

## Possible Revisions to Disclosure Requirements Relating to Oil and Gas Reserves by the SEC

### Introduction & Context

Prior to commenting on the 15 questions posed in your invitation document it might be constructive to set these comments in the context of the staffing and expertise of the SEC in the Oil & Gas area.

It is clearly important that *the* Regulatory body involved with valuing oil and gas companies should have a technical staff capable of working with their administrative colleagues, having the technical background to understand the new rules and to be able to explain these technical matters so that the SEC builds up a body of knowledge which will allow itself to be more transparent and informed about reserves calculation and probability.

Such an approach will also give the SEC a more professional appearance not only to the *companies* themselves but also to the *investors* and to the *Accounting Standards Board*, with whom I believe it is extremely important for the SEC to conduct a dialogue, and thereby promote a healthy relationship amongst all of the stakeholders.

Ideally, I believe such staff should be petroleum geologists & geophysicists, and reservoir engineers, having at least 10 years recent experience with an oil/gas company, working on the estimation of reserves. The possibility of secondments from industry, or indeed from the professional societies themselves, AAPG, SPE, IASB, for a period, might not be excluded; transparency in the workings of a regulatory body is absolutely essential

### SEC Questions

1. The most important aspect of reserves calculation relies upon the data which is available to go into the calculations. The rules will depend upon the nature of the reservoir rock, whether oil or gas, and its qualities. It is suggested that guidelines be drawn up with stakeholders to define the nature of the determinations to be utilised in a number of cases.

Consistency of approach to calculation of quantities, however defined, is crucial to maintain consistency and comparability.

2. Yes, provided that the circumstances are defined and the relevant guidelines issued.

Currently an investor does not have the full picture of a company portfolio, having only a *proven* number to rely on, currently with not even a level of certainty defined, upon which to base any (inaccurate) assessment of petroleum potential.

Were *probable* and *possible* estimates of reserves also to be included, together with even *undiscovered* estimates of yet-to find petroleum potential, it might be that a more accurate overview of the value of a company would be attained.

But the approach utilised should be laid down and methodologies defined and agreed amongst SEC and stakeholders, and especially the oil/gas companies.

Intrinsically there is no reason why non- conventional sources of oil/gas should not be included, such as gas hydrates, deep gas, oil shales, & tar sands. It is a matter of defining the nature of their inclusion so that everyone reports according to the same rules.

3. It is of paramount importance that SEC adopts a set of rules and criteria which are known and accepted by all stakeholders. Currently the PRMS System which has been formulated by SPE, AAPG, WPC, & SPEE is the best known.

The United Nations Framework Classification (UNFC) has the great advantage of being able to display variations visually and might be incorporated with some success.

It is unlikely that the basis of the reserves calculations will change with time, although it may be foreseen that the type of resource might. But if SEC is to continue its dialogue with stakeholders any variation should not be seen as an intractable problem.

4. Revision of the term *proved reserves* should certainly be undertaken, irrespective of whether the PRMS is adopted, and other types of resource incorporated as well.
5. 3D Seismic data, well drilling (geological) results, well logs and test results, together with cores taken from the reservoir are all crucial in establishing *oil* and/ or *gas- in- place* estimates.

The very nature of the hydrocarbon encountered will give a view about recovery factors and hence an idea of the proven amounts of hydrocarbon present.

Most discoveries have a number of wells drilled into the structure prior to being declared a *field*, so that it is not difficult to define the basic data that it is necessary to obtain prior to making any assessment of resource. One might even define the nature of the testing depending upon the lithology of the reservoir, present in the well, forming the reservoir rock.

One might take a selection of oil/gas fields and set up a group to consider what data is ideally required to come up with a resource assessment, and ask them to undertake calculations and reach consensus on the approach to be adopted in the future.

Whatever data is specified or allowed, it is mandatory that such data may be utilised anywhere in the world. Currently the use of 3D seismic data is restricted to the Gulf of Mexico.

This is not to say that this type of data should be employed in all cases of fields and discoveries, but that any new type of seismic acquisition or processing should be permissible provided its appropriateness is explained and understood.

6. Yes, and also incorporate the levels of risk to be assigned to other categories of reserves. Proven might be 90%, 2P, 50%; 3p, <50% Part of the guidelines should be to set down the limits of reserve probability so that everyone knows precisely what these are. Consistency and transparency within the confines of technical reality are crucial to maintain confidence in reporting.
7. One might consider a minimum time period for proved undeveloped reserves to remain in effect, before being re-evaluated; perhaps three years, depending upon the data being utilised. One might state that any discovery being evaluated with only 2D data, at present, might be re-evaluated now.

It is important that the SEC gives the lead to encourage companies to utilise the most up-to-date data in assessing reserves.

It is also essential that the SEC keeps up to date with technological advances in reservoir assessment and production techniques which impact on reserves and upon the economics of field recovery.

8. Any factor which influences the recovery of the amount of hydrocarbons in place, within a field, is an economic factor which should be disclosed since it affects the timing of development and therefore the value of the resource. The quality of disclosure, to investors, would be enhanced, by reference to such factors.
9. *Existing operating conditions* change with time, so that it important for the investor to know what these are, and for the conditions to be updated every three years.

There is no need to proscribe anything, simply to insist that they are updated, so as to be technically current.

10. The economics of a field will be dependant upon the price that can be obtained for the resource. The price can vary and using a fixed price at a fixed date can be attractive. However one might consider using a price range over a projected two-year period with the instruction to update such figures every two years if the discovery is not developed.

But it is important to specify that resource/reserve numbers are one thing, their value on production may be another; depending upon price.

11. Provided that any inclusions are explained and justified why seek exclusions. One wants honest and justifiable disclosure in an absolutely transparent manner. Come down hard on those that attempt to be opaque!

12. As 11

13. Why not treat unconventional resources in a different way and under a different category. Their assessment is quite different to that for conventional oil & gas reserves and they really should not be confused in the investors mind.

I would suggest drawing up a different set of criteria here with industry, specific to unconventional resources.

14. Advances in technology and the use of the technology are two different things and as I have said above the SEC should encourage companies to report using up to date techniques on the reserve portfolios.

To do this the SEC, as a matter of routine, having set up a technical group, as recommended in the Introduction above, should have regular meetings with industry to keep themselves current, and regular dialogue with oil/gas companies will ensure an effective conversation can take place.

15. Most major oil companies have the staff with the required expertise to produce accurate and structured disclosures.

For many companies however these individuals do not exist and thus to comply with requirements they employ contractors to carry out the work, just as a company will employ accountants to put in their tax returns.

Such is the technical complexity of resource evaluation however it would seem sensible for companies and individuals employed in such work to be "chartered" by the professional societies, so as to give credence and authority to their submissions.

The SEC itself might also make it a requirement for a certain number of their technical staff to be professionally qualified in this way.

## Summary & Conclusions

The above recommendations and observations are intended to be constructive.  
Thank you for the opportunity to comment