Gas Market Fundamentals and Commercial Considerations in the E&P Industry

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Abstract

Exploration projects sometimes fail to deliver on economic expectations for reasons other than resource performance. Price swings in the dynamic gas and oil commodity markets can strip profitability from programs. Service costs also track these price swings with a brief time lag. As a result, untimely development can lead to severe value destruction.

Netback economics can be eroded further by the surprise of unanticipated costs in getting a hydrocarbon from the wellhead to a market interface. The value of gas or oil depends on which market it is delivered into and on its quality. The cost to transport gas, for example, to a market at a pipeline interface may change with time depending on capacity on the pipeline, market area demand, and changes in quality. Gas from the Gulf of Mexico typically requires processing to remove hydrocarbon liquids or separation to remove oil or water. These processes, which can apply to both gas and oil, add costs frequently not fully accounted for in base case economics.

Although the workings of any commodity market are complex, a few fundamental indicators can help managers understand the direction of gas price at a particular market hub. Moreover, a few economic benchmarks help in our understanding of the relative value of gas compared to fuel switching alternatives, such as coal. This advantage, however, does not exist for oil, a global commodity where the Organization of Petroleum Exporting Countries (OPEC) controls a significant portion of world capacity. However, for oil, particularly in the Gulf of Mexico, a few commercial considerations pertaining to market access and quality can help an exploration manager better understand both project risks and economics as it pertains to the market.