

Unconventional Resources around the World: Company Strategies for Dynamic Global Markets*

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Abstract

As falling commodity prices have left North American unconventional gas plays increasingly unprofitable, operators and investors have been forced to look at alternative unconventional opportunities - North American tight oil and international shale gas.

In this presentation, we will outline the most important pros and cons for each investment theme from a commercial vantage point. For many operators and investors, the portfolio benefits and price risks in tight oil plays compete head-to-head with the low entry costs and unproven geology of international gas.

In Wood Mackenzie's view, large portfolio players (majors and large independents) will continue to increase their investments in both North America tight oil and international gas plays. Niche investors (exposed to one or two plays) will be forced into US liquids plays. Supply players (NOCs and utilities seeking access to volumes) will invite experienced unconventional operators to participate in their domestic gas opportunities and NOCs will partner with experienced operators to access North American liquids plays.

We expect competition to further intensify in the North American tight oil market with more cash-rich companies seeking to acquire acreage in producing plays. While in international gas plays, larger companies will seek sizeable positions in the most promising shale gas assets, with supply players controlling access where they can.

Wood Mackenzie: Unconventional Play Service

Unconventional Resources Around the World: Company Strategies for Dynamic Global Markets

22 May 2013

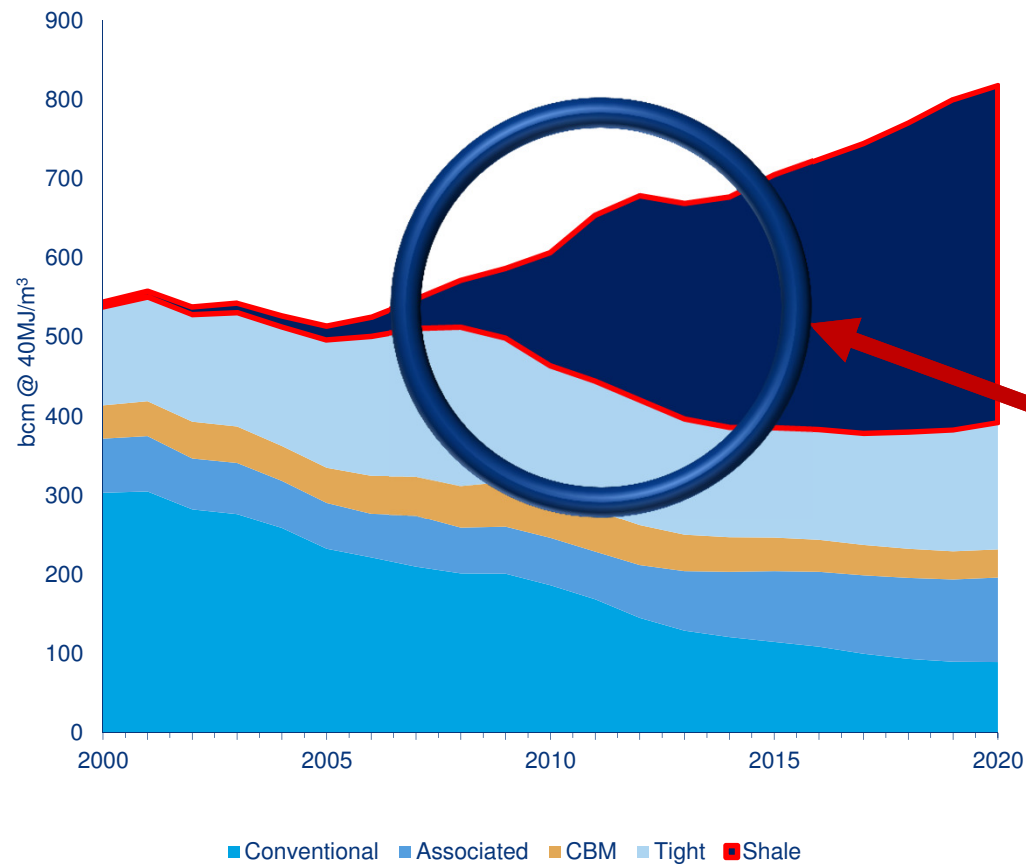


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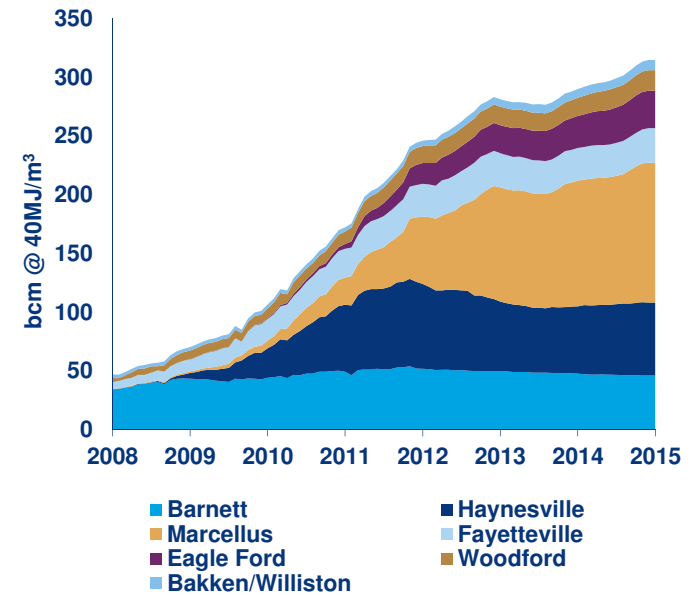
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The US “shale gale” overcame its own set of headwinds

Total US shale supply forecast

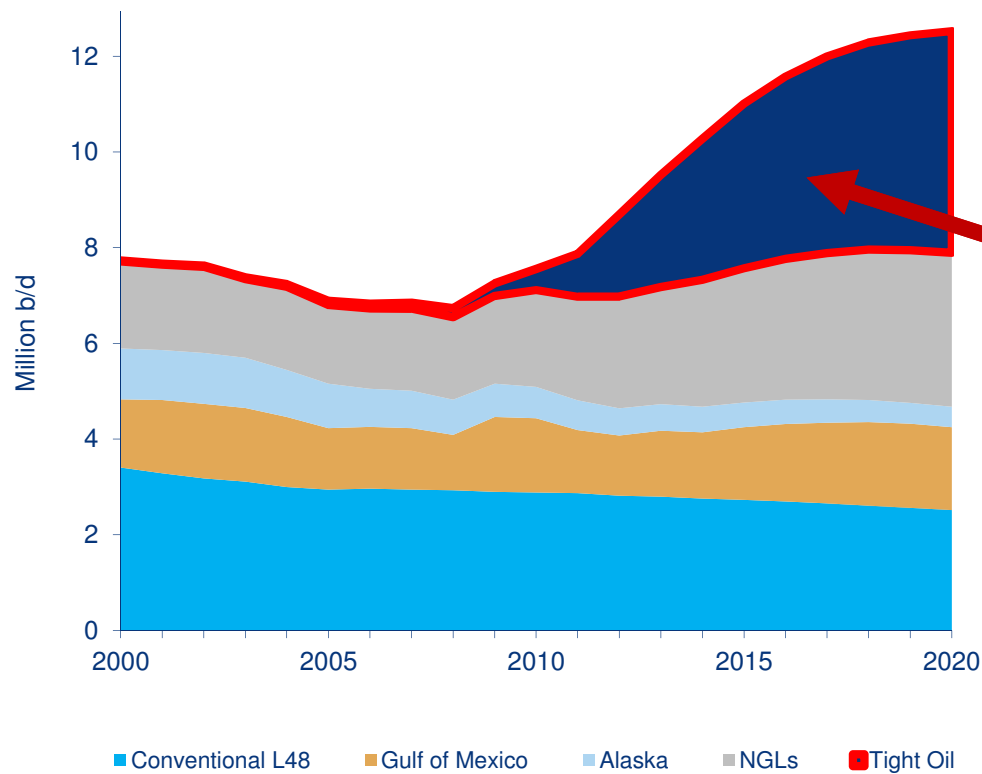


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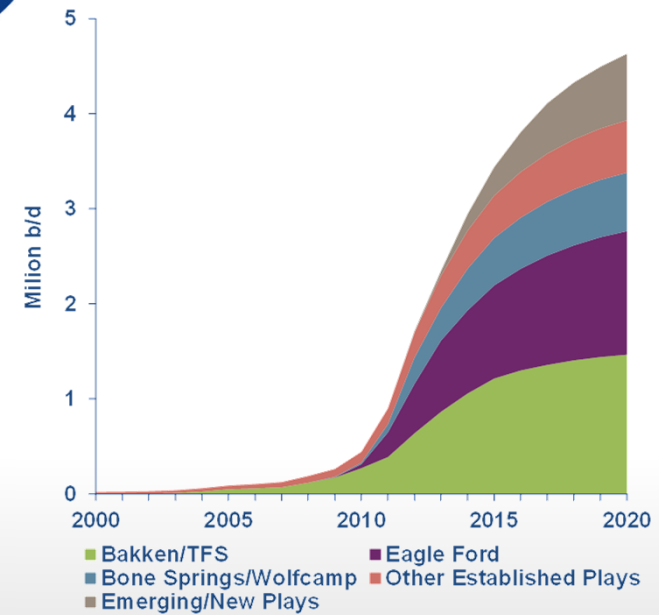


