

# SEC REVISED RESERVES REPORTING RULES

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**As Presented to  
Ohio Petroleum Section  
Society of Petroleum Engineers  
and the  
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Desk & Derrick Club**

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*Celebrating Our 20<sup>th</sup> Anniversary  
1988 - 2008*



# SEC REVISED RESERVES REPORTING RULES

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- **PURPOSE:** SEC revised oil & gas company reporting requirements to **provide investors** with more **meaningful** and **comprehensive** disclosure
- **EFFECTIVE:** **Year End 2009 filings** and beyond
- **DESIGN:** To **modernize and update** the oil & gas disclosure requirements to **align** them with **current practices** and **changes in technology**.



# HIGHLIGHTS

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- Modifies RESERVE DEFINITIONS to Align with Industry Standard (Petroleum Resources Management System)
- Revises Definitions of “Proved Reserves”
- Allows Inclusion of PROBABLE and POSSIBLE Reserves (Optional)
- Mandates 12 Month Average Prices (Benchmark Prices on 1<sup>st</sup> Day of Each Month)
- Requires Disclosure of Independence and Qualifications of Evaluator

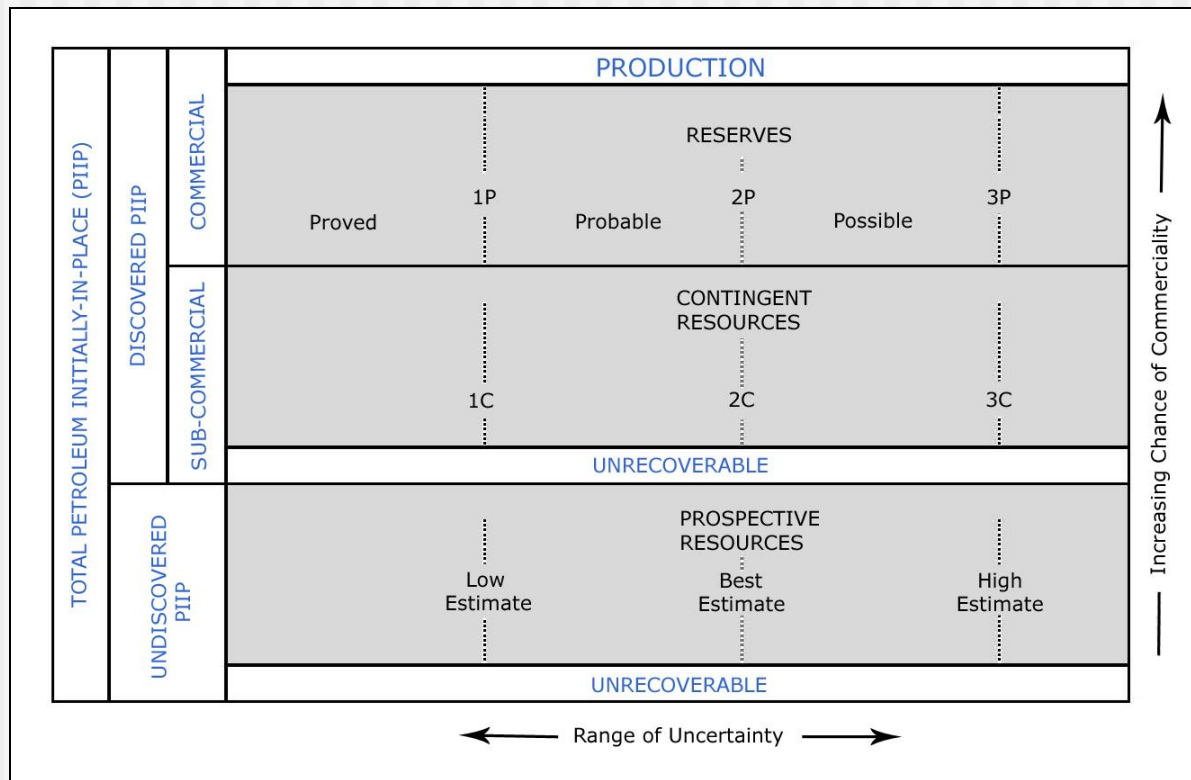
# MODIFIES RESERVE DEFINITIONS

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- Petroleum Resources Management System (PRMS) sponsored by:
  - Society of Petroleum Engineers (SPE)
  - American Association of Petroleum Geologists (AAPG)
  - World Petroleum Council (WPC)
  - Society of Petroleum Evaluation Engineers (SPEE)
  
