SPEE Recommended Evaluation Practice #2 – Presentation of Hydrocarbon Production, Sales, and Lease Use Quantities in Reserve Reports

Issue:

The quantities of hydrocarbons (oil, gas, condensate, natural gas liquids) forecasted in a reserve report represent the basis for all cash flow projections. The U.S. Securities and Exchange Commission (SEC) regulations consider reserves as proved if economic producibility is supported. As the term economical producibility infers quantities that are involved in a commercial transaction, it follows that a SEC reserve report should project sales quantities of hydrocarbons, rather than some other quantity, such as production.

SPEE recognizes that preparers of reserve reports[1] often report quantities other than net sales for a variety of reasons. Examples observed include:

1. Gross Production Stream - with the production stream unadjusted for lease fuel use and/or line loss/measurement loss;
2. Gross Production Stream - unadjusted for non-hydrocarbon impurities, such as CO_2 or H_2S, etc.;
3. Predominance of Production Data - Due to governmental reporting requirements, it is more common to have gross production data available rather than net sales data, or there may not be sufficient data to determine net salable quantities;
4. Need for Gross Production Stream Reporting - reasons may exist for gross reporting, such as royalties or taxes based on production, calculation of reversionary interests or production payments based on production quantities;
5. Reservoir Analysis – accounting for total fluid production to facilitate proper reservoir analysis.

Lease Use

Lease use volumes and line loss/measurement loss represents volumes that are consumed or lost between the wellhead and the point of custody transfer. SPEE has observed a variety of treatments of these volumes, including:

1. Ignoring these losses altogether;

[1] The terms "Preparers of Reserve Reports" or "Preparer" are used herein to signify the person(s) responsible for the contents of the report.

2. Adjusting produced volumes downward;
3. Adjusting operating expenses upward to reflect lease use;
4. Adjusting product prices downward to reflect net realized price;
5. Adjusting production tax rates to reflect net realized revenue;
6. Presenting additional cash flow summaries with negative volumes to represent the lease use.

Purchased Gas

In some instances, operators may purchase gas from third parties for lease use fuel, gas lift use, or re-pressuring. Operators generally desire to carefully account for purchased gas for reasons such as to avoid paying duplicative royalties or production taxes and ensuring proper accounting treatment

SPEE Recommended Evaluation Practice:

SPEE's recommendation on the presentation of hydrocarbon volumes is to present net salable volumes, i.e., lease fuel should be deducted from the volume available for sales. For instances where the preparer of the reserve report chooses to handle these reductions in another manner, the cover letter should discuss the treatment in a manner that leaves the user with a clear understanding.

SPEE further recognizes that in some cases, the difference between gross production and net salable quantities is immaterial. The term immaterial is generally used to indicate that the difference is so small that it can be ignored. In many general situations, a value of +/- 10% is often used as a threshold of materiality absent an agreement otherwise. SPEE believes that 10% is too high for a threshold of materiality for gross production versus salable quantities for hydrocarbon production. In the context of the difference between gross production and net salable volumes, SPEE suggests a threshold of materiality as being the level of non-hydrocarbon impurities allowed by usual and customary sales agreements in the region. For example, many U.S. gas sales contracts allow for contaminants up to 2%. If the preparer of a reserve report chooses to ignore immaterial differences between gross production and net salable volumes, SPEE would recommend that the preparer consider the level of non-hydrocarbons allowed in usual and customary sales agreements as a threshold of materiality.

In situations where there are third party purchases of hydrocarbons that are utilized on the lease, SPEE recommends that the preparer of the reserve report consider including a separate cash flow projection that illustrates the purchase situation as either an operating cost or a capital investment, depending on the particular accounting treatment chosen by the owner. For instances where the preparer of the reserve report chooses to handle these reductions in another manner, the cover letter should discuss the treatment in a manner that leaves the user of the report with a clear understanding of the issue.