This type of growth will be replicated with oil production

Total US liquids supply forecast

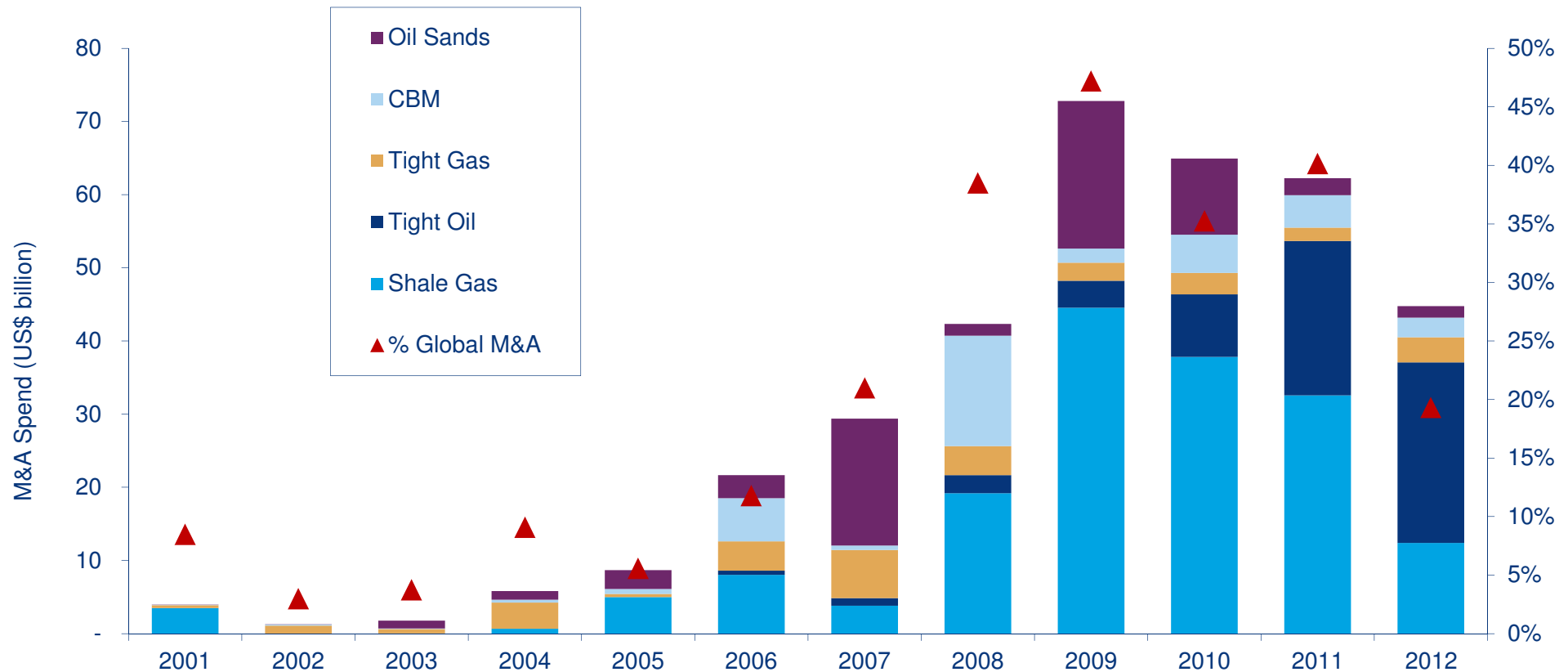


Play detail



There are many elements to the globalisation of unconventional plays, one being their impact on worldwide M&A

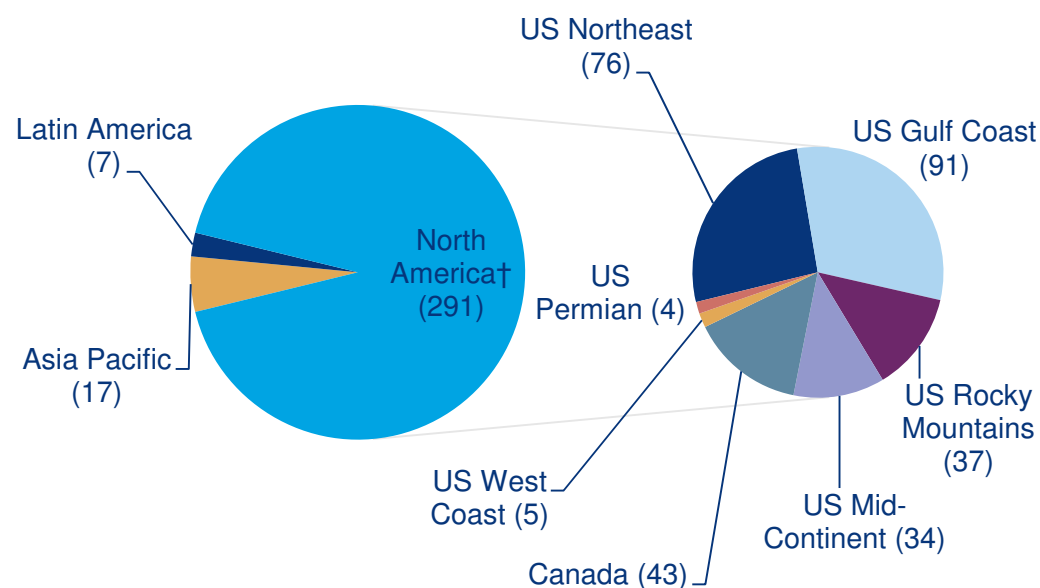
Annual M&A spend in oil sands and unconventional plays



