Reserves Reporting - What's it all about?

IHS Energy Considers the Issues Surrounding Reserves Reporting and looks at Relevant Regulatory Controls

Shell's recent announcement that 20% of its reserves were no longer "proved" prompted much debate over the reporting of such figures. But the issue has also led many observers and business analysts to ask about the current system of reserves reporting. Kenneth Chew, Vice President - Industry Performance and Strategy, IHS Energy, considers the issues surrounding reserves reporting and looks at relevant regulatory controls. IHS Energy enables oil and gas companies worldwide to create and maintain best-in-class decision-making processes by providing and integrating essential E&P information, intuitive software and consulting services.

Why do companies report reserves anyway? The purpose of reserves reporting is undoubtedly commendable and there are good fiscal and regulatory reasons for doing so. It also allows investors and the public at large to put a value on the assets of an E&P company and to make comparative analysis between companies.

However, this only works if all companies report reserves to the same standards and this is where industry regulators enter the picture. Financial accounting rules (and thereby reserves reporting) vary from country to country.

The most commonly used accounting standard, which is a requirement for all companies quoted on the New York Stock Exchange, is that of the US Financial Accounting Standards Board (FASB). Issued in November 1982, FAS 69 (Disclosures about Oil and Gas Producing Activities) provides the reporting and accounting rules and reporting formats for (1) proved oil and gas reserve quantities

(2) capitalized costs relating to oil and gas producing activities

(3) costs incurred for property acquisition, exploration and development activities

(4) results of operations for oil and gas producing activities

(5) a standardized measure of discounted future net cash flows relating to proved oil and gas reserve quantities.

The fifth item is one of the most contentious because it requires future cash inflows to be calculated by applying year-end oil and gas prices (no matter how atypical they may be) to year-end reserves, and bases future costs on year-end costs and the assumed continuation of existing economic conditions. As Shell said in its statement "The information so calculated does not provide a reliable measure of future cash flows from proved reserves".

Although the FASB makes the rules, the resultant company reports are filed with the United States Securities and Exchange Commission (SEC). Furthermore it is the SEC that has defined what is actually meant by the various terms incorporated into FAS 69, such as "oil and gas producing activities", "exploration costs" and, perhaps most importantly, "proved reserves".

Regulation S-X, Rule 4-10, where these definitions appear, was first published in 1978 and, although slight modifications have been made to it since that time, it remains essentially unchanged.

This has created numerous problems for companies because technology has not stood still in the meantime. As an example, advances in seismic such 3-D, 4-C and direct hydrocarbon detection, the use of huge computing power to make reservoir simulations, and probabilistic calculation methods all allow far greater precision in establishing in-place and recoverable hydrocarbon volumes than was possible a quarter of a century ago.

As a result of such technological advances, SEC engineers have been obliged on a number of occasions (e.g. June 2000; March 2001) to issue interpretations and guidance documents to assist companies in compiling their regulatory filings. It should be noted that such documents are generally accompanied by a header disclaiming responsibility on the part of the SEC for the views of its staff.

The SEC engineers themselves state that "it is difficult, if not impossible, to write reserve definitions that easily cover all possible situations."

Nevertheless, the thrust of the SEC proved reserves definition remains that companies may "disclose only proved reserves that a company has demonstrated by actual production or conclusive formation tests to be economically and legally producible under existing economic and operating conditions."

The interpretation of "conclusive formation tests" has become an issue in deepwater Gulf of Mexico, where companies are reluctant to conduct drill-stem and production tests for cost and environmental permitting reasons, preferring to rely on log analysis, wireline formation tests and cores.

Not only technology has changed in the past 25 years. Internationally, the widespread use of the production-sharing contract has also had an impact on what a company can report as "owned" proved reserves.

Given the fundamental uncertainty that exists about all reserves estimates (they are just estimates) and the varying possible interpretations that can be placed upon terms such as "reasonable certainty" and "conclusive", it should not be thought surprising that there can be a considerable variety of opinion on what constitutes "proved reserves".

