ORAL PRESENTATION

Day 1: 3rd April 2019

Session 1: Commercial Environment

Chairs: Ian Cross - Moyes and Co, Andy Butler – SundaGas

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8:55	Exploration Update and Global Fiscal Terms	Andrew Latham	Wood Mackenzie
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9:45	Where Do Producer Governments in Asia Go Next?	Rachel Calvert	IHS Markit

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The Global Energy Landscape

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THE CHALLENGE AHEAD: ENERGY COMPANIES NEED TO STEER THROUGH CYCLES AND TRANSITIONS

Energy companies face tremendous short and long-term challenges. Short term, the challenges are related to volatile energy prices, illustrated by the oil price slide in Q4 2018. Rystad Energy has developed a proprietary model using system dynamics to understand market dynamics. Key insights from these simulations will be shown, e.g. how shale has increased the market volatility and shortened the cycle time.

Longer term, energy companies and governments must prepare for the energy transition away from fossil fuel. **It is not IF, but WHEN** this will happen, as oil demand will peak and renewable electricity generation will become very competitive. Investments in new energy sources have a very different risk-reward profile versus traditional upstream investments and capital cost will need to be much lower, very different from the current equity-based funding of capacity development. Thus, are current energy companies natural owners of tomorrow's energy infrastructure? How fast will the transition happen and what kind of financial and organizational transformation do we need to see? And which role should, and could governments take? How does this impact E&P companies around the world?

SPEAKER BIOGRAPHY

Jarand founded Rystad Energy in 2004 and is managing the company. Jarand has extensive experience in oil and gas strategy advisory work from McKinsey and Rystad Energy. He has led a number of strategy projects for international oil and gas companies and oilfield service companies. He has also worked with governments and international organizations on topics related to the global energy agenda. He is among the most cited petroleum analysts in the industry. His areas of expertise include E&P strategy, transactions, macro and oil service industry analysis, including decommissioning market studies. Jarand holds a M.Sc. degree in Physics from the Norwegian University of Science and Technology.

ORAL PRESENTATION

Exploration Update and Global Fiscal Terms

Andrew Latham[1]

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The exploration industry has successfully reset its economics. Since 2017 the value of new conventional discoveries has comfortably exceeded their cost of discovery, with full-cycle returns well into double digits. The past two years have seen the best value creation for a decade, despite lower oil prices.

Improved exploration economics have been achieved by lower costs and a sharper focus on play commerciality. We see much more emphasis on prospects with a straightforward route to development.

This new commercial focus has not been achieved by a retreat to low-risk, near-field drilling. Quite the opposite. The lion's share of new volumes, and the best returns, have come from high-impact wells in new plays and basins. Around 50% of these volumes lie in deep-water.

Less is more. The industry is now leaner, more efficient, and more profitable. But it is completing fewer wells and gross volumes are down. Global discoveries have slipped from 20-40 billion boe per year to around half these volumes since 2016. In the longer term oil supply depends on new discoveries and exploration will need to ramp up its investment.

The corporate landscape has become less diverse. Most Majors and a handful of international E&Ps are centre-stage. Other US-focused or smaller players have retreated to shale. NOCs have opportunities to boost their exploration.

In Asia Pacific, the exploration industry's reset has yet to fully take hold. Despite select highlights in Malaysia, Myanmar and Australia, activity levels remain subdued. But with a raft of new bidding rounds on the horizon, and several governments planning to review and revise their offerings, Asia's exploration industry may be about to get a much-needed shot in the arm.

Many governments around the world have adjusted their oil and gas fiscal terms in response to the downturn in prices. Some have moved towards greater emphasis on revenue sharing, rather than profit sharing, as a means to ensure at least some revenues for the state in times of low prices. Contracts based on revenue sharing are generally regressive and, should prices recover strongly, could see companies enjoying much of the upside. However, in Asia Pacific, recent changes have not been enough to boost the region's competitiveness: more needs to be done.

Another growing trend in exploration licensing has been the use of biddable fiscal terms. Where the industry sees great subsurface potential, such as in recent Brazilian and Mexican rounds, winning bids in terms of cash bonuses or profit shares can be extremely onerous. Such high acreage access costs are one of the main threats to an overall recovery in exploration economics.