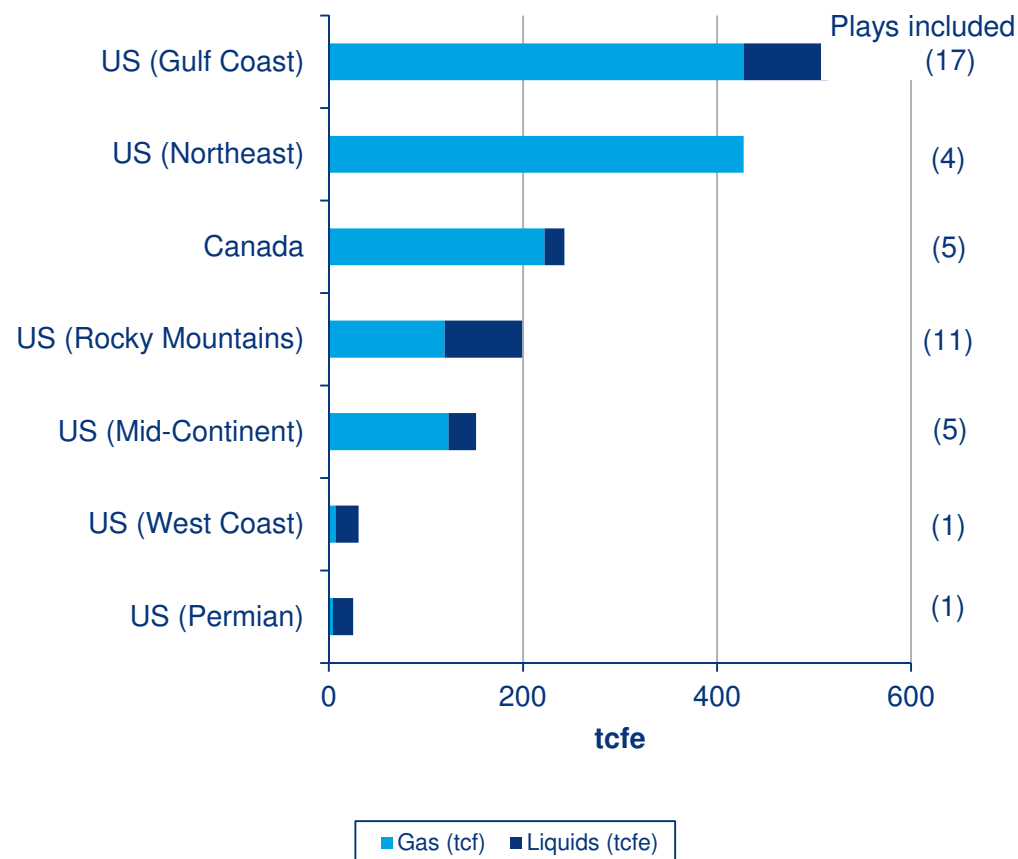
Source: Wood Mackenzie

The majority of total resource* from producing plays sits in North America, and despite operators' shift to tight oil, volumes are mainly gas

