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Seizing Opportunity in Unconventional Hydrocarbons



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EXECUTIVE SUMMARY

For the past several years, leading major oil companies and independent exploration and production companies (E&Ps) have viewed unconventional resources as key elements of future energy supply. As a result, they have poured a significant portion of their investment capital into heavy oil, shale gas, tight gas, and coal bed methane. However, the economic crisis and subsequent reduction in financial liquidity in companies worldwide threatens the growth prospects for North America's unconventional hydrocarbon resources.

In light of the economic climate, leading unconventional gas producers are reducing their capital budgets and, in some instances, shutting down production entirely. For example, Chesapeake Energy Corporation, citing wellhead prices “substantially below industry break-even costs,” curtailed a portion of its unhedged mid-continent production. In just the past few weeks, leading oil sands sector participants including BA Energy, Nexen, Petro-Canada, and Suncor Energy announced significant project delays or cancellations. So, as Canada’s *Globe and Mail* queried, Will unconventional projects and jobs be incinerated by the crisis? We believe not. Oil sands and shale gas, in particular, have become pivotal sources of North American supply growth. A number of elements support the likelihood of continued

development of these resources: the underlying fundamentals of supply and demand dynamics (i.e., as the price decreases, more resources will be consumed); the environmental and other benefits of gas versus other fuels for power generation; and the potential for governments to pursue greater energy security.

The recent decline in unconventional activity stems from its capital-intensive nature and the pace at which participants had sought to exploit the resources. For example, the Canadian Energy Research Institute’s latest study estimates that capital expenditures of more than \$300 billion Canadian (US\$251 billion) will be required during the next 20 years to realize the full potential of oil sands resources. As another example, a Booz & Company analysis of 10 mid-cap natural gas

producers found that the median company had outspent its operational cash flow by 130 percent during the past 12 months. Clearly, access to capital is a necessity for unconventional producers.

Now that capital is not readily available, the financial crisis is contributing to a significant restructuring of the competitive landscape. “We need to live within our cash flow” is the refrain management teams have repeatedly expressed, as there is little capital available. Due to the credit discontinuity, it is likely that some of today’s unconventional participants will not survive—at least not in their current form. Yet, based on similar discontinuities in other industries, we have seen that those companies with the foresight to not only cut spending, but also go further in identifying and acting on ways to capitalize on market opportunities, can secure competitive advantage and prosper.

Unconventional Resources Offer Significant Potential

Over the past three years, strong global demand, robust commodity prices, improved technologies, and readily available capital led some companies to significantly expand production from North America’s

unconventional resources—both oil and gas. On the oil front, Canadian oil sands production reached 1.2 million barrels per day during 2007 and recent forecasts indicate production will increase to 2 million barrels per day by 2012.

Unconventional gas production has also shown a surprising increase, especially in light of recent dire predictions regarding North America’s imminent dependence on imported liquefied natural gas. For example, the Barnett shale alone contributed almost 900 billion cubic feet to domestic supply during 2007. Based on significant growth from the Fayetteville and Woodford shales, as well as several tight gas plays in the Rockies, the Energy Information Administration (EIA) projects that unconventional natural gas will represent almost 50 percent of total domestic production by 2012.

The Economic Crisis Increases Uncertainty

Declines in global demand growth and commodity prices related to the economy represent significant hurdles. From a global supply perspective, unconventional resources hold a marginal position. In addition, oil prices have already dipped below the most recent break-even price estimates

of \$80 to \$115 per barrel for new integrated oil sands developments. The story for gas is no different—the projected break-even costs of many emerging basins exceed current prices, as evidenced by several producers’ recent plans to curtail production and capital expenditures.

So, is the promise of unconventional resources now a historical fallacy?

No. The underlying fundamentals support continued development of unconventional resources in three ways. First, global supply and demand balances, albeit less aggressive than previous estimates, call for continued growth in unconventional production to offset declining supply from more mature, traditional sources. The demand outlook for unconventional natural gas is also supported by its potential to reduce carbon emissions by supplying a larger percentage of power generation needs. Second, major oil companies have fewer opportunities for new development, as challenging international environments offer limited access or unfavorable terms—thus they have a great incentive to use technology and other means to ensure that unconventional resources are economically viable. Finally, declining oil prices will decrease inflationary cost pressures that have plagued

development investment over the past several years, thus softening the impact of declining commodity prices on project economics.