SPEAKER BIOGRAPHY

Andrew is Vice President, Global Exploration at Woodmac and has over 25 years' experience assisting majors and independents in the development of their exploration strategy. He currently works on Wood Mackenzie's Exploration Research, providing analysis of exploration economics, strategies and industry trends, and has consulted on optimising petroleum exploration investments, process, opportunity characterisation and evaluation.

Prior to joining Wood Mackenzie in 1995, Andrew started his career as an international new ventures geologist with Ranger Oil, eventually becoming a project geologist in Angola. Andrew graduated from Imperial College, London, with a BSc Honours degree in Geology, and holds a PhD in Geology from University College, Cardiff.

ORAL PRESENTATION

Non-fiscal Clauses in Host Government Contracts that are Disincentives to Investment - Can the Value Loss be Quantified?

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Comparisons of Host Government Instruments (licences, concessions, PSCs, etc.) generally concentrate on the fiscal terms, particularly government take, as the principal drivers of value. In this paper other clauses that may have a significant impact on the value ultimately realised from executing an upstream project are discussed, with special reference to examples from S. E. Asia. Examples illustrate the impact on investment metrics and market values of specific contract language. While similar principles may be incorporated in a wide range of contracts, subtle, and some not so subtle, differences arise from the detailed language used.

Some important issues are obvious, including the scope of state participation rights, performance bonds, the effect of local content requirements and the nature of the rights to natural gas and the related issue of natural gas pricing. Some obviously add to, or detract from, value but are difficult to quantify, such as assignment and change of control provisions, and stabilisation clauses.

Perhaps the most important, but frequently overlooked area that can significantly impact contract economic performance is governance. This includes the role of the management committee, the scope of its responsibilities, and its voting and dispute resolution procedures. Central to the economic performance of both PSCs and tax / royalty arrangements are the rules for cost recovery and tax deductibility. State approval, or at least oversight, of work programmes and budgets and any accompanying audit rights, may offer the state significant leverage in modifying the contractor's anticipated economic benefits.

SPEAKER BIOGRAPHY

Chris has more than forty years of experience in the industry. He joined Moyes & Co. as a Managing Director in 2000. Since then he has provided a wide range of consulting services to a variety of clients from super-majors to small international start-ups. The scope of this work has included providing advice on technical, financial, and economic issues, including business and strategic planning, decision analysis, valuations, funding support, transaction management, and expert witness testimony.

Chris teaches economic analysis, fiscal systems, valuation practices, and competitive bidding theory and practice for post-graduate courses at the University of Texas, Austin, where he is an Adjunct Professor in the School of Law, and at the University of Texas at Dallas. He has published original work on the evaluation of exploration opportunities, exploration performance prediction, and reserves' uncertainty

ORAL PRESENTATION

Where Do Producer Governments in Asia Go Next?

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As the ultimate resource holders, how producer governments act remains at the heart of future oil and gas market dynamics, making their behaviour an important indicator of future activity levels and potential growth areas. Within Asia Pacific, several governments are currently implementing, or designing, substantial changes to upstream oil and gas regulations and fiscal terms. Emerging developments are likely to be significantly impacted by elections and other above-ground risk developments in several key producing regions over the coming year. These changes will shape the attractiveness of regional exploration and production (E&P) opportunities moving forward and as such are crucial signposts for upstream firms seeking to answer the questions of what and where next in Asia Pacific.

This presentation will focus on multiple emerging regulatory and fiscal developments in Asia Pacific, the above-ground factors driving them and their likely impacts on upstream investors. The discussion will include: challenges with Gross Split implementation, export restrictions and the Oil and Gas Law in Indonesia; new fiscal and contractual terms under review in Bangladesh; and the evolving relationship between producing states and the central government in Malaysia and the upstream implications thereof, as well as other issues.

SPEAKER BIOGRAPHY

Rachel is Associate Director of IHS Markit's E&P Terms and Above-Ground Risk capability, based in Singapore. She leads the team responsible for developing country and sub-national hydrocarbon sector risk forecasts for long-term energy investments across oil and gas producing and frontier countries.