Resource (bnboe) in plays producing >20k boe/d



Gas/Liquid Commercial Volume Split



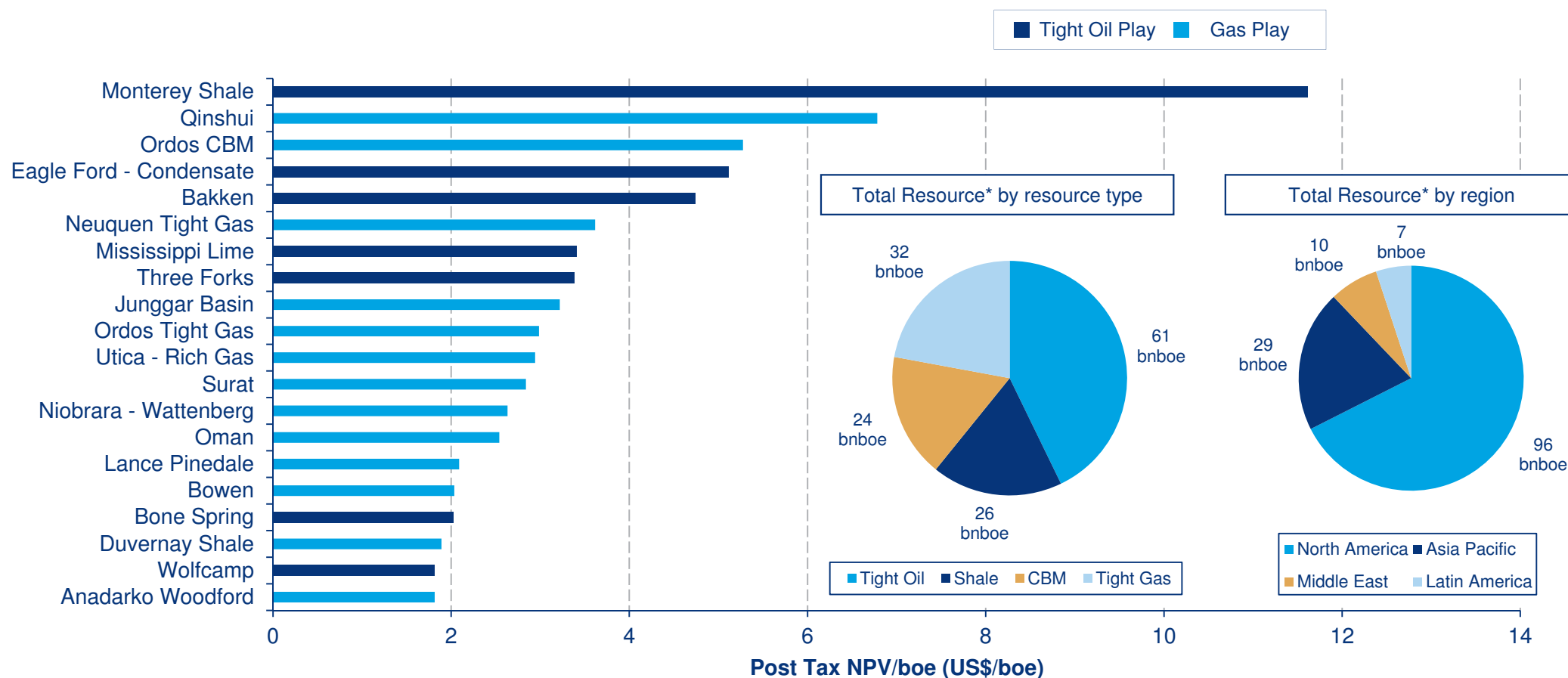
Source: Wood Mackenzie Unconventional Play Service

*"Total Resource" includes resource potential and commercial resource volumes

† Rounding means sub-pie total does not equal 291 bnboe

North American tight oil plays offer the highest value volumes

Post Tax NPV/boe (US\$) for the twenty most valuable global plays > 2 bnboe total resource*

