

Applications of PRMS Guidelines and SEC Rules: Ethical Issues and Biases*

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Abstract

Ethical conundrums and conflicts are endemic in human affairs wherever perceived self-interest may appear to diverge from obligations of trust. Well-grounded, realistic publications provide a framework for professional exercise of sound, ethical choices.

Rules-based Reserves classifications restrict technical choices, but often fail to allow legitimate departures from rules based on outdated knowledge. Thus ethical mischief is more likely to require falsification of facts. Principles-based classifications allow more discretionary technical choices, so that reserves may be expressed more realistically, using present knowledge. There appears to be more potential for subtle ethical misbehavior using a Principles-based classification, such as the Petroleum Resources Management System.

Material misstatements of reserves in internal company estimates damage the company because the consequential portfolio is under-optimized as to performance and asset value, to the detriment of the stockholder. However, the damage caused by a substantial and widely publicized reserves write-down involving SEC-disclosures can be even worse. The fall-out from a widely publicized reserves scandal involving an American corporation could result in the imposition of crippling new regulation on the E & P industry. If there is one prominent scandal, all public companies will suffer. More than ever, E & P professionals must not only observe strictest ethical principles, but to insist on similar high standards among their colleagues, *including their executive managements*. .

All reserves disclosures are estimates, and uncertainty constantly attends the process of deriving the parameters that govern reserves volumes. Wherever estimates are made under conditions of uncertainty, bias is operating. The consequences of bias are to make a project or a portfolio appear to be more valuable, or less valuable, than it is, resulting in suboptimal performance of the asset.

There are three types of bias. Cognitive bias relates to the way we perceive situations or circumstances. Motivational bias occurs when the estimator perceives that some personal advantage may accrue from a higher or lower estimate. Organizational bias is a pernicious, usually unconscious effect that derives from shared optimism among project members.

Although advanced technologies may help to limit bias, the main remedies lie in 1] purposeful testing of parameter ranges; 2] independent multiple estimates; 3] “Nature’s Envelopes”; 4] “Reality Checks”; 5] proper statistical procedures; and 6] rigorous post-audits of projects.

References

Campbell, J.M. Jr., J.M. Campbell, Sr., and R.A. Campbell, 2001, Analyzing and Managing Risky Investments: John M. Campbell, Norman, OK publisher, 487 p.

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AAPG GTW:

APPLICATIONS OF PRMS GUIDELINES AND SEC RULES: ETHICAL ISSUES AND BIASES

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OUTLINE OF SESSION

I. INTRODUCTION

II. DEALING WITH BIAS

ROSE

**III. COPING WITH ETHICAL
CONFLICTS IN ORGANIZATIONS**

IV. “YOU ARE THERE” SCENARIOS

MCLANE

OBLIGATIONS OF E&P PROFESSIONALS

- ❖ Recognize Inherent Fiduciary Responsibility
- ❖ Honor Professional Tenets:
 - ✓ Objectivity
 - ✓ Technically Current
 - ✓ Thoroughness
 - ✓ Candor
 - ✓ Team Work
- ❖ Inescapably Tied to Ethics

PRINCIPLES OF APPLIED ETHICS

- A. Ethical fitness implies conscious and frequent practice in making choices (Kidder, 1996)
- B. Integrity in Decision-making (Carter, 1996)
 - 1) Discerning what is right and wrong;
 - 2) Acting on what you have discerned, even at personal cost;
 - 3) Stating openly that you are acting on your discernment of right and wrong.