- Basic Definitions
  - Petroleum: naturally occurring mixture consisting of hydrocarbons in the gaseous, liquid, or solid phase
  
  - Resources: intended to encompass all quantities of petroleum naturally occurring on or within the Earth's crust (recoverable and unrecoverable) whether currently considered **conventional** or **unconventional**

# MODIFIES RESERVE DEFINITIONS

## Resources Classification Framework



# REVISES DEFINITIONS OF “PROVED RESERVES”

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## Proved

- Old Definition: the estimated quantities of crude oil, natural gas, and natural gas liquids whose geological and engineering data demonstrates with reasonable certainty to be recoverable in future years from known reservoirs under existing economic and operating conditions
- New Definition: those quantities of oil and gas which... can be estimated with **reasonable certainty** to be **economically producible**... from a given date forward, from known reservoirs, and under existing conditions, operational methods, and government regulations...



# REVISES DEFINITIONS OF “PROVED RESERVES”

## Reserves

- Old Definition: previously undefined
- New Definition: the estimated remaining quantities of oil and gas and related substances anticipated to be **economically producible**, as of a given date, by application of development projects to known accumulations. Additionally, there must exist, or there must be a reasonable expectation that there will exist, the legal right to produce or a revenue interest in the production of oil and gas, **installed** means of delivering oil and gas or related substance to market, and all permits and financing requirements to implement the project.

# REVISES DEFINITIONS OF “PROVED RESERVES”

## Developed

- Expands the definition to include using technologies other than production through wells and include reserves if the cost of any required equipment is relatively minor compared to the cost of a new well

## Undeveloped

- Replaces the requirement that productivity be “**certain**” for areas beyond the immediate area of known proved reserves with a “**reasonable certainty**” requirement and permits inclusion of quantities of oil and gas that can be recovered through improved recovery projects
- Allows PUDs beyond 1 offset from producing well
- Sets out **five years** as a reasonable timeframe of development
  - A **plan** and **intent** to drill must exist
  - Only exception based on “**specific (not necessarily unusual) circumstances**”





# REVISES DEFINITIONS OF “PROVED RESERVES”

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Reasonable Certainty – (not previously defined)

New rule provides guidance as to meaning:

- High degree of confidence
- “Much more likely to be achieved than not”
- Estimated Ultimate Recovery (EUR) is much more likely to increase than to either decrease or remain constant over time (Deterministic methods)
- There is at least a 90% probability that the quantities actually recovered will equal or exceed the stated volume (Probabilistic methods)

# ALLOWS INCLUSION OF PROBABLE AND POSSIBLE RESERVES (OPTIONAL)

## Unproved Reserves

- **PROBABLE** Additional reserves that are less certain to be recovered than proved reserves but which, in sum with proved reserves, are as likely as not to be recovered

Deterministic Methods - It is **likely** that actual quantities will equal or exceed the sum of Proved + Probable

Probabilistic Methods - There must be at least a 50% probability that actual quantities recovered will equal or exceed the sum of Proved + Probable

- **POSSIBLE** Less certain than probable

Deterministic Methods - Total quantities actually recovered have a **low probability** to exceed Proved + Probable + Possible

Probabilistic Methods - At least 10% probability the recovery will equal or exceed Proved + Probable + Possible

# SEC PERMITS THE USE OF NEW TECHNOLOGIES

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## Reliable Technology

- **Current:** Company must use “**actual**” production or flow tests to meet “reasonable certainty” standard
- **New:** Adds the defined term “**reliable technology**” to clarify the types of technology used to establish “reasonable certainty”
- **Definition:** Technology (including computation methods) that, when applied using high-quality geoscience and engineering data, has been **field tested** and has demonstrated **consistency** and **repeatability** in the formation being evaluated or in an **analogous formation**. In probabilistic terms, reliable technology has been proved empirically to lead to correct conclusions in 90 percent or more of its applications.