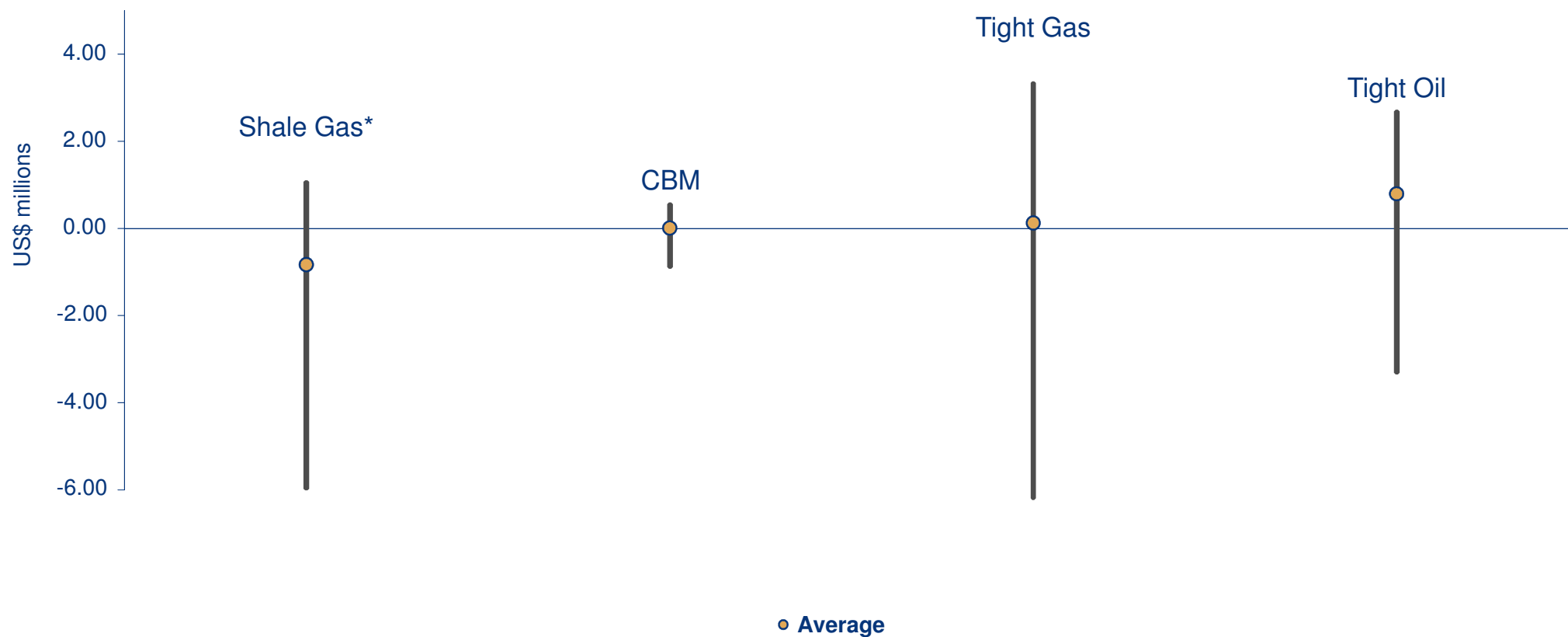


Source: Wood Mackenzie Unconventional Play Service

* Total Resource" includes resource potential and commercial resource volumes

Not all resource themes, and certainly not all plays, are created equal

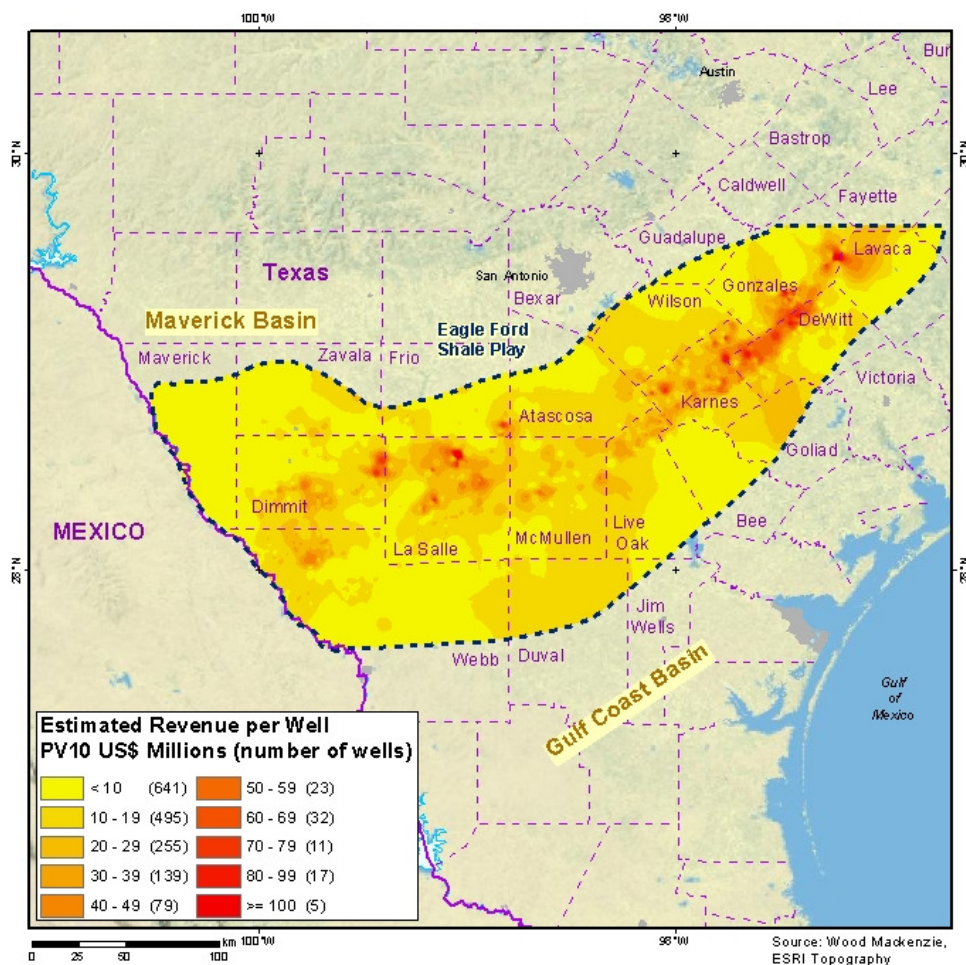
Post-tax NPV/well ranges in North America