PRINCIPLES OF APPLIED ETHICS

C. Three Principles for Resolving Moral Dilemmas (Kidder, 1996)

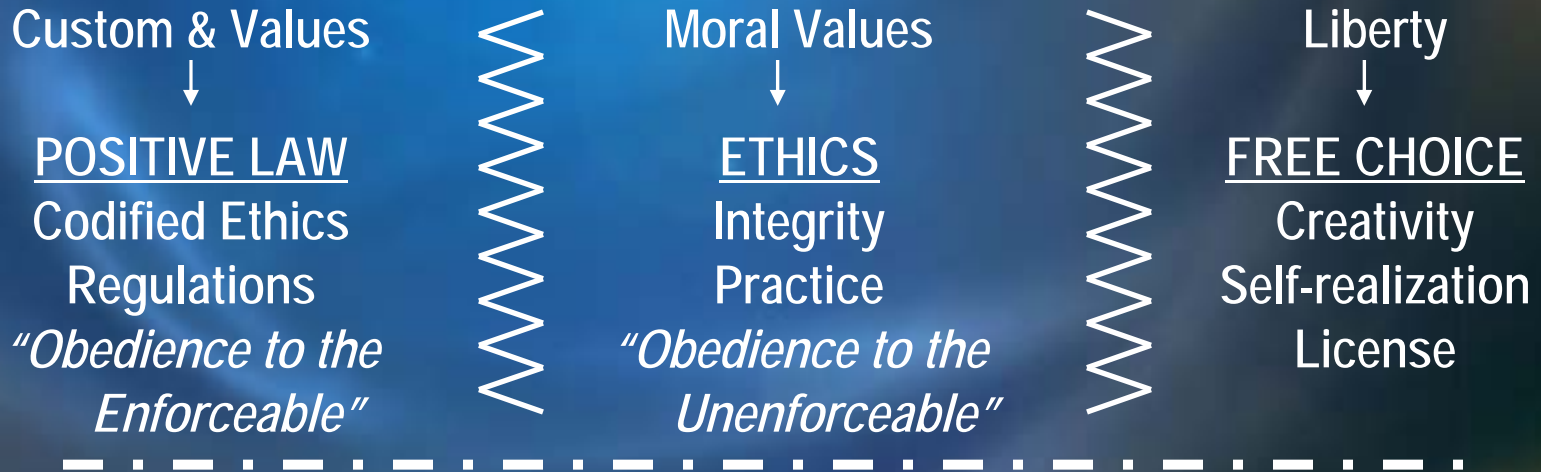
- 1) *Ends-based thinking*: greatest good for greatest number;
UTILITARIANISM
- 2) *Rules-based thinking*: follow highest sense of principle:
CATEGORICAL IMPERATIVE
- 3) *Care-based thinking*: do what you want others to do to
you: GOLDEN RULE

D. Dilemma Paradigms: "Right vs. Right"

- 1) Truth vs. Loyalty
- 2) Individual vs. Community
- 3) Short-term vs. Long-term
- 4) Justice vs. Mercy

DOMAINS OF HUMAN ACTIVITY

Modified after J.F. Moulton (1924),
as discussed by R.M. Kidder (1996)



Because most formal agreements must evolve rather than emerge fully formed, they require some mutual trust during their gestation period. The expectation of ethical behavior in others is the Foundation of

- (1) healthy free-market commerce;
- (2) a vibrant scientific community;
- (3) progressive participative government.

CLASSIFICATION SYSTEMS -- Pros & Cons

1) "Rules-based"

- Restrict Technical Choices
- Rigid, become Obsolete
- Ethical Mischief requires Falsification of Facts

2) "Principles-based"

- Allow more Judgment, Discretion
- Flexible, can Adapt to New Concepts & Technology
- Ethical Mischief easier to Rationalize

? *More potential for subtle, ethical misbehavior with Principles-based System?*

DISCUSSION TOPIC:

What are some Plausible Scenarios Affecting the U.S. Oil & Gas Industry that could arise from a well-publicized Reserves Writedown by a NYSE E&P Corporation?

CONCLUSION:

The Adoption of a Principles-based Reserves Classification System (PRMS) and the political philosophy of the current Administration together make it more necessary than ever for E&P Professionals to be Pro-active, openly insisting on responsible reserves statement by their employers and colleagues.

Dealing with Bias:

“All reserves disclosures are estimates, and uncertainty constantly attends the derivation of parameters that govern reserves volumes”

Whenever estimates are made under conditions of Uncertainty, ***BIAS IS OPERATING***

Consequence of Bias:

Assets are portrayed as *more valuable*, or *less valuable* than they are.

TYPES OF BIAS:

