



- The use of year end pricing, a system that worked until commodity markets became seasonal, very liquid and volatile;
- Relatively recent inclusion of coal bed methane to reserves, with limited clarity on technical methodologies for assessments;
- Reliance on logs for lowest know hydrocarbon determination, when proven pressure analysis methodologies are available;
- Continuing to exclude non-hydrocarbon revenue, when such revenues can factor significantly into corporate decision making;
- Relaxation of a “fluids to surface test” for only deep water Gulf of Mexico, as if that oil and gas province is somehow different than others such as deep water Brazil, North Sea or even remote locations in Canada and the on-shore United States; and
- A confusing and misleading segregation between integrated mineable bitumen projects that produce a synthetic crude that isn’t reserves, versus in-situ projects that create a raw bitumen product that isn’t usable without upgrading but is reserves.

There are also opportunities for improvement of the current rule set not related to conflicts or technological problems, such as:

- The potential for expansion of probabilistic applications;
- The potential for disclosure of some categories of non-Proved resources.

Accordingly, I am not of the view that a step change in approach or regulation is needed. I believe the current framework is robust, but in need of some update and in desperate need of clarification through active training and education. I shouldn’t find that the rule set is interpreted differently between different issuers, and between different professionals within issuers, yet that is exactly my experience. In each of the companies I have worked for, we have had to develop extensive in-house training tied directly to the various SEC documents that have been released, and bring reservoir engineers, geoscientists, management and even accounting staff to a common understanding of the rules. My practice in teaching this material tells me that number of years of experience, professional affiliation or university degree are no indicator of understanding.

Consistent, industry wide training on the interpretation of Rule 4-10 is not, nor has it ever been, widely available, and nor is it likely to be for liability reasons unless the SEC themselves does it. Liability prevents independent petroleum consulting firms from offering such education, though some goes on “under the table”, and general results of SEC Letters of Inquiry are made as public as possible and shared through private discussions and industry association. I believe that the onus lies on the SEC to instruct issuers and market participants on their interpretations and expectations. Such a matter was not contemplated in your Concept Release “General Request for Comment”, and I believe it sorely lacking. Unless the SEC takes it on to insure that issuers and others know the expectations, any “improved” rule set will suffer the same problems. The Shell experience demonstrated the impact that a lack of common understanding and application can have. The recent commencement of posting SEC questions and resulting issuer responses is not an efficient way to communicate salient points of interpretation; the volume of information is high, issuer specific and not readily accessible.

Finally, before I specifically address the Commission’s questions regarding their rule set, there is the matter of the number of reserves rule sets available. It seems as if everyone who ever touches reserves has the desire to write their own rules. Some of the rules I am aware of include those written by the SEC, the Society of Petroleum Engineer (that has been merged with older rules authored by the World Petroleum Congress, and more recently, the American Association of Petroleum Geologists and the Society of Petroleum Evaluation Engineers), the World Bank, the United Nations, the United States Internal Revenue Service, and virtually every state, local and national government that has hydrocarbon potential. While there are lots of similarities between all of these, there isn’t consistency – the common usage of the categories of Proved, Probable and Possible despite universally different definitions being the most egregious.

Rule makers write rules that suit their goals. The SPE’s definitions are based on a technical framework, the SPEE’s are primarily economic, many state and local governments are for promotional or royalty/revenue maximization purposes, the IRS’s maximize tax, the SEC’s are about consistency and creating a level playing

















