CRIPPS SEARS & PARTNERS

SM E&P NETWORKING FORUM
16TH NOVEMBER 2012 - MINUTES

Shale Gas, unconventional hydrocarbons

There was a broad discussion around the impact and role of shale gas and in particular for Europe. The shale business is currently a capital intensive low margin resource play which in its present form works well in North America but does not in the short term fit in Europe, with perhaps one or two exceptions. Some 120 Billion $ have been invested into the domestic unconventional ventures by the US E&P industry in the last 4 years. The margins and returns are clearly impacted by gas price volatility. The North American shale industry has a number of key advantages over Europe, including lower population densities in shale prone areas, economic alignment with all the stakeholders (e.g. royalties to landowners creating an incentive to allow exploration) and a greater service industry to support activity. Also, in North America there was a greater need to exploit domestic resources.

The need for a European rather than North American shale industry model was also acknowledged. It was also felt the shale industry had to improve its public perception; what was needed was a successful, producing unconventional gas venture in Europe through which the Industry could demonstrate safe and clean operations. This could help, say, in the UK where currently over 20% of the supply comes from the Middle East as LNG and a properly shaped shale industry could change the security of supply. It was noted that the UK government took a much more factual and rational approach to the Shale Gas question than governments in e.g. France and Germany, where the discussion has turned in to a "religious" debate. Europe cannot be seen as a unity for unconventional hydrocarbons. While the development of the new technology in West European countries is likely to be slow, several of the central and East European countries are eager to get a greater energy independency from Russia and are pushing unconventional gas exploration (e.g. Poland, Ukraine). A success in these countries would most likely induce a change in the public perception in Western Europe. Other countries are looking to boost domestic resources, such as China, although potentially at some environmental cost. This need for security is also influencing conventional gas resources, such as in Israel.

There was a consensus that substitution of oil by cheaper gas and the increasing liquid production in unconventional ventures would lead to a much longer oil plateau rather than a peak.

Investment, availability of capital

The access to capital remains ones of biggest issues, particularly for the smaller companies. It was noted that one of the biggest providers of capital is the USA and yet the flow of US investment into international projects is relatively low. Several reasons were put forward for this. The main one is that there are more than enough investment domestic US investment opportunities, particularly in shale projects. In addition, US investors and US E&P companies have, by and large, not fully understood international opportunities, particularly the various non-geological risks and uncertainties. It was noted that a number of farm out opportunities outside the US are coming from US companies, which in the past would not have considered such moves. This creates additional opportunities for European

companies in e.g. the North Sea, especially since the Majors have also been reluctant to play in this mature area. The intermittent flow of capital could have an impact on the global hydrocarbon reserves and the longer term use of energy. However, it was also noted that since 1970 proven worldwide gas reserves have continued to increase and have grown by a factor of over 400 since that time, predominantly through additions in conventional gas.

In general it was felt the flow of capital had not greatly improved over the last year. There is some capital available for "in vogue" exploration plays, but it remains limited for development opportunities, especially since the access to appraisal funds is severely limited. Banks do fund developments, post-appraisal, where sufficient proven reserves guarantee predictable economics. The ratio equity / loan, required by the banks for the North Sea used to be in the range of 20/80 but is more likely to be 50/50 at present.

Criteria for loans are thus becoming harder and projects undergo much closer scrutiny. J.P. Morgan's prime criteria for investment are (in order of importance):

1. Geography, country risk
2. Quality of asset
- Quality of management team and track record
- Upside potential of the asset

For deep water exploration smaller companies need greater capital to cover the downside contingencies such as the need for a relief well. The banks capacity continues to be affected by regulatory issues, such as the Basel capital adequacy limits. When it comes to developments capital providers are risk averse and funding decisions will be based on development complexity, political risk and the quality of the supporting third party analysis in a CPR or equivalent.

Shares of E&P companies continue to trade low; the stock value of some E&P companies is lower than their cash in bank.

Macondo

Two and half years on from the Macondo blow out the question was raised on what impacts had been seen. For deep water activity there has clearly been an increased involvement of HSE staff. However, for a number of operators there have also been delays in development activity as all project execution has been reviewed from an increased HSE perspective. Lead times have increased significantly and have doubled in some cases; companies and Governments are not taking any risks. It was felt it is harder to get wells approved and this has had an impact on deep water drilling, although some felt that complacency was drifting back in, perhaps in those countries with less rigorous controls. Certainly insurance premiums have been increasing following the Macondo incident, having even reached prohibitive levels for some small companies. Conditions for new entrants are becoming increasingly difficult as the authorities request proof of deep water operational experience.

Large companies may be able to "afford" a Macondo incident, smaller ones not. It was mentioned that e.g. Tullow would not have survived Macondo.

Frontier Plays

It was noted that certain developing countries that have had some frontier exploration success were rapidly increasing the cost of entry into new licences despite the relatively immature nature of the acreage (e.g. Kenia that has introduced a compulsory 1 MM $ signature bonus for all blocks). There was also a trend to only award blocks in licence rounds. It was felt that this was in part due to the role now being played by the seismic acquisition companies. They are persuading Governments to allow spec seismic to be acquired that would then form part of the data package to accompany a licence round. It is becoming more difficult for smaller companies to get open acreage and work up the geological story before seismic is acquired. One suggestion was for those companies to work more closely with the seismic acquisition companies to develop a more complete geological picture in return for an acreage position.

A way to reduce initial cost would be for smaller companies to team up in the early seismic acquisition and acquire spec seismic over a larger area.

North Seas

The last licencing round had been very successful. An emerging problem are old fields as well as basic installations and key processing and transport assets that form the backbone of the North Sea infrastructure; they are still needed by others but often have limited or no more value for the owner. There are generally no takers in attempted asset sales. A possibility would be that the government would take over some of the key assets. An alternative would be to facilitate a change of hands through tax reliefs.

Andy Crouch, Peter Burri, 22 November 2012

The next SM E&P Meeting will be held on Friday 10th May 2013.