Finding Competitive Advantage in the Face of Uncertainty

On the other hand, the crisis is contributing to significant change in the competitive landscape. Traditionally, access to resources coupled with access to capital drove success in the unconventional sector. This fact is illustrated by the number of small and medium-sized players that accumulated large leaseholdings and employed leverage to generate short-term success in production growth as well as valuation and share price performance.

However, it takes more than just a large land position and aggressive drilling to create shareholder value in the face of an economic slowdown. Now that capital is not as readily available, high-quality resources, lower operating costs, and technological advantage will determine which companies have the staying power to capitalize on long-term opportunity in the unconventional segment. There are three steps that companies can take during the downturn to improve their positions over time. These steps

are equally applicable to well-capitalized companies and those facing liquidity issues, and may actually generate incremental capital or improve liquidity.

1. Companies should look for opportunities to expand their unconventional portfolios through mergers and acquisitions. Large companies with healthy balance sheets will likely find a multitude of opportunities, as some small and mid-cap players will be unable to raise additional debt or equity capital and will be forced to divest assets or consider selling their companies. In recent work with an oil sands participant, Booz & Company identified a number of attractive takeover prospects whose current market values did not appropriately reflect the inherent value of their project portfolios.

Inorganic growth isn't just for the cash-rich. What the industry needs, perhaps, is a wave of mergers of equals akin to what we saw in the late 1990s, when like-sized companies combined operations to form larger entities. This would allow smaller players to improve their capital positions, increase potential cost savings, and position themselves for market turnaround.

Furthermore, there is potential in joint ventures: Chesapeake Energy, for example, has demonstrated the benefits. It has raised more than \$5 billion in capital, including upfront payments and guaranteed payments for future capital expenditures, through recent transactions with StatoilHydro in the Marcellus Shale and BP in the Fayetteville Shale.

2. Unconventional producers should focus their capital spending on opportunities to advance or create competitive advantage. The nature of unconventional assets versus conventional resources—including differences in capital requirements, reserve life, the role of technology application, and interdependence between midstream and downstream assets—suggests that there are unique opportunities for competitive advantage in unconventional development.

Market leaders will continue, and possibly accelerate, investments that establish and sustain these benefits. Moving forward with the construction of an oil sands upgrader could force a competitor to cancel its plans for a similar project. Expanding gas-gathering and -processing facilities in a particular basin could allow a

company to dictate the future development of that area. Collaborating with suppliers to secure access to manufacturing capacity and advanced technologies can create advantages in resource recovery and cost. Such forward-thinking initiatives can change the competitive landscape significantly. To make such decisions, companies must examine the near-term potential and long-term option value of their capital portfolios. This will help them prioritize investment decisions. Divestments might be needed to mitigate limited capital availability and high-grade opportunities.

3. Future winners in the unconventional sector will distinguish themselves by demonstrating superior operational and technical capabilities. As we have discussed in previous publications, economies of scale in unconventional projects can best be realized through use of a tailored business model, one that separates simple, easily repeated activities from more complex, customized efforts.

In recent assignments with unconventional gas producers, we have found that reviewing the surface access process and addressing existing bottlenecks can reduce producers' cycle time by 20 to 30 percent. Those companies pursuing such an advantaged model to its full extent—for example, segmenting rig lines by complexity—will ultimately enjoy lower expenses for finding, developing, and lease operating, thereby providing incremental capital for reinvestment in production growth.

Unconventional resources have the potential to redefine the competitive landscape. They are needed to meet future growth in demand and their economic fundamentals, including the relationship between realized price and costs, will adjust to allow economic participation in global supply. Still, not all companies will survive the current crisis. The lack of liquidity among many unconventional E&Ps, as well as the fact that lower prices will spotlight economic disadvantages, will force many players out of the market.

Such discontinuities represent opportunity for those who exploit them. The companies that pursue competitive advantage in the face of the crisis will view their markets as George S. Patton viewed the battlefield: “Nobody ever defended anything successfully, there is only attack and attack and attack some more.”

Endnotes

¹ Andrew Steinhubl, Glenn Klimchuk, and Herve Wilczynski, "Building the E&P Factory: Lessons from Leaders in Other Manufacturing-Based Industries," Booz & Company, June 2007: http://www.booz.com/global/home/what_we_think/reports_and_white_papers/ic-display/41901972

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