cannot qualify as reserves.

STORED GAS

- Natural gas in storage is not considered reserves.

  – Gas re-injected into its native reservoir can be considered reserves until produced and sold.

  – No written guidance on gas moved to another reservoir, if unsold and untaxed.

IMPROVED RECOVERY (IR)

- May use successful projects in same formation in the same area as analogs for defining proved IR reserves.

- Rock and fluid properties in subject project must be at least as favorable as those of analogs.

PRODUCTION SHARING CONTRACTS (PSCS)

- Report total company PSC reserves separately from total mineral-interest reserves.
- Calculate reserves using "economic interest method.“
- Must involve capital at risk.
- Does not require right to take-in-kind.
- Must have right to extract oil and/or gas.

PROBABILISTIC RESERVES ESTIMATES

- SEC will accept if “professionally prepared”
- Will acknowledge no SEC verbiage relating P90 to reasonable certainty

FLOW TESTING

- Requirement for “conclusive formation test” in a discovery situation – Interpreted as surface flow test
  - Question arises from deep water exploration
  - Subject of SEC “Comment Letter” survey of industry begun in October 2002
  - Letters to 55-60 producers
  - April 14, 2004 Deepwater GOM "Do Not Object" policy

REASONABLE CERTAINTY

- Variously defined as leading to “positive revisions far more often than negative revisions” or as evidenced as occurring “at least 75 percent of the time.” (Winfrey 10/28/03)

- Does not equate to P90.

SIMULATION DERIVED RESERVES ESTIMATES

- SEC will accept but will require “good history match.”

RECOVERY FACTORS

- Respondents to use volumetric recovery efficiencies assuming most inefficient drive mechanism until drive mechanism becomes known.

- Use of analogs OK? Same field, area, basin?

CONFIRMED ACCESS TO MARKET

- Typically applies to areas outside North America.
- SEC may not always require signed contract.
- May rely upon MOU that contains all relevant commercial terms (prices, rates, term).
- Entirely case specific

COMMERCIAL ISSUES

- Should not project reserves beyond remaining term of a contract or license unless the issuing body (country) has established a track record of doing so.
- Project Sanctioning
- Internal / External approved plan of development

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Questions

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Comments

Comparison of Various Reserves Definitions

	CIM (Petroleum Society) (2002)	SPEIWPC (1997)	Canadian NP 2-B	US. SEC. Reg. S-X
Intended purpose	General application and securities reporting	General application	Securities reporting	Securities reporting
Qualitative description of certainty-proved	High degree of certainty	Reasonable certainty to be commercially recoverable	Reasonably evaluated as economically productive	Reasonable certainty to be recoverable
Qualitative description of certainty-probable	Not proved, but equally likely that remaining reserves will be higher or lower than P+P	Not proved, but more likely than not to be recoverable	Not proved, but likelihood of existence and future recovery - probable reserves presented on a risked basis	Not defined
Qualitative description of certainty-possible	Less likely to be recovered than probable reserves	Less likely to be recovered than probable reserves	Not defined	Not defined
Quantification of probability associated with estimates	Proved→P_{90} P+P→P_{50} P+P+P→P_{10}	Proved→P_{90} P+P→P_{50} P+P+P→P_{10}	Not addressed	Not addressed
Application of probability criteria and aggregation	Recognized that proved entity level deterministic estimates are commonly not P_{90}. The probability criteria are targeted at the aggregate level reported.	Clear distinction that the numerical probabilities are meant to apply to probabilistic estimates only. Implied that probabilistic estimates can be aggregated probabilistically - no clarification on summing deterministic estimates.	Not addressed	Not addressed

Comparison of Various Reserves Definitions

	CIM (Petroleum Society) (2002)	SPEIWPC (1997)	Canadian NP 2-B	US. SEC. Reg. S-X
Pricing	Specified economic conditions; generally accepted as reasonable	Proved: Existing economic conditions, Unproved: reserves may be based on escalated	conditions: escalated conditions: escalated prices can also be used	Prices and costs as of date of estimate
Classification of enhanced recovery mechanism as proved	Successful pilot or existing project in subject or analogous reservoir	Successful pilot or existing project in subject or analogous reservoir	Demonstrated to be successful in the subject reservoir	Successful pilot or project in the reservoir
Proved reserves relative to lowest known hydrocarbons (LKH)	No proved reserves below LKH	No proved reserves below LKH	Not specifically addressed	No proved reserves
Proved reserves extensions on undrilled acreage	Generally limited to directly offsetting drilling spacing units (DSUs) within good geological control	Directly offsetting DSUs or where reasonable certainty of lateral continuity and commercial recovery	Not specifically addressed	Limited to directly offsetting DSUs except where continuity demonstrated with certainty
Proved reserves - requirements for testing	Must be tested in subject accumulation to qualify as proved	Proved reserves based on logs or core if analogous to producing or tested reservoir	Not specifically addressed	Reservoirs require actual production or a conclusive formation test for classification as proved
Development and production status categories	Developed producing Developed non-producing Undeveloped	Developed producing Developed non-producing Undeveloped	Producing Non-producing	Developed Undeveloped