Broadly, the SEC encourages a conservative approach, especially in the absence of supporting data. It also takes a conservative approach regarding frontier area developments, requiring some sort of evidence that the reserves will be developed, either in the form of signed sales contracts or a commitment to develop the necessary production and transportation infrastructure. It is probably on these grounds that Shell had to recategorise the resources associated with the super-giant Gorgon gas-condensate field on Australia‘s northwest shelf.

The SEC has not specified a confidence level for the certainty of proved reserves. The Society of Petroleum Engineers (SPE), on the other hand, has specified a 90% confidence level for proved reserves. It is interesting to note that the Russian oil company Yukos reported SEC proved liquid reserves of 10.45 billion barrels at end-2002 and SPE proved liquid reserves of 13.73 billion barrels.

In other words, the SEC reserves definition was even more conservative than the SPE's 90% confidence level in this instance.

So how useful are SEC proved reserves data?

As mentioned above, the SEC reserves definitions and guidelines have the merit of allowing company evaluations and inter-company comparisons of what otherwise would be a fairly subjective item, on the basis of reasonably standardized criteria.

While this may be the best solution as far as the protection of the public and the average investor is concerned, the need for standardization and the inbuilt conservatism result in a significant loss of information that could be of significant value to an informed and experienced analyst.

Some of the things that the SEC does not allow to be reported in filings are probable and possible reserves. Oil recoverable from oil-sand operations must also be excluded from disclosures about oil and gas producing activities (the SEC considers it as mining) although most companies describe oil-sand reserves separately.

The absence of data on probable reserves is a serious loss of valuable information. Canada's NI 51-101 - Standards of Disclosure for Oil and Gas Activities - requires a statement of probable reserves and permits a statement of possible reserves.

The Shell situation highlights this problem. While Shell's SEC proved reserves have diminished by 20%, the chances are that Shell's resource base - the total inventory of Shell's discovered hydrocarbon resources that are likely to be developed at some future time - has changed very little if at all. The recategorised reserves have simply been shifted from one pocket to another and will probably be shifted back again at some time in the not-too-distant future.

From an investor's point of view, it is valuable to know what is a company's assessment of its total resources. ExxonMobil gets round this difficulty by reporting its resource base and annual resource base additions in a "Financial and Operating Review" that does not have to be filed with the SEC. The 2002 Review makes for interesting reading. While ExxonMobil's SEC proved reserves at end-2002 stood at about 21.1 billion barrels of oil equivalent, the company's discovered resource base was some 72 billion barrels of oil equivalent i.e. only 29% of resources were reported as proved.

Another significant feature is that ExxonMobil's 2.2 billion barrels of new-field resource additions and acquisitions tells one what the company actually accomplished in 2002. By contrast, the 1.2 billion barrels of discoveries and extensions reported in "proved reserve" additions give no indication of how ExxonMobil performed as an explorer in 2002. It is quite possible for not a single barrel reported to the SEC as discovery and extension additions in 2002 to have been drilled in 2002. They may simply reflect earlier discoveries that now conform sufficiently to SEC proved reserves criteria to allow them to be booked.

A final example from Shell highlights this situation. In September 2001 the UK Department of Trade and Industry authorised the development of the Penguin group of fields in the northern North Sea. Shell's share of the proved resources of this development duly appeared as discoveries/extensions in its SEC filing in 2002. The first Penguin discovery well was completed in November 1974! But because the fields were not viable until advances in development technology took place (including a 65-km sub-sea tie-back), they first appeared as „discoveries“ almost 30 years after the initial discovery was made.

So, in summary, while the SEC's conservative definition of proved reserves may have the effect of protecting the investor, they also have the effect of depriving analysts and investors of much valuable information.

IHS Energy *(www.ihsenergy.com) enables oil and gas companies worldwide to create and maintain best-in-class decision-making processes by providing and integrating essential E&P information, intuitive software and consulting services. IHS Energy is a privately held, wholly owned subsidiary of IHS Group.*