SPE DISTINGUISHED LECTURER SERIES is funded principally through a grant of the SPE FOUNDATION. The Society gratefully acknowledges those companies that support the program by allowing their professionals to participate as Lecturers.

And special thanks to The American Institute of Mining, Metallurgical, and Petroleum Engineers (AIME) for their contribution to the program.
Reserve Overbooking – An Issue of Professional Ethics

Mark McLane, SPE, Rose & Associates, LLP

Society of Petroleum Engineers
2004 – 2005 Distinguished Lecturer Series
A Definition of Ethics

“The discipline dealing with what is good and bad and with moral duty and obligation; a set of moral principals or values; a theory or system of moral values; the principles of conduct governing an individual or a group”

Webster’s New Collegiate Dictionary

‘Ethics’ may also be viewed as:

- A framework for discerning Right from Wrong
- A process for choosing between choices equally perceived to be right
Living in the “Post-Enron” World

• In spite of increased financial and regulatory scrutiny, reserve overbooking remains a persistent problem.

• It is not a technology issue, it is a people issue often with strong ethical components.

How does Reserve Overbooking relate to the issue of Professional Ethics?
Reserve Overbooking

- Widely Acknowledged
- Taboo – Reluctantly Discussed
- Multiple Causes
- Won’t Just Go Away
Why are Reserve Estimates So Important?

• Used by Investors – An indicator of Asset Value

• Key component of:
  – Project Valuations
  – Contract & Unitization Agreements
  – Project Evaluation, Approval & Funding
  – Regulatory Reporting
  – Corporate Strategic Planning
1996-2000 Revisions / YE 2000 Reserves

Negative Revisions

Positive Revisions

Proved Reserve booking changes for U.S. producing properties

Alexander (2001) – Data from J.S. Herold
Reserve Overestimating & Overbooking Can Occur at All Stages of Asset Development

- Exploration
  - Basin Analysis
  - Play
  - Prospect
  - Appraisal

- Mergers & Acquisitions

- Development

- EOR & Optimization

- Depletion

- Abandonment

- Production
Reserve Overbooking

What’s Wrong with It?

- Creates ‘Ethical Tension’ because it conflicts with objectivity, and thus professionalism

It also…

- Misleads Shareholders
- Potentially Destroys Value
- Creates Organizational Stress
Reserve Overbooking – Causes

Errors of Omission

Errors of Commission
Reserve Overbooking – Causes

Errors of Omission

• Ignorance & Poor Estimating Practices

• Solved through Education, Training, Mentoring (Feedback) and Portfolio Monitoring
Reserve Overbooking – Causes

Errors of Commission

• Intentional Overbooking – Misguided Incentives
  – Who Benefits?
  – Personal Rewards versus Shareholder Value

• Ignoring Unambiguous Reserve Overbooking
  – What would you do?
“What is honored in a country is cultivated there.”
Plato

Or…

What gets rewarded, gets done!
Misguided Incentives

Example Company – Big Rock Oil

• Bonuses awarded for drilling wells
• Staff not meeting minimum target laid off!

What results should management expect?

Lots of wells! But will they add value?

May not matter to staff…but it does to shareholders!
An Example – “You Are There”

Reserves booked assuming 160-acre drainage

4 Years Later…

Data analysis supports 90 to 120 acres
An Example – “You Are There”

What would you do?

• Write down now?

• Wait and hope?
Reserve Overbooking - Solutions

- Leadership
- Education
- Professionalism
Reserve Overbooking - Solutions

Leadership

• Lead by Example

• Clearly Stated Expectations and Standards
  – Willing to be Accountable

• Critically Evaluate Incentive and Reward System
  – “If the Company prospers, we all prosper”
  – Puts Shareholder Value above Personal Gain

• Not Limited to Managers!
Reserve Overbooking - Solutions

Education

• Learning how to deal with Uncertainty through better estimating
  – Systematic and probabilistic

• Understanding the effect of Bias on estimating and Decision Making

• Critically evaluating Patterns of Past Performance
  – The Key to real improvement!
Reserve Overbooking - Solutions

Professionalism

• Guided by Values and Principles – Not Circumstances

• Accepts Responsibility and Accountability

•Places Long-Term Shareholder Value above Personal Gain

• Fair and Objective
Existing Controls, Procedures and Policies

• Governmental Regulations
  – SEC, et. al.
  – State/National Engineering Boards
• Professional Society Guidelines
  – SPE/WPC
  – AAPG
  – SPEE
• Company Policies

How Are They Working?

Ultimately, compliance…is an issue of personal and corporate values
Our Challenges

As Companies:
• Encourage & Reward Professionalism
• Develop Mentors!
• Provide a process to resolve Ethical issues

As Individuals:
• Take responsibility
• Be willing to learn!
• Deal with issues & differences Professionally
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