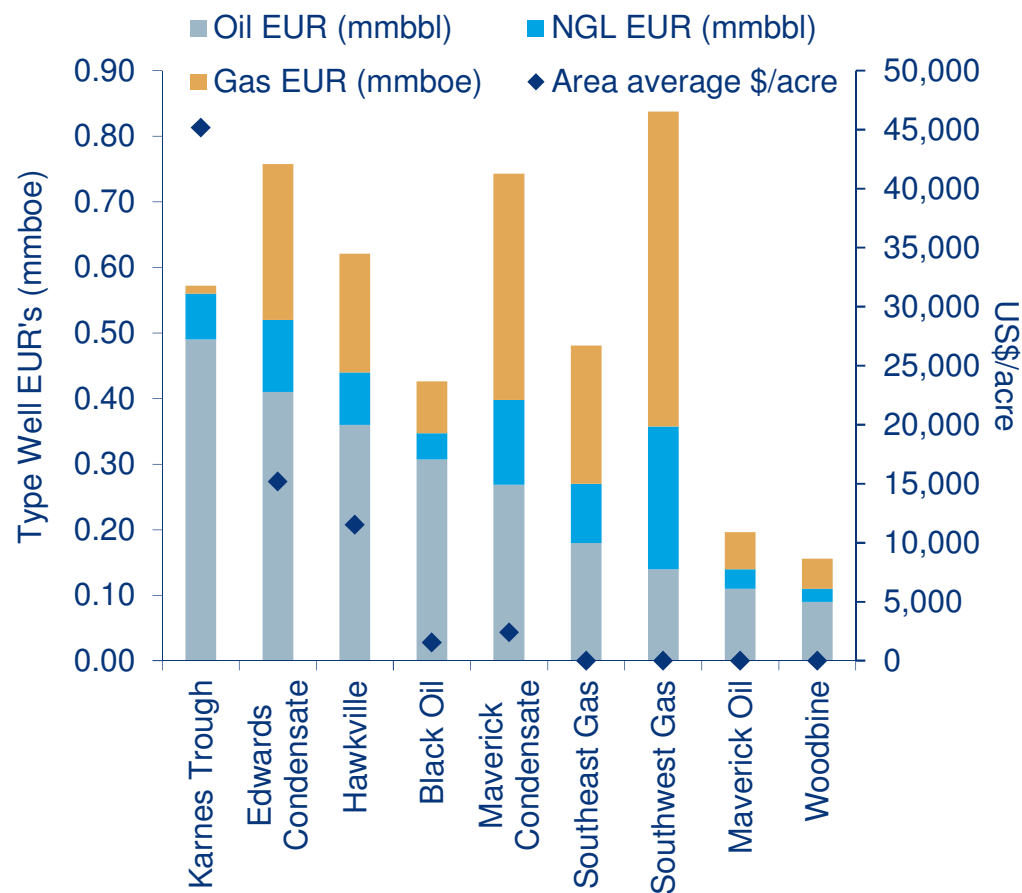
Source: Wood Mackenzie's Unconventional Play Service, * Excludes numerous wet gas plays

Expect wide differentiation within each and every play

Eagle Ford revenue by well heat map



Eagle Ford EURs and acreage value



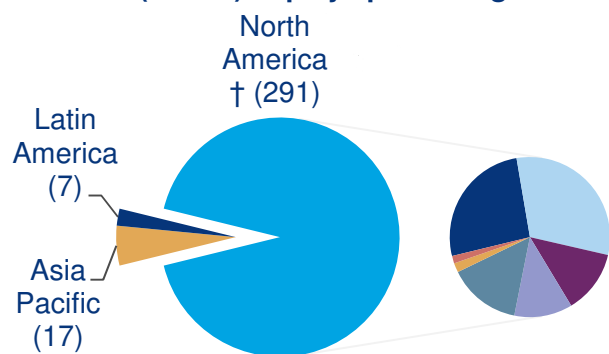
Source: Wood Mackenzie

Numerous areas are global unconventional exploration “hot spots”

Latin America:

Liquids and gas prices are improving and shale formations are being evaluated by experienced unconventional gas operators.

Resource (bnboe) in plays producing >20k boe/d



Russia:

A mix of majors and Russian companies have committed capital to assess the enormous Bazhenov play.