# MANDATES 12 MONTH AVERAGE PRICES

## Pricing Mechanism for Determining the Economic Producibility of Reserves

- 12-month Average Price
  - 1<sup>st</sup> day of each calendar month
  - Arithmetic average
    - If used in 2008 = \$101.96/bbl and \$8.905/MmBtu
    - Current through March 2009 = \$43.68/bbl and \$4.84/MmBtu
- “Economic Producibility”
  - Existing economic conditions – positive cash flow
  - Commerciality (PRMS) definition – defined investment criteria of management
- Alternative Pricing Schemes (Optional)
  - Management decisions
    - Futures pricing
    - Rate of return thresholds

# MANDATES 12 MONTH AVERAGE PRICES

## First Day of Month Benchmark Prices

2008	HENRY HUB (LOUISIANA)	APPALACHIA		WEST TX	ERGON WV - OIL
		DOMINION SOUTH POINT	COLUMBIA GAS	INTERMEDIATE (CUSHING, OK)	
JANUARY 1	7.095	7.735	7.455	96.01	90.25
FEBRUARY 1	8.095	8.520	8.350	88.97	86.00
MARCH 1	9.110	9.530	9.630	101.85	96.00
APRIL 1	9.855	10.475	10.365	100.98	95.50
MAY 1	10.780	11.400	11.300	112.52	107.50
JUNE 1	11.440	11.890	11.800	127.36	120.50
JULY 1	13.185	13.845	13.625	140.97	132.75
AUGUST 1	9.260	9.860	9.505	123.26	117.50
SEPTEMBER 1	8.235	8.260	8.055	115.96	109.25
OCTOBER 1	7.170	7.290	7.320	98.53	94.50
NOVEMBER	6.195	6.440	6.490	67.81	62.00
DECEMBER 1	6.435	6.835	6.690	49.28	49.00
1ST DAY OF MONTH AVG (2008)	8.905	9.340	9.215	101.96	96.73
DEC 31: YE08 (Benchmark for SEC)	5.710	6.225	6.095	44.60	41.00
2009					
JANUARY 1	5.710	6.225	6.095	44.60	39.00
FEBRUARY 1	4.770	5.205	5.050	41.68	36.25
MARCH 1	4.040	4.595	4.330	44.76	40.00
APRIL 1	3.580	4.025	3.855	49.66	43.50
4-MONTH AVG	4.525	5.013	4.833	45.18	39.69



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# REQUIRES DISCLOSURE OF INDEPENDENCE AND QUALIFICATIONS OF EVALUATOR

- Requires Disclosure of Independence and Qualifications of Evaluator
  - Internal Guidelines
    - Controls to assure **objectivity**
    - **Qualifications** of the technical person primarily responsible
    - Employee or third-party
- Requires **Filing** of Existing Third-party Report or Audit Letter
- Expanded Disclosure
  - Purpose
  - Effective Date
  - New definition of “geographical area”
    - Containing 15% or more of total proved reserves
  - Reserves Tables

# EXPANDED DISCLOSURE OF UNDEVELOPED RESERVES

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## Undeveloped Reserves

Requires a company to use a **narrative** to disclose the following:

- Total quantity of PUDs at year-end
- **Material change** in PUDs during the year, including PUDs converted into proved developed reserves
- **Investments** and progress made during the year to convert PUDs into proved developed oil and gas reserves
- An **explanation** of the reason that material concentrations of PUDs in individual fields have remained undeveloped for **five years** or more after disclosure as PUDs
- **"Specific"** circumstances that warrant their inclusion
- Provide additional disclosure regarding **aging** of PUDs

# QUESTIONS AND COMMENTS

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THANK  
YOU!

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