1) COGNITIVE BIAS

Exercise: Overconfidence

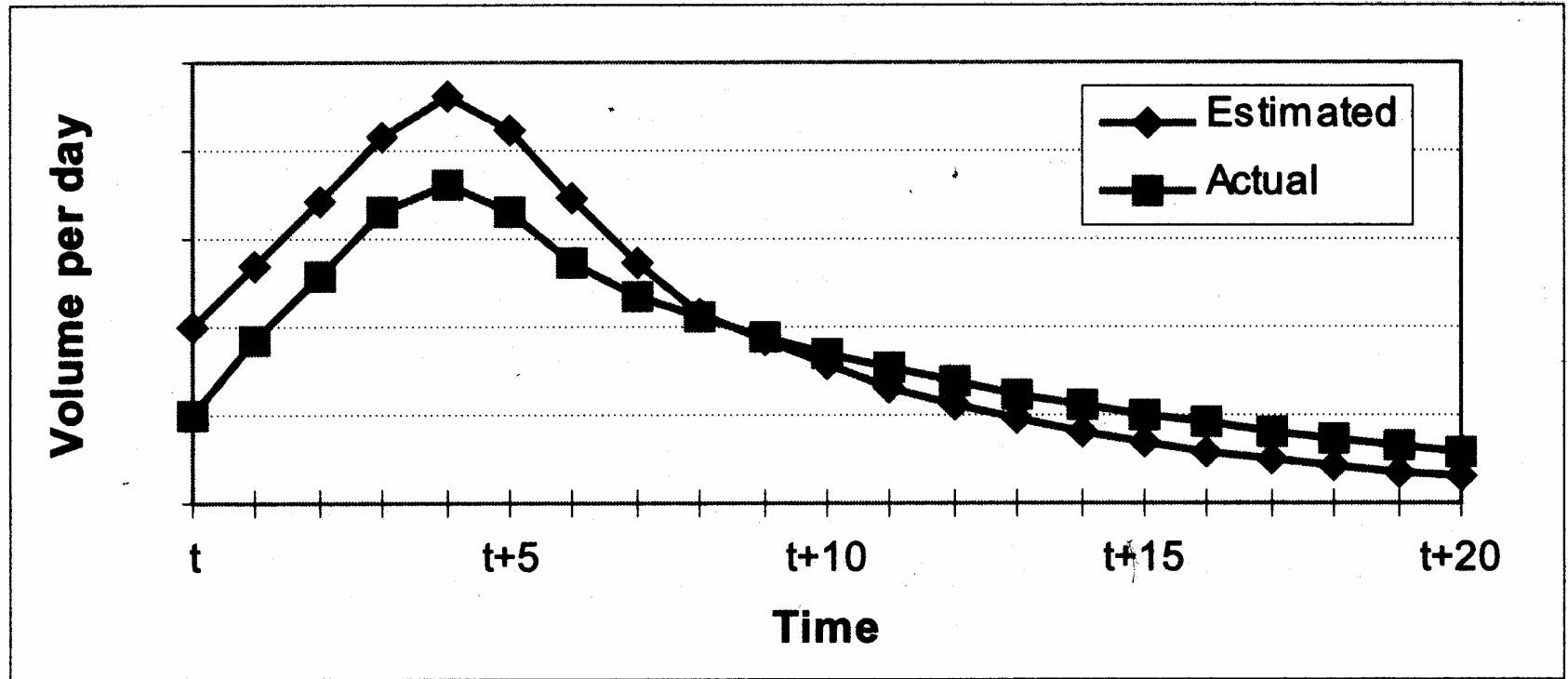
2) MOTIVATIONAL BIAS

**Example: Perceived self-interest
influences technical conclusions**

3) ORGANIZATIONAL BIAS

**Examples: Campbell, 2001
Merrow, 2003**

ERRORS IN PRODUCTION VOLUME ESTIMATES

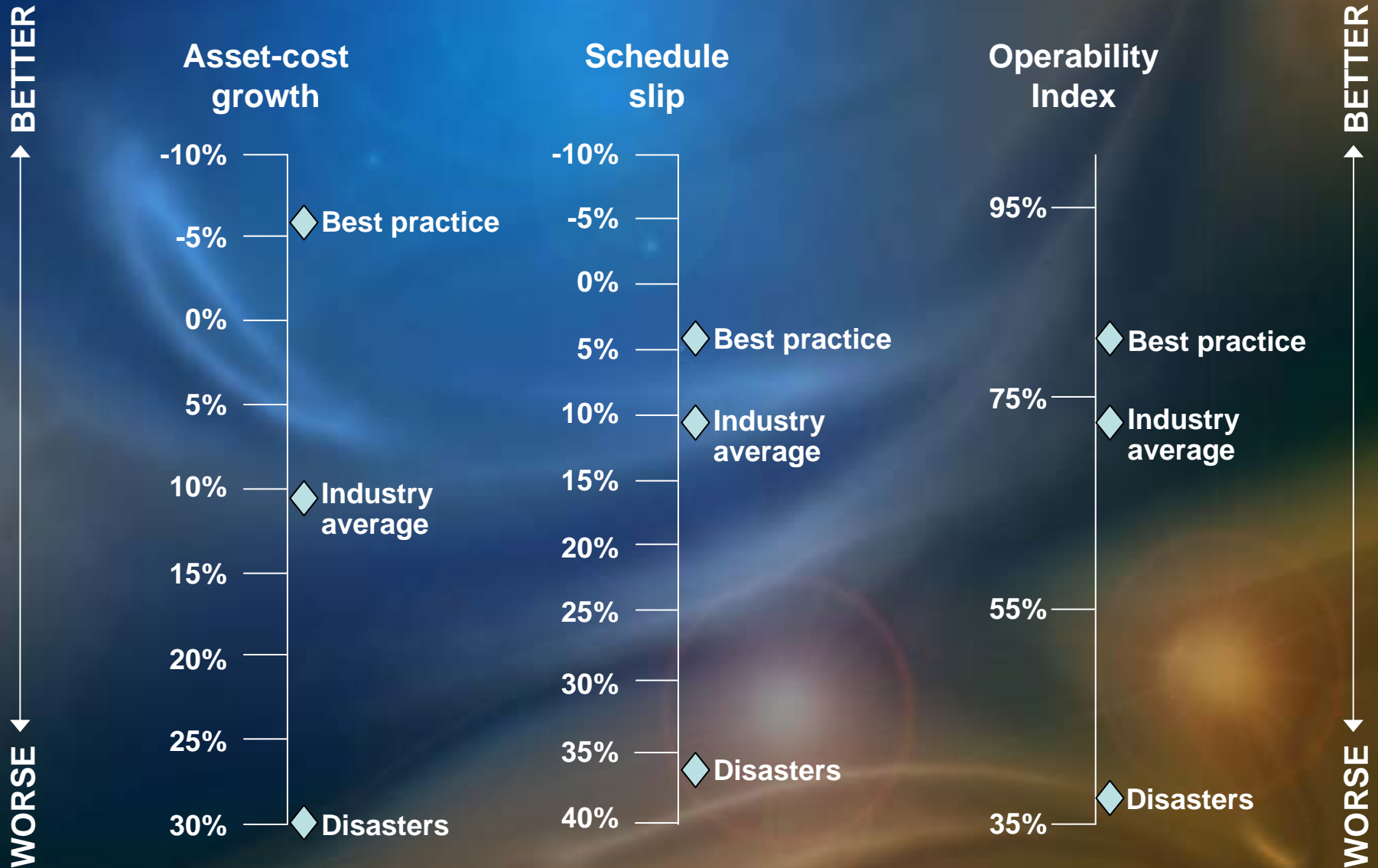


$n = 160$ projects (worldwide)

Campbell (2001)

For 159 of 160 (99.5%) projects, actual production was less than estimated production

INDUSTRY PERFORMANCE ON DEVELOPMENT PROJECTS (after Merrow, IPA, 2003)



REDUCING GEOTECHNICAL BIAS:

- 1) Purposeful Testing of Parameter Ranges**
- 2) Independent Multiple Estimates**
- 3) “Nature’s Envelopes”**
- 4) “Reality Checks”**
- 5) Proper Statistical Procedures**
- 6) Rigorous Post-audits of Projects and Feedback**

ORGANIZATIONAL REMEDIES

- 1) Are official and unofficial incentive-systems aligned with ethical behavior by professionals and managers?
- 2) Does the organization have a widely circulated code of ethics?
- 3) Does the organization have an accessible Independent Reserve Committee or Ombudsman to hear possible conflicts?
- 4) Does the organization provide training in Ethical Conduct via case examples that focus on anticipation and prevention rather than binary conflicts?
- 5) Does the organization clearly distinguish between what is Ethical and what is Legal?

PERSONAL REMEDIES

- 1) Frequent reading on Professionalism and Ethics;
- 2) Conscious practice in making ethical choices;
- 3) Cultivate personal and professional candor (get comfortable playing it straight);
- 4) Recognize that technical, philosophical, and/or competitive differences with others do not necessarily represent their unethical behavior;
- 5) Learn to sense “ticking time-bombs” and find ways to defuse them before they blow up in your face;
- 6) Live within your means so you have the financial cushion to retain personal choice of employer or client;
- 7) Always be willing to vote with your feet.

ADMONITION:

As you listen to all of the remaining sessions in this GTW, please try to identify specific elements that may lend themselves to ethical abuses or biases.

**WE WILL BE RAISING SUCH
QUESTIONS IN ALL DISCUSSIONS**

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