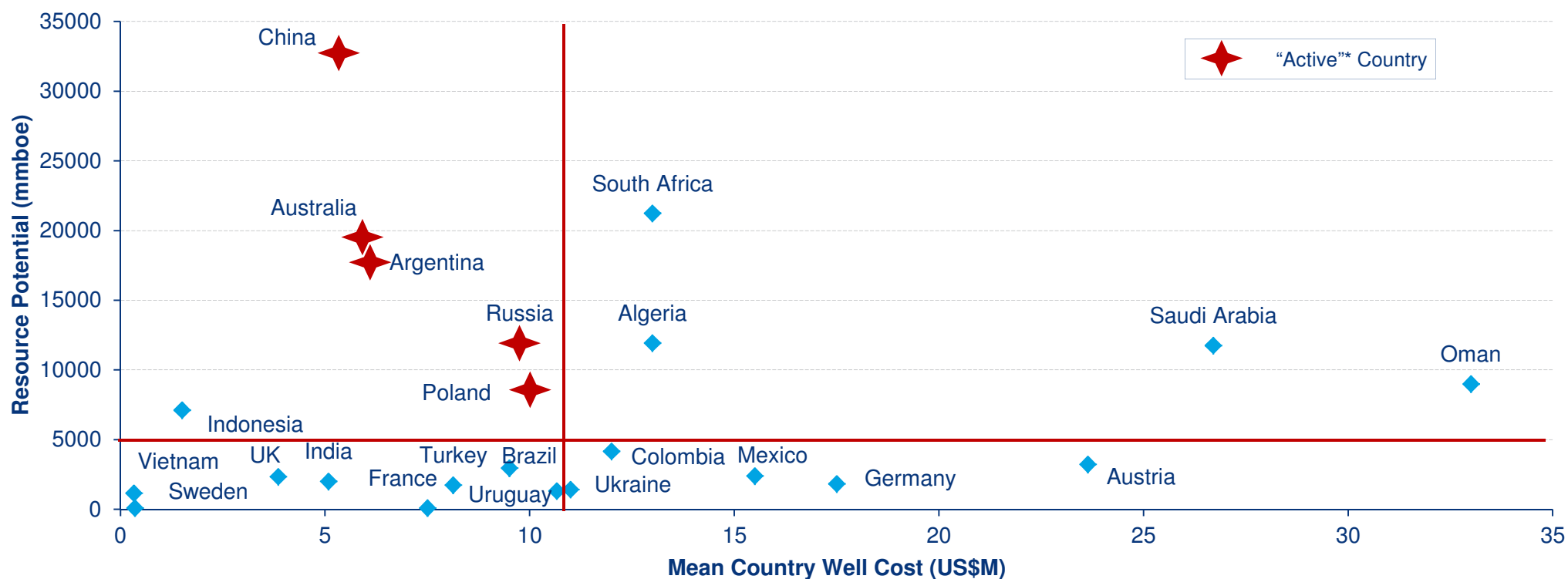
China:

Production targets are being raised, subsidies are being established, and a more diverse group of companies is being allowed to bid on shale acreage.

Source: Wood Mackenzie Unconventional Play Service

Internationally, the countries with most activity combine low relative costs and high volumes

Resource Potential vs Mean Country Well Cost for International Plays



Source: Wood Mackenzie Unconventional Play Service

* 'Active' country refers to a country with a relatively high level of drilling and corporate activity (e.g. farm ins/outs, M&A)

The best strategy for participating in the unconventional sector, whether it be via North America oil or international gas, varies by company

Categories and Corporate Examples

Portfolio



Niche



Supply



Risk tolerance and planning horizons will impact tight oil activity

Tight Oil Strategy Table

	Primary Appeal	Primary Drawback	Most likely entry approach
Portfolio	Flexibility to produce liquids when oil prices are high.	Scale may be too small to impact corporate reserves replacement ratios.	A medium to large scale acquisition of a liquids-focused North American independent.
Niche	Positive cash flow and quick pay back.	High risks in new plays or play extensions.	Build out existing positions in liquids-rich plays, and lease low cost acreage in emerging plays.
Supply	Potentially scalable liquids production.	Challenging to make the right investment decisions without local knowledge.	Partner with local experts to gain access to resource and expertise.

International gas is, in our view, more of a supply story

International Gas Strategy Table

	Primary Appeal	Primary drawbacks	Entry Approach
Portfolio	Large accessible resource volume.	Long lead times between licensing and production means concepts might not survive successive portfolio reviews.	Licensing large blocks with lengthy initial 'exploration' phases in a range of countries.
Niche	Low entry costs and 'company making' resource potential.	Potential for markets to turn on limited data points.	Accessing blocks in countries where the company has connections or legacy conventional positions. North American independents will be conservative with international positions.
Supply	Opening up a resource that improves domestic supply.	Lack of technical expertise	Partnerships with more technically proficient partners in domestic plays.

Contacts

- › Visit Wood Mackenzie at Booth #1919 to see our latest research and speak directly with us
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